

THE EARLIEST ROCHESTER BRIDGE.  
WAS IT BUILT BY THE ROMANS?

BY A. A. ARNOLD, F.S.A.

To the printed programme of the ceremonies attending the opening of the reconstructed Iron Bridge at Rochester just before the war—in May 1914—the Bridge Wardens annexed a short summary of the history of the various bridges which had been built over the Medway between Strood and Rochester. This summary was compiled by Mr. J. J. Robson, M.I.C.E., the present Bridge Engineer, who, in conjunction with the late Mr. A. C. Hurtzig, M.I.C.E., had designed and also superintended the alterations and improvements just then made in the bridge.

Mr. Robson described the earliest bridge as having been built by the Romans, and apparently came to such conclusion after studying the report of Mr. John Hughes, a civil engineer, who had had charge of the foundations of the present bridge during its construction in 1850 and the following years. Mr. Hughes' report on the foundations of the earliest bridge, which he had to remove in order to replace them with the foundations for the new bridge, was addressed to the Institute of Civil Engineers, and was dated 13th May 1851. Mr. Robson begins thus:—

When the Romans fortified Rochester, they built a bridge of masonry over the River Medway on the same site as the present bridge. In 1851, when the foundations for the late cast-iron bridge were sunk, it was found that the Strood pier came directly over a Roman pier.

He, moreover, communicated his views to the late Mr. George Payne, who made them the subject of a note in

*Arch. Cant.*, Vol. XXIX. (pages lxxxiv.-v.). The material portions of Mr. Payne's note are as follow:—

I learn from Mr. Robson that Mr. Hughes contributed a paper to the Institute of Civil Engineers in 1851, wherein it is stated that "the Strood pier of the present bridge came exactly over one of the stone piers of the *Roman* bridge, which had to be dug out for a depth of 15 feet below the bed of the river; it was founded in hard ballast, which was 8 feet thick, overlying the chalk. The *Roman* piles removed were shod with iron shoes and penetrated into the ballast. This bridge had ten openings and nine stone piers (see documents of 1115 A.D.), and is supposed to have been 10 feet in width between the parapets. The masonry was of Kentish rag rubble."

The foregoing reference to the Masonry connected with the first bridge which spanned the River Medway is of the highest importance. Hence I lose no time in recording Mr. Hughes' notes in our *Archæologia*.—G.P.

The above note eventually led to the production of the report of Mr. Hughes above referred to. It is an important document, and of peculiar bearing on the history of the bridge; for it would seem that Mr. Hughes was the only person who, during all the last thousand years which had elapsed since these foundations were laid, had had the opportunity of examining them and who had left a record of what he had discovered about them. Fortunately he was fully competent to judge and to describe the work.

His report deals principally with the then recently introduced process, known as the Pneumatic method, which was adopted in constructing the foundations of the new bridge at Rochester. The opening portion of this report gives, in condensed form, the history of the former bridges so far as it was then known. The bridge standing at the time of his writing, *i.e.*, in 1851, had been built of stone at the end of the fourteenth century, and was about to be destroyed and supplanted by the new iron bridge, of the foundations of which Mr. Hughes had the charge and superintendence.

The short statement as to the earlier bridges is worth reprinting, as also are the exact terms in which Mr. Hughes describes the foundations of the first bridge, as he found them in 1850 :—

The bridge (he writes) which is now in course of erection over the Medway at Rochester, under the direction of Mr. Cubitt (President Inst. C.E.), is designed to consist of three large openings, spanned by cast-iron segmental girders, and of a passage, across which a movable bridge will be placed, to admit masted vessels to the upper parts of the river. Of the large openings, the central one is designed to be 170 feet wide, and the two others are 140 feet each.

The site selected is in a line with the principal streets of Rochester and Strood, and is identical with the position of an ancient wooden bridge which existed before the erection of the present stone structure, and of which a short account derived from the local histories will afford interest,\* in connexion with the remains of it which have been met with in the progress of the recent works.

