

MINUTES EQUIPMENT & TECHNIQUES COMMITTEE MEETING HELD ON SATURDAY 21 MARCH 2009

Location - The Old Methodist Chapel, Great Hucklow, Buxton, Derbyshire. SK17 8RG

Present - Bob Mehew BM (Chair), Bob Dearman BD, Glenn Jones GJ, Dewi Lloyd DW, Stephan Natynczuk SN, Andy Pryke AP, Les Sykes LS, Nick Williams NW.

1 Welcome, Apologies

BM opened the meeting at 10.30. Apologies had been received from Andrew Atkinson, Jules Barrett, Brian Jopling, Graham Mollard.

2 Actions Arising

Action 081108.1 - *NW volunteered to provide a report on the QC system.* – NW stated in progress. Action Continues.

Action 081108.2 – *NW authorised to purchase first batch of 200.* - 200 now with NW and are laser etched with BCA01. NW reported he had not received a bill for them as yet. Closed.

Action 081108.3 – *BM to check with regions on their potential usage of anchors over next few years.* – BM decided not need to pursue as considered CCC & DCUC requirements small. Agreed Closed.

Action 081108.4 - *NW should negotiate for purchase of 500 / 1000 if price is acceptable.* – NW reported he did have a conversation with the supplier which did leave some confusion in his mind. NW noted that BCA may have to accept an even larger batch (couple of thousand) due to minimum production run quantity. NW raised the need for a system to be set up to issue the anchors. BM noted GSG wanted 25 for Rana and expected demands from other regions. Action Continues.

Action 081108.5 – *BM to forward copy of revised draft to Training for noting.* - Training discussed 8/12/08 & considered definition of techniques confusing. Following round of emails 21/1/09 BM propose drop from handbook the following sentences. *“In respect of techniques, it is responsible for providing advice on new or developing techniques in caving, techniques required for the installation of fixed aids as covered by the fixed aids policy and an option for appraising equipment. By default therefore techniques in this context do not apply to personal caving skills”.* GJ noted has defined at a previous meeting and also on 24 November 2001 and hence can't drop. AP suggested web site should have links to material on techniques. NW proposed if Training have problem, let Council resolve. BM accepted the sentences would remain in the Handbook entry. Closed.

Action 081108.6 – *BM to confirm A Pryke is still contact for DCUC anchors.* – BM asked 1/2/09 with no reply. AP noted he was not sure as he had no contact with DCUC committee. BM said he would ask again. Action Continues.

Action 081108.7 – *LS to supply a pdf version of the anchor inspection procedure which BM will put up on BCA WebSite.* – Noted CNCC used version which meeting agreed to replace by version taken from training material. BM decided to hold off until after agreed training material which also includes Inspection Procedure. Action Dropped.

Action 081108.8 – *BM to circulate copy of revision (of inspection procedure for handbook entry) for comment and acceptance.* – BM did 27/11/08 which included varied inspection procedure. Closed.

Action 081108.8 – *LS, BD & GJ to produce new draft of BCA Anchor Scheme* – Draft issued, see Item 5. Closed

Action 081108.9 - BM to review the maximum capacity of Hydrajaws puller and costs for expanding, a source of a truly portable tester up to 50 kN and a portable device for removing anchors (with or without drilling). BM reported that the maximum capacity for the medium duty Hydrajaws pullers is 25kN. (Gauges come in 5, 10, 15, 20 & 25kN at £75.) AP asked if that was true maximum capacity, BM replied it was the gauge limit but doubted if instrument would take much more. BM thus concluded these pullers could not be used as a primary tester because want 50kN force. BM reported Hydrajaws do 145kN tester at £2300 and Hilti don't sell anything above 20kN. GJ asked about size of the puller, BM said he thought the photo in the agenda indicated the kit was less than 12inches long. AP noted designed for testing road crash barriers. BM suggested whilst coupling the puller to an anchor would not be too difficult, he did wonder about using it on a vertical face. GJ questioned if would use it in vertical orientation; BM noted had some test bed anchors in vertical orientation but agreed could limit new test beds to horizontal orientation. NW suggested that for £2000 could well get someone to build a puller to do the job. GJ asked if needed tester. BM noted need to carry on testing to monitor potential degradation. NW commented would be needed if required to change resin. NW felt had struggled for several years without tester and would be worthwhile investment. NW commented favourably on a hydraulic system where on could easily measure fluid pressure and thus get more compact and cheaper system. In response to a query, NW noted that whilst Stu's rig was rather large, it was instrumented for both force (via a pressure gauge) and also displacement. NW referred to email he had circulated of the German puller (see half way down page at <http://www.bolt-products.com/Glue-inBoltDesign.htm>) and felt this would be the way to go. However he was not offering to build it.

