

6. Moulding Machine Area.

Look inside the building here and notice the contrast in construction compared with the bluestone buildings. Although Humes were in the forefront of manufacturing technology, their buildings do not reflect the engineering achievements which they housed.

Working conditions at the factory were spartan, but the workers, many of them migrants, made their lot more pleasant by growing fruit trees and vegetables, and catching eels, fish and rabbits around the site.

The Top Factory produced 4 and 6 ft. long pipes (1.2 and 1.8 m.). The steel bases of the moulding machines can still be seen.

The Hume pipe-making principle is based on the way anything inside a revolving cylinder is pushed to the sides like the "Rotor" at Luna Park.

Steel moulds were coated with oil to make sure the pipe came out, the reinforcement was placed inside and the machine was set spinning. Concrete was then shovelled into the moulds and the speed increased to evenly distribute the concrete.

A vibrating mechanism helped settle the stones and a stoning bar was used to remove any loose stones. Excess water was forced out with a trowel.

After five minutes of spinning, sufficient water was expelled and the concrete set enough for the mould to be transferred to a steam chamber. An overhead crane and a trolley in the channel in front of the steam chambers assisted in moving pipes.

The works began with two small concrete mixers above each moulding machine but in later years this was changed to a single large mixer for all the machines, located to your left.

7. Concrete Mixing and Materials

The layout of the pipe works took advantage of the slope of the site and different levels wherever it could using gravity to assist moving material. Sand was delivered down the steel chutes on the hill and brought to the batch plant where you are standing.

Here sand and 1/4 inch and 1/2 inch crushed bluestone were placed in the bays and fed by conveyors to a weighing and mixing hopper inside. Cement was added from a silo nearby (now removed). Once measured, ingredients went into the concrete mixer.

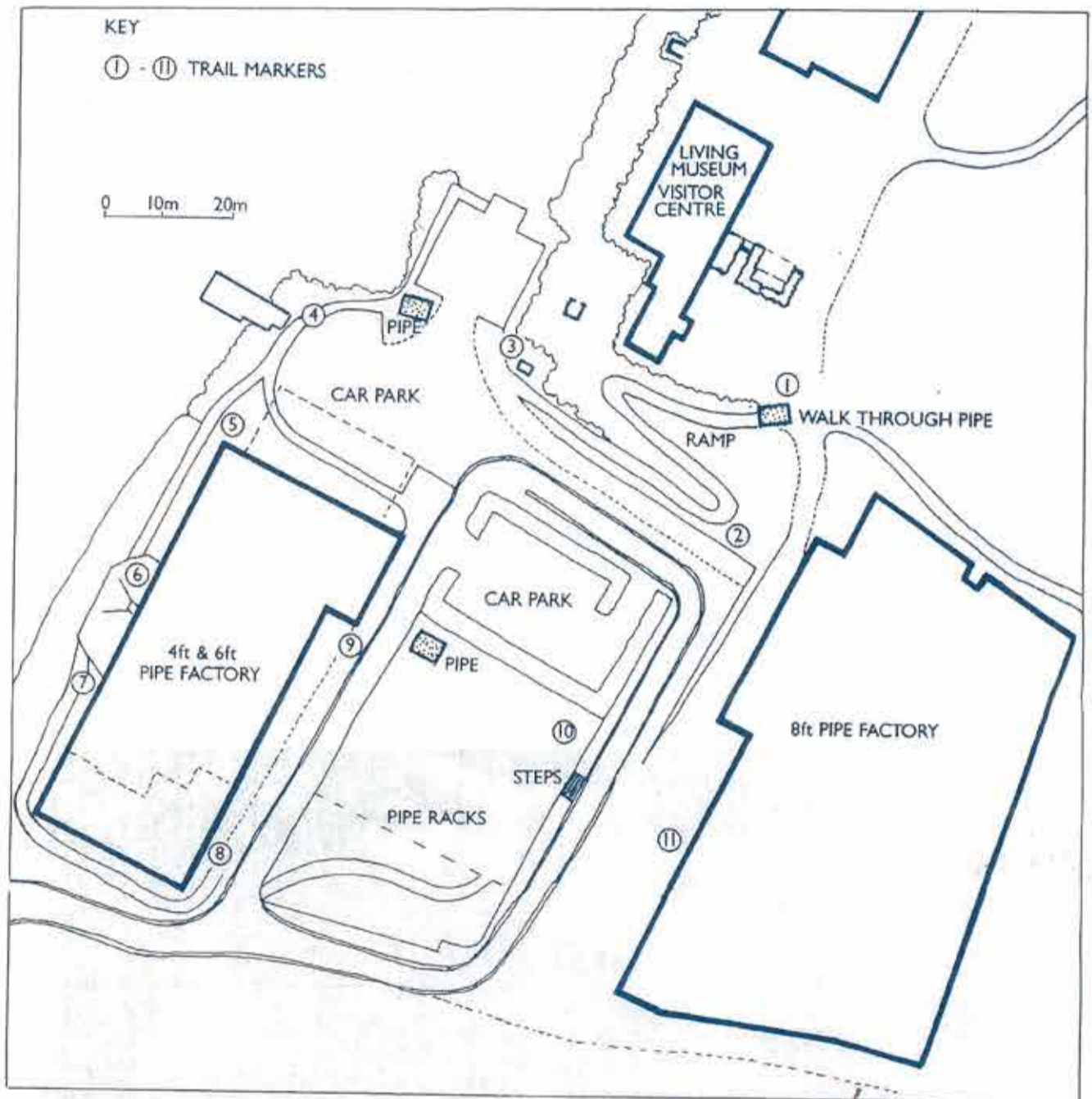
Before the batch plant was installed in the 1960s, materials were shovelled by hand into small mixers near each moulding machine and cement came in bags.

