

BUILDINGS AT RISK

Bridges – iconic or unknown – are both useful and cared for

Our Buildings at Risk series looks at buildings and structures lost, at risk and saved. In this edition, Dave Martin of the Isle of Man Natural History and Antiquarian Society completes our trip looking at the bridges and other crossing-structures associated with the Sulby River and its tributaries.

We finish our voyage down the Sulby river and its tributaries by looking at bridges in and around Ramsey harbour and the work needed to keep them in good order.

Until the mid-1700s the main way to cross the Sulby river was by fording it. In the Ramsey area, there was an awkward-to-get-to ford at the current 'Whitebridge', which we saw last time, and there was a ford at the foot of 'The Sandy' – later named Bowring Road, but known then as 'The Sandy' from the ground on which it was built.

A major problem, apart from possibly getting wet in the ford, was that the lower reaches of the Sulby are tidal.

The range between low water and high water in the Irish Sea, at the time of spring tides, can be up to 10 metres (33 feet).

The fords at the Whitebridge and at the foot of The Sandy are a little bit up the river, and the fording-places were also little above chart datum, so they never saw the full height of a high tide – but they could certainly see maybe up to 10 feet of water rise at the ford at foot of the Sandy. This made the ford impassable.

In 1728 a petition signed by Deemster Nicholas Christian, prominent citizens of Ramsey and the Captains of the northside parishes, sought Governor Thomas Horton's assistance to provide a bridge in Ramsey. They cited problems with residents getting trapped on one side or other of the river, and the hindrance to trade when those from the northside parishes could not get to Ramsey. However, nothing was forthcoming at that time.

We saw in the Buildings at Risk article on May 7 how Tyn-



The iconic public view of Ramsey swing bridge

(photo: Juan McGuiness)

wald eventually recognised the need for a national commitment to infrastructure, resulting in the 1739 'Bridges Act' to levy an island-wide head-penny poll tax on every adult to fund maintenance of bridges and to build five new key bridges.

The Act specified that these bridges, in the order laid down – Ramsey was number four on that list – were to be built as soon as sufficient funding had been collected.

It would appear that either insufficient money was being raised, or it was being used

elsewhere, because unlike Sulby bridge – the first on the list – the bridge at Ramsey took much longer to build.

In 1755, the House of Keys passed a resolution that 'the Committee already appointed for the building of a bridge over Ramsey River may borrow £113 for the purpose of carrying on and finishing the work'.

The resulting bridge is still known locally as 'the Stone bridge' to distinguish it from the earlier wooden and later metal swing bridges.

The course of the Sulby river through Ramsey has definitely changed over time; it used to discharge in the area now known as the Mooragh before the river was 'disciplined' and the two stone piers built to form the harbour entrance.

There is a story, without any known proof, that something similar happened when the 'Stone' bridge was built – it has been suggested the river ran a little further south (perhaps near where the railway line ran later), and that the stone bridge was built on dry



Promotional drawing for Ramsey swing bridge. Note the railway lines on the quay

(Manx Museum Library)

ground and the river then diverted to run underneath it.

One of the signs of an 'early' bridge is the way pedestrian refuge niches were included, usually atop extended mid-span piers.

Ramsey's 'stone' bridge has been widened over the years, and the continued presence of such a refuge on the upstream/western side of the bridge is a sign that this is the older side, and when the bridge was widened in 1840 the extension was added on the downstream side.

With pavements, especially a wider one on the eastern side, such refuges are not so

necessary, but one now also provides shelter for a traffic sign!

The length of a bridge is the distance between the banks, the width is the distance between the upstream span where the stream or river goes under the upstream span to the downstream span where it emerges into the open air again and is a measure of, say, how many vehicles could sit side-by-side.

Ramsey might just be able to lay claim to the 'widest bridge' on the island – on the TT course but not in the TT lexicon.

Most bridges on the Isle of

Man are only wide enough for one or two vehicles to cross side-by-side; but one seldom seen bridge on a stream that joins the Sulby before it exits through Ramsey harbour, grew significantly wider.

The Leighany stream, also previously known as Stuan e Craue, drains the land to the west of Brookfield, and forms part of the boundary twixt the parishes of Maughold and Lezayre.

The Leighany is little seen or known nowadays, but was familiar to generations of Albert Road School pupils who used the Leighany field for school sports.



Machining one of the bearing rollers to take a new steel 'tyre' in 2013

(photo: DoI)

In earlier days though, the Leighany was an obstacle for those wishing to head west from Ramsey.

Dating back to at least 1797, a bridge, known as Mylrea's, carried the new 'road to Lezayre'.

