Warwick Bridge corn mill progress update

Interim update to end October 2018

Millwrights and the milling machinery

The millwrights have been working hard at the mill, dressing and balancing the two sets of stones that we plan to use and cleaning the other three sets. During this process we discovered that the oat shelling and milling stones at the back of the frame were in fact mismatched pairs, the runner stones being millstone grit (as we expected) and the bed stones, that are a couple of inches smaller in diameter, made from sandstone. The eastern set of French burr stones also revealed an interesting feature. When they were lifted for cleaning and dressing, they had been refaced with Carborundum. This was both a cost effective fix for worn down stones, and a popular surface for milling animal feeds in the early 20th century. The Carborundum stones will grind the bran almost as fine as the white flour, making a finer wholemeal product than the western set of stones. The natural French burr will leave the bran in large flakes for easy sorting and producing white flour.

The millwrights have degreased, cleaned and serviced all of the gears and shafts that enable power to be transferred from the waterwheel to the various millstones and associated machinery. They have removed an enormous build up of grease, oil and meal dust that had accumulated since the initial commissioning of the machinery and applied clean oil to the bearings for smooth operation. The waterwheel and its axle have been cleaned, and silt and other debris has been dug out of the wheel pit. They have also serviced the tenter-screws (the devices which raise and lower the runner stone to control the grade of flour produced). Other machinery they have worked on includes a bagging hopper on the ground floor and a fixed winnower and a portable winnower that had been adapted from hand crank to a belt drive sometime in the recent past. They have also been repairing a flour bin and grading machine and measured for a new heavier duty sack hoist chain, and stripped and cleaned the oat roller/crusher on the ground floor.

On the water control front they have replaced the rotten woodwork at the head of the waterwheel, cleaned and repainted the trash grid that stops unwanted items from entering the wheel, and constructed a new elm control gate to regulate the flow of water into the buckets on the wheel. The buckets have been delivered, and had their holes adjusted to fit the rim, and are waiting, along with the new sole plates, to be fitted to the wheel once other works in and around the wheel pit have been completed. The millwrights have also continued working on the waterwheel and its related control gates. Machinery that could not be removed from the building has been covered to protect it during the repair work, and more fragile machinery has been removed off site for safe storage.

Back at the workshop they have made new sets of cevassing to fit around the bed stones of the two sets of millstones we will be using. They have cleaned, repaired and put new linings in the two sets of stone casings that will be used. They have refurbished the racks that will operate the control gate (but not

fitted them) and made a new sluice gate for the spillway. The millwrights have also constructed and delivered two large wooden grain storage bins. These will be used to store the grain to be milled once the mill is operational.

Main building conservation and repair works

The main contractor, Historic Property Renovation Ltd, (HPR) started work on site during July and have concentrated their early efforts on works in and around the beck, the head and tail race, the culvert and the cascade as those were subject to a strict timetabled licence by the environment agency to protect the watercourse and potential fish stocks. These areas have been cleared of silt and vegetation build up, and damaged/missing stonework has been replaced and repointing undertaken. In conjunction with this work, they have erected scaffolding inside and outside the building, and have been inspecting timberwork for damage and evidence of any woodworm beetle invasion. Some live infestations were found and treatment by a licensed practitioner has been undertaken – including to some of the historic machinery – to ensure no further damage occurs. The external scaffolding has enabled inspection of the stonework and work has commenced on removing ivy, identifying stonework which is damaged beyond repair for replacement and re-pointing stonework in lime mortar. The barn roof has been inspected, slates removed, and tarpaulin secured in place to ensure the building remains watertight over winter and allowing work to continue to the interior. The weather has remained favourable for most of the summer period, although there was some slight flooding into the grounds during a weekend in mid October, the mill buildings were not affected.

The archaeologist has kept a watching brief on site during the work of the millwrights and the contractors, and has uncovered some evidence of earlier buildings on site, and has been taking plenty of photographs and keeping us up to date with progress on site.

Recruitment of staff and community engagement activities

Two appointments have now been made. The mill now has a Mill Project Co-ordinator, Karen Mason, and means that the mill now has a miller on site for the first time since 1991. Beth Harrison is the new Community Engagement and Volunteer Co-Ordinator. Her role will be to deliver a wide range of exciting engagement activities with local volunteers, schools and colleges as well as developing the mill as a learning resource.

