

Autumn 2019

TOUCHPAPER

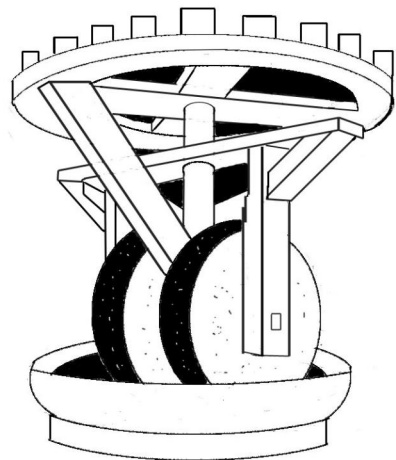
The Newsletter of the Royal Gunpowder Mills Friends Association
Registered Charity No. 1115237

The Last of the Powder Men! Part Two

**HERITAGE - WATER Chelmer and Blackwater
Navigation - A Survivor**

**HERITAGE - WATER The Inland Waterways
Association**

Julie's Nature Column



Autumn 2019

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Deadline for the next issue is 22nd November 2019

Chairman's Chat

Looking out of the window autumn is definitely with us. Long gone the lazy hot days of summer which were forecast. Funny, I don't remember them. Similarly the Mills had a mixed time with attendance down on previous years. Unfortunately the 2'-6" railway suffered a landslip in the early part of the summer and has been unavailable to visitors. I understand it is now operational. However John's little railway has performed well and now has more locos. Rocket Wednesdays have also gone well with only one being rained off.

The Mills building along Queens Mead have at last been reroofed and they look good. It is just a pity they were not done years ago.

Two years ago we had a film company on site using several buildings including the Spinks gallery. The film entitled '*The Current War*' has just been released. It is difficult to recognise the Spinks after all the temporary alterations they carried out.

Your committee has also had a mixed year with several members out of action for various reasons. Sadly your previous Chairman, John Wright, has had to resign from the committee as both he and his wife Ann have been in poor health with numerous visits to hospital. They are trying to sell their Cheshunt home to move to a retirement village at Chipping Norton close to one of their sons.

The future of the site is again in some disarray since the Foundation is committed to leasing a large part of the site to PGL for a children's activity centre rather than consider any other option. A decision on the future of the site and the Mills has to be settled by Christmas. We live in hope.

Dave Sims

Editorial

This issue has the second and final part of the gunpowder story and two articles on canals and waterways, the latter inspired by the Inland Waterways Association Festival of Water at Waltham Abbey over the August Bank Holiday weekend.

Julie's Nature Column completes the issue.

Once more I have material which will be held over for a future issue, which I am always happy to have but I would like some small articles or letters to break up the large articles. Touchpaper is supposed to be a newsletter.

Dave mentioned in his Chairman's Chat that the future of the site is in doubt; we had hoped to have an update on this but at the moment there is nothing that can be released. Hopefully more news may be available in the Winter issue, however as we try to get that out in early December so that it can be distributed before the Christmas post rush details may still not be decided. Watch this space.

Brian Clements

The Last of the Powder Men! Part Two

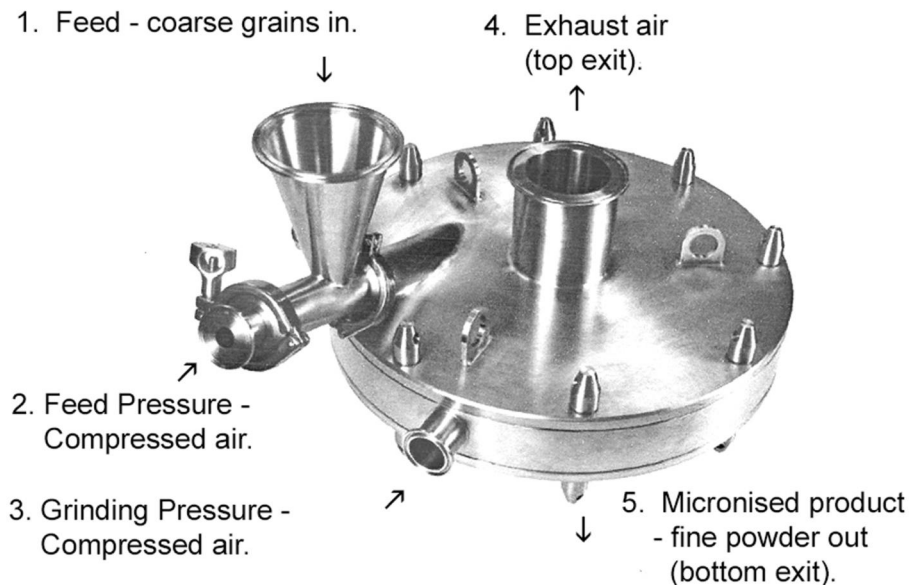
The Main Steps in the Preparation of the Experimental Gunpowders.

