

THE ROYAL GUNPOWDER FACTORY

WALTHAM ABBEY

Nitroglycerine Factory

E1-16

AND 44 - 88a

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WAR

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER E1	OLD SERIES	RCHME NUMBER	N.G.R. TL 37488 02176
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NAME/FUNCTION Acid house	START DATE 1961-2	END DATE 1981?
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NO PHOTOGRAPHY AVAILABLE

<b>CARTOGRAPHIC DEPICTION</b> 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	<b>DOCUMENTARY REFERENCES</b>  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
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<b>PHOTOGRAPHY HISTORIC</b>  WASC 1054/16 Barrel & Weighing house 1981	<b>PHOTOGRAPHY RCHME</b>  1) 206/L/14 09 Mar 1993 From South standing on E2
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**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			
<p>CARTOGRAPHIC DEPICTION</p> <p>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  &gt; 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</p>		<p>DOCUMENTARY REFERENCES</p> <p>1888     Maj Gen W.H.Wardell <u>Handbook of Gunpowder &amp; Guncotton</u> 1888 p.83-89</p> <p>1908     RGPF Ledger WASC 1509 + WASC 1764 ; Nitrating House &amp; pit built 1895-6 p4</p> <p>c1925    RGPF Ledger WASC 1680 ; Nitrating House &amp; pit</p> <p>1938     <u>Textbook of Explosives</u> HMSO 1938 p80-85 Fig 12.1-12.3</p> <p>c1945    RGPF Ledger WASC 1508 ; Nitrating House &amp; pit  Oscar Guttman <u>The Manufacture of Explosives</u> Vol 1 p40-50 Figs 7-8</p> <p>Plans:  E02     B01 - B09 ; Plans and Elevations no date</p> <p>ERDE list 1972 - Nitration plant 1964  RARDE list 1992 - Nitration plant</p>	

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

42  
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 faceted. 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?
<p>NO PHOTOGRAPHY AVAILABLE</p>			
<p>CARTOGRAPHIC DEPICTION</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>DOCUMENTARY REFERENCES</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>	

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 blew 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>			
CONDITION		Fair	

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><b>CARTOGRAPHIC DEPICTION</b></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><b>DOCUMENTARY REFERENCES</b></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.)</p> <p>ERDE list 1972 - Schmidt house 1964  RARDE list 1992 - NG Wash house</p>
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<p><b>PHOTOGRAPHY HISTORIC</b></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><b>PHOTOGRAPHY RCHME</b></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</p> <p>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>
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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 gulley 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 in situ.

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?
			
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
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NAME/FUNCTION Office and Laboratory Nitric Ester House	START DATE 1908 1961?	END DATE 1961? 1992
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NO PHOTOGRAPHY  
AVAILABLE

### CARTOGRAPHIC DEPICTION

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.  
 > 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

### DOCUMENTARY REFERENCES

c1925 RGPF Ledger WASC 1680 ; Office,N.G. Area  
  
 Plans:  
 E07 B01 - B04 ; Plan and Elevations 1908 to 1962  
  
 ERDE list 1972 - Laboratory and office 1964  
 RARDE list 1992 - Portacabin

PHOTOGRAPHY  
HISTORIC

PHOTOGRAPHY  
RCHME

### RELATIONSHIPS WITH OTHER MONUMENTS

ASSOCIATED WITH:

CONDITION Demolished

### DESCRIPTION

- 1) CONSTRUCTIONAL MATERIAL
- 2) ROOF MATERIALS AND STRUCTURE
- 3) POWER SOURCE
- 4) DIMENSIONS i) L      ii) W      iii) HT
- 5) The building has been demolished.

## 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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### CARTOGRAPHIC DEPICTION

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

### DOCUMENTARY REFERENCES

Plan:  
 E09      B01 - 22/11/68 ; Proposed Refridgerator House

ERDE list 1972 - Refrigeration house next to E10  
 RARDE list 1992 - Refrigeration house next to E10

### PHOTOGRAPHY HISTORIC

### PHOTOGRAPHY RCHME

1)206/C/32 02 Feb 1993 From West  
 206/C/34 02 Feb 1993 From South West

### 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
NAME/FUNCTION Shift house and office		START DATE 1960?	END DATE 1985?
			
CARTOGRAPHIC DEPICTION  c1960 - WASC 900/94 c1963 - WASC 900/97 ; E12 1972 - WASC 900/102 ; E12 1972 - WASC 900/104 ; E12 1976 - WASC 900/113 ; E12		DOCUMENTARY REFERENCES  Plans: E12    B01 - B08 ; Plans and Elevations 1961 to 1982  ERDE list 1972 - Shift house and office 1964 RARDE list 1992 - Derelict shift house	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME  1) 206/C/28 02 Feb 1993 From South East	
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
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NAME/FUNCTION Sewer pump house and filter beds	START DATE 1962	END DATE 198?
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<p><b>CARTOGRAPHIC DEPICTION</b></p> <p>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</p>	<p><b>DOCUMENTARY EVIDENCE</b></p> <p>Plan:  E13 B01 - 8/8/1962 ; Detail of Sewage Disposal Works (2ft to 1in)</p> <p>ERDE list 1972 - Sewer pump house and filter beds  1964</p> <p>RARDE list 1992 - Sewer pump house and filter beds</p>
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<p><b>PHOTOGRAPHY HISTORIC</b></p>	<p><b>PHOTOGRAPHY RCHME</b></p> <p>1) 206/C/27 02 Feb 1993 From South West</p>
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<p><b>RELATIONSHIPS WITH OTHER MONUMENTS</b></p> <p>ASSOCIATED WITH: E12, RCHME 185</p>
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<p><b>CONDITION</b> Fair</p>
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<p><b>DESCRIPTION</b></p> <ol style="list-style-type: none"> <li>1) CONSTRUCTIONAL MATERIAL Brick</li> <li>2) ROOF MATERIALS AND STRUCTURE Roofing felt over fibre board</li> <li>3) POWER SOURCE Electricity</li> <li>4) DIMENSIONS i) L 2.4m ii) W 1.7m iii) HT 2.1m</li> <li>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.</li> </ol> <p>Historic artefacts - Instruction notice and makers plate on pump</p>
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## 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?
			
