

Tale Valley Trust Newsletter



Tale Valley Trust

Reg. Charity No. 1079582

www.talevalley.com



Clapperentale Waterwheel Restoration (Escot Park) 2019 / 2020

A Tale Valley Trust Project -

After more than 80 years of laying redundant, most Escot residents did not even know of the wheel's existence. In 2018 the Tale Valley Trust were given grants from the H.B. Allen Charitable Trust & the Garfield Weston Foundation which enabled the restoration project to become a reality. Work began in February 2019.

The wheel was built at the Fairmile forge, part of the Escot Estate, by Huxtables in 1868. Water spun the wheel from above, thus an 'overshot' wheel. Because of the flat gradient from the water intake point over half a mile away at Talewater, the wheel was prone to regular silting and therefore high maintenance. Water flowed into an open brick culvert that ran through the higher side of the entire farm complex to the launder – a wooden trough with its own controllable sluice. In 1936 the wheel was abandoned and a spare estate steam engine was lent to the tenant from the sawmill.

In 1868 the wheel would have been installed to bruise, (flatten), and grind corn – probably oats for horse feed and wheat for flour. To control the flow of grain, a clapper (a wooden or stone block) was used as a primitive regulator – usually in association with a horizontal mill. It is thought that this is where the farm's name is derived – Clapperentale – Clapper on the (river) Tale. (A Google search will reveal several Clapper Mills around the country). By the 1930's, according to Geoff Turl whose father was the tenant at that time, the wheel was only powering a chaff cutter, and not milling.

The wheel was protected (and hidden!) by a tiled roof which had to be removed. A beautiful but self-seeded weeping willow growing out of the foundations sadly also had to go. On February 27th 2019 the wheel was craned out of its sump and placed in an adjacent barn so that it could be worked on. The exit tunnel, 24 metres of arched brick with a brick floor, had caved in over time at the lower end, so careful mechanical excavation was necessary to re-discover it.

On March 5th we exposed a vertical brick access shaft going down behind the wheel. It had been thought that there was an unexplained culvert leading away uphill from the wheel but in fact it is a beautifully crafted curved bend to the shaft that no-one living knew about! Because the gap behind the wheel had been filled with agricultural rubbish over the years it was not possible to access this area until the wheel had been removed. An exciting discovery!

In early May half the wheel was stripped down and the metalwork sandblasted, primed and painted. This was to avoid the risk of the metalwork twisting if all the woodwork was removed at once. Brickwork surrounding the wheel was repaired and new pedestrian steps created where the willow tree had been. By the end of the month the first bucket of the wheel had been renewed, using Escot larch, felled and milled on site. On May 24th a small channel just wide enough to allow crawling was cleared through the silt in the brick tunnel to allow excess water to escape and for the mud to dry out as much as possible. This paved the way, literally, for a fantastic group of volunteers to spend a day in June, clad in chest waders, crawling in relays with buckets passed down the line to remove 5 dumper loads of mud!



In July the earth leat beyond the tunnel was dredged and then a recirculation pump was installed. In September the brick culvert originally bringing water to the wheel was investigated. The investigated area was 10m away from the wheel and is now under a concrete driveway. This was an interesting exercise as laser levels revealed that the culvert would have to be 2/3 full before any water would reach the launder. The section excavated was documented and then carefully filled in again as it would not be practical or economic to reinstate, especially as it was inefficient in the first place because of a very flat contour – ideal for a water meadow! On February 10th 2020 the restored wheel was craned back into position and final adjustments were carried out in situ. By mid-March the new launder was also craned into position over the wheel. On March 26th the water pump was switched on and the wheel spun on its axis for the first time in 86 years! However, the volume of water wasn't quite sufficient. The wheel would spin for 1.5 revolutions and then have to stop for a drink. A second pump has rectified that! The combined flow rate is now 15 litres / second. By the end of March scaffolding was erected over the wheel so that the protective roof could be rebuilt. By Good Friday, April 10th 2020 the roof was complete, scaffolding removed, and the project flowered!

