CINDERBARROW FLYER

The Newsletter

of

Lancaster & Morecambe Model Engineering Society

Newsletter 10 May 2016

Happy is the man whose engine has just passed its steam test and is running well

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Chairman's chat

As we now start another season our thanks should go to Alan Green and his helpers for the work carried out on the inner track. I think it is the best it has been for some time. Once the work of replacing the rotten sleepers has been completed work will start on the outer track. It is yet to be decided the best way forward to solve the problems and bring it to the same standard as the inner track.

It is good to see that the working parties on Tuesdays can muster a good crowd and the site benefits from the work carried out. Peter Griffiths' work on the signalling system paid dividends over Easter, with everything working well. The carriages have been improved with the fitting of suspension bogies due to the efforts of Geoff Martell and Bob Sumner; just a few more left to do in-between your holidays Geoff.

The next few months could prove an interesting time for LMMES with Lancashire CC looking to hand over responsibility to others for the parks and woodlands they own. You will be kept informed by email of the latest developments so *watch this space.*

Our membership seems to increase slowly with two new members applying in the last few weeks. This is good news as some clubs have a declining membership; just remember that a cheery LMMES smile when you see somebody new on site helps them feel at home, and if you are OS of the day try to point people in the right direction and get them involved. Just a reminder to everybody that it is your society and club house which need looking after, so if you get a cup out to have a drink please wash it up afterwards. The same applies to the washing up bowl in the gents' toilet; do not leave it full of dirty water.

The society has recently taken delivery of the new club loco and the newly painted carriage bodies. Once final assembly of the loco and some work in fitting out the carriages has been completed, they will all be ready for use. With the ability of using the carriages singularly we will look forward to seeing the 5 inch gauge owners passenger hauling this season.

Martin Sams, Chairman

Editor's excuses

This looks almost like becoming a regular feature which had not been my wish or intention.

I must apologise for this newsletter being later than intended. My apologies also need to go to those who were kind enough to supply articles on time for this edition, particularly Martin who made sure that his Chairman's Chat was current and topical. Unfortunately my work tends to be seasonal and the bad weather over the winter delayed completion of that season's work which had a knock on impact on everything else. If anyone really feels that my Editorship isn't adequate then I'm sure a friendly transfer of responsibilities can be achieved.

'Third time lucky' as the saying goes so perhaps I really will manage to get the next edition out during October. Many thanks to all our contributors. More articles please for the next edition.

Dr R Douglas Young

MD FRCPE

23rd June 1921 -- 18th April 2015

During Doug's early years he had health problems, always having difficulty with his breathing, so much so that at the time doctors were offering a poor prognosis - little did they know he would live to the ripe old age of 94.

He went to Edinburgh University to study medicine, a profession he was to follow throughout his working life.

At the outbreak of world war 2 Doug served in the Royal Navy in the Pacific aboard H.M.S. Plym as a surgeon lieutenant, an experience he talked little about but never forgot, always attending remembrance day at his local cenotaph. During his time aboard H.M.S. Plym he was involved in the British atom bomb tests off Australia. Even then Doug enjoyed modelling; he built a model of "Plym" in wood, the only exception being the lifeboats [whalers] made of soap.

On his return home he became a resident doctor at Lancaster Infirmary, married Katherine, a physician, and raised a family of three comprising a boy and two girls. When he retired from the RLI his retirement present from Katherine was an electric saw to make models.

He joined our society in the early ‘80s when the club was at Steamtown, owning and running two locos. On moving to Cinderbarrow he built the crossing gates and the majority of the woodwork in the signal box, which is a testament to his craftsmanship since both are as good as the day he made them.

With failing eyesight it became more difficult to do all the things he loved and he had to eventually give up coming to the club. He became our third President, and determined to leave a legacy of his tenure this took the shape of two very entertaining talks, both supported by his family and included tea and cakes.

For his 90th birthday Doug wanted to celebrate at the club and see his beloved "Dholpur" run one more time. This he achieved with help from family and club members making it a memorable day.

Doug will I think will be remembered in the club for many years.

I would like to thank Peter Ellis for supplying a lot of background information allowing me to write this tribute to Doug.

Geoff Martell

Ballast

We are grateful to Aggregate Industries’ Holme Park Quarry for the donation of new ballast.

In due course this will be used to help bring the outer track up to the same excellent quality that has been achieved with the inner track.

Thanks to those members who have helped with the track repairs so far. There is plenty more work to be done before the outer track is usable again but this new ballast is a good start.

Cinderbarrow Testing Day 20th March 2016

Our first major event of the season was slightly earlier than sometimes due to Easter being early but fortunately we had pleasant sunshine and sufficient warm weather to get several members eating lunch outside.

Our members were out in force and this kept the boiler inspectors busy for much of the day. It was nice to see some traction engines present and from early in the day there was a haze of smoke over the site. For the first time there was no formal or informal passenger carrying and this made the day more relaxed and enjoyable for everyone.

The boiler inspection team and candidates

Several of the regular passenger hauling team looking relaxed but lost without any passengers.

