

WAAC - Waltham Abbey Accident Chronology

ALPHABETICAL INDEX OF NAMES

(correct at 14.5.2011)

DATE	NAME
1739	1 man killed
1760	1 man killed
1781	3 men killed
1.6.1857	Adams (bricklayer) (injured)
27.5.1861	Argent, William (injured)
30.11.1885	Bailey, Henry
13.12.1893	Bailey, James (died 19.12.1893)
18.4.1801	Baily (or Bailey), John
29.4.1789	Baker, John
20.4.1940	Baker, W. H (injured)
11.4.1864	Bales, Charles (millman) (injured)
16/17.4.1836	Bates, Timothy (water warder)
6.2.1920	Beause, W (injured)
27.11.1811	Belsham (Belchere), Thos
27.11.1720	Bennett, Peter
11.2.1789	Bennie (or Rennie), James
7.5.1894	Bennie (or Rennie), William
7.5.1894	Berry (injured)
7.1.1916	Berry, Samuel
18.4.1801	Bilton, Tho
22.2.1940	Boswell, A (injured)
7.5.1894	Bragg (injured)
7.5.1894	Brazier (injured)
13.3.1826	Brown, Henry (injured)
13.2.1796	Brown, John (Millman)
16/17.4.1836	Brown, John (rounder)
13.4.1843	Brown, Samuel
5.7.1869	Burgess, W (injured)
27.5.1861	Burgess, William (injured)
13.12.1893	Carr, William John, (injured)
27.11.1811	Chapple (Chappel), Joseph
13.12.1893	Clayden, James (died 14.12.1893)
15.12.1902	Clements, D (injured)
27.11.1811	Coates (or Goates or Goats), Daniel
11.2.1789	Cock, Stephen
13.4.1843	Cole, James
5.3.1893	Cook, John
22.2.1940	Cutts, A. N (injured)
20.4.1940	Cutts, A. N (injured)
7.5.1894	Dellar (injured)
7.5.1894	Derbridge (injured)
1.5.1792	Dew (Dewes), Henry (died 2.5.1792)
13.4.1843	Dudley, John
27.7.1865	Duncan, Thos (master artificer)
16/17.4.1836	Eaton, John (watchman)
7.5.1894	Edwards (injured)
26.7.1918	Edwards, William
7.5.1894	Ellis, (injured)
18.1.1940	Ellis, A.T (injured)
5.2.1902	Embleton W (injured)

13.4.1843	Essex, James (or Edward)
8.4.1940	Evans, Nathaniel
1.3.1894	Findlay, (master worker) (injured)
28.2.1872	Findlay, Edward (asst master worker) (injured)
15.7.1876	Ford (millman)
10.11.1911	Free, Frederick William
7.5.1894	Frost, George
20.4.1940	Galvin, Thomas
27.7.1865	Garrett (millman) (injured)
7.5.1894	Gibbs (injured)
18.4.1801	Gibbs, Joseph
27.11.1811	Goats (or Goates or Coates), Daniel
10.10.1909	Goodey, T (injured)
27.11.1811	Grapes, John
7.5.1894	Gray (injured)
4.2.1790	Graylin, Tho. (Millman)
4.10.1665	Guttridge (Gutridge), Tho
13.12.1893	Hare, Benjamin, (died 19.12.1893)
20.4.1940	Harris, H.J (injured)
19.11.1811	Heady, Edward
18.4.1801	Hodgson, Henry
16.6.1870	Holmes, Abraham
13.6.1866	Houghton, James
23.8.1906	Hutchings, Frederick
7.5.1894	Ingram, William Smith
15.12.1902	Iron, Walter
13.12.1893	Jennings, Henry (died 14.12.1893)
27.6.1823	Johnson, John (master salt petre refiner)
20.4.1940	Keene, Francis
18.1.1940	Kellman, Albert
7.5.1894	King (injured)
7.5.1894	Kirby (injured)
7.9.1877	Knightley, James (millman) (injured)
1.6.1857	Knowler (master worker) (injured)
1.6.1857	Knowler's nephew (injured)
18.4.1801	Lake, John (or William)
7.9.1877	Lane, James (millman)
13.12.1893	Larman, Edward (died 18.12.1893)
18.1.1940	Lawrence, Albert
20.4.1940	Lewis, David,
7.5.1894	Lindholm (injured)
6.10.1866	Lister (or Little), (millman)
2.8.1877	Lovegrove, Wm (injured)
4.12.1894	Luck, James (injured)
13.4.1843	Luck, James,
20.4.1940	Marshall, V.C (injured)
18.4.1801	Martin, Henry
13.12.1893	Massey, Henry
7.5.1894	Maynard (injured)
22.8.1890	Maynard, William
7.5.1894	McCleak (injured)
14.11.1908	McIntosh, D
18.4.1801	Mead (or West), William
15.12.1902	Mecklenbergh, William Henry
18.4.1801	Miles, John
7.5.1894	Monk (injured)

5.7.1869	Monk, E (millman) (injured)
20.4.1940	Monk, Norman
18.1.1940	Morgan, W. S (injured)
22.2.1940	Morgan, W. S (injured)
20.4.1940	Morgan, W. S (injured)
22.8.1890	Napthan (or Napthew), William
13.4.1843	Newland, John
15.12.1902	Page , Eli
8.4.1940	Palmer, J (injured)
27.11.1811	Parker, Benj
10.10.1909	Parker, T (injured)
18.1.1940	Parkes, John
27.11.1811	Payton (or Peyton), William
7.5.1894	Perry (injured)
7.5.1894	Pridmore (injured)
18.1.1940	Purkiss, Charles
20.4.1940	Raby, Leslie
29.4.1907	Rann, William
16.6.1870	Reeves, James (foreman)
7.5.1894	Rennie (or Bennie), James
18.4.1801	Ricketts, Rich
7.5.1894	Robinson (injured)
18.1.1940	Robinson John
15.3.1918	Robinson, Thomas (injured)
27.1.1795	Rooke, C
13.12.1893	Rudd, George (died 14.12.1893)
13.12.1893	Rudkin, William (died 14.12.1893)
27.5.1861	Rule, John (injured)
9.9.1789	Rumball, Tho. (Millman)
13.4.1843	Sadd, Thomas
16/17.4.1836	Sadd, Thomas (master mixer)
28.2.1873	Seeley, (Kames Gunpowder Co) (injured)
8.5.1727	Shadwick, Francis
6.3.1694	Sherbert, Robert
5.10.1665	Simmons, Edward
16.6.1870	Simpson, Charles
7.5.1894	Skinner, (injured)
13.12.1893	Skinner, Henry (Injured)
5.12.1798	Smith (Millman)
10.10.1909	Smith, G (injured)
10.10.1909	Smith, H (injured)
7.5.1796	Smith, John (Millman)
16/17.4.1836	Speller, John (millman)
15.12.1902	Springham, A (injured)
11.2.1789	Stevans, Richard
27.11.1811	Stevens, Wm
18.1.1940	Stoner, E (injured)
15.3.1918	Street, Alfred (injured)
7.5.1894	Suckling, George
20.4.1940	Sugg, H. R (injured)
15.12.1902	Taylor, G T (injured)
7.5.1894	Thomson (injured)
26.7.1918	Threadgold, Thos (injured)
13.4.1866	Turner, William (millman)
14.11.1908	Wackett, A (injured)
1.1.1868	Wackett, John (millman)