Particular thanks must go to:

Tom Hills – for obtaining the grants – the idea was conceived in 2006 when he wrote the Tale Valley Management Plan for the Tale Valley Trust

Nigel Morgan for researching, planning, managing, and himself carrying out the timber felling, milling and wheel restoration

Richard Todd & team for all building works and intuition with historic restoration

SimpkinsEdwards Accountants' volunteers for their team effort in clearing the tunnel

Robin Hopkins for hours of metalwork to create bespoke bolts & tie rods

Matt Calder who turned on his lathe the new winding spindle & pulley wheel for water flow control in the launder

David Willcox – waterwheel restoration expert who wrote the first assessment in 2003

Martin Watts – waterwheel expert who gave his time on site and verbal and written technical advice on several occasions spanning more than 15 years

Over 20 years of achievements

The concept of creating an environmental charity for the Tale Valley came from the considerable destruction of habitat as a result of the A30 dual carriageway dissecting the valley at Fairmile. The Tale Valley Trust was registered on August 1st 1999, two years after the completion of the road, to preserve and restore the ecology and biodiversity of the valley and educate the public in the history, archaeology, art and architecture of this part of East Devon.



The first 5 years were spent working with farmers and landowners to gain their trust and support, in particular that there was no intention of creating open access or rights of way across their land. A permissive footpath was created along a section of river through the Escot Estate which is used as a demonstration area to explain improvements elsewhere in the catchment.

5.5kms of fencing was installed (the Trust gave 100% grants for materials and farmers gave their time) to create a buffer zone of habitat along the river and to exclude stock except for designated drinking & crossing points. Three pasture pumps, requiring nothing more than pressure from a cow's nose to pump water, were also installed.

4km of coppicing was carried out to allow light back into the river. 1896 hectares of farmland were surveyed.

2002 - the TVT commissioned the Westcountry Rivers Trust (WRT) to compile 25 farm plans to review farming impact on the river and how water quality and habitat could be improved. Grants were then offered to the recipients of the plans by the Trust to encourage implementation of

recommendations. Projects included exclusion of stock from the river other than designated crossing / drinking points, selective coppicing to reduce shading and encourage stream vegetation, and creation of buffer strips – land left uncultivated adjacent to the river to reduce soil run off and erosion, prevent artificial fertilizers being distributed directly into the water and provide bankside habitat and cover for wildlife.

In 2003 The Trustees initiated a Tale Valley Education Ranger, Alan Bruford, (still in post today), and at the same time funded environmental education visits for Tale Valley schools. The Trust planned, designed and funded a demonstration permissive river walk along part of the Clapperentale



watermeadow, in partnership with the Escot Estate. This included a large cedar bench with the sea trout life cycle carved into it. Still used daily by walkers.

2004 was a busy year – The Trust hosted a national water vole conference to coincide with releasing 100 voles at chosen sites in the valley (having spent 5 years trapping and monitoring American mink, their number one predator). It was also the year that the Trust started to organise Himalayan balsam removal from 7 miles (11km) of the Tale which has been repeated annually since then. To enhance the river walk a 12 seater 'story tellers corner' was created under a stand of giant redwood trees, each one carved with a native aquatic





theme. (During the 2020 pandemic lockdowns this area has been very popular for socially distanced outdoor meet-ups)!

In 2005 The Trust beat off competition from much larger organisations across the country to win first prize in the Wild Trout Trust & Classic Malts Conservation Awards. The story tellers corner was enhanced by an adjacent tree stump being carved into a marble run 'acorn survival game'!



2006 - The Water Meadow Management Plan & Volunteer Handbook commissioned by the Trust was completed and restoration on much of the unearthed brick sluices began. The Trust was also integrally involved with the creation of the all-abilities wetlands splashwalk to complement Alan Bruford's widely acclaimed and hugely popular swampwalk in the 8 acre wetlands of Escot Park. Alan won a Local Heritage Star Award for his innovative work with primary schools and local groups.

