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AUSTRALIAN ARMY

LAND WARFARE PROCEDURES - GENERAL

LWP-G 7-6-1

ADVENTUROUS TRAINING – PLANNING EXPERIENTIAL LEARNING ACTIVITIES

AMENDMENT LIST NUMBER 1

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Issued by command of
Chief of Army

R Harris
Colonel
Commandant
Army Recruit Training Centre

31 Oct 2019

LWP-G 7-6-1, Adventurous Training – Planning Experiential Learning Activities, 2019

Contents
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2. It is certified that the amendments promulgated in the undermentioned amendment lists have been made in this publication.

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PREFACE

1. Australian Land Warfare Doctrine and Land Warfare Procedures publications are authorised land doctrine for the guidance of Australian Defence Force operations. Land Warfare Doctrine publications are authored at the philosophical and application level while Land Warfare Procedures publications are authored at the procedural level.

2. The content of this publication has been drawn from general lessons, principles and doctrine contained in other relevant publications, instructions and agreements. Every opportunity should be taken by users of this publication to examine its contents, applicability and currency. If deficiencies or errors are found, amendment action should to be taken. Land Doctrine invites any assistance to improve this publication.

Aim

3. The aim of this publication is to provide the theory underpinning adventurous training and the tools required to plan and execute an adventurous training or other experiential learning activity.

Level

4. This is a procedural-level publication for the training of unit adventurous training leaders, and is also intended for use by personnel involved in the design, planning or execution of adventurous training or other experiential learning activities within Army.

5. This publication provides ready reckoners, principles and procedures for the planning and execution of an adventurous training or other experiential learning activity.

Scope

6. This manual is divided into thirteen chapters:
   a. Chapter 1 provides an introduction to adventurous training and experiential learning fundamentals.
Contents

b. Chapter 2 provides information on the application of the Army’s risk management process for the design, planning and conduct of adventurous training exercises.

c. Chapter 3 details how adventurous training can be used to develop resilience.

d. Chapter 4 details how adventurous training can be used to develop leadership.

e. Chapter 5 provides information on the process of facilitation.

f. Chapter 6 details activity design principles.

g. Chapter 7 provide structure for activity planning and preparation.

h. Chapter 8 discusses environmental and heritage protection practices and procedures that are to be adhered to during an adventurous training exercise.

i. Chapter 9 provides general guidance on the provision of first aid on an adventurous training exercise.

j. Chapter 10 provides information on navigation in an adventurous training context.

k. Chapter 11 provides an introduction to weather and how to interpret weather conditions.

l. Chapter 12 provides details on adventurous training equipment.

m. Chapter 13 discusses options for rationing to maximise adventurous training benefit.

Associated Publications

7. This publication should be read in conjunction with other publications and documents, in particular:

a. Army Standing Instruction - Military Risk Management

b. Army Training Instruction 9-1/14, The Peter Stuckey Mitchell Trust Fund Awards

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- Block Scale 19/07, Army Adventurous Training Equipment
- Commander Forces Command Directive 210/15, The Resilience Plan
- Defence Learning Manual
- Defence Road Transport Manual
- Defence Safety Manual
- Incident Reporting and Management Manual
- Land Warfare Doctrine 0-2, Leadership
- Land Warfare Doctrine 5-1-4, The Military Appreciation Process
- Land Warfare Doctrine 7-6, Adventurous Training
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- Land Warfare Procedures - General 7-6-2, Adventurous Training – Roping
- Land Warfare Procedures - General 7-6-3, Adventurous Training – Backcountry Skiing and Alpine Survival
- Land Warfare Procedures - General 7-6-4, Adventurous Training – Whitewater Rafting and Kayaking
- Land Warfare Procedures - General 7-6-5, Adventurous Training – Sea Kayaking
- Land Warfare Procedures - General 7-7-2, Navigation

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Gender

10. This publication has been prepared with gender-neutral language.
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**leadership**
The process of influencing others in order to gain their willing consent in the ethical pursuit of missions.

**resilience**
Lasting solutions requiring a capable and responsive state underpinned by a cohesive society, with respect for rule of law and political competition conducted in non-violent ways.
ABBREVIATIONS

1. The principal source for Australian Defence Force abbreviations is the Australian Defence Glossary located at http://adg.eas.defence.mil.au/adgms. Abbreviations contained within this publication are in accordance with the business rules, guidelines and conventions for the Australian Defence Glossary at the time of its release. The following abbreviations are used throughout this publication; however, commonly used terms have been presented in their abbreviated format throughout the publication and have not been included in this list.

   AC activity commander
   AL activity leader
   app application
   AT adventurous training
   ATLI adventurous training leader instructor
   ATW Adventurous Training Wing
   DTA Defence training area
   ECC environmental clearance certificate
   EMS environmental management system
   EPIRB emergency position-indicating radio beacon
   GL group leader
   IPS ideal performance state
   JOSS Joint Operations Support Staff
   medevac medical evacuation
   MRM military risk management
   MSDS material safety data sheet
   NDTA non-Defence training area
   NFM national fleet manager
   PLB personal locator beacon
   RAS risk appreciation summary
   RODUM report on defective or unsatisfactory materiel
   RV rendezvous
   SAR search and rescue
   SME subject matter expert
The following are common shortened forms or symbols for names of measurements used throughout this publication.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Meaning</th>
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<tr>
<td>hPa</td>
<td>Hectopascal</td>
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<tr>
<td>kt</td>
<td>knot</td>
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<tr>
<td>mmHG</td>
<td>millimetre of mercury</td>
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CHAPTER 1

THE FUNDAMENTALS OF EXPERIENTIAL LEARNING AND ADVENTUROUS TRAINING

For the things we have to learn before we can do them, we learn by doing them.

*Aristotle*¹

SECTION 1-1. LEARNING

1.1 All Army training is about learning. There is a range of different approaches to delivering this training. Some styles are highly structured and appear inflexible, especially in the military context, but are appropriate to developing technical or foundational knowledge such as during ab initio, initial employment and junior leader training.

1.2 Other styles are more appropriate to encouraging self-directed and autonomous adult learners to develop qualities such as leadership, teamwork and problem-solving abilities. This chapter considers the principles applicable to these latter styles to deliver adult experiential learning.

1.3 Experiential learning is learning through doing. It is a process through which individuals construct knowledge, acquire skills and enhance qualities and values from direct participation in meaningful and challenging experiences. The nature of Army employment, especially on operations, necessitates that, wherever possible, this development should occur in controlled non-tactical, and tactical training environments rather than on first exposure to the battlefield.

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While operational experience outside of the training context perhaps has the potential to deliver the greatest benefits, this chapter considers experiential learning in the training context.

A type of experiential learning is adventurous training (AT). AT is a unique form of training that cannot be replicated in classroom or workplace training environments. It is designed to assist commanders to prepare their soldiers for operations by simulating the psychological conditions participants may encounter in battle. By definition, outdoor adventure is a key element of its delivery. AT places participants in challenging and risky but appropriately controlled situations where they experience fear, stress and potential consequence. Learning associated with this experience is then transferred, through facilitation (both formal and informal), to the workplace.

SECTION 1-2. BACKGROUND

Sailor Survival

During World War II it was observed that survivors of many shipping incidents were often the older, more experienced sailors while many younger and fitter sailors perished. It was determined that the life experiences of older sailors had enabled them to develop greater physical and mental resilience in the face of peril whereas younger sailors had not yet developed an understanding of their own physical, emotional and psychological resources.

In 1941 a training school called Outward Bound (a nautical term for a ship’s departure from the certainties of harbour) was established to provide young sailors with the experiences and skills necessary to survive at sea. The educational medium was often physical, but the desired effect was very much psychological and social. This philosophy remains relevant to experiential learning in Army, particularly AT.

An extensive period of high tempo operations from around 1999 created greater demand for the facilitated experiential learning outcomes of the type delivered by AT. These include...
benefits for leadership, resilience, problem-solving and team-building amongst others.

Military Facilitation

1.9 Many aspects of normal Army activities have the potential to deliver meaningful experiential learning with the inclusion of an adventure component and addition of a framework of instructor-led facilitation. This military facilitation construct is being developed for broad application across Army activities by trained facilitators.

SECTION 1-3. ADULT LEARNING CONCEPTS

1.10 Experiential learning employs an adult learning approach in order to ensure that the learner’s needs are most effectively met.

1.11 Adult learning is based upon six assumptions:

a. Need to Know. Adults need to know the reason for learning something.

b. Foundation. Adults have accumulated experience, including errors and failures that provide a resource for new learning. Active participation in learning helps to draw on that experience while correcting learned biases and prejudices that can limit their development.

c. Self-concept. Adults need to be responsible for their decisions on education; involvement in the planning and evaluation of their instruction.

d. Readiness. Adults are practical in their approach to learning; they want to know ‘How is this going to help me right now?’ Adults learners will engage with learning when they can see the relevance and make a connection to the application of the new content.

e. Orientation. Adult learning is problem-centred rather than content-oriented. Whereas children learn skills
sequentially, adult learners start with a (realistic) problem and work to find a solution.

f. *Motivation.* Adults must want to learn. Adults are more motivated to learn by internal rather than external factors. See Chapter 4 for a detailed explanation of Maslow’s Hierarchy of Needs theory of human motivation.

**Facilitating Adult Learning**

1.12 The preceding assumptions shape how teachers can best facilitate adult learning as follows:

a. Adult learning around problems necessitates mutual goal setting between the facilitator and the learner to identify what the learner can do and wants to do. This will identify the gaps to be addressed to assist learners achieve their goals.

b. Adults learn best in an informal situation. Often, adults learn by taking responsibility for the content they require to understand particular goals. Allowing discussion and decision-making of problems gives ownership to the adult learner and acknowledges their experience.

c. Adults want guidance and options, not directions or instructions. They want information that will help them improve their situation through a method of their choice and do not want to be told what to do.

**SECTION 1-4. ADULT LEARNING STYLES**

1.13 A learning style refers to how a person learns, categorises, and processes new content. Each person may have multiple preferred learning styles. The three primary learning styles are: visual, auditory, and kinaesthetic.

1.14 **Visual Learners.** Visual learners:

a. learn by looking, seeing, viewing, and watching
b. need to see facial expressions and body language to fully understand the content

c. think in pictures and learn best from visual displays

d. sit at the front to avoid visual distractions

e. tend to take detailed notes to absorb information.

1.15 **Auditory Learners.** Auditory learners:

a. learn by listening, hearing, and speaking

b. learn best through lectures, discussions, and brainstorming

c. interpret the underlying meaning of speech by listening to voice tone, pitch, and speed and other speech nuances

d. gain little meaning from written information until they hear it, so they benefit from reading aloud.

1.16 **Kinaesthetic Learners.** Kinetic learners:

a. learn by experiencing, moving, and doing (ie, a hands-on approach to exploring the physical world around them)

b. have difficulty sitting still for long periods of time, and are easily distracted by their need for activity and exploration.

**SECTION 1-5. EXPERIENTIAL LEARNING**

1.17 The experiential learner gains knowledge, skills and insight through actively experiencing a situation and through considered reflection upon that experience. This involves active participation in the hands-on learning and reflective phases, thereby excluding participation based solely on rote learning.
1.18 Experiential learning generates direct and indirect transference of skills and knowledge:

a. Direct transference is in relation to the skills and knowledge development such as rope craft, navigation, or sea survival skills.

b. Indirect transference is in relation to the individual developmental outcomes such as, but not limited to: self-awareness, resilience, communication, courage, initiative, respect and teamwork.

Experiential Learning Cycle

1.19 Experiential learning is based on the new learning generated by experience gained from the experience and reflection process. The cycle is ongoing. The steps in the cycle are as follows:

a. *Experiencing.* This is the stage where the learner interacts with the subject matter (e.g., a cliff face, kayak, obstacle course, weapons range or other people). Here the learner gets the hands-on experience based around a stated problem situation. If the process stops after this stage, all learning is left to chance, and instructors have not fulfilled their responsibilities for facilitating individual learning.

b. *Reflecting.* Experience alone is insufficient to ensure that learning takes place. Reflection is essential to determine which of the methods employed in the problem situation worked best or should be abandoned as ineffective (e.g., a directive approach to leadership may not be as effective as a more facilitative approach in an environment of real fear). Learners need to understand that getting it wrong is part of learning and it is best to get this experience in a training environment rather than an operational one. Reflection may initially be individually based but should be followed through a facilitated group process whereby sense is made of an experience through discussion.
c. **Generalising.** The learner takes the collective outcomes of the reflection phase to consider what improvements they need to make. Generalising allows learning to be transferred to dimensions beyond those of the current learning environment (eg, to deployed operations or the workplace).

d. **Applying.** The learner seeks to actively plan and apply the improvements that were determined to be necessary in the generalisation phase. This application necessarily involves experimentation, trial and error in order to reinforce and integrate positive behaviours, knowledge and perceptions and the ability to transfer them to other contexts. In AT, learners may share through the debriefing process an individual commitment for improvement so that their team-mates can assist with enforcing accountability.

1.20 The learner on completion of the cycle (see Figure 1–1) applies their learning to new experiences.
A major challenge for educators who use experiential learning lies in the completion of the latter phases of the cycle. Good planning is required to allow sufficient time for each step to occur. Reflection is a crucial part of the experiential learning process and positive learning outcomes are assured when facilitated rather than left to the individual learner for self-reflection.

A skilled facilitator, asking the right questions and guiding reflective conversation before, during, and after an experience, can help open a gateway to powerful new thinking and learning.

**Simple Facilitation Questions Learning**

1. What (happened)? relates to experiencing.
2. ‘So what?’ relates to generalising.
3. ‘Now what?’ relates to applying.
Aim of Experiential Learning

1.24 The aim of an experiential learning activity must take primacy in dictating the way the activity is conducted if maximum benefit is to be achieved. The most commonly used approaches are as follows:

a. Knowledge and Skills Approach. This approach is focused on imparting knowledge and achieving mastery of technical skills (e.g., the aim of the activity may be to improve the climbing, shooting or navigating skills of the participants). Behavioural change and goal attainments are complementary.

b. Physical Task or Goal Approach. This approach is often used with experienced participants on expeditions, but can also be applied to novices with more modest goals (e.g., the aim of an activity may be to reach the summit of a particular mountain or to sea kayak from one point to another). While emphasis is on goal attainment, technical skill will almost certainly be developed and behavioural change may be effected.

c. Psychological or Behavioural Change Approach. This approach is the primary aim of any Army unit AT activity. The development of technical skills is generally limited to that required to allow safe participation in the activity. Goal attainment is not of primary importance but still needs to be considered, as failure can have a powerful negative effect if not properly addressed.
Adventure-based Learning Characteristics

1.25 Learning experiences are enhanced by making them engaging and rewarding therefore the following characteristics should be considered in the planning and execution:

a. The Individual. A participant comes to the structured experience with a preconception of what it will be like. For some individuals, the anticipation causes a sense of internal stimulation. Others do not experience this feeling until they are immersed in the experience and pushed outside their comfort zone. This internal state that permits learning to occur is referred to as disequilibrium.

b. Disequilibrium. Disequilibrium refers to an individual's exposure to new and often challenging ways of thinking and behaving. It is a state of internal conflict that provides motivation for an individual to make personal changes. Disequilibrium must be present for learning to occur and can be enhanced through the use of novel settings.

c. Novel Setting. Placing a person in a novel physical and social setting requires participants to be actively involved. The excitement and emotional nature of the experience focuses a participant's attention on the tasks at hand. Consequently, people remember what they have learned, experienced and the consequences of their actions are easily observed. These factors aid transference to other contexts. The perceived risk and associated anxiety that often accompanies the activities, helps to break down individual barriers and impels participants into a state of readiness for learning, trust in and reliance on the group, especially in a cooperative environment.
d. **Cooperative Environment.** Establishing cooperation rather than competition fosters the development of group cohesion. Groups that have shared goals and time for social interaction establish this cooperation more quickly, especially when individuals and the group are continually presented with unique problem-solving situations.

e. **Unique Problem-solving Situations.** New skills and problems are introduced to participants in a sequence of increasing difficulty. Learning opportunities are presented when group members draw on their mental, emotional and physical resources. The completion of such tasks leads to feelings of accomplishment.

f. **Feelings of Accomplishment.** Success can lead to increased self-esteem, an increased internal focus of control, improved communication skills and more effective problem-solving skills. The significance of these successes is drawn out through guided facilitation.

**SECTION 1-7. ADVENTUROUS TRAINING**

**The Aim of Adventurous Training**

1.26 The aim of AT is to enhance the Australian Soldier’s ability to thrive in complexity and adversity.

1.27 AT is a unique form of training that cannot be replicated in classroom or workplace training environments. It is designed to assist commanders to prepare their soldiers for battle by simulating the psychological conditions participants may encounter. By definition, outdoor adventure is a key element of its delivery. AT places participants in challenging and risky but appropriately controlled situations where they experience fear, stress and potential consequence. Facilitation both formal and informal is then applied to transfer this learning to the workplace.

1.28 AT is a specific approach to experiential learning that uses challenging physical and mental activities to develop those
higher individual and team qualities that assist individuals and teams in overcoming the fear and stress generated by operations and combat. This helps to prepare soldiers for battle by building their resilience to better survive and succeed on the battlefield. AT has been shown to assist individuals and teams to reset and recover following battlefield exposure in order to minimise its damaging effects.

Battlefield Features

1.29 Realistic training is required for Army to succeed in winning the land battle, for which the following are enduring features:

a. *Friction*. Friction makes even the simplest task difficult to achieve and reflects the complications that inevitably arise as a result of conflict. Friction is caused through:
   (1) enemy action
   (2) adverse weather
   (3) complex terrain
   (4) poor coordination
   (5) poor communication
   (6) insufficient or inaccurate information
   (7) human error.

b. *Danger*. Danger is always present in conflict and results in fear. Fear can dramatically degrade the efficiency and effectiveness of soldiers and units. Realistic training and strong leadership can reduce the negative effects of fear.

c. *Uncertainty*. Uncertainty, often referred to as the ‘fog of war’, characterises the atmosphere in which information to make decisions may be very constrained. Confronted by a wide range of disparate and often contradictory choices, an individual must exercise their judgement in order to accept, balance and manage risk.
Linkage of Adventurous Training to the Battlefield

1.30 AT seeks to emulate those battlefield characteristics that contribute to making warfighting difficult and challenging in order to provide realistic and meaningful training. This includes a real and identifiable challenge to overcome, which fulfils the role of the enemy (eg, the river that is being paddled should provide obstacles and dangers as would an enemy). Without ever-present fear and consequence, the analogy between war and AT breaks down.

1.31 The following observation links the battlefield, leadership, quick-thinking abilities, AT and risk management. It emphasises the value of AT.

   What the Falklands campaign has so clearly and successfully highlighted, is the value of very hard fitness training, the high standard of junior leadership and quick thinking professionalism shown by the soldier. This is one of the tremendous new strengths of the British Army, aided by the deliberate fostering of special adventurous training; risk taking skills have been deliberately provided and financed and this has paid excellent dividends.²

The Objective of Adventurous Training

1.32 The objective of AT is to develop the individual and group qualities required in battle. The following is a non-exhaustive list of indicative qualities:

   a. leadership
   b. resilience
   c. physical and moral courage
   d. self-confidence
   e. self-reliance
   f. self-esteem

The Principles of Adventurous Training

1.33 The principles of AT are that it:
   a. utilises Army-specified technical disciplines and qualified or authorised AT practitioners to develop the individual and group qualities required in battle
   b. emphasises management of perceived risk
   c. uses the full experiential learning cycle
   d. exposes participants to challenge in an environment of fear, stress and consequence
   e. is underpinned by facilitation to support the ADF to optimise human performance, resilience and leadership
   f. is conducted in an unfamiliar and novel environment.

Adventurous Training Framework

1.34 The Adventurous Training Wing (ATW) is the Army’s centre of expertise in AT. It was established in 1989 as the Army AT Centre following a 1988 study by LTCOL Robin Letts regarding the feasibility of establishing an Army school based on philosophies similar to those of Outward Bound3.

1.35 As the name suggests, AT uses adventure as the medium for development of individual and group qualities. ATW trains and

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LWP-G 7-6-1, Adventurous Training – Planning Experiential Learning Activities, 2019
recertifies ADF personnel in the following adventure-based qualifications:

a. Unit adventurous training leader (UATL) – qualified to conduct an AT activity in a specific discipline.
b. Adventurous training leader instructor (ATLI) – a UATL qualified to train and assess ADF personnel in the UATL qualifications.

1.36 AT is to be professionally assured through rigorous technical training and ongoing certification of AT practitioners (eg, UATLs) and instructors (eg, ATLIs) qualified in formal AT disciplines to ensure appropriate engagement with risk and facilitation in what are inherently dangerous environments and disciplines.

1.37 Each of these qualifications can be gained by the defence recognition process, or through completing a course approved or conducted by ATW for one of the following disciplines:

a. roping and climbing
b. canyoning
c. caving
d. backcountry skiing and alpine survival
e. sea kayaking
f. whitewater kayaking
g. whitewater rafting.

1.38 AT is primarily designed to produce psychological change rather than to impart technical skills, and to this extent the discipline itself is largely irrelevant as no military unit needs to know how to whitewater kayak, and very few need to know how to climb; however, all units need teamwork, good leadership and the other qualities that can be developed through AT.

1.39 AT is generally conducted in a rank-neutral environment in order to remove normal workplace barriers, hierarchies and organisational structures that could constrain involvement and
learning. Regardless of workplace rank or status, participants share hardships and are therefore more inclined to communicate openly. Participants can experiment with alternate behaviours, make mistakes and then learn from their experience more readily in a rank-neutral environment. Rank neutral should not be interpreted as rank-free or unconstrained by normal expectations of military discipline and control.

Participation Considerations

1.40 AT is designed to prepare soldiers for battle. Participation in AT is therefore compulsory for Defence members with the exception of personnel:
   a. with medical restrictions
   b. from the Australian Cadet Corps
   c. that are assessed by the conducting UATL as patently failing to cope to the extent that they may suffer trauma.

1.41 Often it is the soldiers who are most reluctant to participate who benefit most from the experience. A UATL will not use compulsion or force to secure participation. Rather, coaching a participant to overcome their fears and reluctance through their own willpower is the best outcome.

1.42 When an AT activity involves a financial cost to soldiers, participation must not be compulsory.

SECTION 1-8. CONCLUSION

1.43 Experiential learning through adventure-based activities can be extremely effective. It treats participants as mature, intelligent and motivated learners in a flexible organisational construct and provides opportunity for them to experiment according to their learning style. A skilled facilitator and correct application of the experiential learning cycle can deliver transformational change and ensure transference of learning to the workplace.

1.44 AT, as a particularly rigorous form of experiential learning, has the ability to subject the participant to the types of fear and
stress encountered in battle in a way that is not possible in many other forms of training. This exposure often increases the benefits to the individual and the team, especially in developing the qualities and resilience required in battle.
CHAPTER 2

RISK IN EXPERIENTIAL LEARNING AND ADVENTUROUS TRAINING

SECTION 2-1. RISK AND ADVENTURE

2.1 All activities in Defence are subject to integral risk management planning prior to the conduct of the activity (see Army Standing Instruction – Military Risk Management).

2.2 Risk and adventure go hand in hand, however, it is important to understand how to best manage risk and the difference between absolute, real and perceived risk. An incorrect appreciation of risk can result in an activity that does not achieve its aims or unnecessarily and inappropriately endangers the participants, either physically or psychologically.

2.3 Commanders have a moral and legal obligation to conduct military training safely. The residual risks of an activity must be managed so far as reasonably practicable, balanced against the exercise’s desired outcomes and within the acceptable tolerances and delegation of the approving authority.

2.4 Like other military training, AT and experiential learning activities must apply and abide by relevant safety doctrine. They must engage subject matter experts (SMEs) in their planning and delivery. In the case of AT, SMEs are the UATLs qualified to advise COs/OCs and run AT activities safely.

SECTION 2-2. PURPOSE

2.5 The purpose of this chapter is to provide those planning and running activities with an understanding of the nature of risk, how it is managed to optimise activity outcomes, responsibilities for risk management, and how risk is planned for.
SECTION 2-3. SCOPE

2.6 Specifically, this chapter covers the following topics:
   a. types of risk
   b. risk and the achievement of adventure
   c. appropriate levels of risk
   d. human dimensions of risk
   e. command and leadership responsibilities
   f. planning for risk
   g. managing risk during an activity
   h. managing an incident
   i. post-incident reporting.

2.7 This chapter does not cover specific risk considerations pertaining to individual disciplines.

SECTION 2-4. TYPES OF RISK

2.8 Risk and adventure are inextricably linked, and OICs and UATLs must have a good understanding of how the types of risk are managed and used for the safety and benefit of the participants. The three key types of risk that must be considered are:
   a. **Absolute Risk.** Absolute risk represents the uppermost limit of risk inherent in a situation where no risk controls have been applied.
   b. **Residual Risk.** Residual risk is the amount of residual risk that exists at a given moment after a risk management process has resulted in risk controls being applied. Common controls include instruction, supervision, appropriate equipment, medical support,
Residual risk can be categorised further as follows:

1. **Acceptable Risk.** An acceptable risk is one where the level of risk is justified by the benefits gained from taking the risk. This determination would be based on an assessment that the risk-taker is suitably competent to perform the task with a realistic expectation of success. The outcome in a situation of acceptable risk must not rely on luck.

2. **Unacceptable Risk.** An unacceptable risk is one where the level of risk is not justified by the benefits gained from taking the risk. In a situation of unacceptable risk, luck plays a major part in determining the outcome.

c. **Perceived Risk.** Perceived risk is something that exists in the minds of the participants and is what simulates the stresses of combat. It is essential for achieving the aim of AT. Perceived risk is a subjective judgement by the participant of the residual risk, and is highly influenced by a wide range of factors including training, skills, previous experiences, trust, mood and self-confidence. Perceived risk will naturally reduce as participants gain greater competence in a particular discipline and the residual risk levels or difficulty will need to be increased in order to maintain challenge. Finding the optimum balance between residual risk and skill levels is the role of the activity facilitator or UATL, necessitating that they be well trained and experienced.

## SECTION 2-5. RISK AND THE ACHIEVEMENT OF ADVENTURE

2.9 Activities that seek to change behaviours through exposure to stressors have the potential to cause physical injury and to damage a participant’s confidence and self-esteem. To reduce this possibility, it is critical that activity leaders (ALs) have a supportive and people-centred approach and that they know
how to recognise over-stress, therefore avoid pushing participants too far. This requires a good understanding of what adventure really is, and when misadventure is being reached.

2.10 Colin Mortlock, a British author and experienced user of adventure-based learning, proposed that adventure is experienced when feelings of apprehension and fear of physical or psychological harm are overcome while undertaking an activity about which the participant is uncertain of the outcome. He proposed that there are five stages of adventure, as follows:

a. **Stage 1 – Exploration and Experimentation.** This occurs when individuals are working considerably below their normal abilities and when fear of physical harm is absent. This stage includes ‘recreational activities’ such as team games and sport. Initial training in AT technical skills would often fit into this category, but only as an enabler to progressing to adventure.

b. **Stage 2 – Adventure.** This is reached when individuals feel in control but need to use their experience and abilities to overcome a technical problem. Fear of physical harm is minimal. This is an important step in skills learning. Participants are not disturbed by feelings of boredom and lack of involvement, nor by psychological stress. This stage is characterised by positive and satisfying human feelings and is crucial when preparing for more demanding activity.

c. **Stage 3 – Peak Adventure.** This occurs when the individual has fear of physical harm, or physical or psychological stress, and no longer feels in control of the situation. The individual feels, however, that they can, with considerable effort and given luck, overcome the situation without accident. The individual is conscious of a definite degree of uncertainty as to the outcome, and feels ‘poised on a knife edge’ between success and

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They have found themselves in a situation which becomes firmly etched upon their mind – perhaps forever. This is the critical stage for developing the qualities needed on the battlefield. The experience acts as a key to unlocking the door to behavioural change and this is what a skilled UATL can achieve.

d. **Stage 4 – Misadventure.** This results in extreme fear leading to panic and terror. Once overcome, there may be great learning experience for the participant, however misadventure is unjustifiable in training because of the negative and disruptive feelings associated with the experience.

e. **Stage 5 – Devastation and Disaster.** This results in mission failure with potential loss of life and other significant consequences through the unplanned breach of risk management limits.

2.11 Stage 4 and Stage 5 are both high-risk, low-return activities. Army should not plan to conduct any training activities that fall into these categories.

2.12 **The Adventure Paradigm – Risk versus Competence.** Mr Simon Priest and Peter Martin, leading authorities in the field of adventure programming, extended Mortlock’s work in their ‘adventure experience paradigm’\(^\text{2,3}\) (see Figure 2–1). In this paradigm, for a given level of risk, competence increases from left to right in Figure 2–1 with skills development and participation in activities. A novice participant would initially find themselves in peak adventure but would move to adventure and exploration and experimentation as their skills and exposure grow.

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To ensure that participants continue to operate in the peak adventure and adventure segments, the perceived risk must be increased as skills increase.4

Priest and Martin label the two underlying dimensions risk and competence (see Table 2–1; for application in the ADF, other terminology can also be used to give context to use of the adventure experience paradigm. In seeking to maintain the participants’ perception and maximise facilitated adventure learning through maintaining the challenge at peak adventure, the appropriate balance between these two dimensions needs to be actively managed.

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2.15 This can be done through progressive development, whereby each subsequent activity has an increased absolute risk, but an unchanged residual risk due to the participants’ improving ability to function in the environment. Regardless of the absolute or residual risk, the perceived risk should always remain high enough to achieve behavioural outcomes.

2.16 If the challenge and risk are not progressively increased as competence increases, the participants may become bored as they become more comfortable with the activity. The absolute risk remains, but the perceived risk is low. It is difficult to maintain the initial thrill and there is a risk that participants may become complacent and, therefore, dangerous. Using parachuting as an example, the 500th parachute jump is often more dangerous than the first. Keeping participants at peak performance is therefore beneficial from both a learning and a safety perspective.

**Optimum Adventure Levels for Leaders and Participants**

2.17 The level of competency of the leader or guide should be higher than that of the participant. While the absolute risk will remain the same for both leader and participant, the higher competence of the leader/guide will ensure that their level of residual risk is lower, enabling them to operate in exploration and experimentation or adventure on the adventure paradigm. The participant who is involved in the same activity, should be experiencing peak adventure in order to achieve the adventure learning benefits of the activity. Figure 2–25 shows Priest’s

<table>
<thead>
<tr>
<th>Risk</th>
<th>Competence</th>
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<tr>
<td>Environment</td>
<td>Individual/group</td>
</tr>
<tr>
<td>Situation</td>
<td>Experience</td>
</tr>
<tr>
<td>Challenge</td>
<td>Skill</td>
</tr>
<tr>
<td>Difficulty</td>
<td>Ability</td>
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*Table 2–1: Risk and Competence*
activity paradigms, detailing the ideal level of adventure being experienced by a participant and a leader/guide on the same activity.

![Diagram](Figure 2–2: Priest’s Adventure Paradigm – Ideal Levels of Adventure)

2.18 Activity planners should understand how perceived risk affects the decisions of approving authorities and OICs. Inexperience resulting in a perceived risk higher than the residual risk may cause an authority to impose controls that are of no practical consequence, and which may even increase residual risk while dangerously reducing perceived risk. It is, therefore, essential that approving authorities and OICs consider the advice of experienced practitioners when determining the residual risks of an activity and the controls required to treat them. UATLs

also have a responsibility to take every opportunity to gain experience and develop their skills and judgement, so that they can provide sound advice on the identification, categorisation and quantification of the absolute and residual risks of an activity.

Self-esteem, Self-efficacy and Psychological Risk

2.19  In experiential learning and AT the potential for psychological injury can be just as great as the potential for psychological growth. ALs need to be very conscious of this potential and understand how to place participants in the adventure and peak adventure segments of Mortlock's Adventure Paradigm.

2.20  Building resilience is a key goal of experiential learning and AT, and depends on development of strong self-esteem and self-efficacy. Self-esteem is the respect one has for one’s self, while self-efficacy is one’s belief in their capability to succeed in a certain situation. Self-efficacy is particularly important, as a strong sense of self-efficacy allows an individual to confront a new challenge with confidence, such as those that will almost certainly be present on a battlefield.

2.21  To develop self-efficacy, individuals must perceive that they have personally contributed to meeting and conquering a challenge. This personal sense of accomplishment can be easily damaged by keeping participants in the exploration and experimentation segment of the Adventure Paradigm or worse, pushing them into the devastation and disaster segment. It can occur when an activity leader (AL) does not allow participants to fully contribute or let the participants develop confidence in their own skills (eg, by having a raft crew stop paddling through a rapid). In the worst cases, a participant’s self-esteem may also suffer, such as when a UATL insists on towing a sea-kayaking participant in front of their team, when it is not a matter of safety or due to injury. Similarly, removing a participant’s ability to make a decision when they are struggling to commit to action can be equally damaging. For example, if a UATL pushes a participant who has stalled at a jump in a canyon, without their consent, this could lead to disempowerment.
In such cases, regardless of whether a participant’s contribution has any real impact or not, their self-efficacy has not been developed. It is also possible that the participant’s self-esteem will have suffered due to feelings of failure. There are many alternative techniques that can be employed in these situations to avoid this psychological damage, such as breaking an action into small steps, forcing the participant to establish eye contact, or contributing to their action such as through a count. Whatever strategy is used, except in the case of an emergency, the leader’s role is to ensure that the participant perceives that it was they who met the challenge, and hence, can meet other challenges in the future.

SECTION 2-6. APPROPRIATE LEVELS OF RISK

For an activity to best achieve the aim of AT, it should seek to involve high perceived risk but low residual risk. AT exercises should be designed and conducted with residual risk as low as reasonably practicable, but with a high perceived risk for the participants, in order to gain the most benefit. The fundamental principle of risk management used worldwide is to keep the risk as low as reasonably practicable. It is also the fundamental principle in military risk management (MRM). Residual risk is the actual risk that exists given all controls put in place (such as safety equipment and supervision). The perceived risk will differ individually. It is a personal and subjective assessment of the residual risk present in the activity. Residual risk will differ according to a number of factors, such as the skill and experience of the participants, the equipment used, the familiarity with the environment, and the training area. For activities such as unit AT with unskilled participants, residual risk will be generally low. Residual risk can be categorised as follows:

a. **Acceptable Risk.** An acceptable risk is one where the level of risk is justified by the benefits gained from taking the risk. This determination would be based on an assessment that the risk-taker is suitably competent to perform the task with a realistic expectation of success.
In a situation of acceptable risk, luck plays little part in determining the outcome.

b. **Unacceptable Risk.** An unacceptable risk is one where the level of risk is not justified by the benefits gained from taking the risk. This determination would be based on an assessment that the risk-taker is not suitably competent to perform the task with a realistic expectation of success. In a situation of unacceptable risk, luck plays a major part in determining the outcome.

2.24 If a risk was acceptable, failure would normally be considered to be a result of bad luck. If a risk was unacceptable, success would normally be considered to be a result of good luck. Any activity where the success is based on having only good luck should be considered an unacceptable risk. Determining the type and acceptability of risk is a major component of decision-making.

**SECTION 2-7. HUMAN DIMENSIONS OF RISKS**

**Risk-taking**

2.25 Barring ‘acts of God’, all unforeseen outcomes can be attributed to some form of systems failure due to human error, such as the following:

a. **Overload.** Overload error can generally be linked to issues such as:
   
   (1) insufficient training
   (2) fatigue
   (3) poor physical condition
   (4) a lack of knowledge
   (5) poor skills
   (6) an inability to cope
   (7) worry and stress
b. Decision to Err. It is important to recognise that most of these decisions are made intuitively. Decisions to err can generally be linked to:
   (1) inappropriate personal values
   (2) management priorities and leadership actions
   (3) differing cultural values
   (4) peer pressure
   (5) incorrect assumptions
   (6) abnormal behaviour.

c. Traps. Traps can generally be linked to unrecognised and unacknowledged personal, group and organisational limitations and inconsistencies.