14.8.1869	Wackett, John (millman) (injured)
27.11.1811	Wakeland, Hen,
27.11.1811	Want, Thomas (injured)
16.6.1870	Ward, John
13.12.1893	Watts, Walter
18.4.1801	West (or Mead), William
1.6.1857	Williams (labourer), injured
5.2.1902	Williams, C (injured)
22.8.1890	Wilson, Albert (injured)
16.6.1870	Wilson, Lewis
27.11.1811	Wiltshire (Wilshire), Thomas (died 13.12.1811)
20.4.1940	Wiseman, R (injured)
27.5.1861	Woodham, Sampson
16/17.4.1836	Wraight, John (watchman)
5.12.1798	Wright(Millman)
11.2.1789	Wright, Jas (Storekeeper)
11.2.1789	Wright, Thos
10.12.1915	Young, Mrs

ROYAL GUNPOWDER MILLS.

Deaths in the Factory.

[with due respect to the efforts of William Winters, Dinah Dean and Raymond Sears]

4 October 1665

Explosion

Thomas Guttridge [Gutridge]

Edward Simmons [Simons], carpenter, died on 5 October from his injuries.

1675

Nine men and four horses

1720

Peter Bennet

1 May 1792

Harry Dew fell into boiling saltpetre

27 January 1795

C Rooke drowned while moving a lock gate

18 [16] April 1801

Nine men and four horses in an explosion.

Thomas Bilton, John Bailey, Henry Hodgson, John Miles, Joseph Gibbs, Henry Martin, Richard Ricketts, William Lake, William West,

27 November 1811

Eight men in an explosion.

William Stevens, Benjamin Parker, Thomas Belsham, Henry Wakeland, John Grapes, Joseph Chapple, Daniel Coats, Thomas Wiltshire [died later].

Winters gives some different spellings viz:

Thomas Wiltshire, Stevens, Chappel, Parker, Wakeling, Goats, Grapes, Belchere

13 April 1843

Seven men died in an explosion.

Thomas Sadd, John Newland, James Luck, John Dudley, James [or Edward] Essex, James Cole, Samuel Brown.

27 May 1861

Samson Woodham

16 June 1870

Five men died in an explosion.

James Reeve, Lewis Wilson, Charles Simpson, Abraham Holmes, John Ward.

20 August 1890

Two men died in an explosion.

Names given as William Napthan [Naphew] and William Maynard.

Reports that Napthan was suspected of suicide.

13 December 1893

Nine men died in an explosion, some instantly but others from their injuries on succeeding days.

[13] Walter Watts, Henry Massey, [14] William Rudkin, Henry Jennings, George Rudd, James Claydon, [18] Edward Larman, [19] James Bailey, Benjamin Hare.

22 December 1993

Two men died in an explosion in the Joyce & Co. commercial ammunition factory, Farmhill Road.

Samuel Burton, Charles Burton.

7 May 1894

Explosion

William Rennie, William Smith Ingram, George Suckling, George Frost.

15 December 1902

Explosion at noon killed three.

30 October 1911

Constable drowned whilst working a lock gate.

Constable 390N Frederick Free of the Metropolitan Police found dead in water.

18 January 1940

Five men killed in explosion.

Albert Lawrence, John Parkes, Charles Purkis, Albert Kelman, Robinson.

8 April 1940

One man fatally injured by acid burns.

Nathaniel Evans

20 April 1940

Five men killed in explosion.

Thomas Galvin, Francis Keene, David Lewis, Leslie Raby, Norman Monk.

1940 EXPLOSIONS

	<u>FATALITIES</u>	<u>INJURED</u>	<u>MEDALS</u>
18.1.1940 (5)	A. LAWRENCE J. PARKES A. KELMAN J. ROBINSON C. PERKIS	A. ELLIS F. STONER W.S. MORGAN "	EGM. (LATER) GC W. SYLVESTER L. O'HAGEN S. SEWELL

22.2.1940 (-)	A. BOSWELL C. EAGLES? A. N. CUTTS W.S. MORGAN
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8.4.1940 (Acid) (1) N. EVANS J. PALMER

20.4.1940 (5)	F. KEENE (15) D. LEWIS T. GALVIN H. MONK L. RABY	BEM R. WISEMAN W.S. MORGAN V.C. MARSHAL A. CUTTS H.R. SUGG H.J. HARRIS W. H. BAKER	H. BURNS E. SOLUS W. T. WEST
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Sandhurst Hospital Admissions Register

WASC-0869-01

Register Number	Name (Bold text = died)	Date
30	Aldous K	27 7 1917
6	Allen J	30 5 1917
123	Ambrose I	8 10 1918
142	Amey A C	4 12 1918
146	Amey A C	31 12 1918
139	Amos H	21 11 1918
105	Anderson C	14 6 1918
7	Anderson J	16 11 1939
161	Andrews Wm	20 10 1919
12	Aries, Boy G	16 6 1917
71	Atkins B	3 1 1918
51	Aylett B	22 2 1940
81	Bacon E	7 2 1918
218	Bailey J	16 12 1935
18	Bain, P.C.	3 7 1917
135	Bains Roderick (P.C.)	2 11 1918
27	Baker, Pte	22 7 1917
94	Baldock H	18 7 1940
31	Banks E	1 8 1917
72	Banks Ed	7 1 1918
50	Barber R.G.	7 10 1917
207	Barker A J	18 9 1934
107	Barter F	16 6 1918
193	Bayford C	18 1 1926
171	Beause W	6 2 1920
73	Bell C	18 4 1940
34	Bendall E	12 8 1917
219	Berry A	27 12 1935
70	Bevan F	11 4 1940
165	Binks Alfd	25 11 1919
16	Bird G	29 6 1917
180	Bird G	4 2 1921
209	Blinko H	5 2 1935
222	Boltwood E	12 11 1936
85	Bonwick C W	11 6 1940
155	Bonyng C V	10 1 1919
54	Boswell A	22 2 1940
190	Bradley F	5 9 1923
25	Brooks W W	16 7 1917
145	<i>Brotzel A</i>	20 12 1918
225	Brown A J	29 12 1937
4	Brown H	12 11 1939
1	Brown J F	12 9 1939
163	Bull J (Pte)	28 10 1919
23	Bullen J	5 12 1939
62	Bunting Thos	7 11 1917
55	Burgess A	24 2 1940
17	Burwood W T	1 12 1939
97	Butcher J	18 4 1918
208	Byfield J	14 1 1935
73	Carpenter E	7 1 1918
71	Carpenter J W	16 4 1940
19	Carter W	5 7 1917
59	Chapman T	27 3 1940
10	Ckark J G	12 6 1917

