



CHESTERFIELD WFA

Newsletter and Magazine issue 44

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Welcome to Issue 44 - the August 2019 Newsletter and Magazine of Chesterfield WFA.

Our next meeting is on Tuesday evening, 6th August
when our speaker will be Chris Corker of York
University



Chris`s talk is entitled “Making the Armaments Centre of The World: Sheffield 1860-1914’. The role Sheffield Played in munitions production during the Great War is somewhat legendary, with the great factories of the city’s east end turning out shells by the million, yet Sheffield’s role as a global centre of armaments production in the Victorian and Edwardian period is sometimes forgotten.

The Branch meets at the Labour Club, Unity House, Saltergate, Chesterfield S40 1NF on the first Tuesday of each month. There is plenty of parking available on site and in the adjacent road. Access to the car park is in Tennyson Road, however, which is one way and cannot be accessed directly from Saltergate.

Grant Cullen – Branch Secretary



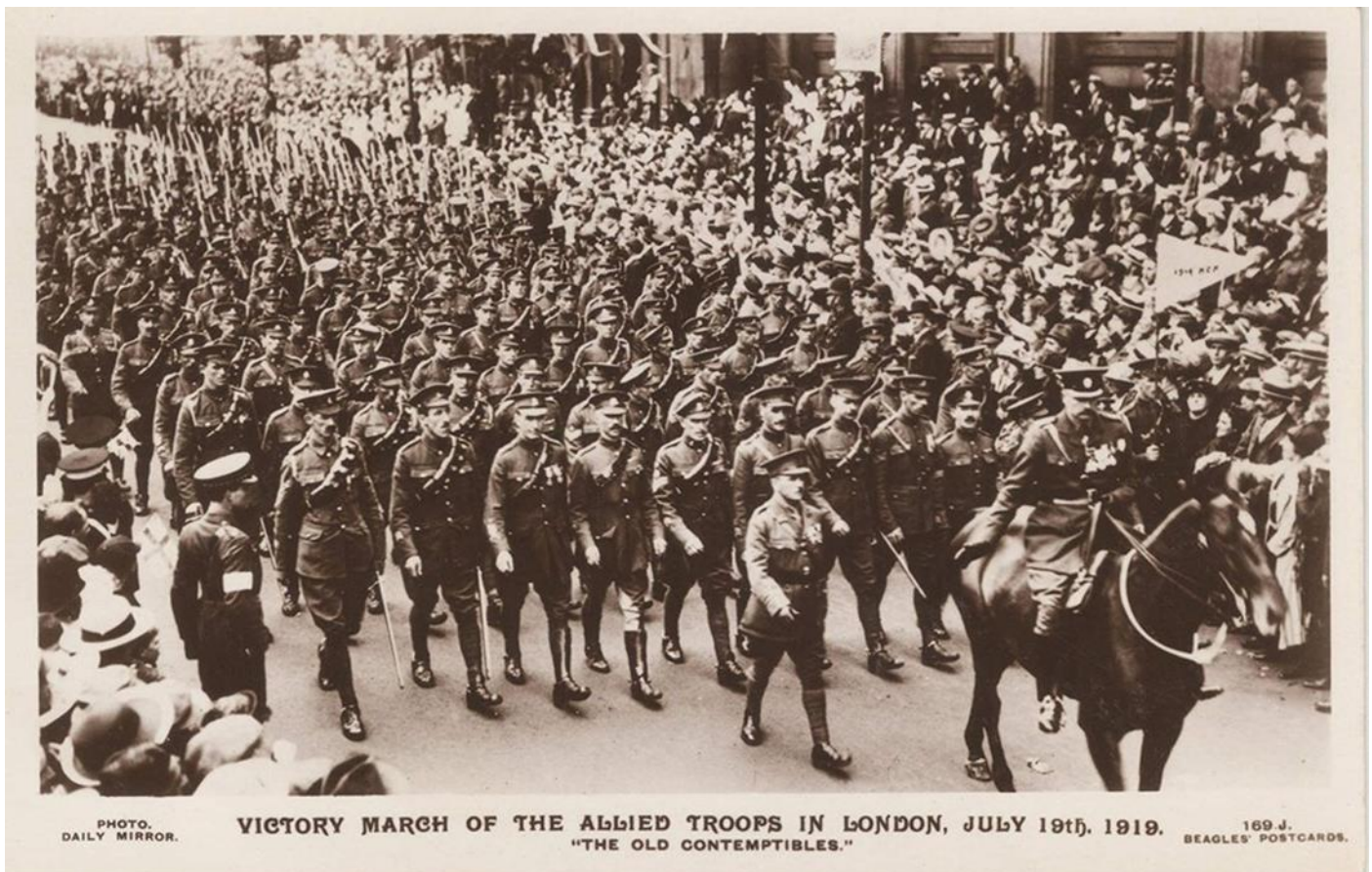
Western Front Association Chesterfield Branch – Meetings 2019

Meetings start at 7.30pm and take place at the Labour Club, Unity House, Saltergate, Chesterfield S40 1NF

January	8th	Jan.8th Branch AGM followed by a talk by Tony Bolton (Branch Chairman) on the key events of the first year after the Armistice.
February	5th	Making a welcome return to Chesterfield after a gap of several years is Dr Simon People who will discuss the `Versailles Conference of 1919`
March	5th	A first time visitor and speaker at Chesterfield Branch will be Stephen Barker whose topic will be the `Armistice 1918 and After`
April	2nd	No stranger to the Branch Peter Hart will be making his annual pilgrimage to Chesterfield. His presentation will be “Aces Falling: War Over the Trenches 1918”
May	7th	John Beckett Professor of English Regional History, Faculty of Arts at the University of Nottingham - `The Chilwell Explosion Revisited`
June	4th	Rob Thompson - always a popular visitor to Chesterfield Branch. We all tend to think of recycling as a `modern` phenomenon but in Wombles of the Western Front- Salvage on the Western Front` Rob examines the work of salvage from its small beginnings at Battalion level to the creation of the giant corporation controlled by GHQ.
July	2nd	In Prof. John Bourne we have one of the top historians of The Great War and he is going to talk about `JRR Tolkien and the 11th Lancashire Fusiliers on the Somme`
August	6th	'Making the Armaments Centre of the World: Sheffield 1860-1914' Dr. Chris Corker - University of York. The role Sheffield played in munitions production during the Great War is somewhat legendary. This talk examines some of the great names in the history of Sheffield steel in the build up to the war.
September	3rd	Back with us for a second successive year is Dr Graham Kemp who will discuss `The Impact of the economic blockade of Germany AFTER the armistice and how it led to WW2`
October	1st	Another debutant at the Chesterfield Branch but he comes highly recommended is Rod Arnold who will give a naval presentation on the `Battle of Dogger Bank - Clash of the Battlecruisers`
November	5th	Chairman of the Lincoln Branch of the WFA, Jonathan D`Hooghe , will present on the “7th Sherwood Foresters - The Robin Hood Rifles”
December	3rd	Our final meeting of 2019 will be in the hands of our own Tim Lynch with his presentation on “One Hundred Years of Battlefield Tourism”

Issue 44 - list of contents

- 1 Meetings and Speakers Calendar
- 2 Contents Page
- 3 Personal Note from the Chair (35)
- 4 Secretary`s Scribbles
- 5 Book Discussion Group news
- 6 - 16 July Meeting
- 16 - 17 Framing the Barnsley Pals Commemorative Colours
- 17 - 20 Centenary of Peace
- 20 Gallipoli Association news
- 21 Allied Aircraft at the Dardanelles
- 22 - 34 Lithgow Small Arms Factory and Museum
- 35 - 36 Sunken WW1 Scapa Flow warships sold on EBay
- 36 Billy Cotton - Royal Fusilier
- 37 - 40 Death Over the Trenches - part 2



A Personal Note from the Chair (36)



As usual, Grant's request for my contribution to the newsletter found me frantically looking around for inspiration. I am always, or nearly always (certain tweets from the USA excepted), impressed by people's ability to rattle out tweets at the drop of a hat but that particular skill eludes me.

I was grateful therefore to realise that today's date is 4 August which as I am sure you all know is the day one hundred and five years ago that Britain declared war on Germany and much to the relief of our Entente partners committed ourselves to the bloodiest (at least as far as Britain is concerned) war we have ever fought.

I suppose the anniversary of Britain's entry into the Great War, ostensibly as a reaction to Germany's invasion of Belgium but in reality a commitment to maintaining our traditional strategic policy of maintaining a balance of power in Europe, contrast vividly with our current national pre-occupation with leaving Europe. I am reminded of an episode of *Yes Prime Minister* in which Sir Humphrey explains to the new Prime Minister Jim Hacker that we were in Europe to side with the Dutch against the French and the Germans against the Italians etc, as that had always been our national policy. It now looks as if Brexiteer or Remainer we will have to find a new strategy. It is also somewhat Ironic that the biggest stumbling block to the Brexit negotiations appears to be Ireland, in 1914 of course it looked far more probable that Britain would face a civil war over Ireland than we would be drawn into a European conflict. Let's all hope hard or soft borders in Ireland do not reignite the troubles.

Enough of politics, my only excuse is to explain that I am currently doing research for a new talk for next year on British Strategy in lead up and the duration of the Great war and so these issues are to the forefront of my mind.

Tony Bolton Branch Chair

Secretary's Scribbles



Welcome to issue 44 of the WFA Chesterfield Branch Newsletter and Magazine.

On Tuesday night, for our August meeting, we welcome as our guest speaker Dr. Chris Corker. Chris, who lives in Sheffield, will be visiting the Branch for the first time. He is Lecturer in Management at York University. He has researched the steel and armaments industry in Sheffield for over a decade and is now branching into research on the metalworking industries in the Hallamshire area from the late 13th Century to the present. He completed his PhD in business history at Sheffield Hallam University in December 2016, titled 'The Business and

Technology of the Sheffield Armaments Industry 1900-1930'. The following year he was awarded the annual Coleman Prize for excellence in new business history research by the Association of Business Historians for his doctoral work. He is also a recipient of the Emerald Literati Prize for the best article in the Journal of Management History in 2018. In the last two years Chris has also presented research on Sheffield steel and armaments companies at international business and economic history conferences in Montreal, Canada; Oklahoma City, and Detroit, USA; Jyvaskyla, Finland; and across the UK. On Remembrance Sunday 2018 Chris was curator and lead speaker at the 'Sheffield's Great War' event at the Sheffield City Hall in aid of the Royal British Legion.

It is not often I have a `moan` in these notes but I will this time - just to get it off my chest, as it were! Prior to our last meeting, when we had the eminent historian Professor John Bourne as our speaker, I wrote to all of the secondary schools in the area suggesting that given the topic John was presenting on (JRR Tolkien) may be of interest to students and staff of these schools, particularly those involved in the study of English Literature or History. Sadly, I did not receive a single reply from any of these schools. Was I surprised?...well not really as in December of last year I contacted each of these schools, inviting them to attend any of our meetings in 2019 and enclosing our calendar for the year. Again I thought we may be of interest to sixth formers who may be studying History with a view of going on to take this subject at University. I did not receive a single reply, not even an acknowledgement of receipt of my mail. I find this rather sad.....and impolite not to have been given any kind of response. On a more positive note, my thanks to Jane Ainsworth and Edwin Astill for their contribution to this Newsletter

A reminder that on Tuesday 13th August our Book Discussion Group meets at 7pm at our regular venue - more details elsewhere - but I would encourage everyone to come along - even if you haven't got round to reading the book, we always have a good natter on all things Great War.

I look forward to seeing as many of you as possible on Tuesday night - all welcome

Grant Cullen - Branch Secretary

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Any opinions expressed in this Newsletter /Magazine are not necessarily those of the Western Front Association, Chesterfield Branch, in particular, or the Western Front Association in general



Blitz `n` Pieces

Prop. Adrian Saitch

Small family business trading in all our yesterdays and promoting remembrance of the heroes of the World Wars. Selling military memorabilia from both conflicts and the smaller ones. Royal British Legion member and an ex serviceman striving to keep the memories alive of the ones that fell in war.

Badges and Insignia, Books and Ephemera, Medals and Decorations, Military Pictures – Pictures, Postcards, Silks .Visit my stall at Chesterfield Market on Thursdays, Retford Market on Fridays, Worksop Market on Saturdays

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Book Group Report

The Chesterfield WFA Book Group held its fifth meeting on Tuesday 25th June at the Labour Club, Saltergate, when five members discussed “**The Home Front, Derbyshire in the First War**” by Scott Lomax.

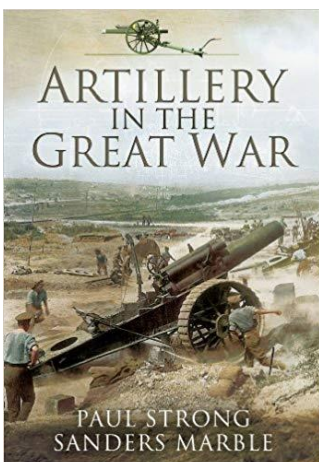
This was another excellent choice. As it says on the tin, the book covered a wide selection of topics about the Home Front of which many of us did not know much about.

While we have had WFA talks on Zeppelins, the Chilwell factory and hospitals, most of us were not aware of the extent that food rationing and conscription affected life. Of great interest also was a story that dominated the newspapers at the time, ‘The Derby Sensation’. Alice Wheeldon, a suffragette attempted to obtain the South American poison curare to kill the guard dogs at the prison where her son, a conscientious objector, was held and free him. This plot was investigated by MI5 and was finally reported as a plot to assassinate Lloyd George on the golf course with poisoned darts fired by an air gun.

After the war her son William was given early release from prison . Unable to find employment he emigrated to communist Russia where he was shot in a Stalinist purge in 1937.

Scott Lomax is a local author, who has also written ‘True Crime books about notorious murders such as those committed by Jeremy Bamber and that of Jill Dando, and he very kindly agreed with Grant Cullen that he would come to our meeting if available. Unfortunately he had another commitment on the day; maybe we will welcome him to Saltergate one day.