The date when this bridge was first built is unknown; but about the year 1115 a code of regulations for its maintenance and repair was recorded by the then Bishop of Rochester, and it is probable that, in his time, they were considered as ancient customs. From this record the bridge would appear to have consisted of ten openings and nine piers of stone, 43 feet from centre to centre. The road was supported over each opening by three *sullivas* or "beams" of large dimensions, that they may well support the planks and the great weight of all those things that pass over them. The openings on either side of the sixth pier were each provided with two such beams only. Thick planks were laid on the beams, and a low "balustrade" on each side completed the roadway, which is supposed to have been about

\* Mr. Hughes has added this note: *Vide* "History and Antiquities of Rochester," compiled chiefly by the Rev. Samuel Denne, from Thorpe's *Registrum Roffense*, Lambarde, Stowe, and others.

10 feet wide. A wooden tower, called a fortification, was also built with "marvellous skill" near its east end, on the Rochester side.

In 1264 the upper works of the bridge were burnt down by a force under the Earl of Leicester, acting in hostility to King Henry III., against Rochester Castle. Seventeen years later, in 1281, heavy floods in the river, following a severe and long frost, brought down large masses of ice, which carried away some of the stone piers, and did much damage to the remainder. Proper repairs were then much neglected, and the structure seems to have remained in a ruinous condition until about 1344-5, when a safe passage was made for men and horses, and a drawbridge and "barbican" were added to the west, or Strood side.

In less than three years the traffic became so great that the wooden bridge appeared unsafe. Forty years, however, passed away before Sir Robert Knolles and Sir John de Cobham found it necessary to provide for this increased traffic by commencing the stone bridge, which, after a period of four hundred and sixty years, and after numerous modifications of its form, both of roadway and waterway, is now, in its turn, about to be removed, partly on account of the convenience and necessities required by the rapid progress of internal communications, and partly because of its dilapidated condition.

Mr. Hughes next proceeds to detail the steps taken to make the foundations of the new iron bridge, closing his long and technical account of the pneumatic method with the following valuable description of the foundations of the old bridge which it was his task to demolish :—

The progress made in sinking the cylindrical piles for the Strood Pier, established the fact that it occupies the site of one of the piers which carried the wooden bridge first erected over the Medway; and a mass of Kentish ragstone, of the nature of rubble without mortar, is found for a depth varying from 13 feet to

25 feet below the present bed of the river. Pieces of timber of considerable dimensions . . . used as piles, or framing, occurred in this bed of rubble-stone, penetrating a foot or two into the gravel, which proved to be 6 feet or 8 feet thick. This timber is oak, elm, and beech—all, except the last, perfectly sound and tough (a few pieces had evidently been burnt); the beech was saturated with water, and was in the condition of a soft pulp. Some fragments of iron proved that the piles had been shod with that material.

It will be seen that Mr. Hughes does not even suggest that the foundations of the earliest bridge were Roman work, but leaves his readers to form their own opinions on that point.

Indeed, no writer on Rochester topography who has dealt with the history of the bridges at Rochester has, so far as I am aware, ever asserted or even suggested that the earliest bridge was made by the Romans, but that of course does not at all prove that Mr. Robson was wrong in assuming that Mr. Hughes' description of the foundations entitled him to mention them as clearly Roman work.

The only writer apparently who has given us his views as to the date of the building of the first bridge is Mr. Thorpe in his treatise on the *Antiquities of the Diocese of Rochester*, included in the same volume with his translation of the *Custumale Roffense* (by which latter title the book is generally known). On page 148 of that work he writes:—

There are many reasons which make it probable that the first bridge over the Medway between Rochester and Strood was erected there in the reign of King Edgar\* about a hundred years before the Conquest.

At a meeting of the British Archæological Association at Rochester on 25th July 1853, when the new iron bridge was in course of construction, a paper on the history of the bridges over the Medway at Rochester was read by Mr. H. G. Adams of Rochester, who, however, does not appear actually to have examined the foundations, but gives an

\* Edgar the Peaceable, 958—975.

interesting account of what he learned from the foreman of the men employed under Mr. Hughes in the course of removing the old foundations. The following is the substance of his paper so far as it is relevant to the present question. After reciting from Kilburne's *Survey of Kent* (1659) a description of the stone bridge built at the end of the fourteenth century, he goes on to say—

Respecting the date of the first erection of Rochester Bridge, we are left quite in the dark, no record, that I am acquainted with, having yet been discovered which discloses this point.