95	Clark J	19	7	1940
147	Clements A	1	1	1919
170	Clewley W R	9	1	1920
104	Cobb G	12	6	1918
202	Coleman J	3	12	1931
99	Compton Geo	7	5	1918
110	Compton Geo	25	6	1918
210	Connell V	20	3	1935
66	Cook J	8	4	1940
38	Cooper J	15	1	1940
15	Cooper N	28	6	1917
148	Crabb F C	1	1	1919
6	Cross E J	15	11	1939
169	Crutchley H G	7	1	1920
204	Cuckow G	23	2	1934
221	Cuckow H	15	4	1936
177	Currall Ed	24	11	1920
223	Cussey E	30	11	1936
52	Cutts A N	22	2	1940
156	Daniels F W	20	1	1919
214	Davies N	5	9	1935
57	Day J	22	10	1917
188	Deadman Jas	6	2	1922
21	Dean A W	3	12	1939
166	Deane H	27	11	1919
44	Dicks C	23	9	1917
76	Dilley A	23	1	1918
45	<i>Divall W</i>	23	9	1917
181	Doe Richard	22	2	1921
182	Doe Richard	7	3	1921
186	Doe Richard	8		1921
75	Donne P	17	1	1918
24	Downes E	5	12	1939
217	Driscoll H	25	11	1935
150	Dunn Jas	6	1	1919
29	Dyson J T	15	12	1939
125	Edmonston S	11	10	1918
130	Edmonston S	22	10	1918
	Edward O	5		1939
24	Edwards F C	16	7	1917
115	Edwards Wm	18	7	1918
27	Edwards Wm	12	12	1939
42	Ellis A T	18	1	1940
4	Emmings F W	25	5	1917
152	Ephgrave Chas	14	1	1919
67	Evans N	8	4	1940
63	Everett Jos	13	11	1917
168	F Gibbs (P.C.)	29	11	1919
113	Fenton F	5	7	1918
49	Fishpool G H	30	1	1940
192	Flack C	11	3	1924
96	Flannagan V	17	4	1918
111	Flannagan V	29	6	1918
87	Ford W F	29	6	1940
167	Ford W	28	11	1919
32	Foster J H	2	8	1917
21	Freeman N	7	7	1917
55	<i>Fugl A</i>	22	10	1917
51	Fuller F	15	10	1917
	Gardner A	22	5	1939

56	Garrod K	22	10	1917
20	Gates J	1	12	1939
63	Gaughan P	2	4	1940
185	Gibbons W	4	5	1921
120	Gibbs F	5	9	1918
32	Gibbs L	2	1	1940
2	Gibbs W H	16	10	1939
48	Giddings E	30	1	1940
25	Giddings R	9	12	1939
1	Gifford C	21	5	1917
86	Glossop J	23	6	1940
31	Goddard H	29	12	1939
57	Goddard H W	4	3	1940
89	Gough H	26	3	1918
5	Green H	26	5	1917
	Green R G	5	7	1938
2	Green,Pte	23	5	1917
46	Guest A J	23	9	1917
131	Gunn A (P. Sgt)	23	10	1918
47	Hailstone A H	24	9	1917
175	Halfhide H	30	9	1920
9	Halls J	17	11	1939
64	Halstead C N J	4	4	1940
226	Hamberger E C	16	3	1937
68	Hanson E	6	12	1917
8	Harding R W	10	6	1917
52	Harold, Flt Lieut	20	10	1917
58	Harrison W G	26	3	1940
43	Hart G	12	9	1917
72	Hassall A W	17	4	1940
79	Hassall T	30	4	1940
90	Hawkes J	26	3	1918
117	Hayden I	12	8	1918
197	Hicks J	15	2	1929
88	Hill J	1	7	1940
67	Hilton A	2	12	1917
129	Hipwell E (P.C.)	21	10	1918
187	Hoare F (P.C.)	28	9	1921
11	Horniblow, Pte	10	6	1917
62	How H F	1	4	1940
11	Howson T	20	11	1939
78	Huggins T	30	4	1940
15	Hughes T	21	11	1939
33	Hutson S W	5	1	1940
134	Hynds Jas (P.C.)	31	10	1918
19	Ingle F J	1	12	1939
26	Inkersole A T	11	12	1939
17	Jacklin B	2	7	1917
80	Jackson H G	4	5	1940
48	Jackson, Sapper D	30	9	1917
37	Jefferys C M	13	1	1940
61	Johnson E	27	10	1917
28	Johnson F	24	7	1917
66	Johnson F	27	11	1917
8	Johnson H	17	11	1939
124	Johnson W	10	10	1918
116	Joys F	8	8	1918
22	Julian S H	29	11	1939
126	Jupp Arthur Henson (P.C.)	11	10	1918
199	Kealey W H	8	7	1930

61	Thompson T F	31	3	1940
176	Thomson Jas	8	11	1920
114	Threadgold Tho	18	7	1918
18	Thurgood W	1	12	1939
211	Tobin H	27	6	1935
35	Towers R G	10	1	1940
60	Tribble F C	24	10	1917
102	Turner C	18	5	1918
173	Upton A	24	3	1920
101	Waknell A	17	5	1918
	Walker J N	21	7	1938
122	Walls W E	21	9	1918
26	Walters A	19	7	1917
81	Ward J	16	5	1940
84	Ward W	8	6	1940
82	Watkins C	9	2	1918
189	Watkins J W	26	2	1923
3	Watson T	12	10	1939
82	Watts H	18	5	1940
153	Webb Eric J	14	1	1919
23	Weedon C	13	7	1917
203	West G	10	11	1933
140	West Hugh (P.C.)	25	11	1918
35	West W	13	8	1917
83	White F J	22	5	1940
28	White H N	13	12	1939
213	White R	2	9	1935
137	White W A	9	11	1918
79	Wiggett W S	29	1	1918
34	Williams A E	5	1	1940
201	Wilson H	16	3	1931
38	Wiltshire G	2	9	1917
60	Wingrave F W	28	3	1940
74	Wiseman R	20	4	1940
13	Wood T	27	6	1917
98	Wood T	19	4	1918
20	Woodley J	7	7	1917
40	Woodward J	16	1	1940
10	Woolvett J W	18	11	1939
47	Wyatt A	29	1	1940
172	Wynn D R	17	2	1920

