BUILDINGS AT RISK

Bridges are so important but many fade into background

Our Buildings at Risk series covers buildings and structures – at risk, lost, and saved. This week, Dave Martin of the Isle of Man Natural History and Antiquarian Society starts looking at some bridges and other crossings – vital structures that often just fade into the background.

Ballakelle bridge (photo Don Smith)

For millennia, rivers were solely natural features, boundaries in the landscape, providing water for human and animal consumption.

The first man-made features on our rivers were probably rocks rolled in as stepping stones, or to form small dams.

Over time, structures were built to exploit our streams and rivers – fish traps in the rivers and water wheels of increasing size and sophistication to harness water power, some with water management such as mill-ponds and lades to divert and impound water (see Buildings at Risk in the Examiner of July 19, 2016 and February 20, 2018), and water was also more recently used as a raw material for industrial processes such as extracting starch or washing lead ore.

One of the biggest impacts that our watercourses have had on the population is the obstacle they place to free movement. Occasionally such obstacle was used as defences (or, in the case of the Battle of Skyhill) possibly as part of a trap.

Manx rivers have never been significant transport arteries – in fact to most of those on the island, the rivers and streams were just an unwelcome obstacle to be dealt with.

In the case of small streams, stepping stones or a fallen tree might allow dry-shod foot passage, otherwise our ancestors would wade at a shallow crossing point, and their livestock would be driven across too.

Uneven river beds might be a nuisance to those on foot, but could be a serious nuisance to wheeled transport, leading to attempts to level-out the stream or river bed at a crossing point, initially by adding smaller rocks to fill the gaps – and eventually concrete – to become established fords.

Tholt-y-Will glen: New bridge and its delivery via helicopter (DEFA)

Pressure to cross dry-shod; to be able to cross however much the river was in spate; to accommodate new and improving methods of transport; and pressure from building, commerce and tourism all led to evolving methods of spanning the banks of our streams and rivers.

Ditches were often just bridged by a 'slate' slab - these could span 'a few' feet, but not much more; and the island lacked massive trees from which to build significant wooden bridges - and there are very few ravines suitable to be spanned by a rope bridge.

Most crossings therefore required a more substantial masonry construction.

Some landowners would construct their own crossings or bridges to get access to their own property, but larger river crossings were almost always constructed by joint endeavour – be that a community, parish or town.

TRAVELLING DOWN, AND ACROSS, THE SULBY

The Sulby River and its tributaries contain a wide and rich range of the types of crossings and bridges found on our island. We'll take a trip down the river, starting from the headwaters of the Sulby and its tributaries, down eventually to sea-level it where emerges into Ramsey Bay.

Simple stone slabs, often Manx 'slate', across a stream or road-side ditch, proliferate across the Island. In the uplands, they may still be visible and obvious – lower down they often straddle road-side ditches to allow access from roadway to field. Many of these remain in situ, carrying loads far in excess of what our ancestors could have ever imagined. Nevertheless, they survive in remarkable numbers – but totally unrecognised and unremarked, often covered in grass. As you pass along country roads, if there is a road-side ditch, there is a very good chance that many

Cammag Close bridge (Chris Callow)

Kewish's bridge (Manx Museum)

'Johnny the smelter' crossing the ford at Claddaghs (Manx Museum)

Stepping stones in Sulby Glen (Manx Museum)

Slate slab bridge, as found all over the island (Manx Museum)

Claddaghs footbridge, September 1930, after the 'great flood' (Manx Museum)

of the field gates will still be accessed over a 'slate' slab bridge.

Wider streams were crossed by 'packhorse' type bridges.

Building a low or flatter arch is harder and, especially with rounded/'shore stones' it can need mortar to hold the stones in place, whereas a near semi-circular arch has maximum 'wedging force' (and also maximum room beneath for water), so some early bridges have a pronounced semi-circular arch.

To the south of the new Sulby reservoir, hidden in a fold in the hills, is a great early example, of a size probably built by the local farmers in the Crammag area to give access to their land for agriculture and possibly peat-cutting and possibly used as one of the ancient routes Southward across the hills.