And, after further remarks, he proceeds :—

It is, however, to the old wooden bridge that our attention must for the present be directed. Kilburne calls it a "very strong timber bridge," and by the ancient records it would appear to have consisted of nine piles or piers of stone and earth, on which the wooden superstructure rested. This would give ten intermediate spaces or arches, not nine, as is sometimes stated. The present (*i.e.*, the stone bridge) also has ten: four on the Strood, and five on the Rochester, side of the large central arch, which occupies the space of two, and was formerly so divided. In a print entitled "The North West Prospect of the City of Rochester," dated 1738, eleven is the number of arches represented.

And, after further reference to Mr. Essex's article\* on the Bridge in *Archæologia*, vol. vii., he continues :—

The statement that the arches of the wooden bridge rested upon piers of earth and stone seems to be a little contradicted by the discovery of wooden piles, evidently the remains of an old bridge foundations, during the progress of the present works. These piles were, many

\* Mr. Essex's paper on the first Bridge at Rochester, from *Archæologia*, vol. vii., is referred to in a paper on "Rochester Bridge in 1561" in our Vol. XVII., and a copy of the design of the first bridge which Mr. Essex propounded and which was given on page 410 of *Archæologia*, vol. vii., is copied on the page opposite to 218 of *Archæologia Cantiana*, Vol. XVII.

of them, shod with iron and driven far down into the bed of the river, out of which they had to be drawn.

Further on Mr. Adams says :—

I am informed by the Overseer of the Works that as much as six hundred and sixty cubic feet of timber, chiefly oak, was recovered in this way. A great portion of it was perfectly sound, as is shewn by a piece which he has had converted into a tea-caddy.\*

Mr. James Phippen's *Descriptive Sketches of Rochester, &c.*, published in 1862, gives a very full account of the successive bridges over the Medway there. It is evident that the author had studied with special care the records of the building of the several bridges of Rochester, in which he was, I believe, resident for many years, including the period from 1850 to 1856, during the time, that is, when the foundations of the first bridge were removed and the present iron bridge erected on its site. He was so well informed that it is well worth recalling what he says as to the origin of the first bridge. He begins his article thus :—

At what period and by what people a bridge was first erected at Rochester is a problem which will probably never be settled. Conjecture even, generally active in assigning dates to places of antiquity, is here utterly at a loss. The great probability is that it was of Saxon origin, for although the Romans had a station here, it may be considered that they contented themselves with the ordinary passages of the river by means of fords, then in existence at several places, the remains of which are still visible in many parts of the river Medway.

Unfortunately Mr. Phippen does not give any account of the removal of the foundations of the first bridge. All he says on the subject is—

Much delay was occasioned in the progress with these works, from the difficulty experienced in obtaining a secure foundation; and this, at one time, appeared

\* *Journal of the British Archaeological Association*, vol. ix., pp. 348—358.

almost insurmountable. The untiring energies and unflinching perseverance of the contractors, however, were crowned with success, and the object of their efforts was ultimately accomplished.