Lunch outside in the spring sunshine

GL5 at Locomotion, Shildon March 2016

On the weekend of 17th - 20th of March Stan Jackson and I took our locos and rolling stock to this event which was basically to demonstrate the working of typical freight yard operations in BR days. GL5 members from all over the country took and assembled a quite complex rail system in the confines of the museum consisting of three goods yards. A token system was in operation between the three yards to ensure safe operation on the single line system. Both steam and diesel locos were operated on the layout, and a turntable was also in use to ensure the locos were correctly orientated. One feature which really caught my eye was the 5" scale semaphore signal made by some members; the detail was a joy to behold.

Ron Strachan

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5" gauge bracket signal

Shildon yard sidings

Shildon yard throat

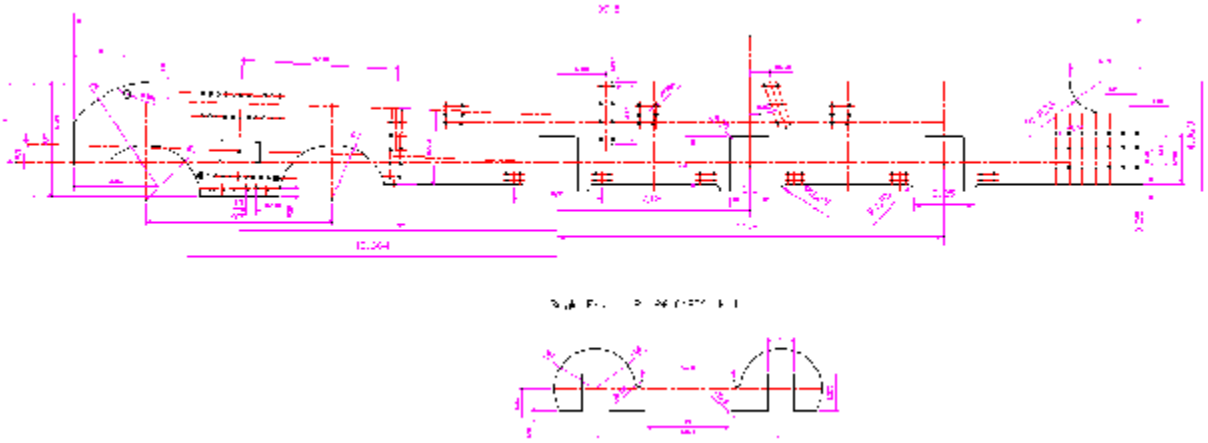
Shildon yard turntable

My last and final steam loco building project by Ron Strachan Part 4

Designing and building a 5" L N E R B 16 4-6-0

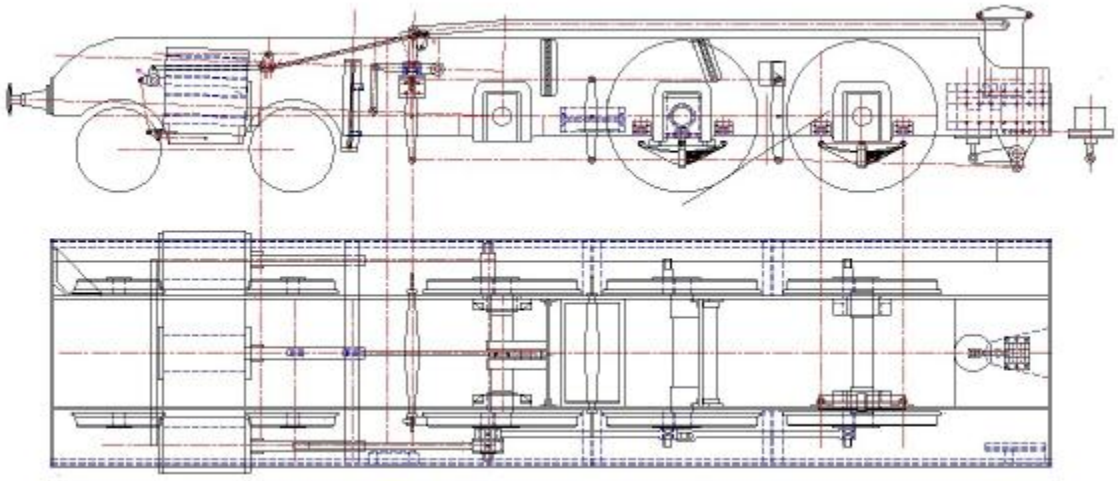
Frame drawings and construction

Using Autocad I scaled from the G A drawing at 1 1/16" to the foot, the leading dimensions of the main features and marked out and drilled the holes for the frame stretchers, Motion bracket, Drag box and Cylinder holes. Jigs were made for Cylinder holes and the Spring sockets. The Jig for the Cylinder holes was also used on the Cylinders.