BM noted two reasons debate started one to pull old anchors out and second wanted to use Stu's rig to type (destructively) test anchors in both radial and axial mode. LS suggested waiting making decision until obtain Stu's rig and assess its state. BM noted an alternative puller will have the advantage over Stu's rig of being much more usable in the field. Currently only have axial testing provided by Hilti, so looking to provide BCA with capability. Several routes, purchase Hydrajaws puller, have piece of kit made up, borrow piece of kit from contact of BD for axial puller. NW suggested since committee wants' piece of kit, should go out and get some costings for next meeting to make a decision on. BM summarised that desire for type tester was due to need to type test new anchors batches or resin plus need to show new & existing anchors meet current Mountaineering Standard for both axial and radial testing. BM noted had not undertaken radial tests, the best possibly on offer was Stu's rig which could reach to about 75 degrees. LS noted he had used turfa winch with load cell to undertake radial testing. NW noted he had 5 tonne load cell and bridge. LS said he had some which pulled at 55 kN. Action 081108.9 closed

Action 090321.1 – BM to obtain several quotes for next meeting on alternative axial pull testers.

NW left the meeting.

Action 081108.10 – LS to obtain quote for drill and 10 drill bits from Hilti. – Drill bits obtained. Closed.

Action 081108.11 – AA to produce a short note on why rope testing should continue and identify objectives for future work. – see Item 7 Closed.

Action 081108.12 – BM to produce a note on other aspects of rope testing. – see Item 7 paper issued Closed.

Action 081108.13 – BM to issue draft fixed aid policy for all members to comment on before next meeting. – issued 1/2/09 – see Item 8 Closed.

2 Minutes of Meetings on 8 November 2008 (circulated on 1/2/09)

Meeting accepted minutes supplied.

4 Any Other actions from last meeting

BM reported that he had listed the items under this agenda heading as points which he felt should not be lost in subsequent discussion but he did not wish to instigate a debate at this point in time.

5 Revision to BCA's Anchor Scheme

a) Installation Procedure, Training and Documentation Document

BM apologised for the delay in issue of draft. GJ apologised for not contributing during the drafting process but had some comments.

GJ suggested that Section 1 on Introduction could do with a reference to the absence of a catastrophic failure of the near 20 year anchor program. LS noted that several failures have been recorded but that none had failed which had been installed correctly.

Action 090321.2 – GJ to provide draft contribution on success of programme to LS.

GJ raised a minor comment in Section 2.1 requesting that it should include a reference on how long the anchors have been installed to provide context. LS commented that he was unsure as to the length of time the anchors had been installed. **ACTION COMPLETE AND CLOSED**

Action 090321.3 – GJ to provide comment on length of time anchors in Swinsto installed to LS and LS to check records for length of time.

GJ noted the description of the resin colour change was not light grey to grey in Section 2.2 and subsequently; either it should be cream to grey or light grey to dark grey. The point was accepted.

BM asked if the name of the new anchor was spelt PECO rather than PICO. The committee agreed that it was PECO (which was at the request of the manufacturer) and the document would be spell checked to ensure consistency.

GJ asked if clarification could be given on the use the term secure storage used in the final paragraph of Section 2. It was accepted that none was needed.

BM asked whether the starting statement in Section 3 that “A dust mask and goggles must be worn at all times whilst installing anchors” was appropriate since surely one only needed to wear it during the drilling? BD noted he did keep his on all of the time for protection from squirts of resin as well as dust from drilling. LS noted that the use of a dust mask was single fit and could only be used once. BM accepted the comments.

