

**THE ROYAL GUNPOWDER FACTORY,  
WALTHAM ABBEY, ESSEX  
Area E, Nitroglycerine Factory**

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**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER E1	OLD SERIES	RCHME NUMBER	N.G.R. TL 37488 02176
NAME/FUNCTION Acid house		START DATE 1961-2	END DATE 1981?
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION Drwg No.P16;Bldg 5 Acid House (New) c1960 - WASC 900/94 ; E1 c1963 - WASC 900/97 ; E1 1972 - WASC 900/102 ; E1 1972 - WASC 900/104 ; E1 1976 - WASC 900/113 ; E1		DOCUMENTARY REFERENCES  Plans: E01 B01 - 22/11/1961 ; New Acid Mixing House B02 - ; New Acid Mixing House (2ft to 1in) B03 - 5/1962 ; New Acid Mixing House B04 - 14/8/1962 ; Steam pipes,Extractor Vents B05 - 14/6/1962 ; Steam Mains B06 - 27/6/1962 ; Electrical Services (4ft & 8ft to 1in) B07 - 3/4/1962 ; New Acid House Base  ERDE list 1972 - Acid house 1964 RARDE list 1992 - Acid house	
PHOTOGRAPHY HISTORIC  WASC 1054/16 Barrel & Weighing house 1981		PHOTOGRAPHY RCHME  1) 206/L/14 09 Mar 1993 From South standing on E2	
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH: E2,47			
CONDITION      Demolished			
DESCRIPTION  3)      POWER SOURCE Electricity  4)      DIMENSIONS i) L 8.3m ii) W 7.2m  5)      The building was demolished, probably in 1981 see WASC 1054/16. The concrete floor slab remains with wall foundations indicating three former rooms.			

## THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER E2	OLD SERIES 43	RCHME NUMBER	N.G.R. TL 37514 02172
NAME/FUNCTION Nitrating House No.3 Nitrating House No.1		START DATE 1895-6 1908	END DATE 1908? 1981?
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION  1897 - WASC 900/53C ; Nitrating House No.3 c1910 - WASC 900/65 ; Nitrating House No.1 c1910 - WASC 900/79 ; Nitrating House No.1 1917 - WASC 900/70 ; Nitrating House No.1 1917 - WASC 900/72 ; Nitrating House No.1 1919 - WASC 900/74 ; Nitrating House No.1 c1920 - WASC 900/80 ; 43 1923 - WASC 900/84 ; 43 Nitrating House No.1 1932 - WASC 900/87 ; 43 Nitrating House No.1 > 1940 - WASC 900/91A ; 43 1954 - A - B.34 ; 43 c1960 - WASC 900/94 ; E2 c1963 - WASC 900/97 ; E2 1972 - WASC 900/102 ; E2 1972 - WASC 900/104 ; E2 1976 - WASC 900/113 ; E2		DOCUMENTARY REFERENCES  1888 <u>Maj Gen W.H.Wardell Handbook of Gunpowder &amp; Guncotton 1888 p.83-89</u> 1908 <u>RGPF Ledger WASC 1509 + WASC 1764 ; Nitrating House &amp; pit built 1895-6 p4</u> c1925 <u>RGPF Ledger WASC 1680 ; Nitrating House &amp; pit</u> 1938 <u>Textbook of Explosives HMSO 1938 p80-85 Fig 12.1-12.3</u> c1945 <u>RGPF Ledger WASC 1508 ; Nitrating House &amp; pit</u> <u>Oscar Guttman The Manufacture of Explosives Vol 1 p40-50 Figs 7-8</u>  Plans: E02       B01 - B09 ; Plans and Elevations no date  ERDE list 1972 - Nitration plant 1964 RARDE list 1992 - Nitration plant	

PHOTOGRAPHY  
HISTORIC

PRO Supply 5/860 90-2 1897  
PRO Supply 5/860 93 1897 View north from E2 showing  
Guncotton stoves under construction  
Engelbach Army and Navy Illustrated 13-Jan-1900 p483  
PRO Supply 5/860 95 Nitrating house from north  
PRO Supply 5 860 97 Exterior also shows E3 and E5  
PRO Supply 5/861 183-97 1903  
PRO Supply 5/861 226 Interior feb 1905  
PRO Supply 5/861 227 Interior feb 1905  
PRO Supply 5/861 228 Interior jan 1905  
PRO Supply 5/861 233 Interior mar 1908  
PRO Supply 5/861 234 Labrinyth may 1908  
PRO Supply 5/861 249 Interior jun 1909

WASC 1024 Old Nitrating house drowning tank during  
demolition 2.2.1981

E2 WASC 1054/10 Entrance 1981  
E2 WASC 1054/11 Looking N/W 1981  
E2 WASC 1054/12-14 Views of roof structure 1981  
E2 WASC 1054/15 Exterior 1981  
E2 WASC 1054/17 Approach to E2 E3 & E5 1981  
PRO Supply 5/861 202 1903? Fume pipe condensor and  
after separating gutter.  
Supply 5/861 205 1903? Shows now blocked tunnel on  
west side and gutters running into it.