Since starting in post they have hosted several visitor and volunteer sessions, including two separate visits from every class at the local primary school, taking part in Heritage Open Days and hosting visits from Cumbria Industrial History Society and Heron Corn Mill. Each activity has brought new things to light – whether it be anecdotal memories from a family member who worked at the mill in bygone days, or photographs showing the mill in earlier times, all of which will help us to ensure that we have as complete a picture as possible of life at the mill. One fact which came to light was that a very large fuschia bush adjacent to the head race was planted by the wife of the last miller, back in the 1970s. We were keen to ensure that this remained part of the story of the

mill, so cuttings have been taken and distributed to various volunteers and staff members to nurture over the winter, and the original bush has been moved to the garden at the front of the mill to ensure it is not damaged during the building works.

As part of the education offer, a handling collection of artefacts has been put together to take to schools and other groups. Karen has been approached to give a talk to the local Women's Institute next year, extending the reach of the project to another group of people. We now have a pool of at least 15 volunteers with a range of skills to offer, and a training session on oral history recording has been held. They will be participating in the Volunteers Fair in Carlisle in November aiming to bring the mill to the attention of a different audience, and increase the diversity of the volunteers. Karen and Beth are busy preparing a suite of guidance documents for volunteers across a range of topics.

Beth has begun activities aimed at increasing the health and wellbeing of local people, initially with a weekly circular walk from the mill, and has established links with the local University with media students visiting to identify and track local wildlife.

A facebook page for the mill has also been established, and is regularly updated with events and items of interest: https://www.facebook.com/wbcornmill/

Updates are also posted on NECT's website pages for the project http://www.nect.org.uk/warwick-bridge-corn-mill

NECT acknowledges the support of all our funders on this project: Heritage Lottery Fund, Historic England, RDPE Leader programme Solway, Border and Eden, Architectural Heritage Fund, the Headley Trust, The Pilgrim Trust, Garfield Weston Foundation, Cumbria County Council, Arts Council, Cumbria Waste Management Environmental Fund and other individuals. Without your support this project could not happen.

