Summer 2013

TOUCHPAPER

The Newsletter of the Royal Gunpowder Mills Friends Association

Snippets

T-Force

AGM & Social Event

Obituary:

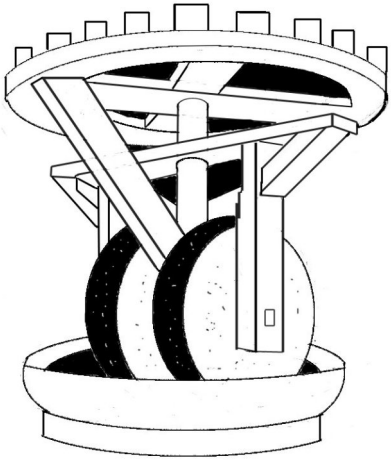
Frank Panton

History of South Site

Letters:

Michael Ondaatje

Spring issue comments



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Deadline for the next issue is 23 August

Chairman's Chat

The AGM and Social Gathering on 17th May were very successful and enjoyed by those who came. Dave Sims was the guide on a Land Train run, laid on particularly for those who have not been to the Mills recently.

A lot of people came to the late Spring Bank Holiday weekend, particularly on the Monday when the weather was sunny and warm (relatively so for this Spring!). On the Sunday and Monday there was a Wild West Show and throughout the week the Mad Lab, as well as its usual programme, had a Spy Week including a German Enigma coding machine on display, very well organised by Len Stuart.

Bryan Howard and Les Tucker are writing a history of the South Site and its buildings from the start until its final sale and conversion into a housing estate and the enormous Sainsbury's Distribution Centre. They are making good progress but any contributions would be welcome.

The Company and ourselves are currently reviewing the buildings on site and dividing them into three categories: those to be kept and maintained, those to be allowed to decay gracefully and those to be disposed of. Those to be kept will include all the Listed Buildings together with L122 the Main Lab, hopefully L119 the Abel Heat Test Building and others yet to be determined.

As always we look forward to seeing Friends at the Mills during the Summer.

John Wright

Editorial

Les Tucker's series on Rocketry will be continued in a later issue. His contribution this time is on T-Force, he became interested and abandoned the rockets!

This is once more a packed issue with more pages than we have used in the past.

You will note under 'Snippets' a report on Les Philips, unfortunately at the back of the issue is a later item sadly reporting his death.

To prove that some people do read Touchpaper Dave Mullenger has identified the operator in the photo on P.26 of the Spring issue as Frank Irons. See the letter from Les Tucker for more comments on the Spring issue.

Brian Clements

‘Snippets’

Gordon Bromberger visited Les Philips in his sheltered accommodation. Les has now reached the ripe old age of 97! He has to rely on a Zimmer frame to get about and his eyesight is poor but he was ‘with it’ and asked Gordon about Jack Powling and Dave Hartley. More details may emerge if Gordon attends the reunion as promised.

The Lowestoft branch of retired civil servants has had to search for a new meeting place since the Beaconsfield club went into receivership.

Vera Chaplin and her husband are regular attendees. At the first meeting in March one topic discussed was the sudden loss of one of our members, Maureen Gaughan.

Sandra Day from the cash office is still in Lowerstoft although she was widowed some 3-4 years ago. She doesn’t attend the retired civil servants meeting but we’re looking for ‘new’ members.

Diamond Wedding Anniversary

Marjorie and Alan Dentry celebrated their Diamond Wedding Anniversary on 4th April 2013.

They came to Waltham Abbey from ROF Burghfield in 1977 and stayed until they retired and moved to Carmarthenshire in 1991.

Bryan Howard

T- Force A Secret Story of WW2

Only relatively recently has the story of T – Force in WW2 been revealed.

As the prospect of ultimate victory in WW2 became more than a distant dream thoughts turned to the implications of occupying Germany.

One of the outcomes was the formation of Target - Force, T-Force.

The Force was a secret technical intelligence unit tasked with going in with the spearhead forces and securing and protecting key sites and documents, drawings, equipment, personnel etc. previously identified, relating to technology of potential interest to the Allied Powers. Intelligence assessors with the Force would make an initial assessment and then call in the relevant experts.

It had been recognised that German military technology in many spheres from jet aircraft, weaponry, submarines, rocketry and so on was in advance of Allied development and it was intended to exploit this knowledge as it was captured.

