

# NATIONAL CAVING ASSOCIATION



Minutes of the meeting of the Association's Equipment Committee held on Saturday 5 April 1997  
at The County Staff Social Club, Stafford.

## 1. Administrative.

- 1.1 **Present:** Les Sykes, Glenn Jones (CNCC); Mark Lowe, Jenny Potts (DCA); Adrian Fawcett (CCC); Chips Rafferty (BCRA), Nick Williams (Convenor).
- 1.2 **Apologies:** A brief E-mail message was received from Les Williams and a letter had been received from Owen Clarke.
- 1.3 Minutes of the previous meeting. LS said he had several points of issue with the minutes of the meeting held on 10 February 1996. It was agreed that since this meeting was the first under NW as convenor, the previous minutes would be noted and the relevant items would be further addressed under the relevant agenda items.
- 1.4 GJ requested clarification about the constitution of the Equipment committee and, in particular the procedure for the authorisation of expenditure. NW said that the issue of finance and expenditure would come up later when the budget was discussed. The committee operates as a forum of interested persons assisting the National Council with matters relating to equipment. The Committee is largely free to establish its own procedures of operation and since it was necessary for all important decisions to be ratified by the National Council of the Association, there was no real need for the designation of specific voting rights and a quorum. With the exception of WPCST, who had not sent a delegate for many years, all constituent bodies of the Association were circulated with an agenda and delegates could attend as they wished. This position was endorsed without dissent by those present.
- 1.5 It was agreed that minutes and committee papers should be circulated by e-mail to all those who had the necessary facilities, but that agendas and notices of meetings should still be sent by post. **ACTION: NW**
- 1.6 NW informed the committee that he had set up an arrangement with the BMC Technical Committee which meant that he was now receiving the BMC Technical Committee's minutes and equipment failure reports. BMC would be circulated with NCA Equipment Committee material, and the BMC would be invited to send a delegate to the next Equipment Committee meeting, but this had not been done on this occasion since the meeting was likely to spend a significant period on administrative matters and picking up on previous work. **ACTION: NW**

## 2. Anchor replacement programme

- 2.1 LW had sent a brief report on the situation with eco-anchors on Mendip: 3 placed in Swildons Hole, 14 in Priddy Green Sink, 6 in Blacknor Hole (Portland Stone), 11 in Thrupe Lane Swallet. All Anchors are tested and in good condition, No failures to date. Anchors to be placed soon include Rhino Rift, GB Cave, Thrupe Lane, Pinetree Pot, Swildons Blue Pencil Passage.
- 2.2 AF described the situation in Wales. Anchors are soon to be placed in Pant Mawr Pot entrance, Llanelli Quarry Pot and possibly in OFD. There had been no problems with anchors already in place, except that it was proving difficult to get the records of placement from North Wales.
- 2.3 ML said that most relevant sites in Derbyshire had now been fitted with anchors. The total placed was 300+ They had now started using the Resifix resin, which seems to have no problems other than the smell. There had been reports of a few loose anchors which had been placed with the Hilti resin. Anchors were now being tested annually but this was difficult in view of the numbers.
- 2.4 LS and GJ reported that there were now 700+ anchors in place in the Dales, and although there had been reports of some loose anchors these were all using Hilti resin and there had

been no problems with the Resifix resin. It was expected that 100 - 150 anchors would be placed in the Dales this coming year.

