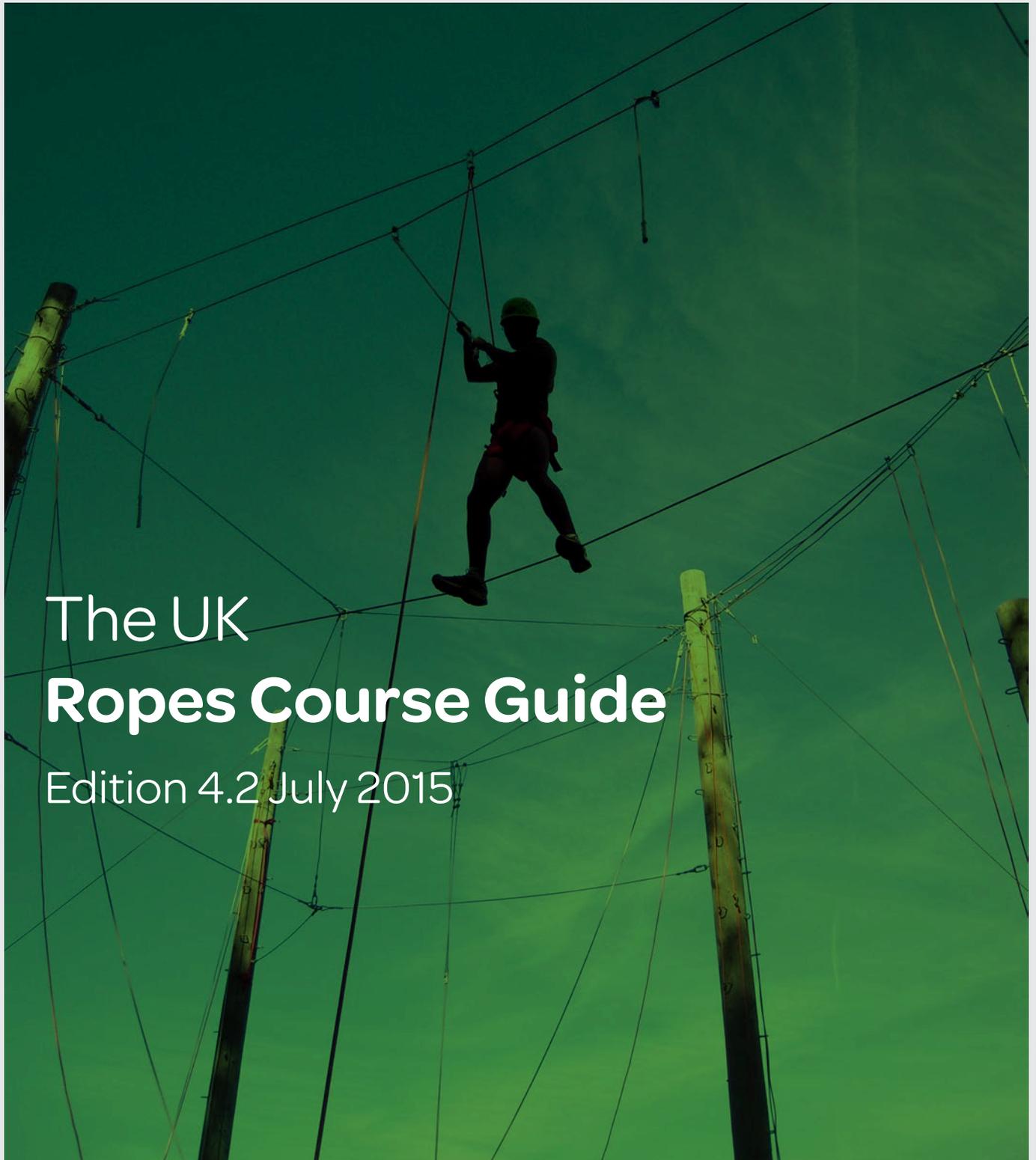




European
Ropes
Course
Association in conjunction with

AAIAC

Adventure Activities
Industry Advisory Committee



The UK Ropes Course Guide

Edition 4.2 July 2015

Contents

1. Foreword

2. Abbreviations

3. Introduction

Explanatory Note: European Norms General

4. General

Key Terms / Definitions

Key to Diagrams

Activity Systems

Support Systems

Belay Systems

5. Construction

New Ropes Courses

Explanatory Note – Low Ropes Courses

Existing Ropes Courses and Modifications

Obligations on Constructors

Obligations on Operators

Obligations on Participants

6. Inspections and Maintenance

Inaugural Inspections

Routine Visual Check

Operational Inspection

Periodical Inspections

Tree Inspections

Maintenance

Working at Height Regulations and Ropes Course Inspections

7. Operation

EN15567:2015 Part 2 Operations

Good Practice

Human Error Accidents

Working at Height Regulations and the operation of ropes course

8. Selecting competent suppliers

References and further reading

Procedures for submitting comments on this guidance

Note

This guidance is intended to assist all those involved with ropes courses to comply with EN15567:2015 which sets out the standards to be met for the installation of new ropes courses and the operation of both new and existing courses. All ropes course operators, designers, constructors and inspectors should have access to a copy of the European Standard as it contains detailed information beyond the scope of this document.

This guidance is updated from time to time in the light of practical experience and feedback from operators, designers, constructors and inspectors. Comments on the content are welcome and the procedure for submitting comments can be found at the end of the guidance.

This guidance has been compiled by:

Nick Moriarty - The European Ropes Course Association

In conjunction with:

The Health and Safety Executive

The Adventure Activity Licensing Authority and Service

Adventure Activities Industry Advisory Committee

Compliance with this guidance does NOT infer approval, endorsement or similar from any of the named contributors to this guidance and does not entitle any organisation to use their logos or similar identification or to give the impression of such.

1. Foreword

Following the publication of the European Ropes Course Standard (EN15567:2007) in March 2008 and Working at Height Regulations (2005 as amended), the Adventure Activities Industry Advisory Committee (AAIAC) requested Nick Moriarty coordinate the production of a single document for operators, trainers, builders, inspectors and constructors of ropes courses. The first edition of the UK Ropes Course Guide was published in 2008.

In March 2010, CEN decided to carry out an immediate review of EN15567:2007. This reflected a rapidly developing industry. There were no further editions of the UK Ropes Course Guide pending the publication of the revised European Standard. This edition of the UK Ropes Course Guide reflects the revised European Standard which became available in June 2015.

Although the first UK ropes courses appeared around sixty years ago, the industry has flourished in the last twenty-five years. Unlike most adventure activities, ropes courses did not evolve as a sport or a pastime; rather they were a tool for personal and team development. In this respect, they remain one of the most powerful tools for outdoor experiential learning and are used to this end the world over. The use of ropes courses as a recreational activity is a relatively recent development and yet, since the previous edition of this guide, recreational use of ropes courses in the UK has surpassed developmental use.

Initially, the fastest development in the ropes course industry occurred in the United States; however, since 1995 the greatest advancements have occurred in Europe. In 2003, the European Ropes Course Association (ERCA) was formed and membership has increased rapidly. The Association for Challenge Course Technology (ACCT) was formed in the United States in the early 1990's. ERCA and ACCT cooperate in sharing information in the interests of the wider ropes course community.

Despite the high potential for risk, there is no specific regulation of the ropes course industry in the UK, although operators are subject to general legislation such as the Health and Safety at Work Act and the Management of Health and Safety at Work Regulations. However, the European Standard is a successful attempt to collate good working practice from across the European Union. ERCA has also been instrumental in collating good ropes course practice, accident data and remains at the forefront of industry developments.

Ropes Courses are currently out of scope of the Adventure Activities Licensing Regulations and so providers of high or low ropes courses (who are not required to hold a licence for other activities that they offer) do not require a Licence for this activity. However, the Licensing Authority and Service also consider the safety management of non-licensable activities, as a part of the providers culture of safety overall, in reaching the decision on whether to issue a licence. They will refer to this guidance when determining whether or not good practice is being followed.