We recommend this book to members as a very informative and interesting read about our local area.



Our next Book Group meeting will be on Tuesday 13th August, 7pm in the Chesterfield Labour Club and we will discuss ‘**Artillery in the Great War**’ by Paul Strong and Sanders Marble, published by Pen and Sword.(206 pages). It is often said that the First World War was an Artillery war with an estimated 58% of British casualties being caused by shellfire. This book should give us a good understanding of this very important weapon

This Book Group is open to everyone, there is no membership as such - come and give it a go.

July Meeting



Dr John M Bourne taught History at Birmingham University for 30 years before his retirement in September 2009. He founded the Centre for First world War Studies of which he was Director from 2002-2009, as well as the MA in First World War Studies. He has written widely on the British experience of the great War, including *Britain and the Great War* (1989 & 2002); *Who's Who in the First World War* (2001), and (with Gary Sheffield), *Douglas Haig: War Diaries and letters 1914-1918* (2005). John is currently editing the diaries and letters of General Sir Henry Rawlinson, again with Gary Sheffield. He is Ho. Professor of First World War Studies at the University of Wolverhampton. Away from academia John is a keen supporter of Port Vale Football Club.

After the formalities of opening our meeting, Branch Chair Tony Bolton welcomed our speaker for the evening, Dr. John Bourne who was going to give a talk entitled '*JRR Tolkein and the 11th Lancashire Fusiliers on the Somme*'. Most of us are certainly aware of JRR Tolkein from his 'Lord of the Rings' books - but how much do we know about the man, his pre-war background, his Great War service as a subaltern and what influence his war service had upon his subsequent writings?

John opened by saying he had recently turned 70 but his granddaughter, Bronwen, preferred to give his age as 'eleventy'! A few weeks ago when speaking to an old friend, John mentioned that he was going to be giving a talk to a WFA Branch on Tolkein, his friend said...are you sure? Why?.....the 'Tolkeinies', he said, are as bad as 'Trekkies'....people will turn up dressed as wizards, as elves....but being Chesterfield they'll all come as orcs!



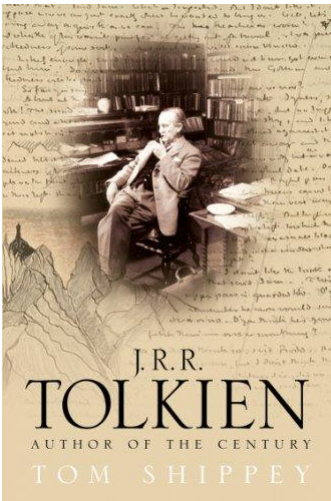
First slide up was the man himself, John Ronald Reuel Tolkein, seen in his Lancashire Fusiliers subaltern's uniform of 1916. He was known to his chums at school as 'John Ronald', to his wife as 'Ronald'.

John said he had a terrible admission to make, he had never read either of the books which gained Tolkein fame - Lord of the Rings and The Hobbit, but he said he did know quite a lot about him, and that is due, in no small part to Tom Shippey.

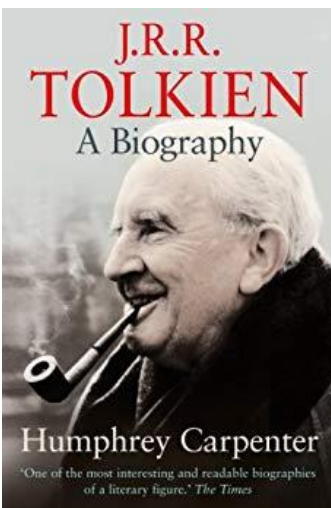


Tom Shippey is one of the world's leading authorities on JRR Tolkien. He went to the same school, the King Edward, in Birmingham and held for a period the position of Professor of Middle and Old English Literature at the University of Leeds and it would be fair to say he has made a living out of advising the Tolkien estate. John said he met Tom when he became a Research Fellow at St. John's College, Oxford. Through Tom, John realised he had similar interests to Tolkien, although Tolkien's interest was in language, whereas John's was in words. John went on to say he was interested in place names and first names, and went on to give several humorous anecdotes regarding people, experts in these fields, whom he had come across. He did point out that there had been little research into and coverage of the first names of soldiers in the First World War.

When John moved to Birmingham to take up a post at the University, his wife's church, and the infant school his children went to, was on Raddlebarn Road, and this was name which fascinated Tolkien as he did not know what the derivation of it was.



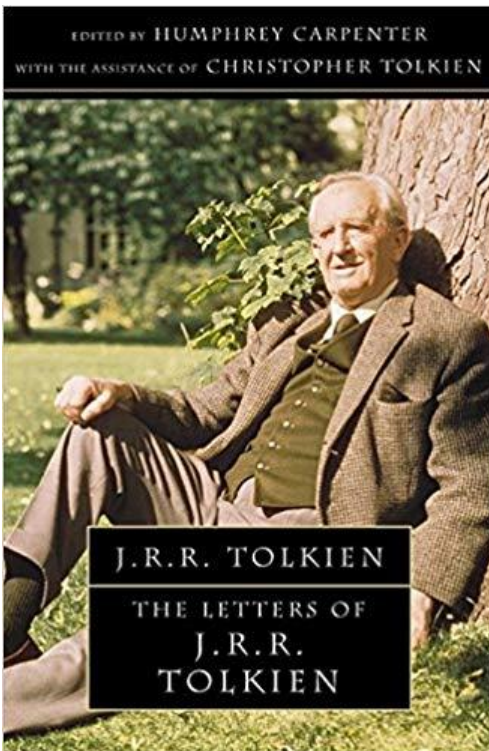
Tom Shippey has recently had a book published 'JRR Tolkien - Author of the Century' and John said that Tolkien was like marmite - some people love him...others can't stand him. Most of the people who can't stand Tolkien are people whom Tom Shippey can't stand either - the 'literati' who run literature studies in this country



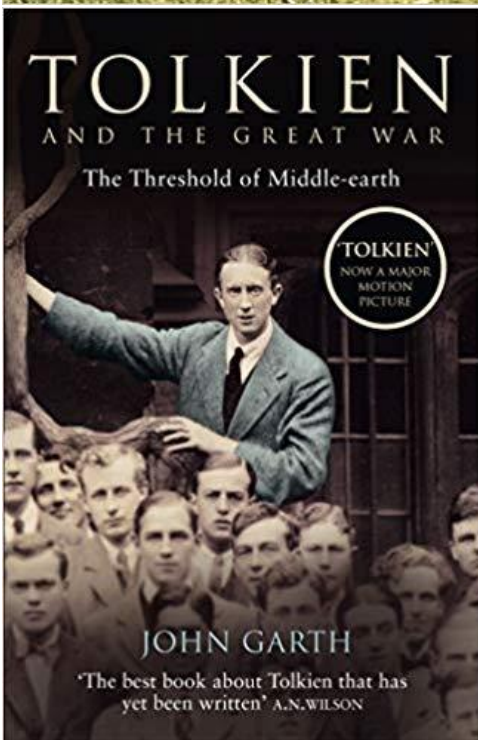
So, what do we know about Tolkien?

This is the standard biography on Tolkien by Humphrey Carpenter, a contemporary of WH Auden. Alan Bennett famously described Auden as 'the first GI bride' but he did serve in the military as part of the strategic bombing survey which post war analysed the effects of bombing on German infrastructure.

Carpenter doesn't do war and his comments on the section on Tolkien at war is somewhat risible.



There is also Letters of JRR Tolkein, published by Carpenter but this book only includes three letters written by Tolkein during the First World War, two of which are to his wife and one to his friend, GB Smith, and only this latter letter was written by Tolkein whilst he was on active service. There are apparently many more letters written by Tolkein to his wife during this period but Carpenter somewhat dismissively says that `they are of a somewhat intimate nature`which would want to make the reader more anxious to read them!



We have, however, this much better book by John Garth. John said that it was a book that he had significant differences with, but nonetheless it was a work of scholarship and Garth does get his head around the military stuff

Tolkein`s father, Arthur Tolkein died in 1896 when Tolkein was 4 years old - he was born in Bloemfontein, South Africa, where his father worked as a bank manager. This was the first significant event in JRR`s life which threw the family into, not exactly penury, a more basic existence. From this the most important person in his life was his mother Mabel. Tolkien's mother took him to live with her parents in Kings Heath, Birmingham. Soon after, in 1896, they moved to Sarehole (now in Hall Green), then a Worcestershire village, later annexed to Birmingham.^[21] He enjoyed exploring Sarehole Mill and Moseley Bog and the Clent, Lickey and Malvern Hills, which would later inspire scenes in his books, along with nearby towns and villages such as Bromsgrove, Alcester, and Alvechurch and places such as his aunt Jane's farm Bag End, the name of which he used in his fiction.

Mabel Tolkien taught her two children at home. Ronald, as he was known in the family, was a keen pupil. She taught him a great deal of botany and awakened in him the enjoyment of the

look and feel of plants. Young Tolkien liked to draw landscapes and trees, but his favourite lessons were those concerning languages, and his mother taught him the rudiments of Latin very early. Mabel Tolkien was received into the Roman Catholic Church in 1900 despite vehement protests by her Baptist family, which stopped all financial assistance to her. In 1904, when J. R. R. Tolkien was 12, his mother died of acute diabetes at Fern Cottage in Rednal, which she was renting. She was then about 34 years of age, about as old as a person with diabetes mellitus type 1 could live without treatment—insulin would not be discovered until two decades later. Nine years after her death, Tolkien wrote, "My own dear mother was a martyr indeed, and it is not to everybody that God grants so easy a way to his great gifts as he did to Hilary and myself, giving us a mother who killed herself with labour and trouble to ensure us keeping the faith."

Leaving the Established church for Catholicism in those days was a big issue and John recalled that even when he got married - his wife was Catholic - he had to take instructions in her faith - and he `brought the house down` with an anecdote of an early meeting with the Irish priest who was to conduct their nuptials, but it served to illustrate how these distinction were really quite significant. Mabel`s family were staunchly Anglican, anti-Catholic so when she converted this did not go down well. When she dies Tolkein and his brother are left orphans. So we have a young orphan, whose inspiration had been his mother and he sees her as a `martyr`. Tolkein remained a practicing Catholic all his life and he looked upon Lord of the Rings as a deeply catholic book, although John said he could never really see the connection



After his mother, the most important lady in his life was his wife, Edith Mary Bratt. Edith first met Tolkien early in 1908, when he and his younger brother Hilary were moved into 37 Duchess Road by their guardian, Fr. Francis Xavier Morgan of the Birmingham Oratory. At the time Tolkien, known within his family as Ronald, was 16 years old and Edith was 19. According to Humphrey Carpenter, "Edith and Ronald took to frequenting Birmingham teashops, especially one which had a balcony overlooking the pavement. There they would sit and throw sugarlumps into the hats of passers-by, moving to the next table when the sugar bowl was empty. ...With two people of their personalities and in their position, romance was bound to flourish. Both were orphans in need of affection, and they found that they could give it to each other. During the summer of 1909, they decided

that they were in love.

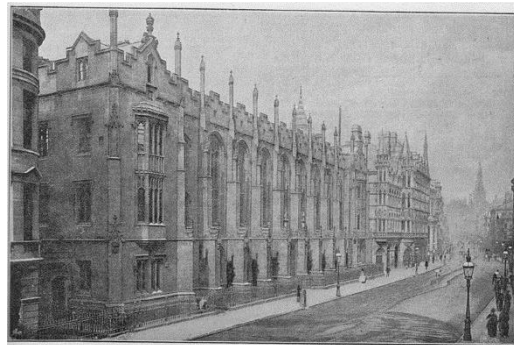
However, before the end of the year the relationship had become known to Tolkien's guardian, Father Francis Xavier Morgan (January 18, 1857 - June 11, 1935) was a Roman Catholic priest at the Birmingham Oratory in Birmingham. He was half Welsh and half Anglo-Spanish. He took care of Mabel Tolkien during her illness, and took over custody of Ronald and Hilary Tolkien after her death. Father Francis was a pipe-smoker and Tolkien derived his own custom from this.

Viewing Edith as a distraction from Tolkien's schoolwork and bothered by her Anglican religion, he forbade any contact between them until Tolkien became a legal adult at twenty-one. Tolkien grudgingly obeyed this instruction to the letter while Father Morgan's guardianship lasted. However, on the evening of his twenty-first birthday, Tolkien wrote a letter to Edith, who had since moved to Cheltenham. It contained a declaration of his love and asked her to marry him. She replied saying that she was already engaged but subtly implied that she had become so out of a belief that Tolkien had forgotten her. Within a week, Tolkien had journeyed to Cheltenham where Edith met him at the railway station. That day, Edith returned her ring and announced her engagement to Tolkien instead.

The other influence on Tolkein was the King Edward School in Birmingham. This was a scholarship school. He was extremely popular at school, playing First XV rugby. In 1911, while at King Edward's School, Tolkien and three friends, Rob Gilson, Geoffrey Bache Smith and Christopher Wiseman, formed a semi-secret society they called the T.C.B.S. The initials stood for Tea Club and Barrovian Society, alluding to their fondness for drinking tea in Barrow's Stores near the school and, secretly, in the school library. After leaving school, the members stayed in touch and, in December 1914, they held a "council" in London at Wiseman's home. For Tolkien, the result of this meeting was a strong dedication to writing poetry.



Christopher Luke Wiseman (left) was Tolkien's inseparable companion from the age of around 12, when the two met in the fifth class at King Edward's. That term, Christopher came second in the class lists, and Tolkien came first, but their initial rivalry developed into friendship based on a shared interest in Latin and Greek, enjoyment of rugby and a keenness for discussing anything and everything. The boys moved through the school together. Christopher started to learn hieroglyphics, and provided a sympathetic ear for Tolkien's first stumblings in poetry and his invented Germanic languages. He was also a nucleic member of the TCBS. By 1911, Christopher was highly knowledgeable about natural sciences and music. He was an amateur composer, and also an excellent mathematician. Wiseman was the son of a Methodist minister and joined the Royal Navy during



THE FREE GRAMMAR SCHOOL, NEW STREET.
(From a Photograph by Whitlock, New Street.)

