

The Oily Rag!

Winter 2019 / 20
Issue No 140



The usual suspects on a dull day at West Buckland.

The Taunton Model Engineers'
magazine

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From the Editor

This Winter has been rather eventful for the TME. So there is quite a lot to report in the issue of “The Oily Rag”. Despite challenging conditions work is proceeding at West Buckland. More information and details of the plans for the future are described in two pieces by our chairman.

The carbon footprint of heritage railways is a cause for concern, not because they contribute massively to the problem but because they do so in a very visible fashion. Ray Rolt’s article on the possible use of fireless locos is thought provoking. “The Oily Rag” has gone international to fill the pages with a piece about the “Barsi Light Railway”.

We also have reports on two ongoing projects, Jon Freeman talks about his new petrol / electric loco’s power source and Harry Howe about restoring a “Simplex”.

John

Chairman’s Notes

By David Hartland

I must start this report by noting the tremendous news that we have achieved a grant from “Viridor” towards the new Clubhouse building at West Buckland. In detail, this money will pay outright for the water supply and the electricity to the site, and will pay for half the costs of the building fabric. We have enough money put aside from your donations last year, to pay for the rest of the building.

All being well, we should have the building erected this summer, and watertight by the onset of winter. Then we are ready to fit it out.

General working parties have been held every Thursday pretty well all winter, and usually at least 15 volunteers have come forward for these days, often in some fairly trying conditions. The rain which started in October has continued since then and the site is pretty muddy. But at least this gives us a clear indication of where we must place the land drains! The first station is complete and track laying, using materials recovered from Creech in the first instance, is well underway. For the main line we will be using proper rolled steel rail on recycled plastic sleepers but that is in the future. For now we are concentrating on the loop line and the carriage shed area, so that by the end of the spring we can run a train at last.

Vivary running will start shortly, do continue to support this on Sundays if you can. There is still a need and a pleasure to be had from running trains for the Public.

Roll on those warm summer days!



Just to fill a corner, Noel Whiting running on the old portable track, some years ago

West Buckland Site Layout.

By David Hartland

Over two years of planning have gone into choosing a layout for the site at West Buckland. The plan shown opposite is the latest of some 38 schemes considered but this has the support of the technical sub-committee, the main committee, and the general membership at the meeting of 18th February.

This is a complex plan. It is a goal, an objective, construction will proceed in several stages and there may well be some better ideas coming forward, resulting in a few changes but we believe that the overall concept will remain as drawn. The raised track is in two stages, the first is the small loop, which is slightly longer than the old Vivary track, and the second stage which is an adventurous circuit over twice the length of Vivary. There will be 3½" and 5" gauges, plus the possible addition of 2½" in due course. The ground level track again will be built in two stages, eventually with a complete circuit ⅔ of a mile long, with both 5" and 7¼" rails. As yet we are not finally decided as to the position of the ground level steaming bays, or the layout of the car park area.

Programme for completion will depend on three factors, how much money we can raise, how many hours each of us can put into the site, and how many new members each of us can get to come along to help. I would like to think that with such an enthusiastic team as we have and yet more enthusiastic members yet to be recruited, that both tracks could be basically complete, with trains running, by late 2021 or early 2022.

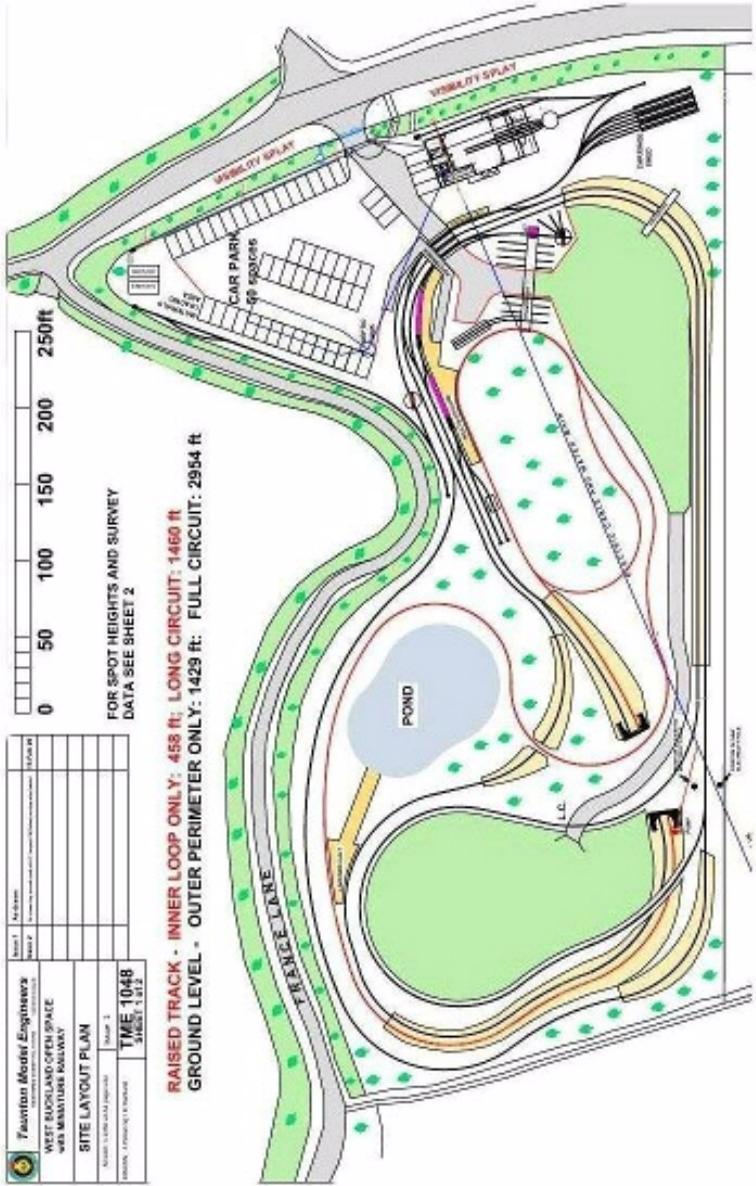
Let's do it!