PHOTOGRAPHY  
RCHME

- 1) 206/L/13 09 Mar 1993 Nitrator from North  
206/L/15 09 Mar 1993 Hole for Drowning Tank  
206/L/27 09 Mar 1993 From on top of E3
- 2) BB92/26267 E2 Nitrator view from West.  
BB92/26268 E2 Nitrator view from North West top of  
mound showing entrance, Drowning Tank Pit and  
Nitroglycerine exit tunnel.  
BB92/26269 E2 Nitrator view from North West, detail  
of entrance and Nitroglycerine exit tunnel  
BB92/26347 E2 Drawing E.02.B.02 Proposed  
Alteration to Nitrating House (MOD Chessington)
- 4) 4786/32 06.05.1993  
4786/33 06.05.1993  
4788/16 06.05.1993  
4788/18 06.05.1993

RELATIONSHIPS WITH OTHER MONUMENTS

ASSOCIATED WITH: E1, E3, E5, E6, E15, RCHME 273

CONDITION      Good



#### DESCRIPTION

1) CONSTRUCTIONAL MATERIAL  
Brick in English bond and earthwork

2) ROOF MATERIALS AND STRUCTURE  
-

3) POWER SOURCE  
Electricity, steam heat and compressed air

4) DIMENSIONS iii) HT 5.7m iv) DIA 9.47m

5) The Nitrator was housed within a circular revetment wall surrounded by a high earthwork traverse. The 3 building in the centre was entered along a brick tunnel from the south closed by a red wooden slatted gate. The tunnel originally joined to the central building by a porch. On the northern side of the mound steps lead upto a platform supported on RSJs that probably formerly carried acid tanks. A series of small bore pipes lagged in cork and a metal gutter (RCHME 273) ran up the western side of the mound carrying control wires form E6, compressed air and possibly other liquids. Also entering from the western side is a cast iron flanged pipe with a bore of 10.6cm. This may connect to one of the two cast iron flanged pipes that emerge at the base of the revetment wall on the west side. Both these pipes are set within earthenware pipes with bores of 7.5cm and 11cm, the latter being lead lined. Above these pipes is a blocked arched brick opening, height 1.55m width 0.79m. Opposite to this tunnel on the eastern side is an arched brick tunnel, height 1.55m width 1.62m. The precense of bolts along either side of the tunnel indicate that gutters ran along both sides carrying nitroglycerine to wash houses E3 and E5. Around the wall are a series of holes that formerly contained small horizontal joists that acted on the exterior of the building. Some pipework and electric pumps relating to tha last phase of operation remains attached to the wall.

The building covering the nitrating equipment differed in form to the other roundhouse in that the southern part was curved while the northern part was facettted. The building had a diameter of 7m and was timber framed set on a low sill wall. In the centre of the building is an oval brick lined pit. The pit measures 5.85m in length, 4.35m in width and is 1.15m in depth. On the base of the pit the positions of five beams may be discerned that formerly supported the lead drowning tank. The building has been fired, probably during 1981.

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER E3	OLD SERIES 45	RCHME NUMBER	N.G.R. TL 37568 02162
NAME/FUNCTION Washing House No.3 Washing House No.1		START DATE 1895-6 1908	END DATE 1908? 1981?