WW1, surviving the war. Tolkien named his son Christopher, after Christopher Wiseman. Most of Tolkien's friends were non-conformists and none appear to have been Roman Catholic.

There was four in the `TCBS`Tolkien, Wiseman, Robert Quilter Gilson and Geoffrey Bache Smith. Gilson, son of a King Edward School headmaster was not a writer, but an artist and designer. He was killed by shellfire on the First Day of the Somme.



Smith (left) served in the "3rd Salford Pals" of the Lancashire Fusiliers. He fought in the Battle of the Somme, at the end of which (in November 1916) he was severely wounded by enemy shrapnel, and died soon afterwards on December 3rd. Two years following, *A Spring Harvest* was published as a compilation of Smith's poems. John drew members attention to the artistic license regarding these deaths in the recent film on Tolkien's life. The film also appeared to show that the key relationship was that between Tolkien and Smith, whereas, in John's opinion, it was that with Wiseman.

So here we have these four, bright, able grammar school boys, in the great industrial city of Birmingham. Then we go to war. One thing that the Centenaries have shown, particularly that of 1914 was what a surprise war was when it came, Anglo-German relations had actually been better in 1914 than they had been in the previous decade. The British Government had been preparing for war in 1914...but it was war in Ireland - not a war against Germany and they really only woke up to the dangers of it towards the end of July when the Austrians sent that ultimatum to Serbia.

Few people were expecting war and these four young men were contemplating their careers. So when war came was it a case of rushing to colours? Some of the TCBS in fact did this, joining up

right away. Tolkein`s younger brother, Hillary joins the 3rd Battalion of the Birmingham (Service) Regiment.

Tolkein had a problem, he sees his future as an academic and to be an academic he needs a good degree and this war was going to interrupt his studies whilst he`s on a roll. One of the reasons people volunteer is the excitement, adventure, patriotism, no of these things `ticked Tolkein`s box`, you get the feeling that he had no ideological commitment to this war, he doesn`t like it...he doesn`t even like the bloody French ! - and this is a war fighting on the side of the French - in France - his own background on the Tolkein side is German. Intellectually, aesthetically, historically, or even the poetry and languages of Northern Europe would draw you to conclude he would be more comfortable with Germans than the French whom he despised.

None of the four join up right away, Tolkein decides he will do his final year, and when he returns to Oxford, he discovers this scheme whereby you can join the OTC and this he does in October 1914 which entitled him to wear a brassard this avoiding being presented with white feathers etc. From this he is saying, I will join `when I am ready` ... but I`m not quite ready `yet`. Smith is a member of the OTC and he doesn`t join up until October with the Ox and Bucks Light Infantry. He joined the 8th battalion as a supernumerary second lieutenant which indicated that there had been no vacancies hence the term `supernumerary` and for whatever reason in December 1914 he switches to the Lancashire Fusiliers.

Now we have the big question, why does Tolkein, with no Lancashire connections, join the Lancashire Fusiliers? The only feasible answer seems to be that GB Smith was already serving with them. On his attestation certificate it says he is joining the 19th battalion Lancashire Fusiliers. By the time he passed his finals in July 1915, Tolkien recalled that the hints were "becoming outspoken from relatives". He was commissioned as a temporary second lieutenant in the Lancashire Fusiliers on 15 July 1915. He trained with the 13th (Reserve) Battalion on Cannock Chase, Staffordshire, for 11 months. In a letter to Edith, Tolkien complained: "Gentlemen are rare among the superiors, and even human beings rare indeed." Following their wedding, Lieutenant and Mrs. Tolkien took up lodgings near the training camp.

On 2 June 1916, Tolkien received a telegram summoning him to Folkestone for posting to France. The Tolkiens spent the night before his departure in a room at the Plough & Harrow Hotel in Edgbaston, Birmingham.

On 5 June 1916, Tolkien boarded a troop transport for an overnight voyage to Calais. Like other soldiers arriving for the first time, he was sent to the British Expeditionary Force's (BEF) base depot at Étaples. On 7 June, he was informed that he had been assigned as a signals officer to the 11th (Service) Battalion, Lancashire Fusiliers. The battalion was part of the 74th Brigade, 25th Division. Now the battalion already had a signals officer, chap called Reynolds, so it would appear that Tolkein was not `signals ready` and would need to be `brought up to speed` in the field...or was he just another platoon officer? John said he couldn`t answer that. However, on July 20th, Tolkein does become the battalion signals officer when Reynolds is promoted which John Garth thinks was anticipated when Tolkein was sent to the 11th.

While waiting to be summoned to his unit, Tolkien sank into boredom. To pass the time, he composed a poem entitled *The Lonely Isle*, which was inspired by his feelings during the sea crossing to Calais. To evade the British Army's postal censorship, he also developed a code of dots by which Edith could track his movements.^[54]

He left Étaples on 27 June 1916 and joined his battalion at Rubempré, near Amiens. He found himself commanding enlisted men who were drawn mainly from the mining, milling, and

weaving towns of Lancashire. According to John Garth, he "felt an affinity for these working class men", but military protocol prohibited friendships with "other ranks". Instead, he was required to "take charge of them, discipline them, train them, and probably censor their letters ... If possible, he was supposed to inspire their love and loyalty." Tolkien later lamented, "The most improper job of any man ... is bossing other men. Not one in a million is fit for it, and least of all those who seek the opportunity."

What many people don't know is that Tolkien was the battalion's Signals Officer and for some this position is looked upon as "less dangerous" than other roles, but, consider, what does the German artillery target - communications and signals located at battalion headquarters. We don't know why he became a signals officer but Brian Hall's book says that the BEF abolished the Communications and signals Sections at battalion level in 1913 deferring it to the Royal Engineers. They therefore had to recruit engineers with electrical experience in 1914, many being drawn from Birmingham University which was one of the few centres of excellence for electrical engineering in 1914. He arrived at the Somme in early July 1916. In between terms behind the lines at Bouzincourt, he participated in the assaults on the Schwaben Redoubt and the Leipzig salient. Tolkien's time in combat was a terrible stress for Edith, who feared that every knock on the door might carry news of her husband's death. Edith could track her husband's movements on a map of the Western Front. According to the memoirs of the Reverend Mervyn S. Evers, Anglican chaplain to the Lancashire Fusiliers

"On one occasion I spent the night with the Brigade Machine Gun Officer and the Signals Officer in one of the captured German dugouts ... We dossed down for the night in the hopes of getting some sleep, but it was not to be. We no sooner lay down than hordes of lice got up. So we went round to the Medical Officer, who was also in the dugout with his equipment, and he gave us some ointment which he assured us would keep the little brutes away. We anointed ourselves all over with the stuff and again lay down in great hopes, but it was not to be, because instead of discouraging them it seemed to act like a kind of hors d'oeuvre and the little beggars went at their feast with renewed vigour.

On 27 October 1916, as his battalion attacked Regina Trench, Tolkien came down with trench fever, a disease carried by the lice. He was invalided to England on 8 November 1916.¹ Many of his dearest school friends were killed in the war. Among their number were Rob Gilson of the Tea Club and Barrovian Society, who was killed on the first day of the Somme while leading his men in the assault on Beaumont Hamel. Fellow T.C.B.S. member Geoffrey Smith was killed during the same battle when a German artillery shell landed on a first aid post. Tolkien's battalion was almost completely wiped out following his return to England.



Left -Men of the 1st Battalion, Lancashire Fusiliers in a communication trench near Beaumont Hamel, 1916.

Tolkien might well have been killed himself, but he had suffered from health problems and had been removed from combat multiple times.

According to John Garth: *Although Kitchener's army enshrined old social boundaries, it also chipped away at the class divide by throwing men from all walks of life into a desperate situation together. Tolkien wrote that the experience taught him, "a deep sympathy and feeling for the Tommy; especially the plain soldier from the agricultural counties". He remained profoundly grateful for the lesson. For a long time, he had been imprisoned in a tower, not of pearl, but of ivory.*

John then discussed the Lancashire Fusiliers, there is no Regimental History of the Lancashire Fusiliers although there is a book - `Made of the Right Stuff` written by two chaps who worked at the Lancashire Fusiliers museum in Bury. There is only one mention of Tolkein in this book, something which is not uncommon when you get to the sources, but it does give reasonably accurate descriptions of the main actions in which the Lancashire Fusiliers were involved whilst Tolkein was with the battalion. The 11th Battalion, Lancashire Fusiliers was a K3 battalion, in 74 Brigade, 25th Division. The battalion war diary only contains two mentions of Tolkein by name, the first records his arrival at the battalion, the second, when he is struck of the strength of the battalion in November 1916. When he was invalided out at the end of October the assumption was he would be treated, get fit again, and return.



John then showed the 25th Division`s Order of Battle from June to November 1916 and it should be noted that two of the Brigade Commanders were sick but we don`t know the cause. It does appear, however, that there was a lot of sickness in this area, and senior officers were not immune.

The Divisional Commander was Major General Sir Guy Bainbridge (left) and he was in charge from June v1916 until August 1918. The Division had been badly smashed up by August 1918 and was completely reconstituted with new battalions, and John mentioned a new book by Alison Hines entitled `Refilling Haig`s Armies`. Bainbridge was a very competent and able officer and his Divisional reports on the division`s activities during the Somme campaign were concise and thorough. What worked - artillery preparation, maintaining contact with the creeping barrage, taking units out of the line for proper practice - which explains why they did well at the end with the capture of Regina Trench.

The Lancashire Fusiliers were heavily committed on the Somme, Albert, Bazentin Ridge, Pozieres Ridge, Mouquet Farm, Stuff Redoubt, Regina Trench, all of which incurred really quite serious casualties. It wasn`t an easy introduction to trench warfare for Tolkein or indeed anyone else who joined that battalion at that time.

John then touched briefly on each of the Battalion commanders, Bird, Finch, Sprague and Messiter - there we have...a civilian, a boy, a dug-out and a regular.



The Commander of 74th Brigade was Brigadier-General George Ayscough Armytage. He was quite unusual for a British officer of the period - he had married a woman considerably older than he was, it`s usually the other way round, taking Douglas Haig as an example. Armytage also went on sick leave but recovered and subsequently returned.



He was replaced by Brigadier General Hugh Keppel-Bethell who was renowned for his temper, being notorious for having total `melt-downs` shouting and screaming at subordinates - and superiors in equal measure! - but this did not stop him becoming the youngest British divisional commander (66th Division) of the 20th century in March 1918 when he successfully rebuilt this shattered division. Keppel-Bethell succeeded Armytage in October 1916, one week before Tolkein returned ill to the UK. He remained in command of 74 Brigade until March 1918 when he took command of 66th Division

According to John Garth, quoting Humphrey Carpenter, a handful of officers of the 11th Lancashires had been career soldiers with extensive experience who had e `dug out` of retirement - men with narrow minds and endless stories of India or the Boer War. John, using the time honoured technical expression, described this as `bollocks`. There were no `dug-outs` in the 11th Lancashire Fusiliers and none who had served in India, so this idea that somehow Tolkein was like a `fish out of water` `surrounded by all these ageing nincompoops` is absolutely incorrect.

It is difficult to place Tolkein in class terms, being the orphan child of a catholic convert, in a non-catholic country, with no money, he had to make his own way in the world, indeed it is difficult to pigeon hole Tolkein . For someone like Wiseman, Gilson or Smith, you could say they were middle class chaps and clearly Tolkein had the ability to talk like, sound like and aspire to be a middle class chap but whether he was or not is another matter. The battalion was full of officers who were public schoolboys and quite a few were younger than Tolkein who was now 24 at the time of the Somme. He is also one of the few married subalterns because in typical middle class modes you don `t get married until you can provide for a wife. So those people who married young, like coal miners could provide for a wife `cos they were well paid.

The second in command of the battalion was the twenty year old Captain Metcalfe....and he didn `t come off a council estate, yet Tolkein was comfortable in his company. His background was classic, his father was a Church of England clergyman. When Metcalfe was wounded in October 1916 his replacement was George Constable from the Sherwood Foresters.

John then put up a slide showing the battalion `s officer fatalities during the battalions time in the Somme sector and gave a brief description on some of those on the list.

Tolkein `s experience in the Lancashire Fusiliers has been used by `Tolkienies` to foster a sense that he was isolated, socially and intellectually, but in John `s opinion, this was nonsense when you look at the actual backgrounds and interests of the people he served with.

Tolkein was only with the Lancashire Fusiliers from 26th June 1916 until 25th October 1916, clearly long enough to get killed as numerous of his brother officers had been killed or wounded and in some cases badly wounded, during that period and others would be killed or badly wounded later in the war. But Tolkein comes down with trench fever and he was not the only officer thus afflicted, two others take ill similarly. Tolkein gets sent back to England to recover, being considered really ill and Tolkein `s file shows the ups and downs in his condition day by day, seemingly recovering then suffering a relapse. Whilst recovering from trench fever he developed gastritis which saw him lose two stones in weight.

He was sucked out of the environment of the threat of death and wounding and dumped in Birmingham - where? - fifty yards from where the current King Edward school is - in the Great Hall of the University of Birmingham which, in 1916 was being used for treating medical cases.

