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Challenge Courses

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Australian

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Adventure Activity

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Good Practice Guide

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Guidance for high and low challenge (ropes) courses

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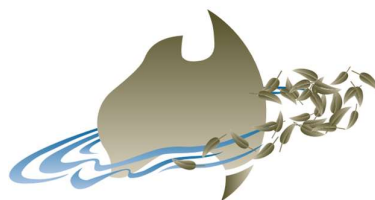
and adventure/*initiative games*.

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Traditional Owner Acknowledgement

18 We acknowledge the *Traditional Owners* of Country throughout Australia and their continuing connection
19 to land, waters and community. We pay our respects to the people, the cultures and the Elders past and
20 present.

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29 Australian Adventure Activity Standard and the Good Practice Guides are a guide only. *Activity providers*
30 and any other person accessing the documentation should consider the need to obtain any appropriate
31 professional advice relevant to their own circumstances, including the specific adventure activities and
32 needs of the *dependent participants*.

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43 and ratifying the documents:

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45 • are not liable for any loss resulting from an action taken or reliance made on any information or
46 material contained within the Australian Adventure Activity Standard, Good Practice Guides and
47 associated documents.

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Version details

Version	Date	Details
1.0	23 Sept 2019	Version one release.
2.0	2026	

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50

51 Foreword

52

53 "When I experience dadirri, I am made whole again. I can sit on the riverbank or walk through the trees;
54 even if someone close to me has passed away, I can find my peace in this silent awareness. There is no
55 need of words. A big part of dadirri is listening."

56 **Dr Miriam-Rose Ungunmerr-Baumann AM**

57

58 The Australian Adventure Activity Standard and Good Practice Guides are designed to ensure effective,
59 responsible, sustainable and safe delivery of adventure activities to *dependent participants*. They can help
60 people across the outdoor sector to develop appropriately managed adventure activities which enhance
61 individuals and our communities, while protecting the environment and culturally significant places. In
62 doing this, these documents can help ensure that people will continue to enjoy the benefits of adventure
63 activities well into the future.

64 Best wishes for all your adventures.

65 **The Australian Adventure Activity Standard Steering Committee.**

66 **Outdoor Council of Australia**

Creation

The Australian Adventure Activity Standards (AAAS) and accompanying Good Practice Guides (GPGs) were developed through a national project and launched in 2019. They drew together, and built upon, the various state and territory-specific adventure activity standards that had previously operated across Australia, replacing a fragmented set of arrangements with a single, nationally consistent voluntary framework. The original development drew on the input of a wide range of outdoor and adventure activity experts with extensive experience, supported by expert advisory groups and informed by open consultation across *activity providers*, education authorities and other stakeholders.

The Steering Committee gratefully acknowledges the members of the various focus groups, industry consultation, working groups and expert advisors for their work and contributions, and thanks the State and Territory Governments for funding the original development.

The AAAS and GPGs are now maintained by the Outdoor Council of Australia (OCA). They are subject to comprehensive review at least every five years, with targeted reviews undertaken in response to serious incidents, fatalities, relevant court decisions, or material changes in regulation or practice. Reviews are overseen by the Steering Committee and conducted in accordance with the AAAS Review and Update Methodology — a pragmatic, mixed-methods process combining legislative and regulatory analysis, currency checking of cited standards and instruments, stakeholder consultation, data-informed *risk assessment*, and structured expert input through the Expert Advisory Group, followed by open public consultation before endorsement.

The first comprehensive review under this methodology was undertaken in 2025–26. The review was facilitated, and the Standard and Good Practice Guides drafted, by The OREAS Group Dr David Marsden for and on behalf of the Outdoor Council of Australia. The Outdoor Council of Australia gratefully acknowledges the contributions of all who took part in the review:

- Dr David Marsden (PhD), Lead Consultant (The OREAS GROUP)
- Lori Modde, Project Sponsor (OCA Chair)
- the members of the AAAS Steering Committee, who provided governance, direction and endorsement of the reviewed documents;

Lori Modde, OCA Chair, Outdoors NSW, ACT
David Marsden, Lead Consultant, The OREAS Group
Andrew Atfield, Tasmania Government
Andrew Knight, Outdoors Victoria
Dom Courtney, Outdoors Queensland
Jodie Freund, South Australian Government
Katie Brown, Outdoors WA
Mitchell Hardy, NT Government
Neil Le Febvre, Outdoors WA

- the members of the Expert Advisory Groups, who contributed specialist knowledge and reviewed drafts across the Core and activity Good Practice Guides; and
- the *activity providers*, education authorities, peak bodies and individuals who contributed through public consultation, focus groups, and submissions.

Further details of the creation and review of the AAAS and GPGs can be found at www.australianaas.org.au, where updates are also published.

Funders

The Steering Committee gratefully acknowledges and thanks the State and Territory Governments for funding the original development and 2026 review.

112	Table of Contents	
113	Preface.....	6
114	1 Introduction.....	9
115	2 Management of Risk.....	10
116	3 Planning.....	10
117	4 Diversity, equity and inclusion.....	12
118	5 Participants.....	12
119	6 Environment.....	22
120	7 Equipment and logistics.....	25
121	8 Responsibilities and roles.....	33
122	Glossary.....	36
123	Acronyms.....	39
124	Appendices.....	40
125	Detailed Contents.....	62
126		
127	List of Figures	
128	Figure 1.1: Structure of the Standard and Good Practice Guides.....	8
129	Figure Y.2: Unequal length lanyards.....	58
130	Figure Y.3: Sufficient gap between lanyards.....	59
131	Figure Y.4: Single piece or sheathed lanyards.....	60
132		
133	List of Tables	
134	Table 5.1: Supervision for different situations.....	16
135	Table N.2: Activity variables — challenge courses.....	41
136		
137		

Preface

About these documents

The Australian Adventure Activity Standard (AAAS) and related Good Practice Guides (GPGs) are an industry good-practice framework for safe and responsible planning and delivery of outdoor adventure activities with *dependent participants*.

The AAAS and related GPGs provide guidance on responsible activity delivery, including safety and respect for the environment, cultural heritage and other users. They are not a full legal compliance framework.

Activity *providers* are encouraged to obtain independent professional and legal advice in relation to their obligations and duties in delivering adventure activities and should reference the relevant laws to the area in which they intend to undertake the adventure activity.

Dependent Participants

A *dependent participant* is a person who is owed a *duty of care* by the *activity provider* and who wholly or partially on the provider's systems, processes and operational practices for the support, supervision, guidance or instruction needed to take part in an activity. In most cases this means a participant who reasonably relies on the provider for their safety. The degree of dependence may vary over the course of an activity.

Considerations for determining whether a person is a *dependent participant* may include, but are not limited to:

- whether the organisation is providing a service or product to the person
- whether the organisation owes the person a *duty of care* in the circumstances
- whether the person reasonably relies on the provider for the support, supervision, guidance or instruction needed to participate safely.

Considerations for determining the **level of dependence** may include, but are not limited to:

- the foreseeable level of competence of the participant in the activity, and the degree of reliance this creates on the provider's work system, including reliance on *activity leaders*
- the foreseeable level of self-reliance of the participant to reasonably manage their own safety
- the variation, or possible variation, in the degree of dependence or self-reliance throughout the activity
- the individual context, nature and circumstances of the activity
- the relevant circumstances and particular facts relating to the responsibilities assumed by the provider.

Does the Standard and Good Practice Guides apply to me?

The Australian Adventure Activity Standards (AAAS) and associated Good Practice Guides (GPGs) are primarily designed to support activity *providers* conducting lead or supported adventure activities involving *dependent participants* with the aim of delivering safe, responsible and well-managed experiences. Each *provider* must determine, based on their specific circumstances, whether the participants they work with are dependent and/or their level of dependency on the provider's systems and operations. Providers should use the AAAS and relevant GPGs to ensure that the activities they lead are planned and delivered in accordance with the Standard.

Australian *providers* operating internationally can use the AAAS and GPGs as a benchmark for safe practice, while complying with the laws and relevant standards of the jurisdiction in which the activity is conducted. Legal advice should be obtained where activities cross jurisdictions.

180 *Activity providers* include outdoor education and adventure businesses, schools, universities, TAFEs, camps,
181 clubs and organised “meet-up” groups, youth organisations, not-for-profits, and community-based
182 organisations that deliver adventure activities to *dependent participants*. An individual may also be an
183 *activity provider* where they hold the ultimate legal *duty of care* to participants. “The Standard” and the
184 GPGs apply to a provider as a “whole organisation” rather than to “specific roles” within it.

185 Some providers may have their own standards or guidelines appropriate to their *duty of care*. These should
186 be reviewed periodically to ensure current *duty of care* expectations are met, and “the Standard” and the
187 GPGs may assist with such reviews.

188 Are they legally binding?

189 The AAAS and GPGs are not legal requirements. However, they may refer to specific laws and regulations
190 which may be legally binding on *activity providers*. Some *land managers* and other organisations may
191 require compliance. This may be as a condition of obtaining a licence, permit or other permission, or some
192 other condition (e.g. a contract).

193 Under Australian common law and relevant legislation, *providers* have a legal *duty of care* towards
194 *dependent participants* in some circumstances. In broad terms, the legal duty requires *providers* to take
195 reasonable care that their actions and omissions do not cause reasonably foreseeable injury to *dependent*
196 *participants*.

197 It is important to be aware that adventure activities in Australia operate within a complex legal landscape.
198 *Activity providers* must understand the obligations that apply to them and seek independent professional
199 and legal advice where any obligation is unclear.

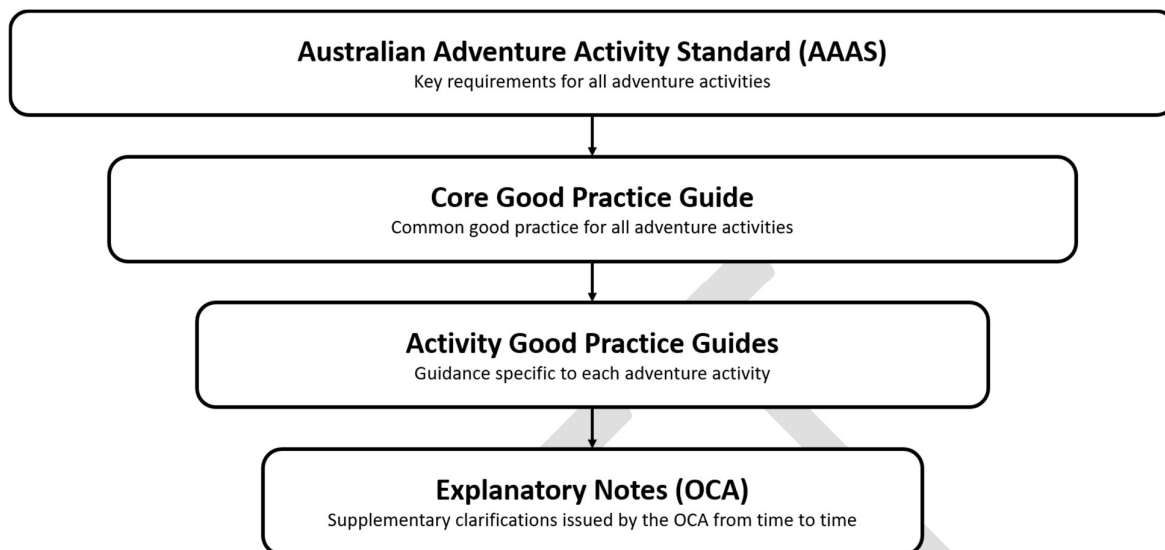
200 The following obligations include, but are not limited to, those set out in detail in Appendix A — Principal
201 legal obligations, grouped by the function each obligation performs:

- 202 • Work health and safety — the foundational legal duty for the majority of providers, including the
203 primary *duty of care*, officers' due-diligence duty, consultation, safe systems of work, and
204 notifiable-incident reporting.
- 205 • *Duty of care*, negligence and consumer protection — the common law *duty of care*, the Civil
206 Liability Act (or equivalent) of each state and territory, and the Australian Consumer Law.
- 207 • Protection of children and vulnerable persons — Working with Children and Working with
208 Vulnerable People schemes, Child Safe Standards and Reportable Conduct Schemes.
- 209 • Transport of participants — land, water and air — heavy vehicle, road transport, domestic
210 commercial vessel, recreational marine and civil aviation obligations.
- 211 • Land access, environment and cultural heritage — park, Crown land and reserve licensing, the
212 EPBC Act, Aboriginal cultural heritage law(s) and/or regulation(s), and biosecurity duties.
- 213 • Information privacy, equity and employment — the Privacy Act and Australian Privacy Principles,
214 anti-discrimination law(s) and/or regulation(s), and the Fair Work Act and relevant award.
- 215 • Substances, food and licensed items — medicines and poisons, food safety, liquor and tobacco,
216 and firearms obligations.
- 217 • Activity-specific licensing — fisheries and recreational fishing licensing, and animal welfare duties.

218 Appendix A is an orientation only and is not exhaustive. It does not constitute legal advice, and the relevant
219 law(s) and/or regulation(s) of the jurisdiction(s) of operation must in each case be determined and
220 complied with.

221 Structure of the Standard and Good Practice Guides

222 The guidance for adventure activities comprises several related documents. For any activity, the AAAS (the
223 Standard), the Core GPG, the relevant activity GPG, and any applicable Explanatory Notes issued by the
224 Outdoor Council of Australia, from time to time, should be consulted.



225

226 *Figure 1.1: Structure of the Standard and Good Practice Guides*

227 The documents present cumulatively more specific information. Providers should determine how they use
228 the AAAS and GPGs based on their context and need, and are encouraged to draw on them when
229 developing and reviewing their standard operating procedures. Activity providers are encouraged to obtain
230 independent professional and legal advice on their obligations and to reference the laws relevant to the
231 area in which they operate.

232 Interpretation of the Standard and Good Practice Guides

233 The following words and phrases are used in all documents and have specific meanings:

234 **Must:** used where a provision is mandatory, if the provider is to operate fully in accordance with AAAS or
235 GPGs. (This is equivalent to the keyword “shall” used in other voluntary standards e.g. Standards Australia,
236 other International Standards Organisations (ISOs) etc.)

237 **Should:** used where a provision is recommended, not mandatory. It indicates that the provider needs to
238 consider their specific situation and decide for themselves whether it applies or is relevant. A “should”
239 statement describes good practice. Departure from a “should” statement does not of itself establish a
240 breach of duty — a provider may meet its obligations by other means appropriate to its context — but
241 providers should be able to explain the basis for a different approach.

242 **Can/cannot:** indicates a possibility and capability.

243 **May/need not:** indicates a permission or existence of an option.

244 **But are/is not limited to:** used to indicate that a list is not definitive and additional items may need to be
245 considered depending on the context.

246 The following formatting is used throughout:

247 Defined words are in italics. They are defined in the Glossary.

248 Examples are in smaller italic 9-point font.

249 In document references are underlined. References are to section heading titles.

251 1 Introduction

252 1.1 Challenge courses

253 A Challenge Course is a temporary, mobile or permanent physical structure comprising of either an
254 individual or series of *elements*, where a person requires a fall protection system should they fall from an
255 element. Where a slackline is used as part of a *low element* or *high element*, the slackline equipment must
256 be used per the manufacturer's instructions and integrated into the appropriate fall safety system for that
257 *element*. A *Challenge Course* may include activities at 'play centres' and 'climbing adventure centres'. A
258 challenge course excludes structures or *elements* that involve abseiling, rock climbing, *artificial surfaces*
259 climbing or *bouldering* (refer to the Abseiling and Climbing GPG for these activities).

260 Challenge courses are also known as challenge ropes courses. *Participants* are required to use dexterity,
261 strength, balance and complex physical movements to successfully traverse the element or course of
262 elements. Challenge courses are often used for experiential learning, personal challenge or team building
263 purposes but also for entertainment. *Adventure games* and *low obstacles* may also be a part of the
264 challenge course.

265 Fall protection systems differ for *low elements*, *adventure games* and *high elements*.

266 *Low element(s)* (also known as low ropes or obstacle courses) is any element or series of elements for
267 which the appropriate fall safety is achieved through *spotting* and/or an impact attenuating surface (IAS).
268 Some physical structures do not require fall safety and are called *low obstacles* to indicate when this is the
269 case.

270 *Spotting* is a support process provided by a person, or persons, who aim to minimise injury to a person who
271 falls by helping to redirect the fall and protect the head and upper body. *Spotting* is one control among
272 others and should not be relied upon as a sole means of fall protection.

273 *High element(s)* (also known as high ropes) is any element with a free height of fall greater than 3 m, for
274 which safety can no longer be achieved by spotting and requires a height safety system using harnesses and
275 specialist safety equipment or other established methods or systems. *High elements* may include but are
276 not limited to swinging elements as well as *flying foxes*. In some circumstances spotting may be required
277 while transitioning from a low to high *fall height* or vice-versa, as the 'stretch' in the height safety system
278 means it can only function as intended over a certain *fall height*.

279 An *element* is considered a *temporary element* when it remains in place no longer than seven consecutive
280 days.

281 *Adventure games* (also known as *initiative games*) are activities which are not identifiable as a *low element*
282 or *high element* activity, but which require spotting to ensure participant safety. *Adventure games* may be
283 conducted as separate activities or as part of a warm-up for challenge course activities. *Adventure games*
284 are covered by this GPG.

285 1.2 Exclusions

286 Activities that are not covered by this GPG are:

- 287 • *abseiling* either on *natural* or *artificial* surfaces (refer Abseiling and Climbing GPG)
- 288 • *bouldering* either on *natural* or *artificial* surfaces (refer Abseiling and Climbing GPG)
- 289 • games, sports or activities that are not *Adventure Games*
- 290 • *rock climbing* either on *natural* or *artificial* surfaces (refer Abseiling and Climbing GPG)
- 291 • activities that do not involve a height safety system (e.g. mud runs, 'playground equipment', etc)
- 292 • competitive activities (e.g. adventure races, etc.).

293 1.3 Related activities

294 Possible related activities may include:

- 295 • *abseiling, climbing or bouldering* either on *natural or artificial* surfaces (refer [Abseiling and](#)
296 [Climbing GPG](#)).

297 2 Management of Risk

298 *Risk management* in outdoor and adventure settings is highly context-specific. In natural environments
299 there is an almost infinite range of combinations of participants, purpose, weather and local conditions,
300 and every provider differs in structure, size, philosophy and operating environment. *Risk management*
301 therefore cannot be a 'tick-the-box' exercise or a 'one size fits all' approach; risk systems should be flexible,
302 adaptive and highly responsive to the circumstances of each activity, drawing on recognised frameworks
303 such as AS ISO 31000:2018 and AS ISO 4980:2023.

304 The section guides providers to build a risk system that fits their own structure and operating environment
305 rather than copying another organisation's. A volunteer-led club might apply it as a lightweight but
306 documented plan with strong dynamic assessment in the field; a commercial operator might use it to
307 underpin a formal, audited *risk management* system. In every case it directs the provider to make risk
308 thinking flexible, adaptive and responsive to the actual circumstances of each activity.

