

SHELLS, SHELLS AND MORE SHELLS! *The National Filling Factory No. 5 Quedgeley*

Building the Factory

Following the shell crisis of June 1915, local Munitions Committees **were** organised throughout the country in a drive to increase weapons output.

Although the new factories were government property, they would be designed, constructed and managed by local business people subcontracting to an established armaments company. The established armaments firms wanted the new heavy shell factories to be run as if they were an 'extension to their existing works.'¹

Just three days into his job as the new Minister of Munitions, Lloyd George visited Bristol and met with a local group of eminent businessmen – including several railway directors - who formed the West of England Munitions Committee. This meeting resulted in schemes for a national shell factory in Bristol that would produce empty shell casings and a national shelling filling factory in Quedgeley, Gloucestershire. The urgency of total war meant factories sprung up in anywhere and everywhere; railway workshops, textile mills or, in the case of Quedgeley Ammunition, a farm requisitioned under the Defence of the Realm Act (DORA) from one Curtis-Hayward, whose hedges and ditches were completely destroyed.²

Increased storage capacity was needed for explosives and propellants (some of which were imported from the USA). In October 1915, the Berkley Estate in nearby Slimbridge - a relatively isolated area - was chosen as one of the country's two largest storage magazines for the propellants. In December 1915, notice 'was served on nine estate tenants, Lord FitzHardinge; Earl of Berkeley and George Tudor under DORA. Until 1918 'much financial hardship was endured by the tenants' due to the loss of access to their land.'³ In April the value of the work was £137,000 and by July when the factory site was complete it had reached approximately £200,000.⁴

On Her Their Lives Depend

Even though 70 of the women first employed at Quedgeley were given training at Woolwich (the rest were trained on site locally), the shell and cartridge filling work was considered

¹ Paul Francis, "Historical Appraisal RAF Quedgeley (HQ, 1, 5 & 7 Sites)" Quedgeley Urban Village Ltd, February 2004, p. 9, accessed March 12, 2014, <http://www.airfieldresearchgroup.org.uk/wp-content/uploads/2012/06/RAF-Quedgeley.pdf>.

² Brian Edwards "National Filling Factory No 5 Quedgeley," *Gloucestershire Society for Industrial Archaeology Journal* 1994, 33, accessed February 6, 2014, <http://www.gsia.org.uk/reprints/1994/gj199432.pdf> (The original document was also accessed in Gloucestershire Archives).

³ Brian Edwards, "The Slimbridge Munitions Depot, Historical Background," *Gloucestershire Society for Industrial Archaeology Journal*, 1995, 13, accessed February 6, 2014, <http://www.gsia.org.uk/reprints/1995/gj199513.pdf> (The original document was also accessed in Gloucestershire Archives).

⁴ Brian Edwards, "National Filling Factory No 5 Quedgeley", *Gloucestershire Society for Industrial Archaeology Journal* 1994, 34, 37, 38 accessed February 6, 2014, <http://www.gsia.org.uk/reprints/1994/gj199432.pdf> (The original document was also accessed in Gloucestershire Archives).

unskilled. The only requirement was a steady hand and readiness for work. Quedgeley transformed the labour market in nearby towns. The majority of women workers came from domestic service, which was commented upon in a local newspaper,

'It has been deemed unpatriotic to employ men servants who could serve their country in the war, and now we are told that the demand for woman's work in munitions and other factories is so urgent, that the retention in private houses of women servants who could be dispensed with, is a crime against community... How to get through the complicated work of a large household with less help, will be a serious question for numbers of housewives.'⁵

Approximately 20 percent of the workforce consisted of young men less than 18-years old, men considered too old for military service, and wounded or discharged soldiers; this demographic remained for the duration of the factory's operation.

