

THE ROYAL GUNPOWDER FACTORY,

WALTHAM ABBEY, ESSEX

Area A



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THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER A200	OLD SERIES 219	RCHME NUMBER	N.G.R. TL 37710 00958
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NAME/FUNCTION	START DATE	END DATE
Waltons House	1787	
Master Workers House	by 1807	by 1807
Store Keepers Office	by 1841	by 1841
Store Keepers and Assistant Inspectors Office	by 1851	by 1851
Ordnance Office	by 1865	by 1865
Superintendents Office	by 1908	by 1908
Main Office	by 1972	by 1972
Safety Office		

NO PHOTOGRAPHY
AVAILABLE

CARTOGRAPHIC DEPICTION

1827 WASC 900/04 + MPH 271 ; 110
 1830 WO55 2694
 1830 WASC 900/05
 c1830 WASC 900/06
 c1835 WASC 900/07
 1861-1868 WASC 900/10A ; 21
 1865 WASC 900/13
 1865 WASC 900/14
 1871 SUPP5 682
 1865 WASC 900/38 + SUPP5 975 ; Superintendents
 Offices
 1865 WASC 900/41A ; Superintendents Office
 1865 WASC 900/42 ; Superintendents Office
 1897 WASC 900/53C ; Superintendents Office
 c1910 WASC 900/65
 c1910 WASC 900/79
 1917 WASC 900/70 ; Main Offices
 1917 WASC 900/72 ; 219
 1919 WASC 900/74 ; 219
 c1920 WASC 900/80 ; 219
 1923 WASC 900/84 ; 219
 >1940 WASC 900/91A ; A200
 1954 A - B.34 ; A200
 c1960 WASC 900/94 ; A200
 c1963 WASC 900/97 ; A200
 1972 WASC 900/102 ; A200
 1972 WASC 900/104 ; A200
 1976 WASC 900/113 ; A200

DOCUMENTARY REFERENCES

Plans;
 A200 B01 - B09 ; Plans and Elevations 1857 to 1985

1807 WO55/2351;51 Storekeepers Offices
 1830 WO55/2694;110 Storekeepers Offices
 1841 WO55/2856;110 Storekeepers Offices and
 Assistant Inspectors Office
 1851 WO55/3027;26 Ordnance Office
 1908 RGPF Ledger WASC 1509 + WASC 1764 ; Main
 Office built pre 1860 p24
 c1925 RGPF Ledger WASC 1680 ; Main Office
 1936 WASC 901/41A/1 14 May 1936 Main Office
 c1945 RGPF Ledger WASC 1508 ; Main Office

1972 ERDE List ; Walton House/Safety Office
 1991 Mott McDonald survey
 1992 RARDE List ; ; Walton House/Safety Office

1992 FBRC ; Book Store

1993 RCHME NBR No. 91455

PHOTOGRAPHY

PHOTOGRAPHY

<p>HISTORIC</p> <p>WASC 1211 John Waltons sundial Millstone base to sundial WASC 1231 Waltons House memorial plaque to F M Smith WASC 1232 &/1-5 Waltons House WASC 1524/1-2 Waltons House WASC 1543/26-31 Waltons House</p>	<p>RCHME</p> <p>1) 206/E/10 From South West</p> <p>2) BB92/26065 A200 Cast Iron Bridge over Mill Head stream from East BB92/26067 A200 Waltons House from South East BB92/26068 A200 Detail of Plaque from West BB92/26231 A200 Ground floor North West room, view from North East.</p> <p>4) 4788/13 06.05.1993</p>
<p>RELATIONSHIPS WITH OTHER MONUMENTS</p> <p>ASSOCIATED WITH: A201,A202</p>	
<p>CONDITION Good</p>	
<p>DESCRIPTION</p> <p>1) CONSTRUCTIONAL MATERIAL Brick</p> <p>2) ROOF MATERIALS AND STRUCTURE Slate</p> <p>3) POWER SOURCE Electricity and gas</p> <p>4) DIMENSIONS i) L 15.9m ii) W 11.27m iii) HT estimate 6m</p> <p>5) See Attached Threatened Buildings Record report</p>	

ROYAL COMMISSION ON THE HISTORICAL MONUMENTS OF ENGLAND

MOD Building No. A200
Office
The Royal Gunpowder Factory
Waltham Abbey
Essex

NBR No: 91455
NGR: TL 377 10 00958

One of the few surviving eighteenth-century buildings on the site, the original structure was a relatively simple two-storeyed office building of two bays by one bay, constructed of red brick laid in Flemish bond.

Subsequent additions have taken place in at least five further phases of construction, from the late eighteenth century to the late nineteenth century. Some time before 1821 it was extended on the north side to create a third bay of two storeys. Around 1860, a two-storeyed wing was built at the north end of the east elevation. Following this, a two-storeyed addition of two bays by two bays was built at the west end of the south elevation. In c1888-9 another two-storeyed wing was added at the south end of the east elevation. A service tower had been added in the re-entrant angle of the latter south-east wing by c1895.

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One of the few surviving eighteenth-century buildings on the site at the Royal Gunpowder Factory, the original structure was a relatively simple two-storeyed building of two bays by one bay. With a rectangular plan, aligned north to south,¹ it contained two rooms on each floor with a staircase at the eastern side.

Now surrounded by later additions, its original western side and part of its eastern side form part of the present west and east elevations. It is constructed of red brick laid in Flemish bond, with a stepped brick cornice, and has rubbed red-brick flat arches to the two windows on each floor of both the west and east elevations. The windows were sash, except on the east elevation where they may have been blind from the start.² At the north end of the west elevation is a stone shield carved with foliage and cherubs flanking a ?lion head and a winged angel-head. It is eighteenth-century in style and may belong to the original building, although presently it is only screwed to the brickwork.

Interior features which may belong to this original phase include ?fireplaces on the former south wall, six-panelled doors, and skirting.

The roof was hipped and the original trusses, which are pegged and have carpenter's marks for assembly, survive as part of the present hipped roof. It has two trusses which were central, approximately one metre apart, and which each consists of a tie beam, a king post with expanded head and foot, and raking struts. On the south side of the southern central truss and on the north side of the northern central truss, a further strut projects from the tie beam and lower feet of the king posts to support a purlin for the hips at either end. There are diagonally-set staggered butt purlins.

As a two-celled unit, the original building would not have been substantial enough to function as a dwelling. Rather, it appears to have been a purpose-built office building. The offices may have been for inspectors who kept watch, for example, on buildings such as the former Wash Up House, Powder Store and Barrel Store (A201, A202) situated opposite, approximately 15 metres west of the building. There may have been a number of such small office buildings on the site.³

¹ The plan is aligned north-north-east to south-south-west but for clarity in this report it is described as if it was aligned north to south.

² Alternatively, the windows on the east elevation may have been blocked at a later date. They were blind by 1856, as they are shown as such in plans "showing the present offices and proposed alterations for Master Workers Quarters," signed J. Randell, Clerk of Works, 7th November 1856, cat. A200.B.05 (MOD Central Disposals Unit, Chessington).

³ For example, at the entrance to the Royal Gunpowder Factory site, approximately 200 metres south-east of the building A200, is a former police station (A233/A238) which appears to have been built in the early nineteenth century originally as a two-celled unit of two storeys.

By c1821 the building had been extended on the north side by the addition of a further bay, marked by a straight joint and brick closers on the west elevation. Its brickwork, laid in Flemish bond, is very similar to that in the original block. The original hip at the north end of the roof became redundant. It was enclosed by the extension to the roof, which consists of a single truss with a tie beam, king post with expanded head and foot, and raking struts which are slightly narrower than the raking struts of the earlier roof. Its purlins are clasped between the principal and upper edge of the raking strut.

The extra rooms created by the additional northern bay resulted in a slight change of layout in the building. The two rooms on the ground and first floors of the original two-celled unit were each converted into one room. An entrance doorway at the east side of the new north elevation led to a lobby and to a small room on the north-west side, both of which were heated by corner fireplaces sharing the same stack on the north wall. A plan showing the uses of the rooms in 1856⁴ describes the main two-bay room on the ground floor as Master Worker and Captain Instructors Office, the adjacent north-west room as a Messenger's Room, with Lobby on the north-east side. For the first floor, the main room is described as Clerk's Office and a single room in the northern bay in Superintendent's Office.

A site plan of c1821 labels the building as "Inspectors Office".⁵ The site plan also shows another rectangular structure, aligned parallel at approximately 10 metres on the north-east side of the building, which is labelled "Grand Watch House" at its south end and "Master Worker's Office" at its north end. The rectangular building was still used as a watch house in 1856.⁶

The next building phase is stated to have been around 1860.⁷ Presumably it was then that the two-storeyed wing at the north end of the east elevation was added. It is of yellow brick in English bond. There are drawings, dated 1856, for a two-storeyed addition in this position which were part of a proposal to convert the office building into Master Worker's Quarters.⁸ However, although the present north-east wing may relate directly to those drawings, it is not clear whether the actual proposed conversion to living quarters ever took place. According to the proposal drawings, there was to be, in the existing three-bay building, a sitting room and a living room on the ground floor and two bedrooms on the first floor. A new addition on the north side of the east elevation was to be a kitchen on the ground floor, with a bedroom above, and there was to be a single-storey pantry, coal/wood house, wc and ashpit on its east side. It may be that the building was used as a dwelling for a short period from c1860 and then was converted back to offices,

⁴ Plans "showing the present offices and proposed alterations for Master Workers Quarters, signed J. Randell, Clerk of Works, 7th November 1856, cat. A200.B.05 (MOD Central Disposals Unit, Chessington).

⁵ "A Survey of the Lands and Buildings, the Property of the Ordnance, at the Royal Powder Works, Waltham Abbey, made in compliance with the Master General and Boards Order 6th June 1821" (PRO, Hayes Repository).

⁶ Plans "showing the present offices and proposed alterations for Master Workers Quarters", signed J. Randell, Clerk of Works, 7 November 1856, cat. A200.B.05 (MOD Central Disposals Unit, Chessington).

⁷ The Ledger of c1908 states that the building was extended in 1860, cat. WASC 1509 (PRO, Hayes Repository).

⁸ Plans "showing the present offices and proposed alterations for Master Workers Quarters", signed J. Randall, Clerk of Works, 7 November 1856, cat. A200.B.05 (MOD Central Disposals Unit, Chessington).

or that the addition was carried out merely to provide extra office-related space. The building was still described as a Superintendent's Office in the mid 1860s,⁹ and in the 1880s.¹⁰

Some time after 1856, but before 1888, another two-storeyed addition was built at the west side of the south elevation, set back from the west elevation of the original building by approximately half a metre.¹¹ Like the north-east wing it is constructed of yellow brick but is laid in Flemish- rather than English-bond. Its roof abuts the lower part of the south hip of the main roof and itself is hipped at the south side. Of two bays by two bays, it had a pair of sash windows on the ground and first floors on its west elevation, and another sash window on the ground floor of the south elevation. There was a single-storeyed projection, with a flat roof, at the east side of its south elevation which may have been built at the same time.¹² This projection functioned as a lobby leading to a doorway in the south wall.

In c1888-9 a further wing was added on the east side of this south addition, giving the building a U-shaped plan. Of two storeys and of a size similar to the two-storeyed north-east wing, this south-east wing is built of yellow brick laid in English bond. The sills below the sash windows are plainer than the sills of the north-east wing. It has a bay window, rising through both storeys, on the south elevation.

Even though, with this further addition, the building was now over double its original size, it is not clear whether it functioned as living quarters or only as offices. The proposal drawings of 1888-9 for the south-east addition describe the whole building still as "Superintendent's Office" and, more specifically, detail the south-west room on ground floor as being for Clerks, and the south-west room on the first floor for the Assistant Superintendent. The former Watch House, north-east of the building, is labelled as "Dining Room" at this date and was presumably used as the eating place for the workers on this part of the site.¹³

Before 1895, less than a decade after the south-east wing was built, a service tower of just over one metre square, was added in the re-entrant angle of the south-east wing and the west side of the original building.¹⁴ Of mixed bond, its yellow brickwork is not bonded into the rest of the building. Also around the same time, a single-storeyed structure, with a lean-to roof, was added on the

⁹ OS 1:2500 map, Sheets 1 & 2 "Royal Powder Factory, Waltham Abbey General Plan", 1865 (surveyed 1863, corrected February 1866).

¹⁰ Drawings for Superintendent's Office, Proposed Extension, Item 126, Part 2, 1888-9, cat. A200.B.03 (MOD Central Disposals Unit, Chessington).

¹¹ It is not represented on the plans of 1856 (cat. A200.B.05) but is shown as being built by 1888-9 (cat. A200.B.03) (MOD Central Disposals Unit, Chessington).

¹² Certainly the projection existed by 1888, as it is shown as built in proposed extension plans of that date, cat. A200.B.03 (MOD Central Disposals Unit, Chessington).

¹³ RGPF Waltham Abbey, Superintendents Office, Proposed Extension, Item 126, Part 2, 1888-9, cat. A.200.B.03 (MOD Central Disposals Unit, Chessington).

The Ledger of c1908 describes the Dining Room, then disused, as a two-storeyed building (51' x 19'6") of brick, lath and plaster, with a tiled gable roof. It had three main rooms on the ground floor. It is noted in the Ledger that the Dining Room is to be demolished in 1908-9.

¹⁴ It is represented in a block plan of the building in the OS County Series 1:2500 maps, 2nd ed. 1897 (surveyed 1865, revised 1895), sheet refs XLIX.14, XLI.8.12, XLII.5.9.

north elevation of the building (A200).¹⁵ Joining with a lean-to addition on the west side of the building on the north-east side which was then used as the Dining Room, this addition may have been a kitchen.

The building is described as the Main Office at this time¹⁶, in c1908 and again in 1923, by which time the south lobby projection, the northern lean-to and the north-east "Dining Room" building had all gone.¹⁷

Various other minor alterations to the building include the addition of a new sash window on the south side of the original east elevation, the insertion of a door in place of the southernmost sash window on the ground floor of the south-west addition, the blocking of the sash window on the south elevation of the south-west addition, the blocking of the door between the two southern rooms on the ground floor and of the door in the central front room. The stairs have been replaced in the mid to late twentieth century.

Surveyed March 1993
Report by R L Burgess

¹⁵ OS County Series 1:2500 maps, 2nd ed. 1897 (surveyed 1865-9, revised 1895), sheet refs XLIX.14, XLI.8.12, XLII.5.9.

¹⁶ OS County Series 1:2500 maps, 2nd ed. 1897 (surveyed 1865-9, revised 1895), sheet refs XLIX.14, XLI.8.12, XLII.5.9.

¹⁷ "Royal Gunpowder Factory, Waltham Abbey" site plan 1:2500, as named 13th September 1917, revised March 1919 and March 1923, cat. WASC 900/84.

The northern and lobby additions were probably removed in c1908-9, at the same time as the Dining Room.

