

# On Her Majesty's Service

WASC 1815

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# Waltham Abbey — an Essex town steeped in history

**THERE is history aplenty to be found in the town of Waltham Abbey, Essex.**

The Abbey Church dominates the skyline, and legend has it that the town is the final resting place of King Harold.

The townspeople have also made an important contribution to the defence of the realm over the years, and this was marked with the bicentennial celebrations last year at the Royal Armament Research and Development Establishment (RARDE).

The site was taken into government ownership

**BY  
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in 1787 for the production of gunpowder for the Crown. Since then

there have been a number of changes in the work carried out there, reflecting alterations and progress in the worlds of politics, science and economics.

It was Lieutenant General Sir William Congreve who negotiated the purchase of the Waltham



Lieutenant General Sir William Congreve, who negotiated the purchase of the gunpowder mills in 1787.

Abbey gunpowder mills in 1787, and who invited William Newton (whose name is remembered today in Newton's Pool at the site) to become Master Worker.

In the middle of the 19th century the site saw a change: an experimental plant was set up at Waltham Abbey for the production of gun-cotton, and then a new site was acquired at Quinton Hill, on the southern side of Waltham Abbey, for the construction of an even larger capacity plant.

There was also a nitro-glycerine factory built, and production of cordite began in 1891, with a new cordite factory being built soon after.

Early on during the First World War the Royal Gunpowder Factory was the only government manufacturing site. Production and employment grew, and by 1917 the workforce numbered over 5,000 — half of them women.

### Acquired

After the war both production and employment fell, but the emphasis moved to experimental and investigative work. This led to such developments as solventless cordite, acid concentration plants and a continuous process of TNT.

In 1933 came the call for a state of readiness for wartime output, and the most important process introduced during this period was the production of the high explosive RDX.

In July 1945 the Royal Gunpowder Factory closed, but not before the area had been surveyed by staff from the Arma-

**... and since 1787 playing an important role in the defence of the Realm**

ment Research Department as a location for its explosives investigation activities.

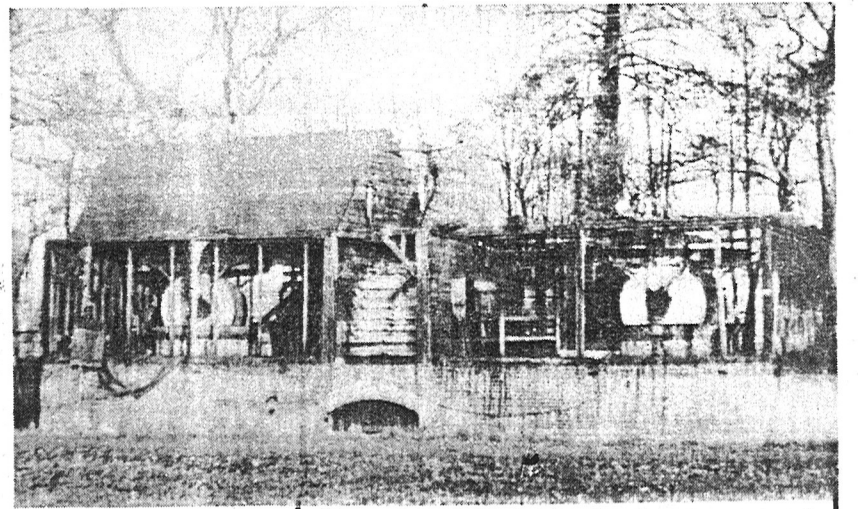
In fact it was the same month that saw the opening of the experimental station, and the following year the Chemical Research and Development Department took over, dealing with liquid propellant systems and plastic rocket propellants.

### Changed

In 1948 the title was changed to the Explosives Research and Development Establishment, and in 1977 the site became the Propellants, Explosives and Rocket Motor Establishment (PERME).

In 1984, as part of a scheme to privatise the Royal Ordnance Factories, the site at Waltham Abbey was divided between the Royal Armament Research and Development Establishment (RARDE) and what was to become the Royal Ordnance plc.

Again the work was modified to meet the demand, and RARDE Waltham Abbey moved to cover the chemistry and physics of energetic



The ruins of the last pair of water-powered gunpowder mills.

materials together with research into associated chemical processes.

The area retained in government ownership as RARDE Waltham Abbey was that part which included the site of the Royal Powdermills.

At the end of last year a special open day was held to mark 200 years of continuous contribution to the Crown. Because of the nature of the work carried out there, the

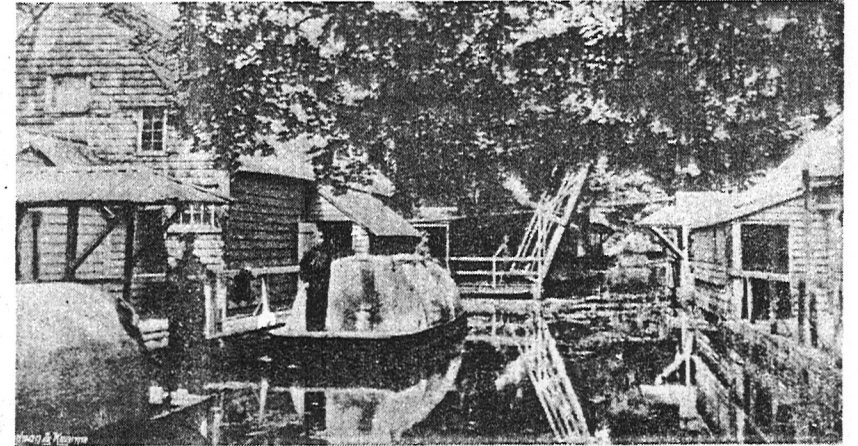
establishment would normally have been closed to the public, but on the open day in September people were invited to visit the site.