<p>CARTOGRAPHIC DEPICTION</p> <p>&gt; 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</p>		<p>DOCUMENTARY REFERENCES</p> <p>ERDE list 1972 - Magazine 1964          RARDE list 1992 - Mixing house/nitric ester store</p> <p>Plans          Drg 01 Mixing House No.4 5-apr-1940</p>	
<p>PHOTOGRAPHY HISTORIC</p>		<p>PHOTOGRAPHY RCHME</p> <p>1) 206/I/15 From South West          206/T/10 From South</p> <p>2)BB92/26164 View from North West</p>	
<p>RELATIONSHIPS WITH OTHER MONUMENTS</p> <p>ASSOCIATED WITH: RCHME 107</p>			
<p>CONDITION Fair</p>			

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 Genarator room		START DATE 1964	END DATE 1981?
			
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.

## THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER 44	OLD SERIES	RCHIME NUMBER	N.G.R. TL 37547 02182
NAME/FUNCTION Boat house		START DATE 1857-8	END DATE
			
CARTOGRAPHIC DEPICTION  1923      WASC 900/84 : Boat House		DOCUMENTARY REFERENCES  1908      RGPF Ledger WASC 1509 + WASC 1764 : Boat House built 1857-8 p4 c1925      RGPF Ledger WASC 1680 : Boat House c1945      RGPF Ledger WASC 1508 : Boat House	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHIME  1) 206/R/16 18 Mar 1993 Site of Boat House from East	
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH: RCHIME 287			
CONDITION      Buried			
DESCRIPTION 1)      CONSTRUCTIONAL MATERIAL Brick  4)      DIMENSIONS i) L 8.1m ii) W 4.3m  5)      The remains of the demolished boat house may be traced as two low brick foundation walls. The inner bay may be traced where the infilling material has settled			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER 46	OLD SERIES	RCHIME NUMBER	N.G.R. TL 37625 02155
NAME/FUNCTION Mixing House No.2		START DATE 1904	END DATE 20-Apr-1940
NO PHOTOGRAPHY AVAILABLE			
<p>CARTOGRAPHIC DEPICTION</p> <p>1923 WASC 900/84 : 46 Mixing House No.2</p> <p>1940 Proc Court Inquirey on explosion RGPF 20th April 1940 - Appendix II Plan of crater and building</p>		<p>DOCUMENTARY REFERENCES</p> <p>Proc Court Inquirey on explosion RGPF 20th April 1940 1894 WASC 901/154A 30 Nov 1894 No2 Mixing House includes construcyion table</p> <p>Plan; 46 B01 ; Site plan of New Mixing House</p> <p>1908 RGPF Ledger WASC 1509 + WASC 1764 ; Mixing House built 1904 p4</p> <p>c1925 RGPF Ledger WASC 1680 : Mixing House</p> <p>c1945 RGPF Ledger WASC 1508 : Mixing House (demol by explosion)</p>	
<p>PHOTOGRAPHY HISTORIC</p> <p>1940 Proc Court Inquirey on explosion RGPF 20th April 1940 - Appendix I Photographs 1-4</p>		<p>PHOTOGRAPHY RCHIME</p>	
<p>RELATIONSHIPS WITH OTHER MONUMENTS</p> <p>ASSOCIATED WITH: E3</p>			
<p>CONDITION Demolished</p>			
<p>DESCRIPTION</p> <p>1) CONSTRUCTIONAL MATERIAL Earthwork</p> <p>5) The mixing house was totally destroyed in an explosion on 20th april 1940. A slight scarp marks the position of the northern side of the traverse.</p>			



## THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER 46A	OLD SERIES	RCHME NUMBER	N.G.R. TL 37620 02130
NAME/FUNCTION Mixing house		START DATE 1940?	END DATE 1945?
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION  1954     A - B.34 c1960    WASC 900/94 c1963    WASC 900/97 1972     WASC 900/102 1972     WASC 900/104 1976     WASC 900/113		DOCUMENTARY REFERENCES  c1945    RGPF Ledger WASC 1508 : Replace 46 to new 1941 design  1972     ERDE List ; Mixing House with Landing Stage 1992     RARDE List ; Mixing House with Landing Stage	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME  1) 206/O/17 08 Mar 1993 steam pipe entering 206/O/18 08 Mar 1993 steam pipe. N/G gully tunnel 206/O/19 08 Mar 1993 interior from South 206/O/20 08 Mar 1993 detail of area where N/G tank stood 206/O/21 08 Mar 1993 holes for N/G mixing tables 206/O/22 08 Mar 1993 tunnel through which the N/G was channelled  2) BB92/26292 Mixing House 46A from South West	
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH: E3. 46R			
CONDITION     Good			

DESCRIPTION

1) CONSTRUCTIONAL MATERIAL  
Breeze block and earthwork

2) ROOF MATERIALS AND STRUCTURE  
-

3) POWER SOURCE  
Electricity and steam heating

4) DIMENSIONS iv) DIA 10.6m

5) This mixing house replaced mixing house no 2 (46) which was destroyed in an explosion on 20th april 1940. The mixing house sat within a circular breeze block revetment wall surrounded by an earthen traverse. The mixing house was a timber framed roundhouse 9m in diameter that sat on a low brick sill wall. It was secured to the floor by vertical mounting bolts and was separated from the revetment wall by a gully. In the centre of the building is a post hole 16cm x 16cm. The mixing house was entered from a landing stage through a covered porch from the south. The porch was timber framed and covered by asbestos sheeting. To the west of the porch was a small asphalt covered building base 2.6m x 1.7m. The arm of the canal was specially constructed to serve this building.