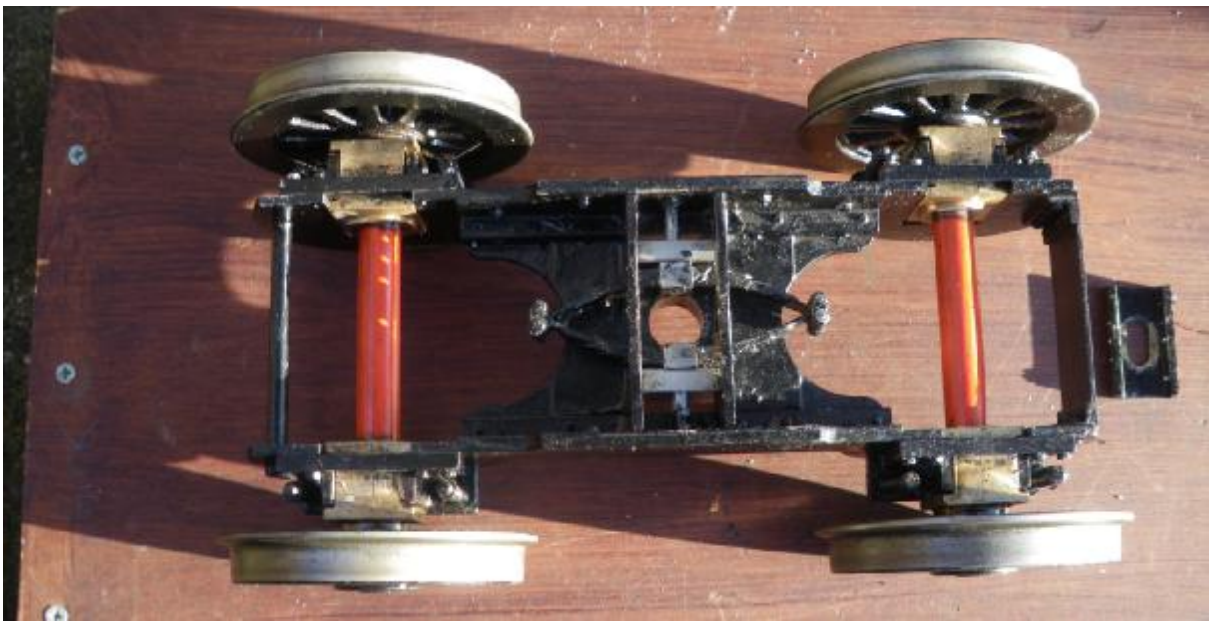
Initial F E for frame drilling, note the Datum hole for the Cylinders

The above drawing was further developed into the F E and Plan drawings shown below.



F E and Plan

Whilst awaiting the arrival of the Axle Horns and Driving and Bogie Wheels the frames were partially assembled using the two Drag Box castings to hold the frames square whilst assembling the Frame stretchers, Bogie stretcher and Buffer beam. The Motion bracket was left until the cylinders were mounted and a dummy leading axle to ensure correct alignment. It is amazing just how many times the frames were separated to add holes for further components during assembly. Also a start was made on the Bogie which was of a relatively standard design. One interesting feature was the Leaf springs on the Bogie centre bogie slide used instead of coil springs. It took a bit of working out how to do this. It seems to work well but I have had to increase the amount of side play recently as the loco did not like the sharp bends on some tracks.



Bogie transverse leaf springs

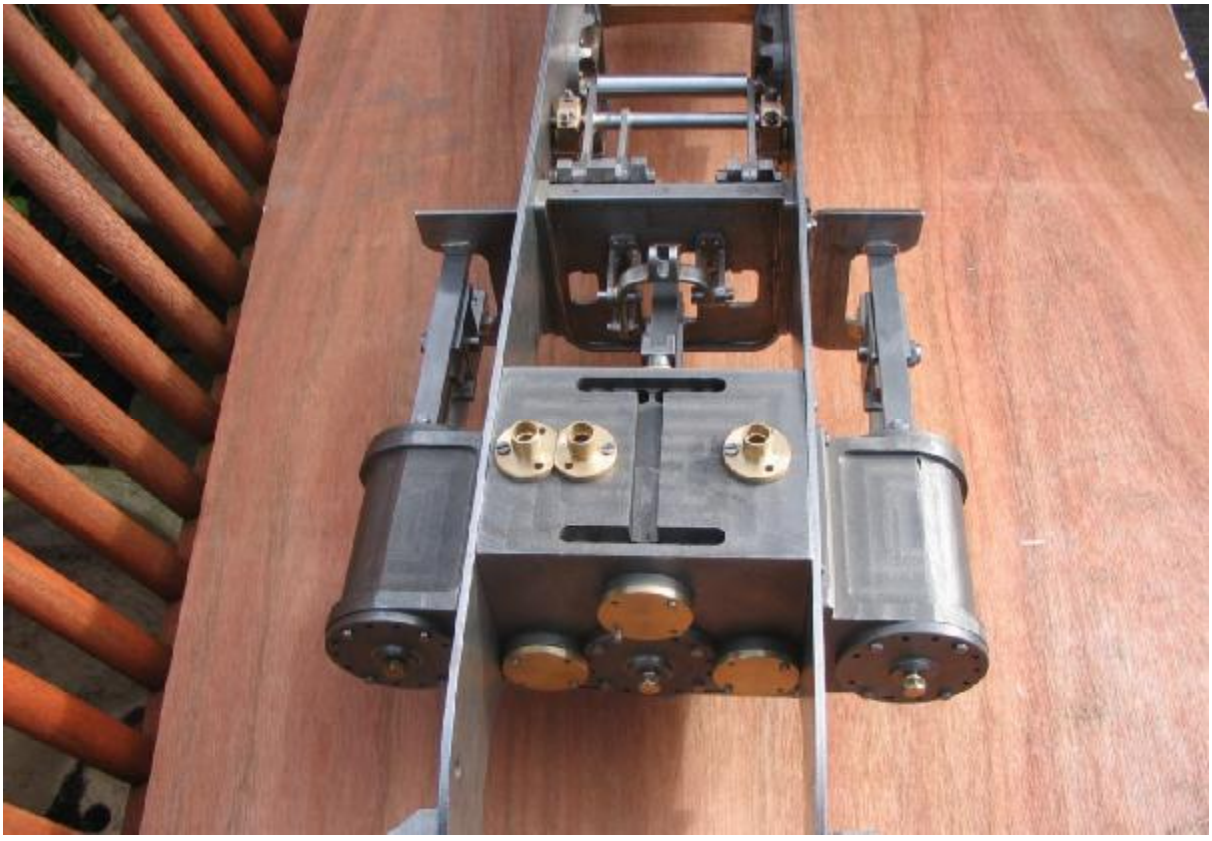
I also decided to use leaf springs on the driving wheels as on the full size loco. The delivery of the wheel castings, horn castings and other bits and pieces allowed further progress of the frames. The Axle boxes were made of BDMS which are ok in C I horns with Oilite bushes. The full size loco was fitted with Steam reversing. The Steam cylinder and Cataract cylinder were located on the horizontal stretcher between the crank and intermediate axles. I did not go for this and plumped for a Lever reverser instead.