 Fawcett Model Engineers 10000 W. 10th Street, Suite 100 Westland, Michigan 48186	Sheet 1	Address
	Sheet 2	City/State/Zip
WESTLAND-OPEN SPACE AND RECREATION FACILITY	Sheet 3	Project Name
SITE LAYOUT PLAN	Sheet 4	Scale
Author: [Name]	Sheet 5	Date
Checked: [Name]	Sheet 6	Time
Drawn: [Name]	Sheet 7	Time
Project No. [Number]	Sheet 8	Time
Client: [Name]	Sheet 9	Time
Project Location: [Address]	Sheet 10	Time
Project Description: [Text]	Sheet 11	Time
Project Status: [Text]	Sheet 12	Time
Project Budget: [Text]	Sheet 13	Time
Project Schedule: [Text]	Sheet 14	Time
Project Risk: [Text]	Sheet 15	Time
Project Impact: [Text]	Sheet 16	Time
Project Benefits: [Text]	Sheet 17	Time
Project Challenges: [Text]	Sheet 18	Time
Project Opportunities: [Text]	Sheet 19	Time
Project Risks: [Text]	Sheet 20	Time
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Project Monitoring: [Text]	Sheet 22	Time
Project Evaluation: [Text]	Sheet 23	Time
Project Reporting: [Text]	Sheet 24	Time
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Project Stakeholder: [Text]	Sheet 26	Time
Project Governance: [Text]	Sheet 27	Time
Project Compliance: [Text]	Sheet 28	Time
Project Ethics: [Text]	Sheet 29	Time
Project Sustainability: [Text]	Sheet 30	Time



FOR SPOT HEIGHTS AND SURVEY
DATA SEE SHEET 2

RAISED TRACK - INNER LOOP ONLY: 458 ft; LONG CIRCUIT: 1460 ft
GROUND LEVEL - OUTER PERIMETER ONLY: 1429 ft; FULL CIRCUIT: 2954 ft



Junior members corner

By Charlie Cox

In the last edition of "The Oily Rag" I wrote about starting to build my driving trolley. Since then I have added the wheels, the current axle holders are only temporary and will be changed soon. When I started to mount the axles I found I had to make quite a few changes to my original design. In the end I decided to get rid of it altogether and fit the current temporary rig. I would like to thank Jon and Julie for letting me use their workshop to fit my axles.



The temporary axle mounts.

My long term aim is to build a 5" gauge GWR Mogul I hope to have something to report in the next issue of this magazine.

Vivary Park, Santa Special Report

By Diana Fathers

As usual, a very enjoyable day but not the best of weathers. Still, plenty of club members in assorted festive clothing and plenty of people queuing for rides until the weather forced an earlier than planned stop to things.

Of course, all the children had small gifts and sweets from Santa and went away happy.

We were able to give our chosen charity West Buckland School (where else?!) a cheque for £150.

Thanks to everyone for their support and special thanks to the team who maintain the track in good order, set up and take down everything for running and to Phil, for tea making and everything else he does to keep the railway a place that everyone enjoys coming back to.

See you all on 5th April!

A new project to follow the “Brute”.

By Jon Freeman

Having spoken to many owners and designers of petrol-electric locos, one popular view is that combining some sort of engine and generator with batteries for traction power is a good idea. In light of experience, I tend to disagree. Often, builders couple a small petrol engine to a vehicle alternator with batteries and often this proves problematic. Easily overlooked is the inherent mismatch between engine and alternator torque characteristics. This oversight makes it all too easy to design a system perfectly tailored to stalling engines, or making it difficult to start the engine when batteries are only part-charged. Manual throttle controls may be useful but an often seen stall avoiding fix is to fit high power current limiting resistors, strangulating alternator output.