Perceptions

2.26 In identifying risks, it is especially important that the differences between real and perceived risk are understood. Everyone attributes different risk values to an event and will act accordingly, and what appears risky to some may not appear risky to others. Perceived risk, and the ability to match perceived risk with residual risk, may in turn be influenced by a variety of factors, such as the following:
   a. confidence level
   b. familiarity with equipment
   c. mood
   d. psychological predisposition
   e. level of fatigue
   f. awareness of personal limitations
   g. tolerance of ambiguity
Recognised Phenomena

2.27 All of these issues manifest themselves in several well-recognised and well-documented phenomena. In order to reduce the incidence of unforeseen occurrences, these phenomena need to be recognised and contained in planning, conducting, monitoring and reviewing all processes and activities:

a. Overfamiliarisation. Most serious injuries and fatalities are preceded by a near miss or accident of a parallel nature in the same area. This implies that, in spite of an accident having occurred, the individuals associated with the activity fail to recognise that it may occur again. This is probably the result of overfamiliarisation with the situation, where continued exposure to a hazard reduces the participant's perception of the risks associated with that activity. Previous accidents or near misses are seen as freak or chance events, or are dismissed as being insignificant as a result of repeated exposure.

b. Inappropriate Focus (Summit Fever). There is a tendency for individuals and groups to focus on potential outcomes or the attainment of an end goal rather than current actions and activities. This focus outweighs intermediate safety requirements.

c. Over-arousal. Following significant arousal, it is not uncommon for individuals and groups to fail to attend to extant and emergent hazards. This may result from a feeling of joy or relief from having survived a notable event. It is in situations like this that participants may ‘drop their guard’.

d. After-lunch Syndrome. Following breaks in high-intensity activities, participants often perform poorly due to lethargy, which is especially noticeable after lunch.
e. *Cold and Tired.* Participants are also vulnerable when cold and tired, as they often do not care as much about potential outcomes as they should.

f. *Risk Shift.* A common phenomenon of group dynamics is for groups to make riskier decisions than the individuals that comprise them. One of the explanations for risk shift is that risk-taking is a socially valued behaviour, especially in a military environment. Thus in risk-taking situations the bolder members of the group are often the most influential. Another manifestation of risk shift is when a person within a group abandons responsibility for personal safety and places this responsibility onto someone else in the group, usually the leader or another skilled person, often without the leader’s knowledge.

g. *Attribution Theory.* Attribution theory is the human tendency to take credit for positive behaviours or outcomes but to deny responsibility for bad or negative ones. This stems from a strong desire to protect individual self-esteem and present a positive public image. The main danger that arises from attribution theory is that it can be difficult to find out the real causes of accidents and near misses in order to put measures in place to reduce the chances of similar events occurring again.

**Risk Transference**

2.28 Regardless of what is written in an exercise instruction about responsibility for risk, the real-time decisions and actions of leaders and participants are the overriding means of ensuring safety in the dynamic environment of adventure-based activities. Participants are often provided the skills to manage safety in initial training and should be encouraged to accept mutual responsibility for the safety of the group. In sea-kayaking for instance, once an individual is trained to safely exit an upturned kayak and perform basic paddle strokes, they learn how to rescue each other without reliance on external support. It is critical that external safety arrangements are not overt, as this may cause the members to
psychologically transfer the responsibility for risk and safety to a third party.

SECTION 2-8. COMMAND AND LEADERSHIP RESPONSIBILITIES

2.29 There is a range of appointments and roles that have responsibilities and accountabilities when it comes to risk management and safety. The appointments that follow apply to AT activities and can be generalised for other experiential learning. See Chapter 7 for a full list of activity roles and responsibilities. The roles/appointments are:

a. Approving Authority. The approving authority for an activity takes the ultimate responsibility for its safety. The approving authority undertakes the duties of the officer authorising the activity as per MRM. This must, however, be considered in the context of their discipline knowledge, their reliance on advice from others to make their decisions, and the reality that they will likely not be on the ground during the activity. Given these limitations, the approving authority must have justifiable confidence that the ALs are competent, that the activity will be run in accordance with ADF policies, that safety and emergency procedures are adequate, that the risk appreciation summary (RAS) is correct and appropriate controls are implemented, and that the activity is designed to achieve its aims in a manner commensurate with the skills of its participants.

b. Officer-in-Charge. The OIC has overall responsibility for activity planning and conduct. The OIC undertakes the duties of the responsible officer as per MRM. Regardless, the OIC responsibilities include preparing the activity proposal and instruction for the approving authority, undertaking the RAS and putting in place the necessary controls, sourcing competent AL (AT qualified as appropriate), researching exercise locations and actions on emergency, and monitoring the conduct of the
exercise. The OIC should seek guidance from SMEs if they are not qualified in the relevant AT discipline.

c. **Activity Commander.** The activity commander (AC) is the UATL who is responsible for the overall on-the-ground conduct of the activity. The AC undertakes the duties of the officer conducting the activity as per MRM. This can be the OIC if they are suitably qualified. The AC ensures that the activity is being run as planned, that the assisting leaders are complying with prescribed processes and procedures, and where modifications are required due to weather, conditions, safety, participant ability, or any other justifiable reason, these are implemented as appropriate. The AC’s decision to modify an activity for safety reasons cannot be overridden by the OIC or any other instructors or participants. As such, the AC carries important accountabilities regarding the safe conduct of an activity and for the specialist AT advice they provide during the AT planning process and exercise conduct.

d. **Unit Adventurous Training Leaders.** UATLs are responsible for safe conduct of the activity in accordance with the discipline specific publications.

e. **Group Leader.** A group leader (GL) is a UATL who has been appointed supervisory responsibilities over a group or sub-activity due to the number of participants, complexity of the activity, group separation, and/or the level of supervision required by the specific activity. Unless otherwise specified, the GL has the authority of the AC to modify an activity where the group is separated from the AC, and it is not practical for the AC to determine the situation being confronted by that group. As such, provided it was reasonable to appoint a GL in that role, they would hold the same accountabilities as the AC.

f. **Participants.** Participants are responsible for complying with instructions and for their individual safety and that of the participants around them. This is tempered by their level of skill, competence, confidence and supervision.
Participants would normally need to be negligent or malevolent to be held accountable for the risks associated with AT.

2.30 ATW has ongoing responsibilities in the management of risk in AT as a whole through ensuring that policies, procedures and training of ATLIs and UATLs are based on justifiable safe practices and are updated as lessons are learnt. ATW is also responsible for ensuring that all reasonable steps are made to notify current UATLs and ATLIs of changes to practices taking into account that these UATLs exist in the ARA, other services, ARes (Active) and ARes (Inactive).

Duty of Care Responsibilities

2.31 All activity appointments have a duty of care obligation determined by their level of decision-making authority and ability to affect the activity or elements of it. Duty of care refers to the moral and legal requirement of a leader to take reasonable care of those under their command:

a. An AC/leader in charge of a group on exercise, regardless of the ranks, qualifications or experience of the group, has a duty of care to those in the group.

b. This duty of care may extend to third parties or non-military groups (eg, if a group participating in an AT exercise injures a member of the public or another organisation, the group has a duty of care to the injured person).

c. Furthermore, the Australian community has an expectation that if an incident or injury occurs nearby, even if there is no causal responsibility, Defence should assist where it is possible.

2.32 Each leader must comply with the requirements of duty of care and must not act in a negligent manner. Negligence may include:

a. the failure to comply with legal and policy requirements

b. abandonment of a group by a leader
c. abandonment of a third party the group has injured
d. abandonment of the third party once assistance has been commenced but not completed
e. the provision of assistance at a level beyond the qualifications held or training received
f. negligence or failure to comply with the provisions of duty of care may result in military, criminal or civil prosecution.

SECTION 2-9. PLANNING FOR RISK

2.33 It is a fundamental responsibility of the OIC and all ALs to plan for risk. This is particularly the case for AT where residual risk may be higher than in other activities. While the OIC will undertake an RAS as part of developing the exercise instruction, there is a need for risk planning to permeate the whole activity design process.

Risk Appreciations

2.34 Discipline-specific safety procedures are described in the respective AT publications and must be followed:

a. Risk appreciations are not to include controls that are already contained within doctrine. It is sufficient to ensure that the task will be undertaken in accordance with doctrine. Such controls are already implied and risk confusing or hiding real, new or novel mitigations necessary for safety.

b. Risk appreciations should include human factor risks such as fatigue or indolence where individuals may fail to follow orders or doctrine, such as when faced with conflicting priorities of time and space versus acting in accordance with set procedures and orders.

c. Where deviations from respective doctrine exist, these deviations, risks and mitigations must be clearly articulated and communicated for the respective
commanders’ decision at the level appropriate to the risk.

d. Deviations from doctrine must be endorsed at the requisite level for the level of risk.

e. Risk appreciation must be continuous. It does not stop at the end of planning, it continues throughout the activity to accommodate changing weather, fatigued and other group interactions.

2.35 Using large documents to manage risk within an exercise is unwieldy and can often increase risk. Key decisions or triggers should be articulated and clearly defined and included within orders before entering an activity in order to ensure clarity around appropriate and safe actions.

2.36 There are a number of key risk factors that an OIC should consider to determine the overall grading of the risk of an AT activity. These are detailed in Annex A.

Casualty Evacuation, Search and Rescue

2.37 The requirement for casevac, search and rescue (SAR) must be planned for and may affect the design, conduct and participant make-up for an activity. Relevant plans must be included in the AT instruction and briefed to leaders and participants as they are essentially the controls designed to address the risk that an incident occurs and requires these forms of response.

2.38 Casualty Evacuation. A casevac is a non-standardised and non-dedicated means of returning a casualty to medical care. It differs from a medical evacuation (medevac), which is the dedicated and supported medical transport and treatment for recovery to advanced medical care, in the following ways:

a. Casevac is for those in dire need that cannot wait for a medevac.

b. Casevac can be through opportunity means such as the closest available craft or person.
c. Where casevac is essential, it must be to reduce or prevent further harm, considering the injury that may be inflicted or exacerbated by the move when compared with waiting for medevac. For example, a short casevac move through otherwise impassable terrain may be required due to deteriorating weather conditions to rendezvous (RV) at an ambulance exchange point and handoff the casualty to a medevac air ambulance.

2.39 Search. Individuals and groups can become lost or separated for a variety of reasons. The contingencies for this must be covered within orders as follows:

a. Scheduled Contact. Scheduled contact should be included in plans with detail including actions on no contact or lost contact, expected return/off water time and SAR time (when SAR should be initiated if no contact from the group). Scheduled contact needs to be based on the practical limits of available communications. The use of SPOT trackers or similar one- or two-way satellite communication devices to notify everything is ok or assistance is required, are acceptable means of maintaining scheduled contact in remote areas.

b. Separation. Separation of members from a group can be mitigated by a system of rally points, signals, RVs and bounds.

c. Lost Personnel. Lost personnel should generate actions to:

(1) make the situation safe

(2) create large signs and signals to assist in being located

(3) wait a reasonable time for another party then, in an emergency, move in one direction to go back to a known place.

d. Conduct of Search. Search should be conducted in stages. Generally, the group will undertake an
immediate search of the route and minor branches or other likely locations along the route. If the immediate search is unsuccessful within around 60 minutes, this may grow into a supported search using emergency services, volunteers and others.

2.40 Rescue. Rescue can be performed at many different levels from those self-rescue skills required by an individual to protect their own safety through to coordinated SAR through multi-agency assets. Planning for potential rescues should apply the following principles:

a. Where possible, activities should be designed around the simplest and most efficient forms of rescue (e.g., in climbing, a lower off from a lowerable system is preferable to committing to a pluck off).

b. Plan to use available organic resources first (e.g., in sea kayaking novice participants can easily be trained early in Bow rescues and H rescues in deep water, preventing the need for the UATL to commit to every capsize).

c. The rescue must consider the whole group, not just those in peril (e.g., in backcountry skiing and alpine survival a single ambulatory casualty escorted from a snow covered wilderness area to a road access ambulance exchange point, must not compromise the safety and adequate supervision of other members in the group either left behind or supporting the move).

d. Provide each GL with a competent 2IC where feasible. This could be another, less-experienced UATL or an experienced participant. Not only does this cover the event that the GL is the casualty but allows either the GL or 2IC to direct and control rescues, while keeping the remainder of the group safe.

Medical Planning

2.41 Medical planning is essential to good activity design. The hazards unique to an activity or location will have been identified as part of the risk assessment. These will drive the
medical requirements such as pre-training requirements; the content, distribution and number of first aid kits; the requirement for and skill level of medics; casevac requirements; and existing injuries or illnesses that would exclude potential participants. These hazards include:

a. nature of injuries that could occur during the activity, including travel to and from

b. environmental issues such as possible weather extremes, fauna and flora

c. remoteness and time to arrange a casevac

d. impact of communications reliability on casevac times.

2.42 Medical planning is likely to have an impact upon the communication plan. For example, personal locator beacons (PLBs), emergency position-indicating radio beacons (EPIRBs) or other satellite-based emergency devices might be carried for all potential situations where a required casevac could not reasonably be enacted within 2 hours of an incident. Further, the inclusion of Volunteer Marine Rescue assets in the casevac plan may require the carriage of civilian marine band VHF radios.

2.43 Reliance on civilian emergency services is a viable and often sensible option as it is not always practical to include medics with advanced wilderness first aid training. This must be researched beforehand and agreed to by the approving authority.

SECTION 2-10. MANAGING RISK DURING AN ACTIVITY

2.44 Regardless of the risk appreciation, planning and RAS, once an activity has commenced, the OIC, AC and other ALs are fundamentally responsible for identifying, monitoring and reacting to anticipated and unexpected risks. The importance of experience cannot be underestimated, as it invariably leads to good judgements. For this reason, ACs and GLs should be
selected based upon relevant location and discipline experience rather than rank or qualification.

2.45 Along with the established practices and procedures relating to specific AT disciplines, there are a number of generic activities that should be undertaken to help reduce risks during an activity. These are described in detail in Annex B and include:

a. pre-activity training
b. group size and supervision
c. orders and safety briefs.

2.46 The most important risk management strategy when running any activity is the ability to modify it if there are concerns about emerging risks such as deteriorating weather, illness or injury, delays, or conditions not aligning with expectations. For this reason, the authority to make appropriate changes and how these are to be transmitted to the OIC or parent unit need to be clearly articulated at the outset of the activity.

SECTION 2-11. MANAGING AN INCIDENT

2.47 There will almost always be some residual risk remaining after an activity has commenced, regardless of the planning, training and other control measures put in place. The realisation of this risk is usually called an incident. Incidents can be minor and routine for the discipline, such as a flipped raft in whitewater or a capsize in sea kayaking. Even these minor incidences can, however, escalate into something more serious. A flipped raft can result in paddlers being trapped under the raft or caught in a sieve; if multiple sea kayakers capsize simultaneously then rescues may be very difficult, and paddlers may be washed towards rocks.

2.48 In any incident it is critical that the leader remains calm and makes sure that the situation is prevented from getting worse. Preventing the situation from getting worse could be through stopping all other rafts from coming down a rapid, or getting all upright sea kayakers to raft up. From there the leader must
2.49 Ideally, it is not the UATL who is undertaking the rescue, as they may miss the situation deteriorating for the rest of the group. The preferred COA is that the UATL directs and controls the response as it is carried out by other competent participants. This will not always be possible due to issues such as skill levels, urgency and proximity to the incident. Having a competent 2IC is invaluable in these situations to either conduct the rescue or manage the rest of the group.

2.50 During an incident it is best to avoid spending too much time looking for the optimum COA. There will usually be many options, and if the first one is not effective, it can then be removed from the list. Responses should be employed using simplicity first, provided it is safe, before then going for the more complex and gear intensive options.

2.51 Once personnel have been recovered, first aid needs to be applied and casevac procedures implemented if required. Ideally all participants will continue the activity, however, leaders must be conscious of a number of issues:

a. Those involved in the incident may be suffering hypothermia, mild shock, sprains and unseen injuries, and a loss of confidence.

b. Other participants, who perceive themselves to be less skilled than those involved in the incident, may also suffer a loss of confidence, which could lead to an incident of their own through a ‘self-fulfilling prophecy’.

c. These factors can lead to a quick repetition of the incident, which will often be worse due to rising exhaustion levels within the group.

d. It is therefore important to regroup in order to stabilise the group and properly assess that the incident has been fully resolved or overcome.

2.52 To minimise the risk of psychological injury, reduced self-esteem or self-efficacy, or friction within the team, a...
significant incident should be debriefed at the earliest opportunity.

2.53 In summary, in the event of an incident the leader should:
   a. remain calm
   b. prevent the situation from getting worse by getting the remainder of the group safe
   c. assess and prioritise where action is required
   d. undertake the rescue, ideally by directing and controlling others
   e. act, and do not spend too much time contemplating optimum solutions
   f. conduct first aid and casevac if necessary
   g. regroup and avoid a repetition
   h. debrief all involved.

2.54 Where the incident has involved a serious injury or death, or where there is an issue with equipment, practices or the location which are not of a routine nature and may require changes to processes or procedures, the following additional actions are to be undertaken:
   a. *Evaluate the Scene.* The leader must ensure that appropriate evidence is taken to describe the situation. The purpose is to describe the situation for later review in as much detail as is reasonably possible. This can include notes, sketches, photos, imagery with geo-data, statements and video or audio recordings. Notes could address positions of personnel, task, equipment location and status, time of events, weather conditions, and communications logs.
   b. *Control and Preserve the Scene.* The first priority is to make the scene safe and carry out life protecting actions. After this is complete, in so much as reasonably practical the leader must ensure that the site of a likely investigation is preserved in the condition it was in at the
time of the incident. The leader should cordon the area
to prevent contamination of evidence. Where this is not
possible, there is increased importance on thoroughly
documenting the incident.

2.55 There may be a need for follow up support to the victims if it has
been a potentially traumatic incident. This support can be
through command support from the leader or team members,
and psychological or chaplaincy services as required.

SECTION 2-12. POST-INCIDENT REPORTING

2.56 The OIC is responsible to ensure that all incidents are reported
in an appropriate and timely manner, in accordance with the
Incident Reporting and Management Manual\(^6\). Generally, this
commences with immediate communication as quickly as
possible through the chain of command from those at the
incident site to the appropriate commander. The immediate
information should include:

a. At (date time)
b. At (location)
c. What (has happened)
d. What (has already been done)
e. What (are the intended actions).

2.57 ATW must be included in the following circumstances for an AT
activity of where AT equipment is involved:

a. Where formal reporting occurs, the unit must include
ATW as a ‘for information’ addressee.
b. Where inquiries, investigations or fact finding occurs, the
unit must include ATW:

(1) as a ‘for information’ addressee on the initiating
and final documents/instruments

IRMM AN/IRMMAN.pdf
2.58 Lessons Learnt. ATW maintains a strong safety culture in the delivery of AT, where soldiers are exposed to residual risk. UATLs are required to promote a culture of reporting all near misses and dangerous occurrences in order to create an environment to prevent re-occurrences and to protect life. An openness to learn and adapt is essential to ensure high standards of safety. ATW distributes lessons learnt through:

a. training, doctrine, safety signals and web-based information sharing
b. recertification of UATLs and ATLIs
c. liaison with other professional bodies, foreign units and industry
d. AT concentrations and working groups
e. ATW courses and assessments.

SECTION 2-13. CONCLUSION

2.59 Activity OICs and leaders are primarily responsible for the safety of the participants while achieving the aim and objectives of the activity. This requires a thorough understanding of the types of risk, how they are managed, and the relationship between risk and achieving adventure. Psychological risk is just as important an issue to manage as physical risk, although it is more difficult to plan for. The best control for psychological risk is employment of capable and people-focused UATLs and facilitators who understand what is going on in the minds of the participants, as well as being able to identify and manage the planned and unforeseen physical risks that continually arise during the course of an activity.

Annexes:

A. Officer-In-Charge Guide to Adventurous Training Risk Grading

B. Safety Requirements for Conducting Adventurous Training
ANNEX A TO CHAPTER 2

OFFICER-IN-CHARGE GUIDE TO ADVENTUROUS TRAINING RISK GRADING

1. The OIC has a responsibility to identify absolute risks, control measures and residual risks. These residual risks can then be used to grade the overall risk of an activity and determine whether additional controls are required or whether it should even go ahead at all.

2. This annex describes the process that OICs can apply to grade the component and overall risk of an activity.

Individual Risk Management

3. Leaders must constantly assess risk against the approved MRM tool. This incorporates subjective (assessment based upon judgement) and objective (factual not open to interpretation) factors. The combination of these two factors need to be compared with the approved RAS. If the in-activity risks identified exceed the authorised limits, reassessment and approval must be undertaken.

Subjective Factors

4. Subjective factors need to be considered as part of activity planning. A qualified and experienced UATL without local experience and knowledge will not be able to provide the same level of on-the-job risk management as an equivalent UATL who has this knowledge. The following factors are provided to allow OICs to appropriately categorise risk and likelihood taking these factors into account during planning and conduct.

5. **Leader Experience.** The levels of leader experience are:
   a. **Expert.** The leader is highly competent and familiar with all aspects of training, doctrine, and procedures. The leader holds significant experience including the following:
      (1) holds the highest relevant qualification

LWP-G 7-6-1, Adventurous Training – Planning Experiential Learning Activities, 2019
(2) has long-term experience
(3) has a wide range of complex rescue skills and responses.

b. Experienced. The leader has considerable experience and has conducted many exercises using these or like skills and knowledge:
   (1) holds the relevant qualifications
   (2) is competent
   (3) has dealt with contingencies previously
   (4) has skills in a variety of environments and varied rescues.

c. Skilled. The leader is qualified and somewhat experienced:
   (1) holds the relevant qualifications
   (2) is capable of dealing with contingencies such as simple rescues.

d. Newly Trained. The leader not yet been exposed to full workplace conditions; they may lack experience in a variety of conditions or environments and have limited solutions to solve problems. Other factors may include:
   (1) they have recently attained the relevant qualification
   (2) they have had little experience and may not have yet used their qualification or performed rescues.

6. Leader Currency. The levels of leader currency are:
   a. Active. The leader is current and actively performs the specific activity regularly:
      (1) they feel comfortable in the environment
      (2) they feel comfortable in all skills and knowledge
      (3) they maintain currency without lapse
(4) they conduct the activity or similar regularly.

b. Recent. The leader is current, but not necessarily active:
   (1) they feel comfortable in the environment
   (2) they feel comfortable with most skills and underpinning knowledge
   (3) they maintain currency
   (4) they have conducted the activity or similar.

c. Periodic. The leader maintains basic currency:
   (1) they are aware of skills and underpinning knowledge
   (2) they have participated in, but not necessarily been extensively involved in activity delivery
   (3) they conduct activities infrequently.

d. Maintained. The leader has met minimum basic requirements:
   (1) they maintain minimum level of skills and knowledge
   (2) they have not recently participated in an activity.

7. Participant/Group Experience. The levels of participant/group experience are:

   a. All Skilled. Every individual within the group has extensive experience, but may not necessarily hold a qualification:
      (1) all can perform required skills to manage their own safety
      (2) all understand factors of the environment to identify hazards as well as safe areas
      (3) all can perform self-rescues and contribute to group rescues in a range of conditions.
b. **All Competent.** Every individual within the group has some demonstrated skills and knowledge:
   
   (1) The group elements can perform skills to manage their own safety to varied degrees to support the leader.

   (2) All are aware of, but may not necessarily recognise, factors of the environment to identify hazards as well as safe areas.

   (3) All are aware of self-rescues and can contribute to group rescues in limited circumstances.

c. **Varied Experience.** All or some have experience, but none are novices:
   
   (1) there must be no novices

   (2) some within the group can perform some skills

   (3) some may be aware of hazards and safe areas.

d. **Some or All are Novices.** The group contains at least one novice:
   
   (1) Even if only one participant in the group is a novice, despite the experience of the remainder of the group, the group will fall into this category.

   (2) A novice has no assumed experience, skills or knowledge.

   (3) A novice requires constant supervision in areas of danger.

8. **Site Familiarity.** The levels of site familiarity are:

a. **Regular.** The leader is intimately familiar with the site:
   
   (1) they use the site frequently

   (2) they have extensive knowledge of the area

   (3) they know the hazards within the area

   (4) they know the implications of weather effects.
b. **Occasional.** The leader is familiar with the site:
   (1) they use the site often
   (2) they understand the area
   (3) they are aware of hazards in the area.

c. **Known.** The leader has been in the site previously:
   (1) they have been in the site at least once
   (2) they have not necessarily been in the area recently
   (3) they do not necessarily understand hazards of the area in a variety of conditions.

d. **Unknown.** The leader has not seen the site:
   (1) The leader has not reconnoitred the site, or they have not been to the site for significant time.
   (2) The leader does not necessarily understand hazards of the site in a variety of conditions.

**Objective Factors**

9. Assessment of objective factors must also be considered when assessing risk. The following paragraphs provide some context to allow OICs to appropriately plan their activity.

10. **Local Weather.** This includes consideration of all weather conditions and effects. These include: precipitation, wind, heat, cold, tide, swell, length of day/night, moon state, and air pressure. In this consideration, the weather is not the factor, rather, it is the effect of it upon the planned activity:
   a. **None.** This describes good conditions that will not have any effects.
   b. **Low.** This describes poor weather that may affect the activity.
   c. **Medium.** This describes harsh conditions that may be constant or temporary that will affect the activity.
d. High. This describes adverse conditions that will affect the activity.

11. **Site Conditions.** This describes the environmental factors and condition of the training area:
   
   a. **Good.** The site is stable, not subject to significant changes and is well known.
   
   b. **Difficult.** The site has some hazards that require careful supervision.
   
   c. **Complicated.** The site is a constant hazard requiring careful supervision.
   
   d. **Hostile.** The site is a constant and significant hazard.

12. **Activity Complexity.** This describes the tasks being attempted:
   
   a. **Simple.** The skills and knowledge are within demonstrated reach of all within the group. The outcome is certain.
   
   b. **Low.** The skills and knowledge are on the limits of the demonstrated reach of all within the group. The outcome is uncertain; meaning contingencies may be enacted.
   
   c. **Medium.** The skills and knowledge required are significant and enacting contingencies is an expected outcome. This requires a high degree of teamwork to provide mutual protection and support.
   
   d. **High.** The skills, knowledge and experience required are significant. The elements carry significant risk that cannot be mitigated.

13. Individuals can develop their own methodology for their continual review and assessment of risks. These should be based upon experience, judgement and sound decision-making.
ANNEX B TO CHAPTER 2

SAFETY REQUIREMENTS FOR CONDUCTING ADVENTUROUS TRAINING

Responsibilities

1. It is a recognised phenomenon that accidents and incidents do not usually relate to a single factor, but are often the result of a chain of events that begins with a hazard and ends with the consequences of an incident or accident. These safety requirements are not a substitute for foresight, prudence and common sense in the planning and conduct of AT exercises. While this annex sets a standard for AT, it is also suitable for other forms of experiential learning activities.

Pre-activity Training

2. Every AT exercise and activity must include sufficient preparation for the task to be undertaken by the group. This does not mean that all personnel are trained and prepared to a proficient standard; indeed some of the best self-development training comes from the experiential learning of a new skill ‘on the job’. It does, however, mean that there are sufficient skills and knowledge within the group to perform safely. The OIC must ensure that:

a. Prior to every AT exercise all personnel must undertake revision training in first aid, including the skills to deal with likely injuries or illnesses applicable to the task and environment.

b. All personnel are able to communicate using the means applicable to the exercise, for example using radios, satellite phones, field signals, words of command, whistle or paddle signals.

c. All participants in AT exercises involving water must have completed the Army swim test not more than 12 months prior to the commencement of the exercise.
This test involves treading water for 2 minutes and swimming 30 m, both while fully clothed.

d. All personnel participating in AT exercises involving immersion in water and the need to swim, must have demonstrated ability to swim in the context of the exercise standards, dress, equipment and environment. This can be done in a supervised manner at an appropriate time in the activity. For example, at the commencement of a whitewater kayaking exercise, all personnel must demonstrate that they can swim safely and negotiate whitewater rapids with their equipment as if they had just exited their craft.

e. UATLs and participants must complete pre-exercise training required for difficult and complex exercises. This training may involve physical-fitness or specific-skills training (eg, a very long distance sea kayaking activity, such as a Bass Strait crossing, might require participants to build endurance and practise rescue scenarios in lead-up activities). Pre-exercise training is designed to reduce or mitigate accidents, injuries and illnesses and assists the UATLs to identify individuals that may require closer supervision. It may also enable the group to perform to greater challenges.

Group Size and Supervision

3. Safety supervision is a complex problem that will depend upon the risk grading of the activity (see Annex A). Relevant factors include:

a. group size
b. group experience
c. group culture and dynamics, both formal and informal
d. individual traits such as experience, hierarchy (both formal and informal), communication, functional behaviours, dysfunctional behaviours, and coping skills
e. technical skills of the guides, leaders and participants
f. supervisory skills of the guides, leaders and self-regulation/self-discipline of the group as well as individuals within the group

g. weather and weather effects on the environment as well as the group

h. task, task familiarity and prior experience in the task in the specific site

i. location familiarity of the leaders, guides and participants

j. fatigue, morale, fear, stress, leadership and human nature

k. organisational complexity

l. resources, equipment and information

m. development of individual and group behavioural outcomes and technical skills

n. inherent risk likelihood and consequence to the technical skill

o. risk and exposure during specific elements of an AT activity.

4. A group participating in an AT exercise may have a vast range of individual experience or skill. Individual ability will vary according to personality, capability, life experiences and the situation. The experience levels and the reaction of the group and individuals in that group to the fears and stress of AT must be taken into account as this will have an impact on the safety implications of the exercise.

5. Safety supervision is described in detail in each of the discipline-specific AT publications. Safety supervision must be appropriate to the point at which individuals are exposed to danger. This may include appropriate risk management to tailor the activity to meet safety requirements. Activity planning will identify where these friction points and points of danger exist that require additional treatment through procedure, supervision, PPE, or other mitigation.
6. Group size, including sub-groups separated for specific tasks or objectives, is inextricably linked to safety management. Ideally the minimum group sizes are:

   a. that which meets safety requirements for the particular AO, activity and likely contingencies, inclusive of supporting emergencies or self-supported evacuation of casualties, or holding safely until external support and evacuation

   b. four personnel in order to enable one person to remain with a casualty while two seek help.

Orders and Safety Briefs

7. Responsibility. The OIC is responsible to the exercise approving authority to ensure that appropriate actions are performed safely. The OIC’s intent is communicated through orders to ensure that all personnel participating in the exercise understand the safety requirements of the exercise and their responsibilities in the event of an incident or accident.

8. Orders. These need not include intimate detail as one might expect from section ambush orders. Rather the orders may be deliberately limited to allow and foster initiative within the participant group, which may lead to unexpected outcomes that significantly enhance learning. It should follow the standard SMEAC format with which ADF personnel are familiar:

   a. Situation. The broad reason for the exercise, inclusive of the higher commander’s intent to inform why the task is being undertaken. This should also include what other elements are doing, the environmental details and weather effects as they are relevant to the mission.

   b. Mission. The purpose of the exercise in order to develop the individual and group qualities required in battle. Generally the mission statement will include either:

      (1) demonstrate/develop resilience

      (2) demonstrate/develop leadership.
c. *Execution.* The how of the exercise described in detail as appropriate to the mission so that leaders and participants can perform to the expected standard. This should include:

(1) the exercise’s aim and objectives  
(2) phasing  
(3) the exercise area layout, including hazards and area limits, routes, locations and bounds  
(4) specific groupings  
(5) specific tasks  
(6) the main effort by phases, functional group and effect  
(7) RV procedures  
(8) timings  
(9) actions on/contingency plans, in particular:  
   (a) the SAR plan, including ‘no contact by’  
   (b) the casualty plan that must be enacted immediately by the team in the event of a casualty  
   (c) action on lost  
   (d) action on separation  
   (e) self-rescue/protection drills.

d. *Administration and Logistics.* This describes the general support to ensure the safe conduct of the exercise, it includes:

(1) the location and description of safety and rescue equipment  
(2) the location of the safety vehicle and the keys  
(3) the health support plan, inclusive of pre-training, stores, medevac by or to external assets
(4) the administration and environmental requirements related to the exercise

(5) rations

(6) dress and equipment, including inspections.

e. Command and Signals. This describes how the exercise will be led. It details:

(1) All appointments, their responsibilities, locations and seniority.

(2) Communications, generally this will be described using the acronym PACE:

(a) Primary. This is the main expected means of communication. Internal to a small group this could be voice or whistle. External to the group this could be mobile phone.

(b) Alternative. This is another expected, redundant, means of communication. Internal to a small group this could be field/hand/visual/paddle signals. External to the group this could be satellite phone.

(c) Contingency. This is if the primary and alternative means of communications are ineffective. Internal to a group this could by the use of day/night flares or smoke. External to a small group this could be moving to a known landline phone or use of a marine radio or similar. This will typically prompt a local SAR response.

(d) Emergency. This is if all other means have failed, or if the situation warrants immediate call for assistance with or without use of other communications means. Typically this will be through some form of emergency locator beacon to prompt a
national rescue coordination centre response.

9. **Safety Brief.** The presentation of a thorough safety brief will assist in the conduct of a safe AT exercise and will identify responsibilities and actions to be carried out in the event of an accident, reducing confusion and enabling a quick response to any AT emergency by the leaders, participants and any supporting agency.
CHAPTER 3

DEVELOPING RESILIENCE

Courage is the ability to operate in the presence of fear, not the absence of fear.

Theodore Roosevelt

SECTION 3-1. FEAR IN TRAINING

3.1 The first time a soldier faces fear or hardship should not be on the battlefield. It is why unit commanders push for hard training, as a means of building resilience in their people. Safely exposing soldiers to fear, and the task of inoculating soldiers to its effects, is a much more difficult task for commanders. Fear may be experienced in many types of training but is a central component of effective AT. This chapter considers developing resilience in the context of AT, however, the principles are equally applicable to other forms of training within Army.

3.2 In order to gain the maximum benefit from experiential learning and AT, it is necessary to understand, and use, the psychological aspects of fear and stress. Fear and stress affect an individual’s performance in many ways, sometimes improving it and sometimes degrading it. In order to improve the Army’s effectiveness in battle, it is necessary to utilise fear and stress to enhance human performance rather than degrade it. In the same manner that we can inoculate soldiers to the sounds and smells of battle through the use of battle effects simulators, so too we can develop their coping strategies for the purpose of dealing with fear and stress.

3.3 Fear is defined as an unpleasant emotion caused by the threat of danger, pain, harm or the unknown.

3.4 Stress is defined as a state of mental, or emotional strain, or tension resulting from adverse or demanding circumstances.

3.5 Resilience is defined as the capacity of individuals, teams and organisations to adapt, recover and thrive in situations of risk, challenge, danger, complexity and adversity.\(^2\)

SECTION 3-3. PHYSIOLOGICAL RESPONSE TO FEAR

3.6 In any scenario one may feel fear or over-arousal. This may be from:
   a. the perceived lack of competence to deal with the situation
   b. overestimation of perceived risk
   c. astute appreciation of the real mortal dangers involved.

3.7 Fear is the body’s normal reaction to danger and affects the body in many ways. When placed in a dangerous situation the brain becomes aware of a threat or challenge as a result of messages received from the senses. Hormones are released and the involuntary nervous system sends signals to various parts of the body. In this way, the brain enters survival mode and prepares the body for fight, flight or freeze. Some of the physiological responses to fear are as follows:
   a. an alert mind
   b. increased blood flow is diverted to the central field of vision (tunnel vision)
   c. auditory occlusion (loss of hearing)
   d. decrease in fine and complex motor skills


LWP-G 7-6-1, Adventurous Training – Planning Experiential Learning Activities, 2019
e. increased respiration
f. an increased blood clotting ability
g. increased sweating
h. tense muscles
i. diversion of blood to the essential organs
j. an increased heart rate
k. rising blood pressure
l. an increased breathing rate
m. open nostrils and air passages in the lungs
n. a release of sugar by the liver
o. a release of adrenaline by the adrenal gland
p. a dry mouth
q. a contracting or failing anal sphincter muscle (extreme fear)
r. a decreased immune response (over prolonged periods).

3.8 The fight, flight or freeze response has evolved over many thousands of years. It is the body’s mechanism for focusing all its resources on the primary objective of staying alive. In a period of danger the body shuts down activity on functions not directly involved in preserving life.

3.9 When the right level of arousal is achieved, the body is capable of achieving amazing feats but, if too much arousal is encountered, the body may be unable to cope with the situation; information and arousal overload may occur. This has a negative effect on the body’s ability to react to the situation. Curiously, many of the physiological responses occur before the person is consciously aware of the danger. This is because many of these functions are controlled within primitive parts of the brain that evolved long before the more conscious parts of the brain that relate to language, music and making tools.
Perception versus Reality

3.10 The body’s reaction to a situation depends on the individual’s perceived risk. Residual risk is not important when determining an individual’s potential arousal level; for example humans have a natural aversion to heights; if you stand someone on the edge of a 10-storey building, their reactions of fear or anxiousness, even when they know they are connected to a rope that could support the weight of a small car, is related to their innate fear of the perceived, rather than actual, risks.

Neurological Reaction to Fear

3.11 Fear is an emotion, or feeling, that is prompted in our perception of threat or danger. Evolutionarily, it is mostly a protective process alerting us to act quickly or with caution. It has impacts on our biology and behaviour and can result in sub-optimal decision-making. Building resilience to fear is an important aspect of performance as a soldier; further, we increasingly understand that this resilience is important in post-military-service life as well.

3.12 Fear is one of the generally agreed six basic human emotions – anger, disgust, fear, happiness, sadness, and surprise. Fear is arguably the most powerful of these emotions, and for good reason, as in an evolutionary sense it protects us from harm. Fear is also important in environments and situations that are new, unknown and uncertain, as is the case in AT. Understanding the underlying mechanisms of how fear manifests in humans is important if we are to overcome fear of situations and environments that are otherwise rationally safe and navigable; for example, in overcoming the inevitable and normal fear that roping over the side of a cliff might stimulate.

