



Patrons - Lord Faulkner of Worcester - Judy, Lady McAlpine - Dame Margaret Weston, DBE - Brian Greenwood

"BESTT Keeps 'Train..in' During Covid-19 Lockdown!"

Chairman's Chat



It is seven months since our AGM in York and two months later the world had come to a STOP.

Lockdown came swiftly and our training partners were forced to close down and our second year Mechanical Overhaul trainees had to return to their homes. But with fortitude and skill ,

Henry Cleary (Project Director), Martin Wadeson (Training Manager), Peter Winebloom (Training Support Manager), John Reddyhoff (Trustee) devised an [online training programme \(viewed here\)](#)

By the end of July the lockdown was easing and some of our training partners started to open their workshops such as the North Norfolk Railway, Severn Valley Railway, Kent & East Sussex Railway and some of our trainees went back to continue their practical training . The remaining trainees have been offered and accepted places at the Heritage Skills Academy in Bicester, The Steam Workshop near Dewsbury, Alex Sharphouse and Windermere Jetty Museum. We are very grateful to these organisations.

With completion of the NLHF project by the end of 2020, BESTT needs to offer more short courses and we welcome views on what they should cover. Contact : enquiries@bestt.org.uk

Gordon Newton (Chairman)

Please Note - Due to the Covid19 restrictions. Notice will be given to members as soon as possible regarding the forthcoming conference and AGM



Keeping things Going



Like so many others, the BESTT team has had to use all our reserves of ingenuity to try to keep things going over the last few months. That we are still running is in itself an achievement - other NLHF supported training schemes have had to shut- often because all the staff were on furlough.

With lockdown our trainees had to leave placements as heritage sector workshops closed but quite quickly Martin Wadeson (supported by Peter Winebloom, John Reddyhoff and Lawrence Donaldson) developed successful Zoom based training with each group of trainees getting at least one weekly teaching session, together with tests and exercises and off the shelf, self taught training eg on working at heights.

The trainees themselves deserve great credit for keeping going but the pandemic has affected them. Sadly one of our most talented has had to leave the scheme because his household includes a shielding person and is in a lockdown area.

By July online needed a break and BESTT needed access to a workshop. Many heritage workshops remained closed to all but essential staff but again we had help again from North Staffs and Cheshire TEC at Klondyke Mill and from KESR. John Reddyhoff (KWVR) also briefed the BESTT Board on assessing how safe working might be achieved. Bigger railways may be more confident at this and smaller projects took a while to re-open, if at all. Conversely in Cumbria our shared trainee at Windermere Jetty was really helped by Alex Sharphouse getting back to work quickly and has enjoyed a wide range of projects as a result. We now have 7 trainees back in heritage placements, including 2 in the pioneering training partnership with Bicester Heritage (they are still getting some rail experience to supplement the classic cars).

Looking ahead there are some critical issues for BESTT. With the virus (and social distancing) around for some time to come we cannot rely on getting trainees into workshops as readily as before and jobs in workshops will be much rarer. But if steam is to survive it needs trained hands. We need to be able to provide more of the training experience ourselves and to focus more of our effort on volunteers - to make training an enjoyable and worthwhile option even if they don't work in the sector.

Henry Cleary



The past 7 to 8 months has been exceedingly difficult to carry out training due to the Covid virus.

This has also been difficult for the BESTT management and trainees, as they are on various placements across the country.



On the positive side we have managed to change the methods of training and support and provided some exceptionally good on-line classroom sessions (view the PDF document below) using the Zoom system and new Learning Management system (LMS) purchased by BESTT.

Due to the great support from John Reddyhoff, Lawrence Davidson and training support manager Peter Winebloom the training sessions have been well received and highly successful. We have carried out on-line training most weeks from the start of lockdown in March until the middle of August covering many different subjects.

On the 'on-line' training sessions lasting about 1 hour, the trainees were given good clear guidance of the subjects and a number of questions to be studied further. These were answered on line before a follow up zoom meeting and the next subject the following week. During the follow up meetings the trainees were questioned in depth about the subjects and each question was discussed further in good detail.