Flowing into the new reservoir from the East is the small Lhergy Rhenny stream which rises between Snaefell and Beinn-y-Phott. A slightly longer-span bridge gave access to Crammag from the north, but that bridge (a little downstream from the modern one at the Eastern end of the reservoir, below Lhergy Rhennie) was washed away in the 'great flood' of 1930 which sent torrents down many of the streams and rivers which rise in the Manx hills.

The bridge at Tholt-y-Will, in front of the former Tholt-y-Will Hotel, probably started as purely a local construction, but as the island developed, more emphasis was given to building and maintaining the infrastructure, such as the 1760 Bridges Act.

Landowners were obliged to supply manpower, and at times materials – principally for highway maintenance or improvements, but also when necessary to work on bridges as part of the highway.

Organised by John Cowley of Crammag, in 1805 13 local men including Illiam y Close (William Cowley, a well-known local preacher), provided labour totalling over a hundred man-days to build Tholt-y-Will Bridge.

Since Illiam's day, it has been widened to accommodate heavier traffic, such as tourist charabancs.

Tholt-y-Will glen was developed as a tourist attraction and, as in other glens, they constructed paths or walkways, and with rustic footbridges across the streams.

Our national glens are one of the island's treasures, and while we could enjoy the glens from afar, visitors could not reach easily their glades and treasures without such bridges make them accessible.

Continued effort and investment by their custodians, most recently the DEFA, has kept these jewels accessible. Access for actual bridge maintenance though becomes more difficult as a glen becomes more densely forested – where once timbers could be carried in through the glen, that may no longer be possible and more innovative approaches may be needed – in 2018 a helicopter was used to lift bridge parts and materials into the depths of Tholt-y-Will glen.

About 400 metres below Tholt-y-Will is the seldom-seen but beautiful Ballaskella bridge, sometimes known as Murray's bridge.

Again, of early 'high arch' construction, it is one of the most beautiful bridges on the island, and its survival despite periodic floods is a testament to the skill of its experienced but unqualified builders, who crucially understood how to use the local stone.

A few hundred metres further down the valley, clearly visible from the Sulby Glen road is the bridge to the 'Irish Cottages' and the Block Eary quarries and reservoir.

As you drive past the 'Irish Cottages' track entrance on the East side of the road, some who stop and look up at the hillside on the Western side may see Struan Reagh ('the laughing stream') - one of the seasonally-prettiest waterfalls on the island - but how many realise that the Sulby Glen road crosses another bridge at the foot of the waterfall? Yet further down, as the valley floor flattens out, it was possible to wade across, or ford the river and its tributaries.

There were also established sets of stepping stones, and at least one bridge to pass dry-shod on foot, that known as Kewish's bridge, presumably after the Kewishes at the Cluggid.

For most of its journey down the Sulby Valley, the Sulby River runs over rock. But at the foot of the glen when it reaches the Northern Plain, it runs in a channel eroded through glacial moraine – sand, gravel and clay left behind by the glaciers.

As it passes through the Claddaghs, the soft banks eroded and the river spread out, leaving relatively easily crossed shallows; and the riverbed had extra stone added to save hooves and wheels sinking as they crossed, creating a ford.

At what is now the upstream or western end of the Claddaghs, a ford became established, and eventually a footbridge was erected close by the ford. Masonry footings were built for either end, and a modest masonry pier in the middle; but in the infamous 'great flood' of 1930, the banks and foundations were eroded and the bridge collapsed.

The decision was made to strengthen the banks and build a 'proper' bridge. Referred to, wrongly, by some as a Bailey Bridge (which were Second World War pre-fabricated truss bridges), in fact the bridge across the Sulby at the Western end of the Claddaghs was built in 1935 by hand on site using girders from a former harbour board crane.

Concerns over the course of the river and erosion continued, and in 1953 sections were dredged and straightened, and the banks reinforced or armoured, to try to discipline its flow.