3.13 Understanding the biology of fear requires understanding of the brain. This first step is important in the process of building resilience and our ability to navigate the volatility, uncertainty, complexity, and ambiguity of the modern battlefield, AT can be a highly effective activity to achieve this.

3.14 The brain is a complex array of billions of neurons. It has been argued that we know more about our universe than we do of
our brains. Perhaps neuroscientist Paul MacLean’s 1990 Triune Brain model (see Figure 3–1) is most helpful to understanding the operations of the brain in activities such as AT.

3.15 Paul MacLean explains three evolutionary sections of the brain:

a. the ‘reptilian’ brain in the centre – responsible for instinct and survival

b. the surrounding ‘limbic’ or mammalian brain – responsible for emotions and memory

c. the executive ‘frontal cortex’ – thought to be key to complex and rational decision-making.

![Triune Brain Model](image)

Figure 3–1: Triune Brain Model

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3.16 Though much more complex, for ease of explanation we might think of our reptilian brain as developing first, followed by our mammalian brain, with our executive brain developing last. Indeed, recent research indicates that our brains continue to develop deep into our 20s, and at different rates among all humans. How the brain functions and interacts with our surroundings is widely considered to be fundamental to our experience of fear.

3.17 When completing complex tasks, those that require multiple levels of analysis and response (e.g., roping from a cliff), it is optimal that we operate from the executive part of our brain. That is, making rational decisions based on the probability of harm as well as in sustaining the confidence that we will successfully complete the task. However, on occasion we all suffer what might be considered a sensory or emotional overload and the fear being experienced can overwhelm our ability to carry out or complete the task. In some cases this can take the form of anxiety and panic. In extreme cases, this can place others around us in danger, and is even contagious in some circumstances. This is why it is important that we understand the mechanisms and treatments for such instances.

3.18 It is theorised that in cases of severe fear being experienced that our amygdala (a part of the limbic brain and linked to emotional control) can ‘hijack’ our executive brain’s ability to think, decide and act. This is often what is being alluded to in our reference to ‘fight, flight or freeze’. Again, though much more complex, in this situation the body might shut down blood flow to only those parts of the body that are critical to survival, such as the heart, lungs and limbic brain, sustaining a state of survival.

3.19 This can impede our ability to think and behave rationally, and is illustrated in extreme cases such as non-medical shock. However, we can use methods to effectively combat fear and anxiety including cyclic breathing and cognitive reframing (see paragraph 3.35).
3.20 AT has been shown to be an effective way to build resilience in people’s fear response. By incrementally and safely exposing people to increasingly risky experiences, the fear response can be dampened for that specific activity, sometimes referred to as inoculation training. Further, there appears to be some transference of this resilience across life domains and environments. For example, conquering one’s fear of heights may assist, or embolden, us to be comfortable in other recognised fear producing situations, such as in water or public speaking.

3.21 It is also important to note that fear has implications in leadership and teams. If people are subject to punitive leadership or toxic team environments for prolonged periods of time, the brain might display chronic characteristics of amygdala hijacking. In these instances an ‘avoidance’ mindset\(^4\) can be adopted where people are afraid to make decisions, take otherwise reasonable risks or speak up where it is necessary to do so. This has negative impacts leading to suboptimal performance including narrow focus, poor threat and problem analysis, catastrophising and ultimately suboptimal decision-making; what Caroline Dweck might call a ‘fixed mindset’\(^5\).

3.22 However, in environments where people are valued and feel psychologically safe to contribute, where fear is absent, an ‘approach’ mindset can be encouraged. Here people are more likely to make informed decisions, accept being incorrect, take considered risks that contribute to the task, and be more positive and confident. Such individuals and teams are more likely to perform optimally, and are characterised by having a broad focus, increased insight, and being solution focused; what Caroline Dweck might call having a ‘growth mindset’. A high performance teams study by Google\(^6\) makes for


\(^6\) https://rework.withgoogle.com/blog/five-keys-to-a-successful-google-team/ (accessed 14 Mar 19).
interesting reading around how to optimise team effectiveness through creating approach environments in our teams. Understanding our neurology is important in this instance.

3.23 Of course it is all much more complex than this, but the neuroscience matters in AT and in how our teams operate in both experiential environments and situations. Technology now gives us great insight and accessibility to this information. As a learning organisation, Defence will benefit from this greater understanding of how we can perform optimally as individuals and therefore as teams. Understanding our limitations and the neurological interactions between ourselves, our environment, and others provides a powerful way by which to build and maintain resilience, optimal decision-making, and ultimately give us the advantage over our enemies. AT has a significant role in helping us to achieve this.

SECTION 3-4. LEVEL OF AROUSAL

3.24 The dictionary defines ‘arouse’ as ‘to excite into action’. This is a useful term because, before an activity is commenced, the body and mind need to be awakened to make ready for what has to be done.

3.25 Too much arousal, however, can be a problem, this is demonstrated in the student who panics at examination time, goes to pieces and fails the examination. In this case the student may be too anxious, too aroused or too stressed – whichever term is used. Psychologists Robert Yerkes and John Dodson examined this phenomenon and put it into theory in 1908. They represented it graphically as the Yerkes–Dodson law for determining the ideal performance state (IPS). An IPS is gained when an individual is neither under-aroused nor over-aroused.\(^7\) Figure 3–2 illustrates an IPS.

\(^7\) Yerkes, RM and Dodson JD 1908, ‘The Relation of Strength of Stimulus to Rapidity of Habit Formation’ in Journal of Comparative Neurology and Psychology, Volume 18, Issue 5, pp. 459–482.
The following points should be noted about arousal levels:

a. Arousal levels fluctuate very quickly, especially during a highly stressful activity.

b. Arousal levels are very much an individual thing; that is, each person has their own particular IPS.

It is important to understand and monitor arousal levels before they can be properly controlled. An individual must therefore know how to monitor their own individual arousal level by looking at how their body reacts to perceived pressure or stress before they can look at the best method to control it. A leader or guide must be able to monitor the arousal levels of participants, and adjust the perceived risk in order to maintain the participants in their IPS.

Arousal has the following benefits:

a. Optimises Ability. The IPS is a state where an individual’s ability to perform is optimised, so by
developing the ability to maintain the IPS an individual is able to maximise their abilities.

b. **Assists Learning.** Lessons learned during experiential learning and AT are firmly entrenched.

### 3.29 Arousal can have the following drawbacks:

a. **Over-arousal Stress.** Over-arousal can lead to an inability to cope with a situation.

b. **Post-traumatic Stress Disorder.** If arousal is prolonged or intense, post-traumatic stress disorder may result.

### 3.30 **Comfort Zone Model.** This model looks at how you respond to new and unfamiliar situations. The goal is to expand your comfort zone by taking calculated risks to engage new challenges. The key is to working in the edge of the stretch zone so that your comfort zone gradually expands (see Figure 3–3). If you do not invest in yourself to continually work on expanding your comfort zone, it will contract over time and things that were once manageable will become daunting. The model consists of the following three zones:

a. **Comfort Zone.** The comfort zone is where we operate in day to day. The experiences in this zone are known or not threatening. They will cause little anxiety or stress but actions and decisions may be impacted due to boredom or overfamiliarity. This is an essential zone for effective recuperation. It is comfortable here and can be a very hard place to leave.

b. **Stretch Zone.** The stretch zone is often exciting, challenging and engaging but can also be intimidating. A key fact indicating that you are operating in the stretch zone is the presence of stress, doubt and uncertainty of the outcome. This zone is where the most effective learning and development can occur, but is unsustainable for long periods of time.

c. **Panic Zone.** The panic zone is where some, if not all of your behaviours become unmanageable and involuntary. At the worst case your brain will engage...
primitive fight/flight/freeze posture responses. A person in this zone is no longer capable of the higher functions of leadership or learning.

**Figure 3–3: Comfort Zone Model**

### SECTION 3-5. STRESS

3.31 Stress usually occurs when an individual's level of arousal goes beyond their IPS and they no longer feel able to cope with the situation. The body’s reaction to this over-arousal is both physical and psychological, and is often referred to as the ‘fight, flight or freeze’ response. When warranted, the flight or fight response is beneficial as it prepares the body to deal with the pressure situation. However, when unwarranted or excessive, arousal can lead to stress.

3.32 Cumulative stress is the result of extended, repeated and severe exposure to stress. Equally, low levels of stress for an extended period can also result in high levels of cumulative stress through under-stimulation. Think of yourself working in a job that is mind-numbingly boring, and how that would affect your stress levels if that was all you had to look forward to each day when you went to work. This can also be observed in warfare, which involves a high percentage of boredom mixed
with moments of terror, or high activity. It is because of this that it is desirable for AT to aim for multi-day activities, which allow members to develop coping strategies for such stresses, thus emulating the extended and often open-ended nature of military operations.

Stress Management Approaches

3.33 The following stress management approaches are applicable to events in training or in real-world circumstances such as operations.

3.34 Prior to an Event. Ways to help prevent stress prior to a stressful event include:

a. *Training and Education.* It is said that knowledge conquers fear. A detailed explanation of a situation may assist in controlling the fear response. Knowledge of a situation requires setting specific, measurable, achievable, realistic and time-bound (remembered using the acronym SMART) goals in defining success.

b. *Front-loading.* Front-loading is a technique used to psychologically prepare people for a stressful event and includes an element of risk disclosure. This is a structured facilitation mechanism addressed further in Chapter 5.

3.35 During an Event. Ways to help manage stress during an event include:

a. *Tactical Breathing.* This type of breathing is a common stress management technique, and is widely used as a means to lower heart rate variability and allow the mind to focus. Tactical breathing, done properly, activates the parasympathetic nervous system, which automatically produces physiological responses in the body to reduce the stress response. To follow the proper breathing technique:

   (1) breathe in over a 4 second count
   (2) pause at the top for 4 seconds
(3) breathe out deeply over 4 seconds and
(4) then pause at the bottom for an additional 4 seconds
(5) repeat four times or as necessary.

b. ‘Three Threes’. The ‘three threes’ process assists in relaxing the mind. To follow the ‘three threes’ sequence:
(1) look for and concentrate on three sights
(2) listen for and concentrate on three sounds
(3) feel and concentrate on three objects
(4) relax, focus and continue.

c. Focus on Process not Outcomes. Focusing on potential outcomes of an activity can significantly increase levels of stress. It is only by focusing on completing sequential steps in the process (which is often a simple one) that a participant may effectively ‘shut out’ their source of stress. They can assure themselves that they are trained and ready to complete the task.

d. Positive Thinking. When focusing on the process it is important to replace defeatist and negative approaches with positive thoughts and positive self-talk. For example, if a participant is paddling a kayak down a rapid where there is a dangerous rock that the participant does not want to hit, do not tell them, ‘Do not hit the rock!’ as this may paradoxically cause them to do so as their focus on it is increased. The brain visualises thought and the body subsequently follows. It is far better to project outcomes by saying, for instance, ‘Go to the left of the rock!’.

e. Visualisation and Modelling. When using tactical breathing, and having reduced the heart rate variability to an acceptable level, you can begin to mentally rehearse and visualise yourself completing the task. See yourself performing the required process flawlessly, or visualise someone else performing the task with ease.
When modelling off of someone else it is important to focus on the aspects of that person you think are ideal for that situation. Your aim is not to try to be them, but rather to be the best you can be, by modelling the positive attributes you have identified in them.

f. *The Optimistic Outlook.* One good way to manage fear is acceptance of the knowledge that, whatever the possibility is which is scaring the participant, it has not happened yet. It is true that fear can be increased by the memory of previous experiences, but the primary issue causing the concern is still yet to happen.

g. *Leadership.* Sometimes it is purely strong leadership that is required to reduce a stressful situation. Through personal example or telling participants to ‘bite the bullet’, a leader may enable participants to normalise the situation and reduce their stress to an acceptable level.

h. *Humour.* There are many absurdities in life, and many will be evident during the conduct of AT activities. These absurdities form a good base for the development of humour, which is of immense value, especially when people are afraid and tired. It breaks the ice, lightens the load and reduces tension. It provides a sense of proportion in the face of adversity.

i. *Inoculation.* Phobias and fear can be inoculated against. A gradual progression of training, repeated exposure and effective processing strategies can be used to enable people to develop confidence and overcome fear. Activities should be designed to allow all participants to finish having achieved a level of fear and stress inoculation. This might mean you need to have smaller activities or goals for people who are struggling. An example might be guiding a claustrophobic participant in a caving activity through a less challenging, but still tight and for them emotionally challenging squeeze, than is undertaken by other participants.
j. **Smile.** The brain links a smile with a pleasant experience. By smiling while stressed, it is possible to ‘fool’ the brain into thinking that the situation is not as bad as it seems!

k. **Instant Centring Sequence.** The instant centring sequence allows the body to instantly relax on command. This is detailed in Annex A.

### 3.36 After an Event.

Stress management after a training event will be conducted by activity facilitators, leaders, guides or UATL. For significant life events further support may be required from professional counsellors, friends and family. The following are methods of formal stress management:

a. **Defusing/Immediate Debrief.** A defusing or an immediate debrief occurs at or close to the time the incident occurred and attempts to immediately reduce the impact of the incident.

b. **Debriefing.** A debriefing ideally occurs after time is allowed for individual reflection. Debriefings provide a structured situation for personnel to air their thoughts and feelings in relation to the incident and gain perspective. A debrief is a technique used during the reflection and generalisation stages of the experiential learning cycle to process the experience, through reflection and discussion with fellow participants. The two main types of debrief are:

   1. **Adventurous Training Debrief.** An AT debrief is an informal, structured discussion facilitated by the UATL with the aim of having participants analyse and verbally share their adventurous experience. AT debriefs provide information on likely reactions to the activity and identify personnel already experiencing or at risk of severe stress reactions.

   2. **Critical Incident Stress Management Debrief.** Critical incident stress management covers a wide range of programs and intervention strategies. Critical incident stress management strategies...
were originally designed to prevent stress in emergency services personnel and to assist them in managing and recovering from significant stress should they encounter it in their work. This type of debrief is formal and is only to be conducted by trained professionals.

3.37 The Army Resilience Framework. The framework (see Figure 3–4) builds resilient individuals and teams, and provides leaders the training to support this development as well as enable soldiers to bounce back from setbacks and enhance their effectiveness in all other areas of their lives.

Figure 3–4: The Army Resilience Framework
SECTION 3-6. CONCLUSION

3.38 Fear and stress are a physiological and/or psychological issue that require effective measures to address them appropriately. Through some experiential learning activities, and AT in particular, fear and stress management mechanisms can be developed that will help soldiers function better in future situations.

3.39 UATLs, guides, leaders and facilitators should aim to maintain participants at their individual IPS for the duration of the activity. Through the use of formal and informal fear and stress management processes, participants can be assisted to maximise their human performance potential.

3.40 It is therefore imperative to understand what participants are going through. This includes their fears and doubts and their need for encouragement. Probably more than in any other military training, there is a need for the instructor to be understanding and supportive. There is no place in AT for an instructor who yells and screams at participants or ridicules their attempts.

Annex:

A. The Instant Centring Sequence
ANNEX A TO CHAPTER 3

THE INSTANT CENTRING SEQUENCE

1. The instant centring sequence allows the body to instantly relax on command. As you practise the progressive relaxation technique use a key word (‘relax’) or some action (deep breath) that can be linked to this relaxed state. After further practise, you will need only to think of the word or carry out the action to evoke the relaxed, alert state.

Progressive Relaxation Technique

2. The progressive relaxation technique is designed to assist in relaxing the body and mind. It involves tensing and relaxing muscles in a systematic fashion to induce a relaxed, alert state. The steps are as follows:
   a. Find a comfortable, quiet position.
   b. Close your eyes, control your breathing and clear your mind.
   c. Tense and release each major muscle group in a systematic manner, including legs, torso, arms and head.
   d. After releasing each muscle group, scan those muscles to ensure that they are completely relaxed.
   e. Now concentrate on relaxing all the muscles in your body. Mentally scan your body from head to toe to identify any muscles that might still be tense. Maintain this state of total relaxation for a period of time.
   f. Open your eyes, stretch and feel refreshed.
Instant Centring Sequence

3. This process is often called centring and is a useful technique to control your arousal level, but it can require weeks to master. The full instant centring sequence is as follows:

a. **Stage 1.** During this stage:
   - (1) employ the progressive relaxation technique (see paragraph 2) using a key word or action
   - (2) control your breathing
   - (3) try to tune into your heartbeat to slow it down and think ‘into’ the feelings of relaxation
   - (4) practise two times per day for two or three weeks.

b. **Stage 2.** During this stage:
   - (1) speed up Stage 1 by tensing your whole body on the in-breath and relax all of your body on the out-breath using a key word or action
   - (2) feel your centre of gravity sink lower and lower
   - (3) practise several times a day for a week or two.

c. **Stage 3.** During this stage, simply breathe in and out and trigger relaxation by using a keyword or action.
CHAPTER 4

DEVELOPING LEADERSHIP THROUGH EXPERIENTIAL LEARNING AND ADVENTUROUS TRAINING

SECTION 4-1. LEADERSHIP

[By] leadership we mean the art of getting someone else to do something that you want done because he wants to do it, not because your position of power can compel him to do it, or your position of authority.

_Dwight D Eisenhower_¹

4.1 Leadership is, arguably, the single most important factor in any team. While there are exceptions, it is generally accepted that most people are not born leaders, and it is extremely rare that a ‘natural born leader’ has not devoted some time and effort in developing their leadership ability. Leadership is a skill that can be learned, developed and refined.

4.2 Learning to become a leader can start with a theoretical understanding of leadership theory. There are many theories of leadership available to study, one of which is the Army Leadership Model. The Army Leadership Model provides a sound theoretical framework for leadership practice and behaviour within the Australian Army. The Army Leadership Model is presented in Annex A. The Army Leadership Model is complemented by the Army Principles of Leadership, and is underpinned by Army’s core values. While it is imperative that all leaders in the Australian Army are fully conversant with the Army Leadership Model, and Army’s Values and Behaviours, leaders should look to other models of leadership to inform and

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¹. Remarks at the Annual Conference of the Society for Personal Administration, 05/12/54 https://www.eisenhower.archives.gov/all_about/index.html#leadership (accessed 13 May 19).

LWP-G 7-6-1, Adventurous Training – Planning Experiential Learning Activities, 2019
improve their leadership practice (know yourself and seek self-improvement is one of the principles of leadership). Annex B provides some additional leadership theories to inform your leadership theoretical development. Annex B is not intended to be a comprehensive discussion on leadership, and you are encouraged to do your own further research in the field of leadership.

4.3 A theoretical understanding of leadership is critical; however, it is not in itself enough to make a good leader. It is the practical application of knowledge that is of greatest importance.

4.4 Challenging experiential learning, and AT in particular, has the potential to provide formative and enduring leadership opportunities, especially amongst junior ranks that are still developing their leadership style. AT is able to provide real life, high-stress situations that can simulate the psychological conditions of battle, probably better than most other forms of training. If used as an adjunct to the normal leadership development program for junior officers and NCOs, substantial benefits can be gained. In addition, this training can be carried out at comparatively little cost.

4.5 This chapter has been written to provide guidance to UATLs and leaders of outdoor adventure-based activities to enable the development of both UATL leadership and participant leadership. It provides a revision of the Army Leadership Model and provides guidance on leadership for the design, planning and conduct of AT and other experiential learning activities, for which many of the principles are equally applicable. For complete leadership doctrine see LWD 0-2, Leadership.

SECTION 4-2. MECHANISMS FOR DEVELOPING LEADERSHIP

4.6 There is considerable evidence that leadership is best practised in arduous circumstances, if that is the environment that leadership is to be delivered. This is particularly important for Army’s leaders; the closer we can replicate the complexity and stress associated with leading during an operational
deployment, and during combat operations in particular, the better prepared Army’s leaders will be in these situations.

4.7 AT has many features similar to the battlefield. AT provides an environment that challenges and stimulates all participants; one in which risks are real, and one which encourages individuals to accept responsibility for their actions, decisions and development. Importantly, AT and other experiential learning activities can be designed to provide immediate consequences of any decision made, and this allows the developing leader to review their decision-making process, with a view to understanding their leadership decisions and subsequently refine their approach as needed. The experiential learning cycle (see Chapter 1) should be the catalyst for leadership development during an AT activity.

4.8 AT can develop leaders in two fundamental ways. The first is to develop within the participants the qualities required of a good leader:

a. physical and moral courage
b. self-confidence
c. self-reliance
d. determination.

4.9 The second way is to provide participants the opportunity to exercise their leadership in a challenging environment with elements of real and perceived risk. AT is an open learning environment which provides an ideal opportunity for developing leaders to experiment with their own leadership styles. This feature should be emulated to the extent possible in other forms of experiential learning. By trying different styles in different situations, leaders will be able to determine the most effective style for them.

4.10 ALs are able to delegate group leadership roles to participants while maintaining technical control and responsibility for the safe conduct of the activity. This provides the opportunity for participants to exercise their leadership; however, as with developing individual or group qualities, the delegation of group
leadership should not be done in an ad hoc manner, if the aim of the activity (or one of the aims) is to develop leadership. To be effective in developing leadership the activity needs to be designed, conducted, and facilitated, with a deliberate aim to develop leadership.

4.11 The leadership skills of ALs also benefit from the conduct of experiential learning activities, however, this is rarely the primary aim and leaders should strive to put their participants first, to 'make them the hero'.

SECTION 4-3. GUIDELINES FOR DEVELOPING LEADERSHIP

Army Leadership Model

4.12 Central to the Army Leadership Model (see Annex A) is the Functional Approach to Leadership (see Figure 4–1). This allows the activity design to focus on the tasks to be completed (task needs) in a manner that will require the participant leader to manage both individual and group needs to achieve the activity goals.
In the case of AT, the UATL needs to fully understand the particular strengths and weaknesses of each AT discipline with regard to developing leadership. This will ensure that activity selection and design is based on optimising leadership development (rather than simply based on their own expertise or interest). All ALs also need to understand the factors associated with both individual and team (group) needs.

**Individual Needs**

4.14 While leaders may expect individuals to perform actions and complete tasks as instructed or directed, each individual has
differing strengths, weaknesses, attitudes, values, ethics, character traits and morale. With an understanding of individual behaviour and how individuals affect team behaviour, a leader is more likely to work successfully with others in building a cohesive team.

4.15 No two individuals are the same. Personality, capability, life experiences (both good and bad) and the situation, affect how an individual is likely to act. Different individuals have capabilities that may be of use to the team, such as physical, mental or spatial ability, and different character traits such as motivation, self-esteem and a sense of humour. A strong situation such as those that may occur on an AT activity, will bring out the best and worst in individuals. This will be generated through fear, consequence and stress throughout the activity.

4.16 When there are strong differences in the values individuals hold, it is difficult to develop the common goals that enable a team to work well. However, differences in the capabilities and personality styles of team members, rather than hindering good teamwork, can provide richness and depth to the experience. A leader should aim to use and coordinate individual personalities and capabilities to achieve the best effect for the group.

4.17 Individual Motivation. Some individuals apply more effort in achieving goals than others. The effort people apply to tasks is a reflection of their own level of motivation. Motivation is a willingness to exert effort towards achieving a team or organisational goal in order to satisfy some individual need. The effort expended is proportional to the individual requirement to satisfy their needs. In order to achieve a group task, it is a requirement that the individual's need is compatible and consistent with the team's goal or task.

4.18 A key motivational theory is Maslow's Hierarchy of Needs (see Figure 4–2). Developed in 1968 by American psychologist Abraham Maslow, the hierarchy of needs theory advances the proposition that an individual is motivated only by unsatisfied needs and that, once a need has been satisfied, it is no longer
a motivating factor. The theory describes needs as arranged in a series of levels: a hierarchy of importance. As lower order needs are largely met, higher order needs emerge and require satisfaction. Only once the lower order needs are met will an individual feel motivated to achieve goals that satisfy higher order needs.

4.19 Maslow’s Hierarchy of Needs is described as follows:

a. **Physiological Needs.** These are the basic needs of life – air, food, water, warmth and sleep. Only once these needs are met will an individual feel motivated toward the security needs.

b. **Security Needs.** These needs include safety and shelter.

c. **Social Needs.** These include friendship, affection, and a need to feel part of a team or society. The achievement of a task that satisfies the social needs may include an activity in which teamwork is required.

d. **Ego Needs.** These are the need for recognition of achievements by the individual and peers or by their team. The success of a goal will go towards satisfying the egotistical needs of individuals.

e. **Self-actualisation Needs.** These are much higher level needs related to a rich and rewarding life based on respect for self. These needs cannot really be satisfied through participation in an activity.
Using Maslow’s Hierarchy of Needs to Develop Leadership

4.20 AT can be shaped to challenge the participant leader’s ability to meet the individual needs of their group, especially at the lower three levels of the pyramid. These challenges can be manipulated and monitored to generate rich debriefs.

4.21 Physiological and Security. When individuals are wet, cold, hungry, tired (physiological), and scared (security) they will focus inwards and be less inclined to work towards achieving group and task needs. AT activities, by their nature and careful design, provide the medium by which the physiological and safety needs of individuals can be deliberately compromised, so that the participant leader is required to address the individual needs of participants.

4.22 Social. Participant leaders can also be challenged to meet the social needs of participants. For example, a whitewater rescue scenario requires an upstream scout; this is a task that can be

Figure 4–2: Maslow’s Hierarchy of Needs
quite lonely and isolating and a person that inexperienced leaders will often forget about. As such, a simulated whitewater rescue incident with a participant leader in charge provides an ideal opportunity to discuss the social needs of each team member in situations of stress. Understanding the social needs of individuals, according to Maslow’s theory, also allows the participant leader (or the facilitator) to use the social needs as a barometer of how individuals within the team are coping. Social withdrawal is an early indicator of a person not having their physiological or security needs met. This can be a very useful observation for the participant leader on an activity, or a leader in an operational role; and it is a lesson that can be well learned during challenging AT.

Group Needs

4.23 Teamwork is fundamental to the core business of Army and may be effectively developed through experiential learning and AT. Most unit activities are organised around groups of participants. A group may be defined as a number of people who have either come together or been put together for a purpose, such as, to complete a mission or play sport as a team. Groups are formed so that the members of the group can receive some form of benefit and are generally classified in the following manner:

a. *Formal Groups.* Formal groups are created by an organisation for a specific purpose. Grouping involves a means of organising work to enable the organisation to achieve its overall goals. Formal groups are normally structured in a hierarchical fashion, with individuals being appointed to head the various sub-groups within the organisation.

b. *Informal Groups.* Informal groups result from shared interest among individuals, such as sports and hobbies. Informal groups often have emergent leaders and may form a ‘shadow’ organisation that can exert a powerful force, both good and bad, on the formal organisation.
4.24 For the conduct of an activity, there may be benefits from replacing the formal groups of the workplace with informal groups of mixed rank, gender and organisation in order to add to the disorientation of the participants. Conversely, learnings from the activity may be more effectively transferred to the workplace if the team that works together also has a shared adventure experience.

Group Development

4.25 The aim of group development is to achieve a cohesive team. A group is cohesive when its members are attracted to the group’s task, to its prestige and to other members of the group. Importantly, highly cohesive groups perform better than non-cohesive groups, especially if the groups are small. Where tasks are interdependent, the collaborative actions of cohesive groups will help achieve these tasks. Because cohesive groups are self-policing, they also control member behaviour.

4.26 The Functional Approach to Leadership model identifies that the leader is constantly balancing individual, group and task needs. A leader that can create ‘self-policing’ group can devote more effort to individual and task needs. If we consider the relationship further, a ‘self-policing’ group will go a long way towards meeting individual needs; again allowing more effort to be directed to task needs.

4.27 Groups develop in a series of stages. Each stage has different implications for individual behaviour and for group performance. The stages are not discrete, but appear as levels in the group evolution from formation to close. The different stages that new groups will experience as they develop into an effective team are as follows:

a. **Forming.** This stage includes when group members first meet and learn about the task or tasks to be completed. It is characterised by a sense of uncertainty and awkwardness, and perhaps anxiety. The group norms and standards are yet to be defined, and members are eagerly looking to find out what is acceptable behaviour within the group. Most members are polite, resulting in a
superficial level of harmony and cooperation. The group begins to understand the nature of its members and the interests, abilities and values that each individual brings to the group.

b. **Storming.** This stage is characterised by individual assertive behaviour, which may result in some group instability and conflict. Informal leaders begin to appear, power struggles may erupt and conflict may arise about how the task should be accomplished. The members of the group have each begun to feel comfortable enough with their new environment to take some risks in revealing more of their personalities. Each person wants to feel a sense of individual importance and to influence the group (by finding a niche).

c. **Norming.** Norming refers to the stage in which the group becomes more cohesive. Close bonds and relationships are formed between members of the group. By this stage, the group will have defined its roles and the various relationships among roles. Appropriate behaviour will also have been established, and an identifiable group culture will have started to emerge. Members of the group will take responsibility for resolving conflicts and strengthening friendships.

d. **Performing.** The performing stage is achieved when the group is working well as a team and is working toward achieving goals or tasks. By this stage, it is reasonable to expect that the group will work smoothly and productively together. Group members look outwards to see how other people in the group are feeling in order to make sure all are supported. Decision-making and problem-solving will be shared within the group. At this stage, the group is mature enough to attend to its own needs in terms of both task and relationship matters.

e. **Mourning.** The mourning or adjourning stage occurs when the group has achieved its task or when the group is disbanded. Feelings of sorrow and loss accompany this stage as members find themselves in an
environment that does not satisfy their individual needs in the same way.

Using Stages of Group Development to Develop Leadership

4.28 The Stages of Group Development model suggests that groups move through each stage sequentially. This certainly can be the case and a well-designed activity can provide a developing participant leader with valuable experience in leading a group through the stages of group development in a challenging environment. It is a leader’s responsibility to lead their team through the stages of group development and get them to the performing stage as quickly as possible, and then to keep them there.

4.29 While personality issues and individual values may affect the development of the team and thus the achievement of the goal, failure to achieve goals is the most common cause of group disintegration. At any stage, a group may begin to doubt its capability, values or even leadership. The group may plateau or revert to the norming, or even the storming stage. The mutiny on the HMS Bounty is a classic example of a group regressing to the storming stage, and selecting a ‘new leader’.

4.30 A well-designed activity will put pressure on individual and group needs, thus requiring the participant leader to actively lead and address any personal and/or group issues in order to ensure that the group reaches and maintains the performing stage. The leader and group performance in responding to these challenges can make useful subjects for effective debriefs.

4.31 Where the activity environment does not sufficiently challenge individual and group needs, the UATL or facilitator may need to further shape events to ensure that the participant leader is challenged. This should be done only as far as is necessary to extract opportunities for learning and should not compromise safety.
Design

4.32 Activity design must specifically target leadership: it should, wherever possible, put a participant in the leadership role. While multi-day, expedition style activities, lend themselves to leadership development, single day activities can provide opportunities to develop leadership, if the UATL delegates responsibility to a participant leader. Even a single day abseiling activity has leadership responsibility – the participant leader can carry out equipment checks, delegate roles for transporting equipment to the abseil site, and possibly deliver the safety brief, all the while under the supervision of the UATL.

Task Needs

4.33 There are two quite distinct, but complementary aspects of the task needs of an experiential learning or AT activity. The first is to develop the required qualities and the second is the specific activity tasks to be completed. For example, a Nordic ski activity may target determination and leadership (qualities) by completing a ski tour or building survival shelters (activity task). The activity should be designed to ensure that qualities are developed from the specific activity tasks, which may involve an element of artificial complexity. The participant leader should be focused on the activity task need while the UATL or facilitator should always be focused on developing the required qualities.

SECTION 4-4. CONFLICT RESOLUTION

4.34 Leaders are often required to gain the unwilling cooperation of others. An important leadership skill is the art of persuading others to the leader’s way of thinking. Effective conflict resolution brings individuals or groups to a suitable agreement in the short term and creates improved working relationships in the longer term.

4.35 Conflict may occur between individuals in the group, between an individual and the leader, or between the leader and the group. While some conflict is constructive and can result in
healthy debate and the creation of new ideas, further conflict will inhibit team performance. The team does not suffer from conflict inherently, but through conflict that remains unresolved. Leaders must identify conflict as it arises, because the earlier conflict is explored through facilitation, the better the team will perform.

4.36 There are five major conflict strategies, as follows:

a. **Avoiding.** Under this strategy a leader may appear neutral or may actively avoid the tension that conflict creates. The leader may monitor the situation in order to wait and see if the conflict is resolved by group members themselves.

b. **Accommodating.** Under this strategy a leader may accommodate the needs of others in order to maintain harmony. Most often a leader may neglect their own needs in order to ensure that the group members are satisfied.

c. **Forcing.** Forcing involves attempts to overwhelm an opponent with formal authority and the use of power or threats. This style may be appropriate when quick, decisive action is vital.

d. **Compromising.** Under this strategy, middle ground is found between two opposing views. In order for the strategy to succeed, both opponents must be willing to sacrifice, which may mean that the best result for either opponent is not achieved.

e. **Collaborating.** Collaboration is a strategy which attempts to solve conflict through honest discussion and is used by leaders who seek long-term benefit or a winning situation for both opponents.

4.37 Understanding each of these strategies and when it is best to apply them generally leads to a better result overall, even when opponents are uncompromising or unaware of the different conflict resolution strategies. The leader’s individual style, the personalities and capabilities of group members, the strength
and culture of the group, and the situation will all demand application of different conflict resolution strategies at different times during the conduct of an AT or adventure-based activity.

SECTION 4-5. LEADERSHIP OF FEAR

4.38 AT is mandatory for the target participants. Nonetheless, senior ranking members of a unit have the ability and authority to avoid AT and often exercise this discretion, leaving the activity to ‘those who need it most’; junior officers, NCOs and soldiers.

4.39 The reality is that fear is often a fundamental aspect of AT and fear has no respect for rank. Non-attendance in battle is not an option so the same should apply to AT as it is preparation for battle.

4.40 Senior ranks who avoid AT forego the opportunity to demonstrate that they would not ask their soldiers to do anything that they are not prepared to do themselves. They forego the opportunity to demonstrate a human side of their leadership and the opportunity for frank feedback from the people from whom it means most. The net result is an increase in genuine respect from soldiers for their leaders.

4.41 To help manage this issue:

a. commanders must be encouraged to direct and monitor the attendance of the target participants

b. UATLs should acknowledge the attendance by senior ranks and reinforce the respect this develops

c. UATLs need to stress to all participants and approving authorities the purpose of the rank-neutral environment and that fear has no respect for rank.
Principles of Leadership

There are 10 principles of leadership behaviour in the Australian Army. They have withstood the test of time and are useful for self-assessment and in developing a personal leadership style. These principles include:

a. be proficient
b. know yourself and seek self-improvement
c. seek and accept responsibility
d. lead by example
e. provide direction
f. know and care for your subordinates
g. develop the potential of your subordinates
h. make sound and timely decisions
i. build the team and challenge its abilities
j. keep your team informed.

Army’s Rules for a Fair Go

The Army’s ‘Rules for a Fair Go’ apply to all ranks in the Australian Army. They provide a set of principles for behaviour for all Army members. The Rules for a Fair Go have been developed to enhance the Army’s values, ethics and ethos. They are as applicable to leaders as they are to individuals and groups. The Rules for a Fair Go are as follows:

a. Bring honour to your country, the Army, your mates and yourself. Respect and use the Army values of:

   (1) courage
   (2) initiative
   (3) respect
   (4) teamwork.
b. Earn the trust and loyalty of your team. Do not let your mates down.

c. Be accountable for your actions and decisions.

d. Encourage your mates to do the same.

e. Treat others as you want them to treat you.

f. Lead by example. Look after all your people all the time.

g. Have the courage to stand up for what is right and stop unacceptable behaviour.

h. Be honest always.

i. Respect the differences in others (ie, gender, personality, race or religious beliefs).

j. Make our chain of command work.

k. Use the military justice system; it is there to give you a fair go.

SECTION 4-7. CONCLUSION

4.44 Leadership development begins with a study of leadership theories, and for Australian Army junior leaders a comprehensive understanding of the Army Leadership Model. However, to fully develop one’s leadership, a person needs to practise being a leader in challenging and demanding environments. The closer we can replicate the challenges of the battlespace, or operational deployment, for developing leaders, the more confident those leaders are likely to be once deployed.

4.45 To effectively develop leadership, the activity needs to be designed with leadership as one of the clear aims: simply rotating the role of the leader during an activity is not the most effective way to develop leadership.

4.46 Effective facilitation of an activity requires that opportunities are sought to manipulate the ‘task’ needs in such a way that the
participant leader needs to then take care of both individual and group needs.

Annexes:
A. Army Leadership Model
B. Leadership Theories
ANNEX A TO CHAPTER 4

ARMY LEADERSHIP MODEL

Definitions

1. **Command.** Command is the authority which a commander lawfully exercises by virtue of rank or assignment. Command includes the authority and responsibility for effectively using available resources and for planning the employment, organising, directing, coordinating and controlling of military forces for the accomplishment of assigned missions. It also includes responsibility for the health, welfare, morale and discipline of assigned personnel. Commanders command organisations but lead people.