Images - Millwright works

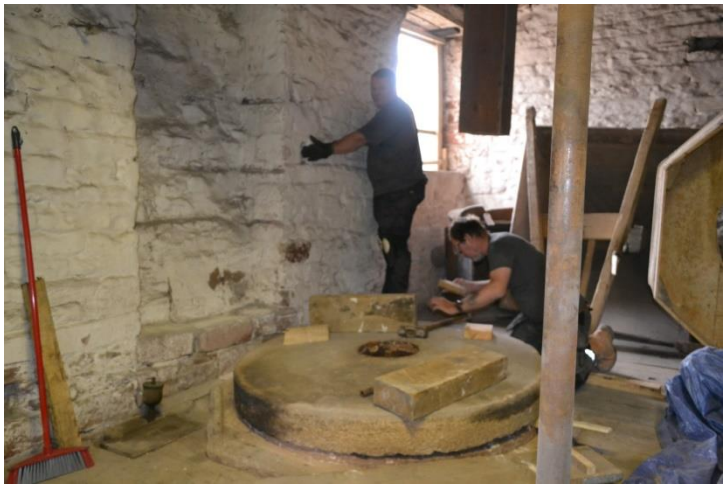


Figure 1 lifting the runner stone with levers and wedges to clean the oat stones

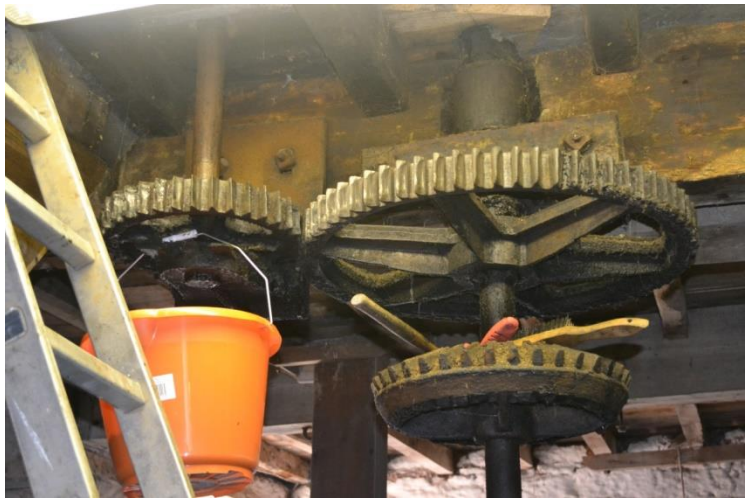


Figure 2 Gears during cleaning

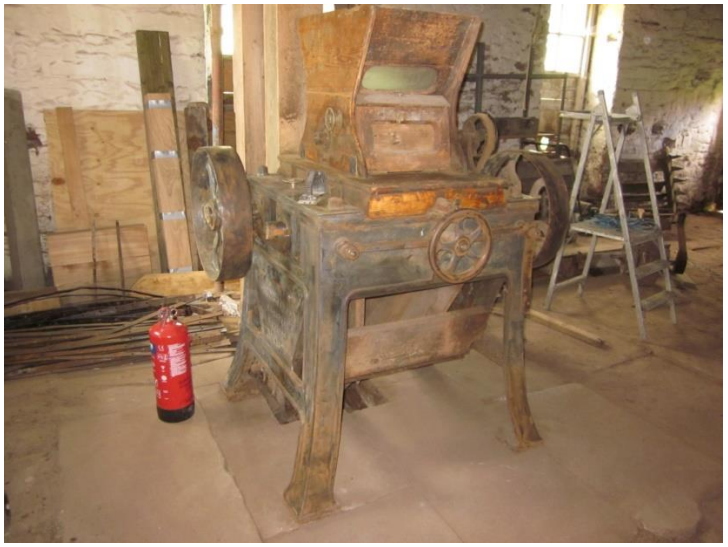


Figure 3 f**reshly cleaned oat roller on the bottom floor of the mill**

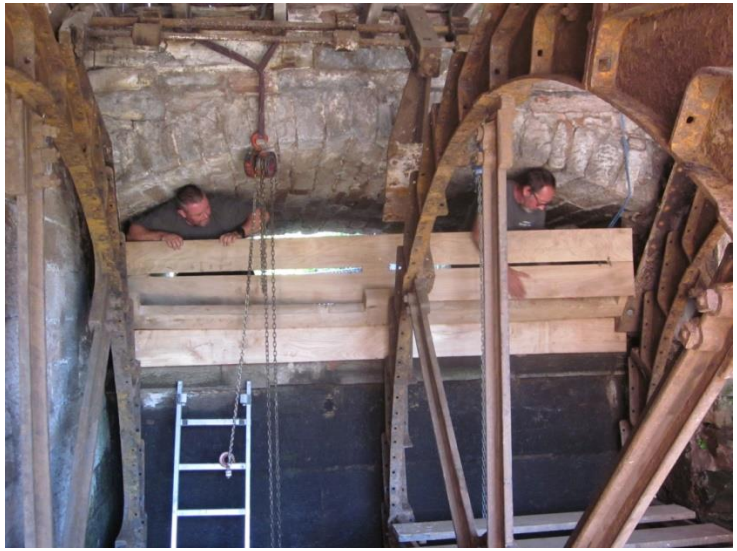
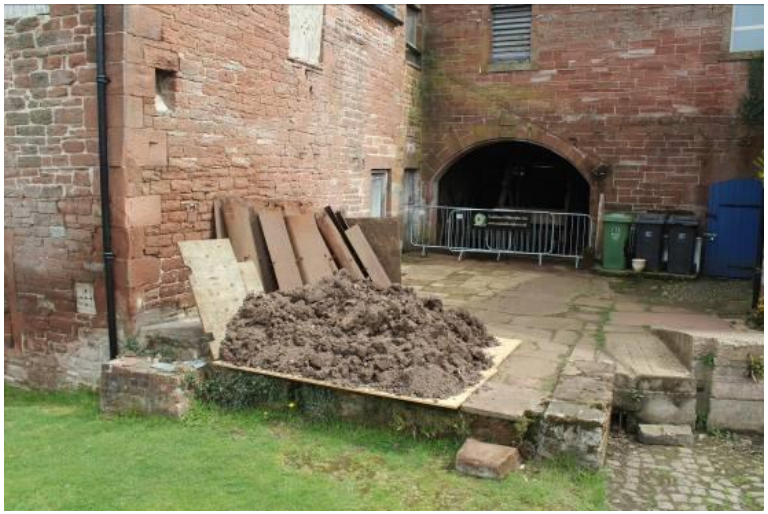


Figure 4 **Fitting the Control gate in position to direct the water into the wheel buckets**