1. Abbreviations

Solely for the ease of reading, the following abbreviations are used.

| Full Name | Abbreviation |
|--|----------------|
| Adventure Activities Industry Advisory Committee | AAIAC |
| Adventure Activities Licensing Regulations 2004 | AALR |
| Adventure Activities Licensing Service | AALS |
| European Ropes Course Standard EN15567:2015 Part 1 Part 2 | EN |
| European Ropes Course Association | ERCA |
| Health and Safety | H&S |
| Health and Safety Executive | HSE |
| Health and Safety at Work | HSW |
| Lifting Operations and Lifting Equipment Regulations | LOLER |
| Personal Protective Equipment | PPE |
| United Kingdom | UK |
| Work At Height Regulations 2005 (as amended) | WAHR |

3. Introduction

Those using this document should do so in conjunction with:

- European Ropes Course Association (ERCA) Standards
- EN15567:2015 Part 1 & Part 2 (EN)
- Health and Safety at Work Act 1974 (HSW)
- Work at Height Regulations 2005 (as amended) (WAHR)

The document summarises key information about:

- Construction
- Inspections & Maintenance
- Operation
- Choosing suppliers

Explanatory Note: EN General

In 2003, Germany initiated the EN in an attempt to formalise the standards of the sector. UK representation, on the committee of experts, was poor initially but by the end of the process the UK had its interests represented proportionately and the CEN committee elected a UK expert (Nick Moriarty) as Convenor.

The first edition of the EN was very much a compromise as it endeavoured to strike a balance between very different (national) ropes course cultures. The new edition is more comprehensive and accurately reflects, what has become, a united European industry.

Part 1 of the EN, relating to construction and safety requirements, is objective and measurable. Part 2, relating to the operations, remains largely subjective.

4. General

Constructors and operators have duties under general health and safety legislation. This guidance document does not deal with these general duties and competent advice should be sought regarding these and other general legal obligations. However, compliance with this guidance will generally be sufficient to comply with these duties as they relate to ropes courses.

Compliance with the EN is not a legal requirement. However, it may be referred to by the health and safety enforcing authorities when considering how a constructor or operator has discharged their health and safety duties. Therefore, it is important that operators are familiar with the standard.

EN does not seek to differentiate between high and low courses. Generally, a high ropes course will rely on an assisted belay, collective or an individual safety system (see key and diagrams below). A low ropes course is the generic term for elements close to the ground (rarely more than 1 metre). Therefore, the term low ropes course may also include an assault/obstacle course and initiative exercises. An assault/obstacle course is a series of free standing or linked elements where the emphasis is normally on it being a physical challenge (team or individual). Initiative exercises are generally single challenges that require team participation and, as the name implies, the emphasis placed on participants using their initiative.

Note: EN now specifically includes zip lines.

Key Terms / Definitions

Ropes Course

Constructed facility consisting of one or more activity systems, support systems and, if needed, belay and/or safety systems with restricted access and requiring supervision.

Key to diagram 1 below:

- **Activity Systems** Include:
 - A1 Elements
 - A2 Platforms
 - A3 Access
- **Support Systems** include:
 - S1 Poles, trees, buildings, rock or other supporting structures
 - S2 Foundations, anchors
 - S3 Guy Lines
- **Belaying Systems** include:
 - B1 Assisted belaying System
 - B2 Safety line
 - B3 Individual Safety System (categories A to E)

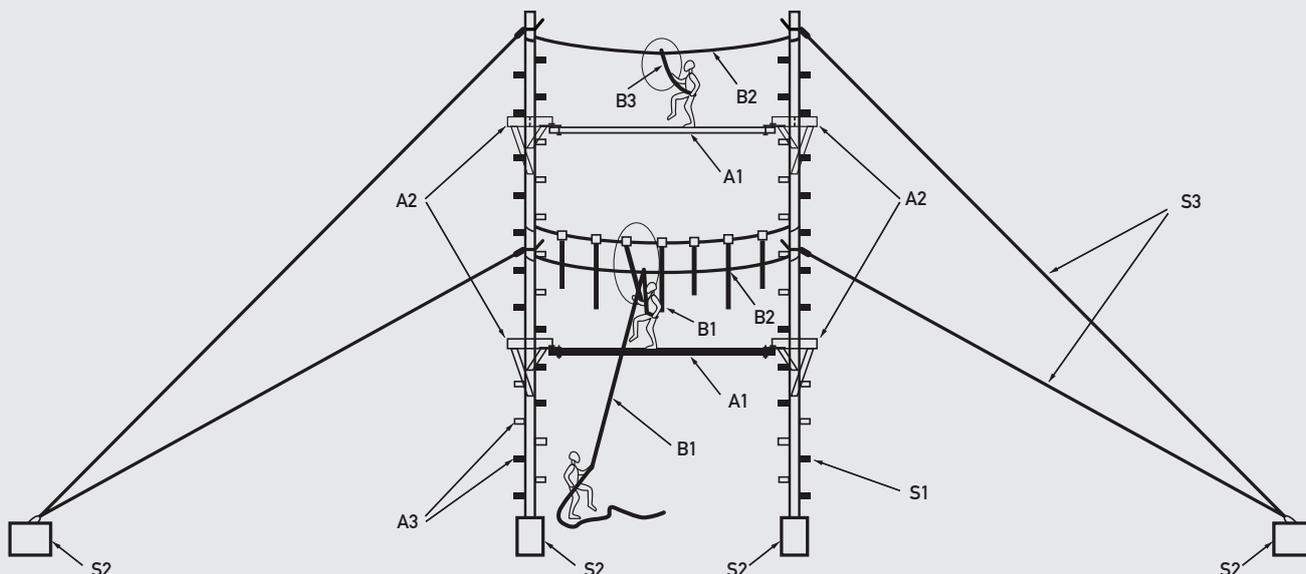


Diagram 1: Example of a ropes course

Assisted belay system

Belaying system where the participant is secured by at least one person

Individual Safety System Categories A-E - Component(s) connecting the harness to the safety line (see examples for each later below)

Category A - Self-closing device which is not automatically self-locking. Examples include self-closing or screw gate karabiner.

Category B - Self-locking device. Examples include self-locking karabiners.

Category C - Interlocking device to reduce the likelihood of unintentional detaching from the safety system.

Category D - Interlocking device to prevent unintentional detaching from the safety system.

When used in accordance with the manufacturer's instructions this technology can significantly reduce the levels of training, supervision, information and/or instruction required to maintain appropriate levels of operational safety.

Category E - Device that is permanently attached, and can only be opened with a tool.

When used in accordance with the manufacturer's instructions this technology can significantly reduce the levels of training, supervision, information and/or instruction required to maintain appropriate levels of operational safety, NB appropriate monitoring and rescue arrangements are still necessary.

Collective safety system - System which can protect at least one person and once properly installed or erected, does not require any action by the user to make sure it will work

Interlocking device - Device with at least two gates whereby an action on the one gate results in an effect on another gate

Mobile ropes course - Facility that is transportable

Supervising adult - Person aged 18 or above who is either the parent/legal guardian or has the authority of the parent/legal guardian of the child participant(s). To have undertaken adequate training to accompany the child participant(s) and is in a position to see the child participant(s) and intervene verbally

Critical application - Application where the consequences of a failure are likely to lead to a serious injury or death

Primary Brake - Braking system engaged during normal operation [of a zip line] to arrest the participant which can be either active or passive

Active braking system - Braking system [on a zip line] operated by the participant or another person

Passive braking system - Braking system [on a zip line] operating without manual intervention. Examples are bungee, gravity, net, water, impact absorbers, impact absorbent floors, landing mats, etc.

Emergency braking system - passive braking system [on a zip line] that controls participant deceleration upon failure of the primary brake without causing serious injury or death

Routine Visual Check - Inspection intended to identify obvious hazards that can result from vandalism, use or weather conditions

Operational Inspection - Verification carried out by an inspection body at least once per calendar year and within a maximum interval of 15 months intended to establish the level of safety of the ropes course

Level 1 supervision – Where an instructor can physically intervene to prevent a misuse of the individual safety system that would otherwise lead to a significant risk of serious injury or death.

Level 2 supervision – Where an instructor is able to see the participant and intervene verbally.

Level 3 supervision – Where a participant is in a position to alert an instructor of their need for assistance, who is able to respond promptly to the alert and provide adequate assistance.

Inspection body - EN ISO/IEC 17020 defines inspection bodies as type A, type B and type C which are covered by appropriate professional liability insurance. The classification A, B, C denotes the level of independence – not competence.

Explanatory Note: EN: Levels of Supervision

Inevitably there is some cross-over between the three levels of supervisions but as a general rule those on an assisted belay ropes course will be under Level 1 Supervision. The level of supervision required on other types of safety system will vary depending on the type of safety system. Additional considerations include the experience of participants and the amount of instruction they have received. Safety is achieved through a combination of experience, technology, instruction and supervision. Any compromise in one area will require a proportionate enhancement in another.