8. Testing.

The green machine with the concrete pipe was used to test finished pipes for strength and water tightness. The pipe was clamped into place and water was pumped inside to the required pressure and held for a specified time. If water leaked or the pipe cracked, it failed the test. The test sample ranged from 1 to 100 percent, depending on the standard required.

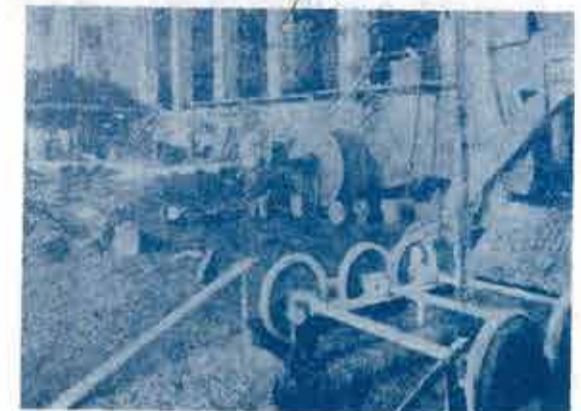
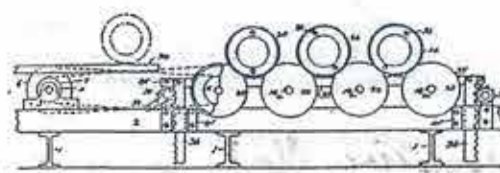


Pipemakers at Humes Laverton 1987.



9. Steam Chambers and Tramlines

Freshly-made pipes, still in their moulds, were rolled into the steam chambers and doors were slid or lowered in place across both ends. Steam was then piped in from the boilers to begin the curing process. Pipes remained in the chambers for up to five hours. They were then rolled out the near end onto the stripping bench which was positioned in the channel in front of the chambers. Here two men took the mould apart and rolled it back to the moulding machine area, through the space between the chambers, to begin the process all over again.



Moulding machines in the bluestone buildings. 1920s.

The finished pipe was rolled in the other direction onto trolleys on the tramway and then over wooden planks to the pipe racks. Extensive use was made of nearly half a mile (700 m.) of narrow gauge tramways and a small train to haul pipes to the storage areas. The earlier meatworks also made use of tramways and some of these may have been adapted by Humes.