

## Prototype PECO Anchor Decommissioning

Following the decision by BCA's Equipment and Techniques Committee that the 77 prototype PECO anchors installed in Dales caves should be decommissioned, the CNCC Technical Group has spent some considerable time looking at the options for the decommissioning process. It is important to note that E&T recommended that the anchors are to be decommissioned, and not necessarily removed.

Options Considered:

- 1. Removing the anchor.** Removing a correctly installed (and not loose) anchor is not an easy thing to do. CNCC TG spent the best part of an hour (at Rowten Pot) drilling out the resin and using a crow bar before egress of the anchor was achieved. Given that there are over 30 anchors in Rowten, *this option was discounted.*
- 2. Hack Sawing off the Head of the Anchor.** Even with new "best quality" hack saw blades (and two are required as the hard stainless steel quickly wears out the teeth of the hack saw blade), it takes about 20 minutes (and some stress to the operators elbow and bruised knuckles) to remove the head of the anchor, *this option was discounted.*
- 3. Using a Portable Grinder to Grind off the Head of the Anchor.** This option was tried in the quarry at Ingleton, but the flammability of the resin, the amount of sparks generated, the fumes created, and the hazard of using a grinder whilst hanging on a rope meant that *this option was discounted.*
- 4. Taking the Anchor out of Service *in situ*.** This method was tested in Rowten and proved not only to be a satisfactory method to decommission the anchor, but also the quickest method. *This is the recommended option.*

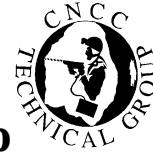
### Recommended Method;

The head of the anchor should be hammered flat to the rock using a lump hammer. It is important that the hammer strokes are towards the operator rather than away from the operator, as a rebound of the lump hammer will almost certainly result in a broken nose or other facial damage.

Once the head of the anchor is flat to the rock, it should be smeared with resin. Then the resin should be carefully covered with mud or earth (in a stream washed cave such as Rowten, it will be necessary to take in a supply of earth/mud). The application of the earth/mud, should sufficiently camouflage the anchor as to make it virtually unnoticeable. Please see the following images;



## C.N.C.C. Technical Group



Anchor hammered flat

Smeared with resin

Covered with earth/mud