There may be crossover between the various levels of supervision. For example, an assisted belay ropes course may form part of a school's curriculum. As a result, students may participate on the ropes course every week for an entire school year. Initially they may be taught how to belay under very close supervision (Level 1 Supervision) but as their experience and competence grows so the requirement for high levels of supervision may diminish and Level 2 Supervision or Level 3 Supervision may be perfectly adequate. Similarly, those who have used a self-belay course regularly may not, under certain circumstances, be required to begin with Level 2 Supervision. Conversely, for example, a risk assessment for people with special needs on a self-belay ropes course may well identify that increased supervision levels are required.

Ratios of instructors to participants need careful consideration. Differences in the experience of instructors, participants, weather conditions, aims of the session and the demands of particular courses produce far more variation than can be adequately managed by a simple ratio. The only ratio within the EN, relates to those on an assisted belay ropes course where there is a requirement that an instructor should not be responsible for more than 4 people at height at any time. In essence this means that an instructor cannot supervise more than four belayers simultaneously under optimum circumstances of competence, experience, etc. It should be emphasised that this is a minimum ratio (contained within a minimum standard) and that for inexperienced participants a more conservative ratio (i.e. fewer belayers per instructor) should be adopted. Alternatively, the methods of supervision and the equipment used, may mean that a high ratio, even with novice belayers, is acceptable.

Recommendations on supervision, made by the Adventure Activity Licensing Service (AALS) that relate to the use of ropes courses by Licensed providers, can be found in the Appendix to this guide

Assisted Belay Safety System



Individual Safety System Category A

Self-closing device which is not automatically self-locking. Examples include self-closing or screw gate karabiner.

Examples only:

ISC Spectre
"snap-gate" karabiner



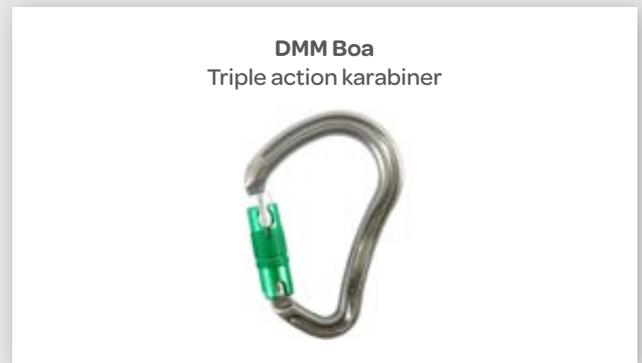
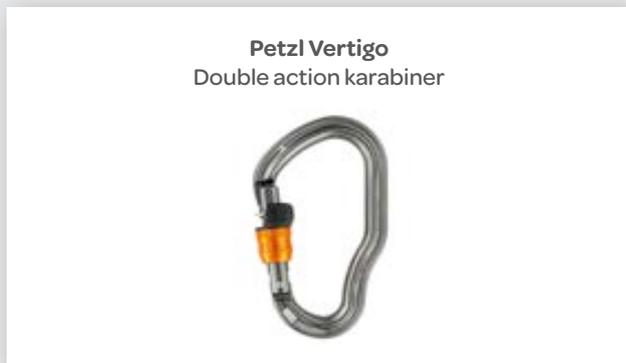
Camp HMS
Screw Gate Karabiner



Individual Safety System Category B

Self-locking device. Examples include self-locking karabiners.

Examples only:



Individual Safety System Category C

Interlocking device to reduce the likelihood of unintentional detaching from the safety system. An “Interlocking Device” is a device with at least two gates whereby an action on the one gate results in an effect on another gate

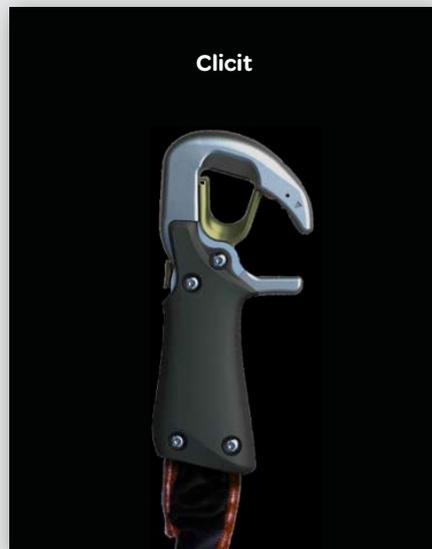
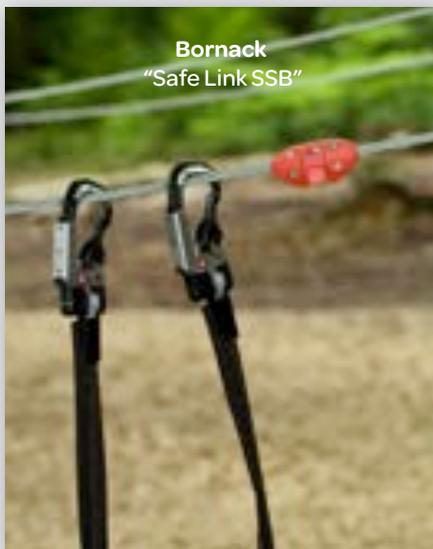
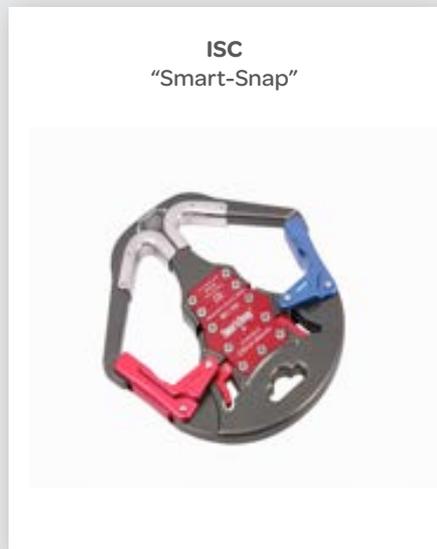
Example only:



Individual Safety System Category D

Interlocking device to prevent unintentional detaching from the safety system. An "Interlocking Device" is a device with at least two gates whereby an action on the one gate results in an effect on another gate

Examples only:



Clicit may also be configured as a Category C device

Individual Safety System Category E

Device that is permanently attached, and can only be opened with a tool.

Examples only:



Collective Safety System



Another example of a Collective Safety System might include airbags

Low Ropes (spotting)



Copyright RCD 2015

Zip Lines

Harnesses may take a variety of forms



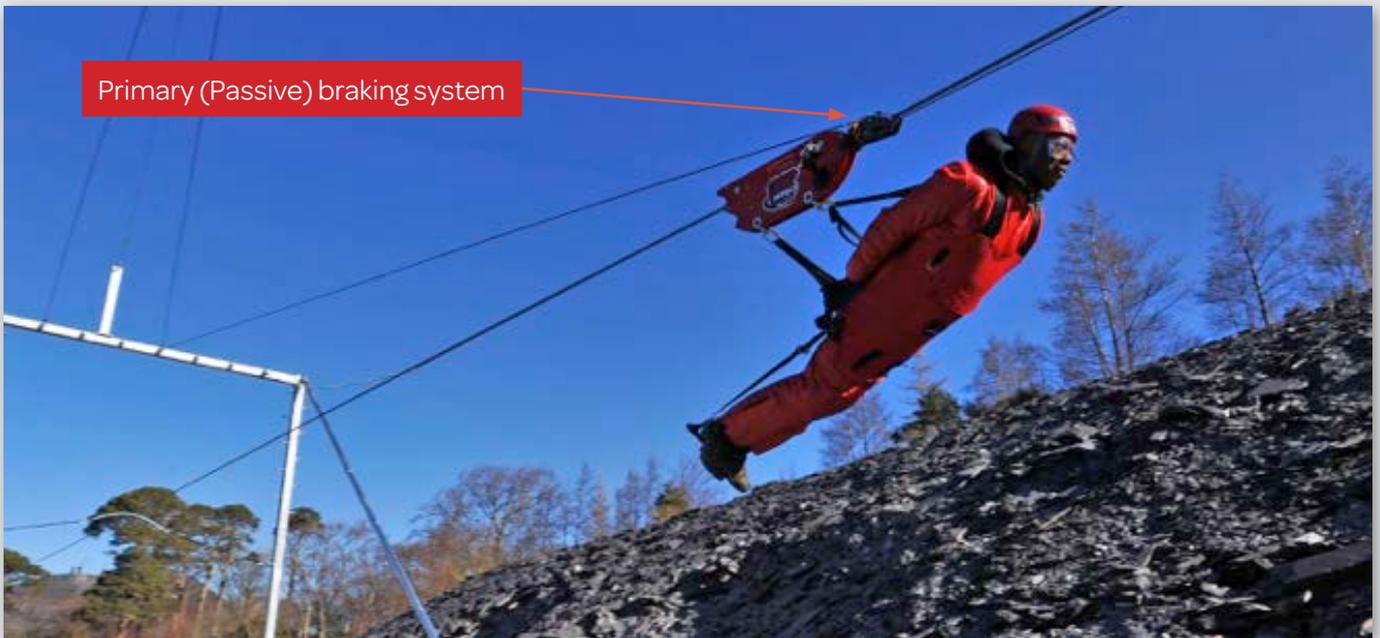
Copyright Zip World Ltd 2015



Emergency brake (e.g. spring covered by foam) must be passive

Primary (Passive) Brake. An appropriately prepared and maintained ground surface can provide the primary brake.