In July 1863, during the visit in that year of the Archæological Institute to Rochester, a paper was read by Mr. John Ross Foord, of Rochester, a leading member of the firm of contractors in that city. It appears that his firm had had the contract for the removal of the foundations of the stone bridge, all of which had to be removed before the new iron bridge, or rather the passages under it, could be utilised by vessels passing up the river. Of Mr. Foord's paper, which was entitled "On Old Rochester Bridge and Ancient Remains adjacent," only a brief summary is given in the Archæological Institute's volume containing an account of the proceedings in the year 1863. Much of the paper, as might be expected from the title, is concerned with the removal of the piles of timber and other works forming the foundations of the stone bridge built at the end of the fourteenth century. In default of any statement on record as to how the foundations of the old stone bridge had been laid, Mr. Foord supplied the information from what he had discovered in the process of demolition. The foundations were constructed by driving piles, mostly of elm, shod with iron, into the bed of the Medway, here chiefly of chalk. These piles were 20 feet in length, driven close together, and forming platforms about 45 feet in length by 40 feet in width. Mr. Foord described also the construction of the starlings outside the platforms; with half-timber piles ingeniously secured by ties, enclosing spaces about 95 feet by 40 feet, the intervening cavities being filled with chalk, while the top and sides were planked over with elm. A course of flat bedded stone of Kentish rag was laid over the platform, and on that the solid masonry was built, the mortar being nearly as hard as the stone. The number of piles removed under Mr. Foord's direction, an operation which presented unusual difficulties, was upwards of 10,000, the quantity of timber about 250,000 cubic feet.

A vast accumulation of piles, chiefly, as before observed, of elm, and some of oak, still lay near the river side, below the present bridge, on Mr. Foord's premises. The piles continued to lie for years in his marshes near the gas works, until an unusually high tide and flood occurred, when the river overflowed the banks of the marsh and carried all the piles away.\*

None of them apparently were those from the foundations of the earliest bridge, which Mr. Hughes described in his report of 1851. Mr. Foord would probably have mentioned the fact, if any of the foundation piles from the earliest bridge had been found among those that he removed from the foundations of the stone bridge.

Such are the points bearing upon the question of the origin of the earliest bridge. There is no record, and one could hardly expect there to be any, of the Romans having built the bridge, but there is some antecedent probability that they did so, when they occupied the place. And considering the great importance of the passage over the Medway at Rochester, forming, as it did, a necessary link in the road leading from Dover and the continent to London and their settlements beyond London, it is only natural to presume that the Romans must have built a bridge here; and that, after their occupation ceased, and the superstructure of their bridge, which was most likely of wood, fell into ruins, our Saxon forefathers, when they repaired or replaced it in the reign of King Edgar, or whenever else it was, found and utilised the Roman foundations and raised their bridge upon them, probably securing their work and the piles, on which it rested, to the corresponding masonry foundations, which they found still existing.

In a book written by Mr. Wright, a qualified writer on archæological subjects, entitled *The Celt, the Roman, and the Saxon*, 1832, the following passages occur, and I think

\* The late Mr. George Payne told me in 1920 that, to the best of his recollection, the overflow of the river occurred in the year 1890. He was not quite sure of the date, and I think it must have been some years later. He added that he had previously secured four or five of the piles and, to ensure their preservation, had laid them in Rochester Castle.

they are very pertinent to the question whether the first, the earliest, bridge at Rochester was the work of the Romans during their occupation of England. Mr. Wright says (pages 184-5):—

We have many proofs that the rivers in this country were passed by an extensive system of bridges. It is probable, indeed, that a military road seldom passed a river without one. Some of the more important Roman bridges remained till a recent period, forming the foundation of the modern structures which replaced them. Such was the case little more than twenty years ago at London, and when the old bridge over the Tyne at Newcastle was taken down in 1771, the piers were found to be Roman masonry. The foundation was laid upon piles of fine black oak, which were in a state of perfect preservation. The remains of three bridges are found along the line of the Wall. When the old Teign-bridge in Devonshire, by which the Roman road crossed the Teign in its way to Totnes and Plymouth, was taken down in 1815, the Roman work beneath was found in a remarkable state of preservation. It is the opinion of Mr. Bruce and other antiquaries that the bridge at Newcastle, as well as the others in the Wall district, had no arches, but that a horizontal roadway of timber was laid on the piers. . . .