There were many steps in the manufacture of the gunpowder samples. An outline of the path I selected, from some experimental 'initial trials', is as follows;

1. INGREDIENTS - Charcoal, Sulphur and Potassium Nitrate.
2. PREMILLING and SIEVING - crunch up each ingredient separately and sieve to size.
3. MICRONISING - mill each ingredient separately using the microniser.
4. PREBLENDING - weigh and mix a batch of the three dry ingredients in a rotating stainless steel blender (up to 4 kg)
5. WATER ADDITION - transfer a small batch of the dry micronised mix to a small brass rotating blender. Add water over a period of time.
6. HYDRAULIC PRESS - press the damp powder into 'gunpowder biscuits'.
7. OVEN DRYING - dry the damp consolidated gunpowder biscuits in the oven.
8. HYDRAULIC PRESS - break the hard dry biscuits between matched toothed brass platens to produce gunpowder grains.
9. POLISHING - polish off the rough edges of the grains in a rotating blender to give a smoother, easy flowing, material.
10. SIEVING - sieve the gunpowder grains to the required specification.

Experimental Process and Plant Notes: The Nitty-Gritty.

The aim of the work, using our experimental plant items and processing method, was to produce gunpowder samples for quality evaluation.



Microniser

Fine Milling Using the Microniser - Selecting the Method:

The US and the Norwegian micronising plants produced gunpowder on a fairly large production scale. Our requirement at Waltham Abbey was far less and pilot plant quantities fitted the bill. I did some early tests on the microniser and milled the three ingredients individually to see what, in general, would happen. I was most interested in checking the static electricity generated around the tall dust collection bag - as we didn't want a dust explosion!

Micronising the charcoal gave some crackling noises and a similar level of noise was experienced with the potassium nitrate. The sulphur was the last to be tried. I did expect more static noise, compared with the other ingredients, and I certainly got it - the static crackling was bordering on the 'horrendous'! The good news was that there was no dust explosion, proving that our antistatic measures worked well.

It was pretty clear that if I mixed the three ingredients together to produce a 'pre-gunpowder mix', the static level should drop, as the conducting charcoal would help dissipate the charge. Adding water to the mill, as in the US and Norwegian plants, would also help remove static. However, with our small microniser, the addition of another inlet port to feed water, or steam, posed problems. The basic microniser design would be altered, with unknown consequences, and it would also be difficult to meter a water feed against very high pressure compressed air. There were far too many complications - and there was no guarantee that it would work. Another possibility was to dampen the premix with water and feed this into the mill. My previous experience of micronisers showed that damp feeds often led to 'bridging' in the feed hopper, effectively stopping the feed altogether. Small micronisers have narrow bore inlet ports that can block very easily. For expediency, I decided to micronise the ingredients separately and later mix them together with water to form a damp powder. The mixing task was carried out using a cone blender. So, for our requirements, this route of gunpowder manufacture was the preferred choice.

Microniser Control - Producing the Required Particle Size:

A range of particle sizes from the microniser can be achieved by varying the power to the mill. This was quite simply done by adjusting the compressed air pressure to the microniser grinding chamber. In this way a number of samples, with a broad range of ingredient particle sizes, for the experimental work, were achieved.

The gunpowders made from these materials had correspondingly different burn rates. The burn rate was measured using a test known as the 'Lead Fuse Burn Time'. This was carried out at the Royal Ordnance Factory at Chorley. By plotting the microniser 'Compressed Air Pressure' versus 'Burn Rate', we obtained a graph and hence we were able to produce 'tailor made' gunpowders.

Producing the Gunpowder grains:

Hydraulic Pressing: As previously mentioned, weighed amounts of the damp powder were pressed between brass platens in the hydraulic press. In this way flat, biscuit sized, cakes of consolidated gunpowder were made. These were then dried to produce 'hard biscuits'.