GJ noted that Section 3.3 introduces Y hang assembly but the document does not cover single anchor installations. BD noted Y hang was an example. GJ accepted the comment.

BM asked if Section 3.3 should clarify that the holes should be drilled using a hammer drill rather than a core drill. LS noted that as BCA supplied the drill bits, there was no need. AP said this was also covered in the Training session. BM responded that core drilling would make a fundamental difference to the strength of the anchor due to the smooth side of the hole and loss of mechanical interface. BD noted that BCA supplied the drill as well as the bit. GJ noted that core drilling was slower. BM accepted the comments.

AP asked if that the contaminated bottle reference in Section 3.6 should be changed to a plastic water bottle. LS noted that the point was covered in the Training session. AP accepted the comments.

GJ suggested that the word “mixing” be inserted before thread in the first phrase “Remember to check that the thread...” in Section 3.7. LS & BD accepted the comment.

GJ suggested that reference to twisting the anchor as it is inserted should be made in Section 3.8. LS noted the possibility of the anchor sticking on twisting. LS agreed to insert a reference to using twisting motion in the first sentence and change “tap home” to “insert”.

GJ suggested that Section 3.9 should start with a reference to roof hangs rather than at the end. LS & BD accepted the comment.

GJ suggested that the underlined paragraph in Section 3.10 on testing newly installed anchors with the Hydrajaws puller would be better presented as a new Section 3.11. LS & BD accepted the comment. AP asked how this proposal fitted with previous views about testing of anchors. Also given some anchors were placed in locations where testing was not feasible, would this not invalidate those anchors? BM asked if the test of “reasonably practicable” was appropriate. LS suggested it was. GJ asked what alternative could be used. BM suggested just “reasonable” owing to the problem that “reasonably practicable” is a well defined phrase in law and would imply testing every anchor. AP asked if an objective of the Committee was to show the anchors were compatible with the Mountaineering Anchor Standard (BS EN 959:2007) then did that standard require testing of placed anchors. GJ agreed that there was an objective was to show compatibility so there was no need for testing individual anchors. So was there a need for the paragraph? BD said that the need was to show that the hole had been cleaned correctly and that the resin mix was correct. AP asked what the experience was on testing anchors in Derbyshire. BD confirmed that no anchor had failed such a test. LS stated that he did not support such testing in the Dales. GJ proposed the paragraph should be removed. AP supported the proposal noting this would reflect that it is not part of the Mountaineering Anchor Standard. LS asked if BD was happy with its removal. BD replied he was not because it was the check against poor cleanliness or poor resin mix. BM noted a number of partial failures in the Dales (that is anchors which subsequently reported as being loose). AP asked if there was evidence as to whether the proposed test would identify these potential failure modes. BM suggested there was none. GJ argued that just about every loose anchor in the Dales which had been changed was one which had used the Hilti resin and not Resifix and had been reported as loose many years after their installation. LS supported GJ. LS went onto note that the process of anchor installation has been on a learning curve since day one and changes had been made to take into account learning experiences including the loose anchors (which included sinking the back of the anchor into the rock). He also noted that all of the anchors which had been tested in the Dales had passed the requirement of the paragraph under discussion which related back to the British Standard on PPE Anchors BS EN 795:1997.

