

Winter 2015

TOUCHPAPER

The Newsletter of the Royal Gunpowder Mills Friends Association

News of the Railway

The Mills and PGL

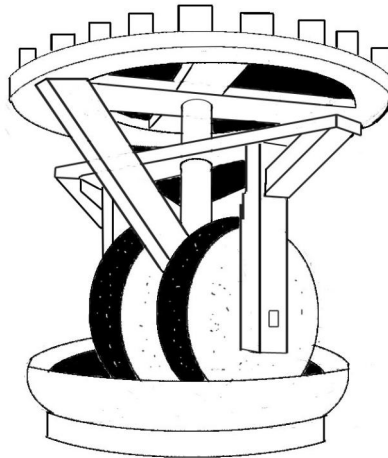
Julie's Nature Column

Early Rocketry Part 6

Quizzes and Wordsearch

Obituary:

Brian Harvey



Winter 2015

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Deadline for the next issue is 12th February 2016

Chairman's Chat

Unfortunately the treasurer, John Cook has had to resign his position for personal reasons. His replacement will be announced in the next Chairman's Chat after approval by the committee.

The current situation with regard to PGL is reported by John Cook later in this issue.

Recently the replica mill in L157 was damaged, probably by children. We hope to begin repairs shortly but it may be a difficult task. It needs to be done. We also expect to start building new carriages for the cannons near Walton House. The existing carriages have not tolerated the wet weather over recent winters at all well. The new ones will be made in oak which should last a lot longer but take more effort to build.

Two Christmas lunches were held on the 4th and 11th December at the Crown in Romeland Waltham Abbey. They were greatly enjoyed by those who attended. Len Stuart, assisted by Bryan Howard, organised them both extremely well just after recovering from influenza. Thanks very much to both of you.

It only remains for me to wish you all a Happy Christmas and a Healthy and Prosperous New Year.

John Wright

Until a new Treasurer has been announced please send renewal forms and payment to John Cook. Ed.

Editorial

This issue has been put together more hurriedly than usual, so I apologise in advance for any typos etc. Part of the reason is the ongoing saga of the proposed PGL takeover of much of the site.

This, as I have said in the past is your newsletter and depends on your contributions. The last part of Les Tucker's rocket series makes it even more important that people write the occasional piece, do not be afraid of rejection, I try to make room for nearly all the items I receive.

The obituary for Brian Harvey is followed by extracts from his site news for 2007, including the famous bread pudding recipe. Typically Brian wrote about 2000 words for the site newsletter each year and his contributions always showed his good humour despite the time he spent sorting out the toilet plumbing problems. He also persuaded me to guide on the land train, which took some effort as I was not initially keen to do the job, but having tried it I was grateful for his persistence and enjoyed stealing some of his best lines to use in my commentary.

As usual at this time of the year you will find renewal forms enclosed, please do continue to support the Friends as we are working with volunteers and other supporters to try to maintain the visitor attraction on site and hope to reduce the impact of the PGL proposals. Please renew before you forget. There will be an AGM, probably in May and we will try to arrange the social event but at the moment with the uncertainty of the site's future we cannot yet give details.

Finally do have a Merry Christmas and a Happy New Year.

Brian Clements

News of the Railway

After some twelve years in the making, at last, light is visible at the end of the tunnel. The passenger carriage has been built and tested, the Baguley/Drewry locomotive has had a major overhaul, paint job and air brake connections fitted. The Southern Station (access via the footbridge opposite the main laboratory on Long Walk) has 4 platform modules in place - 3 having had decking fitted, a ramp is under construction. The first of 4 modules for the North Station at 83B is in place. Documentation is well advanced, as is implementation of advice from Her Majesty's Chief Inspector of Railways.

The strange group building said railway can often be seen brandishing mugs of tea or begging for alms from any passing Land Train or Army Lorry, although secretive they are said to be friendly. The Railway Volunteers or Railway Children as they are sometimes called, will offer shelter, assistance or directions to any deserving person or cause.

As ever the Railway volunteers are looking for any person who would like to join them, not only help build but to train as drivers, guards or in any other way to help run it.

Chris Humphrey

CWH @ wargm railway

Plans Revealed For Mills Holiday Camp

A planning application was submitted to Epping Forest District Council on 30 November 2015, after much delay, for the construction of a children's holiday camp on 41 acres of the Royal Gunpowder Mills site. The developer and camp operator, PGL Travel Ltd., revealed its proposals in October at a public exhibition at the Mills.