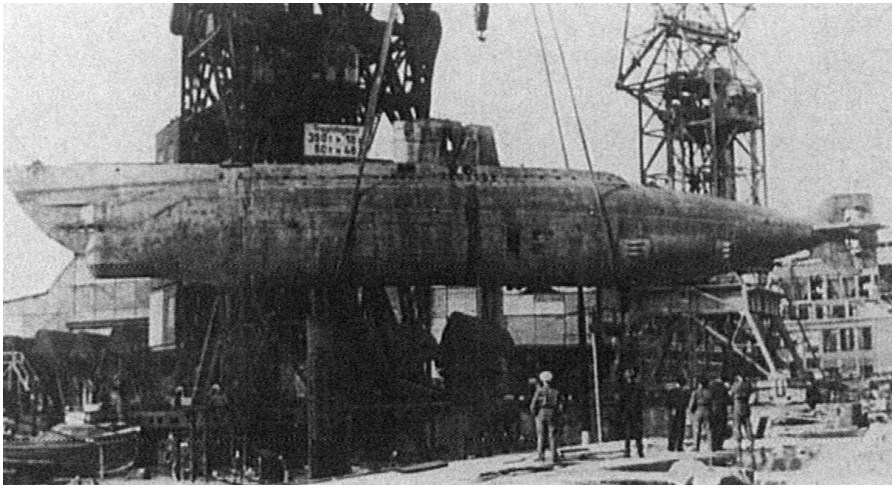
The German technological lead in many spheres stemmed partly from the way the Nazi regime had capitalised on the importance of technical subjects in the educational system and the relative attractiveness in Germany of science, technology and engineering as a career at all levels, which had resulted in a high degree of international competitiveness. Technical advance was achieved because of the structure and attitudes of society to science and technology, in contrast to Britain where it was achieved in spite of. As an example of the difference in emphasis stemming from an early point, in 1901 the number of students studying engineering at British universities was 1580, in Germany it was 7130.

By the mid 1930's German technical expertise had been increasingly turned to military applications.

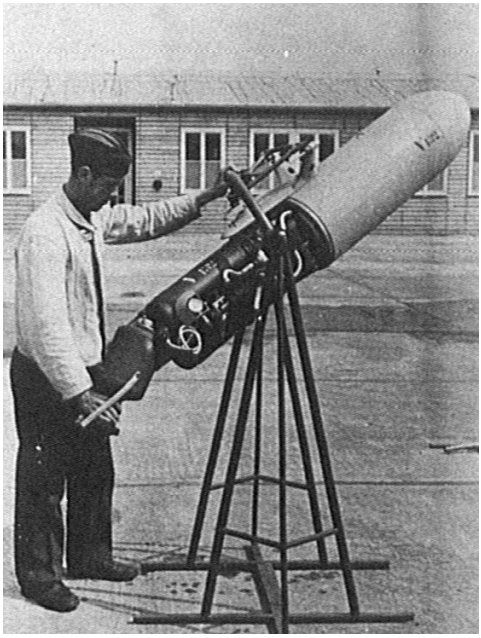
The idea of T- Force originated from the already existing naval intelligence unit AU 30, which had been performing a broadly similar role and relations between the two units were not always cordial, AU30 viewing T-Force as a collection of upstarts. AU30 had been created by Cdr. Ian Fleming of Naval Intelligence. After the war Fleming went on to write the James Bond books. Bond was modelled on one of the AU30 operational commanders who had a particularly dashing reputation – Patrick Dalzel-Job.

The man to lead the Force was duly appointed – Brigadier GHC Pennycook. He had been the head of the Chemical Warfare Branch in the 21st. Army Group HQ and since the Germans had shown no sign of using chemical weapons was somewhat under employed. T-Force was a disparate unit and the methods employed to form it were equally disparate. The procedure for recruiting the infantry nucleus of the Force followed the lines of looking around for anyone who seemed to be under employed and the Brigadier's attention fell on the 5th. Battalion of the King's Regiment. The Battalion had been employed on the D Day beaches, providing protection against snipers etc. and then guarding the perimeter at Dunkirk, where ironically a large number of German troops were surrounded. They now found themselves with a very different function. Reinforcement Holding Units were trawled. The result was a mixed bunch, ranging from trained infantrymen and Royal Marine volunteers to ambulance drivers through to personnel released from convalescence and others whose role had wound down such as some types of gunners. The necessary experts were recruited from their various units, - interpreters, bomb disposal from the Engineers, gunnery experts from the Artillery, Pioneers to deal with heavy lifting, packing etc., transport personnel, aviation equipment experts from the RAF and not forgetting the safe breakers, who were recruited from the ranks of Wormwood Scrubs Prison, on temporary leave. Initially all were united in total bafflement as to the precise nature of their duties.

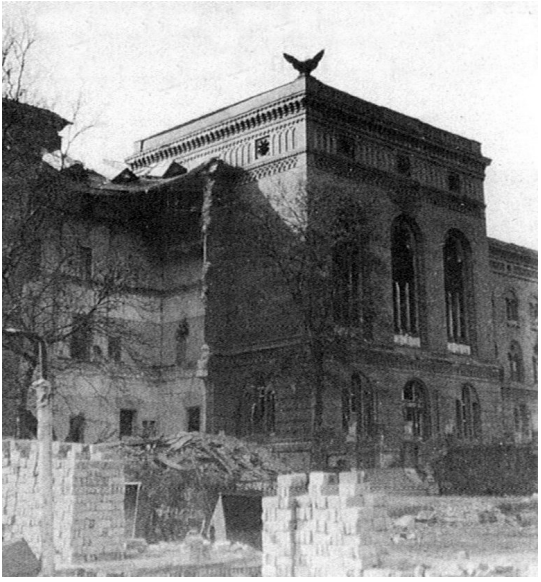
T-Force evacuating equipment from a factory in Cologne



Type XVIIB U – Boat being prepared for despatch to the UK



Experimental glider bomb at the Walterwerke



The Naval Academy at Kiel – scene of the surrender of the city

All in all a most unlikely Special Forces unit, without any Special Forces training.

