



THE NORTH STAR CHRONICLES – a newsletter primarily for the model railway fraternity

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Editorial

It is back to big trains this month in the form of a progress report on my railway in the garden.

The Puffing Adder Railway

At the outset it needs to be made clear this is a railway in the garden and not a garden railway which would be a very different animal. There are also many different approaches to the subject. This is the way I did it. Some valuable lessons are being learned which are shared in the hope they will be of use to fellow modellers.

Perhaps the most important of these is don't leave it too long before you start construction of the railway/railroad, particularly if the layout is at ground level. There are lots of jokes about aging and ability to bend down or more particularly get up again from ground level. The reality is, it is no joke. Knee pads which my daughter kindly gave me for my birthday may not be the most elegant devices but they do help with the process of operating at ground level (see photo overleaf).

Funnily enough, in my experience it is the top parts of one's body that take the strain when involved with building ground level layouts, in the form of shoulders and eyes. The former are used frequently to roll over and push up from sitting on the ground. And this is a frequent occurrence. Again in my experience, as long as you have knee pads the amount of punishment that your lower body takes is relatively low. More of this later.



The sartorial elegance of a tracklayer

It is a fact that building a model railway in virtually any scale and gauge involves compromises. I am a firm believer in use what you have got. This has resulted in the Puffing Adder Railway being devoid of scenery. Further, the layout is a simple circuit with one SM32 (coarse O gauge) passing siding.

Because it is designed just to run trains and mostly steam engines at that, the layout is flat with no hills. In my view this is far from ideal as hills add operating interest to layouts.

As far as the location is concerned, as reported last month essentially the track circumnavigates the area of grass at the rear of the house. However two areas of concrete are also incorporated – firstly at the base of the pool wall area and secondly in front of the veranda.



The section of the layout round the grass

Reverting to the use what you have got principle, the base for the track comprises (mainly) pre-existing concrete and bricks which in their former life were used as pavers. As will be seen from the photos, the bricks were laid along the edge of the grass. The layout then moves from the brick track base onto the (mainly) pre-existing concrete for a turning circle which final rejoins the brick after running along the edge of the veranda just outside the veranda door (at right in photo above).

With respect to curvature, if I had relied on a circle of track around the grass the radius would have been a generous 7 feet, but to add some sort of operating interest a decision was made to incorporate an area of concrete (right rear in photo above) which reduced the radius in the area concerned to just under 5 feet.