NO PHOTOGRAPHY  
AVAILABLE

<p><b>CARTOGRAPHIC DEPICTION</b></p> <p>1897 - WASC 900/53C ; Washing House No.3  c1910 - WASC 900/65 ; 45 Washing House No.1  c1910 - WASC 900/79 ; 45 Washing House No.1  1917 - WASC 900/70 ; 45 Washing House No.1  1917 - WASC 900/72 ; 45 Washing House No.1  1919 - WASC 900/74 ; 45 Washing House No.1  c1920 - WASC 900/80 ; Washing House No.1  1923 - WASC 900/84 ; 45 Washing House No.1  1932 - WASC 900/87 ; 45 Washing House No.1  &gt; 1940 - WASC 900/91A ; 45  1954 - A - B.34 ; 45  c1960 - WASC 900/94 ; 45  c1963 - WASC 900/97 ; E3  1972 - WASC 900/102 ; E3  1972 - WASC 900/104 ; E3  1976 - WASC 900/113 ; E3</p>	<p><b>DOCUMENTARY REFERENCES</b></p> <p>c1945 RGPF Ledger WASC 1508 ; Washing House  1945 Plan and elevation traced 20th december 1945  (no ref No.)  Plans;  E03 B01 3/6/1940 ; Tunnel to No.2 Pouring on  House    ERDE list 1972 - NG wash house 1964  RARDE list 1992 - NG wash house</p>
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PHOTOGRAPHY  
HISTORIC

PRO Supply 5/860 Washing House No.3 Exterior 1897  
PRO Supply 5/861 229 Interior jan 1905  
PRO Supply 5/861 250 Interior jul 1909  
PRO Supply 5/861 274 No.1 washing house (no date)

1888 Maj Gen W.H. Wardell R.A Handbook of  
Gunpowder & Guncotton 1888 Chp X11 p.85-87  
1908 RGPF Ledger WASC 1509 + WASC 1764 ;  
Washing House built 1895-6 p4  
c1925 RGPF Ledger WASC 1680 ; Washing House  
1938 Textbook of Explosives Used in The Service  
HMSO 1938 Chp X11 p80-85 Fig 12.1,13.3

Proc. of Court of Enquirey on explosion at RGPF  
20-Apr-1940 figs.17, 18, 19  
E3 WASC 1054/5 Interior of roof 1981  
E3 WASC 1054/6 Exterior of roof 1981  
E3 WASC 1054/7 E3 entrance 1981  
E3 WASC 1054/8 Interior with steps 1981

PHOTOGRAPHY  
RCHME

1) 206/L/16 09 Mar 1993 Washing house from West on  
top of E2  
206/L/23 09 Mar 1993 Mound from South showing  
Exit tunnels  
206/L/24 09 Mar 1993 Exit tunnel to South  
206/L/25 09 Mar 1993 N/G tunnel to 46R  
206/L/26 09 Mar 1993 Interior from South  
206/L/28 09 Mar 1993 Interior showing N/G tunnel to  
46R  
206/L/29 Waste

2) BB92/26270 E5 and E3 Nitroglycerine Washing  
House view from South West.  
BB92/26272 E3 Detail of wooden gully support in  
service tunnel.  
BB92/26273 E3 Nitroglycerine Washing House view  
from South East.  
BB92/26276 E3 Interior of Nitroglycerine Washing  
House.

4) 4786/32 06.05.1993  
4786/33 06.05.1993  
4788/15 06.05.1993

RELATIONSHIPS WITH OTHER MONUMENTS

ASSOCIATED WITH: E2, E5, 46, 46a, 52

CONDITION Good



#### DESCRIPTION

1) CONSTRUCTIONAL MATERIAL  
Brick in English bond

2) ROOF MATERIALS AND STRUCTURE  
Probably roofing felt over timber boards

3) POWER SOURCE  
Electricity

4) DIMENSIONS iii) HT 3.75m iv) DIA 9.1m

5) The wash house was enclosed within a circular brick revetment wall surrounded by an earthwork traverse. The wash house was entered through a curved brick tunnel from the north side protected by a red wooden slat gate. By this gate a stone plaque records the date '1896-7', also by the entrance are the modern fuse and switch boxes. The original form of the revetment wall consisted a curved brick depression on the eastern side leading towards mixing house 46 and a brick arched service tunnel, height 1.72m width 0.77m, leading to the wash water settling house 52. The wooden gutter support shelf for the gutter remaining insitu along the eastern wall. At the base of the revetment wall on the west side an earthenware pipe enters with a cast iron flanged pipe set within it. The pipe has a bore of 11cm and is sealed by a circular plate.

Within the circular brick revetment formerly stood a timber framed round house measuring 7.6m in diameter. This building was set on a low brick sill wall over a slate damp proof course. The upper part of this building was braced against the revetment wall by a number of small horizontal joists the holes for which are visible in the brickwork. Also set on a stone bed in the brick work were two large horizontal timbers that formerly supported a raised platform roughly at head height within the building.