The listed incorporating mill buildings on the east side of Queens Mead (L145, L148, L153 & L157) will be refurbished to provide new classroom accommodation. The World War II vintage cordite processing buildings on the eastern flank of the site will be demolished and replaced by new construction. More accommodation will be provided by the buildings immediately south of Queens Mead, currently housing the Rocket Vault / Mad Lab (L168) and the Café (L176). Facilities for outdoor activities will be constructed at New Hill, including a new lake, and on part of the site designated as an Ancient Scheduled Monument on the west side of Long Walk. The whole of Queens Mead will become a children's play area.

The exhibition was well attended by local residents, Mills' volunteers and many members of the Friends. The Charitable Foundation that owns the Mills site and, PGL Travel Ltd., as its developer partner, asked visitors to provide feedback. While receipt of some letters and emails has been acknowledged, many questions about the future of the Mills site remained unanswered.

In response to concerted pressure from the local residents association, the Town Council held a public meeting in Waltham Abbey Town Hall on 1 December 2015. The independent chairman struggled to maintain order as residents, volunteers, Friends and members of local interest groups condemned the Foundation's representatives - just one of the Trustees and an adviser. Speaker

after speaker criticised the Foundation for failing to invest in, and effectively promote, the visitor attraction, for using funds obtained from public bodies for the benefit of a private developer and consistently failing to listen to the local people who fought hard to establish the Mills as a visitor attraction and freely give up their time to run and maintain it.

The meeting was held to give the Foundation and the Operating Company, responsible for managing the Mills day-to-day, the opportunity to share their plans for the future of the site in general and the visitor attraction in particular. Quite shamelessly, the Foundation's representatives declared no responsibility for the visitor attraction. The Operating Company chairman was not present – apparently he had a more pressing engagement. The General Manager post, vacant for some months, has yet to be filled. Two members of the Operating Company Board spoke but were unable to provide any assurances and merely appealed for more help.

It is apparent that there are no plans to retain the Mills visitor attraction, in any semblance of its current form, if the PGL holiday camp proposals are approved by the planning authority and go ahead. With the exception of the main exhibition building and the Walton House offices, all the serviced accommodation currently used by the visitor attraction will be lost – the 'Mad Lab / Rocket Vault', the Café, the Spinks Gallery, the 'Wildlife Tower', the Grade I listed incorporating mill building L157, the volunteer base, workshop and storage facilities. Queens Mead, used throughout the summer for outdoor events, will also be leased to PGL.

The commercial terms agreed between the Foundation and PGL Travel Ltd. provides no funding whatsoever for relocation of existing visitor attraction facilities. The Foundation's own financial reserves will be used primarily for infrastructure improvements for PGL's sole benefit.

The overriding priority of the Foundation, as the Mills landlord, is to conserve the site's historic buildings and structures either indirectly by leasing to commercial tenant or directly with funds raised from rental income. It seems the only beneficiaries of this strategy will be the small parties of archaeology enthusiasts and other specialists who will be offered pre-booked guided tours. It seems increasingly likely that, if the children's holiday camp is built, the local people, without whose hard work the Mills would not exist, will no longer be able to enjoy the unique character and tranquillity of the site and its buildings. Moreover, Waltham Abbey and the Lee Valley will lose their primary family visitor attraction.

You can find out more on the 'Save The Gunpowder Mills' website. save-rgm.org

Contact Epping Forest District Council eppingforestdc.gov.uk if you would like to object to the planning application.

John Cook

Julie's Nature Column

With Autumn ending and now going in to winter, it has been mild so far and although winter can be cold and the place looks bleak, wildlife is still very active. I have seen a change in the Buzzard's range of territory, coming much further down to the south end of the site. There are quite a lot of pigeons around Queens Mead which might be easy pickings for a Buzzard. I have constantly missed photo opportunities, but managed to get this photo the other day.



The deer have finished rutting and will now concentrate on feeding and keeping warm. Deer hair is hollow which gives them very good insulation. On a sunny cold morning you will often see them warming up in the sunshine lying beside a tree which they use as a shield against any cold winds. This time of year I regularly go out on my tractor to put their feed out and as you can see some of them are quite used to me.





There is a lot of bird activity at the moment, flocks of Goldfinches and Siskins love the seeds on the Alder trees. I've seen Goldcrests and a Treecreeper and whilst I'm trying to get photos I hear the Kingfishers up and down the waterways. Sometimes I don't know which way to look first. Herons are still around the site checking out the best places to fish. This one is sitting on the white footbridge.