- 2.5 LS requested clarification on whether or not the Anchor Replacement Policy document had been adopted by the National Council and was therefore official Association Policy. NW said he would check this and inform the committee of the relevant NC minute number. **ACTION: NW**
- 2.6 LS circulated the latest version of the installation guidelines. The procedure set was to ensure an initial commissioning inspection within 28 days of placement of the anchor, followed by further inspections after 1 year, then another 2 years and then another five years. However, due to the sheer number of anchors, it was proving very difficult to guarantee an inspection within one year, so it was proposed that this should be changed to two years. ML, NW, GJ (and LW via NW) expressed concern that this decision should not be taken without being sure that this inspection frequency was adequate. LS said he was sure it was, but agreed that an examination of the data on existing anchors should be done to provide the necessary evidence. This would be made available at the next Committee meeting. **ACTION: LS/GJ.**
- 2.7 AF asked if the few anchors used in an axial load position (usually vertically into a roof) should be tested more frequently than those used normally (in shear). LS said that there were very few in this mode, and GJ pointed out that the failure of the anchor was never sudden or catastrophic - at worst the anchor slowly pulled out under a load of several KN. It was agreed that no special testing procedures for vertical anchors would be implemented at this stage but if AF wanted to examine this problem he should feel free to do so. **ACTION: AF**
- 2.8 It was noted that the new Resifix resin, produced by Exchem, was a polyester based resin as opposed to the epoxy used by Hilti. It was agreed that it would be useful if the committee could find someone with a detailed knowledge of the chemistry of these resins. **ACTION: ALL**
- 2.9 LS informed the meeting that he was still negotiating with Hilti for the purchase of the 2t test gear which they no longer required. However, this equipment is not suitable for ultimate strength tests on eco-anchors which requires 10t equipment. It was agreed that it would be useful to own this equipment but it was not worth a huge amount to NCA. A budget of £240.00 was agreed to purchase the equipment if possible. **ACTION: LS**
- 2.10 10t test gear was hired from Hilti (with an operator) for £50 per day when required. LS informed the meeting that he did not believe that the move away from using Hilti resin would affect this arrangement since Hilti were still interested in the results of our tests.
- 2.11 CR pointed out that Petzl are now marking several items of their equipment with words to the effect of "all equipment 100% tested". It would be nice to think that the same would apply to the anchors. LS explained that 100% testing of anchors was not possible for a number of reasons, including the fact that the effect of a high proof load on the anchor could not be accurately predicted and, more importantly, it clearly was not safe to hang on an anchor under test, but also it was not acceptable to place anchors specifically to allow testing to take place. This had been the subject of considerable discussion in the past, but in order to ensure that the position is clear, LS agreed to prepare a document (probably in the form of a letter to NW) rehearsing this argument using up-to-date information. **ACTION: LS**
- 2.12 LS has received an approach from SPIT Ltd who would like NCA to recommend their resin as being suitable for use. They have supplied resin samples. It was agreed that it would be possible for us to test the SPIT resin to find out if it is acceptable for use as an alternative to the Resifix or Hilti material, but that this was a very different thing from permitting SPIT to put an NCA endorsement on their product. It was agreed that LS/CNCC would test the resin and bring the results to the next Committee meeting in order to decide what we should tell SPIT, based on the results of those tests.
- 2.13 NW informed the committee that BSEN795:1997 (*Protection against falls from a height. Anchor devices. Requirements and testing*) and BS 7883 : 1997 (*Code of practice for application and use of anchor devices conforming to BSEN795*) had recently been published and that we should take note of the contents since these were likely to be considered as current best practice in the case of an question about NCA procedures. It was agreed that NW would obtain a copy of each standard and LS/GJ would examine it for differences and relevant points to NCA procedures. **ACTION: NW, LS/GJ.**
- 2.14 NW asked LS if there was a documented test programme in place which would ensure that we knew of any problems with the Ecoanchor/resin combination before any danger ensued since we do not yet know what the life of the anchor system is. LS said that no formal

programme to this effect existed although he was instigating a number of tests to try to compare different resins, placements, effect of frost etc. under controlled conditions and tests were being done annually on anchors in Swinsto Cave since this shows very high traffic. Although the anchor replacement programme seems to be generally accepted by cavers, there was significant resistance in the caving community to placing anchors unnecessarily and it was therefore undesirable to place anchors in caves solely for test purposes and clearly we did not want to be doing ultimate tensile tests on perfectly good anchors in use in caves since this could result in damage to the cave environment. CR suggested that a suitable alternative might be to place a series of anchors as a handline in Tommy Taylor's Cave in How Stean gorge - this was not a caver's cave and so was unlikely to cause significant angst on aesthetic grounds, and the owners were very likely to be grateful to have a hand-line installed. CR would approach the owners to see if they were in favour of this, and we would discuss what the test programme should try to achieve at the next Committee meeting. **ACTION: CR**

- 2.15 LS and NW informed the committee of an approach from BMC regarding the use of glued anchors. They had had problems with people mis-using glued anchors with the result that they had come unattached from the rock face without significant load. LS had written to the BMC technical Committee with details of the NCA procedures and they had sent NW a copy of their report on the problem.
- 2.16 CR said he had seen an advertisement for a BMC publication on bolting. It was though likely that this was more to do with the ethics of bolt placement than the practical procedures, but it was though to be worthwhile to get a copy nonetheless. **ACTION: CR.**
- 2.17 LS informed the meeting that he had received approaches from as far away as New Zealand for information on the Anchor Replacement programme. Particular interest had been shown by the French. OC suggested that it would be good to have a presentation on the programme for the UIS Congress in Switzerland in August. This should be in the form of one or two A2/A1 boards of pictures and information. NW said he could take it, or arrange for it to be taken, to the Congress. It was agreed that this was a good idea, and a sum of £25.00 expenses was assigned to the project. **ACTION: LS/GJ; NW**
- 2.18 JP expressed some concern that DCA (in particular) may be incurring unnecessary expense in purchasing resin and hangers since they are obtaining them via CNCC despite the fact that the resin is made in Derbyshire. It was agreed that next time it was necessary to purchase a quantity of resin or anchors, members of the committee should speak by 'phone to ensure that any opportunities for free carriage were taken.