2008 - East Devon District Council (EDDC), South West Water (SWW) & Environment Agency (EA) recognise the importance of the TVT work by creating a 3 year post for an East Devon water vole project officer, Mervyn Newman. TVT commissioned a Japanese Knotweed eradication program in the valley. (This ran until 2016 when known sites were clear and no further sites were reported).



2010 - a further 50 water voles were released in August to the Tale Valley.

2011 - Living Wetlands Awards 6/20. The EA carried out an electrofishing survey of red listed wild brown trout on a representative stretch of the Tale. In their 1998 survey they found just 1 brown trout fry and 26 brown trout greater than 3cm. This year there were 37 fry and 31 larger trout (above 3cm). Also recorded were 2 dace, 15 bullheads, 3 eels, 1 minnow, 3 stone loach & 7 lamprey. The largest trout measured was 23.7cm.

2013/14 - Farm plans revisited - funding became available through the Water Framework Directive (WFD) and Devon Wildlife Trust (DWT) to re-visit and update progress on 24 farms. DWT had been impressed with the overall condition of the River Tale in comparison to other tributaries in the River Otter and had learnt about the 2002 River Tale project to increase biodiversity in the Tale catchment.



2015 - Living Waterways Award – commended. During the 2015/16 winter TVT commissioned West Country Rivers Trust to carry out a detailed Water Quality Monitoring Project. Four main trouble spots were identified and six tons of sediment an hour was recorded during flood conditions on its way to the sea!

2017 – 3 year financial commitment to the 5 year DWT



River Otter Beaver Trial (2015-2020) to persuade government that wild beavers should be allowed to stay in the catchment. Trust money in particular part funded field officer Jake Chant with his work in the Tale Valley.



In 2019 the Trust reached its 20th birthday. In anticipation of this it was hoped that an iconic project could be funded to mark the occasion. Sizable grants materialised during the autumn of 2018 and so the waterwheel restoration project, first researched in 2003, became a reality.

April 2020 the waterwheel project was completed during the Covid 19 pandemic national lockdown. Individuals were able to finish it as it is isolated and outdoors! [Please see www.vimeo.com/417618952](http://www.vimeo.com/417618952) for short video!



Clapperentale Water Meadow

Having completed the Clapperentale waterwheel restoration in 2020, the Trust has begun planning to restore the upper water meadow, north of the farm buildings, to a managed pasture with reduced grazing and more opportunity for meadow flowers and wildlife. As with most things this isn't as straightforward as removing the cattle. For a start the phosphate level is too high for many wildflowers. Phosphate needs to be removed through cropping but the area is mostly too uneven or too wet to run haymaking machinery over it. If the grass & rushes are simply cut without removal the nutrient levels will remain too high.

Limited grazing in autumn / winter is important for treading in seeds. Animal dung increases the earthworm count which in turn attracts wetland birds such as snipe to the wetter areas. Short grazed grass is important for the life cycle of our common blue butterflies, but tussocks of unmanaged grassland support marbled white butterflies as well as harvest mice and other struggling species.

It's easy to look at a meadow purely as fodder for animals, but it's equally as easy to see it as habitat for wildlife. Both can lead to serious issues. If we set aside our meadows purely for wildlife, we then need to import food from unsustainable sources - in fact we may be eating food that is causing great harm on the other side of the planet while we sit and admire the insects in our beautiful meadow.

So a careful management plan has to be drawn up and the Trust is very fortunate to have Devon Wildlife Trust and the Westcountry Rivers Trust integrally involved at an early stage. As always, funding is an issue but we are ever hopeful for donations, legacies and grants!



