

Issue 14

Christmas 2021

[Contents on page 2](#)

# The L.B.& S.C.R. Modellers' Digest

A journal of the Brighton Circle, for those modelling the "Brighton" in all scales and gauges.



Copyright of all material included in this Digest remains the property of the respective author ©2021.

## Contents

	Page
A Livestock Train for Hadlow Cross	John Ritter <a href="#">5</a>
Lockdown Progress - a Loco Shed	Mike Waldron <a href="#">12</a>
Virtual Blatchington 6	<a href="#">34</a>
“We’re gonna build a wall”	Chris Cox <a href="#">35</a>
Central Croydon	Alan Budgen <a href="#">44</a>
Virtual Blatchington 7	<a href="#">48</a>
The Bodmer Single	Chris Cox <a href="#">49</a>
Early Brighton Carriages	Nicholas Pryor <a href="#">52</a>
Signalling at Lewes	Dave Searle <a href="#">57</a>
Slinfold	Malcolm Robinson <a href="#">60</a>
The Geography of Brighton Loco Names	Nick Holliday <a href="#">62</a>

## Contents - continued

	Page
Lewes in P4 - part 2	<a href="#">65</a>
Lewes Road in N Gauge	<a href="#">74</a>
4 Wheeled Carriages in HO Scale	<a href="#">96</a>
New Buildings at Ashcombe Down	<a href="#">105</a>
Bishopsgate by Bernard Miller	<a href="#">115</a>
Stroudley Park - An ex LBSCR Urban Terminus	<a href="#">120</a>
Interesting Trackwork for Modellers	<a href="#">125</a>
4mm Scale Wagons	<a href="#">129</a>
Building a Gauge 1 Billinton Carriage in Wood	<a href="#">131</a>
A Three Position Signal Demonstrator	<a href="#">143</a>
New Products	<a href="#">150</a>

# Editorial

This edition contains some more superb modelling, which I hope will be of interest well beyond the boundaries of those who model the Brighton. As always, there is much that is generic about research and modelling techniques, that is applicable much more widely.

I am particularly pleased to welcome three new authors to the Digest, each of whom brings his own individual approach to Brighton modelling. My thanks to Malcolm Robinson, Huw Evans and Ian Metcalfe.

A theme that has developed during lockdown has been the practice of meeting on Zoom. For a group like the Brighton Circle, with a geographically dispersed membership (including Australia and Canada), it has allowed members to have “face to face” meetings much more regularly than the traditional annual get together. Since the Circle’s modellers’ meeting took place at Blatchington Mill, the Zoom meetings have become known as Virtual Blatchingtons. Significantly, the Zoom meetings have taken on a life of their own, encouraging members to “show and tell” their work - which is, of course, much appreciated by the editor of the Digest, for whom this provides a useful source of new material!

Eric Gates

Modelling Steward, The Brighton Circle

[ericgates1310@gmail.com](mailto:ericgates1310@gmail.com)

[Return to contents page](#)

# A Livestock Train for Hadlow Cross

John Ritter

Following some discussion in the e-Group about the livery of early LBSCR goods vehicles, the editor of Modellers Digest requested an article on the subject. It is illustrated by some cattle wagons of the Stroudley era together with Craven brake No 93. I purchased five of a batch of these 7mm scale wagon kits produced by Tim Hughes for a group of Circle members. The focus of this article is the painting of them.

The one thing in common with all vehicles was the palette of colours I used, reflecting perhaps my early watercolour painting days. The procedure comprised a full coat of base colour followed by washes of dilute 'brews' for accentuating grooves, nooks and crannies, for adjusting the overall colour, and for dirtying up (weathering). The surface was then left level until dry. These washes were all slobbered on with a No 8 squirrel hair brush, and tidied up with a smaller dry brush.

Three points of clarification:

1. The description of "pale/light lavender grey". Some years ago I came across a BALM Dulux web site which stated that prior to the 1860s what was called lavender grey we now identify more accurately as bluish grey; the mauve tinge is a recent convention.
2. In our model makers' favour, the LBSCR goods stock colours were close to photographic grey-scale, giving us a fair degree of confidence that our painting efforts can match what those cameras saw back then.

3. Regarding 'passengers', Woodland Scenics O scale Hereford cows #2767 are 1/48th scale representations of modern-day large ones. They are close matches for smaller Victorian era beasts in 7mm scale, and small enough to fit inside Stroudley cattle wagons.



Sussex Reds loaded, and a thick spray of red brown.

Given all this,  
the palette I use  
is:

- Pale grey body colour. Tamiya spray AS-16 (USAF Light Grey) or Humbrol enamel 147 (Light Grey)

- Light grey body colour. Tamiya spray Primer

- Black. Humbrol 33 (matt black) plus 3ml No 62 (Leather) or No 113 (Rust)

- Roof white. Old off-white house undercoat. For lime wash, same, but contaminated with bits of muck, broken brush bristles, etc.

- Unpainted wood. Humbrol 110, plus No 29 (Dark earth) on floors.

- Sussex Red cows. Tamiya TS-1 Red brown all over, off-white muzzles etc. A very close match.



Sprayed with Tamiya undercoat, mist sprayed with USAF light grey, weathered with dark earth wash. Roof weathered with black and dark earth wash.

Assembly of the cattle wagon kits was mostly straight forward using cyano glue.

Noteworthy doings of mine include a 1mm thick brass sheet bonded to the styrene floor for extra weight and stiffness. The pre-formed brass roofs were covered with 0.4mm manilla board to achieve correct thickness and the suggestion of canvas. Lengths of PCB sleeper strip were used to stiffen the relatively soft resin mouldings at cant rail level and flat against the sides at belt rail level. Lengths of 0.7mm diam. piano wire were threaded through slots cut into the vertical posts and secured by dabs of glue to increase realism, side strength and stiffness. The bottom rail on one side moulding was cut lengthwise to release the sole bar, which was pivoted mid-point to a block secured to the floor to provide 3-point compensated suspension. Some of the sole bars were ground down by up to 1mm to give different ride heights to dispel the impression of 'five identical kits'. One of the w-iron castings was fettled to make it more accurate, and the face of the axle box was ground back to receive an etched overlay with LBSC on it. This was then used as a master for twenty new white metal castings. Wheels are Slater's S7, with the spokes and rims filed back to give a more spidery effect; some are open spoked and need to be replaced.

Wagon numbers are a sore point. I had finished the very difficult (for me) task of manipulating 40 transfers each 1.5mm high and matching random 3-D printed oval works plates from Ian MacCormac, when I discovered Mike King's accurate information on blocks of numbers. Compromise: I retained or changed the first numerals to 1 or 7, so they are now partly correct. Life is not long enough for anything more.



Loose-loaded Sussex Reds, mostly facing the same direction.

Reinforcing PCB strips are clearly seen greatly strengthening at cant rail level and flat against the belt rails. The 'window' bars are set into slots cut into the uprights.

The beautiful model of the ever-popular Craven brake van No 93 was scratch built for me by Colin Paul (paid for in Lagavulin currency). It arrived with a clean pale grey body, to which I applied successive washes of black, then blue and finally splotchy dark earth in my attempt to reproduce its decrepit condition in the well-known photograph.



Craven brake van No 93 converted for goods traffic.

In conclusion, these photographs were taken indoors over the course of two hours on two successive days, both bright but cloudy. The sun's transit cast different tinges on the models; the effect of artificial lighting is far more drastic. All in all, the results please me, and the cows haven't complained!



Photographs copyright John Ritter

[Return to contents page](#)

# Lockdown Progress at Littlehampton

By Mike Waldron

The virus lockdown last year meant for me that the only person who really had cause to go out was my wife, apart from the daily exercise walk!

Once the painting, garden furniture repairs and outstanding odd jobs had been completed, modelling time loomed large! My layout has languished for some while, but at last got some well overdue attention.

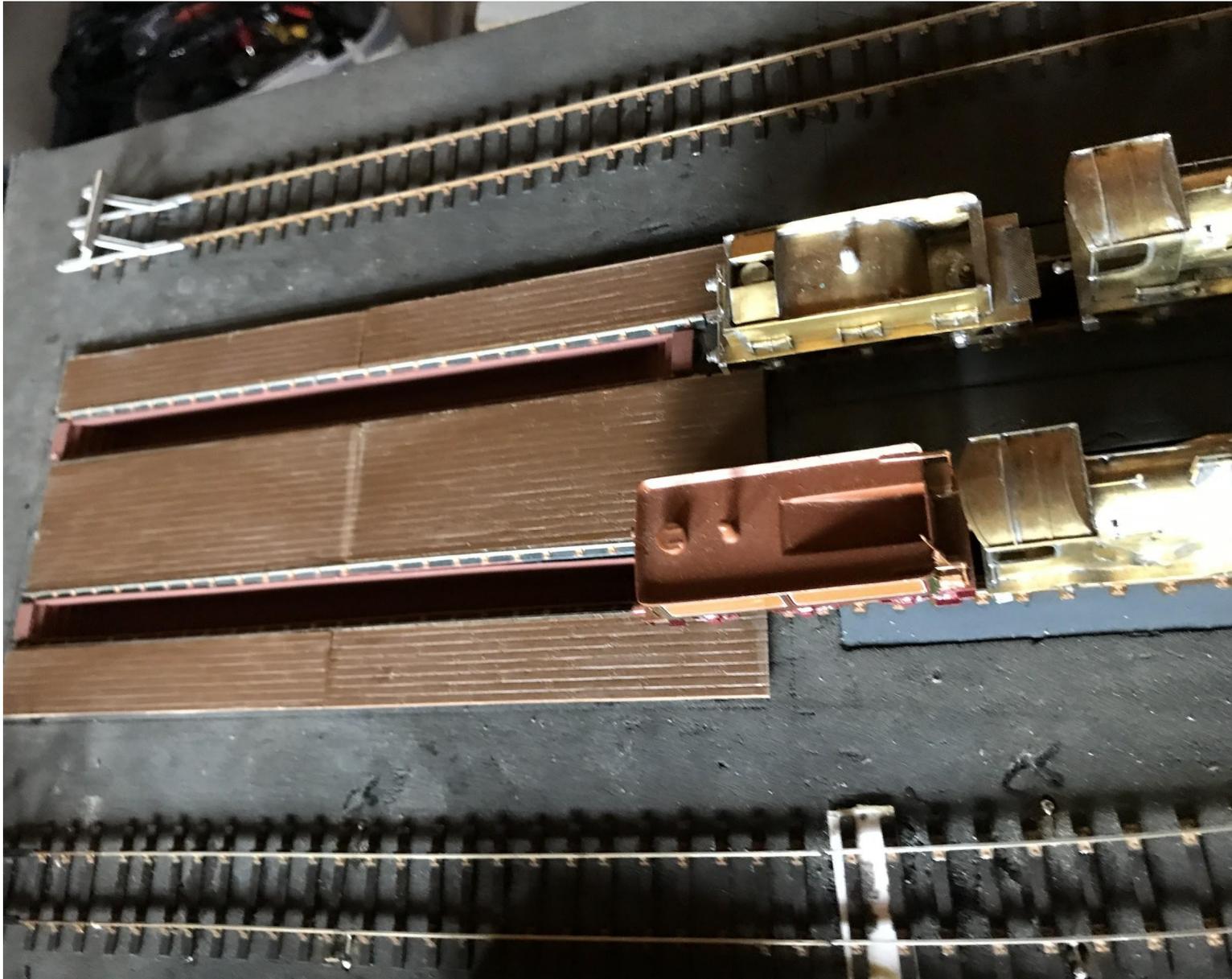
The site of my loco shed is the far corner of the cabin, and mostly out of reach from the operating area. After thinking about the need to mechanise my turntable I concluded that the only practical way forward was the drastic measure of jigsaw-cutting a triangular section out of the board. Thankfully little damage to the framing ensued, so it was brought indoors.

The scenario was simple. Until the turntable was in situ and working, I could not lay the approach track. Coupled with that, the shed itself needed inspection pits (à la Tunbridge Wells shed), both inside and immediately in front, as per Newhaven shed.

This meant that the shed location was also needed first - so it was vital that the baseboard was slotted and the track laid at that point first.

The shed building is an Lcut kit, produced slightly longer than the advertised two road version by arrangement with the proprietor, and has proved very good to build. Unfortunately, the brick pattern was not English bond, but it will be far enough away not to be noticed.

A couple of ' bays' in length were added (2 windows worth). Sadly there's a very slight discrepancy between the two sides. Annoyingly, the further (non-visible!) side has the slightly deeper laser cut brick pattern.



Here is the floor boarding. A way of disguising the joints is still under consideration, though, as the shed fits over the whole area, it won't be too visible anyway. Possibly some hose, or tools could be judiciously laying around. So far, I haven't yet glazed the windows. I originally was very sceptical as to whether they would be thin enough, but having painted them black, they visually recede, so they were used, rather than resorting to etched ones at further expense. They just need glazing...

The rear siding is a headshunt for the ash siding which runs away from the shed. Two further sidings are on this side of the shed, with a wooden coaling stage, which will sit between both sidings. A couple of short rakes of Stephenson Clarke wagons are under construction and will occupy one of the sidings, either as the present coal supply, or, alternatively, while the coal pile is replenished. Undecided as yet which to model.

The doors have yet to be attached permanently, as they are easily damaged, so probably will be a last task along with gutters and downpipes. Then the coal stage needs making and water cranes fitted.

Further view of the  
woodwork with the shed  
sited over it. The yard  
will be ballasted with the  
usual very fine ash(?) and  
loco yard mess up to the  
level of the rails.



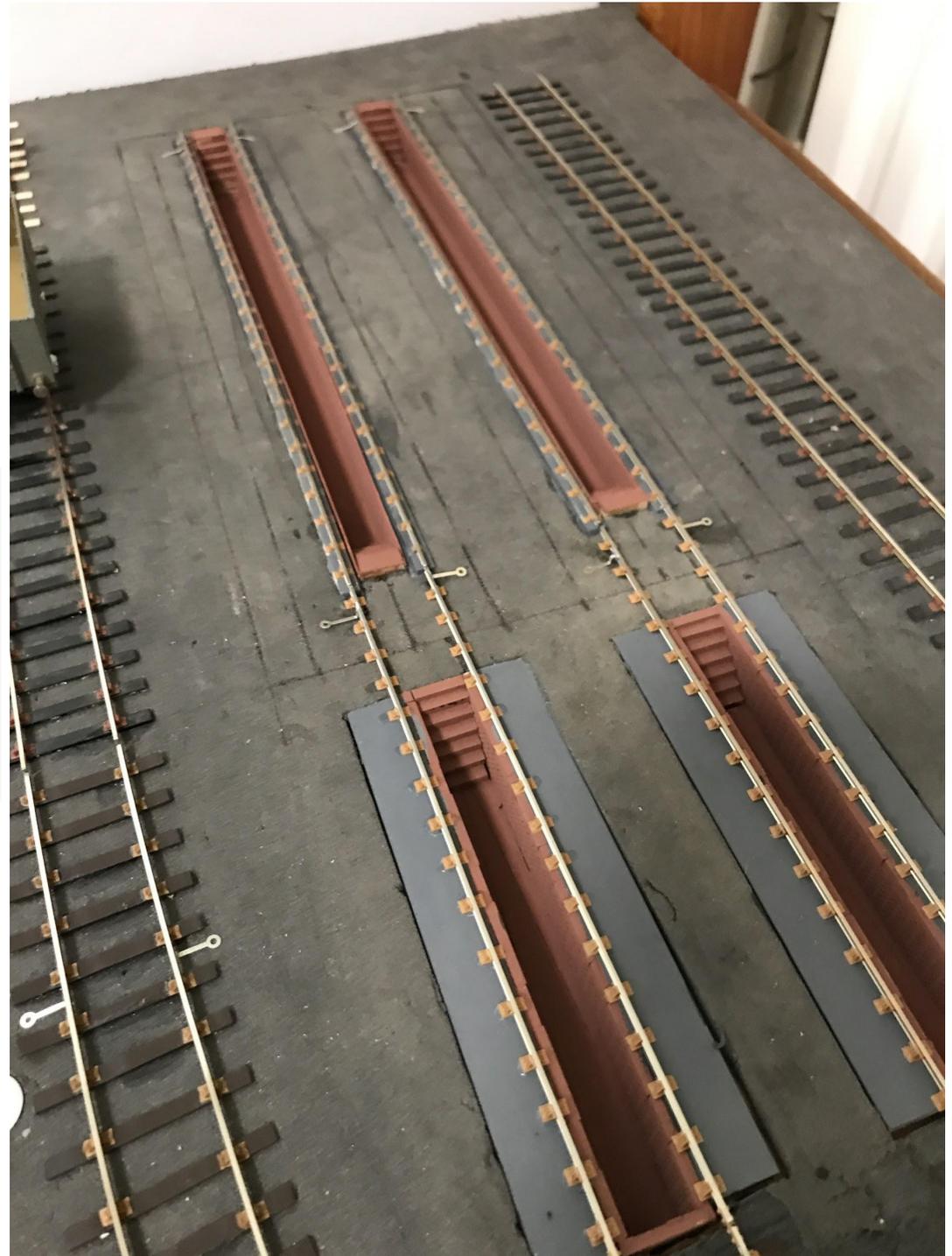


Shed with front inspection pits



**Lcut's inside detail.** Great ... but not seen in the corner once in situ...!

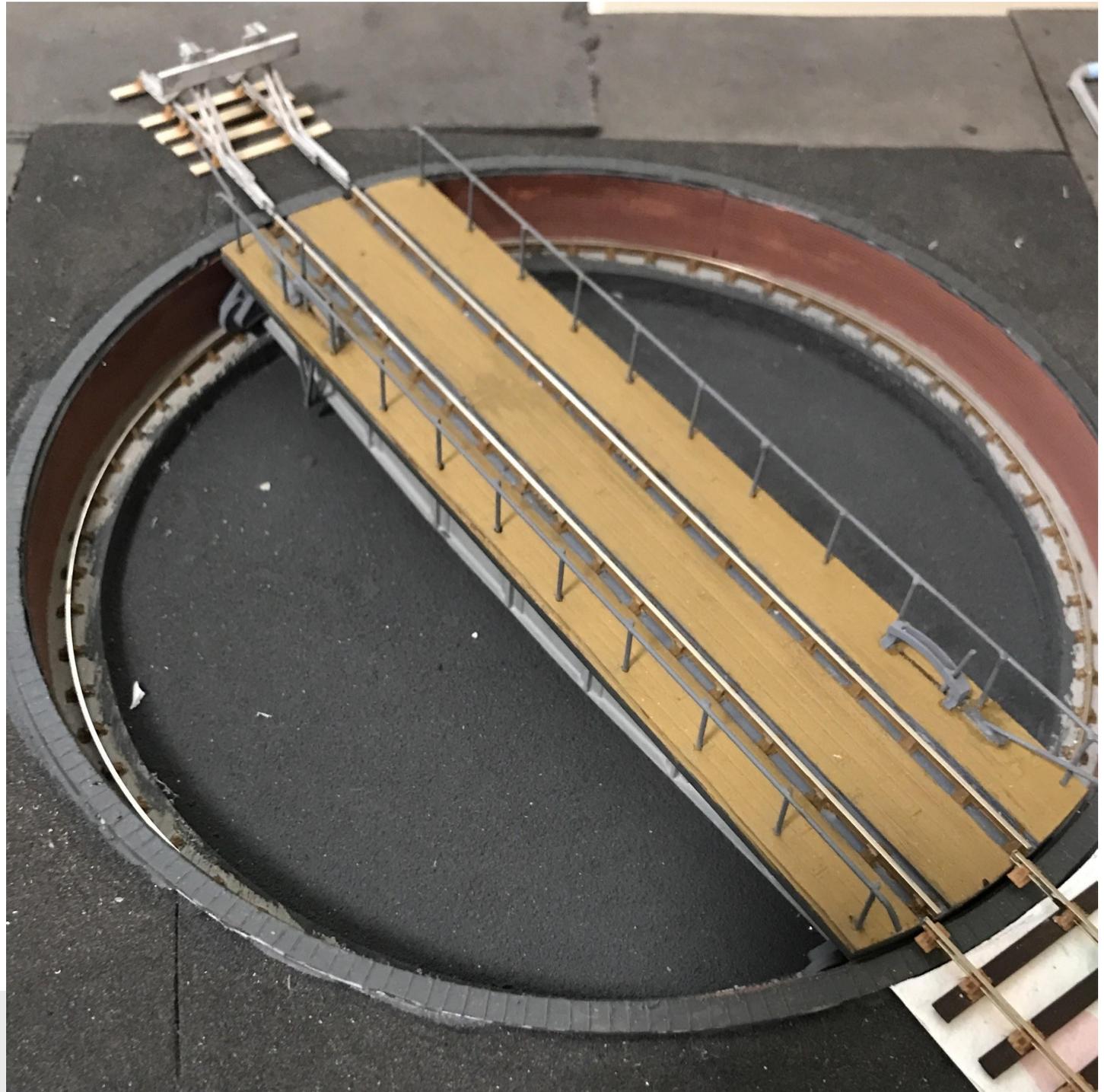
**Outside and in shed pits.** Wooden boarding by Wills to be laid between the inside rails. Note the Palatine models current droppers. They will all be hidden. Outside, the ballast will cover them.