2. **Leadership.** Leadership is the art of influencing and directing people to achieve, willingly, the team or organisational goal. Leadership is not intended to replace or reduce command authority, but it produces more effective results as it engages people at a deeper, more personal level.

3. **Management.** Management is the act or manner of administering, handling, directing or controlling personnel. Management refers to the organisation of resources (including human resources) in order to achieve an organisational task or goal.

Relationship between Command, Leadership and Management

4. There is a complex relationship between command, leadership and management. The three are not often undertaken in isolation. They are inclusive and weighted according to the situation. For example, on the battlefield, a leader may need to manage their resources but will place a greater emphasis on the need to lead their soldiers into battle. There is also a degree of command in that the leader has the command authority of their soldiers.

5. For an AT or adventure-based activity, the leader or UATL may have no command authority but will be expected to
successfully achieve the task or goals of the activity through the application of leadership and management skills.

Army Leadership Model

6. The Army Leadership Model (see Figure 4–3) and principles provide a sound theoretical framework for leadership practice within the Australian Army. It is a product of research and includes elements from a number of approaches. The model incorporates and extends the Functional Approach to Leadership (adapted from the power and influence approach). Leaders will need to operate from the inside out in relation to the model\(^2\) and the particular environment or situation. The model and principles are applicable to peace and war, to routine exercises, during operations, in training, and on AT activities.

\(^2\) Vision, functional needs, leadership style (within the context of the culture).

*LWP-G 7-6-1, Adventurous Training – Planning Experiential Learning Activities, 2019*
7. **Vision.** The primary responsibility of the leader is to define the team's purpose and identity. Providing direction is central to the task of leadership. It equips the leader and the team with the essential knowledge of their current position, future direction, the means to achieve this and the proposed end state. A shared vision is the glue that holds a team together and keeps it moving forward despite adversity. What is also important is the impact on those who see the vision. Ideally it should create excitement and challenge, and enable group members to focus, define boundaries and create commitment.
8. **Functional Needs.** The functional approach to leadership was developed by John Adair, a British professor, in 1983. The functional approach encompasses task, group maintenance and individual needs. Although quite distinct in themselves, the three areas overlap, and actions taken to satisfy one need will affect one or both of the other areas. The theory of group needs determines that a leader must be able to identify the needs that exist within a group and effectively provide for these needs. In any situation, different emphasis may be placed on individual, group or task needs. The functional approach to leadership is shown in Figure 4–1.

9. **Leadership Style.** An individual’s personal leadership style is a combination of personality, character and behaviour. A leader’s ability to employ a range of appropriate behaviour is vital. The leadership style employs participative behaviour and motivating behaviour. The relationship between the two behaviours is shown in Figure 4–4. A balance between the two styles of behaviour is required to achieve the task. On an AT or adventure-based activity, a UATL or GL may use differing ranges of both participative and motivating behaviour, depending on the situation, the risk and danger involved, and the objectives of the training. These two behaviours are dependent upon both the group and the situation:

   a. **Participative Behaviour.** This behaviour ranges from collaborative (a high level of group input) to directive (a low level of group input) leadership.

   b. **Motivating Behaviour.** Motivating behaviour is concerned with motivating team members to act willingly through leader influence and motivation to achieve team tasks and goals. This behaviour ranges from transformational (the group is aware of the importance of the task) to transactional (incentives are given).
10. **Culture.** Culture is an essential leadership consideration, as it is from within the Army culture that leaders must operate. An organisational culture comprises a set of values, norms and beliefs, as well as less visible underlying assumptions that form the basis of shared understanding within a group. Myths and legends, ethoses, ethics and loyalty, as well as the Army’s expressed values of courage, initiative, respect and teamwork, are typical of the wider Army culture. Symbols such as badges and uniforms also assist in building an organisational culture. Leaders assist to create cultures when they create groups and organisations. Once cultures are established, they determine the leadership values of the organisation. Leadership takes place within the culture of an organisation or team. If leaders do not become conscious of the culture in which they are embedded, that culture will manage them. A UATL and other leaders must remain aware of the culture and values of a group participating in an AT or adventure-based activity, as that group may be from an environment which is very different from that of the UATL.

11. **Environment.** Leaders must be aware of the environment in which an activity is conducted. The environment and the situation will also shape the leadership style and method used just as much as the leader and the individuals in the group. The environment of risk and danger in which AT and adventure-based activities often take place may result in
individuals and groups behaving in a different manner from which they might behave in a more familiar environment. UATLs and leaders of adventure-based activities should recognise the differences in behaviour and adjust their leadership style to achieve the tasks and the objectives of the training. The environment includes:

a. **Internal Factors.** Internal factors include the climate within the team (such as mood and morale) as well as the impact of organisational structure and processes.

b. **External Factors.** External factors include political, economic and social considerations, the impact of technology, and even regional and international issues. For AT and adventure-based activities, this may include restricted use of land managed by national parks or the impact of other users in the training area.
ANNEX B TO CHAPTER 4

LEADERSHIP THEORIES

1. Leadership has been the subject of study for thousands of years. There are many theories, some have lasted while others have not. Some are explained here.

2. The Great Person. Originating in the nineteenth century this proposes that individuals are born great. That they are inexplicably destined to be leaders, this theory has fallen given that individuals can be trained and developed to be leaders. Furthermore, this theory focuses upon followership and control over others based on authority due to righteous position rather than growth and empowerment of the team.

3. Traits. This approach is based on the idea that leaders are born with certain qualities or traits (such as intelligence, self-confidence and ambition) and that these can be trained. This theory has holes in that many leaders do not share common traits. Further, some traits that bring success in some situations do not in others. This theory also ignores factors that influence group performance.

4. Behavioural. This describes the certain consistent behaviours that define a leader usually through examination of a great person leader. Behaviours refer to how a leader divides their effort between people, tasks and experimentation in a given situation. Not all leaders share common behaviours and similarly some behaviours that bring success will also bring failure dependent upon the situation.

5. Power and Influence. To be able to influence and direct others a leader must exercise some form of power over them. This power refers to the relationship that exists between individuals and groups. Every leader will use some of the following forms of power and methods of influence in a given situation:
   a. delegated command
   b. force or the threat of physical punishment
6. **Situational.** The situational approach to leadership recognises that leaders may be effective in one situation but ineffective in another. This means that leaders must change dependent upon the situation, which may be seen as inconsistency in some teams. In this approach, the nature of the team and the situation determines the leadership style – delegating, facilitating, coaching or directive.

7. **Contingency.** Like situational leadership this builds upon the trait and behavioural theories and goes further to accept that the leader must adapt and change styles dependent upon the circumstances.

8. **Attribution.** Unlike the great person theory, this is instead followership focused, whereby a crowd of followers attribute leadership focused to a particular individual that might best fight for their needs.

9. **Transactional.** Unlike other leadership models focused upon the leaders or followers, this model focuses upon the interactions between the two. Here the model is defined by payment or reward for short-term gains or purchases. This model demonstrates that once the transaction is complete, so is the leadership relationship.

10. **Functional.** This theory is perhaps best suited to the military context. It describes the leader meeting three needs: the task, the people and the team. Leaders will act in a bias towards each of these needs at the cost of the others dependent upon the circumstances at the time.

11. **Transformational.** This model is also highly applicable to the military context. It is based on a model where self-discipline for personal development and growth is actively encouraged. Rather than simply adjusting outwards behaviours, this model focuses upon fundamental beliefs that underpin those values,
emotions, thoughts and behaviours. This type of leadership is strategic in that it is long term and requires vision, patience and tolerance. This type of leadership imparts a more positive experience and more permanent change. This model:

a. creates meaning
b. focuses on values and beliefs
c. focuses upon long term goals over the daily routine
d. addresses causality rather than symptomatic issues
e. proactively creates change
f. identifies and makes full use of every resource, including human resources and their potential
g. recognises and rewards significant contribution
h. provides challenge and meaning for teams and individuals
i. provides empathy, understanding and tolerance
j. leads and innovates.

Leadership Styles

12. A leader must be able to adapt their style dependent upon the task, team and people. This is inclusive of the environment and situation as well as a variety of other influencing factors such as:

a. where that team sits within a larger team
b. the importance and gravity of the task
c. the leadership of individuals within the team.

Leadership using Effective Emotional Intelligence

13. Daniel Goleman\(^3\) identified six leadership styles based upon the different components of emotional intelligence (see Table 4–1). Leaders may need to vary between styles, while

some are effective in the short term only a few are effective in the long term.

14. All six styles can be considered effective in their own way when applied correctly in the correct context for the appropriate audience. However, misapplication in any of these will undermine the task performance, team cohesion and individual growth.

15. Leaders must possess a range of leadership tools to be able to recognise and adapt their leadership style as required to the task, team and individuals.

16. Leaders that do not possess the self-awareness to recognise the impact of their leadership or cannot adapt to the situation are ineffective; hence they are not actually leading.
## Table 4–1: Emotional Intelligence-based Leadership Styles and their Overall Effectiveness

<table>
<thead>
<tr>
<th>Mode of Operation</th>
<th>Style</th>
<th>Underpinning Emotional Intelligence</th>
<th>Best Suited</th>
<th>Overall Impact on Leadership Climate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coercive</td>
<td>Demands immediate compliance ‘Do what I tell you.’</td>
<td>Drive to achieve Control</td>
<td>In a crisis Shock into change</td>
<td>Negative</td>
</tr>
<tr>
<td>Authoritative</td>
<td>Mobilise toward vision ‘Come with me.’</td>
<td>Confidence Change catalyst</td>
<td>Changes need clear vision Direction needed</td>
<td>Positive</td>
</tr>
<tr>
<td>Affiliative</td>
<td>Creates harmony and builds emotional bonds ‘People come first.’</td>
<td>Empathy and relationship building Communication</td>
<td>(re) Build team Create bonds Motivation under duress</td>
<td>Positive</td>
</tr>
<tr>
<td>Democratic</td>
<td>Consensus through participation ‘What do you think?’</td>
<td>Collaboration Team leadership Communication</td>
<td>Building ownership Gathering input</td>
<td>Positive</td>
</tr>
<tr>
<td>Pace Setting</td>
<td>Sets high standards for performance ‘Do as I do, now!’</td>
<td>Conscientious Drive to achieve Initiative</td>
<td>Quick results High competition Already motivated team</td>
<td>Negative</td>
</tr>
<tr>
<td>Coaching</td>
<td>Developing people for the future ‘Try this.’</td>
<td>Developing others Empathy Self-awareness</td>
<td>Human performance enhancement Long-term development</td>
<td>Positive</td>
</tr>
</tbody>
</table>
CHAPTER 5

ADDITIONAL FACILITATION TECHNIQUES

Advanced Facilitation

5.1 An advanced facilitator will develop skills and judgement through years of experience. As such they will be able to effectively employ a range of advanced techniques to deliver better outcomes more effectively. Advanced techniques can be used before, during or after an activity. They are usually deployed when there is some problem that is limiting the learning of individuals or the group.

5.2 Facilitation is readily delivered through verbal means; however, not all learners are the same and not all are particularly self-aware or can express emotions openly in a group. Therefore, everyone will express themselves in different ways and facilitators may find some of the following options useful in accommodating these differences.

Advanced Facilitation Options

5.3 Guided Workbooks and Journals. These can be useful tools to guide learners to objectively describe and review their thoughts, emotions, physical reactions and behaviours. Written records are easier to review objectively than thoughts, which are subjective, amorphous and subject to unchallenged bias. These tools are powerful when used post-activity and post-facilitation as reminders of the learning and commitments to change.

5.4 Imagery and Art. These can be used to describe that which is not easily spoken. The learner could create or select an image that characterises their perspective. The facilitator may place many images upon a table and have the learners select two and describe how they relate to the learning experience. For example, the image of a dog pack could describe the need for better leadership and communication skills within their group (see Annex A).
5.5 **Role-play, Skits and Mimes.** These can be useful tools to describe behaviour from different perspectives, particularly in small group contexts. Exaggeration of minor aspects of behaviour can demonstrate the observed behaviour of which the learner may be unaware. The facilitator must ensure that this remains a positive, socially safe and respectful medium.

5.6 **Soldiers’ Five, Self-guided Learning and Briefs.** These can immediately contextualise and provide relevance to new learning. Facilitators may be perceived as outsiders attempting to exert influence and control through the learning process. A facilitator can turn the tables by guiding learners to deliver their own learning. For example, sub-groups might research different components of a problem and share their learning back to the group using relevant language and context. This mechanism removes any issues around facilitator credibility as they are now a credible peer and not an external facilitator.

5.7 **Letter Writing.** This can clarify perspective or be a reminder of self-discovery and commitment to improvement. The facilitator guides the learner to write a letter to themselves, others within the group, a relative, a peer outside the group or a supervisor/subordinate from their home unit. For example:

   a. a debrief to others addressing observations, suggested improvements and resultant benefits
   b. a letter of commitment to address observations on behaviours and adopt suggested improvements
   c. a letter to self to reinforce commitments made
   d. a letter to self to promote positive thoughts and perspectives
   e. a letter to others to ask for support to commitments made
   f. a contract with self/others to practise positive behaviours.
5.8 **Interruptions.** Interruptions impose a brief pause in the activity to review and reflect upon a learning opportunity. They must be used sparingly and kept very short in order to minimise disruptions:

a. **Method.** The following sequence may be used for an interruption-based facilitation:

   (1) The facilitator identifies an opportune learning moment, usually when progress has stopped and there is an unresolved issue of a technical (eg, righting a capsized craft) or behavioural nature (eg, cannot communicate).

   (2) The facilitator pauses the group in a location at the problem site, ensuring safety.

   (3) The facilitator poses a single thought-provoking question, which could be rhetorical or requiring a response from the group to identify learning.

   (4) The facilitator then directs the group to resume the task. The facilitator need not ensure the best or correct solution as often the best learning occurs in conflict, which can be drawn out during the debrief.

   (5) Once demonstrated, the group may be given ownership of their learning experience by establishing rules to call their own ‘time-out’.

b. **Considerations.** The following points should be considered when using an interruption-based facilitation:

   (1) If overused, learners could grow dependent upon the intervention and the facilitator’s solution

   (2) Interruptions have the potential to detract from allowing learners to resolve problems themselves

   (3) Facilitator must avoid imposing their opinion or offering the ‘instructor solution’ as this detracts from the group’s problem-solving experience.
5.9 Framing. Framing helps to provide context around an activity. Military training generally uses the ‘reality’ frame as the challenges are real enough without contriving them:

a. **Reality.** The problem situation is described as it actually is without artificial rules or scenarios. Reality framing ensures that there is no ambiguity around issues of risk and danger.

b. **Fantasy.** Used mainly recreationally or for icebreakers (see Annex B), the problem situation may be described in fantasy terms in order to elevate arousal levels in a context that is otherwise mundane. For example, a rope might designate a lava floor, acid river or electrified spider’s web.

c. **Contextual.** Real world items are described in other familiar terms in order to assist contextualisation and transference of learning, for example:

   (1) A kayaker’s paddle is referred to as a ‘weapon’ so that all soldiers know to carry it at all times.

   (2) A whitewater river or sea is referred to as ‘the enemy’ so that soldiers appreciate that it must be observed and managed as it will impose forces that will disrupt the group’s plans.

   (3) A cliff face is referred to as an ‘obstacle’ so that soldiers understand they must work cooperatively to negotiate the crossing for mission success.

d. **Isomorphic.** This technique uses equipment, consequences and rewards that are part of the activity in reality to encourage positive behaviours required in an alternative context. Designing an isomorphic frame requires detailed planning and is most suitable for re-directional programs. For example:

   (1) A two person team, supported by a facilitator could resolve trust, teamwork and performance issues over a multi-day, multi-pitch lead climbing expedition where they are compelled to protect
each other and are responsible for each other's safety.

(2) The attachment to one another by climbing rope is metaphorical to their team work linkages in reality.

(3) Their protection of each other's safety is metaphorical and inextricably linked to trust in reality.

(4) The closeness of camping on cliff ledges is metaphorical for cooperative behaviours.

(5) The multi-pitch, lead climb environment (ascending a route with stops at belay stations, hauling rope up from below while having no set ropes above) confines them to the task. This is metaphorical to the inescapable fact that their success or failure depends upon teamwork.

5.10 **Focusing.** The preceding techniques seek to reduce, eliminate or mitigate the problem. For dysfunctional groups an alternative solution focus may be more effective, particularly where learners have a strong negativity bias.

5.11 The facilitator must step back to maximise ownership of the learner in their experience. The learner, not the facilitator, must be the expert in identifying solutions through the following:

a. **Identify Past Solutions and Successes.** The facilitator guides the learner to recall occasions of success to any degree, either in the context of the activity or elsewhere. For example:

   (1) Can you recall one thing that went well today, even if it did not go as planned?

   (2) Can you recall one thing you did that worked well?

   (3) What was an enjoyable part of today?

   (4) What was one part of today where the group did something well?
(5) The responses should describe the success in detail of why and how.

b. *Emphasise Successful Traits and Behaviours.* The facilitator focuses on success and the reasons for it to guide away from failures. For example:

1. What made today successful?
2. What did you do that made that part of the day enjoyable?
3. What was the group doing when we did that thing well?
4. How did others perform well to help you today?
5. How did your behaviour surprise you today?

c. *Encourage Investment in Reinforcing Success.* The facilitator guides the learner to take responsibility for their own successes. The facilitator must continue to use a positive bias to define objectives and avoid reference to negative aspects that could promote a self-fulfilling prophecy. This process can be aided by careful consideration and use of appropriate tense:

1. Where problem behaviour has occurred use past tense in order to assist the learner to see the problem behaviour as past behaviour from which they can move forward.
2. Where there is an absence of problem behaviour use present tense in order to assist the learner to identify exceptions to the expected problem behaviours.
3. When planning for positive behaviours use future tense in order to assist the learner to identify positive behaviour as a choice within their control.
Combating Resistance

5.12 At times learners will not participate effectively in the learning experience due to a variety of reasons:
   a. past experiences
   b. perception of the facilitator
   c. mood
   d. external issues
   e. health or psychological fitness
   f. facilitator and program design may not meet the learner’s needs
   g. facilitator and program design may be inappropriate.

5.13 In these circumstances the facilitator must continue to strive for positive effect but be conscious that their efforts do not exacerbate the situation.

5.14 The facilitator must maintain a positive outlook and consider that a resistant learner is simply using different methods to communicate. Using behaviour to convey their feelings, needs and problems to the facilitator who must pick up on these cues to tailor the program to address the learner’s need.

5.15 Importantly the facilitator should avoid presenting themselves as the ‘expert’ as this may make them the focus of the resistance or even attack. In imposing expertise and opinions akin to a lecturer, the facilitator undermines their ability to support, development and change in learners.

5.16 Specific Methods. The facilitator may be able to identify resistance but not the cause. The following options provide alternatives for working through resistance respectfully and tactfully:
   a. Unawareness. Frequently resistant behaviour stems from a lack of awareness of the behaviour or disagreeing that the behaviour has a negative impact. This could be related to the learning task, themselves, their effects on
The facilitator can use the interruption technique to prompt the individual and group to self-assess the issue from a different perspective. Enlisting the support of others in the group to address this resistance allows the resistant learner to hear from credible peers. This may be a hard and confronting conversation but it will allow the group to provide feedback on its members without the facilitator needing to do so. For example the facilitator may pose the following questions: Why do you think they are acting this way? Does their description of their actions sound right? Who else can tell me why they think this has happened? What could be the causes of this behaviour? What is the impact upon the task by this behaviour? What is the impact to the group of this behaviour?

b. *Unconscious Opposition.* Sometimes learners may be unaware of their behaviours and impacts but refuse to moderate their position. The facilitator can best arrive at a positive outcome through active listening in order to help the learner become aware of the dissonance or inconsistency between their behaviour and the outcomes sought. For example the facilitator may use the following questions in series: ‘I do not understand what is going on here, can you describe it to me? I still do not get why this is going on, can someone else help to explain it to me? So I think I am starting to see where you are going, does this sound right …?’ At the last question the facilitator feeds back to the learners their descriptions in their language using their examples. The facilitator can continue to ask for explanations and descriptions from different perspectives to compel the learners to consider different viewpoints on their behaviour.

c. *Conscious Opposition.* If the facilitator identifies that a learner is being deliberately oppositional to the learning experience, the facilitator can take the group through a process that leads them to the logical conclusion that the behaviour is dysfunctional and has negative outcomes.
This can be done through discussion, practical experience, or a framed activity. For example:

(1) A GL that insists on restrictive control over a group can be shown the limitations of that behaviour. Blindfolding the group is analogous to removing their initiative. The leader is then required to lead the blindfolded group through a complex task (such as an obstacle) using only voice commands from a distant position. The resistant learner should then appreciate the difficulty of the challenge and the helplessness of their group in the absence of initiative.

(2) A learner that is resistant due to anxiety can be shown how their lack of participation prevents the group from achieving its objectives. Drawing on elements of mateship and teamwork can help the resistant learner to understand their contribution to achieving success, which may be sufficient to overcome their resistance.

**Conclusion**

5.17 Without facilitation AT is recreational and will not achieve its stated intent. ALs are encouraged to continuously seek improvement in facilitation skills through constant tailoring of the activity levels to match participant needs and practice in the conduct of the debrief.

**Annex:**

A. **Effective Communication**

B. **Facilitation Icebreaker Tools**
ANNEX A TO CHAPTER 5

EFFECTIVE COMMUNICATION

1. Communication is the foundation of interpersonal relationships and is vital to effective leadership and teamwork. The appropriateness of communication style, tone and content of the message displays understanding and respect. Reflection in experiential learning relies on effective communication.

2. Where individuals feel they cannot express themselves or they are not being heard, they will cap their communication and instead grow frustrated and angry. If left unchecked, this will allow the opportunity for individual and group development to be squandered.

3. Communication is the act of conveying intended meaning from one to another. The steps of communication are as follows:

   a. Forming Intent. The sender conceives the need to send the message, potentially due to urgency or importance.

   b. Composing. The sender shapes the message based upon their perception of the audience needs.

   c. Encoding. The message is encoded with language and non-verbal cues and selected mode: verbal, non-verbal.

   d. Transmission. The sender delivers the message, shaped by environmental noise, method of delivery and so on.

   e. Reception. The receiver receives the message shaped by their perception of the message transmission factors.

   f. Decoding. The receiver breaks the message content down to separate the message from the sender’s language and verbal or non-verbal cues.

   g. Interpretation. The receiver interprets the message based upon their perception and assumptions of the sender combined with their own experience.
The Communication Pyramid

4. The communication pyramid model describes the five levels of effective communication illustrated at Figure 5–1.

5. **Rituals and Cliché.** Conversation at the ritual level typically revolves around banalities and clichés expected at the start of any conversation. This is the ritual of polite conversation without any real engagement or transference of ideas. The initiator may not expect a detailed conversation or want to engage in one. Soldiers often display good-natured ‘leg-pulling’ through banter, but this can descend into unproductive sarcasm. Examples of ritual conversations are:
   
a. How about this weather?
b. G’day mate, how are you?
c. How are the wife and kids?
d. G’day Ugly, still single?
e. I thought I heard a whinge and knew it must be you!
6. **Facts and Information.** This is the minimum level of communication needed to effectively perform most jobs to a basic standard when working with others. At this level most people are still in their comfort zone, not expressing true opinions or thoughts. Conversation is limited to relay of provable facts from one source to another, but rarely taking ownership of them. For these reasons participants in this level of conversation are not really taking any risks socially.

7. **Ideas and Judgements.** At this level of conversation participants are commencing to own the facts and express their own ideas, thoughts, beliefs and opinions. This is when we expose ourselves openly to counterarguments and, therefore, social risk if those ideas are not accepted. Hostile environments (whether real or perceived) will stifle expression especially if individuals have had bad experiences previously. In a respectful, supportive and safe environment these conversations will not only be accepted, but sought out; this type of conversation will exchange honest ideas and opinions. Examples of conversation beginnings in a supportive safe environment at this level of communication include:
   
   a. I believe that…
   
   b. Have we considered… I think that this might work
   
   c. If we have not tried this yet, I think this might work...

8. **Feelings and Emotions.** Soldiers are typically reluctant to communicate their feelings. When people do expose true feelings they expose themselves to significant risks socially and to their reputation if those feelings are not accepted and respected by the group. In a supportive, safe environment, the group will accept and respect individuals’ feelings, even if they are not experienced by others in the group. Very private feelings over life issues are generally the domain of chaplains, psychologists and other support personnel. Generally, people will only express feelings honestly when there is a high level of trust and respect within the group. In this context, feelings are
best restricted to just the task and relationships at hand. Some examples of conversations displaying feelings include:

a. I feel in control…
b. I know this is not logical, but I feel scared because…
c. I feel bored, I am bored because…

9. **Peak Rapport.** At this level all barriers to communication have been removed; this level of connectedness is not often experienced, but is common amongst those with shared experiences in armed conflict. This can be emulated in socially safe, supportive and respectful environments where people feel heard and appreciated without judgement.

**Barriers to Communication**

10. Most people carry preconceptions or biases before any communication even commences. We form opinions on others through our lens of experiences and expectations even before they have had a chance to speak. It is important to note that these judgements are based on opinion and assumptions rather than true facts. They could be based upon:

a. appearance
b. gender
c. sensory perceptions, such as smell
d. body language, such as stance or handshake.

11. This can lead to opinion-based conclusions regarding:

a. trustworthiness
b. social standing/hierarchy position (choice to follow)
c. intelligence
d. reliability
e. integrity.

12. The dangerous extension of this is prejudice, a toxic and damaging concept. However, this can be countered through
keeping a positive outlook and open mind for new information while maintaining our own ethical values.

Understanding Biases in Communication

13. Communication with others is an imperfect process that is affected by our individual experiences, perspectives, emotions, outlooks and cultural settings. These factors can lead to cognitive bias, which is a systematic error in thinking that subtly affects the way we see and think about the world, the decisions and judgements that we make. Cognitive biases result from the brain’s attempt to simplify information processing, are often accurate and help us to make decisions quickly, however, unfounded biases can lead to poor decisions and bad judgements.

14. Simply being aware of cognitive bias is not sufficient to prevent it from creeping into our thinking, communication and interactions. It is very difficult to always remain entirely objective, as to do so denies our individuality and personality. Nonetheless, awareness is the first step to avoiding or minimising the harmful effects of our biases. Being open to our own intuition and feedback from others is very important in this process.

15. Humans create their own subjective reality based on individual differences in biopsychosocial feedback as we sense the world. Whether we are hungry or tired, sad or angry, or feel alone impacts how we perceive the world around us. Indeed, some researchers believe we feel before we think, and therefore decide and act, mostly intuitively. This presupposition has implications for how our mental models of the world are formed. Similarly, how we interpret information flowing in from our environment colours our perceptions of the world and how we react to it. And the information is changing quickly – it is increasing in speed, volume, fragility and complexity. So it is becoming more and more challenging to know what to do with it all, or what to believe. Cognitive biases and heuristics are helpful in this instance; however, they also have a downside that we must be aware of in order to perform optimally as
soldiers and as leaders. AT has an important role to play in this domain.

16. You may develop a one-sided point of view around a specific and limited range of information, which can lead to narrow thinking and a fixed mindset. In navigating the world we tend only to look for information, people, and environments that confirm how we think and feel about the world. AT is a highly effective means by which we can challenge this confirmation process, and practise thinking and acting in different ways.

17. AT provides an important environment in which awareness of the traps of cognitive and group biases can be explored. Through experiencing new and challenging activities in complex environments we can push the boundaries of what we know and understand about ourselves and others. This facilitates insight, growth, and ultimately is likely to increase our self-awareness. Learning about our biases for thinking and action, and understanding how in the face of fear and uncertainty those biases can be exacerbated will enhance our ability to make better judgements and decisions as we navigate the modern world. This is linked to increased resilience, enhanced team performance and improved interpersonal relationships, all critical skills for the modern soldier.

18. Researchers have identified hundreds of cognitive biases which can be overwhelming and confusing to navigate. Perhaps Buster Benson\(^1\) most elegantly assists us to make sense of it all by grouping these biases under four ‘problems’ that biases help us to address they are:

a. information overload
b. lack of meaning
c. a need to act fast
d. how to know what is important.

\(^1\) https://betterhumans.coach.me/cognitive-bias-cheat-sheet-55a472476b18
19. Following are some of the more common biases grouped under the four problem biases that leaders should be aware of in themselves and others:

   a. *Information Overload.* Information overload refers to the fact that there is just too much information in the world, we have no choice but to filter almost all of it out. Our brain uses a few simple tricks to pick out the bits of information that are most likely going to be useful in some way:

      (1) *Anchoring Bias.* This is relying too heavily on the first piece of information you learn. For example, once learning the average price for a car, you will think any amount below that is a good deal, perhaps not searching for better deals. You can use this bias to set the expectations of others by putting the first information on the table for consideration, that is, to anchor the discussion.

      (2) *Confirmation Bias.* This is favouring information that conforms to your existing beliefs and discounting or rejecting evidence that does not confirm your views. The first principle is that you must not fool yourself – and you are the easiest person to fool.

      (3) *Availability Heuristic.* This is placing greater value on information that comes to your mind quickly. For example, prolific media reporting of a rare event may lead you to believe that it is far more common than it actually is. Try to gain different perspectives and relevant statistical information rather than relying purely on first judgements and emotive influences.

      (4) *Framing Effect.* This is allowing yourself to be unduly influenced by context and delivery. For example, the question ‘Have you ever been caught beating your wife?’ implies that you do and, if you have not been caught it is because you
are sneaky. Advertising relies on framing to generate emotions. Try to be mindful of how things are being put to you.

(5) **Self-serving Bias.** Otherwise known as externalisation, this is the tendency to blame external forces when bad things happen and give yourself credit when good things happen. Fostering humility and being open to self-improvement can help to overcome this bias.

(6) **Attentional Bias.** This is paying attention to some things (usually superficial or easier) while simultaneously ignoring others (which may be more complex or challenging but no less important).

b. **Lack of Meaning.** Lack of meaning acts as a filter only allowing through information that makes sense to us. It is then used to connect with other information to fill in the gaps with stuff we already think we know, and update our mental models of the world:

(1) **Hindsight Bias.** Also known as the knew-it-all-along effect, this is the inclination, after an event has occurred, to see the event as having been predictable, despite there having been little or no objective basis for predicting it.

(2) **Spotlight Effect.** This is overestimating how much people notice how you look and act. Instead of worrying about how you are being judged, consider how you make others feel. They will remember this much more, and you will make the world a better place.

(3) **Halo Effect.** This is your overall impression of a person influences how you feel and think about their character. This especially applies to physical attractiveness. If you notice that you are giving consistently high or low marks across the board, it
is worth considering that your judgement may be suffering from the halo effect.

(4) **Curse of Knowledge.** This is related to confirmation and hindsight biases, once you have a good understanding of a concept, you tend to assume that it is obvious to everyone. When teaching someone something new, go slow and explain simply. Repeat key points and facilitate active practice to help embed knowledge.

(5) **Functional Fixedness.** This is inability to see 'outside the box' or how things are usually done. This is particularly important for team roles as all individuals should have the opportunity to exercise leadership for example.

c. **A Need to Act Fast.** A need to act fast means that with every piece of new information, we rapidly assess its ability to affect the situation, apply it to decisions, simulate the future to predict what might happen next, and act on our new insight:

(1) **Groupthink.** This can compound the Dunning–Kruger effect especially if there are strong voices with only superficial knowledge. Groupthink can, and has, led teams to make sometimes catastrophic decisions. In these instances members of the group who initially have reservations about a particular decision or COA are either convinced or 'go along with' the group consensus. Historical examples of the potential disastrous effects of group biases include the Bay of Pigs invasion, Columbia space shuttle disaster, and the Jonestown massacre. Be open to testing the consensus and allowing everyone to be heard. Rather than openly contradicting others, seek to facilitate objective means of evaluation and critical thinking practices.
(2) Sunk Cost Fallacy. This is sticking with a particular, and perhaps erroneous, COA on the basis that you have already invested heavily in it. Sunk costs cannot be recovered and it may actually be better to cut your losses and change strategy.

(3) Backfire Effect. When some aspect of your core beliefs is challenged, it can cause you to believe even more strongly. This can be dangerous when combined with the sunk cost fallacy.

(4) Barnum Effect. This is seeing personal specifics in vague statements by filling in the gaps, for example reading an astrological horoscope and being convinced that it is tailored to your circumstances.

(5) Dunning–Kruger Effect. Because experts know so much about a topic, they are usually aware of what they do not know and therefore tend to underestimate their own ability or be cautious in putting forward important knowledge, especially where their voice is a dissenting one. Fools and fanatics are often certain of themselves while wiser people are full of doubts.

(6) Fundamental Attribution Error. This is judging your performance on the circumstances but the performance of others on their character. For example your own poor performance may be due to a lack of sleep but someone else’s poor performance is attributed to being lazy. Be mindful to err on the side of taking personal responsibility rather than justifying and blaming.

(7) False Consensus Effect. This is a tendency to overestimate how much other people agree with you.

(8) Optimism Bias. This is believing that you are less likely to suffer from misfortune and more likely to
attain success than your peers. Otherwise known as wishful thinking. Making rational, realistic judgements provides a lot more to feel positive about.

(9) **Bystander Effect.** This is believing that, in an emergency situation, you do not need to do anything because someone else will step forward. Assume that you will need to act to achieve a desired outcome.

d. **How to Know What is Important.** How to know what is important means that our brains can only afford to keep around the bits of information that are most likely to prove useful in the future. We need to make constant bets and trade-offs around what we try to remember and what we forget. For example, we prefer generalisations over specifics because they take up less space:

(1) **Negativity Bias.** This is seeking to avoid exertion, loss or pain by overemphasising negative thoughts, thereby missing out on rewarding opportunities. Listing pros and cons and thinking in terms of probabilities can help you evaluate things more objectively.

(2) **Google Effect.** Also called digital amnesia, this is the tendency to forget information that can be found readily online by using the internet. According to the first study about the Google effect people are less likely to remember certain details they believe will be accessible online.

(3) **Primacy and Recency Effect.** Items near the end of a list are the easiest to recall, followed by the items at the beginning of a list; items in the middle are the least likely to be remembered.

(4) **Prejudice.** This is a feeling towards a person or group member based solely on that person’s group membership. This can underpin poor assumptions about situations and people, leading
Research by Greenwald, Banaji, and Nosek\(^2\) suggests that we are all subject to automatic and implicit race biases. That is, we stereotype people of certain races, or genders and even places of origin, such that we make flawed assumptions about their capacity or ability. In short, some biases developed over millennia to protect us from material threats may now, in the modern world, have outlasted their usefulness and in fact may be working against us.

**Understanding our Own Attitudes**

20. Consider your personal assumptions, thoughts and reactions to the sentences listed in the following subparagraphs. The emotive response, words and language that jump into your head are a reflection of your own attitudes and learned responses. The slight change in context of who called or is visiting will elicit different responses in each of us. In order to become a better communicator we must develop greater self-awareness of our own attitudes and lenses to communication so that we can regulate and mitigate the resultant thoughts, emotions and behaviours:

a. The police rang, they want to see you now.

b. The hospital rang, they want to see you now.

c. Your partner rang, they want to see you now.

d. We have a visitor you need to host from the local school.

e. We have a visitor you need to host from HQ.

f. We have a visitor you need to host from SOCOMD.

g. We have a visitor you need to host from the local news.

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Managing Agreement

21. Groups establish norms of behaviour and acceptance rests on members sharing similar objectives and desires. A danger of this closeness is groupthink, especially when members share significant common experiences. Conversely, where a member holds a preference that they perceive is counter to the preferences of the group, they may sacrifice their own interests in order not to ‘rock the boat’.

22. In extreme cases where there is a lack of communication, all of the members of a group may support a COA that is actually counter to their own individual preferences on the mistaken assumption that they are the only one that does not support that option. Jerry B Harvey addresses this phenomenon in his 1974 article ‘The Abilene Paradox: The Management of Agreement’.

23. The phenomenon is explained by theories of social conformity and social influence, which suggest that human beings are often very averse to acting contrary to the trend of a group through fear of exclusion. The Abilene paradox illustrates that groups have problems managing disagreements, but in a poorly functioning group, managing agreement may also be a problem.

Barriers to Effective Listening

24. Listening accounts for around half of communication and is a skill that can be developed and improved. The following behaviours have the potential to disrupt effective communication as a consequence of ineffective listening:

   a. allowing pre-existing biases and prejudices to colour your views of what a speaker seeks to convey, causing the listener to jump to conclusions

   b. responding instinctively and emotionally to specific triggers that challenge your own views or opinions – red

flag to a bull – instead of approaching the exchange logically and with an open mind

c. inattentive listening whereby the listeners mind begins to wander off into other daydreams that are more interesting than the speaker (eg, some listeners switch off when the content becomes too technical or filled with jargon and they are reluctant to seek explanation).

Listening Skills Practices

25. A major part of listening is understanding the non-verbal communication and the internal dialogue that shapes how the listener receives the speaker’s message. Our brains quickly review information received and predict where it is going but this process is subject to biases. Some practices to improve listening are described in the following paragraphs.

