

## LESSONS LEARNED GROUP

### Manchester Hole & Goyden Pot 2005

**[Due to the national profile of the caving incident in Manchester Hole in the Yorkshire Dales we are including the Lessons Learned for a wider audience. Ed]**

#### ■ The Issue ■

**In November 2005 a party of young people with a very experienced and qualified leader were caught out in Manchester Hole cave in Nidderdale when the water rose rapidly and unexpectedly.** Tragically a fourteen year old boy failed to escape the rising water. Extensive investigation by HSE and others, and a subsequent trial, established that nothing more could have been done to foresee the event. Although a number of theories were proposed the investigation failed to establish how and why the complex flooding of the Manchester Hole/Goyden Pot system differed on the day from what was normally experienced. It may have been influenced by the opening up of what is referred to here as the 'new' sink. Whilst this means that a recurrence cannot reliably be predicted it is nevertheless reasonably foreseeable that the same flooding pattern will happen again. A greater margin of error is therefore now necessary beyond what had previously been considered reasonable.

#### ■ The Outcome ■

Information for providers of caving activity at Manchester Hole and Goyden Pot.

Manchester Hole remains an appropriate venue for led groups with an appropriate leader and good safety management in place.

Water levels in Manchester Hole and Goyden Pot (and other cave systems associated with the River Nidd) are influenced by all of the usual factors associated with active cave streamways, e.g. river level, catchment, surface drainage, rainfall, snowmelt etc.

However even if no water is flowing in the surface river, under certain conditions, the upstream reservoirs can spill water which may subsequently cause water levels to rise in the downstream caves, possibly resulting in flooding. This spilling is usually as a result of strong westerly winds creating waves which can carry water over the dam spillways. If the water level in Scar House Reservoir is lower than 2 metres below the spillways of the central arches then this is unlikely to occur.

At intervals, Yorkshire Water must check the opening mechanisms that release water from the dam down the river bed (known as scour tests). This will affect Goyden Pot, though it may not fill it completely, and it could also affect Manchester Hole. This may not be a huge amount of water, but the timings of these are varied. The caving guidebook suggests speaking to a local Yorkshire Water employee stationed at the dam. This post no longer exists. Telephoning the local Yorkshire Water office may be a useful back up to check if a scour test is planned for the time when a group will be down these caves.

#### ■ Recommended procedure ■

1. Be aware of and understand the information above.
2. Obtain an up to date and accurate weather forecast. It should, amongst other things, include rainfall, wind speed and direction.
3. Have some knowledge of weather over the preceding week and how this will have affected water levels and surface conditions.
4. Check water levels at Scar House Reservoir.
5. On arrival, if water is flowing in the river outside Manchester Hole (and into Goyden entrance), it would be inadvisable to enter Goyden pot. It is still reasonable to enter Manchester Hole, but it is now advised not to go into the part of the cave beyond the 'crawl'. At the time of writing, the 'New Sink' in the river bed upstream of Goyden entrance is currently blocked. If open, can allow some of this surface water to drain into the lower section of Manchester Hole causing water levels to rise rapidly and sump off the section beyond the crawl. If the weather conditions and/or forecast indicate river levels could rise significantly, thus giving rise to the possibility that river water may enter the upstream entrance of Manchester Hole or of Goyden Pot completely filling with water then a trip into Manchester would be unsafe and should not be undertaken.
6. If there is no water flowing in the river bed outside Manchester Hole but the water level at Scar House Reservoir is higher than 2 metres below the spillways then trips into both Manchester Hole and Goyden Pot may still be possible. However, if using Goyden Pot, be aware that in certain conditions, there is still a risk from water spilling over the dam which will flow into the entrance and cause difficulty if not flooding. Therefore points 1 to 4 (above) should be carefully considered before committing to a trip. In these conditions, Manchester Hole is safe from water flowing into its upstream entrance, but as with Goyden Pot, due to the influence of the 'New Sink', should it be open, there is still a risk from water spilling over the dam which will flow into this sink and cause difficulty if not flooding in the section of cave beyond the crawl. Therefore points 1 to 4 should be carefully considered before committing to this section of the cave.
7. If there is no water flowing in the river bed outside Manchester Hole and the water level at Scar House Reservoir is lower than 2 metres below the spillways then trips into both Manchester Hole and Goyden Pot are acceptable. The risk of water spilling is very low, however factors 1 to 4 above should still be considered as water can still enter the cave systems from other sources. ■

More detailed information is available from the British Caving Association which has produced a guide to the hydrology of Manchester Hole and Goyden Pot. (Ref. G Mollard, <http://british-caving.org.uk/?page=8>)

Image: Nidderdale by Dave Wild