What therefore did it all amount to? John said he had a problem with John Garth who thinks his time on the Somme was the defining experience of Tolkein`s life. OK, fifty per cent of his closest chums were killed, both in 1916, but his brothers both survived as did others on the fringes of Tolkein`s life. Is this the defining number from which he gets the idea of Middle Earth? John Garth says `yes` - and John said that he knows far more about Tolkein than he does, but John said he was unconvinced at it is a familiar trope of writing about the First World War, for if you were in it , it must have been the most important, most defining, most searing experience on your life. John doubts this - two things stick in his mind, from talking to veterans of the First World War and his own father and uncles who had been in WW2 - the excitement of it and the enjoyment of it all, something you don`t feel about Tolkein. John concluded that he doesn`t think that the Trilogy is about the First World War - yes a few things maybe. When asked Mr. Tolkein, what is it about?...he would answer it`s about what it`s about and he was absolutely clear that it wasn`t an allegory. He hated allegory, it`s not an allegory. Tolkein`s entire view of the world was based upon language and this is what singles him out as a human being and it was from a very early age he had an absolute fascination with languages and learned languages. He invented a world to make his languages real for having invented languages he had to invent a world that spoke these languages. This the driving force. The other driving force in his life was the believed martyrdom of his mother. So if the First World War is to be rated, it must be behind these things.

John recalled a Vietnam War veteran who said that when he slid down the banister of life - the Vietnam War was splinter in his arse. For some war was a big issue but for others it was a case of `Goodbye to All That` and put it behind them and they moved on, mostly back to what they had been doing before the war. History had disrupted them but afterwards they did their best to put the carriage back on the track and John said he found it extremely difficult to see Tolkein as a traumatised veteran of the First World War.

This concluded John`s excellent, interesting, humorous and different, presentation, for which Branch chair Tony Bolton warmly thanked him on behalf of those attending...once again 30+ coming to hear our speaker.

Trench Fever

In John Bourne`s presentation he said that JRR Tolkein`s days on active service in WW1 were ended when he contracted `Trench Fever` So what exactly is this disease and how could it end a soldier`s days on the front line.

Trench fever (also known as "five-day fever", "quintan fever" (febris quintana in Latin), and "urban trench fever") is a moderately serious disease transmitted by body lice. It infected armies in Flanders, France, Poland, Galicia, Italy, Salonika, Macedonia, Mesopotamia, Russia and Egypt in World War I. Three noted sufferers during WWI were the authors J. R. R. Tolkien, A. A. Milne, and C. S. Lewis. From 1915 to 1918 between one-fifth and one-third of all British troops reported ill had trench fever while about one-fifth of ill German and Austrian troops had the disease. The disease persists among the homeless. Outbreaks have been documented, for example, in Seattle and Baltimore in the United States among injection drug users and in Marseille, France, and Burundi.

The disease is caused by the bacterium Bartonella quintana (older names: Rochalimea quintana, Rickettsia quintana), found in the stomach walls of the body louse.^[3] Bartonella quintana is closely related to Bartonella henselae, the agent of cat scratch fever and bacillary angiomatosis.

The disease is classically a five-day fever of the relapsing type, rarely exhibiting a continuous course. The incubation period is relatively long, at about two weeks. The onset of symptoms is usually sudden, with high fever, severe headache, pain on moving the eyeballs, soreness of the muscles of the legs and back, and frequently hyperaesthesia of the shins. The initial fever is usually followed in a few days by a single, short rise but there may be many relapses between periods without fever. The most constant symptom is pain in the legs. Recovery takes a month or more. Lethal cases are rare, but in a few cases "the persistent fever might lead to heart failure". After effects may include neurasthenia, cardiac disturbances and myalgia.

Modern day treatment is by antibiotics , but of course in Tolkein`s day as a Great War soldier, these were yet to be developed.

FRAMING THE BARNESLEY PALS COLOURS by Jane Ainsworth

Friday 19 July 2019 was the Centenary of Peace Day which had been celebrated across Britain and Allied Countries one hundred years ago.

Articles filled the front pages of contemporary newspapers about the celebrations nationally and locally. By coincidence, *Barnsley Chronicle and Penistone Mexborough, Wath and Hoyland Journal*, which was then published on a Saturday, came out on 19 July 1919. The main mention of Peace on its first page was that the Board of Guardians had agreed to provide 'extra relief to outdoor recipients during Peace week' of 2s 6d for adults and 1s 6d for children (worth approximately £25 and £15 today); this was in addition to joining residents at 'Gawber Road Institution' for a special meal.

On 26 July 1919, the entire front page was filled with details of the celebrations on the 19th. In the morning was a huge welcome home to the forces, the last of whom had recently been demobilized. There were 3,000 officers and men in the procession, crowds watching and decorations on all the buildings. Barnsley folk were fascinated to watch the tank, which was driven to Locke Park where it put on a demonstration by knocking down a wall; it was on display for a number of years. After street parties and special meals, the exhibition of flares and rockets arranged for the evening was unfortunately spoilt by heavy rainfall.

All sorts of souvenirs were created internationally: Peace medals, Peace mugs etc, specially embroidered Peace silk postcards or cushion covers and programmes of events with photos. Bassetts even mass produced Jelly Babies as Peace Babies, which were very popular.

Many inedible items survive, treasured as passed down within families or collected by people passionately interested in the First World War and its memorabilia, such as Historian and Author Jane Ainsworth.

It is appropriate that on such an auspicious day, Jane, Co-ordinator of the Barnsley Pals Colours Project at St Mary's Church, can announce that sufficient funds have now been raised to frame the two King's Colours of the 13th and 14th Battalions of the York and Lancaster Regiment.

Jane explains: 'I am delighted to inform readers that thanks to the generosity of many individuals, groups and organizations, we have been able to commission the framing from the Conservation Unit at the People's History Museum in Manchester. This is the most important next step in protecting these unique objects of our heritage, symbolic of and a connection to our Barnsley Pals, of whom we are justifiably proud.

'We still need a significant amount of money to relocate them into the War Memorial Chapel and to conserve the impressive War Memorial Pillar and two Plaques. This work may be delayed because of

newly identified structural problems with the plasterwork in the Chapel. As many people will know, this is one of the headaches of looking after an old building, but funds will have to be found for the renovations to be carried out.

‘However,’ Jane continues: ‘today we want to focus on positive news, to thank publicly all those who have helped us reach this stage, to encourage others to donate to this important project and to let readers know what Father Stephen, the PCC and I are planning.

‘Since my last article on 28 June, I received confirmation that two more grant applications have been successful. We now have £5,000 from the South Yorkshire Community Foundation with the grant allocated from the York and Lancaster Regiment Foundation fund from the sale of the Drill Hall in Eastgate to *Barnsley Chronicle*. Kingstone Ward Alliance has agreed to pay £500 as well as Cudworth, Penistone, St Helen’s and Stairfoot. This is in addition to £2,000 from Dearne Valley Landscape Partnership, who have supported us at every stage, and the same amount in donations, with large amounts from York and Lancaster Regiment via Colonel Norton, Friendly and Wharnccliffe Lodges of Freemasons, Royal Air Forces Association, National Union of Mineworkers and several individuals.

‘Father Stephen has registered St Mary’s Church to be open during this year’s Heritage Open Days in September for the first time. We are still finalizing arrangements but will have events, an exhibition and refreshments on Friday 13 September, when Elizabeth Smith from the Commonwealth War Graves Commission will join us, Friday 20th and Saturday 21st, when we will have several activities for children as well as informal tours and a concert in the evening.

‘We hope to have many visitors to Barnsley’s Civic Church, which is extremely important as a place of worship and an inclusive community resource in the town centre. It is one of most – if not the most - significant historic churches in our borough and it is Grade II listed. St Mary’s has many beautiful stained glass windows as well as a large number of memorials to individuals in addition to the First World War and Boer War Memorials and the Colours.

‘We will be launching a Friends of St Mary’s group during the open days – support is needed for various events, enhancing and maintaining the churchyard and helping me to carry out research to produce guidebooks. We will also be taking details of anyone who might like to join us on a coach trip to Manchester to look round the People’s History Museum and have a personal tour of the Conservation Studios, where there is a busy programme of textile conservation for the museum and other people.

‘The framing of the Colours has to be carried out in situ and, when the dates are confirmed, we will publicize when St Mary’s Church will be open so that visitors can watch the Conservators at work’.

COMMEMORATING THE CENTENARY OF PEACE

Jane Ainsworth, Volunteer Co-ordinator of the Barnsley Pals Colours Project, feels disappointed at the lack of commemorations of important Peace Centenaries in relation to the Great War, which, despite the hope that it would be “the war to end all wars” (US President Woodrow Wilson), led to its being renamed the First World War.

Barnsley has just held its first Big Weekend in celebration of 150 years since it became a Metropolitan Borough – it is also 770 years since we were granted a Charter to hold a Market. Our amazing new Library@TheLightbox was opened as part of the impressive redevelopment of this area of town and the Mayor’s Parade was a huge success with lots of groups participating – including three of us carrying the replica flags – and crowds watching. However, the opportunity was missed by planners of the event to mark the Centenary of Peace. Significantly, I am writing this on the Centenary of Peace Day, a bank holiday designated by the Government of 1919 for a date when most of the Armed Forces still serving overseas would have been demobilised and returned home to their loved ones and local communities.



Jane had the honour (richly deserved) of carrying one of the replica colours at the Mayor's Parade with Tom Barnes, Chair of Churchfields Branch of Barnsley RBL,

The Armistice ended the fighting on 11 November 1918 with the surrender of Germany but peace was not restored in Europe until various peace treaties were signed in 1919 between the Allied Powers and Central Powers.

The Army of Occupation remained in Rhineland for some time after the Armistice – the Barnsley Pals were part of this Army until late May 1919. The German U-boats were immediately confiscated but the High Seas Fleet was interned at Scapa Flow while their fate was negotiated. Conditions on board the 74 ships were appalling for the German crews with a lack of supplies and no entertainment resulting in poor discipline. Rear-Admiral Reuter decided to scuttle the ships on 21 June 1919 and succeeded in sinking 52 with the remaining 22 being beached by the British Navy. No German Sailors drowned but nine were shot for not helping to save their ships. Many of the sunken ships were subsequently salvaged and there was a commemoration recently on Orkney for the Centenary of the loss of German lives in this action'.

The most important of the treaties was the Treaty of Versailles, which was signed by Germany and the Allied Powers on 28 June 1919 in the Palace of Versailles, exactly five years after the assassination of Archduke Ferdinand which had led to the outbreak of war.

One of the most important but controversial provisions of this treaty was that of making Germany and its allies accept full responsibility for the war and requiring them to make reparation for the loss and damage caused. The amount assessed in 1919 is worth £284 billion today. However, Germany had paid little by October 1925, when the Locarno Treaties were negotiated in Switzerland to improve relations across Europe and to maintain peace. As the world's financial crisis deepened with the Great Depression, the amount of reparation was re-negotiated then suspended at the Lausanne Conference in Switzerland in 1932. (Britain only cleared our debt for this war in March 2015, when Chancellor George Osborne paid £1.9 billion to pay off the War Loan).

Defeat in 1918 combined with the difficult economic situation led to the rise of Adolf Hitler, who had served throughout the Great War and been wounded. His ideology developed from fascism and antisemitism while his power grew as leader of the National Socialism German Workers Party then Nazi Party. Hitler's invasion of Poland in 1939 caused the Second World War and this resulted in the deaths of millions, caused by the war itself and the Holocaust.

The Normandy landings on D-Day (6 June 1944) as part of the meticulously planned Operation Overlord led to its end. The 75th anniversary of the brave actions of the British and Allied Forces were remembered this month; the thousands of men who lost their lives during training and in action were commemorated and the dwindling number of survivors rightly celebrated for their extraordinary determination.

At the end of the First World War, when news of Peace was heard in Barnsley it was, according to a Sheffield newspaper, received "with entire absence of public demonstration. A spirit of deep thankfulness prevailed, but there was no civic recognition of the great and historic event. Few flags were displayed, and the local church bells were silent; yet, despite this apparent apathy, nowhere was the signing of peace more welcome than in Barnsley – a town that did rather more than "its bit" in helping to win the war." "Late at night a few fireworks were let off by individuals, who determined that the day should not pass unmarked, but peace day in Barnsley passed with "business as usual", with a general spread of gladness at the coming of a practical promise of a new era. Yesterday, thanksgiving services were held at the Barnsley churches and chapels, which were largely attended by grateful congregations."

Saturday 19 July 1919 was nominated as Peace Day by the Government for national celebrations; details were reported in *Barnsley Chronicle* of the events in the town centre and surrounding townships. There was a huge procession, in which an estimated 3,000 Officers and men participated and the town centre was decorated with glorious flags and bunting. Led by mounted police returned from active service, the procession comprised Boy Scouts and Church Lads Brigade, the Band of the 1st Volunteer Battalion accompanied by Bugle Band, Officers and men of the Royal Navy, Royal Artillery, Royal Engineers and Cavalry Regiments, 1/5 and 2/5 York and Lancaster, Band of the 13th (Service Battalion) followed by the First and Second Barnsley Pals, National Reserve Band .then all other Battalions of the York and Lancaster Regiment, and all other Regiments, Cooper's Royal Brass Band, other infantry regiments, Machine Gun Corps, R. A. M. C., Royal Army Service Corps, Royal Defence Corps with the National Reserves, Royal Air Force.

Local people felt ambivalence. They were glad of peace but "Amongst those masses of onlookers were many aching hearts and sad, tear-dimmed eyes at the inevitable thought of father, son, brother, or dear friend, who had given his all that Peace Day might be so happily commemorated".