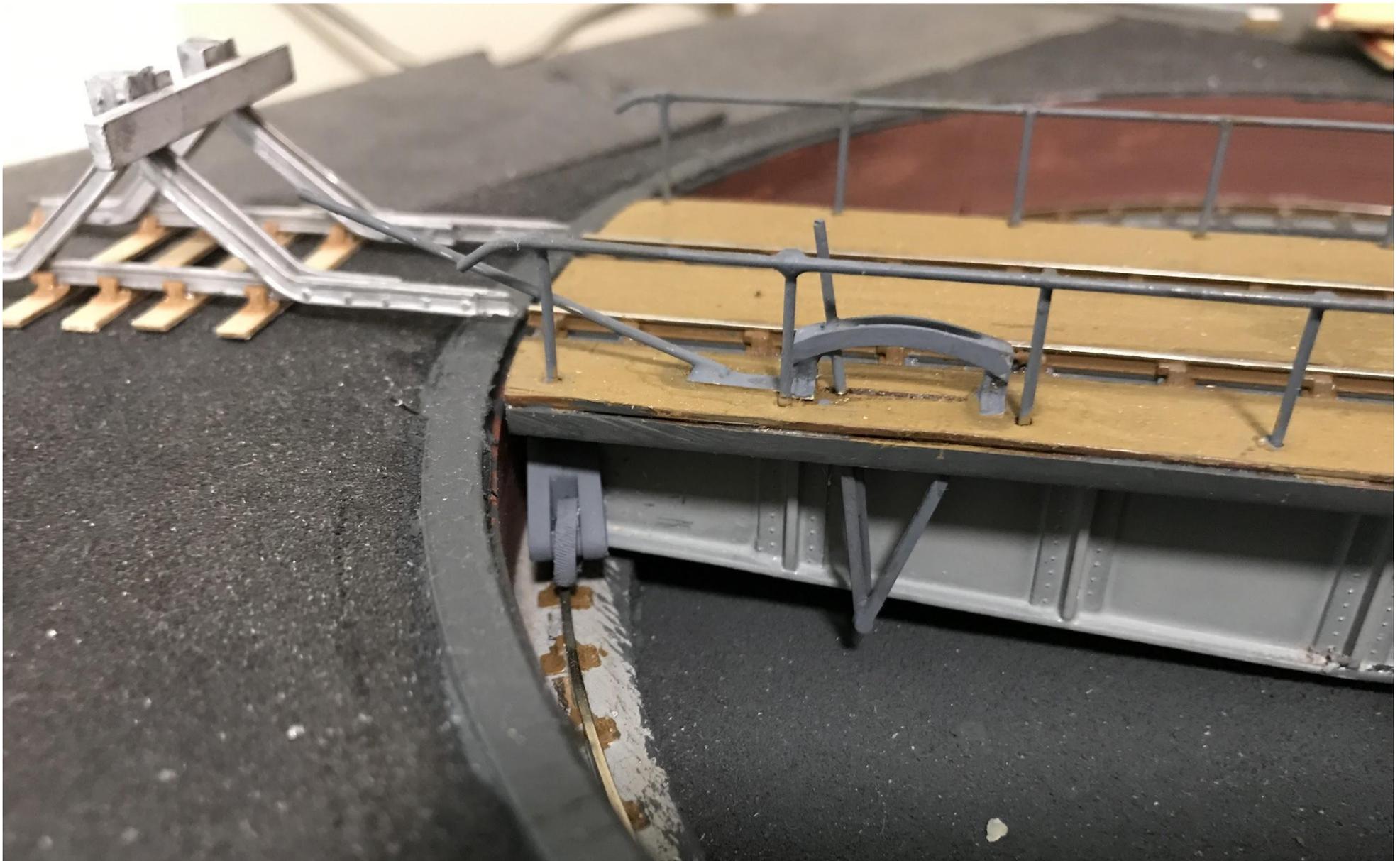


The turntable warrants a mention, in the way that I devised to allow adjustment of the second stopping point at  $180^{\circ}$  round from the other. The motor is a natty little Chinese one with an integral slow gearbox almost concentric with the motor. Speed is c30rpm - perhaps a little too fast, but a potentiometer will sort that.

The deck is double sided PCB, with the copper removed down a central line. At one end, the chairs and rail were cyano'd in place up to the centre, then the excess left until the mechanism can stop as accurately as possible at  $180^{\circ}$ . The other chairs and rail are then glued down, with plain gauges.

The turntable is in a separate, detachable sub-board.



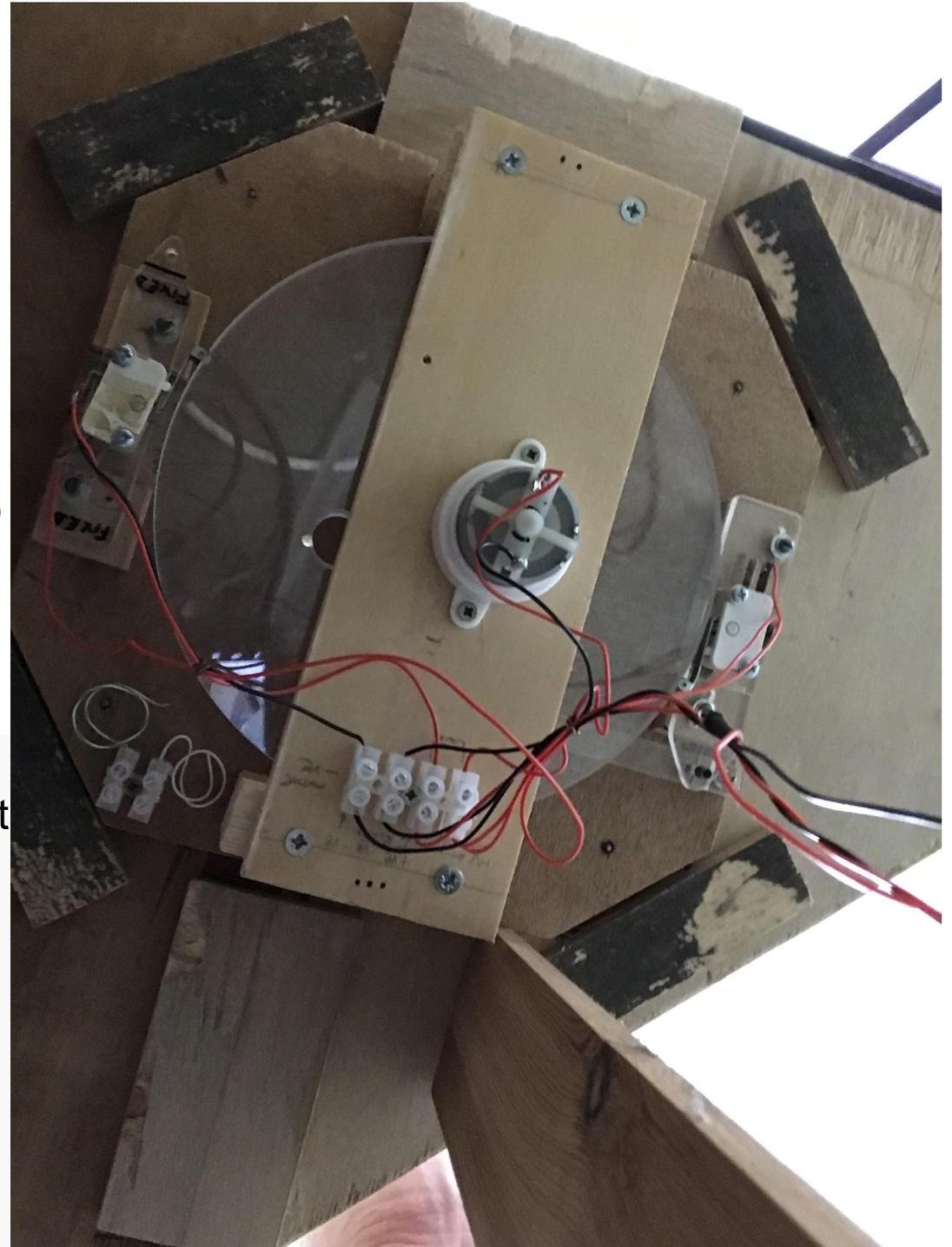


**Detail of push poles and locking lever.** Note functional rail beneath cosmetic wheel: functional in that two wipers under each end of the table pick up current from opposite halves of the circular rail.

The central shaft has a brass rod-in-tube arrangement with the tube Araldited in the well, and a Perspex disc a little smaller than the well fitted on the bottom of the shaft. There are two micro switches at 180° from each other, mounted on Perspex strips, with two slotted screws to allow adjustment. The datum one set up first had straight slots, but the second one had to be replaced, so it was equipped with curved milled slots concentric with the shaft, and a lever arrangement to push/pull it to advance and retard the no2 stopping position. This has worked well, and has to be operable when the shed board is reunited with the main baseboard.

**Underside of turntable.** Note the two micro switches on Perspex slide bases for adjustment of stop positions. Wiring circuit is dead simple. It runs from the power input lead, through one motor terminal, one micro switch and then the second, then back through the output lead.

There is a push-to-make button that goes across the circuit to activate the motor when the notch in the wheel has reached either switch roller, breaking the circuit.



All the track was duly constructed using Exactoscale parts - utilising one previously experimental B7 LH/B7 RH tandem turnout - and another similar, though not identical. Both of them were built using two superimposed part B7 templates, printed out using Templot, with interlaced sleepers! That was quite a challenge, especially as the turnouts become very wobbly when the template and double sided tape are removed, as there are only four long timbers across each crossing vee. All the rest is made up from 9' 0" sleepers!

There is a major issue with plastic track - and that is the tendency for the butanone solvent to soften the sleepers so much that, when it evaporates, the sleepers start to curl up!

I experimented with a previously badly made single slip using a hot air gun, which, as I am sure you can already imagine, proved to be rather excessive. The inevitable happened, and the sleepers sagged .... but at least it proved that it could be done with the requisite heat - from a small discarded hairdryer.

Recourse to the hairdryer proved to be the better method! A strip of something to support the ends as the upside down turnout sagged back to shape was necessary, thereby rendering the turnout usable again!

Once these had been located, the remaining track could be 'blended into the location', so to speak. This is not the Norman Solomon-recommended procedure, as he maintains that it is not feasible to add individual items of track to give a prototypically flowing formation. However, the traditional skill of 'fitting' was applied, filing minute amounts off one rail end at a time, and then offering it back up to the adjoining piece, and spying it in the small mirror - his weapon of choice to ensure it looks good and smoothly flowing from the driver's view. It reminds me of the late guru Mike Sharman's adage - "If it looks right it probably is right"!

All the crossings are bonded with small strips of nickel silver across the undersides of the vees and check rails, and the stock and closure rails are similarly treated with tinned copper wire. My biggest complaint with track building is the variation in the dimensions of gauges of different manufacturers. I initially made my own from brass washers parted off in the lathe and drilled brass rod, painstakingly turning them to the exact sizes stated in the S4 standards literature.

Subsequent purchases, in the interests of accuracy (!) from Exactoscale, C&L and S4 stores have all proved to vary very slightly, which, under the Scalefour edict of “getting it all right”, is rather annoying! I should have trusted my own work.

So, with varying results of crossing accuracy, resort has had to be made to the knife file, to remove offending projections that hinder smooth progress through the vees and check rails - invariably vees that are not quite in line. In fact this is, I believe, the most difficult area to jig and gauge amply, despite relevant gauges, and here, in my opinion, the Brooke Smith ply and rivet methods scores most highly,

I just haven't got the patience to fiddle around with soldering all those rivets to make bomb-proof track, and then put cosmetic chairs over them, when you can just fiddle once with the tiny Exactoscale chairs!

Indeed, a thin knife needle file, with the teeth ground off one side, is a very handy beast. Only one vee had to be replaced ... quite a challenge, but not impossible, when the rest of the tandem turnout is already laid!

All track was then carefully laid using a novel arrangement: Cyano!

Let me explain. My preferred method of ballasting is the Solomon all-at-one-go method - i.e. get it all sorted, then index the turnout operation rod slots, and glue, drop the track on and then ballast while still wet. However, this could not happen in this instance, as turntable, shed roads and two tandem turnouts all had to be laid at the same time as two other turnouts....! Clearly not doable.

So I worked length by length, and tacked each length in place at each end only using cyano acrylate glue! It really grabs it quickly. Ballasting will have to take place after the turnout operating bars are put in place.

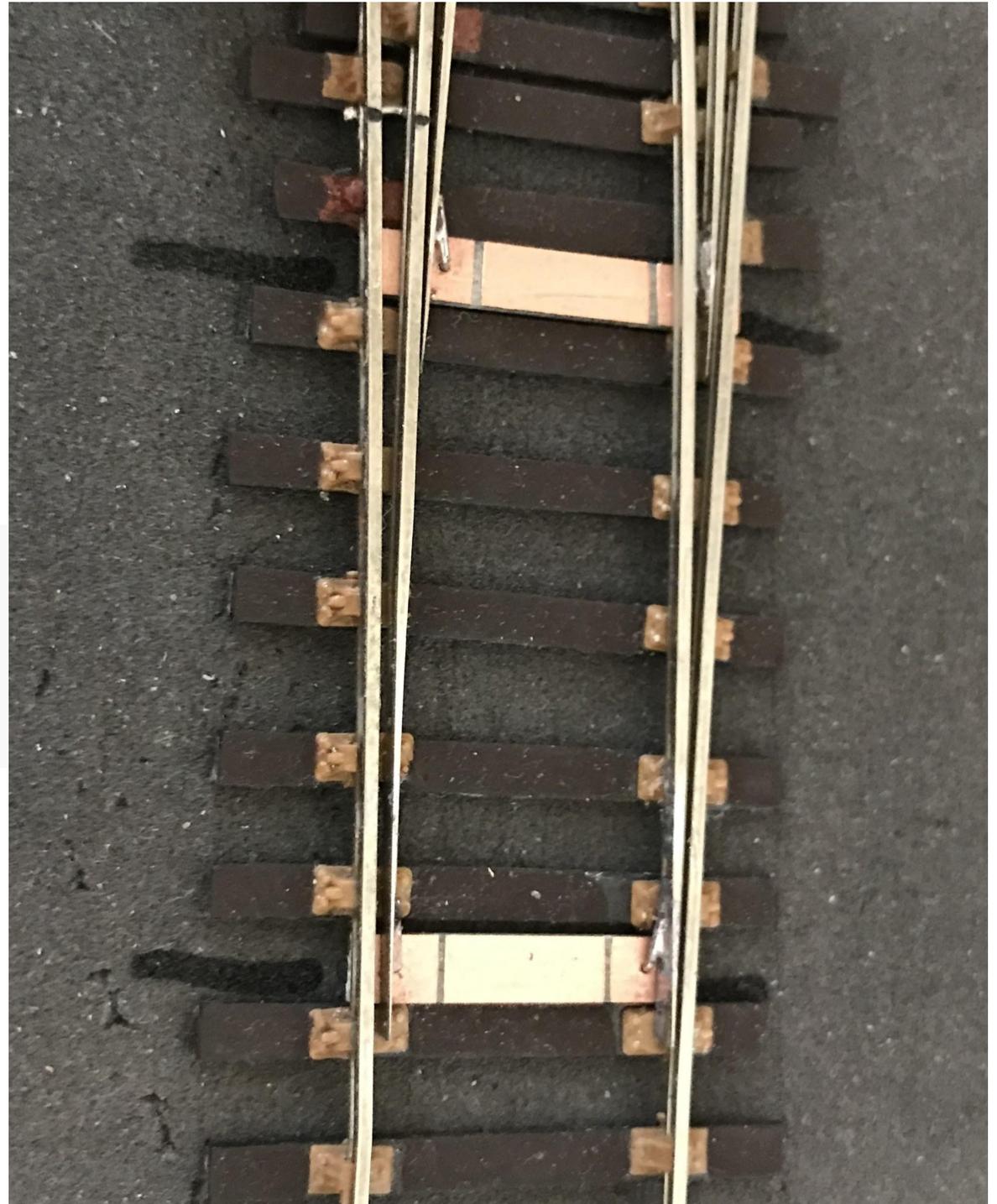
These tie bars are made from double sided PCB sleepers, with two holes drilled 16mm apart to take plated brass lace (L'il) pins pushed through and bent through 90<sup>0</sup>, and trimmed. These, as per Norman Solomon, are soldered to the turnout blades, using a hinged action.

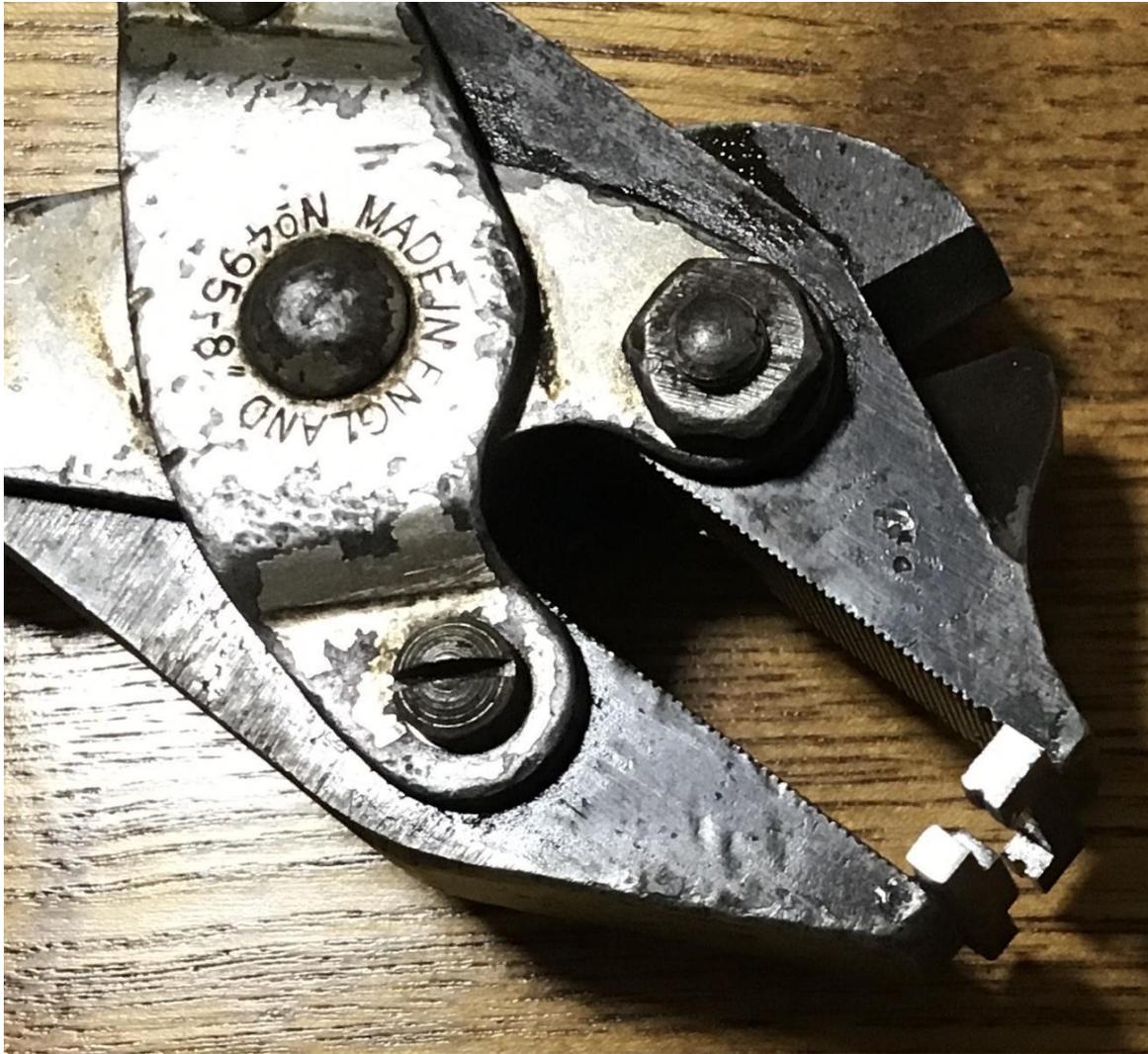
The operating 'sleeper' bar fills the space between the two actual sleepers, and a pair of dropped rods soldered to the central portion to represent the two bars in the prototype. The only prototypical irregularity is that the two rods should really be in different gaps either side of one sleeper, but, design as I may, I couldn't come up with a sensible method to reproduce that exactly.