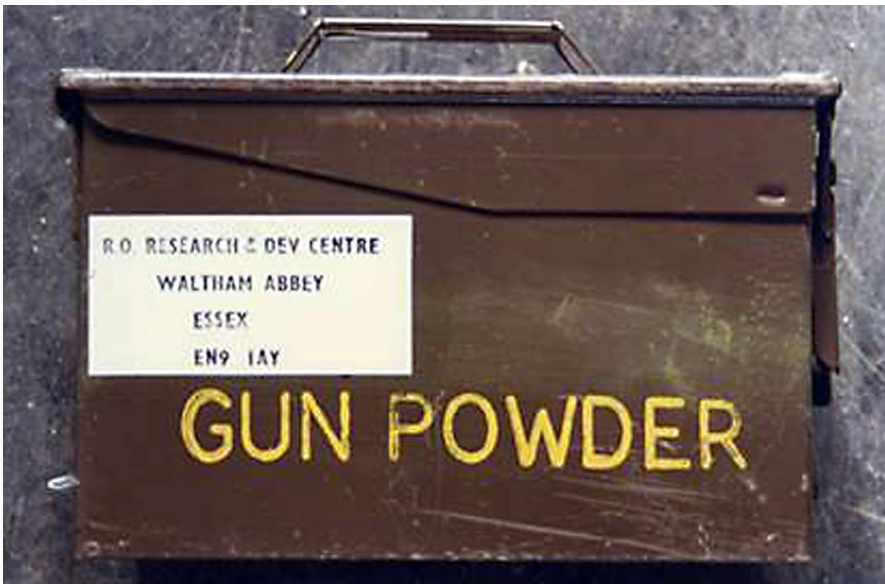
It was interesting to note that it took a higher pressure to consolidate the micronised gunpowder, compared with that from the traditional edge runner mill. The reason was simply because the edge runner mill produced a wider range of particle sizes, whereas the microniser had a built-in classification effect, similar to a cyclone separator, and gave a more uniform particle size. The traditional gunpowder packed down more easily, because the finest particles filled the voids between the larger particles (known as close packing) so, for a given density, the micronised gunpowder needed rather more force to compress it.

Granulation of the Dried Gunpowder Biscuits:

Chris and I visited ROF Chorley, where a lot of redundant gunpowder plant remained after its production ceased there. We were invited to take whatever we wanted and we selected an old gunpowder 'roller crushing' mill, made of phosphor bronze. Chunks of gunpowder cake were dropped between grooved rollers, where it was 'pinched' and shattered. The milled fragments fell below.

The rollers had 'teethed grooves' along their length that had been machined down to a smooth finish - very similar to car gear teeth -

but, of course, they extended along the length of the two foot rollers. Unfortunately, as the roller crushers were intended for production scale work, they were far too big for our needs. To overcome this problem, I got our machine shop to copy the profile of the rollers' teeth, and then manufacture two flat 'matching platens' to fit into our hydraulic press. These brass 'flattened platens', with a similar profile to the old gunpowder crushing roller mill, successfully produced a gunpowder grain size suitable for our needs.



The Finished Product

The Final Results.

Our micronised gunpowder samples were tested by the quality department at Chorley and they proved to be highly successful. They were tested against an MOD gunpowder specification that included the all important Lead Fuse Burn Time test. The Burn Time of our micronised gunpowder fell exactly at the centre of the permitted burn time limits of the specification - exactly what we had aimed for.

At a follow up meeting at Fort Halsted, we were asked if we could 'possibly' make a gunpowder with a specific 'burn time', that suited their own particular requirement. So we returned to Waltham Abbey to produce this 'tailor made' gunpowder. Once again, the gunpowder sample was sent off for Burn Time test evaluation and the result was spot on target.

Thus it was clearly proved that gunpowder, milled using a Microniser, easily matched that produced by the old traditional Edge Runner mill. Also, by adjustment of the micronising pressure, the burn time characteristics required could be accurately achieved.

So finally, it can be said that the last gunpowder produced at Waltham Abbey was in the early 1980's. This signalled the end of a long line of gunpowder makers, the 'Black Powder men', whose reign extended way back to the 1600's - we were the last! I cast my mind back to one very dark winter's morning, when a particularly heavy fog fell across the Lea Valley. I stood in the murky mist near the gunpowder building and I saw some hazy apparition of two medieval monks, draped in cloaks and hoods, slowly approaching through the woods. I thought, "Is this a ghostly visitation of the souls of the past masters of the evil blackpowder - eager to improve their wicked art?" Well I was wrong, it was just two scientists wearing duffle coats with their hoods up! Some things never change!

Mike Evans

HERITAGE - WATER

Chelmer and Blackwater Navigation - A Survivor

The story of the largely unknown but surviving Chelmer and Blackwater Navigation, ably engineered by Richard Coates over 1794-1796, is an interesting and heartening one for heritage, boding well from the future environmental, historical and leisure point of view.

The ERDE sailing Club had links with the Blackwater (Touchpaper Spring 2019 letter from Bryan Howard and Tony Barratt) at Maldon and the opportunity is taken to outline the history of the Chelmer Navigation, linking Chelmsford with the Blackwater at Heybridge.