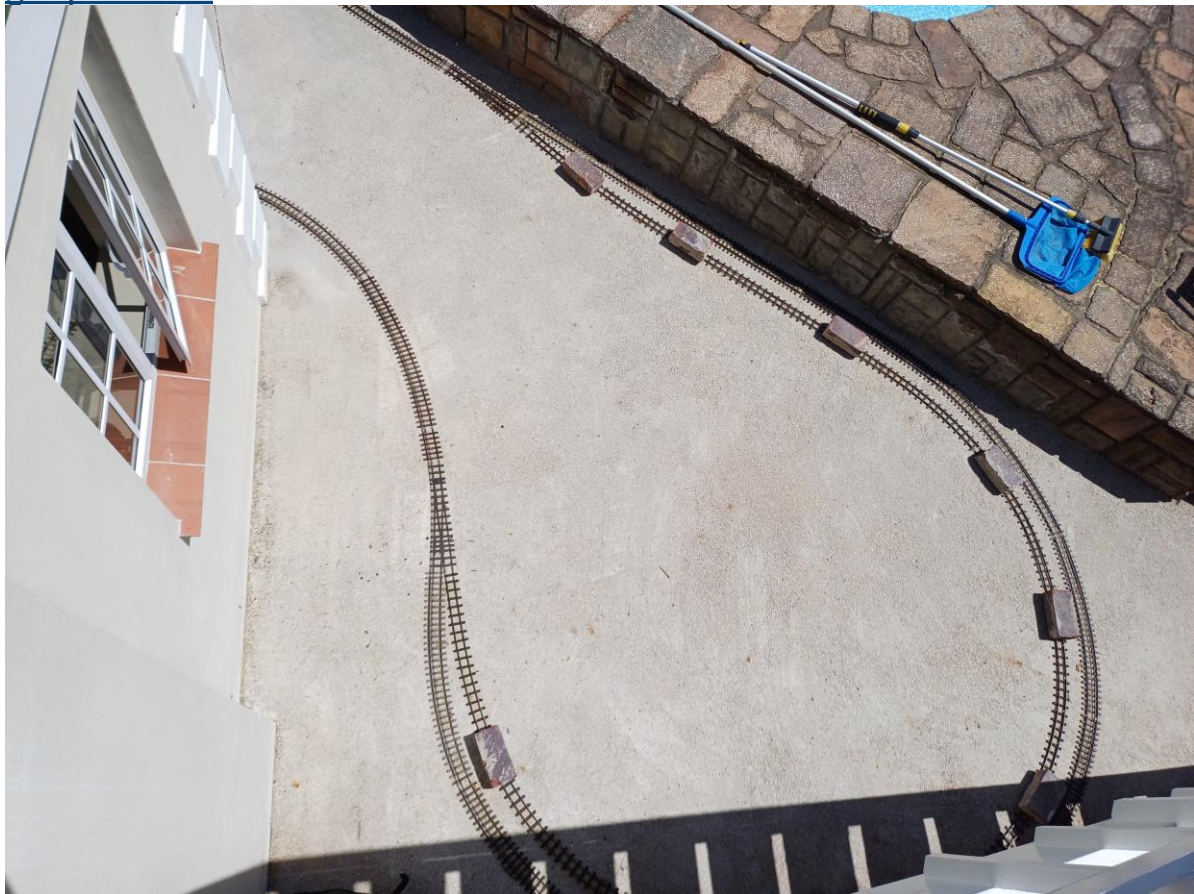
The track was used in a previous incarnation and comprises Tenmille gauge 1 sleepers into which Tenmille chairs have been installed. Code 200 nickel silver bullhead rail is inserted through the chairs. The process was described in NSC Volume 2 no 10 available on the website. This track arrangement gives the maximum 'bang for your buck'. Contrary to the naysayers, code 200 rail will accommodate all but the earliest LGB locos and rolling stock. In addition it is much cheaper than

LGB's code 332 rail and if not so robust is far superior from an aesthetic point of view. Best option is to look around for second hand rail and just import the sleepers.

The drawback of this approach is the points. I was fortunate to buy some gauge 1 Tenmille point kits when they were still available. While the parts for the kits are still available this would involve a bit of 'fiddling'.

The situation becomes even more complicated when you have to convert the gauge 1 points for dual gauge running. I managed this for the main line with the North Star Railway but the relevant branch could only accommodate one gauge.

In the case of the Puffing Adder Line, the through lines accommodate both gauge 1 (45mm track gauge) and 16mm gauge (track gauge 32mm) but only 32mm gauge equipment can move onto the single passing loop of the latter. This was achieved using a Peco SM32 point as a base. A third rail was added thereto so that the main line could be traversed by both gauges but only 32mm locos could enter the passing loop. The process of converting the Peco points for dual gauge running was covered in NSC Volume 8 no 12 and has also been described by Chris Cairns (no relation) in: <https://www.gardenrails.org/forum/viewtopic.php?t=12333> in March 2019 and Tony Bird in : [https://gardenrails.org/forum/viewtopic ... ge#p124650](https://gardenrails.org/forum/viewtopic...ge#p124650)



Birds eye view of the turning circle

The inner (32mm gauge passing loop) is not yet operational. Bricks are being used to hold the joints in place until a decision is made whether or not to solder them.

A word on joining the track is appropriate. It has to be recalled that the rail concerned has been through many previous incarnations. It was last used on the North Star Railway line and incidently the plastic sleepers also used then had survived the African sun. The same sun had baked the conducting lubricant to the rail and to ensure conductivity was still satisfactory and that the solder had some untarnished brass to which to adhere, the ends of the rail had to be polished but I am getting ahead of myself.

First step is to clart yourself with sunscreen. This may not be such a big problem for those in the northern hemishere but sunscreen and a hat are de rigeur in the southern hemispere at this time of year.

Second, one has to trim the ends of rail especially when laying curves. I use a battery powered Dremel for this which has the habit of going flat at crucial times like yesterday when I was trying to get the job finished.

Third, clean the old lubricating material from the end of the rail which you wish to solder.

Fourth, add a small dab of new conductive lubricating oil to the ends of all the rails.

Fifth, having cleaned the rails to make sure there is no conductive lubricant obscuring the polished brass, add flux to both pieces of rail and the fishplate.