Copyright Go Ape 2015



Primary (Passive) braking system

Copyright Zip World Ltd 2014

Hazards and Risks

There are some inherent risks associated with all ropes course activities. Operators should make participants aware that these risks exist but that through careful management they are tolerable.

Many recreational course operators ensure participants complete an “acknowledgement of risk” form and for certain operations this may be prudent. The appropriateness of this will depend on the relationship between the participants and the operators. The identification of risks should be clear and allow realistic, informed and uninhibited options to any participants, who, as a result, may wish to decline the activity. It is worth noting that for some the risks may not be truly apparent until a participant has seen or even started an activity. See section: Acknowledgement of Risk

There are a variety of hazards that may be found on a ropes course. It is important to appreciate that no two facilities will have exactly the same hazards and the hazards may vary with the participants. Some common hazards found on a ropes course may include:

- Falling from an activity system to the ground;
- Falling, sliding or swinging into something solid (also common hazards on a low ropes course);
- Falling from one activity system onto another, or another part of the same;
- Objects dropped from a height;
- Rope burn - which may in turn lead to a more serious incident such as letting go of a belay rope;
- Entanglement in a rope or net – there may be a higher likelihood when helmets are worn;
- Hair, finger or clothing entrapment in belay devices and zip lines;
- Lower limb injuries from bouncing, landing on zip lines.

5. Construction

Traditionally, ropes courses were constructed by enthusiastic outdoor instructors and the original Outward Bound™ courses were good examples of this. Typically, builders were climbers and often had some complementary skills such as a familiarity with sailing and associated hardware (e.g. rigging materials like shackles and cable). Courses were erected in trees and the builder was invariably responsible for operating the course, so they naturally understood how it was best managed safely.

As the commercial value of ropes courses became widely recognised so construction techniques became more sophisticated and considered. Many UK courses are now built on poles but they can be found in forests using trees as supports for aerial walkways, underground in disused mines or even in shopping centres, sports halls, in bridge arches and attached to rock faces.

Note: It is worth noting that the effectiveness of pole treatment (timber preservative) processes has declined since 2004 following the introduction of various European restrictions that prohibit the use of certain chemicals and procedures previously adopted. Timber poles that may previously have provided 25 years' safe use may now have a far shorter "life span". Meticulous inspection by a competent person is therefore very important. There have been a number of very serious pole failures in recent years. It is very difficult to determine how well a pole has been treated; however, in the UK, suppliers to the telecommunication and electrical industries, are normally able to provide poles conforming to the highest standards. There are also a number of supplementary preservative processes that can be applied after installation. Indeed, such processes (e.g.: Boron Rods) can significantly enhance longevity. Specialist advice should be sought

New Ropes Courses

Explanatory Note: Low Ropes Courses

EN does not differentiate between high and low ropes courses. Appropriate care should be taken in ensuring that a low ropes course is structurally sound, that landing areas and surfaces are suitable and that they are operationally fit for purpose. It would of course be inappropriate to expect a constructor of a "spider's web" to provide engineering design calculations; however, it would be very important for the operator of a "spider's web" to be in possession of instructions on how the activity should be run. In terms of an inaugural inspection, as defined by the EN, this should not be considered mandatory for low ropes courses.

Existing ropes courses and modifications

European Standards do not apply retrospectively so existing courses need not conform to EN. They must however be safe and in the event of an accident the onus will be on the operator to demonstrate it was safe.

If operators with existing courses decide to make new additions to their facility then these additions should conform to the EN. Like for like works do not require an inaugural inspection (e.g. the replacement of belay cables, ropes or the replacement of a rotten platform); however, substantive changes do. Modifications to a course (that has already had an inaugural inspection in accordance with the EN) will require an independent inspection – see definition.

Obligations on Constructors

The manufacturer or the installer of a ropes course must provide a product manual containing at least the following information:

- A technical description of the facility and its individual components (material certificates etc.);
- Instructions relating to the correct use of the course. This should include the specification for all associated PPE;
- A certificate of conformity to EN15567: 2015-1;
- A manufacturer's declaration, containing at least:
 - Design calculations;
 - Normative references;
 - Exclusions of liability, if any;
 - Instructions for maintenance specifying the frequency and method by which equipment is inspected and maintained.

Obligations on Operators

- To ensure the following documentation is maintained. This will include:
 - Name and address of the owner and operator;
 - Document indicating the annual inspections carried out by an inspection body;
 - List of the site personnel, their function and qualification/competence;
 - Evidence of public and employers liability insurance;
 - Daily inspection records. The daily sheets should be kept for three years;
 - Accident reports;
 - Personal protective equipment inspection register and operation log;
 - Risk assessment and management plan which shall be drawn up by the ropes course operator;
 - Instructor and rescue training documents which demonstrate instructor competence in their role;
 - Participant safety instructions;
 - Manufacturer's product manual;
 - Safety and emergency plan;
 - Current tree assessment report (if relevant);
 - Current inspection report carried out by an inspection body;
 - Safety instructions.

Obligations on Participants

The age and experience of participants will have a bearing on their obligations. Operators must consider to what extent participants are able to fulfil their obligations. Adequate provision must be made for participants unable to fulfil their obligations.

- Comply with safety instructions and briefings;
- Bring any safety concerns to the attention of ropes course staff;
- Be careful of their own safety and the safety of others.

6. Inspections & Maintenance

A comprehensive inspection regime is an essential part of ensuring that any ropes course is fit for purpose and that the deterioration of materials and equipment on a used facility is detected before failure occurs. With older ropes courses now reaching the end of their serviceable life, and many new courses receiving vast numbers of recreational users, there is an ever increasing requirement for a professional approach to inspection processes. Even with ropes courses at smaller venues catering for comparatively small numbers of participants, inspection and maintenance needs to be systematic and on-going.

The constructor of a ropes course must provide instructions for maintenance and inspections (including frequency) as well as a comprehensive set of drawings and design calculations.

Inaugural Inspections

The EN requires that when a new ropes course is built, but before it is used, an inaugural inspection must take place. This may only be done by a completely independent Inspection Body. By definition, such an inspection body will have no commercial interest in the construction or maintenance of ropes courses, nor any fiduciary interest in the facility to be inspected or other conflict of interest. They must also have their own public liability insurance for such work. Crucially however they must be competent and operators should take all reasonable care to ensure that an inspector is competent.

The inaugural inspection involves:

- **Visual Inspection;**
- **Checking that the design calculation and / or tree strength assessment exists;**
- **Check the current arboreal assessment to ensure that all trees used as a support system have been judged safe to use;**
- **Verification that the course has been constructed in accordance with the design drawings (e.g. guy angles). Otherwise referred to as an Assessment of Conformity to Design;**
- **A functional test carried out at height by an inspector (this therefore means the inspector must have a comprehensive knowledge of courses and how they are used). They should also be qualified and competent to work at height.**

Routine Visual Check

This is done before opening of the ropes course each day it is to be used. This involves a visual check of critical components, an assessment of the general appearance of the course and surrounding environment, looking for such things as storm blown debris or damage, vandalism, hazards arising from unfinished or interrupted maintenance, etc. This is often done by an appropriately trained instructor. These daily inspections must include PPE.

Operational Inspection

This will be carried by the operator every 1-3 months or as directed by the constructor. Generally speaking the constructor's recommendations should be considered a minimum; however, operators may consider more frequent inspections are required – based on their empirical evidence.

Examples of visual and Operational Inspection are cleanliness, condition of ground surface, sharp edges, missing components, excessive wear (of moving parts) and the structural integrity of the safety system (e.g. condition of cables).

An Operational Inspection should be as comprehensive and thorough as a Periodic Inspection – the only difference being the latter has a greater degree of independence. This requires inspectors to be as competent and knowledgeable as they should be for a Periodic Inspection. For example, they may need to determine the degree of rot in a timber pole and decide, based on industry standards, whether it is acceptable. A thorough knowledge of wire rope discard criteria is invariably essential for an Operational Inspection.

