

Some historical notes on Parc Mine for Mine Explorers

Brief history

Parc Mine was the last working mine in the Gwydyr Forest and its extensive connections with older mines make it an important resource from the point of view of both history and industrial archaeology. The mine started life as part of Gwydyr Park Consols in 1883 and passed through various hands over the years. While both lead and zinc concentrates were sold, this generally didn't cover working costs of the mines so that many of these enterprises ran at a loss. Eventually the long suffering mine shareholders forced liquidation of the companies and the mine setts were sold on to restart the cycle. After the Second World War prospects improved and more modern equipment and better separation plant increased yields and the mine ran at a profit. Sadly the yields of ore at depth proved to be poor and by the late 50's a combination of low content and poor metal prices meant the enterprise was finished. By that time the principal lode had been driven to connect with the older Llanrwst and Cyffty mines, but neither offered any substantial reserves of ore.

During the early 60's the mine was used for experiments with new ore separation techniques and a considerable amount of material was processed. While the experiment showed the new techniques were worthwhile it also demonstrated that the overall yields from the feedstock were commercially unviable and this marked the end of mining in the Gwydyr Forest.

In 1968 the mine was used as the location of an experiment to try and measure the deformation of the coastal region due to the tides. An area on level 2 was prepared and sensitive pendulums and ancillary equipment was installed. The results were not conclusive as problems associated with the deformation of the rock cavity housing the equipment marred the measurements. The equipment was removed from the mine and the portal sealed.

Subsequent Decay

Over the years Parc mine has suffered from decay and collapse. The principal lode ran through some unstable areas of rock and while the mine was in production a considerable amount of rock bolting took place on level 3 to stabilise the passage and prevent any collapses. With the mine no longer maintained, nature took its course and a large collapse took place on level 3 effectively splitting this in two. Water started to back up behind the collapse and there were concerns that if the volume increased dramatically then the blockage might fail catastrophically and a huge volume of water, ochre and rock would surge down the valley causing serious pollution of the river Conwy.

To prevent this, a 'choke dam' was constructed at the point where the level 3 passage reached the boundary of Kneebones cutting. The dam consisted of a few 200mm diameter pipes at floor level to take the normal discharge flow and a 750mm diameter pipe about 1.5m off the ground to take any excess. The dam containing the pipes was about 10m long, made of concrete and completely filled the passage. In the event of a collapse this arrangement would limit the flow to an acceptable amount and it was sufficiently robust to withstand the surge and hold back any larger pieces of debris.

Fears regarding the failure of the blockage have so far proved to be unfounded and while there has been some build up of water behind the collapse there is sufficient leakage to limit the depth on the Cyffty side to about 2-3m. This depth varies with weather and season and it means that anyone descending the far ladder-way from level 2 to 3 will encounter ochreous water at least 1m depth and more generally 1.5m.

Collapses in the older workings which Parc has intersected have also taken their toll:

- Material falling down Endeans Shaft in Llanrwst mine has resulted in damage to the balance bob arrangement which transferred motive power to the pump in new shaft and has blocked the base of Endeans Shaft. Some of this material may have caused

a blockage on level 3 just outbye of the main collapse and prevented access to the 'pretty passage'. This is now clear.

- A collapse of material near to Llanrwst New Shaft blocked the main level 2 passage, this was cleared by a dig 1995
- In 2013 there was a collapse in the vicinity of Llanrwst Diagonal Shaft which completely blocked the main level 2 passage. This has now been cleared by another dig.

In 2012 there was a failure in the steel framework in the level 3 portal and a large amount of rubble and stonework blocked the portal. This collapse was visible on the surface adjacent to the surfaced area overlooking the landscaped tailing dumps and has now been fenced off. It seems unlikely that the damage to the portal will be repaired due to the difficulty and cost.

The debris has reduced the water flow exiting the portal and as a consequence some of the water now drains into the bottom of Kneebones cutting and thence via a hole in the cutting floor which probably leads into the remains of level 4. Water levels outbye of the choke dam have increased due to the blockage and make access via Kneebones cutting a very wet experience.

The timber-work in the stopes above level 2 is in poor condition and much of it has collapsed over the years. While some ore chutes have also suffered from rot, there are still many surviving examples.

The main ladder-ways down to level 3 and up Llanrwst new shaft have been checked and are generally in good condition, however explorers must make their own safety assessments before using them.