

Hullbridge u3a - Historic London Group

visited the Royal Gunpowder Mills at Waltham Abbey



Our coach made the short trip from Hullbridge Community Centre to Waltham Abbey and parked up on site. We were shown into the refreshment hall and had a complimentary tea or coffee and used the facilities. We then split into three teams of seventeen and were assigned a guide. One team proceeded to the Armoury, film and exhibition building. The old

architecture has been embellished with a modern facade from a previous lottery grant. The second team were shown around the mixing mills by their guide and team three took the tractor pulled trailer around the 175-acre heritage site. Each of these activities took approximately one hour. We had an hour and a bit for a very nice M&S buffet lunch before going to the third and final point of interest on the site. The canal network within the Waltham Abbey

Royal Gunpowder Mills is extensive, reaching a peak of nearly 10 miles (16 km) of waterways during the First World War. A cast iron aqueduct was built across the River Lea in 1879. There are only 23 cast iron aqueducts on the whole English waterway systems and three of them are within the Mills. Fed by the River Lee, this complex, man-made system was built to safely



transport volatile explosives. Today, the heritage site preserves several surviving waterways and is a popular visitor attraction. These

Gunpowder Mills affectionately known as "The Island" due to the water course on all four sides were in operation for over 300 years.



Gunpowder gave off black smoke often giving away the location of where it had come from. So in the mid 1850s the site became involved in the development of revolutionary nitro based explosives and known as "smokeless powder". The site grew in size, and the black powder became less important. Gunpowder manufacture is believed to have commenced on the site in the mid seventeenth

century, making use of the site and the water supplies of a medieval water-powered fulling mill that had later been used as an Oil mill. The river provided water for both powering some of the gunpowder mills as well as allowing the passage of specialised vessels (powder barges), either within the site, or into and out of the site. During Second World War, Waltham Abbey remained an important cordite production unit and for the first two years of the war was the sole producer of RDX. RDX is one component of torpex, the explosive that was used in the Bouncing Bomb. Operation Chastise, commonly known as the Dam Busters Raid, was an attack on German dams carried out on the night of 16/17 May 1943 by 617 Squadron RAF Bomber Command, later called the Dam Busters, using special bouncing bombs developed by Barnes Wallis. Currently the site is home to two large flocks of fallow deer. With evidence they are not restricted to the



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fields when we were on foot around the buildings. There is a 2 ft 6 in (762 mm) gauge narrow-gauge railway on the site 1,100 yards (1,000 m) long and has two stations. It is known as the Gunpowder Railway. The diesel locomotives and rolling stock currently on site have been restored and are maintained by a team of enthusiastic volunteers. Visitors can arrange a trip on

the railway at predetermined dates. The railway replaced the canals and powder barges to transport the audience around the site. The Royal Gunpowder Mills finally closed on 28 July 1945 at the end of the war. The establishment re-opened as a research centre known as

the Explosives Research and Development Establishment, or ERDE, in 1945. It became the Propellants, Explosives and Rocket Motor Establishment, Waltham Abbey, or PERME Waltham Abbey in 1977. The rocket activity later extended to the production of rocket motors, including work on



the Skylark project. The South site and the Lower Island works were handed over to Royal Ordnance plc immediately before it was privatised in 1984. During Second World War, Waltham Abbey remained an important cordite production unit and for the first two years of the war was the sole producer of RDX. RDX is one component of torpex, the explosive that was used in the Barnes Wallace Bouncing Bomb. The North side however remained in Ministry of Defence control as a research centre; becoming part of the Royal



Armament Research and Development

Establishment. After various reorganisations, the research centre finally closed in 1991. Since 1999, the Mills are an Anchor Point of the European Route of Industrial Heritage, set in 175 acres (0.71 km²) of parkland and containing 21 buildings of major historical importance. A large area of the north site is listed as the Waltham Abbey SSSI and another separate area is a scheduled monument. Visitors can

see exhibits related to gunpowder making, tour the site on a land train. An attempt to demolish the cordite mills and replace them with dormitories for young people staying at a children's activity centre was rejected by Epping Forest District Council in 2016 after exposure in the national press.

A big thank you to Carol and Paul Ogden for organising this historic, interesting trip.