

Whitechapel Bell Foundry

Saturday 18 February 2017

The foundry was established in 1570 and moved to its present premises, now a Listed Building, on a one-third acre site in Whitechapel Road, in 1738 when it was a green field. Alan Hughes, the Manager and our guide, explained that there was a record of monks (not here) making bells in the 12th century. Our visit was brought forward to February due to the sale of the premises in March 2017.

The ground floor is split into the casting and hanging sections and some small upper storey areas are reserved for carpentry and engraving. To make a bell, bell metal is poured between two moulds: the 'cope' (which holds the shape of the outside of the bell and is prepared in a large bell-shaped container) and the 'core' which is made of curved bricks. Each surface is covered with loam (made of sand, clay, goat hair and horse manure) and rotating profilers are used to ensure the gap is precise and the surfaces even. When cool the loam mixture is broken away. After being dried in an oven, the bell is placed on a lathe for tuning which is done by removing metal (5–10% of the total) in specific places in order to adjust the pitch and harmonics. The lathe is the main innovation in bell-making; until the 19th century bells were made to a size and could not be tuned. The next stage, voicing, positions the clapper for the best sound. This is followed by hanging the bell. Bell wheels for the bell ropes are made in two halves to allow them to be taken into the bell tower. In the carpentry shop we were moved by the wall of boards listing former employees. This is due to stay when the building is



A range of profilers hanging on the wall; the largest is for Big Ben.



Two sets of moulds between which the metal is poured

sold in March. The firm's archives will be preserved in the London Metropolitan Archives.

The market for bells was affected by their durability (production peaked in the 19th century), and the use of welding to repair cracked bells, but old bells can now be re-tuned. The firm has expanded its production of hand bells and small celebratory bells. We were told that Britain was the only country where change ringing takes place. The firm also made mortars until the 1970s. Unfortunately seats and stools were notable for their absence: apart from engraving, the work did not require them. An announcement on the firm's website after our visit revealed that the foundry was not moving to a new location but that its various products would continue to be made by three separate firms following the Whitechapel Bell Foundry designs. Some equipment and artefacts, including the last tower bell to be cast, are being given to the Museum of London.

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