One of the officers recruited was Major Tony Hibbert of the Parachute Regiment. He had been taken prisoner at the bridge at Arnhem and later escaped. Later he broke his leg in a road accident and he was appointed to a Staff role in T-Force, still with his leg entirely encased in plaster. As an extension to this role he was to co-ordinate an assault on Kiel, a powerhouse of German armament development, including the giant Walterwerke.

In spite of the plaster Hibbert later began to find himself in an operational role, riding highly uncomfortably in the lead jeep.

Somehow Brigadier Pennycook welded the disparate force together and after the breakout from Normandy it began operations armed with permission to go anywhere to further the search based on a previously provided almost limitless check list - the ‘black list’ of sites and personnel of interest. The results were not long in coming.

The impression that this was a jolly roaming around the countryside would be erroneous. Whilst the freedom of action was welcome there was a considerable degree of uncertainty as to what the Force would meet, with many isolated German units still capable of determined action. Considering the nature of the unit the way they dealt with opposition when encountered was highly creditable.

Well before Germany was reached there were many finds in Holland, many coming from the contents of rail freight wagons wrecked by bombing. To assess the exact significance of the finds often required the calling of experts – for example the use of magnesium aluminium alloy in a consignment of aviation radio equipment to reduce size and weight was of great interest not only to the aviation electronics experts but also to the metallurgists.

The flavour of T-Force comes out in the episode of the Sudeten German Czech Nazi fanatic in a factory which manufactured U-boat gearboxes and which needed guarding. The Force had to move on

and couldn't leave anybody behind so the services of a nearby anti-tank regiment were called on. They sent an armoured M10 tank destroyer and its gun was forced through a window into the dining room of the designer, who lost his zeal when it was indicated 'any trouble, no house'.

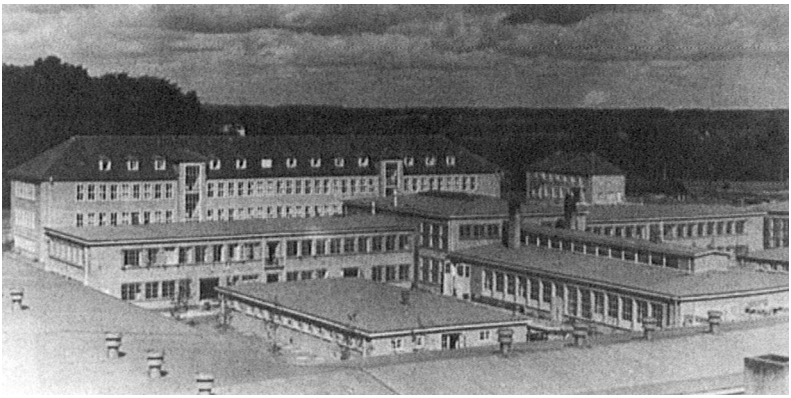
A search of the factory revealed three cellars full of ball bearings. The find couldn't have been better timed. An important ball bearing factory in Britain had recently suffered interruption in production and the German bearings, worth it was estimated £2,000,000, were quickly flown out in three Dakotas to fill the gap.

One feature which began to figure largely was the quantity and quality of technical documents seized. These were swiftly despatched to Britain for translation. One consignment was translated by Admiralty staff who produced a 300 page document in 10 days.

Important discoveries relating to rocket fuel were made. At Embsen a nitric acid plant was secured and at Bomlitz the factory for making V2 propellant and DIGL – a substitute for nitroglycerine, considered by the assessors as 'of special interest'.

The discoveries were endless. The metallurgists found an interesting use of sintered iron as a substitute for copper in the driving bands of shells. In Hannover a centre for the use of infra red technology in night fighting led by Professor Hase was discovered.

As the advance into Germany continued an increasing number of top scientific personnel were detained, some of such importance that they were immediately transported to England for interrogation. An early example was Dr. Kramer, an aviation scientist tracked down by the RAF team. He had figured in the black list as the inventor of the Fritz X, a radio controlled rocket bomb, and the Henschel 293 a radio controlled glider bomb, the first guided missile to sink a British ship, HMS Egret, and his projects included a variety of rocket projectiles such as X4 and X7

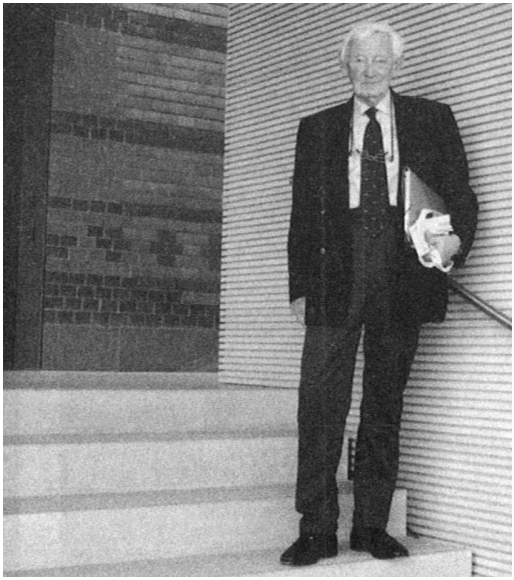


The Walterwerke

Helmut Walter (in hat) watching weapons test at the Walterwerke

Men of 5th. Kings listening to Churchill's VE Day broadcast – on the day General Barker placed Tony Hibbert under arrest

Major Tony Hibbert MC
1946



Tony Hibbert on the steps of the old Naval Academy Kiel 2006

which introduced the concept of wire guidance from a spool unwinding from the rocket in motion.