Partial frame assembly (Note the horizontal stretcher.)

I took the marked out cylinder castings to Roy Morris and we used his Bridgeport miller with a 4" Shell End Mill to remove the excess material in no time at all, then on to his Edgwick lathe to do the bores on the inside cylinder; I did the outside cylinders on my Myford The drilling of the steam passage ways on the inside cylinder was a bit challenging but CAD gave me the setting angles to ensure that all passages emerged in the right places. The final profiling of the cylinders was done on my Tom Senior miller. The cylinder and valve covers were straightforward turning and the boring task of drilling and tapping nearly 100 6 BA holes for the cylinder end covers was carried out and 60 on the inside cylinder holding bolts. The Motion Bars were BDMS and the Crossheads were machined from BDMS blanks and then Casehardened. I have used this combination on some of my previous engines with very little wear in service. The outside motion brackets and the inside motion stretcher were mild steel fabrications. The six piston valve liners were made from C I and press fitted into the inside cylinder casting. The piston valves were also C I fitted with four piston rings. I also made the main pistons from C I with 2 C I rings on each. The Plugs on the front

cylinder covers were to allow 3 in 1 oil be sprayed into the cylinders before putting the loco in winter storage as I have had problems with seized pistons in the past. I find that with C I pistons it is essential to remove as much condensate as possible after a run and prime the valves with the lubricators, also on some occasions I pour lubricating oil down the blast-pipe.

Cylinders and Motion bars



Valve liners, steam flanges and exhaust passages.

In the next article I will describe the design of the Stephenson's valve gear and final assembly of the rolling chassis.

Big Boots and Western Railroad

(www.bigbootsrr.com)

By David Wilson

I was recently on holiday in Florida, USA (31 March) with family including seven grandchildren. As you will have guessed this meant that most of our time when not sleeping was spent in the varying Disney parks - miles and miles of walking and riding some excellent Disney attractions.

On the Sunday though I got special dispensation and escaped from the family and went to see the above railroad, arriving without prior permission to be greeted by the very friendly owner, Captain John R Boot. The railway is fully owned by John and is operated by him along with a fairly large voluntary group.

Unfortunately it was not one of the railroad's operating days but I was offered a tour around the railroad along with another guy behind a four unit diesel rig. This was radio controlled and John sat at the rear of the train to control it with me immediately behind the loco. This presented a great view ahead as you can guess.