Getting back to the mild beginning this winter I am still seeing plenty of mice and voles and I was surprised to find this toad yesterday which would normally be hibernating. Let's hope the winter isn't too harsh in the months to come and that I will have plenty more photo opportunities to share with you.



Julie Matthews
Nature conservationist
Royal Gunpowder Mills

Early Rocketry

Part 6 (Final) Britain (2)

The word early is defined as the 19th century interim after Congreve when the Hale rocket was developed and in the 20th century the years from 1937 to the end of WW2 in 1945.

In the latter period British rocket development was entirely military.

In the civil field Britain did not follow the pattern evident in Germany and the US in the 1930's – where initial activity by amateur enthusiasts became progressively more sophisticated, producing viable rockets, with, in the case of the US, members eventually founding commercial firms,

In Britain whilst the enthusiasts of the British Interplanetary Society were able to produce competent designs for rocket powered space vehicles they were prevented from any experimentation with actual rockets by the provisions of the 1875 Explosives Act.

The Hale Rocket 1844

In 1844 William Hale introduced his rocket which improved on the Congreve design.

He eliminated the deadweight of the Congreve cumbersome and inaccurate guide stick, replacing it with a system in which part of the thrust gases were led through exhaust holes which, in conjunction with tail fins, produced a spinning effect, markedly improving stability in flight.

A number of foreign armies took up the design, particularly in Europe the Austrians. Beyond this the Americans took an early

interest, to the extent that they bought manufacturing rights from Hale and shortly after formed a rocket brigade to serve in the Mexican-American War 1844-1846, which operated effectively in major actions.

In Britain consideration of the new design was slow. Use in the Crimean War was still only experimental and the Hale rocket was not officially adopted until 1867. It was employed widely in colonial engagements. Particularly useful in the terrain often involved was the suitability of the 24 pdr. version for carrying in packs by mules.

A significant Government contract followed adoption, easing Hale's financial difficulties.

However by the 1890's the rockets were becoming increasingly outmoded, and official interest was waning. Storage in overseas conditions was a problem, with gunpowder separating from casings. Conventional artillery development was proceeding apace, particularly after the introduction of breech loading and the rifled barrel, with significant improvements in power, range and accuracy.

In 1919 the Hale rocket was officially declared obsolete and military rocketry disappeared from the scene.

Late 1930's - Rocketry reappears

In the 1930's there was a resurgence of official interest in rocketry. The War Office became aware that the German military, taking advantage of the omission of rockets from the weapons banned by the Versailles Treaty, had commenced a rocket programme. As it became obvious that war was looming, the threat of mass bomber attack and means of defence was a major preoccupation. Large numbers of anti aircraft guns were needed, placing a strain on productive capacity. The Government turned to the rocket as a supplement to the gun.

Just in time

As early as 1935 work had started in the Explosives Branch at Woolwich Arsenal on an anti aircraft rocket, transferring to Ballistics Branch in 1936. By 1937 a 2" calibre weapon had been devised and a 3" version was being worked on.

In the meantime the 19th. century Victorian defence mobilisation centre, Fort Halstead, had been identified as suitable for use as an experimental outstation.

Elements of the Rocket Section of Ballistics Branch moved to the Fort in 1937 – the precursor to what was ultimately to become the Fort Halstead Research and Development Establishment.

In 1939 the Projectile Development Establishment covering military rocket development was formed under the direction of Alwyn (later Sir) Crow.

The Anti Aircraft Rocket

(1) The 2" Rocket - AA Ground to Air

It was envisaged that a rocket of 2 inch calibre could parallel the performance of the current AA gun.

The design produced held a cordite charge within a thin steel tube (weight was important). To inhibit the effect of the hot gases from burning on the motor tube the charge was secured and separated from the body by plastic material. Further, the charge was centrally pierced in a star shaped configuration. This produced an almost constant burning surface, giving a relatively constant thrust.

Whilst the theory was sound, in practice it proved impossible to find a satisfactory plastic material. Over the temperature range involved it became fluid at one end and at the other it lost its plasticity and became tacky.

The drastic step was taken to abandon work on a plastic surround and adopt a loose charge consisting of a plain cylinder of cordite supported on a steel cross fixed at either end of the motor, with burning taking place on all exposed surfaces.

After much experimentation it was found that spraying the inside of the motor tube with a suspension of finely ground alumina in a solution of sodium silicate provided sufficient insulation of the walls of the motor tube from the effects of hot gases.