309

310 2.1 Management of risk

311 *See Core GPG (2 Management of Risk).*

312 2.2 Context Matters

313 *See Core GPG (Management of Risk).*

314 2.3 Risk management framework and process

315 *See Core GPG (Management of Risk).*

316 2.4 Risk management plan

317 *See Core GPG (Management of Risk).*

318 2.5 Dynamic risk assessment

319 *See Core GPG (Management of Risk).*

320 2.6 Incident reporting

321 *See Core GPG (Management of Risk).*

322 3 Planning

323

324 Sound planning is what turns intent into safe and consistent delivery. Clear management and approval
325 processes help a provider manage risk, with the people responsible for approving processes, plans and
326 procedures varying according to the organisation's context. Good planning considers the purpose of the
327 activity, the people involved, group size, the cultural and environmental values of the place, and what to do
328 when conditions change or things go wrong.

329 Here the guidance helps a provider translate intent into a repeatable, defensible process. Approval roles
330 can be scaled to context — a single coordinator in a small operation, or a tiered sign-off structure in a larger
331 one. The material can shape activity-plan templates, prompt early engagement with *Traditional Owners*
332 and *land managers*, and ensure emergency planning and field documentation are in place and reviewed
333 before participants arrive.

334 3.1 Management and approval of activities

335 *See Core GPG (Planning).*

336 3.2 Activity plans

337 Activity plans must consider the desired benefits and outcomes of the activity, the client group, and the
338 program context (e.g. school program, outdoor education, tourism, resort, weekend recreation), as these
339 factors materially influence the safety systems, level of participant involvement in belaying/spotting, and
340 staff training required.

341 Additional challenge course activity planning considerations may include but are not limited to:

- 342 • site characteristics such as:
 - 343 ○ supervision line of sight
 - 344 ○ *waiting areas*
- 345 • element characteristics such as:
 - 346 ○ difficulty
 - 347 ○ height
 - 348 ○ height safety system used
- 349 • *activity leader competencies* required
- 350 • activity progression
- 351 • appropriate warm-up or lead-up activities (e.g. trust, cooperation, communication)
- 352 • suitable options to allow “challenge by choice”
- 353 • operating procedures and instructions that need to be provided
- 354 • participant training required (e.g. spotting, belaying, attaching to safety systems)
- 355 • any other relevant considerations listed in this document and the Core GPG.

356 *See Core GPG (Planning) for the general requirements and further detail.*

357 3.3 Group size

358 *See Core GPG (Planning).*

359 3.4 Cultural, environmental and historical values

360 *See Core GPG (Planning).*

361 3.5 Emergency management planning

362 Refer Core GPG – Emergency management planning.

363 Rescue procedures that are effective in solving problems and rescuing people from all points of height must
364 be established and able to be effectively applied at all times the course is in use. The use of relevant rescue
365 systems and procedures must be practised periodically to maintain currency.

366 *See Core GPG (Planning) for the general requirements and further detail.*

367 3.6 Activity leader required documentation

368 *See Core GPG (Planning).*

369 4 Diversity, equity and inclusion

370 Adventure *activities* are delivered by, and for, people of diverse identities, abilities, cultures, life
371 experiences and circumstances. Recognising that diversity, and providing equitable opportunities for safe
372 and meaningful participation, is fundamental to safe and effective practice.

373 In practice this section guides providers to design activities that include rather than exclude, applying
374 across interactions between leaders, participants and others encountered during an activity. A provider can
375 use it to review enrolment and communication practices for barriers, build cultural and psychological safety
376 into leader briefings, and ensure complaint and review mechanisms are visible and accessible. It is intended
377 to be read alongside the Participants and Responsibilities sections rather than in isolation.

378 The recommendations in this section apply alongside, and inform the application of, the subsequent
379 sections of the Core, including without limitation 5 Participants, 5.3 *Vulnerable participants*, 5.5 Privacy of
380 information, 4.3 Cultural safety, 4.4 Psychological safety and dignity, and 8 Responsibilities and roles. Those
381 sections continue to apply in their own terms; where requirements overlap, the more onerous applies.

382 4.1 Diversity of participants and leaders

383 *See Core GPG (Diversity, equity and inclusion).*

384 4.2 Inclusive practice

385 *See Core GPG (Diversity, equity and inclusion).*

386 4.3 Cultural safety

387 *See Core GPG (Diversity, equity and inclusion).*

388 4.4 Psychological safety and dignity

389 *See Core GPG (Diversity, equity and inclusion).*

390 4.5 Information, communication and consent

391 *See Core GPG (Diversity, equity and inclusion).*

392 4.6 Leader competence

393 *See Core GPG (Diversity, equity and inclusion).*

394 4.7 Concerns, complaints and review

395 *See Core GPG (Diversity, equity and inclusion).*

396 5 Participants

397 Every activity depends on the people taking part, and on the information and support they receive before
398 and during it. Pre-activity information and communication help potential participants, parents or legal
399 guardians and client organisations make an informed decision about taking part, and continue through
400 consent, acknowledgement of risk, and the care of those who may be vulnerable. Supporting participants
401 well — from first enquiry to supervision in the field — is central to safe and respectful practice.

402 Its purpose is to help a provider ensure people know what they are signing up for and are appropriately
403 supported once they arrive. Pre-activity information can be adapted to the audience and activity,
404 participation restrictions set defensibly, and additional safeguards put in place for *vulnerable participants*

405 and minors. The supervision guidance lets a provider calibrate direct versus *indirect supervision* to the
406 activity, environment and group.

407 5.1 Information provided pre-activity

408 Pre-activity information should clearly communicate:

- 409 • expectations and activity conditions
- 410 • as per Core GPG - Participants.

411 An appropriate pre-activity assessment should be conducted to ensure *participants* have the necessary pre-
412 requisite skills & knowledge to undertake the activity.

413 See *Core GPG (Participants)* for the general requirements and further detail.

414 5.2 Participant considerations

415 Appropriate procedures must be in place to address risks associated with *participants* living with or
416 experiencing an impairment.

417 Also refer Core GPG - Participants: Restrictions.

418 5.3 Participant health and wellbeing

419 See *Core GPG (5 Health and wellbeing)*.

420 5.4 Supervision and management during the activity

421 5.4.1 Supervision plan

422 Supervision requirements must be documented in a challenge course supervision plan.

423 Activity supervision must be implemented according to the challenge course supervision plan.

424 A challenge course supervision plan must include:

- 425 • a course diagram for visual reference
- 426 • a summary of the risks identified in the *risk assessment*
- 427 • supervision requirements for the challenge course
- 428 • specific locations to operate supervision from
- 429 • obstructions (e.g. trees, structures, etc.) and/or conditions (e.g. sun location, mist, etc.) that may impact
- 430 supervision visibility and procedures to overcome these
- 431 • relevant manufacturers specifications or requirements
- 432 • *activity leader* roles and responsibilities
- 433 • *activity leader* competencies including any special competencies for each element
- 434 • *activity leader* pre-deployment confirmation of competence, training or orientation required
- 435 • communications plan
- 436 • emergency response plan.

437 Also refer Appendix Z Challenge course supervision plan.

438

439 5.4.2 Group size considerations

440 Considerations when determining group size must include:

- 441 • site capacity
- 442 • site related legislation or regulation
- 443 • the time allowed to enable all participants in the group to complete the activity is sufficient and
- 444 realistic and does not compromise safety
- 445 • having appropriate supervision for *participants non-actively participating*
- 446 • considerations for determining group size outlined in Core_GPG.

447 5.4.3 Supervision ratio considerations

448 Considerations in determining challenge course supervision requirements should include but are not
449 limited to:

- 450 • the nature and design of the *elements*
- 451 • requirements for the height safety system(s) and transfer between height safety system(s)
- 452 • time for the *activity leaders* to allow all *participants* to undertake the activity being sufficient and
- 453 realistic and does not compromise safety
- 454 • the ability to see and/or hear *active participants*
- 455 • the number of *active participants* enables *activity leaders* to adequately monitor, detect and
- 456 correct improper procedures
- 457 • having appropriate supervision for *participants non-actively participating*
- 458 • the potential for *activity leader* fatigue
- 459 • emergency event and/or rescue requirements
- 460 • considerations for determining supervision requirements in Core_GPG.

461 An appropriately *competent person* must establish supervision requirements and standard operating
462 procedures for element(s) and/or the challenge course.

463 5.4.4 Participants that are non-actively participating

464 Consideration must be given to the type of supervision *participants* required when *non-actively*
465 *participating* i.e. who are waiting to undertake the activity.

466 In cases where *participants* who are *non-actively participating* require *Level 1 or 2* supervision, that
467 supervision must be provided by an *activity leader* not providing *Level 1 or 2* supervision of an activity or by
468 a *responsible person* as appropriate.

469 5.4.5 Assessment of participants use of safety systems

470 Each *participant* must be assessed to confirm they have sufficient reach to use and operate the safety
471 systems while retaining an appropriate footing. (For example, there may be a minimum height requirement to
472 reach or connect height safety systems.)

473 An assessment must be completed to confirm each *participant* is competent to carry out the relevant safety
474 instructions and safety system operation.

475 The assessment to confirm each *participant* is *competent* to carry out the relevant safety instructions and
476 safety system operation must be completed without exposure to risks, serious injury or death. (For example,
477 use of test system or element.)

478 Where the *participant* has been assessed as *competent* to carry out the relevant safety instructions and
479 safety system operation, ongoing supervision must monitor and check the *participants* actual use for
480 continued *competence* before adjusting the *level of supervision*.

481

482 5.4.6 Supervision provided

483 Supervision for *collective belay* systems must be determined by the *risk assessment* and supervision plan.

484 The maximum number of separate *elements* one *activity leader* can supervise must be determined by the
485 *risk assessment* and supervision plan.

486 5.4.6.1 High elements supervision

487 When *high elements* are in use there must be at least one *activity leader* available with supervisor or
488 manager competencies.

489 All people at height irrespective of the level *competence* must be appropriately supervised.

490 When multiple active *participants* are at height on *high element(s)*, there should be a minimum of two
491 *activity leaders* included in the supervision plan.

492 5.4.7 Pre-activity course preparation supervision

493 A safety system must be used when undertaking pre-activity setup or safety inspection that has a fall from
494 height hazard.

495 When a height safety system is used, there must be another person:

- 496 • aware that the height safety system is in use
- 497 • monitoring the setup of the activity or the safety inspection (e.g. level 3 supervision)
- 498 • who can promptly respond if there is an emergency.

499 5.4.8 Supervision of connectors & connections

500 *Self-closing connectors* that are *non-locking* must not be used.

501 All *locking connectors* that are not *tool locked* or *auto-locking* (e.g. screwgate carabiners) must be
502 appropriately supervised throughout the activity to ensure they remain locked.

503 The first/initial connection of *climbers* and *belayers* to the safety system must be supervised or checked
504 before being relied upon. (Refer 7.3.5 Assessment of participants use of safety systems above.)

505 5.4.9 Supervision for different situations

506 The recommended *level of supervision*, minimum recommended usage checks and suggested supervision
507 ratios that should be used are in the following table.

508 The table is to be used in conjunction with other 7.3 Supervision requirements sections above.

509 (Refer table next page.)

510

511 **Supervision for different situations table**

512 *Table 5.1: Supervision for different situations*

Safety system	Assessment	Checking use after assessment (Refer note 1 and 3)	Rest of the system (Refer note 1 and 3)	Suggested ratio (Refer to note 1 and 2)
Low elements or adventure games	Level 1	Level 1 or 2 as appropriate	Level 2 thereafter when spotting required	1:18 active participants with a maximum of 8 climbers
			Level 3 (see note 7) thereafter when no spotting required	1:24 active participants
Assisted or team belay (Note 5)	Level 1	Level 1 check each use	Level 1 check each use	1-4 belay systems (Note 4)
Auto belay	Level 1	Level 2 with a minimum of 3 uses checked	Level 2 thereafter	1:12 climbers
Self-belay	Level 1	Level 2 with a minimum of 5 uses checked	Level 2 thereafter if connectors are: • auto-locking or • triple action auto-locking	1:20 climbers
			Level 3 (see note 6) thereafter if connectors are: • tool locked, • interlocking device or • interlocking device - tool activated	1:20 climbers
Continuous self-belay	Level 1	Level 2 with a minimum of 3 uses checked	Level 3 (see note 6) thereafter if connectors are: • tool locked, • interlocking device or • interlocking device - tool activated	1:20 climbers

513 **Notes:**

- 514 1. Use course designers or course builders recommendations for the site and/or elements when
515 available. Site specific recommendations must be used in preference to generic suggestions that
516 lack an understanding of the specific site or element involved.
- 517 2. When site specific course designers or course builders ratio recommendations are not available,
518 the suggested ratios in the table need to be revised for the specific site or elements by
519 considering:
- 520 • 7.3.6 Supervision provided requirements and recommendations above and
 - 521 • 7.3.2 Group size considerations section above and
 - 522 • 7.3.3 Supervision ratio considerations section above.
- 523 3. When site specific course designers or course builders levels of supervision and assessment
524 checking recommendations are not available, the suggested assessment checking
525 recommendations in the table need to be revised for the specific site or elements.
- 526 4. An important consideration in determining the supervision ratio includes but is not limited to the
527 proximity of the belay stations.
- 528 5. Includes all other types of safety systems not specified elsewhere (e.g. haul systems, “donkey belays”,
529 “glider possum” etc.)
- 530 6. Use of *Level 3* supervision on *high elements* must only be used where the course has a suitable
531 design and equipment and appropriate procedures for *participant* induction, assessment and
532 progress monitoring.
- 533 7. Use of *Level 3* supervision for *low elements* or *adventure games* when no spotting required must
534 only be used where the course or *adventure game* is of appropriate design for the *participants*.
- 535 8. Refer glossary for definitions for *levels 1, 2 or 3*.

536 5.5 Activity management

537 5.5.1 Knowledge of site

538 *Activity leaders* must have an induction to the activity site that includes supervision requirements in the
539 supervision plan and any relevant specific activity site procedures.

540 The knowledge of the activity site that *activity leaders* require before leading *participants* at that site,
541 should be considered when allocating *activity leader* roles.

542 5.5.2 Pre-activity equipment preparation

543 Rescue equipment must be ready for immediate use before each activity.

544 5.5.3 Activity leader positioning

545 Procedures should enable *activity leaders* to respond to emergencies and complete rescues in an
546 appropriate time frame.

547 5.5.4 Activity leader fatigue and repetition

548 Considerations for *activity leader* fatigue should include but is not limited to:

- 549 • time required to complete tasks
- 550 • task repetition
- 551 • weather (e.g. hot temperatures etc.).

552 Considerations in managing *activity leader* fatigue and task repetition risks should include but are not
553 limited to:

- 554 • group sizes and the number of groups
- 555 • role rotation
- 556 • suitable breaks.

557 5.5.5 Spectators

558 Any spectators should be directed to an appropriate *waiting area* to view the activity.

559 5.5.6 Participants belaying and spotting

560 Considerations for when *participants* operate height safety systems must include:

- 561 • *participants* are willing and capable
- 562 • appropriate training is provided
- 563 • the need for ongoing monitoring to ensure:
 - 564 ○ correct technique is used
 - 565 ○ attention to the task is maintained
 - 566 ○ equipment is used correctly
- 567 • backup systems to support the *belayer* (e.g. using a backup belayer)
- 568 • the relative weights between the *belayer* and *climber*, where the *belayers* weight is integral to the
569 correct function of the belay and the *belayer* is not anchored.

570 Considerations for when participants are spotting should include but are not limited to:

- 571 • *participants* are willing and capable
- 572 • appropriate training is provided
- 573 • the need for ongoing monitoring to ensure:
 - 574 ○ correct technique is used
 - 575 ○ attention to the task is maintained.

576 5.5.7 Activity information for participants

577 The information required to be provided to *participants* must be determined prior to the activity.

578 Required information must be provided at the appropriate time before or during the activity.
579 Activity information that should be provided to *low element* or *adventure game participants* includes but is
580 not limited to:

- 581 • appropriate personal clothing requirements
- 582 • relevant hazards and risks
- 583 • any expectations required of the participant
- 584 • specific areas they need to know about (e.g. *waiting areas*, belay areas, where safety equipment is to be
- 585 worn, areas not to be entered)
- 586 • how to access the elements
- 587 • communications and systems used to manage the flow and safety of the activity
- 588 • the correct fitting of and care of any personal safety equipment
- 589 • appropriate technique(s) for the activity
- 590 • method for “falling off” and “recovering”
- 591 • correct method of *spotting*.

592 Activity information that should be provided to *high element participants* includes but is not limited to:

- 593 • information provided for *low element* or *adventure game* participants above
- 594 • element specific hazards or risks
- 595 • the correct use of the height safety systems and/or any other fall protection systems
- 596 • appropriate technique(s) for the activity
- 597 • the release procedures for height safety system or other system
- 598 • procedures for exiting or being lowered back down.

599 Where there is only has one *activity leader*, the group must be briefed on what action to take to enact the
600 emergency management plan if the *activity leader* becomes injured or incapacitated.

601 5.5.8 Activity Communications

602 A clear & unambiguous communication system must be used to manage the activity.

603 For example:

- 604 • system of safety operation such as confirming “on belay” or “off belay”
- 605 • safety communication from *activity leader* to *participant* and *activity leader* to *activity leader*.
- 606 • safety communication *participant* to *participant*
- 607 • emergency situations.

608 5.5.9 Falling objects

609 Procedures to minimise the possibility or impact of falling objects must include:

- 610 • checking the site prior to use
- 611 • ensuring helmets are worn where relevant as per the equipment section
- 612 • designating *waiting areas* that reduce the expose to falling objects
- 613 • briefing *participants* on potential hazards and how to avoid dislodging objects
- 614 • briefing *participants* on the appropriate action and warnings to give if an object does fall
- 615 • managing groups so that the groups and individuals exposure within potential falling object areas
- 616 is minimised
- 617 • minimising movement between areas that are located below others
- 618 • supervision of *participants* while they are located above others.

619 Procedures to minimise the possibility or impact of falling objects should include but are not limited to:

- 620 • placing belay areas wherever possible so that they are not directly under the *climber*
- 621 • managing spectators and/or other people moving through the area.

622 5.5.10 Entanglement and snags

623 To avoid entanglement in ropes and devices:

- 624 • long hair must be secured to stop it being able to be entangled
- 625 • loose jewellery (e.g. bracelets and necklaces) and watches should be removed or secured
- 626 • loose clothing should be secured
- 627 • clothing and hat drawstrings should be secured.

628 To avoid being caught or snagged, where there is such a risk:

- 629 • rings should be removed or tapped over
- 630 • body piercings should be removed or taped over
- 631 • loose jewellery (e.g. bracelets and necklaces) and watches should be removed or secured.

632 The *activity leaders* should monitor belay rope(s) to keep them at the appropriate length and tension, to
633 prevent the possibility of a slack rope becoming entangled or snagged.

634 5.5.11 Falls from height

635 Considerations for the likelihood of a fall from height should include but are not limited to:

- 636 • the stability and grip of the surface being stood on
- 637 • obstacles that need to be negotiated
- 638 • abilities of *participants* including the ability to follow instructions.