212	Kiff John	15	8	1935
205	King S	26	4	1934
144	King Thos (P.C.)	17	12	1918
184	Kirby L (Pte)	9	4	1921
41	Kirby R	17	1	1940
39	Knoll A	3	9	1917
160	Landeryon A	30	5	1919
157	Langrick A	25	1	1919
149	Legerton R (P.C.)	4	1	1919
77	Lemon G	20	4	1940
154	Leslie (P.Sgt)	28	1	1919
195	Leslie J S	15	6	1928
83	Linwood J	14	2	1918
80	Little C W	4	2	1918
143	Locke Fred	7	12	1918
90	Logsdon F	8	7	1940
119	Long C	2	9	1918
78	Maggott B	29	1	1918
118	Mansfield R	20	8	1918
64	Manson A	19	11	1917
88	Manson A	20	3	1918
136	Marston Putt (P.C.)	5	11	1918
40	Mayes H W	5	9	1917
128	Mead A E	17	10	1918
14	Megicks J T	21	11	1939
30	Meredith T D	21	12	1939
	Metcalf L	8	9	1938
16	Mezen A D	28	11	1939
13	Mills J	21	11	1939
33	Milton T	10	8	1917
91	Mingay L W	11	7	1940
92	Moore J	5	4	1918
44	Morgan W	18	1	1940
53	Morgan W S	22	2	1940
75	Morgan W S	20	4	1940
70	<i>Mrelt</i>	21	12	1917
36	Munns T	10	1	1940
159	Murphy M (P.C.)	14	3	1919
227	Newland E J	14	4	1937
220	Newman O R	26	2	1936
178	Noble Chas	9	12	1920
9	Noble W	12	6	1917
12	O'Hagen	21	11	1939
56	Overall C E	2	3	1940
89	Page J A	4	7	1940
215	Page S	16	9	1935
65	Palmer F	27	11	1917
	Palmer J	28	3	1938
68	Palmer J	8	4	1940
7	Parkes H	9	6	1917
200	Parrish J W	16	10	1930
100	Patience W	8	5	1918
183	Pearce A (P.C.)	16	3	1921
49	Pegrum Geo	3	10	1917
108	Petch H J	18	6	1918
42	Phillips J H	7	9	1917
58	Pinnock A	23	10	1917
22	Pollard B	13	7	1917
41	Porter A	7	9	1917
151	Powell W	7	1	1919

224	Poyser E	1	12	1936
	Reece A	22	7	1938
94	Richardson H	12	4	1918
228	Roberts A J	27	8	1937
92	Roberts F J	11	7	1940
86	Robertson Thos	15	3	1918
174	Roblett Frederick	4	9	1920
29	Rogers A W	26	7	1917
69	Rogers Jas	16	12	1917
77	Ruscoe S H	28	1	1918
216	Rusk J	25	10	1935
84	Saggers J A	15	2	1918
5	Saich T	14	11	1939
112	Salmon L F	3	7	1918
69	Sams W P	11	4	1940
162	Sculley (Mrs)	20	10	1919
54	Sears E	21	10	1917
127	Seceull A J (P.C.)	14	10	1918
141	Shadwell	27	11	1918
	Sharman D	15	8	1938
76	Sharpe E A	21	4	1940
191	Sharpe H	23	10	1923
93	Sheldrake G T	10	4	1918
206	Shelfer H	30	4	1934
95	Shepherd T H	15	4	1918
106	Sherman	15	6	1918
3	Shields H	25	5	1917
91	Skilton W (P.C.)	3	4	1918
46	Slade H	29	1	1940
39	Smith C W	15	1	1940
138	Smith E	14	11	1918
194	Smith G R	18	7	1927
85	Smith Leslie	2	3	1918
179	Speller C A	1	1	1921
164	Speller W	12	11	1919
50	Spencer F N	20	2	1940
14	Spencer W	27	6	1917
45	Springham C H	29	1	1940
103	Stanger R	5	6	1918
74	Starling T	16	1	1918
96	Stevens F Mrs	20	7	1940
126	Stiff, P Sgt	12	10	1918
37	Stock E	1	9	1917
59	Stocks W M	24	10	1917
121	Stokes H	10	9	1918
225	Stokes J	3	3	1937
32	Stokes W L	2	8	1917
43	Stoner E	18	1	1940
196	Straney H	18	6	1928
87	Street Alfred	15	3	1918
133	Stronach (P.C.)	30	10	1918
93	Sturge T D	13	7	1940
158	Styles J	6	3	1919
132	Sullivan J (P.C.)	28	10	1918
109	Surridge H	25	6	1918
36	Swallow F	20	8	1917
136	Swallow F	6	11	1918
198	Tarling G	13	11	1929
53	Taylor C	20	10	1917
65	Theobalds W	7	4	1940

**CHRONOLOGY OF GUNPOWDER, EXPLOSIVES and
THE WALTHAM ABBEY ROYAL GUNPOWDER MILLS**
Compiled by Richard Thomas

Abbreviations used: WA= Waltham Abbey. WASC = Waltham Abbey Special Collection.
WARGM= Waltham Abbey Royal Gunpowder Mills. GC= Guncotton. GP= Gunpowder.
NG= Nitroglycerine. CE= Chemical Explosive. Barrels are 90lb.