Rubber specialists had to be called in from Britain to assess the importance of finds at the Continental rubber works, particularly in synthetic rubbers applied to designs for aircraft tyres and fuel tanks.

The north German plains were the Salisbury Plain of the German Army containing not only extensive training grounds but a number of military research establishments. A major discovery which the gunnery specialists could have spent years on was the Krupps proving ground at Meppen, including a testing range allowing firing up to 36 miles, experimental shells, some rocket assisted and every type and calibre of shell, cartridge case and propellant used by the German Army and Navy. The activity at Meppen was inexhaustible, even including an advanced meteorogical research institute. A factory was discovered producing anti-aircraft predictor equipment, including the only two known examples in existence.

Discoveries went on and on. At the Blohm+Voss factory at Wensendorf T-Force took possession of the plant for assembly of the Messerschmitt Me 262 jet fighter aircraft. At Hesedorf they occupied the vast GAF ammunition dump with its 6 mile perimeter fence.

Private Hilton of the 5th. King's had stopped his vehicle in a town centre when he was approached by a 'distinguished looking gentleman' who greeted him affably and said 'Perhaps I should introduce myself. I am Professor Hahn, chief scientist for atomic research in Germany'. Private Hilton hadn't the faintest what atomic research was but it sounded impressive enough to take the Professor to his CO. Thus one of the foremost German scientists came under British control.

The safe breakers began to work overtime. In Bremen 95 safes were blown in three days. However urgency meant that the finely honed skills of the Wormwood Scrubs Prison detachment became

increasingly irrelevant. By this time plastic explosives had entered the vocabulary and their ability to be moulded into thin shapes meant that most safes began to be opened by this method e.g. insertion in keyholes. Inevitably some of the safes contained vast amounts of money which led to some uneasy confrontations, especially when it was learnt that Nazi Reichmarks would continue for a time as valid currency.

In the meantime unknown to the participants events were inexorably leading to T- Force's finest hour, and Tony Hibbert's nemesis.

On 4th. May 1945 the surrender of German forces in northwest Europe was signed, and the order went out from HQ to all British forces to 'stand still', halt where they were. In theory that should have been that with everybody heaving a sigh of relief. But for Tony Hibbert things were not that simple. Some time before that he had been given the order, verbally, by Brigadier Pennycook to advance on Kiel – the site of one of the most significant armament development establishments in Europe, the Walterwerke and holding no less than 150 black list sites. What worried him, but not so it appeared the High Command, was the fact that if the Russians chose to ignore the Yalta Agreement and advance on Kiel and the Kiel Canal in the next few days they could occupy Schleswig-Holstein and threaten Denmark and north Europe. At one time an entire airborne division had been assigned to the capture of Kiel, but this was gradually whittled down to 500 from T-Force. The whole story is shrouded in mystery, complicated by the fact that Hibbert could not produce a written order, but on the face of it he took it on himself to commit the most heinous crime in the military book, directly disobeying an order from High Command, and advance the 60 miles to Kiel. Not content with that, intelligence had come through that two SS armoured divisions were converging on Neumunster, a vital block point on the road to Kiel, and their commanders were either unaware of or were choosing to ignore the surrender.

With grave misgiving the duty officer at Corps HQ signed a movement authorisation. This was after an awkward phone conversation with an irate Brigadier Pennycook in the middle of the night who told him he did not appreciate being awoken merely to reiterate a previous verbal order to advance on Kiel. Why he did this whilst knowing of the stand still is part of the mystery.

And so the five hundred of T-Force set off on the road to Kiel, led by Hibbert, still with his leg in plaster, the final advance of the British Army in northwest Europe, many mystified as to how this fitted in with the stand still of 4th May and for those in the know the certain knowledge that if the story of the two SS columns were true and they reached Neumunster before T-Force complete annihilation would follow. Spurred on by this, the advance became a race between the various elements of the Force. Somehow some members of the SAS got ahead of Hibbert and the flavour of the proceedings can be gauged from the presence in the SAS jeep of the same metallurgist who had identified the magnesium aluminium alloy way back in Holland and must have acquired the taste for adventure.

Racing through astonished German units T-Force reached Kiel, which contained some 12,000 fully armed army and navy personnel. Hibbert headed straight for the Naval Academy which had been identified as the control point for the city, there to be confronted by a German Navy captain. A surreal scene followed in which Hibbert, complete with leg in plaster, wished the captain good morning and asked him not to shoot him, at which point the captain burst into laughter and helped him up the steps. The captain phoned HQ to confirm that a surrender had been signed and then surrendered Kiel to T-Force – their finest hour.

Kiel provided a rich treasure trove of technological discoveries. Here Hellmuth Walter, Germany's most prolific weapons designer had established the Walterwerke. One of his chief interests, some said obsession, was the development of a true submarine i.e. one which could travel underwater for long periods at the same speed as a surface vessel. After experimentation with liquid oxygen, compressed oxygen and nitric acid, he had fixed on hydrogen peroxide as the

basis of the propulsion system. The idea was that using hydrogen peroxide as the oxygen carrier, mixed with diesel oil fuel, steam would be generated to run a steam turbine. This closed cycle propulsion would remove the need for frequent re-surfacing to re-charge batteries, and as early as 1940 a Walter hydrogen peroxide submarine, the V40, achieved the unheard of submerged speed of 23 knots.