This is a poor and inelegant bodge, shifting large stresses to the batteries, relegating the generator to inefficient battery charging duty. Better by far would be to match the torque characteristics of engine and alternator. This can be done with a little electronics.

My second completed loco, the "Brushless Brutalist" (Brute for short) is a petrol-electric without battery. With two sets of bogies, the Brute is dual gauge. Powered by a 120cc petrol engine, the Brute has run several times on Vivary Park running days during 2018/9, likewise at Ashton Court in its 7.25" guise. Having covered 200 miles to date, The Brute has proved more than powerful enough to meet all demands made. Mechanically the Brute holds few surprises, brushless traction motors being perhaps the only feature not seen elsewhere. The control system however, is unique. Having a "No Batteries" design criterion immediately frees the design from tight operating voltage constraints. Taking advantage of this, a permanent magnet brushless generator was chosen. This produces a voltage proportional to engine speed. At low load or when stationary, the controller sets the engine to tickover, and raises engine speed only as power demand warrants it. The power electronics is designed to work over the wide voltage range this system provides.

Cost will deter many from using this type of generator while for next-to-nothing, a suitably sized vehicle alternator can be found. This is where many an experimenter gets locked into the vehicle mindset of including large batteries. True, an electrical source of some sort is required to provide excitation to the rotor field electro-magnet until it is spinning fast enough to self-excite but this could be a tiny battery quite separate from traction supplies, or maybe even a solar cell, or hand-cranked magneto.

With any engine powered bike, truck, train or plane, the driver or control system raises the engine speed before attempting to pull away. Perfectly sensible, at all times engine power deliverable must

exceed power demanded to prevent stalling. There are no controllers on the market for controlling an engine and traction system in this way. One outcome of this work will be such a controller, easily retro fittable to, or designed into, petrol electric loco designs.

Off-the-shelf generator sets were also considered, but standard sets rev the engines quite high all the time to maintain 50Hz AC. This wastes fuel, and creates too much noise and pollution. Recently however, Inverter Generators have appeared. These use modern electronics to produce a steady 240V 50Hz AC output, losing the high revs constraint of older types. I have procured an inverter generator and will try this out as a power source at the start of the running season. This might behave nicely, and quietly tickover while standing in the station, but however clever it proves to be, it is not psychic! It can not know when to raise the revs in anticipation of driver demands. The best we can hope for is a rapid, non-stalling response to increasing load. We will see!

The bulk of this project involves tailoring an engine / alternator set to model engineering applications. Alternators are designed to be driven by large engines where the alternator load torque is a fraction of that available. Driven by small engines, load torque can easily exceed that available with stalling the inevitable result. For successful, stall free running, a way must be found to safely limit load torque to be a little less than that deliverable by the engine over its working power and speed range. This can be done, the solution is to re-design the regulator. This might sound daunting, but it helps to understand exactly what the fitted regulator does.

The alternator chosen for this work is a Lucas ACR. Designed in the 1960s, they are still available new or used and it is easy to get at all the bits. The regulator is potted in an inch-and-a-bit square tin box with two wires, a third connection being the case. With only three connections, we know this piece of 60s technology can be nothing clever, and a simple experiment revealed all. Using a variable bench



Jon's regulator test setup

power supply in place of a battery, a 24V filament lamp in place of the alternator field coil, behaviour was observed as applied voltage varied. With voltages from about 3V up to 14.5V the lamp glowed. At higher voltage the lamp is off. The regulator is seen to be a voltage controlled switch. Simple as that!

Knowing the ACR delivers useful power into 12V systems from



The motor/generator set delivering 24V.

speeds of 1000 RPM and up, with a redesigned regulator we can expect to power 24V systems from speeds of 2000 RPM and up. A Honda GX35 35cc 4 stroke engine was coupled up. This idles at 3000 RPM. Using the bench supply powering the field in place of the regulator, outputs of

over 28V were easily achieved, using 24V filament lamps as loads. This much was proved, with loads up to about 600 watt more than enough for a powerful 5" gauge loco.

But then for some reason the drive coupling failed, one more thing on the "to be fixed" list. Meanwhile the electronic controller design proceeds apace. Using a low-cost ST Nucleo computer board (a bit like an Arduino but cheaper, vastly more capable and easier to use), the engine revs are accurately measured, this used to limit alternator field current so preventing stall torques. The controller also reads driver control settings, measured motor power drain and uses all these to set engine speed using a model control servo. Using this it should be easy enough to build a highly efficient loco which, like The Brute, revs the engine no more than necessary, and quietly purrs around the track for most of the time.