639 To protect from a fall from height, procedures must include checking *participant(s)*:

- 640 • equipment is correctly fitted before they need to rely on the height safety system
- 641 • correct attachment to the height safety system, safety or other systems.

642 Checking equipment and attachment must not be delegated to the *participants* themselves, unless they
643 have demonstrated *competence* in the procedure(s) and then only for checking their own equipment or
644 attachment.

645 To reduce the potential for falls from height, procedures must include:

- 646 • ensuring ropes are of a sufficient length for the element
- 647 • removing unnecessary slack in height safety system before use
- 648 • monitoring the correct use of height safety systems
- 649 • monitoring attaching to anchors or height safety systems
- 650 • monitoring belay rope(s) to keep them at the appropriate length
- 651 • monitoring height safety systems to remove unnecessary slack in belay ropes
- 652 • providing appropriate instruction to mitigate risks caused by the stretch in *dynamic rope*.

653 To reduce the potential for falls from height, procedures should include:

- 654 • designating what areas that are not to be entered
- 655 • designating *waiting areas*
- 656 • designating areas that can only be accessed when attached to the height safety system
- 657 • checking participants equipment is correctly fitted before they need to rely on the height safety
658 system
- 659 • checking correct attachment to the height safety system, safety or other systems
- 660 • anchoring the *belay* where the height safety system relies substantially on the *belayers* weight to
661 arrest a fall and the weight of the abseiler or climber is greater than that of the *belay*.

662 Consideration must be given to the need for separately *spotting climbers* when starting their ascent, until
663 such time the *climber* reaches a *fall height* where the height safety system will full operate to stop their fall
664 before they touch the *fall zone*.

665 5.6 Fall safety systems management

666 5.6.1 Belay and activity systems

667 Procedures to ensure that all *activity leader* supervised systems function as intended must include:

- 668 • anchor systems and equipment are suitable for the activity, site and *participants*
- 669 • appropriate knots and connections are used
- 670 • regular inspection of all anchors and connections where practicable
- 671 • operating procedures and checks used will prevent unplanned disconnection of any part of the
- 672 system
- 673 • checking attachment and disconnection to the system during the activity.

674 Appropriate assessment should consider and address the possible differences between *participant* and
675 *activity leader* usage of systems.

676 Where a height safety system relies on a lanyard, throughout the climb the *climbers* harness attachment
677 point should not be higher than the anchor point that the lanyard is attached to. (This means the *fall factor*
678 on a lanyard should not exceed 1.0 – refer [Appendix W Fall factors](#).)

679 5.6.2 Assisted belay

680 Where *participants* are *belaying*, they must be instructed and appropriately supervised.

681 Where a height safety system requires a *belayer*, either the *belayer* must be:

- 682 • verified as a *competent belayer* or
- 683 • under *Level 1 or 2* supervision of an *activity leader*.

684 5.6.3 Self belays

685 5.6.3.1 Two lanyard safety systems

686 Procedures must be in place to minimise the likelihood of placing a head/neck between the two lanyards
687 when using a two-lanyard safety system. (For example, informing of procedures to reduce risk, lanyards are kept in
688 front while using, lanyards are held together while progressing.)

689 5.6.3.2 Auto belays and continuous self-belays

690 Procedures to ensure that all *auto belay* and *interlocking continuous self-belay* systems function as
691 intended must include:

- 692 • anchor systems and equipment are suitable for the activity, site and participants
- 693 • appropriate knots and connections are used
- 694 • operating procedures and checks used will prevent unplanned disconnection of any part of the
- 695 system
- 696 • appropriate training of *participants* in use of the “automated systems”
- 697 • confirming *competence* of *participants* in using the “automated systems” prior to them
- 698 undertaking the activity without *Level 1 or 2* supervision
- 699 • ongoing *level 3* supervision of the activity.

700 5.6.4 Collective belays

701 5.6.4.1 Barriers

702 A *risk assessment* and supervision plan must consider if monitoring is required to ensure fixed barriers are
703 effective.

704 5.6.4.2 Soft-fall

705 A *risk assessment* and supervision plan must be used to determine the supervision required when falls from
706 height are solely protected by *soft-fall*.

707 5.6.4.3 Deep water

708 Supervision of deep water pools used to protect from falls of height must conform with any required 'pool
709 safety' legislative or regulatory requirements of the relevant jurisdiction the activity operates in.

710 Supervision arrangements must include:

- 711 • appropriate rescue requirements
- 712 • appropriate training of *activity leaders* responsible for water rescue
- 713 • *Level 1 or 2* supervision visual supervision at all times in the event a person becomes unconscious
- 714 while in the water.

715 5.6.4.4 Netting

716 A *risk assessment* and supervision plan must be used to determine the supervision required when falls from
717 height are protected by netting.

718 5.6.5 Spotting belays – low elements and adventure games

719 Where *participants* are *spotting* they must be instructed and appropriately supervised.

720 Where a safety system requires a *spotter*, either the *spotter* must be:

- 721 • a *competent spotter* or
- 722 • under *Level 1 or 2* supervision of an *activity leader*.

723 The number of *spotters* required and their location in relation to the *climber* must be determined prior to
724 the activity for each *element* or *adventure game*.

725 Considerations in determining the number of *spotters* and their location should include but are not limited
726 to:

- 727 • the nature and design of the *element* or *adventure game*
- 728 • the likelihood of falling and possible directions of the fall
- 729 • whether the *element* has holds on vertical, inclined and/or overhanging surfaces
- 730 • the body orientations of the *climber* that the *element* or holds permit, or the *adventure game*
- 731 requires
- 732 • obstacles in the *fall zone*
- 733 • the use of padding to protect from hazards in the *fall zone* and/or hard landings
- 734 • the number of *active participants* enables *activity leaders* to monitor, detect and correct improper
- 735 procedures.

736 5.6.6 Flying foxes

737 A full body harness or combination chest and sit harness must be considered when using a *flying fox*, to
738 mitigate the risk of falling out of a sit harness when inverted.

739 5.6.7 Giant swings

740 A full body harness or combination chest and sit harness must be considered when using a giant swing, to
741 mitigate the risk of falling out of a sit harness when inverted.

742 5.6.8 Rescue systems

743 Rescue systems must allow for a timely and effective rescue.

744 *Activity leaders* climbing on *high elements* must carry appropriate rescue equipment to enable descent to
745 the ground.

746

747 5.6.9 Suspension trauma

748 Suspension trauma (also known as harness suspension trauma, harness hang syndrome or orthostatic
749 intolerance) is a medical complication that may develop when a person is suspended motionless in a
750 *harness* for a prolonged period. Modern guidance suggests the risk increases significantly after
751 approximately 10 minutes of motionless suspension, though individual susceptibility varies. Suspension
752 trauma can lead to blood pooling in the lower extremities, pre-syncope, syncope, shock and, if untreated,
753 death.

754 Emergency management plans must include:

- 755 • prompt rescue of unconscious or motionless persons suspended in a *harness*
- 756 • guidance on *trigger points* for considering the possibility of suspension trauma occurring
- 757 • appropriate actions to follow where suspension trauma is suspected, including but not limited to
- 758 relevant first aid treatment in line with the most current Australian Resuscitation Council and
- 759 equivalent international guidance.

760

761 5.7 Participation restrictions

762 *See Core GPG (Participants).*

763 5.8 Vulnerable participants

764 *See Core GPG (Participants).*

765 5.9 Privacy of information

766 *See Core GPG (Participants).*

767 5.10 Activity leader to participants ratios

768 *See Core GPG (Participants).*

769 5.11 Activity briefing

770 *See Core GPG (Participants).*

771 6 Environment

772 Environmental conditions can directly affect the safety of an activity, and everyone involved shares
773 responsibility for protecting the natural and cultural heritage of the places they visit. Weather, fire, water,
774 terrain, wildlife and the requirements of *land owners* and managers all shape what can be done safely and
775 respectfully. Providers must actively identify, reduce and manage both the risks the environment poses and
776 the impact an activity has upon it.

777 For providers, the guidance encourages planning around the localised, in-situ conditions at the specific time
778 and place of an activity, rather than relying on general assumptions. The trigger-point approach can set
779 clear go/no-go and modification thresholds, fire and severe-weather planning can be aligned with the
780 relevant guidance material, and *land manager* requirements confirmed. Activity-specific detail is expected
781 to come from the relevant activity GPG, with this section providing the common baseline.

782

783 6.1 Environment and site related planning

784 For course and element details refer to section 6.1 Artificial surfaces and elements design and construction.

785 Other environmental considerations other than climate or weather for challenge courses may include but is
786 not limited to:

- 787 • the possible fauna at the challenge course
- 788 • the terrain surrounding the challenge course.

789 6.2 Course design and construction

790 Refer to section 6.1 Artificial surfaces and elements design and construction.

791 6.3 Weather

792 6.3.1 Weather information

793 Appropriate sources must be used for:

- 794 • current and forecast weather
- 795 • current and forecast weather warnings.

796 6.3.2 Weather warnings

797 Refer Appendix Z Weather warnings.

798 6.3.3 Weather triggers

799 *Trigger points* must be based on relevant Bureau of Meteorology weather forecasts and warnings and
800 actual weather conditions.

801 The *risk management plan* and emergency management plan should include guidance on *trigger points* and
802 associated actions for:

- 803 • wind speeds or wind gusts that make the course or element(s) unsuitable for use
- 804 • weather conditions that limit visual/verbal *direct supervision*
- 805 • lightning
- 806 • *severe weather* warnings
- 807 • thunderstorm warnings
- 808 • tropical cyclone advice: watch and warning
- 809 • cold temperature
- 810 • extreme hot temperatures.

811 Actions for weather triggers may include but are not limited to:

- 812 • cancellation of activity
- 813 • postponing the activity
- 814 • modifying the activity
- 815 • evacuating to a safe location
- 816 • avoid locations effected by tides or surf
- 817 • avoiding areas that have the potential for *flash flooding*
- 818 • preparations to avoid the risks associated with lightning
- 819 • preparations to avoid the risks associated with blizzards
- 820 • moving to areas that are protected from strong winds and/or hail
- 821 • managing risks of flying or falling items during strong winds.

822 6.3.4 Lightning

823 A lightning *risk management* procedure must be developed for the site.

824 When thunder is audible the *provider's* lightning *risk management* procedure should be enacted, using
825 current weather and lightning-tracker information to determine the distance and direction of the storm.

826 The 30/30 rule may be used as a rule of thumb. *Active participants* should be removed from *high elements*
827 and other unsuitable locations when lightning is assessed to pose a risk to the site.

828 Considerations for locations to waiting out the thunderstorm should include but not limited to avoiding:

- 829 • being on *high elements*
- 830 • being connected to metal structures, cable or equipment
- 831 • being on the highest ground in the area
- 832 • tall trees or structures that may act like a lightning rod
- 833 • water saturated ground near watercourses
- 834 • locations where a group is unable to spread out.

835 6.4 Bushfire, prescribed fire and fire danger

836 *See Core GPG (6 Bushfires/fire danger).*

837 6.5 Flooding

838 Areas subject to flooding or flood warnings should be avoided.

839 Areas likely to experience *flash flooding* should be avoided during *severe weather* or thunderstorms.

840 6.6 Drinking water safety

841 *See Core GPG (Environment).*

842 6.7 Food safety

843 *See Core GPG (Environment).*

844 6.8 Wildlife safety

845 Procedures should be in place to minimise the risks associated with any fauna or flora that may be
846 encountered.

847 The types of wildlife encounters that may need to be considered include but is not limited to:

- 848 • snakes
- 849 • ants
- 850 • bees
- 851 • wasps
- 852 • nesting birds
- 853 • other local fauna.

854 *See Core GPG (Environment) for the general requirements and further detail.*

855 6.9 Environmental conditions, safety and impact management

856 *See Core GPG (Environment).*

857 6.10 Tree safety

858 *See Core GPG (6 Tree safety).*

859 6.11 Environmental sustainability information

860 *See Core GPG (6 Env. sustainability (App L)).*

861 6.11.1 Design and construction environmental sustainability
862 For environmental sustainability considerations refer to AS 2316.2.1:2025 Artificial climbing structures and
863 challenge courses Part 2.1: Flying foxes and challenge ropes courses—Construction and safety
864 requirements. This may include items relating to flora and fauna (e.g. tree usage, root systems, native habitats,
865 etc.).

866 6.11.2 Temporary elements environmental sustainability
867 As per section 6.8.1 above.

868 6.12 Environmental sustainability procedures
869 See Core GPG (6 Env. sustainability (App L)).

870 6.13 Land owner and/or manager requirements
871 See Core GPG (Environment).

872 6.14 Water environments
873 See Core GPG (Environment).

874 7 Equipment and logistics

875 The right equipment, well chosen and well maintained, is fundamental to safe delivery. Equipment
876 requirements differ from one activity and context to another, spanning personal and group gear, first aid
877 and medication, communications and transport. Deciding what is genuinely needed, keeping it fit for
878 purpose, and organising the logistics around it are everyday responsibilities for any provider.

879 It helps a provider decide what equipment is genuinely needed, who is responsible for it, and how it is kept
880 fit for purpose. The framework can drive equipment checklists matched to each activity, inspection and
881 maintenance schedules appropriate to scale, and communications and first aid provisions matched to the
882 remoteness and risk of the activity. It supports consistent logistics decisions without imposing a single
883 equipment list on every provider.

884 7.1 Artificial surfaces and elements design and construction

885 Construction and/or operation of *Challenge Courses* must conform with any relevant work health and
886 safety (WHS/OHS) legislative or regulatory requirements of the jurisdiction the activity operates in.

887 Permanent *artificial surfaces* and *element(s)* constructed specifically for use in activities must comply with
888 relevant construction standards.

889 The relevant standard may include:

- 890 • AS 2316.2.1:2025 Artificial climbing structures and challenge courses Part 2.1: Flying foxes and
891 challenge ropes courses—Construction and safety requirements
- 892 • AS 2316.2.2:2025 Artificial climbing structures and challenge courses Part 2.2: Flying foxes and
893 challenge ropes courses—Operation requirements
- 894 • AS 4422 (Int):2022 Playground surfacing— Specifications, requirements and test method
- 895 • EN 795: Personal fall protection equipment – anchor devices.
- 896 • Other equivalent standards may apply (e.g. EN 15567-1) where the structure has been built and
897 certified to those standards.

898 Permanent *artificial surfaces* and *element(s)* constructed using superseded construction standards should
899 be reassessed for ongoing suitability for use during maintenance inspection.

900 Temporary *artificial surfaces* and/or *temporary element(s)* should comply with either permanent *artificial*
901 *surfaces* relevant requirements or be assessed by a competent person that it is fit for purpose for the
902 activity.

903 Design of *high element(s)* and challenge courses must allow the use of an appropriate rescue system.

904 Systems must have a functional inspection to confirm it is appropriately constructed and operates or
905 performs it's required function. Refer [Appendix X Inspections and maintenance](#) for additional detail.

906 7.2 Equipment general

907 7.2.1 Equipment general principles

908 All equipment must be used with reference to the manufacturers instructions.

909 Training in the use of equipment used must be provided to *activity leaders* and *participants*.

910 Before use, the compatibility between and the correct functioning of all equipment must be confirmed.

911 The elements used must be of a height that the *fall height* will allow the fall safety system to operate
912 effectively.

913 Operation of challenge courses must conform with any legislative or regulatory requirements. (For example,
914 'amusement' structure laws.)

915 Equipment, connection methods and systems used must be periodically reviewed.

916 Equipment used must be appropriate for the activity context.

917 7.2.2 Equipment loading

918 Equipment designed to be under load will have a *stated strength* that may or may not include a *safety*
919 *factor*. The type of *stated strength* rating needs to be known before use to ensure equipment is safely
920 loaded. (Refer [Appendix V Equipment load ratings](#) for more details).

921 Equipment with the *stated strength* providing the *Minimum Breaking Strength* (MBS) must have a suitable
922 *safety factor* applied and a *Safe Working Load* (SWL) calculated.

923 Equipment with the *stated strength* providing the *Safe Working Load* (SWL) must be loaded only to a
924 maximum of the *Safe Working Load* (SWL).

925 Reference to the manufacturers instructions must occur when determining a *safety factor* and/or *safe*
926 *working load*.

927 The expected peak load and possible additional loads if a rescue is carried out must be considered when
928 determining equipment loading.

929 7.2.3 Equipment integrity — heat and flame

930 Safety equipment must not be exposed to heat or open flame that may damage or compromise the
931 integrity of the equipment. This includes but is not limited to smoking, vaping, naked flames and high-
932 temperature surfaces near where equipment is worn or stored.

933 7.3 Fall safety management systems

934 7.3.1 Fall safety systems

935 All safety equipment used in the safety management system and/or a height safety system must be
936 appropriate for the task.

937 An appropriate safety system must be used when at height on all *high elements*.

938 Procedures used for height safety systems must be suitable for the equipment.

939 Procedures and systems used should be consistent throughout the challenge course activity session.

940 Any height safety system or lanyard must be appropriate for the expected *fall factor* of a climber.

941 Also refer section 7.5 Fall safety systems management.

942 **7.3.2 Ropes and lanyards used**

943 The type of rope used in a height safety system must be appropriate for the type of *high element*.

944 Considerations for selecting when *dynamic rope* or *static rope* is suitable for a height safety system should

945 include but is not limited to:

- 946 • the expected fall distance before the height safety system halts the fall
- 947 • the amount of impact loading expected on the *climber*
- 948 • the *fall factor* involved
- 949 • if the elasticity of a *dynamic rope* during a fall may increase the risk of injury
- 950 • the amount of slack rope likely to be in the height safety system, which may increase the fall
- 951 distance and therefore the impact loading and *fall factor* on the climber.

952 Safety lanyards must be made of a suitable material (e.g. flat webbing, tubular webbing, static or *dynamic rope* of

953 suitable diameters) that has an appropriate *safe working load*.

954 **7.3.3 Connections**

955 The connection system used must always provide an appropriate safe attachment, including at

956 changeover/transition points.

957 Connection methods, equipment and systems used must be periodically reviewed.

958 Considerations when determining connection methods, equipment and systems must include:

- 959 • the type of equipment being used
- 960 • what systems if any are required to provide redundancy
- 961 • what needs to be attached and how
- 962 • the experience and context of who is completing the connection
- 963 • the availability of a *competent person* to supervise or check the connection that is completed by a
- 964 participant.

965 **7.3.4 Connectors – practices relating to use**

966 The type of *connector* used must be suitable for the task.

967 Considerations for determining the type of *connector* suitable for a task must include:

- 968 • the likelihood of misalignment and/or loading the gate
- 969 • the likelihood of it becoming unlocked and/or disconnecting via a rollout
- 970 • the way it will be loaded
- 971 • the amount of exposure to vibration
- 972 • how often inspection of the connection can occur
- 973 • material the connector is made of compared to the type materials it will connect to.

974 *Connectors* made from appropriate materials must be used when connected to metal wire.

975 *Carabiners* must be used so that no load is across the minor axis or gate.