Date	Event	WARGM	War
3000BC	Arrowhead. The first recorded projectile at the RGM site. Flint arrowhead dated 3000 - 1800BC. Found at Newtons Pool by J.H.Munns, July 1967. For notes on arrowhead, see - wasc-0570 / wai-0173.		
Pre 800's	China, fire mixtures for warlike purposes with no saltpetre in mixture		
By 800's	Chinese aware of saltpetre - "hsiao", which appears in Taoist writings		
900's	Chinese employ "hsiao" in fire mixtures with other materials		
1044	Wu Ching Tsung Yao written record of fire mixtures for war which, included with other materials a mixture of saltpetre, charcoal and sulphur - "huo yao" fire drug or proto gunpowder		
12th C	Arabs add saltpetre to incendiary mix		
1249	Franciscan friar, Roger Bacon sets out the secret of gunpowder in his "Letter on the Secret Workings of Art and Nature, and on the Nullity of Magic" or "De Secretis" and "Opus tertium" giving an account, in code, of saltpetre and gunpowder		
1260's	First report in Britain of gunpowder used to propel a projectile.		
Early 1300's	Gunpowder made in the Tower of London by hand methods using imported materials		
1327	Cannon used by Edward III in his invasion of Scotland "Crackys of War"		
1346	Bombard used at the Battle of Crecy by the English		
1543	First gunpowder mill in England (?) erected by the Lee family at Rotherhithe.		
1548	Gunpowder first used in civil engineering - dredging of the River Niemen		
1561	First references to gunpowder at Waltham Abbey. Contract in Calendar of State Papers with correspondence from Marc Antonio Erizzo to John Thomworth (Tamworth), merchant of Waltham Abbey, who bought saltpetre and sulphur. Probably as a merchant, not a maker.		
mid 1560's	Evelyn Family - gunpowder manufacture at Tolworth Surrey		
1570	Thos Gill and Wm Byrd making gunpowder at Faversham, Kent		
1588			Armada
1590	Map of Waltham Abbey (WASC 900/0) showing the Millhead Stream already in existence and the location of a Fulling Mill (later converted to an Oyle Mill)		
1605			GP Plot
1627	Gunpowder first used for blasting in mining for ore, in Hungary		
1638	Gunpowder first used in Britain for blasting in mining for ore at Ecton copper mine		
1640	Production of Gunpowder at Sewardstone started, probably until 1715. Start of gunpowder industry in Lea Valley.		English Civil War 1642-46
1643	Samuel Hudson as tenant of the Oyle Mill (converted from the Fulling Mill)		
1652	Saltpetre Act		1st Dutch War 1652-4
1662	Thomas Fuller, curate of Waltham Abbey, claims in "History of the Worthies of Great Britain" that more gunpowder was "made by mills of late erected on the River Lea ... than in all England besides". (Possibly referring to the Sewardstone Mills.) Also that "the mills in my parish have blown up 5 times in 7 years but blessed be God, without loss of any man's life."		
1665	First recorded deaths at WA. Thomas Guttridge and Edward Simons - killed by a powder mill. Also Ralph Hudson (brother of Samuel) signed ordnance contract to supply gp to the government. The Oyle Mill converted to a Gunpowder Mill.		2nd Dutch War 1664-7
1669	"an Oyle Mill, lately converted into two powder mills ... in the tenure of Samuel Hudson"		
1672	Ralph Hudson secured new contract; new mills built at Hooks Marsh Bridge, near present Grand Magazine, which lasted until after 1676		3rd Dutch War 1672-4
1673	Hudson fined		
1676	Ralph Hudson died, succeeded by son Peter who continued with contract until 1693, when he was accused of supplying bad powder. No further contracts awarded		
1702	William Walton took over the mills. First contract awarded		War with France 1689-98
1711	William Walton died. His widow Philippa took over with son John.		War of the Spanish Succession 1702-13
1719	Act regulating the storage and transportation of gunpowder		

1724	Further Act regulating the storage and transportation of gunpowder		
1732	Lawsuit against Philippa Walton, widow of William Walton		
1735	John Farmer's plan of the mills. Powder mills worked by horses but corning and glazing was water powered. Mills owned by John Walton, son of Philippa.		
1739	"Only his clothes were found on Galley Hill" - 1 man killed		
1741	Act regulating the storage and transportation of gunpowder		War of Austrian Succession 1739-48
1747	Board of Ordnance first purchase proof mortars		
1748	Act regulating the storage and transportation of gunpowder		
1755	Act regulating the storage and transportation of gunpowder		
1757	John Walton dies; brothers Thomas & Bouchier Walton inherit		7 Years War 1756-63
1759	Government purchased the Faversham Mills		
1767	John Smeaton engaged to design improved mills by Bouchier Walton		
1770	Factory had "several curious gunpowder mills ... worked by water" Making 100 x 1cwt barrels per week. Cutting of the Lee Navigation.		
1771	Act regulating the storage and transportation of gunpowder		
1772	Stamp mills outlawed. First Act regulating manufacture of gunpowder		
1779	Capt Congreve inspected Royal Navy's gunpowder at Plymouth - reported that only 4 barrels were serviceable		
1781	Explosion of the Corning & Glazing Engine "3 killed and much damage done in the town"	WARGM Controller	American War of Independence 1776-83
1783	First detailed plan of the works WASC 900/1		
11.10.1787	Government became involved with the Mills and started negotiations with Walton for the purchase. Mills producing about 600 barrels p.a. Mr James Wright (1) appointed Storekeeper		
9.2.1789	Production resumed after refurbishment costing £35,000 under control of Major William Congreve.		
12.2.1789	First explosion at WARGM		
1789	First set of "Gunpowder Rules" issued from Faversham		
1791	Congreve said "not piece work"		
1793	Sunday working introduced.		
1793	Steps taken to tighten security. 23.2 No beer admitted. 27.2. Gravel found on shoe.- Instructions given to inspect footwear. Many references made to a days pay being stopped for safety transgressions 28.5 Flint found in seive. 29.5 First references to traverses being set out.	James Wright (1)	
1794	Cylinder charcoal introduced, brought in from Faversham		
1795	Final settlement of the purchase. £10,000		
April 1795	First Steam stove		
18.4.1801	Explosion at new Corning House on Horse Mill Island - 9 men and 4 horses killed. (400 barrels removed by boat just before explosion)		
15.7.1801	"No (electrical ?) excitation in rolling barrels on leather covered floors"		
1801	Detailed plan of the works (WASC 900/2)		
1804	Shortage of powder. 9 more horse mills built. Grand Magazine built for 1500 barrels. 20,000 barrels a year forecast. Ballincollig bought by the Crown.		French Revolutionary and Napoleonic Wars 1792-1815
1805	Cheshunt Cornmill bought and shut down to conserve water for the Gunpowder Mills.		Anglo-American War 1812-15
6.4.1805	Mr H S Matthews appointed Storekeeper		
1806	Report by John Rennie. (Archives at Inst of Civil Engineers) Also detailed plan MR 580 (WASC 900/3)		
1809	Waltham Abbey Cornmill bought		
1809	20050 barrels		
1810	20688 barrels		
27.11.1811	Explosion in No 4 Press House on Lower Island. Ensuing fire spread to Corning House and Reel House. - 8 men killed	H S Matthews	
1811	21252 barrels		
1811/12	Bramahs Hydraulic Presses introduced instead of screw presses		
1812	21033 barrels. General Congreve created Baronet.		
1813	22398 barrels. 250 men employed		
1814	10161 barrels. William Congreve succeeded his father. There were 5 barges, nine powder boats, two ballast barges and six punts.		
1815	17331 barrels. 1027 barrels regenerated. Battle of Waterloo		
1816	9551 barrels		
1817	2270 barrels		
20.1.1818	Mr E Middleton appointed Storekeeper (died 17.6.1825)		
1818	1127 barrels		
1819	988 barrels		
1821	1012 barrels		
1822	365 barrels. 307 barrels regenerated. 34 men employed	E Middleton	
1823	208 barrels. 1589 barrels regenerated		
1824	217 barrels. 1602 barrels regenerated		

