

HEXHAM BRIDGE.

(See Plates 11, 12, 13.)

To Mr. Donkin,

Aulthorpe, 12 January 1777.

I BEG leave to acquaint you, that I have fully considered the construction proper for a bridge over the river Tyne at Hexham, and have carefully computed every article of expence that will probably attend the erection of it in a substantial manner, and sufficient for me to risk my credit as an artist upon it. The situation is that which I particularly examined at the request of Mr. Errington, viz. about fifty yards below the boat, and nearly in a line with the little bridge that crosses the mill leet; in which case it will land at the north end upon the close east of the boat house, which is situate between that and the lane.

The bridge I propose to consist of nine arches, and to extend between the abutments 518 feet, and including the abutment well, 568 feet; to be twenty feet wide over all, and about eighteen feet between the parapets. I suppose it to be gravelled over in the manner of a good turnpike road, and the length of the road over the middle arch to be thirty-one feet above the surface of the river in its ordinary state: the height of the great inundation in the year 1771, being at this place above that surface scarcely fourteen feet.

The neat Estimate of materials and workmanship	-	-	-	£	s.	d.
				6036	0	0
Upon the above, I allow 10 per cent. for engines, utensils, and contingent expences				604	0	0
<hr/>						
Expence of the bridge complete, with the road formed over it to the extent of the abutment walls	-	-	-	£	6640	0 0

To forming the ascents to the bridge at each end, that at the south to be wharfed up with walls extending fifty yards with a breast-work or rough parapet thereon, and so that the slope shall not be steeper than one in twelve; masonry, filling or forming the road to the extent of the slope

	-	-	-	320	0	0
Total expence of the bridge complete, materials and workmanship	-	-	-	£	6960	0 0

It is to be noted, that the road is supposed to be made up to the height of seven feet above the level of the ordinary surface of the river, and not higher.

It is further to be observed, that there is here no allowance for a small bridge over the mill leet; nor for forming the level road between that and the great bridge, nor for way leave or quarry leave, nor for the superintendence or surveyor's salary, which two last I cannot estimate at less than eight per cent. upon the above amounts, or at about 56ol., making the whole sum 752ol.: so that, if Mr. Errington undertakes the bridge at a less sum than 750ol., with the intent of building it under my direction, it is probable he will be money out of pocket, and therefore lower than this I cannot advise his engaging therein.

I must observe, however, that the above is on supposition that every thing is to be provided, and therefore whatever the materials that are on hand may be found to be worth to this undertaking on a fair valuation, where they lie, will be so much to be deducted from the sum to be advanced by the country.

I cursorily viewed the situation opposite to the Hermitage, where I formerly proposed to build a bridge in 1756, and though I have no doubt of building a bridge there, yet to do it with a probability of safety against such a flood as that of 1771, which at that time was not thought of, is impossible there or in any other situation near Hexham, for less money than the amount of the above estimate.

I am, &c.

J. SMEATON.