

9. "Before the Bridges" Crossing the Firth of Forth in earlier times.

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The Firth of Forth has always been a barrier to north-south trade and travel in the east of Scotland.

Until the building of the Kincardine Bridge in the 1930's, the lowest crossing-point on the Firth of Forth was the ford at Cambuskenneth, and later the bridge at Stirling.

This gave rise to numerous ferries along the nearly 60-mile length of the tidal Firth.

Along the northern shore of the Firth ferries ran from Alloa, Kincardine, Culross, North Queensferry, Burntisland, Kinghorn and Pettycur, Kirkcaldy and Earlsferry. These ferries served places of the south shore such as Thrisk, Kersie and Higgin's Neuk at Airth, Borrowstounness, South Queensferry, Granton, Leith and North Berwick.

The "narrow passage" ferries operated from harbours to the west of Burntisland, whilst to the east the crossings were known as "the broad passage".

There were also of course many less formal ferries operated by local boatmen as and when the business opportunities arose.

The North Queensferry crossing had been in use since the 11th century, and had always been the main route, being the shortest crossing with Inch Garve as a refuge half way across if needed.

Another, but much longer crossing, was between the Earlsferry at Elie and North Berwick, more commonly used by pilgrims travelling to St Andrews.

During the 17th and early 18th centuries the numerous ferries became concentrated into fewer and fewer harbours as the size of the ferries increased. But the shorter Queensferry crossing, being on the line of the 'Great North Road', was always the most popular one. By the end of the 18th century, away from the Queensferry, the principal ferry station was at Pettycur, Kinghorn, where no less than nine boats were operating. During the early 19th century Burntisland became the boom ferry port, and a rail ferry between Burntisland and Granton came into operation, and was in service until the opening of the Forth rail bridge in 1890.

To examine the crossings in turn, we will start from Stirling and work downstream.

Stirling Bridge

For centuries this was the lowest crossing on the Forth. At the time of the Battle of Stirling Bridge in 1297 this was just a narrow wooden bridge.

The word "pons" appears on three mid-15th century maps, and a bridge is represented on the burgh seal of Stirling in 1296, one year earlier than Wallace's battle in which the breaking down of the bridge is traditionally an episode. The tradition implies that the bridge was wooden, and the representation of a stone bridge on the seal is probably a convention. In 1304 an allusion to boats suggests no bridge was available; in 1305 a bridge, presumably of timber, was repaired. Between 1361 and 1391 a ferry replaced the bridge. In 1407 the bridge was said to be very ruinous. The work carried out then was evidently of some importance, and payments to the fabric are recorded in 1408 and 1415. This structure may again have been of wood, as the possibility of it being broken is mentioned by an English spy between 1424 and 1437

Though Simpson states that the Old Bridge was built between 1410 and 1415, the RCAHMS consider its appearance suggests a date later in the 15th or even into the early 16th century for its erection. Built of squared rubble, it consists of four arches. References to the repair of the bridge in the 17th century are in the Burgh Council records. The southern arch was rebuilt in 1749, the original arch having been blown up in 1745 to prevent the Highland army entering Stirling. It was closed to wheeled traffic in 1831, when the new bridge was built

Alloa Ferry

The Alloa Ferry was almost certainly one of the crossings used by the drovers, who having faced the long drive from the north of Scotland or from the west were anxious to cross the Forth with their beasts in good condition for the markets in the central belt of Scotland

A ferry, mentioned in 1620, and in operation until the 20th century, crosses the River Forth between Alloa and South Alloa. The piers and slipways are located at South Alloa and across the Forth below Alloa Glass Works. The stone pier at South Alloa is c 3m - 4m high on its northern side. A row of wooden posts is visible at the south-east end of the pier. The pier appears to be still in use. Remains of a stone pier or slipway are visible on the north side of the river at Alloa. The structures are suffering from a certain amount of disrepair.

Kincardine Ferry

The Ferry Pier at Kincardine was built 1826-7. A coursed-rubble ramped ferry pier. On the southern shore the landing at Higginsneuk, the Stirlingshire terminal of Kincardine Ferry, is situated about 200yds upstream from Kincardine Bridge. The 'Ferry of Airth' mentioned in 1565 may or may not have been located here, but in later times the crossing was much used by drovers making for Falkirk Tryst, and today the most conspicuous feature of the place is the walled drove-road] that leads to the ferry from the highway at the Keith Arms Inn. This is 40ft [12.2m] wide, and unmetalled. Between the end of the walling and the edge of the mud-flats, the course of the road is marked by kerbs and revetment; the jetty, which ran out across the mud to the deeper water, was of wood and has gone to ruin, but the piles on which it rested, set in rows transversely to its axis, may still be seen at low tide.