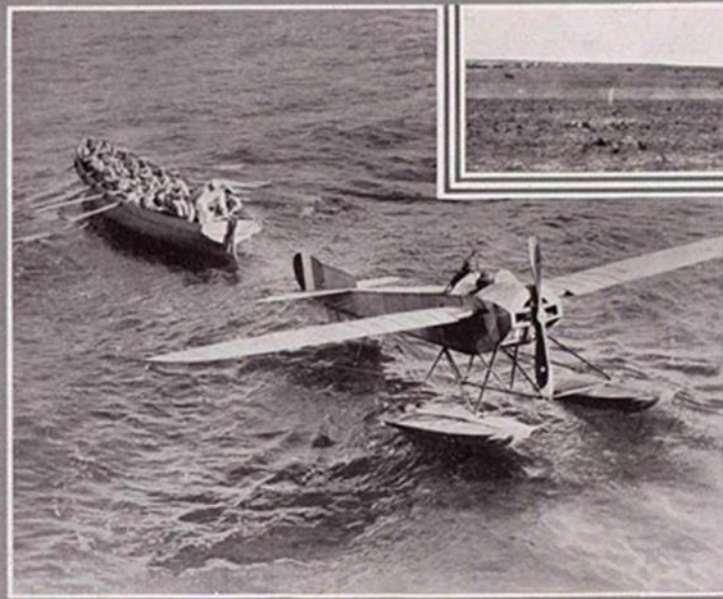
Sir William Sutherland, David Lloyd George's Private and Press Secretary who was knighted in 1919 along with Lieutenant Colonel Joseph Hewitt, had come to Barnsley at the request of the Prime Minister to honour the men and welcome them back. He was aware of "the record of the York and Lancaster Regiment, which had a very distinguished history and which had had a hard and laborious time.... He knew that no less a person than Mr Lloyd George appreciated the remarkable work of Yorkshire regiments throughout the heavy fighting in France, Flanders and other spheres of war. Yorkshire was certainly the most distinguished county in England and the record of Yorkshire in sport and in fighting had always been amongst the very first. They had a distinguished Colonel in Sir Joseph Hewitt, who had been one of the best friends of the battalion and had spared no effort to further its interests at all times".

The battalion owed a great debt to Sir Joseph Hewitt" who responded: "you came voluntarily to do your duty, and willing to sacrifice all without regard for self. You were as happy in offering that sacrifice as you are now you are rejoicing at your re-union, at your coming back and bringing with you glory. Your achievements are written on the scroll of fame, and Barnsley is very proud of you". He asked them all to remember "your pals whom you have left behind. They are watching us to-day, and I hope when you leave this earth you may all know the great joy of re-union. You have gone through the fire just as much as they. They were unlucky in one sense, but they have gone with a hero's sacrifice – the greatest sacrifice".

Jane feels that is appropriate that the photograph of Barnsley folk taken on Peace Day was taken in Penistone as they continue to make a huge effort to remember and honour those who have served and died in any war, as has been reported in *Barnsley Chronicle* over the last few months. They also planned a weekend of events for Armed Forces Day 2019. She is especially grateful to the Penistone Ward Alliance as they were the first such group to agree to pay £500 towards the cost of framing the two Barnsley Pals Colours and conserve the War Memorial Pillar with 200 names.

Jane applied to all Barnsley Ward Alliances for funding and is pleased that St Helen's, Cudworth, Stairfoot and Kingstone have also paid £500 each towards the cost of the work. We are thrilled that a £5,000 grant has recently been approved by the South Yorkshire Community Fund from the York and Lancaster Foundation. This has enabled us to commission the first stage of the programme, ie framing the two King's Colours. We are awaiting a date from the Textile Conservators at the People's History Museum in Manchester to start work in St Mary's Church and hope that this will be in the autumn.

The Work of the Allied Aircraft at the Dardanelles.



Taking a Seaplane in Tow After a Flight in the Dardanelles

HOUSING a SEAPLANE after her DAY'S WORK

The seaplane seen below the top picture has just returned after carrying out reconnaissance duties in the Straits, and is being taken in tow by a cutter and pulled alongside the mother ship. On returning to the parent ship after a flight the machine is hoisted on board by means of a steel boom, and the method of attaching the lifting gear to the seaplane is clearly seen in the centre picture. The steel cables are attached to eyes built into the fuselage of the seaplane. The floats of the machine are "stepped," which minimises the suction of the water and allows the crane to pull the machine clear with comparatively little effort. The seaplane when taxiing on the water at full speed causes the floats to skim lightly over the surface.

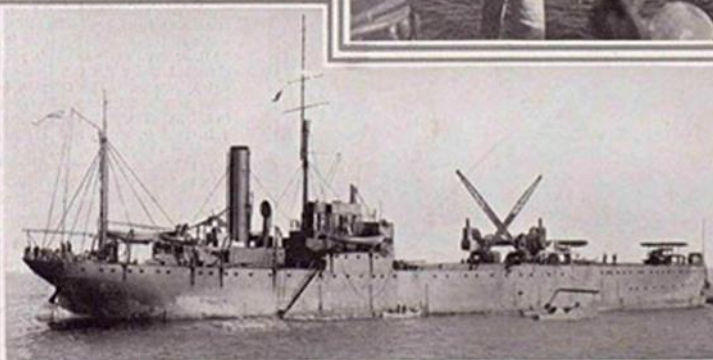


Hoisting a Seaplane Aboard

The pilot, seen standing, is a Frenchman and his observer British.

The SEAPLANE CARRIER, "ARK ROYAL"

The "Ark Royal" was originally a merchantman, but it has been so converted that it now acts as mother ship to the seaplanes in the Dardanelles. The vessel has extensive repair shops on board as well as storerooms filled with the numerous "spares" which are always being required. There is also accommodation for the flying officers and air mechanics. It will be observed that amidships she has steam derricks for lifting the seaplanes aboard.



The "Ark Royal"—Aeroplane Ship—in the Dardanelles Straits
Two aeroplanes can be seen on the long deck of the mother ship.



An Aeroplane on the Gallipoli Peninsula in Front of Krithia

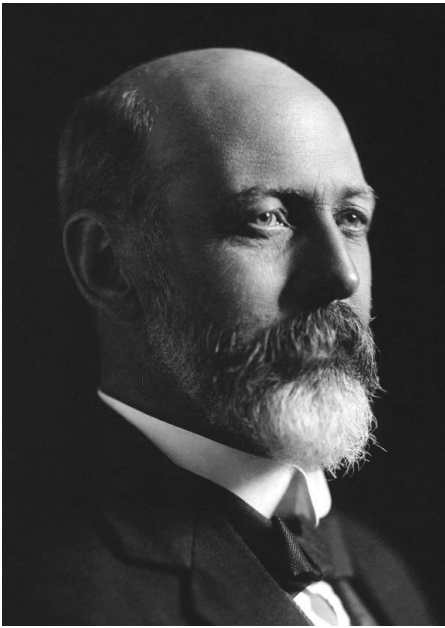
AIRCRAFT at the DARDANELLES

During the recent operations in the Dardanelles the aeroplanes and seaplanes have played a very prominent part. The air-craft illustrated on this page are all of the Nieuport type. They are small, efficient French monoplanes driven by 80-h.p. Gnome engines. The illustration above shows a land machine just off on a reconnaissance flight.

One of our members, Edwin Astill, has attended a few meetings in Sheffield of the Newcomen Society, an organisation dedicated to preserving the history of engineering. Recently, he received a copy via the Newcomen Society, of the magazine of the Australian Engineering Society, which has a very interesting article in it about the Lithgow Small Arms Factory and Museum. I particularly found the bit about the differences in tolerances used by the Enfield factory in England and the subsequent problems caused by this. This brings to mind the problems encountered by the Canadian forces when they arrived on the Western Front equipped with Canadian made Ross rifles - over designed/specified for field conditions.

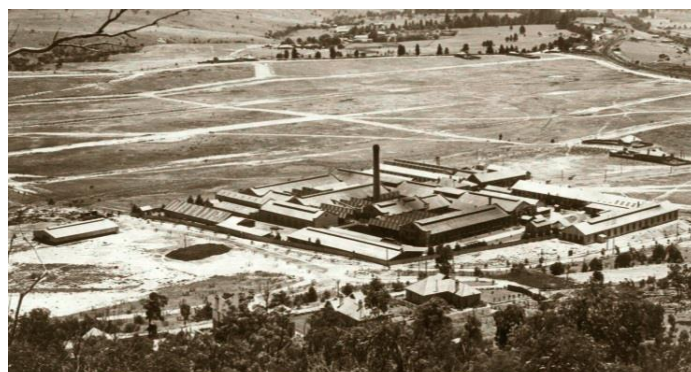
Lithgow Small Arms Factory & Museum - a microcosm of Australian values, ingenuity and history. by Renzo Benedet, President & Secretary of the SAF Museum.

Introduction It was the 7th April 1908 when the Commonwealth Department of Home Affairs placed an advertisement in the Commonwealth Gazette advising of the purchase of lands for defence purposes at Lithgow, NSW for a sum of £2776-17s-6d (valued at A\$602,000 in 2019 dollars). That land purchase subsequently led to the design and construction of the Lithgow Small Arms Factory (the Factory), an industrial icon of massive proportions in Australia's history. Lithgow became the birthplace for precision manufacturing in defence applications in Australia. It introduced mass production with world class production techniques. It developed and sustained the Lithgow region for 70 years, economically and socially. In 1942 it was leading the way in equality of working conditions and pay for women and men. It gave Australian troops firearms suited to varying operating conditions in various war zones. At its opening in 1912, the Factory was a smallish complex but it 'grew and grew' with production facilities being added in short bursts over a 20 year period. This story traces some of the essential features of the Factory: the decision for choosing Lithgow; the engineering challenges and triumphs experienced in WW1 and WW2; the key figures in the making of the Factory; and the rising of the Lithgow Small Arms Factory Museum (the Museum) and its development. Choosing Lithgow Lithgow is located 140km west of Sydney and is on the fringe of the Blue Mountains. In the early 1900s, Lithgow was primarily farmland, co-existing with the coal mines, railway works and the iron and steel industry. Federation was a mere 6 years old when the Australian Government began to seriously think about self-reliance in terms of military effort. It had 113 years of English rule prior to 1901 - its customs and traditions were very much geared to the 'mother country'. It seemed 'the colonies' were just that, an offshoot of England that would never cease. The experience of Australians in the Boer War planted a seed in the minds of the first Australian Parliament and Defence hierarchy that 'self-reliance' should be considered. In fact, the concept of Australia having its own 'central arsenal' was first raised in 1881 but was not acted on until 1907, when Prime Minister Deakin resolved to make Australia's defence supply independent of Britain. But Australia had no expertise in defence production. Its secondary industry was embryonic.



Despite this, it was the local Member of Parliament, Joseph Cook (left, next page), and the Lithgow Progress Association which, in the years preceding 1908, lobbied hard for Lithgow as the site for a possible small arms factory. At the time, Lithgow was an industrial (iron & steel making), railway and coal mining district with ample farmland. But the Lithgow site had a strong rival in the Victorian based Colonial Ammunition Company (the nation's first modern ammunition factory), located in Footscray, a suburb of Melbourne. Joseph Cook and Lithgow industrialists prevailed over Victoria because of Lithgow's industry, its railway access and plenty of available land. On November 11, 1908, the Department of Defence called tenders for supply of a plant for manufacture of small arms, bayonets and scabbards, to be built at Lithgow. The question that is often asked is why the Australian Government made plans for a small arms factory in 1908, when there were no obvious threats

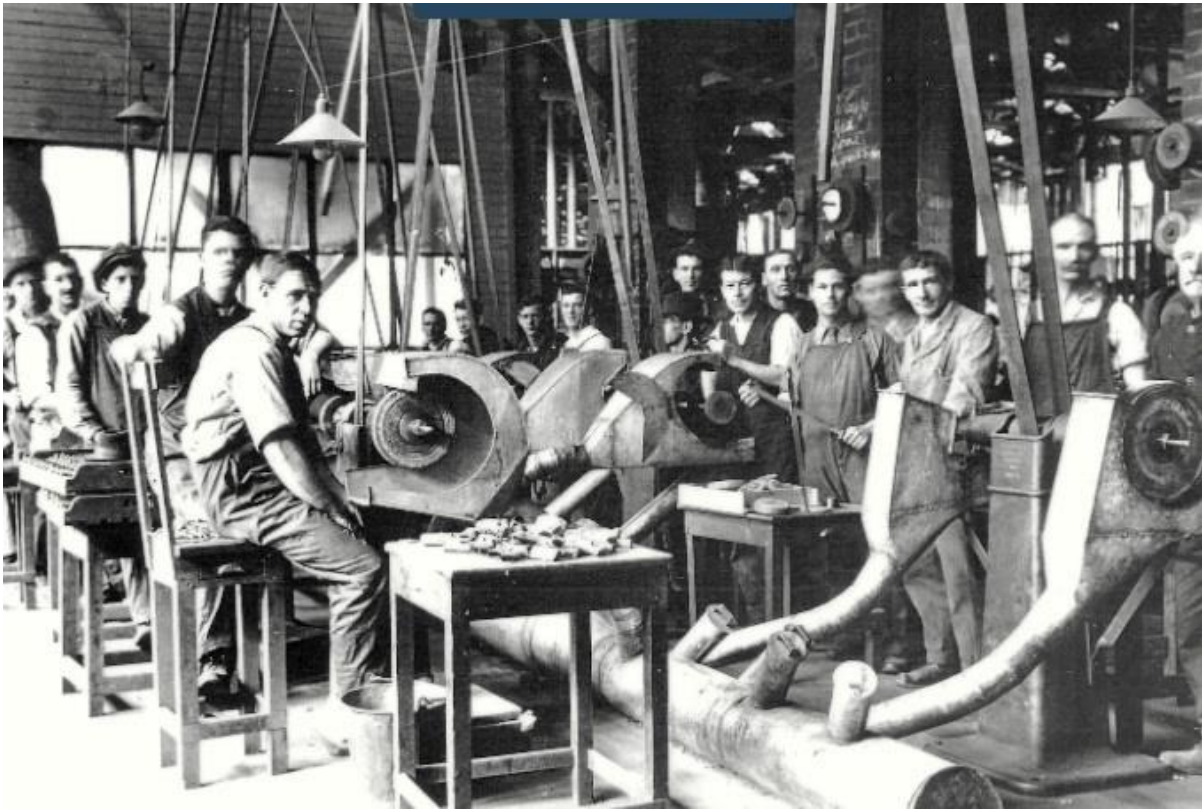
of war - World War 1 was six years away. Well, it wasn't just about war, although some threats were emerging. In fact, it all began with the plans of Prime Minister Deakin to create an Australian defence force by overhauling the collective forces of the States. He was adamant that Australia needed a defence force that could stand on its 'own two feet'. But behind the scenes and from British intelligence, military mobilisation was beginning in some parts of the world. In 1906, Deakin had warned that 'leading nations are arming themselves with feverish haste'. He felt it was incumbent on Australia to take greater responsibility for its defence and to play its part in the defence of the Empire, 'to be a source of strength and not of weakness'. At that time, Britain was concerned about Germany's naval build up and Australia was concerned by Japan's rise and quick defeat of the Russian navy in 1905. Australia had always been conscious of its geographic isolation from Britain. The increasing international tensions were a concern but not at a level that impacted the proposed Factory. The expectation of war was not on the horizon. Developments in Europe were distant to Australia and any needed support to the 'mother country' would be honoured perhaps in a similar vein to that during the Boer War. The tender for the Factory issued in 1908 was responded to by four overseas groups. But the choice was really between two companies - Pratt & Whitney (US) and Greenwood & Batley (UK). The tender prices were almost identical (between £68,000 and £69,000 - equivalent to A\$15million in 2019 dollars purchasing power). In 1909, the decision was taken to award the design and build of the facilities and production management to Pratt & Whitney. It was announced by the Minister for Defence, Joseph Cook, who as the Commonwealth Member of Parliament representing Lithgow, had been the architect behind the Lithgow site selection a year earlier.