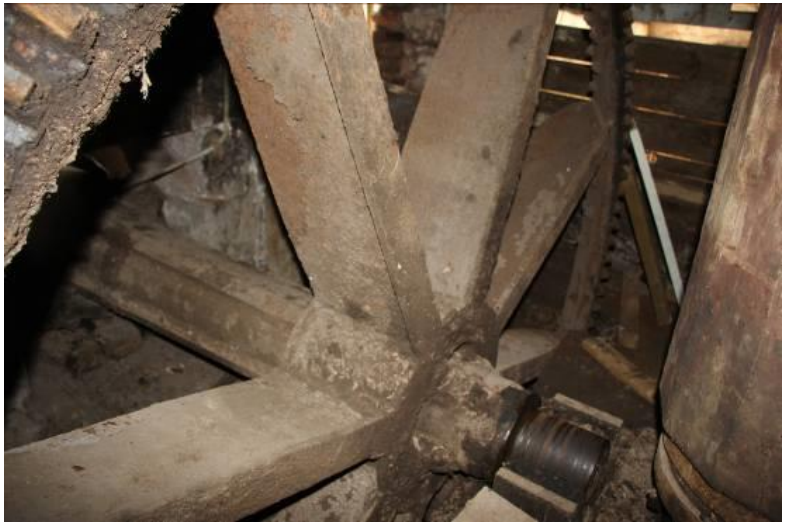
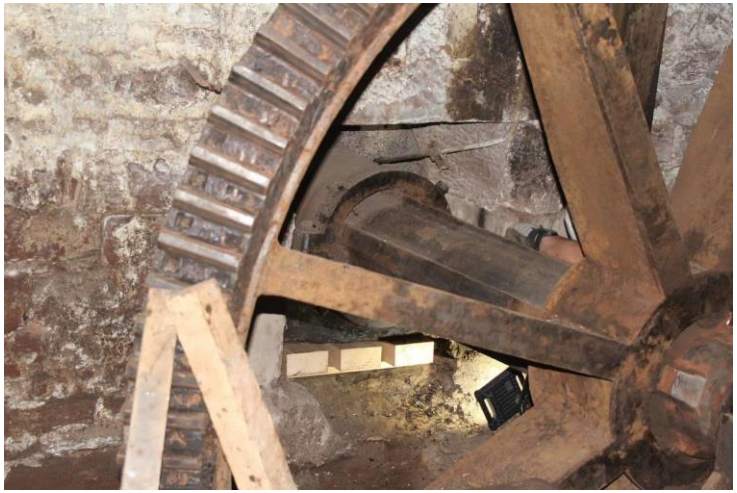


Figure 5 Fine silt removed from the headrace and the remaining buckets removed from the wheel [Photo Harry Beamish, Archaeologist]

Figure 6 The inner bearing opened up for inspection The reinforcing ribs on the axle and the scale of the one piece cast iron Pit Wheel is very evident in this view [Photo: Jon McGuinness Traditional Millwrights]



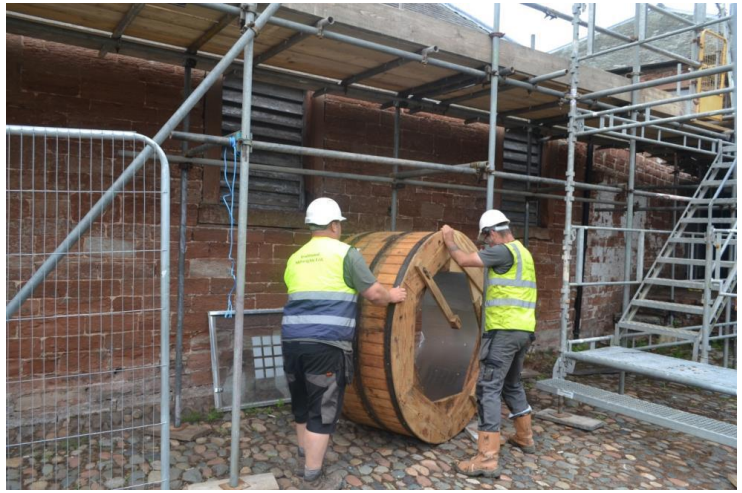


Figure 7 new packing blocks being inserted below the centre bearing of the waterwheel