This also marks the return after some years to Waltham Abbey of the Inland Waterways Association International Festival of Water annual tour of UK water centres (See below for description of the Association and the Waterway Recovery Group).

Terminology - A canal is where completely new ground is cut for the route. A navigation is where an existing watercourse is improved, repaired etc. to create a navigable waterway, normally for commercial reasons.

Coal was fundamental to the industrialist and the domestic fuel consumer and its price and availability was a constant preoccupation in the 18th century.

Chelmsford was in a very bad position for coal supply and the price in Chelmsford was very high, reflecting port tolls at Maldon, the point of import, and very high transport costs involved on the journey from Maldon to Chelmsford with transshipment to wagons and very bad conditions on the road from Maldon, almost impassable in winter, particularly Danbury Hill, when coal was needed most.

When the Duke of Bridgewater opened his canal from his mines at Worsley to Manchester in 1761 within a year the price of coal in Manchester had halved. When this became known a great many people, industrial and domestic, sat up abruptly and took a great deal of interest in the possibility of emulating the Duke with a canal, not least the people of Chelmsford.

The River Chelmer ran from Chelmsford to flow into the Blackwater Estuary and then the open sea.

In 1792 a scheme was prepared utilizing the Chelmer for a Navigation which would allow coal to be imported at Heybridge near Colliers Reach on the Blackwater, mainly from the north east, at what became the Heybridge Basin, transhipped into barges and taken up to Chelmsford.

In 1793 an Act was passed authorizing 150 investors in what was grandly named 'The Company of Proprietors of the Chelmer and Blackwater Navigation'. Roughly half were local and the other half mainly from Leicestershire – why Leicestershire? – a successful canal had been established there and doubtless they were interested in repeating the success.

'An Act for Making and Maintaining a Navigable Communication between the Town of Chelmsford and a Place called Collier's Reach, in or near the River River Blackwater, in the said County'

By lucky chance the Ipswich and Stowmarket Navigation in the East Anglia area had just been completed and its Resident Engineer Richard Coates moved smoothly into the same post at Chelmsford, with canal builder par excellence John Rennie as Chief Engineer of the project. In an astute move Coates brought experienced navvies with him from Suffolk and appointed his brother George, a stone mason, as Master Mason.

Inevitably there were problems – flooding etc., but overall Coates, overseen by Rennie, and his Suffolk stalwarts did a good job and the work of straightening, widening and dredging the river together with associated works such as locks progressed satisfactorily.

After an initial trial in 1796 the Navigation was opened in 1797 to the accompaniment of jubilation and celebration. It ran for 13.75 miles with twelve locks from a sea lock at Heybridge Basin where cargoes were transferred from the sea going vessels to horse drawn 60ft.x 16ft. 25 ton barges for the journey to the head of navigation at the created Springfield Basin Chelmsford where there were private wharves and a public wharf. Four wharves along the Navigation served local villages.

The Company of Proprietors
of the
Chelmer & Blackwater Navigation
Limited

This is to certify that

John Edward Marriage
of Budds Farmhouse,
Highwood,
Chelmsford,
Essex CM1 3RA

On the ^{two}twentyfifth day of July 1991 was Registered as the Holder of
New Ordinary Shares of £100 each, fully paid,
in The Company of Proprietors of the Chelmer & Blackwater Navigation
Limited, the Rotational Numbers registered in the Proprietor's Name now being

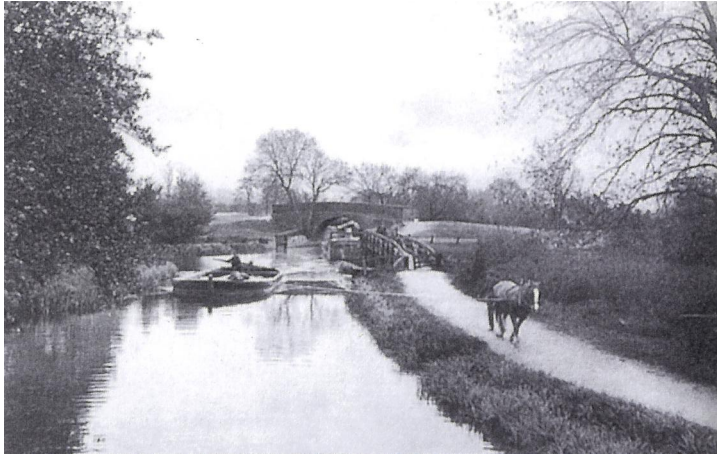
Old Shares	146
New Shares	514, 515

The Registration has been made in a Register kept at the Company's Office,
in accordance with the Act of Parliament of July 1793.
This certificate confirms that entry.