Apart from the revolutionary submarine, obsessed or not Dr. Walter initiated and directed the development of a whole host of weapons, at least some of which could have substantially extended the war had they come to fruition.

It was vital that the massive amount of the Walterwerke technical documentation, charts, drawings etc. be found and there was despair when Walter told the investigators that on instructions from High Command they had all been incinerated. However the wily Doctor then blandly informed them that no one had said the whole lot couldn't be micro filmed and the films were buried in barrels at recorded spots along the coast.

To fully describe the Walterwerke activity would require an entire article in itself.

Apart from the 23 knot submarine Walter designed a one man submarine, a kind of steered torpedo, and a production line for this had been set up.

Walter applied the concept he developed to power a turbine underwater to the production of the powerful thrust in rocket engines in the skies above. He led the field in the concept of rocket powered aircraft, his rocket engine HWK 509, using a mixture of peroxide and hydrazine, becoming the power unit for the Messerschmitt Me 163 Komet rocket powered fighter and the Bachem Ba 349 Natter interceptor, fired vertically from the ground. This was a very advanced concept and T-Force captured the only known example. The 'hot drive' HWK 509 variant powering the Natter weighed only 390 lbs.

He designed the fuel pumps to power the turbines in V2 rockets.

As Luftwaffe airfields came under increasing attack the ability to take off from shorter runways became of crucial importance. The Walter HWK 500 Starthilfe engine provided rocket assisted take off (RATO).

The launch ramp for the V1 was Walter designed.

Design work was in progress in the use of jet engines to deliver sea mines from aircraft, and to propel a glider bomb from the shore to attack shipping and jet assisted anti-aircraft shells were under investigation.

25% of the Walterwerk's research budget was devoted to torpedoes. Again hydrogen peroxide power was to the fore.

Walter developed 'T-Stoff' propellant, cheaper to produce than cordite type material, utilised in an anti-tank weapon. T-Force retrieved the only example from the bottom of a lake.

All in all the Walterwerke was one of, if not the greatest, concentration of military technological activity in the world.

The work ethic in Kiel was strong. In a scene which could only happen in Germany, the T-Force guards at the shipyard gates were startled to find the workers, apparently oblivious to the fact they were in the chaos of the end to a calamitous war, banging on the gates demanding to be let in to continue their work.

Tony Hibbert had little time to savour his success before his action caught up with him. On VE Day General Barker arrived in Kiel and placed him under arrest for disobeying an order. On the face of it his force had broken a cease fire signed by a British Field Marshall, not a pleasant situation and with wide implications, such as giving the excuse for defiant German units to fight on. Brigadier Pennycook also was having an uncomfortable time

In the meantime the main function of T-Force became to ship massive amounts of reparation material to Britain, with the help of the relevant technicians brought over, involving dismantling,

numbering and drafting reassembly instructions, crating and the arranging of the movement to Britain of those Germans required for interrogation in Britain.

Reparations went from the largest machinery down to relatively small but important machine tools, individual blueprints etc. etc., the list was endless.

To quote random examples, as an idea of the scale of the operation, Dorman Long of Middlesborough got an entire blast furnace and kiln from the Ruhr, weighing 2500 tons. Rather than remove plant, Courtaulds copied the artificial fibre technology in the IG Farben plant at Dormagen, well in advance of their own, then built a plant five times the size. British Aluminium at Monmouth got part of the Lunen aluminium works.

One shipment of tungsten steel warheads alone weighed 1000 tons.

One of the first encephalographs ever made, an instrument which measures electrical potentials on the scalp, went to a hospital in Middlesex and so on.

On occasion there was a race between T- Force and the Russians for a particular haul. A particular success was the removal of 11,000 kilos of refined uranium ore from the Krupps WidiaWerk hours before a Russian reparations team arrived.

The Totals

Overall, T-Force escorted over 6000 investigators, worked with 1400 reparations teams, took experts to over 7500 blacklist targets and investigated 3600 scientists and technicians, 415 of whom were moved to the UK.

To assess with any degree of accuracy the total value of the reparations received by Britain would be an impossible task. A broad indication given was that the Russians removed equipment to the value of £20 billion and the British one tenth of that.

The Aftermath

The high hopes for the Walter hydrogen peroxide submarine, an example of which had been sailed to Vickers at Barrow-in-Furness, were not in the end fulfilled.

It was a dangerous and difficult material to handle, particularly in a submarine environment. Walter had been working on a high strength hydrogen peroxide propellant which he had named 'Ingolene' after his son, but involved considerable expense.

It was not until 1958 that Vickers produced a hydrogen peroxide submarine – HMS Excalibur, a trial prototype HMS Explorer had been launched in 1956, which the Navy could consider for operational use. In initial trials Excalibur was a success, achieving 25 knots submerged. It was then used in training exercises involving surface vessels tracking a fast moving submerged submarine. However there were a number of explosions involving the new fuel. There was a similar experience with hydrogen peroxide powered torpedoes – in 1955 one caused the loss of HMS Sidon, and work on the fuel which had shown such promise was terminated.