976 Systems that have loads applied and released so that alignment of *connectors* or equipment may change, or

977 subject to vibration should be inspected at an appropriate frequency.

978 **7.3.4.1 Harness connections**

979 The connection of the *harness* must be stable and secure. The benchmark for stability and security is a re-

980 threaded figure-of-eight knot. Where carabiners or other connectors are used, the connection method

981 must achieve a comparable level of risk control to the benchmark, including but not limited to: prevention
 982 of gate cross-loading, prevention of inadvertent opening, prevention of disconnection by rollout, and use of
 983 locking or auto-locking mechanisms appropriate to the supervision context.

984 If using a *locking* connector (e.g. screwgate carabiner) to connect to a climbers harness, the connection must
 985 use two *locking* connectors in opposed orientation to each other.

986 The connection of the belayers harness to a belay device must use either a *locking* carabiner or *auto-*
 987 *locking* carabiner.

988 In situations where participants complete any connection to a harness:

989 • the *connector* or knot must be checked by a *competent person*

990 **7.3.4.2 Lanyards connections to anchors and critical lines**

991 The connection attaching climbers lanyards to any anchor points or *critical lines* must use:

992 • an *auto-locking* carabiner or
 993 • an *interlocking device* or
 994 • a *tool locked connector*.

995 **7.3.5 Harnesses**

996 Where required, an appropriate *harness* must be used on all *high elements*.

997 **7.3.5.1 Full body harnesses**

998 A full body *harness* meeting AS/NZS 1891.4:2025 (or equivalent international standard) must be used on all
 999 *high elements*. Full body *harnesses* eliminate several potential harness-related risks, including:

1000 • inversion (intended or accidental)
 1001 • reduced security where body shape would compromise a sit harness
 1002 • reduced security where a participant experiences a pre-existing health, medical or personal
 1003 condition episode (e.g. epilepsy)
 1004 • increased risk for very young participants
 1005 • extended time at height.

1006 **7.3.6 Rescue equipment**

1007 Appropriate vertical rescue equipment must be readily accessible.

1008 Rescue systems used should be fit for purpose, including being rated to carry the loads required for the
 1009 specific rescue scenarios identified in the *risk assessment* (which may include single-person or two-person
 1010 load rescues), in accordance with the manufacturer's specifications.

1011 Rescue systems used should be able to be used to lift and to lower.

1012 Considerations for rescue systems should include but is not limited to:

1013 • load direction including multi-direction loads
 1014 • load magnitude
 1015 • ability to raise the person and rescuer
 1016 • ability to lower the person and rescuer
 1017 • ability to enable an *activity leader* to complete *contact rescues*.

1018 Vertical rescue equipment must be appropriate for the *Challenge Course*, the rescue scenarios identified in
 1019 the *risk assessment*, and the manufacturer's specifications and operating manual. The specific items
 1020 required will be determined by the course designer, course builder and/or operator manual.

1021 Example equipment lists can be found in [Appendix T Challenge course equipment](#).

1022 7.3.7 Assisted belay
1023 Refer to sections above: 6.3.1 Fall safety systems, 6.3.2 Ropes and lanyards used, 6.3.4 Connectors –
1024 Practices relating to use, 6.3.5 Harnesses and 6.3.6 Rescue equipment.

1025 7.3.8 Self-belay including continuous self-belay
1026 Also refer to sections above: 6.3.1 Fall safety systems, 6.3.2 Ropes and lanyards used, 6.3.4 Connectors –
1027 Practices relating to use, 6.3.5 Harnesses and 6.3.6 Rescue equipment.

1028 7.3.8.1 Self-belay system lanyards - Single piece or sheathed
1029 *Self-belay* systems with lanyards must be designed to minimise possible user entrapment and pressure on
1030 the neck, head and/or helmet that may cause strangulation when loaded. (Refer Appendix A6.3 Single piece
1031 or sheathed lanyards.)

1032 7.3.8.2 Self-belay system with two safety lanyards
1033 *Self-belay* systems with two safety lanyards must be designed to minimise possible user entrapment and
1034 pressure on the neck, head and/or helmet that may cause strangulation when loaded. (Refer Appendix Y
1035 Safety diagrams for lanyards.)

1036 While progressing across an *element* while using a two-safety lanyard system, both lanyards of the *self-*
1037 *belay* system should be attached to the *critical line*.

1038 7.3.9 Other safety systems
1039 Other safety systems must have a functional inspection to confirm it is appropriately constructed and
1040 operates or performs it's required function.

1041 7.3.9.1 Impact attenuating surface (IAS) / Soft-fall
1042 An impact attenuating surface (IAS, formerly known as soft-fall) used to protect from falls from height must
1043 conform to the relevant requirements of AS 2316.1:2009 Artificial climbing structures and challenge
1044 courses Part 1: Fixed and mobile artificial climbing and abseiling walls (or its current published version).

1045 Where an IAS is relied upon without the use of *spotting* it must cover the whole of the expected *fall zone*.

1046 7.3.9.2 Barriers
1047 Any barriers, railings or banisters to protect from a fall from height must conform to relevant building
1048 codes.

1049 7.3.9.3 Deep Water
1050 Any deep water pools used to protect from falls of height must conform with any required 'pool safety'
1051 legislative or regulatory requirements of the relevant jurisdiction the activity operates in.

1052 Deep water to protect from falls of height must cover the whole of the *fall zone*.

1053 The depth of water used to protect from falls of height must be sufficient so a person who falls unprepared
1054 avoids hitting the bottom. (For example, deep enough if they fall and 'pin drop'.)

1055 The *fall height* into deep water used to protect from falls of height must be limited to protect a person
1056 falling from injury.

1057 The deep water pool must allow suitable entry and exit from the water.

1058 The deep water pool must have any required infrastructure to manage access (e.g. fencing and gates to
1059 prevent accidental child drownings etc.)

1060 The water within the deep water pool must be suitable for a person to swim in.

1061 7.3.9.4 Safety netting
1062 Nets used to protect from falls from height must conform to:

- 1063 • AS 2316.2.1:2025 Artificial climbing structures and challenge courses Part 2.1 (which provides
1064 introductory guidance and refers to the BS EN 1263 series for further detail)
1065 • BS EN 1263-1:2014 Temporary Works Equipment – Safety Nets – Part 1: Safety Requirements, Test
1066 Methods
1067 • BS EN 1263-2:2014 Temporary Works Equipment – Safety Nets – Part 2: Safety Requirements For
1068 The Positioning Limits.

1069 7.3.10 Participant supplied safety equipment

1070 Where a *participant* supplies any personal safety equipment, this must comply with this *GPG*, be
1071 appropriate, and be serviceable.

1072 A specific *risk assessment* must be undertaken before any *participant*-supplied equipment is used, and a
1073 documented procedure regarding *participant*-supplied safety equipment should be developed.

1074 7.4 Other equipment

1075 7.4.1 Helmets

1076 A *risk assessment* must determine when *active participant(s)* are required to wear a helmet.

1077 A *risk assessment* must determine if anyone *non-actively participating* is required to wear a helmet.

1078 A *helmet* should be considered for active *participants* on *high elements*.

1079 A *helmet* should be considered for active *participants* on *low elements*.

1080 The outcome in each case must be determined by the *risk assessment* required earlier in this section.

1081 Considerations for wearing a helmet must include risks of:

- 1082 • head injury from falling objects
1083 • strangulation by the helmet chin strap caused by a helmet entrapment
1084 • head injury from striking the head during falls or swings.

1085 When a helmet is required to be worn it must be an appropriate helmet for the situation.

1086 Areas and activities that require a helmet to be worn must be identified.

1087 A helmet should be worn while climbing on *high elements*.

1088 A helmet should be considered when climbing on *low elements*.

1089 Also refer to 7.4.9 Falling objects, 7.4.10 Entanglements and snags, 7.5.3.1 Two lanyard safety systems and
1090 Appendix Y Safety diagrams for lanyards.

1091 7.4.2 Clothing

1092 Procedures must be in place to ensure appropriate clothing is worn.

1093 Considerations when determining appropriate clothing should include but is not limited to:

- 1094 • the requirements of the element(s) being used
1095 • sun protection
1096 • the weather conditions.

1097 Also refer to 7.4.10 Entanglements and snags.

1098 Footwear must be fit for purpose.

1099 Procedures must be in place to ensure appropriate footwear for the expected and foreseeable terrain is
1100 used.

1101 7.4.3 Other personal equipment

1102 7.5 Pre-activity equipment preparation and inspection

1103 All equipment must be checked that it is serviceable before each activity or before being used.

1104 Consideration should be given to implementing checks for damage in situations where unsupervised
1105 community access to equipment or elements could occur (e.g. public access sites, vandalism, etc).

1106 A daily operations sheet should be used to record equipment and setup checks. (Refer to Australian
1107 Standard AS 2316.2.2:2025)

1108 7.6 Inspection and maintenance

1109 Any inspection of a *Challenge Course*, its *elements* or related equipment must be undertaken by an
1110 *appropriately competent person* whose qualifications, training and experience are suitable for the type of
1111 inspection being conducted, and who has reference to the relevant standard(s).

1112 Maintenance inspections must conform with any legislative or regulatory requirements.

1113 Compliance with the Australian Standard AS 2316.2.1:2025 may include but is not limited to inspection,
1114 testing and maintenance requirements.

1115 All *elements* and anchors used must be periodically inspected by an appropriately competent person, as per
1116 any relevant construction standard, designer and/or constructor recommendation(s).

1117 Appropriate procedures must be in place for inspections and determining the time periods between
1118 inspections.

1119 Considerations for how regular the inspections occur may include but is not limited to:

- 1120 • the characteristics of the site
- 1121 • how many people use the site and how regularly
- 1122 • any manufacturers, designers or constructors recommendations where relevant
- 1123 • the equipment being used.

1124 Any tree used as part of an *element* should be periodically inspected by an *appropriately competent person*
1125 such as an arborist with a minimum qualification of AQF Level 5 (or equivalent demonstrable competence)
1126 in arboriculture.

1127 Any tree located within the challenge course area that presents a falling object risk should be periodically
1128 inspected by an *appropriately competent person* (e.g. arborist).

1129 All equipment must be inspected periodically that it is serviceable.

1130 Inspections should include but is not limited to:

- 1131 • surrounding area and ground
- 1132 • physical structures
- 1133 • materials and fittings
- 1134 • safety equipment.

1135 Equipment and inspection records must conform with any legislative or regulatory requirements.

1136 A record of inspection must be maintained.

1137 Refer [Appendix X Inspections and maintenance](#) for additional detail.

1138 An equipment record should be maintained.

1139 Where used an equipment record should record but is not limited to the:

- 1140 • item individual identifier
- 1141 • date of purchase
- 1142 • date of inspections
- 1143 • recommended or maximum lifespan.

1144 A retirement of equipment policy should be developed.

1145 Considerations for a retirement of equipment policy may include but is not limited to:

- 1146 • type of use
- 1147 • frequency of use
- 1148 • prevailing conditions when used
- 1149 • actual deterioration, wear and tear
- 1150 • age
- 1151 • years in service
- 1152 • manufacturers recommendations.

1153 A system to identify equipment and elements should be used to assist reporting and recording faults or
1154 condition checks.

1155 7.7 Storage and transport of equipment

1156 Activity equipment must be stored and transported in accordance with the manufacturers
1157 recommendations or instructions.

1158 Where no manufacturer's recommendations exist, considerations for storage and transport of equipment
1159 may include but are not limited to:

- 1160 • equipment is clean and dry
- 1161 • the storage is free from harmful chemicals
- 1162 • the storage is free from damp conditions
- 1163 • the storage is free from environmental exposure including Ultra Violet (UV) light and avoids
1164 extremes of temperature
- 1165 • the equipment is free from interference from animals/pests.
- 1166 • equipment is protected from being squashed, contaminated or otherwise damaged during
1167 transport (e.g. not stored under heavy items, not exposed to fuel or chemicals).

1168 7.8 Framework for equipment requirements

1169 *See Core GPG (Equipment and logistics).*

1170 7.9 First aid equipment and medication

1171 *See Core GPG (Equipment and logistics).*

1172 7.10 Communications equipment

1173 *See Core GPG (Equipment and logistics).*

1174 7.11 Use of equipment

1175 *See Core GPG (Equipment and logistics).*

1176

1177 8 Responsibilities and roles

1178 This section sets out the responsibilities and roles of persons involved in the planning and delivery of
1179 challenge course activities under this guide. It must be read in conjunction with Core GPG Section 8, which
1180 contains the generic responsibilities and roles framework applicable to all outdoor activities. Where a sub-
1181 section below states 'See Core GPG', the full requirements for that sub-section are set out in the Core GPG
1182 and apply without modification to challenge course activities.

1183 8.1 Responsibilities and roles framework

1184 See Core GPG Section 8.1 — the responsibilities and roles framework, including the three operational
1185 leadership roles of *Leader*, *Assistant Leader* and *Support person*, applies without modification to challenge
1186 course activities delivered under this guide.

1187 8.2 Naming conventions

1188 See Core GPG Section 8.2. This guide uses the standard Core GPG role terms — *Leader*, *Assistant Leader*
1189 and *Support person* — throughout. Providers should be aware that AS 2316.2.1:2025 and AS 3533 use the
1190 terms Supervisor (equivalent to the AAAS *Leader*) and *Leader* (equivalent to the AAAS *Assistant Leader*).
1191 Where a provider uses those AS terms, they map as follows:

1192 *Leader* — this title is used where the Core GPG uses 'Leader' (equivalent to AS 2316.2.1:2025
1193 'Supervisor')
1194 *Assistant Leader* — this title is used where the Core GPG uses 'Assistant Leader' (equivalent to AS
1195 2316.2.1:2025 'Leader')
1196 *Support person* — as defined in Core GPG Section 8.4.3

1197 8.3 Provider responsibilities to prepare and support leaders

1198 See Core GPG Section 8.3 — the provider responsibilities to prepare and support leaders apply without
1199 modification to challenge course activities delivered under this guide.

1200 8.4 Leader responsibilities and role descriptions

1201 See Core GPG Section 8.4 — the leader responsibilities and role descriptions, including the role descriptions
1202 for *Leader* (8.4.1), *Assistant Leader* (8.4.2) and *Support person* (8.4.3), and the leader fitness for work
1203 requirements (8.4.4), apply without modification to challenge course activities delivered under this guide.

1204 8.4.1 *Leader* — operational responsibility in the field

1205 The *Leader* carries operational responsibility in the field for the activity and all participants, working within
1206 the provider's systems and direction; see Core GPG Section 8.4.1 for the full role description.

1207 8.4.2 *Assistant Leader* — delegated responsibility

1208 The *Assistant Leader* supports the *Leader* and carries delegated operational responsibility for defined
1209 elements or participant groups, operating under the *Leader*'s direction; see Core GPG Section 8.4.2.

1210 8.4.3 *Support person*

1211 The *Support person* is a non-technical role that assists *activity leaders* in managing participants and fulfilling
1212 general supervisory and organisational duties, and does not carry the technical responsibilities of a *Leader*
1213 or *Assistant Leader*. The key responsibilities of this role, and its important limitations — including that a
1214 *support person* must not be treated as an *activity leader* for the purpose of calculating *activity leader* to
1215 participant ratios unless they also hold the relevant challenge course knowledge and skill — are as set out
1216 in Core GPG Section 8.4.3.

1217 8.4.4 Leader fitness for work

1218 Leaders and *assistant leaders* must be physically and psychosocially fit for the demands of the role;
1219 providers must take reasonable steps to manage risks arising from factors including physical and
1220 psychosocial fitness, alcohol, medication, other substances and fatigue; see Core GPG Section 8.4.4.

1221 8.4.4.1 Physical and psychosocial fitness

1222 The provider must ensure, so far as is reasonably practicable, that each person assigned to a Leader or
1223 *Assistant Leader* role is physically and psychosocially capable of the demands of challenge course
1224 facilitation — which vary with element type (low or high), the operating site and the participant group.
1225 Leaders must self-assess their fitness before accepting a role; see Core GPG Section 8.4.4.1.

1226 8.4.4.2 Alcohol, medication and other substances

1227 Alcohol and other substance consumption should be discouraged during or immediately before an activity
1228 where it could impair a leader's performance. Leaders must carry sufficient medication for the full duration
1229 of the challenge course session and have a contingency if it is lost, damaged or unavailable; see Core GPG
1230 Section 8.4.4.2.

1231 8.4.4.3 Fatigue

1232 Physical and mental fatigue creates significant risk in challenge course contexts, particularly through the
1233 repetitive nature of tasks such as harness fitting, connection checking and belay monitoring; providers must
1234 implement reasonable controls including role rotation, appropriate scheduling and self-assessment
1235 procedures; see Core GPG Section 8.4.4.3.

1236 8.5 Leader readiness and capability

1237 See Core GPG Section 8.5 — the leader readiness and capability requirements, including leadership
1238 knowledge, skill and experience (8.5.1), provider responsibilities under the Outdoor Leader KSE Framework
1239 (8.5.2), first aid (8.5.3), knowledge and skill acquisition (8.5.4), verification (8.5.5), currency (8.5.6) and
1240 verification and currency records (8.5.7), apply to challenge course activities delivered under this guide.

1241 The detailed knowledge, skill and experience required of a Leader is set out in Appendix M of this guide,
1242 and of an *Assistant Leader* in Appendix N. The program planning matrix (leader-matching tool) is set out in
1243 Core GPG Appendix O, the recognition-of-competence pathways in Core GPG Appendix P, and the
1244 indicative experience bands in Core GPG Appendix Q.

1245 8.5.1 Leadership knowledge, skill and experience

1246 The provider must ensure each person in a Leader or *Assistant Leader* role holds integrated knowledge, skill
1247 and experience appropriate to the responsibilities of the role and the specific challenge course context. This
1248 is a non-delegable provider obligation that cannot be satisfied by a qualification alone — it requires active,
1249 documented verification against the role's responsibilities; see Core GPG Section 8.5.1.

1250 8.5.2 Provider responsibilities under the Outdoor Leader KSE Framework

1251 Providers must verify the capability of every person assigned to a Leader or *Assistant Leader* role across the
1252 nine domains of the AAAS Outdoor Leader KSE Framework, scaled to the activity context and the capability
1253 level required; see Core GPG Section 8.5.2. The challenge course activity scope, and the leader
1254 requirements that differ between low and *high element* activities, are set out at the head of Appendix M.

1255 8.5.3 First aid

1256 Leaders must hold a current first-aid qualification appropriate to the activity, environment and applicable
1257 work health and safety law(s) and/or regulation(s). See Core GPG Section 8.5.3 and Core GPG Appendix L
1258 (first aid and medication considerations).

1259 8.5.4 Knowledge and skill acquisition

1260 Knowledge, skill and experience may be developed through, but is not limited to, formal qualifications,
1261 industry training, provider-based programs, structured participation or a combination; no single method
1262 has primacy; see Core GPG Section 8.5.4.