The Wheel Turns

by David Hartland

There are often times in lathework where it is useful to turn the work by hand at very slow speed, or just a part of a revolution. There have been lots of articles over the years describing handles which can be attached to the rear of the headstock to perform this function. I have one – made up in a hurry many years ago. The first time I used it all went well, but I made the mistake of leaving it in position and when I next switched on the lathe the handle flew around at a frightening speed and would have taken my hand off if I had been slower to the clutch lever. I have pondered these events in the brain now for several years, wondering if there was a better idea.

One afternoon at Vivary Park between trains I was watching some young mothers going by and could not but help notice a very smart

set of (you are wondering what comes next, I am sure....) wheels on one of the prams. This set my mind into action....



The wheel and arbour.

At our local junk shop there was a wheel off one such pram. It came complete with tyre, and with a lurid green colour which somehow complemented the grey of the Myford. It only took half an hour to make an expanding arbour to fit the rear of the lathe and we were in business.

The wheel I used is 13in diameter, which might be considered a little big for the job. I have used it for tapping as small as 6BA, but it really suits the larger jobs where a bit more torque is required. The large diameter means it is very sensitive for part revolutions of the work. If left on the lathe it causes no risk as the smooth tyre surface means that nothing can catch in it and in fact in hot weather I notice that the spokes of the wheel create a pleasant draught along the lathe and cooling the operator. Somewhere I suspect there is a young mother in some distress with only three wheels on her pram....



Wheel mounted on lathe.

The Barsi Light Railway

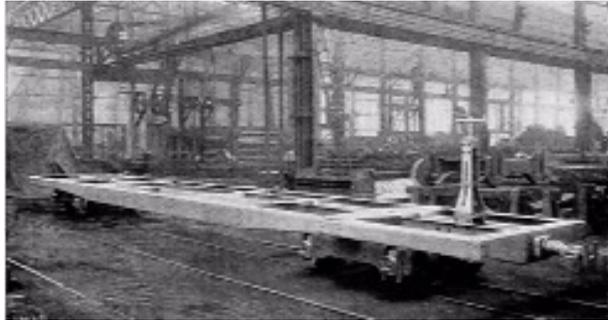
By P. T. Singh

Everard Calthorpe was born in Deeping St. Nicholas in March 1857. His first involvement with railways was when he became a premium apprentice with the LNWR at Crewe. Later he joined the GWR at Swindon as a draughtsman surveyor. In 1882 he moved to India to take up a position as assistant locomotive superintendent on the "Great Indian Peninsula Railway". In 1886 he requested leave to look into feeder lines for the GIPR. He put forward two schemes, one for a tramway to carry the Hindu faithful from the railway to the religious centre of Nasik, the other for a branch line to join the existing GIPR station at Barsi Road to the town of Barsi. Both schemes were approved by the railway. Negotiations were started with the government in Bombay (Mumbai) and surveys conducted on both lines. In parallel Calthorpe set up a London based company "The Indian Railways Feeder Line Co." By 1889 he had been away from his post for three years and the railway board made it clear he should either resume his duties or resign to concentrate on the branch lines with their full support. He chose the second.

Negotiations with the government were protracted but finally in 1895 the Secretary of State gave permission for the construction of the line to Barsi. Calthorpe set up a new company based in London, "The Barsi Light Railway Co." to raise the £75,000 needed to build the line. Construction started the following January.

Everard Calthorpe had very strong views on the advantages of narrow gauge railways and also the form they should take. "The Barsi Light Railway" was to be built from the ground up as a show case for his ideas and not from whatever could be bought off the

shelf or simply modified to fit. He considered 2' 6" gauge was the optimum giving the highest ratio of payload to capital cost. He said that the cost per mile was only around a quarter of that of a standard gauge line due to the lower costs of the civil engineering and of the track. To simplify transfers from the standard 5' 6" gauge GIPR four wheel trucks of the time to the light railway trucks the capacity had to be the same. Since keeping track costs down meant light section rail this required the use of bogie freight wagons and defined the maximum axle loading as 5 tons. This also applied to the locomotives which were designed to have as far as possible the same loads on all axles.



A standard steel carriage under frame. Under construction at Leeds Forge Co.

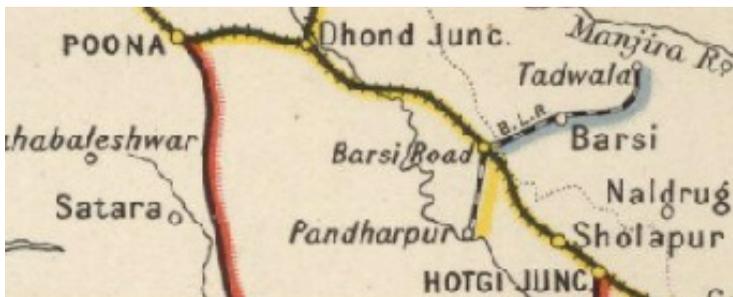
He placed the contract for the locomotives with Kitsons of Leeds.