Walter worked with the British until 1948 and then returned to Germany. In 1950 he took advantage of a job offer from America and emigrated to work for the Worthington Corporation of Harrison, New Jersey.

It has not been possible to discover what happened to Tony Hibbert after arrest. However his hopes of making a permanent career in the Army had been dashed by his leg injury and it seems possible that, bearing this in mind, and the fact that nothing untoward had arisen and the Russians had been denied occupation of a vital area, the matter was allowed to drop. He was discharged from the Army in 1946.

Epilogue

In 2006 a party of 5th. Kings Regiment veterans went back to Kiel, accompanied by Tony Hibbert, then aged 90, who duly posed for TV on the steps of the old Naval Academy where he had received the surrender of the city.

They visited the Walterwerke factory to see what was now being made in what had been the centre for cutting edge military technology and discovered that its main product was ……machinery for manufacturing ice cream cornets and wafers!

Under the reparations policy Waltham Abbey acquired a Schmid continuous nitration nitroglycerine plant.

This however was never used and put in store in S6, possibly because the establishment was obtaining sufficient of its nitroglycerine needs by hot water extraction from dynamite supplied by ROF Bishopton (Letter from Mark Phillips to Dave Sims 10-05-2003).

There is a massive amount of material on reparations and the use of German scientists in the National Archives at Kew. Research is under way in an endeavour to find documentation on the scientists sent to Waltham Abbey. If any is found a further article will be written.

Les Tucker

The full story of T-Force can be found in :

T-Force The Race for Nazi War Secrets 1945

Sean Longden

London 2009

T-Force Addendum

In the recent popular television series Endeavour on the early career of Inspector Morse, in one episode the action takes place in a 1950's military rocket factory.

The rockets pictured looked quite authentic.

Memories of WW2 are still live and Morse's boss, who fought at Monte Cassino, doesn't hide his distaste for a German, highly efficient, rocket scientist employed at the factory, reminding him of the cruel conditions suffered by foreign workers at Kiel, Peenemunde and Nordhausen.

A GOOD SENIOR MOMENT

When I was ready to check out and pay for my groceries the cashier said, "Strip down, facing me."

Making a mental note so I could complain to our congressman about this running amok Homeland Security crap, I did just as she had instructed.

After the shrieking and hysterical remarks finally subsided, I found out that she was referring to how I should position my credit card.

None the less, I've been asked to shop elsewhere in the future.

They need to make their instructions a little clearer for seniors.

WARGMFA AGM/Social Friday 17 May 2013

Forty four members gathered at the Café for the annual get together, not all managed to make it for the AGM however. It was good to see them all.

The weather was not as warm as we hoped but we are an intrepid bunch and assembled outside to watch a rocket propelled plastic bottle on John Wilson's monorail followed by the launch of a flying saucer.

After returning to the warmth of the Café we partook of the refreshments available.

We were fortunate to be given 6 bottles of wine and a quantity of cider and lager courtesy of a previous event at the Mills. Those present managed to consume the wine but sadly we were defeated by the cans. Yes, I did help with the wine disposal!

Next, it was time for the Photograph which can be seen on the following page.

John Tindall kindly drove the landtrain for a tour of the site. Dave Sims gave the commentary assisted in places by reminiscences from various Friends. A very enjoyable jaunt!

Gordon Bromberger made a welcome return with a new hip and a pacemaker. He looked very well.

If there is anything members would like to do or see at the event next year please let me or any committee member know and we will see what we can do.

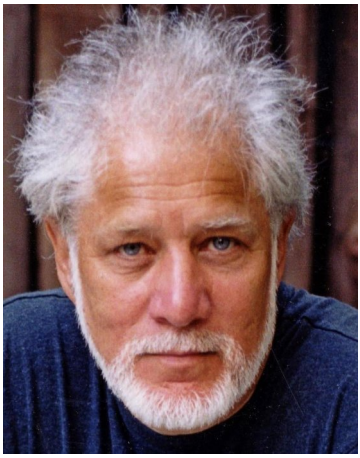
Daphne Clements

Photo by Ian MacFarlane

Roy Atkins
Malcolm Bergh
Margaret Lee
Gordon Bromberger
Les Bates
Derek Back
Pauline Back
Brian Clements
Daphne Clements
Geoff Colley
Pamela Colley
Sheila Cooke
John Cook
Jean Church
Harry Edwards
Peter Eickhoff
Minnie Fenton
Peter Hart
David Hewkin
Chris Humphrey
Jock McDougall
Sheila Higgins
Bryan Howard
Diane Howse
Geoff Hooper
Suzanne Leeson
David Manners
Beatrice Hide
Sheilagh Owens
Jack Patient
Richard Penfold
John Rowley
Michael Seymour
Dave Sims
Len Stuart
David Steel
Anne Steel
Les Tucker
John Vernon
Tony Madison & daughter
John Wright
Ann Wright
Liz Chapman

Letters to Touchpaper

Internationally acclaimed author visits the Mills



Michael Ondaatje visited the Mills on 18 April 2013 and was given a personal tour by Michael Seymour and Ian Macfarlane, who also acted as chauffeur.