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER A201	OLD SERIES 221,222,223	RCHME NUMBER	N.G.R. TL 37688 00950
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NAME/FUNCTION Mixing House/Composition Mill Washing up House, Store Workers Office, Laboratory Storekeepers Office, Master Drawing Office, W.A.s Office, Lab/ Stores. Surgery	START DATE 1787/8 by 1865 by 1886 by 1908 196?	END DATE by 1865 by 1908 196?
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NO PHOTOGRAPHY
AVAILABLE

CARTOGRAPHIC DEPICTION

1801 WASC 900/58
1806 WO78/1352 Mixing House
1827 WASC 900/04 + MPH 271 ; 108,109
1830 WO55 2694
1830 WASC 900/05
c1830 WASC 900/06
c1835 WASC 900/07
1861-1868 WASC 900/10A ; 18,19,20
1865 WASC 900/13 ; Washing up House
1865 WASC 900/14 ; Washing up House
1865 WASC 900/38 + SUPP5 975 ; Washing up House
1865 WASC 900/41A ; Storekeepers Office, Master
Workers Office, Laboratory.
1886 WASC 900/42 ; Storekeepers Office, Master
Workers Office, Laboratory.
1897 WASC 900/53C
c1910 WASC 900/65 ; 221,222,223
c1910 WASC 900/79 ; 221,222,223
1917 WASC 900/70 ; 221,222,223
1917 WASC 900/72 ; 221,222,223
1919 WASC 900/74 ; 221,222,223
c1920 WASC 900/80 ; 221,222,223
1923 WASC 900/84 ; 221,222,223
>1940 WASC 900/91A ; A201/2
1954 A - B.34 ; A201/2
c1960 WASC 900/94 ; A201/2
c1963 WASC 900/97 ; A201/2
1972 WASC 900/102 ; A201/2
1972 WASC 900/104 ; A201/2
1976 WASC 900/113 ; A201/2

DOCUMENTARY REFERENCES

Plans;
A201/2 1787/8 B01 - B04 ; Plans and Elevations 1957 to 1977
Dec.13th 'New Mixing and Saltpetre Mill to be
erected opposite the Master worker's (Winters
1887, 29), new Mixing House £239 13s 6 3/4d
(Winters 1887, 119)

1807 WO55/2351;53 Master Mixing House
1830 WO55/2694;109 Mixing House
1841 WO55/2856;109 Mixing House
1851 WO55/3027;27 Mixing House
1858 WASC 901/126 27 Sept 1858 Plan & Section
showing proposed alterations to Nos 13 & 15
stores
1908 RGPF Ledger WASC 1509 + WASC 1764 ;
Visitors Danger Building Office, Drawing Office,
Laboratory built pre 1850 p25
c1925 RGPF Ledger WASC 1680 ; Visitors Danger
Building Office, Drawing Office, Laboratory
c1945 RGPF Ledger WASC 1508 ; Visitors Danger
Building Office, Drawing Office, Laboratory

1972 ERDE List ; Old Library Reading Room
1991 Mott McDonald survey
1992 RARDE List ; Surgery
1992 FBRC Book Store
1993 RCHME NBR No.91462

PHOTOGRAPHY HISTORIC

WASC 1271 various views 03.1978
WASC 1543/32-34 various views
WASC 1272 Original beams
WASC 1289-/11 NG section

PHOTOGRAPHY RCHME

1) 206/E/11 18 Jan 1993 From South East
206/E/12 18 Jan 1993 From South East

2) BB92/26066 A201 Surgery view from South East
BB92/26232 A201 Interior Ground floor view from

	South East. BB92/26233 A201 Interior ground floor view of Crown Post from South East. 3) 225/C/17-8 Exterior 4) 4788/13 06.05.1993
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH: A200, A202	
CONDITION Good	
DESCRIPTION 1) CONSTRUCTIONAL MATERIAL Brick 2) ROOF MATERIALS AND STRUCTURE Slate 3) POWER SOURCE Latterly electricity 4) DIMENSIONS i) L 15.15m ii) W 6.82m iii) HT eave 2.9m 5) See Attached Threatened Buildings Record report	

ROYAL COMMISSION ON THE HISTORICAL MONUMENTS OF ENGLAND

MOD Building No. A201
Mixing House
The Royal Gunpowder Factory
Waltham Abbey
Essex

NBR No: 91462
NGR: TL 37688 00950

This single-storeyed building has a rectangular plan and is constructed of red brick laid in Flemish bond. It has two main phases of construction.

The original phase, built between 1787 and 1800, is the main part of the building which has a tall hipped roof. It functioned as a Mixing House for combining the gunpowder ingredients before the incorporating process.

Immediately to its south is a similar-looking structure (A201), of contemporary date, which functioned as a Saltpetre Mill.

Probably in the early nineteenth century, before 1830, A201 was extended on the north side by a single storeyed addition with a lower hipped roof. At the same time, a narrow addition was probably built on the south side of the main structure. The building continued to function as a Mixing House at this time.

By the mid nineteenth century, the original part of the building functioned as a Powder Store and the north addition was a Barrel Store. A coal cover was added on the north side in 1887. By c1908 it was a Drawing Office, Visitors Danger Building Office and Laboratory.

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Building A201 was constructed between 1787 and 1800.¹⁸ It was used as a Mixing House for combining the ingredients of gunpowder, namely sulphur, saltpetre and charcoal before that mixture was taken to gunpowder mills some 50-250 metres to the north and north-east on the site.¹⁹ It functioned in conjunction with a contemporary similar-looking building immediately to its south, which was a Saltpetre Mill, and a later flat-roofed block presently links the two buildings. It is situated approximately 15 metres to the west of an eighteenth century office building (A200), and approximately 25 metres south west of the former site of a watch house. A water course flows on its west side. The earliest part of the building has a tall hipped roof, 22' (6.7 m) in height.²⁰ It has a rectangular plan, aligned north to south, and is constructed of red brick laid in Flemish bond. There are three sash windows on the west elevation and originally there would have been windows and probably a doorway on the east elevation. Rubbed red-brick flat arches for the windows and closers for the windows and doorway remain. Below the eaves is a stepped brick cornice.

The two roof trusses of the original part of the building are of timber and each comprises a tie beam, king post with a pyramidal expanded base, and raking struts extending from three sides of that pyramidal base. The apex of the roof is presently obscured by a ceiling which has later been inserted. The roof has slate coverings.

Probably in the early nineteenth century, the building was extended on the north side by a single storeyed addition, of one bay, with a lower hipped roof, 16' (4.9 m) in height.²¹ It is secondary to the main building, as indicated by a straight joint on the east elevation and by the fact that it encloses the stepped brick cornice of the north elevation. At the same time a narrow one-bay addition, with an even lower hipped roof, was probably added on the south elevation at this time.

¹⁸ Historical Survey by Purcell Miller Tritton & Partners, 64 Bury Walk, London, SW3 6QA, produced in 1985 (2.5.2).

¹⁹ F Drayson, Drawing No. 37: "Plan of a New Mill Head and Tail Streams proposed to be made in Queens Meads, shewing the Position of the 5 Gunpowder Mills proposed to be retained on the Old Mill Head, the Situation of the Cylinder House for making Charcoal and the Site of the Composition Mills over the Gullies", 1830, cat. PRO MP 11.15 (Kew)

²⁰ Ledger c1908, cat. WASC 1509 (PRO, Hayes Repository).

²¹ Ledger c1908, cat. WASC 1509 (PRO, Hayes Repository).

A set of drawings dated 1830 show a detailed perspective, section and plan of a Mixing House.²² The drawings are similar to the secondary appearance of building A201, that is, with low wings on either side of a main structure which has a tall hipped roof, and are likely to be a survey record of this particular building A201. As such, they provide an indication of the layout of a Mixing House and the utensils used therein. In the drawings a main room is empty, except for a stand in one corner which looks like a wash stand, and is open to the roof. Smaller side rooms contain bins, presumably for holding the gunpowder ingredients. Utensils shown in the drawing include a barrel and fork-like tool for mixing.

Later alterations include an extension westward of the north addition, the replacement of the original windows and doorway on the east elevation, the insertion of a ceiling approximately 1.5 metres above the tie beams of the trusses in the main part of the building, and the addition of a gabled porch to the entrance door on the east front. The porch, which was 5' x 9'3" (16.4 x 2.8 m), has later been removed but a scar remains in its position against the east wall.²³ The present link block between A201 and A202 is of later brick and has a flat roof and is likely to be a replacement of a narrow single-bay addition on the south side of A201, as shown in the 1830 drawing.²⁴ A coal cover, constructed of corrugated iron, had been built against the north side of the north addition in 1887 but was demolished in 1907-8.²⁵

Around the mid-nineteenth century, the original part of the building had functioned as a Powder Store and the northern addition was a Barrel Store.²⁶ By c1886 it was a Storekeepers Office and Store.²⁷ In 1908 and in 1923 it is shown in plans as being a Drawing Office, with a Laboratory Store in the flat-roofed room on the south side and a Visitors Danger Building Office in the north room.²⁸

Surveyed March 1993
Report by R L Burgess

²² F Drayson. Drawing No. 10. "Drawings of the Mixing House and of the utensils used therein", 1830, cat. PRO MP 11.15 (Kew).

²³ Ledger c1908, cat. WASC 1509 (PRO, Hayes Repository).

²⁴ F Drayson. Drawing No. 10. "Drawings of the Mixing House and of the utensils used therein", 1830, cat. PRO MP 11.15 (Kew).

²⁵ Ledger c1908, cat. WASC 1509 (PRO, Hayes Repository).

²⁶ "A Survey of the Lands and Buildings, the Property of the Ordnance, at the Royal Powder Works, Waltham Abbey, made in compliance with the Master General and Boards Order 6th June 1821", updated in the 1850s-60s, (PRO, Hayes Repository).

²⁷ Royal Powder Factory, Waltham Abbey, General Plan, 1865, corrected May 1886, cat. SUPP5/975 (PRO Kew).

²⁸ Ledger c1908, cat. WASC 1509 (PRO, Hayes Repository) and site plan of "Royal Gunpowder Factory, Waltham Abbey" 1:2500, as named 13 September 1917, revised March 1919 and March 1923, cat. WASC 900/84.

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER A202	OLD SERIES 224	RCHME NUMBER	N.G.R. TL 37688 00950
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NAME/FUNCTION	START DATE	END DATE
Saltpetre melting House	1787/8	by 1827
Sulphur Mill	by 1827	by 1865
Washing up House, Store	by 1865	by 1886
Workers Office, Laboratory	by 1886	
Storekeepers Office, Master		by 1898
Drawing Office, W.A.s Office, Lab/Stores		by 1945
Cordite Formans Office & Store	by 1898	by 1972
Old Library Reading Room	by 1972	by 198?
Surgey	by 198?	

NO PHOTOGRAPHY
AVAILABLE

CARTOGRAPHIC DEPICTION

1801 WASC 900/58
1806 WO78/1352; Saltpetre
1827 WASC 900/04 + MPH 271 ; 108,109
1830 WO55 2694
1830 WASC 900/05
c1830 WASC 900/06
c1835 WASC 900/07
1861-1868 WASC 900/10A ; 18,19,20
1865 WASC 900/13 ; Washing up House
1865 WASC 900/14 ; Washing up House
1865 WASC 900/38 + SUPP 5 975 ; Storekeepers
Store, Store, Washing Up House.
1865 WASC 900/41A ; Storekeepers Store, Store,
Washing Up House.
1886 WASC 900/42 ; Storekeepers Office, Master
Workers Office, Laboratory.
1897 WASC 900/53C
c1910 WASC 900/65 ; 224
c1910 WASC 900/79 ; 224
1917 WASC 900/70 ; 224
1917 WASC 900/72 ; 224
1919 WASC 900/74 ; 224
c1920 WASC 900/80 ; 224
1923 WASC 900/84 ; 224
>1940 WASC 900/91A ; A202
1954 A - B.34 ; A202
c1960 WASC 900/94 ; A202
c1963 WASC 900/97 ; A202
1972 WASC 900/102 ; A202
1972 WASC 900/104 ; A202
1976 WASC 900/113 ; A202

DOCUMENTARY REFERENCES

1787 'saltpetre mill to be erected opposite the Master
Workers House' (Winters 1887, 29), new Saltpetre
Mill £130 3s 6d
1807 WO55/2351;
1830 WO55/2694;108 Sulphur Mill
1841 WO55/2856;108 Sulphur Mill
1851 WO55/3027;28 Sulphur Mill
1908 RGPF Ledger WASC 1509 + WASC 1764 ;
Cordite Formans Office and Store built pre 1850
p25
c1925 RGPF Ledger WASC 1680 ; Cordite Formans
Office and Store
c1945 RGPF Ledger WASC 1508 ; Cordite Formans
Office and Store
1972 ERDE List ; Old Library Reading Room
1991 Mott McDonald survey
1992 RARDE List ; Surgery
1992 FBRC Book Store
1993 RCHME NBR No.91463

PHOTOGRAPHY
HISTORIC

PHOTOGRAPHY
RCHME

WASC 1271 various views 03.1978 WASC 1543/32-34 various views	1) 206/E/12 18 Jan 1993 From South East
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH: A201	
CONDITION Good	
DESCRIPTION 1) CONSTRUCTIONAL MATERIAL Brick 2) ROOF MATERIALS AND STRUCTURE Slate 3) POWER SOURCE Latterly electricty 4) DIMENSIONS i) L 8.4m ii) W 6.82m iii) HT eave 2.9m 5) See Attached Threatened Buildings Record report	

ROYAL COMMISSION ON THE HISTORICAL MONUMENTS OF ENGLAND

MOD Building No. A202
?Saltpetre Melting House
The Royal Gunpowder Factory
Waltham Abbey
Essex

NBR No: 91463
NGR: TL 376 009

Building A201 was built between 1787 and 1800, probably as a Saltpetre Melting House. It is single-storeyed and has a tall pyramidal roof. The plan is square and the construction is of red brick laid in Flemish bond.

There appears to have been a Saltpetre Boiling House immediately to its south but this has been replaced. Immediately to its north is a similar-looking structure (A201), of contemporary date, which functioned as a Mixing House.

By the mid nineteenth century, the building was a Wash Up House. It was a Master Workers Office by 1886 and by c1908 it was a Cordite Foreman's Office and Store.

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Building A202 was constructed between 1787 and 1800.²⁹ A set of drawings dated 1830 show a detailed perspective, section and plan of a Saltpetre Boiling and a Melting House.³⁰ The square Melting House in the drawings is similar to building A202 and is likely to be a representation of the structure at that date. The building represented in the drawing has a partition wall at the northern end and contains four vat-like containers and several ?wash stands.