The nitroglycerine entered the mixing house from the washing house E3 along a lead lined gutter formerly supported on timber trestles. The nitroglycerine was then channelled along the western side of a breeze block lined tunnel to the north of the roundhouse. The nitroglycerine was then stored in a tank within the building before being measured into burettes. To the north of the roundhouse are the cut off steel bolts that secured this tank and an L shaped trough in front, 220cm x 142cm, into which the bags of guncotton were placed. In the floor of the building are three groups of four post holes 26cm x 22cm, depth 7cm to which the mixing tables were fixed.

The building was heated by a warm air pipe entering from the west that unusually entered the base of the building. The pipe was constructed from sections of rolled galvanised sheeting and connected together by bolted flanged ends. The pipe was lagged by fibrous asbestos secured in place by chicken wire and protected by a jacket of galvanised metal.

Historic salvage - heating pipe, 'Maxlume' danger building lights, any other metal fittings

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY			
NUMBER 46R	OLD SERIES	RCHME NUMBER	N.G.R. TL 37658 02184
NAME/FUNCTION Replacement for Mixing House No.2		START DATE 1941	END DATE 1945?
			
<p>CARTOGRAPHIC DEPICTION</p> <p>1954 A - B.34  c1960 WASC 900/94  c1963 WASC 900/97  1972 WASC 900/102  1972 WASC 900/104  1976 WASC 900/113</p>		<p>DOCUMENTARY REFERENCES</p> <p>1972 ERDE List ; Replacement for Mixing House No.2  1991 Mott McDonald survey  1992 RARDE List ; Replacement for Mixing House No.2</p>	
<p>PHOTOGRAPHY HISTORIC</p>		<p>PHOTOGRAPHY RCHME</p> <p>1) 206/O/26 08 Mar 1993 from South  206/O/27 08 Mar 1993 pipe detail  206/T/23 17 Mar 1993 Detail lead pipe North side</p> <p>2) BB92/26293 Mixing House 46R from South</p>	
<p>RELATIONSHIPS WITH OTHER MONUMENTS</p> <p>ASSOCIATED WITH: E2. U2 OVERLIES: RCHME 358?</p>			
CONDITION		Good	

#### DESCRIPTION

1) CONSTRUCTIONAL MATERIAL  
Breeze block and earthwork

2) ROOF MATERIALS AND STRUCTURE  
Galvanised metal sheeting

3) POWER SOURCE  
Electricity and steam heating

4) DIMENSIONS iv)DIA 11.4m

5) The mixing house along with 46A was built probably in late 1940 as replacement for mixing house 46 destroyed in an explosion on 20th april 1940. The mixing house was set within a circular breeze block revetting wall retaining an external earthen traverse. The traverse was revetted along its northern side by a breeze block wall against Newtons Pool. The mixing house was entered from the east through a tunnel. Within the tunnel the narrow guage rails that served the house remained, as the metal rails approached the entrance porch they were replaced by wooden rails. At the ned of the tunnel an old crack sealed by cement has the date 1-1-44.

The timber roundhouse that formerly stood in the centre of the traverse was separated from the revetting wall by a gully 0.7m in width. The timber wall frames sat on a brick retaining wall around the concrete floor, 9.3m in diameter, secured to the floor by vertical mounting bolts. The roundhouse was entered along through a covered porch constructed from a timber frame with asbestos sheet fixed to it. Only part of the floor was exposed, the remainder covered by humic deposits. Where the floor was exposed were four square post holes each 10cm x 10cm forming a feature 82cm x 82cm. To the north of the building in the gully are two rectangular concrete holes, form the larger a lead pipe with a bore of 39mm entered the building. This pipe was probably associated with the movement of nitroglycerine into the house.

The building was heated by a single pipe from fanhouse U2 that formerly connected to an octagonal roofplate, 91cm x 91cm, at the apex of the roof. The pipe consisted of segments formed from rolled sheets with flanged ends bolted together. The pipe was lagged by fibrous asbestos, held in place by chicken wire and protected by a galvanised metal jacket. The building was lit by electric light protected in enamelled 'Maxlume' boxes.

Historic artefacts: Heating pipes, Maxlume danger buildings lights, other metal fittings