26. **Bite your Tongue.** Often listeners feel they understand the message before the speaker has finished talking and tend to respond prematurely. This is off-putting for the speaker and makes them feel that their message is not valued. The listener must allow the speaker space to complete their message before responding, perhaps by literally biting your tongue.

27. **Do Not Monopolise.** Frequently people feel the need to speak, but do not recognise that they are completely filling the conversation space without allowing others the room to participate. Here the speaker should enable others to speak by offering them open-ended questions and pauses in the conversation, combined with ‘bite your tongue’.

28. **Reflective Listening.** Paraphrasing what the listener has heard can convey to the speaker that they are listening, however, parroting back exactly the same words can be counterproductive. Open questions that seek to understand the why of the message powerfully confirm attentive listening. For example:

   a. you sound angry
   b. you are showing me that you feel scared right now
c. you sound like you feel that the group is not hearing you

d. that sounds like you are concerned about the risks here

e. I understand that this is very important to you

f. it sounds like you feel quite alone

g. if I understand you correctly, are you are saying…

h. it seems you feel let down by the group

i. it must have been very frightening for you.

29. **Challenge Questioning.** Here the listener asks clarification questions such as ‘why?’ or ‘why is that important to you?’. This can be particularly useful if messages and perceptions are contradictory; for example, ‘You say this is unimportant, but clearly this has upset you; what’s going on? Why is this affecting you? Is this really the case, where is the real evidence?’

**Ground Rules for Respectful Communication**

30. These are up to the facilitator and must be tailored to the needs of the group. A suggested sample includes:

a. Allow every voice by having a single speaker, raising hands to comment or holding a ‘speaker’s stick’.

b. Allow opt in by giving all participants the time they need to collect their thoughts and encouragement to have their contribution heard. The facilitator should return to those who elect to pass or delay answering.

c. Sequence conversation randomly so that potential speakers contribute only when it is ‘their turn’.

d. Optimistic framing by the facilitator can help to find learning outcomes even when activity objectives are not met, which often provides fruitful learning opportunities.

e. Respect the privacy of individuals who may extend themselves to share very personal thoughts and emotions. The facilitator has a role in establishing the high levels of trust necessary for this to occur.
31. Encouraging a commitment at the conclusion of every facilitation session can provide participants with a behavioural goal to pursue. The facilitator is often unable to monitor this, however, where that commitment is shared with the group, others can assist in goal achievement upon return to units by offering encouragement, reminders and observations when the person is off-track. In some cases, a formally stated goal can be shared with commanders, peers or family members to make it real and to enable those parties to provide necessary support.
ANNEX B TO CHAPTER 5

FACILITATION ICEBREAKER TOOLS

1. An icebreaker is a technique whereby the newly formed group is given a task to facilitate familiarity and initial interaction amongst group members. The task is designed to energise the group, both physically and mentally for the task ahead. The task can be shaped to focus upon targeted qualities such as communication, initiative, trust and teamwork.

2. Icebreakers usually involve members introducing themselves to the group. Traditionally ADF members introduce themselves by their rank or job role but these should be avoided in favour of new and personal information such as their name, family, hobbies or where they grew up. This is particularly important for groups that are already established in a military context who will not necessarily know their colleagues socially.

3. There are a myriad of icebreakers, and facilitators should use their imagination to create or adapt new forms of icebreakers. Facilitators must keep the following in mind:
   a. Icebreakers must enable the follow-on activity; they should engage the group’s initiative and imagination priming them with energy to engage in the activity and trust to communicate openly with each other.
   b. Icebreakers must be safe, both physically and socially. This may be simply mitigated by stating the risks involved and describing appropriate action or ground rules.
   c. Icebreakers can be confronting as well as fun; but at all times they must be ethical and in accordance with the Army values.
   d. Icebreakers can include ‘dry’ rehearsals of AT activities, such as raft drills on dry land.
4. **Description.** This is suitable for any group, and is a usual go-to activity as a fun lead in to other icebreakers. This game is particularly useful in opening rigid people to social risk as it permits them to step aside from the usual social hierarchical barriers that can limit honest interaction. It also encourages humility, and subsequent openness to learning, as participants become more comfortable with having a laugh at themselves.

5. **Conditions.** Everyone must ‘evolve’ from an ‘egg’ to a ‘guru’. They do this by winning subsequent challenges with other participants at the same level of evolution:
   
a. The challenge involves two participants shaking hands and introducing themselves by first names and (sometimes) one interesting fact about themselves. This is then followed by rock, paper, scissors, a coin toss, or other challenge, with the winner evolving to the next stage. The loser must remain at that stage and go on to challenge others at their stage of evolution.

b. Everyone starts as an ‘egg’. They put their hands over their head in the shape of an egg, and declare that ‘I am an egg’. Eggs may challenge only other ‘eggs’ until they win and evolve into a ‘dinosaur’ (or a chicken depending on the facilitator’s preference).

c. ‘Dinosaurs’ evolve from ‘eggs’. They place their hands in front of their chest like a Tyrannosaurus Rex and roar like a dinosaur. They may challenge only other ‘dinosaurs’ until they win and evolve into a ‘monkey’.

d. ‘Monkeys’ evolve from ‘dinosaurs’. They wave their hands over their head like a gibbon and make loud ape-like ‘whooping’ noises. They may challenge only other ‘monkeys’ until they win and evolve into a ‘human’.

e. ‘Humans’ evolve from ‘monkeys’. They walk upright and eloquently announce ‘I am a human’. ‘Humans’ may challenge only other ‘humans’ until they win and evolve into a ‘guru’.
f. ‘Gurus’ evolve from ‘humans’. This is the final level of evolution. They sit comfortably on the perimeter of the game area with their legs crossed and hands placed on knees in a meditative position watching the game.

g. At the end of the game, everyone will have evolved into a ‘guru’ except for one person at each level of evolution: one ‘egg’, one ‘dinosaur’, one ‘monkey’, and one ‘human’.

h. Non-‘gurus’ can be used for follow-on activities or to fulfill specific activity roles (eg, team leaders).

Memory Circle

6. **Description.** This game can be used following Evolution to reinforce introductions. It is unsuitable for groups over 10 personnel as it can grow cumbersome. It is suitable for small groups, for example allocated sub-groups, to allow the team forming to occur. This activity is also a good tool for the facilitator to observe how participants absorb information and communicate in a low-pressure environment.

7. **Conditions.** To avoid confusion, this activity is best conducted in two stages:

a. **First stage:**
   
   (1) Everyone stands in a circle facing in. One person starts by stating their name, and one (or two) interesting facts about themselves.

   (2) The person to their left then repeats the name and interesting facts of the previous person, then repeats the process with their own name and two facts.

   (3) The next person then repeats the name and facts of the previous person, and the person before, then repeats the process.

   (4) This keeps going around the circle until the last person, who is to the right of the original person,
attempts to state the name and facts of everyone in the whole circle.

b. Second stage:
   (1) The flow is reversed but no new information is added. The person to the right of the last person repeats the name and interesting facts of the last person, before adding their own name and interesting facts.

c. The person to their right repeats the process and so on until the game passes back to the original person who must recite the names and interesting facts about everyone in the circle.
   (1) Interesting facts should be personal to the individual, and not necessarily about their job or role. Suitable facts include: where they grew up, their favorite memory, their favorite hobby, why they like their favorite type of animal, or what they hope to get out of the activity.

Cannibals and Missionaries

8. **Description.** This is a good team-building and problem-solving game for groups that have already been introduced, or to highlight issues with communication. It is best done practically, as they role-play either missionary or cannibal on a river with a boat or simulation of other suitable tools.

9. **Conditions.** The team is split into three missionaries and three cannibals, the remainder are supporters that can offer advice, but they do not enter the boat or cross the river. All the cannibals and missionaries must cross the river:
   a. There is one boat. The boat can carry one or two people only and can cross the river only with at least one person.
   b. No-one is allowed to swim the river.
   c. The boat, once landed, counts as being on the bank, as do the occupants.
d. The cannibals must never outnumber the missionaries on any bank. If they do, the game is lost and must be restarted.

Sudoku

10. Description. This is a good team-building and problem-solving game for groups that have already been introduced, or to highlight issues with communication. It is best done practically, with some difficulty imposed such as heavy objects, distance or time pressures.

11. Conditions. The group is given nine objects. There are three types of objects; one object of each type is one of three colours. The group must align them on a scale Sudoku board of nine squares aligned in a 3x3 formation.
   a. The group must place the objects so that none of the same type are in the same column or row.
   b. The group must place the objects so that none of the same colour are in the same column or row.

Circle of Hands

12. Description. This is a good introduction game that can break some barriers, by pushing into their personal space.

13. Conditions. Make a circle of people, have them hold hands in mixed up fashion with people across the circle. Then, without letting go of their hands, the group must reform into a circle standing next to the people with which they are holding hands. Alternatively, the group can face away from the centre of a circle holding hands, and must all turn to face in without letting go or crossing arms.

Nine Dots

14. Description. This is a good problem-solving game that can show communication within a group.

15. Conditions. The group must join nine points using a single line with only four turns (corners). This can be done on pen and
Knot in a Rope

16. Description. This is a good problem-solving game that can show communication within a group.

17. Conditions. The group must tie a knot in a rope. This is best done with a long rope:
   a. Each individual in the group must hold one hand on the rope when it is laid out straight. They may not remove their hand from the rope.
   b. The group must tie the nominated knot, without removing their hands from the rope.

Stuck in the Middle

18. Description. This is a good follow-up introduction game, best delivered as a secondary icebreaker. This introduces others to facts about themselves.

19. Conditions. The group sits on chairs in a circle facing in. There are enough chairs for all but one, who stands in the centre:
   a. The person standing makes a statement about themselves.
   b. Everyone whom the statement applies to must move to another chair that is not next to them. The individual in the middle attempts to find a chair.
   c. The process starts again with the individual in the middle making a statement about themselves.
   d. The facilitator must take care, particularly as soldiers can get competitive in the physical aspects. This has
potential for pushing and shoving to ‘win’ the chair. (This can also be an excellent debriefing point).

e. The facilitator must also take care to ensure that the statements remain appropriate and ethical.

Magic Carpet
20. Description. This is a good problem-solving game that can show communication within a group.

21. Conditions. The group must all stand on a bath towel or similar sized object, then flip it over so they are all standing on the reverse side; without anyone stepping off the towel or leaning on other objects.

Charade Whispers
22. Description. This is a good problem-solving game that can show communication within a group, and be quite fun.

23. Conditions. The group must pass a message around the circle without using their voice or written words, they must pass the message non-verbally. The message can also just be a number, increased difficulty can be introduced with decimals and fractions.

Celebrity Head
24. Description. This is a good problem-solving game that can show communication within a group, and be quite fun.

25. Conditions. The facilitator places a card/sticky note with a celebrity’s name on each individual’s forehead. The individual must guess the celebrity by asking the group questions, the group can only answer with yes/no.

Shields
26. Description. This is a good introduction game to get people to access their non-verbal communication to describe themselves. These can be used as props to develop further facilitation later in the activity.
27. **Conditions.** Individuals draw, then describe some facts about themselves:

a. Each person gets a sheet of paper with four segments describing the quarters of a shield.

b. In each quarter the facilitator has the group to individually draw aspects of the individual such as: their greatest fear, their moment of greatest courage or daring in their life to date, something secret about themselves, or what they value, or what they hope to get from the activity.
CHAPTER 6
DESIGN OF EXPERIENTIAL LEARNING AND ADVENTUROUS TRAINING ACTIVITIES

SECTION 6-1. INTRODUCTION

6.1 Emulating battlefield conditions during normal peacetime training is difficult and expensive, and can involve considerable risk. These factors lead to most military exercises being highly staged and resource intensive, with a focus on coordinating larger units and testing the ability to deploy capabilities and logistic systems. Normal military training can, therefore, be limited in its ability to meaningfully develop the capacity for junior leaders and soldiers to withstand the full psychological and physical pressures associated with operational service.

6.2 Well-designed and -run experiential learning and AT activities can provide inexpensive means to overcome these limitations and are a valuable complement to normal military training. Appropriately designed and run activities, can develop the individual and group qualities in participants that are required in battle, which when combined with a soldier’s professional skills developed in normal training, can greatly increase their resilience, effectiveness and adaptability. Importantly, AT provides these benefits to individuals and units in peacetime as well as in times of conflict, and for service corps as well as arms corps.

6.3 Effective activity design requires a good understanding of the individual and unit developmental needs as well as an understanding of the benefits and limitations of AT. Invariably, other factors such as resource constraints, geographic location and instructor availability will influence the design. However, imagination, creativity and innovation during the design process can overcome many of these challenges.
6.4 This chapter provides practical insights into the design process. While it focuses broadly on the design of AT, the principles are equally applicable to other forms of experiential learning.

SECTION 6-2. INITIATING THE ACTIVITY

6.5 AT complements other forms of training by exposing participants to situations of fear, uncertainty and consequence, while it teaches them to operate effectively under these stresses. AT activities can be initiated by one of the following:

a. The Unit. It is most appropriate for AT to be initiated by the unit commander, and incorporated into the unit’s training calendar, to complement other training activities. From a commander’s perspective, the purpose of conducting AT must be clearly linked to preparing soldiers for effective military operations. An example is the conduct of an AT activity to develop leadership and communication immediately prior to the conduct of a junior leadership training program.

b. An Individual. AT proposals initiated by junior officers and NCOs should be encouraged as it develops the desirable qualities of initiative, planning, coordination and acceptance of responsibility. Activities initiated by unit personnel motivated by a desire for adventure and exploration, require encouragement and support, as their drive, energy and enthusiasm provide opportunities for others.

c. Associations. Associations exist within the Army that deliver both AT and adventure-based activities for their members. The most notable of these are the Army Alpine Association and the Army White Water Association. Associations prepare their own activity programs and publish/advertise these programs widely. Association-based AT is generally conducted for the benefit of members and to develop deeper levels of experience and expertise, often in more remote areas and at higher skill levels, than is often available from unit
AT. Units reap the benefits of having their members attend association-based activities. There is scope for associations to run advanced AT activities on behalf of units or to run exported UATL courses on behalf of ATW.

d. Advocates. Army is witnessing growth in AT for a range of non-traditional purposes and participant groups. Consequently the sources of initiation are also expanding. Some of these include the following:

1. Post-deployment decompression (not recreational) AT to aid adjustment back into the workplace and to reassert individual and group strengths that may have been eroded on deployment.

2. Post-deployment AT delivered to wounded, injured and ill soldiers in order to assist the psychological aspects of their recovery. Organisations such as ‘Soldier On’, ‘Mates4Mates’ or Army Soldier Recovery Centres initiate AT for this purpose.

3. AT for developing resilience and providing a positive in vulnerable communities, for example the running of a multi-day facilitated roping AT activity for Somali youth at the joint request of the Somali community, Victoria University and the Victorian Police.

4. The potential for AT designed specifically for senior officers.

SECTION 6-3. SELECTING THE AIMS AND OBJECTIVES

6.6 Units will generally prepare a training calendar well in advance of activities being conducted with aims and objectives based around achieving individual and unit competencies. Some programmed activities will have the potential to deliver additional meaningful experiential learning with the inclusion of
an adventure component and addition of a framework of instructor-led facilitation. These benefits, while valuable, may be peripheral to the overall aim and objectives of the activity.

**SECTION 6-4. ACTIVITY DESIGN**

6.7 When designing an AT activity, on the other hand, it is important that commanders and OICs select the aim and objectives of the activity by determining the unit’s collective and individual training and development needs.

6.8 The aim of AT is to enhance the Australian Soldier’s ability to thrive in complexity and adversity.

6.9 **Table 6–1 in Annex A is a generic ready reckoner for choosing disciplines that develop particular qualities. This requirement may in part be determined by the commander’s assessments and an examination of post-exercise reports, soldier and officer evaluation reports, and training directives.**

**Selecting the Activity**

6.10 While a range of options may be considered, the AT activity, task or discipline should not be finalised until the objectives are known; because some disciplines may achieve the objectives of the activity while others will not. The task or discipline simply establishes the vehicle for experiential learning and should never be confused with the aim.

6.11 In reality, units rarely have the luxury to choose the optimum discipline, length of activity or location to achieve the aim or objectives. Quite often the discipline of the activity will be determined by the UATLs available, the timing will be based on the higher-level training programs, resources will be restricted, and there are far more planned participants (actual participants are usually considerably less) than what would be considered desirable.

6.12 Thankfully, all these issues are manageable, and almost any discipline-based activity can be modified to ensure that the aims and objectives are met. Where the task alone cannot
meet the objective, additional activities should be added. During an activity, an OIC or UATL may devise and implement different scenarios to facilitate the objectives of the activity, provided that adherence to the safety precautions listed in the safety references is maintained. For example, a whitewater kayaking activity will develop individual courage and resilience. Inclusion of a complex river crossing will also enable development of leadership and teamwork skills.

6.13 If not already there, teamwork tasks can easily be incorporated in most disciplines through add-ons such as communal cooking or group travel to and from activities on foot or on mountain bike. If a sea-kayaking activity has been ‘cursed’ by beautiful weather, assisted rescues at night can provide the stressful experience that may have been missing.

6.14 As UATLs gain more experience and confidence, their ability to tweak an activity to ensure that the aims are met, becomes a valuable asset. For this reason alone, units should not only seek the assistance of experienced UATLs, but also ensure that their own qualified personnel get to undertake professional development and assist other units.

6.15 Finally, for all but association-based activities, the discipline should always be considered the tool and not the objective. The ADF, in general, does not need personnel to know how to sea-kayak, climb, cave, or whitewater kayak. Keeping this in perspective is important, as it also emphasises the criticality of good exercise design and facilitation. From a commander’s perspective, AT is run not for its participants to learn a technical AT skill, but so that the unit, no matter what its role or situation, will operate at its optimum performance, and that its members grow their competence and professionalism, both individually and collectively.
SECTION 6-5. CONSIDERATIONS FOR DESIGNING ADVENTUROUS TRAINING

Wilderness Expeditions

6.16 As a general rule, activities that have an expedition element can be far more effective in developing the individual and group qualities required in battle. This is because expeditions place greater demands on the requirement to maintain team cohesion in periods of adversity. Participants are often totally removed for a long period from outside support networks and must rely on each other for support.

6.17 If a unit cannot access enough UATLs to undertake a single large-scale activity, the conduct of a bullring style using multiple disciplines can be a good solution. An expedition that moves participants to different activities in different locations presents an added benefit in that UATLs are required only when their AT discipline is being undertaken. This ‘bull-ring’ or ‘round robin’ model can emphasise participant leadership and group dynamics during these moves.

Duration

6.18 The activity must be long enough to realistically achieve the aim yet not so long that participants are no longer challenged and are not learning from the activity. Duration considerations include:

   a. Short Duration. It is generally considered that a period of three days is the minimum required for the development of the required qualities through application of the experiential learning cycle and for lessons learned through AT to be retained. It takes time to change attitudes that may have been developed over long periods, and it takes time for qualities such as trust and courage to be developed. Meaningful activities can be conducted in shorter periods, especially if the activity is a preliminary phase of a follow-up longer duration activity with skill progression, for example a two-day introduction to whitewater kayaking might precede a
multi-day expedition where there are few flat water locations available to complete preliminaries. However, commanders need to be aware that isolated activities of fewer than three days will not deliver the same enduring benefits as longer duration activities.

b. *Long Duration.* Long-duration activities create opportunities for selected individuals to experience the emotional and physical demands of prolonged periods of isolation and danger. They also allow the development of confidence through acquiring, applying and extending new skills and the development of deep relationships which can rely more heavily on trust and honesty, especially in providing frank feedback. It is desirable for AT to aim for longer duration activities, as they best emulate the extended and often open-ended nature of military operations.

**Programming and Timing**

6.19 It is preferable to program AT early in the training year as AT can increase teamwork, which can be of significant benefit to a unit at the start of the posting cycle when teams are being formed. AT can push a newly formed team through the storming and norming stages of the team formation process to arrive at the performing stage far more quickly than most other activities. Units receive the greatest benefits by enabling this transition to occur earlier in the year rather than by trying to develop teams just before they disband.

6.20 AT programmed at the end of the year may fail to deliver all of the potential benefits as often this timing coincides with teams disbanding, either for the stand down period or more permanently as members post out.

6.21 AT programmed at the end of the year should also be closely scrutinised for intent. An activity conducted as an end-of-year add-on once all the ‘real work’ has been completed, or as a reward for a challenging year suggests that the intent may be more about recreation than leadership and resilience. Recreational activities may have merit and should be
characterised as such. Recreation does not align with the principles of AT in Chapter 1 and should not be characterised as being AT.

6.22 While teamwork can be developed relatively quickly, many other individual qualities are usually developed incrementally over time. Commanders should not expect to see marked changes in the individual qualities of a participant after any one AT activity. Nor should they expect that development to be uniform across individuals. This is where good design, knowledge of the participants, the ability to be able to modify an activity to achieve its aims, and sound facilitation skills amongst the UATLs, can ensure that all participants gain value from the activity. Small AT activities targeted at particular groups and programmed to occur throughout the year will provide much better results than large activities of a generalised nature conducted at the end of the year.

6.23 Seasonal variations and locations for specific disciplines need to be taken into account in scheduling activities.

Size of Group

6.24 The aim and objectives of an activity and environmental considerations will determine the size of the group. However, the minimum group size for any AT activity should be four. In the event of an accident, this allows one person to remain with a casualty and two personnel to go for help. Having a group size fewer than four would require appropriate consideration in the MRM process and such outcomes clearly identified to the approving authority.

6.25 AT activities can be conducted for groups up to company size. However, smaller group sizes maximise leadership development and facilitate the transfer of experiences from the activity to the workplace by allowing effective debriefing. The optimal group size is four to 10. Larger bodies of troops are best managed by using a bullring system or dispersing activities within a general training area.
Other factors that influence group size include:

a. constraints imposed by safety doctrine
b. instructor experience
c. resources
d. training area availability
e. restrictions imposed by land managers
f. environmental constraints
g. time.

Integrated Training

It may be possible to integrate an AT activity during a regular training exercise. Alternatively, it is also possible to conduct normal military training during an AT activity. For example, high-frequency communications training can be integrated into a ski tour, or first aid revision into a climbing activity. With appropriate facilitation, units can extract significantly greater benefits from such combined training compared with conducting technical skills training in isolation.

Rank-neutral Environment

A rank-neutral environment is the recommended means of conducting AT and has many benefits. AT is about respecting each other, their strengths and weaknesses, and working together to achieve a common goal, regardless of rank and a rank-neutral environment best achieves this.

It should be noted that a rank-neutral environment means that there is no formal rank structure within the participants of the group and is not the same as a rank-free environment. Participants are expected to act in an appropriate manner, and maintain respect for rank. Whether to have rank neutrality is a commander’s decision, after consideration of the objectives of the activity and the optimal way to achieve those objectives.
The following are benefits of a rank-neutral environment:

a. It is an effective way to challenge individuals who are used to using the power of rank in their leadership style.
b. Rank neutrality breaks down the basic structure of a group and creates an open learning environment.
c. Rank neutrality greatly encourages honest, open and respectful communication, which is essential in creating teams where everyone contributes and is given the opportunity to contribute.
d. For junior ranks, it allows additional freedom to influence the group and take on leadership roles.
e. Some of the best ideas for solving a problem presented to the group may come from the lower ranks, who may never usually be asked for their opinion. A rank-neutral environment gives everyone a voice.
f. It is easier to control groups using names to identify individuals, especially in public areas.

Skill Progression

Activity design should take a progressive approach to skill development. This progression can be incorporated into one activity or into a number of activities over a year. A suggested system of skill development is outlined as follows:

a. **Familiarisation.** Participants learn the basic technical skills and gain exposure to the discipline for the first time. They are introduced to (or initiated in) the qualities required to overcome the challenges that the discipline presents. The psychological stresses can be quite high during the familiarisation process, as the participant is attempting to rapidly cope with and adjust to the new environment. Behavioural change occurs through this process; however it fades quickly.

b. **Skill Development.** Skill development focuses the participants on performing within the discipline such that they are able to complete sections of the activity.
6-11

Participants will still find aspects of the activity a physical challenge, and will be able to push themselves beyond their own comfort zones as their confidence develops. As the residual risk is low and the perceived risk is high, the emphasis on skill-development activities is on learning rather than performing, as the consequence of error is minimal.

c. **Expedition/Exercise.** Expedition or exercise activities are about long-term behavioural change. Participants have the necessary skills to perform an activity, and are taken into a situation where they must call upon their skills to complete the activity. Teamwork and individual effort are required, and the participants are often operating in an environment of residual risk. Expedition or exercise activities should attempt to replicate the conditions of the battlefield. Behavioural change brought about by a well-conducted activity will be long lasting.

**Participation in Adventurous Training**

6.32 Participation in AT is available to all ADF military personnel (including permanent and part-time), as well as foreign military personnel when AT is a relevant component of their service or training with Defence. All AT is conducted on-duty. As AT is specifically an element of military training, non-military Defence employees and other civilians are not to be included as participants.

6.33 Members of the Australian Cadet Corps may also participate in Army AT activities. However, their participation is to be limited to those activities that allow direct supervision by a GL. This includes abseiling, top rope climbing, caving, canyoning, backcountry ski touring and snow survival activities. Cadets are not to participate in whitewater activities, sea kayaking or lead climbing. Approving authorities should give consideration to the age, physical ability and maturity of cadets, the level of supervision and safety requirements when determining activity limitations.
6.34 Categories of Participants. Participants are generally divided into the following two categories:

a. Novice. A novice is a participant who has insufficient knowledge or experience to perform a skill without close supervision. Unit AT is usually centred around novices.

b. Experienced. Experienced personnel are those who are assessed by the OIC as having sufficient knowledge or experience to perform a skill without further instruction. Unit AT involving experienced participants is rare. AT run by AT associations often involves experienced participants that enjoy the technical discipline sufficiently to develop their skills and experience, potentially progressing to achieving a UATL qualification through recognition of prior learning/recognition of current competence.

6.35 These categories determine the level of supervision required and the degree of difficulty of the activity in which they may participate. The degree of difficulty for each skill is detailed in the relevant AT publication.

Civilian Instructors

6.36 It is preferable to use qualified military UATLs where possible, however civilian leaders and instructors, especially ex-military personnel may be used where there is benefit in doing so, for example where military personnel are not available or because they bring particular local knowledge and experience.

6.37 Civilian instructors are often experts in the discipline-specific hard skills but may be less effective in relating the experiences of AT to the battlefield. Civilian instructors without a military background may operate through ‘challenge by choice’, where participants can choose whether to do an activity and the extent to which they get involved.

6.38 Civilian instructors may also run activities in the form of commercial recreation. For example where the raft guide gets the paddlers to hold their paddles in the air as they go through a rapid. While this is fun for an unskilled ‘passenger’, AT is not
recreation. It totally disempowers the team and transfers all sense of achievement to the guide, feeding their ego in the process. This is totally against the ethos of military AT, where the UATL, regardless of how much control they actually exert in a situation, must ensure that it is the participants and the team that feel they have conquered the challenge presented to them. A good leader or facilitator will make the participant feel like they are the hero.

6.39 Despite this there are many good civilian AT instructors and companies. The important thing to do before engaging them is getting a mutual understanding of what procedures and practices are to be used, the aims and objectives of the exercise, and how these are to be achieved.

Recreational Training

6.40 The use of the Army-specified disciplines outside of AT where the activities do not align to the AT principals are not AT.

6.41 At the end of a hard year it is not uncommon for commanders to want to give their unit a reward in the form of an activity designed primarily for relaxation or entertainment. While to do so is the commander's prerogative and may be merited, it is not acceptable to refer to such activities as being AT as they are far from adventurous and have little to do with developing the qualities required in battle. It is particularly inappropriate to disguise an activity as AT merely to justify its approval.

6.42 Inappropriately referring to recreational training as AT can have the following consequences:

a. It creates expectations among the participants which are likely to conflict with the ethos under which UATLs operate. Considerable disharmony occurs when UATLs attempt to provide challenge when the participants are expecting relaxed recreation.

b. Participants who mistakenly believe that their exposure to recreational training represents some form of AT will likely form the view that genuine AT is of little value. Such views can be contagious and very difficult to
change; a junior officer exposed to poorly run AT or rebadged recreational training may carry such view with them through their career and deny to their soldiers the benefits that genuine AT can bring.

SECTION 6-6. CONCLUSION

6.43 Designing an activity based on a commander’s clearly identified aims and objectives is critical to the planning process. The design will set the parameters for activity planning and the way an activity will be conducted and managed. Imagination, creativity and improvisation are necessary to overcome the inevitable obstacles to generate an effective and rewarding activity.

6.44 The range of experiential learning and AT activities is constantly growing, including some very novel areas that will test how the AT and military facilitation communities respond and adapt. Therefore design consideration are not static and will require constant updating to ensure effective activity delivery.

Annex:

A. Characteristics of Selected Experiential Activities
ANNEX A TO CHAPTER 6

CHARACTERISTICS OF SELECTED EXPERIENTIAL ACTIVITIES

Discipline versus Activity

1. The type of activity and the discipline being used are not necessarily related. Understanding this reality is fundamental to an appropriate understanding of AT and ensuring effective activity design. This is because the aim of AT is to develop group and individual qualities and, except in the application of planning realities, is unconnected to the discipline utilised. Having said this, some disciplines can be more effective in developing some qualities over others as detailed in Table 6–1 and Table 6–2.

2. The following provides an example of how the discipline of sea kayaking could be used as a tool for any of the different types of adventure training activities conducted within Army:
   a. an expert expedition across Bass Strait focused on achievement of the goal of rehabilitation through establishing new limits and developing resilience
   b. a UATL-led sea kayaking trip around Wilsons Promontory with inexperienced participants, focused on leadership development.
### Table 6–1: Characteristics of Adventurous Training Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Physical Courage/ Stress</th>
<th>Self-reliance</th>
<th>Teamwork</th>
<th>Confidence</th>
<th>Determination</th>
<th>Leadership Development</th>
<th>Residual Risk (1)</th>
<th>Perceived Risk (1)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abseiling</td>
<td>M to H</td>
<td>L to M</td>
<td>L</td>
<td>M</td>
<td>L</td>
<td>L</td>
<td>LM</td>
<td>M to VH(2)</td>
<td>Limited activity. Benefits taper off quickly due to changes in perception of risk.</td>
</tr>
<tr>
<td>Top rope climbing</td>
<td>M to VH</td>
<td>M to H</td>
<td>M</td>
<td>M to H</td>
<td>M to VH</td>
<td>L to M</td>
<td>L</td>
<td>M to VH</td>
<td>Excellent activity. Safe activity for the benefits achieved, but benefits taper.</td>
</tr>
<tr>
<td>Caving</td>
<td>M to H</td>
<td>L to M</td>
<td>H</td>
<td>M to H</td>
<td>M to H</td>
<td>M to H</td>
<td>L to M</td>
<td>L to VH</td>
<td>Excellent for teamwork and leadership development. Places participants in unfamiliar environment.</td>
</tr>
<tr>
<td>Canyoning</td>
<td>M to H</td>
<td>M to H</td>
<td>H</td>
<td>M to H</td>
<td>M to H</td>
<td>M to H</td>
<td>M to H</td>
<td>M to VH(2)</td>
<td>Excellent for teamwork and leadership development. Requires higher level of planning and training.(3)</td>
</tr>
<tr>
<td>Lead climbing</td>
<td>H to VH</td>
<td>VH</td>
<td>M</td>
<td>H to VH</td>
<td>H to VH</td>
<td>L to M</td>
<td>M to H</td>
<td>H to VH</td>
<td>Excellent activity. Requires considerable individual courage. Requires participant training and experienced UATL.</td>
</tr>
<tr>
<td>Alpine survival</td>
<td>M to H</td>
<td>M to H</td>
<td>M to H</td>
<td>M</td>
<td>M to VH</td>
<td>H</td>
<td>M</td>
<td>L to VH</td>
<td>Should be expedition-based and include snow survival and camping. Weather conditions are a factor. (3)</td>
</tr>
<tr>
<td>Activity</td>
<td>Physical Courage/ Stress</td>
<td>Self-reliance</td>
<td>Teamwork</td>
<td>Confidence</td>
<td>Determination</td>
<td>Leadership Development</td>
<td>Residual Risk (1)</td>
<td>Perceived Risk (1)</td>
<td>Remarks</td>
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<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Whitewater kayaking</td>
<td>H to VH</td>
<td>H to VH</td>
<td>M to H</td>
<td>H to VH</td>
<td>H to VH</td>
<td>M to H</td>
<td>L to H</td>
<td>M to VH</td>
<td>Excellent activity. Requires participant training and experienced UATL. (3)</td>
</tr>
<tr>
<td>Whitewater rafting</td>
<td>L to H</td>
<td>L</td>
<td>H</td>
<td>M</td>
<td>M</td>
<td>M to H</td>
<td>L to H</td>
<td>L to H</td>
<td>Excellent for teamwork and leadership development, but benefits taper. River conditions are a factor. (3)</td>
</tr>
<tr>
<td>Sea kayaking</td>
<td>L to H</td>
<td>H to VH</td>
<td>M to H</td>
<td>H</td>
<td>H to VH</td>
<td>H</td>
<td>L to H</td>
<td>L to H</td>
<td>Excellent activity that can be readily graduated to participant group. Should be expedition-based. Weather and sea conditions are factors. (3) Can be readily designed for both physical and mental rehabilitation.</td>
</tr>
</tbody>
</table>

Classifications:

**Note:**

L = Low  
M = Moderate  
H = High  
VH = Very High

**Note:**

1. Variation in risk rating takes into account varying conditions and situations.  
2. Can have higher residual risk than perceived risk. Accordingly, there is potential for a dangerous situation.  
3. Requires the ability to swim. For mountaineering and ski touring, swimming may be required to conduct river crossings.  
4. Mountain biking has a high to very high risk of minor injury but a low risk of death. Overall residual risk is rated as medium.
### Table 6–2: Characteristics of Selected Experiential Learning Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Physical Courage/ Stress</th>
<th>Self-reliance</th>
<th>Teamwork</th>
<th>Confidence</th>
<th>Determination</th>
<th>Leadership Development</th>
<th>Residual Risk (1)</th>
<th>Perceived Risk (1)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ocean sailing</td>
<td>L to M</td>
<td>L to M</td>
<td>H to VH</td>
<td>M</td>
<td>M</td>
<td>H</td>
<td>L to H</td>
<td>M</td>
<td>Should be expedition-based. Weather and sea conditions are factors. (3)</td>
</tr>
<tr>
<td>Trekking</td>
<td>L to M</td>
<td>L to M</td>
<td>L to M</td>
<td>L</td>
<td>M</td>
<td>M to H</td>
<td>L to M</td>
<td>L</td>
<td>Need to present significant challenges such as altitude or isolation. Should be expedition-based.</td>
</tr>
<tr>
<td>Mountaineering</td>
<td>M to VH</td>
<td>H to VH</td>
<td>H to VH</td>
<td>H to VH</td>
<td>VH</td>
<td>H to VH</td>
<td>H to VH</td>
<td>H to VH</td>
<td>The most physically and mentally demanding of all activities. Requires considerable training and endurance. (3)</td>
</tr>
<tr>
<td>Parachuting</td>
<td>H to VH</td>
<td>VH</td>
<td>L</td>
<td>VH</td>
<td>M</td>
<td>L</td>
<td>M to H</td>
<td>VH</td>
<td>A mentally demanding activity that requires considerable courage.</td>
</tr>
<tr>
<td>Scuba diving</td>
<td>M</td>
<td>H</td>
<td>M</td>
<td>M to VH</td>
<td>L to M</td>
<td>L</td>
<td>L to M</td>
<td>L to VH</td>
<td>Places participants in an unfamiliar environment. Not all will find it challenging. (3)</td>
</tr>
<tr>
<td>Mountain biking</td>
<td>L to H</td>
<td>H</td>
<td>L to M</td>
<td>L to H</td>
<td>L to VH</td>
<td>L to M</td>
<td>M(4)</td>
<td>L to M(1)</td>
<td>Should be expedition-based. Terrain and conditions are factors.</td>
</tr>
<tr>
<td>Activity</td>
<td>Physical Courage/Stress</td>
<td>Self-reliance</td>
<td>Teamwork</td>
<td>Confidence</td>
<td>Determination</td>
<td>Leadership Development</td>
<td>Residual Risk (1)</td>
<td>Perceived Risk (1)</td>
<td>Remarks</td>
</tr>
<tr>
<td>-------------------------------</td>
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<td>-------------------</td>
<td>--------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Paragliding/hang-gliding</td>
<td>H to VH</td>
<td>VH</td>
<td>L</td>
<td>VH</td>
<td>M</td>
<td>L</td>
<td>M</td>
<td>H to VH</td>
<td>A mentally demanding activity that requires considerable courage.</td>
</tr>
<tr>
<td>Opposition paint training</td>
<td>L to VH</td>
<td>L</td>
<td>L to H</td>
<td>M to VH</td>
<td>M</td>
<td>M to VH</td>
<td>L to M</td>
<td>M</td>
<td>This activity involves realistic reaction and consequence and naturally links to psychological and physiological responses in preparation for the battlefield.</td>
</tr>
<tr>
<td>Ballooning</td>
<td>L</td>
<td>M</td>
<td>M</td>
<td>L</td>
<td>L</td>
<td>L</td>
<td>L</td>
<td>M</td>
<td>The activity needs to present a significant challenge and preferably be expedition-based. A resource-intensive activity.</td>
</tr>
</tbody>
</table>

Classifications:

**Note:**

L = Low  
M = Moderate  
H = High  
VH = Very High

**Note:**

1. Variation in risk rating takes into account varying conditions and situations.  
2. Can have higher residual risk than perceived risk. Accordingly, there is potential for a dangerous situation.  
3. Requires the ability to swim. For mountaineering and ski touring, swimming may be required to conduct river crossings.  
4. Mountain biking has a high to very high risk of minor injury but a low risk of death. Overall residual risk is rated as medium.
CHAPTER 7
PLANNING AND PREPARATION

SECTION 7-1. INFORMATION FOR PLANNING

7.1 This chapter contains detailed information for the planning and preparation of experiential learning and AT exercises and other adventure-based activities conducted by the ADF. As AT activities generally present the more complex and variable activities, this chapter refers to AT, however the principles are equally applicable to other experiential learning activities.