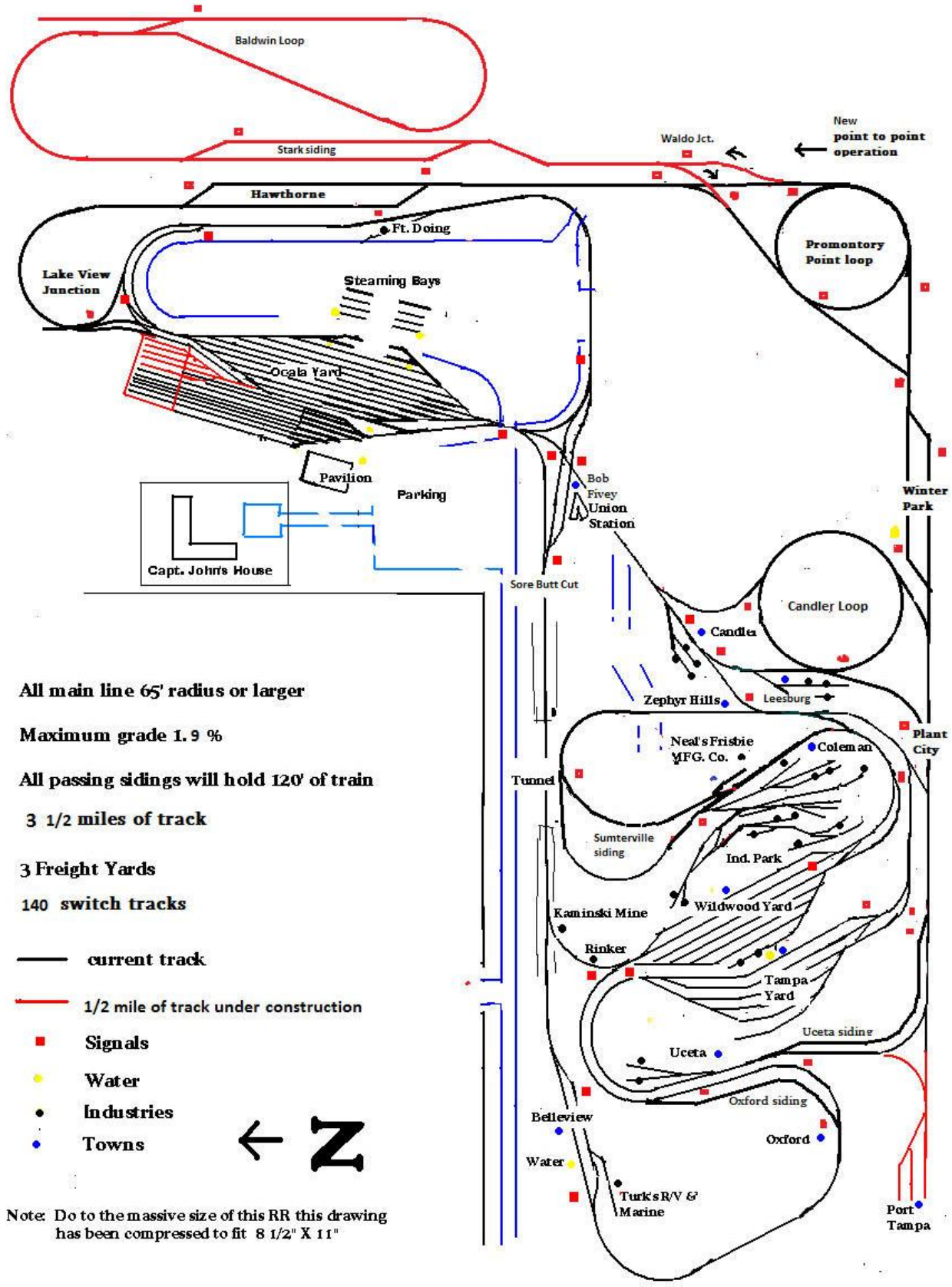
This railroad is currently three miles long and the track bed is being prepared for another two miles as cash flow permits. It's a huge undertaking when compared with 7 ¼" railways in the UK and my trip around the railroad took about one hour.

The track is fully signalled with many marshalling yards and is modelled on a railroad system in Central Florida. On operating days trains are dispatched around the system with cars having varying destinations. The trains therefore go round the system dropping off and picking up cars like on the full size system. In Florida there are branch lines all over the place going into factories, warehouses etc. much like railways in the UK before BR ruined the small freight business.

There are some really good videos of the railroad on YouTube including one which John forwarded to me which shows aerial shots of their Winter Meet when 66 locomotives were operating. Do have a look at the videos on the Railroad web site at: bigbootsrr.com.

I did get another day's freedom and went to another railroad and again received a very friendly reception but that's a story for another day - save to say the guys there shared their packed lunches with me!

Big Boots and Western Railroad Track plan



A Distraction

My love of flying has been with me from childhood along with my love of steam trains.

At the age of sixteen I was given a partly built 3½" gauge Black Five chassis which I worked on for my metalwork GCE at school. At 18 I went into engineering with a machine tool company in Halifax and learnt the 'trade' that was to underpin my dream of building a 5" gauge Britannia.

At twenty-one I went down to Biggin Hill to attend RAF aircrew selection and after 3 days of intensive medicals, aptitude tests and the most daunting interview of my entire life, 400 of us on the first day were whittled down to just 16. I later learnt that I was unsuccessful but was asked to re-attend in 12 months and looking back I was far too immature at that time. I never did go back; instead I moved to New Zealand, but my love of flying persisted.

Along came computers and a guy named Bruce Artwick of subLOGIC in America created Flight Simulator 1 for the Apple II computer. In those crude computer images my dream of flying was reawakened, and my imagination filled in the scenery that wasn't on the screen.

subLOGIC Flight Simulator 1 for Apple II - the first ever!!!

A short while later scenery appeared with the release of Flight Simulator 2 and I was hooked for life.

subLOGIC Flight Simulator II for Apple II with subLOGIC Scenery Disks

Today Flight Simulator 10 (FSX) is a far cry from those early primitive days with aircraft that now 100% simulate the real aircraft not only in flight but also the mechanical and electrical systems. If you land hard and are severe on braking, the simulator monitors the stresses involved in the undercarriage and the life of the associated parts are degraded so failure could occur later. The temperature of the hydraulic fluid in the braking system is monitored and again can lead to failure. This is the depth of detail now associated with these simulators and it is no wonder that real pilots are using them as training aids. Just compare Meigs Field in Chicago below with that above; I'm sure most of you would think that it is a real life photo, but it's a screenshot from FSX - amazing.

