

Wood Block Paving

By Bob Kindred

In the spirit of 'authenticity in all things' should we consider the reintroduction of wood block paving into historic streets built in the Victorian period? The technical and public health merits were often discussed at length in Council Minutes at the time.

The Mayor and Aldermen of one large historic town were much preoccupied in the late 1870s and early 1880s with problems of paving and lighting. It had been the practice to water or sweep the streets according to the weather. In wet weather, watering had continued despite there being "no more occasion for putting water down than in the sea". Streets that had been swept regularly on a Saturday night were now swept at two o'clock on a Saturday afternoon — "which was of no earthly use". As a consequence, when they put plenty of water down it displeased those who drove through the streets and when they lessened the quantities, tradesmen with goods exposed to sale complained of the dust injuring their goods.

Some of the streets were already paved in granite "mixed with some softer material that soon disappeared leaving the granite sticking up in lumps in a way which was most destructive to carriages and horses' legs". The noise of wheeled traffic was frequently described as deafening, preventing civilized conversation; while pieces of granite "the size of a man's fist" were flung about by heavy carriages being driven too fast.

A scheme of wood block paving was embarked upon. The Borough Engineer reported that the advantages were: "1 minimum of noise; 2 safer for horses than granite or asphalt; 3 traction a little more than asphalt; 4 much cleaner than Macadam; 5 presents an even, slightly elastic surface which is a great boon to vehicular traffic; 6 safer than any other pavement on inclines".

The disadvantages were put as: "1 that wood absorbs moisture and gives off offensive smells; 2 is difficult to keep clean in certain weather conditions; 3 is not easy to repair after opening for gas and water pipes". The disadvantages were considered "trifling" but one Alderman was moved to observe that additional expense was incurred in wet weather when it was frequently necessary to throw down sand and shingle only to take it up later. Another observed that the impurities that sank into the wood became dispersed as dust as the pavement wore down making the air "extremely offensive and unhealthy" (having forgotten that this was precisely the form of complaint that had led to wood pavements being advocated in the first place).

It was reported that the plan adopted by some wood pavement companies, of having a perfectly impervious bottom, was contrary to the proper principle of laying such material. Experiments had been tried with five-inch cubes upon an earth foundation but in a very short time water had filtered through and they had become uneven. It was suggested that the paviors were too small, but when twelve inch blocks were tried the surface was no more success than before. The use of one-and-a-half inch thick boards was also abandoned for the same reason.

The Borough Engineer's opinion was that the conditions of construction should be reversed.

The foundation should be sufficiently substantial to prevent settlement but at the same time it should be absorbent so as to take up any moisture that may pass to the underside of the wood.

The Surveyor of Portsmouth had observed that a good foundation, but one that was porous, was an excellent preservative for wood pavements. It was noted that although a concrete foundation had only been adopted in Norwich, the principle of using it was correct although it was observed that the cost was increased by one third. It was also noted that Manchester had been extensively paved in wood blocks without resorting to concrete foundations but later this was attributed to the firmer sub-strata.

The Engineer felt that as it was important to make the top rather than the bottom impervious using asphalt for grouting the top of the joints. The entire top surface should be dressed with boiling tar, a process that might be repeated with advantage every other year. Besides being useful from the public health aspect, the durability of the surface would be enhanced. It was reported that the cost of laying granite and wood paviers was about the same.

The life of wood paving was taken to be from 9 to 12 years, after which re-paving would be necessary but 50% of the blocks would be fit for reuse. Practical experiments showed that, provided that the wood used was suitable for paving (although the species was not stated), in a reasonably well trafficked street the loss on one-sixteenth of an inch from a four-and-a-half inch thick block over a period of two-and-a-half years was quite acceptable.

As far as dealing with inclines was concerned it was reported that in London it was the practice to lay a row of blocks followed by an inch spline placed on the foundation between that of the next row, and the spaces filled with asphalt and small pebbles to give the horses a good grip. Gradients for wood should not exceed 1 in 30—although Ludgate Hill in the City of London was 1 in 25.

As for slipperiness, the City of London Surveyor, Mr Hayward, had made daily observations over a long period and had concluded that granite worn smooth was the most slippery, asphalt next, and wood least. He considered that a horse would travel before falling — 132 miles on granite set paving, 192 miles on asphalt and 446 miles on wood.

Surely the advantages of this excellent but neglected paving material have been overlooked for too long? As we struggle at the end of the 20th century to restrict the damaging intrusion caused by overuse of the motor-car in our historic urban environments now is the time to carry our engineering colleagues, kicking-and- screaming into the nineteenth!