7.2 The environment for all but the most basic AT activities is unpredictable, which builds in the need for foresight, judgement, flexibility and adaptability. Combined with the complexity of coordinating resources sourced from multiple locations, planning an AT activity can be a challenging yet invaluable developmental tool for junior NCOs and officers. For this reason, it is critical that units actively support those tasked with planning AT.

SECTION 7-2. SCOPE

7.3 The thorough design of AT exercises, as described in Chapter 6, is critical to activity success. The starting point for exercise design is for the approving authority to identify the specific objectives to be achieved rather than merely executing an activity in a specific AT discipline, as this may not be the best discipline for the identified objectives.

7.4 While activity design comes first, planning for an AT exercise often must commence prior to the design being finalised in order to feed planning considerations into design. The design should provide the exercise planner with the exercise aim and objectives as well as a general concept (the means of achieving the aim and objectives). The first step in the planning
7.5 This chapter details the following planning considerations:
   a. appointments and responsibilities
   b. AT instructors and leaders
   c. exercise location
   d. AT stores and equipment
   e. administration considerations
   f. safety considerations
   g. the exercise proposal
   h. the exercise instruction
   i. post-exercise activities.

SECTION 7-3. APPOINTMENTS AND RESPONSIBILITIES

Training Adviser

7.6 The training adviser for AT is COMD ARTC. COMD ARTC is responsible for the provision of the safety policy for the conduct of AT within the Army.

Technical Authority

7.7 The technical authority for AT is the OC ATW, ARTC. ATW is the SME organisation and authorised training establishment for AT.

Approving Authority

7.8 The approving authority undertakes the duties of the officer authorising the activity as per MRM and, in so doing, agrees to or determines the broad objectives for the activity and the appetite for risk. The commander’s guidance should be sought or confirmed at the earliest stage of activity planning. Approval should be based on their being satisfied that the activity is

LWP-G 7-6-1, Adventurous Training – Planning Experiential Learning Activities, 2019
efficient, effective and compliant with all Defence values, policies and relevant legislation, especially with regard to safety. Therefore, the approving authority should be at a level of command commensurate with the composition of the participants and the resources required. The lowest level of approval for AT is unit CO and, in most instances, will be at unit, brigade or formation level.

7.9 The approving authority does not need to be an AT SME, but must have justifiable confidence that the OIC has designed the activity to achieve its stated aim, and planned the activity so that risks are adequately identified and managed and that it is conducted in accordance with ADF policies and procedures.

**Officer-in-Charge**

7.10 The OIC undertakes the duties of the responsible officer as per MRM and is responsible to the approving authority for developing and managing the exercise environment to ensure that the exercise objectives are achieved in a realistic, safe, environmentally responsible and cost-effective manner. The OIC is the officer responsible for the overall conduct of the exercise. The OIC will develop and issue the AT exercise proposal and the detailed exercise instructions. Although not essential, it is highly recommended that the OIC attend all or part of the activity to confirm the adequacy of planning arrangements and that the activity is achieving its stated aims. The OIC does not have to be an AT SME, although a UATL qualification is highly desirable. The OIC is assisted by UATLs in planning and conducting the exercise.

**Activity Commander**

7.11 The AC undertakes the duties of the officer conducting the activity as per MRM and is responsible for the overall conduct of the activity. One person may be appointed as AC and OIC if they are suitably qualified, however separate appointments is preferable. The AC ensures that the activity is being run as planned, that the assisting UATLs comply with prescribed processes and procedures, and where modifications are required due to weather, conditions, safety, participant ability,
or any other justifiable reason, these are implemented as appropriate. The AC’s decision to modify an activity for safety reasons cannot be overridden by the OIC or any other instructors or participants.

7.12 The AC must be UATL qualified in the relevant discipline. The AC should be appointed on the basis of relevant experience rather than rank.

SECTION 7-4. ADVENTUROUS TRAINING INSTRUCTORS AND LEADERS

7.13 Once the number of participants is known, the proposed exercise schedule developed, and the discipline(s) identified, the OIC will need to determine the required number and disciplines of the qualified leaders. The ratio of leaders to participants is discipline-dependant and these ratios are listed in the respective AT technical publications. There are four forms of UATL that can be utilised to conduct or assist on an AT activity:

a. **Unit Adventurous Training Leader.** The UATL is an ADF member that holds a current, formal qualification granted by the ATW in a specific discipline. They are qualified to lead participants, and plan, run, facilitate and assist in AT activities without supervision and within their discipline qualification in accordance with the respective AT technical publications.

b. **Adventurous Training Leader Instructor.** The ATLI is a formal qualification granted by the ATW to personnel who are qualified as a trade testing officer to train and assess ADF personnel in the UATL qualifications. For execution of an AT activity they hold the same status as a UATL, although they often have higher levels of experience. An ATLI qualification may be used as an experience discriminator for advanced AT activities.

c. **Group Leader.** The GL is a UATL who has been appointed supervisory responsibilities over a group or
sub-activity due to the number of participants, complexity of the activity, group separation, and/or the level of supervision required by the specific activity. Unless otherwise specified, the GL has the authority of the AC to modify an activity where the group is separated from the AC, and it is not practical for the AC to determine the situation being confronted by that group.

d. **Authorised Adventurous Training Leader.** After consultation and concurrence with OC ATW, the approving authority can authorise a person who does not hold a UATL qualification but does have either commensurate civilian qualifications and/or extensive discipline experience, to act in the role of UATL for a specified AT activity. Such persons may include ADF members, non-military Defence members or civilians. The following considerations are applicable:

1. This authorisation applies only to the conduct of activities within the auspices of the approving authority.

2. This authorisation extends to all applicable UATL functions, including receiving and returning AT stores to AT loan pools.

3. The authorised person must comply with ADF AT processes and procedures.

4. Consideration must be given to the effect on supervision ratios from the perspective of safety and of effective facilitation.

5. This authorisation would be the exception to the norm but recognises that some highly experienced personnel may be unable to gain UATL qualifications due to their rank, availability or other circumstances.

6. Where the activity is wholly delivered by a civilian organisation, the activity is to be run in accordance with their relevant civilian standards.
their accreditation and insurance requirements, and using their equipment. As the activity would not include military facilitation, it would not be consistent with the principles of AT (see Chapter 1) and would, therefore, be defined as recreational or skills-based training, but not as AT. By definition, a civilian organisation not applying an Army AT framework cannot deliver AT.

7.14 Given the number of roles that UATLs may fulfil in the planning and delivery of AT, reference to UATL throughout this publication may include UATLs, ATLIs, and persons authorised to act as UATLs. Activity planners may need to inform themselves as to how these responsibilities are managed. Utilising qualified and current UATLs is always preferred as it:

a. almost always represents better value for money
b. provides opportunities for qualified leaders to maintain their qualifications and build valuable experience
c. enables qualified individuals to directly contribute to the outcomes of their own units
d. ensures consistency across AT activities, especially in moderating the quality of military facilitation
e. ensures alignment with the military ethos by preventing the potential for ‘challenge by choice’ or similar recreational philosophies to be applied by civilian service providers.

Sourcing Unit Adventurous Training Leaders

7.15 Sourcing UATLs can be one of the most difficult tasks faced by an OIC so identifying available individuals should commence as early as possible. Even once they are identified, changing priorities from their parent units can result in their becoming unavailable when required. Planning for redundancy and contingencies is prudent and activity planners should plan for more UATLs than is strictly required by discipline-specific supervision ratios in order to account for the loss of UATLs prior to an activity commencing. Having a spare UATL during the
exercise also provides redundancy should injury, sickness or other reasons result in the loss of an UATL, which could seriously impact on the ability to continue running the exercise.

7.16 In some cases, the AT discipline utilised will be driven by availability of UATLs. In such cases, the activity objectives should not be altered but UATLs may need to adjust their normal modus operandi to suit. Fortunately, with a bit of imagination, almost any exercise can be designed to target the development of the desired individual and team qualities, and hence still achieve the exercise aims.

7.17 Many suitable UATLs do not have access to signals so the most effective and quickest way to identify available personnel is through social media, especially the ‘Australian UATLs’ page on Facebook. Other options include local contacts and ATW. Once UATLs have indicated that they are available, then planners can devote resources to securing their services:

a. ARA and other service members are engaged via an ACMS bid or other agreed process.

b. ARes members will require allocation of Army Reserve Training Salaries and, for inactive or standby ARes members a DA26 Minute – Application Form\(^1\) contract mechanism may be required. Often the availability of ARes members can be more reliable as they often have more control over their own commitments.

7.18 UATLs can be sourced internally from within a unit, from neighbouring units, or nationally, albeit the latter will increase costs due to travel.

**SECTION 7-5. EXERCISE LOCATION**

7.19 The main consideration in relation to the selection of an exercise location is the requirement to safely achieve the aim and objectives of the exercise. The aim of AT is often best achieved by removing participants from a familiar environment

\(^1\) [http://dmnet/Army/DPSRM/Directorates/DPSRM-A/Pages/Forms.aspx](http://dmnet/Army/DPSRM/Directorates/DPSRM-A/Pages/Forms.aspx)
and placing them in a situation that provides a sense of remoteness and danger. To achieve this, it may be necessary to travel long distances to find an environment that appears hostile to the participants and provides a challenge. This has to be considered in relation to resource issues including travel time, cost and availability of transport. At the same time, there are many locations that can be close by which should not be overlooked if the aim of the exercise can still be achieved.

7.20 Regardless of travelling distance, the location of an exercise is determined by the same considerations as those used in the selection of a suitable location for any military exercise and will include:

a. availability
b. the suitability of the environment and terrain to achieve the exercise objectives
c. the safety and communications consideration
d. the environmental impact on the area
e. the authorisation required to enter and operate in the area
f. the means of access and costs.

7.21 Site Selection. Base camp and overnight locations selected for the conduct of an AT exercise may be in buildings, depots, in recognised campgrounds with good road access and useable facilities or in designated wilderness camping areas. In many cases, park rangers or land management agencies will dictate the location of camp sites. Units conducting AT exercises must comply with all directions and procedures directed from such land management agencies. Regardless, the following factors should be considered when selecting base camps and temporary camp sites to be used during an AT exercise:

a. The site must be large enough to cater for the size of the group. This should include appropriate accommodation
types and areas, areas for equipment storage, parking for vehicles and administration areas.

b. The facilities of the site should be appropriate to the exercise. Caving activities, for example, generally require the availability of showers, while whitewater rafting expedition activities require only enough space to sleep.

c. The site should be appropriate for the objectives of the exercise. Activities attempting to develop self-reliance are best sited in wilderness areas.

d. The site chosen must be appropriate to the hazards present in the exercise. For example, camp sites chosen for a sea kayaking activity should be sited above sea high-tide marks.

e. Sometimes, due to weather conditions or incidents occurring during an expedition-style activity, it will not be possible to guarantee that a specific night location will be used. Flexibility and alternatives may need to be factored into site selection.

f. Due to the unpredictability of environmental factors such as river levels, it may be prudent to book suitable alternate exercise locations on a contingency basis in order to avoid cancellation of activities.

g. The site must have cleaning, hygiene and toileting facilities appropriate to the exercise.

h. When a site is to be occupied for a period of time, it must be maintained to an appropriate standard, with ongoing consideration to the hygiene and environmental requirements.

i. It is critical that the impact of extremes of weather on the selected area is well understood. The conditions that necessitate the activity to be modified, cancelled, postponed or moved to another area must be clearly identified and articulated in the planning process. These could be maximum river heights at specific gauges, wind
strengths on the ocean, or general weather conditions. The UATL will be best placed to determine these, but importantly, there should be no explicit or implicit pressure to conduct the activity as planned if conditions are unsuitable.

7.22 **Land Clearance.** Prior to conducting any AT exercise on non-Defence training area (NDTA) such as national parks, state recreation areas, state forests, public land or private land, it is essential to follow the military process to obtain formal written permission from the relevant land management authority or landowner for its use. This formal permission is known as a land clearance and provides authorisation to use the land for military training. Land clearances are obtained via the Training Area Safety and Management Information System (TASMIS). The land clearance is processed by regional Joint Operations Support Staff (JOSS) within the Defence E&IG, who also liaise with landowners on behalf of units. An application via TASMIS requires a detailed description of the exercise-to-be including:

a. the number of personnel conducting training
b. the numbers and types of vehicles involved
c. notes specifying that no weapons will be taken onto the land
d. whether civilian dress will be worn.

**Management of Training Areas**

7.23 **Defence Training Areas.** Defence training areas (DTAs) are those training areas that are owned and operated by Defence. These training areas have environmental management plans or environmental management systems (EMSs) in place, or are in the process of implementing EMSs. Individual DTAs are managed by the E&IG through regional Directorates of Operations and Training Area Management of JOSS.

7.24 **Non-Defence Training Areas.** NDTAs typically include conservation reserves and national parks established and
managed either by the Commonwealth or the various states and territories.

7.25 Training Area Coordination. Access to DTAs and NDTAs is booked and coordinated through TASMIS. Use of NDTAs will often impose restrictions in addition to those that apply to DTAs as applied by the land owner or manager. The EMS may also specify that a code of conduct apply to the conduct of certain exercises.

7.26 A land clearance is usually accompanied by an environmental clearance certificate (ECC), which outlines the obligations of the unit conducting the exercise to preserve environmental values and minimise environmental harm. The ECC is detailed in Chapter 8.

Reconnaissance

7.27 Once an exercise area has been selected, consideration should be given as part of formal planning to undertake a reconnaissance to confirm activity, administrative and safety arrangements. Reconnaissance activities need to be properly resourced as they are done to reduce risks and ensure that the activity runs smoothly. Specifically, the reconnaissance may be required to confirm the following:

a. Activity considerations:

   (1) access to and suitability of training areas appropriate for the experience levels of the participants

   (2) practicality of proposed activities

   (3) equipment requirements

   (4) seasonal changes

   (5) adverse weather options

   (6) local contacts and considerations for ensuring harmonious relationships with other area users.
b. Safety considerations:
   
   (1) reliability of proposed emergency communications
   
   (2) suitability of proposed emergency egress routes and casevac locations
   
   (3) local medical facilities and capabilities
   
   (4) civilian emergency capabilities (eg, Volunteer Marine Rescue) (operating times, frequencies, coverage)
   
   (5) location of key safety indicators (eg, river gauges or water heights).

c. Administrative considerations:
   
   (1) base camp facilities and night locations
   
   (2) travel routes and times
   
   (3) accessibility to fuel, water and food resources.

7.28 It may not always be necessary to conduct a physical reconnaissance. This would be the case if the area is well known to the OIC or AC and not likely to be subject to significant change (eg, Kangaroo Point climbing in Brisbane).

7.29 It may not always be possible to conduct a reconnaissance due to resource constraints, inaccessibility or other unit commitments. In this case, the lack of a physical reconnaissance should be offset by more extensive research and an appropriate adjustment of the exercise risk management plan to accommodate the increased uncertainty (eg, enhanced emergency communications). For more advanced activities, where the sense of exploration is a significant component of the adventure, an exhaustive physical reconnaissance may detract from the achievement of the activities aims and sense of self-reliance of the participants. Should this be considered to be the case, this does not in any way reduce the responsibility of the OIC to have in place a sound plan for ensuring that the group can conduct appropriate
self-rescue, and that injured participants can access appropriate and timely emergency treatment.

SECTION 7-6. ADVENTUROUS TRAINING STORES AND EQUIPMENT

7.30 Discipline specific and general AT equipment is available from regional equipment pools. The range and quantity of equipment available is limited and often in high demand, and may require supplementation from additional regional equipment pools (e.g., adventure associations, such as the Army Alpine Association or Army Whitewater Association). Regional equipment pools loan equipment on a ‘first come, first served’ basis; thus, the greater the lead-time, the greater the chance of obtaining the equipment requested. All AT equipment must be inspected by a UATL upon receipt, return and prior to use. More detail on AT equipment is contained in Chapter 12.

7.31 The OIC can authorise the use of personal specialist AT equipment provided they have been inspected and deemed safe and fit for purpose by a UATL. The use of personal AT equipment will be common for UATLs who will often customise and optimise their safety and rescue equipment. The use of personal equipment in no way reduces the requirement to carry mandatory individual or group equipment as prescribed in respective AT technical publications. All personal equipment is used at the owner’s risk and compensation is generally not available for its loss or damage.

SECTION 7-7. ADMINISTRATIVE CONSIDERATIONS

Rations

7.32 When planning an arduous and challenging exercise, rations are a major consideration. When formulating a ration plan, the aim and objectives of the exercise should be considered as the careful selection of rations may assist with the development of the targeted qualities. If the development of teamwork is one of
the objectives of the exercise, the ration plan chosen should be one that supports this (ie, individual combat rations would be inappropriate).

7.33 In general, field fresh rations develop teamwork, initiative and cooperation between participants, whereas combat ration packs given to non-combat units may familiarise those personnel with the rations used on operations. Rations must be suitable for the energy requirements of the exercise as well as being practical for the exercise. For example, fresh field rations requiring extensive preparation and cooking would be inappropriate for a multi-day skiing expedition. Further information on rationing is contained in Chapter 13.

Accommodation

7.34 Accommodation during an AT exercise can range from sleeping in individual shelters (hootchies); in small two-person tents; in large (14 x 14 ft) tents; in groups under tarpaulins; or in temporary accommodation, such as rock bivvies or snow caves. As for rations, the type of accommodation chosen should suit the objectives of the exercise, the environment and the conduct of the exercise. In general, group accommodation may assist in the development of group qualities, while individual accommodation may develop self-reliance.

General Stores and Equipment

7.35 Stores. General stores (appropriate to the environment, exercise and the participants) should be planned for and requested for the exercise and should include:

a. cooking facilities, including gas stoves, pots and utensils
b. food storage facilities
c. cleaning stores and expense items for both personnel and equipment
d. lighting, including torches, lanterns and batteries
e. firefighting equipment as appropriate
f. camp site facilities such as tables and chairs.
7.36 **Dress.** Dress for an AT exercise may vary from military uniforms, civilian clothing or specialist protective equipment. Some considerations for the selection of dress include:

a. The selected dress must be appropriate for the exercise, allow necessary movement and must provide protection from the exercise hazards.

b. The selected dress must not increase the risk of injury of participants. In this regard military uniforms may be suitable for tactical river crossing activities but are unsuitable for water-based AT disciplines.

c. The selected dress must be appropriate to the environment and provide protection from elements such as rain, cold or sun.

d. The selected dress must be in good functional condition.

e. The OIC must ensure that the participants adhere to the dress requirements stipulated by the AC. Cotton is usually prohibited in water-/snow-based activities as it tends to wick moisture, increasing the risk of cold-related injuries. The AC can refuse to allow participants to undertake the activity if they are not appropriately dressed.

f. Civilian dress may be required by national parks or the appropriate land management agency.

g. The use of civilian clothing may enhance a rank-neutral activity.

**Transport**

7.37 Vehicles used to transport participants to and from field activities must be fitted with seatbelts and have forward-facing seats. Vehicles can be used to carry stores and personnel at the same time only if a safety barrier is fitted to separate stores and personnel.

7.38 A key requirement is that a dedicated safety vehicle should always be available as close as practical to the exercise location, and that this vehicle should not be used for any other...
purpose. The exception to this requirement is where a safety vehicle cannot be located to be of practical or timely assistance in the event of an emergency, and an alternate casevac strategy is in place. In these situations a safety vehicle may be provided on an on-call basis, provided its reaction time has it available to either receive a patient from the alternate casevac resources if required, or it can receive non-urgent, self-evacuated casualties in a timely manner.

7.39 Vehicles on AT activities are often used to store equipment not in use. Soft-top vehicles may not provide adequate security in locations where there are other users.

7.40 Military-style vehicles may not be appropriate to use within state and national recreation areas and parks.

7.41 Consideration should be given to minimising participant engagement with vehicles once the exercise has commenced. The absence of vehicles can greatly enhance the feeling of remoteness and self-reliance. Where distances are too great to cover by foot within timeframes allocated, consideration should be given to novel solutions such as using mountain bikes, especially in round-robin or expedition style exercises. Such novel solutions need to be appropriately reflected in risk assessments.

7.42 If a unit does not have sufficient suitable organic transport to move all personnel to an AT exercise, alternatives such as other units, vehicle loan pools and hire vehicles must be considered. All other vehicle and transport requirements are contained in Defence Road Transport Manual.

Financial Resources

7.43 Thorough exercise planning requires the forecasting or requesting of resources, including rations, fuel, site costs, travel, Army Reserve Training Salaries where ARes members are involved and allowances. Normal unit forecasting procedures should be used where possible.

7.44 Traditionally, the perception that AT is a ‘nice to have’ has meant that attracting full resourcing has been a challenge for
activity planners and novel and imaginative approaches are often required. However caution should be applied where such responses involve cutting corners, especially where this has the potential to impact safety. It is possible to seek supplementary resource bids at any time. In addition, planning AT activities towards the end of the training year to take advantage of potential underspends may improve activity resourcing but neither of these options is preferred over appropriate prioritisation of effective and professional AT.

7.45 Allowances may be payable for an AT exercise. They are as follows:

a. **Adventurous Training Instructors Allowance.** This allowance is payable to qualified and current UATLs at a daily on-occurrence rate for the days spent conducting unit AT activities. The allowance is generally payable only for formal unit AT activities, excluding time spent in preparation or reconnaissance. ARes members can claim this allowance via PMKeyS Self Service whereas ARA members are required to submit form AE552 Adventurous Training Instructor Allowance Payment Authority – Unit Adventurous training Leader through the activity OIC to the OC/CO for payment authorisation, then to their unit pay representatives for pay system entry. ATLIs posted to ATW are entitled to this allowance on an annual (or pro rata) basis. This allowance is funded centrally and not from unit resources.

b. **Field Allowance.** As with all military field activities, field allowance may be payable to UATL and participants undertaking AT following completion of a field allowance matrix and OC/CO authorisation. This allowance is centrally funded.

c. **Incidentals/Travelling Allowances.** Incidentals and travelling allowances are paid from direct-unit funds and are managed at the unit level. Advice from clerks and pay representatives should be sought before committing such allowances, as there are many restrictions governing their payment.
Peter Stuckey Mitchell bequeathed a trust fund to support a number of awards to the ADF. One of these was the Adventurous Training Award, which consists of awards made to support approved Army AT exercises. There are a number of conditions that apply to the AT award, including:

a. AT exercises must be approved and consistent with the aim of AT, and must comply with relevant policy and doctrine.

b. AT exercises must involve groups and not individuals.

The award money may be used to cover expenses such as the purchase or hire of special equipment, hire of civilian guides, travel and accommodation or any other purpose authorised by the OIC in the conduct of the activity. Any equipment purchased is to be donated to the ATW at the completion of the exercise. The procedures for obtaining disbursements from the Peter Stuckey Mitchell Trust Fund are in ATI 9-1/14, The Peter Stuckey Mitchell Trust Fund Awards.

SECTION 7-8. SAFETY CONSIDERATIONS

A capsized raft, a fall while climbing, or being snowed-in during a blizzard do not necessarily represent disaster. They are all part of the normal AT experience. It is how these are planned for, managed and reacted to that determine the safety of AT. The training and judgement of the UATLs, combined with the application of the practices and procedures contained within the respective technical publications, is how AT activities are conducted safely and incidences such as these become the stories of resilience and success rather than of failure.

Safety and risk management are discussed in detail in Chapter 2; however, from a planning perspective, it is important that approving authorities and OICs listen to the experienced UATLs and follow the requirements of technical publications when assessing risk and safety requirements. Approving authorities and OICs should be cautious about ignoring the
recommendations of UATLs, particularly if they have no greater discipline-specific experience. Further, the inclusion of some non-prescribed measures, such as safety boats in sea kayaking activities where these are not required, may intuitively add to the safety of the activity, but in reality they invariably increase the number of potential risk events and significantly detract from the achievement of the exercises aims.

Communications

7.50 An appropriate communication plan must be established for an AT exercise for safety and administration. The forms of communication may include runners, cellular, satellite or landline telephones, UHF or VHF radios, or emergency devices such as PLBs or EPIRBs. The safety requirements and considerations for communication systems are detailed in Chapter 2.

7.51 Administrative uses of the communications include reports and returns, obtaining weather reports, providing medical information and other administrative matters. The communications plan should be attached as an annex to an exercise’s general instruction.

7.52 It is acceptable for an AT exercise to use the emergency and notification functions of devices such as SPOT trackers as the primary means of communication in remote areas, although this is to include a redundancy measure such as a PLB.

7.53 UATLs are to understand the key differences between PLBs and EPIRBs as shown in Table 7–1.

Table 7–1: Differences between Personal Locator Beacons and Emergency Position-indicating Radio Beacons

<table>
<thead>
<tr>
<th>Personal Locator Beacon</th>
<th>Emergency Position-indicating Radio Beacon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operate for 24 hours once activated.</td>
<td>Operate for 48 hours once activated.</td>
</tr>
</tbody>
</table>

LWP-G 7-6-1, Adventurous Training – Planning Experiential Learning Activities, 2019
Medical Treatment and First Aid

7.54 The level of first aid and medical support organic to an AT exercise will be a function of the risks and consequences involved in the activity, the remoteness of the training area, the ability to conduct a casevac, the time to reach hospital facilities, and the reliability of communications.

7.55 All AT activities need some form of tailored first aid capability. This may simply be one or more participants with the appropriate level of first aid training, but may involve a dedicated medic.

7.56 It is important to identify the medical conditions that may prevent a participant from undertaking an activity, or which may be made worse by doing the activity. Often these unidentified injuries can result in a preventable casevac. Examples include wrist and back injuries, which will usually worsen during sea kayaking; or a propensity to dislocate a shoulder which could be an issue for whitewater kayaking. It is best that activities are either modified to take these participants into account; individuals are specifically catered for, such as placing a participant with a back problem in the front of a double sea kayak; or individuals are prevented from participating if their injury cannot be accommodated.

7.57 More detail is available at Chapter 2 and Chapter 9.

SECTION 7-9. THE EXERCISE PROPOSAL

7.58 The approving authority may require that an exercise proposal is developed to secure resources for detailed planning to occur.
The proposal should contain sufficient information for the approving authority to make an informed decision in regards to the training value of the exercise, the resource implications and the inherent risks. An exercise proposal, should contain the following information:

a. the aim of the AT exercise, specifically identifying what particular qualities are going to be developed through the exercise

b. the exercise design principles, that is how the activity is to be designed and run to develop the qualities identified in the aim

c. planning constraints such as UATL disciplines, timings, equipment, and training areas

d. key appointments for the exercise including the OIC, and UATLs (if known)

e. identify where additional UATLs will be sourced from and whether there is a need to request authorisation for non-UATLs and how this is to be progressed

f. the proposed personnel taking part in the training

g. a general outline of the exercise, including exercise location, a sequence of events and the general conduct of the training

h. a general administration and logistics plan for the training including rations, accommodation, general stores and equipment, AT stores and equipment and transport requirements

i. a list of the resources required for the exercise including allowances payable and resource costs for the training

j. the communications concept, the requirements for any communications equipment and proposed means of communication
an MRM plan showing the major risks of conducting the exercise and the methods used to reduce the risk of the training

i. the particular safety requirements of the exercise and how such requirements are to be achieved (this should include any particular pre-exercise training, particular medical or safety stores and equipment, an outline casevac plan, an outline SAR plan, or any other contingency plans for the exercise).

7.59 The AT exercise proposal provides a means to inform the approving authority of the objectives of the exercise and how the objectives are to be achieved. It also provides a skeleton for the production of an administrative instruction (or mounting instruction, if to be conducted overseas) for the exercise.

SECTION 7-10. THE EXERCISE INSTRUCTION

7.60 The administrative instruction provides the authority to conduct an AT exercise. As such, an administrative instruction must be comprehensive and detail all requirements for the exercise, both internal and external to the unit. While an administrative instruction for an AT exercise is similar to any other administrative instruction, particular requirements of an administrative instruction for an AT exercise are as follows:

a. the aim of the AT exercise, specifically identifying what particular qualities are going to be developed through the exercise

b. the exercise design principles, which is to state how the activity is to be designed and run to develop the qualities identified in the aim

c. identify all key appointments and their responsibilities for the exercise, including the OIC, AC, GLs (if applicable), UATLs and medic (the qualifications and experience of the key appointments should also be detailed)
d. specifically identify any persons authorised to act as UATLs, any commercial arrangements, and if civilian equipment/practices are being used

e. identify the personnel taking part in the training

f. provide a complete description of the exercise (this includes pre-exercise training, a detailed description of events, locations and timings, and any administrative activities that must be undertaken prior to or after the exercise; a detailed sequence of events may be included as an annex)

g. provide a detailed administration and logistics plan for the training (this should include information such as rations, accommodation, general stores and equipment, AT stores and equipment, and transport requirements; each of these may be included as an annex)

h. provide a participant's personal equipment and health checklist, specifically detailing what participants are to bring and wear and what conditions will prevent them from undertaking the activity (this is to be provided by the OIC to every participant, regardless of rank, as a stand-alone document in sufficient time for participants to acquire the mandatory items. Failure to bring mandatory items or presenting with certain injuries may see participants not being able to undertake the AT exercise)

i. provide a list of the resources required for the exercise, which should include allowances payable and resource costs for the training

j. provide a communications plan, which should include the requirements for any communications equipment, requirements for allocated frequencies, reporting requirements, communications in emergencies, and the key telephone numbers applicable to the exercise

k. provide an MRM plan, which shows the major risks of conducting the exercise and the methods used to reduce
the risk of the training (the risk analysis should be included as an annex to the instruction)

1. identify the particular safety requirements of the exercise and how such requirements are to be achieved (this should include any particular pre-exercise training, particular medical or safety stores and equipment, an outline casevac plan, an outline SAR plan, or any other contingency plans for the exercise; the safety plan should be included as an annex to the instruction)

m. identify the environmental compliance requirements of the exercise (environmental clearance information or the ECC should be included as an annex to the instruction).

SECTION 7-11. FACILITATION PLANNING

7.61 Facilitation is a critical and defining component of AT and planning must consider time, location and psychological/social requirements of effective facilitation. Application of the experiential resilience education exercise (commonly known as EREE) workbook is required for all AT and time must be allocated for participants to complete the workbook in a guided fashion. Similarly time must be allocated to completion of 360° feedback sessions towards the conclusion of the activity.

SECTION 7-12. POST-EXERCISE ACTIVITIES

7.62 An often-neglected part of the exercise is the post-exercise activities. An exercise is not formally completed until the following have occurred:

a. the post-exercise review has been held involving all key personnel

b. all administrative reporting requirements (field allowance, ration acquittal, etc.) have been met

c. all accidents and incidents have been reported in accordance with Defence and statutory requirements
d. all equipment has been accounted for, refurbished, processed and returned

e. a post-exercise report has been written.

7.63 The post-exercise report must contain:

a. a thorough description of the exercise as it was conducted

b. highlighting any departures from the original plan

c. provide suggested improvements in exercise design and conduct

d. any suggested improvements for the administrative conduct of the exercise

e. detail the expenditure of resources such as rations, petroleum, oils and lubricants and other expenses paid by unit funds

f. describe the success or otherwise of the exercise against the proposed objectives

g. any successes should be detailed, and suggested improvements should be detailed in the event that the exercise is conducted again.

SECTION 7-13. CONCLUSION

7.64 Safe, challenging and effective activities can best be achieved if they are well-designed, planned and executed in accordance with the plan. The task of planning an exercise can be a valuable developmental tool for junior NCOs and officers. Importantly, the complexity and challenge of organising an exercise, combined with the benefits that good activities provide to a unit, requires and deserves support from senior ranks within a unit to assist and encourage those involved in the planning process.
CHAPTER 8

THE ENVIRONMENT

SECTION 8-1. TRAINING ENVIRONMENT

8.1 There is a wide range of training environments available for the conduct of experiential learning and AT within Army. Often established DTAs, including weapons ranges, obstacle courses, physical training facilities and other tri-Service facilities will be suitable and ease the planning burden for experiential learning and team building activities. However, NDTAs can provide high levels of novelty and challenging terrain that may enhance some experiential learning activities, especially AT.

8.2 NDTAs, including national parks and reserves, contain some of Australia’s most unique and spectacular wilderness areas and landscape features. Many of these areas are environmentally fragile or contain sites of heritage value and are heavily utilised. Consequently, planners of experiential learning and AT have a responsibility to ensure that activities are environmentally responsible and comply with all relevant government legislation, policy and area environmental management plans relating to these environmental and heritage values. The following is a simple philosophy to employ:

a. take nothing but photographs
b. leave nothing but footprints
c. kill nothing but time.

Environmental Impact

8.3 For the purposes of determining environmental impacts, the environment can be divided into the following four categories:

a. the natural environment
b. the historical environment
8.4 An exercise may have influence in one, some or all of these categories. It is important to have an understanding of these categories so that sources of environmental impact and the effects of exercises can be determined.

8.5 **The Natural Environment.** The natural environment consists of the natural surroundings, including those aspects and places that have special ecological, biological, aesthetic and scientific significance or other special values. The natural environment includes the natural topography, ecosystems and habitat of flora and fauna. Many significant natural areas have been reserved and dedicated as conservation reserves such as world heritage areas, national parks, nature reserves, karst conservation areas, and regional parks.

8.6 **The Historical Environment.** The historical environment consists of artificially constructed buildings, structures and locations that have special historical, cultural, aesthetic or scientific significance. The historical environment includes historic buildings and structures, places of historical significance, shipwrecks, anthropological or archaeological sites and other sites of historical interest.

8.7 **The Human Social Environment.** The human social environment consists of the interaction and sharing of all aspects of the environment by people using the natural resources or other buildings and structures. The human social environment also relates to environmental social factors that lead to a person enjoying their experience. These factors include a person’s sensory experiences (such as visual, aural or olfactory senses) of the aesthetic aspects of the environment, as well as their higher feelings of safety, fear and personal worth.

8.8 **The Indigenous Cultural Environment.** The indigenous cultural environment consists of known indigenous sacred sites, important landscape features, rock art and other areas likely to contain indigenous anthropological or archaeological
sites, relics or artefacts. The indigenous cultural environment includes all indigenous cultural or religious customs, beliefs and values.

**Statutory Obligations**

8.9 The ADF has statutory (legal) obligations for environmental and heritage protection. The two principle acts that impose these obligations upon Defence are:

a. the *Australian Heritage Council Act 2003*

b. the *Environment Protection and Biodiversity Conservation Act 1999*.

8.10 Both acts have criminal and civil liability provisions. Every person in Defence is responsible for sound environmental management in the conduct of their duties and Defence members that do not comply with the acts may be prosecuted.

8.11 The *Australian Heritage Council Act 2003* establishes the Australian Heritage Council as the Commonwealth’s policy, advisory and administrative body responsible for the national estate. The act is aimed at protecting places that have been placed on the Register of the National Estate. Commonwealth organisations are constrained from taking any action which adversely affects a place in the Register, unless there is no feasible and prudent alternative to this action.

8.12 The following are the main aims of the *Environment Protection and Biodiversity Conservation Act 1999*:

a. to protect the natural environment, especially those aspects of the environment that are matters of national environmental significance

b. to promote ecologically sustainable development through the conservation and use of natural resources

c. to promote the conservation of natural heritage through biodiversity conservation and a cooperative approach with governments and the community.
8.13 The act recognises the role and knowledge of indigenous people and biodiversity matters, as well as the implementation of Australia’s international responsibilities. Under this act, actions that are likely to have a significant impact on a matter of national environmental significance are subject to a rigorous assessment and approval process.

8.14 Defence also has a moral responsibility to comply with relevant state or territory legislation, regulations and local government ordinances, and will endeavour to do so.

SECTION 8-2. MINIMAL ENVIRONMENTAL IMPACT

8.15 Minimal environmental impact refers to those practices and procedures aimed at protecting, maintaining, restoring and enhancing the environment so that it may provide the greatest sustainable benefit to present and future generations.