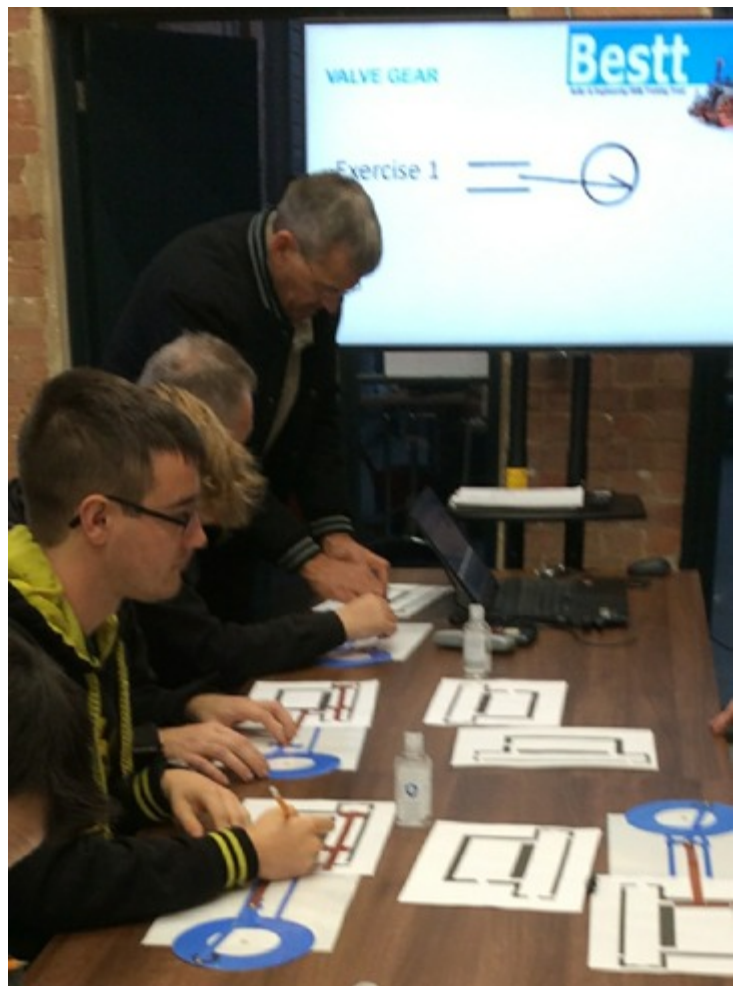
This process was not easy for the trainees as keeping their mind focused on each subject and motivated while being in lockdown was the most difficult part of the on line training. We believe the trainees gained a lot of the classroom knowledge required towards the syllabus even if they were unable to carry out practical training.

During the back end of August and beginning of September the trainees were able to either go back to their placements or take up short placements. They have been working hard on the practical side of the training since the railways have slowly opened up again.

We also managed to start a further three trainees from the middle of March but unfortunately just as the lockdown began, we had to carry out similar online training but aimed at basic engineering skills such as imperial measurements, hand tools plus many others. Again, at the end of lockdown we managed to find them a placement.

The whole experience has been very different from the masterclass usually planned by BESTT, but has given the trainees a good level of training. Now that the placements are back at work, we are now looking to extend the period of training and revisit the masterclasses we would normally offer, a big bonus to the trainees.

Martin Wadeson - Training Manager



Student of the year presented with toolbox



Martin Gathercole, the outstanding student of the year 2019 was presented at the AGM with a comprehensive engineer's toolbox donated to BESTT by Howard & Geoffrey Snowden.



The toolbox contained a wide selection of engineers hand tools. "A number of items we made during our apprenticeship training"- Howard said. These included clamps, vee blocks, angle gauges, callipers, punches etc. "Supervision and instruction in engineering techniques can make these hand tools ensuring that our hand and machining skills were well developed before we were allowed in the workshops". Said Howard. Such skills are very necessary today as they develop hand to eye coordination, knowledge of materials and understanding of manufacturing processes. Personal development is more rapidly gained and this is a great aid to career progression. The satisfaction of being an intuitive engineer is something worth achieving. As a result we never stop learning and also passing on our skills. This is something most necessary in today's world.

Life as an engineer is magical as we are the best. Something worth remembering for young engineers starting out today!