There was some reduction in performance from the original parameters, but overall, somewhat to the surprise of the scientists, the modified design worked satisfactorily.

(2) The 3" Rocket – UP3 (Unrotated Projectile)

A year after the development of the 2" rocket the new 3.7 inch anti aircraft gun was brought into service, leading to a call for a rocket to match it.

The result was the 3" rocket. This continued with the loose charge of cordite – a solventless grade produced at the new ROF at Bishopton and from 1942 at the ROF at Ranskill.

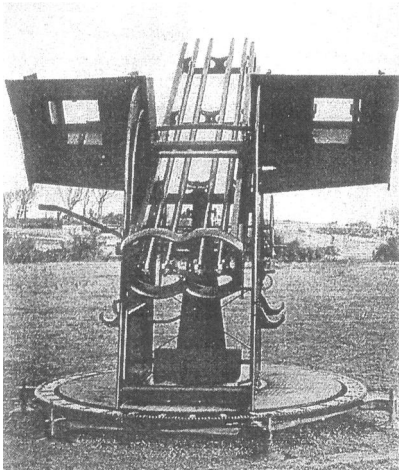
The UP3 design was successful and from 1940 operated as a supplement to the anti aircraft guns.

Originally the projectile was fired from single launchers and detonated by a proximity fuze. The fuze did not perform well and salvo firing was adopted.

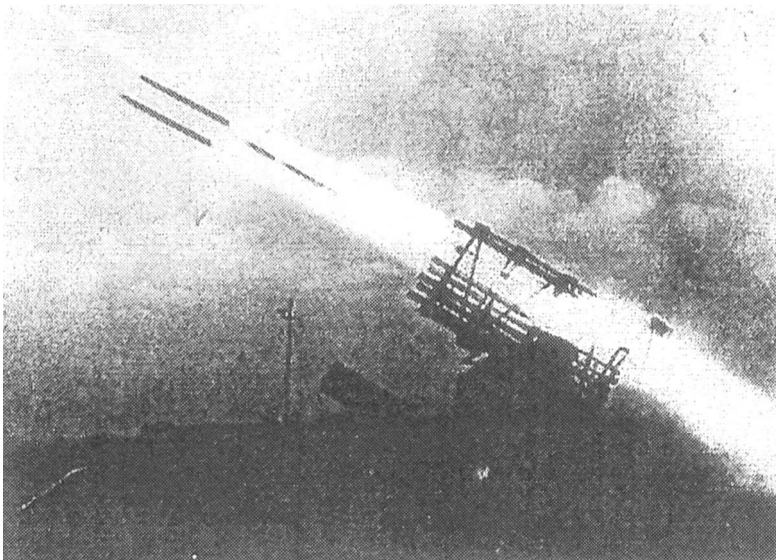
The Z Batteries

The salvos were fired by units termed Z Batteries. These units, largely forgotten, consisted mainly of Home Guard personnel, who on the whole achieved a high standard of performance.

Each Z Battery consisted of 64 launchers, each firing two rockets giving a salvo of 128, resulting in a cube of fire one quarter of a mile wide.



Twin barrel 3" rocket launcher



3" rocket launcher firing

The Z batteries were a useful addition to AA capacity but their radar could not cope with the later 1944 flying bomb offensive and they were disbanded in 1944.

Air to ground / sea application

In the meantime the 3” rocket with explosive warhead became an extremely effective airborne weapon, particularly against tanks and road transport.

It was also employed with some success against submarines.

(3) The 5” Rocket **(a) The Rocket Ships - Mattress**

Arising originally from an Army requirement, the 5” rocket was developed. This had a charge of eleven sticks of tubular cordite.

The intended use by the Army did not in fact materialise, but the Navy then found that it was eminently suitable in a support role for the amphibious landings in hostile territory which were being planned by 1943.

