

CROSSING THE TEES

Fords, Ferries and Bridges



River Tees
Rediscovered 



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Fords, Ferries and Bridges

A Guide by
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This guide was produced as part of the River Tees Rediscovered Landscape Partnership, thanks to money raised by National Lottery players.

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FOREWORD

Groundwork NE & Cumbria work on hundreds of projects every year, helping communities find practical solutions to challenges they face. The River Tees Rediscovered Landscape Partnership, with funding raised by National Lottery players and awarded by the Heritage Lottery Fund, is an exciting initiative involving a wide range of partners, stretching from Piercebridge to the mouth of the Tees.

Our vision is for the Tees Valley to be renowned for its rich landscape, heritage and culture. We aim to connect people and communities to the built and natural heritage within the Tees Valley, bringing our heritage to life, by offering new ways for people to see, hear, touch and enjoy it. This is one of a series of guides which helps to increase learning about our landscape and its heritage.

We hope you enjoy it!

Lucy Chapman

River Tees Rediscovered Partnership Manager
Groundwork NE & Cumbria



Introduction

The River Tees rises on the eastern slope of Cross Fell in the North Pennines and flows eastwards for 85 miles (137 km) to reach the North Sea. For many years it formed the boundary between the County Palatine of Durham where the Prince-Bishop was effectively King of the area and North Yorkshire. Now it acts as the boundary between the ceremonial counties of North Yorkshire and County Durham.

The area we are interested in from Piercebridge to Yarm is the mature stage of the river, where the gradient becomes gentler and the river becomes wider as it is joined by many tributaries. At this stage, the river meanders and has many bends or curves as the land is much flatter than it was in the youthful stage. The river tends to swing from side to side, and as it does so, the current will be stronger on the outside of the bend and so erosion will take place, while on the inside of the bend the current flows more slowly so deposition will take place.

The section from Yarm to the sea is the old age stage where the river is usually at its widest. We see meanders particularly at Sockburn, Yarm, Bowesfield and in times past, at Portrack and Mandale (Teesside Park). During times of flooding, there is an increase in the speed and volume of a river and when a river comes to a tight meander, it often bursts its banks and cuts through the bend. The water flowing around the bend will now be flowing slowly and so deposition will take place. So, we find that unless controlled by man, the course of the river is constantly shifting.

As well as these natural phenomena, people have also shaped the course of the River Tees, particularly from Stockton to the sea with various cuts, training walls and docks.

Crossing the Tees

Rivers have always been a barrier to be overcome and be crossed.

Although the river is a physical boundary, it is not necessarily a property boundary. Indeed, a number of estates are spread over both sides of the river and this led to the need for access across the river and many of the fords and ferries as well as a few bridges exist purely to serve these estates.

While fords were an ancient and common way to cross the river in the middle and lower reaches of the river, they were susceptible to flooding and subject to scouring which would make them unusable. One way around this was to use a small boat so that people and goods could be ferried across the river. Even this method was often impossible when there was a high flow of water down the river. Ferries tended to vanish by the end of the 19th Century, except in the lower reaches of the river where because of the industry, they persisted into the 20th Century.

The ultimate solution to the problem of crossing the river was a bridge, and many bridges were built across the Tees.

Early bridges were built by the Romans and later the Bishops of Durham. In the 19th Century, as railways spread across the country, bridges were needed and as the industry expanded, further road bridges were constructed. In the 20th Century, road traffic increased requiring new bridges to be built and this will continue into the 21st Century with a new bridge proposed near Middlesbrough. However, even some of the finest bridges succumbed to extreme flooding of the river in years such as 1771.

On this journey down the Tees from Piercebridge to the sea, we will look at fords, ferries and bridges. We will see over 80 crossing points suggesting that the river was not quite the barrier that we would expect. Some of these crossings have long gone, often leaving no remains and some crossings are yet to be built. Over 80 official crossing points have been identified and no doubt there were many more unofficial crossing points.

Of the bridges, nine are listed as being of architectural or historic interest.

The Teesdale Way long distance footpath sadly does not follow the river closely enough in some areas and some of the bridges are not visible from this path, although it is worth consulting large-scale maps to find paths closer to the features described. Some crossing points are on private land and trespassing should be avoided.

Piercebridge on the B6275 road

Starting at Piercebridge, it seems likely that the earliest crossing at Piercebridge was a ford (NZ214156).

The first bridge was Roman (NZ213156) and was on the original line of Dere Street, serving the Roman fort on the north bank of the river and crossing the grounds of the George Hotel. The remains of timber piles have been found in the river probably supporting a timber bridge that appears to have gone out of use near the end of the 2nd Century. It was possibly washed away in one of the heavy floods for which the Tees was renowned.



Remains of the second Roman Bridge at Piercebridge (PG)

The second bridge (NZ214155) was built with stone piers some 180 metres downstream from the original bridge. This required a diversion of Dere Street. The new bridge was on the floodplain of the river and would not have been subject to such powerful flooding as the first bridge. The remains of the bridge are thought to have been carried away in the great flood of 1771, although there are still visible remains lying in a field south of the river as the Tees has eroded northwards since the Roman period.

The current bridge at Piercebridge is stone (NZ214155). It seems likely that there was a bridge on this site in the early Middle Ages as there was reputed to be a chapel provided for the bridge. The name is generally accepted to have come from the fact that it was built by two priests. The bridge was mentioned in 1397, and in 1538 it was described as formerly of five arches but recently rebuilt with three.



The bridge at Piercebridge (CC)

There was a skirmish here during the Great Civil War in 1642 which may have caused some damage to the bridge. This bridge also suffered in the great flood of 1771 remaining ruined until 1797 when it was rebuilt and widened.

The bridge was on the Boroughbridge to Catterick and Piercebridge turnpike of 1743, extending to Kirk Merrington in 1748. The structure is Grade II* listed by Historic England.

Adjacent to the bridge is the George Hotel, where the clock made famous in the well-known poem “Grandfather’s Clock”, which stopped never to go again, can be seen in the hotel bar.

Holmes House ford (NZ223149)

There was a ford here which probably was mainly for access from Holmes House and the adjacent cottages to High Coniscliffe, particularly to the church.

Ford near Merrybent (NZ2391420)

This is a relatively modern ford on a track from Low Coniscliffe to Swinelair Farm not shown on any of the old maps.

Merrybent Bridge (NZ245133) (demolished)

The Merrybent railway was constructed to carry stone from quarries near Barton, crossing the River Tees near Low Coniscliffe on a three-span wrought iron girder bridge built by Hopkins, Gilkes and Co Ltd of Middlesbrough. The line was opened in 1870 and the railway closed in 1950, with the bridge being demolished in 1952 after being damaged by fire.