Periodical Inspections

Periodical Inspections should be carried out by an Inspection Body (see definition) at least each calendar year and with a maximum interval of 15 months. The purpose is to establish the overall level of safety of equipment, foundations and surfaces.

The inspection body may also have a maintenance and construction capability but this should be a separate part to their business and not interfere, or have influence on, their role as an Inspection Body.

The process should include:

- **Visual inspection;**
- **Functional inspection;**
- **Determine the replacement state of worn components.**

and should be done according to the manufacturer or supplier's instructions for maintenance.

A comprehensive report should be provided as part of this inspection; this should include:

- **Date and place of the inspection;**
- **Who carried it out;**
- **A summary of what was inspected;**
- **Results of the inspection indicating any defects observed;**
- **Recommendations for any remedial actions;**
- **Assessment, whether there are any misgivings about further use of any of the facility;**
- **A recommendation on re-inspection;**
- **A copy of the inspection report should be kept with the technical documentation of the ropes course.**

Tree Inspections

If a ropes course is built in trees then the trees should be inspected prior to the inaugural ropes course inspection. Thereafter the trees should be inspected at least each calendar year and with a maximum interval of 15 months. The frequency of inspections and the experience of the inspector, will relate to the species, health, location and age of the trees. If in doubt an expert tree surgeon (arboriculturist) should be consulted before the tree in question is used. However, arboriculturists are not usually expected to be experts on ropes courses.

Trees may also need to be inspected after a severe storm or appearance of fungus, or obvious deterioration in the health of the tree.

Tree inspection reports should be retained.

Maintenance

Inspections and maintenance are intrinsically linked. Minor maintenance is often best done by the operator during the routine visual and operational inspection. This may include replacement of maillon-rapides, shackles and small ropes. More significant maintenance, for example the replacement of cables, poles and platforms will usually be carried out by a professional ropes course construction company.

Working at Height (Amended) Regulations 2007 (WAHR) and Inspections

The HSE publication relating to guidance on the application of the Work at Height Amendment Regulations to persons instructing climbing and caving (2007) can be found in a PDF document by visiting the following link:

<http://webcommunities.hse.gov.uk/connect.ti/adventureactivitiesnetwork/view?objectId=554181>

Note: The European Ropes Course Association (ERCA) and EN15567: 2015 can be considered as equivalent “established good practice”.

During routine visual checks, instructors / inspectors may therefore use the same PPE and practices as participants (would normally use) provided they are going around or over the facility in the same way that participants would normally use the course. This assumes that established good practices are followed.

During all other forms of inspections, maintenance and construction work then practices consistent with Working at Height Regulations, are required. This may include the use of industrial harnesses and other industrial PPE and may involve the use of dual rope techniques. It is beyond the scope of this manual to provide the details of WAHR and maintenance techniques but inspectors should be conversant with these regulations before carrying out their work. Additional training is likely to be required for those wishing to fulfil such roles. There are a number of specialist companies that are able to provide such training.

It is worth noting that Under Regulation 6 of the Work at Height Regulations, there is a hierarchy of control for determining how to work at height safely. The hierarchy has to be followed systematically and only when one level is not reasonably practicable may the next level be considered. It is not acceptable to select work equipment from lower down the hierarchy (e.g. personal fall arrest, such as harnesses and lanyards) in the first instance. Wherever possible the need to work at height should be minimised. This may be achieved with a carefully designed ropes course. Collective safety systems always take priority over individual safety systems and the use of a Mobile Elevating Work Platform (MEWP – colloquially known as a “Cherry Picker”), where reasonably practicable, should be considered before the use of personal fall arrest.

Vertical access, in particular, requires careful consideration. For the purposes of maintenance, attachment to climbing staples as a means of fall arrest is inappropriate because they are (normally) untested, unapproved and unquantifiable in terms of their security and dependability as anchors. Generally, an industrial device designed for use on vertical cables or rope is required. Alternatively, inspectors can be belayed (up and down) using a single rope running through a rated top anchor by an assistant.

Instructor accessing with industrial PPE to carry out periodic inspection



Copyright Capstone Inspections 2015

7. Operation

This section relates to EN15567:2015 Part 2 Operations

New and Existing Courses – The EN is relevant to all operations on both new and existing ropes courses.

All ropes course operators are encouraged to refer to EN15567: 2015

Good Practice

Identification of associated risks and the development of operating procedures.

An assessment of the hazards and risks, specific to each element should be done. This may be no more than an identification of the crux areas, potentially serious sections, or known accident black spots. Additionally operators should investigate accidents and near misses. These assessments can be used to develop appropriate operating procedures that balance the excitement or other benefits of the element with their safe use. These procedures will then guide the training of instructors and the briefing of participants.

Participant attitude, involvement and behaviour. Participants have certain obligations; however, these will vary depending on their age and experience.

Participants should be briefed to be careful about their own safety at all times and that of others. They should be told to comply with all safety instructions and be reminded as and when necessary.

Participants should be encouraged to be as fully involved in the measures to ensure their own safety as the provider feels is reasonable. Where possible participants, even young participants, should be encouraged to carry out as much of the relevant procedures as they can with the instructor providing a double (visual and where practicable physical) check, thus reducing the risk of a human error accident. This may well influence what those procedures are and what equipment is identified as the most appropriate.

No person should take part in any ropes course activity whilst under the influence of alcohol or drugs. Participants should be reminded that certain prescription drugs also inhibit safe participation in a ropes course activity.

An identification of appropriate instructor competence

This is likely to be the biggest single factor influencing the safety of these activities. There must be a system of identifying and verifying the required competence of instructors and their assistants. Technical competence is essential but so too are measures to minimise human error and the consequences of human error.

Instructor Induction

An induction process is likely to be required. This would need to address, amongst other things, control measures for the hazards and risks identified above. It must be clear who is to conduct this induction, what it covers, what form it takes, etc. Details of the induction should be retained. Detailed knowledge of each element is likely to be one of the major safety factors in the delivery of these activities.

Instructor Training

This may be in addition to instructor induction. Operators should ensure that instructors are equipped with the skills necessary to deal with any reasonably foreseeable and relevant occurrences on each element used. This will often require training on the elements themselves and should include at least some practical incident and accident scenarios and responses. Details of the training should be retained. Instructors should generally

wear the same equipment as participants during their training and when giving demonstrations. Rescue techniques should be practised regularly to ensure familiarity.

Any qualification system for ropes courses should address the following aspects of training:

- Those overseeing training are competent to do so;
- Full records are kept of training courses, including the syllabus followed;
- Full records are kept of instructor's experience;
- There is a detailed assessment of training practices and instructor's competence.

Identification of group competence

Increasingly, ropes course activities are offered as 'one-off' activities to a wide range of groups, from primary schools to corporate groups or members of the public - frequently in a recreational capacity. A policy of identifying the competence, experience, special needs and physical and medical condition of the participants is advisable. As a result, it would be equally acceptable to either:

- Select the elements on the basis of the client group; or
- Select the client group on the basis of the elements available.

With no previous knowledge of a participants previous experience and competence then operators should assume that neither exists. This is particularly important in relation to children.

Acknowledgement of risk

A policy of informing the participants of the nature and extent of risks and what to expect from the activity is encouraged. This is particularly important where the participants may have no concept or prior knowledge of this type of activity.

It may be unreasonable to expect a ropes course operator to detail the hazards in their primary advertising. However, it may be reasonable, for example, to leave this information until the point of booking or even (in some cases) until arrival. The identification of risks should be clear, and allow realistic and uninhibited options to any participants who, as a result, may wish to decline the activity.

Identification of element options

It may be beneficial to have alternative elements or alternative start or finish points. In some cases, the degree of difficulty or the duration of the exercise or both can be determined by varying these. On the day, the most appropriate elements should be used depending on factors such as the weather conditions, nature, experience and expectations of the group, the number and experience of staff available, etc.

Human Error Accidents

Serious accidents on high ropes courses are rare. This would seem to suggest that the ropes course industry is getting most things right most of the time. Of the accidents that have occurred, human error is a leading cause. Human error accidents are caused by a wide range of factors including incompetence, task over-load, fatigue, etc. but most importantly distraction of one sort or another. They may be more difficult to identify than mechanical failure and therefore more difficult to prevent.

- **Ensure instructor competence.** Competence should be gained by appropriate training and experience as specified by competent bodies and evidence kept in the form of an appropriate qualification, training record or similar.