The building is likely to have functioned in conjunction with a contemporary Saltpetre Boiling House which was immediately to its south but which has since been replaced. Immediately to its north is a similar-looking building which was a Mixing House for combining the ingredients of gunpowder, namely sulphur, saltpetre and charcoal before that mixture was taken to gunpowder mills some 50-250 metres to the north and north-east on the site.³¹ A later flat-roofed block presently links A202 with A201. It is situated approximately 15 metres to the west of an eighteenth century office building (A200), and approximately 25 metres south west of the former site of a watch house. A water course flows on its west side.

Building A202 has a square plan, 27'6" x 27'6" (8.4 x 8.4 m) and is constructed of red brick laid in Flemish bond.³² There would have been two sash windows on the west elevation and two windows and a doorway on the east elevation.³³ The windows themselves have been replaced but the rubbed red-brick arches for the windows survive on the east elevation. Below the eaves is a stepped brick cornice.

²⁹ Historical Survey by Purcell Miller Tritton & Partners, 64 Bury Walk, London, SW3 6QA, produced in 1985 (2.5.2).

³⁰ F Drayson, Drawing No. 1, "Drawings of a Saltpetre Boiling and a Melting House", 1830, cat. PRO MP 11.15 (Kew).

³¹ F Drayson, Drawing No. 37: "Plan of New Mill Head and Tail Streams proposed to be made in Queens Meads, shewing the Position of the 5 Gunpowder Mills proposed to be retained on the Old Mill Head, the Situation of the Cylinder House for making Charcoal and the Site of the Composition Mills over the Gullies", 1830, cat. PRO MP 11.15 (Kew).

³² Ledger c1908, cat. WASC 1509 (PRO, Hayes Repository).

³³ F Drayson, Drawing No. 1, "Drawings of a Saltpetre Boiling and a Melting House", 1830, cat. PRO MP 11.15 (Kew).

The roof is pyramidal and is 23'6" (7.2 m) to the apex.³⁴ As such it is slightly taller than the tall hipped roof of the adjacent building A201 which is 22' (6.7 m) in height.³⁵ The roof trusses are of timber and each comprises a tie beam, king post with an expanded head and a pyramidal expanded base, and raking struts extending from three sides of that pyramidal base. The apex of the roof is obscured by an early plaster ceiling above a later ceiling. The roof has slate coverings.

By the mid nineteenth century, it was a Wash Up House. It was a Master Workers Office by 1886³⁶ and by c1908³⁷ and in 1923 it was a Cordite Foreman's Office and Store.³⁸

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³⁴ Ledger c1908, cat. WASC 1509 (PRO. Hayes Repository).

³⁵ Ledger c1908, cat. WASC 1509 (PRO. Hayes Repository).

³⁶ Royal Powder Factory, Waltham Abbey. General Plan, 1865, corrected May 1886, cat. SUPP5/975 (PRO Kew).

³⁷ Ledger c1908, cat. WASC 1509 (PRO. Hayes Repository).

³⁸ Site plan of "Royal Gunpowder Factory, Waltham Abbey" 1:2500, as named 13 September 1917, revised March 1919 and March 1923, cat. WASC 900/84.

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY			
NUMBER A203	OLD SERIES AS203	RCHME NUMBER	N.G.R. TL 37700 00920
NAME/FUNCTION Library/Lecture Theatre		START DATE 1966	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION >1940 WASC 900/91A ; AS203 1954 A - B.34 ; A203 c1960 WASC 900/94 ; A203 c1963 WASC 900/97 ; A203 1972 WASC 900/102 ; A203 1972 WASC 900/104 ; A203 1976 WASC 900/113 ; A203		DOCUMENTARY REFERENCES Plans A203 B01 - B60 ; Plans and Elevations 1962 to 1968 WASC 176 Brick structures beneath present building discovered Dec 1963 1972 ERDE List ; Library/Lecture Theatre 1991 Mott McDonald survey 1992 RARDE List ; Library/Lecture Theatre 1992 FBRC Bookstore	
PHOTOGRAPHY HISTORIC WASC 176 Demolition Dec 1963 WASC 917 Explosives handtruck 12.9.1967 WASC 745 Opening of lib 1966 x6 WASC 918 Lib & Lecture gen views 12.9.1967 x10 WASC 1224 Lib & Lecture theatre 10.11.1976 WASC 1225 New Library entrance 1966 WASC 1226 Dem of stores for cons of library Dec 1963 WASC 1227 Library under cons 1965 WASC 1228 Library & Lecture theatre 7.8.1978 WASC 1233/5 Looking south towards canteen 12.12.1978 WASC 927 Gen views WASC 927/4 View of BWD, old store & fire station G/2007/3 Lecture theatre and tramway wagon G/2007/4 Lecture Theatre interior 12.09.1967 G/2007/5 Lecture Theatre interior 12.09.1967 G/2007/6 View from south east 12.09.1967 G/2007/7 View from south east 12.09.1967 G/2007/8 View from north west 12.09.1967 G/2007/9 Library interior 12.09.1967 G/2007/10 View from south west 12.09.1967 G/2007/11 Library interior 12.09.1967 G/2007/12 Conference room 12.09.1967 G/2007/13 Conference room 12.09.1967 G/2007/14 Main staircase 12.09.1967 G/2007/15 Main entrance 12.09.1967		PHOTOGRAPHY RCHME 1) 206/R/37 Lecture Hall from South East 206/S/13 16 Mar 1993 Lecture Theatre from South West 206/E/23 Lecture hall from South 4) 4788/13 06.05.1993	
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH: A231/2, 233, 234 Overlies 225, 226, 227, 228			
CONDITION		Good	

DESCRIPTION

- 1) CONSTRUCTIONAL MATERIAL
Brick
- 2) ROOF MATERIALS AND STRUCTURE
Sheet copper cladding
- 3) POWER SOURCE
Electricity
- 4) DIMENSIONS i) L 42.36m ii) W 15.24m iii) HT estimate 8m
- 5)

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER A210 a,b,c,d	OLD SERIES	RCHME NUMBER	N.G.R. TL 37780 01000
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NAME/FUNCTION Power House Main Structure,Bunkers,Welding Shop	START DATE 1908-15?	END DATE
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NO PHOTOGRAPHY
AVAILABLE

CARTOGRAPHIC DEPICTION

1917 WASC 900/70 ; Power House
1917 WASC 900/72 ; 213a
1919 WASC 900/74 ; 213a
c1920 WASC 900/80 ; 213a
1923 WASC 900/84 ; 213a
>1940 WASC 900/91A ; 213a
1954 A - B.34 ; A210
c1960 WASC 900/94 ; A210
c1963 WASC 900/97 ; A210
1972 WASC 900/102 ; A210
1972 WASC 900/104 ; A210
1976 WASC 900/113 ; A210

DOCUMENTARY REFERENCES

Plans;
A210 B01 - B69 ; Plans and Elevations 1915 to 1986

c1925 RGPF Ledger WASC 1680 ; Power House

1972 ERDE List ; Boiler House and Machine Shop
1991 Mott McDonald survey
1992 RARDE List ; Boiler House and Welding Shop

1992 FBRC ; Storage

1993 RCHME NBR No.91451

PHOTOGRAPHY HISTORIC

WASC 325 Steam pipe runs 1946
WASC 1450 Views mid/late 1940s
WASC 1454 Views x2
WASC 1582 interior view from NE corner of crane
RCHME Neg No.BB92/16742 (PRO Supply 5/861 237)
Power Station view from north east corner of crane 1908
PRO Supply 5/861 235-7 Interior (not dated but
sequence in album suggests circa 1908)

PHOTOGRAPHY RCHME

1) 206/R/35 Power House from East
206/R/36 Power House South elevation
206/E/1 From South West

2) BB92/26070 A210 Power House view from South
West
BB92/26071 A210 Power House view from North East
BB92/26072 A210 Power House North section interior
from South
BB92/26073 A210 Power House South section interior
from South East
BB92/26349 A210 Drawing A.210.B.17 Layout of
Number 5 Boiler House 29.July.1947 (Chessington)
BB92/26359 A210 Drawing a.210.B.16 Proposed
Machine Shop and Offices April 1950 (Chessington)
BB92/26376 A210 Drawing A210.B.04 Power House
21 Jun 1916 (Chessington)

3) 225/A/15 East bay Engine House
225/A/16 Detail of crane North end of Engine House
225/B/25 Exterior view

4) 4788/3 06.05.1993
4788/6 06.05.1993
4788/11 06.05.1993

RELATIONSHIPS WITH OTHER MONUMENTS

ASSOCIATED WITH: A211, A212, A213, A214

CONDITION	Good
DESCRIPTION	
1)	CONSTRUCTIONAL MATERIAL Brick
2)	ROOF MATERIALS AND STRUCTURE Slate over timber boards supported on steel trusses with central glass clerestories
3)	POWER SOURCE Steam
4)	DIMENSIONS i) L 36m ii) W 29.4m iii) HT estimate 9m
5)	See Attached Threatened Buildings Record report

ROYAL COMMISSION ON THE HISTORICAL MONUMENTS OF ENGLAND

MOD Building No. A210a,b,c,d
Power House
The Royal Gunpowder Factory
Waltham Abbey
Essex

NBR No: 91451
NGR: TL 37780 01000

Built by 1915 as a Power House, this brick building was originally a single-storeyed rectangular structure of nine bays by six and two half-bays. It has a triple-pile plan, with gables aligned north to south.

A single large room beneath the two westernmost gables was the Boiler House. A brick wall on the east side of the room separated it from the Engine House which was beneath the eastern gable. Central to the south elevation was a round chimney shaft of steel on an octagonal base.

In 1916 the eastern gabled end was extended to the south by an additional three and a half bays.

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Situated approximately 30 metres south of a mid-nineteenth century boiler house (L176) which powered building no. L168 only, building no. A210 was constructed by 1915 as a New Power House comprising a boiler room and an engine room.³⁹ The building was a central power system and served at least the accumulator in building A214 which is situated approximately 20 metres to its north-east.

Resting on concrete foundations, the building is constructed of yellow brick laid in English bond. Its triple gable roof has angle iron trusses with timber purlins, and iron and timber gablets with louvres. The roof covering is slate. Steel stanchions support the gully between the western and central gabled roofs, and a brick wall supports the gully between the central and eastern gabled roofs. The chimney shaft was steel on a concrete base.

Rising to a height of approximately nine metres, the building is single-storeyed and has a triple-pile plan, with three gables which are aligned north to south.⁴⁰ Originally it was a rectangular structure of nine bays by six and two half-bays, approximately 80' x 95'7 1/2" (24.4 x 29.2 m).⁴¹ At the centre of the south elevation was a round chimney shaft, 7'6" (2.3 m), on an octagonal base. Immediately to the east of the building there was a detached Oil Separating Tank, with a diameter of 20' (6 m), as well as a platform for condensers of 25' x 10' (7.6 x 3 m).

³⁹ Record Drawings of Plan and Elevation for New Power House, dated 9/1/1915, cat. A210.B.01. The building was not built by c1908, as it is not documented in the Ledger of c1908, and therefore appears to have been constructed between c1908 and early 1915 (cat. WASC 1509, PRO, Hayes Repository).

⁴⁰ The building is aligned north-north-west to south-south-east but for clarity in this report it is described as if it was aligned north to south.

⁴¹ Plans and elevation of New Power House, dated 9/1/1915, cat. A210.B.01 (MOD Central Disposals Unit, Chessington).

A single large room beneath the two westernmost gables was the Boiler House and contained three boilers which were aligned east to west. A room beneath the eastern gable was the Engine House and carried three engines with dynamos.⁴² The Engine House has a travelling crane which is dated 1915⁴³ and, at the northern end of the room was a switchboard and platform.

Recessed panels form the bays of the east and west elevations whereas the brickwork of the north and south elevations is flush. The west, north and south walls have internal brick buttresses. The Boiler House was entered by six doorways between the main bays on the west elevation and another doorway below the westernmost window of the north elevation. The Engine House had two doorways on its original south front and another in the northernmost of the main bays of the east elevation, below a window. Typical of a boiler/engine house structure, the building was lit, on the north, south and east elevations, by tall semi-circular headed windows. Below each gable on the north elevation was a central window, 6' (1.8 m) wide, flanked by a pair of narrower windows, 3' (0.90 m) in width. Above these windows, in each gable itself, is a round opening, with louvres, for ventilation. On the south elevation, the arrangement for the fenestration on the westernmost gable was similar. The central gable had a pair of narrow windows flanking a doorway to the flue for the chimney shaft. The east elevation originally had six windows in each of its six main bays.

The Boiler House and Engine House were connected by a doorway at both north and south ends of the internal brick wall.

In 1916 the New Power House underwent alteration.⁴⁴ The Engine House was extended to the south by a further three and a half bays (approximately 11 m), presumably to carry another engine and dynamo. This secondary form of the Power House appears to have been used as the basic design for at least one of the buildings on the "south site" of the Royal Gunpowder Works at Waltham Abbey.⁴⁵

A series of drawings show the layout of the Boiler House and its machinery in 1947.⁴⁶ There were three Danks boilers, aligned east to west, which had steel hoppers on the west side. The boilers connected with a flue on the eastern side. At the north-east side of

⁴² There is a photograph of this room, complete with dynamos made by Bruce Peebles & Co., which is labelled "Power Station: View from NE Corner of Crane, circa 1908" (RCHME Neg. No. BB92/16742; a print from this neg. appears in PRO Supply 5/861 (Photo no. 237, neg. no. C/48). The date on this photograph may be incorrect, however, since the building is not shown in the Ledger of c1908, cat. WASC 1509 (PRO, Hayes Repository).

⁴³ "Babcock and Wilson, London & Renfrew, Contractors, 1915" is cast into the crane.

⁴⁴ Drawing of plan and section of "Extension to Power House, Upper Works", dated June 1916, cat. A210.B.04 (MOD Central Disposals Unit, Chessington).

There are no obvious straight joints on the east elevation to show that the south-east bays are additional and it is probable that this extension was carried out very soon after the drawings for the extension were made. Certainly the south-east extension existed by the early 1920s, as it is shown in a 1:2500 site plan of the Royal Gunpowder Factory at Waltham Abbey, revised March 1923. Curiously, another site plan dated 25/6/1948 does not show the extension, but this appears to be an incorrect representation of the building, cat. A210.B.13 (MOD Central Disposals Unit, Chessington).

⁴⁵ For example, drawing of "Boiler House for 17 Boilers, Quinton Hill", cat. WASC 901/224A (PRO, Hayes Repository).