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES 47	RCHME NUMBER	N.G.R. TL 37502 02155
NAME/FUNCTION Egg House		START DATE 1904	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION  1923 WASC 900/84;47 Egg House		DOCUMENTARY REFERENCES  1908 RFPF Ledger WASC 1509; 47 Egg House built 1904 p4 Plan 0.47.B 01 Proposed Egg House N G Factory Edmonsey	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH: E1			
CONDITION Demolished			
DESCRIPTION 1) CONSTRUCTIONAL MATERIAL Timber frame  2) ROOF MATERIALS AND STRUCTURE Zinc covered  3) POWER SOURCE  4) DIMENSIONS i) L ii) W iii) HT  5)			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES 50	RCHME NUMBER	N.G.R. TL 37495 02115
NAME/FUNCTION No1 Granulating House Magazine Dirty Store Magazine		START DATE 1857-8	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION  1871 PRO Supp/682 1886 WASC 900/38 Magazine No1 Granulating House 1897 OS 2nd Ed Essex XL1X.10 c1960 P16 50 Dirty Store		DOCUMENTARY REFERENCES  1908 RGPF Ledger WASC 1509 + WASC 1764 Dirty Store built 1857-8 p4	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH: No1 Granulating House S34, 54			
CONDITION      Buried			
DESCRIPTION 1)      CONSTRUCTIONAL MATERIAL Brick  4)      DIMENSIONS i) L 6.75m ii) W 4.85m  5)      The remains of the demolished magazine may be traced as brick foundations. The remains indicate a porch on the canal side and buttresses on the west side.			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES 54	RCHME NUMBER	N.G.R. TL 37486 02090
NAME/FUNCTION Receiving Magazine No1 Press House Magazine Dirty Store	START DATE 1801-06 1857? 1898	END DATE 1857 1898	
NO PHOTOGRAPHY AVAILABLE			
<p>CARTOGRAPHIC DEPICTION</p> <p>1806 WO78/1352 1827 WASC 900/04 1830 WO55 2694 1830 WASC 900/06 c1835 WASC 900/07 1865 WASC 900/38 + SUPP5 975 1865 WASC 900/41A 1871 PRO SUPP5/682 Magazine 1886 WASC 900/42 ; No.1 Press House Magazine 1897 WASC 900/53C c1910 WASC 900/65 c1910 WASC 900/79</p>		<p>DOCUMENTARY REFERENCES</p> <p>1807 Statement of Property WO55 2694 ; Receiving Magazine 1830 Statement of Property WO55 2351 ; 151 Receiving Magazine 1841 Statement of Property WO55 28 ; 151 Receiving Magazine 1851 Statement of Property WO55 3027 ; Receiving Magazine 1908 RGPf Ledger WASC 1509 Dirty store built about 1857-8 p4</p>	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
<p>RELATIONSHIPS WITH OTHER MONUMENTS</p> <p>ASSOCIATED WITH: 50,76</p>			
CONDITION Demolished			
<p>DESCRIPTION</p> <p>5) No surface remains of the Magazine were seen. The area has been dumped over and the foundations may remain buried.</p>			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES 61	RCHME NUMBER	N.G.R. TL 3748 0208
NAME/FUNCTION Water Tower		START DATE 1896	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION  1923 WASC 900/84; 61 Water Tower Drwg No P16 61 Water Tower		DOCUMENTARY REFERENCES  1905 WASC 1509 RGPF Ledger p5 Water Tower built 1896	
PHOTOGRAPHY HISTORIC  Supply 5/860 86 Water Tower 1897		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH: Nitroglycerine & Acid Factories			
CONDITION      Demolished			
DESCRIPTION 1)      CONSTRUCTIONAL MATERIAL Brick  2)      ROOF MATERIALS AND STRUCTURE  3)      POWER SOURCE  4)      DIMENSIONS  5)      Octagonal brick Water tower. No surface remains. Sections of the tower when the Canal RCHME 287 was re-excavated in 1993 during the decontamination programme.			



**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES 62	RCHME NUMBER	N.G.R. TL 37523 02062
NAME/FUNCTION Mixing House No.3	START DATE 1904	END DATE 1945?	
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION		DOCUMENTARY REFERENCES	
1923 WASC 900/84 ; 62 Mixing House No.3		1908 RGPF Ledger WASC 1509 + WASC 1764 ; Mixing House built 1904 p4 c1925 RGPF Ledger WASC 1680 ; Mixing House c1945 RGPF Ledger WASC 1508 ; Mixing House No.3  1972 ERDE List ; Mixing House No.3/Burnt out 1992 RARDE List ; Mixing House No.3/Burnt out	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RCHME NEG No. BB92/16737 (also PRO Supplt 5/861 photo. No. 251) Mixing House Edmonsey (c1909)  Proc Court of Inquirey Explosion at RGPF 20-Apr-1940 10 photographs		1) 206/U/7 From West 206/U/8 Nitroglycerine tunnel from West 206/U/8 Steam heating pipes and central hole 206/U/10 From West	
RELATIONSHIPS WITH OTHER MONUMENTS			
ASSOCIATED WITH: E5, RCHM 186, RCHM 188, RCHM 189			
CONDITION	Good		

## THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER	OLD SERIES 63	RCHME NUMBER	N.G.R. TL 37625 02071
NAME/FUNCTION Mixing House No.5	START DATE 1904	END DATE 18-Jan-1940	
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION  1923      WASC 900/84 ; 63 Mixing House No.5		DOCUMENTARY REFERENCES  1908      RGPF Ledger WASC 1509 + WASC 1764 ; Mixing House No.5 built 1904 p1 c1925      RGPF Ledger WASC 1680 ; Mixing House No.5 c1945      RGPF Ledger WASC 1508 ; Mixing House No.5(demolished by explosion)  1972      ERDE List ? 1992      RARDE List ?  WASC 498 Proc Court Inquiry at Waltham Abbey re explosion on 18 January 1940	
PHOTOGRAPHY HISTORIC  1) WASC 499 Photographs of explosion 18-january-1940, photographs 1-3  WASC 1333 Cordite Blending House No.5 Bomb damage (craters) 5-Oct-1940 {is this correctly identified?, this building had been destroyed in january}	PHOTOGRAPHY RCHME		
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH: E5, 53			
CONDITION      Destroyed			
DESCRIPTION  5)      Mixing house no 5 was destroyed in a an accidental explosion on the 18th january 1940. The site of the building may be discerned as an area of rubble strewn on slightly elevated broken ground.			

#### DESCRIPTION

1) CONSTRUCTIONAL MATERIAL  
Cast concrete and earthwork

2) ROOF MATERIALS AND STRUCTURE  
Galvanised metal

3) POWER SOURCE  
Electricity and steam heating

4) DIMENSIONS iv) DIA 10.62m

5) The mixing house, formerly a timber round house with a low conical roof supported by a central pillar, was housed within a cast concrete revetment wall 2.1m in height. This in turn was surrounded by an earth traverse. The roundhouse was separated from the revetment wall by a gully 68.5cm wide and 25cm in depth. The roundhouse was 9.3m in diameter and was bolted directly to the concrete floor slab. At the centre of the building is a post hole 17cm x 17cm. A thin groove around the edge of the concrete floor may indicate that the walls were covered by asbestos sheets. Guncotton was brought into the mixing house from the adjacent canal through a covered entrance porch sloping gently down into the building. The superstructure to the porch was supported on a low concrete wall that overlaid the inner revetment wall.