In common with E2 and E5 the wash house has been modified on a number of occasions. The timber round house was extensively damaged when Mixing house 46 blow up on 20th april 1940, although it is unclear whether or not the brick work suffered any damage at this date. Evidence for more substantial modifications to the structure are represented by concrete additions to the late nineteenth century brick structure.

Concrete has been added to raise height of the portal. On the western side a concrete channel has been cut through the mound and the revetment wall. On the eastern side the curved depression has been filled with concrete and a rectangular service tunnel, height 1.66m width 0.76m.

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER E4	OLD SERIES 52	RCHME NUMBER	N.G.R. TL 37585 02110
NAME/FUNCTION Wash Water Settling House		START DATE 1895-6	END DATE 1981?
NO PHOTOGRAPHY AVAILABLE			
<p>CARTOGRAPHIC DEPICTION</p> <p>1897 - WASC 900/53C ; Wash water Settling House  c1910 - WASC 900/65 ; 52 Wash Water Settling House  c1910 - WASC 900/79 ; Wash Water Settling House  1917 - WASC 900/70 ; 52 Wash Water Settling House  1917 - WASC 900/72 ; 52 Wash Water Settling House  1919 - WASC 900/74 ; 52 Wash Water Settling House  c1920 - WASC 900/80 ; 52  1923 - WASC 900/84 ; 52 Wash Water Settling House  1932 - WASC 900/87 ; 52 Wash Water Settling House  &gt; 1940 - WASC 900/91A ; 52  1954 - A - B.34 ; 52  c1960 - WASC 900/94 ; E4  c1963 - WASC 900/97 ; E4  1972 - WASC 900/102 ; E4  1972 - WASC 900/104 ; E4  1976 - WASC 900/113 ; E4</p>		<p>DOCUMENTARY REFERENCES</p> <p>1908 RGPF Ledger WASC 1509 + WASC 1764 ; Wash Water Settling House built 1895-6 p5  c1925 RGPF Ledger WASC 1680 ; Wash Water Settling House  c1945 RGPF Ledger WASC 1508 ; Wash Water Settling House</p> <p>No Plans</p> <p>ERDE list 1972 - Wash Water Settling House 1964  RARDE list 1992 - Wash Water Settling House</p>	
<p>PHOTOGRAPHY HISTORIC</p> <p>PRO Supply 5/860 89 Wash Water Settling House 1897  PRO Supply 5/861 198 1903</p> <p>WASC 499 Explosion damage 18-Jan-1940, photo 7</p> <p>Proc Court Inquirey explosion 20-Apr-1940, photos 9 and 10</p>		<p>PHOTOGRAPHY RCHME</p> <p>1) 206/U/13 From south east  206/U/14 From east</p>	
<p>RELATIONSHIPS WITH OTHER MONUMENTS</p> <p>ASSOCIATED WITH: E3, E5, RCHME 212</p>			
<p>CONDITION Fair</p>			

DESCRIPTION

- 1) CONSTRUCTIONAL MATERIAL  
Brick foundations formerly with timber superstructure
- 2) ROOF MATERIALS AND STRUCTURE  
Formerly angle irons with timber board over
- 3) POWER SOURCE  
Steam heating
- 4) DIMENSIONS i) L 13.4m ii) W 9.8m
- 5) The wash water settling house sat within a concrete cellar 1m in depth. The former timber framed building was a free standing building within this cellar placed on brick foundations 11m x 6.1m, depth 1m. A small timber bridge on the north east side bridged the gap between the two constructions. The building formerly housed a large circular stave tank to receive the spent washing water from washing houses E3 and E5. This was brought to the building along lead lined gutters supported on trestles and over the old river lee on bridges RCHME 212 and RCHME.



## THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER E5	OLD SERIES 49	RCHME NUMBER	N.G.R. TL 37534 02112
NAME/FUNCTION Washing House No.2 Schmidt Plant		START DATE 1895-6 1964	END DATE 1981?
NO PHOTOGRAPHY AVAILABLE			
<p>CARTOGRAPHIC DEPICTION</p> <p>1897 - WASC 900/53C ; Washing House No.2  c1910 - WASC 900/65 ; 49 Washing House No.2  c1910 - WASC 900/79 ; Washing House No.2  1917 - WASC 900/70 ; 49 Washing House No.2  1917 - WASC 900/72 ; 49 Washing House No.2  1919 - WASC 900/74 ; 49 Washing House No.2  c1920 - WASC 900/80 ; 49  1923 - WASC 900/84 ; 49 Washing House No.2  1932 - WASC 900/87 ; 49 Washing House No.2  &gt; 1940 - WASC 900/91A ; 49  1954 - A - B.34 ; 49  c1960 - WASC 900/94 ; 49  c1963 - WASC 900/97 ; E5  1972 - WASC 900/102 ; E5  1972 - WASC 900/104 ; E5  1976 - WASC 900/113 ; E5</p>		<p>DOCUMENTARY REFERENCES</p> <p>1888 Maj Gen W.H.Wardell R.A. <u>Handbook of Gunpowder &amp; Guncotton</u> 1888 Chp X11 p85-87  1908 RGPF Ledger WASC 1509 + WASC 1764 ; Washing House built 1895-6 p4  c1925 RGPF Ledger WASC 1680 ; Washing House  1938 <u>Textbook of Explosives used in the Service</u> HMSO 1938 Chp X11 p80-85 Fig 12.1,12.3    c1945 RGPF Ledger WASC 1508 ; Washing House  1945 Plan and elevation traced 20th december 1945 (no ref No.)    ERDE list 1972 - Schmidt house 1964  RARDE list 1992 - NG Wash house</p>	
<p>PHOTOGRAPHY HISTORIC</p> <p>E5 WASC 1054/9 Entrance wall with date 1896-7 1981  E5 WASC 1054/18 Entrance 1981  E5 WASC 1054/19 Interior of tunnel to E5 1981  E5 WASC 1054/20 Gen view 1981  E5 WASC 1054/21 Old scales found in E5 1981  PRO Supply 5/860 96 1897  PRO Supply 5/860 100 1897</p>		<p>PHOTOGRAPHY RCHME</p> <p>1) 206/L/17 09 Mar 1993 Washing house from North on top of E2  206/L/18 09 Mar 1993 Interior from South looking towards E2  206/L/19 09 Mar 1993 Interior from West  206/L/20 09 Mar 1993 Entrance from West  206/L/21 09 Mar 1993 Showing N/G service tunnel    2) BB92/26270 E5 and E3 Nitroglycerine Washing House view from South West.  BB92/26271 E5 Washing House entrance view from West.  BB92/26274 E5 Interior of Nitroglycerine Washing House.  BB92/26275 E5 Interior of Nitroglycerine Washing House.</p>	

RELATIONSHIPS WITH OTHER MONUMENTS

ASSOCIATED WITH: E2, E3, 52

CONDITION Good

DESCRIPTION

1) CONSTRUCTIONAL MATERIAL  
Brick in English bond and earthwork

2) ROOF MATERIALS AND STRUCTURE  
-

3) POWER SOURCE  
Electricity

4) DIMENSIONS iii) HT 3.8m iv) DIA 9.1m

5) The remains of the Nitroglycerine wash house consist of an internal circular brick revetment wall in English bond 9.1m in diameter and 3.8m in height. This is surrounded by an earthwork bank. In the centre of this feature stood a timber framed roundhouse, probably fired and demolished in 1981 (WASC 1054/9). The roundhouse was entered from the north through a curving brick tunnel sealed by a red slatted wooden gate. By the gate a stone plaque records the date '1896-7'. The roundhouse was 7.7m in diameter and was separated from the revetting wall by a gully 0.75m in width and 0.47m in width. The wash house was originally serviced by a brick arched tunnel, height 1.71m width 0.76m leading towards the wash water settling house 52. A curved depression in the southern side of the revetment wall may have carried further pipes away from the building. Set into the base of the revetment wall on the west side is an earthenware pipe with a lead pipe and copper conductor passing through it.

The internal roundhouse was set on a low brick sill wall over a damp proof course of broken slates. Set into the revetment wall on the northern side are two large horizontal timbers that originally supported a raised platform within the building. A similar arrangement was found on the south site in building 483. Other small joist holes in the wall mark the position of bracing timbers originally set against the outside of the building. Around one of the legs of this framework a section of the lead lined floor remained insitu.

The original form of this building has been modified by alterations carried out in the 1960s and perhaps also in the 1940s. Additions to the structure include the heightening of the entrance in concrete and to the service tunnels bringing the nitroglycerine into the building. On the northern side a concrete channel has been cut into the original brickwork, this leads from E2 and was presumably used to channel nitroglycerine into the building for washing. The tall framework of steel girders was also probably introduced during one of these rebuilding phases. The curved depression on the southern wall has also been filled with concrete and replaced by a rectangular service tunnel, height 1.72m width 0.77m. The presence of rusty bolts on the eastern side of the tunnel mark the position of the gutter that formerly carried the nitroglycerine to mixing house 62.

## THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER E6	OLD SERIES	RCHME NUMBER	N.G.R. TL 37463 02142
NAME/FUNCTION Remote control room for E2		START DATE 1962	END DATE 1981?
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION  c1960 - WASC 900/94 ; E6 c1963 - WASC 900/97 ; E6 1972 - WASC 900/102 ; E6 1972 - WASC 900/104 ; E6 1976 - WASC 900/113 ; E6		DOCUMENTARY REFERENCES  Plans: E06      B01 - 4/8/61 ; Remote Control Room - N.G. Area  ERDE list 1972 - Remote control for E2 1962 RARDE list 1992 - Control room	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME  1) 206/C/31 02 Feb 1993 From West 2) BB92/26142 E6 Interior of Central Room for Nitrator E2	
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH: E1, E2, E15, RCHME 273			
CONDITION      Good			
DESCRIPTION 1)      CONSTRUCTIONAL MATERIAL Breeze block  2)      ROOF MATERIALS AND STRUCTURE Flat concrete slab  3)      POWER SOURCE Electricity and steam heat  4)      DIMENSIONS i) L 3.43m ii) W 3.43m iii) HT 2.3m  5)      The control room is a single storey building with a rectangular plan. The control room is entered through a steel door on its northern side, that is away from the nitrator E2. There is a single armoured window on the north side also. The interior of the building retains many of its control panels. The cables from this building were carried inside a metal gutter along side pipes (RCHME 273) leading to the top of E2.  Historic artefacts - <u>All</u> remaining control panels and other material within the building.			



**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER E7	OLD SERIES 38A	RCHME NUMBER	N.G.R. TL 37438 02156
NAME/FUNCTION Office and Laboratory Nitric Ester House		START DATE 1908 1961?	END DATE 1961? 1992
NO PHOTOGRAPHY AVAILABLE			
<p>CARTOGRAPHIC DEPICTION</p> <p>1917 - WASC 900/70 ; Office and Lab.          1917 - WASC 900/72 ; Office and Lab.          1919 - WASC 900/74 ; Office and Lab.          c1920 - WASC 900/80 ; 38A          1923 - WASC 900/84 ; 38A Office and Lab.          1932 - WASC 900/87 ; 38A Office and Lab.          &gt; 1940 - WASC 900/91A ; 38A          1954 - A - B.34 ; 38A          c1960 - WASC 900/94 ; 38A          c1963 - WASC 900/97 ; E7          1972 - WASC 900/102 ; E7          1972 - WASC 900/104 ; E7          1976 - WASC 900/113 ; E7</p>		<p>DOCUMENTARY REFERENCES</p> <p>c1925 RGPF Ledger WASC 1680 ; Office,N.G. Area</p> <p>Plans: E07 B01 - B04 ; Plan and Elevations 1908 to 1962</p> <p>ERDE list 1972 - Laboratory and office 1964          RARDE list 1992 - Portacabin</p>	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
<p>RELATIONSHIPS WITH OTHER MONUMENTS</p> <p>ASSOCIATED WITH:</p>			
CONDITION Demolished			
<p>DESCRIPTION</p> <p>1) CONSTRUCTIONAL MATERIAL</p> <p>2) ROOF MATERIALS AND STRUCTURE</p> <p>3) POWER SOURCE</p> <p>4) DIMENSIONS i) L ii) W iii) HT</p> <p>5) The building has been demolished.</p>			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER E9/2	OLD SERIES	RCHME NUMBER	N.G.R. TL 37412 02124
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NAME/FUNCTION Refrigeration house	START DATE 1969	END DATE 1990?
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NO PHOTOGRAPHY  
AVAILABLE

<p>CARTOGRAPHIC DEPICTION</p> <p>c1960 - WASC 900/94 ; E9  c1963 - WASC 900/97 ; E9  1972 - WASC 900/102 ; E9  1972 - WASC 900/104 ; E9  1976 - WASC 900/113 ; E9</p>	<p>DOCUMENTARY REFERENCES</p> <p>Plan:  E09      B01 - 22/11/68 ; Proposed Refridgerator House</p> <p>ERDE list 1972 - Refrigeration house next to E10  RARDE list 1992 - Refrigeration house next to E10</p>
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<p>PHOTOGRAPHY HISTORIC</p>	<p>PHOTOGRAPHY RCHME</p> <p>1)206/C/32 02 Feb 1993 From West  206/C/34 02 Feb 1993 From South West</p>
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RELATIONSHIPS WITH OTHER MONUMENTS

ASSOCIATED WITH: E2

CONDITION      Fair

DESCRIPTION

- 1)      CONSTRUCTIONAL MATERIAL  
          Brick
- 2)      ROOF MATERIALS AND STRUCTURE  
          Flat roof covered by roofing felt
- 3)      POWER SOURCE  
          Electricity and steam heat
- 4)      DIMENSIONS i) L 6.6m ii) W 3.5m iii) HT 2.6m
- 5)      This building is a single storey with a rectangular ground plan. It is entered through double doors on the north side, it was lit by a single window on the west side.