A1(M) Bridge, Low Coniscliffe (NZ245134)

This bridge was built as part of the A1M Darlington bypass in 1965. The road follows the line of the old Merrybent Railway for some 10km, crossing the Tees on the site of the former railway bridge. The bridge was constructed in 1961 in advance of the motorway and is of prestressed concrete with three spans.



A1M bridge (AB)

Cleasby Ferry (NZ246134) and Ford (NZ247135)

This crossing point was fairly important, being shown on some 18th and early 19th Century maps. It is likely that the ferry, which is shown on the first edition Ordnance Survey maps, was used mainly when the ford was impassable or perhaps for some of the gentry. Later editions of the map show a boathouse but no ferry. It is possible that the ferry fell into disuse when the Merrybent Railway bridge was built and people used that. The lane down to the river is still known as Boathouse Lane. The ford is shown on all editions of OS map up to the 1950s.

Blackwell Bridge on the present A66 road (NZ2270126)

Originally a ford, known as Blackwell Wath (Wath is an ancient name for a ford possibly of Norse origin) Blackwell Bridge was designed by local architects John and Benjamin Green and was their first masonry bridge.



Blackwell Bridge c1910 showing Toll House (AB)

It is a road bridge with three semi-elliptical segmented arches measuring 19m, 24m and 19m using Gatherley Moor sandstone. It is said to be built on foundations of bags of wool which was a fairly common method for supporting foundations on poor ground. The bridge was completed in 1832 and was a toll bridge. Tolls were removed in 1879 although the former toll house still stands at the west end of the bridge.

The bridge carried the A1 Great North Road from the south into Darlington and as traffic increased so it became inadequate and was widened in 1961. This was done using reinforced concrete with matching stone facing.

Although superseded by the A1 motorway bridge in 1965, it is still an important link road to and from Darlington to the A1 motorway. The bridge is grade II listed.

Stapleton Bridge, Ferry and Ford (NZ265121 approx.)

It is thought that there may have been a medieval bridge which was washed away in one of the floods and the Bridge Inn is thought to be named after this bridge.

The Stapleton family gave some land to the abbey of St Agatha at Easby, near Richmond. One of the conditions was that the monks had to maintain a ferry across the river near the existing ford. The ferry was superseded by the new bridge at Blackwell which involved a realignment of the road to Darlington. In 1840 there was a second inn in the village named The Boat, perhaps after the ferry.

Croft Road Bridge on the A167 road (NZ281098)

There was a ford here but it was said that the river bed was treacherous and the current fast flowing, which perhaps explains the need for a bridge. It is thought that there was a wooden bridge dating from the early 14th Century that was badly damaged by a flood in 1356. The bridge was rebuilt in stone and further rebuilt or restored in about 1400. The bridge was of great military importance in the 14th and 15th centuries.

The present bridge seems to date from the 15th Century and has been much restored since. It was widened to twice its previous width in 1795, and was on the turnpike between Boroughbridge and Durham from 1745 until 1879, when the toll for the crossing was abolished.



Croft Bridge (PG)

The bridge has seven arches and in the 1920s, the river course upstream was diverted slightly to prevent flooding of the villages of Croft and Hurworth Place.

This bridge, or the ford at Neasham (depending on the state of the river), is traditionally where the incoming Bishop of Durham is presented with the Sockburn Falchion (a type of sword). Legend has it that Sir John Conyers of Sockburn killed the monster known as the Sockburn Worm in 1063. The sword was later presented to Durham Cathedral where it can be seen today. It is said that the story of the Sockburn Worm was immortalised by Lewis Carroll in his nonsense poem “Jabberwocky”, part of which was written while he was living in Croft. This bridge is the only Grade I listed structure on the part of the Tees we are looking at. (Barnard Castle bridge, upstream, is also grade I listed).

Tees Bridge on the East Coast Main railway line (NZ290092)

This bridge was built for the Great North of England Railway in 1840. It is about 100m long with four 18m masonry arches skewed across the river at an angle of 50 degrees and was designed by Henry Welsh. It now carries the East Coast mainline railway between London and Edinburgh, and is one of the oldest bridges on the rail network. The bridge is Grade II listed.



Croft Rail Bridge (AB)

Rockcliffe Hall bridge (NZ294086) (Demolished)

When Alfred Backhouse bought Pilmore House, he had it rebuilt and the whole estate remodelled, becoming the Rockcliffe Hall estate. As part of this, a bridge was commissioned in the 1870s to link the estate with land in Dalton woods across the river. A four span wrought iron lattice girder bridge was constructed by the Skerne Ironworks of Darlington. The bridge was demolished about 1960 as it was in a dangerous condition.

Dalton Batts Footbridges (NZ296083)

Although not strictly bridges across the river as they only cross the part between the south bank and the island known as Dalton Batts, they are included for completeness.

The first footbridge dates from around the 1870s as part of the Rockcliffe Hall estate. This seems to have been demolished by the 1970s, when it was replaced by a new bridge slightly upstream. A later footbridge was added a little further upstream more recently.

Hurworth Ferry (NZ306100)

A ferry operated here from at least the 15th Century and possibly for some time before. The ferry ceased operating in the early 20th Century. The latest OS map shows a slipway on the Durham side of the river.

Hurworth Ford (NZ310100)

The ford at the east end of the village allowed access to Low Hail and the Eryholme estate. It was approached on the Durham side by a long slope. It was superseded by a bridge although the ford continued to be used by the farm labourers as the landowner would not allow them to use the bridge.

Low Hail Bridge (NZ310100)

The bridge was constructed in the 1870s to carry a sewer pipe across the River Tees so that sewage from the village could be deposited on land on the Yorkshire side of the river. The pipe was supported on six light iron columns, giving seven spans of 16m at a cost of £2,000. It was paid for by Lord Rokeby and the ratepayers of Hurworth. The bridge was based on an 1820 bridge design from the USA and constructed by the Darlington civil engineer Robert Robinson. It has a wooden deck and wrought iron gates.



Low Hail Bridge (AB)

Neasham Ford known as High Wath (NZ324100)

This ancient ford was in use for many years as the crossing point where the Bishop of Durham was given the Sockburn Falchion. Legend has it that the monks who bore the body of St. Cuthbert crossed the Tees by this ford on their way to Ripon. This important ford was notorious for highwaymen robbing rich travellers.

It is thought that this ford was put out of use by the cumulative effect of illegal sand and gravel removal from the river bed in the 1950s. The ford is still shown on recent maps.

Neasham Ferry (NZ325101)

There was an ancient ferry which certainly existed in the 17th Century until the 1870s at Neasham.

Neasham Ford known as Low Wath (NZ326101)

The name Low Wath suggests an ancient ford, however in this instance that is not the case, as this ford dates from around 1800. When High Wath had become less safe due to the illegal gravel extraction, it became the main ford. The ford is still shown on recent maps.