The two rods have a very short length of plastic wire insulation on each end, and a wipe of PVA glue to fill any hole in the end, and contribute towards insulation from both blades. These are purely cosmetic, and the nickel silver rod from which they are made is bent using a small mild steel drop rod jig cyano'd to a pair of parallel pliers, to make tidily bent and identical pairs of bars.

The operating dropper rod is a length of K&S tube soldered to a washer, and Araldited up into the centre hole flush with the top layer, for mechanical linkage. A spot of solder completes the fixing on the top of the PCB.

**PCB blade tie bars, with indexing marks for drilling the board for the operating rods.** Yet to have the centre hole drilled for the rod.





The stretcher bar press



**End view** Press parts held in place by superglue!

This rod passes down through a pre-drilled 10mm drilled hole in the baseboard, with a square patch of surface 3mm thick foam cut out, and a replacement with a slot (through which the operating rod passes) glued in the depression.

Small stainless steel springs are screwed at one end to the underside of the baseboard, pulling the drop rod into the chosen 'open road' position. A heavy stretch-proof fishing line is used to pull the drop rod across, and thus change the road.

The usually 'open' road sometimes necessitates push rather than pull, so a tiny pulley is fitted on the other side of the turnout, and the spring on the near side instead. The cable moves in the opposite direction, and around the pulley, thus converting it into 'pull' for the lever frame, which by default gives a push from the lower ends of the lever, when 'pulled off' towards the operator, effectively letting the spring pull the turnout drop rod to choose the other road.

A micro switch to change the crossing polarity is also screwed under the baseboard, operated by the dropper rod arrangement. A second sleeper is soldered to the underside of the drop rod, together with a small bar to operate the micro switch (which may yet be a captive nut with a screw adjustment), as well as a return spring connector pin, and a loop for the cable from the lever frame to connect to. The lever frame (one of two home-made) has three cross bar positions at the bottom of each lever to give basic coarse adjustment, and a fine adjustment fitting has yet to be finalised, once it is all back in position on the main baseboard.

This method is also planned for signal operation, using etched De Bode-style bouncers (see MRJ) that I tagged on to 7mm kit etched sheets, which will be linked to the EBM operating units I designed to fit on the lower end of signal posts.

Now the board is being positioned back in the space from where it had been cut. The only annoyance is that it will have to be set about 4 - 6mm higher, as the turntable had to be braced

underneath to fit it in the separated board. That now needs hiding, and a run up preparing for the shed approach road from the station.

When the loco depot is finally in position, the rest of the station and its throat can be located.

**The products** in the background, with drilled and gapped PCB sleeper. L'il pins with 2 in place, one trimmed. The former rods will be soldered to both edges of the centre section of copper.



Signals - the product of early lockdown work



I dallied with one of the Manchester Model Railway Society technical articles on their website, on making metal wheels, to prepare two rear brass centred 3' 8" wheels for 18/21 0-4-2 No 467.

I had a P4 tyre form tool made up a few years ago at a local tool grinders, and produced two tyres 3' 8" diameter, and having made an indexing head a few years go, I was able to set it up with two slitting saws with a spacer, the width of the spokes, between to mill spokes on a brass cylinder.

Here, the two sets of spokes are being milled together.



The results, yet to be fettled.

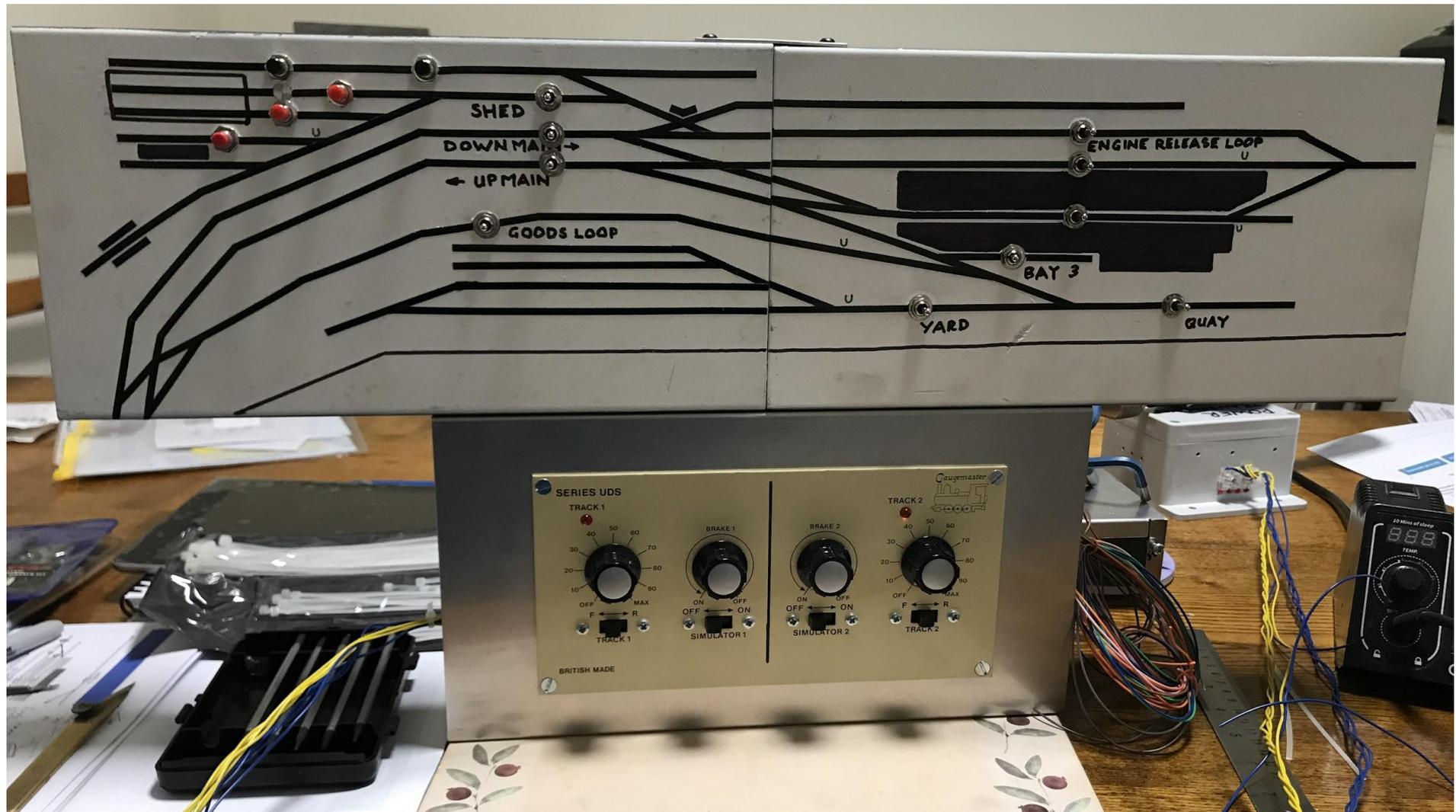
The two wheels, with bosses prepared as washers made from tube (drilled brass rod), ready for soldering along with the form-tool turned rims. The waste around the bosses was left from parting off, and is yet to be removed. The steel rims were tinned first, to ensure even soldering of the spoke 'spiders'.



The axle holes are 2.5mm. I'm not sure yet whether I'll stick to that dimension or up them to  $\frac{1}{8}$ ", which is really far too overscale for what is usually about 5"- 6" or so. It will have split axles and frames in due course.

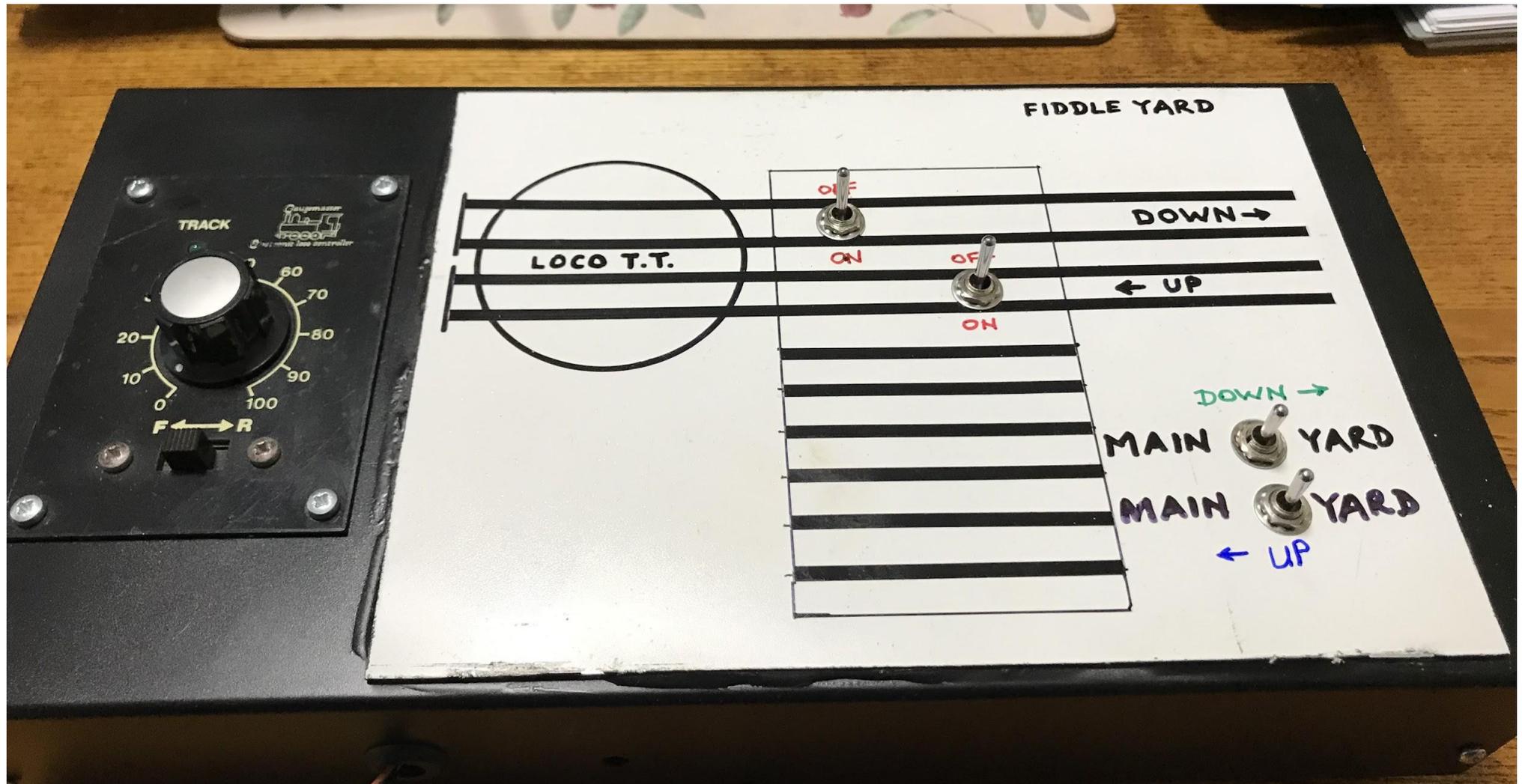
Recently, the already-purchased controllers, transformers and project boxes were connected together to make the control panels below.

The main panel below contains a two track control unit, with brake simulation. The upper two boxes hold the cab control switches, isolator push switches, and will also have uncoupling push buttons too.



Below is the fiddle yard control box, with selection switches for which controller to power the fiddle yard sections - mainly the traverser. Tracks will be powered either by the fiddle yard controller - shown here - or the main control panel. The two control units required separate transformers - the main panel used both windings of one, and the fiddle yard use just one winding, leaving one winding free for other supplies - possibly uncoupling magnets.

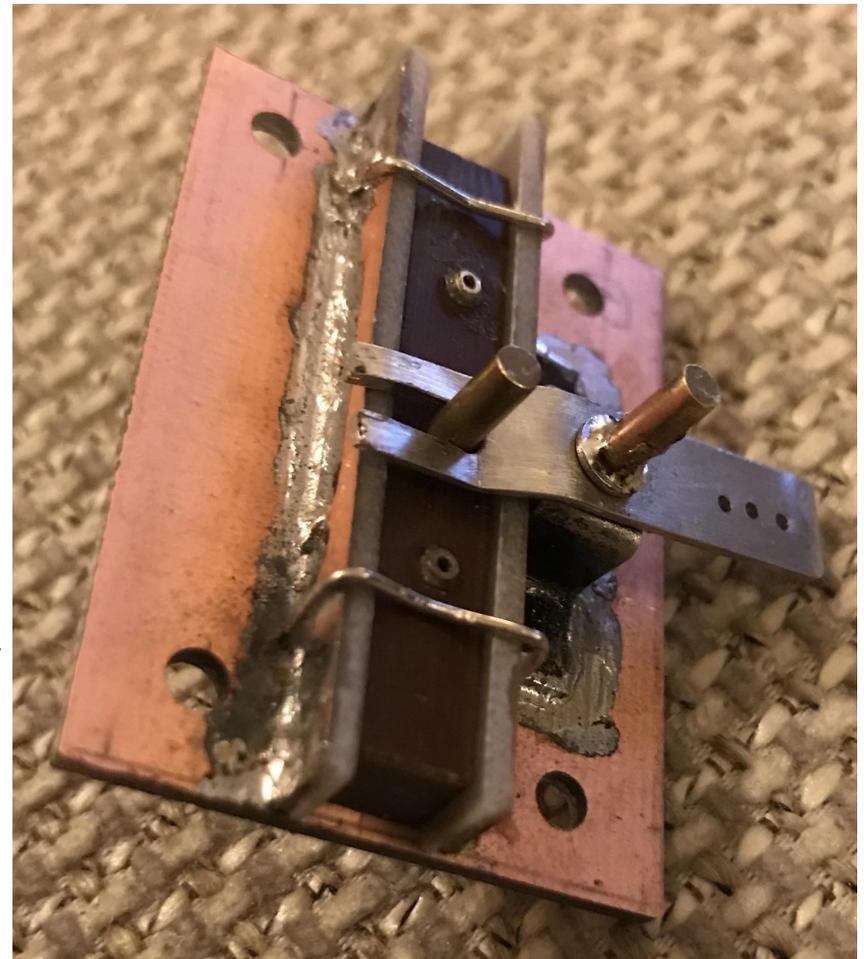
These panels were put together in the last five weeks.



Now that progress is being made at last on getting the layout together, the operation of the turnouts and wiring is being attended to. I was intrigued by the Morgan Design Turnout Operating Units (TOUs) as sold by the S4 stores, so I experimented to see if I could produce my own version, which would be much cheaper.

Some years ago, I purchased a quantity of PCB offcuts - single and double sided - from a small Electronics shop in Cheltenham, and this has proved useful for making TOUs. Some 24 will be needed, so batch building is the order of the day. A quantity of micro switches was obtained even longer ago, when they became available via my first teaching job, in the late 1970s, when a job-lot of electronic gear was given to the technical studies department staff, for us to sift through. They have provided the means of changing the crossing polarity, by means of the slider underneath pushing the micro switch. As I usually like adjustment facilities, these will include a screw and captive nut arrangement to adjust the timing. To the right is the prototype. Already, modifications are being considered.

The base has two strips, rather like slightly wide single-sided copper clad timbers that are soldered at 90 degrees to it, and they sandwich a 6mm x 6mm strip of Tufnol. This is drilled 2.5mm for the actuator rod. The nickel silver lever is double thickness, and drilled 2.5mm for the pillar pin, which is soldered to the base and also through a square 6 x 6 x 6 platform mounting. A small brass washer holds the lever in place.



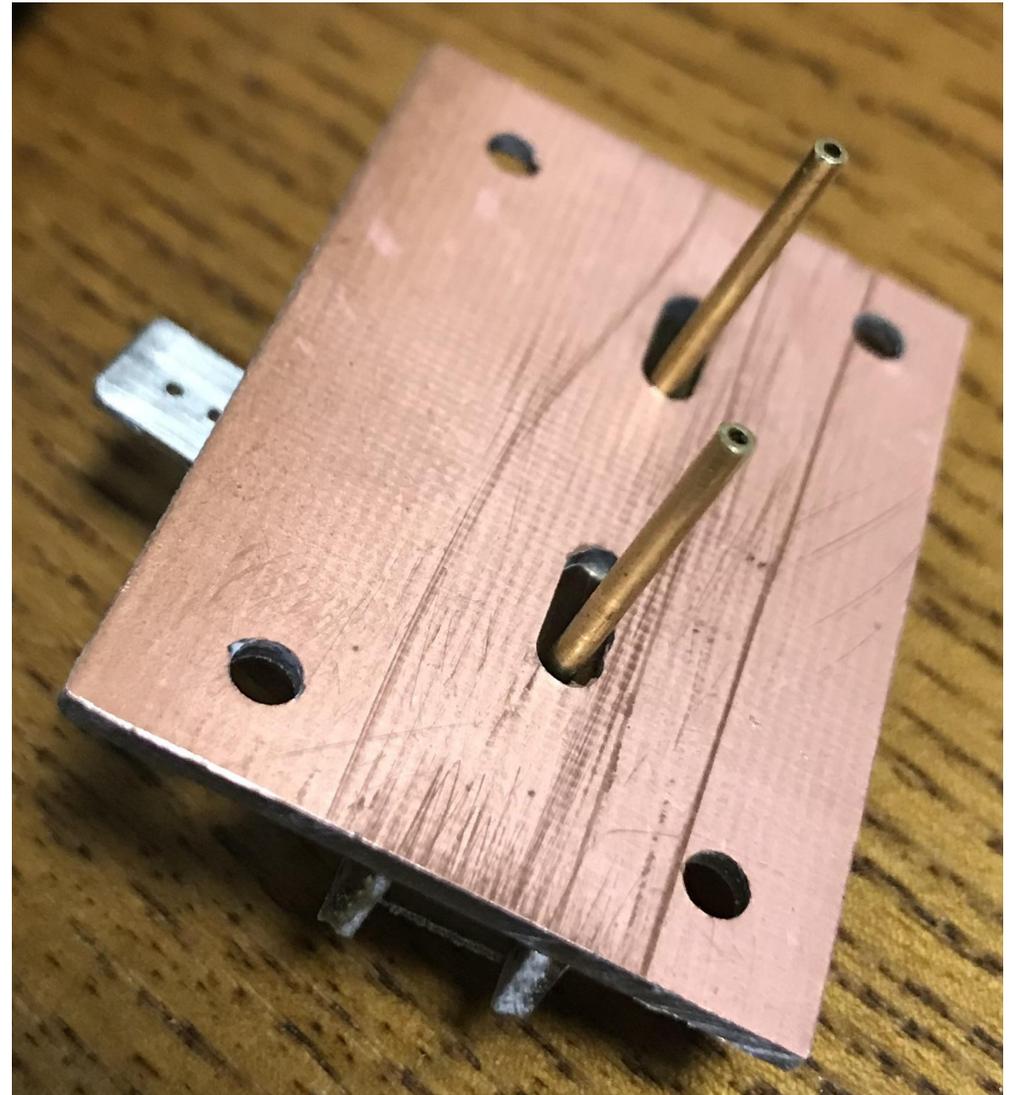
Two 1.6mm brass tubes are also mounted into the slide, but point the other way, and up through milled slots in the base, as above.

