

City of Edinburgh Road Trust

Specification of Works to be executed in reconstructing the carriageway and channels of Arthur Street (from East side of Middle Arthur Place to Pleasance); Middle Arthur Place, and West Arthur Place to the satisfaction of David Crawford Proudfoot Surveyor and Engineer to the Trust who shall lay out and direct the works while in progress.

The whole of the works herein specified are to be executed in accordance with this Specification, the Schedule of Measurements and other relative documents, and they will be laid out by the Surveyor to the Trust, who shall have power at all times during the currency of the Contract to cause any alterations to be made that he considers necessary for the stability of the works and the due fulfilment of the Contract.

The carriageway of Arthur Street which is at present causewayed with common ruble [sic] is to be paved with best dressed causeway blocks; and the carriageways of Middle and West Arthur Places which are at present causewayed with common ruble [sic] are to be constructed with the best Portland Cement grouting and broken metal concrete similar to the carriageways of Livingstone Place and Rutland Street; the present surfaces are to be adjusted to the new levels in the most careful manner so as not to cause hollows, depressions or irregularities of any kind in the new bottom which shall be thoroughly beat down with heavy iron shod beaters and Rolled so as to make it quite uniform and solid, and the finished surface shall have a rise from the sides to the centre of one in thirty or thereby

All causeway stones at present in the carriageways are to be broken by the Contractor to the uniform size of 1½ inch cubes (not larger) and to be used by him in constructing Middle & West Arthur Place, in such a manner as the Surveyor shall direct.

Where new surface gratings are required these shall be provided and made by the Contractor and he shall cut and fill in the tracks and watch the same while the gratings are being formed.

The outlet pipes are to consist of the best nine inch double salt-glazed spigot and faucet fireclay tubes approved on by the Surveyor; the pipes are to be jointed, and the connections to the main sewer, made with the best Roman Cement and the Contractor shall state a price in his schedule for cutting and filling the tracks, providing the pipes and labour complete as Specified and Scheduled.

The Contractor shall dig a site for the new cesspools and he shall provide and lay Caithness stone sill 5'.0" x 2'.9" x 3" with Arbroath stone tongue two inches thick and strong 3" thick Craigleath cover over walls and outlet chambers, the side and end walls to be of the best nine inch composition brick work, built in cement and carefully pointed outside and inside and made watertight. The surface frame to be of the best cast metal and to weigh two cwts or thereby, and the grating and bars to be of best Staffordshire malleable iron with Lowmoor rivets correctly fitted. The frame and bars to be of the same size, quality and finish as specimen [sample] to be seen in the Stores of the Trust at Dalry. The side bars to be 1½" square with ten cross bars 1¼" in diameter and to weigh 80 lbs in all, and to be to the Surveyors satisfaction.

The Contractor shall provide, lay, joint and finish in cement on both sides of the carriageways channels stones of the best whinstone rock from three to four feet long by seven inches deep and twelve inches broad, hollowed on the surface ¾ of an inch: all perfectly squared, nridged [dressed roughly] and finished in a neat and tradesmanlike manner to the entire satisfaction of the Surveyor.

The carriageway of Arthur Street shall be paved with dressed blocks of the uniform size of from seven to twelve inches long by seven inches deep and three inches thick and these shall be provided laid and finished at the prices stated in the Contractors schedule and shall be of the best description of rock, free from all shakes and other imperfections. Dressed in a neat and perfectly square manner throughout the, the tops, sided and ends to fill the square exactly; and they are not to be cut away on the end or side joints as all such stones shall be condemned and rejected. The causeway shall be laid on a bed of clean sharp sea sand not less than two inches in depth at any part and the blocks must be laid by first class able bodied paviors and no unqualified workman shall be allowed to execute the works. All the stones shall be gauged, set hard to hard and clean in the joints which will be filled with the best Fisherrow gravel and equally beat down half an inch with heavy iron shod beaters.

The channel stones, dressed blocks and new metal to be used on the Works shall be of the best whinstone rock from the following quarries viz Barnton, Croy, Ratho, Linlithgow or other quarries approved of by the Trust and their Surveyor.

The carriageways of Middle Arthur Place and West Arthur Place shall be constructed with Portland Cement grouting and broken metal concrete and the Contractor shall use every means possible to secure a strong, equal and hard surface as he shall be held responsible for the maintenance of the works for twelve months after finishing them and at the expiry of that time he shall leave the carriageways as sound, substantial, and equal on the surface as the specimen streets before referred to and to the satisfaction of the Surveyor.

After the ground is cut, rounded and finished, the Contractor shall lay down a bottoming of hard broken metal six inches deep in two layers of three inches, each layer to be separately blinded & rolled and all the metal to be uniform size of 1½ inch cubes and this under metal will be carefully blinded throughout with good sand passed through a fine riddle and rolled with a two ton roller, and carefully watered and swept till all the interstices are filled, and a close surface made ready for laying the top metal and cement grouting upon all as the Surveyor shall direct and to his satisfaction and the bottom metal will also be carefully beaten down and equalized on the surface as directed.

After the Contractor has carefully finished the construction of the bottom he shall lay down a coating of top metal four & a half inches deep, the metal to be all hand broken and of the uniform size of 1½ inch cubes and the top metal must be carefully laid down over the bottom metal experienced metal spreaders in a careful and uniform manner and all hollows or irregularities shall be made up and the whole surface metal carefully grouted with the best Portland Cement mixed with fine grit or gravel, riddled out of the best Fisherrow gravel to the size directed by the Surveyor: in the proportions of Portland Cement, one measure – and fine gravel one & a half measures: this cement and gravel will be thoroughly mixed with the Patent steam mixing machine belonging to the Trust which the Contractor shall be supplied with and for which he shall pay one pound and ten shillings per day (including machine and Feeder and driver) for the time he has the use of it, the Contractor will require to finish the grouting, surface-beating and equalizing in a most careful and tradesmanlike manner by careful workmen and as the Surveyor shall direct, as the whole after strength and durability of the carriageway depends much on this part of the Contract and as the Contractor is entitled to use the best cement he can procure for the purpose his special attention is directed to this matter by the Surveyor.

If the metal (broken from the old causeway at present in the three streets is found to be insufficient, the Contractor shall provide the best hand broken new metal, of the size of 1½ inch cubes, to make up the deficiency and he shall state a price in his schedule for the same delivered on the Works.

In the event of the Contractor doing any work or laying down any material not approved by the Surveyor; the Surveyor shall have full power to remake the works and replace proper materials in such a manner as he considers necessary for the after stability of the Works and the due fulfilment of the Contract, and the Surveyor shall deduct all costs and charges connected therewith from the Contractors instalments of money due under the Contract.

The Contractor shall receive three payments, in all: viz: one on completion of each street, on a certificate being granted by the Surveyor as to the extent of Work executed, less the sum of five per cent to be retained for maintenance of Works for twelve months after the completion of the Contract.

The Cement to be used shall be Robin & Cos best Portland cement, fresh and in first-rate condition for using, or other first-rate Portland cement, if approved by the Surveyor and all the neat cement shall be capable of sustaining a tensile strain of 600 lbs on the superficial area of 2½ inches of the standard test block after being immersed seven days in water. All cement 112 lbs per imperial standard bushel, to be finely ground, and to pass through a No 50 gauge sieve, leaving only a residue of 10 per cent, and the Contractor shall give the Surveyor a certificate or letter from the cement manufacturer that he cement is according to the above specification, and the Surveyor shall have power to reject all cement which is not according to the above test.

(Transcribed from the original hand written specification contained in a bound volume of Edinburgh Road Trust specifications of the period. David McGuigan, March 2022)