Figure 8 taking delivery of the new millstone casings

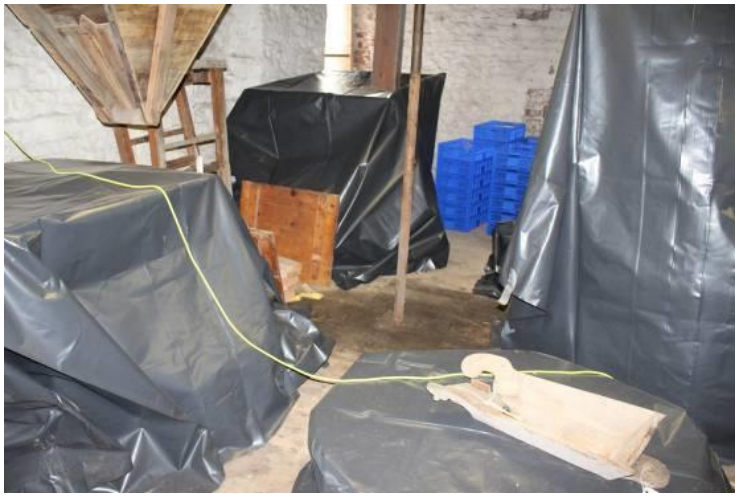


Figure 9 Protecting millstones in advance of building repairs

Images – Building works

Figure 10 Scaffold erected around the barn to allow access to inspect the stonework

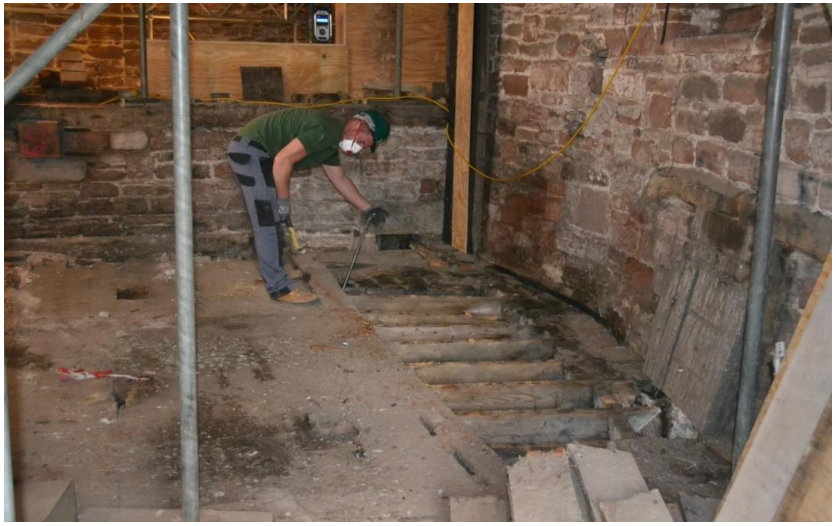


Figure 11 Checking the joist ends for damage and structural integrity

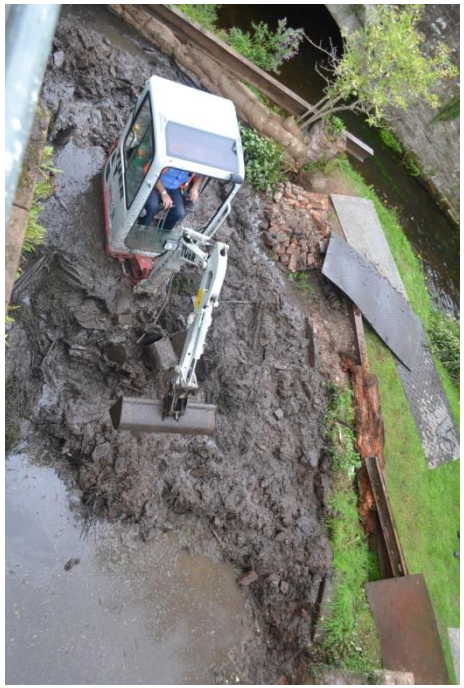
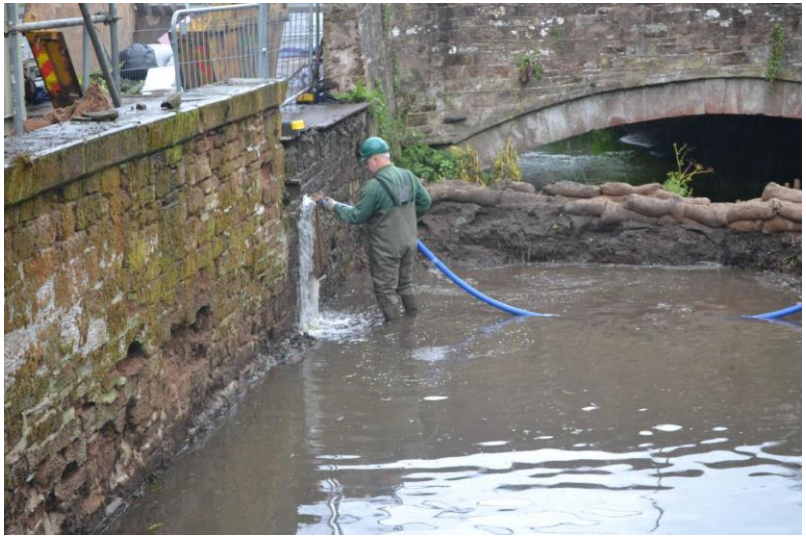


