

## **MINUTES EQUIPMENT & TECHNIQUES COMMITTEE MEETING HELD ON SATURDAY 8 NOVEMBER 2008**

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

Present - Bob Mehew BM (Chair) Andrew Atkinson AA, Bob Dearman BD, Glenn Jones GJ, Stephan Natynczuk SN, Les Sykes LS, Nick Williams NW,

### **1 Welcome, Apologies**

BM opened the meeting at 10.45 and apologised for the delay in opening the meeting. Apologies had been received from Jules Barrett, Dave Ludlam, Charles Milton, Graham Mollard, Pengelly, Andy Pryke.

#### **1a Chinese Anchors**

NW sought permission to bring forward discussion on Chinese anchors (now known as PECO) Anchors as he was only available for a short time.

LS presented the results of 3 axial pull tests which showed that the PECO anchors were as good as DMM ECO. LS noted that he has a video of the tests. NW reported that an analysis of a DMM ECO and a PECO anchor showed they both were consistent with Type 316 Stainless Steel.

NW raised point about marking of anchors. Discussion concluded need for marking since the PECO anchor might be sold to other people,.

BD noted DCA had 60 DMM ECO anchors. LS noted he had 50 DMM ECO anchors.

SN asked about Quality Control (QC) on order. NW agreed he would provide this for new orders. BD agreed to loan some DMM ECO anchors to NW to provide reference set for checking PECO anchors against.

#### **Action 1 - NW volunteered to provide a report on the QC system.**

Meeting agreed to make offer for first batch of 200 which NW agreed to negotiate. A price range was set.

#### **Action 2 – NW authorised to purchase first batch of 200**

NW sought an estimate of the size of the next order. BD noted DCA had 60 DMM ECO anchors. LS noted he had 50 DMM ECO anchors. Both BD & LS noted they had plans for using the existing 60 and 50 ECO anchors in 2009 which left the batch of 200 uncommitted. LS suggested Yorkshire would need around 100 over the subsequent 2 years. He also noted the need for a test bed of these anchors in various regions. Agreed allocate 50 anchors in 5 regional test beds. NW suggested that get another 500 marked for general use and keep the 200 batch for test beds and similar uses.

#### **Action 3 – BM to check with regions on their potential usage of anchors over next few years.**

NW noted there might be a discount a for larger order. Possible price was discussed.

#### **Action 4 - NW should negotiate for purchase of 500 / 1000 if price is acceptable.**

## **1b Stu's rig and "Bradford" Rope Test Rig**

NW enquired about status of Stu's test rig. LS reported delays due to coordinating availability of Stu's widow and others. LS reported D Elliot has load cell and an old lap top for use with the "Bradford" rope test rig, but not set up nor calibrated. NW suggested committee might wish to think about acquiring Peli case containing load cell capability without data logging function to use on anchor testing or rope testing rig. BM suggested until get Stu's rig, can't sort out where to go. (NW left at this point.)

## **2 Minutes of Meetings on 5 July 2008**

GJ suggested there was no need for transcript style and it was sufficient to only produce a set of bullet points and actions as minutes. Committee agreed with this. AA pointed out there could be a need to record debate on significant topic as such minutes would not be understandable to persons who were not present. Committee agreed it would decide if it wanted transcript record which would be attached as an Annex to minutes.

Meeting accepted minutes supplied.

Committee also agreed to agenda plus actions, without supporting notes.

## **3 Actions Arising (not elsewhere on the Agenda)**

Meeting 5 July 2008

Action 1 LS to check if D Elliot holds the 3rd drill purchased in 2007. - DE holds BCA NO. 3 drill purchased 2007. Closed.

Action 2 BM to check with CCC to see if they hold a BCA drill. – CCC holds a very old drill not on BCA's records. Closed.

Action 3 LS to check out with D Elliot as to what the "Bradford" rig was capable of doing – see item 1b above. Closed.

Action 4 Regional Reps to bring a list of fixed aids to the next E&T Committee meeting – see item 10 Closed.

Action 5 BM to bring a draft revision of the BCA Handbook entry for the E&T Committee. – see item 5. Closed.

Action 6 NW to obtain a material analysis of a Chinese and a DMM Eco anchor. See Item 1b above. Closed.

Action 7 AA to produce a draft report on the evidence from the records of anchor replacements and their reasons. AA reported he was awaiting the building of the data base of anchor records before extracting the evidence to draft a report, see Action 9. BM proposed closing action since activity could not be undertaken until data base produced. Agreed. Closed.

Action 8 BM to produce a revised BCA Anchor Scheme document incorporating the comments made in the meeting for discussion by E Mail. – see item 6. Closed.

Action 9 AA & AP would get together and sort out what each of them would do and come back to the next meeting with the results of their efforts. AA reported he was awaiting A Pryke's work on producing a data base. LS asked what was definitive statement on what records should contain. -

see item 6. A Pryke had offered E Mail report but had not been received prior to meeting. AA also reported BCA Web master had informed him that BCA web site server could host data base. Action continues. - Action Closed.

Action 10 BM would supply the data he held on all regions to them for use. - Done. Closed.

Action 11 GJ to produce a document on the types of tests which can be done at the test bed including upgrading the pullers to higher forces. GJ reported he had documented a proposal for French Test Bed, being in 2010 test Anchor 1 to 15kN; in 2013 test Anchor 2 to 15kN and test Anchor 1 to extraction; in 2016 test Anchor 3 to 15kN and test Anchor 3 to extraction; in 2019 test Anchor 3 to extraction. Maximum and minimum temperature data was being record. GJ queried upgrading puller. LS noted this related to the Hydrajaws puller which would be discussed under item 7. Agreed Closed.