0.7mm nickel silver wires will be shaped and soldered to the bases of the switch blades, and fitted free-to-swivel as droppers into the tubes, down through a slot to the underside of the baseboard. This avoids stress, however small, on the soldered joint there.

The lever frames, which were illustrated on one Zoom event last year, are destined to be the means of operation, via modern non-stretch pike line, with return springs on the far side to return the blades to the normal position. They say it's strong enough to land a small shark, so it's good enough for my little turnout stretcher bars.

These operating units can be arranged to sit either way round, so the lever at the frame can operate as expected, as when it is pulled, the lower part of the lever below the pivot actually pushes, so this has to be rearranged in the travel on the way to the turnout or signal. Don't forget that there are direction changers in a normal run of point rodding, as well as expansion joints and adjusters. See Colin Waite's etches info.

Plenty to do still, before I can get round to my favourite occupation - building and painting locos and carriages!



# Virtual Blatchington 6 - VB6

## The Online Modellers' Meeting

The sixth online meeting (**VB6**) took place on 9<sup>th</sup> September 2021. This attracted 32 members, including several new faces and one member of the Circle Facebook group. Presentations were made by:-

Chris Cox showed the latest developments of the stable block and cattle yard on his 1845 era model of Bricklayers Arms, including a working model of an 1844 threshing machine.

Paul Rhodes showed his 4mm cameo layout 'Old Parrock' and some stunning examples of Sussex vernacular architecture, which had featured previously in Issue 12 of the Digest.

Alan Budgen described the chequered history of Central Croydon station for which he is considering a model.

Nick Holliday presented a commentary on lining and painting inconsistencies on Billinton B2 and B4 locos. Some of his points are expanded in an article in issue 3 of the Satellite.

# We're gonna build a wall!

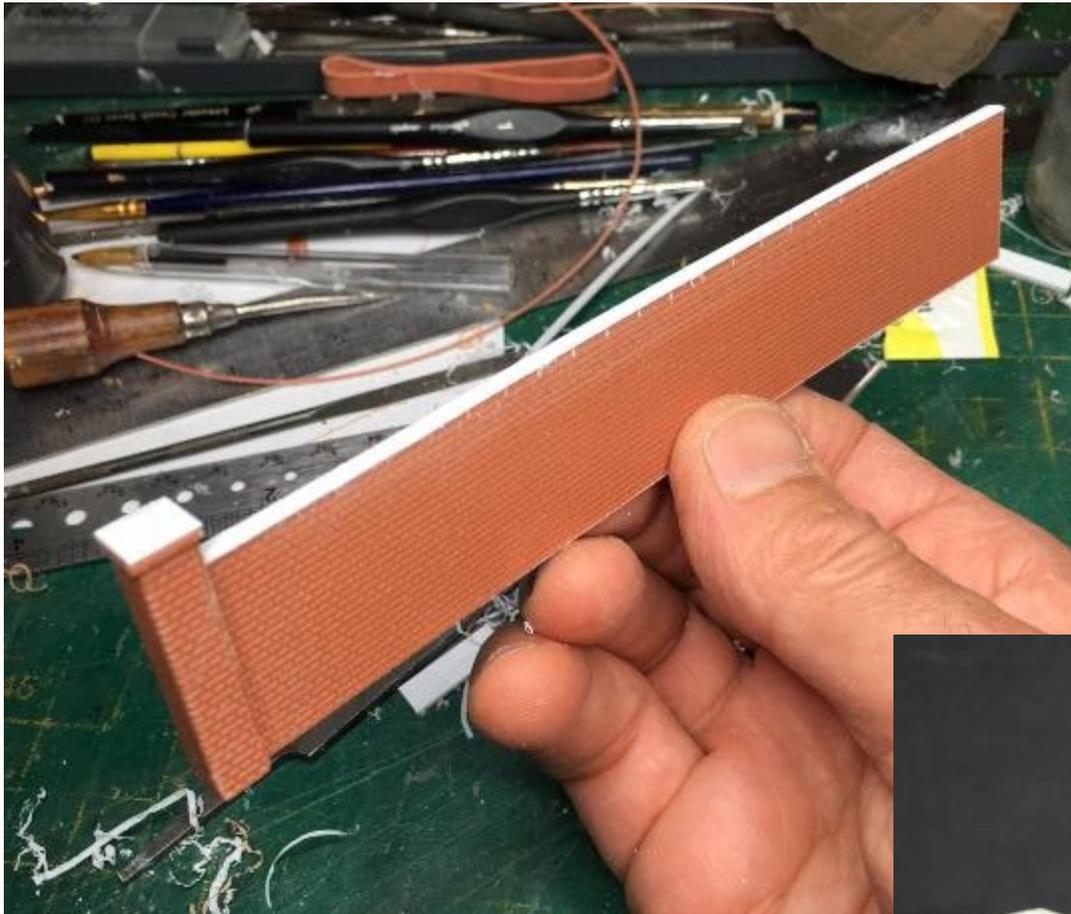
Chris Cox

*Or, a description of constructing, painting and detailing a small corner of Bricklayers Arms.*

Following my presentation for Virtual Blatchington 6, I was asked by a few Circle members to expatiate on my painting techniques.

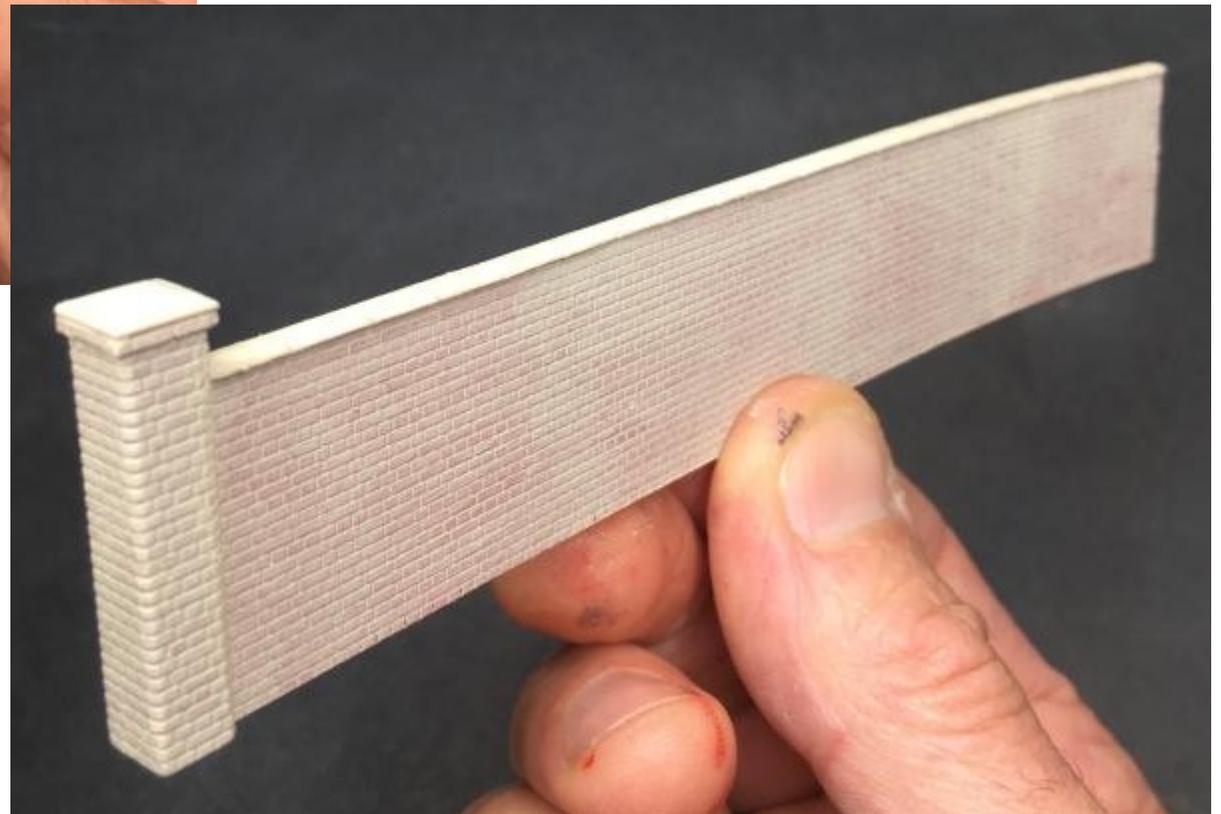
There are a few more jobs to do to complete the first baseboard for the layout, one of which is a wall to finish off the end of the cattle yard, so I decided this might provide the opportunity to cover the basic process. All paints are Humbrol matt enamels, so I have quoted only the numbers, and the use of a palette of some description is essential. Never use the paint straight from the tin as no matter how much you stir it will always dry with a slight sheen and potentially ruin your efforts. I stir the paint well and wipe the stirrer onto my palette and use this paint. Obviously, a palette also allows you to blend colours easily.

The wall itself was constructed from a laminate of styrene covered both sides in Slaters embossed Plastikard, the brick pattern being of English Bond. The laminating process is essential to achieve the correct thickness for the wall, in this case 9", or the length of an imperial brick. The end pillar was built up in a similar way, but the brickwork was cut as a wrap around, the back of each fold being filed with a triangular profiled Swiss file to enable the Plastikard to be bent through 90 degrees without distorting or splitting. I find this keeps the brickwork on the edges nicely in line and it retains some of the detail which is handy when it comes to painting later on.

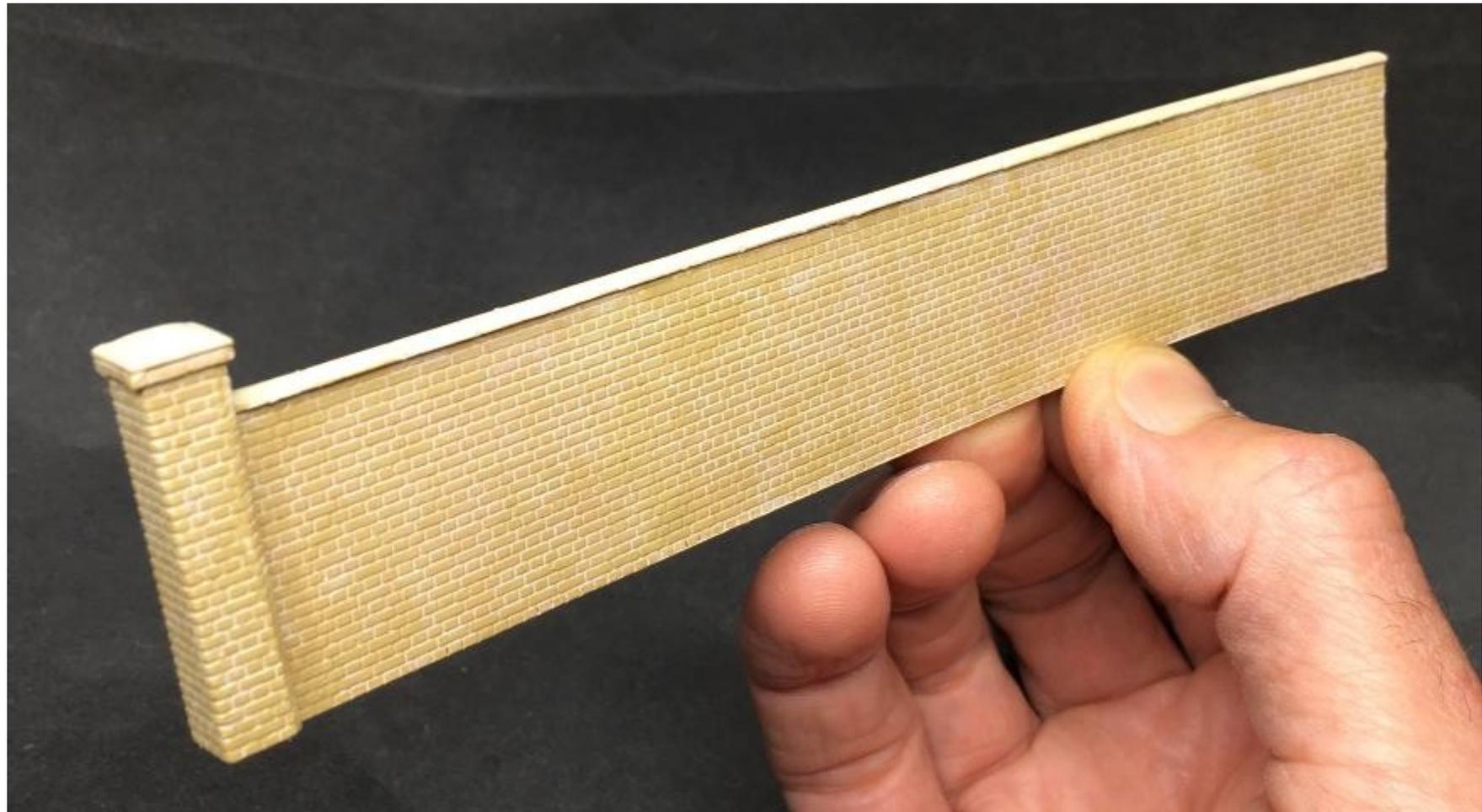


The pillar cap and wall capping were cut from styrene and filed to shape. Joints between each capping stone were cut with a slitting saw and sanded to remove any rough edges.

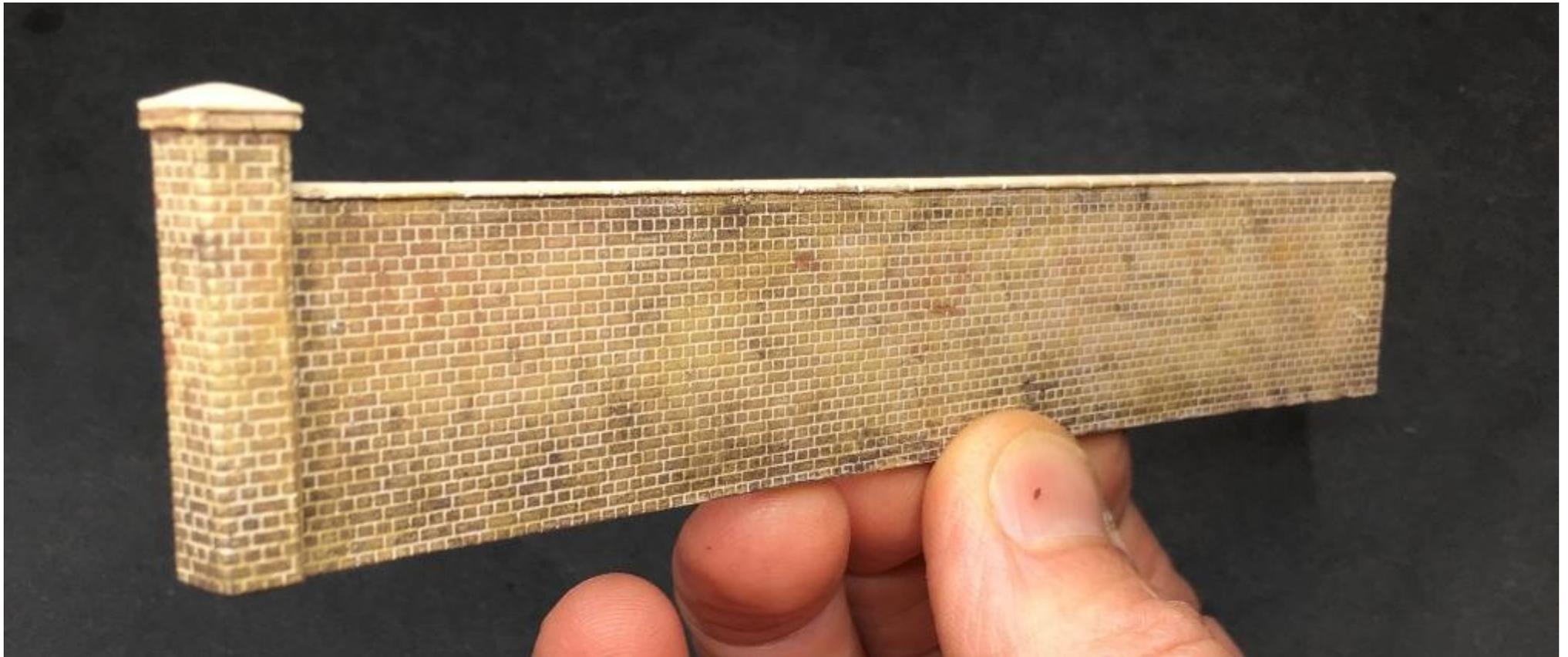
The whole was then given a rough coat of 121 which I use as the mortar colour and serves as a primer coat.



Since Bricklayers Arms is in Bermondsey it comes as no surprise that all the buildings were built in yellow London brick, and I find a good representation of that is 93 or 94. Both colours are suggested here as they are so similar and any variation between the two is to be welcomed. Like fingerprints, no two Victorian bricks are the same so variety in shade is highly desirable. This was dry brushed diagonally over the base coat but only after allowing at least 48 hours for the 121 to cure. Rushing the second coat can sometimes lead to the removal of the base coat which is irritating and time consuming to rectify. The technique of working diagonally is important. If you work in line with the brick courses the paint will fill in the mortar joints which is the last thing you need.



The next stage is the one where the wall begins to take on character. The 93 or 94 was blended with 98, a dark chocolate brown which I find so very useful for painting in shadows and lowlights and as a blending colour for darker shades. This was dry brushed over the wall in a scruffy, patchy manner but concentrating on the lower areas and the junction between the wall and the pillar. The end of the wall was treated similarly as this would join another pillar when positioned on the layout. A little 70 was also worked in to provide a few slightly terracotta patches often seen on hand made yellow stock. Using a fine brush 98 was painted into the corners, under the edge of the capping and so on to create shadows. Fine details in 4mm scale are never big enough to create their own shadows so a little help in the form of darker painted lines makes a huge visual difference.



Using the fine brush again, some individual bricks were picked out in a blend of the colours already mentioned and a few corners darkened with 98. I don't do too many bricks as I find it's not necessary but it is well worth focussing on the corners. A dodgy corner where the brick detail is a little shaky can easily be disguised with some careful painting of individual bricks to disguise the seam. I also find the addition of a little dry brush of 150 green here and there adds a natural dimension but don't overdo it. The capping stones were also dry brushed individually with 98 to create variety.



Once painted the wall was set in place on the layout. There remained a small gap between it and the surface of the cattle yard, which was filled in with basic decorator's filler and once the filler had dried, was overpainted with Sandtex 'Mid Stone' masonry paint mixed with plenty of fine sharp sand. I use this blend for most unpaved surfaces, and it can be brushed on or smeared on with fingers, the use of disposable gloves is recommended! The use of a large tub of paint and sand is a good way of ensuring consistency of surface across multiple baseboards, especially if you can only work on one at a time whilst the others are in storage.



The sandy masonry paint was then given a wash with a diluted mix of burnt umber and a little black acrylic paint in varying degrees, paying particular attention to edges and corners where it can be a bit more concentrated. The open areas were then given a very sparse dry brush of the masonry paint just enough to highlight the tops of the grains of sand. Again, the use of 150 green helps to provide natural effect and finally dried moss glued and poked into corners makes excellent weeds. I rarely return from a family walk without a bit of moss in my pocket and now have a cardboard box full of it, far more than I will ever need. The pile of muck is made from tea leaves ground in a pestle and mortar. It makes excellent fine dirt and when mixed with PVA and glued in place sets hard. A final wash of PVA and sprinkle of tea dust helps to finish the surface. Although not pictured here, Redbush or Rooibos tea straight from the bag makes excellent fallen leaves however, the tea does need to be straight from a fresh bag, not one you have used to make a cuppa!



The overall image shows the wall in context. The painting of the stables followed the same process, and the rough yard surface is the blend of masonry paint and sand weathered down as explained above. Cattle dock fences and gates are cast white metal, the fences being made cast as one post with a set of rails to allow construction of the pens or longer runs of fencing. The track in the foreground has been ballasted using the masonry paint/sand blend which gives a good impression of the overall ballast used at that period. This is quick and easy to apply but must be cleaned back from the rails immediately as it sets like rock and can be disastrous for any point work where it must be used with great care, a lesson I learned the hard way. The blank area to the right of the end wall is part of the goods yard and will eventually be paved, which requires a coat of decorator's filler, sanded down, and scribed to represent stone sets. This final job needs to be done with the second baseboard attached in order that everything lines up and is at the same level.