- **Deploy staff carefully.** It is almost inevitable that any instructor doing any highly repetitive task will eventually lose concentration, their mind will wander, and they will make a mistake. If the task is safety related then the consequences can be catastrophic. Similarly, deploying the same instructor to the same element day after day is likely to result in the same 'task fade'.
- **Avoid long periods of the same repetitive task.** Staff should be deployed so as to minimise excessive exposure to repetitive tasks. One solution is to make sure they have plenty of breaks. However, an alternative approach is to ensure the instructor moves on to a different task at frequent intervals. A different repetitive task is better than keeping to the same one.
- **Avoid element specific instructors.** Training instructors so that they can run different elements is likely to make the experience more rewarding as well as safer for the participants and the instructor. Operating a 'group instructor' system means one instructor stays with the same group of participants through their experience. An instructor will learn what participants are like, who needs extra encouragement or extra attention, who they can trust and who needs particularly close supervision.
- **Use mental checklists.** Preparing a participant for some activities can be a multi-step process. Part of an instructor training scheme could be to encourage instructors to run through a "mental" checklist. This could be a sequential check of the safety 'chain', or following some convenient mnemonic. The key thing is to avoid saying 'GO' merely because the last step in the sequence has been completed without first checking that all the steps have been completed.
- **Use participant participation.** The participant is the person present with the greatest vested interest in their own safety. It makes sense, therefore, to include them in the process of ensuring their own safety. The participant 'does' and the instructor 'checks' is particularly relevant to supervision levels 1 and 2. Two brains and two sets of eyes are invariably better than one: the so-called duality principle. Conversely, a 'single point failure' of a safety management system is where just one error by just one person results in a catastrophic failure of the entire system.
- **Be participant centred.** The duality principle (above) may require operators to revise their procedures, the equipment they use and the way they use it so that the participant can understand and play their part in the process. Involving them in the process makes the activity more satisfying for the participant but it also makes it safer. A double check by another instructor may also enhance safety.
- **Avoid instructor task over-load.** The human brain is not designed for multi-tasking and is not good at it. One or all tasks always suffer. If instructors are involved in attaching participants to a harness, for example, they cannot reliably supervise the other participants doing something else.
- **Avoid concentration loss.** The biggest single cause of human error accidents seems to be that the instructor was distracted. This might be because they were distracted by some other relevant task and the risk of this is increased by making the instructor responsible for multiple tasks. However there have been accidents, some serious, that occurred because the instructor was simply focused on some totally unrelated issue: they were day-dreaming. Practices and procedures need to be considered in terms of keeping instructors focused.

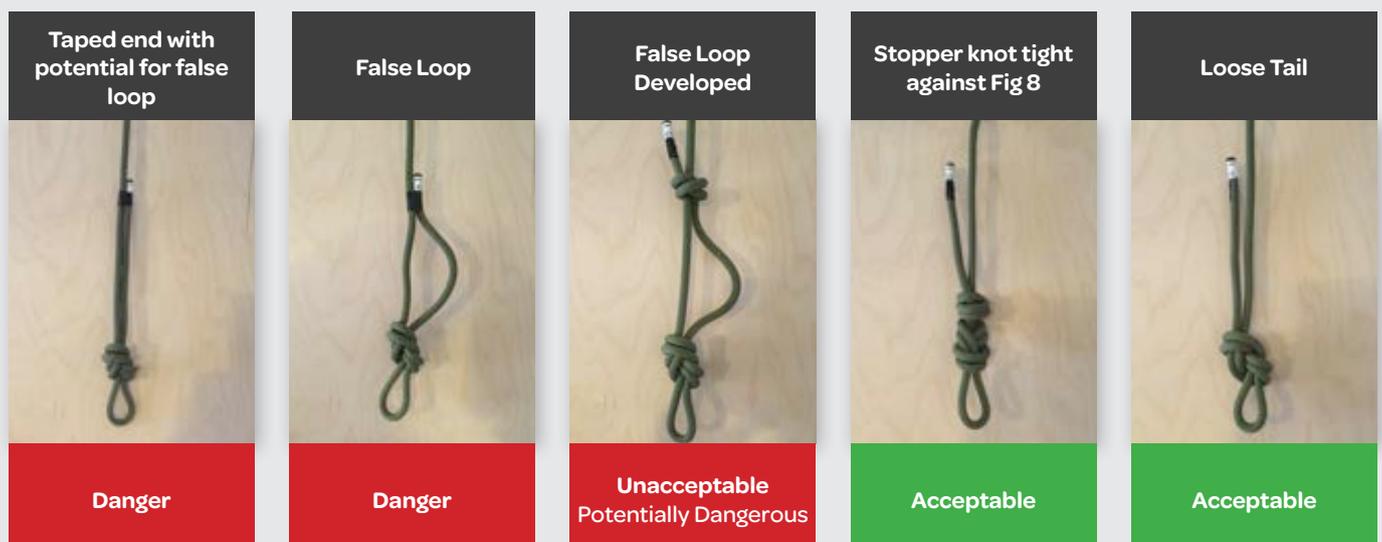
- **Monitor all staff from time to time.** An effective measure, to prevent a wide range of human error accidents, is for management to monitor staff routinely in their normal working environment.
- **Respond to poor practice.** Individual cases of poor practice, that are observed, can be dealt with immediately. More widespread cases of the same poor practice would lead to adjustments to initial training or refresher training procedures.
- **Nurture your staff.** The fact that instructors see management taking a real interest in safety reinforces to them that their management appreciates that what they do on a daily basis is important. Conversely, if instructors feel that management do not care then gradually instructors will not care either. If instructors don't care then they will make mistakes, and if they make mistakes sooner or later these will result in accidents.

During training it is important that adequate consideration is given to equipment and procedures that minimise the likelihood of a human error failure.

Loose Ends

The loose (tail) ends of a knot (e.g. double figure of 8 or similar) should not be taped or in any way fastened to the rope other than by means of a properly tied stopper knot that should lie snugly against the main knot. Otherwise, a false loop can easily develop and into which an attachment can inadvertently be made.

It is considered poor practice to keep a safety critical knot tied permanently. Knots should be released, the rope inspected and retied regularly. Lanyards with sewn terminations are preferable for applications that require regular and repeated use or at least terminations that comply with EN354.



“Rubber retainers” on karabiners

Some operators use karabiners with a rubber type retainer which helps to locate the rope / lanyard and prevent cross loading of the karabiner / gate. Care should be taken to ensure any such device is correctly attached. Unless carefully checked, it is possible that they can give the impression of being attached when, in reality, the rope / lanyard is not attached at all to the karabiner but only to the rubber component. A karabiner with a “captive eye” is one means of ensuring correct loading on a karabiner and is easier to check.



Equipment

This includes both personal and group equipment. This will depend on the nature of the elements, the abilities of the group, the weather and other factors. However, certain aspects may become company policy. For example, whether to use sit harnesses or full body harnesses on high ropes elements or helmets on low challenge course elements;

- The choice between the types of harness should be carefully considered. In recent years there has been a move towards the use of full body harness on high ropes courses; however, it is too simplistic to suggest a full body harness is always preferable. The most important consideration is that a harness fits well and is secure;
- There may be an unacceptably high risk of head injury, which could be adequately reduced by wearing a helmet. The most appropriate helmet may not be a climbing helmet. The risk of head injury may be low and out-weighted by the need for clear communications, visual recognition of participants, etc. and so helmets may not be appropriate. In either event, the operating procedures should make it clear if there is an inflexible policy. Similar decisions will be necessary about the need for particular footwear, outer clothing, etc;
- Other pieces of clothing or equipment such as gloves may be considered useful but not essential;
- Group equipment may also be affected by the venue’s proximity to other resources such as centre buildings, first aid room, etc;
- It may be appropriate to list both group and personal equipment under headings such as ‘must have’ and ‘may have’;

- Because equipment requirements may vary from day to day and group to group it will need to be clear who decides what clothing and equipment is necessary for a particular session or a particular day. It will also need to be clear who checks this, when and where they do it, and what they need to do if it is not correct or acceptable;
- PPE should be checked in accordance with manufacturer's recommendations and a record of this should be kept;
- Consideration should be given to dealing with participant's personal clothing. A list of what to wear will be helpful. There should be a plan (or supply of spare clothing/overalls, etc.) to accommodate participants who arrive improperly dressed for the activity;
-
- Equipment should be used in accordance with the manufacturer's instructions. Where there might be a requirement to deviate from these, confirmation of acceptance of this should be gained from the manufacturer or their distributor.

Weather forecast

A policy for obtaining and interpreting weather forecasts may be needed. It must be clear who is to do this, when it is to be done, and what action they will take for a range of possible forecasts. These could include, but may not be limited to, modification or selection of the elements; modification of clothing, footwear or equipment; change of venue, cancellation and / or return of payment. If the addition of another instructor is the response then there must be a system whereby suitable persons can be deployed in the given time span, etc. Lightning strikes pose a real threat to ropes course users. The following website provides a "real-time" link to lightning strikes in the UK.