#### **4 Any Other actions from last meeting**

None

#### **5 2009 Handbook Entry**

Revised following discussion.

**Action 5 – BM to forward copy of revised draft to Training for noting**

**Action 6 – BM to confirm A Pryke is still contact for DCUC anchors**

**Action 7 – LS to supply a pdf version of the anchor inspection procedure which BM will put up on BCA Web Site**

Committee agreed that the full set of anchor installation procedures should not be made available other than through attending a training course.

**Action 8 – BM to circulate copy of revision for comment and acceptance.**

#### **6 Revision to BCA's Anchor Scheme**

BM noted document circulated which was critically commented upon by GJ. LS had, with support of BD & GJ proposed that they should produce new draft. BD agreed to contribute.

**Action 8 – LS, BD & GJ to produce new draft of BCA Anchor Scheme**

#### **7 2009 Budget (see end of document)**

BM noted Hydrajaws puller item was to enable puller to be coupled to a gauge supplied by NW. LS noted a need for a portable system to test to destruction anchors. AA expressed a desire to have a higher rated puller to facilitate the removal of anchors. LS noted the need to calibrate the existing Hydrajaws testers. BD noted the tester held in Derbyshire had recently been formally calibrated during 2008.

**Action 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).**

GJ noted that in response to the offer of the loan of a core drill bit to compare it to a standard Hilti drill bit (Item 6 5 July 2008 minutes) he had found no appreciable difference in. It was accepted that core drill bits were not worth pursuing

## **8 2008 Spends**

BM noted D Elliot, LS and AA hold the three BCA drills. BD stated that Derbyshire needed a drill. BM proposed purchasing a drill for Derbyshire in 2008. LS proposed that Hilti drills remained the best available noting the discount we could obtain. It was agreed to purchase 10 drill bits as well.

### **Action 10 – LS to obtain quote for drill and 10 drill bits from Hilti.**

LS noted new drills came with a drill cable which allowed the drill to be placed on the belt and link into the drill. LS asked to look into whether these could be purchased.

Meeting agreed it was not worth upgrading Hydrajaws to 20 kN.

## **9 Rope Testing**

BM noted LS work on Up & Down project. LS described set up of two off 9m lengths of 10.5mm rope. He ascended one rope using Petzl jammers to ascend and descended the other rope using a Petzl stop. He repeated this 80 times. The ascended rope showed no sign of damage whilst the descended rope showed obvious sheath movement. BM suggested that this pointed sheath slippage would only be a problem if the rope was used in one direction only.

BM noted he wanted views on a new Long Term Rope Test with smaller usages (say 50, 10, 150 and 200 usages) given the results from the first series of between 80 and 800 usages which showed average drops survived at just over 2.

GJ noted that the committee were inventing reasons to carry on testing. There was no defined objective for these tests and he asked the meeting if there was a documented reason for testing ropes. None were identified. AA commented that there was now a question mark over the safety of rope which if accepted as real would require further testing.

### **Action 11 – AA to produce a short note on why rope testing should continue and identify objectives for future work.**

Committee debated influence of different Fall Factor values, whether 2 drops was sufficient margin for continued use and whether Committee could advise against use of certain diameter ropes.

### **Action 12 – BM to produce a note on other aspects of rope testing.**

LS enquired when would the committee look at testing nylon slings? GJ expressed concern about harnesses. AA noted we tested anchors because we were responsible for them. We chosen rope next because it was a single point failure in the system where as slings and harnesses should not be. This provided a basis for the order of investigation.

## **10 Fixed Aides**

LS asked for a definition of what a Fixed Aid. BM noted the DCA policy statement. BD felt that it was not suitable for modern times. GJ asked about E&T committee's draft Fixed Aids policy and cited the draft policy definition as:

1.2 **Fixed aid** means artificial fixtures or fittings placed in a cave or mine for the purposes of safe access, progress or egress for regular use or for rescue.

1.3 **Fixed aid** does not include fixtures or fittings giving structural strength to cave or mine walls, supporting roof structures or entrances, retaining structures against movement or potential movement etc.

GJ said he would forward all his material on Fixed Aids to BM. AA noted that SWCC had a lot of material on this topic covering kit in OFD.

**Action 081108.13 – BM to issue draft fixed aid policy for all members to comment on before next meeting.**

Committee discussed access to draft material and accepted that a draft might be published for public comment just prior to finalising but felt that early drafts should not be published.

## **11 Any Other Business**

### a) Training of Installers

BD enquired as to when training of installers would become available. BM proposed that LS and BD set up a training course for the people in Derbyshire who needed training including training a trainer for Derbyshire. LS expressed the view that BD having previously been trained by him was competent to become a trainer without further training. GJ proposed that the Committee recognise BD as trainer / installer for Derbyshire, AA seconded and accepted by committee.

LS said he would send BD the course material and some extra information including record keeping. BD should inform LS and BM of whom he has trained. BM suggested that LS remained the central point for information until the scheme was revised.

It was noted that AA was a trainer / installer for Mendip and A Pryke and Adrian Fawcett had been trainer / installers for Devon and Cornwall and South Wales respectively. BD asked BM to inform J Potts of the committee's decision.

### b) Replacing M8 anchors

AA said he had developed a means to use a 20mm core drill to remove M8 hangers. He asked if PECO anchors be tested with 20mm holes to confirm that this was an acceptable acceptable? The committee debated various features of such a test including need for pre placement of spit, smooth wall surfaces, use of 18mm drill bit to obtain full hole depth. BM noted that the testing was worth doing, but he was reluctant to seek Hilti's support to achieve it so it came down to when Stu's rig became available. This was agreed by the Committee.

### c) Date and Time of Next Meeting

10.30 on 21 March 2009 was agreed. Location to be confirmed.

Meeting closed at 3pm.