⁴⁶ Drawings of plan and sections for "Layout of No. 5 Boiler House", dated 29/7/1947, cat. A210.B.17; Hodgkinsons Patent Coking Type Stoker, 17/7/1947, cat. A210.B.24, MS Electric Welded Smokebox, 17/7/1947, cat. A210.B.23; Danks Boilers, Sootblowers and Pipework, 3/7/1947, cat. A210.B.22; Arrangement of check feed valves and cope's regulator, 3/7/1947, cat. A210.B.21. (MOD Central Disposals Unit, Chessington).

the room was a feed water tank. In the north-west corner was a meterboard with CO2 recorder, steam meter, pyrometer, lighting switches and power switches. There was a Hodgkinsons Patent Coking Type Stoker, MS Electric Welded Smokebox, Sootblowers and Pipework to go with the Boilers, and check feed valves and cope's regulator. The chimney is described as being present still at this date.⁴⁷

In c1951 the Engine House was converted to a Machinery Shop and a new building was constructed adjoining its south-east side.⁴⁸

In the northernmost one and a half bays of the former Engine House, a pre-cast floor was inserted to create a Tool Store, Component and Gauge Store on the ground floor, with three Offices and a corridor on the first floor. To light these new rooms, the fenestration at the northern end was altered. The northernmost window on the east elevation and the three windows below the eastern gable on the north elevation were all blocked and replaced, on the north elevation, by two rows of three square-headed windows (approximately 1.3 x 1.4 m) and, on the east side, by a matching square-headed window on the ground floor only. Of the remaining windows on the east elevation, those in the third, fifth, sixth, seventh and eighth main bays from the south had additional square-headed windows (approximately 1.3 x 0.97 m) inserted immediately below the original window sills, and below those in the second and ninth main bays from the south a pair of double-doors were inserted. The two windows on the projecting west elevation of the former Engine House also appear to have had square-headed windows inserted immediately below the sills. On the south elevation, the sills of the three semi-circular headed windows were raised to allow for the heightening and widening of the western of the two doorways, while the eastern doorway was blocked. The two doorways from the former Boiler house to the former Engine House were also blocked at this time.

The machinery proposed to be in the Machinery Shop in 1951 included two power saws, a 3 HP shaping machine, a 5 HP town radial drill, a pallas mill, a centre mill, a 5 HP archdale hor mill, a 5 HP vertical mill (new), a 5 HP Landis universal grinder, a D/E Grinder Tungstun Carbide (+ HP?), a 2 HP Drill Sharpener, a cutter grinder and lathes.⁴⁹

The detached Oil Separating Tank and platform on the eastern side of the building was removed by this time. A new rectangular building, of 49'10 1/2" x 26'3" (approximately 14.97 x 7.95 m) was built at the south end of the east side of the building, in place of an existing shed. A lobby, projecting from fourth bay from the south of the east elevation of the Machinery Shop linked the two buildings. The new building was probably of brick construction and had, like the lobby, a flat pre-cast roof. Divided into four rooms, it comprised a Plating Shop, Sand Blasting and Metal Spraying Shop, Pipe Fitting Shop, and Instrument Shop.

The Boiler House also appears to have undergone alteration around the same time as the former Engine House. The semi-circular headed windows on its west elevation were shortened by raising the sills, and new square-headed windows were inserted below them, except in the second and third main bays from the south where a wide doorway was inserted. On the south elevation, the two semi-circular headed windows which flanked the chimney shaft were also shortened; that on its west side had its sill raised approximately one metre and that on the east side had its sill raised to the springing of the semi-circular-head and a tall rectangular opening was inserted.

More recent alterations to the building include the narrowing of the doorway in the ninth bay from the south on the east elevation and the insertion of a new doorway in the adjacent tenth bay, the blocking of two doorways and two hatches to the end rooms at the northern end of the Machine Shop, after 1960 the demolition of the chimney and of the building and lobby which had been added on

⁴⁷

A note on drawing cat. A.210.B.17 gives details of the stack as at 1947 (MOD Central Disposals Unit, Chessington).

⁴⁸

Drawings of plans and sections of Proposed Machinery Shop & Offices, dated April 1950 and July 1951, cats A.210.B.16 and A.210.B.29 (MOD Central Disposals Unit, Chessington).

⁴⁹

Drawing of proposed machine shop and offices, dated 6/7/1951, cat. A.210.B.29 (MOD Central Disposals Unit, Chessington).

the east side in c1951, and the blocking of the doorway from the Machinery Shop to that lobby.⁵⁰ Two doorways and a pair of windows on the south elevation of the former Boiler House may be part of a c1951 phase but are probably later.⁵¹

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Both chimney and south-east addition are shown on a Record Survey of the site at 1:500, July 1960, Land Survey Branch, MOW, London, Drg No. LSG/8.

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The doorway in the re-entrant angle of the south elevation, for example, is not shown on the plans for the proposed machine shop and offices, April 1950, cat. A.210.B.16 (MOD Central Disposals Unit, Chessington).

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER A211	OLD SERIES	RCHME NUMBER	N.G.R. TL 37790 01023
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NAME/FUNCTION Water softening filter plant Control room	START DATE 1959	END DATE
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NO PHOTOGRAPHY
AVAILABLE

CARTOGRAPHIC DEPICTION

1954 A - B.34 ; A211
c1960 WASC 900/94 ; A211
c1963 WASC 900/97 ; A211
1972 WASC 900/102 ; A211
1972 WASC 900/104 ; A211
1976 WASC 900/113 ; A211

DOCUMENTARY REFERENCES

1972 ERDE List ; Water softening Filter Plant
1991 Mott McDonald survey
1992 RARDE List ; Control Room

PHOTOGRAPHY HISTORIC

PHOTOGRAPHY RCHME

1) 206/E/4 From South

4) 4788/6 06.05.1993
4788/11 06.05.1993

RELATIONSHIPS WITH OTHER MONUMENTS A212, A213, A214

ASSOCIATED WITH: A210

CONDITION Demolished

DESCRIPTION

- 1) CONSTRUCTIONAL MATERIAL
Brick
- 2) ROOF MATERIALS AND STRUCTURE
-
- 3) POWER SOURCE
-
- 4) DIMENSIONS i) L 4.75m ii) W 3.7m
- 5) The structure was demolished in 1992, the concrete floor slab remains.

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER A21	OLD SERIES AE212	RCHME NUMBER	N.G.R. TL 37796 01006
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NAME/FUNCTION Water Softening	START DATE 1942	END DATE
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NO PHOTOGRAPHY
AVAILABLE

CARTOGRAPHIC DEPICTION

>1940 WASC 900/91A ; AE212
 1954 A - B.34 ; A212
 c1960 WASC 900/94 ; A212
 c1963 WASC 900/97 ; A212
 1972 WASC 900/102 ; A212
 1972 WASC 900/104 ; A212
 1976 WASC 900/113 ; A212

DOCUMENTARY REFERENCES

Plans;
 L212 B01,B02 ; Plans and Elevations 1942
 1972 ERDE List ; Water Softening
 1991 Mott McDonald survey
 1992 RARDE List ; Water Softening

PHOTOGRAPHY HISTORIC

PHOTOGRAPHY RCHME

1) 206/E/6 From South

RELATIONSHIPS WITH OTHER MONUMENTS A213, A214

ASSOCIATED WITH: A210, A211

CONDITION Demolished

DESCRIPTION

- 1) CONSTRUCTIONAL MATERIAL
Brick
- 2) ROOF MATERIALS AND STRUCTURE
-
- 3) POWER SOURCE
-
- 4) DIMENSIONS i) L 7m ii) W 3.9m
- 5) The structure was demolished in 1992, the concrete floor slab remains.

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER A213	OLD SERIES AE213	RCHME NUMBER	N.G.R. TL 37799 01008
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NAME/FUNCTION Tanks	START DATE 1942	END DATE
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NO PHOTOGRAPHY
AVAILABLE

CARTOGRAPHIC DEPICTION

>1940 WASC 900/91A ; AE213
 1954 A - B.34 ; A213
 c1960 WASC 900/94 ; A213
 c1963 WASC 900/97 ; A213
 1972 WASC 900/102 ; A213
 1972 WASC 900/104 ; A213
 1976 WASC 900/113 ; A213

DOCUMENTARY REFERENCES

Plan;
 A213 B01 - 4/5/1942 ; Foundatio to Reaction Tank
 1972 ERDE List ; Tanks
 1991 Mott McDonald survey
 1992 RARDE List ; Tanks

PHOTOGRAPHY HISTORIC

PHOTOGRAPHY RCHME

1) 206/E/5 From South East

RELATIONSHIPS WITH OTHER MONUMENTS A214

ASSOCIATED WITH: A210, A211, A212

CONDITION Demolished

DESCRIPTION

- 1) CONSTRUCTIONAL MATERIAL
-
- 2) ROOF MATERIALS AND STRUCTURE
-
- 3) POWER SOURCE
-
- 4) DIMENSIONS i) L 4.6m ii) W 4.57m
- 5) The structure was demolished in 1992, an octagonal concrete slab remains.

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER A214	OLD SERIES AE214	RCHME NUMBER	N.G.R. TL 37800 01020
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NAME/FUNCTION Accumulator Tower and Engine House Shift House / Water Tower	START DATE c1915 1950?	END DATE 1950?
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NO PHOTOGRAPHY
AVAILABLE

CARTOGRAPHIC DEPICTION

>1940 WASC 900/91A ; AE214
1954 A - B.34 ; A214
c1960 WASC 900/94 ; A214
c1963 WASC 900/97 ; A214
1972 WASC 900/102 ; A214
1972 WASC 900/104 ; A214
1976 WASC 900/113 ; A214

DOCUMENTARY REFERENCES

Plans;
A214 B01 - B04 ; Plans and Elevations 1950 to 1953

1972 ERDE List ; Shift House / Water Tower
1991 Mott McDonald survey
1992 RARDE List ; Shift House / Water Tower

1993 RCHME NBR No.91465

PHOTOGRAPHY HISTORIC

PHOTOGRAPHY RCHME

1) 206/E/3 1993 From South
206/N/9 12 Mar 1993 From South East

2) BB92/26074 A214 Shift House/Water Tower from
North East
BB92/26075 A214 Accumulator Tower from North
East
BB92/26076 A214 Accumulator Tower Interior looking
up

3) 255/C/33-4 Water Tower
255/C/35 Bottom of Water Tower
255/C/36 North West

RELATIONSHIPS WITH OTHER MONUMENTS

ASSOCIATED WITH: A210, A211, A212, A213

CONDITION Good

DESCRIPTION

- 1) CONSTRUCTIONAL MATERIAL
Brick
- 2) ROOF MATERIALS AND STRUCTURE
Slate
- 3) POWER SOURCE
Formerly steam
- 4) DIMENSIONS i) L 14m ii) W 7.4m

5) See attached Threatened Buildings Record Report

ROYAL COMMISSION ON THE HISTORICAL MONUMENTS OF ENGLAND

MOD Building No. A214
Accumulator House & Pump House
The Royal Gunpowder Factory
Waltham Abbey
Essex

NBR No: 91465
NGR: TL 37800 01020

Built of yellow brick, this building has an L-shaped plan which comprises a single-storeyed wing of three bays by two bays, with a tower on its east side.

It was built between c1908 and c1915. The tower was an Accumulator House and the lower wing was a Pump House. There was a low lean-to structure built of timber on the east side of the tower.

The accumulator was removed in c1950 when the building was converted to a changing room and lavatories.

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This building was built between c1908 and c1915 as an Accumulator House and Pump House.⁵² It is likely to be contemporary with the "New Power House" building (A210) which is situated approximately 15 metres to its south-west. The former incorporating mill buildings to the north of A214 had originally been powered by steam from their respective boiler houses but a new source of power had to have been established by the end of the first decade of this century since all but one of the tall chimneys for these incorporating mills were demolished at that time. Accordingly both buildings A214 and A210 appears to have formed a central hydraulic system for much of the northern part of the site of the Royal Gunpowder Factory at Waltham Abbey.

L-shaped in plan, the building comprises a tower and, on the west side, a single storeyed wing.⁵³ It is constructed of yellow brick laid in English bond.

The tower is of two bays by two bays (approximately 7 x 7 m) and is about 12 metres in height. Its lower third, which batters out to be wider than the upper two thirds of the tower, contains a pair of blind square panels on the north, south and east elevations. There was a wide doorway at the centre of its north elevation.⁵⁴ The upper part of the tower has, on each elevation, a pair of blind rectangular panels, the north and south of which contain a pair of small windows with semi-circular heads of red brick. The roof is hipped and has slate coverings.

Contained within the tower was the Accumulator.⁵⁵ A concrete round bed and iron beams at both roof height and the height at which the tower batters out externally are all that remain of the Accumulator.

On the east side of the tower there was originally there was a single-storeyed outshut built of timber and with a lean-to roof.⁵⁶

⁵² The building is not represented in the Ledger of c1908 (PRO, Hayes Repository) but there are a series of drawings for the building which are dated April and May 1915 (cats AE214/1 and AE214/3 (MOD Central Disposals Unit, Chessington).

⁵³ The building is aligned north-east to south-west but for clarity in this report it is described as if it was aligned east to west.

⁵⁴ Drawing of Building A214. Proposed Cloakroom Accommodation, MOW, London, September 1950, cat. A214.B.04 (MOD Central Disposals Unit, Chessington).

⁵⁵ Drawings showing accumulator house and pump house, dated 28/5/1915, cat. ?AE/214? (MOD Central Disposals Unit, Chessington).

⁵⁶ Drawings showing accumulator house and pump house, dated 28/5/1915, cat. ?AE/214? (MOD Central Disposals Unit, Chessington).

The single storeyed wing, which was the Pump House, is of three bays by two bays. Originally its north elevation had a wide doorway in the position of its central bay, the south elevation had a window with a semi-circular head in its central bay, and the west elevation contained a doorway and a pair of windows with semi-circular heads.⁵⁷ It has a gabled roof with slate coverings. A doorway connects the wing with the Accumulator House.

The building still functioned as an Accumulator House and Pump House in 1923.⁵⁸

Following the closure of the Royal Gunpowder Factory in 1945, in c1950 the building underwent alteration. The Pump House was converted into a Changing Room and the windows and doors on its north, south and west elevations were blocked and new windows and doors, with square heads and concrete sills, were inserted.⁵⁹ The Changing Room contained lockers and new rsjs were added.

The accumulator had been removed by c1950 and the tower then had a suspended ceiling inserted and its ground floor was divided to create rooms for lavatories and a calorifier.⁶⁰ Two new doorways replaced the single doorway on the north side of the tower and metal windows were added on the south and east sides. The outshut on the east side was removed at this time.

Surveyed March 1993
Report by R L Burgess

⁵⁷ Drawing of Building A214. Proposed Cloakroom Accommodation, MOW, London, September 1950, cat. A214.B.04 (MOD Central Disposals Unit, Chessington).

⁵⁸ Site plan of Royal Gunpowder Factory at Waltham Abbey, 1:2500, as named 13 September 1917, revised March 1919 and March 1923, cat. WASC 900/84.

⁵⁹ Site plan of Royal Gunpowder Factory at Waltham Abbey, 1:2500, as named 13 September 1917, revised March 1919 and March 1923, cat. WASC 900/84.