A Barsi Light Railway class A on test at Newlay

The design they produced was an 0-8-4 tank engine with Walschaerts valve gear and a four wheel swing link bogie. To test the system and also show it to prospective buyers, Kitsons purchased a piece of land about a mile long between Leeds and Liverpool canal and the Midland Railway at Newlay to build a display track. The track had straight level sections where they demonstrated hauling loads of 1036 tons. It also had 1/57 inclines with curves with radii down to 210' where the loads were reduced to 190 tons. The integrated system came to be called the "Barsi system".

The track was laid with 30lbs/yard rail on pressed steel sleepers. The rail seats were inclined to set the rail heads at the same angle as the wheel treads which at the time was very rare but is now almost universal. To maximise the payload and minimise the tare all of the freight vehicles used the same 25' x 7' pressed steel under frame and were mounted on the same Fox pressed steel bogies at a time when timber was still widely used in wagon construction. All rolling stock and locos were required to work on curves with radii down to 100'.



The full extent of the Barsi Light Railway around 1910.

In India work on the railway went well, the 21½ mile line from Barsi road GIPR station to Barsi was opened on 18th March 1897 and was built within budget. Work on a 26½ mile extension from

Barsi to Tadwala started in September 1904. This required the issue of £85,000 of ordinary shares. The line was opened in May 1906 the work being completed well within budget. Later this line was extended the 64 miles to Latur.



Part of the abandoned narrow gauge railway.

Over the next few years more lines were added, a 31 mile extension connected Barsi road to Pandharpur and a further 84 miles took the line to Miraj. By 1927 the total route mileage was just over 200 miles. The railway was owned by the "Barsi Light Railway Co." until 1954 when it was bought by the Indian government. In the 1990s the government decided to rationalise the

Indian railway network which led to the closure of many narrow gauge lines. The same fate could have befallen the "Barsi Light Railway" but it was still carrying a lot of freight and passengers which caused a bit of a dilemma. So conversion to standard 5' 6" gauge was started. Clearly this could not be on the original alignment with its sharp curves and steep gradients but when it opened in October 2008 the new line was probably closer to Calthorpe's original standard gauge plan of 1886



Much of the original line followed the roads.

The "Barsi system" was adopted elsewhere, notably in Australia but also in the UK where it was used on the "Leek and Manifold Light Railway" this should come as no surprise since a certain E Calthorpe was the consultant for the latter project.



The surviving class B loco on display in Secunderbad.

He always saw the possible use of railways in war time and many of the ideas he pioneered were used in the battlefield railways of WWI

One of the Kitson locos has survived, a B class 4-8-4 of 1907 which is on display outside the headquarters of The "South Central Railway" in Secunderbad. The track and infrastructure was simply abandoned. Much of it is still visible, although gradually it is being reclaimed by nature

The class A locos were 29' 5-1/4" long overall. In any gauge this would be quite a large model. A 7.25" gauge version would be a little under 9' long. That would look very impressive running at your new site! If you are tempted detailed works drawings are available.

STEAM HAS A FUTURE!

By Ray Rolt

It only required a 16 year old girl to make a lone demonstration outside the Swedish Parliament, that went virile around the world, to result in demonstrations in many countries against Climate Change.

This problem has to be accepted and action taken to deal with it. What the time scale will be, only time will tell. I would hope that the next generation will enjoy a similar access to air shows of historic aircraft, traction engine and steam rallies, historic car rallies, miniature and narrow gauge railways and preserved railways that we have had, accepting that they only make a small contribution to the problem compared to that of heavy industries and other similar factors world wide.

As far as steam power is concerned, I feel that a Steam Lobby needs to be formed to safeguard steam interests. Initially, it would need to educate people of the difference between “internal combustion” engines and “steam power”, be it in turbine or piston engine form, the exhaust of which is harmless water vapour. Any association with pollution being in the generation of the steam!

To my knowledge, there have been two examples of ‘pollution free’ steam locomotives. The best known is the “fireless” locomotive, which has been in existence for many years. Here the boiler is replaced by a large “thermos flask” that is resistant to high pressure steam, which is then used at a reduced pressure. This is partially filled with water, about two thirds, and is then filled with high pressure steam which results in it becoming full of water and steam at high pressure. The high level of external insulation maintains this

state for hours after the supply of high pressure steam is disconnected. This steam supply is usually from a manufacturing process requiring high pressure steam. A well known example are the two locomotives used in the “Huntley and Palmers” biscuit factory in Reading. Here they could be used in areas where ingredients were stored because they were free of any potential pollutants. They were also used in areas of high fire risk, such as ordnance factories and, when replaced by diesel locos, these had to have spark inhibitors fitted to the exhaust.