W.J.Spall Secretary

A copy of a proprietor's share certificate.

Navigation share certificate



Barge with patiently plodding horse on well maintained footpath 1900

This could have been any time between 1797 and cessation of horse haulage in the 1950's and the leafy scene has remained substantially unchanged along the entire navigation throughout it's life.

With two men per barge the Navigation journey occupied a 12 hour day.

In geographical separation from the main waterway system, the Navigation must have seemed a far and isolated country to the great canal builders to the north.

The jubilation was justified. As with Manchester, the price of coal in Chelmsford and cost of carriage of other goods halved within the year.

The Chelmer was part of the GHQ Stop Line in 1940 when invasion seemed imminent – sounds surreal now.

As the successful Engineer for the Navigation, Coates was in pole position to see its prospects and in a nifty piece of footwork decided

to leave engineering and become a businessman, quickly buying waterside land at Springfield Basin, building wharfage and storage and founding a carrying company to bring primarily bulk product to Chelmsford on the Navigation and distribute in the area, with flour and other product moving downstream from Chelmsford and mills further down the Navigation and corn for shipment out to the London market. Clearly the bulk import would be coal, but Coates also saw the possibilities for another bulk product – timber from the Baltic. Apart from this the company carried chalk to improve soil, bricks, slate and general cargo.



Richard Coates plaque

The Navigation was successful and Coates and a partner, the 'adventurers' as they were quaintly called, prospered. Coates became a generous benefactor to Chelmsford, making substantial donations to local charities and paying for work on churches, schools etc.

He appears to have been an astute staff picker and his yard foreman for the Navigation, George Cliff, was extremely competent, ultimately achieving the very rare move from staff to owner on Coates death in 1822.



**What the well dressed foreman looked like in the
18th Century
George Cliff at the Springfield quayside**

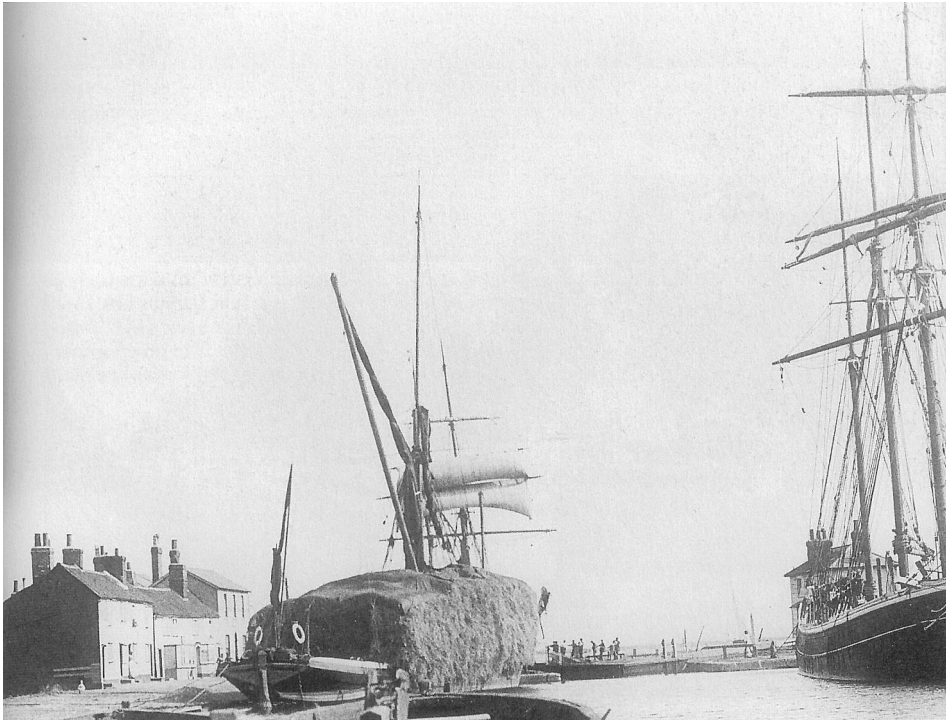
One has the sense that the Board had a very high opinion of Cliff, to justify this painting. Also it is interesting to see that the opportunity was taken to record in the background the two bulk staple materials carried on the Navigation – coal and timber, neatly stacked, with the vital patient transport horse standing at its cart in the background.

Was the correspondence in Cliff's hand to denote managerial status? and are the trackways he is standing between an illustration of a crude wagon way?