BM summarised that two people had spoken for removal for the paragraph and one had spoken for its retention. On being invited to comment, SN suggested that the use of reasonably practicable brought into question if it was necessary to test. AP noted that a situation of testing some but not all anchors would be difficult to defend in a court of law. BD pointed out that the question would be was the anchors tested. AP noted that the answer would be no because the Mountaineering Anchor Standard did not require it. LS pointed out that no anchor was used in isolation, it was part of a system and that even if one anchor did give way, the rest of the system would not fail. LS also noted that there had not been a failure of a properly installed anchor. AP observed that the Derbyshire data begged the question for the need to test. GJ said that there was nothing stopping a person from testing an anchor after it was installed. BM reminded GJ that the Committee had issued a statement after the Rhino Rift saga that “...the disadvantages of using a puller as part of routine testing outweigh the advantages and as a result the Equipment Committee no longer recommend that Eco Anchors be pulled as part of routine testing” (see also Minutes of meeting 19 May 2007). BM noted that this statement would be overturned by including the paragraph. BM expressed the view that if the paragraph should be included, then the phrase “reasonably practicable” should be replaced by a weaker requirement. LS expressed the view if the paragraph was further weakened, then why have the paragraph in at all. BD noted that this was a training document. BM noted that the document was an Installation Procedure and that the Committee had previously agreed that some matters would be left to the training session. On being invited to comment, DL said he felt unable to comment. BD noted that if the paragraph was left out, then there would be no training on testing so there would be no option for a region to test if they so desired. GJ noted that the current status was that no testing should take place in any region. LS expressed the view that Derbyshire should be allowed to test if they wanted to do so even though the Dales would not test. He considered that all the Committee should be looking for

was a suitable form of words. BM suggested this could be done by removing the word practicable. GJ & AP noted that leaving the paragraph in would contradict the issued statement.

BM noted that the Committee had exhaustively discussed the topic and should now make a decision. He proposed there were two alternatives, either the paragraph was excluded or amended. BM called for a vote on exclusion of the paragraph. 3 votes were recorded for exclusion, 1 against exclusion and 2 abstentions. The paragraph was therefore excluded. In response to a query, BM said that he would have voted against.

BM concluded that having discussed at length the topic of testing, the Committee had decided that it was not able to reverse the previous expressed view that anchors should not be routinely tested.

GJ suggested the word “two Y hang” be removed from Section 4.4. LS & BD accepted the comment.

BM asked if Section 6 on inspection of anchors should be the same as has been issued to cavers. LS noted that this was the inspection process for installers and thus should be more comprehensive. BM accepted the comment.

AP suggested that a reference to a force of 10kN should be included in commenting about proof testing in Section 8.

BM sought confirmation that central records would not be required by the document. LS & BD confirmed this.

In Section 10, clarification was sought as to whether a person would be covered by BCA’s insurance once they were nominated to become an installer. BM said that the insurance scheme would cover those which were recorded as being covered. It was agreed that Section 10.1 should require the Regional Council to record the approval in writing. It was also agreed that there should be a central issue of certificates of competence to install anchors under the scheme. GJ volunteered to undertake the role of central issue as Membership Administrator.

(NB During the lunch break, NW agreed that the scheme would cover people once they were nominated to become an installer. NW also agreed to the role of the BCA Membership Administrator being expanded to include keeping the records of installers.)

The Committee agreed that LS & BD should update the document to reflect the comments and decisions made and provide it for use in training. The Committee agreed that thanks should be given to BD & LS for their effort in drafting the document.

b) Anchor Scheme Document

BM tabled a draft document covering the scheme for general issue. Given the Installation Procedure document was not being released to the wider audience, then in his opinion a second document was required so that both Regional, National Councils and other interested parties would be aware of what the scheme is about.

BD noted that given the changed Installation Procedure document, then all Installers were no longer trained and needed revalidation. LS agreed. BM noted that put an urgency on organising the revalidation workshop.

Reference has already been made in discussion on the Installation Procedure about sub regions installing anchors effectively independently of their region. LS recalled that previous discussion some years ago had agreed to the principal of independent access by sub regions. LS asked how many anchors might be involved in such sub regions. BM suggested tens if not hundreds.

BM noted that Section 10 of the Installation Procedure stated a number of points which he felt were worth publishing. He had extracted these and pulled them into the draft. He proposed that if the Committee agreed, the document should be published to show how the scheme runs. The draft used italic print to cover phrases which were not in the Installation Procedure. BM envisaged that this draft if approved, would be sent to Council for noting and placed on the web site. BM noted that the document also included the pre use inspection statement which would then be available to be copied by anyone. LS asked if the need for the document was accepted. GJ said he felt it was.