One of the “Huntley and Palmers”
fireless locos.



When the Swiss Railways were electrified, to avoid having to replace the Station Pilots, these were fitted with a pantograph on the cab roof and the boiler converted to electric heating. This made them pollution free, though at the time this was not a cause for concern!

After World War II, Germany was divided into East Germany, which was under the control of the Russians, and West Germany, which became an independent country. Because of a lack of Capital Investment in East Germany, the railways continued to use steam locomotives, which were modernised and resulted in the building of

the modern Meiningen Locomotive Works, now well known for the building of boilers for new locos such as the “Tornado”.

Due to East Germany’s dependence on steam locomotives, they developed the fireless loco to a greater degree than other countries. This resulted in higher pressure and the fitting of a superheater to give the reduced pressure steam to the cylinders at a higher temperature for greater efficiency and was known as a “Gili-type” high pressure fireless loco. In a normal fireless loco, the reduction of the steam pressure to the cylinders meant that as the temperature remained the same, the steam was superheated. In the “Gili-type”, the reduced pressure steam was passed through an internal superheater enhancing the temperature further. Hans Wendler (1906-1989), one-time technical director at Meiningen, proposed a new type of fireless loco that could operate over distances of 220km to 480km a day, using a central charging point, in 1987. This was to use two ‘boilers’, one on the loco and one on an extended “tender”, to give an extended range of operation.



An artist impression of the Wendler locomotive.

This was due to the shortage of good locomotive coal and unsuccessful attempts to burn the more abundant soft brown lignite. An order was placed for eleven locomotives, using the frames and running gear from withdrawn ex Prussian P8 4-6-0 (DR 38) locos. These were to be used on passenger trains. He took out his Patent DD261126A1 of 19 October 1988. The reuniting of Germany in 1990, resulting in the modernisation of all the railways, meant that these locos were never built.

It is only thanks to “Camden Miniature Steam Services” that I learnt of these proposals. I have bought a number of their books over the years as they seem to publish more “specialist” books than the larger railway publishers. I was given their book “From The Files” by Robin Barnes, published in 2018, for Christmas. Robin Barnes is well known for his water colour drawings of proposals for locomotives, probably best known for his impressions of David Wardale’s 5AT 4-6-0 Project. I was not even aware that it had been published.

Could This Concept be Adapted for Preserved Railways?

The West Somerset Railway, along with other preserved lines 20 miles or more in length, are currently faced with a request to replace the track with new and increase the axle loading. As the use of flat bottomed rail is half the cost of bull-headed rail, this will be used except in station areas where bull-headed rail is more in character for a preserved line. If financial help can be made available through the Heritage Lottery Fund, this would not only be a great help to the lines concerned, but would result in track able to take the higher axle load that would be necessary. In return, these lines could be used as ‘guinea pigs’ for developing the concept, which if successful could be used universally.

What would be needed are two such locos able to run two round trips of the line, to form the mainstay of the services, on one charging of the “boiler”, augmented by ordinary preserved locomotives for special occasions and added interest. Ideally these could be converted to use a “biofuel” burner to make them “carbon neutral”. In the case of the West Somerset Railway, an ideal candidate would be “Dicheat Manor”, which requires a complete rebuild and is currently on display at Swindon. This could be rebuilt as a ‘Hall’ Class loco, to accommodate the larger “boiler”, with modified springing and retaining the smaller driving wheels. A “cosmetic” outer casing could be fitted to the ‘boiler’, encasing the insulation.



A preserved German fireless locomotive

As the “line speed” is restricted to 25 mph and the daily mileage would be about 110 miles, the second “boiler” on the tender may not be required. Alternatively, a smaller “boiler” could be fitted charged

at a lower pressure, for emergency use. Both “boilers” would be “charged” overnight using “off peak” three phase electricity via built in electrode heaters to simplify the means of recharging, the heated contents of any second “boiler” being pumped into the main “boiler” to reduce the charging time and then refilled, any water treatment being added at the same time. The charging would be controlled by ‘pressure stats’. The charging pressure for any second boiler would be just above the reduced pressure, going straight to the cylinders via the superheater for emergency use.

If these locos worked satisfactorily, the same system could be adapted for use on secondary lines that may be ‘reopened’ or built to improve ‘public transport’. Here they could be based on the ‘Hastings’ units, using steam turbine generators and electric traction motors.

This is not a fantasy idea, but a serious proposal by an eminent steam engineer that would have been built if it had not been cancelled on political grounds due to a change of policy resulting from the reunification of Germany. It would be a fitting tribute to him if a loco could be built on his concept, in a simpler form, to see how it would perform.