Date	Women	Men	Total
June 1916	2,113	307	2,420
September 1916			3,916
December 1916			3,212
March 1917			6,364
October 1917			4,459
January 1918			4,664
October 1918	5,070	1,157	6,227

Table 1. Workforce in the National Filling Factory at Quedgeley

As shown in *Table 1* the numbers in the workforce fluctuated because of fears about TNT poisoning and seasonal variations in output due to raw material shortages, and appeals were carried out in the local newspapers to increase any shortfall in numbers.⁶ Editorial comment and photographs were used to persuade. For example, this over-optimistic sentiment, 'the war has united all classes in this country. Any antagonism there was between the sexes has disappeared in the new social and industrial status acquired by women.'⁷ Even verse was employed to stir the war effort,

'Your comrades fighting in the trenches, look to you at lathes and benches; To see that they have all they need; For shells, and still more shells they plead; And men to replace those who fall. What answer have you to their call.'⁸

A train service was provided for the factory workers from December 1915 by extending the Midland Rail track to the Quedgeley site.⁹ Workers came from Cheltenham, Gloucester and Stroud at a weekly return cost of two shillings and two pennies; the rest arrived on foot or by bicycle. The labour force was paid one pound per week, but after insurance and train fares

⁵ "Servants and the War Work", *The Looker-On*, Cheltenham, March 25, 1916, Cheltenham Local and Family History Centre.

⁶ Brian Edwards, 'National Filling Factory No 5 Quedgeley', *Gloucestershire Society for Industrial Archaeology Journal* 1994, <http://www.gsia.org.uk/reprints/1994/gi199432.pdf>, 39-40.

⁷ The Nation and the War, *The Looker-On*, July 10, 1915, 18, Cheltenham Local & Family History Library.

⁸ W. Field, *Stroud News and Gloucestershire County Advertiser*, Friday July 2, 1915, Stroud Local and Family History Centre, 6.

⁹ Brian Edwards, 'National Filling Factory No 5 Quedgeley', *Gloucestershire Society for Industrial Archaeology Journal* 1994, 38, accessed February 6, 2014, <http://www.gsia.org.uk/reprints/1994/gi199432.pdf>.

the workers were not left with much to live on. To prevent a strike, in April 1916 the women were given a small pay rise because they had not been given free rail travel which had reportedly been promised by Lloyd George in the press.¹⁰ At least two men on the directorial board of Quedgeley were also railway company directors - John Julius Steinitz; Gloucester Railway Carriage and Wagon Company Ltd and J. H Beach; Gloucester Railway Carriage and Wagon Company.

No Holidays for Canaries!

The factory site was divided into danger and non-danger areas, the latter housed changing rooms and other facilities while the former contained workshops and storage magazines. Filling shells could result in toxic jaundice due to TNT poisoning and yellowed skin, hence munitionettes were nicknamed 'canaries.' We do not know precisely how many women died from this condition, nor are there recorded numbers for Quedgeley.

When the factory began operations, not all of the workshops and magazines were ready for use but due to the urgent requirement for ammunition the Ministry of Munitions encouraged the use of any available building. This increased the hazardous conditions for the workers, with explosives stored in bulk next to workshops and large shell filling carried out in small fuse stores. A safety official visited the factory in June 1916; he found a considerable quantity of breach loading shells and incomplete 18 pounder quick-firing ammunition in areas intended for empty shell storage. He recorded 26 girls filling large 60-pound shells with 100 pound loads of gunpowder in the store, contrary to regulations. As a temporary solution the factory reduced the gunpowder load to 'not more than 25lbs at any one time!'¹¹

Those employed in the danger areas were issued flannel overalls; white was given to the TNT workers. These overalls included a coat, cap and trousers without turn-ups or pockets, but offered no special protection and were not fireproofed, even though that had been the original intention.

As production got underway, workers were prevented from taking holidays because the first Easter had resulted in a fall in output, hence all national holidays throughout the rest of spring and summer were postponed. In September 1916 a four-day rest period was allowed. In 1918, Winston Churchill, the new Minister of Munitions, made an appeal to the workers to continue output during that last Easter period.¹²

Upon the declaration of peace - 11th November 1918 - all workers were given three days holiday with pay. They then returned to stock stake and clean the factory, and by the end of November 1918, 75 percent had been dismissed.¹³

¹⁰ Brian Edwards, 'National Filling Factory No 5 Quedgeley', *Gloucestershire Society for Industrial Archaeology Journal* 1994, 44, accessed February 6, 2014, <http://www.gsia.org.uk/reprints/1994/gi199432.pdf>.