1263 8.5.5 Verification

1264 For each person in a Leader or *Assistant Leader* role, the provider must verify knowledge, skill, experience
1265 and currency in context before the person carries the role. The detailed challenge course knowledge, skill
1266 and experience against which verification is made is set out in Appendix M (Leader) and Appendix N
1267 (*Assistant Leader*), and pathway guidance is in Core GPG Appendix P; see Core GPG Section 8.5.5.

1268 8.5.6 Currency

1269 Knowledge, skill and experience must be current. The provider must determine the minimum currency and
1270 recency requirements appropriate to the context — having regard to the element types operated, the role,
1271 the frequency of practice, and the consequences of a lapse in capability — and verify currency for each
1272 person in a leadership role before they carry the role. The means by which currency may be established are
1273 set out in Core GPG Section 8.5.6.

1274 8.5.7 Verification and Currency Records

1275 Providers must maintain records of how verification was conducted — including the basis, method, date
1276 and person responsible — for each person in a leadership role, retained consistent with the provider's
1277 record-keeping obligations; see Core GPG Section 8.5.7.

1278

1279 Glossary

1280 Also refer terms and definitions from Core GPG.

1281 AAAS: Australian Adventure Activity Standard – See Introduction for details.

1282 *Active Participant*: a participant who is either a *climber*, *abseiler*, *belayer* or *spotter*.

1283 *Activity leaders*: the collective noun for *leader(s)* and assistant *leader(s)*.

1284 *Adventure Games (Also known as initiative games)*: an activity which is not identifiable as a *low element* or
1285 *high element* activity, but which require *spotting* to protect a participant if they fall. Activities that do not
1286 require *spotting* are games.

1287 *Artificial surface(s)*: a man-made structure. Also called ‘artificial structures’ and may include but is not
1288 limited to portable climbing/abseiling walls, climbing gyms, challenge course elements, fixed
1289 climbing/abseiling or other towers, buildings and bridges.

1290 *Assisted belay (also known as ‘dynamic belay’ and ‘team belay’)*: *belay system* operated by at least one
1291 person who is not the *climber*.

1292 *Auto belay*: a specialized belay device that operates automatically and removes the need for a belayer.

1293 *Auto-locking*: a *connector* that will automatically lock to prevent it from opening and requires two or more
1294 deliberate actions to unlock.

1295 *Belay line*: the line that is used in an *assisted belay* to connect to the *climber*.

1296 *Belay System*: the means by which the *climber* or *abseiler* is protected from an uncontrolled fall or descent.

1297 *Belayer*: a person that operates the *belay system*.

1298 *Bouldering*: a form of climbing activity, limited in height and for which fall safety can be achieved by the
1299 provision of an impact absorbing system, by a *spotter* providing control of a fall or by a combination of
1300 these measures.

1301 *Carabiner*: (refer *connector*).

1302 *Climber*: the person who is protected by *spotting* or a *belay system*.

1303 *Competence*: ability to apply knowledge and skills to achieve expected results.

1304 *Competencies*: the plural of *competence*. Having *competence* in more than one ability.

1305 *Competent leader/participant/person/assessor*: a person who has acquired through training, qualification
1306 or experience the knowledge and skills to carry out the task.

1307 *Connector(s)*: a metal device used to link components together. A connector may be:

- 1308 • *Non-locking*: a *connector* that cannot be locked to prevent it opening
- 1309 • *Self closing*: a *connector* that automatically closes
- 1310 • *Locking*: a *connector* that can be manually locked and unlocked without a tool to reduce the
- 1311 possibility of it opening
- 1312 • *Tool locked*: a device that requires a tool to manually lock and unlock. (A maillon is an example of a
- 1313 *tool locked* connector.)
- 1314 • *Auto-locking*: a *connector* that will automatically lock to prevent it from opening and requires two
- 1315 or more deliberate actions to unlock.

1316 *Contact rescue*: a rescue requiring an *activity leader* to manoeuvre to the persons actual location to
1317 physically assist them.

1318 *Collective belay*: a fall from height safety system that operates without a person intervening or operating it.
 1319 (For example, soft-fall or a pool of water in a *fall zone*, guardrail, fence etc.)

1320 *Continuous belay*: *belay system* that enables climbers to progress from one activity system element to the
 1321 next and that does not require *climbers* to undo or change the connection to the *belay system*.

1322 *Continuous self-belay*: *belay system* operated by the *climber* that enables *climbers* to progress from one
 1323 activity system element to the next and that does not require *climbers* to undo or change the connection to
 1324 the *belay system*.

1325 *Critical line*: a part of an *element* that a safety system attaches to.

1326 *Dynamic belay*: refer *assisted belay*.

1327 *Dynamic rope*: a specially constructed kernmantle rope that is somewhat elastic under load. The elastic
 1328 stretch under load is what makes the rope dynamic. (Also see *static rope*.)

1329 *Element*: a temporary, mobile or permanent physical structure where a person requires a system to protect
 1330 them from an uncontrolled fall or descent.

1331 *Fall height*: The vertical distance between the *climbers* or abseilers lowest body element and the surface
 1332 beneath.

1333 *Fall factor*: is the ratio of the height of a fall (h) (measured before the rope or lanyard begins to stretch) and
 1334 the rope or lanyard length available to absorb the energy of the fall (L). It is used as a representation of the
 1335 severity of a fall when arrested by a *belay system*. It is calculated by (h) divided by (L).

1336 *Fall zone*: The surface that can be hit by a *climber* or abseiler falling.

1337 *Flash flooding*: is flooding in a localised area with a rapid onset, usually as the result of relatively short
 1338 intense bursts of rainfall.

1339 *Flying fox*: a means of travel along a sloping rope or wire by attaching to it using a free moving pulley and
 1340 being propelled by gravity.

1341 *GPG*: Good Practice Guide

1342 *High element*: (also known as high ropes) is any *element* or series of *elements* where the *fall height* means
 1343 fall safety requires a *belay system* using harnesses and specialist safety equipment or other established
 1344 methods or systems.

1345 *Initiative games*: See *adventure games*.

1346 *Interlocking device*: a *belay system* using two lanyards that have interconnected carabiners, so that when
 1347 one carabiner is locked it automatically leads to unlocking the other one and vice-versa.

1348 *Level 1, 2 or 3*: describes the type of supervision provided to participants. The level meaning is:

- 1349 • *Level 1* – where a nominated person responsible for supervising others during all or part of the
 1350 activity is able to physically intervene immediately. (Aligns with level 1 in Australian Standard AS
 1351 2316.2.2:2025 and *direct supervision* in the Core GPG).
- 1352 • *Level 2* – where a nominated person responsible for supervising others during all or part of the
 1353 activity is able to visually see the participant(s) and verbally intervene immediately. (Aligns with
 1354 level 2 in Australian Standard AS 2316.2.2:2025 and *direct supervision* in the Core GPG).
- 1355 • *Level 3* – where a nominated person responsible for supervising others during all or part of the
 1356 activity is in the vicinity and able to respond promptly to provide assistance when called upon.
 1357 (Aligns with level 3 in Australian Standard AS 2316.2.2:2025 and *indirect supervision* in the Core
 1358 GPG).

1359 *Level of supervision*: a category system that indicates the type of supervision provided to *participants*.
 1360 (Refer *Level 1, 2 or 3* for the categories used in this GPG.)

1361 *Locking*: a *connector* that can be manually locked and unlocked without a tool to reduce the possibility of it
1362 opening.

1363 *Low element (also known as low ropes or obstacle courses)*: any *element* or series of *elements* where the
1364 *fall height* means fall safety can be achieved by *spotting*, using an impact absorbing system or by a
1365 combination of these measures.

1366 *Low obstacle(s)*: a temporary, mobile or permanent physical structure where a person does not require a
1367 system to protect them from an uncontrolled fall or descent. (Also refer *low element*.)

1368 *Minimum Breaking Strength (MBS)*: is the magnitude of a load that may permanently distort or damage
1369 equipment but not cause it to break. (Refer [Appendix V Equipment load ratings](#)). Equipment should never
1370 be loaded to the MBS, even for testing purposes when testing a system before being use, the test should
1371 not exceed the *safe working load (SWL)*.

1372 *Natural surface(s)*: the geologic structure and flora that forms a cliff or steep face.

1373 *Non-actively participating*: a *participant* that is waiting to but is not currently doing the activity.

1374 *Non-locking*: a *connector* that cannot be locked to prevent it opening.

1375 *Participant*: a person who undertakes an *activity* and is not a *leader* or *assistant leader* for the *activity*.

1376 *Responsible person*: a *competent* person who is able to complete delegated elements or tasks during an
1377 activity that does not require the activity-specific *competence* of an *activity leader*.

1378 *Safety Factor*: the ratio between the *Minimum Breaking Strength (MBS)* and *Safe Working Load (SWL)* to
1379 provide a safety margin. It is expressed as a ratio, example 8:1. (Refer [Appendix V Equipment load ratings](#)).

1380 *Safe Working Load (SWL)*: is the magnitude of load that does not permanently distort, weaken, damage or
1381 break equipment and includes a safety margin. (Refer [Appendix V Equipment load ratings](#)).

1382 *Self-belay (also known as static belay)*: *belay system* that is operated by the climber.

1383 *Self closing*: a *connector* that automatically closes.

1384 *Self locking*: (see *connectors – auto-locking*).

1385 *Slackline*: a type of *element* formed by a length of flat webbing that is tensioned between two anchors.

1386 *Soft-fall*: an impact-absorbing surface.

1387 *Spotter(s)*: a person or persons who are *spotting*.

1388 *Spotting*: a support process provided by a person, or persons, who offer physical protection of the head and
1389 upper body of a person should they fall. (Note: The term “spotting” is sometimes used to describe
1390 providing *level 2* supervision on *high elements*. Terms used can vary and providers can use whatever
1391 terminology they prefer. In this document note that “spotting” is used to identify situations only as defined.
1392 This is to avoid any potential confusion between *low element* and *high element* requirements.)

1393 *Stated Strength*: the magnitude of load that is either the *Minimum Breaking Strength (MBS)* or *Safe*
1394 *Working Load (SWL)* marked on equipment or listed in the manufacturers literature. (Refer [Appendix V](#)
1395 [Equipment load ratings](#)).

1396 *Static belay*: see *self-belay*.

1397 *Static rope*: a specially constructed low stretch kernmantle rope, that has low elongation under load. The
1398 low elongation or stretch under load is what makes the rope static. (Also see *dynamic rope*.)

1399 *Team belay*: a type of *assisted belay*. (Also see *assisted belay*.)

1400 *Temporary element*: an *element* that does not remain in place no longer than consecutive seven days.

1401 *Tool locked*: a device that requires a tool to manually lock and unlock. (A maillon is an example of a *tool*
1402 *locked* connector.)

1403 *Trigger point*: a particular circumstance or situation that causes an action to occur.

1404 *Waiting areas*: a location in which to wait prior to undertaking the activity, where it is reasonable for a
1405 person to not be required to use equipment to protect them from a fall from height.

1406 Acronyms

1407 The following acronyms are used in this Good Practice Guide.

1408 AAAS: Australian Adventure Activity Standard

1409 AQF: Australian Qualifications Framework

1410 GPG: Good Practice Guide

1411 IAS: Impact attenuating surface

1412 ISO: International Organization for Standardization

1413 MBS: Minimum Breaking Strength

1414 OCA: Outdoor Council of Australia

1415 PPE: Personal Protective Equipment

1416 SWL: Safe Working Load

1417 UV: Ultraviolet

1418 WHS: Work Health and Safety

1419

1421 Appendices

1422 Appendix A Principal legal obligations

1423 *See Core GPG (Appendix A).*

1424 Appendix B Management of Risk

1425 *See Core GPG (Appendix B).*

1426 Appendix C Summary of AS ISO 31000 – risk management

1427 *See Core GPG (Appendix C).*

1428 Appendix D Risk management process

1429 *See Core GPG (Appendix D).*

1430 Appendix E Risk analysis information

1431 *See Core GPG (Appendix E).*

1432 Appendix F Risk management plan template examples

1433 *See Core GPG (Appendix F).*

1434 Appendix G Dynamic risk assessment process

1435 *See Core GPG (Appendix G).*

1436 Appendix H Benefit–Risk Assessment

1437 *See Core GPG (Appendix H).*

1438 Appendix I Emergency management planning framework

1439 *See Core GPG (Appendix I).*

1440 Appendix J Health & wellbeing considerations for risk management

1441 *See Core GPG (Appendix J).*

1442 Appendix K Privacy of information

1443 *See Core GPG (Appendix K).*

1444 Appendix L Environmental sustainability procedures

1445 *See Core GPG (Appendix L).*

1446 Appendix M First aid and medication considerations

1447 *See Core GPG (Appendix M).*

1448 Appendix N Knowledge, skill and experience — Leader

1449 Each knowledge, skill and experience requirement in this appendix is to be applied by the provider within
 1450 the context of the planned challenge course activity — including the element types in use (low and/or
 1451 high), the operating site, the participant group and the provider’s own program structure. The
 1452 requirements are not a minimum checklist to be satisfied mechanically — they are a framework for the
 1453 provider to assess and confirm the capability of each person in a leadership role against the demands of the
 1454 specific activity. This appendix contains only the requirements specific to challenge course activities; the
 1455 generic Leader knowledge, skill and experience is set out in Core GPG Appendix M.

1456 Activity scope and leader requirements

1457 This guide applies to the planning and delivery of challenge course activities across both element types —
 1458 low elements and high elements — and the range of settings commonly encountered in Australia. The
 1459 principal technical variable for challenge course activities is element type, each with distinct fall safety
 1460 systems and competence requirements.

1461 Providers must treat low element activities and high element activities as two distinct activities, each
 1462 requiring its own documented management plan. A person competent to lead high element activities is
 1463 not, by virtue of that competence, also competent to lead low element activities; competence in each
 1464 element type must be verified separately. Where the level of operational support available to the Leader is
 1465 reduced, the provider must give additional consideration to the Leader’s depth of experience, decision-
 1466 making capability and rescue self-sufficiency.

1467 *Table N.2: Activity variables — challenge courses*

Variable	Low elements	High elements
Element types	Balance beams, Burma bridges, log walks, low platforms, swinging elements	Traverses, cargo nets, Commando crawls, giant swings, flying foxes, zip lines
Fall safety system	Spotting and impact-absorbing surface (no rope-based fall protection)	Rope-based belay system (assisted belay, auto-belay or continuous self-belay)
Primary technical demands	Spotting principles, adventure game facilitation, inspection of structures and fall zones	Harness fitting and checking, belay system rigging and operation, high-angle rescue
Key standards	General WHS requirements; site inspection standards	AS 2316.2.1:2025 (flying foxes and ropes courses); AS 3533 (amusement structures)

1468 The program planning matrix (leader-matching tool) is set out in Core GPG Appendix O. Note that no
 1469 challenge-course-specific scaling of supervision by location is applied in this guide, because the immediate
 1470 operational response on a challenge course (returning a participant to the ground within the harness hang
 1471 syndrome critical window) does not change with site remoteness. The domains below contain only the
 1472 requirements specific to challenge course activities; they do not repeat the generic content of Core GPG
 1473 Appendix M.

1474 N.1 Safety and risk management

1475 The Leader identifies and manages hazards specific to challenge course environments. This domain covers
 1476 activity-specific hazard assessment and management that adds to the generic safety framework in the
 1477 Core.

1478 Knowledge

1479 The Leader must understand the challenge-course-specific hazards including fall from height on low and
 1480 high elements, harness hang syndrome, falling-object and entanglement risks, structural and tree hazards,
 1481 and weather and lightning triggers for suspension or evacuation.

1482 This should include but is not limited to: the mechanisms, onset signs and time-critical nature of harness
1483 hang syndrome (suspension trauma), including the critical rescue window and the requirement to return a
1484 suspended participant to the ground, or into a horizontal position, without delay; hazards and associated
1485 risks for participant use of low and high elements, including hazards associated with the structure, hazards
1486 associated with equipment used to negotiate the element, fall protection hazards and group management
1487 hazards; falling-object and entanglement hazards, including loose clothing, hair, jewellery and unsecured
1488 items; typical environmental hazards within challenge course sites and surrounding areas, including
1489 unstable trees and branches, falling limbs and tree debris, ground surface hazards in fall zones, and spiders,
1490 insects, snakes and other fauna; weather-related hazards (wind, rain and lightning) and the provider's
1491 documented trigger points for modifying, suspending or evacuating elements; the provider's procedures for
1492 safe participant use of elements, emergency response and first aid; requirements for recording and
1493 reporting inspection outcomes and for escalating issues of immediate concern; and the relevant 'work
1494 health and safety' law(s) and/or regulation(s) applying to work at height in the relevant jurisdiction(s).

1495 **Skills**

1496 The Leader must be able to apply challenge-course-specific risk-assessment and rescue skills including
1497 weather-based decisions, harness hang syndrome rescue and the management of entanglement, falling-
1498 object and structural hazards.

1499 This should include but is not limited to: completing visual inspections of the course site, surrounding areas
1500 and elements before sessions and confirming the integrity of safety systems; completing ongoing risk
1501 assessments across simultaneously operating elements and adjusting controls as conditions change;
1502 applying weather triggers to modify, suspend or evacuate elements, including managing the safe recovery
1503 of participants already on high elements when conditions deteriorate; recognising a suspended or
1504 distressed participant and executing a harness hang syndrome response within the critical window,
1505 including recovery into a horizontal position; controlling falling-object and entanglement hazards through
1506 pre-activity participant checks; assertively correcting breaches of safety procedures by participants and
1507 activity leaders; coordinating an emergency response, including allocating roles, directing the use of rescue
1508 equipment and liaising with emergency services; and reporting and documenting hazards, incidents and
1509 near-misses promptly.

1510 **Experience recommended**

1511 The Leader has operated a challenge course safety and emergency management system and applied rescue
1512 procedures in real or simulated conditions.

1513 This should include but is not limited to: operating under a documented challenge course safety system,
1514 including scheduled inspection regimes; responding to real or simulated safety events, including weather
1515 suspensions, equipment faults and participant distress; practising or executing the rescue of a suspended
1516 participant, including harness hang syndrome scenarios; and contributing to incident, near-miss and
1517 inspection reviews for challenge course operations.

1518 **N.2 Technical activity leadership**

1519 This domain covers the technical knowledge, skill and experience specific to challenge course activities,
1520 across both low and high element systems. Providers must treat low element and high element activities as
1521 two distinct activities; competence in each must be verified separately.

1522 **Knowledge**

1523 The Leader must understand the technical content of challenge course operations, across the element
1524 types they are assigned to supervise — low element fall safety, high element belay systems, equipment
1525 selection and inspection, supervision plans and supervision levels, and the structural and equipment
1526 standards in AS 2316.2.1:2025 and AS 3533.