Figure 12 Clearing nearly 30 years of silt and debris from the tailrace



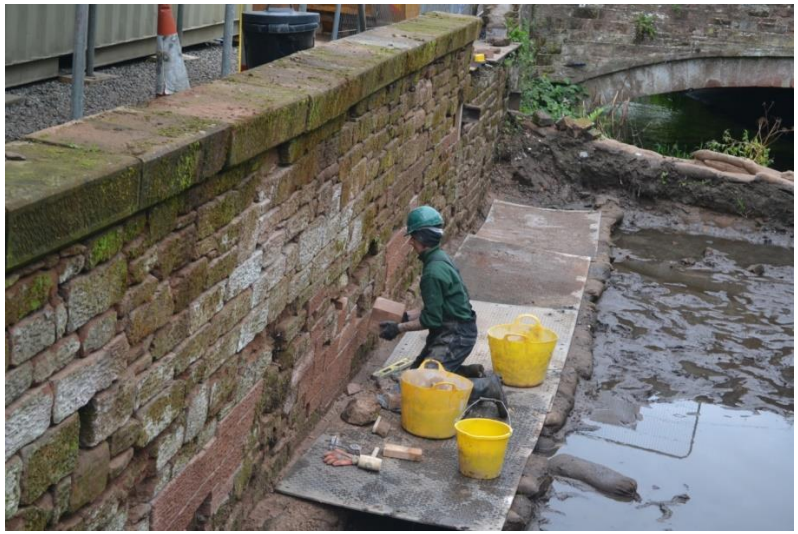
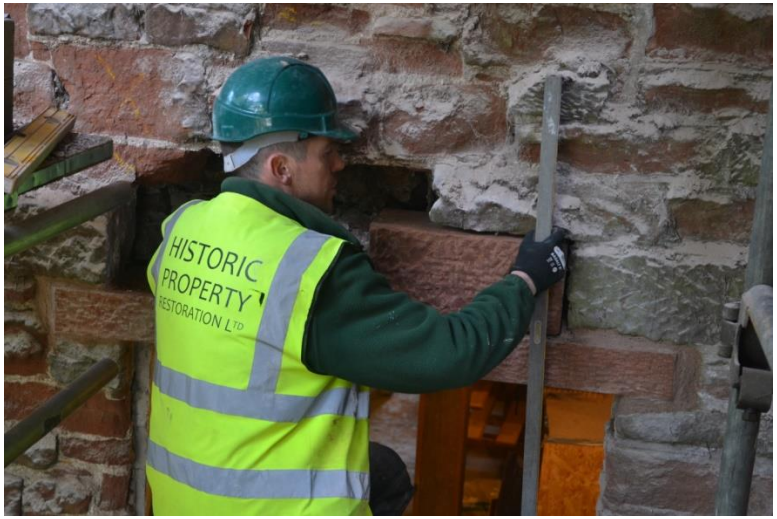


Figure 13 Tail race with sandbags in place, commencing cleaning of stonework to identify repair/repointing required and Fig 14, Mason fitting hand chiselled stones into place