A 9400 Class 0-6-0 PT has been bought for use on the W.S.R. when the new track has been laid. If the owner was agreeable to the boiler and tanks being replaced by a fireless boiler unit, funded by others, including reinstatement of the original boiler and tanks after extensive testing if he requested it, the potential and reliability of the system on a ‘preserved line’ could be verified. This would be of great use for the ‘preservation movement’ as a whole if circumstances were to change in the future.

To quote the well known “motto” of the Scouts / Guides “ be prepared”.

Restoring a "Simplex"

by Harry Howe.

Some while ago I saw a "Simplex" project for sale by "Station Road Steam". I saw the potential for a good locomotive and hoped that I could get it running quite quickly with the intention to restore it more completely at some point in the future.

However after closer examination it was decided to strip it down to the frames and start from there. It soon became obvious that at least two people had been involved with the build. The chassis is well made by a very good engineer but later work was by someone far less skilled and many parts were only fit for scrap.



The "Simplex" during the strip down.

The frames were stripped completely and sand blasted before being painted for me by Jerry Mills. The wheels were painted as well and the rust cleaned off the motion. When the running boards were fitted it was not possible to get full gear forward. This required a file to be taken to the cutaway on the left hand side. The valves were lapped in since they looked to have picked up. The tanks and cab were awful, they were welded up from steel sheet. The welding was very

poor and the steel badly rusted. So the decision was taken to scrap the lot. It was also decided that rather than replace the tanks, the loco would be converted to a tender engine. This would give more space for fuel and water and keep the water cold to help the operation of the injector.



The restored frames.

Attention was then turned to the boiler. Several of the dome bush studs had been snapped off. The remains had to be drilled out and the holes re-tapped. The original turret was made from round brass and soft soldered. The threads were very suspect so it went into the bin and a new one was made from 1/2" square bar turned in a 4 jaw chuck

The regulator initially seemed ok until I tried fitting a regulator handle. It turned out that the square was smaller than the threads to secure it! This triggered the removal of the regulator which was easier said than done. Once out, it was discovered that it was not fit for purpose, the regulator rod was welded to the screw part of the regulator, the tube was a dodgy construction made from lots of little sections that screwed in to each other so this also went into the bin. A mate /



The boiler stripped and cleaned

work colleague offered to make a new one for me and he did a grand job. With the regulator and new turret in place and numerous other smaller problems sorted the loco was given a brief run on compressed air one Saturday night. The smokebox required a new dart and new handles before it could be used. With this complete, the first test fire was put in the boiler on Saturday 16th February. This went better than expected, of course there are still things to sort out but on the whole it was a great success!



The first firing.

OF SHIPS AND THINGS

BY FIREMAN MN RETIRED

What on earth was I going to do for a month? I need not have worried for I was well looked after. Matron Gwen said you are our responsibility so you will come and live with us. The house was a large rambling place, which originally was built by a tobacco planter in the early 1800s it was huge and I never did get to count how many rooms it had. I was to be looked after by the housekeeper, a youngish black lady of about 25 years of age called Esmeralder but known as Ezzie. The cook had been told to feed me up and bless her she did her best.

The first night I was set up in a bedroom with a sitting room and bathroom. When I finally turned in I went out like a light. Next morning my wardrobe which had been taken away in the night had been washed and laid out ready for me, when I say wardrobe it was a pair of jeans and a t-shirt which I had come ashore in.

Tom and Gwen got home after I was asleep and they were long gone by the time I awoke but they had left orders with Ezzie to take me into town and get me kitted out. Naturally me being Mr good guy I protested saying I have no money. Ezzie said no problem! And off we went. That night Tom and Gwen got home earlier and we sat down for a meal together and I didn't feel so much like the poor relation.

A couple of days later Ezzie said today we go out in the car, she had the use of a big old American Hudson probably from about 1940. I got to see the real Africa, so different from that shown in the tourist guides, mind you some days it was nice to sit in the shade and with a mixture of pidgin English and signs, spend some time with the two old fellers who looked after things.

About two weeks into my holiday! Ezzie said get good nights sleep tonight, for tomorrow we go on a long trip. In the morning I said to Ezzie what s this trip then? She said wait and see, I felt about six years old. The roads were just dusty tracks except for a bit of Tarmac in some towns or large villages. We passed all sorts of wild game, which ran off at our approach. We crossed the border into Rhodesia with no formalities and then had a stop for lunch, which the cook had prepared for us. By the evening we came to a town called Umtali, we parked in the driveway of a very swish bungalow and Ezzie said quite matter of factually, we stop the night. It was the home of Ezzies parents and two younger sisters; they were such nice people and treated me like a long lost son.