#### Humbrol colour palette

70 Brick red

93 Desert yellow

94 Brown yellow

98 Chocolate

121 Pale stone

150 Forest green



Photographs copyright Chris Cox

[Return to contents page](#)

# Croydon Central

Alan Budgen

Alan's presentation on the Central Croydon branch followed a discussion on the Brighton Circle's e-group about the information available on this short lived line. For this summary, two photos are included.

This one is included for the unusual view of the signal box, rather than for the field setting for the game of cricket.

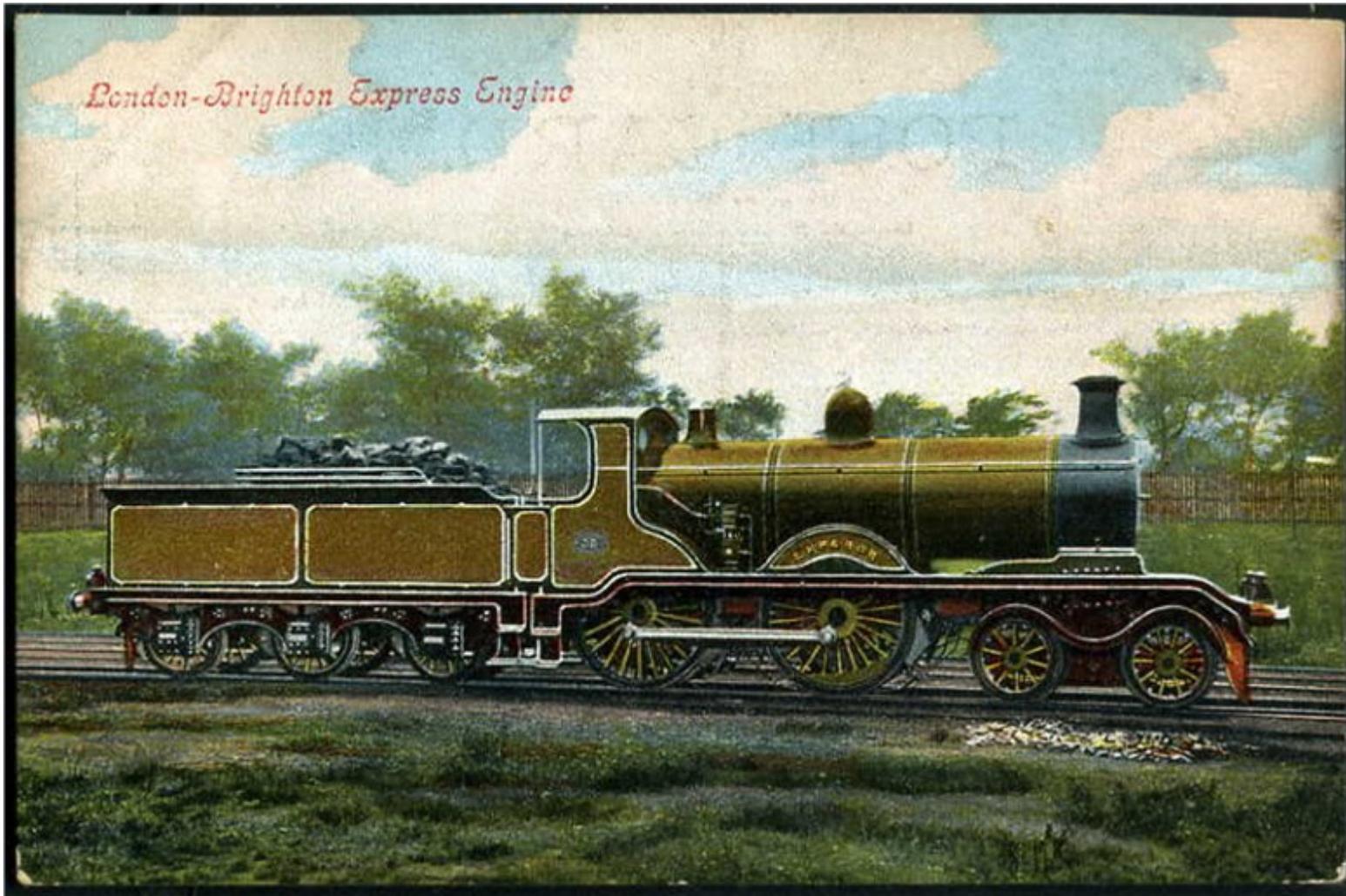




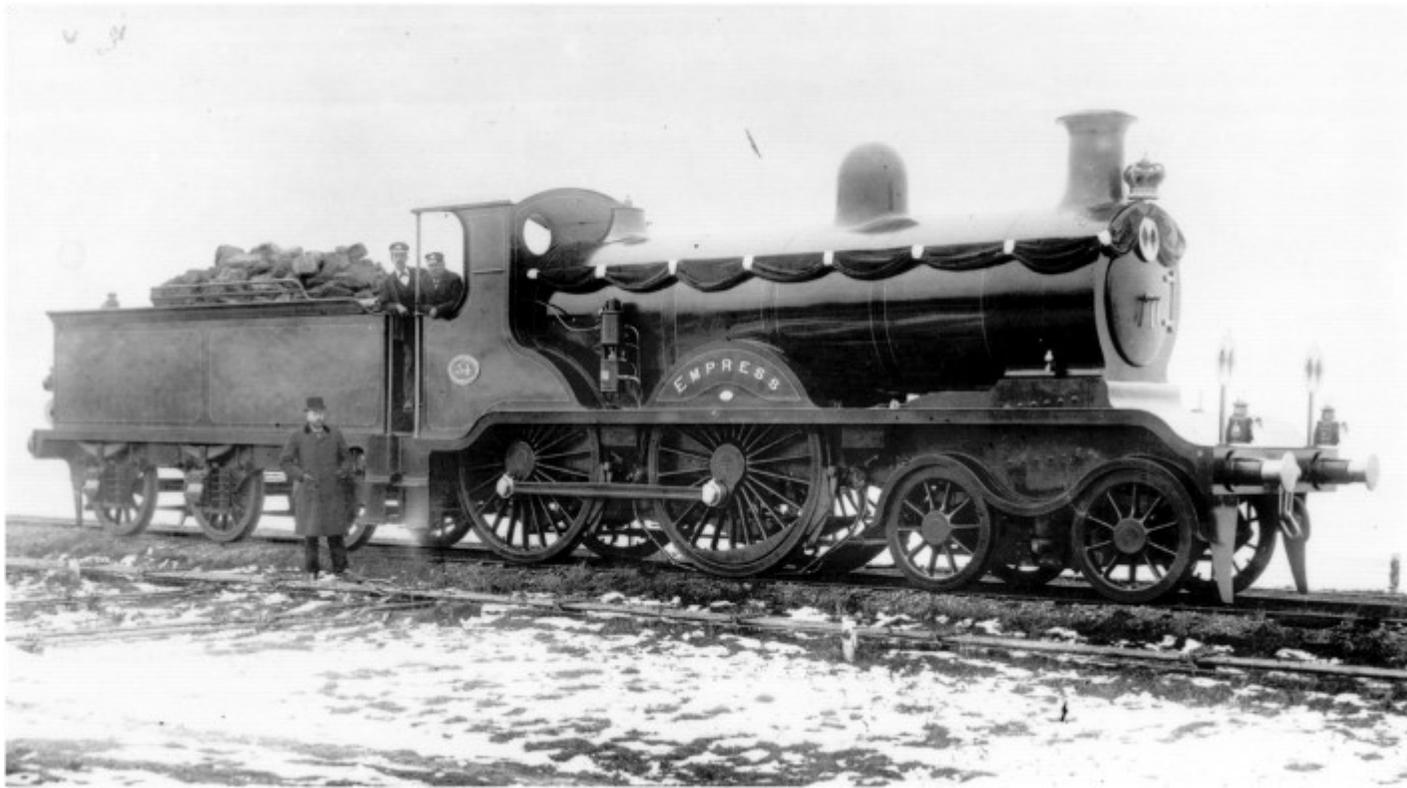
[Return to contents page](#)

# Lining on Billinton Bogie Locos

Nick Holliday



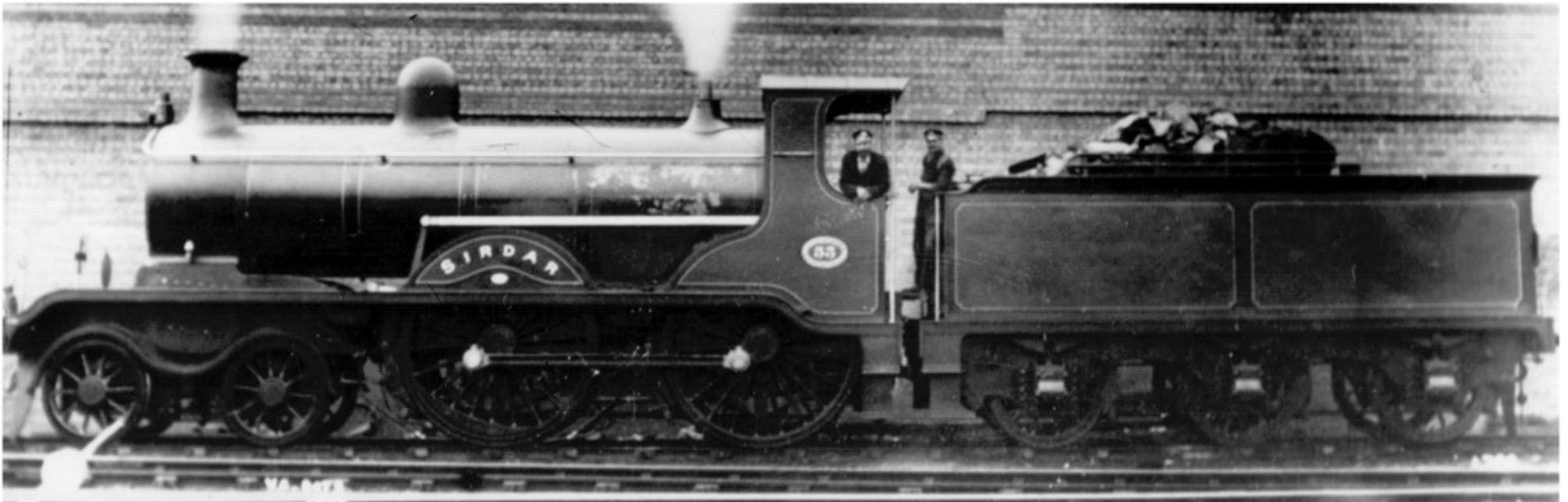
Nick illustrated the difficulty of establishing the way in which the livery of Billinton's 4-4-0s was executed in certain areas. The section of the frames that appears above the footplate and to the rear of the smokebox is usually in shadow, so that the colour and the presence (or absence) of lining is uncertain. Nick offered a series of photos to illustrate the point.



Off topic -

Did you know that the 2nd and 3rd B4s to be built did not have a cab door, although the first of class did.

[Return to contents page](#)



# Virtual Blatchington 7 - VB7

## The Online Modellers' Meeting

The seventh online meeting (**VB7**) took place on 25<sup>th</sup> November 2021. This attracted 29 members, and included a presentation by Malcolm Robinson who is a member of the Circle Facebook group.

Presentations were made by:-

Chris Cox who described his version of the Bodmer single, as originally built, as a comparison with the Stroudley version documented by Ian White in Digest 12;

Nicholas Pryor, who showed some models of very early Brighton carriages;

Dave Searle who spoke about the signalling arrangements for the Epsom Clubs layout of Lewes;

Malcolm Robinson who outlined his work to research Slinfold, with a view to construction of a layout and

Nick Holliday, recovering from a dose of Covid, who showed a series of maps illustrating the geography of Brighton loco names.

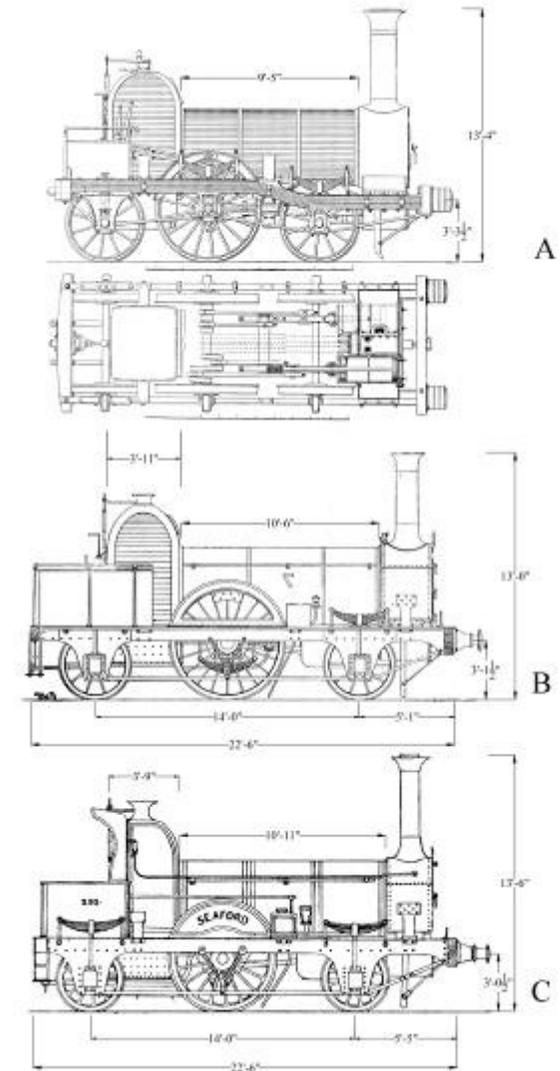
# The Bodmer Single

Chris Cox

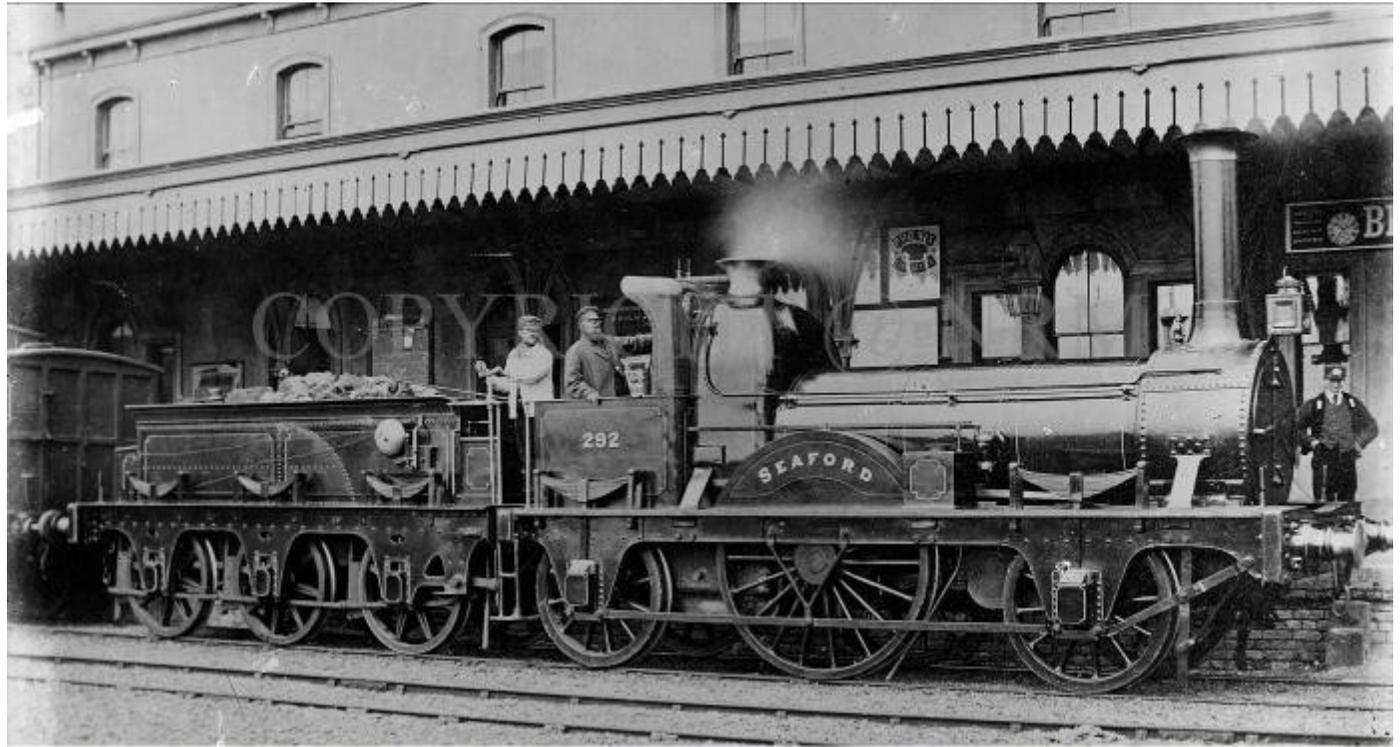
Chris described the history of Johann Georg Bodmer's engineering experiments, including his locomotives with opposing pistons in each cylinder. One loco each went to the SER and the Brighton.

The Brighton's Bodmer was long lived, although subject to two rebuilds as illustrated on the right. Ian White's construction of the Stroudley version was described in LB&SCR Modellers' Digest Issue 12 and a picture of the completed loco appears on the following page.

Chris's model of the original version is illustrated on the page following.



Ian White's version of the Bodmer single, in its third incarnation and in the Stroudley passenger livery. Detail of the construction of this loco was described in LB&SCR Modellers' Digest Issue 12.



The Bodmer single in its original form.



Photographs copyright Chris Cox

[Return to contents page](#)

# Early Brighton Carriages

Nicholas Pryor

Nicholas Pryor described a set of very early carriages that have recently been completed from kits by 5 & 9 Models.

Craven Type 13E 19'  
Composite Brake of  
1863.

Teak varnished livery  
painted by David  
Studley



These coaches are all built from kits supplied by Chris Cox at 5&9 Models. Their construction was entirely orthodox, but where possible, every effort was made to reduce their overall weight. Floors and partitions are polystyrene sheet and roofs are brass. The finished coaches are still quite weighty and will be a challenge for any model of an early loco, but roll well and ride nicely. They are planned to be hauled by a Jenny Lind type locomotive, which is also now being built from a 5&9 kit, and it is hoped that loco will be able to haul at least three or four of them.

The coaches are all finished using standard Humbrol enamels. The brown livery of the 1840s vehicles is intended to be that of the London and Brighton Railway, for the period prior to the amalgamation that created the LB&SCR. The main body colour is matt 160, which is darkened for low lights and lightened slightly for highlights to emphasise the external body framing. Roofs are all in matt 121, footboards in matt 29 and interiors in matt 110. It is known that the coaches of the London & Croydon were originally in a sea-green colour and it is thought that this colour may have been retained after the amalgamation for vehicles intended for suburban use. The 1850s vehicles are painted in a mix of satin 131 and matt 76. All other colours are as for the L&B liveried coaches. These colours and the techniques mentioned are all based on Chris Cox's own 'paint recipes' and I am grateful to him for sharing this information.

The passenger figures are all from the 1845 range by Preiser, being the only source of painted figures of this era. They are (and indeed look) very much in HO scale and are rather dwarfed in the 1850 open Third. The figure of the guard is 4mm scale, and the imbalance in size is something that will have to be resolved in time. Using cast model figures can only make the weight problem worse.

The coaches were built and painted for me by my good friend Frank Bulkan. He was, before he started building for me, very much an LMS man, but he has now built so many items of LBSCR stock that he is beginning to become a firm fan of the pioneer railways era.



Craven Type 14A 21' 6in  
First Family Luggage 1858



Craven Type 14D 23' 6in  
Composite Luggage 1863



Left  
LBSC Type 3A 18' semi  
open Second



Below  
LBSC Type 4C 18'  
Seconds in 1849 condition



LBSC Type 6A  
22' Open Third  
1850.