Howard Snowden

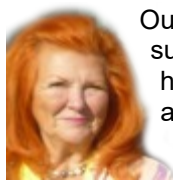
"An investment in knowledge always pays the best interest" (Benjamin Franklin)



Left to right - Howard Snowden, Martin Gathercole and Geoffrey Snowden

BESTT thanks Howard and Geoff for their initiative and generosity. They have another toolbox ready to present to the next student of the year. **Could this develop into a national scheme where we donate our tools to encourage new engineers?**

Skilful people needed!



Our Patron The Hon Lady McAlpine, a great supporter of steam heritage was invited to give her views regarding the current state of apprenticeships in the steam heritage sector.

I hear "of course we have lost the old skills" surprisingly often from clearly uninformed but otherwise intelligent people. The term "skill" is of course used in relation to the practising of any craft but the "lost" skills referred to are usually in the realm of engineering and keeping alive historic machinery.

The SKILLS are out there and thriving: what we need are the PEOPLE who feel they can earn a decent living by learning and using those skills. To judge by the bills I get for work on my 1927 Phantom 1 Rolls Royce, if you have the knowledge, you CAN make a decent living!



Presenting BESTT Certificates to 1st year Mechanical Overhaul students at the 2019/20 AGM in York. From left to right - The Hon. Lady McAlpine (Patron), Gordon Newton (BESTT Chairman), Tilman Shaw, Jennifer Hayton, Martyn Gathercole, Chay McLean, Dan Dickson, Ben Sharred

Photo (Martin Wadeson)

What we need now is common sense on the Government front. We need to turn most of the ridiculous red-brick "universities" back into Polytechnics: let young people with no interest in academia leave school at 15 and take up apprenticeships doing day-release courses at the "Poly" - or a short course at a college near their home. Or a BESTT - led course.

To suggest that kids are failures if they don't spend three years at "Uni" learning not to get up in the morning and amassing £9,000 or more debt before even having a chance to look for a job is totally insane.

Acquiring a skill gives a sense of confidence and self-worth as well as an income. I realise that I am stating the obvious but why is it not more obvious to Governments? I know this Government IS trying to create apprenticeships but they need to move faster to re-establish the old Polytechnics... most of which of course were stripped of their engineering equipment and technical labs in the race to make everyone acquire an invariably useless degree.

I have grandchildren whose "engineering" courses are computer based.. and while I see the need for these skills, no-one has yet been able to drive a computer, or pick up vast loads with one.. or travel vast distances in one.

We need people who understand how to join bits of metal together, make a piston or a new cylinder head, create a new boiler for an old steam engine. I will keep lobbying Government about the Technical Colleges; but we need more voices raised on the subject. Too many people think that "tinkering with old engines" is "just a hobby"; but our National Engineering Heritage is reliant on young people wanting to learn how to maintain it.

When I married Sir William, I was asked how I felt about switching from racing old cars to admiring old Railway and Traction Engines. My answer was simple: it is all "Beautiful Engineering" and we Brit's started it all!

The Hon Lady McAlpine

Fatal accident to driver and fireman because of an incorrectly fitted washout plug



The driver and fireman of BR Class 6 Pacific 72005 Clan MacGregor died following an incident on 16th February 1954 when a washout plug blew out in the smokebox.

The boiler had been washed out at Carlisle Kingmoor on the 15th February. The locomotive returned to service on the morning of the 16th and was then worked by various crews from Carlisle to Carstairs and Carstairs to Perth. The next working was from Perth back to Carstairs. One crew worked the

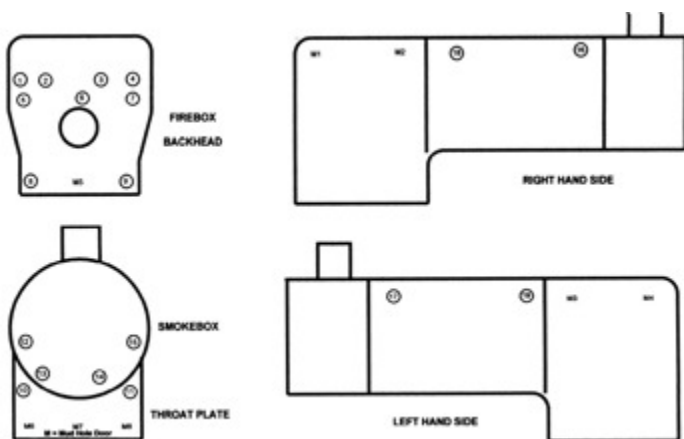
locomotive for a short distance to Friarton, on the outskirts of Perth, where they were relieved by the crew who were subsequently involved in the accident at Gleneagles, which is about 17 miles from Perth.

