

VIIa:—OLD TYNE BRIDGE.

THE following *Report*, referred to in Mr. Clephan's account of the Old Bridge (pp. 135-142), has been printed from the original document now in the possession of a member of the Society :—

REPORT OF JOHN SMEATON, ENGINEER, CONCERNING THE STATE OF
THAT PART OF TYNE BRIDGE BETWIXT NEWCASTLE AND GATES-
HEAD, WHICH IS IN THE COUNTY OF DURHAM.

Having carefully inspected the State of the South part of Tyne Bridge, the 16th of September last, at low water, I found it in a general State of disrepair ; but as it has been originally ill built, I look upon it as impossible after standing so many years, to render it perfectly sound, unless the whole was new built which is not the present proposition ; yet by occasional Repairs, seasonably applied, it may last many Years. I shall therefore take the arches in order and confine myself to the pointing out of such things as more immediately call for assistance.

The 1st arch, beginning from the South Side, is in a great measure blocked up by Cellars, for convenience of the houses above ; & has no Current of Water through it when the Water is below the Sturlings, or Jetties, as they are called, which surround all the Piers, in the manner of London Bridge ; this Arch seems at present to want no material repair.

The 2nd arch has a passage between the Jetties at Low Water. The aisling of the Piers, on both sides this arch, want repairs many of them being loose, & some of them dropped out ; the aisling of the North Side appears worse than it really is, having been built originally bulging ; at least so it seems to me.

The whole, or greatest part, of the arches of this Bridge have been lined with Ribs, as was customary formerly, with a view to strengthen them ; but it so happens that a great many of those Ribs have separated themselves from the arches that they originally were in contact with, and have tumbled down ; one of the ribs now remaining in this arch vizt., that on the upstream or west side of the arch, is so far separated from the arch, & is in such imminent danger of falling, that to prevent mischief to any that may be under it, when it happens to fall, it will be proper to take it down. I do not apprehend it anyways necessary to rebuild it ; because I cannot suppose that it has ever been of any real use.

In the middle of this arch, the stonework is entirely perforated by an area of about 4 yards by 6, & as the Bridge has been so constructed at first, it seems as if this area had once been covered by a Draw Bridge, by way of defence being so placed that if open, the passage over the Bridge as it now is between the

Houses, would have been stopped thereby. This area is now floored with Timber covered with Earth, & paved at the Top like the rest of the Bridge; so that when Carriages go over this part of it, the Vibration of the Timber makes it appear to shake. The main Timbers are pretty strong; but the whole has been very roughly executed, & has all the appearance of a Jobb done in a great hurry. It seems also to have had some repairs occasioned by the rotting of the Ends of the great Beams, which have been supported by pieces put under them. Some of the small Wood that is supported by the greater, appears to be decayed; but, while so supported nothing of great consequence can happen. In fact as I don't find the State of this flooring sensibly different from what it was when I viewed it in the year 1765, for that reason, it may be supposed possible to continue for a number of Years to come; but as it is a piece of Work so put together, that one cannot answer for it a failure may happen when it is least expected; and as the Lives of Men depend upon it, & is in a visible state of decay it appears to me that it ought to be repaired; & as it is very probable that it may never be wanted again to serve the original Intention while it is a doing I would recommend this area to be arched with Stone; & as the Center may be erected underneath, & everything prepared for turning the arch before anything is disturbed upon the Top, I apprehend everything may be, with ease completed in three days' Stoppage.

The next arch North has lost all its Ribs, yet shows no Signs of Infirmity except, that as the Penstones are in a double Layer, composing an interior & an exterior arch, the former is a little separated from the latter, on the downstream side on the South Haunch. Some Repairs are wanted in the Setting of the Jetties of this arch, as also more or less in all the rest.

The 4th arch from the South Side, or second from the draw Bridge arch, is called the Keelmans Arch; it has originally had 5 Ribs underneath it, of which there is only one remaining but it shews no loss by the want of them. The upstream Shoulder of the Pier on the South Side of this arch wants repairs, & together with the rest, a number of small articles which it would be useless as well as tedious to mention.

As the whole of the Repair is a kind of Jobbing Work, there is no ground upon which to form an Estimate of the Expence for when part of an old Edifice is pulled down in order to be repaired, it often discovers something unforeseen; of which a Repair is equally necessary; for this Reason (except the arching of the draw Bridge Area) it cannot well be done by Contract; because a Contractor will not do more than originally appeared, & thereby the Sore left unbottomed; & if done by day's Work, the Expence will greatly depend upon the honesty & Address of the Workman; but I should imagine the whole, stone Arching in the draw Bridge included, may be done as well as the general state of the Bridge will admit of, for £150, or at most £200.

Ansthorpe,
18th Oct., 1769.