Below

LBSC Type 6K  
22' Second and  
Type 6C 22'  
semi-open Third  
1850



Photographs copyright Nicholas Pryor

[Return to contents page](#)

# Signals at Lewes

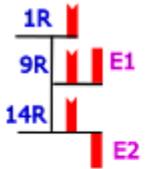
Dave Searle

As part of the project to build a model of Lewes station in 2mm finescale, the group at Epsom Club has undertaken research into the signalling of the complex layout at the station. The diagram and photo that follow reflect the signalling scheme from 1886 and illustrate the way in which the various possible routes were signalled.

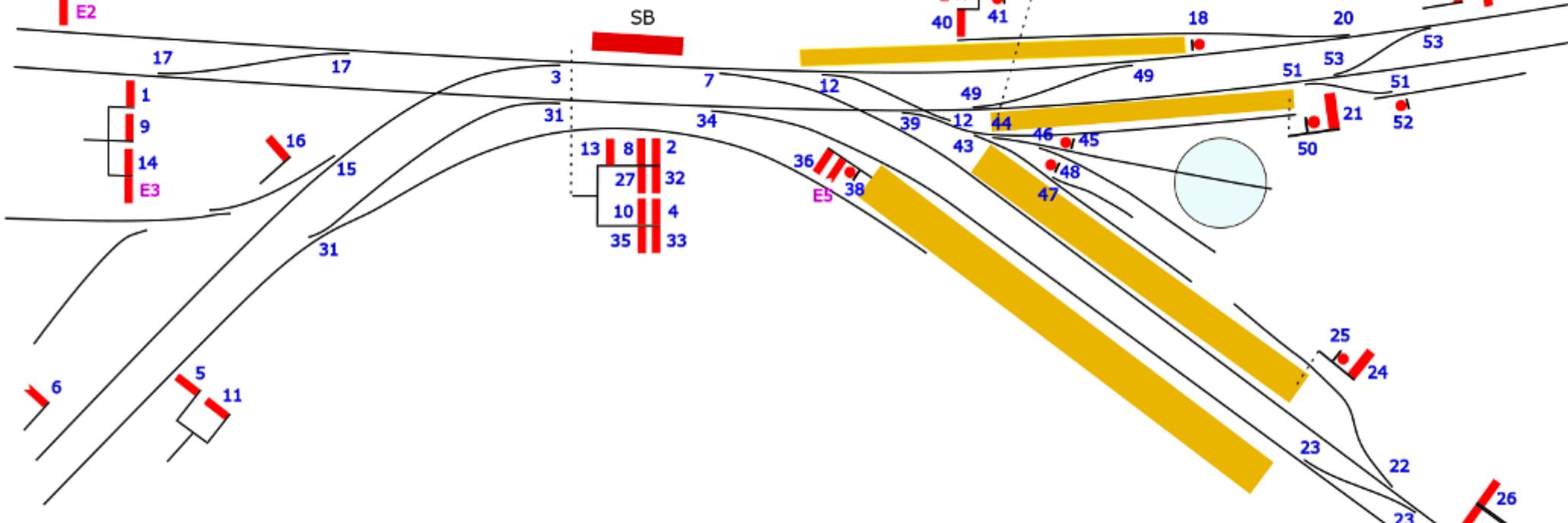
Signals on the photo have been annotated to show their position on the diagram.

# Lewes 1886

## Hastings



## Brighton



## Uckfield & Tunbridge Wells

### Routes

Hastings to Brighton: 2, 1, E1 → 21, 19

Tunbridge Wells to Brighton: 3, 4, 5, 6 → 21, 19

Hastings to Keymer: 7, 8, 14, E1 → 24, 26

Tunbridge Wells to Keymer: 7, 3, 10, 11, 6 → 24, 26

Hastings to Newhaven Bay: 12, 13, 9

Brighton to Hastings: 29, 30 → 28, E4, 27, E3, E2

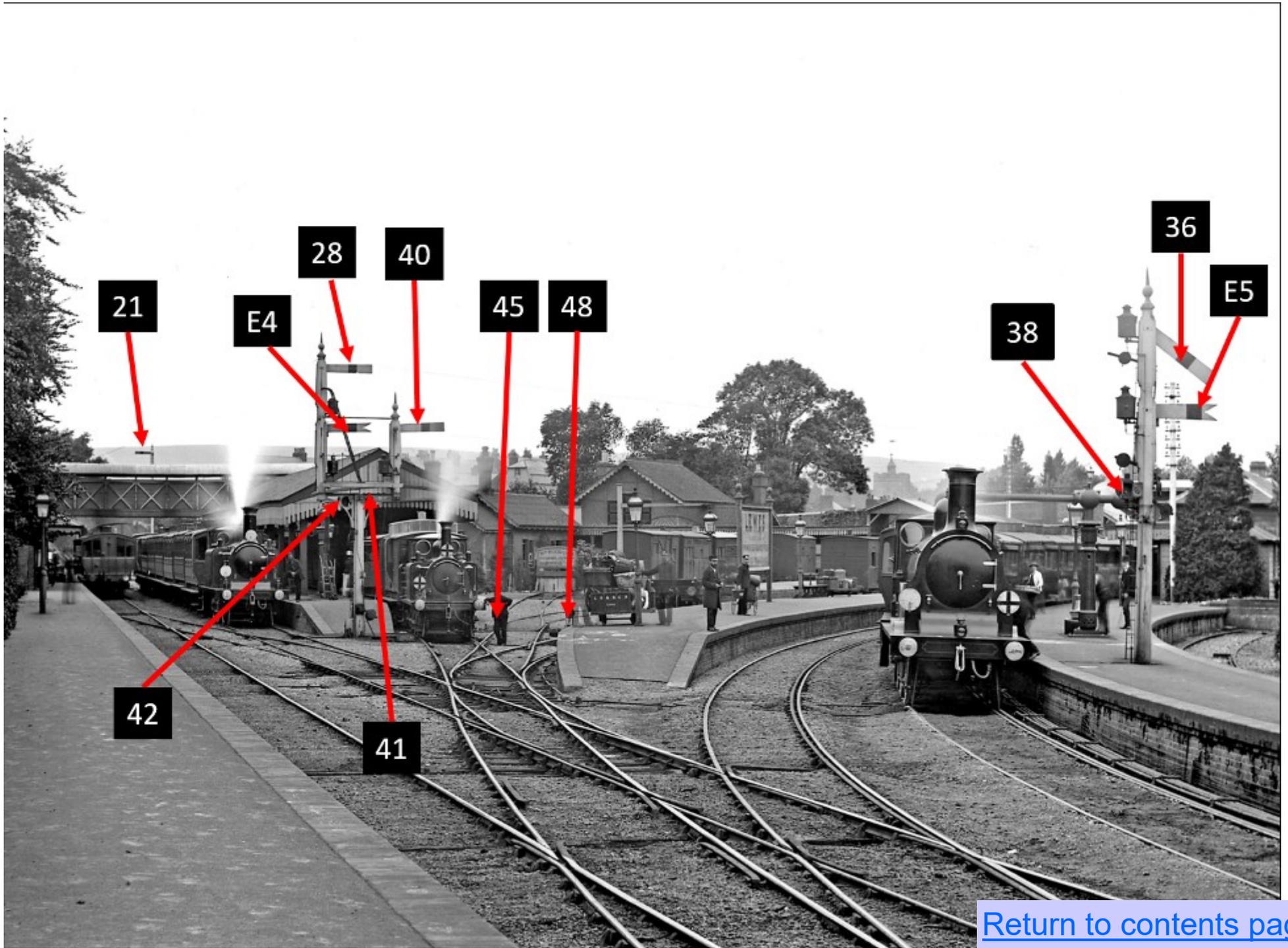
Keymer to Hastings: 37 → 34, 36, E5, 35, E3, E2

Brighton to Tunbridge Wells: 29, 30 → 31, 28, 32

Keymer to Tunbridge Wells: 37 → 34, 31, 36, 33

Newhaven Bay to Hastings: 39, 40, 27, E3, E2

## Keymer & London



[Return to contents page](#)

# Slinfold

## Malcolm Robinson

Malcolm gave a fascinating presentation of the considerable amount of research that he has carried out in preparation for building a model of Slinfold station.





The double bridge, built after the Board of Trade Inspector refused to approve the line with the original gradient at the station.



Photographs copyright Malcolm Robinson

[Return to contents page](#)

# The Geography of Brighton Loco Names

Nick Holliday

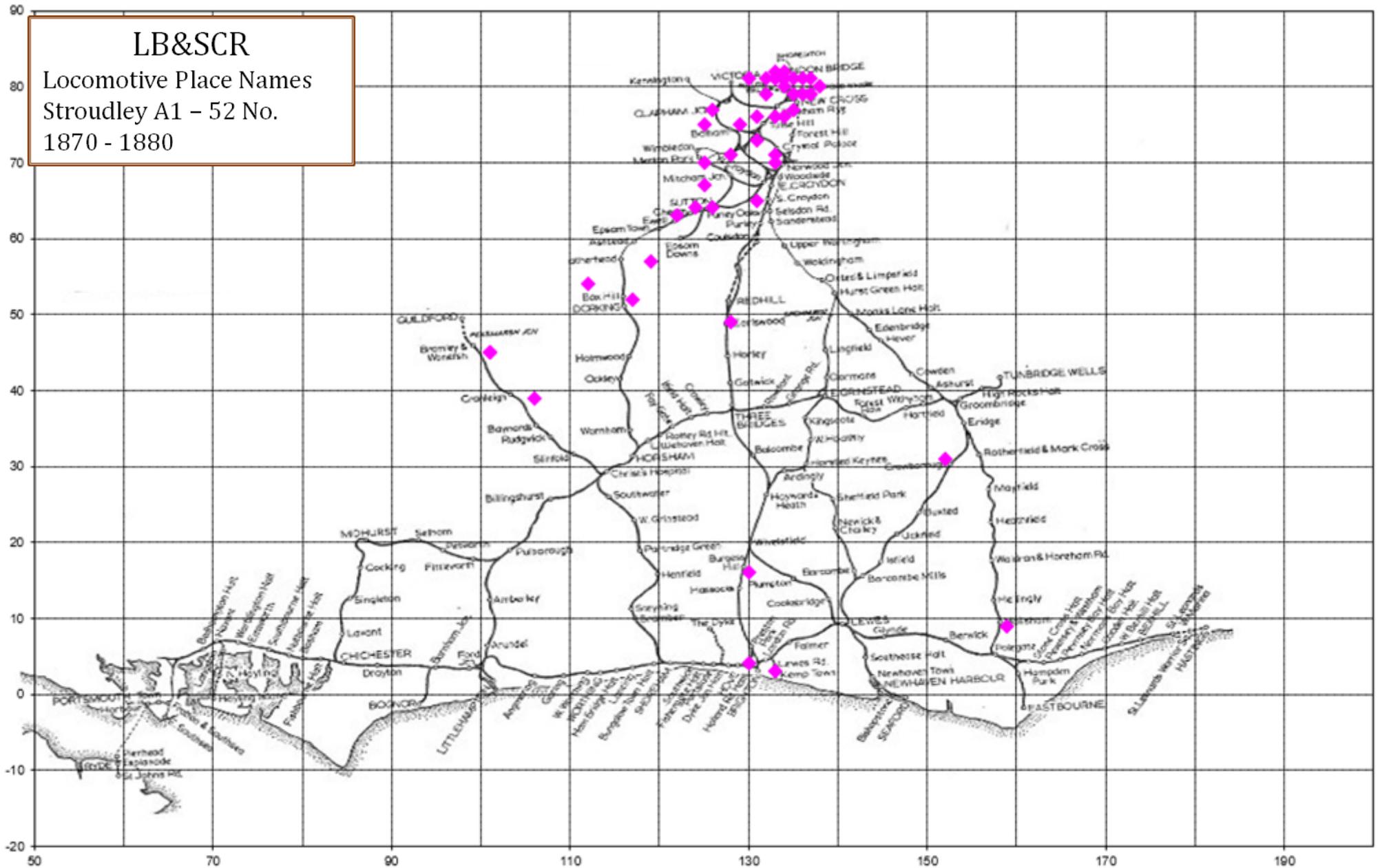
Nick rounded the evening off with a slideshow that illustrated the names chosen for Craven, Stroudley and Billinton locos, showing how these were distributed around the Brighton's territory (and beyond) and how the names were spread year by year.

The slides on the following pages provide, as examples, the locations of names chosen for the Terriers (note that renaming means that there are more names than locos) and those for all locos built in 1881.

The presentation prompted an energetic discussion about the rationale for the choices, which seemed to be scraping the barrel by the time that Billinton was building his radial tanks! Quite a number of names related to large country houses and the suggestion was raised that there was a policy to recognise the local great and good.

# LB&SCR

Locomotive Place Names  
Stroudley A1 - 52 No.  
1870 - 1880

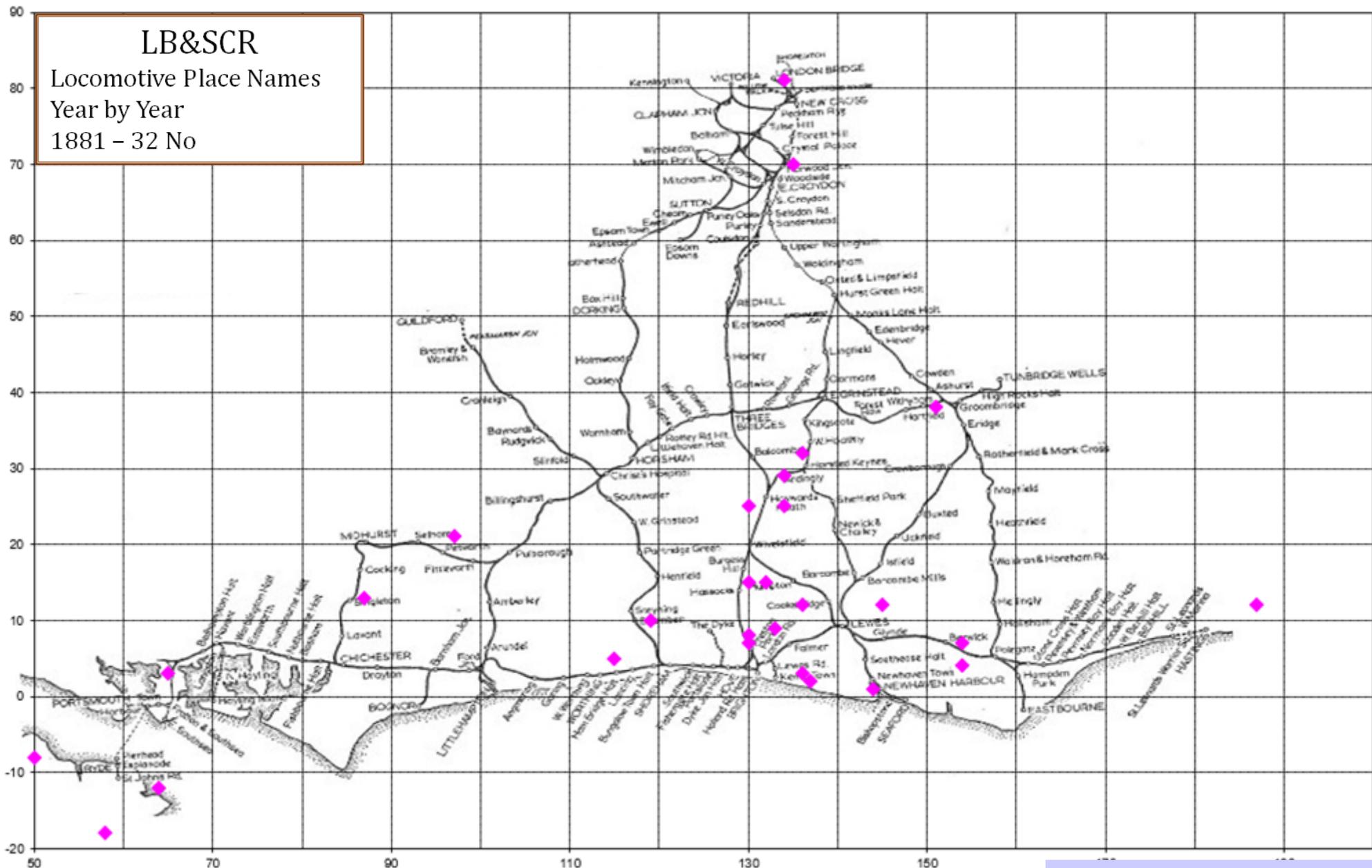


# LB&SCR

Locomotive Place Names

Year by Year

1881 - 32 No



[Return to contents page](#)

# Lewes in P4 - part 2

Rod Cameron

This should maybe be part 1A as I've not done much on this for the last year for several reasons, and no more tracklaying. Hopefully that will recommence over the winter. So what you have here is some captioned photos showing some experiments with platforms and buildings to get an initial feel for what the finished station might look like.



*View from the Brighton direction. The discrepancies are greater, especially with Platform 8 and the loop; so if I had laid more plain track much of it would have had to come up. Silver linings and all that. So now I will use the platforms to gauge the track through the station, moving outwards from the V.*



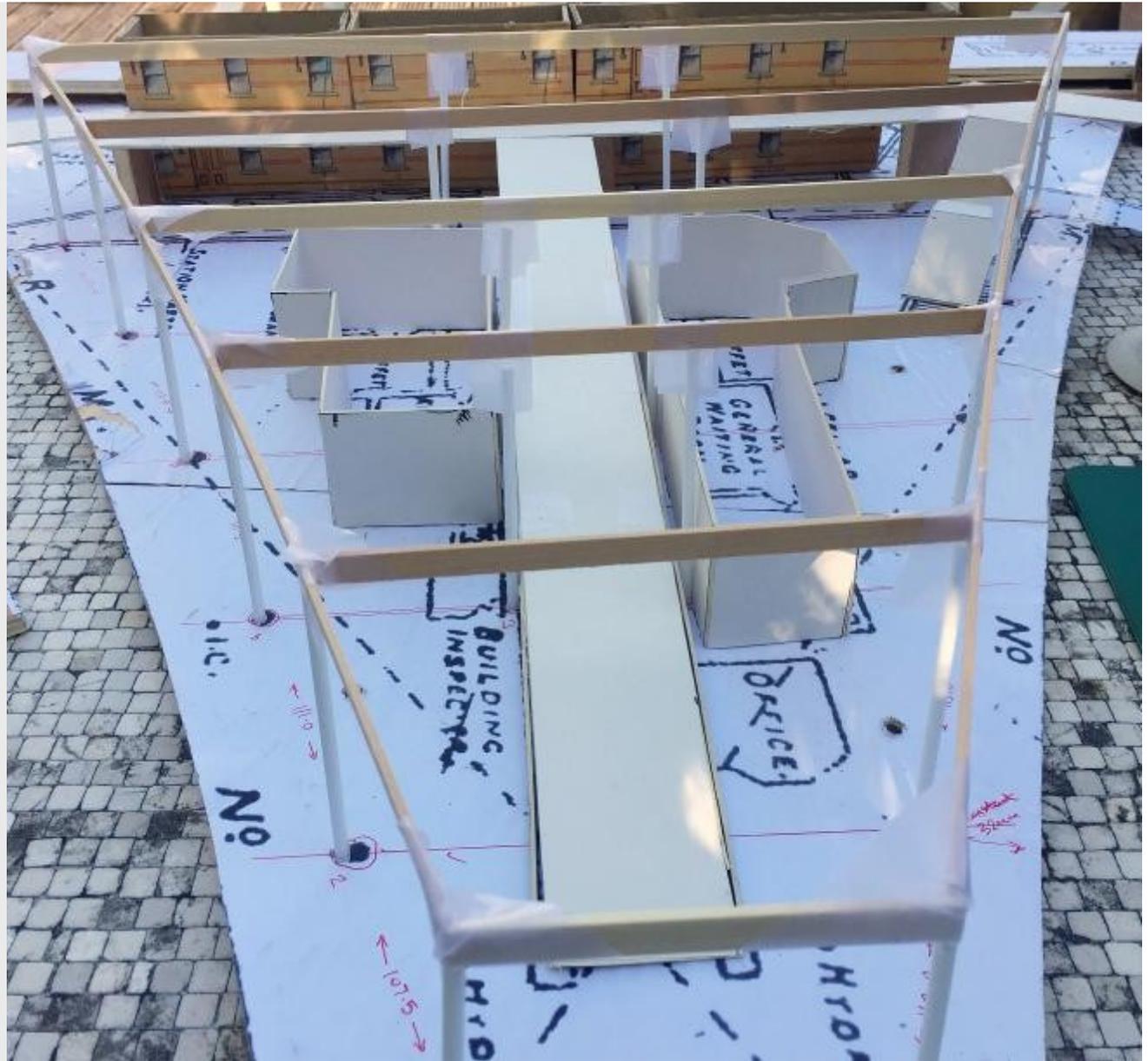
*I then did some quick and dirty mockups of some of the station structures in true Blue Peter style with Daler board, PVA, magic tape and ply offcuts. So what you see here are the main platform buildings, the overall footbridge and staircases (floor only), the luggage ramp and the lift tower on the Brighton platform.*



The tinsplate-like effect on the platform buildings is from cutouts of rescaled drawings of at least one pair of these obtained from the Network Rail archive print library <https://nr.printstoreonline.com/>. Hopefully the final versions will be closer in quality to Dave Rigler's beautiful models of the previous incarnation of Lewes station as shown in Digest 13.