Sixth, solder the tracks together covering the fishplate with solder in the process.

This approach will ensure good electrical conductivity and that the curves will 'hold' their shape.

Sadly, the process also involves a fair amount of physical punishment.

Having to constantly revert to a vertical position from one peering at track while resting on one's knees normally requires rolling over so that arms can assist with reaching the vertical position. In the process, in my experience shoulders take a lot of strain.

Finally on track while there is not much doubt it would benefit from being ballasted particularly if the ballast was used to smooth out the bumps in the concrete caused by the small stones on the surface. While it would also be possible to smooth out the surface by using a grinder, management permission would never be obtained for that. The result is the track is by no means sitting on a flat base. However there is no intention to sort out that issue by ballasting the track for example. I think enough visits to Ben Doon have been made for this life.

There are two bridges on the line. One, the Baker bridge, (named after its builder – the late Don Baker) was added because it was cluttering up the garage. As can be seen in the photo below it is a riveted girder bridge.



A second bridge – the bridge over the river - Wye? was also added.



Bridge Over the River - Wye? LGB Arched bridge catalogue no 50610. Current price Euros229 plus minus R4800 excluding shipping and import taxes etc! No wonder the hobby is under pressure.

This was also cluttering up the garage but there was a second more important reason which explains its presence on the Puffing Adder Line. It was incorporated because of the difficulty in accomodating the track around the bay window of the house while staying on the brick. Ok I know ,I know, another solution would have been to widen the brick path but trackage rights could not be obtained for this purpose. The photograph tells the story better than words.

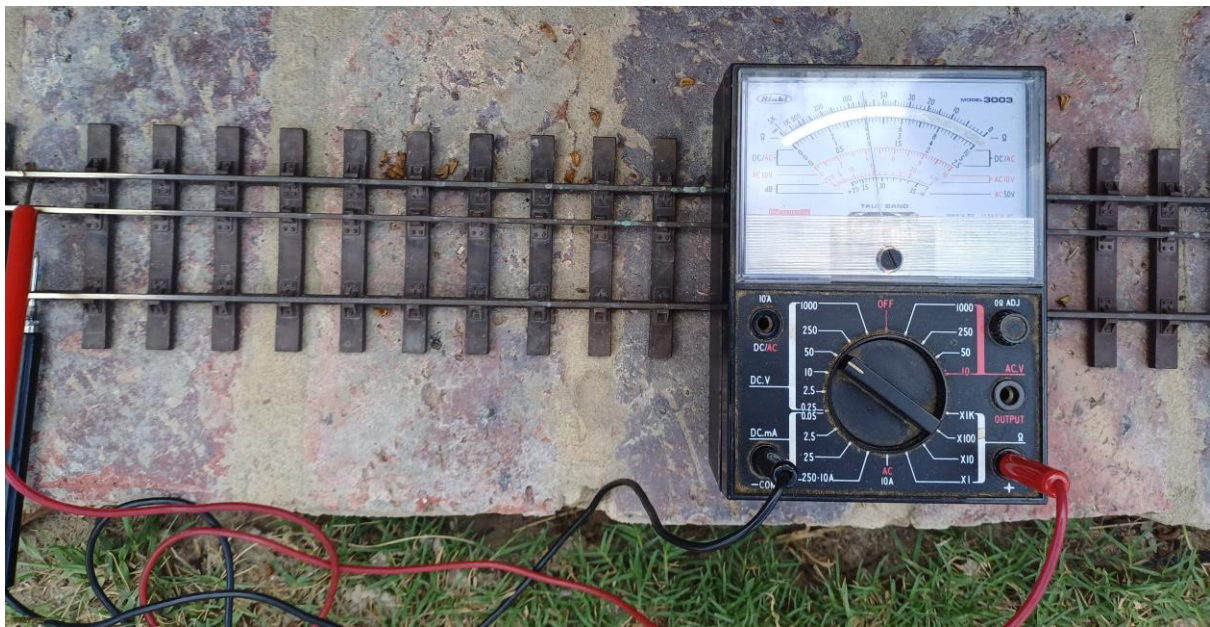
With respect to the electrics, a more comprehensive article on the subject will feature at some stage but in the meantime the following short comment will perhaps suffice.