1527 This should include but is not limited to: LOW ELEMENTS — element types and configurations, spotting
1528 principles (spotter positioning relative to fall trajectory, weight and strength relative to participant, number

1529 of spotters required), adventure game design and facilitation principles, inspection requirements for
1530 structures and impact-absorbing surfaces, and participant induction requirements for spotting; HIGH
1531 ELEMENTS — element types and configurations, belay system selection (dynamic versus static rope,
1532 assisted belay, auto-belay and continuous self-belay systems), harness types (sit, full body and
1533 combination) and selection criteria including the requirement for full body or combination harnesses on
1534 flying foxes and giant swings, connector types and failure modes, fall factor principles and lanyard length
1535 selection, safe working load and safety factor calculation, rescue system design and operation (participant
1536 lower-off, assisted descent and recovery of an unconscious person from height), AS 2316.2.1:2025
1537 construction and safety requirements, AS 3533 design and inspection requirements, and structural and
1538 hardware inspection before use; GENERAL — challenge course supervision plan requirements, supervision
1539 level terminology (Level 1 physical intervention immediately available; Level 2 visual and verbal
1540 intervention immediately available; Level 3 in vicinity with prompt response), and participant assessment
1541 protocols for confirming competence before reducing supervision level.

1542 **Skills**

1543 The Leader must be able to apply the practical technical skills required to lead challenge course groups
1544 across the element types within scope, including equipment fitting and checks, belay system operation,
1545 supervision and rescue.

1546 This should include but is not limited to: LOW ELEMENTS — establishing and directing effective spotting
1547 teams, demonstrating correct spotting technique for a range of element types and participant orientations,
1548 inspecting low element structures and fall zones, facilitating adventure games, and managing participant
1549 transitions between elements; HIGH ELEMENTS — fitting and adjusting harnesses for individual participant
1550 body types, rigging and checking belay systems and all connections, conducting pre-activity harness and
1551 connection checks without delegating the check responsibility to participants, operating assisted belay,
1552 auto-belay and continuous self-belay systems, supervising participants who are belaying and detecting
1553 incorrect technique, recognising harness hang syndrome and executing timely rescue including recovery
1554 into a horizontal position, executing high-angle rescue (lower-off, assisted descent and recovery of an
1555 unconscious person), and inspecting structural elements, anchors, connections, hardware and cables
1556 before use; GENERAL — completing and maintaining a challenge course supervision plan, assessing each
1557 participant's reach and competence in safety system operation and determining the appropriate
1558 supervision level, and managing activity leader fatigue through role rotation.

1559 **Experience recommended**

1560 The Leader has led challenge course sessions across the element types and supervision levels within their
1561 scope, including rigging, induction, ongoing supervision and rescue.

1562 This should include but is not limited to: having supervised low element and adventure game sessions with
1563 participant groups of varying age, ability and physical capability; having managed spotting failures, falls or
1564 injuries in a low element setting; having led high element sessions including rigging, participant induction,
1565 harness fitting, connection checking and ongoing supervision; having executed or practised rescues of
1566 suspended participants including harness hang syndrome response; having conducted pre-activity
1567 structural and equipment inspections; having supervised participants at Level 1, 2 and 3 and progressively
1568 reduced supervision as competence was confirmed; and having developed or contributed to a challenge
1569 course supervision plan for a specific site or set of elements.

1570 **N.3 Leadership and group management**

1571 This domain covers group management challenges specific to challenge course activities, particularly the
1572 management of simultaneous active and non-actively participating participants and activity-leader fatigue
1573 from repetitive tasks.

1574 **Knowledge**

1575 The Leader must understand how to supervise simultaneous active and non-active participants across
1576 multiple elements and how to manage activity-leader fatigue.

1577 This should include but is not limited to: methods used to supervise multiple course elements
1578 simultaneously, including the performance of spotters, belayers and participants; the management of non-
1579 actively participating participants, including designated safe areas, boundaries and engagement strategies
1580 for waiting groups; group briefing and rotation structures for moving groups between elements; techniques
1581 used to build group cohesion and to motivate and encourage participants, including managing fear
1582 responses, peer pressure and challenge-by-choice participation; the phases of the adventure-based
1583 learning cycle (briefing, goal setting, development of trust, activity participation, debriefing and transfer of
1584 learning) where sessions are delivered for learning outcomes; principles of group dynamics, and the signs,
1585 stages and levels of conflict within groups and techniques used to resolve them; role boundaries between
1586 the Leader, Assistant Leaders and supervisors; and the causes of activity-leader fatigue arising from
1587 repetitive spotting, belaying and checking tasks, and rotation strategies to manage it.

1588 **Skills**

1589 The Leader must be able to apply group flow and supervision skills specific to challenge course operations.

1590 This should include but is not limited to: organising participants into manageable groups and sequencing
1591 element rotations so that active and non-actively participating participants remain engaged and supervised;
1592 positioning to maintain sight lines across multiple elements; directing and supervising Assistant Leaders and
1593 support persons through clear delegation; maintaining boundaries and safe areas for participants who are
1594 not on elements; engaging participants in warm-up, trust-development and practice activities in low-risk
1595 situations before element use; applying challenge-by-choice and graduated challenge to support inclusive
1596 participation; providing directions, encouragement and corrective instruction to spotters, belayers and
1597 participants; facilitating participant debriefs and leading team-member debriefs; and rotating activity-
1598 leader roles to manage fatigue.

1599 **Experience recommended**

1600 The Leader has managed group flow and activity-leader teams across the element types and supervision
1601 levels within their scope.

1602 This should include but is not limited to: supervising groups with simultaneous active and non-actively
1603 participating participants across multiple elements; leading or coordinating teams of activity leaders,
1604 including role rotation; facilitating adventure-based learning sessions delivered on challenge course
1605 elements; and managing difficult group dynamics in real sessions, including fear responses, overconfidence
1606 and peer pressure.

1607 **N.4 Decision-making and judgement**

1608 This domain covers the application of activity-specific decision triggers to modify, suspend or cancel
1609 challenge course activity.

1610 **Knowledge**

1611 The Leader must understand the activity-specific proceed, modify, suspend and cancel triggers for
1612 challenge course operations.

1613 This should include but is not limited to: the provider's documented weather trigger points for challenge
1614 course operations, including wind, rain and lightning thresholds for modifying, suspending or evacuating
1615 elements; structural and equipment triggers, including signs of deterioration and failures that pose an
1616 immediate safety risk and require an element or item of equipment to be withdrawn from service;
1617 participant competence triggers for setting or changing supervision levels (Levels 1, 2 and 3); the time-
1618 critical nature of harness hang syndrome and its effect on suspend-versus-continue decisions; and the
1619 provider's escalation pathways and the limits of the Leader's authority.

1620 **Skills**

1621 The Leader must be able to apply weather-based, structural and competence-based decision triggers in real
1622 operations.

1623 This should include but is not limited to: assessing weather and site conditions before and during sessions
1624 and applying documented triggers to proceed, modify, suspend, evacuate or cancel; managing the safe and
1625 orderly recovery of participants from high elements when conditions deteriorate; adjusting supervision
1626 levels in response to assessed participant competence; withdrawing elements or equipment from service
1627 where inspection findings or observed faults require it; documenting operational decisions and the
1628 reasoning behind them; and escalating decisions outside the Leader's authority to the provider.

1629 **Experience recommended**

1630 The Leader has made or practised the relevant operational decisions in real or simulated conditions.

1631 This should include but is not limited to: making or practising suspension, evacuation and cancellation
1632 decisions under changing weather conditions; adjusting supervision levels for real participant groups as
1633 competence was confirmed or withdrawn; withdrawing elements or equipment from service following
1634 inspection findings; and participating in near-miss or incident reviews focussed on challenge course
1635 decision-making.

1636 **N.5 Planning and program management**

1637 This domain covers the planning of challenge course supervision and the logistics of element preparation
1638 and session delivery.

1639 **Knowledge**

1640 The Leader must understand the components of a challenge course supervision plan and the pre-activity
1641 preparation required to deliver a session safely.

1642 This should include but is not limited to: the components of a challenge course supervision plan, including
1643 the course diagram, supervision and use requirements, communications plan and emergency response
1644 plan; the inspection regime for the course, including daily, operational, comprehensive annual and tree
1645 inspections, and who is responsible for each; factors affecting the selection and sequencing of element
1646 activities, including group objectives, session duration, participant characteristics, and season, weather and
1647 environmental conditions; activity plans and required documentation, including informed consent, safety
1648 and serviceability checklists, equipment fault reports and incident reports; and staffing requirements,
1649 including activity leader to participant ratios and the competence required at each assigned position.

1650 **Skills**

1651 The Leader must be able to apply the planning skills required to prepare and deliver challenge course
1652 sessions.

1653 This should include but is not limited to: preparing, completing and maintaining a challenge course
1654 supervision plan for the site and elements in use; selecting and sequencing a program of element activities
1655 to meet the needs of the participant group; scheduling and completing pre-session inspections and
1656 associated reports; establishing any additional equipment required for elements and completing safety and
1657 serviceability checks; briefing the activity-leader team on the plan, roles and communication protocols;
1658 completing post-session responsibilities, including dismantling and inspecting equipment, tagging faults,
1659 reporting maintenance requirements and leading team debriefs; and recommending improvements to
1660 activities and safety management.

1661 **Experience recommended**

1662 The Leader has planned and delivered challenge course programs and updated supervision plans in
1663 response to operational change.

1664 This should include but is not limited to: planning and delivering challenge course sessions to
1665 predetermined activity plans for participant groups of varying age, ability and objectives; developing or
1666 updating a challenge course supervision plan in response to operational change, such as new elements,
1667 incident findings or changed staffing; and contributing to inspection scheduling and maintenance reporting
1668 for a course.

1669 N.6 Environment and place-based knowledge

1670 This domain covers site-specific knowledge relevant to challenge course operations, including structural
1671 hazards, visibility, weather and environmental impacts affecting element safety.

1672 **Knowledge**

1673 The Leader must understand the site-specific factors that affect safe challenge course operations.

1674 This should include but is not limited to: site-specific environmental hazards, including unstable trees and
1675 branches, falling limbs and tree debris, ground surface hazards in fall zones and landing areas, and spiders,
1676 insects, snakes and other fauna; the effects of local topography and vegetation on wind exposure, lightning
1677 risk and the behaviour of weather at the site; sight-line and visibility constraints affecting supervision
1678 positions and communication across the course; local seasonal weather patterns and trusted sources of
1679 forecasts and warnings for the site; the environmental impact of course operations on host trees, soil and
1680 vegetation, and any land owner and/or manager requirements applying to the site; and emergency access
1681 routes and the expected emergency response arrangements for the site.

1682 **Skills**

1683 The Leader must be able to apply site-specific knowledge in supervision planning, ongoing monitoring and
1684 participant briefing.

1685 This should include but is not limited to: conducting checks of the course site and surrounding areas for
1686 hazards before sessions; interpreting forecasts, warnings and in-field weather cues for the specific site;
1687 applying sight-line and visibility constraints when planning supervision positions and communication
1688 methods; briefing participants on site-specific hazards, boundaries and safe areas; and implementing
1689 minimal-impact and tree-protection practices in course operations.

1690 **Experience recommended**

1691 The Leader has conducted site checks and operated the site across the conditions within their scope.

1692 This should include but is not limited to: operating the specific course site across a range of seasons and
1693 weather conditions; completing site-specific inductions covering elements, rescue systems and emergency
1694 procedures; and contributing site knowledge to supervision plans, inspections and emergency response
1695 planning.

1696 N.7 Communication and interpersonal skills

1697 Not modified for challenge course activities — the requirements of Core GPG Appendix M (domain M.7)
1698 apply in full.

1699 N.8 Self-management and professional practice

1700 Not modified for challenge course activities — the requirements of Core GPG Appendix M (domain M.8)
1701 apply in full.

1702 N.9 Outdoor living, activity and travel skills

1703 This domain covers the personal capability the Leader must hold to operate on a challenge course site.
1704 Challenge courses are delivered at fixed venues or designated sites and do not require activity-specific
1705 travel, camping or navigation skills beyond those described in the Core.

1706 **Knowledge**

1707 No activity-specific additions are required; refer to the equivalent domain in Core GPG Appendix M.

1708 **Skills**

1709 The Leader must hold the physical and mental capability to operate on a challenge course site, including
1710 the ability to fit and check personal protective equipment and function at height for the duration of a
1711 session.

1712 This should include but is not limited to: physical and mental capability sufficient to access, move through
1713 and operate at any point on the elements they are responsible for, including the ability to reach a
1714 suspended participant for rescue using the course's access systems; ability to fit, adjust and check own
1715 harness, helmet and other personal protective equipment, recognising that PPE configurations vary
1716 between sites and element types; and ability to function and make sound decisions while working at height
1717 for the duration of a session.

1718 **Experience recommended**

1719 The Leader has previously participated in and operated at height on low and high element activities under
1720 supervision before leading independently.

1721

1722 Appendix O Knowledge, skill and experience — Assistant Leader

1723 This appendix sets out the knowledge, skill and experience expected of an Assistant Leader carrying the role
1724 described in Section 8.4.2. The role is structured against the same nine domains as Appendix M; the
1725 requirements of Appendix M apply, with the variation that each domain is applied at the level of the
1726 delegated tasks, under the direction of the Leader and within the provider's systems. This appendix
1727 contains only the requirements specific to challenge course activities; see also Core GPG Appendix N.

1728 O.1 Safety and risk management

1729 The Assistant Leader must be able to identify and report the challenge course-specific hazards within their
1730 assigned element area, follow defined operating procedures and contribute to emergency response under
1731 the direction of the Leader.

1732 O.2 Technical activity leadership

1733 The Assistant Leader must hold the spotting and participant induction skills for low elements if assigned to
1734 low element supervision, and the harness fitting, connection checking and belay monitoring skills for high
1735 elements if assigned to high element supervision. The Assistant Leader is not required to manage non-
1736 routine situations independently, conduct rescues from height without direction, or hold competence
1737 across element types they are not assigned to. An Assistant Leader assessed as competent for low elements
1738 only must not supervise high element activities.

1739 O.3 Leadership and group management

1740 The Assistant Leader supervises participants at their assigned element, maintains appropriate supervision
1741 of non-actively participating participants within their area and refers group management issues outside
1742 their scope to the Leader.

1743 O.4 Decision-making and judgement

1744 The Assistant Leader must recognise conditions requiring escalation (equipment concerns, participant
1745 distress, weather changes), report them promptly to the Leader and take immediate safety actions within
1746 their delegated scope.

1747 O.5 Planning and program management

1748 The Assistant Leader must be familiar with the challenge course supervision plan, the operating procedures
1749 for their assigned elements and the emergency management plan.

1750 O.6 Environment and place-based knowledge

1751 The Assistant Leader must have site-specific knowledge appropriate to the elements they are assigned to
1752 supervise, including relevant visibility constraints and local hazards.

1753 O.7 Communication and interpersonal skills

1754 The Assistant Leader must brief participants on the specific procedures for their assigned element, use the
1755 course's unambiguous communication system correctly and report anything affecting safe delivery to the
1756 Leader.

1757 O.8 Self-management and professional practice

1758 The Assistant Leader must self-assess fitness for work, manage fatigue from repetitive tasks and report
1759 concerns to the supervising Leader.

1760 O.9 Outdoor living, activity and travel skills

1761 The Assistant Leader must hold the physical and mental capability to operate safely at height on the
1762 elements they are assigned to supervise, and must be able to fit and check their own personal protective
1763 equipment.

1764 Appendix P Recognition of competence: pathways to verification
1765 See Core GPG Appendix P. The recognition-of-competence pathways — formal qualifications and training,
1766 provider-based assessment and prior learning — apply without modification to challenge course activities.

1767 Appendix Q Indicative experience bands and evidence expectations
1768 See Core GPG Appendix Q. The indicative experience bands and evidence expectations support the
1769 provider's verification of leader experience for challenge course activities.

1770 Appendix R Australian Bureau of Meteorology weather warnings
1771 and trigger points
1772 See Core GPG (Appendix R).

1773 Appendix S Program planning matrix: leader-matching tool
1774 See Core GPG Appendix O. The program planning matrix (leader-matching tool) applies without
1775 modification to challenge course activities. For challenge courses, activity complexity is informed by the
1776 element types in use (low and/or high) and the participant group characteristics. Note that no challenge-
1777 course-specific scaling of supervision by site location is applied in this guide, because the immediate
1778 operational response on a challenge course (returning a participant to the ground within the harness hang
1779 syndrome critical window) does not change with site remoteness; the matrix applies in the context of initial
1780 site selection, risk assessment and emergency planning.

1781 Appendix T Challenge course equipment
1782 The equipment required and the appropriate "type" of equipment used is dependent on the specific
1783 context of the activity.

1784 Equipment used for challenge courses may include but is not limited to:

1785 High elements specific equipment

1786 Equipment used for high elements may include but is not limited to:

- | | | | |
|------|---|------|---------------------------|
| 1787 | • accessory cord | 1795 | • harnesses |
| 1788 | • artificial fixed anchors used in elements | 1796 | • helmets |
| 1789 | • ascending devices | 1797 | • lanyards |
| 1790 | • belay devices | 1798 | • pulleys |
| 1791 | • wires and other fixed ropes | 1799 | • shear reduction devices |
| 1792 | • carabiners or other connectors | 1800 | • slings |
| 1793 | • descending devices | 1801 | • static rope |
| 1794 | • dynamic rope | 1802 | • tethers. |

1803 Rescue equipment may include but is not limited to:

- | | | | |
|------|----------------------|------|--|
| 1804 | • additional rope | 1810 | • knife suitable for cutting ropes |
| 1805 | • ascenders | 1811 | (preferably a rescue hook knife and on a |
| 1806 | • belay device | 1812 | lanyard) |
| 1807 | • carabiners | 1813 | • pliers or multi-grips |
| 1808 | • climbing cord | 1814 | • prusik loops |
| 1809 | • cowstails or claws | 1815 | • pulleys |
| | | 1816 | • slings. |

1817

1818 **Low elements specific equipment**

1819 Specific equipment for *low elements* may include but is not limited to:

- 1820
 - *softfall*, crash pads or padding.

1821 **General equipment**

1822 General equipment used for challenge courses may include but is not limited to:

1823 **Emergency/rescue**

- 1824
 - documentation (see Core_GPG – Activity leader required documentation)
- 1825
 - emergency communication equipment (see Core_GPG – Emergency communication)
- 1826
 - first aid kit in waterproof storage (see Core_GPG – First aid equipment and medication)
- 1827
 - a waterproof method of storing and carrying documentation and communications equipment
- 1828
 - specific activity context equipment required (see list above)
- 1829
 - emergency shelter where appropriate for the context
- 1830
 - emergency equipment to keep a patient warm (e.g. mat, sleeping bag) where appropriate for the
- 1831
 - context.

1832 **Activity Leaders**

- 1833
 - communications equipment (standard communication rather than emergency communication
- 1834
 - where this differs) and spare batteries or backup “power banks”
- 1835
 - pen/pencil and blank writing paper
- 1836
 - watch or equipment suitable to tell and measure time for first aid purposes
- 1837
 - head torch and spare batteries
- 1838
 - gloves
- 1839
 - same as for participant.

1840 **Participant**

- 1841
 - personal medications (including for asthma and anaphylaxis)
- 1842
 - personal hygiene requirements
- 1843
 - clothing appropriate to the weather conditions
- 1844
 - sun hat
- 1845
 - sunglasses
- 1846
 - spare prescription glasses
- 1847
 - sunscreen
- 1848
 - gloves.