As traffic grew, the bridge was widened, and given a new southern arch in 1847. It continued to grow wider on the northern side, being repeatedly widened.

The recognisable part of Mylrea's bridge now spans the Leighany from by the former Raymotors' filling station, all the way across Parliament Square to at least the front door of the current Ramsey Town Hall, the third on the site.

However, it goes further. When Ramsey's first dedicated town hall was built in 1888-9, the bridge was extended further north to allow the town hall to straddle the Leighany and hence parochial boundary.

Arguably the final part of Mylrea's bridge is that which carries the road and former railway line along Derby Road / West Quay, to where the northern span (now partly in concrete) brings the Leighany to join the Sulby in the harbour.

Moving down the Sulby, there were also a series of wooden pedestrian bridges from about the end of Christian Street / Collins Lane across the harbour to the area just to the west of the shipyard; these are believed to have been something like the pontoon bridge that was used in similar circumstances across Peel harbour.

What is now known as Shipyard Road in Ramsey was once known as Bridge Road as it led to this wooden bridge across the harbour.

In the years after Queen Victoria came to the throne, Ramsey was a busy town and port, with a successful shipyard and railhead.

The town authorities aspired to develop Ramsey as a seaside resort, purchasing land around the former river mouth to form the Mooragh lake/park and the North Promenade in 1881, but access



Repairs under way - dismantling the 120 year old bearing (photo: DOI)



How many TT riders and visitors will realise they are crossing the much-widened Mylrea's Bridge?

(photo: Juan McGuiness)



The bridge, hardly changed since it was built in 1892



The iron piles which support the ends of the bridges when it is in use

via the commercial western end of the harbour, and its Stone Bridge, was felt inappropriate so a new bridge direct to the Mooragh was proposed.

To help promote the boarding-house plots the Commissioners were selling on the new North Promenade, the Commissioners decided to build a new, opening, bridge to provide both direct access to the Mooragh and maintain access to the shipyard and upper / inner harbours.

To a design by Mr CJ Lilley of London, the Cleveland Bridge and Engineering Co Ltd of Darlington started work in 1888.

As the harbour bed is the same sand, shingle and clay as the rest of the northern plain of the island, problems were encountered securing sufficiently strong foundations

for the central support base, which the Cleveland company thought needed to carry up to 1,200 tons.

In early 1892 the Commissioners were forced to pay damages to a number of the developers who had purchased plots on the Mooragh whose businesses had been damaged by the non-completion of the bridge. The bridge finally opened in June 1892.

Hidden beneath the deck in the centre of the bridge is the - quite complex - central bearing. A large hollow shaft, embedded in the foundations, is the point around which the whole bridge pivots. The weight of the bridge is taken by a 24 foot diameter open taper-roller bearing, whose 20

'rollers' are two-foot diameter wheels, one foot wide.

Now operated by two electric motors, the bridge was originally hand-operated, needing four men in total turning handles on pedestals either side of the bridge centre, via a series of gears and shafts down to a 26 foot diameter gear on the outside of the bearing ring.

At high tide, the sea level nears the top of the quayside in Ramsey, and almost reaches the bottom of the span of the bridge. The central bearing and turning mechanism is shrouded by well-pointed masonry, which generally keeps the sea out or reduces its impact.

The bearing chamber does occasionally over-top and is now fitted with one-way-valved scuppers and a

bilge pump. The bridge itself is painted about every eight years; but the viaduct leading to the bridge from the Peveril/Mooragh side, because it is blasted by easterlies coming up the harbour, requires more frequent attention.

In the 21st century, the bridge is swung on average once a day, but previously more frequently - so has swung at least 50,000 times and maybe many more than that.

The mechanism is greased every two weeks, not just for lubrication but also against salt-water, but after 120 years of service, DoI engineers detected problems with the central bearing; possibly in part due to under-sized replacement rollers being fitted at some point.

It wasn't just open heart

surgery, it was more heart-out surgery - almost the whole mechanism was taken ashore and overhauled.

The design wasn't changed, but modern techniques, such as using liquid nitrogen to fit the new bearing, have allowed greater precision and hopefully another century or more of life for this bridge.

Our bridges - whether iconic or unrecognised, are mostly NOT at risk.

All bridges which carry the public highway, from the tiny slate-slab spans at Narradale to the major bridges in Ramsey, are inspected biennially.

Their value to us all means they receive professional care because of the care given to them by a generally un-seen and un-sung team, which enables these bridges to continue serving the island community.



Ramsey Stone bridge - with several metres of water covering the former 'Sandy' ford, and a surviving pedestrian refuge



The southern/upstream arch of Mylrea's Bridge