

or drawn out, they must be cut off about the top line of the pitched stone invert of the water ways of the new Aqueduct.

The timber work must in all cases be removed as rapidly as it is loosened, and every precaution taken that may be required to guard fully against obstructing the water ways of either the old or new structures.

This, the contractor should clearly and distinctly understand, must be done at the time and in the manner he is called upon to do so; whether it be during the winter season, by the employment of divers, or at any other season of the year, or in any other way whatsoever that the Department of Railways and Canals may consider necessary to effect the object.

In case it is found necessary to form a water-tight bulkhead across the trunk of the new Aqueduct (at the time the first division of the structure is in progress, or after it has been carried up to the line of high water), either for the purpose of excluding or retaining the water, or to serve both purposes when required, the contractor will be expected to state the bulk sum for which he would construct such a dam or bulkhead, and remove it when no longer required—the difference of level between the crown of the arches and high water in the river being about  $11\frac{1}{2}$  feet, and between the same point and low water  $5\frac{1}{2}$  feet—the bulkhead will answer for medium water at about  $8\frac{1}{2}$  feet over the crown of the arches.

When a section of the pit has been unwatered, the bottom is to be sunk to the depth required for a stratum of concrete which is to form a bearing surface for the masonry of the abutments and piers, as well as for the pitched stone work under the water ways of the structure.

The bottom, under the respective abutments, for a distance of 13 feet parallel to the centre line of the Canal and for the whole width to be occupied by the Aqueduct and its connecting walls, except that part of the south-east retaining wall already built, is to be sunk uniformly to a level surface at  $44\frac{23}{100}$  feet below the coping of the present Aqueduct. On this a stratum of concrete  $2\frac{1}{2}$  feet in depth is to be placed to form a seat for the masonry.

The bottom for each of the piers to be excavated to the full depth of  $45\frac{73}{100}$  feet below the same fixed point on the coping of the present Aqueduct, or  $2\frac{1}{2}$  feet below the general bottom, for a width of  $15\frac{1}{2}$  feet measured along the centre line; except at the third pier from the north abutment, for which the width to be excavated to the depth above stated will be  $17\frac{1}{2}$  feet.

The intervening spaces or those under the archways are to be kept  $2\frac{1}{2}$  feet higher, or made to an uniform level surface at  $43\frac{23}{100}$  feet below the same point on the present Aqueduct coping.

At these different levels, and for the extent stated at the respective places—that is, the distance on the centre line and width of the structure, its off-sets, cut-waters, etc.—the bottom must be trimmed off to a smooth and uniform surface, and the sides of the cut for the deeper parts made straight and plumb.

The material excavated must in all cases be taken out of the pit, hauled, transported and disposed of on ground provided by the contractor beyond the line of high water of the river:

If the bottom material continues to be of a like class as indicated by the borings the abutments and piers of the structure will be placed on a stratum of concrete, and, the space under the different arches be of pitched stone laid in cement mortar upon a stratum of concrete. The concrete to be made with hydraulic cement in the manner subsequently described, laid on in layers not exceeding ten inches in depth, each of which must be well rammed or beaten down. The cut formed for it under the piers and abutments must be entirely filled, and care taken that it is of the full depth— $2\frac{1}{2}$  feet—and that the top is brought to a fair level surface for the masonry.

In every case where concrete is used to form a bearing surface, it must be allowed to remain a few days exposed to the action of the atmosphere before it is covered with masonry.

Under the different water ways the layer of concrete is to be 9 inches deep in the centre, increasing toward the sides to about 33 inches, leaving a regular curved