⁶⁰ Site plan of Royal Gunpowder Factory at Waltham Abbey, 1:2500, as named 13 September 1917, revised March 1919 and March 1923, cat. WASC 900/84.

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER A219	OLD SERIES	RCHME NUMBER	N.G.R. TL 37780 00911
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NAME/FUNCTION M T Office and North Site Surgery Offices/Telephone Exchange	START DATE 1940	END DATE
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NO PHOTOGRAPHY
AVAILABLE

CARTOGRAPHIC DEPICTION

>1940 WASC 900/91A ; A219
1954 A - B.34 ; A219
c1960 WASC 900/94 ; A219
c1963 WASC 900/97 ; A219
1972 WASC 900/102 ; A219
1972 WASC 900/104 ; A219
1976 WASC 900/113 ; A219

DOCUMENTARY REFERENCES

Plans;
A219 B01 - B07 ; Plans and Elevations 1957 to 1960

1972 ERDE List ; MT Office and North Site Surgery
1991 Mott McDonald survey
1992 RARDE List ; Offices/Telephone Exchange
1992 FBRC Office

PHOTOGRAPHY HISTORIC

PHOTOGRAPHY
RCHME
1) 206/E/2 18 Jan 1993 From South
206/J/18 4 Mar 1993 Floor slab rom South

RELATIONSHIPS WITH OTHER MONUMENTS

ASSOCIATED WITH:

CONDITION Demolished

DESCRIPTION

- 1) CONSTRUCTIONAL MATERIAL
Brick
- 2) ROOF MATERIALS AND STRUCTURE
-
- 3) POWER SOURCE
Electricity
- 4) DIMENSIONS i) L 21.4m ii) W 7.3m
- 5) The building was demolished in 1992, partitions on the surviving floor slab indicate eight former rooms.

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY			
NUMBER A220	OLD SERIES	RCHME NUMBER	N.G.R. TL 37742 00975
NAME/FUNCTION First Aid centre Vehicle Wash Down Garage		START DATE 1939	END DATE 1992
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION >1940 WASC 900/91A ; A220 1954 A - B.34 ; A220 c1960 WASC 900/94 ; A220 c1963 WASC 900/97 ; A220 1972 WASC 900/102 ; A220 1972 WASC 900/104 ; A220 1976 WASC 900/113 ; A220		DOCUMENTARY REFERENCES Plan; A220 B01 - 25/8/1939 ; Main Dressing Centre, First Aid	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH:			
CONDITION Demolished			
DESCRIPTION 1) CONSTRUCTIONAL MATERIAL Brick 2) ROOF MATERIALS AND STRUCTURE - 3) POWER SOURCE - 4) DIMENSIONS i) L 4.1m ii) W 7.3m 5) The building was demolished in 1992, the concrete floor slab remains.			

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER A221	OLD SERIES 229/223	RCHME NUMBER	N.G.R. TL 37815 00923
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NAME/FUNCTION Dept. of Storekeepers Quarters (94) Chief Clerks Quarters Senior Officers Quarters Directors Residence	START DATE 1807-1827 1865? 1900? 1945	END DATE 1865? 1900? 1945
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NO PHOTOGRAPHY
AVAILABLE

CARTOGRAPHIC DEPICTION

1827 WASC 900/04 + MPH 271
1830 WO55 2694
1830 WASC 900/05
c1830 WASC 900/06 ; 94 Dept. of Storekeepers Quarters
c1835 WASC 900/07
1861-1868 WASC 900/10A ; 94
1865 WASC 900/13
1865 WASC 900/14 ; Chief Clerk Quarters
1865 WASC 900/38 + SUPP5 975 ; Chief Clerks Quarters
1865 WASC 900/41A ; Chief Clerks Quarters
1865 WASC 900/42 ; Dwelling
1897 WASC 900/53C
c1910 WASC 900/65 ; S.O. Quarters
c1910 WASC 900/79 ; S.O. Quarters
1917 WASC 900/70 ; S.O. Quarters
1917 WASC 900/72 ; 229
1919 WASC 900/74 ; 229
c1920 WASC 900/80 ; 229
1923 WASC 900/84 ; 229
>1940 WASC 900/91A ; AS221
1954 A - B.34 ; A221
c1960 WASC 900/94 ; A221
c1963 WASC 900/97 ; A221
1972 WASC 900/102 ; A221
1972 WASC 900/104 ; A221
1976 WASC 900/113 ; A221

DOCUMENTARY REFERENCES

Plans;
A221 B01 - B04 ; Plans and Elevations 1946 to 1964

1830 Statement of Property WO55 2351
1841 Statement of Property WO55 2856
1851 Statement of Property WO55 3027
1908 RGPF Ledger WASC 1509 + WASC 1764 ; S.O. Quarters
c1925 RGPF Ledger WASC 1680 ; S.O. Quarters
c1945 RGPF Ledger WASC 1508 ; S.O. Quarters

1972 ERDE List ; Directors Residence
1991 Mott McDonald survey
1992 RARDE List ; House

1993 RCHME NBR No.91470

PHOTOGRAPHY HISTORIC

PHOTOGRAPHY RCHME

- 1) 206/E/14 21 Jan 1993 The lodge from East
- 2) BB92/26069 A221 House Directors Residence from South East
- 3) 225/C/19 Ground floor stairs
225/C/20 Detail stair newel
225/C/21 Front door
225/C/22 South East front
225/C/23 North East front
225/C/24-5 West elevation

	225/C/26 South West 225/C/27 From South 225/C/28-9 East front 225/C/30 North East of A221 225/C/31 From North East 225/C/32 Exterior
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH:RCHME 345, RCHME 357	
CONDITION	Good
DESCRIPTION 1) CONSTRUCTIONAL MATERIAL 2) ROOF MATERIALS AND STRUCTURE 3) POWER SOURCE 4) DIMENSIONS i) L ii) W iii) HT 5) See Attached Threatened Buildings report	

ROYAL COMMISSION ON THE HISTORICAL MONUMENTS OF ENGLAND

MOD Building No. A221
Dwelling
The Royal Gunpowder Factory
Waltham Abbey
Essex

NBR No: 91470
NGR: TL 37815 00923

For nearly two centuries, this building has functioned as a dwelling for various senior officers working at the Royal Gunpowder Factory site.

Probably built in the early nineteenth century, its original form appears to have been a rectangular block of two storeys with a pair of single-storeyed service wings projecting on the west elevation. From the ground to the top of the plinth is constructed of red brick laid in English bond, above which the construction is of yellow brick in Flemish bond. The windows are hornless sashes. The roof is hipped with wide overhanging eaves.

Later alterations and extensions have taken place in at least four or five phases. A single-storeyed porch was added on the east front, bay windows were added, in two phases, on the south and east sides and a flat-roofed single-storeyed extension was built on the north side, a projecting wing on the north side of the west elevation was raised from one to two storeys, that north-west wing was then extended to the west, and the two north-west and south-west wings were linked by an infill block.

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Building A221 is situated approximately 100 metres directly north of Building A234, close to the west bank of the River Lee, on the Gunpowder Factory site at Waltham Abbey.

It appears to have been built in the early nineteenth century and has functioned as a dwelling for various senior officers working at the Royal Gunpowder Factory site. It was a Clerk of Cheques Dwelling in 1821,⁶¹ a Storekeeper's Dwelling in c1827,⁶² Engineer Officers Quarters c1850s,⁶³ a Captain Instructors Quarters in 1859,⁶⁴ Chief Clerks Quarters by 1886,⁶⁵ Staff Officers Quarters by 1897⁶⁶ and 1908,⁶⁷ S C [Senior Clerks] Quarters by 1923,⁶⁸ and Directors Residence in 1972.⁶⁹

The original form of the building appears to have been a rectangular block of two storeys with a pair of single-storeyed service wing projecting on the west elevation. From the ground to the top of the plinth is constructed of red brick laid in English bond, above which the construction is of yellow brick in Flemish bond. The window openings of the original phase have rubbed yellow-brick flat

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- ⁶¹ Map of "A Survey of the Lands and Buildings, the Property of the Ordnance, at the Royal Powder Works, Waltham Abbey, made in compliance with the Master General and Boards Order 6th June 1821" [updated in c1850s-60s] (PRO, Hayes Repository).
- ⁶² Plan of the Several Works and Buildings of the Royal Gunpowder manufactory at Waltham Abbey, dated on PRO file as 1827 (PRO MPH/271).
- ⁶³ Updated map of "A Survey of the Lands and Buildings, the Property of the Ordnance, at the Royal Powder Works, Waltham Abbey, made in compliance with the Master General and Boards Order 6th June 1821" [updated in c1850s-60s] (PRO, Hayes Repository).
- ⁶⁴ Plans and Section shewing in Yellow the Proposed Addition to the Captain Instructors Quarters, dated 1/11/1859, cat. WASC 901/304 (PRO, Hayes Repository).
- ⁶⁵ Royal Gunpowder Factory, Waltham Abbey, General Plan, 1865 corrected 1886, cat. PRO (Kew) SUPP5/975.
- ⁶⁶ OS County Series 1:2500 maps, 2nd ed. 1897 (surveyed 1865-9, revised 1895), sheet refs XLIX.14, XLI.8.12, XLII.5.9).
- ⁶⁷ Ledger c1908, cat. WASC 1509 (PRO, Hayes Repository).
- ⁶⁸ "Royal Gunpowder Factory, Waltham Abbey", site plan 1:2500, as named 13th September 1917, revised March 1919 and March 1923, cat. WASC 900/84.
- ⁶⁹ ERDE Building Lists 1972. The former Director's widow was residing in the house at the time of this survey.

arches. The windows they contain are hornless sashes with narrow glazing bars and are typical of the early nineteenth century.⁷⁰ The roof is hipped, with wide overhanging eaves, and has a slate and zinc covering.⁷¹ There are a pair of brick stacks, each with four flues, on the north and south hips of the roof.

The main rectangular block contains four rooms and a central entrance hall on the ground floor, with a similar layout for bedrooms on the first floor. A survey plan of the ground floor plan of the house in 1859 shows a pair of drawing rooms on the south side of the hall, a dining room in the north-east room and a library with closet in the north-west room.⁷² The single-storeyed wing at the south end of the west elevation of the house contained the kitchen, and a wing at the north end of the west elevation, also originally single-storeyed, was a larder and pantry.⁷³ There appears to have been a separate wooden building west of the kitchen which was a wash house.⁷⁴

Interior fittings include buffets in the south-east dining room and four-panelled doors. Some of the fireplaces are now obscured. At the west end of the entrance hall, a dog-leg stair with winders has turned newel posts and plain balusters. It may be reset.⁷⁵

The building has been altered and extended in at least four or five phases. At the centre of the east front is a porch, of one storey and built of brick, containing a doorway with a semi-circular head and two square-headed windows. It appears to be secondary to the original structure and was probably added in the mid-nineteenth century.⁷⁶

After 1859 the single-storeyed south-west wing was altered so that the original kitchen was converted into a servants area, the wooden wash house was demolished and a new kitchen was built at the west end, with a scullery (with copper) and larder at its west side.⁷⁷ At that time the larder in the north-west wing became a store.⁷⁸

After 1886⁷⁹ and before c1895⁸⁰ a single-storey bay window, containing sash windows with horns, was added at the east end of the south elevation and a single-storey projection with a flat roof was built at the east end of the north elevation.

⁷⁰ Except for the window at the east side of the south elevation on the first floor, which is blind or blocked.

⁷¹ Ledger c1908, cat. WASC 1509 (PRO, Hayes Repository).

⁷² Plans and Section shewing in Yellow the Proposed Addition to the Captain Instructors Quarters, dated 1/11/1859, cat. WASC 901/304 (PRO, Hayes Repository).

⁷³ Plans and Section shewing in Yellow the Proposed Addition to the Captain Instructors Quarters, dated 1/11/1859, cat. WASC 901/304 (PRO, Hayes Repository).

⁷⁴ Plans and Section shewing in Yellow the Proposed Addition to the Captain Instructors Quarters, dated 1/11/1859, cat. WASC 901/304 (PRO, Hayes Repository).

⁷⁵ The present staircase is at the south side of the west end of the entrance hall whereas it is shown at the north side of the west end of the entrance hall in Plans and Section shewing in Yellow the Proposed Addition to the Captain Instructors Quarters, dated 1/11/1859, cat. WASC 901/304 (PRO, Hayes Repository).

⁷⁶ The porch is not shown on a block plan of the building in Plan of the Several Works and Buildings of the Royal Gunpowder Manufactory at Waltham Abbey 1827 (PRO MPH/271), nor on a block plan by Frederick Drayson of 1830 (PRO MP 11.15, p37 Kew), nor on Plans and Section shewing in Yellow the Proposed addition to the Captain Instructors Quarters, dated 1/11/1859, cat. WASC 901/304 (PRO, Hayes Repository). Although it is drawn on a Map of "A Survey of the Lands and Buildings, the Property of the Ordnance, at the Royal Powder Works, Waltham Abbey, made in compliance with the Master General and Boards Order 6th June 1821", this map was updated in the 1850s-60s and the porch is likely to belong to that (PRO, Hayes Repository).

⁷⁷ Plans and Section shewing in Yellow the Proposed Addition to the Captain Instructors Quarters, dated 1/11/1859, cat. WASC 901/304 (PRO, Hayes Repository).

⁷⁸ Plans and Section shewing in Yellow the Proposed Addition to the Captain Instructors Quarters, dated 1/11/1859, cat. WASC 901/304 (PRO, Hayes Repository).

A second bay window, also lighting the south-east dining room and matching the bay window on the south elevation, was added at the south end of the east elevation before c1908.⁸¹ Also by c1908, the north-west wing had been raised to two storeys. This wing was later extended to the west by a single-storeyed projection. An even later infill block connected the two west wings.

⁷⁹ Royal Powder Factory, Waltham Abbey, 1865, corrected May 1886, PRO Supply 5/975 also WASC 900/38.

⁸⁰ OS County Series 1:2500 maps, 2nd ed. 1897 (surveyed 1865-9, revised 1895), sheet refs XLIX.14, XLI.8.12, XLII.5.9.

⁸¹ Ledger c1908, cat. WASC 1509 (PRO, Hayes Repository).

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY			
NUMBER A222	OLD SERIES	RCHME NUMBER	N.G.R. TL 37742 00975
NAME/FUNCTION Security Lodge Portocabin		START DATE 1948 197?	END DATE 197?
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION >1940 WASC 900/91A ; A222 1954 A - B.34 ; A222 c1960 WASC 900/94 ; A222 c1963 WASC 900/97 ; A222 1972 WASC 900/102 ; A222 1972 WASC 900/104 ; A222 1976 WASC 900/113 ; A222		DOCUMENTARY REFERENCES Plans; A222 B01,B02 ; Plans and Elevations 1948,1956 1972 ERDE List ; Clocking Station 1991 Mott McDonald survey 1992 RARDE List ; Police Body Search	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME 1) 206/R/5 18 Mar 1993 Police Lodge from East	
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH:			
CONDITION Good			
DESCRIPTION 1) CONSTRUCTIONAL MATERIAL Fibreglass 2) ROOF MATERIALS AND STRUCTURE Fibreglass 3) POWER SOURCE Electricity 4) DIMENSIONS i) L 3.2m ii) W 2.8m iii) HT 2.25m 5) The modern security may sit on the site of its predecessor.			