1825	500 barrels. 2021 barrels regenerated		
29.6.1825	Mr C Wilks appointed Storekeeper		
1825	Faversham Home Works sold (after leasing to private sector from 1816)		
1826	519 barrels. 3035 barrels regenerated		
1827	505½ barrels. 3396 barrels regenerated		
1829	985 barrels. 1244 barrels regenerated		
1830	2070 barrels. 1988 barrels regenerated		
c1830	Charcoal manufacture transferred to Waltham Abbey		
1831	3294 barrels		
15.10.1831	Mr James Wright (2) appointed Deputy Storekeeper		
1832	2733 barrels.		
13.10.1832	Lt Col. C T Moody C.R.E. appointed in charge of the Royal Gunpowder Manufactory		
1833	Ballincollig sold. WA now only government factory		
1833	1435 barrels. 1139 barrels regenerated		
1834	1077 barrels. 254 barrels regenerated		
1838	Pelouze discovered that treating cotton with nitric acid produced a highly inflammable material		
2.7.1840	Lt Col C T Moody C.R.E. appointed Inspector of Gunpowder		
13.4.1843	Explosion at Cornig House and Press House. Very violent - timber found one mile away at Enfield Lock - 7/10 men killed		
1845	Order received for closure, never carried out.		
27.11.1845	Capt Alexr. T Tulloh R.A. appointed Inspector of Gunpowder		
1846	Guncotton (a dangerous rival to gunpowder),discovered by Schönbein following thoughts suggested by his discovery of ozone in 1844. A mixture of sulphuric and nitric acids' nitration on cotton. Bottger discovers guncotton, independently of Schonbein		
1846	Ascanio Sobrero discovered Nitroglycerine involving the nitration of glycerine		
1847	Maynard discovers nitrocellulose soluble in a mixture of ether and alcohol - collodion cotton		
1847	John Hall & Sons(English Patentees) announced production of GC and supply in various packings. 4oz of GC =28oz of GP		
14.7.1847	Hall's factory exploded killing 21 men		
1847/8	3 other explosions in France at Vincennes and Bouchet		
1.7.1852	Major C C Dickson R.A. appointed Inspector of Gunpowder		
1852	Austria (Von Lenk) purchases rights to Schonbein GC process		
1853	Capable of producing 20,000 barrels pa		
2.1854 -	Capt W Henderson appointed Acting Inspector of Gunpowder		
4.1854	Col W H Askwith R.A. appointed Acting Inspector of Gunpowder		
1854	Faversham Marsh Works sold (after leasing to private sector from 1832)		
18.8.1855	Col W H Askwith R.A. appointed Superintendent		
1856	Water driven hydraulic presses introduced. Demand starts to grow.		
3.1856	Lord Panmure Lea sailing barge built		
1857	First steam driven gunpowder mills (Group A). Also raised tramway system, with trucks propelled by men or boys.		
29.10.1858	Report on "Government gunpowder works at WA" published in The Engineer		
1860	Explosives Act passed to include new types of explosives - proves inadequate		
27.5.1861	Explosion at Group A Mills		
Feb 1862	Details of improvement sent to British Government		
July 1862	Another explosion in Austria. GC production banned there		
1862	Alfred Nobel added 10% NG to gunpowder and developed NG as a commercial blasting explosive		
1863	Further experiments on guncotton under Mr (Sir) Frederick Abel, War Office Chemist. Made 1000-2000lbs of GC at WA over next 5 years in adapted saltpetre refinery buildings in Highbridge Street.		
1859 -1863	Nobels discover that NG can be exploded by a mercury fulminate detonator. Immediate significant success as a civil blasting material - blasting oil.		
1864	Lasting cloth adopted as fire prevention measure		
1864	Explosion killed Emil Nobel and 4 others		
1864	Earl de Grey and Ripon Lee sailing barge built		
1865	Abel took out patent after solving difficulties of GC manufacture by pulping. GC became widely used in military mines and torpedoes and as a military & civil blasting agent. Its rate of combustion was too rapid for use as a military propellant and it was too sensitive for shell filling. manufacturing development continued at Highbridge Street.		
1866/1867	Abel publishes "Researches on Guncotton"		
1867	Nobel patented NG with a silica absorbent		

1867	Alfred Nobel greatly increases safety of NG by absorbing in Kieselguhr, an inert porous silica, to produce material in conjunction with a fulminate detonator, named Dynamite		
27.2.1868	Col C W Younghusband R.A. appointed Superintendent		
1868	E. O. Brown discovers that Nobel method of dynamite detonation by mercury fulminate can be applied to compressed GC		
1869	E. O. Brown discovers that wet GC can be exploded by a small primer of dry GC - made handling much safer since GC could now be stored and transported in safer wet state.		
1869	15 boats in use at WA. 21'-30' in length 5'11" - 8'6" in width. Also 16 open boats and 2 barges built for the Lee		
16.6.1870	Explosion of Press House on Lower Island. Magazine next door containing 5000 lbs of GP emptied into river. - 5 men killed	Col. C W Younghusband	
1870	32 pairs of mills 27,000 barrels. 150 men employed		
1871	M Berthelot publishes first treatise on explosives		
1872	Factory at WA to produce 250 tons of guncotton a year in old Saltpetre factory by Highbridge St using Abel process.		
2.10.1874	5 am Macclesfield Bridge, Regents Canal - 2 or 3 barrels of petroleum and 5 tons of GP on narrow boat Tilbury en route for Chilwell near Nottingham exploded. 3 died. This explosion was a contributory factor in bringing about the 1875 Explosives Act		
1.4.1875	Lt Col Young R.A. appointed Superintendent (died 25.5.1875)	Young	
26.5.1875	Capt Morgan R.A. appointed Acting Superintendent	Morgan	
29.6.1875	Col R J Hay appointed Superintendent		
1875	Explosives Act. Introduced an effective and longlasting system of licensing and inspection. Col Sir V D Majendie appointed first permanent Inspector of Explosives	Col R J Hay	
1875	Nobel gelatinised collodion cotton with NG as blasting gelatine - 25% more powerful than Dynamite		
2.8.1877	Explosion of GC in press. Rope Mantlets introduced after this.		
1.7.1880	Col C B Brackenbury R.A. appointed Superintendent		
1881	Electric lighting installed at WA		
1884	Factory Rule book introduced	Col C.B Brackenbury	
1884	P Vielle produced a rifle powder consisting of a mixture of GC and collodion cotton gelatinised by ether-alcohol called Poudre B (B=Blanche, white) as opposed to Poudre N (N=Noir, black) which was gunpowder.		
1.7.1885	Maj Gen W H Noble appointed Superintendent (died 17.5.1892)		
1885	South Site (Quinton Hill) purchased		
1885	Turpin in France demonstrated advantages of Picric Acid as shell filling. Adopted by French government under name of "Melinite"		
1888	Nobel produced a military propellant "Ballistite" a mixture of collodion cotton (45%) and NG with camphor as a gelatiniser/moderator		
1888	GC Factory on South Site opened		
1889	Cordite patented by Abel and Dewar - 58% NG, 37% GC, 5% Vaseline using acetone as a solvent.	Maj Gen W H Noble	
22.8.1890	Explosion in No 1 Breaking down house prior to pressing - 2 men killed		
1891	Telephone system introduced		
1.1891	Quinton Hill NG plant completed		
16.3.1891	First charge of glycerine nitrated at Quinton Hill NG plant		
21.3.1891	First incorporation of NG and GC at WA. Sent to Woolwich by barge for further processing .		
17.6.1891	Full production of cordite commences at WA - 2 tons per week		
1.4.1892	Maj F W Barker R.A. appointed Acting Superintendent during Major Noble's illness	Barker	
1.10.1892	Lt Col W McClintock R.A. appointed Superintendent (until 13.7.1894)		
13.12.1893	Explosion at Cam House on Lower Island. - 9 men killed	Lt Col W McClintock	
24.4.1894	Beginning of real Safety Practice and Policy		
7.5.1894	Explosion at Quinton Hill NG plant - 4 killed		
31.5.1894	Maj F L Nathan R.A. appointed Acting Superintendent	Nathan	
27.7.1894	Col J B Ormsby appointed Superintendent		
1895	Picric Acid (Lyddite) adopted for British shell filling		
1895	Picric powder introduced as booster for Lyddite		
1895	Opening of Sandhurst Hospital	Col J B Ormsby	
1897	NG plant built at Edmonsey on North Site		
1898	Cordite Factory completed on North Site		
20.1.1900	Bt Col F L Nathan appointed Superintendent		Boer War 1899-1902
1901	Cordite MD introduced (GC 65% NG 30% Mineral jelly 5%)		
1901	Nathan Thomson Rintoul displacement method of NG manufacture patented		
1903	Booster tetryl (CE) entered British service use		
1903	Quinton Hill No 1 Nitrating House plant replaced by Nathan Thomson Rintoul NG displacement plant		