The person who removed and refitted the plugs in the smokebox during the washout at Kingmoor was not the regular boiler washer and had not been fully trained in that role. The boilermaster had carried out a visual inspection whilst the boiler was opened up for washout but this did not include any check that the washout plugs were correctly refitted.

Plan of washout plugs and mudhole doors - from HRA Guidance Note

Like other BR Standard locomotives, 72005 was fitted with self-cleaning screens in the smokebox and it is likely that these were refitted prior to the steam test after the washout so that it would have been difficult to see a leaking washout plug in the smokebox. The smokebox door had not been opened whilst the locomotive was being serviced at Perth prior to the accident.

After the accident, the locomotive stopped immediately outside the signalbox at Gleneagles and the signalman reported that the



footplate was enveloped in dense clouds of steam. The crew who had been relieved at Friarton were travelling passenger to Carstairs on the same train and got access to the locomotive shortly after the accident. They found that the pressure gauge was already showing 0psi and the gauge glasses were empty.

The injured crew were badly scalded and were taken to hospital in Perth, where the 61 year old driver died four days after the incident and the 24 year old firemen survived for another two days before dying.

The conclusion of the investigation was that the washout plug in the smokebox had never been properly tightened and had worked loose in service. The threads had not been coated in graphite but this would have not contributed to the loosening of the plug in service.

The person who failed to tighten the plug had not acted maliciously but the result of this action by a person who was not trained resulted in the deaths of two people.

This is a reminder of the criticality of work like this on boilers that can sometimes be taken for granted because it is carried out regularly. A simple lapse of memory can result in a loose plug.

Washout plug tightened immediately after fitting and independently checked



Fitted

Tightened

Independently Checked

Both the HRA Guidance Note and the BESTT training module on washout plugs identify the competence requirements for the work and emphasise that a washout plug is "out in the tray" or "in and tight"

John Reddyhoff

Source: Fatal Accident Inquiry into the deaths of a locomotive driver and fireman held on 17th May 1954.

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BESTT Training Courses



Interested in training?

Apply to join our 4 day Boiler Washout & Examination course.

Further details - enquiries@bestt.org.uk

Members of the Boiler Washout & Examination Course

Knowledge not passed on is knowledge wasted !

BESTT Trustee and director - achievements include; Chairman of the North Norfolk Railway 1973-2010, Heritage Railway Association - retired in 2014 also having chaired West Somerset Railway and Great Central Railway at various dates.

Founded FEDECRAIL in 1994 and WATTRAIN (World Alliance of Tourist Trams & Trains) in 2009 now President Emeritus.



When I first became involved in railway preservation, as it was then called, in 1968, there were still many around, mostly men, who had experienced many years working with steam - and, in particular, with steam locomotives. After all, British Railways had only ceased to operate regular steam trains the year before. BR, had, for understandable reasons, decided to time their closure of "unremunerative" railway lines with this change of motive power. This had the effect of combining our sense of nostalgia with anger at the wholesale closure of our railway network fuelling the emergence of a vibrant volunteer led heritage railway sector.