Michael Ondaatje was born in Sri Lanka on 12 September 1943 and now lives in Toronto, Canada. He is best known as the author of 'The English Patient', the novel which won the 1992 Man Booker Prize, amongst other awards. It was adapted into a film which won an Academy Award for Best Picture, Best Director (Anthony Minghella) and a Golden Globe for Best Motion Picture. He has written several other novels, 13 collections of poetry, has lectured on English Literature in London and Toronto, edited many works and co-edits a Literary Journal with his wife Linda Spalding, who is also a poet and an academic. Amongst many awards, he was made an Officer of the Order of Canada (OC) and the Sri Lanka Ratna, the highest award given by the Government of Sri Lanka for foreign nationals.

He stayed with us for over three hours and the tour included the Land Train route, New Hill, the Armoury, the Film, the Main Exhibition, the Explosions Exhibition, the underfloor machinery part of L157, the WW11 Exhibition, the Mad Lab, the Rocket Vault and the Archives. He was a pleasure to show round, most interested and impressed by our unique site and plans to visit again in September.

We suspected the tour may be research for a possible new novel but he didn't give any clues! Apparently he had mentioned, when arranging his visit, that he was interested in Waltham Abbey's water transport connections to London.

We look forward to his re-visit and members will be updated then.

Michael Seymour

Your efforts to keep Touchpaper going with sufficient varied content is much appreciated. In the Spring Edition the specific aspects appreciated were :
The atmospheric images on the back cover, more please.
The bold larger print for the image captions, please continue.

Sorry we don’t have any other image of Frank Irons. (Photo 4 P.26 Spring issue Ed.) The gentleman standing on the right of the pool in the plume image on P.27 was in fact John Clark not Allen, but the scene described by Allen would have been the same as this.

Following on from the excellent series of puns in the Spring Touchpaper :

There’s a news item about a nun who’s being charged with vote fraud. Her cellmate, an elderly nun, applied for an absentee ballot, but died, and presumably went to heaven, a few days before election day. The surviving nun forged her signature and sent in the ballot. This may be the first case of someone being charged with voting for nun of the above.

Regards

Les Tucker

Humour

Family Presents

It all began with an iPhone.

March was when my son celebrated his 15th birthday, and I got him an iPhone. He just loved it. Who wouldn't?

I celebrated my birthday in July and my wife made me very happy when she bought me an iPad.

My daughter's birthday was in August so I got her an iPod Touch.

September came by so for my wife's birthday so I got my wife an iRon.

Education

A man is stopped by the police at midnight and asked where he's going.

“I'm on the way to listen to a lecture about the effects of alcohol and drug abuse on the human body."

The policeman asks, "Really? And who's going to give a lecture at this time of night?"

The man replies "My wife".

Obituaries

Frank Panton CBE, MBE(Mil), PhD, FRSC, FRAeS, FRSA

It is with sadness that we note the passing of Frank Panton, our Director from 1976 to 1979. To many at Waltham Abbey Frank Panton was regarded as a hard-nosed administrator, and few may not have appreciated that under his steely exterior there was an extremely warm man with a great sense of humour, often self-deprecating and always able to see the ridiculous in life. Frank was something of a "mentor" to me; he sent me out to the Defence Research and Development Staff in the Washington Embassy in 1978 and found me a good job when I returned in 1981, taking a fatherly interest in my well-being thereafter. He himself had a fascinating and illustrious career, both before and after his time at Waltham Abbey, which I thought was worthy of sharing with you. Some of it was reported in his obituary in the Daily Telegraph on 17th April 2013.

Frank Panton was born and educated in Lincoln in 1923. After the outbreak of the Second World War he was commissioned into the Royal Engineers. As reconnaissance officer of No 1 Bomb Disposal Company, he was responsible for locating and identifying enemy explosive devices, including the highly sensitive "Butterfly" anti-personnel bombs. In 1948 his work was recognised by his award of an MBE. After university at Nottingham University, where he took a BSc in Chemistry and a PhD and was vice-president of the National Union of Students, he was recruited by Military Intelligence and posted to Berlin. This was in the early stages of the Cold War, and the West needed to discover how much progress the Soviets were making in developing an atomic weapon. An important source of intelligence was the work being carried out in the East German mines, factories and scientific establishments that the Soviets had taken over. Based at Checkpoint Charlie, the name given by the Western Allies to the best-known crossing point in the Berlin Wall between East and West Berlin, he screened refugees for useful information as they crossed the border to the West.

Frank Panton was in the Permanent Under-Secretary's Department at the Foreign Office from 1953 to 1955 and then in the office of the Political Adviser, Berlin, until 1957. As deputy head of the Technical Research Unit at the MoD, he was one of a select few who acted as Britain's point of contact with the United States on nuclear weapons intelligence. Based at the British Embassy in Washington in 1958-59, he was one of the principal channels for nuclear intelligence passing between the two countries. An appointment as technical adviser to the UK Delegation to the Strategic Arms Limitation Talks (SALT) held in Geneva was followed by a move back to the Permanent Under-Secretary's Department at the Foreign Office. Then, in 1963, he returned to the British Embassy in Washington as Counsellor (Defence) on nuclear matters. He had unique access to the United States' "father" of their nuclear programme, Admiral Hyman Rickover.