Another leafy scene 1929 Towpath beginning to narrow

The remaining land at the Basin was soon occupied by mills, sawmills, lime kilns and an iron works. Flour millers were among the first to take up James Watt's rotary movement steam engine and the Chelmsford millers followed, with the advantage of cheap coal from the Navigation and cheaper carriage of grain, enabling increased production at more economic rates and a substantial increase in shipment of flour to London.



Heybridge Basin 1900

Barge awaiting loading – bottom of picture. The heavily laden brig is carrying hay – a 'Stackie'

The firm later passed to a nephew James Brown together with his son and was renamed Brown & Son Ltd. Coal Merchants and English and Foreign Timber Merchants & Importers. The company later imported solely timber on the Chelmer and developed into a large builders merchants.

Later in the 19th century Brown & Son gradually expanded its activity until it occupied an impressive range of timber sheds along the wharf, replacing the previous buildings.



Barge approaching Brown Baltic softwood storage sheds in the Springfield Basin 1960

As competition from the railways cut into canal trade from around 1840, in common with other waterways the Navigation, after notable success, declined. However it survived on the timber trade and a trade from the early 20th century in willow for cricket bats (latterly to Pakistan) from maturing plantations which a far seeing Director had ordered to be planted in the 1880's.

Ironically whilst the Chelmer carried on doing its job, forgotten by everybody, the great canals of the Midlands and North, once the mighty transport sinews of the Industrial Revolution, gradually slid into dereliction.

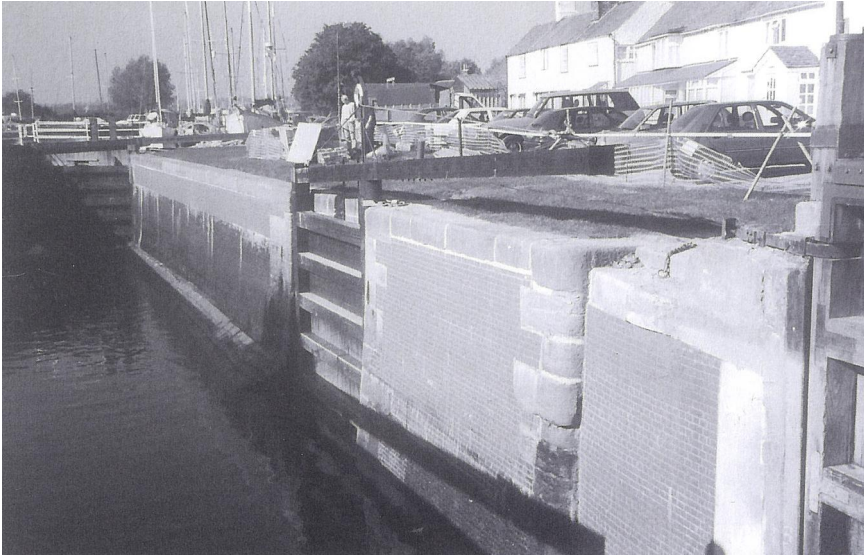
By accident or design the Navigation escaped the late 1940's nationalization of key industries.

Horse drawn haulage ceased in the 1950's and the long serving wooden barges were replaced by steel barges carrying up to 40 tons powered by huge twin diesel outboards, the wake making a fine sight as they powered up the Navigation, together with an impressive noise, which was not to everybody's liking.



**Motor power along the
Navigation 1965**

Baltic softwood import with sea going vessels coming into the Heybridge Basin continued, only ceasing at a surprisingly late date - 1972



Heybridge Basin sea lock Lengthened to take larger vessels 1960



Heybridge Basin 1965 Timber being unloaded from coaster into barge

The Proprietors struggled on, now encouraging leisure use as well as continuing willow selling and additionally sales of water which was abstracted by the East Anglia water authority.

In 2002 it proved impossible to continue and they had to put the company into administration, and that could have been that, with the Chelmer sliding into overgrown oblivion.

There was however an encouraging sign when the Chelmer Valley including the Navigation was declared a Linear Conservation Area in 1990. Reflecting this a Conservation Area Partnership Scheme comprising the Council and the National Heritage Lottery Fund was formed and very fortunately received a substantial grant for restoration work.

This meant that apart from the Springfield Basin the Navigation was in fairly good fettle when in 2005 a white knight in the shape of the Inland Waterways Association arrived. The Navigation flows through still largely unspoilt countryside with some very pleasant stretches and the Association, perceiving the high environmental, amenity and industrial heritage vale of the route, decided they couldn't let it go, entering into an agreement with the Proprietors to take over the running of the Navigation, via a subsidiary company – Essex Waterways Ltd., together with income and expenditure.