I have often read in 'how to do it books' that if you are going to run locos powered from the track, it is necessary to employ track feeders at regular intervals. This is particularly the case with DCC. The Puffing Adder Railway is approximately 65 metres long and at the moment is running on DC. Power transmission depends on the rail joiners. As noted above these have conductive lubricant attached to the ends of the rails being joined.

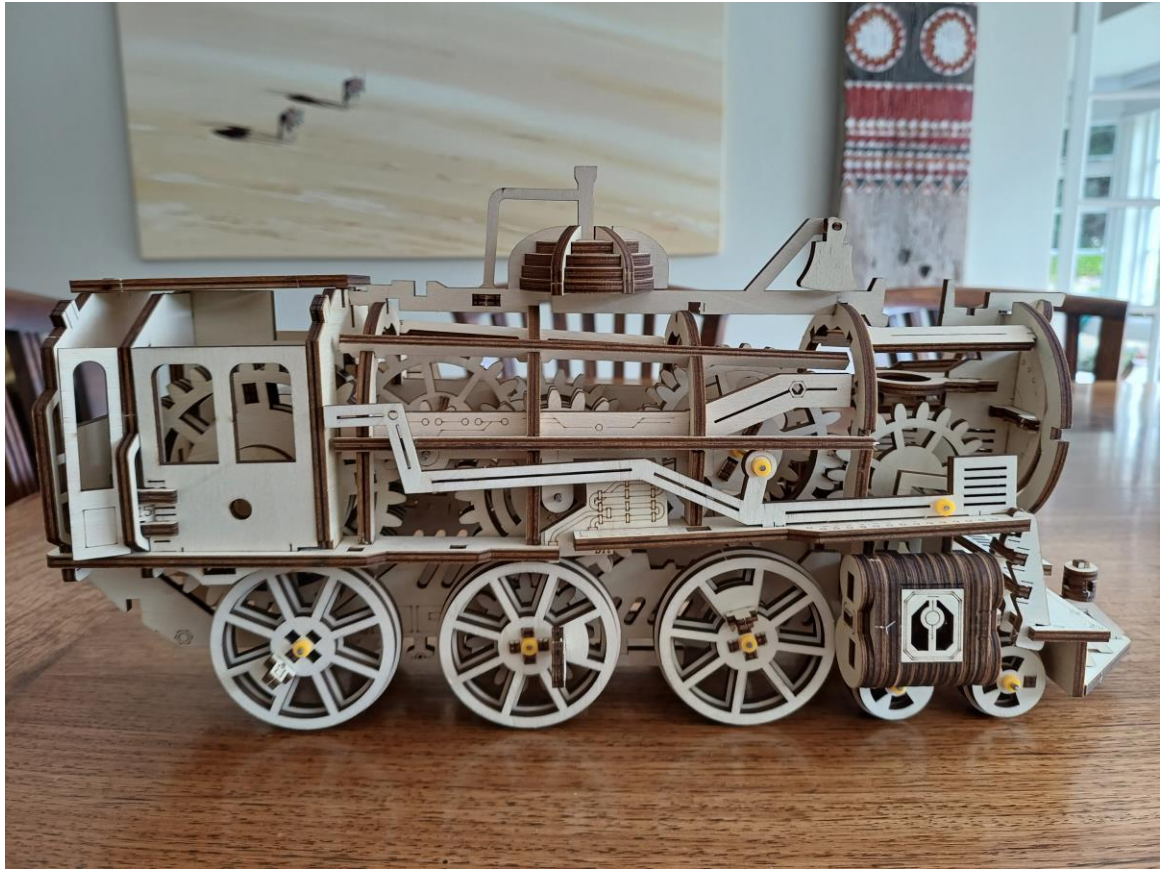


Regret I can't remember from whom I bought my Conductive Lubricant but at \$14.99 plus shipping don't think I will be using the product when the current box runs out. Fortunately, there are plenty of alternatives available locally at a considerably cheaper price.

To prove the point, just under 20 volts is supplied by the DC power source when the throttle is fully opened. Half way around the track and with power only being fed from one direction the meter reading is as below.



The moral of the story is that there is no voltage drop whatsoever half way around the track and with power being fed from just one direction. Finally, on a different tack I am delighted to report that after over 50 years of marriage my wife is finally 'in' to trains. Perhaps not exactly what I would have chosen – wooden body powered by clockwork but you have to start somewhere! The loco concerned is still a work in progress as the photo overleaf will attest.



The end