Nitroglycerine was run into the building along a lead lined gutter from washing house E5. The nitroglycerine gutter entered the building along a tunnel through the eastern side of the traverse. The remains of the bolts that supported the gutter are visible along the southern side of the tunnel. Once inside the building the nitroglycerine was temporarily stored within a lead tank, the metal fixing bolts remain in the floor. In front of this tank is a J shaped concrete hole 158cm x 135cm and 45cm deep, this was formerly lead lined. Although the floor was partly obscured by debris four square holes 26cm x 26cm were visible. Into these holes were formerly fixed wooden blocks to secure the mixing tables.


The building was heated by steam heating that was brought to the building through lagged pipes supported by concrete stanchions. Within the building were two flanged and curved cast iron steam pipes. Also within the building was a cast iron steam chest with the following lettering "The Lancaster" Patent Lancaster and Tonge Pendleton'.

Historic artefacts - steam heating pipes?, steam chest, any other metal fitting

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES 73	RCHME NUMBER	N.G.R. TL 37524 02018
NAME/FUNCTION Earth closet	START DATE 1904	END DATE	
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION	DOCUMENTARY REFERENCES 1908 RGPF Ledger WASC 1509 + WASC 1764 ; Earth Closet built 1904 p7		
PHOTOGRAPHY HISTORIC	PHOTOGRAPHY RCHME 1) 206/U/12 From North		
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH:			
CONDITION	Good		
DESCRIPTION 1) CONSTRUCTIONAL MATERIAL Brick  2) ROOF MATERIALS AND STRUCTURE Roofing felt over timber boards  3) POWER SOURCE None  4) DIMENSIONS i) L 3.3m ii) W 2.7m iii) HT gable 2.9m  5) The earth closet consists of a covered elsan bucket to the south and an open urinal to the north. A painted sign on the wall reads 'clean'.			

## THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER	OLD SERIES 76	RCHME NUMBER	N.G.R. TL 37532 01952
NAME/FUNCTION Traverse (part of former Corning House No.3) Press House and Pump House Mixing House No.4		START DATE 1806-1818 c1850 1898?	END DATE 1819 1898? 1940?
			
<p><b>CARTOGRAPHIC DEPICTION</b></p> <p>1827 WASC 900/04 + MPH 271 ; Traverse site of Former Corning House worked by Horses.</p> <p>1830 WASC 900/05 ; site of No.3 Corning House</p> <p>c1835 WASC 900/07 ; site of Corning House</p> <p>1865 WASC 900/38 + SUPP5 975 ; Press House, Wheel, Pump, Washing up Houses and Traverse.</p> <p>1865 WASC 900/42 ; Press House, Wheel, Pump, Washing up Houses and Traverse.</p> <p>1871 SUPP5/682 ; Washing up House/Press House</p> <p>1897 WASC 900/53C</p> <p>c1910 WASC 900/65 ; 76</p> <p>c1910 WASC 900/79 ; 76</p> <p>1917 WASC 900/70 ; 76</p> <p>1917 WASC 900/72 ; 76</p> <p>1919 WASC 900/74 ; 76</p> <p>c1920 WASC 900/80 ; 76</p> <p>1923 WASC 900/84 ; 76</p> <p>1932 WASC 900/87 ; 76</p> <p>&gt; 1940 WASC 900/91A ; 76</p> <p>1954 A - B.34 ; 76</p> <p>c1960 WASC 900/94 ; 76</p> <p>c1963 WASC 900/97 ; 76</p> <p>1972 WASC 900/102 ; 76</p> <p>1972 WASC 900/104 ; 76</p> <p>1976 WASC 900/113 ; 76</p>		<p><b>DOCUMENTARY REFERENCES</b></p> <p>1830 Statement of Property WO55 2351</p> <p>1819 'Mr Philpot, of Stanford Street purchased at the late sale of Ordnance property all the Corning Houses, Press Houses etc.....Mr Philpot offers £50 for the machinery of Nos 2 and 3 Corning Houses, which cost the Board £9000. In good state of preservation' Winters 1887 p86</p> <p>1841 Statement of Property WO55 2856</p> <p>1851 Statement of Property WO55 3027</p> <p>1908 RGPF Ledger WASC 1509 + WASC 1764 ; Mixing House, Shoe Porch built 1860(about)p7</p> <p>c1925 RGPF Ledger WASC 1680 ; Mixing House, Shoe Porch</p> <p>c1945 RGPF Ledger WASC 1508 ; Mixing House, Shoe Porch (demolished)</p> <p>1972 ERDE list ; Former Mixing House No.4</p> <p>1992 RARDE list ; Former Mixing House No.4</p>	
<p><b>PHOTOGRAPHY HISTORIC</b></p> <p>1) WASC 499 Photograph No.6 - Damage to building in January 1940 when Mixing House 63 blew up.</p>		<p><b>PHOTOGRAPHY RCHME</b></p> <p>1) 206/I/16 01 Feb 1993 Traverse from South West</p> <p>206/I/18 01 Feb 1993 Dock near 76 from South</p> <p>206/I/19 01 Feb 1993 Traverse from South</p> <p>206/T/7 17 Mar 1993 Brick traverse</p>	

RELATIONSHIPS WITH OTHER MONUMENTS

ASSOCIATED WITH: RCHME 288      CUT BY: RCHM 107

CONDITION      GOOD: Fair

DESCRIPTION

1)      CONSTRUCTIONAL MATERIAL  
Brick

2)      ROOF MATERIALS AND STRUCTURE  
-

3)      POWER SOURCE  
1) Horse 2) Water powering a hydraulic pump 3) Electric lighting?

4)      DIMENSIONS i) L 14.94m ii) W 5.45m iii) HT estimate 6m

5)      The monument lies at the head of a higher level leat RCHME 288 fed from Millhead stream. The core of this monument is an oval, battered brick traverse dating from the early nineteenth century and associated with a corning mill worked by horses. In the middle of the century the building was converted to a water powered gunpowder press house, analogous to 103/4. The mill was powered by the head of water from the leat falling into the old river Lee at a lower level. This wheel powered an hydraulic pump which in turn powered the press on the north east side of the building. At the end of the century the press house was converted to a cordite mixing house. The mixing house was badly damaged in an explosion in 1940 and may have gone out of use at this time. The site of the wheel house to the south west of the traverse was lost in 1940 when a new canal arm was pushed through RCHM 107.