*It was then on to a mockup of the overall roof in the V of the station. I do have a plan of this from Network Rail, and an architectural elevation found on the internet, together with the station plan used to do the platforms, all of which are a huge advantage. However, there are minor discrepancies between them, possibly due to a difference in scaling in the horizontal and vertical directions on the NR roof plan (or in the printer I used to scale it up). It's not a lot (<5%), but to match with the station plan I may have to improvise a little. So, what is a mockup for? In some cases it can be as detailed as, say, a test build of a new etched kit; or it can be, as in this case, a quick and simple exercise just to get a feel for what the final build might look like, and to verify that it looks sufficiently like the prototype. Therefore, with Evergreen tube, stripwood and magic tape, the next phase in the main station area mockup was the principal support columns and beams.*



*As mentioned previously, I have had to make some minor changes to the column positions, with the guiding criteria being 1) the rows of girders have to be the same distance apart, and 2) the edge of the overall structure is a scale 8 feet from the platform edge as stipulated in the Network Rail plan. Some of the mockup columns are not quite vertical due to drilling error on my part - the 'proper' columns will probably be 3D printed and I will find a way of ensuring that they are vertical.*



*Always worth a comparison with the real thing! This process, whilst a bit rough, has given me ideas about what to do and what not to do when I start the 'proper' one. The upper bits won't be seen under 'normal' conditions so things like girders and trusses will be more 'impressionistic' making use of bulk laser cutting etc (I really ought to fire up the Silhouette cutter again) even though there is considerable detail variation. I'm not getting any younger and this is a solo project - I'd sooner spend the time on the trains and track etc.*



*Channelling my inner Pythagoras, a card mockup of the roof itself.*  
To be continued ...



Photographs copyright Rod Cameron

[Return to contents page](#)

# Lewes Road in N Gauge

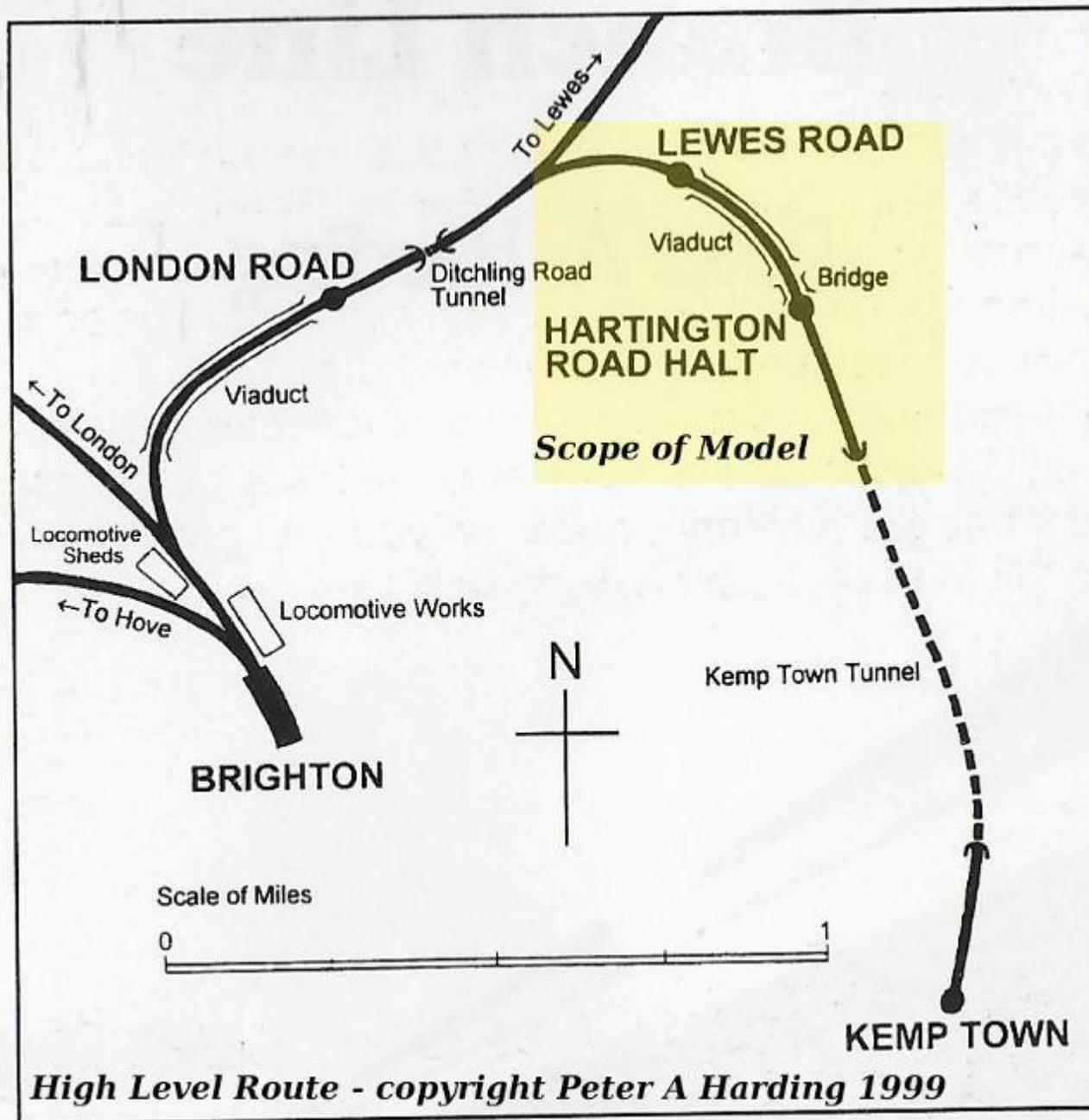
Huw Evans

One of the hardest parts of embarking on a particular model is of course your decision on what to model in the first place? Like many people living in Brighton I'd been intrigued by stories of the long lost Kemp Town branch line and indeed have some minor memories of its last vestiges myself. As a student arriving to the town in 1979, the East side of the Lewes Road viaduct was still there, along with some ancillary buildings behind some fencing at Kemp Town railway station. So that all piqued my interest and decades later, when the short book by Peter Harding was published in 1999, I snapped this up and was subsequently able to relay a few pertinent facts to anyone who was interested down the pub...

..A few more decades followed and it was time to take early retirement – blimey that went quickly! I was then keen to restart an interest in model railways that I'd reluctantly parked for some 45 years.

.. Small scale modelling now appealed to me, in theory at least, for the ability to model more prototypical distances and scenery, though as a teenager, I'd never created anything other than the ubiquitous OO gauge oval. Initially I considered trying T gauge 1/450 scale, but ongoing concerns from the various blogs on consistent smooth running lead me down the path to the more tried and tested N gauge 1/148. Personally, I'd had no personal experience of this, or had even seen an N scale layout in operation.

As for the subject matter I turned my attention once again to the Kemp Town Branch Line, but

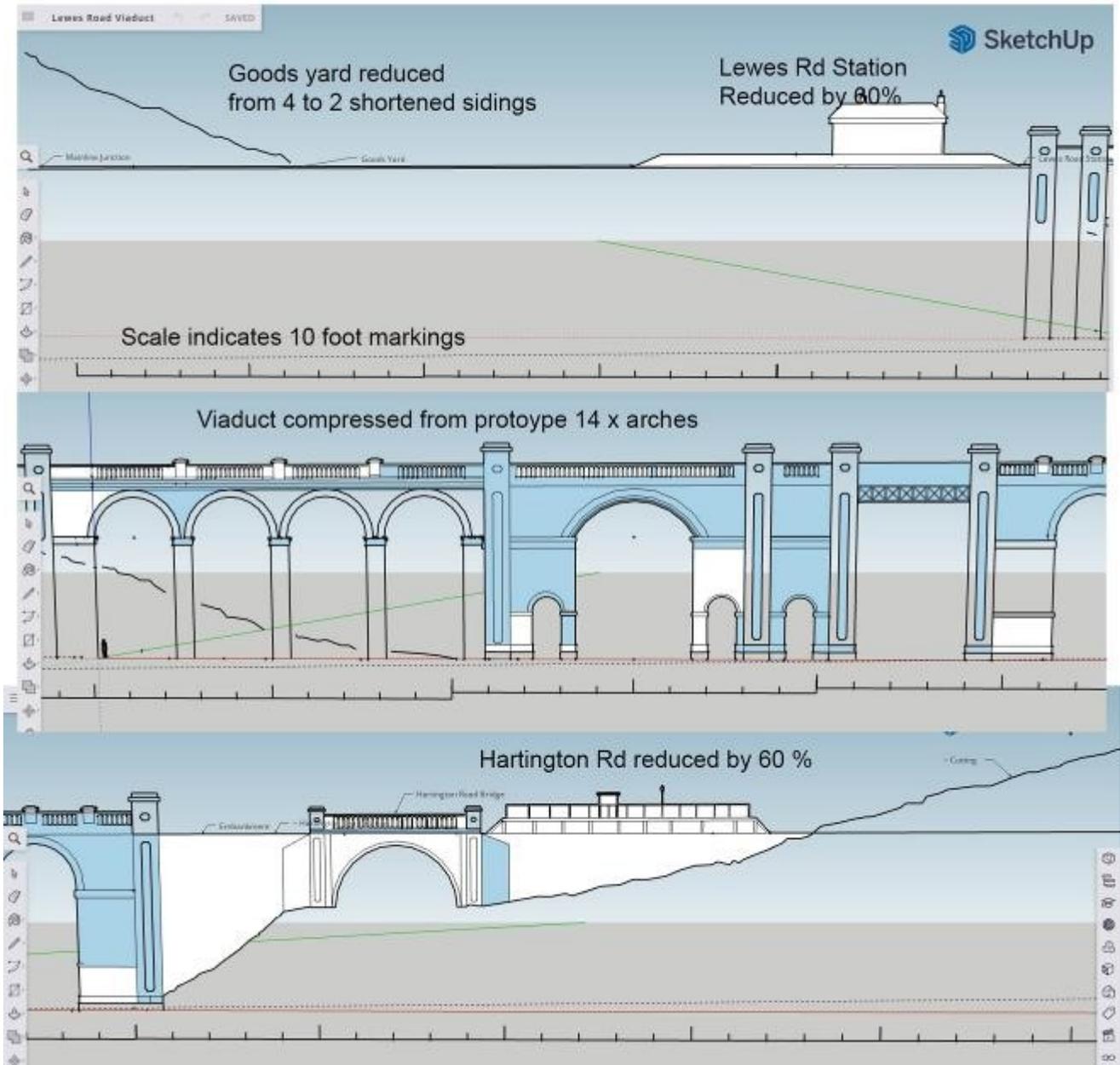


having read of a number of existing efforts in modelling the Kemp Town terminus I wanted to try something different.

To my knowledge, no one has attempted to model the central section incorporating the Lewes Road viaduct, although I had read elsewhere of abortive blog discussion to model this in O gauge which would have been quite a project! I guess the primary reason this hasn't been modelled is operationally its rather dull with the majority of its route being a single track shuttling back and forth, together with the considerable amount of urban scenery to model. However, scenically, I reasoned that the viaduct and approaches would make a dramatic amphitheatre for viewing from the front, although in reality the overall track plan was a U shape. This would

therefore have to be flattened somewhat into a much shallower curve to fit into a narrow rectangular plan. So, armed with some initial dimensions from the Peter Harding book, together with historic and contemporary maps, plans and photographs, site visits and a liberal dose of ready reckoning, allowed me to begin drawing up my ideas. For this I used Google's free drawing package 'Sketchup', which I found pretty easy to use and can recommend. Of course, I quickly realised that even in N gauge I would have to make some compromises to fit my available space. I began with a truncated side-on view of the viaduct and approaches as shown here.

Lewes Rd to Hartington Rd Overall model horizontal length compressed by 75%



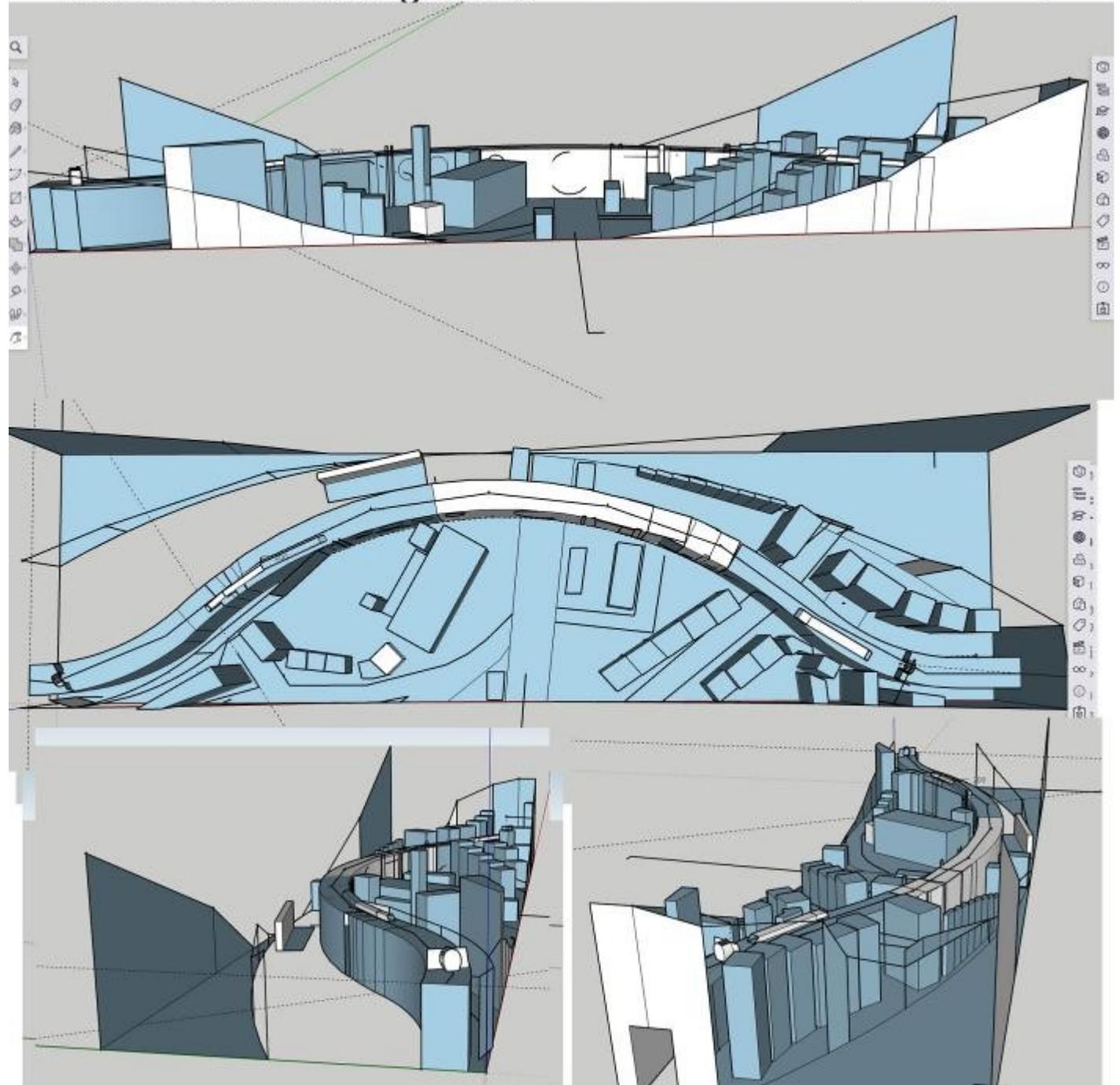
Lewes Road to Hartington Road - Overall model horizontal length compressed by 75%.

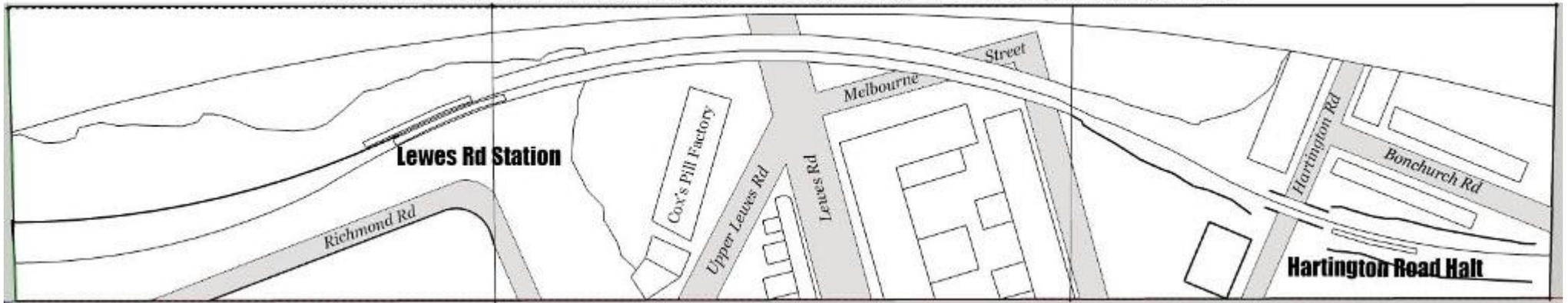


By including a scale on each drawing, I was then able to print at 2mm/foot and visualise the overall project on the kitchen table.

## Lewes Rd to Hartington Rd Overall model horizontal length compressed by 75%

Next up was a 3D representation also in Sketchup, which I could 'fly around' to further refine the design and add key buildings. Note I still haven't worked out how to draw the landscape over these contours, so all the buildings appear from a horizontal zero position – but it suits my immediate purposes.





Lewes Road model - 2mm finescale comprising 3 sections totalling 8feet x 1 foot 6 inches.

This led me to conclude I could build my overall layout in 3 rectangular sections totalling 8 foot in length and 18 inches wide, the central section being the core viaduct and urban scenery. I've set the overall model in the year 1908 allowing me to include the following features:

- Lewes Road station and coal yard

- The short lived Hartington Road halt

- The even shorter lived LBSCR petrol rail car.

- Push Pull Terrier trains

- Tram operation along a short section of the Lewes Road.

- The Lewes Road viaduct dominating the skyline

- Edwardian street furniture.

I rapidly concluded that this will take me a considerable amount of time to complete, so I'm initially focussing on the central section comprising the viaduct itself, to re-learn some modelling skills. In my compressed model, this section is 3 feet x 18 inches, so little more than a diorama to start with (albeit that would be equivalent to 6 x 3 foot in OO gauge, so still a lot of detail to fill).



I therefore began by constructing the baseboard for this central section using a standard ply construction, hollowed out for lightness and future cable routes. Small isn't it!



Next up, plotting the surface area and constructing the contours, bearing in mind I was going to make some difficult choice over the horizontal distance compression and hence the steepness of prototype hills. Construction was from interlocking hardboard, covered with chicken wire and plaster bandage and whilst it

seems as tough as old boots, in hindsight, its probably over engineered and I would have used the expanded polystyrene hot wire technique in future. The three pictures on this page show the contours in progress, together with roads, the viaduct track bed and the skeleton of a key building slotting into this landscape.