Neasham Hall Bridge (NZ325093)

Sir Thomas Wrightson bought Neasham Hall in the late 19th Century and a few years later built this fine bridge across the river. Wrightson owned the company of Head Wrightson in Thornaby and they built many bridges.



Neasham Hall Bridge (AB)

This bridge dates from 1909 and is a lattice girder bridge with a centre span of 30m and two side spans of 15m. The east end piers are inset with 2 small cast-iron medallions with the monogram TW. The west end piers have a pair of iron gates. The bridge was probably built to make access from the Hall to Eryholme church easier. The bridge is Grade II listed.

Sockburn area

This area is a long peninsula in a loop of the river and at the narrowest point it is only 310m, and at the top of the loop, only about 700m.

Today all that remains of the village is an early nineteenth-Century mansion, a ruined church and a late eighteenth-Century farmhouse. The church dated from before the Norman Conquest but was replaced in 1838, and it is close to here that the Sockburn Worm is said to have been slain.

There have been a number of fords, ferries and bridges in the area outlined below. It is said that some were used by the Romans although there is no evidence and the known Roman road runs slightly to the east of the peninsula.

(Eastfields) Ford (NZ343071)

This ford does not appear on early OS maps but is shown between 1914 and 1954. It is a long ford crossing the river diagonally across an island of shingle. It was probably only for the use of the farm and may no longer be in use due to changes in the shingle banks in the river.

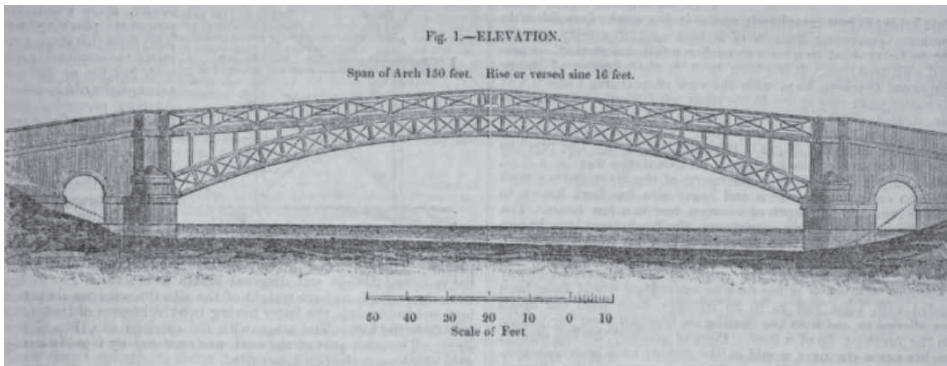
(Woodhead) fords and ferries

The earliest OS maps of 1857 show a ford at NZ345066 and a private ferry at NZ348063. By 1896, the ford had disappeared and the private ferry had moved upstream to NZ346065. Presumably, the river had eroded the ford and the early ferry was now in an area of shallower water. The ferry would just be used for local traffic from the farms.

Sockburn ford and Bridge (demolished)

In the 1680s, the Sockburn estate was bought by the wealthy Tyneside Blackett family. In 1834 they built a new hall and pleasure garden.

A bridge (NZ351070) was built in 1838, designed by William Hambley of London, at a cost of £1,200 (about £1m today). It was a fine wooden-arched bridge with abutments of red sandstone, and its carriageway was carried on a timber deck. The bridge had a span of 46m and was 4 m wide. The bridge was repaired in 1859, and by 1885 the Blackett family were advertising for tenders for a wrought iron bridge, a replacement for the wooden bridge.



Engraving of Sockburn Bridge (AB)

In the event, this was not built and it seems that the timber bridge was destroyed in the 1890s to be replaced by a private ferry.

Around 1910, a suspension footbridge was built using the old abutments. This lasted until 1985, when a tree swept down the river in a flood carried away part of the bridge. Only the abutments now remain.

Close to the hall was an ancient, possibly pre-Roman ford, Sockburn Wath (**NZ350071**). The ford was closed in 1869 after a long, drawn-out court battle which involved the family paying for a new bridge at Girsby.

Girsby Bridge (NZ351082) was completed in 1870 and has five spans of almost 16m each with bowstring girders of wrought iron carrying the footway. It leads to Girsby church which was built by the Blackett family in 1838 to replace the church at Sockburn. The bridge was built very close to the site of both a ford and a ferry, probably both used to reach the church until the bridge was constructed.



Girsby Bridge (AB)



Fishlocks Bridge (RG)

A little further downstream was an old corn mill called Fishlocks, where there was a weir with facilities for fish (particularly salmon) to pass upstream. This was a tourist attraction in the 19th Century, together with the spa wells nearby.

There was a ferry here in the 19th Century (**NZ352097**). Just downstream of this was an ancient ford known as Fishlocks Wath (**NZ350099**).

In 1987, the local landowner built a bridge on the same site as the ford. It was a 50m long, curved-arched steel girder bridge known as a vierendeel girder, giving access to private land on both banks of the Tees. It was erected by Indiscon of Darlington and designed by Simpson Coulson and Partners of Stockton.

In the 19th Century, there was a ferry (NZ349101) presumably for access from farms on the Yorkshire side of the river to the corn mill on the Durham side - the mill had closed by the mid-19th Century.

Over Dinsdale Bridge (NZ346113)

The local vicar Rev. W S Temple erected a wooden bridge in 1839. In 1856, the old bridge was replaced when he had a brick arch constructed on the old piers. This sadly collapsed soon afterwards causing the death of two men. By 1857, Mr Emmerson had placed a cast iron arch on these old supports. The bridge linked Over Dinsdale on the Yorkshire side of the river with Low Dinsdale on the Durham side, where there was a church. For many years there was a toll on the bridge.

The bridge, with four 15m spans and a two-tonne weight limit, was taken over by North Riding County Council in 1955 and the original beams were replaced with steel beams and a concrete deck was laid. It was strengthened again in 1993, but remains single track with a footpath.

This bridge ends the loop of the river around the Sockburn peninsula.

Just downstream of Dinsdale Spa is County Wath (NZ345120), an ancient ford sometimes shown on maps as Countess Wath. This was another haunt of Highwaymen lying in wait to rob the rich traveller.



Over Dinsdale Bridge (AB)

Close by is the site of Pountey's Bridge (NZ346120), supposedly the site of an old Roman bridge on the road from Brough on Humber to Chester-le Street and the north, sometimes known as Cades' Road named after John Cade of Durham, an 18th-Century antiquarian who, in 1785, proposed its existence. The name is thought to derive from Pons Teys (bridge on the Tees). There was a later bridge at this point which was washed away in the great flood of 1771.

A little way downstream was a ferry (NZ347121). This is shown on maps as late as 1954 and was probably only used for farmland access.