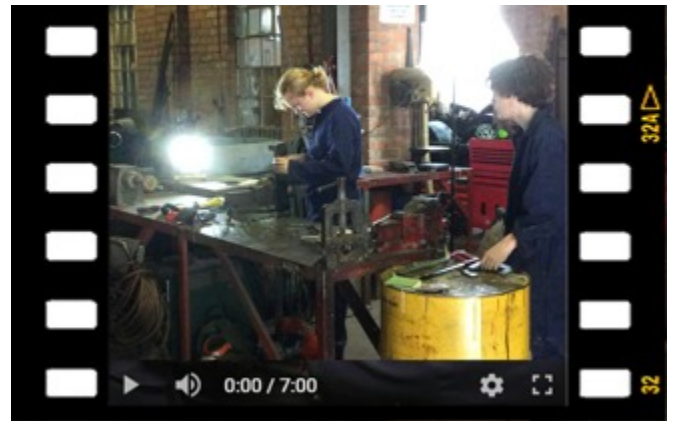
You have to remember that when we reopened branch lines, there were few, if any, engineering facilities or covered accommodation. The plus was that there were a number of greybeards who understood the basis of steam engineering learnt very often from a lifetime's work experience which they had been prepared to share with the new and young team of volunteers. We have always been aware of the fact that this pool of knowledge would not last forever but its existence enabled us to build up our own skills and facilities. When we first reopened the North Norfolk Railway we operated trains only on a few days each year; now we run on over 240 days each year, endemics allowing.

I believe that there are now several hundred engineering staff on the payrolls of heritage lines in the UK. In view of the current pandemic, I regard this as probably being the sector's saving grace. When I look back over the 51 years, I well remember the hard to mouth situations we lived through and I am glad that the current generation of operators do not have to face those challenges. There are, of course, new ones but now I think that there is a general acceptance by the British public that "like mother and apple pie, steam railways are a good thing". This was not always the case : I remember well the formal opening of an extension - I think to the Nene Valley - by Prince Charles. As he cut the ribbon, Michael Harris, then the editor of Ian Allan's Railway World, turned to me and said: "You realise, David, that this means that we are now part of the establishment". He was not far wrong but I wonder how many realise how beneficial that has been.

At the end of the day, the common denominator is the need to be able to depend on a fleet of reliable locomotives to haul our trains, which is where you come in AND is the reason why we are so passionate about providing the skills you will need to keep us going in the future!

David Morgan

Trustee



[BESTT visited Klondyke Mills, Derbyshire to film the trainees operating machine tools.](#)

The link above will take you to the YouTube film.

Filmed & Edited by Mike Oakley (miyk-projects-Creative Media & iT)

BESTT Presentations

To view the full documents. Please download the following links



Dr Paul Shelton - "Is there a place for digitalisation in heritage engineering?" Originally presented at AGM



Martin Wadeson - "Presentation to BESTT online shutdown" Originally presented to the board.



Article in The Old Glory Magazine

The Boiler and Engineering Skills Training Trust



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Boiler & Engineering Skills Training Trust



Membership and Donation Form

The Boiler and Engineering Skills Training Trust is a charity entirely devoted to the training of new heritage boilersmiths and mechanical engineering to maintain the working steam fleet of railway locomotives, steam vessels and road vehicles for future generations to enjoy.

We have raised substantial Heritage Lottery Funding for our training schemes but we can only continue if we have a base of donations from those who support us. To learn more about BESTT visit:

www.bestt.org.uk

☐ **Corporate Membership** - Heritage railways, Museums, Preservation Groups, Clubs & Societies and professional organisations

£75 per year

☐ **Associated Membership** - Limited individual. One

£12 per year

☐ **Donations** - Donations are a great help and can be made on a single or yearly basis. You will receive an acknowledgement and details.

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☐ **Gift Aid** - Please fill in the form on the back of this page



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To join BESTT and support our work, please provide the information and send by post, with your subscription to:

BESTT, 14 Greenfield Lane, Idle, Bradford, West Yorkshire BD10 8PT.

You can also email: enquiries@bestt.org.uk.

Cheque's made payable to - **"Boiler & Engineering Skills Training Trust"**

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June 2019

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- Membership gives the opportunity to be involved with BESTT.
- Keep up to date with newsletters and web site.
- Receive first hand information regarding opportunities for both trainees and mature students.
- Receive information regarding technical training modules.
- Have the opportunity to get behind the scenes and look at what we do.
- Offer your own skills and expertise.
- Know that your subscription / donation is keeping BESTT alive and enable the scheme to continue into the future.
- Notice and invitation to the AGM.

Thank you for your support - keeping steam alive...

Supporting Organisations



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Boiler & Engineering Skills Training Trust



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