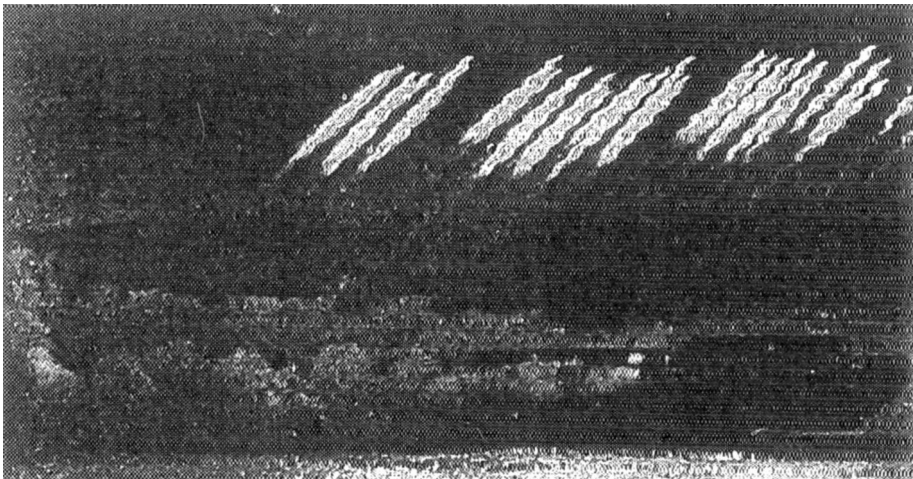
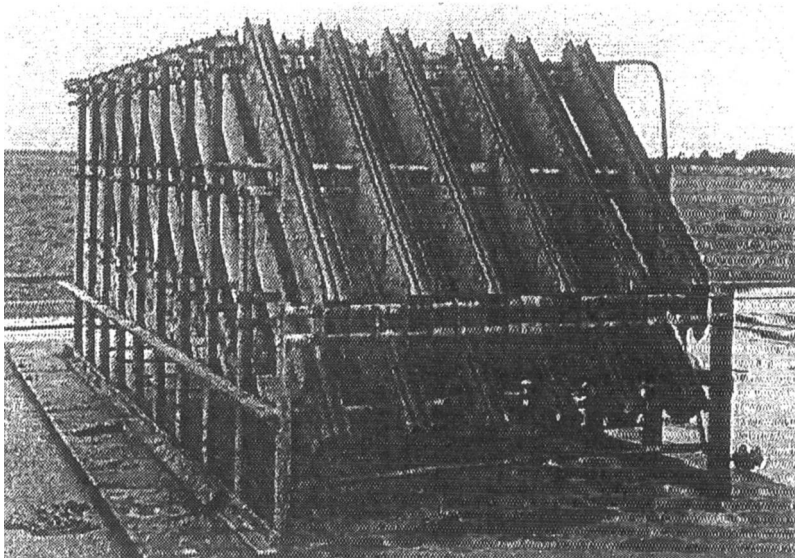
Fitted with a high explosive charge, the rocket motor was arranged in multiple projectors to fire salvos from rocket ships (shades of Congreve), designed to neutralise artillery threatening landings.

The equipment was given the name “ Mattress”, reflecting its softening effect on artillery positions.

The rocket ships’ first role was in support of the landing on Sicily, where they were a spectacular success.

A ‘Land Mattress’ was also developed and was employed in the crossing of the Rivers Scheldt and Rhine.

5" Multiple Launcher – 'Mattress'(b) LAP – 5"



A Mattress salvo

After the earlier tribulations with plastic material, such was the pace of war time development that by 1943 a 5” calibre motor had been designed for development employing plastic propellant, with the designation Light Alloy Plastic – LAP.

Further utilisation of the 3” Rocket Motor – Guided Missile propulsion

Meanwhile other uses were being considered for the AA rocket motors, with implication for the future.

Beginning in 1942 work was started on producing an operational guided missile. – rocket powered missiles which could be guided on their targets.:

Four projects were instituted. Fundamental to missiles was the propulsion unit and the motors which had powered the rockets in the AA role now figured in these.

Brakemine - February 1943 - Ground to air missile.

‘Radar controlled rocket’ – beam riding system. A missile guidance system in which the missile flies down a radar beam aimed at the target.

Development by AA Command and private firm A C Cossor.

The AA Command team was led by Major Sedgfield of REME who had written a paper on the concept in 1942. This team was responsible for the missile structure, control, firing and command systems . The A C Cossor team, led by Mr. L H Bedford developed the receiver and guidance system.

Flying control was ‘twist and steer’ in which the two main wings were connected to the fuselage by pivots, allowing them to rotate to different angles of attack.

The teams put in a very creditable performance and by September a 1944 test vehicle had flown.

Brakemine achieved operational level and deserves a better place in the dusty annals of early British rocketry applied to missiles, as does Major Sedgfield, what became of him? as one of the original thinkers.

One Brakemine missile has miraculously survived and is displayed in the REME museum.



Brakemine at REME Museum of Technology

Little Ben / Longshot – February 1944

Test vehicle for ground to air systems.

Propulsion by 3” rocket motors.

July 1948 first flight test

Stooge - mid 1945

Ground to air

Powered by four 5” rocket motors and four 3” boost motors

Development by Fairey Aviation

Post war numerous test launches were made up to around 1947.