Low Middleton Hall private ferry (NZ361108) and ford (NZ365104)

They are both shown on the 1857 maps but disappear by the 1954 map, although the boathouse near the ferry still appears on modern maps. These crossing points would link Low Middleton Hall with farms on the Yorkshire side of the river.

Bowlhole Ford (NZ372101)

This ford is only shown on the 1857 map and would most likely be a farm ford.

Fardeanside ford (NZ373094)

This was an old ford from the farm complex of Fardean Side on the Yorkshire side of the river into the area of Newsham Grange in County Durham. It seems to have fallen into disuse by the time of World War 2.

Worsall Fords Wath (NZ383095)

It has been said that there was an ancient ford, Worsall Wath (NZ383095), at the highest point where ordinary tides flow. However, there is no map evidence of this and the ford may well have been the High Worsall Ford (NZ384099) which linked Newsham Grange in County Durham with the church at High Worsall.

Since the river was tidal from this point (until the construction of the Tees Barrage), and the river was navigable to Low Worsall, there were hardly any fords downstream of this point.



Yarm Railway Viaduct (AB)

Yarm Railway Viaduct (NZ417131)

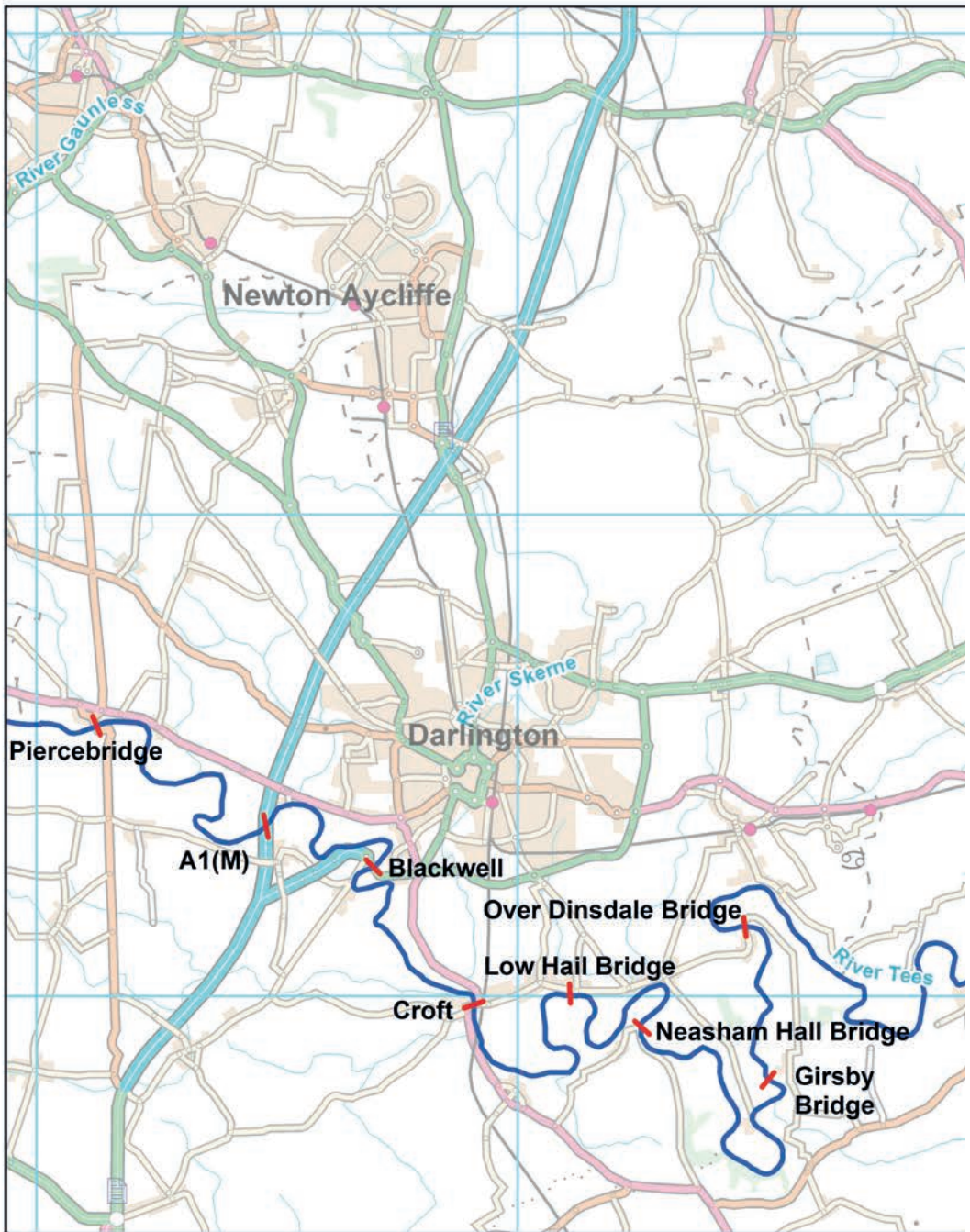
This was built for the Leeds Northern Railway (formerly the Leeds and Thirsk Railway) between 1849 and 1851. The bridge designed by Thomas Grainger and John Bourne cost £44,500. It is over two-thirds of a kilometre long and consists of 43 arches mainly in brick, but those over the river are of stone and are skewed. A plaque on the Yarm side of the river arches gives details of its construction. 7.5million bricks were used in the construction of the bridge. The brick arches have a span of 12m and the river arches 20m. There has been a need to strengthen and support some of the arches. In the past, open coal wagons have allowed coal to be blown and deposited on the town, much to the disgust of the local population.

The viaduct is Grade II listed.