In 1969, Frank Panton, as Assistant Chief Scientific Adviser (Nuclear) at the Ministry of Defence, obtained political and

financial approval for the research and development of the nuclear warhead system Chevaline, used in UK Polaris submarines. Chevaline was developed in response to the deployment of increasingly sophisticated Soviet defences. Its purpose was to improve the penetrability of the warheads and provide a credible deterrent to a first strike. One key feature was the use of multiple decoys offering so many seemingly identical targets that an anti-ballistic missile system would be overwhelmed, thus allowing enough warheads to get through.

From 1976 until his retirement from the MoD in 1984, he was director of two Research and Development establishments. The first was of course our own Propellants, Explosives and Rocket Motor Establishment (Waltham Abbey and Westcott) from 1976 to 1979, where he was much involved again with Chevaline. His second Director appointment was at the Royal Armament Research and Development Establishment at Fort Halstead from 1980 to 1983 where he was closely involved in counter-insurgency operations in support of soldiers in Northern Ireland. A notable success was the upgrading of the remotely controlled Wheelbarrow bomb disposal device now in wide use.

After RARDE he acted as a consultant to MoD as an Independent Member of Nuclear Weapon and Nuclear Propulsion Safety Committees between 1984 and 1999; he also worked for the Cabinet Office for 12 years. Much of his consultancy work involved tracking nuclear material that was being dispersed throughout the world and endeavouring to develop counter measures if it got into the wrong hands. For this he was awarded a CBE.

On retirement he undertook a second PhD, this time in history. He became Chairman of Canterbury Archaeological Trust in 1991. While an underpass was being built in Dover, a wooden seagoing boat dating from the Bronze Age was found beneath the old Roman harbour wall. The Dover Bronze Age Boat Trust was formed in 1994 to preserve and display the boat, thought to be the oldest in the world, and Frank Panton became its Chairman. He took the lead in

raising £1 million to put the project on a sound financial footing. The boat is now displayed in the Dover Museum, which was graced with the presence a few years ago with the presence of HRH the Prince of Wales.

He died of natural causes aged 89 on 8th April 2013, the same day as Baroness Thatcher – the Prime Minister he advised on nuclear fission and its use around the world. His funeral was held at St John the Baptist Church in Tunstall near Sittingbourne in Kent. It was extremely well attended by friends and former colleagues. He is survived by his wife Pauline and his two sons Timothy and Christopher.

Geoff Hooper

Les Phillips

Dr Leslie Phillips died on Wednesday 22nd May at the age of 97. Although he had various appointments in the MOD his first interest was in research and he spent the sixties and early seventies at ERDE pursuing that interest. He was active in the Chemical Society Gas kinetics Discussion Group. He was awarded a D Sc at the University of Exeter in the early seventies. I have to thank him personally for rescuing my career after a traumatic illness in 68/69. He had lost his sight in his declining years and died peacefully in a nursing home in Sheffield.

Mike Healey

Ron Treadgold

Ron passed away peacefully in his sleep on 20th may.

He had been in hospital for a few days, for the first time in his life!

Ron was a member of the Friends, and a committee member for many years, and had worked at the site years ago.

His son Robert said that Ron was cheerful till the end and his main passion was the Royal Gunpowder Mills.

A full obituary will appear in the next issue.

The History of South Site

South Site existed for 100 years to make energetic materials for military use, finally closing in 1989.

The early history is well documented and is being incorporated in a booklet to provide an appreciation of the work undertaken there, However there are gaps in our knowledge of the post war years 1950-1989.

PR branch was originally intended as a supplier of materials for projects such as 'Bluewater' but within PR there was separate research areas e.g. N_2O_5. Can anyone shed light on these activities? My co-author would be interested in the manufacture of gunpowder.

P2 was set up to develop plastic propellant but polyurethanes were extensively researched; does anyone know what 'Dalterol' was and what units are So numbers expressed in? e.g. So 2000 I recall as a standard AP grist and So 6000 for micronized.

Although I worked in P1 there were some areas that I didn't know about the background, in particular the picrate-carbamite complex and its effect on ballistics. Why did the Finney press explode and what other problems arose in the manufacture of casting powder.

In the good old days I would invite you to put pen to paper, but now most people have computers; perhaps you'd like to set to work on your word processors and send the results to Touchpaper.

Bryan Howard.

(Manuscript copy is quite acceptable. Ed)

Guidelines for submission of copy

As a guide approximately 400 words fit a single A5 page without illustrations, it generally helps to include a separate image to break up the text, so if you have an image(s) please include it(them) although we may be able to find something.

Text may be sent as emails or attached to emails as plain text or Word documents. Pictures should be sent as separate images, either jpg or png although other formats may be useable.

If images are included in Word documents more effort is required to separate them and there is a reduction in quality so please send images separately if possible.

Paper originals should be scanned at 300dpi, digital photos can be resized to 1200 x 900 or larger, full size pictures from modern cameras are bigger than necessary and waste time uploading and downloading.

Pictures should be in colour if possible, they may only appear as grey scale in print but this is to keep costs down, normally they will be in colour in the electronic version.

We are happy to receive paper copies of text and pictures but cannot guarantee their return, if you cannot send items by email consider bringing them into the Mills or passing them to someone who does come in or can email them

Finally please be sensitive to copyright rules.

Events at the Royal Gunpowder Mills

For information visit the Web Site:

http://www.royalgunpowdermills.com/whats-on-and-events/

Brian Clements.

Pump house and Traverse

Below: Gunpowder Press