8.16 Facilitators and UATLs must plan to minimise the impact that an exercise will have upon all categories of the environment. Understanding sources of impact will assist in planning and implementation of minimal environmental impact practices.

Sources of Environmental Impact

8.17 The main sources of environmental impact for experiential learning and AT activities include:

a. **Visual and Aural Impact of Camping.** The combination of Defence vehicles, tents, clothing and even equipment are often indicators to other camp site users that Defence members are undertaking an exercise. Exercises often implement early starts and late finishes, which may be disturbing to other camp site users. Camping away from established camp sites will also impact the environment.

b. **Visual and Aural Impact of the Exercise.** Defence has many of the same needs of a training area as commercial groups, organisations and individuals and will therefore need to share these locations. Like with
c. **Degradation of Water Supply and Systems.** Water quality is an important issue to all area users as the water quality and supply in an area can quickly be degraded. Exercises conducted along or near a watercourse will need to implement protective measures controlling the entry of waste, detergents and soaps into waterways.

d. **Human Waste.** Human waste has not only an olfactory impact, but it also has visual and health impacts as well. Poor human waste management practices can have a serious detrimental impact on a group activity. Planning should include measures where necessary to remove all solid human bodily waste generated by an exercise in order to avoid contamination of limited water supplies and wilderness camping areas.

e. **Fire.** Much of the Australian landscape (with the exception of Tasmania) has evolved with fire and requires regular bushfire to propagate and regenerate. Fire can have a devastating effect in many areas, causing damage to flora, fauna and, potentially private property. Fire damage can restrict access for adventure-based exercises until the area has regenerated sufficiently. All fire restrictions are to be strictly adhered to.

f. **Routes and Tracks.** Routes and tracks are particularly prone to causing damage to the environment as they are a source of erosion and allow the invasion of alien species of flora and fauna. In addition, over time, tracks often become braided and shortcuts are made, both of which increase the erosion and damage.
Human-generated rubbish has a negative visual environmental impact and may also have negative environmental effects. Many synthetic materials are composed of chemicals and plastics that break down slowly, or break down and release harmful chemicals into the environment. Such impact has an effect on flora and fauna, as well as the long-term ecology of an area.

**Codes of Conduct**

8.18 An environmental code of conduct is a voluntary set of procedures to be followed in order to minimise environmental impact. Codes of conduct have been developed for many activities and for different areas in which exercises take place. Some areas (such as alpine regions or caves) are particularly fragile, and have quite thorough codes of conduct which include procedures such as maximum party sizes, the use of fuel stoves and collection of firewood, the avoidance of sensitive vegetation and the disposal of human waste.

8.19 Examples of some codes of conduct are the Minimal Impact Bushwalking Code, the Minimal Impact Caving Code (developed by the Australian Speleological Federation) and the Snow Camping Code. The code of conduct may be the minimum required standard. Facilitators and UATLs should implement best possible minimal environmental impact practices.

8.20 Climbing and roping activities are not governed by a single code of conduct and there are a number of practices that may be contentious in some climbing and roping communities. In particular, care should be taken in minimising the placement of new bolts and holdfasts on cliff faces and ensuring that the placement is well considered. Inappropriate or excessive placement of climbing hardware can degrade aesthetic values of a particular location and cause frustration amongst other user groups.

**Monitoring Environmental Impact**

8.21 It should be noted that the implementation of minimal environmental practices is not the final step. On Defence
exercises, leaders must continue to monitor the environmental performance of the participants and the impacts of the exercise, and be prepared to make changes as necessary.

**Damage and Nuisance**

8.22 It is important that all damages, whether unintentional or not, are rectified if possible and reported. Vandalism, negligence and nuisance behaviour is extremely serious. There have been previous instances where ADF units on AT exercises have stolen road signs as souvenirs and etched unit identifiers in caves. These sorts of behaviours have led to all Defence units being banned from valuable and scarce AT training areas and has also caused considerable damage to the standing of the ADF in local communities. OICs and ACs must be alert to inappropriate behaviour, ensure that participants are aware and ensure that it is prevented. OICs and ACs may be held accountable for the actions of participants.

**Environmental Clearance Certificate**

8.23 For exercises in which the environmental impact is assessed as not being significant, Defence manages the impact upon the environment through the use of online bookings via TASMIS or an AB081 Environmental Clearance Certificate.

8.24 ECCs are used as a management tool by Defence in order to ensure that the assessed level of environmental impact is not exceeded. Exercise planners should liaise with regional JOSS to determine the need for an ECC. If required, the completed ECC must accompany a request for the use of a training area.

8.25 The ECC process is the means by which due diligence can be demonstrated in the planning of an exercise, and compliance with legislation and regulations is being met. The ECC allows inclusion of conditions that may be legislatively or locally imposed and provides information to enable a commander to accept and enforce those conditions.

8.26 The ECC contains three sections to be completed by:

a. the person proposing the exercise
b. the appropriate Defence E&IG environmental officer
c. the AC accepting the proposal with any conditions imposed.

8.27 Once an activity has been completed, the OIC provides an assurance that all environmental conditions were complied with. If an activity results in degradation to environmental or heritage values that requires remediation, this is to be reported through the ECC process.

SECTION 8-3. CONCLUSION

8.28 Experiential learning and AT activities are often conducted in wilderness environments in order to enhance benefits gained from the feeling of isolation. These training locations are often fragile and activity planners and leaders have a moral and legislative responsibility to ensure that impacts on the environmental and heritage values of these locations are minimised. Appropriate environmental stewardship will help to ensure that these special locations remain unspoilt and available into the future.
CHAPTER 9

FIRST AID

9.1 Experiential learning and AT exercises take place in outdoor environments with a real risk of injury. ALs must have the skills and knowledge to recognise and deal with minor injuries and illnesses, or have a suitably qualified medic available to provide appropriate treatment. While they may not be the provider of first aid to a casualty, ALs must be available to enact the safety plan and provide for the remainder of the group while awaiting the provision of professional medical assistance.

9.2 This chapter should be read in conjunction with:
   a. LWP-G 1-2-5, Army First Aid
   c. discipline-specific publications may also contain additional first aid guidance for specific injuries that may occur within their environments.

9.3 This chapter does not replicate the information contained in the references, but provides some guidance for the provision of first aid in the wilderness or when at least 2 hours from professional medical assistance. Consideration must be given to the provision of first aid to casualties, casualty priority, management, documentation and evacuation. This chapter should be read in conjunction with Chapter 2.

First Aid Response

9.4 The designated medic or most qualified member of the group should conduct the first aid. However, it is a requirement for all participants in AT to undertake revision training in first aid as anyone should be prepared to act as first aider. This may also be applicable to other experiential learning activities where
there is a moderate risk of injury or illness. This revision is to include the following principles:

a. the mnemonic DRSABCD, and application in the activity context
   (1) D = danger
   (2) R = response
   (3) S = send away
   (4) A = airway
   (5) B = breathing
   (6) C = CPR
   (7) D = defibrillation
b. haemorrhage control
c. the management of bites and stings
d. the management of burns
e. the management of fractures
f. the management of unconscious casualties
g. the management of environmental issues
h. the management of shock
i. other conditions relevant to the exercise.

9.5 The AL, facilitator or UATL is not expected to have the medical training to deal with all accidents, injuries and illnesses, but needs to be able to provide basic first aid in order to assist the appointed exercise medic, and to assist in the provision of longer term care for any casualties and the remainder of the group.

9.6 A key consideration in the provision of first aid to a casualty is that group members must carry out only those first aid actions that they have been trained to do or are qualified to do, and use those skills that will improve the situation. If there is any danger that the actions of a group member or medic may, in fact, make
the situation worse, no action should be taken and professional medical assistance must be sought. At times, this may present a challenging dilemma for ALs so should be considered in activity planning and rehearsals.

9.7 Group members will look toward those with the training and experience in the specific environment to be able to make sound decisions. For AT this creates particular leadership responsibilities for the UATL. Leaders in other experiential learning should seek to develop their awareness of the activity environment in advance through the conduct of thorough reconnaissance.

9.8 Casualty Priority. If there are multiple casualties, the first aid must be prioritised such that the casualties most in need are provided first aid as precedence. Casualties requiring CPR are the highest priority, followed by other unconscious casualties, then those suffering from life-threatening haemorrhages. Other casualties may be prioritised after that according to their injuries and needs. Prioritisation must be based on patient need and resources available.

9.9 CPR is labour-intensive and, once commenced, must be continued, with no guarantee of success. Therefore, before commencing CPR, consideration must be given to the implications to other casualties and their injuries. While conducting CPR other casualties may be deteriorating.

9.10 Once first aid assistance has commenced, a duty of care exists, and the first aid must be carried through to conclusion. This is equally applicable to non-military groups that may require assistance, once consent has been obtained. First aid must be continued as follows:

a. until relieved by a better qualified person
b. until physically unable to continue
c. until the first aider is in mortal danger
d. until the casualty no longer requires first aid.
9.11 Any first aid provided must not have any chance of making matters worse.

9.12 Documentation. Documentation should be developed covering the circumstances of the incident, the symptoms and signs of the casualty, treatment given and periodic vital signs. Such documentation is of use to emergency services and professional medical services to determine a priority of response and to plan subsequent treatment, if required. If a rescue is required, all relevant information is to be copied and given to the response agency to assist them in rescue prioritisation and planning.

9.13 Casualty Management. If a casualty is ambulatory and sufficiently stable to be evacuated without worsening their condition, then evacuation may be appropriate. The casualty’s condition must be continually monitored throughout the evacuation. If the casualty’s condition begins to deteriorate, a determination should be made whether to continue the evacuation or stop and manage the casualty. This will depend upon the condition of the casualty and injuries suffered, the weather, environment, distance to professional medical assistance, time of day and the ability of the remainder of the group to effect an evacuation.

9.14 In the case that a group has a casualty that is unable to walk or the situation or environment is such that the casualty cannot be evacuated by the group, then the group must have the means of survival until assistance arrives. The group must be prepared to spend a considerable time in location (overnight or several days) and must manage any casualties until professional medical assistance can be provided.

9.15 In either situation, ongoing care to any casualties (and the remainder of the group) must include shelter (from heat or cold), food, water, shock management, continual vital sign monitoring and first aid treatment. Appointed leaders must continue to lead the group and manage the resources available to bring the situation to a safe conclusion.
Suspension Trauma

9.16 Suspension trauma, also known as harness hang syndrome is an effect on a person if they are held upright with very limited or no movement for a period of time (5 to 30 minutes).

9.17 Suspension trauma is a medical emergency. Onset of symptoms may be after just a few minutes, but usually occurs after at least 20 minutes of free hanging. Typical symptoms are pallor, sweating, shortness of breath, blurred vision, dizziness, nausea, hypotension and numbness of the legs. Eventually it leads to fainting, which may result in death due to oxygen deprivation of the brain.

9.18 If the suspended person is not unconscious or injured, and has something to kick against or stand on such as a rock ledge it is helpful for them to use their leg muscles by pushing against it every so often to keep the blood pumping back to the torso.

9.19 If the person is stranded in mid-air or is exhausted, exercising the leg muscles will keep the blood returning to the torso, but as the movements become weaker the leg muscles will become much less effective at returning blood to the torso.

9.20 Once the person is back on the ground they should be placed in the ‘W’ position. The ‘W’ position is where the person sits upright on the ground with their back/chest straight and their legs bent so that their knees are in line with the bottom of their chin. For added stability, make sure that the person’s feet stay flat on the ground. Once in this position, they need to stay in that position for at least 30 minutes or until their symptoms subsides. The time in the ‘W’ position will allow the pooled blood from the legs to be slowly re-introduced back into the body. By slowing the rate at which the pooled blood reaches different organs, the body has more of an opportunity to filter the pooled blood.

Conclusion

9.21 Accidents happen and ALs must have the skills and knowledge to provide basic first aid to any casualty and be able to deal with a number of casualties should such an accident occur. All Army
members are trained in first aid and all activity participants, with first aid revision training, should be able to act as first aider. Activities conducted in remote or wilderness settings may not have access to professional medical assistance for a significant period of time. In this case, casualty management must be undertaken in order to reduce the effects of such accidents and preserve the lives of those taking part in such exercises.
10.1 Navigation is the process of monitoring and controlling movement from one place to another. It also enables the navigator to determine their location at any given time. A junior commander must be a skilled navigator if they are to execute their orders and use the ground to their advantage. Navigation is a core military skill. This chapter is written to provide assistance to navigation in the context of experiential learning and AT. For military navigation doctrine see LWP-G 7-7-2, Navigation.

10.2 A leader (a UATL for AT, or a facilitator for other experiential learning) must be able to navigate, to lead a group from a start point to an objective, determine the location of the group and lead the group safely back to the starting point (or finishing point) at the completion of the exercise. Responding to emergency incidents may also require navigation to extract a casualty or to guide an emergency response team in to the location of an incident.

10.3 A leader must also be a confident route-finder in the activity they are conducting. Route-finding is the art of locating and following a route that is appropriate to the abilities and equipment of the group. The route may be in easy or difficult terrain and may involve following tracks or roads, or may involve forging a route through terrain that is untracked.

10.4 Finally, it is important to have a number of redundant navigation systems. This may involve a GPS unit along with a map and compass, or two sets of maps and compasses, each used by a different person. Leaders should advise members of their group on the group’s progress during an exercise, and should identify and point out navigable features to the group at appropriate opportunities. For safety, as well as a sense of
ownership, unless there are specific activity design features at play, participants on experiential learning activities should have some knowledge of their position and heading at all times.

Navigation Aids

10.5 There are various aids to assist group navigation. These may include, but are not limited to, the following:
   a. maps
   b. charts
   c. compasses
   d. guidebooks
   e. cave maps
   f. air and satellite images
   g. altimeters
   h. GPS devices
   i. smartphone applications (apps).

10.6 Maps. Maps are a two-dimensional symbolic representation of a three-dimensional portion of the Earth’s surface. The majority of maps used to support experiential learning and AT are normally topographic maps at scales of 1:25 000, 1:50 000 or possibly 1:100 000 (which are generally useful for route planning only). The scale of the map chosen should be appropriate to the exercise. The majority of Australia is covered at 1:100 000 scale, while most of the coastal areas, ADF training areas and areas of high human habitation are covered at 1:50 000 scale. Only select areas of interest, ADF training areas or areas of high human habitation are covered at 1:25 000, however, many of these maps are dated. The marginal information on a map should especially be noted, as it details the zone, the projection, the datum, the magnetic variation and the date of publication of the map. The projection and the datum are important for the use of GPS receivers.
10.7 Charts. Charts are the sea (or air) equivalent to maps but often use a different set of symbols to represent features. Only the land features that assist the navigation of ships or aircraft will be shown. Many charts show depths and heights in feet rather than metres (most maps in Australia show height above sea level in metres).

10.8 Compasses. A compass enables navigation orientation relative to the geographic cardinal directions. When combined with a map, a compass provides a heading and orientation for the map. With a little visualisation of the terrain’s features and a calculated resection, a group’s exact location can be determined. The majority of military compasses are marked in mils, whereas the information on the majority of maps is marked in degrees. While many believe mils to be more accurate than degrees, surveyors use degrees, minutes and seconds to calculate distances and points to millimetre accuracy. Of course, compass accuracy is determined by the user. A compass must be held flat and away from metal objects, magnetic devices and electric currents to obtain an accurate reading.

10.9 Guidebooks. A guidebook is a published source of information on a route or area. It may contain written descriptions, maps, sketches or topographic diagrams to assist with the navigation of an area. A rock-climbing guidebook usually contains a list of climbs, their location, their length and their difficulty. A caving guidebook will usually contain a list of caves in the local area, their location, pitch lengths and any particular features or dangers. Guidebooks greatly assist in route planning and navigation.

10.10 Cave Maps. A cave map is a specially designed map that shows an underground three-dimensional area as a two-dimensional figure. Cave maps are often complex; unlike maps of portions of the Earth’s surface, a cave may have several overlapping levels and chambers. Cave maps also have their own particular symbology for representing the special underground features found in caves.
10.11 **Air and Satellite Images.** Air and satellite images are photographs, thermal or radar images taken from aircraft and orbiting satellites. Photographs taken from aeroplanes and, increasingly drones, are the most beneficial for general navigation. Thermal or radar images may provide broad information unavailable elsewhere, such as the current density of vegetation, soil moisture or bushfire damage. Images can give an accurate and up-to-date picture, but require careful reading, interpretation, and often contain distortions in the information presented.

10.12 **Altimeter.** An altimeter is an instrument that measures the changes in air pressure in order to provide a measure of altitude above sea level. An altimeter is basically a modified barometer, which measures air pressure in millibars or hectopascals. As air pressure decreases relatively uniformly with altitude, the air pressure measured by an altimeter is calibrated to metres above sea level. Section 10-2 describes the use of altimeters in more detail.

10.13 **Satellite Positioning Systems.** There are numerous national and proprietary satellite systems that are used to provide positioning data that may be accessible through navigation devices. These systems provide autonomous geospatial positioning information. The most commonly used system in Australia is the American GPS. This is a system of navigation in which a receiver held by the user decodes signals transmitted by orbiting satellites, which gives the position of the receiver on the Earth’s surface. When used correctly, satellite positioning systems are an excellent aid to navigation, but if used poorly, it may give a wildly incorrect position to the user. LWP-G 7-7-2, Navigation provides further details.

10.14 GPS receivers are readily available off-the-shelf and increasingly contain advanced features and functions that make navigation simpler. Most smartphones now have a GPS receiver built in, so, within a group, there will likely be many GPS receivers available to support navigation. Similarly there is a range of smartphone apps that assist navigation.
10.15 An altimeter is an instrument that measures air pressure. As air pressure decreases relatively uniformly with an increase in altitude, the measurement of air pressure can give a fairly accurate estimate for height above sea level. Altimeters, however, are strongly affected by variations in weather and temperature. Electronic versions may account for some of these variations. Like a compass, the benefit to be gained from the use of an altimeter is dependent upon the user.

Altimeter Use

10.16 An altimeter can be used to assist in the determination of a group’s location at night or in extreme weather conditions. With a compass bearing to an observed feature and a known altitude, the location of a group can be accurately determined. A magnetic bearing is made to the observed feature, converted to a grid bearing and converted to a back bearing. A line is drawn on the map from the feature along the back bearing. Where the line intersects the known altitude is the location of the map user. This method will be most effective where changes in altitude are pronounced, for example in mountainous terrain.

10.17 As altimeters measure air pressure, a change in air pressure will be shown as a change in altitude even though a group may be stationary. An improvement in the weather usually results in an increase in air pressure, which will be shown as a decrease in altitude by the altimeter. The converse is also true. It is important that the altimeter is constantly reset to the correct altitude at known points, such as spot heights on a map. As air pressure changes relatively slowly, resetting of the altimeter several times a day or at known features while travelling will usually suffice.

10.18 An altimeter contains many small metallic parts and is quite susceptible to variations in temperature. The small parts expand and contract with the change in temperature, causing changes in the indicated altitude. Electronic altimeters are available that automatically compensate for temperature variations.
10.19 Weather Prediction. One additional use for an altimeter is as a predictor of weather trends. When stationary, an altimeter user can watch the trend of the changing air pressure. The altimeter should be gently tapped to overcome slight friction in the mechanism (this is not needed with an electronic altimeter – some of which plot the changes in air pressure over a period of time) and the change in altitude then noted. An increase in altitude indicates a lower air pressure and, thus, worsening weather; while a decrease in altitude indicates a higher air pressure and, thus, improving weather. Weather is the subject of Chapter 11.

SECTION 10-3. CONCLUSION

10.20 The GPS navigation system and other technologies provide excellent tools to assist navigation and route-finding tasks. They should never be relied upon alone as they remain subject to failure, interference, jamming and to the inherent errors in the system. Such technology should be harnessed but care needs to be taken to ensure that any app to be relied upon can be used in an offline mode when there is no phone coverage. Competent leaders also need to ensure that they maintain good navigational skills that can be relied upon away from terrestrial and satellite network coverage, when batteries go flat and at night. Further, group navigation using a map and compass can be used as a mechanism to enhance teamwork and self-reliance.
CHAPTER 11

WEATHER

SECTION 11-1. PLANNING

11.1 Experiential learning activities take place in the outdoor environment where they are subject to prevailing weather conditions. Planners and practitioners must consider weather conditions and processes to ensure that experiential learning activities are conducted safely.

11.2 Technology plays a significant role in the measurement and interpretation of weather information. Rapidly advancing technology also means that weather information and its interpretation is constantly updated and readily available in a range of useful formats to anyone with a smartphone and a relevant app installed.

11.3 Planners and practitioners should harness this technology but also be prepared to make their own interpretations of weather conditions to apply general weather information to specific locations, or for when technology fails or does not reach remote locations where experiential learning activities may be conducted. This chapter provides an introduction to the understanding of weather and the application of weather information in order to interpret weather conditions in the field.

SECTION 11-2. UNDERSTANDING WEATHER

11.4 The term ‘weather’ is used to describe the day-to-day variations in atmospheric conditions. Meteorology is the study of the weather. Most weather phenomena occur in the lowest level of the atmosphere known as the troposphere. Climate is the statistical collection of weather conditions (temperature, humidity, cloud cover, wind and precipitation) over time measured within a particular region.
11.5 The weather in Australia is greatly influenced by a number of particular features, as follows:

a. Australia has a ridge of mountains (the Great Dividing Range) which extends the length of the country very close to the east coast.

b. Australia is generally very flat from the west coast across the country to the Great Dividing Range.

c. Australia has a long southern coastline which is parallel to the Antarctic coastline.

11.6 The effect that these features have on Australian weather is examined in more detail in this section.

Temperature

11.7 Heat energy from the Sun does not usually heat the atmosphere directly. Rather, the energy from the Sun heats areas of the Earth's surface, and the heat radiates off the Earth's surface to heat the surrounding air mass. Much of this heat is then lost through radiation to the intense cold of outer space.

11.8 The temperature of the atmosphere varies most significantly from the equator to the poles. The greater sunshine intensity results in a net gain of heat in equatorial regions while regions approximately latitude 37° north and south to the poles lose more heat than they gain from the Sun. There is a redistribution of heat from the equator to the poles, carried by the atmosphere as the weather.

11.9 Atmospheric temperature is influenced by a number of factors, including:

a. **Altitude.** The higher the altitude, the colder the air temperature (and the lower the air pressure). Air cools with altitude at a rate known as the adiabatic lapse rate (or lapse rate). The lapse rate differs between moist air and dry air at the following rates:

   (1) moist air – 6.5 °C per 1000 m altitude
b. **Latitude.** The greater the distance from the equator, generally the colder it is. This is caused by the Sun’s rays striking the Earth at an angle and, therefore, delivering less heat energy.

c. **Orbit.** As the Earth orbits the Sun, its distance from the Sun varies. The Earth’s closest point to the Sun occurs on approximately 4 January each year, known as perihelion. The Earth’s furthest point from the Sun occurs on approximately 4 July each year, known as aphelion.

d. **Seasons.** As the Earth revolves around the Sun, it is tilted on its axis at an angle of 23.5°. The Earth’s axis always points to the same area in space; consequently, when the Southern Hemisphere is tipped towards the Sun more direct sunlight and long hours of daylight cause warmer weather resulting in summer in Australia. At the other side of Earth’s orbit around the Sun, the Southern Hemisphere is tipped away from the Sun and the Sun shines more obliquely on the Southern Hemisphere resulting in winter in Australia. The orbit of the Earth around the Sun is shown in Figure 11–1.

e. **Cloud Cover.** Cloud cover by day will reduce atmospheric temperature, as it filters the Sun’s energy that strikes the Earth and reflects some of the Sun’s energy back into space. Cloud cover by night, however, will retain the air temperature, as it reflects heat radiating from the Earth and prevents the escape of much of the heat to the atmosphere beyond the clouds. If skies are clear at night, heat radiated from the Earth’s surface will escape into space, resulting in lower local temperatures.
SECTION 11-3. ATMOSPHERIC PRESSURE

Air Pressure

11.10 Weather systems flow around the Earth in generally constant patterns of air-pressure systems. Wind is caused by air flowing from areas of high pressure to those of low pressure, however the flow is not direct. Since the Earth is rotating the air is deflected (to the right in the Northern Hemisphere and to the left in the Southern Hemisphere) so that the wind flows around the high and low pressure areas.

11.11 Atmospheric pressure is the force exerted by the weight of the atmosphere upon the surface of the Earth at a given point. Atmospheric pressure is also referred to as barometric pressure as it is measured with a barometer. Measures of air pressure include:

a. hPA (formally known as millibars)
11.12 Air pressure decreases rapidly with altitude, as there is less overlying atmospheric mass exerting force on the Earth. Air pressure is an average of 1013 hPa (or 1 atmosphere or 760 mmHg) at mean sea level in fine weather. The lowest air pressure ever recorded (870 hPa) was in Typhoon Tip in 1979 and the highest ever recorded (1084 hPa) was in Siberia in 1968.

11.13 **Isobars.** Air pressure is measured at many locations throughout the country. These measurements are converted to mean sea level air pressures in hectopascals and are plotted on a synoptic chart. A line drawn on a weather map connecting points of equal sea-level air pressure is called an isobar and is the equivalent of a contour line for air pressure.

11.14 **Wind.** Isobars also show wind speed and direction. As the air pressure tries to equalise throughout the atmosphere, air will flow from areas of higher pressure to lower pressure. Closely spaced isobars indicate a greater difference in air pressure and, thus, stronger winds. Widely spaced isobars indicate a lower difference in air pressure and, thus, lighter winds.

11.15 **Synoptic Chart.** A synoptic chart (see Figure 11–2) is a pictorial representation of the regions of air pressure at mean sea level over a portion of the Earth's surface. Synoptic charts form the basis of most weather maps. Synoptic charts also depict specialised symbology relevant to the depiction of weather events and conditions. The typical symbology of a synoptic chart includes:

   a. regions of high and low pressure, delineated by a pattern of isobars; the isobars are generally drawn at intervals of 2 or 4 hPa, depending on the scale of the chart
b. cold and warm fronts that delineate major boundaries between air masses

c. troughs of low pressure and ridges of high pressure

d. areas where rain has fallen in the past 12 or 24 hours

e. surface wind direction and speed at spot locations

f. in some cases, a satellite image, which is shown under the synoptic chart; thus making the cloud bands associated with fronts and low-pressure systems readily identifiable.
High-pressure Systems

11.16 High-pressure systems, also known as anti-cyclones, are areas of high pressure relative to their surroundings. Surface winds flow anticlockwise and away from an area of high pressure. Isobars in a high-pressure system are generally widely spaced. Air in the vicinity of a high-pressure system is descending, warming and is able to hold more moisture. The descending air suppresses the upward motions needed to support the development of clouds and precipitation. High pressure systems are associated with fair weather.

Low-pressure Systems

11.17 Low-pressure systems have lower pressure at the centre than in surrounding areas. Extreme versions are known as cyclones. Surface winds flow clockwise and towards the area of low pressure. Isobars in a low-pressure system are generally closely spaced. Air in the vicinity of a low-pressure system is ascending and cooling, which causes the moisture it contains to condense into clouds and precipitation. Low-pressure systems are associated with cloudy weather (and likely precipitation). High-pressure and low-pressure systems are shown in Figure 11–3.
11.18 A trough is a long tongue or gully of low pressure extending out into an area of high pressure. A trough usually has a high-pressure system on either side, and a cold front often forms in the trough. A trough is depicted on a synoptic chart as a bold broken line. A trough is shown in Figure 11–4.

11.19 A ridge is a tongue of high pressure that protrudes into an area of low pressure. Ridges are usually associated with fine and settled weather. Ridges are not depicted on a synoptic chart with any special symbol. A ridge is shown in Figure 11–5.
Figure 11–4: Synoptic Chart – Trough

Information from:
National Meteorological and Oceanographic Centre
Bureau of Meteorology
MSL Analysis
VALID 0600 UTC 5 MAR 2002           4PM EST 5 MAR 2002

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Figure 11–5: Synoptic Chart – Ridge Front

Information from:
National Meteorological and Oceanographic Centre Bureau of Meteorology
MSL Analysis
VALID 0600 UTC 5 MAR 2002           4PM EST 5 MAR 2002
A front is defined as the transition zone between two air masses of differing densities. Fronts extend horizontally and vertically and can often be seen as an approaching line of cloud on the horizon.

### Cold Front

A cold front (see Figure 11–6) is defined as the transition zone where a cold, dense air mass undercuts and replaces a warmer air mass. The air behind a cold front is noticeably colder and usually drier than the air ahead of it. As the warm and moist air is pushed up, it cools and the moisture it contains condenses into clouds and precipitation. Cold fronts are associated with wind and rain. Cold fronts are common in winter in Australia.

![Figure 11–6: Cold Front](image)

Symbolically, a cold front is represented by a solid line with triangles along the front pointing towards the warmer air and in the direction of movement. A cold front on a synoptic chart is shown in Figure 11–7.
Cold front

Information from:
National Meteorological and Oceanographic Centre
Bureau of Meteorology

Figure 11-7: Synoptic Chart – Cold Front
Warm Front

11.23 A warm front (see Figure 11–8) is defined as the transition zone where a warm air mass pushes up and over and replaces a cold air mass. Warm fronts are generally less violent than cold fronts. The air behind the warm front is warmer and usually more moist than the air ahead of it. When a warm front passes through, the air becomes noticeably warmer and generally more humid than it was before. As the warm front rises over the cold air, the warm air cools, and the moisture contained within it condenses into clouds and precipitation. Warm fronts are not common in Australia.

Figure 11–8: Warm Front

11.24 Symbolically, a warm front is represented by a solid line with semicircles pointing towards the colder air and in the direction of movement. A warm front on a synoptic chart is shown in Figure 11–9.
Figure 11–9: Synoptic Chart – Warm Front Occluded Front

Information from: National Meteorological and Oceanographic Centre Bureau of Meteorology

Msl Analysis
VALID 0600 UTC 5 MAR 2002           4PM EST 5 MAR 2002

160 1020
352 1012
356 1008
248 1016
300 1004
334 1012 1008
341 1000 995
365 992 885 882
254 1016
281 1018
219 160
222 100
226 20
220 20
310 40
333 40
391 370
398 372
407 366
L
X
981
L
X
101
L
X
1009
L
X
1000
H
X
1015H
X
1012
11.25 Occluded fronts (see Figure 11–10), or occlusions, are formed when a cold front (moving more quickly) catches up with a warm front and the cold and warm air interact. The two air masses produce a narrow belt of rain followed by clear weather. Occluded fronts are a development phenomena of cyclones in some areas of the world. Occluded fronts are not common in Australia but often develop in the Southern Ocean.
Figure 11–10: Synoptic Chart – Occluded Front Clouds
11.26 Clouds form when moist air rises, expands, cools, condenses and forms precipitation. The following are the four situations which can cause moist air to rise:

a. orographic uplift (mountains)

b. frontal lifting (cold air undercutting warm air or vice versa)

c. convection effects (warm air up-draughts)

d. cyclonic lifting.

11.27 Clouds are classified using Latin words to describe the appearance of the clouds as seen by an observer on the ground. The following are the major types of clouds:

a. cirrus (curl)

b. stratus (layer)

c. cumulus (heap)

d. nimbus (blanket).

11.28 Further classification identifies clouds by the height of the cloud base. For example, cloud names containing the prefix cirr-, as in cirrocumulus clouds, are located at high levels while cloud names with the prefix alto-, as in altostratus, are found at middle levels.

Cirrus Clouds

11.29 The most common forms of high-level clouds are thin and often wispy cirrus clouds (see Figure 11–11). Typically found at heights greater than 20 000 ft (6000 m), cirrus clouds are composed of ice crystals that originate from the freezing of supercooled water droplets. Cirrus generally occurs in fair weather and point in the direction of air movement at their elevation. Cirrus clouds often indicate the formation of bad weather in 12 to 36 hours (usually 12 to 18 hours).
Figure 11–11: Cirrus

Cirrocumulus Clouds

11.30 Cirrocumulus clouds are formed high in the atmosphere where the temperature is below freezing and moisture has condensed into ice crystals. They are thin and white, and often have the appearance of fish scales. When the Sun is low on the horizon, cirrocumulus clouds form many brilliant colours. Cirrocumulus clouds may indicate possible precipitation in 12 to 24 hours, but are a general indicator of fine weather. The appearance of cirrocumulus clouds on a fine summer morning may indicate afternoon thunderstorms. Cirrocumulus clouds are shown in Figure 11–12.
Altostratus Clouds

11.31 Altostratus (see Figure 11–13) clouds are a mid-level, layered cloud that appear as a thin blanket of grey or blue streaky cloud. The Sun may appear as if it is shining through frosted glass. Altostratus clouds usually indicate precipitation within 12 hours. In cold and moist conditions, altostratus may develop into nimbostratus, resulting in persistent rain or snow.
Altocumulus Clouds

11.32 Altocumulus clouds (see Figure 11–14) may appear as parallel bands or rounded masses. Typically, a portion of an altostratus cloud is shaded; a characteristic which makes them distinguishable from the higher level cirrocumulus. Altocumulus clouds usually form through convection in an unstable layer aloft, which results from the gradual lifting of air in advance of a cold front. The presence of altocumulus clouds on a warm and humid summer morning is commonly followed by thunderstorms later in the afternoon.
Stratus/Nimbostratus Clouds

11.33 Stratus or nimbostratus clouds (the terms are used interchangeably) are dark, low-level clouds accompanied by light-to-moderate falling precipitation. They occur when relatively large areas of moist air rise gently in a stable...
atmosphere and condense at a given altitude. Low clouds such as stratus are primarily composed of water droplets since their bases generally lie below 6500 ft (2000 m). However, when temperatures are cold enough, these clouds may contain ice particles and snow, and may drop snow and sleet as precipitation. Stratus clouds are shown in Figure 11–15.

![Figure 11–15: Stratus](image)

**Cumulus Clouds**

11.34 Fair weather cumulus clouds (see Figure 11–16) have the appearance of floating cotton and have a lifetime of 5 to 40 minutes. Known for their flat bases and distinct outlines, fair weather cumulus exhibit only slight vertical growth, with the cloud tops designating the limit of the rising air. Given suitable conditions, however, harmless cumulus clouds can later develop into towering cumulonimbus clouds associated with powerful thunderstorms. Cumulus clouds are fuelled by buoyant bubbles of air or thermals that rise upward from the
Earth's surface. As they rise, the water vapour within cools and condenses forming cloud droplets. Young fair weather cumulus have sharply defined edges and bases while the edges of older clouds appear more ragged; an artefact of cloud erosion. Evaporation along the cloud edges cools the surrounding air, making it heavier and producing a sinking motion (or subsidence) outside the cloud.

Figure 11–16: Cumulus

Stratocumulus Clouds

11.35 Stratocumulus clouds (see Figure 11–17) generally appear as a low, lumpy layer of clouds that is sometimes separated by patches of clear sky. Stratocumulus vary in colour from dark grey to light grey and may appear as rounded masses or rolls. They are formed by moist air carried upward by the wind into cooler air. Stratocumulus are often accompanied by weak intensity precipitation, and may form before a cold front, being a prelude to gusty winds and heavy precipitation.
Cumulonimbus Clouds

11.36 Cumulonimbus clouds (see Figure 11–18) are much larger and more vertically developed than fair weather cumulus clouds. They can exist as individual towers or form a line of towers called a squall line. They often have a distinct anvil shape. Fuelled by vigorous convective updraughts (sometimes in excess of 50 kt), the tops of cumulonimbus clouds can easily reach 39 000 ft (12 000 m) or higher. Lower levels of cumulonimbus clouds consist mostly of water droplets while at higher elevations, where temperatures are well below 0 °C, ice crystals dominate. Cumulonimbus can produce rain, hail, heavy winds and heavy precipitation. Cumulonimbus clouds are associated with violent weather and storms.
The cloud types, their appearance and their altitude are summarised in Figure 11–19.
SECTION 11-5. PRECIPITATION

11.38 When air is warm, it has a greater ability to hold a large amount of water vapour. As the air cools, the ability to hold water vapour is reduced and the water vapour starts to condense into water or ice droplets, forming clouds. The temperature at which water vapour in the air condenses and forms clouds is the dew point. The dew point will vary according to air pressure, the presence of other weather effects (such as wind), the amount of water vapour in the atmosphere, and the presence of geographic features, such as mountains and water bodies.

11.39 Once the air temperature has cooled sufficiently to reach dew point and the water condenses to form clouds, the condensation of this water releases heat which causes the air to rise and cool further. As the water (or ice) droplets that are
forming the clouds grow in size, they become too heavy to be held up by the air and the drops fall as precipitation.

**Water or Ice Precipitation**

11.40 Many clouds, especially those with greater altitude, form through the condensation of the water vapour directly into ice crystals. If the falling ice crystals do not pass through warmer air, they join together as they fall and reach the ground in a frozen state as snow. More commonly, as the ice crystals fall, they pass through air that is warmer than the water freezing temperature (0 °C) and melt to form raindrops. If the raindrops do not then pass through another layer of freezing air, the drops reach the ground as rain.