On the NW side of the roadway, in its lowermost part, a recess has been dug in the mud-bank and revetted with timber, no doubt as a dock for a ferry-boat.

Culross Ferry

This seems to have been a little-used crossing, and was probably little more than a local boatman carrying passengers when requested.

The Queens Ferry

North Queensferry

The village takes its name from [Saint Margaret of Scotland](#), the wife of King [Malcolm III of Scotland](#), who is said to have established the village to ensure there would be regular [ferry](#) crossings across the Firth of Forth for the benefit of [pilgrims](#) travelling to [St Andrews](#). Margaret is said to have made her arrival in Scotland here in 1068, and to have regularly used the ferry crossing when travelling between the then [capital](#) Dunfermline, and [Edinburgh Castle](#). From around this time, the crossing became known as the Queen's Ferry.

Margaret died in 1093 and made her final journey by ferry to [Dunfermline Abbey](#), where she remains buried. Her son, [David I of Scotland](#), awarded the ferry rights to the [abbey](#). However, it is likely that there was a settlement around the present site of the village long before the time of Margaret. The site of the village, on the narrowest part of the Firth of Forth, with added advantage of the island of [Inchgarvie](#) in between, suggests that it would have been the natural point of crossing and a vital link to the north of Scotland for centuries before the Queen's Ferry was established.

North Queensferry over the centuries remained a small community, but the numbers passing through the village daily were huge. From noblemen to commoners, from [Kings](#) to [cattle](#), all had to use the Queen's Ferry to cross the Forth.

The Town Pier, the main ferry terminus for many years, was designed by [John Rennie](#) and built between 1810 and 1813. The Harbour Light Tower was built in 1817; until then, the Signal House was used by boats as an aid to navigation.

Ferries berthed both at the Town Pier and at the Battery Pier (now beneath the Forth Bridge). To accommodate the deeper draughts of the new, larger steam-powered ferries, Thomas Telford extended Town Pier in 1828 to its present length. The Railway Pier, on the far side of West Bay, was the terminus of the new Dunfermline-North Queensferry Railway which opened in 1877. The Railway Pier was used as one of the northern ferry terminals from 1877 to 1890, and in 1920 it replaced the old Town Pier.

The ferry's importance diminished during the 19th century, with an alternative ferry crossing operating for a while between [Burntisland](#) and [Granton](#)

South Queensferry

Queensferry, sometimes also called South Queensferry, sits on the south shore of the narrowest part of the Forth Estuary east of [Grangemouth](#), looking across to [North Queensferry](#), its twin on the [Fife](#) shore. As an obvious place to cross the river when heading into [Fife](#) from [Edinburgh](#) it is likely that settlements either side of the river here, and ferries between them, date back to ancient times.

The "Queen" in Queensferry was [Queen Margaret](#), the wife of [Malcolm III](#). She set up a church in [Dunfermline](#), where she had married [Malcolm](#) in 1070. This rapidly became a place of pilgrimage leading to increasing demand for transport across the Forth Estuary. The Queen's Ferry, paid for by [Margaret](#) and operated by monks from [Dunfermline](#), was the result. This had no fixed southern terminal, using a variety of landing places in or near the village depending on the tide and [weather](#).

In 1879 construction began on a railway suspension bridge across the narrows here. This had been designed by [Thomas Bouch](#), builder of the Tay Railway Bridge that opened in 1878. The collapse of the Tay Bridge with large loss of life on 28 December 1879 brought a halt to work on [Bouch's Forth Bridge](#). The [Forth Rail Bridge](#) that was finally built between 1883 to 1890 was designed by [Sir John Fowler](#) and Benjamin Baker and is a testament to conservative over-engineering. With the coming of the internal combustion engine, the ferries grew again in importance. By the 1950s the ferry across the Queensferry Passage was the busiest in Scotland, with four ferries making over 40,000 crossings each year and carrying 1.5 million people, 600,000 cars and 200,000 goods vehicles. In 1956 it cost between 2/6d and 7/6d for a car, and between 4/6d and 5/- for a lorry. The cost for a passenger was 5d.

The Burntisland Ferries

The Passenger Slip is situated in line with the harbour entrance, and within the tidal (unlocked) part of the harbour. This pier was apparently the N terminal of the train ferry service across the Firth of Forth to Granton. The slipway on the SE side of the pier possibly supported Bouch's patent marine railway, for unloading wagons and carriages.

The "William Muir", above, was well known in the town, running the ferry service to Granton (Edinburgh's port at Leith) until she was scrapped in 1937. A paddle

steamer, she was refitted in 1910 and had only one funnel after that. The slipway on the left of the picture was built at the time of the institution of the rail ferry in 1850, and still exists, as does the small booking office. For some years in the early 1990's a ferry service was reinstated between Burntisland and Leith, but unfortunately this no longer runs.