FSX and Chicago Meigs Field

I fly a Boeing 737 from Manchester and in front of me on the screen is an airport full of activity, ground services and other aircraft arriving and departing. The aircraft traffic is the same as real life airline schedules along with actual weather downloaded in real time from the Met Office. Air traffic control in real time along with communication with the co-pilot and cabin crew completes the immersive environment. After take-off I am greeted with full photographic scenery of the UK.

One thing that tended to break the spell was using the mouse to click and operate the controls on the screen, so I purchased an autopilot from a shop online, connected it up and the action of turning a knob or flicking a switch that made things happen on the screen was pure magic.

A 737 Autopilot

The internet contains literally thousands of accounts of people building full size cockpits so after a great deal of research and asking questions of these people in the online forums I took the plunge and started the construction of my very own Boeing 737NGX cockpit.

The Dream (one day)

With the house on the market and our intention of moving I had to make room in the workshop for boxes of household stuff ready for the move. Much of my workshop tools had to be packed leaving me to twiddle my thumbs, so with the Britannia on hold I made room for the main instrument panel (MIP) of the cockpit.

The computer was upgraded to a 'beast' capable of running all the hardware and software required by the simulator:-

- Intel Core i7-980X Extreme Edition 3.33 GHz (overclocked to 4.4Ghz) Six Core (12 Thread) water cooled CPU
- 1 x Nvidia GeForce GTX 980 x 4Gb (To run three 4k monitors for the outside views)
- 2 x Nvidia GeForce GTX 960 x 4Gb (To run the 6 MIP display monitors and 2 feeds to the Flight Management Computer displays)

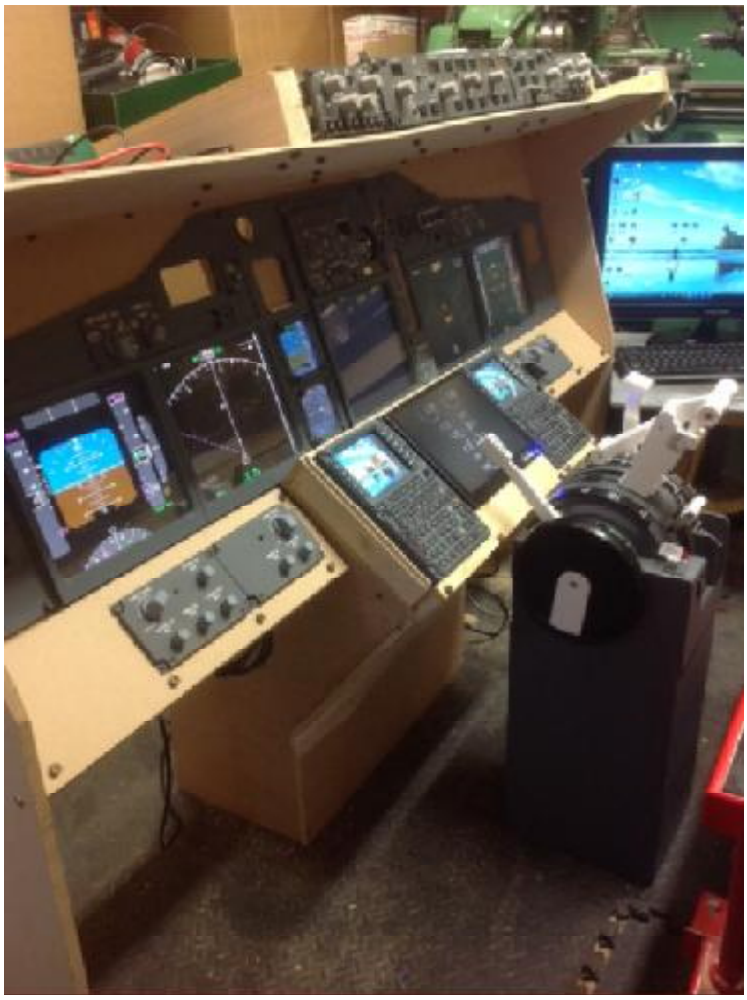
The three new graphics cards give a total of 15 possible display outputs if required, yet draw less power than my old graphics card - amazing.

A number of solid state drives are used to run everything from Windows 10, FSX, REX weather engine, aircraft traffic and the whole of the UK photographic scenery library.

The FSX flight simulator is used to provide the link to the weather, traffic, photographic scenery software and the avionics software suite called Prosim737 which simulates the real aircraft systems and flight model and is the link to the hardware screens, knobs and switches.