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER E12	OLD SERIES	RCHME NUMBER	N.G.R. TL 37470 02058
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NAME/FUNCTION Shift house and office	START DATE 1960?	END DATE 1985?
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NO PHOTOGRAPHY  
AVAILABLE

<p>CARTOGRAPHIC DEPICTION</p> <p>c1960 - WASC 900/94  c1963 - WASC 900/97 ; E12  1972 - WASC 900/102 ; E12  1972 - WASC 900/104 ; E12  1976 - WASC 900/113 ; E12</p>	<p>DOCUMENTARY REFERENCES</p> <p>Plans:  E12      B01 - B08 ; Plans and Elevations 1961 to 1982</p> <p>ERDE list 1972 - Shift house and office 1964  RARDE list 1992 - Derelict shift house</p>
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<p>PHOTOGRAPHY HISTORIC</p>	<p>PHOTOGRAPHY RCHME</p> <p>1) 206/C/28 02 Feb 1993 From South East</p>
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RELATIONSHIPS WITH OTHER MONUMENTS

ASSOCIATED WITH: E13

CONDITION      Poor

DESCRIPTION

- 1)      CONSTRUCTIONAL MATERIAL  
Brick
  
- 2)      ROOF MATERIALS AND STRUCTURE  
Flat concrete slab with raised roof lights.
  
- 3)      POWER SOURCE  
Electricity and steam heat
  
- 4)      DIMENSIONS i) L 10.4m ii) W 7.3m iii) HT 2.8m
  
- 5)      The building is single storeyed with arectangular ground plan. The building has been partly fired. To the east is a locker room entered from a door on the south wall, with a shower cubicle and urinal lit by two double metal windows and a roof light. In the centre is a large room entered through another door on the south wall, this is lit by a metal framed window on the south wall and windows along the west wall. To the west of the building are two small rooms. The northern portion of the building has been demolished and remains only as concrete floor slab measuring 12.2m x 7.2m. The positions of three rooms may be discerned.

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER E13	OLD SERIES	RCHME NUMBER	N.G.R. TL 37485 02030
NAME/FUNCTION Sewer pump house and filter beds		START DATE 1962	END DATE 198?
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION  c1960 - WASC 900/94 ; E13 c1963 - WASC 900/97 ; E13 1972 - WASC 900/102 ; E13 1972 - WASC 900/104 ; E13 1976 - WASC 900/113 ; E13		DOCUMENTARY EVIDENCE  Plan: E13 B01 - 8/8/1962 ; Detail of Sewage Disposal Works (2ft to 1in)  ERDE list 1972 - Sewer pump house and filter beds 1964 RARDE list 1992 - Sewer pump house and filter beds	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME  1) 206/C/27 02 Feb 1993 From South West	
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH: E12, RCHME 185			
CONDITION      Fair			
DESCRIPTION 1)      CONSTRUCTIONAL MATERIAL Brick  2)      ROOF MATERIALS AND STRUCTURE Roofing felt over fibre board  3)      POWER SOURCE Electricity  4)      DIMENSIONS i) L 2.4m ii) W 1.7m iii) HT 2.1m  5)      The pump house is a small single storey building with a rectangular ground plan. It houses a Bronson plunger pump by Tuke and Bell Lichfield Staffordshire.  Historic artefacts - Instruction notice and makers plate on pump			



**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER E14	OLD SERIES	RCHME NUMBER	N.G.R. TL 37522 01946
NAME/FUNCTION Mixing House No.4 Nitric Ester Store Magazine	START DATE 1940 1964?	END DATE 1964?	
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION  > 1940 - WASC 900/91A 1954 - A - B.34 c1960 - WASC 900/94 c1963 - WASC 900/97 ; E14 1972 - WASC 900/102 ; E14 1972 - WASC 900/104 ; E14 1976 - WASC 900/113 ; E14	DOCUMENTARY REFERENCES  ERDE list 1972 - Magazine 1964 RARDE list 1992 - Mixing house/nitric ester store  Plans Drg 01 Mixing House No.4 5-apr-1940		
PHOTOGRAPHY HISTORIC	PHOTOGRAPHY RCHME  1) 206/I/15 From South West 206/T/10 From South  2)BB92/26164 View from North West		
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH: RCHME 107			
CONDITION Fair			