After two hundred and twenty six years from the first meeting full of hope at the Black Boy Hotel on 15 July 1793 the Navigation still survives - the current Proprietors shrewdly retain the freehold - not a bad deal.

Maybe if the original Proprietors and Coates had still been around they would be pleased to see that in the 21st.century their Navigation still serves Chelmsford, albeit in a function very different from the past.

The support of the Suffolk navvies which Coates had brought with him continued after completion. A number liked what they saw and decided to settle in the Heybridge area, doubtless influenced by the employment opportunities offered by the carrying company.

In a pleasing note some of their descendents, with Suffolk surnames, still live in the area.

The IWA / Essex Waterways with volunteer labour, local and from outside sources, mainly one of the groups under the IWA umbrella, the Waterway Recovery Group (WRG), have been carrying out a program of restoration including ultimately clearing the whole length of the vital towpath (See next article).

There is an air of activity and care around the Navigation now. Some of the original proprietors surnames still appear in the Chelmsford area and there are signs that it is gradually dawning on Chelmsford what a great working waterway heritage and environmental amenity lies on its doorstep.

Les Tucker

HERITAGE - WATER

The Inland Waterways Association

The Inland Waterways Association (IWA) is a membership charity and most of the work it does is led by volunteers.

The IWA has two main purposes – one the protection of our waterways and the other their restoration, each including a wide spectrum of activities.

Protection

This ranges from remedying wear and tear on bridges, locks etc., towpath deterioration, damage from vegetation through lack of dredging, planning infringements and so on.

Restoration

The volunteer movement restoring the waterways is an outstanding example of what can be done if the will is there. There are over 35 societies dedicated to restoring a waterway. The IWA represents their concerns and conveys them to the relevant Authority, e.g. the Canal and River Trust. It assists societies with proposals, advice, funding, technical support, campaigns. A recent example is limiting the damaging effect of the HS2 railway on the canal system.

An important feature is its position as the parent organization for the Waterway Recovery Group which does important restoration work around the system on the basis of annual residential camps, which attract a wide range of volunteers (See below).

Waterway Recovery Group

The Waterway Recovery Group is a subsidiary organization of the IWA.

It restores canals throughout the UK on a voluntary basis, in conjunction with local support groups, via week long residential camps staying in local accommodation and via week end digs.



The Group has its own construction plant and can tackle most restoration jobs. Volunteers cover a wide spectrum, from Duke of Edinburgh Award people, general volunteers, skilled tradesmen such as brick layers, excavator drivers etc. to professional engineers.

Camp leaders are trained on special courses to ensure proper running of the camps.

A recent development is the family camp for those with young children who still want to volunteer and take the opportunity to introduce the children.

The camps planned for 2019 cover the Midlands, Swansea, Sussex, the Cotswolds and nearer to home the program includes the Chelmer Navigation. On the Chelmer work will be more on the maintenance side rather than heavy construction – repairing landing stages, refurbishing footbridges, building canoe storage areas, reinforcing canal banks etc., so the emphasis will be on the application and acquisition of carpentry skills

Accommodation will be on the popular restored sailing barge moored at the Heybridge Basin.



By far the most important part of the leaders' responsibilities is to ensure a copious supply of high quality British tea to the volunteers, and extensive tea brewing instructions are a vital part of the leaders training course. Any breakdown in tea supply such as a defective Burco water boiler is treated with the utmost seriousness and emergency action to rectify it is at a much higher level than for minor mishaps such as a broken leg.

Any mistaken identification of a particular brew could lead to a potentially dangerous situation and to avoid this leaders are provided with a British tea identification chart based on tea colour. This of course tends to conflict with the instruction Builder quality. Trained leaders are expected to deal with the situation as it arises.

Such is the importance of tea to volunteers that for their information and reassurance a condensed version of the brewing instructions is published in Navvies, the journal of the WRG, together with the tea identification table.

Toolbox Talk

Brewing the Tea

Brewing the tea on a WRG camp is the most important and potentially one of the most hazardous activities on a canal camp. The task should only be delegated to a suitably trained and competent person. It is an ideal first test for DoEers! (Keeping the leader lubricated ensures a good report!

Heating the water

On all canal camps there lurks a silver beast generically known as the **Burco**

In the accommodation this will be an electrically powered device, but on site it will be powered by gas, which can be very temperamental to get it and keep alight in windy conditions.

Caution the Burco can become very hot during heating and can spout scalding water if the tap is opened without due care.