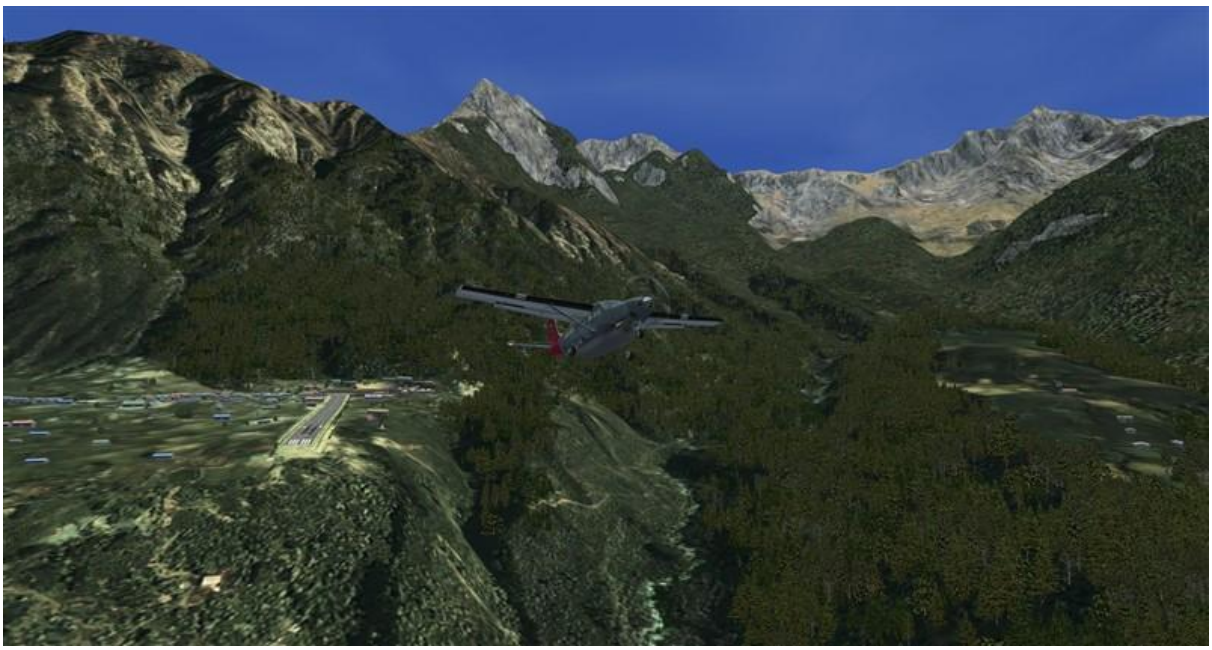
The cockpit now has the six main display panels along with the two flight computers up and running with the simulator and the next step is to start connecting all the switches and knobs to Prosim.

It all has to be painted to remove the MDF and plywood ‘effect’, and seats to be added along with the pedestal and overhead system panels when funds permit.



I can fly realistically anywhere in the world from Manchester to Luckla in Nepal, to Singapore, Australia and New Zealand. The scenery flying into Queenstown is breathtaking and the arrival and departure into Luckla is hair-raising to say the least.

Manchester Airport



Luckla in Nepal

Once moved I will be back on the Britannia with about a year of my impending retirement required to finish it.

I hope the above has given you a glimpse of what people can ‘create’ in their workshops.

If you are interested in having a go even in a small way, just contact me, and I will be happy to help in any way I can. In fact come and have a look?

Cheers

Mike Swift

Pictures of Cinderbarrow from the air may appear in the next edition. *Editor.*

Kendal College ‘Makerspace’

If you know what you are doing and have parts to make that are a little too big for your own machines then this may be a great opportunity. This information was gathered from the Kendal College website and a discussion with Alex Bergus.

Kendal College engineering department is inviting the community to get creative as it opens up its facilities in a new 'makerspace'.

The equipment will be free to use on Monday evenings from February 29 until the end of June 2016. Just turn up between 6.00 and 8.30pm.

Alex Bergus, an engineering tutor at the College, came up with the idea and will be leading the project.

"It's not going to be a teaching thing," he said. "It's an option for people who want to make things to come and have a go.

"We have these big windows where everybody can see in, so we might as well have a system where people can come in and use the equipment"

The makerspace will give people the opportunity to use industry-standard equipment to pursue their own ideas, including 3D modelling software and printers, CNC mills and lathes, robotics state-of-the-art computer software.

People having the freedom to do whatever they want is central to the idea of the makerspace.

Mr Bergus, who was technical director of Primasonics in Penrith before he started lecturing two years ago, said: "People can do art projects, make a bit for their motorbike or build the prototype for an idea they want to take on Dragon's Den. I'm not bothered. As long as it's not weapons or drugs paraphernalia, it's fine. If you have an idea, come and make it and then go off and do something fantastic with that idea."

The makerspace will be open for over 16s, with the potential for the minimum age to be reduced in the future. It will run on a drop-in system to begin with, with no need to sign up.

See more at: http://www.kendal.ac.uk/about-us/news-and-events/news/engineering-department-to-open-up-makerspace/#sthash.7hUPkdLY.dpuf

So far there have been about ten people attending most Mondays with a maximum possible of twenty. Take your own materials or pay for them and contribute to tool wear!

Machines and equipment include CNC lathe and mill, 3D printer, Solidworks and MasterCAM, 2 Gates mills, 8 Harrison lathes, Emco lathe etc.

Mr Bergus hopes to run a similar session during term time from September.

Events beyond Cinderbarrow

Carlisle and District Model Engineering Society

This year is the 80th Anniversary of the CDMES. To celebrate the occasion the Club's annual open day is to be held on Saturday June 11th 2016 at Upperby Park. To share our celebrations members from other Model Engineering organisations are cordially invited to attend along with their locomotives when a festival of 'Running' will hopefully take place.

You and your locomotives, whether steam or electric powered, will be most welcome. Please remember that a current membership card for your own club, along with a valid boiler certificate, will be required if you wish to demonstrate your steam locomotive's capabilities. Please reply by 31st May if interested.