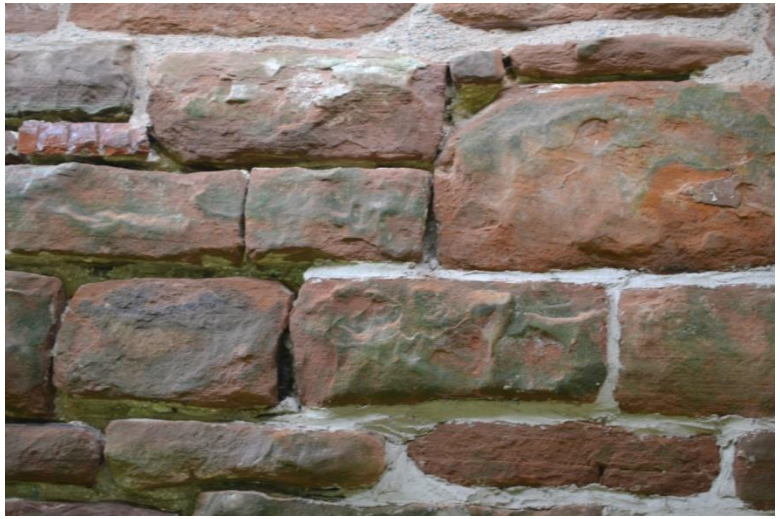


Figure 14 and 16 checking alignment of new stone inserted above a window opening and close up of new lime mortar pointing in north wall

Figure 15 hand carving new coping stone for top of tailrace wall

Figure 16 Slates removed from barn roof and tarpaulin in place

Images – Archaeology finds and community activity

Figure 17 Archaeologist uncovering an extended wall previously hidden next to the culvert

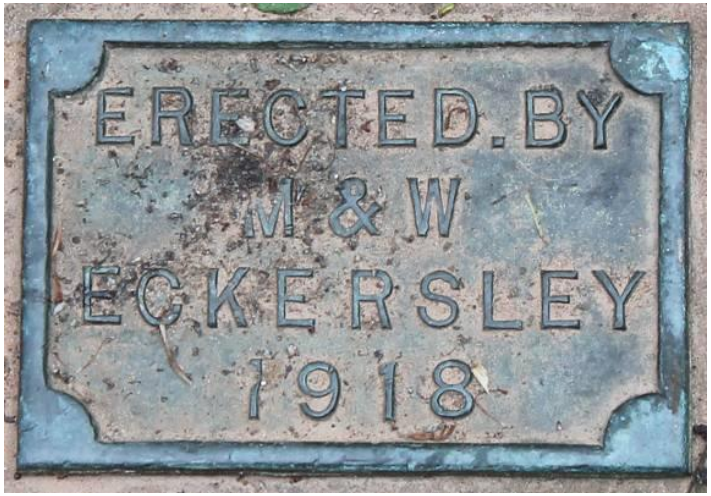


Figure 18 Plaque uncovered at the top of the head race, shows evidence of re-building of the weir

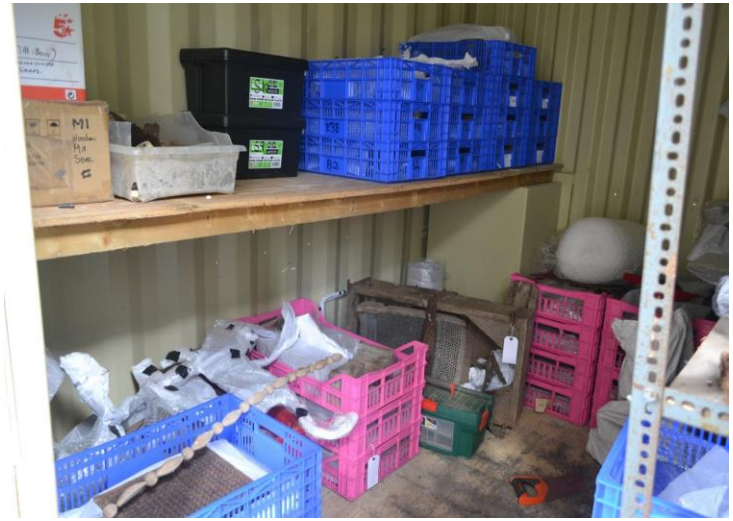


Figure 19a and b Small items inventoried and wrapped for safe storage during works on site