### Security

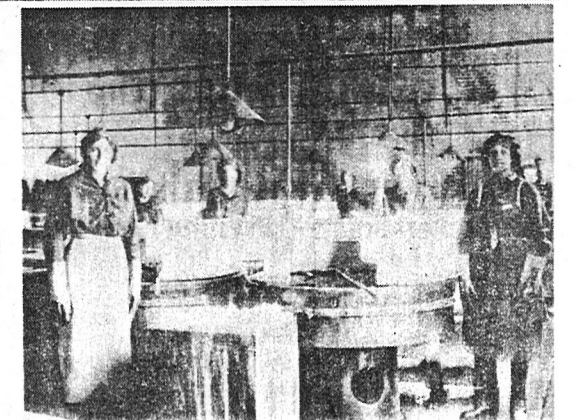
There were exhibits by the various sections and also special demonstrations. Because of the security at the site, however, many areas were kept out of bounds and

cameras were not allowed into the establishment.

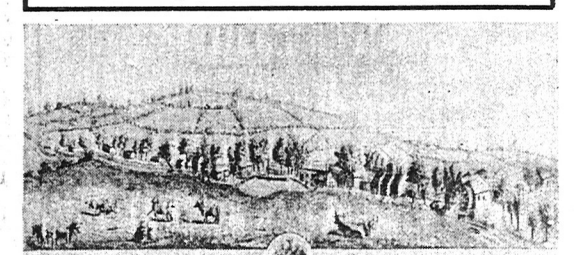
Nevertheless, all those who attended the celebration were able to see something of the history of the site, and learn about the 200 years that the people of Waltham Abbey and the powder-mill location have spent in the defence of the realm.



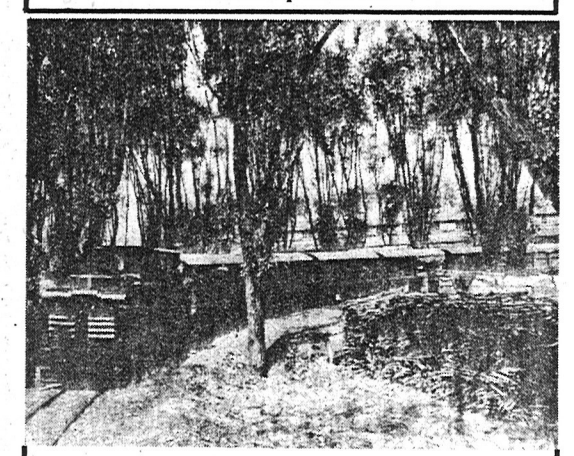
Gunpowder mills and the powderboats on the Millhead Stream at the Royal Gunpowder Factory.



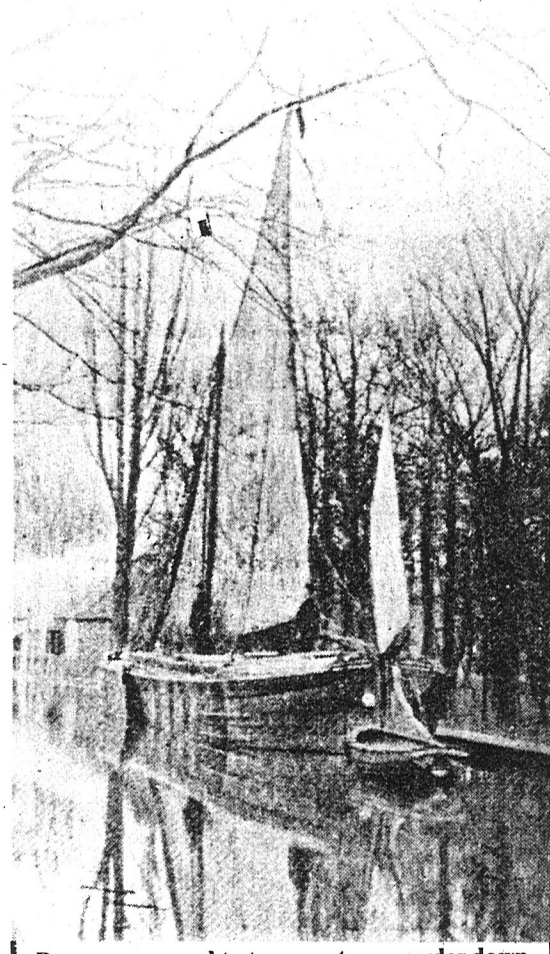
This is the guncotton nitration plant at the Royal Gunpowder Factory.



The powdermills that were taken into Crown ownership in 1787.



The narrow-gauge railway built at the Royal Gunpowder Factory.



Barges were used to transport gunpowder down the River Lea to the magazines at Woolwich and Purfleet.



Explosives were tested underwater at the Waltham Abbey site.