BD noted that document should permit a deputy of the Regional Coordinator to keep records as the Installation Procedure did. AP suggested that the document should make reference to the need for the coordinator to have knowledge of who has been trained and of the Installation Procedure so they can ensure Installers are updated with changed to the procedures. BD suggested the committee should be kept informed of all trained Installers and whether they were in date. LS suggested this could be monitored by the role GJ was undertaking. GJ said he could provide a report to whoever the Chair wanted. The meeting accepted this approach.

LS viewed the coordinator would be a trained installer. BM commented that the Installation Procedure did not require this. BM also pointed out that the procedure did make clear that an installer could only install anchors in the region for which they had been nominated. The procedure only required a region to nominate people for training. GJ agreed this was correct. LS claimed that an installer would not do so. BM expressed concern that this may arise. LS suggested that an adequate control measure was in the issue of anchors and resin. BD agreed with this view and noted that in Derbyshire, prior agreement was required over any location for an anchor. BM accepted the comments.

GJ noted he could produce plastic cards verifying trained installers using the BCA membership card system. It was agreed that this would be the certificate issued to confirm a trained status.

LS queried whether "new" was required in the first sentence under Installation. BM noted that the phrase "and identify new anchor positions" was not used in the Installation Procedure document. It was agreed that the phrase should be included but without the word "new".

AP asked if Installers could be approved by a sub region rather than the RCC for the whole region such as Forest of Dean, North Wales and Scotland. BM asked if the Committee would accept a "sub regional" Regional Coordinator if nominated by the Region. The committee agreed that this was for each Region to decide but it was key that the records should be kept at regional level.

LS objected to the phrase "and tested for competence in installation and SRT". BD agreed. BM responded that the phrase was to cover the final sentence of Section 10.1 of the Installation Procedure document which states that "Further assessment must be made by the Regional Co-ordinator during anchor installation training which may be suspended if this competence falls into doubt". LS said this was not testing. It was agreed to delete the whole phrase.

AP asked if the final sentence on revalidation should also be qualified by an additional "if there is an update to the scheme" in addition to every three years. LS suggested that updates should be able to be done via the Regional Coordinator. BM suggested that whilst small changes might be capable of being done that way, major changes might not be. BD suggested that he did not anticipate any major changes.

LS asked if insurance should be for all Installers rather than just competent ones. AP suggested it should be approved Installers. BM noted that insurance was provided for installers being trained. It was agreed that the phrase should be replaced by "all recognised BCA Installers and Regional Co-ordinators".

It was agreed that an additional sentence should be included stating that "The BCA Membership Administrator will keep a record of all trained installers".

BM proposed that he circulate a revised copy by email for final comment and that if there were no comments, the document would be taken to BCA's Council for information at its June meeting. The meeting accepted this proposal.

Action 090321.4 – BM to reissue document and if no comments supply to BCA Council.

AP asked if the anchor discussion documentation would be removed from BCA's web site. BM agreed to remove discussion document. AP noted there was other information which should be removed. The meeting accepted this proposal. **ACTION COMPLETE AND CLOSED**

Action 090321.5 – BM to remove discussion document and related material from the web site.

BD asked if there was a need for sub regions to nominate who their installers would be trained by. AP asked if this mattered given GJ would be keeping a central record. BM suggested the Region needed to know who would install in their region. BD concern was reduced to ensuring that records of installed anchors were only kept by one person for that sub region.

BM stated that currently there were only two approved trainers, BD & LS and that no one else was approved to train using the revised Installation Procedure document. He noted that AA had been accepted as a Trainer under the old scheme. LS noted that CCC did not have a trainer. BM noted that the person who had been trained no longer was in post so should not be attempting to train people. This was agreed by the Committee. SN asked who was responsible for informing all installers as to whether they were trained or not. BM agreed to do this. **PROPOSE THAT THIS SHOULD BE THE RESPONSIBILITY OF THE E&T CONVENOR**

Action 090321.6 – BM to write to all installers advising them of changes to the Installation Procedures and the need to be trained.