<http://www.netweather.tv/index.cgi?action=lightning;sess=>

ROSPA also provides some interesting information on lightning strikes: <http://www.rospa.com/leisuresafety/adviceandinformation/leisuresafety/lightning.aspx>

Numbers of participants per element

It may be acceptable to specify this generally (i.e. for the whole course) or specifically (for each particular item). An indication of whether this can be varied and if so, by whom? Constructors have an obligation to provide this information under the requirements of the EN.

Participant's size and weights may also be a factor in determining whether or not they can participate in an activity.

Briefings

There will generally need to be a policy on the existence, content and presentation of a safety briefings. This may be part of a generic safety briefing (at an outdoor centre for example), specific to the ropes course session in its entirety, or each element. Participants should be advised on what they can do to help ensure their own safety. It may not be appropriate for instructors to deliver all relevant instructions in one briefing.

On low or other isolated elements, the chosen method of protection may be 'spotting'. This will generally need to be explained to participants in some detail, and may need to be practised. Similarly, the safe use of cow's tails or belay systems will need to be explained and may need to be practised.

Technical Advice

If the activity falls beyond the experience or competence of management it will be necessary to get advice from one or more appropriately experienced and qualified person or persons. It may be necessary to determine 'appropriate' from first principles by considering the requirements of a particular element or venue. An ERCA accredited Trainer will have the requisite skills for this purpose. A currently active Mountaineering Instructor Award (MIA) or Certificate (MIC) holder or a Caving Instructor Certificate (CIC) holder may have the skills to train and assess belaying skills, but the standard MIA training course does not specifically deal with ropes courses.

All ERCA instructor courses are run by ERCA accredited trainers.

Technical advisers need to take their role seriously. They must be able to demonstrate relevant competence. This will include being up to date with current and best industry practice.

Medical conditions and/or disabilities

There will generally be a need for checking any conditions which may require a participant to receive special attention, or who may need to be excluded from the activity. If this will call for additional personnel there will need to be an appropriate system for making them available.

Manual handling

Participants on some ropes course elements should be briefed about manual handling problems. The extent of this will be influenced by the age, fitness and prior experience of participants individually and collectively.

First Aid

In addition to normal first aid facilities it may be appropriate to include scenario-based training, using actual elements, so instructors and operators can identify the problems as well as the solutions particular elements may present.

Emergency action plan

This could be integrated with the scenario-based training mentioned in First Aid above. It would be normal to include this as part of an induction procedure. Consideration should be given to the safety of all participants, not just those injured or immediately affected. Consideration should also be given to the evacuation of all personnel from the site (spectators etc.) and, in some large commercial operations this could run to many hundreds. The need for regular (documented) practice, refresher training and full reviews of emergency action plans and rescue systems cannot be overstated.

Off-elements supervision

Participants not involved in an element may be harmed in a variety of ways. For example, participants 'waiting their turn' can wander off or try other elements unsupervised.

EN requires ropes courses to be adequately marked for spectators and participants. This may also include methods of easily identifying instructors (e.g. by wearing distinctive uniforms)

Fire Risk

Due to the flammable nature of many sites, a no smoking policy may be appropriate.

Individual Safety System Category B (ie: Self-Belaying - cow's tails) and the 'double unclipping' problem

With the exception of appropriate, properly functioning, "interlocking devices" (sometimes referred to as 'smart' karabiners), no single measure seems to have totally prevented incidents of participants completely unclipping both lanyards from the safety system whilst traversing sections of a self-belay ropes course (Safety System Categories A and B). A number of measures may however, be effective in minimising the risk of injury as a result of a "double unclip". A total unclip is considered to be a near miss but is not a dangerous occurrence.

In recent years, there has been an increase in the use of self-belay for recreational purposes. With this has come a reduction in the level of supervision traditionally found. On many recreational courses after participants have successfully completed the first 5 change-overs of the training course the level of supervision may then reduce to level 3. Operators should be aware that if this is how they intend to operate their course then there are additional requirements under the EN standard in terms of the marking of elements, special safety instructions etc.

Since earlier editions of the UK Ropes Course Guide, different technology has evolved that helps to reduce or even eliminate the possibility of "double unclipping". These are categories C, D and E. There is a subtle but significant difference between individual safety system category C and D. If Category B is utilised (Category A is not recommended) then the following points should be considered:

- There is likely to be benefit in ensuring that participants are introduced to the problem and associated procedures initially in a safe setting (such as on the ground). This could be under Level 1 supervision but more likely Level 2;
- There is clear benefit from then progressing to some form of 'practice' course where the risk of injury (even in the event of a fall) is low. A "low" course that simulates some of the elements of the "high" course, but only some 1 - 2 metres off the ground is likely to be advantageous. Students can demonstrate their competence to handle the clipping and unclipping in comparative safety. This must be under level 2 supervision (or level 1 if appropriate but this would entail an instructor on each platform). The EN standard requires that there are a minimum of 5 change-overs in this section;
- There ought to be value in using a buddy system with some form of "clip!" - "check!" system, whereby the buddy on the ground confirms the 'clip' before the buddy on the element moves on. In practice, there is observable difficulty in keeping the concentration of the ground buddy sufficiently active for this system to retain its usefulness as an effective preventative measure. Careful tutoring and monitoring by instructors can help, as can personalised initiatives which focus on keeping this important communication effective;
- There may be distractions for the ground buddy. It would be desirable to arrange the course so that there were, for example, no low-level elements to 'play' on instead of concentrating on their buddy;
- There may be advantages to having instructors 'aloft' with the group;
- There are obvious advantages to ensuring that a participant is otherwise secure (in balance, feet secure and both hands free) at the point of 'clipping' out from one element and into another. This approach of "safe zones" does not prevent total unclipping; it merely reduces the risk of the person also falling.

- Participants may, understandably, become stressed and confused on a high course. A general principle of keeping these two emotional states separate seems sensible so that the more stressed a participant is the more clear it should be as to what they need to do. There follows some examples below of how this could be achieved. An essential mechanism for addressing this is to be able to see the course through the eyes of the participant;
 - Inevitably, there will be many cables, staples, brackets etc., only some of which need concern the student. It should be very obvious what the user is going to clip to before they unclip. This is an essential requirement of the standard. Safety cables should be rigged to avoid, for example, clipping off a low unclip followed by standing up to clip on to a high clip, or 'clipping off' whilst out of sight from what they need to 'clip on' to, or having to stretch (or climb) in order to reach the clip;
 - As indicated above there is a very clear requirement in the standard for the safety line on each element to be clearly marked. If the level of supervision is reduced from level 2 to level 3 then additional safety notices and marking will be required.
 - There may be benefit in colour coding other parts of the course. For example yellow is what you clip to, red can be used for hands and feet whilst black is part of the structure and need not concern the participant.
 - Choosing the right karabiner is important. It must have a minimum of a double action capability (captive eye karabiners are generally well suited). Although the EN permits a Category A Karabiner it should be remembered that this a European wide standard and what is considered acceptable practice in some countries may not be in others. Individual Safety System Category B, C, D or E should be adopted.
- Vertical ascent provides a quite different safeguarding problem to traversing elements. It may be confusing to users to cope with changing back and forwards between systems. It is likely to be equally confusing if there are intermediate belay points between cables. Vertical sections present a much greater hazard as the risk of a high fall factor is often present.
- It seems sensible to restrict the activity (or selected elements) to those users who have been judged to have the mental and physical capacity to safely be involved and who are likely to benefit from the exercise.

It is common practice on commercial courses for accompanying adults to be required to assume responsibility for themselves and for children in their care.

Individual Safety Systems

Minimum supervision levels 1 to 3 depending on safety categories and the participant's age

| Age in years | Test Course | | | | First five change-overs ^a after the test course | | | | Rest of the course | | | | |
|--|-------------|----------------|----------------|----------------|---|----------------|----------------|----------------|--------------------|----------------|----------------|----------------|---|
| | < 6 | 6 to 9 | 10 to 13 | from 14 | < 6 | 6 to 9 | 10 to 13 | from 14 | < 6 | 6 to 9 | 10 to 13 | from 14 | |
| Category of the individual safety system | A | 1 | 2 | 2 | 2 | 1 | 2 ^b | 2 ^b | 2 | 1 | 2 ^b | 3 ^b | 3 |
| | B | 1 | 2 | 2 | 2 | 1 | 2 ^b | 2 ^b | 2 | 1 | 2 ^b | 3 ^b | 3 |
| | C | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 ^b | 3 ^b | 3 | 3 |
| | D | 1 ^c | 2 ^c | 2 ^c | 2 ^c | 2 ^b | 2 | 3 | 3 | 3 ^b | 3 | 3 | 3 |
| | E | 1 ^c | 2 ^c | 2 ^c | 2 ^c | - | - | - | - | 3 ^b | 3 | 3 | 3 |

^a For courses using a category D safety system, the first five change-over's may be included within the test course. In this case the supervision levels of the test course apply.