The decision to go with Pratt & Whitney met with expected British criticism and there was considerable consternation as to how could 'a colony' do this to England. The 'writing was already on the wall' after an exhaustive international tour by Australian Defence officials of military industrial plants in the US and UK revealed the superiority of US production techniques, with a lesser need for skilled personnel. The Pratt & Whitney decision suited Australia's primitive manufacturing base and its lack of skilled people. Pratt & Whitney had perfected a production regime which not only involved precision mass production and the interchangeability of parts, its workforce needs were less, with lesser skills as the machines did the 'repetitive work'. In contrast, the British model required a much greater workforce with higher skills. The challenges facing the Factory were intense, starting from a 'blank sheet of paper'. The fact that Pratt & Whitney had never built and supplied an entire factory complex anywhere outside the US and that they had no experience whatsoever in their machines 'punching out' parts to comply with British War Office specifications, didn't go unnoticed in both political circles and the media. The Lithgow plant was to be Pratt & Whitney's showpiece internationally - and it was to be, at the time, Australia's largest arms factory. Construction got underway in late 1909. Usual construction-related issues emerged in terms of insufficient labour, material supply issues and the Lithgow weather conditions. The Factory was designed for a one-shift 48-hour working week, producing 15,000 rifles and bayonets a year. Pratt & Whitney supplied the various machine tools (340 in number plus 11 forge hammers and 22 oil furnaces), the jigs and fixtures for making, measuring and maintaining the cutting tools and gauges to check sizes after each machining operation (6370 gauges were ordered). 6500 tools and 9000 spares were ordered, including 2250 cutting tools - the remainder being tools used for making, measuring and maintaining the cutting tools. Optimistically, full factory production was originally expected to be achieved in late 1910 - this pushed out to early 1911, then to late 1911. The Factory finally opened on June 8th, 1912. To retain operational and supply compatibility between the UK and Australian armies, the US-designed Lithgow plant was going to make rifles to the UK SMLE 303 design, ie the then British standard Short Magazine Lee-Enfield .303 inch bore, bolt action rifle, soon to be widely used by Britain and British-allied armies (like Australia) in WW1, and used again later in WW2. The first major hurdle became evident during the production trialling phase at Pratt & Whitney, prior to the machinery being sent to Lithgow from the US. The issue was that, unbeknown to anybody outside of the Enfield Factory in England, the British were using two different measurement standards. Anything below 2 inches was measured against a local Enfield standard that was 'four tenths of a thou' (0.0004 of an inch) shorter than the true Standard Imperial Inch that was used for dimensions over 2 inches. The UK designed SMLE 303 required over 2250 special cutting and forming operations to make the 173 separate parts of the rifle. It soon became evident that due to the two different "standard" inches, and poorly chosen British manufacturing tolerances, interchangeability and compatibility of parts just couldn't 'come together'. As was typical at the time, machines did not have individual electric motors, but were powered by flat leather belts run from overhead pulleys on lineshafts.



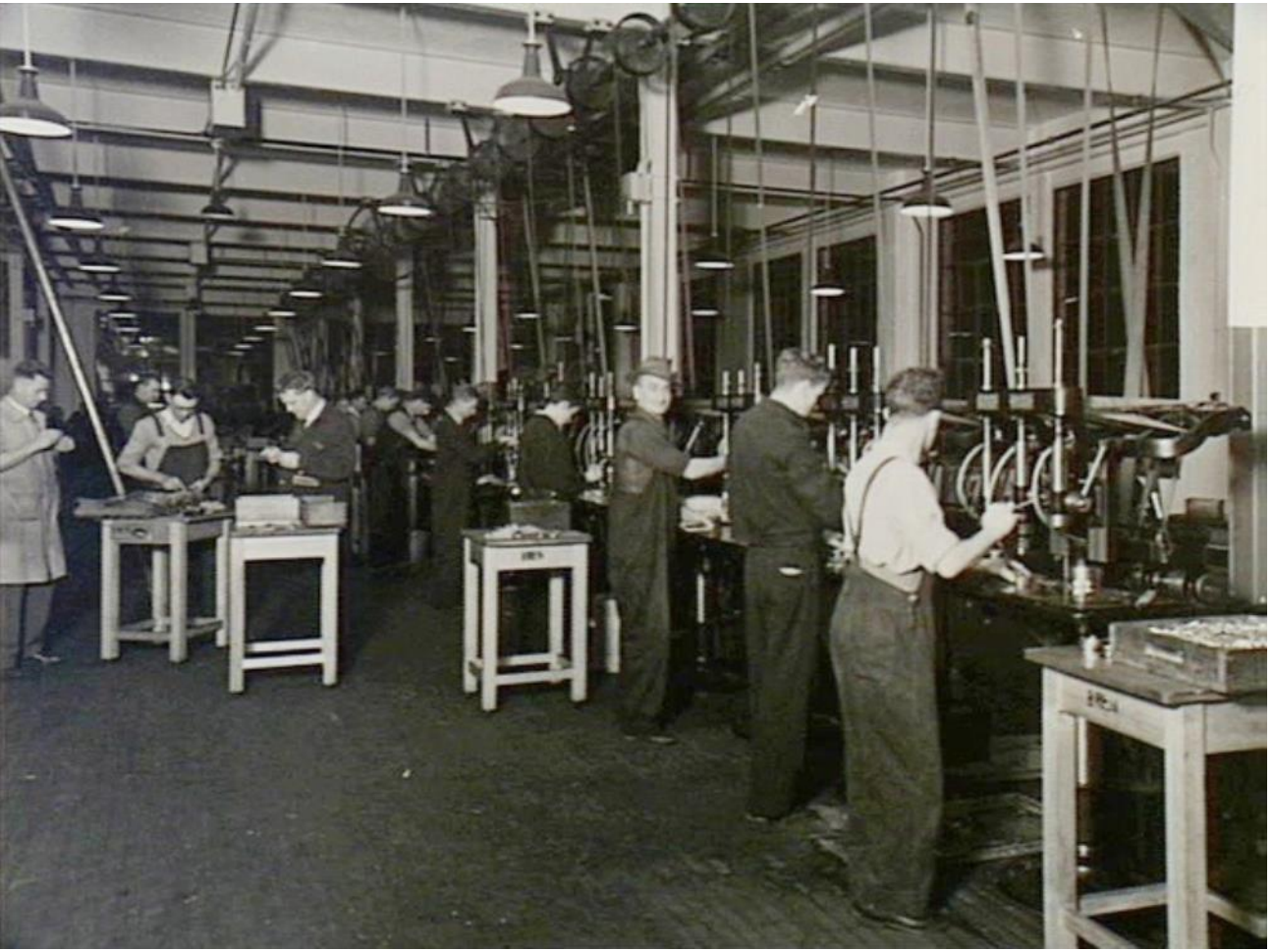
To overcome the problem, Pratt & Whitney designed and manufactured a perfectly tolerated version of the SMLE 303 rifle and used it to develop a whole new set of drawings, tolerances and specifications. The batch of compromise-design rifles which P&W along with Clarkson¹ developed in 1911, after knowing of the sloppy British specifications, were taken to the UK for inspection and approval. The P&W rifles had been modified to allow interchangeability of parts, and following approval, the P&W design was used subsequently. This 'blew out' the time it took to design and perfect the equipment to build truly interchangeable rifles at Lithgow. The Enfield Inch was never used after that and was abolished in 1924. Time in making a rifle Under the British Enfield manufacturing methods, between 48 and 72 man-hours per rifle were required, with virtually all of the time requiring skilled tradesmen. Such men were widely available in Britain - but not so in Australia. With the more mechanised Pratt & Whitney production practices, 23.5 man-hours per rifle were needed to build an SMLE 303 rifle, of which only 10 minutes required a skilled tradesman (for barrel straightening). However, it should be noted that the practices used by Pratt & Whitney required skilled labour in terms of toolmakers and millwrights for making tools, jigs, gauges and undertaking machinery modifications. The Drawing Office also required skills. In fact, the Lithgow Factory had to supply a lot of its own production equipment beyond that supplied with the original contract. Much of the production equipment was managed by the Factory but supplied and installed by local and UK contractors, such as the major power plant - this being in 1910 to 1912.



At the time and subsequently, the machinery-based production methods of the US proved their value. The initial annual volume of 15,000 rifles and bayonets was soon increased in 1913 to 20,000. This was further increased to 35,000 in 1914. The working week increased from 48 hours per week to 68 hours. Initially, this move was on a one shift basis - people were asked to work extended hours from September 2014 to July 2015. It soon became apparent that this was harming worker health and it was in July 2015 that a two-shift production process was introduced. Employee numbers soared from 120 in 1912 to 1300 in 1918. At the end of WW1 and after, rifle production was ongoing but at a significantly reduced rate of 3000 per year. One-off defence requirements were in play such as producing spare parts and converting rifle barrels for the new Mk VII ammunition. In the lead up to WW1 and during most of the WW1 period, the SMLE used Mark VI ammunition. As the war progressed, so did ammunition technology and in 1917, the new ammunition - Mark VII - with aerodynamically superior projectiles gave the rifle bullets a 24% higher muzzle velocity than the Mk VI version. And so, there were many rifles which needed to be updated to take the Mk VII ammunition.

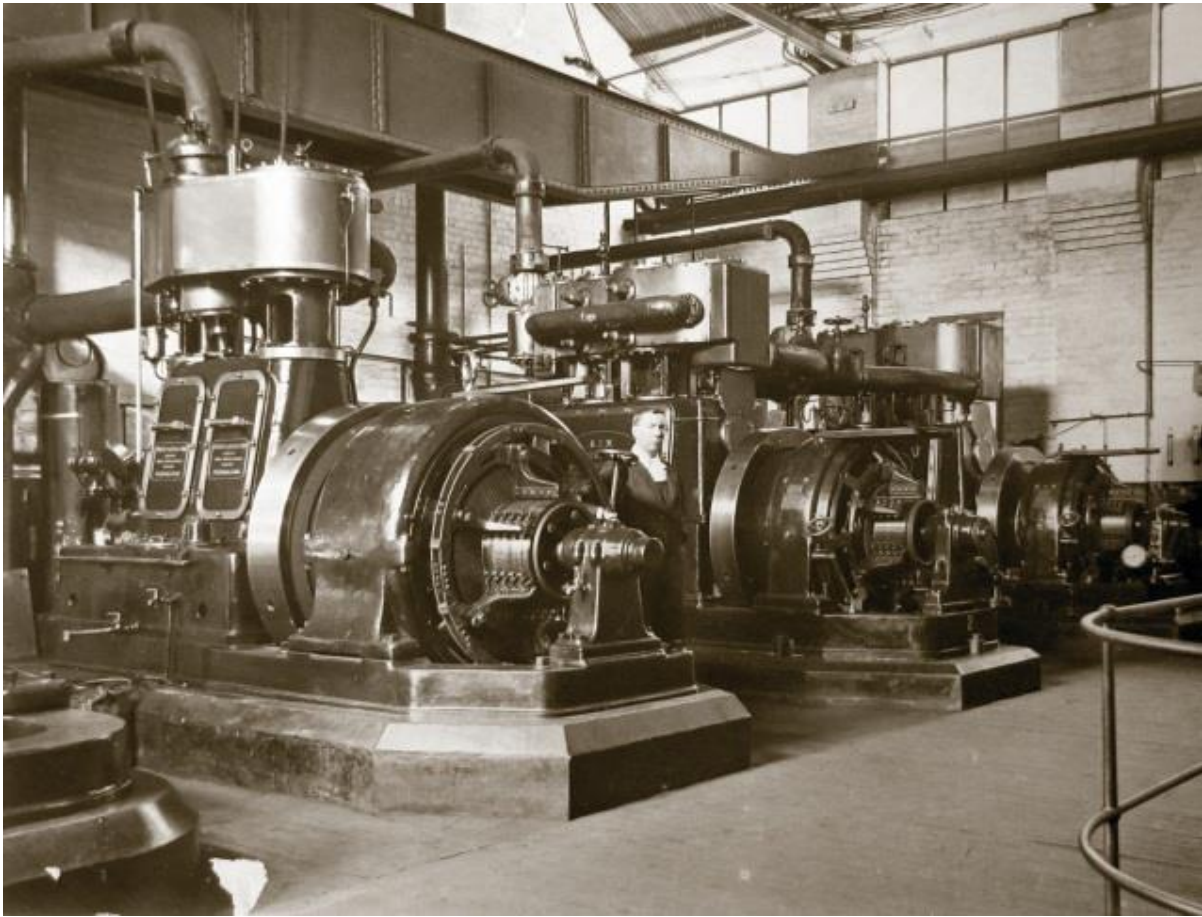


The first Pinnock Sewing Machine, made in the Factory in 1949. From the SAF Museum Archives. Bellis & Morcom steam engines and power generators in the SAF Powerhouse, 1920.