15.12.1903	Explosion of cordite incorporating M/c - 3 killed	Bt Col F L Nathan	
1904	Quinton Hill Guncotton Factory extended. Nathan Thomson displacement system for GC nitration introduced		
1904	Germany commences use of TNT (Tri Nitro Toluene)		
1904	Edmonsey Nitration Plant replaced by Nathan Thomson Rintoul NG displacement plant		
8.2.1909	Bt Col F L Nathan R.A. appointed Superintendent of SA and RG Factories		
6.8.1909	Maj F T Fisher R.A. appointed Superintendent of SA and RG Factories	Maj F T Fisher	First World War 1914-18
1914	26 tons pw cordite		
3.1915	64 tons pw cordite		
1915	Cordite RDB introduced. 200 tons pw (52% Collodion Cotton 42% NG 6 % Mineral Jelly)		
1916	Quinton Hill enlarged. Building of Women's Hospital		
15.12.1917	Lt Col P H Evans R.A. appointed Superintendent of RG Factory	Lt Col Evans	
1925	WA commenced production of RD 202 fuze powder, a mixture of ammonium perchlorate, charcoal and starch.		
1931 - 32	Total Cordite production at WA 207 tons		
1933	Cordite W introduced, including 6% carbamite in place of mineral jelly		
1933	TNT first made at WA		
12.7.1934	Dr R. C. Bowden appointed Superintendent - 1st civilian. Beginning of winding down.		
1935 - 36	Total Cordite production at WA 662 tons	Dr R C Bowden	
1938	RDX Cyclo-trimethane-trinitramine invented. Small pilot plant at Quinton Hill producing 5 tons pw		
late 1930's	Cordite RDN introduced including 55% picrite (nitroguanidine)		
1938 - 39	Total Cordite production at WA 3970 tons		
1939	Creation of Bishopton plant. Dr Bowden is transferred there 31.7.1939		
1.8.1939	Mr P G Knapman appointed Superintendent		
18.1.1940	Explosion at NG Mixing House handling frozen NG - 5 men killed	Mr P G Knapman	2nd World War 1939-45
20.4.1940	Explosion of NG Mixing House - 5 men killed		
1940	Enemy land mine destroyed the last of the water powered mills		
1940	120 tons NG a week. 75 tons cordite a week		
1943	January - Cordite and RD 202 production stopped. August - GC production stopped. September - NG production stopped		
1.1.1944	Mr R F Smith appointed Managing Chemist	Smith	
28.7.1945	The Royal Gunpowder Factory was formally closed down as an Ordnance Factory and was transferred to the Chief Superintendent of the Armament Research Department for use as an Explosives Experimental Establishment.		
31.7.1945	Armament Research Department was opened.		
1.10.1946	Chemical Research and Development Dept.		
1948	Explosives Research and Development Establishment		
1977	Propellants, Explosives and Rocket Motor Establishment		
1984	Royal Armament Research and Development Establishment. North & South Sites split. North remained MOD. South went to Royal Ordnance		
1986	Royal Ordnance bought by BAE Systems		
1989	South Site closed		
7.1991	North Site closed (June or July???)		
1.1992	Remediation contract by S.W. Atkins on behalf of MOD (until 1996)		
1993	English Heritage starts on site (until 1996)		
3.1997	Trust takes over.		
5.4.2001	Opening scheduled but cancelled due to Foot & Mouth crisis		
16.5.2001	Site opened by Duke of Gloucester		
17.5.2001	Site opens to the public		

Abbreviations used: WA= Waltham Abbey. WASC = Waltham Abbey Special Collection. WARGM= Waltham Abbey Royal Gunpowder Mills. GC= Guncotton. GP= Gunpowder. NG= Nitroglycerine. CE= Chemical Explosive. Barrels are 90lb.