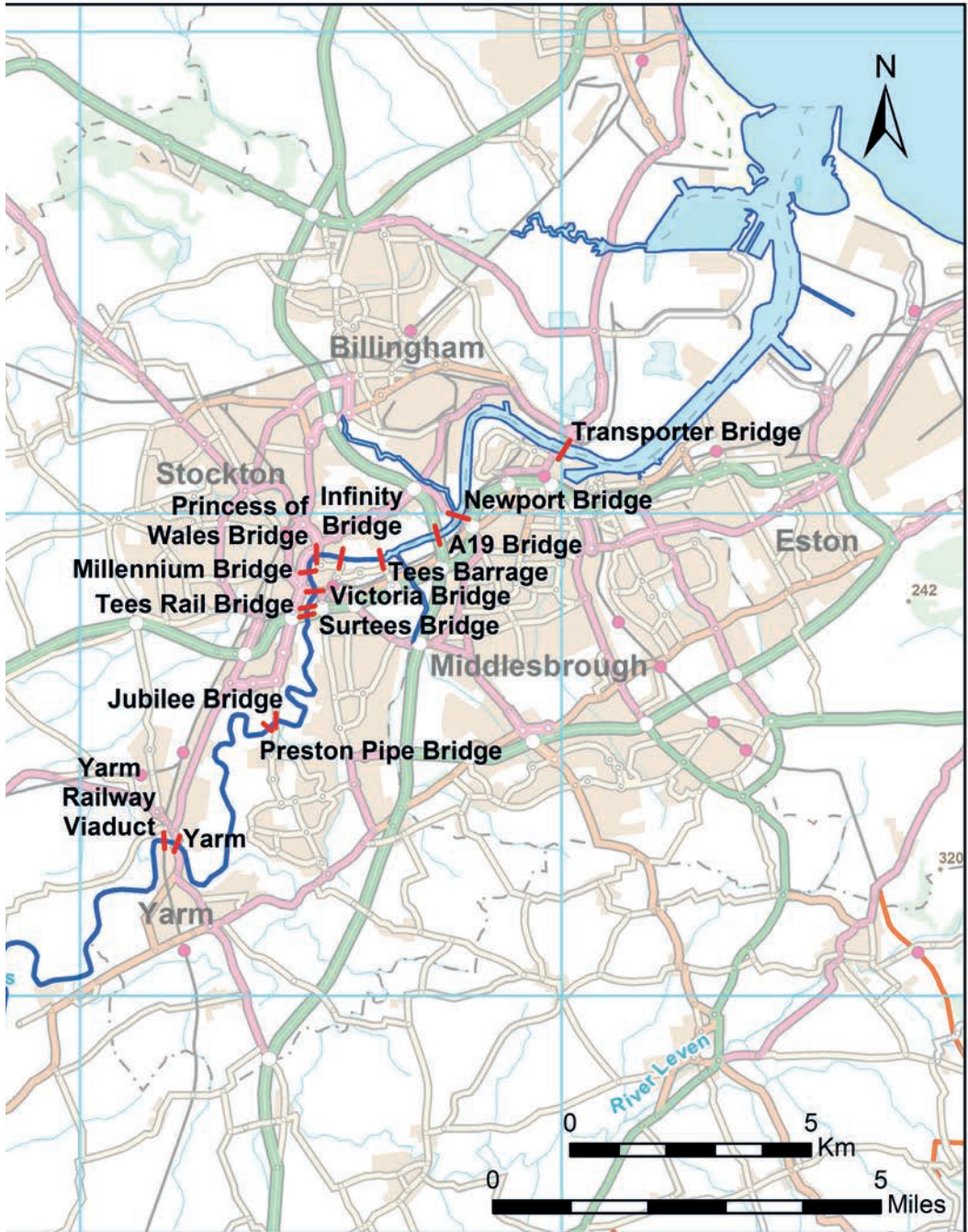
Yarm Road Bridge on the A67 road (NZ418131)

A bridge is recorded here in 1305, when Edward I granted five years pontage - a toll to be used to repair the bridge which was in poor condition.

The stone bridge was built by the Bishop of Durham, Walter Skirlaw, in about 1400. The bridge is of five arches, two over the land, semicircular in shape and three over the water which were pointed. The bridge was the lowest bridging point on the Tees until a bridge at Stockton was constructed.



— Bridges of the River Tees



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Yarm Bridge (AB)

Over the years, the bridge has been much modified. During the Great Civil War, a drawbridge was built into the northernmost arch as a defensive measure to prevent Parliamentary troops in the area from crossing the bridge and marching on the town of Stockton, which was held by the Royalists.

The bridge was originally 3.66m wide and was partially rebuilt at the end of the 18th Century and was widened to double the width in 1810. The alterations to the underside of the bridge can be clearly seen from the riverside footpath.

Yarm bridge is Grade II* Listed.

Iron Bridge (NZ418131) (demolished)

By the end of the 18th Century, the stone bridge was becoming inadequate for the traffic and a new bridge just downstream was proposed. This was to be a cast iron bridge of similar design to that opened at Sunderland in 1796. It was designed by Thomas Wilson, who was involved with the Sunderland Bridge. The arch was of a 55m span containing 250 tonnes of iron and took two years to build at a cost of £8,000 (almost half a million pounds today).

The ironwork was constructed by Walkers of Masborough, near Rotherham. Although the bridge was completed in September 1806, the southern approach road had not been completed. On 12 January 1806, the bridge collapsed with an almighty crash due to the unsatisfactory construction of the southern abutment. The remains of the bridge were removed and the old bridge widened and is still in use today.



Yarm Iron Bridge (AB)

Yarm School Footbridge (NZ421126)

For some years Yarm School have tried to get planning permission for playing fields on the north bank of the river opposite the school, which would require a footbridge across the river.

After a number of failed planning applications, in October 2018 the project was finally given planning approval.

The bridge is described as a truss girder bridge for foot traffic only. It is to be of timber construction, made up of a series of smaller components, providing a span of 18m each side abutment to piers, and a central span pier to pier of 36m. The height above the normal water level is 8.65m in the centre to allow for the “Teesside Princess” river cruise boat adequate clearance. The bridge will have ramps at either end to allow easy access.

Private Ferry, Whitehouse (NZ431137)

The first edition OS map of 1856 shows a private ferry leading from Whitehouse farm via a track to Egglecliffe village, probably used for church attendance. It is not marked on any later maps so must have gone out of use in the late 19th Century.

Private Ferry Barwick (NZ430144)

The first edition OS map of 1856 shows a private ferry leading from Barwick across the river and again this would link with Egglecliffe. It is not shown on later maps, although a boathouse is shown near Barwick on the 1895 map.

Preston Pipe Bridge (water pipe) (NZ438155)

As the area was expanding, the need for water became greater, and a new pipe bridge was built at Preston on Tees. The bridge was a 64m span, tied concrete arch bridge constructed in 1959 at a cost of £42,000 (about £700,000 in today's money). The bridge weighing 200tonnes was constructed on the north bank of the river and launched across the river.

It carried two water pipes, and a further one was added in 1979. In 1996, the bridge was repaired and protected by a surface coating.

The bridge is approached by a track from Preston Lane, but there is no public access across the bridge.



Preston Pipe Bridge (AB)

Jubilee Bridge (NZ440157)

The bridge was opened on 20 April 2002 as part of a new road into the ever-expanding Ingleby Barwick, once reputed to be the largest private housing estate in Europe.

The bridge is a 150m long, three-span cantilever bridge with a centre span of 106m. The steelwork was provided by Cleveland Bridge of Darlington.

A two-lane dual carriageway with a cycle track and footpath on the north side is carried over the bridge.



Jubilee Bridge (AB)

Bowesfield Water Pipe Bridge (NZ446174)

Before 1851, water supplies for the area came mainly from wells which were subject to contamination and caused various diseases. In 1851, the Stockton, Middlesbrough and Yarm Water Company was formed to supply piped water to the area from the River Tees at Broken Scar, Darlington. By the 1860s, South Stockton, later Thornaby, was expanding with industry and housing needed a good supply of fresh water. To supply this, the pipe bridge was constructed across the river from Bowesfield, an area of Stockton rapidly becoming industrialised, to a similar area at South Stockton. The bridge was a wrought iron lattice girder bridge of three spans the centre one of 32 m and the two side spans of 22m. Two 0.75m water pipes were carried over the bridge. It was demolished in 1979.