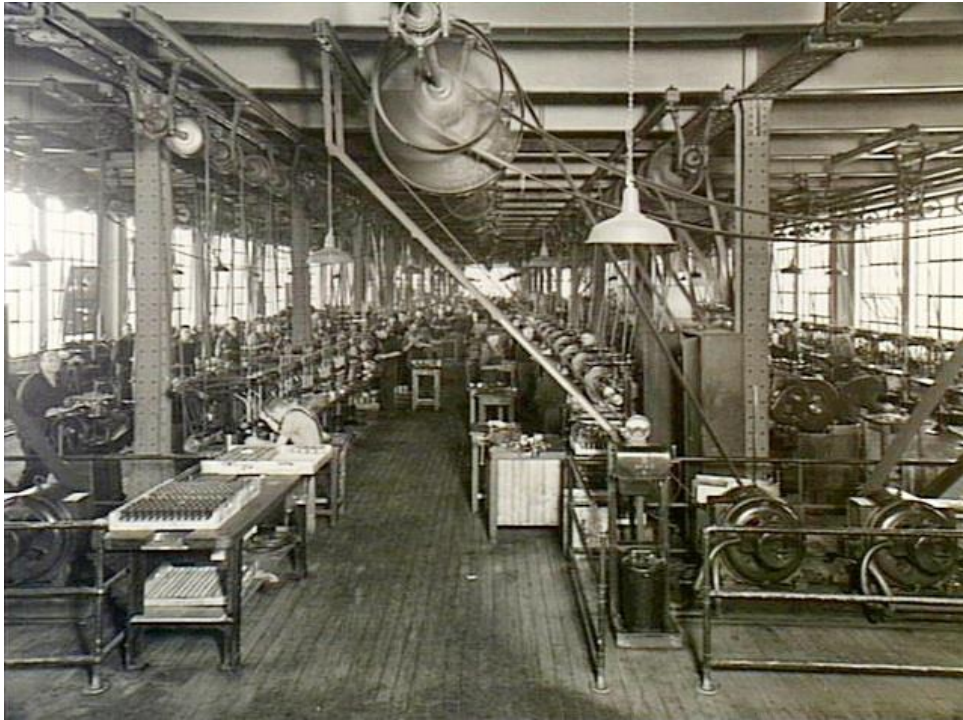
Above - Making Bren Guns, SAF, May 1940. This early production line in the drilling section was driven by flat belts from overhead lineshafts. Commercial manufacture began in 1920 and continued through to 1986. In the 1920s, commercial works made up about 3% of total production, rising to 31% in 1930, to 80% in 1932, and falling to 7% in 1939. Commercial work was less than 1% in 1942 but gradually rose to 6% 1945, and flourished in the 1950s and 1960s. With WW1 behind them, the Defence hierarchy had not been too keen on the Factory taking on commercial work. They didn't want a Government run establishment competing against private industry. But keeping the Factory open was a necessity to preserve valuable skills and keep the machinery ready for when it would be needed again. It transpired that commercial work could be done as long as it related to products which otherwise were not or could not be made in Australia. And so began the transition. There was uncomplicated commercial work including toasting forks, washers, air brake parts for trains, artificial limbs, aircraft parts and hand tools.

The workforce numbers slipped to around 300 to 350 during the 1920s.



The late 1930s saw a rise in military aggression in Europe. The Factory was ‘humming along’. Building works on the site continued to accommodate the planned manufacture of the Vickers machine gun and the Bren light machine gun. But the dimensions and layout of the various Factory facilities, designed for a much earlier era, were not well suited to Bren gun production. As the Depression hit, the Government changed its position and encouraged the Factory to seek more commercial work. This resulted in profitable and long-lasting work on shearing handsets, combs and cutters, parts for cinema projectors, sewing machines, golf clubs, spanners and sophisticated handcuffs. This commercial work flourished and was the mainstay of the Factory until WW2 started. A new building, specifically designed for Bren gun manufacture was built between 1941 and 1942 and new machinery brought in. The Bren gun building was large and square in layout as it accommodated a series of machines with individual small electric motors, unlike the earlier machines. Those were driven by flat belts and overhead line-shafts, which dictated a longitudinal layout and which derived their power from a few centralised large electric motors, or from steam engines in the earliest times. Both the Vickers and Bren machine guns were complex firearms (compared to the simple bolt-action SMLE rifles) as they had many more complex parts, with closer dimensional tolerances. The Bren gun alone required 4074 different types of tools. As a result, the degree of skill required from the workforce was higher, particularly in assembly where the machine guns were put together. However, semi-skilled labour continued to be used in doing fine tolerance machining work. Production philosophies in the mid-1930s were vastly different to those 20 years earlier. Production volume during 1914-1918 was 133,600 rifles. This increased to 439,000 for 1939 to 1945. As a result, higher capacity required more machinery, more buildings and more power. WW2 weapons required many orders of accuracy and complexity compared to that of weapons used in WW1. Production philosophy was not only about volume but more so about productivity. The issue was that as the weapons were more engineered, the calibre of staff was not always adequate to the task and so

techniques were implemented to minimise long or expensive machining operations and simplifying or deleting complex parts, thus requiring modifications to tooling.



The Factory was soon to discover what it meant to be overwhelmed. As WW2 broke out and gathered pace, demands on the Factory went 'sky-high'. The WW1-style SMLE rifles were still in production, and were now peaking at 200,000 units a year (in WW1 it had reached 35,000 per year). The Vickers machine guns and Bren light machine guns were being churned out at peak, in 1942 and 1943, of 2,900 and 6,900 units per year, respectively. Bren gun production first started in 1939, with 1942 through to 1945 being the period where production was ramped up. In those years 1942 to 1945, there were 17,110 Bren guns produced at the Factory. Correspondingly, Vickers gun production for the 1942 to 1945 period was 10,130. The Factory

could not cope with the extreme volume. It just didn't have the capacity nor the people. New manufacturing facilities were needed. It fell on the Lithgow Factory management to establish a series of eleven feeder factories within 3 hours drive of Lithgow, recruit and train the workforce, and achieve the exacting quality required for armaments. The feeder factories were in the Central West of NSW, at Forbes, Orange, Wellington, Mudgee, Cowra, Young, Dubbo, Parkes and Portland. It was a horrendously arduous task given the demanding war effort requirements. In all, during peak production in 1942, there were 5,700 employees at the Lithgow Factory with a further 6,000 across the feeder factories. But the pleasing fact was that as the men 'went to war', many women took their places and did a resoundingly good job - in fact, 40% of the workforce at the time was female. A case in point in support of female labour was that women barrel setters in Orange were found to be more skilled than many of the men, rightly earning them an increase in wages.

The early days of the Factory were crucial to its longevity. The 'eyes of the world' were on Lithgow to either perform or perish - the British said it was not possible to do what Pratt & Whitney proposed. But there was a handful of people who 'went out on a limb' to make it all happen. They were the entrepreneurs. They were the risk-takers. They were the true movers and shakers. While there were many involved, four individuals stand out. William Clarkson was associated with the factory from 1908 to 1911. It was on his recommendation that US technology was used, alienating his British masters no end. Despite some fundamental reservations, Clarkson's technical instincts (although he was a Navy man) foresaw the benefits of the US technology in terms of production philosophies and work practices. He was proven right. John Jensen - a Cost Accountant by training, Jensen was more than just a 'bean counter'. He was one of the longest serving senior managers and was the 'go to man' since his remit was extensive, covering industrial relations, employment, production planning and control, stock control and office administration. He by-passed Government procedures where he could. He took on the unions. He revolutionised work practices with resultant high productivity. He was the innovator of the Factory and made the US mass production process work for Lithgow.



The Rifle section at SAF in one of the new buildings, long after WW2. Note these machines have individual electric motors - no lineshafting. Note also the women operators. Photo details - see top right. One of 12 female apprentices in 1975. John Jensen was directly involved with the Factory from mid-1911 through to late 1914. But he remained close to the Factory and its operations in his various roles within the Department of Defence overseeing ordnance production. He became the

Secretary of the Department of Supply and Development from 1942 to 1948. Frederick Ratcliffe worked at the factory from 1909 through 1927. It was 1916 when Ratcliffe was appointed Factory Manager after serving his 'apprenticeship' under Clarkson. He was an Engineer who had worked at Pratt & Whitney in the US, where he specialised in planning arms factories. It was his efforts to commence non-defence work that stamped his mark on the Factory, together with his unflinching desire to overcome a dreadful housing shortage in Lithgow which had worked against the recruiting of people. On both counts, his legacy was profound. Jack Findlay was connected with the factory from 1909 to 1947. He was the Factory's specialist (senior Foreman) on heat treatment and steel properties, a role which became ever so important as WW2 hit.

His technical nous was instrumental in ensuring the stringent quality control across the SMLE 303 rifles and Bren and Vickers machine guns of both the Factory and feeder factories during WW2 when production was at its highest. He became General Manager of the Factory post WW2 and served the factory for over 40 years



A rather lengthy period in Government control, the Office of Defence Production (capturing all Defence production facilities across Australia, including the Lithgow Factory) was privatised under the Australian Defence Industries Pty Ltd (ADI) banner which took effect in April 1989. The decision had its detractors and those impacted by it did not fully realise the impending consequences. At the time, the Factory was embarking on trialling and manufacturing the F88 Steyr rifle, while its workforce was around 600 people.



The Small Arms Factory name disappeared and in its place ADI emerged. In late 1999, ADI was sold to the commercial interests of Transfield and Thompson-CSF. Ownership changed again when in 2006, the French based Thales Group acquired the facilities and assets, which remain in their hands to this day. The Thales Group at the Lithgow site continues to manufacture the F90 Steyr rifle (an upgraded version of the F88), and almost 200 people are employed there by Thales.



A display of small guns in the SAF Museum.

In 2006, Mr Ron Hayes donated a large collection of handguns to the Museum

The birth of the Lithgow Small Arms Factory Museum was the brainchild of a few ex-employees and local

community members. In the early 1990s, ADI was downsizing and/or rationalising its production facilities, including Lithgow. Its intention was to sell off assets and the like, without any regard to leaving a legacy for the people of Lithgow.



From 1990 through to 1995 was when many of the Australian munitions factories were rationalised. During the latter part of this period ex-employees in particular voiced their concerns to ADI not to dispense with the various machines. ADI management did not take any notice initially and its 'fire sale' mentality continued. Lithgow Council bought into the act in 1994 and along with the ex-employees, persuaded ADI to leave a legacy. In 1995 ADI gifted the Administration building (the current Museum facility) along with many artefacts to the City of Lithgow. A special committee was formed to decide how the history of the Factory could be preserved. Council did not want any direct involvement in this. It happened that a group of ex-employees and some locals would establish the museum.



The rationale for having a Museum was to preserve the history of the Factory and tell the story of ingenuity, adversity and community mateship to current and future generations. The Factory meant so much to Lithgow.

It was the mainstay of the township for many years. Generations of families were indebted to the Factory. Skills learned were of world class.

Trades were inspired. Unionism evolved. Serving one's country during the wars through precision manufacturing was an honour. The bold step into commercial production showed the

fortitude and innovation of management and workers. But the most telling fact is that the Factory, on the same site, continues to manufacture high precision firearms, some 107 years after it all started - a unique situation in Australia. The current Factory operates alongside the Museum, which is associated with the Factory, and occupies the former Factory Administration Building, and soon, the former General Machine Shop. The Museum has an extensive and significant archival collection that documents the history of the Small Arms Factory and its role in pioneering precision manufacturing in Australia. The conservation of such industrial archives is so rare, it is worth providing some detail about the collection. It contains an extensive run of the American Machinist magazine, dating back to the early years of the twentieth century; plans and blueprints for machines in the original Pratt & Whitney 1910 contract; building plans; and specifications for munitions manufactured at the Small Arms Factory. It also holds records relating to executives and employees of the SAF; wartime posters; publications on industrial safety; an in-house newspaper produced in the Orange feeder factory during WW2; and an extensive photographic collection that documents not only the SAF, its employees and industrial processes, but also the SAF sporting teams, and de facto community facilities such as the Factory Dam. The archive collection is the only collection of its kind providing a glimpse of history from the early 1900s through to the 1980s at Australia's primary ordnance/weapons production facility in the lead up to and during both World Wars. Over the past 22 years, the Museum has amassed an array of historical, educational, research and scientific objects and artefacts that make it the largest Museum of its kind in Australia. It is renowned internationally for its collection. The Museum collection was recognised in February 2019 by UNESCO and now forms part of the Memory of Australia World Register. It is the first organisation in Lithgow to be awarded this prestigious accolade and the first in Australia for the type of collection it has. The UNESCO award is significant as it demonstrates the value of history held by the Museum depicting a time in Australia's past where a community was forged and grown on the back of what would become the start of precision manufacturing in Australia. This "Rising Sun" display appears to have become the de facto emblem of the SAF Museum. Lithgow Small Arms Factory & Museum Staffed by volunteers, the Museum has today some 35,000 archived records, almost 3000 firearms and over 50 precision metal working machines dating back to the early 1900s and formerly used by the Factory. The metal working machines are located in the General Machine Shop building, having been brought in from other parts of the site. The oldest machine dates to the early 1900s - being the Pratt & Whitney rifling machine. The vast majority of the machines were used at the Factory - many imported (from the US and UK), some made by the Factory and others made in Sydney. The museum also has one of the first Computer Numerical Control (CNC) machines which the Factory used and is in the process of 'cleaning the machines up'. Some have electric motors but many no longer have any power source, having formerly been operated by the lineshaft method. The aim is to convert the General Machine Shop building (which measures 60m by 25m) into a precision engineering display area plus a workshop and presentation area. There is plans to include other machines (not used at the Factory) depicting machinery technology, such as typewriters and possibly the early computer age. Currently they are in the process of spending some Aus\$200,000 on improving the Museum and adjoining General Machine Shop. Museum improvements cover rust proofing and painting the external windows, placing a metal mesh cover across the front of the building and installing a series of internal panels to 'dress up' the building and use as painted murals. Monies on the General Machine Shop are going towards rust proofing the roof, fixing the many skylights, fixing the guttering and downpipes, painting all exterior windows, fixing the wooden floor and putting reinforced glass surrounds around the rifling machine at the entrance of the building. Over 105,000 people have visited the Museum since its opening.