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY			
NUMBER A226	OLD SERIES	RCHME NUMBER	N.G.R. TL 37874 00854
NAME/FUNCTION foundation for proposed Police Hut (never completed)		START DATE 1964	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION 1972 WASC 900/102 ; A226 1972 WASC 900/104 ; A226 1976 WASC 900/113 ; A226		DOCUMENTARY REFERENCES Plan; A226 B01 - 9/11/1964 ; Proposed Police Post at Main Gate	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS			
CONDITION			
DESCRIPTION			

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER A227	OLD SERIES	RCHME NUMBER	N.G.R. TL 37857 00864
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NAME/FUNCTION Main Gate Search (Contraband)	START DATE 1941?	END DATE
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NO PHOTOGRAPHY
AVAILABLE

CARTOGRAPHIC DEPICTION c1963 WASC 900/97 ; A227 1972 WASC 900/102 ; A227 1972 WASC 900/104 ; A227 1976 WASC 900/113 ; A227	DOCUMENTARY REFERENCES Plan; A227 B01 - 22/12/1941 ; Contraband Main Gate
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PHOTOGRAPHY HISTORIC	PHOTOGRAPHY RCHME
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RELATIONSHIPS WITH OTHER MONUMENTS

ASSOCIATED WITH:

CONDITION Good

DESCRIPTION

- 1) CONSTRUCTIONAL MATERIAL
Brick in stretcher bond
- 2) ROOF MATERIALS AND STRUCTURE
Flat concrete slab
- 3) POWER SOURCE
Electricity
- 4) DIMENSIONS i) L 5.55m ii) W 3.62m iii) HT 2.33m
- 5) The building has a pair of double doors on the eastern side and a single door to the west.

- 2) ROOF MATERIALS AND STRUCTURE
Slate
- 3) POWER SOURCE
Electricity and steam heat
- 4) DIMENSIONS i) L 11.65m ii) W 8.08m iii) HT eave 3.25
- 5) See Attached Threatened Buildings report

ROYAL COMMISSION ON THE HISTORICAL MONUMENTS OF ENGLAND

MOD Building No. A230
Shifting Room
The Royal Gunpowder Factory
Waltham Abbey
Essex

NBR No: 91467
NGR: TL 37800 00848

Building A230 appears to have been built by c1895 as an infill between a pair of early nineteenth century buildings on its east and west sides. Its north elevation wall utilises an earlier brick wall which ran flush on the north elevation between those earlier two buildings.

It functioned as a Shifting Room, where workers would have washed themselves and changed clothing before and after working shifts on the site.

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Building A230 was built by c1895 as a Shifting House, that is, a changing room where workers would have washed themselves and changed clothing before and after working shifts at the Gunpowder Factory site.⁸² It was an infill between two early nineteenth-century buildings. On its east side is A231 which was built by c1806 as a Timber Store.⁸³ On its west side was a Storehouse which was demolished by c1923.⁸⁴ The north wall of A230 utilises an early nineteenth-century brick wall which formerly linked A231 with the Storehouse.

The building is rectangular in plan, 39' x 26'9" (11.89 x 8.2 m) and is 11' (3.36 m) to eaves height.⁸⁵

Like the brickwork of A231, the north elevation and east party wall are constructed of red brick laid in Flemish bond. When the south and west elevations were built, the north wall was heightened. The top four rows of brickwork on the north elevation and the whole of the south and west elevations are of yellow brick laid in English bond. The present west wall may be a replacement of an original party wall. A wide doorway, with a cambered head, was inserted at the east end of the north elevation. There is no fenestration.

The roof is hipped and has slate coverings and carries a timber louvre. There appears to have been a skylight on the northern side of the roof to light the building. The roof trusses are of angle iron and rolled iron with ties at the hip ends.

Plans of 1924 show that the building continued to function as a Shifting Room.⁸⁶ At the time of this survey it was disused.

⁸² OS County Series 1:2500 maps, 2nd ed. 1897 (surveyed 1865, revised 1895), sheet refs XLIX.14, XLI.8.12, XLII.5.9.

The Ledger of c1908 is incorrect in dating the building to 1902, cat. WASC 1509 (PRO, Hayes Repository).

⁸³ F Drayson Drawing No. 36 of "Buildings forming the Engineers Establishment", 1830, cat. PRO MR580.

⁸⁴ The Storehouse appears in the F Drayson Drawing No. 36 of "Buildings forming the Engineers Establishment", 1830, cat. PRO MP 11.15 (PRO, Kew) and in the OS County Series 1:2500 maps, 2nd ed. 1897 (surveyed 1865, revised 1895), sheet refs XLIX.14, XLI.8.12, XLII.5.9. However, it is not shown in "Royal Gunpowder Factory, Waltham Abbey" site plan 1:2500, as named 13 September 1917, revised March 1919 and March 1923, cat. WASC 900/84.

⁸⁵ Ledger c1908, cat. WASC 1509 (PRO, Hayes Repository).

⁸⁶ "Drawing of "Royal Gunpowder Factory, Waltham Abbey, New Heating Scheme", dated 12/9/1924, cat. A230.B.01 (MOD Central Disposals Unit, Chessington).

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER A231	OLD SERIES 243	RCHME NUMBER	N.G.R. TL 37800 00848
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NAME/FUNCTION Millwrights Store Gun House Timber Store Shifting Room Admin. Adj. Garage	START DATE 1807-27 by 1865 by 1886 by 1908 194?	END DATE by 1865 by 1886 by 1908 by 194?
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NO PHOTOGRAPHY
AVAILABLE

CARTOGRAPHIC DEPICTION

1806 WO78/1352
1827 WASC 900/04 + MPH 271 ; 81/82
1830 WO55 2694
1830 WASC 900/05
c1830 WASC 900/06 ; Millwrights Store
c1835 WASC 900/07
1861-1868 WASC 900/10A
1865 WASC 900/13 ; Gun Shed
1865 WASC 900/14 ; Gun Shed
1865 WASC 900/38 + SUPP 5 975 ; Timber Store
1865 WASC 900/41A
1886 WASC 900/42 ; Timber Store
1897 WASC 900/53C
c1910 WASC 900/65
c1910 WASC 900/79 ; Shifting Room
1917 WASC 900/70
1917 WASC 900/72 ; 243
1919 WASC 900/74 ; 243
c1920 WASC 900/80 ; 243
1923 WASC 900/84 ; 243
>1940 WASC 900/91A ; A231
1954 A - B.34 ; A231
c1960 WASC 900/94 ; A231
c1963 WASC 900/97 ; A231
1972 WASC 900/102 ; A231
1972 WASC 900/104 ; A231
1976 WASC 900/113 ; A231

DOCUMENTARY REFERENCES

Plans;
A231 B01 - B17 ; Plans and Elevations 1884 to 1984
1830 Statement of Property WO55 2351; Millwrights Store
1841 Statement of Property WO55 2856; Millwrights Store
1851 Statement of Property WO55 3027; 45 Millwrights Store
1908 RGPF Ledger WASC 1509 + WASC 1764 ; Shifting Room pre 1850 p27
c1925 RGPF Ledger WASC 1680 ; Shifting Room
c1945 RGPF Ledger WASC 1508 ; Shifting Room
1972 ERDE List ; Director CAO & Shifting Room
1991 Mott McDonald survey
1992 RARDE List ; Admin Bolck/Garage
1993 RCHME NBR No.91466

PHOTOGRAPHY HISTORIC

PHOTOGRAPHY RCHME

- 1) 206/R/7 From North East
206/R/9 From South
- 2) BB92/26237 A231 View from North West.
- 3) 225/A/20-1 North elevation showing sjs
225/B/2 South elevation

RELATIONSHIPS WITH OTHER MONUMENTS

ASSOCIATED WITH: 249b, A230, A233, A234, A235

CONDITION Good

DESCRIPTION

- 1) CONSTRUCTIONAL MATERIAL
Brick in flemish bond
- 2) ROOF MATERIALS AND STRUCTURE
Slate
- 3) POWER SOURCE
Electricity
- 4) DIMENSIONS i) L 30.5m ii) W 8.08m iii) HT eave 3.25m
- 5) See Attached Threatened Buildings report

ROYAL COMMISSION ON THE HISTORICAL MONUMENTS OF ENGLAND

MOD Building No. A231
Timber Store
The Royal Gunpowder Factory
Waltham Abbey
Essex

NBR No: 91466
NGR: TL 37800 00848

Building A231 was built by c1806 as one of a matching pair of Timber Storehouses on the north side of an Engineers Yard near the entrance to the site at the Gunpowder Factory.

Rectangular in plan and single-storeyed, it is constructed of red brick laid in Flemish bond. It appears to have had no fenestration on the north elevation originally and the south elevation had double doorways in each of its nine bays. The roof is hipped and contains timber trusses which each comprise a tie beam, king post with expanded head and foot and raking struts.

The brickwork on the west side of its north elevation contains a series of straight joints which may be original to the building or part of one of its later phases.

By 1827 it functioned as a Millwrights Store. It was a Gun Shed by c1863. By c1886 it was a Shifting House and by the late nineteenth century a lean-to projection had been added at the centre of its south elevation.

Extensive were alterations carried out in c1966 when the building was converted into offices.

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Building A231 was built by c1806 as one of a matching pair of timber storehouses, aligned east to west,⁸⁷ on the north side of an Engineers Yard near the entrance to the site at the Gunpowder Factory.⁸⁸ The other of the pair, building A234, is situated approximately five metres to the east. Although separate, the two buildings were linked by a brick wall which is flush with their north walls to create a unified north elevation.⁸⁹

Both buildings were still used as "timber stores" in c1821.⁹⁰ By 1827 they had begun to have slightly different functions, as A231 was described at that time as a Millwright's Store, while the adjacent A234 was a Carpenters Store, and a separate saw pit had been built on their south side. By c1863 both buildings were Gun Sheds, and although it is not clear exactly what this function involved, probably they were stores.⁹¹ By c1886, the area between the two buildings was infilled (A232) and was, like A231, a Shifting House.⁹² A Shifting House is a changing room, where workers would have washed themselves and changed clothing before starting and at the end of working shifts. Building A231 appears to have remained a Shifting House at least until 1924.⁹³

⁸⁷ The buildings are aligned east-south-east to west-north-west but for clarity in this report they are described as if they were aligned east to west

⁸⁸ Royal Gunpowder Factory, Waltham Abbey, site plan of 1806, cat. PRO MR580.

⁸⁹ F Drayson Drawing No. 36 of "Buildings forming the Engineers Establishment", 1830, cat. PRO MP 11.15 (PRO, Kew).

⁹⁰ "A Survey of the Lands and Buildings, the Property of the Ordnance, at the Royal Powder Works, Waltham Abbey, made in compliance with the Master General and Boards Order, 6th June 1821", [updated in the mid nineteenth century], (PRO, Hayes Repository).

⁹¹ "Royal Powder Factory, Waltham Abbey, General Plan", sheets 1 & 2, scale 1:2500, cat. WASC 900/13 & 14.

⁹² "Royal Powder Factory, Waltham Abbey", 1865, corrected May 1886, cat. WASC 900/38, PRO Supply 5/975.

⁹³ Drawing of sections and elevations of the building for New Heating Scheme, dated 12/9/1924, cat. A230.B.01 (MOD Central Disposals Unit, Chessington).

Building A231 is built of red brick laid in Flemish bond and it has a stepped brick cornice. It has a rectangular plan of nine bays by two bays, 100'6" x 26'9" (approximately 30.2 x 8 m) and is single-storeyed, at 20' (6 m) in height.⁹⁴ Each of the nine bays of the south elevation originally contained double doorways which would have been for bringing timber to and from the yard on the south side.⁹⁵ There was a doorway at the centre of the west elevation and a window at the centre of the east elevation.⁹⁶ There appears to have been no fenestration on the north elevation originally.⁹⁷

⁹⁴ Ledger c1908, cat. WASC 1509 (PRO. Hayes Repository).

⁹⁵ F Drayson Drawing No. 36 of "Buildings forming the Engineers Establishment", 1830, cat. PRO MP 11.15 (PRO. Kew).

⁹⁶ F Drayson Drawing No. 36 of "Buildings forming the Engineers Establishment", 1830, cat. PRO MP 11.15 (PRO. Kew).

⁹⁷ The F Drayson Drawing No. 36 of "Buildings forming the Engineers Establishment", 1830, cat. PRO MP 11.15 (PRO. Kew) shows no windows or doors on the north elevation. Two doorways were later inserted and were blocked in the 1960s, as indicated on proposal drawings for conversion of building A231 to offices, cat. A231.B.02 (MOD Central Disposals Unit, Chessington).

The brickwork on the west side of the north elevation contains a series of straight joints which may be original to the building or part of one of its later phases. The straight joints extend from the ground to approximately 2.5 metres up the elevation. There are brick closers on both sides of the straight joints which suggests that a narrow piece of board or brickwork projected northward at the positions of each of the straight joints. The function of this is not clear. A site plan of c1821, updated in the mid nineteenth century, labels the north side of buildings A231 and A234 as "proof ground", and it is possible that the straight joints were somehow related to this.⁹⁸

The roof is hipped and contains timber trusses which each comprise a tie beam, king post with expanded head and foot and raking struts. The timbers are through-bolted. There are no purlins. The roof has slate coverings, and carried four louvres which may not have been original.⁹⁹

Originally the interior comprised a single large room. By the late nineteenth century a projection with a lean-to roof had been added at the centre of its south elevation, which was part of its Shifting Room function. Plans of 1924 show the layout of the building as it was as a Shifting Room at that date, with cupboards along the north side and wash stands along the south side.¹⁰⁰

In c1965-6 the building was converted into offices.¹⁰¹ Inserted on the north elevation is a doorway at the centre with four tripartite sash windows on either side. Two secondary openings on the north elevation were blocked at this time.¹⁰² Similarly, on the south elevation, a doorway was added in the central bay and tripartite sash windows were added in each of the remaining eight bays. A ceiling was inserted and the louvres were removed from the roof. The interior was subdivided into offices, a conference room and an interview room. This layout was essentially the same at the time of this survey in March 1993.

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⁹⁸ "A Survey of the Lands and Buildings, the Property of the Ordnance, at the Royal Powder Works, Waltham Abbey, made in compliance with the Master General and Boards Order, 6th June 1821", [updated in the mid nineteenth century], (PRO, Hayes Repository).