CHRONOLOGY

WALTHAM ABBEY ROYAL GUNPOWDER MILLS

DATE	EVENT
1561	Contract in Calendar of State Papers. With correspondence from Marco Antonio to John Tamworth at WA. The latter was the executor of Lady Denny, widow of Sir Anthony Denny who had been granted the Abbey after the Dissolution.
1590	By that date Millhead Stream already in existence
1662	Reference to mills in Dr Thomas Fuller's 'History of the Worthies of England'
1664	Probably the creation of two mills
1665	First deaths by explosion in Parish Register of burials
1665	Signing of an Ordnance Contract with Ralph Hudson (brother of Samuel)
1669	Deed mentions two newly converted gunpowder mills (Samuel Hudson)
1672	(27 May). Report of a powder mill to Count Baron: near Hook's Marsh Bridge, belonging to Ralph Hudson
1672-4	Ralph Hudson secured new contract from the Board of Ordnance
1673	Hudson fined
1676	Ralph Hudson died. Brother Peter takes over.
1702	Mills in the hands of William Walton who signed his first contract with the Board
1711	Walton died. Widow Philippa carried on.
1732	Lawsuit against Philippa Walton, widow of John Walton
1735	Mills owned by second John Walton (John Farmer's History of WA) ** Powder mills worked by horses, but water power for corning & glazing ** John was Philippa's son
1757	Death of John W. Mills in hands of Thomas & Bouchier Walton
1759	Mills at Faversham purchased by the Crown
1760	The Crown purchases Faversham Mills

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1770	Use of water power had spread to powder mills (See Peter M.'s New and Complete History of Essex)
1770	Cutting of Lea Navigation
Early 1770s	Bouchier commissioned Johns Smeaton to design a watermill
1772	Stamp mills are outlawed
1776-83	American War of Independence
1783	Plan of Factory
1787	(11 Oct.) The Crown purchased the mills from John Walton III (= minutes of the Honourable Board of Ordnance). Major Congreve in charge £35,000 spent on improvements & enlargements Deal not completed until 1795
1789	(9 Feb.) First production of 'Crown' powder
1789	(12 Feb.) First explosion First set of gunpowder rules are issued (from Faversham)
1806	John Rennie's report on Waltham Abbey (Archives, Inst. of Civil Engineers) Mentions experimental power steam engine at Battle, Surrey
1812	General Congreve becomes Baronet
1814	His son William Congreve succeeds his father as 2nd Baronet and as Comptroller of the Royal Laboratory
18??	Congreve Junior develops the Congreve rocket
1846	First guncotton made in Basle (by Schonbein)
1847	NG first made by Sobrero
1856	19 Jan. Plan 'The Dimensions and position of the proposed new buildings at Waltham Abbey (Group A Buildings): raised 'tramway (r
1856-7	Building of new steam powered gunpowder mill (Group A, N. site)
1857-8	Installation of tramway (earliest map which shows this dates from 1859)
1858	Government gunpowder works at WA' <i>The Engineer</i> , 29 Oct.1858
1861	Explosion 17 Jan No 10 Mill Lower Island (PRO)
1863	Abel commenced experimental production of guncotton at WA
1872	Abel set up plant for guncotton (Colonel Younghusband was the Superintendent)
1877	Explosion 7 Sept., South end of No6 Mill, Millhead (PRO)

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1884	Explosion	26 Sept. Guncotton explosion in Water Oven, GC factory (PRO)
1891	NG plant set up at WA + cordite plant. Followed by second plant.	
1893	Explosion	2 March, Guncotton drying stove fire (PRO)
1894	Explosion	1 March. Guncotton Dipping Room (PRO)
1894	Explosion	30 March, Explosion at settling pond (PRO)
1894 (4 dead)	Explosion	7 May Quinton Hill NG explosion
1894, 7 May	Explosion	Wash Water Settling House - Reeling House
1895, 10 July	Explosion	Group 'C' Mills, No13G
1895	Explosion	17 Oct. 11B Mill Group B (PRO)
1897	Explosion	2 Oct. No 5 Mill (PRO)
1899	Explosion	21 April, No11B Mills (PRO)
c.1895	Opening of Sandhurst Hospital	
1916-7	Building of women's hospital	
1900	Explosion	1 March, No1 Hydraulic press (PRO)
1902	Explosion	5 Feb, Blank Cutting House (PRO)
1902 (3 dead)	Explosion	15 Dec. Cordite incorporating machine, Simmons, p.75
1907	Explosion	2 Dec., Firing of cordite press, Group H (PRO)
1908	Explosion	19 Feb. Silvered vessel hut (PRO)
??	Explosion	Explosion of press Group H (after 1909, before 1916) (PRO)
1916	Explosion	2 Feb. No 25 stove, guncotton section, fire (PRO)
1916	Explosion	1 May, Ignition of MDY, No5 Press house(PRO)
1916	Explosion	22 July, NG explosion (PRO)
1916	Explosion	31 July, Fire Guncotton stove (PRO)
1916	Explosion	24 August, Fire C/E Nitrating House (PRO)
1917	Explosion	22 Feb. Fire No3C/E Purification House (PRO)
1917	Explosion	19 Dec.Fire No 25 & 32 Cordite Mag Stores (PRO)
1917	Explosion	22 Dec. Fire G/C Yarn Water Proofing House (PRO)

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1918	Explosion	15 Dec. Fire purification house, acetone (PRO)
1918	Explosion	5 Oct. Press No5 Bay 9 Ignition of MD (PRO)
1933	TNT first made at WA	
1934	Appointment of Dr. R.C. Bowden as Superintendent (first civilian) It's the beginning of the winding down	
1937	Explosion	11 Sept. Explosion of NG in pond (PRO)
1937	Explosion	1 Dec. Cordite tray stove explosion (PRO)
1938	Plant for production of RDX set up at WA	
1939	Creation of Bishopton and Bowden is transferred there	
1940	Explosion	18 January, NG mixing house
1940	Explosion	20 April, similar to above
1940	Enemy land mine destroyed the last of the powder mills	
1943	Production stopped at RGF	First RD202 (Jan) then guncotton (Aug) the NG (September)
1945	(28 July) RGF formally closed.	
1945-6	Experimental Station of the Armament Research Department at Woolwich	
1946-7	(1 Oct.) Chemical Research and Development Department	
1948	ERDE (Explosives Research and Development Establishment)	
1954	Malcolm McLaren appointed	
1963 ?	Renovation of powder boat	
1977	PERME	
1984	North and South sites were split: North remained MOD, South went to Royal Ordnance	
1986	Royal Ordnance bought by BAE Systems	
1989	South site closed	
1991	July North site closed.	
1992	January. Remediation contract began (S.W. Atkins on behalf of MOD) Until 1996	
1992 to 4	Adam Ford, freelance archaeologist employed by W.S. Atkins	

Sheet1

1993	English Heritage starts on site.
1994	Stephen Chaddock came in to replace Adam when he left. David Prince elbowed their way in and became lead consultants
1995 to 6	Work English Heritage completed
1996 to 7	One Foot in the Past. BBC programme on WA CIVIX became the lead consultants
1997	(March) Trust took over
2000 Feb April	Robert Saunders leaves Robert Taylor appointed
2001 April	Opening scheduled for 5 April. Cancelled due to outbreak of Foot & Mouth
2001 May	(16th) Royal Opening with the Duke of Gloucester 17Th Opens to the public