The Kinghorn and Pettycur Ferries

Kinghorn, Pettycur Harbour was rebuilt in 1792. The harbour comprised a rubble pier with a curved end, protecting a natural inlet, but now badly silted. There is a cast-iron capstan on the pier-head with inscription 'Anderson, Leith Walk Foundry, 1813'

There were complaints in the Old Statistical Account in 1791 that had the money expended on Pettycur and its basons been expended on improving the harbour at Kinghorn, the needs of the ferry would have been met, especially as there was now a lighthouse for the benefit of the passage boats.

As it was, though, the small harbour at Pettycur continued to be the main port for the ferries.

The Kirkcaldy Ferries

The ferries from Kirkcaldy do not seem to have provided a regular passenger service, but there is some evidence that a freight ferry may have operated in the 18th and 19th centuries

The Earls Ferry

It is thought that the ruin at Earlsferry is that of a hospital and other sources note Ardross Hospital at Earlsferry. This was the North end of the ferry from North Berwick, for the poor and travellers, which was founded in 1154 by Duncan, fourth Earl of Fife, and granted by Duncan, fifth Earl, to the nuns of North Berwick. It is thought that there was probably a chapel and cemetery attached to this hospital as the earth around it is full of human bones. A modern panel set in the gable states that the chapel was built by MacDuff, Earl of Fife, in 1093 and repaired in 1830.

Earlsferry. Main Street

Granton

From 3 February 1850, the world's first ferry-train began operating between Granton and [Burntisland, Fife](#). The paddle-steamer Leviathan carried the trains, which formed the main link across the Forth until completion of the [Forth Bridge](#) in 1890. Passenger and car ferry services continued into the 1960s.

Passengers were apparently willing to accept short ferry trips with most of the journey being by train – no doubt that was greatly preferable to a sea voyage from Granton or Leith to Aberdeen or, even worse, a journey by road. The real problem was goods traffic, as trans-shipment of goods from train to boat and boat to train was slow, labour-intensive and risked damage to the consignments.

An answer was found in the form of the 'Floating Railway' devised by [Thomas Bouch](#).

Thomas Bouch was then an enterprising young engineer, and had been involved previously with railways. He designed many successful structures but unfortunately later was responsible for the first Tay Bridge which collapsed in a storm in 1879.

His proposals for Granton to Burntisland crossing were to have special vessels built with railway lines on the decks and matching equipment provided at the harbours at each end of the crossing to allow wagons to be run directly on and off the vessels. The crossing was approximately five miles, from Granton to Burntisland, almost due north / south. A [railway from Edinburgh city centre to Granton](#) already existed, and a line ran from Burntisland to Ladybank where there was a junction, one route going to Perth and the other to Tayport (Ferryport-on-Craig) where a further ferry crossed the Tay.

[Granton Harbour](#) was built and owned by the Duke of Buccleuch; the existing port of [Burntisland](#) was developed by the Duke and [Sir John Gladstone](#).

The map above shows the harbour just after the train ferries stopped operating. The ferries berthed on the east side of the Middle Pier near to where the words 'Granton Station (Terminus)' are shown. The map may not open at full size – it is set to fit within your browser window. To enlarge it further, click the icon near the bottom right of the image.

The proposal was accepted and work went ahead. The actual design of the ferries appears to have been by Thomas Grainger, a partner in the firm of Grainger and Miller, railway engineers, who were involved in the design of the railway between Edinburgh and Granton. The ferries operated successfully from 1850 onwards, generally without any problems, although the crossings were suspended in very rough weather. This was the first roll-on/roll-off train ferry in the world and was withdrawn only in 1890 when the Forth Bridge, further upstream, was completed along with substantial new railway lines to connect it to the rest of the railway network.

The vessels themselves and the shore installations were dependent on each other, and purpose-designed.

Both at Granton and Burntisland, the slipways were constructed to allow the

vessels to be loaded and unloaded at all states of the tide. This was accomplished in two ways – firstly the gantry structures could be moved up and down the slipways, and secondly there were ramps, which could themselves be moved, to connect the shore side to the vessels. Stationary steam engines powered ropes on pulley wheels between the rails to pull wagons on and off the ferries.

The ferries were owned by the railway company, which referred to them as 'Goods Boats'.

The service became quite intensive, the Balbirnie in 1863 operating day and night with two crews each working 12 hour shifts. Wagon capacity was 20 on the Leviathan, and 40 on the Midlothian. Although the service was for goods wagons, empty passenger carriages and occasionally locomotives were conveyed, as the ferry was the most convenient way of transferring stock to the different parts of the railway system. The alternative was to send them by rail over other companies' lines which would have incurred charges.

Passengers were catered for by more conventional vessels, the 'Passenger Boats', all paddle-steamers.

Train Ferry at Burntisland