DESCRIPTION

- 1) CONSTRUCTIONAL MATERIAL  
Timber frame with sheet asbestos over
- 2) ROOF MATERIALS AND STRUCTURE  
Corrugated asbestos
- 3) POWER SOURCE  
Electricity
- 4) DIMENSIONS i) L 10.35 ii) W 6.5m iii) HT gable 4.75m
- 5) The building is enclosed on three sides by an earthen traverse, this is revetted on the southeast and north east sides by a breeze block wall. The building is a single storey with a rectangular ground plan, it has gabled ends to the north west and south east. It has a single window on the south east elevation and two windows on the south west elevation. The building could be ventilated by the use of removable boards at the top and bottom of the walls, each of the boards has two copper knobs. On the north eastern side is a breeze block lobby and loading area. Within in the lobby is a shoe box, the door fittings are brass. The building was formerly served by canal RCHME 107.

This building replaced the earlier Mixing House No.4 when it was badly damaged in the accidental explosion of Mixing House 63 in 1940.

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER E15	OLD SERIES	RCHME NUMBER	N.G.R. TL 37410 02116
NAME/FUNCTION Compressor house Generator room		START DATE 1964	END DATE 1981?
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION  c1960 WASC 900/94 ; E15 c1963 WASC 900/97 ; E15 1972 WASC 900/102 ; E15 1972 WASC 900/104 ; E15 1976 WASC 900/113 ; E15		DOCUMENTARY REFERENCES  Plan; E15 B01 8/6/1964 ; Nitric Ester Group New Compressor House  1972 ERDE List ; Generator Room 1991 Mott McDonald survey (All.2) 1992 RARDE List ; Generator Room	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME  1) 206/C/30 02 Feb 1993 From West	
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH: E2, E6			
CONDITION      Good			
DESCRIPTION 1)      CONSTRUCTIONAL MATERIAL Brick  2)      ROOF MATERIALS AND STRUCTURE Roofing felt over flat fibre board  3)      POWER SOURCE Electricity  4)      DIMENSIONS i) L 2.08m ii) W 2.18m iii) HT 2.2m  5)      The building is single storeyed and is almost square in plan. It is entered through a door on the west side. It houses a four stroke pump by Broom and Wade Ltd.  Historic artefacts - pump? any makers plates			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER E16	OLD SERIES	RCHME NUMBER	N.G.R. TL 37592 02088
NAME/FUNCTION Tool shed and mud hut		START DATE 196?	END DATE 1992?
NO PHOTOGRAPHY AVAILABLE			
<p>CARTOGRAPHIC DEPICTION</p> <p>c1960 WASC 900/94 ; E16  c1963 WASC 900/97 ; E16  1972 WASC 900/102 ; E16  1972 WASC 900/104 ; E16  1976 WASC 900/113 ; E16</p>		<p>DOCUMENTARY REFERENCES</p> <p>1972 ERDE List ; Tool Shed and Mud Hut  1991 Mott McDonald survey (All.2)  1992 RARDE List ; Remains of Brick Shelter</p>	
<p>PHOTOGRAPHY HISTORIC</p> <p>Supply 5/861 200-1 1903</p>		<p>PHOTOGRAPHY RCHME</p> <p>1) 206/M/30 4 Mar 1993 From West</p>	
<p>RELATIONSHIPS WITH OTHER MONUMENTS</p> <p>ASSOCIATED WITH: RCHME 211</p>			
<p>CONDITION Demolished</p>			

DESCRIPTION

- 1) CONSTRUCTIONAL MATERIAL  
Brick sill wall with timber superstructure
- 2) ROOF MATERIALS AND STRUCTURE  
Roofing felt
- 3) POWER SOURCE  
Electricity and steam heat
- 4) DIMENSIONS i) L 4.7m ii) W 4.7m
- 5) The superstructure of this building has been demolished leaving a low brick sill wall 0.4m in height. A timber frame was formerly bolted to this sill wall by means of vertical bolts set into the brick work. Internally the positions of two floor joists may be recovered. The building was formerly connected to steam heating pipe RCHME 211.