^b Accompanied by a supervising adult.

^c If required under 6.3.3.

8. Selecting competent suppliers

Buying a ropes course is a significant financial investment and should not be undertaken lightly. Time spent investigating the right product and supplier is essential. The relationship between supplier and operator is usually long lived and selecting the right partner is therefore important. There is also a legal duty placed on operators to ensure that their suppliers are competent. There are some key factors that should be considered when buying a ropes course.

- Consider websites and marketing material claims carefully. Whilst some claims may be genuine, others may be false. However, the ropes course industry is subject to normal trading standards regulation, so buyers have a variety of rights that are considered 'inalienable' (i.e. the purchaser does not lose these rights even though they may have signed a waiver to that effect.) Better, though, to exercise all due diligence in the first instance;
- Do not ask a supplier to volunteer references, but instead request a client list extending back over the previous 12 months with start and finish dates of each project. Consider establishing, from the client, the following:
 - Was the ropes course built on time?
 - Was the ropes course built to budget?
 - Did the construction process and the finished product fulfil their [the operators] expectations?
 - Are the trainers accredited by ERCA or at the very least can they provide you with evidence of ropes course experience? The latter should not only be in a "technical expert" capacity but actually working with users / groups on a ropes course. There is no substitute for real experience.
 - Was the training good?
 - Did the ropes course pass an inaugural inspection in accordance with EN15567? Who carried out the inspection? In particular, was the Inspection Body really competent and independent?
 - Was the after sales service good?
 - Would they employ the contractor again for future work or would they look elsewhere?
- Ask your prospective supplier if you can visit similar installations to the one you are considering buying;
- Ask to see a copy of a supplier's Public Liability Insurance Certificate (and if relevant Contract Works, Product Design insurance etc.). Check policies are genuine;
- Request a copy of relevant certificates (check with issuing body they are genuine if in doubt).
 - chainsaw operators;
 - first aid certificate;
 - MEWP (Mobile Elevated Work Platforms - cherry picker) and other plant operator licences;
 - LOLER (lifting certificates) for lifting equipment (hoists etc).
- Pay little regard to claims of guarantees - the proof is in the pudding! Whilst subsequent redress through the courts etc. may be possible it is inevitably slow, expensive and highly inconvenient. Ask to speak to clients from ten years previously. It is easy to offer guarantees but harder to deliver!

- Remember all installations should have design calculations and engineers drawings;
- Don't underestimate the cost. Always have a contingency;
- Is the supplier prepared to allow you to retain a proportion (perhaps 5%) of the cost price for 12 months in order to ensure that any defects are rectified?
- Are contractors appropriately trained and experienced to work at height? What evidence do you have? Whilst it may seem strange and even unfair, clients have considerable responsibilities for ensuring that the contractors they engage are competent. If, for example, the contractor has an accident during construction operators should anticipate having to prove their due diligence in ensuring the contractor's competence;
- Does the proposed design address the Working at Height Regulations in terms of instructors accessing the ropes course for inspection or maintenance purposes?
- Does the ropes course construction fall within CDM Regulations? If so make sure these are complied with.

The same due diligence should be applied to selecting appropriate Inspection and Training Bodies.

To help ensure you have a properly designed and constructed ropes course; and that the right processes and documentation are in place an inaugural inspection by a Type A Inspection Body (as defined by ISO 17020) should be carried out. Ensure the Type A Inspection Body really has extensive ropes course experience. Regrettably, such inspectors are few and far between. Thereafter, take care to ensure Periodic Inspections are carried out by a Type A, B or C Inspection Body that has sufficient competence and integrity.

References and Further Reading

For further information about this document or for general ropes course related matters please contact:
Nick Moriarty nick@erca.co.uk

There are a variety of sources of information available for operators of ropes courses. This is not an exhaustive list but are primary references.

1. EN15567:2015 parts 1 and 2
2. European Ropes Courses Association: Installation and Operational manuals;
3. AALA Notes - <http://webcommunities.hse.gov.uk/connect.ti/adventureactivitiesnetwork/view?objectId=205776&exp=e1>
4. Adventure Activities Licensing Regulations 2004
5. Health and Safety at Work etc. Act 1974
6. Lifting Operations and Lifting Equipment Regulations 1998
7. Personal Protective Equipment Regulations 1992
8. Work at Height Regulations 2005 (as amended)

Appendix A, 16th February 2010 (revised 2015)

Recommendations made by the Adventure Activities Licensing Service (AALS) in relation to Licensed establishments using ropes courses.

1. Ropes Courses are currently out of scope of the Adventure Activities Licensing Regulations, and so providers of high or low ropes courses do not require a Licence for this activity. However, the Licensing Service also considers the safety management of non-licensable activities, as part of the providers culture of safety overall, in reaching its decision on whether to issue a licence and so offers this guidance to and about licence holders who also offer a high ropes facility.
2. Some client groups and/or licensed providers offering self-belay (cow's tails) courses or assisted belay (bottom rope/top rope) courses may decide they have an exceptional case, with an unusually reliable, motivated and manageable group, and that the leader is both competent and prepared to take on the role of instructor. In this case Level 3 supervision provided by the course operator may be appropriate. However, for most cases the Licensing Service recommends that at least Level 2 supervision be provided throughout the experience by an experienced instructor. Groups are generally encouraged to decline anything less. In the case of an "adventure park" operation whilst the course operator may only offer Level 3 supervision, Level 2 supervision could be adequately provided if the accompanying leader has been adequately trained and endorsed.
3. Novices on assisted belay courses (top/bottom roping) will generally need to be under Level 1 supervision. This is a requirement of EN15567:2015 (Part 2) in any case.
4. Employers of leaders who take groups to high ropes courses (e.g. teachers employed by a Local Authority) should be aware that the leaders may be required to sign a Risk Acknowledgement/Disclaimer in which they accept responsibility for ensuring compliance with the course safety system by themselves and by the children in their care. If a leader signs such a document in the course of his/her employment the employer (in our example the employing Local Authority) will likely be held to be vicariously liable for any subsequent failure of supervision that causes injury. This is likely to protect the leader from personal exposure to litigation but transfers that risk to the employer.
5. As with other adventure activities, employers are likely to be deemed to have fulfilled their duty of care if they train and assess the leader to a good standard, and provided them with the means to manage foreseeable risks.

6. Types of supervision.

6.1 Level 1 supervision

Situation whereby an instructor can physically intervene to prevent a misuse of the individual safety system that would otherwise lead to a significant risk of serious injury or death

This means that each group will be accompanied by an instructor assigned to only that group by the course operator for the duration of their time on the course / element. This person will be able to intervene physically if they are not satisfied with the safety or behaviour of participants.

6.2 Level 2 supervision

Situation whereby an instructor is able to see the participant and intervene verbally

Again, this means that each group will be accompanied by an instructor assigned to only that group by the course operator for the duration of their time on the course / element. Verbal intervention may be targeted at deliberate and dangerous misuse of the course, such as reckless behaviour, or inadvertent misuse such as an accidental double unclipping of both cows. This person will also be well positioned, and skilled, to assist those struggling with getting round the course because of nervousness or limited physical ability. They will also be able to assist individuals down from the course should the need arise.

6.3 Level 3 supervision

Situation whereby a participant is in a position to alert an instructor of their need for assistance, who is able to respond promptly, or reasonably promptly, to the alert and provide assistance

Note: It is intended that the role of the instructor is to be available to provide adequate assistance to a participant if called upon to do so. This is a largely reactive, rather than proactive, role.

This means that each group will not be accompanied by an instructor assigned to only that group by the course operator for the duration of their time on the course. Instead, after an initial induction, staff will roam around the vicinity of the course and can be summonsed if required. The immediate safety, security and behaviour of participants under Level 3 supervision is therefore largely the responsibility of the participants and/or their accompanying parents, leaders, teachers, etc.

Procedures for submitting comments on this document:

Comments should be addressed by email or post to:

Nick Moriarty
European Ropes Course Association

Email: nick.moriarty@erca.co.uk

Please ensure that comments:

1. Are typed and emailed
2. Include the name and contact details of the person making the submission
3. Include the date of submission