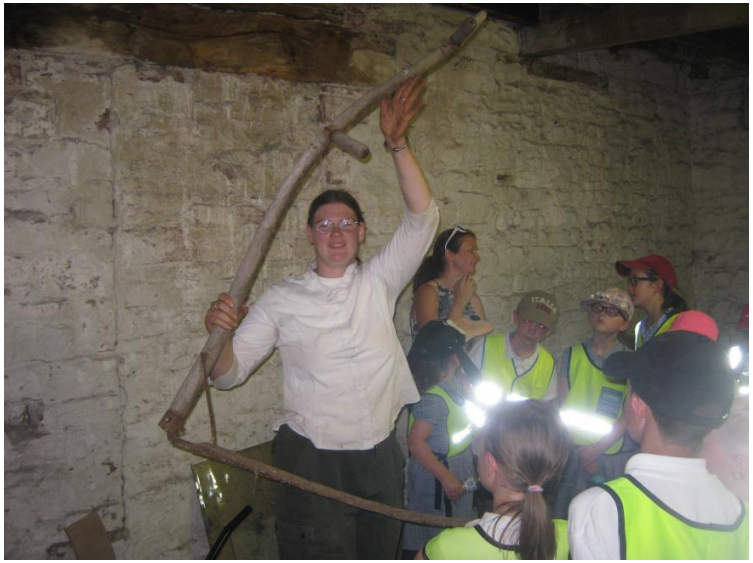


Figure 20 Karen, our miller showing some of the mills artefacts to school group

Figure 21 School visit inspecting work from the scaffold

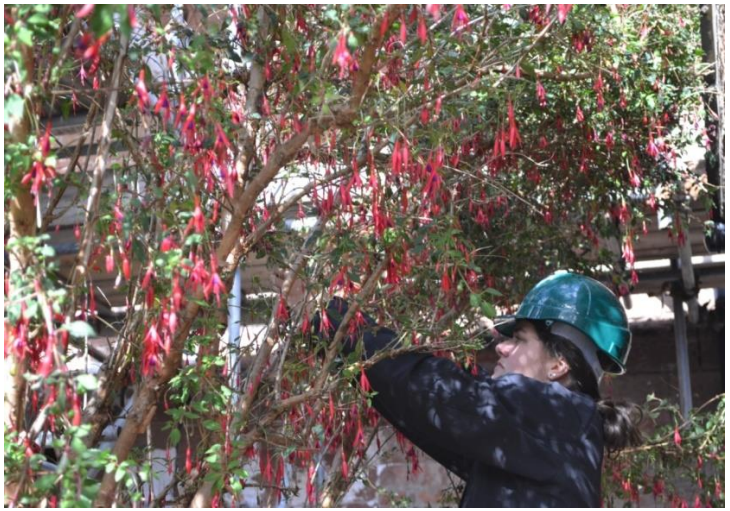


Figure 22 taking cuttings from Fuschia bush planted by the wife of the last miller

Figure 23 cuttings taken to overwinter and replant in new mill garden

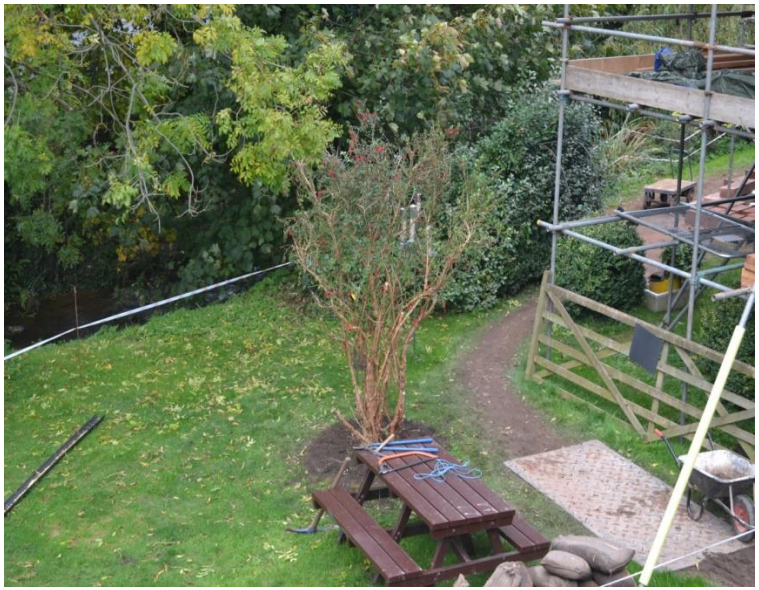


Figure 23 Fuschia bush moved to its new home, away from building works

Figure 25 Oral History training session for volunteers