Surtees Bridge on the A66 road (NZ446178)

A new road was planned from Darlington through to Middlesbrough which took out much of the old town of Thornaby.

A bridge was required across the Tees and this consisted of five spans using girders made of “Corten” - a special type of weathered steel requiring no painting.

The bridge was 125m long and 23.5m wide with the girders supported on four piers each of four 1m diameter columns with a cross head.

The bridge, opened in 1982, was said to be named from the French “sur Tees” meaning ‘on the Tees’ and was also the name of a well-known family who had owned land on the Tees. It carried two lanes of traffic in each direction.

For some years there had been problems with the settlement of ground behind one of the abutments and also the bridge did not meet requirements for the ever-heavier lorries on the road. Finally, the new road from Ingleby Barwick joined the A66 just west of the bridge.

The bridge was to be effectively rebuilt from 2006, with the proviso that traffic would be kept running in both directions. This was done by demolishing one carriageway at a time and rebuilding the bridge and the overall length was increased to 145m.

One of the largest mobile cranes in the country capable of lifting 1,200 tonnes was used and work was completed in December 2007, giving the river a brand-new bridge with three lanes in each direction and a pedestrian and cycle crossing.

Surtees Bridge (AB)



Rail Bridges on the Darlington to Middlesbrough line (NZ446179)

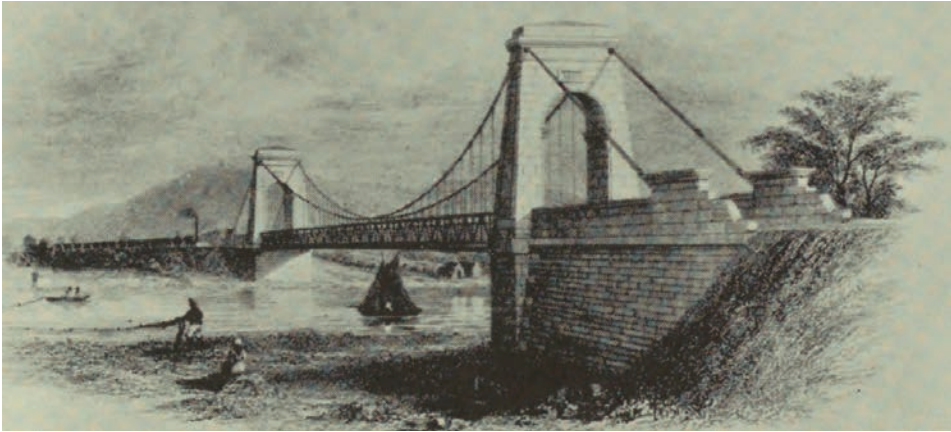
The Stockton and Darlington Railway opened in 1825 and carried coal to loading staithes on the quayside. Shortly after the opening, it was realised that these staithes were inadequate so it was proposed to extend the line to Port Darlington, now Middlesbrough. It was necessary to cross the River Tees and a bridge was proposed.

Parliamentary powers were granted for the new line to Middlesbrough in May 1828.

Timothy Hackworth designed a wrought iron plate girder bridge to be supported on two stone piers. There was some scepticism about the carrying capacity, so Hackworth built a model and tested it to show how strong it was. However, it was slightly more expensive than the suspension bridge design by Captain Samuel Brown of the Royal Navy, which was tried and tested, but unfortunately not as a railway bridge. The railway suspension bridge was 125m long with a main span of 66m long and 1.8m wide. The whole structure cost £2,300 (£180,000 in today's money) and weighed only 113 tonnes, and was ready for testing on December 10, 1830.

As the first engine, pulling 16 coal trucks, moved onto the bridge, the deck wobbled and shook and the supporting pillar on the Yorkshire side swayed and cracked. As the train approached the centre, the deck rose up in the middle, creating a hill, with eight trucks going up the Durham slope while, simultaneously, the other eight rolled down the Yorkshire side. The coupling in the middle snapped, and while the front eight wagons and the engine proceeded across to Yorkshire, the eight rear wagons ran back into County Durham.

To allow traffic to use the bridge it was propped up with wooden "starlings". The bridge was found to sway so much that trucks were chained 9m apart so that weight was distributed evenly across the bridge. It is said that one driver was so unhappy about crossing the bridge with a loaded train that he set his locomotive to "crawl" and leapt out of the cab. He ran across and waited on the other side for his train then he jumped back aboard and, drove on to Port Darlington.



Stockton Railway Suspension Bridge (AB)

In 1844, the bridge was replaced by an iron-trussed girder bridge designed by Robert Stephenson. Supported on masonry piers, it had three spans of 27m and two of 9.5m. Sadly, in 1847 a similar bridge at Chester collapsed, and as a result the Tees bridge was strengthened. After the failure of a similar bridge in Scotland in 1882, a new bridge was built alongside. Fortunately, due to the expansion in the iron and steel industry in Middlesbrough, a new bridge was already planned to increase traffic capacity. This was a riveted wrought-iron plate bridge on cylindrical piers. Stephenson's bridge was still in use but restricted in capacity, so that in 1906 the cast iron girders were replaced by mild steel riveted plate girders.

In 2008, the 1882, bridge which had been disused for some years had its tracks lifted was demolished, and a new bridge of steel and concrete on concrete piers was erected in its place by Network Rail with the work carried out by Carillion at a cost of £4.5m using the original foundations, but now with just three spans giving an overall length of 85m.



New Rail Bridge with 1906 bridge on 1844 stone piers and Surtees bridge behind (AB)

1906 bridge on
1844 stone piers
(AB)

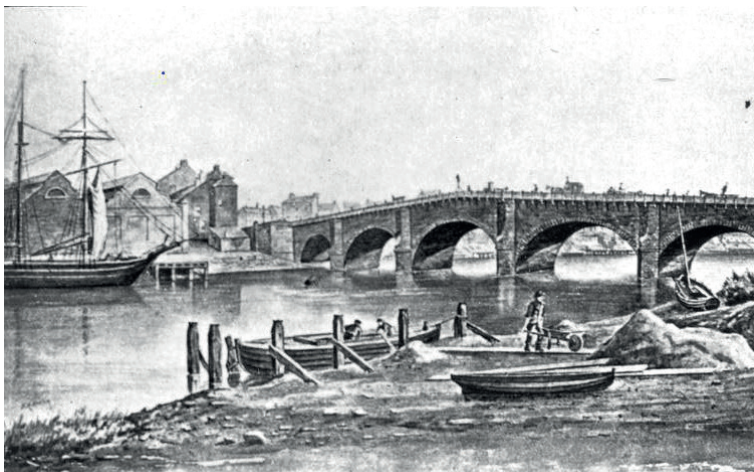


During construction of this new bridge, the foundations of the original 1830 suspension bridge were found. On the riverbank beneath the railway bridges can be seen a number of ex S&D Railway stone sleepers used to support the riverbank.

