

Ropes don't BREAK!

Marcus Bailie, Head of Inspection for the Adventure Activities Licensing Authority, asks that if ropes don't break why do we bother logging their use?

There may be many reasons why you would want to log the use of your climbing ropes but safety isn't one of them. This seemed to be the message which came over strongly at the recent BMC Technical Committee Conference. It was like music to my ears.

When non-climbers look at the safety of climbing they have tended to concentrate on equipment and not on the real issues such as the competence of the climber and the belayer. This has been a particular problem at, for example, climbing walls which are inspected by Local Authorities, or university clubs which may be administered by a non-climbing student union official. Many other examples exist where competent climbers feel that they are prevented from using their better judgement because of uninformed adherence to some ruling, protocol or regulation. It may be difficult, for example, to justify not conforming to manufacturer's guidelines even when they say that ropes should be replaced every two years.

Those who attended the Conference were told in no uncertain terms that the claim for such a short life expectancy of ropes was no longer sustainable. Pit Schubert, President of the UIAA Safety Commission, declared in his inimitable Germanic accent "if you want to break a climbing rope you must cut it over a sharp edge, corrode it with acid or use a weight drop machine. Everything else EES IMPAUSIBLE!"* Speaker after speaker supported the view. Researchers from a number of university and college departments presented evidence on how ropes could become weaker through use. However, none of the ropes failed on its first drop, even using weight drop machines. There was always severe and detectable damage (such as the tearing of the sheath) before subsequent drops produced com-

plete failure. And the oldest rope tested was 29 years old!

The BMC's booklet 'Ropes' and the article in Issue 11 of Summit gives excellent guidelines on the sort of things you should consider when deciding when to down-grade or retire your ropes. The 'handling' of a rope is certainly an aspect we consider very seriously: a rope which is difficult to handle is difficult to handle safely. Stiff ropes may not lock off as easily in some belay devices; it is more difficult to make knots secure; stiff ropes are more difficult to manage on a stance, with possible safety implications for the lead climber or for a retreating pair.

The Adventure Activities Licensing Authority has not, and does not, expect even commercial providers to adopt a blanket "two years and it has to go" approach to ropes. What we do expect is that they check their ropes each time before use, and after any major fall, by 'running it through', with the expectation "if we don't like it we don't use it". Thereafter, the recording of routine checks by a competent person for damage or abrasion, and ensuring that its length is still clearly readable on both end tabs, may be more useful than a detailed log of usage.

Logging usage may be done for reasons other than safety and these alone may mean that some users may decide to continue using them. In a club or similar situation, if the rope is not where it should be then a signing out procedure may give an indication of who has it. Secondly if it's returned covered in mud or in tangles then the log may show who left it like that. Other considerations such as determining which ropes last best may have some validity but this information can usually be obtained in a less bureaucratic way.

In conclusion, overwhelming statistical evidence suggests that in practice ropes only fail by cutting over sharp edges and

when corroded by acid. Detailed logging of the usage of the rope is therefore not going to affect its safety.

*" This is Pit's way of reinforcing the point. Obviously it is not impossible to break a climbing rope by overload. What Pit is saying is that because of the standard to which ropes are made and the care with which we maintain them it is very, very unlikely. To the extent that even after millions of hours of rope usage all over the world a modern climbing rope has never failed in normal use due solely to overload. Ropes break, or rather cut, when they run, under load, over sharp or rough edges. Speakers at the conference spoke of the importance of care with runner placements and abseil lines so as to ensure that the rope will not run over dangerous edges. Rope cuttings may be rare but the consequences are desperately serious and so care is essential." - *Technical Committee.*

Ropes don't break by overload, but they do by cutting and abrasion - so take care, not all landings are this forgiving! Simon Marsh leaving Ao Nang Tower. Credit: Alex Messenger.