The remains consist of the brick traverse, to the southwest a short length of a brick foundation in the canal bank marks one wall of the wheel house, the remainder has been lost to the canal. To the north east of the traverse the brick foundations of the press house, length 8.65m width 7.23m and part of a broken concrete floor. The western wall also forming a wharf edge to the canal basin. Along the front of the wharf is some metal piping that may either relate to the hydraulic gunpowder press or the cordite mixing house. To the southwest of the traverse the foundations of the northern wall of the pump house survive in the canal bank as a single row of bricks.

Historic artefacts - Metal pipes along the front of the press house.

## THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER	OLD SERIES 88a	RCHME NUMBER	N.G.R. TL 37594 01900
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NAME/FUNCTION No.6 Mixing House C.E. Magazine	START DATE 1914-20? 1940?	END DATE
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<p><b>CARTOGRAPHIC DEPICTION</b></p> <p>1923    WASC 900/84 ; 88a          &gt; 1940    WASC 900/91A ; 88a          1954    A - B.34 ; 88a          c1960    WASC 900/94 ; 88a          c1963    WASC 900/97          1972    WASC 900/102          1972    WASC 900/104          1976    WASC 900/113</p>	<p><b>DOCUMENTARY REFERENCES</b></p> <p>Plans;          88a    B01 - B04 ; Plans and Elevations</p> <p>c1925    RGPF Ledger WASC 1680 ; CE Magazine</p> <p>1991    Mott McDonald survey          1992    RARDE List ; Derelict Tetryl Magazine and                    Mixing House</p>
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<p><b>PHOTOGRAPHY</b> HISTORIC</p>	<p><b>PHOTOGRAPHY</b> RCHME    206/0/24             206/113-4</p>
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<p><b>RELATIONSHIPS WITH OTHER MONUMENTS</b></p> <p>ASSOCIATED WITH: 88b</p>
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<p><b>CONDITION</b>      Fair</p>
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DESCRIPTION

1) CONSTRUCTIONAL MATERIAL  
Brick in English Bond

2) ROOF MATERIALS AND STRUCTURE  
-

3) POWER SOURCE  
Electric lighting

4) DIMENSIONS i) L 10.67m ii) W 6m iii) HT gable 5m

5) The magazine is a single storey gabled building in brick. The western wall consists of three blind panels the centre panel has the double doors. This entrance was originally protected by a covered porch in order that material could be loaded and unloaded under cover from the adjacent canal. The north and south gabled ends consist of two blind panels with a window in each panel. The eastern wall has three blind panels with a window in the centre panel opposite to the door. In the concrete floor of the building are a number of holes marking the positions of the mixing tables. The building is roofless.

All five windows in the building retain part of the danger building lighting system. This consisted of a timber blocking to the window with a single small pane of glass at the top, two in the larger eastern window. External to each window is a Maxlume danger building light casing set with a wooden case. The wiring for the lights was enclosed within narrow bore metal piping.

Historic artefacts - Danger building lights including at least one window frame.



## THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER 88b	OLD SERIES	RCHME NUMBER	N.G.R.
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NAME/FUNCTION Fanhouse?	START DATE 1940	END DATE
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CARTOGRAPHIC DEPICTION	DOCUMENTARY REFERENCES
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PHOTOGRAPHY HISTORIC	PHOTOGRAPHY RCHME 1) 206/I/21 From south 206/T/12 From south
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### RELATIONSHIPS WITH OTHER MONUMENTS

ASSOCIATED WITH: 88a

CONDITION      Good

### DESCRIPTION

- 1)      CONSTRUCTIONAL MATERIAL  
        Brick
  
- 2)      ROOF MATERIALS AND STRUCTURE  
        Flat concrete slab
  
- 3)      POWER SOURCE  
        Electricity
  
- 4)      DIMENSIONS i) L 3.25m ii) W 3.25m iii) HT 3.26m
  
- 5)      The building is a small brick shed with a single door on the west side and a small window on the northern side. The door furniture is brass. A small circular hole on the south side presumably housed a pipe leading to 88a. With the building is an electric ?pump, for pushing warm air into 88a?. A small plate on the machine records the date of manufacture as 16 12 40.  
  
 Historic artefacts - pump and makers plate (it is the only surviving ?warm air pump/fan on site), brass door furniture.

## THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER ARS2	OLD SERIES	RCHME NUMBER	N.G.R. TL 37474 01890
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NAME/FUNCTION Air Raid Shelter 2	START DATE 1940	END DATE 1945
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<p>CARTOGRAPHIC DEPICTION</p> <p>&gt; 1940    WASC 900/91A          1954      A - B.34          c1960    WASC 900/94          c1963    WASC 900/97          1972      WASC 900/102          1972      WASC 900/104          1976      WASC 900/113</p>	<p>DOCUMENTARY REFERENCES</p>
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<p>PHOTOGRAPHY HISTORIC</p>	<p>PHOTOGRAPHY RCHME</p> <p>1) 206/B/4 Interior Elsan Bucket          206/B/5 Interior seating          206/C/22 From southwest</p> <p>2) BB92/26141 From northwest</p>
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<p>RELATIONSHIPS WITH OTHER MONUMENTS</p> <p>ASSOCIATED WITH: Acid Factory</p>
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<p>CONDITION      Good</p>
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DESCRIPTION

- 1) CONSTRUCTIONAL MATERIAL  
Concrete
- 2) ROOF MATERIALS AND STRUCTURE  
Concrete
- 3) POWER SOURCE  
Electricity and steam heating
- 4) DIMENSIONS i) L 9.21m ii) W 5.16m iii) HT 2.55m
- 5) The shelter was entered from the west through doors at either end of the building, each marked with a painted letter A. At the rear of the each entrance lobby is a small cubicle both of which retain a metal elsan bucket. The cubicle was formerly partitioned by a piece of material hanging from the ceiling. In the main central room the original wooden benches survive along the eastern and western walls with a double, i.e. back to back bench down the centre of the room. The shelter was lit by electric lights and heated by steam pipes that entered from the north east corner.

## THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY

NUMBER U3	OLD SERIES	RCHME NUMBER	N.G.R. TL 37520 02088
NAME/FUNCTION Shelter		START DATE 1940?	END DATE 1954?
			
CARTOGRAPHIC DEPICTION		DOCUMENTARY REFERENCES	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME 1)206/L/22 From North East	
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH: 62			
CONDITION: Good			
<p>DESCRIPTION</p> <p>1) CONSTRUCTIONAL MATERIAL Brick in English Bond</p> <p>2) ROOF MATERIALS AND STRUCTURE Flat Concrete slab</p> <p>4) DIMENSIONS i) L 3.1 ii) W 2.05 iii) HT 2.2</p> <p>5) The building has a single door to the East and a single window to the West with a concrete lintel and removable concrete blocks. The North and South elevations are blank. Traces of wavy camouflage paint are discernible on the exteriors.</p>			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES	RCHME NUMBER 108	N.G.R. TL37520 01815
NAME/FUNCTION Watch house		START DATE 1806-27	END DATE 1899?
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION  1827 MPH 271; 146 Watch house		DOCUMENTARY REFERENCES  1830 WO55/2694; 146 Watch house 1841 WO55/2856; 146 Watch house 1851 WO55/3027; 19 Watch house	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH:			
CONDITION Demolished			
DESCRIPTION 1) CONSTRUCTIONAL MATERIAL Brick  4) DIMENSIONS i) L 9m ii) W 6m  5) The watch house was demolished between 1897 and 1900. Odd sections of brick foundations and a sandstone door slab mark its site.			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES	RCHME NUMBER 109	N.G.R. TL37476 01854 TL37455 02045
NAME/FUNCTION Pipeline		START DATE 1940?	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION		DOCUMENTARY REFERENCES	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH: ARS2, RCHME 111			
CONDITION      Poor			
DESCRIPTION  5)      Row of concrete stanchions that formerly supported a steam pipeline. The posts are cast concrete with iron hoops at the top, 1.9m in height.  Steam main along South side of North to South track.-			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES	RCHME NUMBER 111	N.G.R. TL 37462 01916 37502 01939
NAME/FUNCTION Pipeline		START DATE 1940?	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION	DOCUMENTARY REFERENCES		
PHOTOGRAPHY HISTORIC	PHOTOGRAPHY RCHME		
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH: RCHME 109, E14			
CONDITION: Poor			
DESCRIPTION  5) Row of concrete stanchions, 45m in length, that formerly supported a steam pipeline. The posts are cast concrete with iron hoops at the top, 1.5m in height. Joins main feeder pipeline RCHME 109 to E14.			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES	RCHME NUMBER 185	N.G.R. TL37498 02035
NAME/FUNCTION Blast wall		START DATE 1940?	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION		DOCUMENTARY REFERENCES	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH: 62, E13			
CONDITION      Good			
DESCRIPTION 1)      CONSTRUCTIONAL MATERIAL Breeze block  4)      DIMENSIONS i) L 19.15m ii) W 1.2m iii) HT 3.5m  5)      Breeze block blast wall east of E13.			



**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES	RCHME NUMBER 186	N.G.R. TL37497 02075
NAME/FUNCTION Blast wall		START DATE 1940?	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION		DOCUMENTARY REFERENCES	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH: 62			
CONDITION      Good			
DESCRIPTION 1)      CONSTRUCTIONAL MATERIAL Breeze block  4)      DIMENSIONS i) L 8m ii) W 1.15m iii) HT 3.4m  5)      Breeze block blast wall.			

THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY			
NUMBER	OLD SERIES	RCHME NUMBER 189	N.G.R. TL37530 02055 TL37545 02085
NAME/FUNCTION Steam pipe		START DATE 1940?	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION		DOCUMENTARY REFERENCES	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH: 62			
CONDITION      Poor			
DESCRIPTION 5)      Line of concrete stanchions with iron hoops. Formerly carried a steam pipe, bore 27mm, lagged by asbestos covered by bitumen sheeting.			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES	RCHME NUMBER 195	N.G.R. TL 37488 01967 TL 37460 01966
NAME/FUNCTION Pipeline		START DATE 1940	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION	DOCUMENTARY REFERENCES		
PHOTOGRAPHY HISTORIC	PHOTOGRAPHY RCHME		
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH: E14?			
CONDITION	Poor		
DESCRIPTION 1) CONSTRUCTIONAL MATERIAL Earthenware pipe  5) Earthen ware pipes external diameter set in concrete on an earth bank 0.6m in height.			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES	RCHME NUMBER 196	N.G.R. TL 37475 01880 37475 02047
NAME/FUNCTION Telegraph/Electric line		START DATE 1940s	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION		DOCUMENTARY REFERENCES	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS Associated with E12, ARS2			
CONDITION      Poor			
DESCRIPTION  5)      Row of telegraph poles, one post branded inscription 'GPO 24L 47', insulators dated 1940 and 1941.			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES	RCHME NUMBER 198	N.G.R. TL37531 01932 TL37629 01920
NAME/FUNCTION Overhead line		START DATE L19th/20th, 1940s	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION		DOCUMENTARY REFERENCES	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH: E14, RCHME 115			
CONDITION      Poor			
DESCRIPTION  5)      Row of poles supporting overhead lines, some late nineteenth/early twentieth century insulators and later 1940s types. The run may have been used to carry either/or electricity lines and telephone lines.			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES	RCHME NUMBER 200	N.G.R. TL37630 01935
NAME/FUNCTION Steam pipe	START DATE 1940?	END DATE	
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION	DOCUMENTARY REFERENCES		
PHOTOGRAPHY HISTORIC	PHOTOGRAPHY RCHME		
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH: RCHM 103, RCHM 115, S90			
CONDITION Poor			
DESCRIPTION  3) POWER SOURCE Steam  5) Row of concrete stanchions with iron hoops to carry a steam pipe, the pipe was carried over bridge RCHM 103 and along traverse RCHM 115 before crossing the canal to S90.			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES	RCHME NUMBER 203	N.G.R. TL 37615 02085
NAME/FUNCTION Telegraph/Electric Line		START DATE 1940?	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION		DOCUMENTARY REFERENCES	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH: S27?			
CONDITION: Poor			
DESCRIPTION 1) CONSTRUCTIONAL MATERIAL  2) ROOF MATERIALS AND STRUCTURE  3) POWER SOURCE  4) DIMENSIONS i) L      ii) W      iii) HT  5)			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES	RCHME NUMBER 213	N.G.R. TL 37590 02114
NAME/FUNCTION Blast wall		START DATE 1940?	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION		DOCUMENTARY REFERENCES	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH: 52, E4, E16			
CONDITION      Good			
DESCRIPTION 1)      CONSTRUCTIONAL MATERIAL Breeze blockINE  4)      DIMENSIONS i) L 9.3m ii) W 1.4m iii) HT 3.2m  5)      Breeze block blast wall to te east of wash water settling house E4.			