1849 **Group**

- 1850
 - first aid kit (refer Core_GPG for first aid kit common content)
- 1851
 - insect repellent
- 1852
 - rubbish bags
- 1853
 - sunscreen
- 1854
 - water
- 1855
 - food for duration plus spare
- 1856
 - backpack to carry equipment
- 1857
 - repair kit
- 1858
 - multi-tool with knife
- 1859
 - hand sanitiser
- 1860
 - trowel for toileting
- 1861
 - toilet paper.

1862 Appendix U Equipment related standards

1863 Equipment used in *Challenge Course* activities must conform to a recognised standard appropriate to its
1864 intended use, in accordance with the manufacturer's requirements. The following list of standards is
1865 indicative and not exhaustive; equipment certified to equivalent international standards may also be
1866 appropriate where such equivalence is documented.

1867 **Challenge courses:**

- 1868 • AS 2316.2.1:2025 Artificial climbing structures and challenge courses Part 2.1: Flying foxes and
1869 challenge ropes courses—Construction and safety requirements
- 1870 • AS 2316.2.2:2025 Artificial climbing structures and challenge courses Flying foxes and challenge
1871 ropes courses – Operation requirements (EN 15567-2:2007, MOD)
- 1872 • EN 15567-1:2015 Sports and recreational facilities. Ropes courses. Construction and safety
1873 requirements.

1874 **Fixed and mobile artificial climbing and abseiling walls:**

- 1875 • AS 2316.1.1:2021 Artificial climbing structures and challenge courses Part 1: Fixed and mobile
1876 artificial climbing and abseiling walls.

1877 **Equipment and the relevant standards:**

- 1878 • Accessory cord (EN 564:2023)
- 1879 • Braking devices (EN 15151-1:2012, EN 15151-2:2012)
- 1880 • Carabiners or other connectors (EN 362:2004, EN 12275:2013, AS/NZS 1891.4:2025 or ISO 10333-
1881 5:2001)
- 1882 • Chocks (EN 12270:2013)
- 1883 • Crash pads/padding (AS 2316.1.1:2021, UIAA 161-3 (V5, 2018))
- 1884 • Descending devices (EN 341:2011)
- 1885 • Energy absorbing systems EN 958:2024
- 1886 • Frictional anchors EN 12276:2013
- 1887 • Helmets (EN 12492:2025)
- 1888 • Harnesses (EN 358:2018, EN 361:2002, EN 813:2024, EN 12277:2015+A1:2018, AS/NZS
1889 1891.4:2025 or equivalent)
- 1890 • Lanyards (EN 354:2010)
- 1891 • Safety nets (BS EN 1263-1:2014, BS EN 1263-2:2014)
- 1892 • Rock anchors (EN 959:2018)
- 1893 • Rope clamps EN 567:2013
- 1894 • Rope – dynamic (EN 892:2012+A3:2023)
- 1895 • Rope – static (EN 1891:1998, CI 1801:2025)
- 1896 • Personal fall protection equipment – anchor devices (EN 795:2012)
- 1897 • Pitons (EN 569:2007)
- 1898 • Pulleys (EN 12278:2007)
- 1899 • Slings (EN 566:2017, AS 1353:1997 (series) or AS/NZS 1891.4:2025)

1900 **List of relevant standards**

1901 **AS/NZS**

- 1902 • 1353:1997 Flat synthetic-webbing slings Product specification
- 1903 • 1891 Industrial fall-arrest systems and devices
- 1904 • 4 Part 4: Selection, use and maintenance
- 1905 • AS 2316.1.1:2021 Artificial climbing structures and challenge courses Part 1: Fixed and mobile
1906 artificial climbing and abseiling walls.

- 1907 • AS 2316.2.1:2025 Artificial climbing structures and challenge courses Part 2.1: Flying foxes and
1908 challenge ropes courses—Construction and safety requirements (EN 15567-1:2007, MOD)
1909 • 2512 Methods of testing protective helmets 1 Part 1: Definitions and headforms
1910 **CI**
1911 • 1801:2025 Low Stretch And Static Kernmantle Life Safety Rope
1912

1913 EN

- 1914 • 341:2011 Personal protective equipment against falls from a height—Descender devices
- 1915 • 354:2010 Personal protective equipment against falls from a height—Lanyards
- 1916 • 358:2018 Personal protective equipment for work positioning and prevention of falls from a
- 1917 height—Belts for work positioning and restraint and work positioning lanyards
- 1918 • 361:2002 Personal protective equipment against falls from a height—Full body harnesses
- 1919 • 362:2004 Personal protective equipment against falls from a height—Connectors
- 1920 • 564:2023 Mountaineering equipment—Accessory cord—Safety requirements and test methods
- 1921 • 566:2017 Mountaineering equipment—Slings—Safety requirements and test methods
- 1922 • 567:2013 Mountaineering equipment—Rope clamps—Safety requirements and test methods
- 1923 • 569:2007 Mountaineering equipment. Pitons. Safety requirements and test methods
- 1924 • 795:2012 Personal fall protection equipment. Anchor devices
- 1925 • 813:2024 Personal fall protection equipment—Sit harnesses
- 1926 • 892:2012+A3:2023 Mountaineering equipment—Dynamic mountaineering ropes—Safety
- 1927 requirements and test methods
- 1928 • 958:2024 Mountaineering equipment. Energy absorbing systems for use in klettersteig (via ferrata)
- 1929 climbing. Safety requirements and test methods
- 1930 • 959:2018 Mountaineering equipment. Rock anchors. Safety requirements and test methods
- 1931 • 1263-1:2014 Temporary Works Equipment – Safety Nets – Part 1: Safety Requirements, Test
- 1932 Methods
- 1933 • 1263-2:2014 Temporary Works Equipment – Safety Nets – Part 2: Safety Requirements For The
- 1934 Positioning Limits.12270 Mountaineering equipment. Chocks. Safety requirements and test
- 1935 methods
- 1936 • 12275:2013 Mountaineering equipment—Connectors—Safety requirements and test methods
- 1937 • 12276:2013 Mountaineering equipment. Frictional anchors. Safety requirements and test methods
- 1938 • 12277:2015+A1:2018 Mountaineering equipment—Harnesses—Safety requirements and test
- 1939 methods
- 1940 • 12278:2007 Mountaineering equipment—Pulleys—Safety requirements and test methods
- 1941 • 12492:2025 Mountaineering Equipment – Helmets For Mountaineers – Safety Requirements And
- 1942 Test Methods
- 1943 • 15151-1:2012 Mountaineering equipment. Braking devices. Braking devices with manually assisted
- 1944 locking, safety requirements and test methods
- 1945 • 15151-2:2012 Mountaineering equipment. Braking devices. Manual braking devices, safety
- 1946 requirements and test methods
- 1947 • 1891:1998 Personal protective equipment for the prevention of falls from a height—Low stretch
- 1948 kernmantel ropes

1949 ISO

- 1950 • 10333 Personal fall-arrest systems
- 1951 • 10333-5:2001 Part 5: Connectors with self-closing and self-locking gates

1952 UIAA

- 1953 • 161-3 (V5, 2018) Crash Pads

1954 Appendix V Equipment load ratings

1955 Proper understanding and use of equipment load ratings (*stated strength*) is needed to allow for an

1956 appropriate safety margins (*safety factors*) to be used. This ensures that equipment is never loaded to a

1957 point it is in danger of breaking or being damaged.

1958 Manufacturers provide details of the load ratings for equipment either stamped on the equipment or in
1959 available documentation. This is called the *Stated Strength*. *Stated Strength* is the magnitude of load that is
1960 either the *Safe Working Load* (SWL) or *Minimum Breaking Strength* (MBS).

1961 It is critical to understand the difference between *Safe Working Load* (SWL) and *Minimum Breaking*
1962 *Strength* (MBS) because SWL has a safety factor already applied to it, while MBS does not.

1963 *Safe Working Load* (SWL): is the magnitude of load that does not permanently distort, weaken, damaged or
1964 break equipment. It is safe to load equipment to 100% of the SWL.

1965 *Minimum Breaking Strength* (MBS): is the magnitude of a load that may permanently distort or damage a
1966 piece of equipment but not cause it to break. An appropriate *safety factor* needs to be applied to the MBS.
1967 The MBS is a load, determined by the manufacture, that might not break a piece of equipment but may
1968 make it unusable or unsafe to use. Equipment should never be loaded to the MBS, even for testing
1969 purposes when testing a system before being used, the test should not exceed the SWL. Some equipment
1970 may be in danger of being overloaded even at less than half the MBS. It should be noted that the stated
1971 MBS value is calculated from tests on a selection of items, not on each individual item. It is therefore likely
1972 that a small percentage of similar items, (usually less than 1%) will break slightly below their stated MBS
1973 value.

1974 *Safety Factor*: The ratio between the *Minimum Breaking Strength* (MBS) and *Safe Working Load* (SWL)
1975 which is used to provide a safety margin. It is expressed as a ratio for example 8:1. An appropriate *Safety*
1976 *Factor* is chosen based on the type of equipment and intended use. The *safety factor* applicable may be
1977 specified in relevant standards or manufacturers instructions. It is recommended to follow known safe
1978 practices, manufacturers recommendations, relevant standards or calculated assessments when
1979 determining safety factors.

1980 Examples

1981 Rope

1982 Recreational 'climbing/abseiling' rope may have the *Stated Strength* provided as a *Minimum Breaking*
1983 *Strength* (MBS). In use, it requires a suitable *Safety Factor* to be selected and applied to the MBS to
1984 calculate appropriate SWL.

1985 Static rope:

- 1986 ○ Stated strength: 30kN MBS
- 1987 ○ Safety Factor: say 8:1
- 1988 ○ Safe Working Load (SWL): 3.75kN (30 divided by 8 = 3.75)

1989 Flat lifting sling:

1990 A flat lifting sling may have the *Stated Strength* provided as a *Safe Working Load* (SWL). In use, it can be
1991 loaded to 100% of the SWL.

- 1992 ○ Stated strength: 2,000 kg SWL
- 1993 ○ Safety Factor: may or may not be provided by manufacturer
- 1994 ○ Safe Working Load (SWL): 2,000 kg (No calculation required as Stated Strength given as SWL)

1995 The Australian Standard AS1353 states that a 2,000 kg SWL flat lifting sling should have a 8:1 safety factor.
1996 If this is the case, then the MBS is 16,000 kg (2,000 times 8 = 16,000).

1997 Connectors

1998 Recreational 'climbing/abseiling' connectors may have the *Stated Strength* provided as a *Minimum*
1999 *Breaking Strength* (MBS). In use, it requires a suitable *Safety Factor* to be selected and applied to the MBS
2000 to calculate appropriate SWL.

2001 In-line loaded carabiner:

- 2002 ○ Stated strength: 24kN MBS
- 2003 ○ Safety Factor: say 4:1
- 2004 ○ Safe Working Load (SWL): 6kN (24 divided by 4 = 6)

2005 All equipment needs to have its *Safe Working Load* (SWL) estimated using an appropriate *safety factor* for
 2006 the context it is being used. They are not to be loaded above their SWL.

2007 Case example

2008 On the 4th of May 2014, in Rhode Island USA, a 45kN carabiner was overloaded and failed with a 6.8kN
 2009 three-way load, causing 8 circus performers to fall 10m. The subsequent investigation showed that similar
 2010 carabiners, in new condition, also failed when similarly loaded but easily held 50kN when in-line loaded.

2011 Kilonewtons (kN) of force vs kilograms (kg) of load (mass)

2012 Newtons, (abbreviated to N) are the metric units of force. A 102kg object applies, approximately, 1,000 N,
 2013 (1kN) downward force at the surface of the earth, (due to its mass and gravity). One Kilonewton (1 kN) is
 2014 1,000 N.

2015 In a simple vertical loading situation, it is generally accurate enough to convert a load mass of 100 kg to a
 2016 force of 1kN. Forces can exist in any direction, not just up and down. Force is calculated by multiplying mass
 2017 by acceleration. Gravity at earth's surface produces approximately 10m/s² of acceleration, (the exact value
 2018 varies and is slightly less).

2019 Therefore, equipment rated 1 kN of force equals equipment rated approximately 100kg of load (1,000N
 2020 divided by 10 = 100kg of load). So 1kN of force = approximately 100kg of load. Note that peak loads can
 2021 vary and allowance for these should be made.

2022 Examples:

2023 SWL 3.75kN force equals approximately 375kg static load

- 2024 ○ Calculation: 3.75 times 1,000 = 3,750N with 3,750N divided by 10 = 375 or
- 2025 ○ Calculation: 3.75 times 100 = 375

2026 SWL 2,000kg static load equals approximately 20kN force

- 2027 ○ Calculation: 2,000kg times 10 = 20,000N with 20,000N divided by 1,000 = 20 or
- 2028 ○ Calculation: 2,000kg divided by 100 = 20

2029 Appendix W Fall factor

2030 See the Core GPG.

2031 Appendix X Inspections and maintenance

2032 See the Core GPG.

2033 Commissioning inspection

2034 A commissioning inspection must be completed before a newly built course is put into service. It only needs
 2035 to be completed once.

2036 The commissioning inspection must be conducted by a suitably competent challenge course inspector. A
 2037 thorough understanding of how the equipment will be used is required. It is very important that the
 2038 inspector be independent from the manufacturer and owner of the new course.

2039 The purpose of the commissioning inspection is to check that the:

- 2040 • design is functional
- 2041 • design calculations, tree reports and weld inspections exist
- 2042 • course has been constructed as per the design

- 2043 • manufacturer instructions exist for usage, inspections and maintenance requirements.
- 2044 The commissioning inspection must establish that the construction was completed as specified by the
2045 verified design, and must be completed before any operation of the *Challenge Course*.
- 2046 Manufacturers of challenge courses need to specify the frequency of ongoing inspections, and any special
2047 inspection or maintenance requirements.
- 2048 **Ongoing inspections**
- 2049 There are four layers of ongoing inspections. The purpose of each is to ensure that the structure is safe, and
2050 that damage to and degradation of materials is detected before failure.
- 2051 **Daily inspection (formerly routine visual check)**
- 2052 The daily inspection must be completed by a *competent person* before each day of operation, and at
2053 minimum before the first use of the course on that day.
- 2054 Daily inspection is usually done by a well trained instructor.
- 2055 The inspection looks to confirm:
- 2056 • there is no obvious damage
2057 • site is safe
2058 • the integrity of the safety systems.
- 2059 **Operational inspection**
- 2060 The operational inspection should be completed by a competent person at least quarterly, or as per the
2061 manufacturers advised requirements.
- 2062 It should include:
- 2063 • all of the daily inspection checks
2064 • a more detailed closer inspection to confirm no damage or degradation. Examples may include but
2065 is not limited to loose bolts, damaged or rotten timber, tightness of ropes/wires/elements,
2066 damaged/worn wire rope etc.
- 2067 **Comprehensive annual inspection (formerly periodical inspection)**
- 2068 The comprehensive annual inspection should be completed by an independent *competent person* annually
2069 or as per the manufacturer's advised requirements. The time between comprehensive annual inspections
2070 should be no more than 15 months.
- 2071 It should include:
- 2072 • daily inspection
2073 • operational inspection
2074 • assessment of worn components
2075 • and where the inspector deems necessary:
2076 ○ dismantling of parts
2077 ○ excavation to reveal condition of items underground and/or
2078 ○ routine proof testing.
- 2079 **Tree inspections**
- 2080 If the challenge course is built in trees, the trees should be inspected, by a competent person annually or as
2081 per the manufacturers advised requirements.
- 2082 Inspection of trees should also be considered if the course is built among or beneath trees.
- 2083 The time between comprehensive annual inspections should be no more than 15 months.

2084 Expert arboriculturists should be used to verify that the trees are in good health and fit for purpose.
2085 Arboriculturists are usually not required to be experts in the forces imposed on the trees by the ropes
2086 course.

2087 **Inspection reports**

2088 All reports should be retained.

2089 **Maintenance**

2090 Maintenance is typically defined as “like for like replacement of worn out parts”.

2091 Maintenance is usually performed by a suitably competent person specialised in building challenge courses.

2092 **Modifications**

2093 A modification occurs if maintenance changes the functional operation of the *Challenge Course*, or the
2094 loads imposed on the course. Any modification must be assessed and approved by an *appropriately*
2095 *competent person* (typically a course designer/builder). A modification usually requires a new commissioning
2096 inspection (see A5.1).

2097 Examples of modification may include but is not limited to:

- 2098 • adjusting the sag in a flying fox so that it runs faster or slower
- 2099 • re-locating an *element* to make its span longer.

2100

Appendix Y Safety diagrams for lanyards

See the Core GPG.

Introduction

Also refer: Equipment Section for detail of other requirements relating to lanyards.

Also refer: 6.4.1 Helmets in equipment section regarding helmet entrapment.

Equipment section 7.3.8 Self-belay including continuous self-belay notes that: *Self-belay* systems with lanyards must be designed to minimise possible user entrapment and pressure on the neck, head and/or helmet that may cause strangulation when loaded.

Considerations discussed below are:

- Using unequal lengths of lanyards or having sufficient gap between lanyards
- Having single piece or sheathed lanyards.

Unequal lengths or gap between lanyards

Self-belay systems with two safety lanyards must minimise possible user entrapment and pressure on the neck, head and/or helmet that may cause strangulation when loaded by either:

- having unequal lanyard lengths so in the event of a fall, one lanyard is loaded and the second lanyard remains loose when both are attached to the belay anchoring system OR
- having sufficient gap between the two lanyards so even if both are loaded, entrapment between the lanyards does not occur (e.g. both lanyards are held apart by a rigid spreader).

Unequal length lanyards

Usual practice is to leave both lanyards attached to *critical line* (i.e. belay anchoring system/anchor point) during progress across an element.

Where unequal length lanyards are used, in the event of a fall the different lengths ensure that only one lanyard is loaded. The second lanyard remains loose to prevent creating an entrapment hazard.

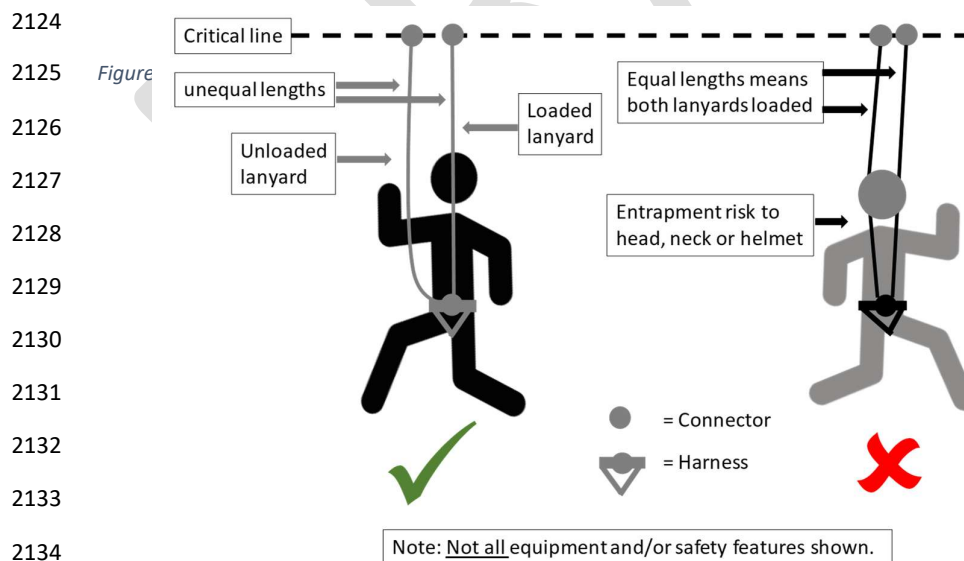


Diagram 1-A

Diagram 1-B

Diagram 1 – Lanyards to be of unequal length (diagram 1-A), as equal lengths can create an entrapment hazard (diagram 1-B).