Lopgap (Liquid Oxygen Petrol Guided Anti-Aircraft Projectile) - September 1943

The only liquid fuel rocket propulsion system under development at that time

Seven 5” boost motors

Post war into the 1950’s the 5” Light Alloy motor – LAP was of particular importance as a propulsion unit in test vehicles

I was required to produce (at Waltham Abbey) 100 5” light alloy rocket motors per week for use by Guided Weapons Group. These were used at Aberporth and Larkhill ranges to power test vehicles for guidance systems

Dick Doe writing in Touchpaper September 2001

At the end of the war it was decided to terminate work on Brakemine, in spite of its programme being the most advanced, in order to concentrate on Lopgap as the latter was considered the more suitable for further test work. However Brakemine had made a notable contribution – its ‘twist and steer’ control method was employed in the later much more powerful Bloodhound missile.

Test flying of Stooage and Longshot continued into the late 1940’s.

As the RTV1 test vehicle Lopgap played a fundamental part in early post war UK surface to air missile development.

British Rocketry to 1945

Early British rocketry - small calibre solid propellant

To 1943 - anti aircraft weapon

From 1944 main roles were :

- (i) An air to ground weapon
- (ii) Mass bombardment in support of amphibious operations
- (iii) The propulsion unit, main or boost, for flying test beds for guided missile subsystems research

This latter function, together with solid propellant development, laid the foundation for a wide range of solid propellant Service missiles e.g. Bloodhound, Swingfire, Blowpipe, Rapier, Seawolf, Seaslug and for civil application in upper atmosphere and meteorological research – Skylark, Petrel, Skua.

By 1953 solid propellant motors had become, with one exception - the sustainer

engines in Red Duster, the sole means of propulsion for British guided missiles – a monopoly position maintained until the mid-1960’s.

Whilst the solid propellant rockets were successful in these roles, it is open to question whether the original development programme instituted in the 1930's was sufficiently ambitious in scope and range. However in the final analysis it could not go beyond the resources available to it.

Les Tucker

This article has taken 1945 as the cut off point for definition of early. This might be extended to the late 1940's / early 1950's. It is possible that there are those amongst the Touchpaper readership who have direct knowledge of aspects of development and the rockets involved, solid and liquid propellant, in that period, albeit working somewhat later.

If so, a contribution to supplement this article would be most welcome. - Ed.

Cracker Jokes

What do you call a man with a spade on his head?

Doug.

What do you call a man with a paper bag on his head?

Russell.

Why did the golfer wear two pairs of trousers?

In case he gets a hole in one.

How does Jack Frost get to work?

By icicles.

What animals need oiling?

Mice, because they squeak.

Find the link quiz

- 1 William and Mary, A fruit, Mobile phone network
- 2 Stilton cheese, A type of jazz, Transatlantic liner prize
- 3 Lincolnshire regiment, A fever, Cowardice
- 4 Beginner, Starboard, Banks of willow
- 5 An insect, Position in rugby, Quick intellect
- 6 Toll road, A weapon, A fish
- 7 Circus venue, River mammal, A draft animal
- 8 Cooling device, Devotee, Small window
- 9 Tax, Campanology, Bar across a road
- 10 Sleep, Card game, Woolly surface
- 11 Garden tool, A train of railway trucks, A dissolute person
- 12 Unit of speed, union (of rope), A shore bird
- 13 A receptacle, Narcotic herb, A successful stroke
- 14 Copy, Cradle, Card game
- 15 Spice, Non-alcoholic beer, Hair colour
- 16 Aussie python, Intensive bombing, Reprimand
- 17 Gamble, Boat, Unit of currency (Irish)
- 18 Catalogue, Leaning of a ship, Poetic 'hear'
- 19 A bird, Part of a target, A hoarder
- 20 Sweet spread, Block by crowding, Play jazz
- 21 Animal skin, Conceal, An old English land unit
- 22 A piece of luck, A worm, Part of an anchor
- 23 A barrier, Indulge in a sport, Dealer in stolen goods
- 24 A reprimand, Salad plant, Missile