**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES	RCHME NUMBER 215	N.G.R. TL 37616 02112
NAME/FUNCTION Shelter		START DATE 1940?	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION		DOCUMENTARY REFERENCES	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME 1)206/M/27 From South	
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH: 46A			
CONDITION      Fair			
<p>DESCRIPTION</p> <p>1)      CONSTRUCTIONAL MATERIAL          Brick in English bond</p> <p>2)      ROOF MATERIALS AND STRUCTURE          Flat concrete slab</p> <p>3)      POWER SOURCE          None</p> <p>4)      DIMENSIONS i) L 3.1m ii) W 2.05m iii) HT 2.05m</p> <p>5)      The shelter is a small single storey building. It has an entrance on the south side, and a window filled by segmental breeze blocks. Traces of wavy camouflage paint remain on the exterior of the building. The building has partly subsided into a filled canal formerly leading to aqueduct RCHME 214.</p>			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES	RCHME NUMBER 216	N.G.R. TL 37633 02120
NAME/FUNCTION Blast Wall		START DATE 1940?	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION		DOCUMENTARY REFERENCES	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME  1)206/M/28 From West 206/M/29 From West	
RELATIONSHIPS WITH OTHER MONUMENTS  PART OF: 46A			
CONDITION      Good			
DESCRIPTION 1)      CONSTRUCTIONAL MATERIAL Breeze block and earthwork  4)      DIMENSIONS i) L 11.58m ii) W 3.8m iii) HT 3.9m  5)      Breeze block blast wall screening entrance to mixing house 46A.			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES	RCHME NUMBER 251	N.G.R. TL37597 02126 TL37606 01245
NAME/FUNCTION Pipeline		START DATE 1941?	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION	DOCUMENTARY REFERENCES		
PHOTOGRAPHY HISTORIC	PHOTOGRAPHY RCHME		
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH: E3, E4, RCHME 253			
CONDITION	Poor		
DESCRIPTION  Pipeline carried on reinforced concrete posts the pipe supported by an iron hoop suspended from a bracket. The pipe is straight and is joined by screw and flanged joints, the bore is 4cm.  The pipe appears to have carried waste water from the nitroglycerine wash house E3 over the Old River Lee across bridge RCHME 253 to the wash water house E4.			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES	RCHME NUMBER 252	N.G.R. TL37606 02150 TL37625 02137
NAME/FUNCTION Pipeline	START DATE 1941?		END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION		DOCUMENTARY REFERENCES	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH: E2, RCHME 253, 46a			
CONDITION      Poor			
DESCRIPTION  <p>Pipeline carried on reinforced concrete posts, the pipe is supported by an iron hoop suspended from a bracket. The pipe is straight and is joined by screw and flanged joints, the bore is 24mm.</p> <p>The pipe appears to have come from E3 across RCHME 253 it then mounts the traverse of 46a and continued around the eastern side of the structure. It is unclear whether the pipe carried liquids or whether it was used to enclose cabling.</p>			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES	RCHME NUMBER 253	N.G.R. TL37600 02150
NAME/FUNCTION Bridge		START DATE 1940?	END DATE
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION		DOCUMENTARY REFERENCES	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS ASSOCIATED WITH: E3, RCHME 252, RCHME 253			
CONDITION      Poor			
<p>DESCRIPTION</p> <p>Two brick piers remain on either side of the Old River Lee, capped by concrete slabs with vertical mounting bolts. Within the reiver are the sawn off remains of bridge supports.</p> <p>The bridge served to carry a nitroglycerine gutter and other services from the Wash house E3 to the mixing house 46a. Additionally it carried pipeline RCHME 251 towards E4.</p>			

**THE ROYAL GUNPOWDER FACTORY - WALTHAM ABBEY**

NUMBER	OLD SERIES	RCHME NUMBER 273	N.G.R. TL 37435 02149 37517 02170
NAME/FUNCTION Pipeline		START DATE 1962?	END DATE 1981?
NO PHOTOGRAPHY AVAILABLE			
CARTOGRAPHIC DEPICTION		DOCUMENTARY REFERENCES	
PHOTOGRAPHY HISTORIC		PHOTOGRAPHY RCHME	
RELATIONSHIPS WITH OTHER MONUMENTS  ASSOCIATED WITH: E2, E6			
CONDITION      Poor			
DESCRIPTION Line of concrete base that formerly carried a steam pipe?. The pipeline was also used to carry control cabling in a metal gutter from E6 to the Nitrator E2.			