2139 The effective minimum difference in length between the two unequal lanyards must be sufficient to
2140 alleviate the risk of entrapment.

2141 Sufficient gap between lanyards

2142 Where two unequal length lanyards are not used there must be sufficient gap between the two lanyards
2143 when loaded to avoid possible entrapment. A rigid spreader may be able to achieve this.

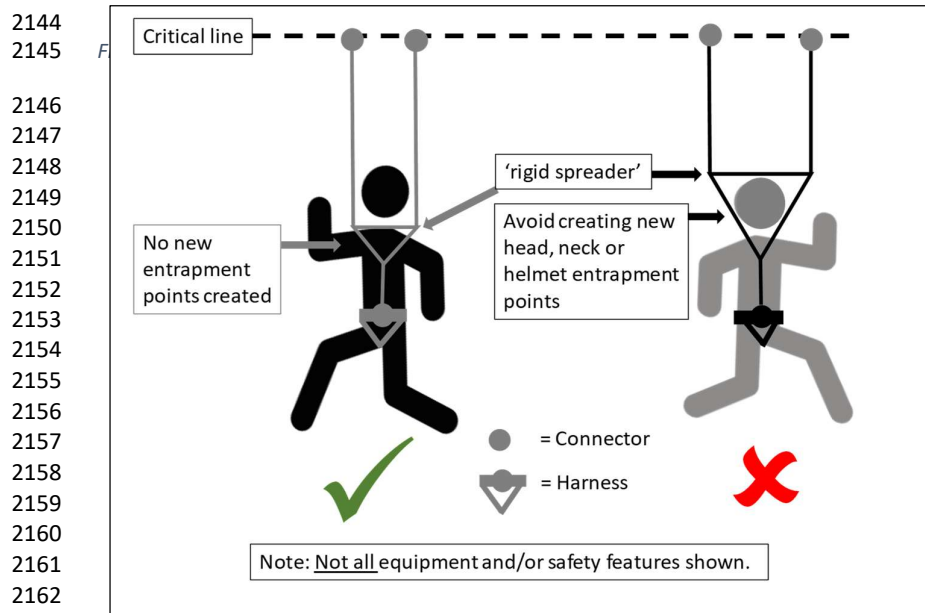


Diagram 2-A

Diagram2-B

2166 **Diagram 2** – The rigid spreader avoids the risk of entrapment (Diagram 2-A) but the design needs to avoid
2167 creating possible new entrapment hazards (diagram 2-B).

2168 Where a spreader is used:

- 2169
- 2170
- 2171
- 2172
- the system must not create other entrapment hazards
 - the minimum spreader distance must be sufficient to alleviate the risk of entrapment
 - the spreader must be of an appropriate design and material to operate as intended
 - the spreader must have a safe working load suitable for the task.

2173 Single piece or sheathed lanyards

2174 Self-belay systems with lanyards must minimise possible user entrapment and pressure on the neck, head
2175 and/or helmet that may cause strangulation when loaded, by having each separate lanyard constructed so
2176 it forms a single piece of material that does not form a loop that creates an entrapment hazard.

2177 All lanyards must be a either a single piece OR appropriately sheathed.

2178 (Continued next page.)

2179

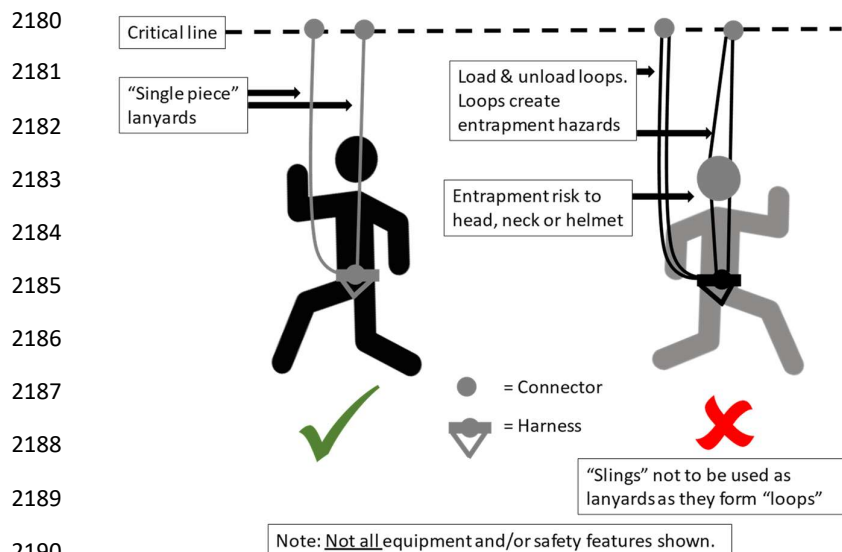


Diagram 3-A

Diagram 3-B

Diagram 3 – Each lanyard to be made so are a “single piece” of material (diagram 3-A) so that they do not form “loops” that can create entrapment hazards (3-B).

Multiple “strands” of a lanyard need to be appropriately sheathed to create a “single piece” (e.g. interlocking device lanyards being appropriately sheathed to prevent individual components creating a ‘loop entrapment hazard’).

Appendix Z Challenge course supervision plan

See the Core GPG.

Course diagram for visual reference

A course diagram or map provides a visual reference aid.

The diagram should include:

- a map – a visual representation that maps the site, course elements and other important locations. (While not necessarily drawn to an exact scale, it should appropriately reflect the relative proportions & distances, so it is not misleading regarding scale or location)
- element identification – an individual identification for each separate element and if needed a key matching the element type/name to the element identification on the diagram
- designated area(s) – location of any designated area(s) (e.g. activity leader supervision locations, restricted areas, helmet use areas)
- emergency plan locations – areas related to emergency plan (e.g. rescue equipment locations, first aid kit locations, emergency communication locations, evacuation routes & exits, emergency mustering points).

Supervision and use

Information recorded in the plan for each individual element should include:

- a summary of the risks identified in the risk assessment
- supervision requirements for the element(s) including:
 - the level of supervision needed (e.g. level 1, 2 or 3)
 - the number of *active participants* an *activity leader* can supervise at one time (e.g. supervision ratio, maximum number of active participants)
- obstructions and/or conditions that may impact line of sight supervision and procedures to address them

- 2220 • any variation in supervision required depending on *participant* considerations
- 2221 • any variation in supervision required depending on equipment considerations (e.g. if different
- 2222 connector types are use like individual screw gate carabiners vs an interlocking device)
- 2223 • relevant manufacturers specifications or requirements including but not limited to:
 - 2224 ○ maximum number of climbers on the element at one time
 - 2225 ○ recommended supervision
 - 2226 ○ reference to any provided standard operating procedure(s)
- 2227 • any standard operating procedure(s) (SOP) required to use the element – either by including the
- 2228 SOP as an appendix or referencing to where the SOP can be found
- 2229 • any special *competencies* required by an *activity leader* to supervise the *element*
- 2230 • any training, induction or confirmation of competence required before *activity leaders* supervise
- 2231 the *element*
- 2232 • *activity leader* roles and/or specific individuals authorised to:
 - 2233 ○ conduct training, induction in use of an element
 - 2234 ○ supervise the element.
- 2235 Information recorded in the plan for when multiple elements are in use at the same time should include:
 - 2236 • supervision requirements for the various elements when used at the same time
 - 2237 • where necessary specific location(s) to operate supervision from
 - 2238 • any standard operating procedures:
 - 2239 ○ For example, any limitations as to the use of various elements (e.g. due to lack of line of sight
 - 2240 some elements cannot be used in certain situations)
 - 2241 ○ Sequencing and progression through the elements
 - 2242 • any relevant manufacturers specifications or requirements (see above)
 - 2243 • any activity leader requirements (see above)
- 2244 Obstructions and/or conditions that may impact supervision visibility may include but is not limited to:
 - 2245 • trees and branches
 - 2246 • structures and equipment
 - 2247 • sun locations at certain times
 - 2248 • low light levels
 - 2249 • weather events (e.g. rain, fog, overcast etc.)
- 2250 **Communications plan**
- 2251 Information in the communications plan should include:
 - 2252 • any pre-activity information that needs to be supplied
 - 2253 • any information that is required during the activity
 - 2254 • communication standard operating procedures between *activity leaders* to maintain the required
 - 2255 level of supervision.
- 2256 **Emergency response plan**
- 2257 The emergency response plan should be included or if separate, referencing to where it can be found.
- 2258
- 2259

2260 Detailed Contents

2261	Traditional Owner Acknowledgement.....	2
2262	Copyright	2
2263	Disclaimer	2
2264	Version details	2
2265	Foreword	3
2266	Creation	4
2267	Funders	4
2268	Table of Contents	5
2269	List of Figures	5
2270	List of Tables	5
2271	Preface.....	6
2272	About these documents	6
2273	Dependent Participants.....	6
2274	Does the Standard and Good Practice Guides apply to me?	6
2275	Are they legally binding?	7
2276	Structure of the Standard and Good Practice Guides	8
2277	Interpretation of the Standard and Good Practice Guides.....	8
2278	1 Introduction.....	9
2279	1.1 Challenge courses	9
2280	1.2 Exclusions.....	9
2281	1.3 Related activities	10
2282	2 Management of Risk.....	10
2283	2.2 Context Matters	10
2284	2.3 Risk management framework and process	10
2285	2.4 Risk management plan.....	10
2286	2.5 Dynamic risk assessment	10
2287	2.6 Incident reporting.....	10
2288	3 Planning	10
2289	3.1 Management and approval of activities.....	11
2290	3.2 Activity plans.....	11
2291	3.3 Group size	11
2292	3.4 Cultural, environmental and historical values	11

2293	3.5 Emergency management planning	11
2294	3.6 Activity leader required documentation	11
2295	4 Diversity, equity and inclusion.....	12
2296	4.1 Diversity of participants and leaders	12
2297	4.2 Inclusive practice	12
2298	4.3 Cultural safety	12
2299	4.4 Psychological safety and dignity.....	12
2300	4.5 Information, communication and consent	12
2301	4.6 Leader competence	12
2302	4.7 Concerns, complaints and review	12
2303	5 Participants	12
2304	5.1 Information provided pre-activity	13
2305	5.2 Participant considerations	13
2306	5.3 Participant health and wellbeing.....	13
2307	5.4 Supervision and management during the activity	13
2308	5.4.1 Supervision plan	13
2309	5.4.2 Group size considerations	14
2310	5.4.3 Supervision ratio considerations	14
2311	5.4.4 Participants that are non-actively participating	14
2312	5.4.5 Assessment of participants use of safety systems	14
2313	5.4.6 Supervision provided.....	15
2314	5.4.7 Pre-activity course preparation supervision.....	15
2315	5.4.8 Supervision of connectors & connections	15
2316	5.4.9 Supervision for different situations.....	15
2317	5.5 Activity management.....	17
2318	5.5.1 Knowledge of site	17
2319	5.5.2 Pre-activity equipment preparation	17
2320	5.5.3 Activity leader positioning.....	17
2321	5.5.4 Activity leader fatigue and repetition.....	17
2322	5.5.5 Spectators.....	17
2323	5.5.6 Participants belaying and spotting	17
2324	5.5.7 Activity information for participants	17
2325	5.5.8 Activity Communications.....	18
2326	5.5.9 Falling objects	18
2327	5.5.10 Entanglement and snags	19
2328	5.5.11 Falls from height	19
2329	5.6 Fall safety systems management.....	20
2330	5.6.1 Belay and activity systems.....	20
2331	5.6.2 Assisted belay	20
2332	5.6.3 Self belays	20
2333	5.6.4 Collective belays	20
2334	5.6.5 Spotting belays – low elements and adventure games	21
2335	5.6.6 Flying foxes	21
2336	5.6.7 Giant swings	21
2337	5.6.8 Rescue systems.....	21

2338	5.6.9 Suspension trauma	22
2339	5.7 Participation restrictions.....	22
2340	5.8 Vulnerable participants.....	22
2341	5.9 Privacy of information	22
2342	5.10 Activity leader to participants ratios.....	22
2343	5.11 Activity briefing	22
2344	6 Environment	22
2345	6.1 Environment and site related planning.....	22
2346	6.2 Course design and construction.....	23
2347	6.3 Weather	23
2348	6.3.1 Weather information.....	23
2349	6.3.2 Weather warnings	23
2350	6.3.3 Weather triggers.....	23
2351	6.3.4 Lightning	23
2352	6.4 Bushfire, prescribed fire and fire danger.....	24
2353	6.5 Flooding	24
2354	6.6 Drinking water safety.....	24
2355	6.7 Food safety.....	24
2356	6.8 Wildlife safety	24
2357	6.9 Environmental conditions, safety and impact management	24
2358	6.10 Tree safety.....	24
2359	6.11 Environmental sustainability information	24
2360	6.11.1 Design and construction environmental sustainability	25
2361	6.11.2 Temporary elements environmental sustainability.....	25
2362	6.12 Environmental sustainability procedures	25
2363	6.13 Land owner and/or manager requirements	25
2364	6.14 Water environments.....	25
2365	7 Equipment and logistics	25
2366	7.1 Artificial surfaces and elements design and construction	25
2367	7.2 Equipment general	26
2368	7.2.1 Equipment general principles.....	26
2369	7.2.2 Equipment loading	26
2370	7.2.3 Equipment integrity — heat and flame	26
2371	7.3 Fall safety management systems.....	26
2372	7.3.1 Fall safety systems.....	26
2373	7.3.2 Ropes and lanyards used	27
2374	7.3.3 Connections	27
2375	7.3.4 Connectors – practices relating to use	27
2376	7.3.5 Harnesses	28
2377	7.3.6 Rescue equipment.....	28

2378	7.3.7 Assisted belay	29
2379	7.3.8 Self-belay including continuous self-belay	29
2380	7.3.9 Other safety systems	29
2381	7.3.10 Participant supplied safety equipment	30
2382	7.4 Other equipment	30
2383	7.4.1 Helmets	30
2384	7.4.2 Clothing	30
2385	7.4.3 Other personal equipment	31
2386	7.5 Pre-activity equipment preparation and inspection	31
2387	7.6 Inspection and maintenance	31
2388	7.7 Storage and transport of equipment	32
2389	7.8 Framework for equipment requirements	32
2390	7.9 First aid equipment and medication	32
2391	7.10 Communications equipment	32
2392	7.11 Use of equipment	32
2393	8 Responsibilities and roles	33
2394	8.1 Responsibilities and roles framework	33
2395	8.2 Naming conventions	33
2396	8.3 Provider responsibilities to prepare and support leaders	33
2397	8.4 Leader responsibilities and role descriptions	33
2398	8.4.1 Leader — operational responsibility in the field	33
2399	8.4.2 Assistant Leader — delegated responsibility	33
2400	8.4.3 Support person	33
2401	8.4.4 Leader fitness for work	34
2402	8.5 Leader readiness and capability	34
2403	8.5.1 Leadership knowledge, skill and experience	34
2404	8.5.2 Provider responsibilities under the Outdoor Leader KSE Framework	34
2405	8.5.3 First aid	34
2406	8.5.4 Knowledge and skill acquisition	35
2407	8.5.5 Verification	35
2408	8.5.6 Currency	35
2409	8.5.7 Verification and Currency Records	35
2410	Glossary	36
2411	Acronyms	39
2412	Appendices	40
2413	Appendix A Principal legal obligations	40
2414	Appendix B Management of Risk	40
2415	Appendix C Summary of AS ISO 31000 – risk management	40
2416	Appendix D Risk management process	40
2417	Appendix E Risk analysis information	40
2418	Appendix F Risk management plan template examples	40

2419	Appendix G Dynamic risk assessment process	40
2420	Appendix H Benefit–Risk Assessment	40
2421	Appendix I Emergency management planning framework	40
2422	Appendix J Health & wellbeing considerations for risk management.....	40
2423	Appendix K Privacy of information.....	40
2424	Appendix L Environmental sustainability procedures.....	40
2425	Appendix M First aid and medication considerations.....	40
2426	Appendix N Knowledge, skill and experience — Leader	41
2427	Activity scope and leader requirements.....	41
2428	N.1 Safety and risk management	41
2429	N.2 Technical activity leadership.....	42
2430	N.3 Leadership and group management.....	43
2431	N.4 Decision-making and judgement	44
2432	N.5 Planning and program management	45
2433	N.6 Environment and place-based knowledge.....	46
2434	N.7 Communication and interpersonal skills.....	46
2435	N.8 Self-management and professional practice	46
2436	N.9 Outdoor living, activity and travel skills	46
2437	Appendix O Knowledge, skill and experience — Assistant Leader	48
2438	O.1 Safety and risk management	48
2439	O.2 Technical activity leadership.....	48
2440	O.3 Leadership and group management.....	48
2441	O.4 Decision-making and judgement	48
2442	O.5 Planning and program management	48
2443	O.6 Environment and place-based knowledge.....	48
2444	O.7 Communication and interpersonal skills.....	48
2445	O.8 Self-management and professional practice	48
2446	O.9 Outdoor living, activity and travel skills	48
2447	Appendix P Recognition of competence: pathways to verification	49
2448	Appendix Q Indicative experience bands and evidence expectations	49
2449	Appendix R Australian Bureau of Meteorology weather warnings and trigger points	49
2450	Appendix S Program planning matrix: leader-matching tool	49
2451	Appendix T Challenge course equipment	49
2452	High elements specific equipment	49
2453	Low elements specific equipment.....	50
2454	General equipment	50
2455	Appendix U Equipment related standards	51
2456	Appendix V Equipment load ratings	53
2457	Examples.....	54
2458	Kilonewtons (kN) of force vs kilograms (kg) of load (mass)	55
2459	Appendix W Fall factor	55
2460	Appendix X Inspections and maintenance	55
2461	Commissioning inspection.....	55
2462	Ongoing inspections	56

2463	Maintenance	57
2464	Appendix Y Safety diagrams for lanyards	58
2465	Introduction.....	58
2466	Unequal lengths or gap between lanyards.....	58
2467	Unequal length lanyards.....	58
2468	Sufficient gap between lanyards	59
2469	Single piece or sheathed lanyards.....	59
2470	Appendix Z Challenge course supervision plan	60
2471	Course diagram for visual reference	60
2472	Supervision and use.....	60
2473	Communications plan.....	61
2474	Emergency response plan	61
2475	<i>Detailed Contents.....</i>	62
2476		