With Best Wishes

M. W. Hodgkinson (on behalf of CDMES) mhn@btinternet.com

2016 Stephenson Memorial Miniature Locomotive Association locomotive efficiency trials

South Durham Society of Model Engineers have kindly agreed to host the event at their railway at Hurworth Grange near Darlington on Sunday 11th September 2016, and if history is anything to go by we should have an excellent day with plenty of locos, good weather and heaps of South Durham hospitality. Please remember to keep September 11th clear so you can attend as a competitor, steward or spectator - all are welcome.

Entries will be invited later this year, probably in July in the format introduced two years ago, where competitors will complete an entry form and return it with a fee of £2.00 to me. Places will be allocated on a first come basis to four each of 3½, 5, and 7¼ inch gauge steam locomotives. Any places not taken up will be allocated to the earliest received entries not accepted in the first allocation, regardless of gauge.

If you wish to enter and not received an e-mail please contact Eddie Gibbons, Secretary SMMLA eddyg.52a@btopenworld.com

Running Royal Scot models of 2 ½", 3 ½", 5" and 7 ¼" gauge, with an exhibition of other scales and part built locomotives.

If you wish to submit your engine to run, be part of the exhibition or if you have any questions, please email:
RoyalScotevent@outlook.com
Exhibitor camping available upon request.

MODEL ENGINEERING SOCIETY LTD
RUGBY
RVR

Rugby Model Engineering Society
Onley Lane, Rugby, CV22 5QD
www.rugbymes.co.uk

9th- 10th July
10:00- 17:00

You are welcomed to our special commemorative event, to mark 50 years since the last Royal Scot was withdrawn.

Free admission.

Northern Association of Model Engineers Rally

DSMEE 80th Anniversary Celebration

June Rally 2016

You are cordially invited to attend the 2016 NAME Rally to be held on the 24th, 25th & 26th June at the Derby Society of Model & Experimental Engineers. This event also celebrates the 80th Anniversary of the Club. This event is limited to NAME Members only – but non-affiliated

Members are welcome to attend any of our other open days or by special arrangement (see the DSMEE Events page on our website). The event is open to railway locomotives, stationary engines/static exhibits and road locomotives (although the availability of space on-site to move around will be very limited – but for road registered visitors, there is a good pathway alongside the main road just outside the site. .

The track is a combined $3^1/_2$" and 5" ground level only layout with many interesting features (there are no $7^1/_4$" gauge facilities). The circuit is approximately 1600ft long with some route options. Due to the use of numerous points, it is essential that the ME standard wheel back-to-back dimension of $4^{11}/_{16}$" is observed, although a minimum of $4^5/_8$" is generally tolerable. The DSMEE track is located near Morley Hayes, Derbyshire.

The event will be informal – though the following itinerary is planned:

Friday: Afternoon running till late. Fish & Chip supper (or similar) Saturday: Morning start until late. Pie & Peas supper (or similar) Sunday: Morning start until late afternoon.

Tea & coffee will be available throughout each day.

Breakfast & lunch cobs will be available for a nominal charge.

The track and site are not generally open to the public, and running during this event will be limited, therefore, to known attendees. Further details, together with an application form (to establish numbers for running and catering purposes) are now available – please e-mail the Rally Organiser at NAMEWebsiteEditor@gmail.com A limited number of caravan or motorhome spaces will be available on a first-come-first-served basis.

LMMES Notices

LMMES

CINDERBARROW RAILWAY

GUIDE FOR STATION STAFF

In addition to standard site and running rules

PRIORITIES ARE

1. **Safety of Public and Staff by awareness of ~**
   - a. Physical dangers. (cf. Health & Safety Document.)
   - b. C.R.B. requirements.
   - c. Age limit requirements.
   - d. Operational procedures.
2. **Comfort and enjoyment for passengers requiring their ~**
   - a. Orderly waiting and boarding.
   - b. Sensible behaviour on trains.

and our ~

- a. Attention to seating arrangements.
- b. Accomodating passengers with disabilities.

MOST IMPORTANTLY ~

AT ALL TIMES

front line staff must present the railway as a well run and efficient operation by their ~

A. Demeanour, B. Appearance and C. Language.

FOR SALE

Cosmo Arc 150 stick welder

+ Auto Dark Vari Shade Helmet

+ Pair of Gauntlets

+2.0mm and 2.50mm rods

Similar items advertised on the internet

for a total in the region of £72

Yours for only £50.

Genuine medical reason for the sale

Contact Malcolm Ford

tel. 015394 44726

tmford1@etherway.net

CINDERBARROW OPEN DAY 2nd JULY 2016

Always a great day. Please come and support this important event in our calendar when we open our gates to our neighbouring Northern Societies.

Help will be required with running the track, welcoming our guests and making sure we all have an enjoyable day. Offers of food for our renowned lunch for all participants will be much appreciated. It would be appreciated if offers of help could be made at or before the planning meeting for this event on 20th June.

Last date for submission of articles for the autumn newsletter is 30th September (possibly!)

Please note: Any comments or recommendations in this newsletter are not necessarily those of Lancaster and Morecambe MES Ltd management committee.