Next morning we set off early still heading westwards. The road was absolutely straight and dusty, either side was cultivated, tobacco and maize. It was nice and green so there must have been plenty of rain (to lay the dust). We stopped the night at a roadside hostel a sort of bed and breakfast. We set off at dawn. Why the early start I said? For an answer I got, you see soon. Fifteen minutes later we turned a bend in the road and they're before us in all its glory with the sunrise behind us the Victoria Falls.

Sales and Wants



(1) A Colchester Bantam in good order mounted on a substantial trolley complete with a 3 jaw chuck and an unused 4 jaw. The machine has a new tool post and is 3 phase. Price £1500

(2) A Jaguar VXS inverter only used for 2 hours cost £750 will accept £350.

(3) A "Trav a Dial" a bit scruffy but in good working order, price £95.

(4) Tom Senior vertical / horizontal mill single phase. Complete with magnetic vice and tilting vice. Price around £1200



John Cavaciuti 07973831331 01823 272334

Events Programme

Tuesday 17th March	“The History of RNAS Yeovilton” by the Curator of the Fleet Air Arm Museum Dave Morris
Sunday 5t April	Public running at Vivary Park 14.00 to 17.00 set up from 12.30
Tuesday 7th April	AGM
Sunday 12th April	Public running at Vivary Park 14.00 to 17.00 set up from 12.30
Sunday 19th April	Public running at Vivary Park 14.00 to 17.00 set up from 12.30
Tuesday 21st April	Sentinel 7109 “Joyce”, Andy Chapman.
Sunday 3rd May	Public running at Vivary Park 14.00 to 17.00 set up from 12.30
Tuesday 5th May	TBA
Tuesday 12th May	Vivary Park, informal club running 18.00 to 21.00
Tuesday 19th May	Trophy Night
Sunday 24th May	Public running at Vivary Park 14.00 to 17.00 set up from 12.30

Monday 25th May	Stockland Fair portable track 14.00 to 17.00
Sunday 31st May	ClubLEC.
Tuesday 2nd June	Visit to the Shute Miniature Railway, Hosted by Tony and Liz Gosling.
Sunday 7th June	Public running at Vivary Park 14.00 to 17.00 set up from 12.30
Tuesday 9th June	Vivary Park, informal club running 18.00 to 21.00
Tuesday 16th June	Club B.B.Q. at West Buckland.
Sunday 21st June	Public running at Vivary Park 14.00 to 17.00
Friday 26th June	Provisional booking for the portable track
Sunday 5th July	Public running at Vivary Park 14.00 to 17.00 set up from 12.30
Tuesday 7th July	Coach trip to Bristol to visit the “SS Great Britain”. Details to follow.
Tuesday 21st July	Visit to Hinkley Point “C” station. To be confirmed.
Sunday 26th July	Public running at Vivary Park 14.00 to 17.00 set up from 12.30
Tuesday 4th August	Visit to Newberry Rail, hosted by Tony and Deana Newberry
Tuesday 11th Aug.	Vivary Park, informal club running 18.00 to 21.00

Saturday 15th Aug.	Dalwood Fair portable track 14.00 to 17.00
Sunday 16th Aug	Public running at Vivary Park 14.00 to 17.00 set up from 12.30
Wed 19th Aug	Coach trip to “The Great Cockcrow Railway”. Details to follow
Sunday 30th Aug	Public running at Vivary Park 14.00 to 17.00 set up from 12.30
Sunday 6th Sept	Public running at Vivary Park 14.00 to 17.00 set up from 12.30
Tuesday 8th Sept.	Vivary Park, informal club running 18.00 to 21.00
Thursday 17th Sept	Brean Steamers visit to Vivary
Saturday 19th Sept.	Somerset County Show – TME attending
Sunday 20th Sept	Somerset County Show – TME attending
Sunday 27th Sept	Public running at Vivary Park 14.00 to 17.00 set up from 12.30
Sunday 4th October	Public running at Vivary Park 14.00 to 17.00 set up from 12.30
Saturday 17th Oct	Possible Midlands Exhibition trip
Sunday 18th Oct.	Public running at Vivary Park 14.00 to 17.00 set up from 12.30
Saturday 24th Oct	Railex show in Taunton (TME stand)
Sunday 25th Oct	Railex show in Taunton (TME stand)

Saturday 31st Oct	Halloween Night steaming at Vivary
Sunday 13th Dec.	Vivary Santa Steaming
Tuesday 15th Dec.	Mince Pies and Natter Evening

Meetings at Stoke St. Mary start at 7.30pm unless otherwise stated

Subscriptions

Ordinary Membership is £30 with a further £5 for spouse or partner. Family membership £35 Junior Membership £5

Subscriptions are due on 1st January

Please make sure any outstanding subscriptions are paid at or before the AGM.

**Membership Secretary contact details—see inside front cover.
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Harry Howe working on his “Simplex”.



Bob Abel working at “Southpointe Halt” on one of the drier days at West Buckland.