Selecting the tea bags

Only the finest quality Builder tea bags should be chosen, none of this cheap supermarket own brand, fancy specialist tea like Earl Grey, or herbal stuff (don't even mention Decaf!).

Buy in bulk because you will need a lot.

Making the tea

Warm the pot, swirl a small amount of boiling water around the pot and discard. Being very careful where the hot water is thrown, not over any other volunteers or on a surface that will become slippery when wet.

Take a decent size handful (minimum of 8 bags) when using the camp pot, but not too many that you can't get them through the top easily.

Fill the teapot with boiling water from the Burco, a second person may be needed and oven gloves are useful to hold the metal handles.

Allow the tea to brew.



Brewing the tea

Allow the pot to stand for a decent length of time. To keep the pot and contents hot, place the filled pot on top of the Burco, having made sure that the lid is in place and the lid handle does not cause the pot to be unstable. For optimum flavor use a timer.

If you can stand a teaspoon up in the brew it is ready.

Serving the tea

Select a cup from the brew kit and empty out any mud, twigs or other foreign matter. Give the cup a quick swirl with water.

Pour the tea from the pot taking care not to burn yourself on the hot handles.

Perform the ritual Tea Pot dance.

Enjoy you deserve it.



Condensed instructions for tea brewing

Toolbox Talk

Brewing the Tea (contd)

And finally...

Check against the colour chart;



H.M. British Tea Colour Chart

OFFICIAL COLOURS



Tea Identification chart

If any Members are further interested in the activities of the WRG information is available on the Group website - www.wrg.org.uk

Les Tucker

Julie's Nature Column

It's been a busy few months trying to keep up with the wildlife on site and remembering all the things that I've seen. In my last blog I mentioned quite a few birds including Barn owls and Red kites, so here's an update on them. Our Barn owl box was checked for eggs and two chicks were discovered and one egg left to hatch.

Our expert bird ringer said he would come back in 3-4 weeks to ring them when they are big enough. On his return he removed 3 chicks from the box and it turns out that the third one was laid quite late so the chick was tiny compared to its siblings and too small to ring. You can see the difference in the photo; the small chick could be a couple of weeks behind the others.



The Red Kite nest was checked and two well grown chicks were sitting in it. They were carefully lowered down in a holdall on a rope by an expert tree climber.

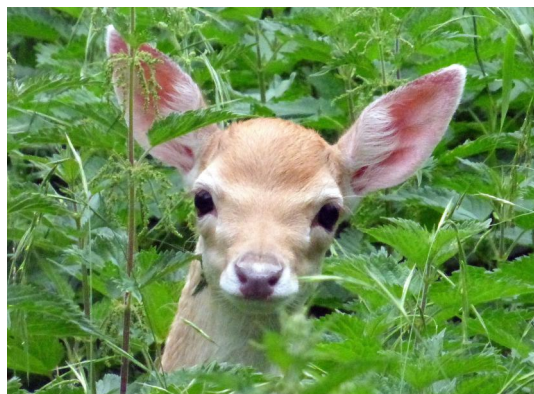
The chicks were tagged and ringed and they looked very healthy. This was a first for the Mills having Kites tagged. Once they fledged they stayed around the nest area for a few weeks and every now and then we hear them calling. One of the chicks was found to have crash landed and seemed to have got its feathers a bit wet and muddy. A volunteer stepped in and brought the bird to us (with great care taken) and we let it dry off for a couple of hours before releasing it. It took to the air without any problems and fingers crossed that it continues to be ok. Here's one of the chicks just about to be ringed/tagged.



Otters have still been visiting regularly and I finally got a daytime photo, it's not the best, but it's the only one I have.



The deer have still been quiet, it feels like they're hiding from us, but there's plenty of evidence to show that they are quite active when we've gone home. Here's a photo of a young fawn about 6 or 7 weeks old. It popped up its head in the long vegetation and stared at me for quite a while. I stood there like a statue so as not to frighten it and eventually it was gone in two or three bounds, vanishing back into the undergrowth.



I'm happy to report that our two cygnets have grown very big and are doing well. It's amazing how fast they grow. Herons have regularly visited the canals on Hoppit Road, standing still hoping that they haven't been seen by us or the fish! What expert fishers they are, even through the duckweed.



We participated in the Big Butterfly count this year and counted 97 butterflies in 15 minutes with two people, pretty good going I thought. There are dragonflies everywhere and a whole lot of other stuff going on in abundance. Yesterday I saw a pheasant with some tiny little chicks, typical of me that my camera wasn't at hand, can't tell you how annoying that is! I'll keep my eyes open for more photo opportunities and wildlife stories to share with you next time.

Julie Matthews

Mills nature conservationist