Bryan Howard

Christmas Word Search

G	S	P	Y	Q	H	E	L	J	R	N	R	L	U	D
B	D	I	F	M	S	M	I	S	T	L	E	T	O	E
S	R	G	R	O	E	P	G	G	M	B	E	H	L	C
E	E	N	O	U	R	C	H	N	V	P	D	G	U	O
I	H	G	S	F	A	P	T	I	T	U	N	C	V	R
P	P	M	H	R	D	Y	S	K	D	K	I	Y	G	A
D	E	A	O	U	L	R	N	C	A	X	E	Q	V	T
E	H	L	F	I	E	W	Z	O	P	Y	R	G	R	I
C	S	R	M	K	X	V	I	T	V	C	L	X	Z	O
N	L	A	C	S	T	N	E	S	E	R	P	L	H	N
I	F	A	T	E	M	I	M	O	T	N	A	P	O	S
M	R	M	U	L	L	E	D	W	I	N	E	S	Q	H
C	T	S	L	E	I	G	H	V	J	Q	T	H	I	A
X	N	D	C	U	Q	K	F	N	A	M	W	O	N	S
H	P	Y	E	K	R	U	T	P	Q	C	U	J	H	U

- | | | | | | |
|----|-------------|----|----------|----|-------------|
| 1 | Snowman | 2 | Carols | 3 | Holly |
| 4 | Mistletoe | 5 | Presents | 6 | Lights |
| 7 | Mulled wine | 8 | Turkey | 9 | Goose |
| 10 | Ivy | 11 | Reindeer | 12 | Pantomime |
| 13 | Shepherds | 14 | Sleigh | 15 | Stockings |
| 16 | Minced pies | 17 | Crackers | 18 | Decorations |
| 19 | Family | | | | |

Obituary

Brian Harvey

**May 1944 -
September 2015**

Brian was married and had 3 children but unfortunately his wife passed away after 18 years of marriage, He lived in Cheshunt

Brian started work at RGM as the 'Assistant Visitor Services Manager' on 19th March 2001, he then became the 'Services Manager' in January 2007.

He retired in September 2012 but remained as a volunteer, he joined the Operating Company Board in February 2014 and had just been voted as Vice Chair before his sudden death on 21st September 2015.

He was always early for work, extremely reliable and knowledgeable about the site, the buildings and the history. It wasn't unusual to see him repairing some piece of equipment from one of the buildings/exhibitions to save money. He kept things up and running for as long as possible including the vehicles, exhibition interactives and the plumbing!

He had a way about him that made people feel welcome and special, it was a joy to see him in action with the public.



He drove all the vehicles and trained all the other drivers of the time too. He performed an entertaining and informative tour, which was from the heart.

For those who can remember, Brian wrote in the regular newsletter and his accounts of his experiences were put across in such a way that we all looked forward to the next instalment. He was famous for making bread pudding and he even gave the recipe in one edition!

Brian's loyalty was second to none and he played a huge role in the history of RGM's Visitor Attraction.

He will be sadly missed.

Liz Went

Site News 2007 - Brian Harvey

This year visitors will notice a few more millstones have appeared around Queen's Mead. These were found and then stored during remediation of the site back in the mid 1990's. Many of them were dug out of the old waterways where they had been dumped when they had become worn, broken or redundant when the old water powered mills were demolished in favour of the new steam powered mills with their cast iron "stones". We've bought them out of hiding so that visitors can take advantage of them as additional seating – useful, knowing how much walking can be done when exploring our rather large site. It just got me thinking how these millstones were manhandled back in the days before forklift trucks and lorries with Hi-abs were available. Our contractors who moved them had just such equipment and estimated that they weighed around 3-4 tons each. It must have been quite a performance in the early days for the original mill owners to lift pairs of these into their vertical operating position. No wonder they didn't attempt to move them very far when they had finished with them.

Since my last escapade in the Wildlife Tower (see Sept 2006 newsletter), I'm always a bit cautious when opening the door. John Wilson, who has been setting up a wonderful display of his wildlife photographs inside the tower, mentioned that he had been pestered with ladybirds one day when he opened the door to get inside. Because I've now reached that age where, in any head to head memory retention contest the goldfish always wins, I had managed to forget this when I went to open the tower for the Victorian Christmas Event, held on a gloriously sunny day in December. Fortunately I was wearing a hat, for as I swung the door open, a cascade of these little red beetles pitter-pattered onto my head. They had apparently decided to hibernate between the top of the entrance door and the lintel, normally not a bad idea as the tower is rarely opened during the winter months, and being south facing is well sheltered. There must have been over a hundred of them, all fast asleep and most of them now on the ground with their legs in the air. The fall did nothing to wake them from their reverie and I reluctantly had to leave them while I went to unlock the remainder of the site. I assumed they all managed to wake up in the warmth of the sun and find another more suitable spot to spend the winter because they had all gone by the time I came back to lock up later that afternoon.