BM asked if Regional Coordinators have to be trainers. The meeting agreed that this was not necessary and that the situation should be left flexible. (NB Section 10.2 of the Installation Procedure requires trainers to be approved by the Committee.) BM went to ask in respect of BD's concern whether the Committee should specify who a sub region should be trained by. AP asked if this was complicating matters. LS agreed. BM asked if the anchor installation records would then be kept by the region who trained them or by themselves or by the Region. GJ noted that there should not be a problem since the anchors and resin would be issued by a region and thus who would know where records should be produced. LS said the Committee could not make a decision at this point in time since it was not clear as to what difficulty might arise with any of the potential sub regions.

AP asked if there should be more trainers or was it sufficient for the Committee to offer two workshops per year for training and maintain the trainers to provide this service. LS asked whether there was still large number of anchors to be placed. BM indicated he felt that two trainers would be sufficient for the time being, assuming the proposed revalidation workshops caught existing installers. **ACTION COMPLETE AND CLOSED**

6 Anchor Training Package & Workshop

BD proposed that a heavy duty binder with plasticated pages be used to contain the Installation Procedure costing £7 a piece. BM stated that his problem was that the budget for the workshop had not included this item which would require £182 for the anticipated 26 participants out of the £400 budgeted. In response to a query about additional funding, BM indicated not in this financial year. AP asked whether the usage that the procedures were likely to see was worth this sort of spend. GJ offered to produce the document using CNCC spiral binder resource for free. BD suggested the front cover should be improved with BCA logo and perhaps a picture. GJ said he would produce a suitable cover.

Action 090321.7 – GJ to print and bind the Installation Procedure document.

BM asked where and when should the revalidation workshop be organised. It was agreed that Derbyshire was a suitable location. BD & LS agreed to organise a revalidation workshop soon after the start of June.
ACTION COMPLETE AND CLOSED

Action 090321.8 – BD & LS to organise a revalidation workshop.

AP asked about producing a DVD. BD expressed the view that it would have little value. BM noted that the primary value for be a record for future when in say 5 years time, the number of people who have practical experience in placing anchors would be down to one or two people. A DVD would provide a visual record for future installers. However, BM felt that there was no value in starting to produce a DVD before the Revalidation Workshop was held. LS suggested that some camera work could be done at the workshop.

7 Rope Testing

BM said he felt the document was too large for it to be usefully discussed in the amount of time left for the meeting. BM went on to ask if it was appropriate for some more Long Term Rope Test work to be undertaken using expeditions who were going abroad this summer. LS pointed out that expedition use would not replicate club use where the rope is untied between uses. In response to a query about cost, BM indicated that he was thinking about spending £200. The meeting felt that there would not be value in such a spend at this point in time. SN suggested that the Committee should allocate a whole meeting to debate rope testing. LS suggested that a paper should be produced for this meeting which covered where we are, what has been learnt, where the confusion, is the testing process OK and what the aims and outputs of a program might be. LS also suggested work should move on to slings. AP also noted a need to reconsider testing methods. (A suggestion was made after the meeting that other work could include Cows Tails and knots.)

Action 090321.9 – BM to produce a paper on future testing of rope and other materials.

8 Fixed Aids

BM noted that he was awaiting some information from SWCC. However given due to lack of time, he proposed the item be left over to the next meeting.

9 Any Other Business

a) Marking of Documents

SN requested that draft documents should be marked draft to minimise confusion in records.

b) Attendees for Workshops

BM agreed to sort out with Regional Coordinators and coordinate the list of potential attendees for the revalidation workshop for BD & LS to use. Following discussion, it was noted that there was not only people required to be revalidated but also a number of people who needed first time training. It was agreed that unless people were currently valid installers (that is they had been trained and had installed an anchor within the past year), then they required to be fully trained rather than just revalidated.

Action 090321.10 – BM to coordinate attendees for the workshop.

c) Date of Next meeting

LS proposed that the date be set after the workshop had been organised so the meeting could take on board any points arising from it. The meeting agreed with this. **ACTION COMPLETE AND CLOSED**

Action 090321.11 – BM to organise a date for the next meeting. ACTION COMPLETE AND CLOSED

The meeting closed at 3.20pm.