⁹⁹ Louvres are not shown on the F Drayson drawings of "Buildings forming the Engineers Establishment", 1830, no. 36, cat. PRO MP 11.15 (Kew). However, they are shown in the Ledger of c1908, cat. WASC 1509 (PRO, Hayes Repository).

¹⁰⁰ "Royal Gunpowder Factory, Waltham Abbey, New Heating Scheme", dated 12/9/1924, cat. A230.B.01 (MOD Central Disposals Unit, Chessington).

¹⁰¹ "ERDE Waltham Abbey, Proposed Conversion of Building A231", dated September 1965, cat. A231.B.02 (MOD Central Disposals Unit, Chessington).

¹⁰² "ERDE Waltham Abbey, Proposed Conversion of Building A231", dated September 1965, cat. A231.B.02 (MOD Central Disposals Unit, Chessington).

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY			
NUMBER A232	OLD SERIES 244	RCHME NUMBER	N.G.R. TL 37800 00848
NAME/FUNCTION Timber Store Shifting Room, Timekeepers Office Shifting Room, Office, Store Admin. Adj. Garage		START DATE by 1865 1898?	END DATE 1898 1945?
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION		DOCUMENTARY REFERENCES	
1865 WASC 900/38 + SUPP5 975 ; Timber Store 1865 WASC 900/41A ; Timber Store 1865 WASC 900/42 ; Timber Store 1897 WASC 900/53C c1910 WASC 900/65 ; Shifting Room c1910 WASC 900/79 ; Shifting Room 1917 WASC 900/70 ; Timekeepers Office 1917 WASC 900/72 ; 244 1919 WASC 900/74 ; 244 c1920 WASC 900/80 ; 244 1923 WASC 900/84 ; 244 >1940 WASC 900/91A ; A232 1954 A - B.34 ; A232 c1960 WASC 900/94 ; A232 c1963 WASC 900/97 ; A232 1972 WASC 900/102 ; A232 1972 WASC 900/104 ; A232 1976 WASC 900/113 ; A232		Plans; A232 B01 - B14 ; Plans and Elevations 1886 to 1971 1830 Statement of Property WO55 2351 1841 Statement of Property WO55 2856 1851 Statement of Property WO55 3027 1908 RGPF Ledger WASC 1509 + WASC 1764 ; Shifting Room built 1887 p27 c1925 RGPF Ledger WASC 1680 ; Shifting Room c1945 RGPF Ledger WASC 1508 ; Shifting Room 1972 ERDE List ; Shift House 1991 Mott McDonald survey 1992 RARDE List ; Admin Block/Garage 1993 RCHME NBR No.91468	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
		1) 206/R/6 From North 206/R/9 From South 2) BB92/26238 A232 View from North. BB92/26239 A232 Interior view from North East. BB92/26243 A234 and A232 from North East. BB92/26246 A232 West end of Administrative block view from South East. BB92/26366 A232 Police lodge & Officers (Chessington)	
RELATIONSHIPS WITH OTHER MONUMENTS			
ASSOCIATED WITH: A230, A231, A233, A234, A235 OVERLIES: RCHME 321			

CONDITION	Good
DESCRIPTION	
1)	CONSTRUCTIONAL MATERIAL Brick in flemish bond
2)	ROOF MATERIALS AND STRUCTURE Slate
3)	POWER SOURCE Electricity
4)	DIMENSIONS i) L 12.6m ii) W 8.08m iii) HT eave 3.3m
5)	This building forms the link between A231 and A234. See Attached Threatened Buildings report

ROYAL COMMISSION ON THE HISTORICAL MONUMENTS OF ENGLAND

MOD Building No. A232
Shifting Room
The Royal Gunpowder Factory
Waltham Abbey
Essex

NBR No: 91468
NGR: TL 37800 00848

This building is an infill between buildings A231 and A234. Its north elevation utilises an earlier brick wall which ran flush on the north elevation between the latter two buildings.

It has a rectangular plan and is single-storeyed. The north elevation is constructed of red brick, laid in Flemish bond, while the south elevation is of yellow brick, laid in English bond. It has a hipped roof with angle and wrought iron trusses and a pair of timber louvres. Skylights may have been the only source of natural lighting originally.

It functioned as a Shifting Room, where workers would have washed themselves and changed clothing before and after working shifts on the site. It contained cupboards and wash stands.

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Building A232 was built by c1886 as a Shifting house, that is a changing room where workers would have washed themselves and changed clothing before and after working shifts on the site.¹⁰³ It is an infill between a pair of early nineteenth century buildings, A231 to its west and A234 to its east. Its north wall utilises an early nineteenth-century brick wall which, in a unified north elevation, linked A231 and A234.¹⁰⁴

The building is rectangular in plan, 39' x 26'9" (approximately 11.7 x 8 m), and is single-storeyed, with a height of 19'4" (approximately 5.8 m) to the apex of the roof.¹⁰⁵

Like the brickwork of the flanking buildings, the north wall of A232 is constructed of red brick laid in Flemish bond and contains a straight joint which has brick closers on both sides. A double doorway with a flat head has been inserted in the north wall. The south elevation is of yellow brick laid in English bond and contains a pair of small windows which have cambered heads. These windows may be secondary, as the surrounding brickwork lacks closers. Inserted in place of an earlier window¹⁰⁶ belonging to the east exterior wall of building A231, was a doorway, with a semi-circular head, connecting A232 with A231.¹⁰⁷

The roof is hipped and carries a pair of louvres. There is a large skylight on the northern half of the roof. The remainder of the roof is covered with slate tiles. The roof trusses are of angle and wrought iron.

Plans of 1924 show the layout of the building at that date, with cupboards and stands along the south side.¹⁰⁸ At the time of this survey it contained some coat stands and seating, although the room has been disused for some time.

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- ¹⁰³ Site Plan of "Royal Powder Factory, Waltham Abbey", 1865, corrected May 1886, cat. WASC 900/38, PRO Supply 5/975.
- ¹⁰⁴ F Drayson Drawing No. 36 of "Buildings forming the Engineers Establishment", 1830, cat. PRO MR580.
- ¹⁰⁵ Ledger c1908, cat. WASC 1509 (PRO, Hayes Repository).
- ¹⁰⁶ F Drayson Drawing No. 36 of "Buildings forming the Engineers Establishment", 1830, cat. PRO MR580.
- ¹⁰⁷ "Drawing of "Royal Gunpowder Factory, Waltham Abbey, New Heating Scheme", dated 12/9/1924, cat. A230.B.01 (MOD Central Disposals Unit, Chessington).
- ¹⁰⁸ "Drawing of "Royal Gunpowder Factory, Waltham Abbey, New Heating Scheme", dated 12/9/1924, cat. A230.B.01 (MOD Central Disposals Unit, Chessington).

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MOD Building No. A233
Carpenters Shop
The Royal Gunpowder Factory
Waltham Abbey
Essex

NBR No: 91474
NGR: TL 37862 00836

Building A233 was probably built by c1827 as a small addition against the north side of Building A238. Originally it functioned as a Carpenters Shop. By the late nineteenth century it was a Police Station.

The building has at least two main phases of construction. Originally smaller than the present building, it contained a large heated room and a passage on the ground floor and two rooms on the first floor. Constructed of red brick, it is of two storeys and has a hipped roof.

By 1883 an additional bay, of two storeys, had been built at the west end and a bay window of one storey was built at the east elevation.

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Building A233 is situated on Powdermill Lane at the entrance to the Royal Gunpowder Factory site, on the north-east side of a former Engineers Yard.

It abuts Building A238 which had been built in c1806 as General Storehouses. No building is shown adjoining the latter in 1806 but by c1821 and c1827 block plans of the site show that a small Carpenters Shop building had been added to its north side.¹⁰⁹

Although there is some discrepancy regarding the representation of the building's plan, it is likely that the addition shown in the early nineteenth century site plans is the present building A233.¹¹⁰

By 1883 the building was used as a Police Station for the Gunpowder Factory site.¹¹¹ Here those entering the site would be searched to ensure they were not carrying anything that could spark an explosion.¹¹²

The present building has two main phases of construction. In the original phase, which appears to date to between c1806 and c1821-7, it was of two main bays by one bay and approximately eight metres in length. It had an almost-rectangular plan and,

¹⁰⁹ Cf Royal Gunpowder Factory Site Plan of 1806, cat. PRO MR580, with "A Survey of the Lands and Buildings, the Property of the Ordnance, at the Royal Powder Works, Waltham Abbey, made in compliance with the Master General and Boards Order 6th June 1821" updated in the 1850s-60s (PRO, Hayes Repository) and "Plan of the Several Works and Buildings of the Royal Gunpowder Manufactory at Waltham Abbey", 1827, cat. PRO MPH/271).

¹¹⁰ In a site plan of 1827 its alignment is different from the present building ("Plan of the Several Works and Buildings of the Royal Gunpowder Manufactory at Waltham Abbey", 1827, cat. PRO MPH/271). Drawings dated 1830 by F Drayson omit representation of the building A233 in detailed plans and elevations of the buildings on this Engineers part of the site but in a more general site plan do show a one with an alignment similar to the present A233.

¹¹¹ "Royal Powder Factory, Waltham Abbey," 1865, corrected May 1886, cat. WASC 900/38, PRO Supply 5/975.

¹¹² A photograph of one of the sergeants of police searching men at the main gate was printed in The Strand Magazine Vol. X Jan-June 1895 "How Explosives are Made" by William G. Fitzgerald.

constructed of red brick, is of two storeys. It comprised a large heated room and a passage on the ground floor and two rooms on the first floor. The windows are sashes and have rubbed brick flat heads. The roof was hipped.

By 1883 the building had been extended by a further bay to the west, creating an extra room on the ground and first floors.¹¹³ Windows on the original west elevation were converted into doorways, one on each of the floors, and the hip at the west end of the original roof was enclosed by the roof of the addition. Probably also by this time a verandah, with a lean-to roof, was built along the west front.¹¹⁴

Also by 1883 a single-storeyed bay window with a polygonal plan was built at the east side of the building. It is of red brick in Flemish bond and has sash windows and a cornice incorporating bricks laid in a nailhead design.

The building functioned in conjunction with the adjacent building A238/268 which contained police barracks. Plans of 1914 and 1924 show building A233 had a central lobby separating the eastern half of the ground floor, which was the Police Station, from the western end, which was a Clothes Room.¹¹⁵ A kitchen had been built at the south-west corner by c1908¹¹⁶ and until relatively recently a covered corridor at the west side linked the kitchen with building A234 to its west. In c1908 a single-storeyed addition with a flat roof was built against the west elevation, in the re-entrant angle between the Clothes Room and the Kitchen.¹¹⁷ A Boot Room was built against the south elevation in the re-entrant angle of the Kitchen and Clothes Room by 1914.¹¹⁸

By 1983 the ground floor comprised Offices at the east end, a central foyer, an inner foyer, and a new Kitchen and Dining Area at the west end of the building.¹¹⁹ The original kitchen was converted into a Female Search Room.¹²⁰

The verandah no longer survives and at the time of this survey further building work was being carried out.

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¹¹³ Plan and Sections Shewing Reading Room added to Library by Conversion of Bedroom of Police Quarters, dated May 1883, cat. A238.B.02.

¹¹⁴ This verandah is shown in a photograph in The Strand Magazine Vol. X Jan-June 1895 "How Explosives are Made" by William G. Fitzgerald.

¹¹⁵ Plans by Edwin Wright, dated July 1914, cat A238.B.07 (MOD Central Disposals Unit, Chessington). Plans of Police Quarters, Library, BWD Offices, dated 12/8/1924, cat. A238.B.11 (MOD Central Disposals Unit, Chessington).

¹¹⁶ Ledger c1908, cat. WASC 1509, (PRO, Hayes Repository).

¹¹⁷ Plan of Police Quarters and Bathroom, by Edwin Wright, 7/5/1908, cat. A238.B.03 (MOD Central Disposals Unit, Chessington).

¹¹⁸ Plans by Edwin Wright, dated July 1914, cat A238.B.07 (MOD Central Disposals Unit, Chessington).

¹¹⁹ Plan dated September 1983, cat. A238.B.17 (MOD Central Disposals Unit, Chessington).

¹²⁰ Plan dated September 1983, cat. A238.B.17 (MOD Central Disposals Unit, Chessington).

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY			
NUMBER A234	OLD SERIES 245	RCHME NUMBER	N.G.R. TL 37800 00848
NAME/FUNCTION Carpenters Store Gun Shed Pattern Room Timber Store, Battery Store Shifting Room, Office, Store Shifting Room, Timekeepers Office Admin. Adj. Garage	START DATE 1801-06 by 1865 by 1886 1898? 1945?	END DATE by 1865 by 1886 1898? 1945?	
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION 1806 WO78/1352 1827 WASC 900/04 + MPH 271;81 1830 WO55 2694 1830 WASC 900/05 c1830 WASC 900/06 ; Carpenters Store c1835 WASC 900/07 1861-1868 WASC 900/10A 1865 WASC 900/13 ; Gun Sheds 1865 WASC 900/14 ; Gun Sheds 1886 WASC 900/38 + SUPP5 975 ; Pattern Room 1886 WASC 900/41A ; Pattern Room 1886 WASC 900/42 1897 WASC 900/53C c1910 WASC 900/65 ; Shifting Room c1910 WASC 900/79 ; Shifting Room 1917 WASC 900/70 ; Timekeepers Office 1917 WASC 900/72 ; 245 1919 WASC 900/74 ; 245 c1920 WASC 900/80 ; 245 1923 WASC 900/84 ; 245 >1940 WASC 900/91A ; A234 1954 A - B.34 ; A234 c1960 WASC 900/94 ; A234 c1963 WASC 900/97 ; A234 1972 WASC 900/102 ; SA234 1972 WASC 900/104 ; A234 1976 WASC 900/113 ; A234		DOCUMENTARY REFERENCES 1830 Statement of Property WO55 2351; 81 Carpenters Store 1841 Statement of Property WO55 2856; 81 Carpenters Store 1851 Statement of Property WO55 3027; 81 Carpenters Store 1908 RGPf Ledger WASC 1509 + WASC 1764 ; Timber Store/Office pre 1850 p28 c1925 RGPf Ledger WASC 1680 ; Timber Store/Office c1945 RGPf Ledger WASC 1508 ; Timber Store/Office 1972 ERDE List ; Police Armoury 1991 Mott McDonald survey 1992 RARDE List ; Admin Block 1992 FBRC Inert Storage and Garage 1993 RCHME NBR No.91469	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME 1) 206/R/4 From East 2) BB92/26240 A234 Detail of North wall.	