### **3. Rope testing programme**

- 3.1 A long letter from OC had been received by NW the day before the meeting, and was circulated to those present. The letter included the latest version of the rope test application forms and the document describing how the rope test results should be interpreted. The letter also mentioned a number of things which OC intends to work on, included some items which will require expenditure. (Copies attached for committee members - available on request from the Committee Convenor for others.)
- 3.2 NW explained that he had been in correspondence with OC regarding a number of technical issues relating to rope testing and had prepared his own interpretative document. (Copies attached for committee members - available on request from the Committee Convenor for others.) He proposed that the next Committee meeting should concentrate on some of these issues although it would probably be necessary for him and OC to have a meeting prior to this in order to ensure that effective communication was established.
- 3.3 In the meanwhile, those present agreed that they fully endorsed OC's position in charge of rope testing for the Association, and supported his effort to provide test data to cavers.
- 3.4 The committee was pleased to note that the latest information from OC did not appear to mention any decision on behalf of the user as to whether or not a rope was safe.
- 3.5 The committee was somewhat concerned, however, that they were unclear as to the precise direction to which OC's efforts were directed beyond providing rope test results. There was a need for the objectives to be carefully defined and the test program to be agreed in advance of any expenditure.
- 3.6 There was also general feeling that an interpretative document based both on the efforts of both OC and NW should be progressed.

- 3.7 JP pointed out that she had received a request from OC to include a copy of the rope test form with the next copy of SpeleoScene, but was reluctant to do this on the basis that it would be expensive and was unlikely to produce the desired result (believed to be that cavers will send OC samples of rope prior to the next testing session). It was agreed that it would be more cost effective to include a small item in SpeleoScene requesting more samples of rope, and giving details of the information which should accompany the sample (based on the information on OC's form).

#### 4. Additional fixed aids in caves.

- 4.1 NW said that he felt there was a need for the establishment of a programme for other fixed aids in caves similar to that for the Eco-anchor. Obvious examples were fixed chains such as that in Blue Pencil Passage in Swildons and fixed ladders such as that in Daren Cilau. There was general agreement with this approach.
- 4.2 LS asked if the fixed traverse wire in Kingsdale Master cave, which had already been discussed in previous meetings in this context, was included in the Anchor Replacement Programme. NW said he would contact BCRA to clarify this point. **ACTION: NW**
- 4.3 It was agreed that regional councils should compile a list of the type of equipment which they would like to see covered under such a scheme and provide this to NW in time for him to prepare a list for discussion at the next Committee meeting. Specific examples were not required at this time, but could be included for illustrative purposes if required.

#### 5. Budget and finance.

- 5.1 A budget for expenditure in the coming year was developed, based on a draft already submitted by LS and other items raised by Committee members. These included two replacement Bosch drills since, as NW pointed out, Bosch are shortly to discontinue the GBH24VR drill and the replacement unit was not thought to be as good for caving purposes. A copy of the proposed budget is appended to these minutes and will be raised at the next National Council Meeting. **ACTION: NW/FSB**
- 5.2 NW explained that the Committee does not have its own account and that any claims for expenditure would have to be forwarded to the Association Treasurer, Mick Day.
- 5.2 It was agreed that the procedure for expenditure for Equipment Committee items should be that items already budgeted for could be claimed off the NCA via NW. Items which had not been budgeted for would need to be discussed at the next available Committee meeting.

#### 6. Any Other Business.

- 6.1 At the start of the meeting, NW said that he wished to place on the record the fact that, as a professional consultant on issues relating to CE marking, he was currently being paid by a UK caving equipment manufacturer to provide assistance with the sale of a caving helmet design. He did not feel that this should have any bearing on his ability to stand as Equipment Officer for the Association, but there was an obvious conflict of interest which should be published. The committee members present agreed that the matter should be noted but that no action was required.

#### 7. Next meeting

- 7.1 It was agreed that the next Committee meeting should be held on 15th November at 2.00pm, probably at the same venue.

The meeting closed at approx. 13:45.

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