Stockton Ferry, Stone Bridge and Victoria Bridge (NZ449183)

The earliest record of a ferry in Stockton was in 1109, and for many centuries the only way of crossing the Tees at Stockton was by what was known as the Bishop's Ferry. The nearest bridging point was upstream at Yarm.

Stockton Stone
Bridge (AB)



Eventually, a bridge was planned and in March 1762, an Act of Parliament was obtained for the building of a toll bridge close to the site of the ferry at Stockton. The foundation stone was laid in 1765, and the five-arched stone bridge designed by Joseph Robson was finally opened in 1769. The central span was 22m with side spans of 18 and 13m on either side and was 7m wide including a 1m raised footway. Due to the height of the bridge, the size of shipping to Yarm was restricted. The cost of the bridge was £8,000 (£500,000 in today's money) which was to be recouped by charging tolls. The ferry ceased to operate and after riots in 1820, the tolls were eventually removed, the bridge costs having been paid off. About this time, some subsidence of the piers was observed, and in order to arrest it about 700 tons of stone was deposited in the bed of the river around the piers.

By the middle of the 19th Century, traffic had increased and there was considerable heavy industry in Thornaby, and the old bridge was inadequate so the parapet and the raised footpath were removed, the whole width was made the roadway, and on each side was constructed an overhanging footpath, 1.5m wide with a parapet. Both footpath and parapet consisted of York flags, supported by and between iron brackets.

By the 1870s, the bridge was again in poor condition so a new bridge was proposed.

This was to be of three parabolic arches in wrought iron with a centre span of 30m and side spans of 26m. It was a wide bridge at 18m, capable of taking four lanes of traffic with wide pavements either side. It cost £85,000 (£8m in today's money). The bridge was opened in 1887 to commemorate the Golden Jubilee of Queen Victoria, and replaced the old bridge which was demolished

The bridge is capable of carrying the heavy traffic of today and was always the bridge of choice to carry heavy industrial loads from the engineering works in Thornaby. The Thornaby end of the parapet has shrapnel damage from World War 2.

It is Grade II listed.



Victoria Bridge (AB)

Teesquay Millennium Bridge (NZ447187)

The bridge was opened on 20 December 2000. Built at a cost of £1.4M, the 220m long footbridge spans the river and Riverside Road, linking the Castlegate Shopping Centre with the Teesdale area of Thornaby. It is used mainly by students at the University and College, and workers in the numerous office blocks to access the town centre.

The main river span is 90m with a clearance of 8.5m for river traffic. The 3m wide deck is supported by pairs of high tensile steel tie rods attached to the inclined 40m high mast which is held in position by backstays connected to ground anchors driven into the river bank.

The bridge has a tendency to bounce a little when a number of people are walking across it in an unsynchronised way, which can be a little disconcerting.



Teesquay Millennium Bridge
(AB)

Ford and Ferries (NZ448191)

The 1857 OS map shows a ford between Stockton and South Stockton.

This is very unusual as the river is tidal at this point and it could only be used at low tide. Industry on the south side was expanding and the river was dredged to allow for larger ships to come to Stockton to load and unload. The ford was lost and replaced by a ferry. There was another ferry a short distance downstream. Both of these ferries would be used by shipyard workers crossing the river. There are stories of workmen rushing out of the yards after work to get to the ferry and on one occasion, a man was said to have tried to jump onto the departing ferry and missed, getting a good soaking in the process!

The downstream ferry was operated by members of the same Kelley family from the middle of the 19th Century until it ceased operation when the shipyards closed in the 1930s.



Ferryboats at Stockton (AB)



Princess of Wales
Bridge (AB)

Princess of Wales Bridge (NZ448191)

Almost on the site of the ferry, this bridge was opened on 23rd September 1992 by Princess Diana, Princess of Wales, giving access to the former industrial area of Thornaby which was being developed by the Teesside Development Corporation. It was built by Tarmac Construction Ltd at a cost of £3m. It has a central span of 40m and two side spans of 30m which are continuous over the piers. The bridge carries a dual carriageway from the Riverside Road.

After the death of the Princess, two memorial plaques were erected on the bridge.

Infinity Bridge (NZ454190)

This footbridge over the River Tees, built at a cost of £15m, was opened on 14th May 2009 and named the Infinity Bridge, on account of its shape which when reflected in the river resembles the mathematical symbol for infinity. The design was chosen in a competition in 2003.

Infinity Bridge (SR)



Constructed by Balfour Beatty Civil Engineering with steel fabricator Cleveland Bridge and Engineering Co, the bridge was commissioned by Stockton Borough Council. It was intended to provide pedestrian and cycle access to aid the development of a 28-hectare site on the north bank of the River Tees facilitating the expansion of the University of Durham's Stockton campus.

The bridge consists of two asymmetrical tied arches, measuring 120m and 60m. The highest point of the arch is 40m above the River Tees. The arches are of welded tapered steel box sections with the 4m wide deck made from precast concrete segments, post-tensioned together by horizontal high-strength steel cables that also tie the feet of each arch together.

The bridge has won a number of awards for its design and construction.



Tees Barrage (RH)

Tees Barrage Bridge (NZ462190)

The Barrage was designed to protect the river from flooding, pollution and the effects of tidal change. The river was tidal as far as Worsall and as has been seen, has had a tendency to flood. Before the Barrage, the river and banks had a terrible smell at low tide due to pollution.

Constructed by Tarmac Construction Ltd between 1991 and 1995 at a cost of £50m, the Barrage was built to maintain a raised water level upstream as far as High Worsall. The bridge, which passes over the top of the Barrage, is supported on the concrete piers of the Barrage. It has four 17.5m arches with two identical 17.5m arches on either side. These arches have a rise of 5m to give sufficient clearance to the navigation channel.

Some 350 tonnes of high strength steel was used for the tubular members together with 280 tonnes of plates and cast steel.

The fabricator was Westbury Tubular Structures Ltd of Wetherby, although the smaller cast steel rings were made at the Blackett Hutton Foundry in Guisborough. The Barrage was built by diverting the river to enable the foundations to be constructed directly on boulder clay of high bearing capacity that was found to exist at this point.

This steady control means the water above the barrage is permanently held at high tide, making the river here perfect for a number of activities and events, such as canoeing, jet skiing and dragon boat racing. The Barrage also incorporates a whitewater course adjacent to it

The Tees Barrage was officially opened on the 17 July 1995 by the Duke of Edinburgh.