11.41 **Hail.** Hail is a large frozen raindrop produced by intense thunderstorms. As snowflakes fall, liquid water freezes onto them, forming ice pellets that will continue to grow as more and more droplets are accumulated. Upon reaching the bottom of the cloud, some of the ice pellets are carried by the updraught back up to the top of the storm. As the ice pellets once again fall through the cloud, another layer of ice is added and the hailstone grows even larger. Typically, the stronger the updraught, the more times a hailstone repeats this cycle and, consequently, the larger it grows. Once a hailstone becomes too heavy to be supported by the updraught, it falls out of the cloud and reaches the ground as ice.

**SECTION 11-6. WEATHER INTERPRETATION**

11.42 Weather interpretation may be carried out by an observation of local conditions or through the examination of data collected by others. Weather forecasts are readily available through radio, television, internet, fax and in newspapers, however, the effect of local conditions will need to be considered through observations of barometer or thermometer readings and identification of clouds and other weather factors including:

a. **Wind.** Wind will generally decrease the local temperature, as it will constantly circulate air that has
been heated by the radiation of energy from the Earth’s surface. However, winds blowing from the west in Australia will generally be hot and dry, and winds from the north may carry warmer air south, increasing the temperature. On a windy night, warmer air may be pushed down towards the Earth’s surface.

b. Height. The Sun’s energy is absorbed by the ground and radiated to the air increasing the temperature, but air is a poor conductor of heat energy, so the radiated heat does not travel far. Thus, the temperature may vary by as much as 10 °C within 1 m of the ground. Wind will also mix the air and allow more air to absorb the heat radiating from the ground.

c. Snow. Snow on the ground can reflect or absorb some of the Sun’s energy, reducing the amount that is absorbed by the ground. Consequently, the temperature will rise more slowly where there is snow.

d. Coastlines. Sunshine heats up the land and sea; however, the land heats up much more quickly and hot air rises off the land. Cooler air from the sea blows over the land to replace this rising warm air. Consequently winds blow from the sea to the land by day. At night, the land cools down much more quickly than the sea, from which warm air continues to rise. Cooler air from the land then blows over the sea to replace the warm rising air and thus winds blow from the land to the sea at night.

e. Lakes. Large bodies of water such as lakes and dams have an effect on the wind similar to that of the coastline. In addition, large bodies of water provide a large amount of water for evaporation, and may increase the amount of moisture in the atmosphere. This results in a corresponding increase in water vapour available for condensation and, thus, precipitation.

f. Mountains. Moist air moves across the land and is forced upwards by mountains. As the air rises, it cools, reaches its dew point and condenses, and the water vapour
forms into clouds. As it continues to rise, the air cools further and the moisture falls as rain. This is known as orographic rainfall. Mountains often have a rain shadow on the lee side, where the air is often dry and descending. By day the hill slopes become hot and the heated air rises uphill (anabatic winds). By night, the hill slopes cool and cool air descends downhill (katabatic winds).

g. **Vegetation.** Areas devoid of significant shade-giving vegetation, such as areas of grain crops, grazing pastures and urban areas, act as heat islands. The radiation from the Sun heats up dark and un-vegetated areas more quickly and the heat lingers longer in the surface and continues to radiate heat into the night-time air. Constant heat dissipating from such an environment will increase water evaporation in the longer term, and the constantly warm temperatures forcing air upwards will prevent condensation. Thus, in the longer term precipitation in such areas is lower.

**Weather Forecasts**

11.43 For all AT exercises, a UATL is to obtain a weather forecast prior to the exercise and to be aware of, and plan for, likely weather effects for the duration of the activity. For some extended duration activities in remote areas, such as a ten-day expedition on Tasmania’s Franklin River, obtaining a weather update or changing plans based on the update is impractical. Therefore UATLs should be prepared for the likelihood and consequences of adverse weather events (e.g., by incorporating sufficient time in the schedule and rations to enable implementation of weather-hold days where required).

11.44 Most weather forecasting is generated by the Bureau of Meteorology and then distributed via fax, telephone, radio, television, newspapers, local ranger stations, contact with a rear party or the internet.

11.45 Rapidly advancing technology also means that weather information and its interpretation is constantly updated and
readily available in a range of useful formats to anyone with a smartphone and a relevant application installed. Examples of useful websites/apps for weather interpretation include:

a. Bureau of Meteorology (www.bom.gov.au and app, including MetEye)
b. WillyWeather app
c. NOAA Weather Radar Live app
d. AccuWeather: Weather Forecast app
e. Navionics Boating Marine & Lakes app.

**11.46** Planners and practitioners should harness this technology but also be prepared to make their own interpretations of weather conditions to apply general weather information to specific locations, or for when technology fails or does not reach remote locations where experiential learning activities may be conducted.

**SECTION 11-7. CONCLUSION**

**11.47** Experiential learning activities can be adversely affected, sometimes drastically, by changes in weather and activity planners and leaders have a responsibility to manage the risks that this entails. The temptation to achieve mission success must be tempered by an appropriate understanding of weather patterns and their implications to the activity. Although modern technology provides accurate weather forecasting and interpretation capabilities, ALs must maintain an ability to make their own weather predictions in the field in the event that technology fails or is not available in the remote locations where experiential learning activities are often conducted.
CHAPTER 12

ADVENTUROUS TRAINING EQUIPMENT

SECTION 12-1. EQUIPMENT

12.1 AT exercises are often conducted in disciplines that differ from the normal operating conditions for which a unit is equipped. Therefore AT activities may require specialised equipment that is not generally available at unit level.

12.2 AT equipment is most commonly drawn from regional AT loan pools.

12.3 Experiential learning may be enhanced through use of novel equipment and environment, however activity success is not dependant on specialist equipment except where safety related. The use of in-service military equipment in Defence adventurous activities such as hexamine stoves and hoochies should be considered as options where appropriate to the activity objectives.

12.4 There are a number of responsibilities for the inspection and management of AT equipment both at unit level and by UATL, and a number of additional considerations for the use of AT equipment that are detailed further in this chapter.

WARNING
This publication does not deal with equipment that is similar to AT equipment when used for military operational purposes.

SECTION 12-2. EQUIPMENT SOURCES

12.5 The majority of ADF units do not hold an entitlement for AT equipment. Safety-related items of AT equipment cannot be purchased under direct-unit purchasing arrangements.
Therefore, units generally will need to source AT equipment from external sources such as loan pool or external hire.

National and Regional Fleet Managers

12.6 In general, due to the safety-related nature of AT equipment, it is centrally managed by the national fleet manager (NFM) from CASG. The majority of AT equipment is purchased by the NFM, regional fleet managers or the regional loan pool for expense items.

12.7 The major responsibilities of the NFM in regards to AT equipment management are as follows:

a. financial forecasting and procurement to maintain authorised stockholding levels in conjunction with the block scale (see paragraph 12.12)

b. defect investigation and warranty claims

c. evaluation and selection of AT equipment items in conjunction with ATW

d. maintenance of the block scale in conjunction with ATW

e. inspection and supervision of regional equipment pools in conjunction with ATW.

Regional Loan Pools

12.8 AT equipment is most commonly drawn from regional AT loan pools whose stock holdings normally match disciplines that can be conducted locally. Some RAN and RAAF bases may have local holding.

12.9 Regional equipment managers are responsible to the NFM for the regional loan pools and to undertake regional purchasing of AT equipment in accordance with authorised stockholding levels.

12.10 Regional AT loan pools are located at:

a. Lavarack Barracks, Townsville

b. Enoggera Barracks, Brisbane
12.11 **Block Scale.** In general, AT equipment is subject to a block scale entitlement in accordance with *Block Scale 19/07, Army Adventurous Training Equipment*. The block scale provides authorised stockholding levels for ATW and the regional AT loan pools. Users must ensure that they are using the current edition as it is subject to change.

**Adventurous Training Associations**

12.12 The Army White Water Association and Army Alpine Association hold AT equipment in regional locations, which is usually available for loan by units. As equipment purchased and its maintenance are funded by member contributions, use is usually on a modest user-pays basis.

12.13 AT associations do not hold large inventories but may hold specialist stores not otherwise available through regional pools. This equipment is not subject to block scale entitlements, but is subject to association requirements for its use and maintenance.

12.14 Units may utilise equipment sourced from regional AT loan pools, AT associations, hire organisations or other personal equipment during AT exercises, however, all equipment used must be inspected and tested for suitability by an appropriately qualified UATL prior to use.
Equipment Standards

12.15 The agencies authorised to purchase safety-related items of AT equipment must ensure that these items comply with relevant standards. These standards are described in the user requirements maintained by ATW and the DEF(AUST) Australian Defence Standards maintained by CASG and ATW. The majority of AT equipment is subject to an Australian Standard, especially equipment manufactured in Australia or New Zealand.

12.16 There are two common standards applied to roping equipment. The European Committee for Standardization standard is more recent and often more rigorous than the Union Internationale des Associations d’Alpinisme standard on which it is based.

SECTION 12-3. EQUIPMENT MANAGEMENT RESPONSIBILITIES

12.17 Storage. In general, all AT equipment must be stored in a clean and dry condition away from direct sunlight, high heat conditions and chemicals (such as petroleum, oils and lubricants, solvents and adhesives) that may cause degradation and damage.

12.18 Demanding Equipment. Regional AT loan pools generally operate on the basis of ‘first in, best dressed’ so activity planners should liaise early with regional equipment managers to ensure that sufficient quantities of the right equipment is available and serviceable for the activity dates.

12.19 Drawing Equipment. AT equipment may be drawn from a regional AT loan pool only by a UATL who is qualified and current in the discipline for which stores are being drawn. Stores are usually drawn by the UATL on behalf of a unit to support an authorised AT activity but may be used for other legitimate and relevant activities such as UATL ongoing training and development.

12.20 Units borrowing AT equipment from regional equipment pools are to sign a loan agreement accepting responsibility for the
equipment. This includes ensuring that the equipment is returned clean and refurbished, and that any outstanding equipment deficiencies are accounted for at the time of equipment return.

12.21 AT equipment must be returned to the regional AT loan pool only by UATLs who are qualified and current in the discipline for which stores were used and, ideally, by the same UATLs who drew the stores. This is to help ensure that all outstanding equipment inspection actions have been completed.

Unit Adventurous Training Leader Responsibilities for Serviceability

12.22 Inspection. UATLs should inspect all AT equipment before drawing it from the regional loan pool to ensure its serviceability, currency and operation.

12.23 During AT activities UATLs are to ensure that AT equipment is used, stored and maintained under conditions and in the manner for which it is designed. UATLs are to conduct periodic checks on the equipment to ensure its safety and serviceability.

12.24 At the completion of the activity, UATLs are to inspect, clean and, where possible, repair AT equipment used throughout the exercise.

Repair

12.25 It is not uncommon for AT equipment to suffer some damage during use and, where possible, damage should be repaired in the field by a competent UATL.

12.26 UATLs must not conduct repairs to safety-critical items (e.g., karabiners).

12.27 UATLs must budget and plan time and funding for the conduct of repairs as part of the activity resource bid.

Replacement

12.28 Equipment that cannot be safely repaired in the field, has become unserviceable through age, or is otherwise no longer suitable for its intended use is to be tagged for workshop repair.
or condemnation and brought to the attention of the regional equipment manager. These items should then be replaced through standard supply system procedures.

12.29 UATLs should refrain from retaining marginally suitable equipment as to do so increases the requirement to manage redundancy for failure and introduces unnecessary risk to future activities. Prompt replacement action for damaged and unsuitable equipment will minimise the impact on equipment availability.

Modifications

12.30 Due to safety considerations, there are to be no local modifications to AT equipment.

12.31 Reporting. Defects, unsatisfactory performance or repetitive failure of AT equipment is to be reported using the report on defective or unsatisfactory materiel (RODUM) procedure outlined in the AC446 Report on Defective or Unsatisfactory Materiel (RODUM) – Land. ATW must be included as a for information addressee and consulted to provide SME advice when drafting a RODUM related to AT equipment. Any member may report on equipment using the RODUM process. Where the issue involves a safety risk to personnel, the RODUM report is to be prefixed with SAFETY-SAFETY-SAFETY to ensure that the report is rapidly processed and the AT equipment item quarantined or removed from use until the issue is resolved.

12.32 Warranty. The majority of AT equipment is commercial off-the-shelf equipment and some items may be subject to warranty. All possible warranty claims must be referred to the NFM for action.

Material Safety Data Sheets

12.33 Some common stores and equipment (including batteries, fibreglass, ski wax, glues, adhesives and detergents) used to support AT activities require a material safety data sheet (MSDS). It is a requirement that all users of such hazardous substances have access to an MSDS for that substance, and that personal protective equipment as listed on the MSDS is
provided for use. MSDSs are available from the substance manufacturer and supplier, and many are available on the internet. The Defence Work Health and Safety Branch website contains a large number of MSDS that comply with Australian Standards.

SECTION 12-4. CONCLUSION

12.34 AT leaders have a number of important responsibilities associated with ensuring the suitability and serviceability of safety-related equipment. These responsibilities extend to maintaining and servicing equipment as appropriate before, during and after an activity and to reporting loss, damage or unserviceability in a timely fashion.

12.35 AT draws on specialist safety-related equipment and a tailored selection of other field stores can enhance achievement of activity objectives, however, activity planners should also consider how use of standard-issue equipment, such as hootchies and field packs, in lieu of commercial equivalents can ease activity planning and support.

12.36 Effective leaders will draw equipment from a variety of sources and be imaginative in their application of equipment requirements in order to maximise achievement of activity objectives and develop individual and group ualities.
CHAPTER 13
RATIONING FOR EXPERIENTIAL LEARNING
AND ADVENTUROUS TRAINING ACTIVITIES

SECTION 13-1. RATIONING

13.1 There is a very broad range of activities that can be considered to be experiential learning. The more demanding of these, particularly AT activities of an expeditionary nature or involving sustained exposure to extreme environments, will impose physical, psychological (inclusive of emotional) and environmental factors simulating those likely on opposed operational deployments.

13.2 One of the purposes of such activities is to enhance human performance and provide conditions conducive to individual growth. Therefore, these factors and continued exertion may necessitate adjustments to the normal diet of participants to ensure that they have the best opportunity to achieve challenging tasks in adverse environments.

13.3 Without such adjustments, inadequate dietary intake will result in significantly degraded performance. Participants will tire more easily, become more susceptible to injury including heat and cold weather injuries, they will recover less quickly and their cognitive function will be impaired. Where activities are conducted in safety critical areas, these factors increase risk and must be managed appropriately.

13.4 Rationing must be flexible and suitable to the purpose of the activity. There are many rationing options and the rations plan must directly contribute to the exercise mission achievement. Group cooking of fresh rations in a communal environment should be used wherever possible as it can provide an experiential learning opportunity and deliver significant benefits compared with individual preparation of combat rations.
13.5 This chapter describes rationing requirements for challenging experiential learning activities such as AT and similar outdoor adventurous activities.

SECTION 13-2. FOOD PROVISION

13.6 Combat Ration Packs. Consider the following when contemplating using combat ration packs for AT activities:

a. These are suitable for light to moderate activity but may need supplementation and are insufficient for greater activity levels.

b. Typically, not all items are consumed and much is discarded.

c. To give the best chance of peak performance, all items from the ration pack must be consumed, and supplemental rations consumed to meet nutritional requirements.

13.7 Allocated/Purchased Rations. These are purchased to order and come at a cost per person per day allocation funded by Defence E&I.G purchase order:

a. These enable significant variety and novelty with items purchased specifically for the task.

b. Items are best purchased as raw ingredients, managed stored and combined into meals by the exercising personnel as required.

13.8 Catering. Use of catering or mess meals are used to support technical skills courses delivered by ATW due to the time demands of these courses. However, the group qualities developed by experiential learning and AT activities can benefit significantly from group preparation of meals and catering support should be avoided.
SECTION 13-3. RATION METHODS

13.9 Good planning must include use of food preparation as an integral part of the activity that not only supports, but features as a main part of the exercise purpose. Food preparation is best done as a group task in a communal setting to further develop experiential learning objectives and team dynamics.

13.10 Food preparation is part of the activity and must be appropriately supervised to always be hygienic in every aspect. This includes personnel, preparation surfaces, tools, containers, utensils, storage and the food itself.

13.11 The choice for hot or cold meals comes down to morale and the environment. Hot food and drinks are vital in cold weather or alpine environments to warm up cold bodies. Hot food also provides a significant morale boost to otherwise weary participants.

Cooking Stoves and Fuels

13.12 Different options exist for meal preparation depending upon the nature and circumstances of the activity. Options include: hexamine stoves, fixed kitchen, field kitchen, barbecues, table-top gas burners, alcohol burners (pump-primed pressures burners such as the MSR Whisperlite™ or unpressurised burners such as Trangia®), compact burners that fit to small gas canisters, no cooking, and pre-prepared food.

13.13 The method selected for cooking will depend on the individual qualities sought, carrying capacity and, in some cases, environmental conditions. For example Trangia stoves, which burn shellite of methylated spirits, are very efficient at sea level but are far less effective at altitude or under very cold conditions where burners using pressurised gas would be more effective.

13.14 Sufficient fuel should be carried for cooking needs and for contingency purposes, for example treating cold weather injuries. Fuels, should always be separated from foodstuffs to avoid contamination. Care needs to be taken to ensure that the
13. In relation to achieving the aim of AT, the advantages and disadvantages of the use of individual combat ration packs include:

a. **Advantages.** Individual combat rations are light, robust, store and transport well, have no particular hygiene requirements, do not require refrigeration, do not require any particular cooking skills and contain adequate kilojoules for moderate to high levels of exercise. Individual combat rations promote self-reliance, and the dehydrated forms are particularly suitable for expedition style activities.

b. **Disadvantages.** Combat rations are relatively expensive, produce a large volume of rubbish for the contents and are for individual use, which does not promote teamwork.

**Group Combat Rations**

13.6 Group combat rations may be more suitable to achieve the exercise objectives. The advantages and disadvantages of the use of group combat rations include:

a. **Advantages.** Five-person combat ration packs are robust, store and transport well, have no particular hygiene requirements, do not require refrigeration, require only basic menu planning and cooking skills and contain adequate kilojoules for moderate to high levels of exercise. Group combat rations promote small-group teamwork and are suitable for field activities.

b. **Disadvantages.** Five-person combat ration packs require both supplementation and a number of group cooking resources, take time to prepare, provide little variation and produce a reasonable volume of rubbish for the contents.
Fresh Rations

13.17 Fresh rations may be available either from unit or base kitchens and messes, or through local purchases or cash in lieu. The advantages and disadvantages of the use of fresh rations include:

a. **Advantages.** Fresh rations provide taste and variety, and allow UATLs and exercise participants the flexibility to plan meals. Fresh rations are inexpensive and their purchase and preparation develop teamwork and adaptability.

b. **Disadvantages.** Fresh rations cannot be stored for long periods and often require refrigeration. Meals take time to prepare, a reasonable level of meal planning and cooking ability is required and cooking facilities must be available.

Emergency Rations

13.18 With many AT activities, especially expedition-style activities, there is a chance that the group will be overtaken by darkness or delayed beyond the anticipated time of return. For this reason, emergency rations (additional to those to be consumed during the exercise) should always be carried when such a chance exists. The emergency rations should consist of high-energy foods; there should be enough emergency rations to maintain the energy levels of the group. Typical emergency foodstuffs are high-calorie foods such as dark chocolate, nutritional energy bars or sports bars, hard bread or biscuit, dried meat (such as jerky or dehydrated rations) and dried fruit.

Water

13.19 As with all activities, there is a need for potable water for consumption. The planning for an AT exercise should identify possible water sources (based on the requirements for consumption and administration) and any need for purification. The consumption of water will depend on the environment and the nature of the exercise, and the fluid requirements of all participants must be met.
SECTION 13-4. MENU PLANNING

13.20 Individuals have preferred tastes and nutritional requirements so menu planning can be difficult, complex and frustrating, especially for extended expeditions. Meeting expected and contingency nutritional requirements must be balanced with carrying capacity and food perishability to deliver a plan that ensures that activity participants are well fed without having to carry an excessive food burden or consuming degraded foods.

13.21 Where time and resources permit, food selection and menu planning should be conducted as a group task for activity participants at the commencement of or prior to the activity or phase, including in barracks. Where this is not practical, fixed recipes can be issued for group preparation.

13.22 Table 13–2 in Annex A provides examples of single serving sizes and typical meals for incorporation into activity planning. Table 13–3 in Annex B provides a list of example meals.

13.23 Allowances for dietary, medical and cultural rationing requirements also need to be considered.

SECTION 13-5. HYDRATION

13.24 Water is essential for all life. Humans can survive for several weeks without food but only several days without water. Water makes up between 50 to 70 per cent of an individual’s total body mass and is vital for:

a. digestion of nutrition
b. excreting waste
c. regulating temperature
d. maintaining blood circulation
e. maintaining healthy concentrations of electrolytes necessary for functioning of the nervous system.
Fluid Loss and Replacement

13.25 A fundamental principle of human health is that water lost to the environment (through respiration, perspiration, urination, defecation and expectoration [spitting]) must equal water taken in through eating and drinking. The effects of a net fluid loss are shown at Figure 13–1.

<table>
<thead>
<tr>
<th>% of body mass fluid loss</th>
<th>Effect on performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>Fully functional</td>
</tr>
<tr>
<td>2%</td>
<td>Impaired decision making and concentration</td>
</tr>
<tr>
<td></td>
<td>Impaired temperature regulation</td>
</tr>
<tr>
<td></td>
<td>35% loss of physical performance</td>
</tr>
<tr>
<td>3%</td>
<td>Reduced muscular endurance</td>
</tr>
<tr>
<td>4-6%</td>
<td>Reduced strength</td>
</tr>
<tr>
<td></td>
<td>Heat cramps</td>
</tr>
<tr>
<td>6%</td>
<td>Heat stroke, coma and death</td>
</tr>
</tbody>
</table>

Figure 13–1: Effect of Fluid Loss as a Percentage of Body Mass

Planning for Hydration

13.26 Hydration needs will vary dependent upon individual, environment and activity. In general:

a. Sedentary personnel will expel around 1 to 3 L per day.
b. Environmental factors (temperature) will impact on the bodily water usage and loss.
c. Cold environments increase energy usage (to keep warm) and therefore water usage and loss through urinating.
d. Regular fluid intake of around 0.5 L every 30 minutes will help hydration.
e. It takes around 6 hours to recover to normal hydration levels once dehydrated.
f. Taking electrolytes (as are present in, table salt, oral rehydration salts or some sports drinks) will support hydration better than drinking plain water alone.

13.27 Figure 13–2 provides indicative planning curves for experiential and adventurous activities. It is important not to underestimate water consumption requirements by planning against the high activity line where appropriate. In a typical three-day exercise the planner might allow for around 12 to 36 L of water per person for the whole exercise. Additional water may be required for carriage in safety vehicles and to cover all contingencies. Water planning requirements are to be in accordance with the Defence Safety Manual.

Hyponatremia

13.28 Excessive intake of plain water can be dangerous as it reduces the concentration of electrolytes in the body leading to hyponatremia. Signs and symptoms include nausea, vomiting, headaches, memory loss, confusion, irritability, lethargy, fatigue, muscle weakness and eventual loss of consciousness, coma and death.

13.29 The body loses salt through urine, perspiration, vomiting and diarrhoea. If too much salt is lost, the level of fluid in the blood will drop. Hyponatremia is a condition that occurs when the sodium in your blood falls below the normal range. In severe cases, low sodium levels in the body can lead to muscle cramps, nausea, vomiting and dizziness. Eventually, lack of salt can lead to shock, coma and death.

13.30 Severe salt loss is very unlikely to happen because our diets contain more than enough salt. The only time this is likely to occur is when someone has acute gastroenteritis (causing vomiting and diarrhoea), severe sweating or water intoxication (from drinking too much water).

13.31 Treatment for hyponatremia is by salt (food and electrolyte) intake. The human body can happily survive on just 1 g of salt a day, as hormones keep a check on sodium levels and make adjustments for hot weather.
Sourcing Water

13.32 A thorough planner will ensure that sources of water replenishment are available at each stage of the activity. In some cases, especially lengthy expeditions where resupply is impractical, it may be necessary to win water on site and this process can effectively contribute to the qualities (such as teamwork) generated by the activity.

13.33 While some water sources are suitable for drinking, it is good practice to ensure that all collected water can be purified and decontaminated before use. This can be through filtration systems (charcoal, straining, Millbank filters, mobile reverse osmosis) and/or purification processes (boiling, puritabs, iodine and UV light). Where group requirements are to be met on site, planners should consider including one of a range of high-quality, high-volume and commercially available purification devices within their logistics requirements to assist in mitigation of risk.

<table>
<thead>
<tr>
<th>Water requirements (litres per day)</th>
<th>High activity</th>
<th>Low activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td></td>
<td></td>
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<td>12</td>
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</tbody>
</table>

Figure 13–2: Water Requirement Planning

SECTION 13-6. SOURCES OF ENERGY

13.34 Planning the Fuels. The three primary sources of energy are carbohydrates, proteins and fats. Generally the energy
requirements should be met by these foods in the ratio of 40 to 50 per cent carbohydrates, 25 to 30 per cent protein and 25 to 30 per cent fats. This ratio provides sufficient available energy to avoid fatigue and to enable tissue repair and recovery. Table 13–1 indicates consumption levels for various stages of activity.

13.35 Carbohydrates. Carbohydrates should make up the majority of calories consumed:

a. **Advantages.** Excellent source for quick energy as they are rapidly broken down and enter the blood stream.

b. **Disadvantages.** Carbohydrates burn quickly so must be constantly resupplied. Combining protein in the meal will slow the digestion of carbohydrates resulting in sustained energy.

13.36 Proteins. Proteins are vital for physical recovery and to make enzymes, which facilitate every reaction that goes on in the body:

a. **Advantages.** Food source for rebuilding damaged tissue and muscle. Major component of the immune system.

b. **Disadvantages.** Slow to break down and enter the blood stream.

13.37 Fats. Fats should make up around 25 to 30 per cent of total calorie intake. Saturated fats should not exceed 10 per cent and trans fats should be avoided altogether:

a. **Advantages.** Highest calorie per gram. Great fuel for keeping the body warm and calming the system for sound sleep. They are an effective energy source, they help transport nutrients and protect organs.

b. **Disadvantages.** Harder than the other food types to break down. Yields only half the power of carbohydrates.
Table 13–1: Energy Requirements

<table>
<thead>
<tr>
<th>Activity Level(kJ)</th>
<th>Carbohydrate(g)</th>
<th>Protein(g)</th>
<th>Fat(g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inactive or sedentary such as barracks administrative tasks</td>
<td>12 500</td>
<td>450</td>
<td>120</td>
</tr>
<tr>
<td>Light activity such as in barracks routine or embarked on a ship</td>
<td>14 600</td>
<td>525</td>
<td>135</td>
</tr>
<tr>
<td>Moderate activity such as typical field exercises, recruit and Infantry initial employment training (such as simple abseiling)</td>
<td>16 700</td>
<td>600</td>
<td>150</td>
</tr>
<tr>
<td>Very high activity such as long marches carrying heavy load and expedition type exercises</td>
<td>19 000</td>
<td>625</td>
<td>165</td>
</tr>
<tr>
<td>Extreme activity such as SASR selection course</td>
<td>21 000</td>
<td>650</td>
<td>180</td>
</tr>
</tbody>
</table>

**SECTION 13-7. FOOD PATTERNS**

13.38 Most of the daily intake should come from the main meals being breakfast, lunch and dinner:

a. Breakfast should be carbohydrate and protein heavy.

b. Lunch should be relatively light.

c. Dinner should be more substantial if there is no planned night activity. Dinner focused on carbohydrate and protein will help with rest and repair after arduous activity.
13.39 **Timings – Before Activity.** A light carbohydrate snack of 100 g an hour before an activity will deliver energy without feeling heavy.

13.40 **Timings – After Activity.** In the 45 minutes following vigorous activity, muscles quickly take up carbohydrates to replenish glycogen, a sugar stored in the muscles for quick availability. Recovery eating should include 50 g of carbohydrate with 12 g of protein within the first 45 minutes then 50 g of carbohydrates every 2 hours for the next 6 hours.

**SECTION 13-8. CONCLUSION**

13.41 Rationing that is appropriate to the environment, participant needs and levels of physical exertion is an important consideration for maintaining peak performance of participants. Sufficient food and clean drinking water and attention to food safety can help to reduce residual risks of an activity, thereby allowing activity planners to engage more closely with other aspects of physical risk that contribute to activity objectives.

13.42 A flexible and well-considered rationing plan can provide excellent opportunities to introduce challenge as well as to develop group dynamics and qualities such as leadership, teamwork and initiative. Rationing should therefore form an integral aspect of effective activity planning.

**Annexes:**

A. **Single Serving Sizes**

B. **Example Meals**
ANNEX A TO CHAPTER 13

SINGLE SERVING SIZES

1. The principle of rationing in all environments is that personnel should be fed to the best possible standard, using fresh rations wherever possible. At least two main meals and a light meal or snack with drinks should be served each day. These meals should be tailored to meet the nutritional requirement of the activity being supported.

2. The following single serving quantities (see Table 13–2) are based on a 17 000 kJ diet required for a moderate level training activity.

3. See Australian Defence Force Ration Scales and Scales of Issue for full rations policy.

Table 13–2: Examples of Food Group Single Servings

<table>
<thead>
<tr>
<th>Food Group</th>
<th>Quantity for One Serving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat, poultry, fish, eggs and alternatives</td>
<td>150 g raw weight of lean red meat (eg, beef, lamb, pork, venison or kangaroo)</td>
</tr>
<tr>
<td></td>
<td>150 g raw weight of poultry (eg, chicken, turkey)</td>
</tr>
<tr>
<td></td>
<td>150 g raw weight of fish fillet</td>
</tr>
<tr>
<td></td>
<td>2 large eggs (120 g)</td>
</tr>
<tr>
<td></td>
<td>1 cup (170 g) cooked dried beans, lentils, chickpeas, split peas or canned beans</td>
</tr>
<tr>
<td></td>
<td>170 g tofu</td>
</tr>
<tr>
<td></td>
<td>30 g nuts or seeds or nut/seed paste</td>
</tr>
</tbody>
</table>
### Contents

#### T3A-2

<table>
<thead>
<tr>
<th>Food Group</th>
<th>Quantity for One Serving</th>
</tr>
</thead>
</table>
| Vegetables | 75 g (1/2 cup) cooked green broccoli or Brussels sprouts  
|            | 75 g (1/2 cup) cooked orange vegetables  
|            | 75 g (1/2 cup) cooked dried or canned beans such as chickpeas or lentils  
|            | 75 g (1 cup) raw salad vegetables  
|            | 75 g starchy vegetables such as potato, sweet potato, taro or sweet corn |
| Grains     | 2 slices of bread or half a medium roll or flat bread  
|            | 1 cup cooked rice, pasta, noodles  
|            | 1 cup cooked porridge or polenta, breakfast cereal flakes or muesli  
|            | 3 crispbreads  
|            | 1 crumpet, 1 small English muffin or scone  
|            | 1/2 cup cooked other cereal (eg, barley, quinoa, semolina, buckwheat or cornmeal)  
|            | 1/4 cup flour |
| Fruit      | 150 g (1 piece) of medium-sized fruit (eg, apple, banana, orange, pear)  
|            | 150 g (2 pieces) small fruit (eg, apricot, kiwi fruit, plum)  
|            | 150 g (1 cup) cooked or canned fruit  
|            | 125 ml (1/2 cup) 100% fruit juice  
<p>|            | 30 g dried fruit (eg, 4 dried apricot halves, 1 and 1/2 tablespoons sultanas) |</p>
<table>
<thead>
<tr>
<th>Food Group</th>
<th>Quantity for One Serving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dairy and alternatives</td>
<td>250 ml (1 cup) milk (eg, fresh, UHT long-life or reconstituted from dried powder)</td>
</tr>
<tr>
<td></td>
<td>125 ml (1/2 cup) evaporated unsweetened milk</td>
</tr>
<tr>
<td></td>
<td>200 g (3/4 cup or 1 small tub) yoghurt</td>
</tr>
<tr>
<td></td>
<td>40 g (2 slices) hard cheese (eg, cheddar)</td>
</tr>
<tr>
<td></td>
<td>120 g ricotta cheese or low-fat cream-style cheese</td>
</tr>
<tr>
<td>Unsaturated spreads and oils</td>
<td>40 to 60 g (2 to 4 tablespoons) spreads (eg, margarine)</td>
</tr>
<tr>
<td></td>
<td>30 to 45 g (1 to 2 tablespoons) oils (eg, canola, olive oil, polyunsaturated oils)</td>
</tr>
<tr>
<td>Discretionary foods</td>
<td>2 scoops ice-cream</td>
</tr>
<tr>
<td></td>
<td>1/4 cup condensed milk</td>
</tr>
<tr>
<td></td>
<td>50 to 60 g processed meat (eg, salami, mettwurst)</td>
</tr>
<tr>
<td></td>
<td>2 to 3 sweet biscuits</td>
</tr>
<tr>
<td></td>
<td>1 slice plain cake or small cake-type muffin</td>
</tr>
<tr>
<td></td>
<td>1/2 small (2 g) bar of chocolate</td>
</tr>
<tr>
<td></td>
<td>30 g salty crackers</td>
</tr>
<tr>
<td></td>
<td>40 g sugar confectionary</td>
</tr>
<tr>
<td></td>
<td>60 g (2 to 3 tablespoons) jam or honey</td>
</tr>
<tr>
<td></td>
<td>12 (60 g) fried hot chips</td>
</tr>
</tbody>
</table>
## ANNEX B TO CHAPTER 13

### EXAMPLE MEALS

Table 13–3: Example Meals for Adventurous Training Exercises

<table>
<thead>
<tr>
<th>Meal</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>High carbohydrate breakfast foods</td>
<td>Fruit juice</td>
</tr>
<tr>
<td></td>
<td>Smoothie with low or reduced fat milk, fresh fruit, low fat yoghurt and honey</td>
</tr>
<tr>
<td></td>
<td>Wholegrain cereal with low or reduced fat milk</td>
</tr>
<tr>
<td></td>
<td>Fruit topped with low fat yoghurt</td>
</tr>
<tr>
<td></td>
<td>Wholegrain toast, muffins, or crumpets with peanut butter, jam or honey</td>
</tr>
<tr>
<td></td>
<td>Waffles or pancakes with fruit and maple syrup</td>
</tr>
<tr>
<td></td>
<td>Porridge topped with fruit</td>
</tr>
<tr>
<td></td>
<td>Wholegrain toast with poached or boiled eggs, baked beans and grilled tomatoes</td>
</tr>
<tr>
<td>Light lunch</td>
<td>Sandwiches, rolls, wraps or pita bread willed with salad vegetables and lean meat, reduced fat cheese or cream cheese, boiled egg canned tuna/salmon or lentils</td>
</tr>
<tr>
<td>Substantial dinner</td>
<td>Grilled fish or lean beef, chicken, turkey, pork with boiled potato and vegetables or salad</td>
</tr>
<tr>
<td></td>
<td>Quiche with vegetables and salad</td>
</tr>
<tr>
<td></td>
<td>Vegetable soup with wholemeal bread</td>
</tr>
<tr>
<td></td>
<td>Meat- and/or vegetable-based curry with rice</td>
</tr>
<tr>
<td></td>
<td>BBQ meat and vegetable skewers with salad and pita bread</td>
</tr>
</tbody>
</table>
### Contents

<table>
<thead>
<tr>
<th>Meal</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pasta with meat and vegetable bolognais sauce</td>
<td></td>
</tr>
<tr>
<td>High carbohydrate snacks</td>
<td>Muesli bars</td>
</tr>
<tr>
<td></td>
<td>Sports bars</td>
</tr>
<tr>
<td></td>
<td>Dried fruit</td>
</tr>
<tr>
<td></td>
<td>High-carbohydrate fresh fruit (eg, bananas, apricots, grapes and mangoes)</td>
</tr>
<tr>
<td></td>
<td>Scones</td>
</tr>
<tr>
<td></td>
<td>Plain sweet biscuits</td>
</tr>
<tr>
<td></td>
<td>Fruit cake</td>
</tr>
<tr>
<td></td>
<td>Sports drinks</td>
</tr>
<tr>
<td></td>
<td>Confectionary</td>
</tr>
</tbody>
</table>

*LWP-G 7-6-1, Adventurous Training – Planning Experiential Learning Activities, 2019*
BIBLIOGRAPHY


*Australian Heritage Council Act 2003*


*Environment Protection and Biodiversity Conservation Act 1999*


*Work Health and Safety Act 2011*
Yerkes, RM and Dodson JD 1908, 'The Relation of Strength of Stimulus to Rapidity of Habit Formation' in *Journal of Comparative Neurology and Psychology*, Volume 18, Issue 5
1. On completion of this amendment, initial and date the amendment certificate on page v to confirm that the amendment has been made.

2. All superseded Signature and Amendment Certificate pages should be retained at the rear of the publication for audit purposes.

3. It is advised that a copy of this amendment instruction be retained and units complete a yearly Doctrine audit.

4. The title of this publication has been updated as part of this amendment and the entire publication has been reprinted.