The rather wet autumn coupled with the winter gales has resulted in our woodland losing quite a few trees and branches. (Mother Nature has been combing her hair, as my Mum used to say.) It's mostly the crack willow that suffers limb loss, the very brittle nature of the wood (hence the name) allows them to snap very easily and without warning. The hardy railway volunteers working at the edge of the woodland are grateful that a particularly large and heavy specimen decided to fall north-south rather than east-west, otherwise a lot of their hard work would have been undone. It was also fortunate that it happened overnight or some of the railway volunteers would have been undone! Visitors can see this fallen menace lying behind the squat little building ARS2 when they take the Land Train tour. (You can stop your sniggering, ARS2 is in fact an Air Raid Shelter!)

Yes I know it's not strictly site news but as I've been put under intense pressure to reveal all (well two people have asked me), I've

decided to take this opportunity to go ahead and give to the world.... well Waltham Abbey anyway.... the secret recipe for The Royal Gunpowder Mills' very own delicacy: - Cousin Jane's Bread Pudding. Now Jane is a niece of mine who divulged the secret formula to me several years ago but calling it Niece Jane's bread pudding didn't sound right and as she's my kids' cousin, then Cousin Jane's Bread Pudding it is.

There is some evidence to suggest that the recipe originally came from China through the trading routes of the Middle East to Europe, eventually being discovered in this country by the learned Franciscan friar Roger Bacon. He, aware of the dangers of letting this be public knowledge, encrypted the secret formula into code. He also did this with another potent mixture which I can't quite put a name to, but there again I don't suppose it came to anything.

This is serious stodge. It has been meted out to various unsuspecting volunteers and members of staff, particularly the more lively ones, it has been known to keep them rooted to the spot for hours. Rumour has it that Titanic suffered terminal damage after striking a lump of this stuff in the North Atlantic. Absolute nonsense of course – it doesn't float!

Cousin Jane's Bread Pudding

Ingredients

- 8ozs white (preferably stale) bread. (Equates to approx. 10 slices of a thick-sliced loaf with crusts removed)
- 2ozs unsalted butter (melted)
- 3ozs soft brown sugar
- 1 large egg (lightly beaten)
- 10 fl ozs semi-skimmed milk
- 4-6ozs dried fruit (sultanas, raisins etc)
- 3-6 teaspoons mixed spice
- grated peel of ½ orange (or 1 lemon)

Method

Remove the crusts and break the bread into small pieces and place in a large mixing bowl. Add the milk ensuring all the bread is soaked and leave for at least $\frac{1}{2}$ an hour.

Beat the mixture with a fork until it is smooth and free from lumps.

Add the beaten egg, melted butter, mixed spice and most of the sugar, retaining some for sprinkling over the top of the pudding, and mix well.

Add the fruit and the orange (or lemon) peel and again mix well.

Pour the mixture into a well-buttered baking dish and sprinkle the remaining sugar over the top.

Bake in the centre of the oven at gas mk3 for $1\frac{1}{4}$ hours.

Tips

Leaving the bread to soak for longer than $\frac{1}{2}$ hour improves the texture, especially if the bread is still relatively fresh, 2-3 hours is good.

The amounts quoted for fruit, sugar and mixed spice are not critical. Experiment with amounts to suit your taste buds. I've used 8 teaspoons of mixed spice before now – it certainly makes the tongue tingle!

When it comes to cooking I usually put the pudding dish on the floor of the oven while roasting a joint. (No... roasting a joint!) It can then take up to 3 hours to cook, but the reduced temperature allows the pudding to slowly set. The result...a thick slab of slimy, stodgy pudding with none of those nasty hard burnt bits round the edges or on top!

Can be served hot or cold with cream, ice cream or crème fraiche but thick gloopy custard is the traditional accompaniment and is hard to beat.

Warning

Do not attempt to get up from the dining table for at least an hour after consuming. You'll find it impossible anyway, let the cowards who chose the fruit salad do the washing up.

Find the link Answers

1	Orange	2	Blue	3	Yellow
4	Green	5	Fly	6	Pike
7	Hippo(drome)	8	Fan	9	Toll
10	Nap	11	Rake	12	Knot
13	Pot	14	Crib	15	Ginger
16	Carpet	17	Punt	18	List
19	Magpie	20	Jam	21	Hide
22	Fluke	23	Fence	24	Rocket

Powder Boat 2004



Restored Boat in Green Hut (L185)