The Barrage is built on the site of one end of the 1810 Mandale cut which helped build Stockton as an important port and shipbuilding area.

A19 Tees Viaduct (NZ474194)

This major crossing has an overall length of 2.9km with 68 spans of varying construction. The section over the Tees has nine spans of varying length; the longest being the 117m river span. The reinforced concrete deck acts compositely with the welded steel plate girders having a maximum depth of 4.88m at the supporting piers. The clearance over the water is 20.73m.



A19 Tees Viaduct (AB)

The height was to allow ships to go upriver to Stockton, but by the time the bridge was open, Stockton had closed as a port.

There have been a number of problems with the bridge, chiefly around corrosion mainly caused by road salt. The A19 carries 96,000 vehicles a day over Tees, compared to 43,000 carried by the A1(M).

It was originally designed to carry around 60,000 vehicles per day.

Proposed New Central Tees Crossing (NZ477197 approx.)

This is a proposal to reduce traffic on the A19 north and south. It would consist of a new bridge slightly to the west of Newport Bridge and carry northbound traffic with Newport Bridge carrying southbound traffic. The bridge would link into a much revamped Portrack roundabout at the north.

Newport Vertical Lift Bridge (NZ478198)

Built by Dorman Long & Co Ltd., the bridge provided 36.6m headroom and 76.2m clear width of water when raised. The machinery for raising and lowering the bridge was located at the centre of the 2,876 tonnes lifting span. It took about 90 seconds to lift using the electric motors but could be lifted manually in the event of electrical failure, this would take 12 men eight hours!

The decline in shipping eventually led to the lifting span being fixed down in 1990 giving a clearance of 6.4m above high water. Although the bridge looks the same, it is no longer capable of opening.

Originally, the bridge had a wooden block deck which proved very slippery in wet weather. It now has an asphalted road surface and adjustments had to be made to the counterweights to compensate for the increased weight.

The structure is Grade II listed.



Newport Bridge in latest colour scheme (CC)

Billingham Branch Bridge (NZ473200)

While not actually a bridge across the Tees, it was built as part of the northern approach road to Newport Bridge and was the first all-welded portal frame bridge in the world. It has a central span of 19.6m with 14.6m and 8.5m spans on each side. When it was built, electric arc welding was a new process and it was not generally used for fabrication of structural members until twenty years later.

This bridge is also Grade II listed.

Old Ferry (NZ482219 approx.)

There was a medieval ferry from Billingham to the Yorkshire side of the river. It was said to run east from Billingham which makes the above grid reference the most likely location. It is not clear when the ferry actually operated.

Middlesbrough- Port Clarence Ferry (NZ499213)

This ferry probably commenced in the 1830s soon after Middlesbrough was founded as a route across to Port Clarence, and became important when the Bell Brothers ironworks opened near Port Clarence in 1854. In 1856, the Council bought the ferryboat landing to improve the ferry service which was operated in 1856 by two cobs (local type of boat). The boats were frequently overloaded so a steam ferry replaced them in 1862. By 1873, a horse and cart ferry was proposed in the form of a transporter bridge, however, due to lack of funds it was not proceeded with, and steam ferries continued to ply across the river until 1911 when the Transporter Bridge was opened.



Clarence Ferry c1905 (AB)



Middlesbrough Transporter Bridge (CC)

Transporter Bridge (NZ499213)

Opened on 17th October 1911, the Transporter Bridge at Middlesbrough is one of eight survivors of similar bridges built between 1893 and 1916. Prior to the age of the motor car, it represented a valid solution to the problem of providing headroom of 48.8m and a clear span of 174m to accommodate the sailing ships using the river. Designed by G.C. Imbault of Cleveland Bridge & Engineering Company of Darlington, it was built by Sir William Arrol and Company Ltd of Glasgow.

Vehicles and foot passengers are carried by means of a gondola suspended from an upper carriage that runs on rails attached to the underside of the structure. It remains the largest of the transporter bridges operating worldwide and provides a valuable public transport service crossing the river in two minutes.

The Transporter Bridge has become a symbol representing the past engineering achievements of the area. It is a fine sight when illuminated and on a clear winter's night, it can be seen from up to eight km away. Due to its historical importance, in 1985, it was designated as a Grade II* Listed structure.

In 1974, the comedy actor Terry Scott mistook the bridge for a regular toll crossing and drove his Jaguar off the end of the roadway, landing in the safety netting beneath. It has also been used as the backdrop for a number of films and TV series. Notably *Auf Wiedersehen, Pet* when the bridge was supposedly sold to the USA.

Although the volume of traffic using the bridge is declining, it was recently refurbished and upgraded with a new carriage and a lift to the top and has become a tourist attraction for extreme sports events such as bungee jumping and abseiling.

The Tunnel that never was (NZ504211 approx.)

In the 1960s Teesside Survey and Plan, there was a proposed crossing of the river near Middlesbrough Dock to link the north bank with the proposed Marton motorway. Neither of these projects was followed up.

Proposed Eastern Tees Crossing (NZ529221 approx.)

This would link the A178 from Hartlepool and the Seal Sands Link road A1185 with the A66 on the south side of the river which would allow better access from the north to the Teesport and Wilton areas. However, this is just a proposal at present,

Pipe Tunnel (NZ537231)

When the Wilton site was opened in 1949 by ICI, a pipeline connection was made to the existing site at Billingham to allow for the transport of gases and feedstocks between sites. The pipes passed under the Tees in a tunnel which had access to maintenance.

Pipe Tunnel (NZ547248)

When North Tees and Seal Sands Chemical works were opened in the 1970s, a further pipe tunnel was constructed to allow transfer of chemicals to and from the Wilton site.

Ford across the estuary (various locations)

Until the river was dredged in the mid-18th Century, it was possible to walk across the estuary from the Coatham area to Seaton Snook, but only at low tide when the water level could be as low as 1m. Now, due to dredging, the level is nearer 14m. Due to the shifting sands and channels, the crossing point would fluctuate.

References

The main source for information on bridges is the definitive work produced by Charles Morris as Cleveland Industrial Archaeology Societies Research Report No 7 with updates in Cleveland Industrial Archaeologist 32. Other articles on bridges are in Cleveland Industrial Archaeologist 10 and 11.

Local Histories of Durham by Hutchinson, Surtees, McKenzie & Ross, Fordyce, Whellan and page and North Yorkshire histories by White and Whellan have also proved helpful.

The early editions of the OS maps available on The National Library of Scotland website have been invaluable. (<https://maps.nls.uk/>)

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The Cleveland Industrial Archaeology Society runs a series of lectures every year, open to all, as well as a series of summer outings for members.

More details of the society membership and its publications can be found on the website: <http://cias-teesside.uk/>