We cannot doubt, nevertheless, that many Roman bridges had arches. Mr. Roach Smith has pointed out a very fine semi-circular arched bridge over the little river Cock, near its entrance into the Wharfe, about half-a-mile below Tadcaster, on the Roman road leading southward from that town (the ancient Calcaria), which he considered as undoubtedly Roman. The masonry of this bridge is massive and remarkably well preserved, and the stones are carefully squared and sharply cut, and on some of them the mason's mark, an R, is distinctly visible. The roadway was very narrow. The Saxons seem to have preserved carefully the bridges they found in existence, though they probably built few themselves; and I am inclined to believe that most of the bridges in

this country at the time of the Norman conquest were Roman. The preservation of these ancient bridges was considered of so much importance that the charge of them was often thrown upon the Hundred, or county. Thus at Cambridge the county was bound to see that the bridge was kept in repair, and certain lands were allotted for the expense of the repairs; and I have very little doubt that the bridge which in the thirteenth century was in such a ruinous condition, that people's carts used to fall over into the river, was the ancient bridge of the Roman town of Camboricum. It was probably from a broken Roman bridge, the remains of which seem to have been visible in the time of Leland, that the town of Pontefract in Yorkshire (*pons fractus*) derived its name.

My principal object in writing this paper was to correct the false impression, which might have been conveyed by Mr. Payne's note in Volume XXIX, to the effect that Mr. Hughes, whose opinion on the subject would naturally have been of supreme authority, had described the earliest bridge at Rochester as being of *Roman* construction.

There is nothing, I think, that I can add bearing upon the date of the first bridge at Rochester, or by whom it was built. I have given all the facts that I can collect, together with Mr. Wright's speculations as to the use which the Saxons were accustomed to make of the remains of such work as the Romans had left; but I suppose that the question of the date of the erection of the earliest bridge at Rochester will never be authoritatively determined.

#### POSTSCRIPT.

As to the painting here reproduced, in the possession of the Bridge Wardens, I have never found out anything as to its history; but I always held the strong belief that it was executed by some artist employed by Dr. Thorpe, the Rochester antiquary. No one else is so likely to have given it; and it represents the bridge as it would have appeared in his time. He was deeply interested in the bridge and its history; he was on the governing body for many years; he put all their affairs in order: collated and published the old

statutes, reformed the annual election procedure, had new seals made, and, at his death, left an enormous quantity of records, now in the collection of the Society of Antiquaries. He lived from 1681 to 1750, and for the last twenty or thirty years of his life was on the Bridge Trust.

In the preface to the *Registrum Roffense*, compiled by him, his son, Mr. J. Thorpe, gives a long account of his father's work for the bridge; and I think it must have been Dr. Thorpe himself who caused the picture to be painted. Dr. Thorpe lived in a house (now the Gordon Hotel) belonging to the Bridge Trust, on the north side of Rochester High Street, just opposite to the Cathedral. Upon the panels on the ground floor, and also all the way up the staircase walls, of this house, are oil paintings, now very dark and dingy, resembling the picture in the Bridge Chamber. It is extremely probable that they were executed during Dr. Thorpe's occupation of the house, and perhaps by the same hand which painted the Bridge Chamber picture. Its date must be about 1734, *i.e.*, previously to the time when some of the arches of the bridge were thrown into one, and while Dr. Thorpe was alive and active. The date is that also of Buck's north-west view of Rochester.

[NOTE.—Acknowledgments are due to the Bridge Wardens for their courteous permission to publish a photograph of the old picture in their possession, and to Mr. Arnold himself for his generosity in defraying the cost of the photographing for the benefit of K.A.S. After the introduction, in Mr. Arnold's paper, of the name and opinions of Mr. Robson, it is only fair to print the latter's rejoinder, which, as the reasoned induction of a practical engineer, cannot fail to carry weight. At the same time it is necessary to emphasize certain material facts. Mr. Hughes nowhere speaks of the first wooden bridge erected over the Medway at Rochester as having been Roman, nor arched. The late Mr. George Payne, citing a communication from Mr. Robson, speaks of the former bridge as having been Roman, but Mr. Payne himself was too cautious an antiquary to state that it was an arched bridge. He refers to the *openings*—leaving it quite undetermined as to whether these openings were arched or rectangular. Mr. Robson appears to be the first writer to maintain that the earliest bridge at Rochester was both of Roman masonry construction and also arched.—ED.]