¹¹ Brian Edwards, 'National Filling Factory No 5 Quedgeley', *Gloucestershire Society for Industrial Archaeology Journal* 1994, 43, accessed February 6, 2014, <http://www.gsia.org.uk/reprints/1994/gi199432.pdf>.

¹² Brian Edwards, 'National Filling Factory No 5 Quedgeley', *Gloucestershire Society for Industrial Archaeology Journal* 1994, 44, accessed February 6, 2014, <http://www.gsia.org.uk/reprints/1994/gi199432.pdf>.

¹³ Brian Edwards, 'National Filling Factory No 5 Quedgeley', *Gloucestershire Society for Industrial Archaeology Journal* 1994, 45, accessed February 6, 2014, <http://www.gsia.org.uk/reprints/1994/gi199432.pdf>.

Armaments Produced

It was intended that production would reach 40,000 rounds of quick-firing ammunition and 250 tons of breech-loading cartridges per week,¹⁴ but factory output exceeded all expectations. The Ministry of Munitions documentation contains a record of a telegram sent to Quedgeley at the end of the war: 'The Controller and Directors of the Gun Ammunition Filling Department desire to express, their great appreciation of the part played by the staff and workers at National Filling Factory No.5 Quedgeley, in achieving such a glorious victory.'¹⁵

National Filling Factory No.5 Summary of Output Originally recorded in MUN 5/365/1122/50, The National Archives	
TYPE	AMOUNT
18 pounder shell filled with block charges	10,279,557
4.5 inch shell filled with block charges	384,269
60 pounder shrapnel shell filled	17,400
2.75in, 4.5in, 6in, 8in, & 9.2inch cartridges filled	7,005,746
Trotyl (TNT) exploder bags & cartons filled	8,489,084
Fuses Nos. 100, 101, 102 & 103 assembled	2,511,275
Fuse no. 106 assembled	566,887
CE pellets compressed for fuse 106	106 502,996
Primers filled	11,501,459

Table 2. Summary of Output National Filling Factory No.5 from 13th March 1916 - 21st November 1918¹⁶

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¹⁴ Brian Edwards, 'National Filling Factory No 5 Quedgeley', *Gloucestershire Society for Industrial Archaeology Journal* 1994, 34, accessed February 6, 2014, <http://www.gsia.org.uk/reprints/1994/gi199432.pdf>.

¹⁵ Telegram November 12, 1918, PRO MUN4/1741, The National Archives. Brian Edwards, 'National Filling Factory No 5 Quedgeley', *Gloucestershire Society for Industrial Archaeology Journal* 1994, 45, accessed February 6, 2014, <http://www.gsia.org.uk/reprints/1994/gi199432.pdf>.

¹⁶ Francis, Paul 'Historical Appraisal RAF Quedgeley (HQ, 1, 5 & 7 Sites)' Quedgeley Urban Village Ltd, February 2004, Appendix 1 p. 103, accessed March 12, 2014, <http://www.airfieldresearchgroup.org.uk/wp-content/uploads/2012/06/RAF-Quedgeley.pdf>.

Archived – A Poem Inspired by Research into Quedgeley

Keep Calm
and have an ordinary day,
boxed files
with history are waiting to meet us.
Yellowing papers
carefully catalogued
into a silence.

Do Not Disturb
the collection's sleeping conscience.
Leaders chosen,
most carefully selected,
to win at all costs
and profit.

Keep the home fires burning,
it's alright it's a job
maim and destruction
shilling a week, yes, just a bob.

You see,
the most intellectual, honorary gentlemen
have devised
Royal Society chemical recipes to burn out their eyes.

It's alright it's a job,
TNT into shells without any protection,
that costs too much mate,
while the men on the front
cost nothing at all,
they'll only last for four minutes,
in blood, guts and squall,
most terribly inconvenient
a rifle shortage for a huntsman's ball.

Returning documents to archive,
they have to be weighed
just a few grams evaporating,
that's OK,
but everything else must stay the same.

The economy of despots and madness,
still remains,
our heritage, our history
written and shelved
quiet
the pain.

Please dismiss any attempt
at researcher's remorse,
comments will be moderated
and later stored,
archived as sanity
feelings ignored.

These words are too heavy,
please take them away.
Keep calm,
and I hope
you have a most unusual day.

by Michelle Thomasson 21st March 2014