In the last issue of the Newsletter we reported that German naval vessels scuttled at Scapa Flow and never subsequently recovered were on sale on eBay - this is the follow up to that story.

Sunken WW1 Scapa Flow warships sold for £85,000 on eBay



Four World War One warships sunk in Scapa Flow in Orkney in 1919 have been sold on eBay for a combined total of £85,000.

The Markgraf, Karlsruhe, Konig and Kronprinz Wilhelm are scheduled monuments, which recreational divers are not supposed to enter.

The asking price was over £800,000.

The three battleships sold for £25,500 each to a Middle Eastern company. The cruiser, Karlsruhe, sold for £8,500 to a private bidder in England.

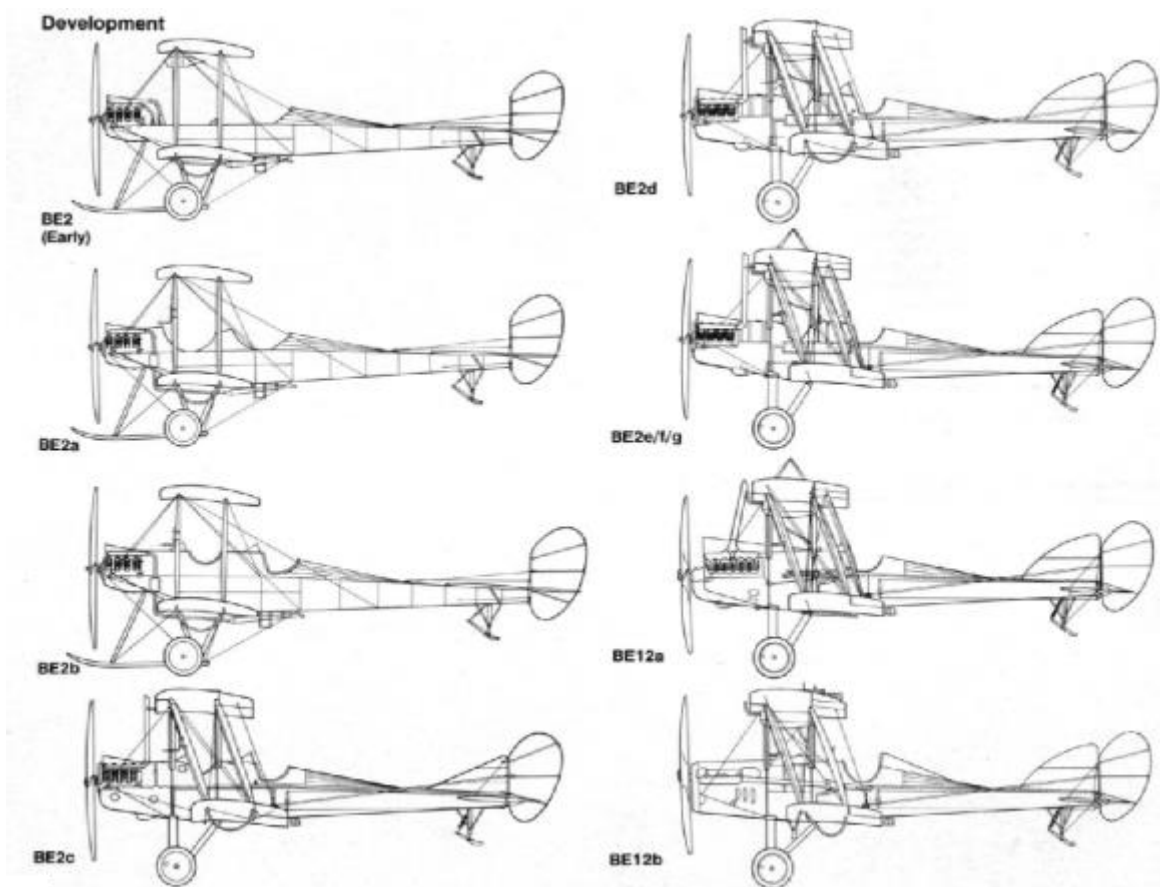
- [Sunken WW1 battleships up for sale on eBay](#)
- [The day the entire German fleet surrendered](#)

The vessels, which were part of the German High Seas fleet, were deliberately scuttled 100 years ago.

They cannot be removed from the seabed.

When the listing first appeared on online auction site eBay, some assumed the advert was a hoax.

Death Over the Trenches: the BE.2 Part II



Max Immelmann's chance to test the Fokker Eindecker in action came on 1 August 1915, when he took off with Boelcke to attack some BE.2cs, which were bombing the German airfield at Douai. The subsequent official report tells the story:

At 6 am on 1 August Leutnant Immelmann took off in a Fokker fighting monoplane in order to drive away the numerous (about ten to twelve) enemy machines which were bombing Douai aerodrome. He succeeded in engaging three machines showing French markings [in fact they were British – author] in the area between Arras and Vitry. Heedless of the odds against him, he made an energetic and dashing attack on one of them at close quarters. Although this opponent strove to evade his onslaught by glides and turns and the other two enemy aircraft tried to assist the attacked airman by machine-gun fire, Leutnant Immelmann finally forced him to land westward of and close to Berbières after scoring several hits on vital parts of the machine. The inmate, an Englishman (instead of an observer he had taken with him a number of bombs, which he had already dropped) was severely wounded by two cross-shots in his left arm. Leutnant Immelmann immediately landed in the neighbourhood of the Englishman, took him prisoner and arranged for his transport to the Field Hospital of the 1st Bavarian Reserve Corps. The machine was taken over by the Abteilung. There was no machine-gun on board. A sighting device for bomb-dropping has been removed and will be tested.

Immelmann's second BE, and his third aerial victory, was encountered on 1 September 1915, his birthday. He was circling over Neuville village, acting as escort to a German artillery-spotting aircraft, when he sighted the British machine, which he erroneously described as a.....

... Bristol biplane which is heading straight towards me. We are still 400 metres apart. Now I fly towards him; I am about 10–12 metres above him. And so I streak past him, for each of us has a speed of 120 kilometres an hour. After passing him I go into a turn. When I am round again, I find he has not yet completed his turning movement. He is shooting fiercely from his rear. I attack him in the flank, but he escapes from my sights for a while by a skilful turn. Several seconds later I have him in my sights once more. I open fire at 100 metres, and approach carefully. But when I am only 50 metres away, I have difficulties with my gun. I must cease fire for a time.

Meanwhile I hear the rattle of the enemy's machine-gun and see plainly that he has to change a drum after every 50 rounds. By this time I am up to within 30 or 40 metres of him and have the enemy machine well within my sights. Aiming carefully, I give him about another 200 rounds from close quarters, and then my gun is silent again. One glance shows me I have no more ammunition left. I turn away in annoyance, for now I am defenceless. The other machine flies off westward, i.e. homeward.

I am just putting my machine into an eastward direction, so that I can go home too, when the idea occurs to me to fly a round of the battlefield first, for otherwise my opponent might think he had hit me. There are three bullets in my machine. I look round for my 'comrade of the fray', but he is no longer to be seen. I am still 2500 metres up, so that we have dropped 600 in the course of our crazy turns.

At last I discover the enemy. He is about 1000 metres below me. He is falling earthward like a dead leaf. He gives the impression of a crow with a lame wing. Sometimes he flies a bit and then he falls a bit. So he has got a dose after all.

Now I also drop down and continue to watch my opponent. It seems as if he wants to land. And now I see plainly that he is falling. A thick cloud rises from the spot where he crashes, and then bright flames break out of the machine. Soldiers hasten to the scene. Now I catch my first glimpse of the biplane I intended to protect. It is going to land. So I likewise decide to land, and come down close to the burning machine. I find soldiers attending to one of the inmates.

He tells me that he is the observer. He is an Englishman. When I ask him where the pilot is, he points to the burning machine. I look, and he is right, for the pilot lies under the wreckage – burnt to a cinder. The observer is taken off to hospital ...

Immelmann's description admirably sums up the weakness and the strength of the BE.2 in combat. First, Immelmann easily completes his turn before the BE pilot is anywhere near completing his, enabling him to latch on to the British aircraft's tail and press home his attack; and second, the BE displays its inbuilt stability after the pilot, as Immelmann learns later, is shot through the neck and killed. The aircraft goes out of control, but literally rights itself and resumes level flight before departing again. This process happened several times before it hit the ground and the observer, who lived to tell the story, was thrown clear.

By the autumn of 1915, the losses suffered by the BEs and other reconnaissance aircraft at the hands of the Fokkers had risen to such an alarming degree that the RFC decreed that all reconnaissance sorties must be escorted. The immediate solution, though not a good one, was for one BE to act as the escort while the other took its photographs. This tactic ended too often in both BEs being destroyed. What was needed was a dedicated fighter aircraft.

The French rose to the challenge first with the introduction of the single-seat Nieuport 11 biplane, which was deployed in the late summer of 1915, albeit in small numbers. Nicknamed 'Baby' because of its diminutive size, it had a machine-gun mounted on the upper wing, enabling the pilot to fire

forwards over the arc of the propeller. The Nieuport 11 also served with the RFC and the RNAS and was built under licence in Italy, where it remained the standard fighter type until 1917.

The Nieuport 11 virtually held the line against the Fokker Eindecker until the introduction of two British fighter types, the FE.2b and DH.2. The original FE.2a was completed in August 1913, but it was a year before the first twelve aircraft were ordered, the first of these flying in January 1915. Had matters moved more quickly, and production of the FE.2 been given priority, it is possible that the Fokker Eindecker would never have achieved the supremacy that it did. The first FE.2b flew in March 1915. In May a few production examples arrived in France for service with No. 6 Squadron RFC at Abeelee, Belgium, but it was not until January 1916 that the first squadron to be fully equipped with the FE, No. 20, deployed to France. The FE.2b was a two-seat 'pusher' type aircraft, powered by a 120-hp Beardmore engine and armed with one Lewis gun in the front cockpit and a second on a telescopic mounting firing upwards over the wing centre-section. It was slightly slower than the Fokker E.III but a match for it in manoeuvrability. Later in the war the FE was used in the light night-bombing role. The FE.2d was a variant with a longer span. FE.2 production totalled 2325 aircraft.

The first dedicated RFC fighter squadron to deploy to France was No. 20, equipped with FE.2bs. It was followed, on 8 February 1916, by No. 24 squadron, armed with Airco (Aircraft Manufacturing Company) DH.2s. Designed by Geoffrey de Havilland, the DH.2 was a single-seat 'pusher' type, whose prototype had been sent to France in July 1915 for operational trials; unfortunately, it was brought down in enemy territory on 9 August. The DH.2 was powered by a 100 hp Monosoupape engine and was armed with a single Lewis gun mounted on a pivot in the prow, enabling it to be traversed from left to right or elevated upward and downward. In practice, pilots found this arrangement too wobbly and secured the gun in a fixed forward-firing position, using the whole aircraft as an aiming platform. Rugged and highly manoeuvrable, the DH.2 was to achieve more success in action against the Fokkers than any other Allied fighter type. No. 24 Squadron was commanded by Major L.G. Hawker, who on 25 July 1915, while flying a Bristol Scout of No. 5 Squadron, had been awarded the Victoria Cross for engaging three enemy aircraft in quick succession and shooting one down. It soon became one of the best-known Allied air units. It gained its first victory on 2 April 1916 and claimed its first Fokker on the 25th of that month. From then on its tally rose steadily. In June 1916 its pilots destroyed seventeen enemy aircraft, followed by twenty-three in July, fifteen in August, fifteen in September and ten in November. On 23 November, however, Major Hawker was shot down by an up-and-coming German pilot named Manfred von Richthofen. Some 400 DH.2s were built, many being shipped to the Middle East after they became obsolete on the Western Front.

The BE.2 was to have been replaced in first-line service during 1916 by another product of the Royal Aircraft Factory, the RE.8. Nicknamed 'Harry Tate' after the Cockney comedian, the RE.8 reconnaissance and artillery spotting aircraft resembled a scaled-up BE.2, but it had a much sturdier fuselage and far better armament. The first aircraft were delivered in the autumn of 1916 but were grounded after a series of accidents that led to the redesign of the tail unit. The RE.8 was subsequently very widely used, equipping thirty-three RFC squadrons. Like the BE.2, it was far too stable to be agile in combat and suffered serious losses, usually having to operate under heavy escort. It was not until the beginning of 1917 that the RFC's reconnaissance squadrons in France began to receive a really viable aircraft, the Armstrong Whitworth FK.8. Designed by the talented Dutchman Frederick Koolhoven, who joined Armstrong Whitworth of Coventry in 1914, the FK.8 army cooperation aircraft – known to its crews as the 'Big AW' or 'Big Ack' – first flew in May 1916 and eventually equipped nine RFC squadrons at home and overseas. About 1400 were built in total, serving in the reconnaissance, patrol, day and night-bombing and ground-attack roles throughout 1917 and 1918. The FK.8 was well liked by its crews, partly for its excellent flying qualities and partly because of its ability to absorb a great deal of battle damage. Two more variants of the BE.2, the 2d and 2e, appeared before production ceased late in 1916. The type ended its combat career with the RFC's home defence squadrons, where it enjoyed considerable success against German airships.



R.E.8 F3556 preserved at the Imperial War Museum Duxford