	<p>BB92/26241 A234 Interior Roof Structure. BB92/26243 A234 and A232 from North East. BB92/26245 A234 Administrative Block view from South East.</p> <p>3) 225/A/22-3 Interior views 225/B/2 South elevation</p>
<p>RELATIONSHIPS WITH OTHER MONUMENTS</p> <p>ASSOCIATED WITH: 249b, A230, A231, A232, A233, A235</p>	
<p>CONDITION Good</p>	
<p>DESCRIPTION</p> <p>1) CONSTRUCTIONAL MATERIAL Brick in flemish bond</p> <p>2) ROOF MATERIALS AND STRUCTURE Slate</p> <p>3) POWER SOURCE Electricity</p> <p>4) DIMENSIONS i) L 30.5m ii) W 8.08m iii) HT eave 3.3m</p> <p>5) See Attached Threatened Buildings report</p>	

ROYAL COMMISSION ON THE HISTORICAL MONUMENTS OF ENGLAND

MOD Building No. A234
Timber Store
The Royal Gunpowder Factory
Waltham Abbey
Essex

NBR No: 91469
NGR: TL 37800 00848

Building A234 was built by c1806 as one of a matching pair of Timber Storehouses on the north side of an Engineers Yard near the entrance to the site at the Gunpowder Factory.

Rectangular in plan and single-storeyed, it is constructed of red brick laid in Flemish bond. It appears to have had no fenestration on the north elevation originally and the south elevation had double doorways in each of its nine bays. The roof is hipped and contains timber trusses which each comprise a tie beam, king post with expanded head and foot and raking struts.

The brickwork on the west side of its north elevation contains a series of straight joints which may be original to the building or part of one of its later phases.

The building has undergone alteration in a number of phases relating to its changing function. It had changed from being a Carpenter's Store in 1827 to a Gun Shed by c1863, reverted to a Timber Store by c1886 and was simply a Store in 1897. By 1923 it is labelled as being part of a series of Shifting Rooms.

At least by the early twentieth century its interior was divided into a square room at the eastern end, an off-centre narrow room and a large six-bay western room. The east side of north elevation had inserted two doorways with semi-circular heads, the easternmost of which was flanked by two sash windows with slightly cambered heads.

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Building A234 was built by c1806 as one of a matching pair of timber storehouses, aligned east to west,¹²¹ on the north side of an Engineers Yard near the entrance to the site at the Gunpowder Factory.¹²² The other of the pair, building A231 is situated approximately five metres to the west. Although separate, the two buildings were linked by a brick wall which is flush with their north walls to create a unified north elevation.¹²³

Both buildings were still used as "timber stores" in c1821.¹²⁴ By 1827 they had begun to have slightly different functions, as A234 was described at that time as a Carpenters Store, while the adjacent A231 was a Millwright's Store, and a separate saw pit had been built on their south side. By c1863 both buildings were Gun Sheds, and although it is not clear exactly what this function involved, probably they were stores.¹²⁵ By c1886, A234 had reverted to being a Timber Store.¹²⁶ By c1895 A234 is described as a Store

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- ¹²¹ The buildings are aligned east-south-east to west-north-west but for clarity in this report they are described as if they were aligned east to west
- ¹²² Royal Gunpowder Factory, Waltham Abbey, site plan of 1806, cat. PRO MR580.
- ¹²³ F Drayson Drawing No. 36 of "Buildings forming the Engineers Establishment", 1830, cat. PRO MP 11.15 (PRO, Kew).
- ¹²⁴ "A Survey of the Lands and Buildings, the Property of the Ordnance, at the Royal Powder Works, Waltham Abbey, made in compliance with the Master General and Boards Order, 6th June 1821", [updated in the mid nineteenth century], (PRO, Hayes Repository).
- ¹²⁵ "Royal Powder Factory, Waltham Abbey, General Plan", sheets 1 & 2, scale 1:2500, cat. WASC 900/13 & 14.
- ¹²⁶ Site plan of "Royal Powder Factory, Waltham Abbey", 1865, corrected May 1886, cat. WASC 900/38, PRO Supply 5/975.

and a link passage had been built to its east side to connect it with a building (A233/8) by the entrance to the site.¹²⁷ A factory plan of 1923 labels the entire range of buildings (A230, A231, A232, A234) as Shifting Rooms, and shows a small projection at the south side of A234.¹²⁸ A Shifting Room is a changing room, where workers would have washed themselves and changed clothing before and after working shifts.

Building A234 is built of red brick laid in Flemish bond and it has a stepped brick cornice. It has a rectangular plan of nine bays by two bays, 100'6" x 26'9" (approximately 30.2 x 8 m) and is single-storeyed, at 20'6" (approximately 6.2 m) in height.¹²⁹ Each of the nine bays of the south elevation originally contained double doorways which would have been for bringing timber to and from the yard on the south side.¹³⁰ There was a doorway at the centre of the east elevation and a window at the centre of the west elevation.¹³¹ There was no fenestration on the north elevation originally.¹³²

The brickwork on the west side of the north elevation contains a series of straight joints which may be original to the building or part of one of its later phases. The straight joints extend from the ground to approximately 2.5 metres up the elevation. There are brick closers on both sides of the straight joints which suggests that a narrow piece of board or brickwork projected northward at the positions of each of the straight joints. The function of this is not clear. A site plan of c1821, updated in the mid nineteenth century, labels the north side of buildings A234 and A231 as "proof ground", and it is possible that the straight joints were somehow related to this.¹³³

The roof is hipped and contains timber trusses which each comprise a tie beam, king post with expanded head and foot and raking struts. The timbers are through-bolted. There are no purlins. The roof carries two louvres, although these may not be original, and has slate coverings.¹³⁴

Originally the interior appears to have comprised a single large room. This was later sub-divided into a square room at the eastern end, an off-centre narrow room and a large six-bay western room. To give access to, and to light, the newly created eastern rooms, two doorways and two windows were inserted at the east end of the north elevation. The doorways have semi-circular heads of rubbed brick and the windows contain sashes and have slightly cambered heads of rubbed brick. The eastern room contains a fireplace and was an office, and some time after c1908 the office was sub-divided to contain a battery store.¹³⁵

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- ¹²⁷ OS County Series 1:2500 maps, 2nd ed. 1897 (surveyed 1865, revised 1895), sheet refs XLIX.14, XLI.8,12, XLII.5,9.
- ¹²⁸ "Royal Gunpowder Factory, Waltham Abbey" site plan 1:2500, as named 13 September 1917, revised March 1919 and March 1923, cat. WASC 900/84.
- ¹²⁹ Ledger c1908, cat. WASC 1509 (PRO, Hayes Repository).
- ¹³⁰ F Drayson Drawing No. 36 of "Buildings forming the Engineers Establishment", 1830, cat. PRO MP 11.15 (PRO, Kew).
- ¹³¹ F Drayson Drawing No. 36 of "Buildings forming the Engineers Establishment", 1830, cat. PRO MP 11.15 (PRO, Kew).
- ¹³² F Drayson Drawing No. 36 of "Buildings forming the Engineers Establishment", 1830, cat. PRO MP 11.15 (PRO, Kew).
- ¹³³ "A Survey of the Lands and Buildings, the Property of the Ordnance, at the Royal Powder Works, Waltham Abbey, made in compliance with the Master General and Boards Order, 6th June 1821", [updated in the mid nineteenth century], (PRO, Hayes Repository).
- ¹³⁴ Louvres are not shown on the F Drayson drawings of "Buildings forming the Engineers Establishment", 1830, no. 36, cat. PRO MP 11.15 (Kew) and nor are they shown in the Ledger of c1908, cat. WASC 1509 (PRO, Hayes Repository).
- ¹³⁵ Ledger c1908, cat. WASC 1509 (PRO, Hayes Repository).

Other alterations include the blocking of the double doorways on the south elevation with timber, the blocking of the doorway on the east elevation with brick, the insertion of a louvred window opening and another doorway on the north elevation, and the blocking of the office fireplace.

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THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY			
NUMBER A235	OLD SERIES	RCHME NUMBER	N.G.R. TL 37800 00848
NAME/FUNCTION Police Cycle Shed Brick Structure		START DATE 194?	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION 1954 A - B.34 ; A235 c1960 WASC 900/94 ; A235 c1963 WASC 900/97 ; A235 1972 WASC 900/102 ; A235 1972 WASC 900/104 ; A235 1976 WASC 900/113 ; A235		DOCUMENTARY REFERENCES 1972 ERDE List ; Police Cycle Shed 1991 Mott McDonald survey 1992 RARDE List ; Brick Shed 1992 FBRC Flammable Store	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME 2) BB92/26242 A235 from North East.	
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH: A238			
CONDITION Demolished			
DESCRIPTION The building has been demolished a concrete floor slab remains.			

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY			
NUMBER A236	OLD SERIES	RCHME NUMBER	N.G.R. TL 37859 00836
NAME/FUNCTION Ammunition Store		START DATE 1960?	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION 1972 WASC 900/102 ; A236 1972 WASC 900/104 ; A236 1976 WASC 900/113 ; A236		DOCUMENTARY REFERENCES Plan; A236 B01 - 7/9/1960 ; Prop. Steel Doors to Ammunition Store 1992 FBRC Paper and Bookstore	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS			
CONDITION			
DESCRIPTION			

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY			
NUMBER A237	OLD SERIES	RCHME NUMBER	N.G.R. TL 37856 00834
NAME/FUNCTION Toilets		START DATE 1965	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION 1972 WASC 900/102 ; A237 1972 WASC 900/104 ; A237 1976 WASC 900/113 ; A237		DOCUMENTARY REFERENCES Plan; A237 B01 - 4/2/1965 ; ArrgT of New Male Lavatories for Social Club	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS			
CONDITION			
DESCRIPTION			

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY			
NUMBER A238	OLD SERIES 251	RCHME NUMBER	N.G.R. TL 37862 00836
NAME/FUNCTION Surgery Office Keepers House, Stores, Library/Reading Room Police Barracks Library/Reading Room Police Station, Library, Billiard Room, Cook and Washouse Police Lodge	START DATE 1801-06 1865? by 1886 by 1908 194?	END DATE 1865? by 1886 by 1908 194?	
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION 1806 WO78/1352 1827 WASC 900/04 + MPH 271 ; 92 1830 WO55 2694 1830 WASC 900/05 ; 92 c1830 WASC 900/06 c1835 WASC 900/07 1861-1868 WASC 900/10A 1865 WASC 900/13 1865 WASC 900/14 ; Office Keepers House, Stores, Library/Reading Room 1865 WASC 900/38 + SUPP5 975 ; Police Barracks, Library/Reading Room 1865 WASC 900/41A 1865 WASC 900/42 1897 WASC 900/53C c1910 WASC 900/65 ; Police Station c1910 WASC 900/79 ; Police Station 1917 WASC 900/70 1917 WASC 900/72 ; 251 1919 WASC 900/74 ; 251 c1920 WASC 900/80 ; 251 1923 WASC 900/84 ; 251 >1940 WASC 900/91A ; A238 1954 A - B.34 ; A238 c1960 WASC 900/94 ; A238 c1963 WASC 900/97 ; A238 1972 WASC 900/102 ; A238 1972 WASC 900/104 ; A238 1976 WASC 900/113 ; A238		DOCUMENTARY REFERENCES Plans; A238 B01 - B17 ; Plans and Elevations 1883 to 1983 1830 Statement of Property WO55 2351; 92 Surgery 1841 Statement of Property WO55 2856; 92 Surgery 1851 Statement of Property WO55 3027; 48a Engineers Office 1908 RGPF Ledger WASC 1509 + WASC 1764 ; Police Station, Library, Billiard Room, Cook and Wash House pre 1850 p28 c1925 RGPF Ledger WASC 1680 ; Police Station, Library, Billiard Room, Cook and Wash House c1945 RGPF Ledger WASC 1508 ; Police Station, Library, Billiard Room, Cook and Wash House 1972 ERDE List ; Police Lodge 1991 Mott McDonald survey 1992 RARDE List ; Police Lodge 1992 FBRC Police Office 1993 RCHME NBR No 91473	
PHOTOGRAPHY HISTORIC WASC 1543/22-25 No 9 Powdermill lane & Police main		PHOTOGRAPHY RCHME 1) 206/E/15 21 Jan 1993 From North East	

<p>gate WASC 1592 Superintendents house No9 Powdermill lane Engelbach <u>Army and Navy Illustrated</u> 11-Oct-1899 p105</p>	<p>2) BB92/26063 A238 Police Lodge view from North East Powdermill Lane BB92/26064 From North East Powdermill Lane BB92/26244 A238 Police Lodge from North West. BB92/26346 A238 Plan & Elevation Proposed Extension 28.8.1886 (Chessington) BB92/26353 Conversion BB92/26373 A238 Drawing A238.B.11 Police Quarters Library 12 Aug 1887 (Chessington) BB92/26378 Alterations Nov 1926</p> <p>3) 225/A/24-5 Former exterior West elevation GF 225/A/26 West bay GF 225/A/27 Former exterior West elevation FF 225/A/28 Former hipped roof at West end 225/A/29 Roof details</p> <p>4) 4788/10 06.05.1993</p>
<p>RELATIONSHIPS WITH OTHER MONUMENTS</p> <p>ASSOCIATED WITH:</p>	
<p>CONDITION Good</p>	
<p>DESCRIPTION</p> <p>1) CONSTRUCTIONAL MATERIAL Brick in flemish bond</p> <p>2) ROOF MATERIALS AND STRUCTURE Slate</p> <p>3) POWER SOURCE Electricity</p> <p>4) DIMENSIONS i) L 8.6m ii) W 3.7m iii) HT eave 4.5m</p> <p>5) Powdermill Lane</p> <p>See Threatened Buildings report attached to A268</p>	

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY			
NUMBER A239	OLD SERIES	RCHME NUMBER	N.G.R. TL 37857 00827
NAME/FUNCTION Building		START DATE 1960?	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION c1960 WASC 900/94 ; A239 c1963 WASC 900/97 ; A239 1972 WASC 900/102 ; A239 1972 WASC 900/104 ; A239 1976 WASC 900/113 ; A239		DOCUMENTARY REFERENCES	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH:			
CONDITION Demolished			
DESCRIPTION No surface remains of this building were found.			

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY			
NUMBER A250	OLD SERIES	RCHME NUMBER	N.G.R. TL 37740 00824
NAME/FUNCTION Canteen and Social Club		START DATE 1959	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION c1960 WASC 900/94 ; A250 c1963 WASC 900/97 ; A250 1972 WASC 900/102 ; A250 1972 WASC 900/104 ; A250 1976 WASC 900/113 ; A250		DOCUMENTARY REFERENCES Plans; A250 B01 - B44 ; Plans and Elevations 1958 to 1985 1959 901/83 27 Nov 1959 North site Canteen 1972 ERDE List ; Canteen 1991 Mott McDonald survey 1992 RARDE List ; Social Club 1992 FBRC Social Club	
PHOTOGRAPHY HISTORIC WASC 737 New canteen inc waterways WASC 738 New canteen Colour x6 1961		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH:			
CONDITION:			
DESCRIPTION: Not Described Demolished August 1993			