Other projects supported by the Trust within the valley include:

- 2001 Escot church creation of hardstanding car park
- 2006 Talaton new Village Shop
- 2007 Tale Valley Community Theatre (Foresight)
- 2009 Escot Church compost loo installation
- 2011 Red Squirrel walk through enclosure July
- 2013 Talaton Church bell appeal
- 2017 Pattesons Cross memorial restoration
- 2017 East Devon Walks book initiation and printing
- 2019 Colestocks to Payhembury footpath creation





Devon Wildlife Trust

Protecting Wildlife for the Future

20 August 2020

Tale Valley Trust
Escot House
Escot Park
Ottery St. Mary
EX11 1LU

Dear Tale Valley Trust,

Beavers are Back – Success for the River Otter Beaver Trial

In mid August, we received the tremendous news that the River Otter Beaver Trial has been a success. The government announced that the beavers on the River Otter are here to stay and they will be given space to naturally expand their range.

This is one of the most significant moments for a generation for England's wildlife.

It's been over six years of concerted effort by all at Devon Wildlife Trust and our partners, the University of Exeter, Clinton Devon Estates and Derek Gow Consultancy. From the early beginnings where the beaver population was due to be taken into captivity with no future on the river, to the present day where they are thriving in the wild and 90% of people surveyed support beaver reintroduction.

It has taken a great deal of courage, conviction and sheer hard work. We've built strong partnerships, forged links with communities throughout the catchment, and delivered ground-breaking science. We also owe a great deal to our members and supporters who have been so vocal and persuasive in supporting the return of beavers into Devon's special wetlands.

This now marks the start of a bright new phase for beavers and wetland habitat conservation. The government will be consulting on beaver management and further release plans for the country and we'll be working closely with our partnership in the coming months to make the case for an ambitious national strategy for beaver reintroduction.

There will be lots to consider in the months and years ahead, but this is a time to feel very proud about what we have collectively achieved and celebrate a significant moment in history. This shared success would not have been possible without your generous support. Thank you!

Yours sincerely

Harry Barton
Chief Executive

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By signing up to Gift Aid you'll make your donations go even further. For every £1 you give to Tale Valley Trust, we can claim 25p from HM Revenue and Customs.

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Janice Drake,
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Tale Valley Trust. Charity N° 1079582
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The Tale Valley Trust is able to help the valley community, its flora, fauna, biodiversity and heritage because of your support and generosity. Its existence and effectiveness depends on individual donations, however small, and small grants.

This newsletter is only produced biannually due to the costs involved

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You can make a real difference by sending a cheque headed 'Tale Valley Trust' to the above address, or by emailing the treasurer janice28drake@hotmail.com for the Trust bank details, to make a transfer

Please consider leaving a legacy to the Tale Valley Trust.

AS WE ALL KNOW, CORONAVIRUS HAS CERTAINLY DOMINATED 2020 AND AS A RESULT THE TALE VALLEY TRUST, ALONG WITH OTHER CHARITIES HAVE BEEN AFFECTED BY THE SUDDEN DOWNTURN IN DONATIONS. THIS IN TURN HAS CURBED THE WORK WE DO, RESULTING IN SOME PROJECTS BEING SHELVED OR EXISTING WORK TEMPORARILY HALTED UNTIL SUCH TIME AS LIFE RETURNS TO SOME NORMALITY.

ALTHOUGH CORONAVIRUS HAS BEEN TOUGH FOR CHARITIES WE KNOW THAT THE COUNTRYSIDE HAS BEEN A HUGE SOURCE OF PLEASURE TO THOSE WISHING TO WALK OR JUST ENJOY THIS LOVELY PART OF THE WORLD.

WITH PEOPLE ACROSS THE COUNTRY FACING HUGE CHANGES TO THEIR LIVES AND LESS CASH IN CIRCULATION, RAISING FUNDS HAS BECOME MORE CHALLENGING. IT'S A TIME OF DRASTIC ECONOMIC UNCERTAINTY FOR CHARITIES AND VOLUNTARY ORGANISATIONS.

WE LOOK FORWARD HOWEVER TO BEING ABLE TO CONTINUE OUR PROJECTS THAT WILL HELP TO SECURE THE FUTURE OF THIS BEAUTIFUL AREA BUT IN ORDER FOR US TO DO THIS WE HOPE THAT WHEN TIMES IMPROVE YOU WILL REMEMBER US AND HELP WITH A DONATION.