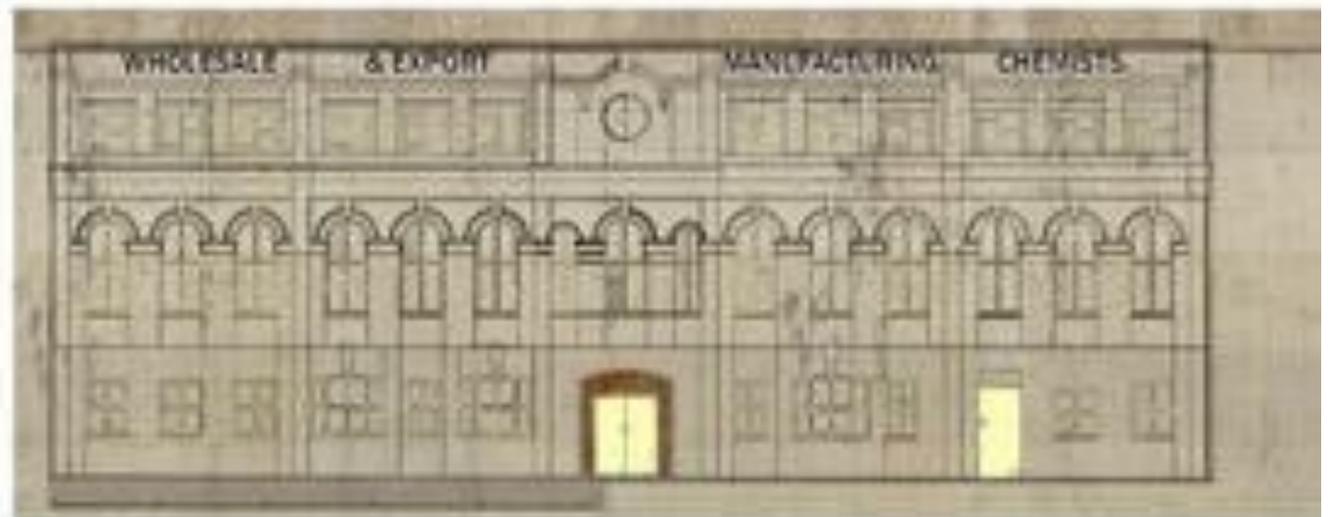
In hindsight I should have started with something simpler, but filled with overconfidence, picked the most complex building within the scope of my model, a centre piece which would dominate the skyline. My reasoning was that if this didn't work, then the whole project would be in doubt. But of course what I didn't know, were the many skills and learning curves to go through over the following 9 months.

This building, is the 'Cox's Pill' factory originally built in 1865 as a laundry before converting to pharmaceutical production in the 1890's. It has a fascinating history and for a time had a world wide monopoly on the sugar coated pill, so was a major exporter for UK and a major employer for Brighton. In fact, the building only closed in 1979, with many employees re-locating to a greenfield site in Barnstaple and still in existence today. The key point, is that this employer still holds great affection for the people of Brighton and countless Grans & Grandads alive today have first hand memories. If I could do this building justice, then I hoped this would be quite a draw for local discussion and possibly even public display. Put into a setting of Edwardian Brighton with its surrounding LBSCR urban branch line then this should get more people to think of 'The Brighton' too.

There are several pictures of this building over its 115 year life, which I augmented with some plans available at the Brighton History Archive – the 'Keep'. Construction of the model began again with a 2D Sketchup drawing as shown. This was imported into Adobe Photoshop and then converted into a transparency. (a process found on YouTube). This allowed me to layer the drawing on top of Scalescenes stone and other texture papers, then add separate layers for initial weathering, signage and window frame production.



Above  
Cox's factory in Sketchup -  
and to the right, imported into  
Photoshop



After mounting on 1mm card, window holes were then cut out and frames created by printing a frame design onto A4 address labels, sticking onto transparent acetate sheeting and cutting out unwanted material. The completed 2D frontage section was then cut into sections to be added to the building frame, constructed from interlocking 2mm mount board, complete with slots for LED lighting to disperse around the building. One complication is that following the prototype, few of the walls are perpendicular, so construction of roof angles in particular was an ordeal. Lighting was added at this stage, some x 20 LED's primarily from the Woodland Scenics product range but also additional suppliers to simulate a flickering fireplace and ceiling light shades. The majority of the windows would have opaque 'glass' (grease proof paper behind the clear acetate), but 2 areas would be open to show the managers office and a section of factory floor to illustrate the pharmaceutical mixing process – a totally whimsical/self indulgent side show as they hardly visible in 2mm scale!



Cutting out windows



Interior of manager's office



Above - the building structure

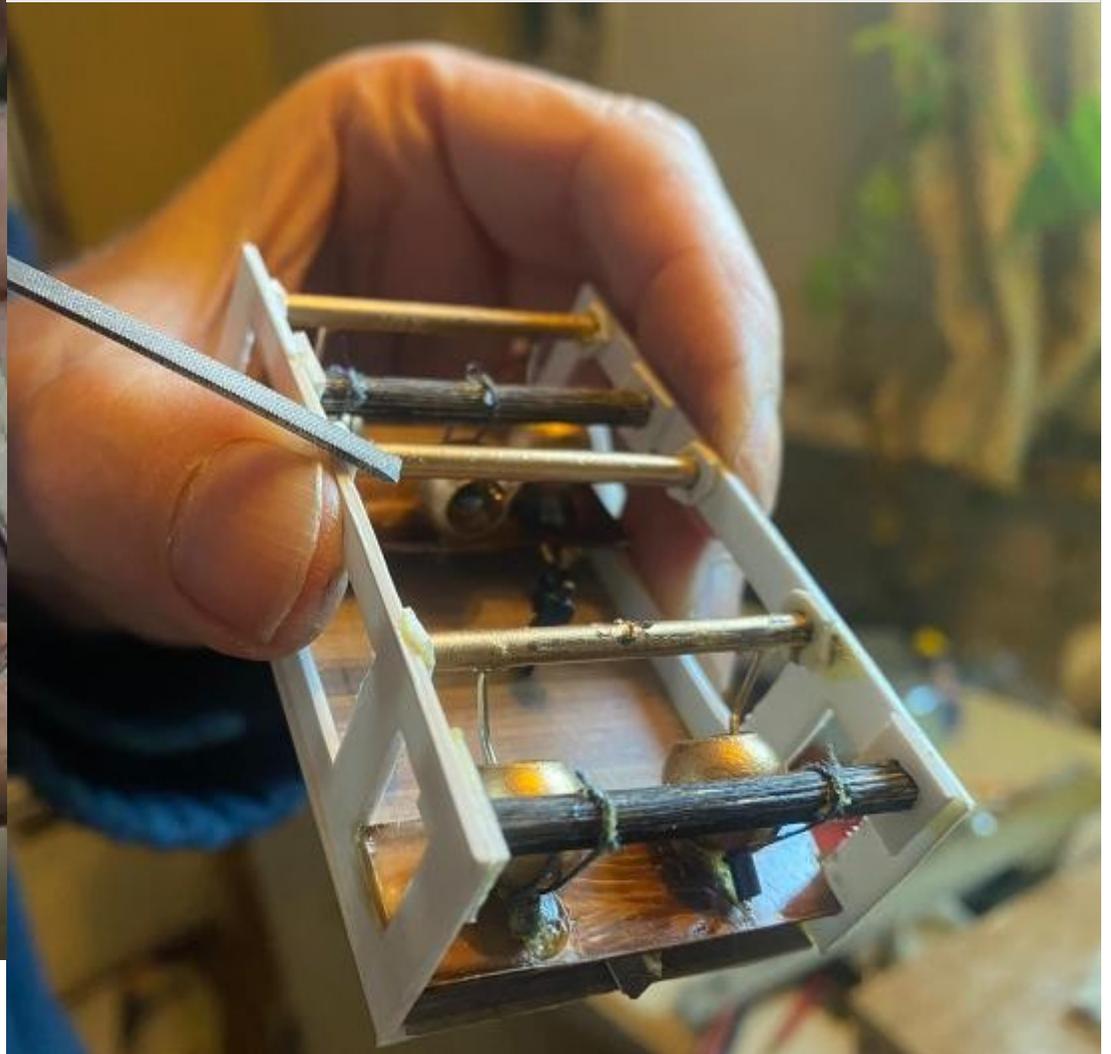
Right - view of the roof





Left - moulding details

Below - factory interior



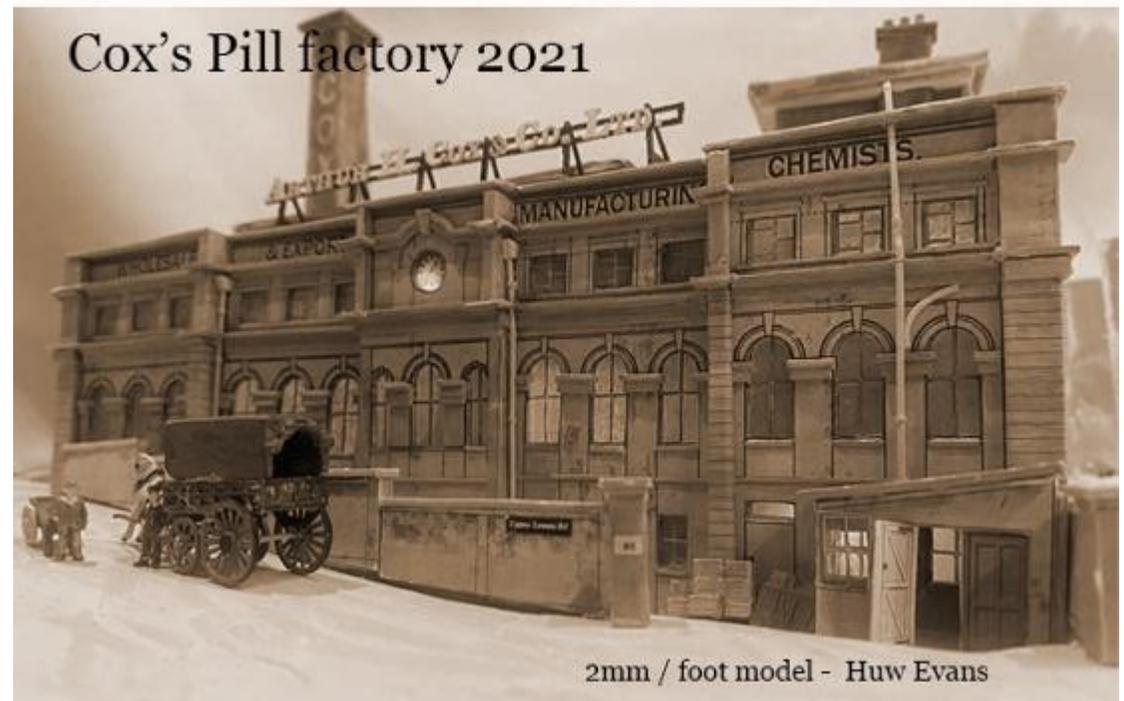
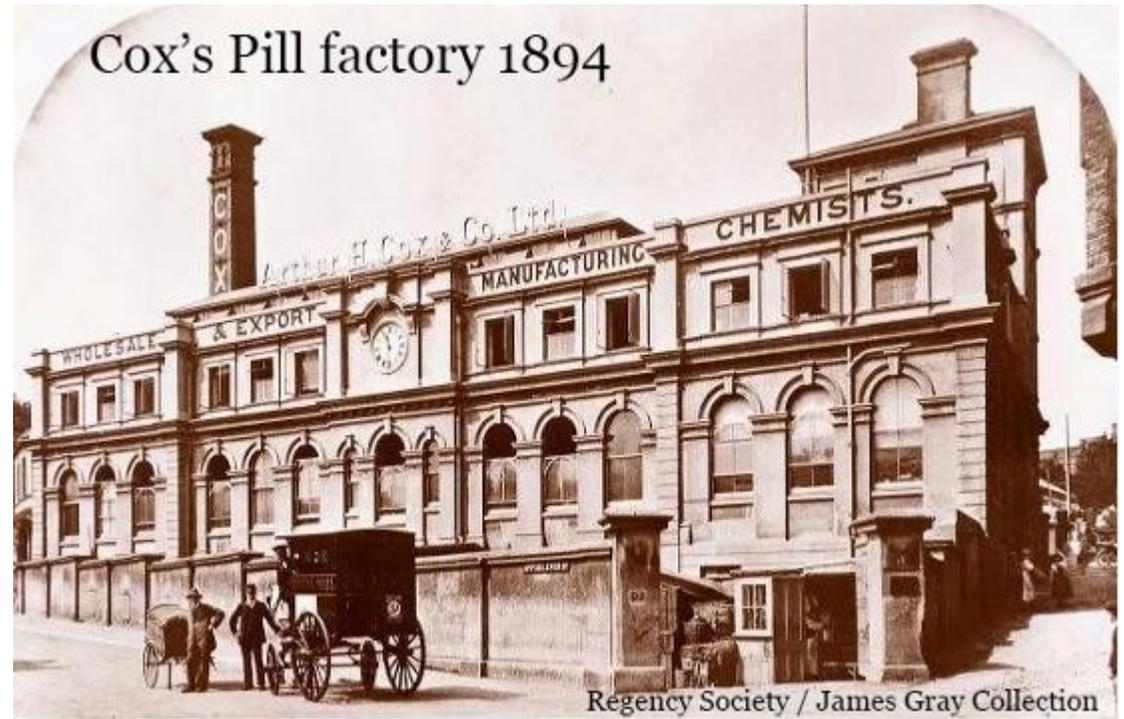


The real factory interior -  
and in model form



External mouldings on the building were constructed from offcuts of mount board and plasticard. One perennial issue is knowing when to stop creating these additional 3D details in favour of the high level 2D drawing detail already on the model surface, particularly in N gauge where this final detail may not be that apparent to the viewer. That said, I've now added some 150 x external components added to the surface of the building to provide further detail. Keen observers may also note amongst the roof elements, the Ratio OO Gauge skylight kit, which albeit supersized in N gauge is of appropriate scale for this factory.

So here are completed pictures of the finished model compared to an original photo from 1894. I'm relatively pleased, but in no way can justify the number of hours to get this far!

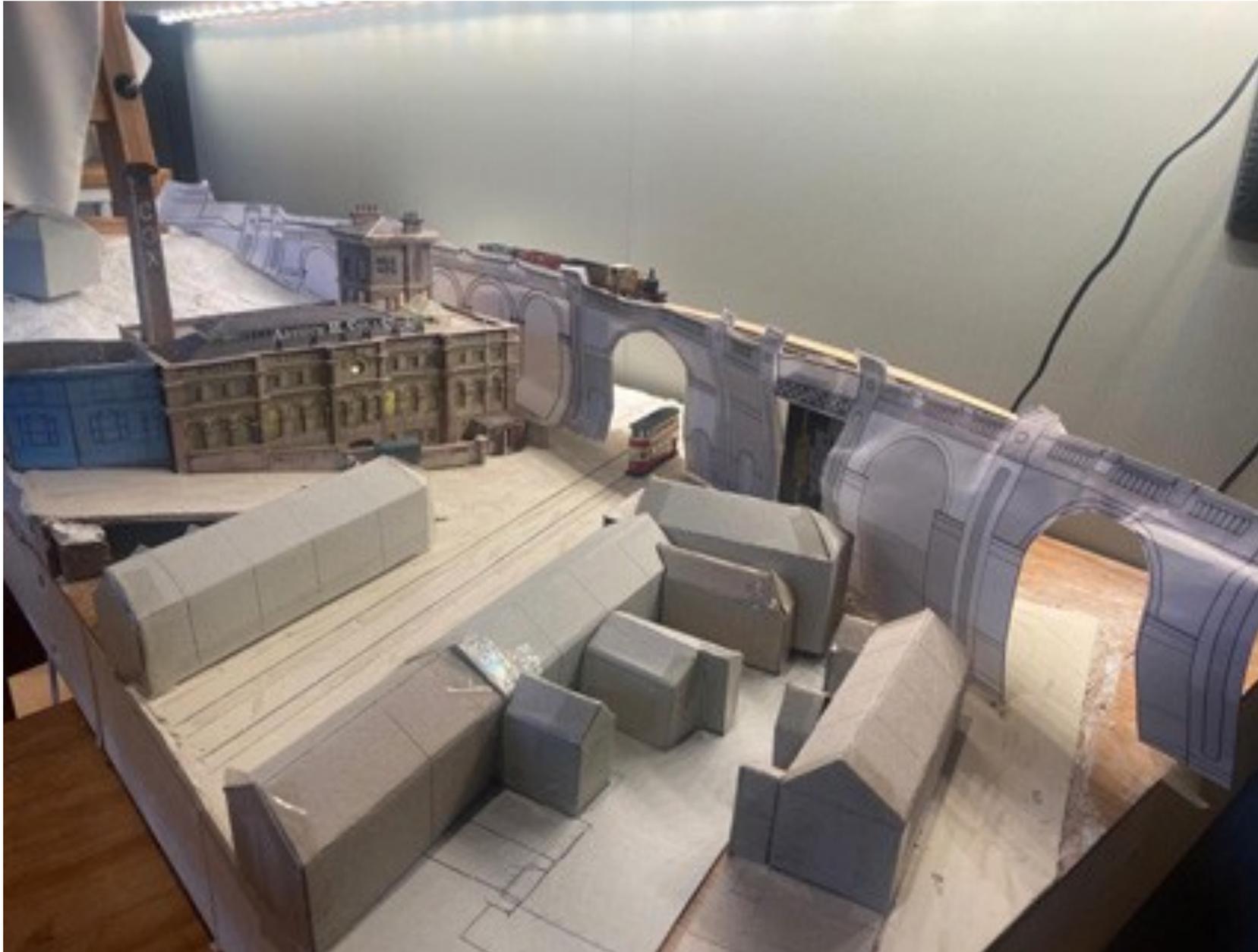








In the final photo, I've added crude mock-ups of the other buildings and the viaduct within this central diorama which has assisted me in refining the proportions and any horizontal compression. Oh and please ignore the London tram – I can only guess it was on a day trip?!



## **Future Plans**

**Scale** – without knowing anything about the subject, I'd picked N gauge for this model. However, a comment by Eric Gates from the LBSCR Modellers forum led me to visit a number of 2mm finescale layouts at the Beckenham and East Grinstead exhibitions in October 2021. I cheekily took a length of my N gauge Code 55 track along and could readily see the difference to finescale Code 40. So at the time of writing, I'm preparing 'Brunel Style' for a conversion weekend of gauge at some point in the future. Of course, for my diorama, this is only the swapping out of a single 3 foot length of track so hopefully the least of my future dilemmas!

**Operation** – I've now purchased an infra-red shuttle controller to automate the future operation, beginning with the 18" tram route, though this has yet to be tested.

**Tram / Railcar** – I've purchased a Kato N gauge chassis which I hope can eventually be used as the base for both a tram and LBSCR Petrol railcar with the chassis facings and superstructure built with plasticard / 3D printed components. I appreciate this will have some compromises, not least as the tram track should be 3'6" gauge compared to the 4'8 ½" gauge.

**LBSCR Balloon Coach** – I'm waiting for the brass model by Ultima Models to come back in stock and hope to construct this at some point in the future.

## Post Script or more accurately a Pre Script

In writing this article for the Brighton Modellers Forum, I couldn't let the opportunity pass to reveal that my Cox's factory is not my first attempt to scratch build a building structure. Here is my first attempt (aged 10 to build a card model of St Davids Cathedral in Pembrokeshire), undertaken a mere 50 years ago this month!

Huw in 1971, with a model of St David's Cathedral



**2021** Returning to modelling after half a century!



**Merry Christmas!**

# 4 Wheeled Carriages in HO Scale

Javier

I have been curious about building a set of Mr. Stroudley's wonderful carriages for a few years as I have envisioned modelling a mixed era Battersea Yard in the near future. Though I managed to get quite a few models on and off my CAD workbench, I tend to be preoccupied by either a very busy home life or the demands of my university studies, so it's a bit rare that I'm able to document the progression of some of my modelling activities. During the summer of 2020 however, Hornby's "generic" 4 wheel carriages had been released, and I found myself with time off from uni. Thus, I found myself with a good opportunity to not only produce & release a set of the carriages in my home gauge of HO, but to record the process of making one of my own 3D printed carriages.





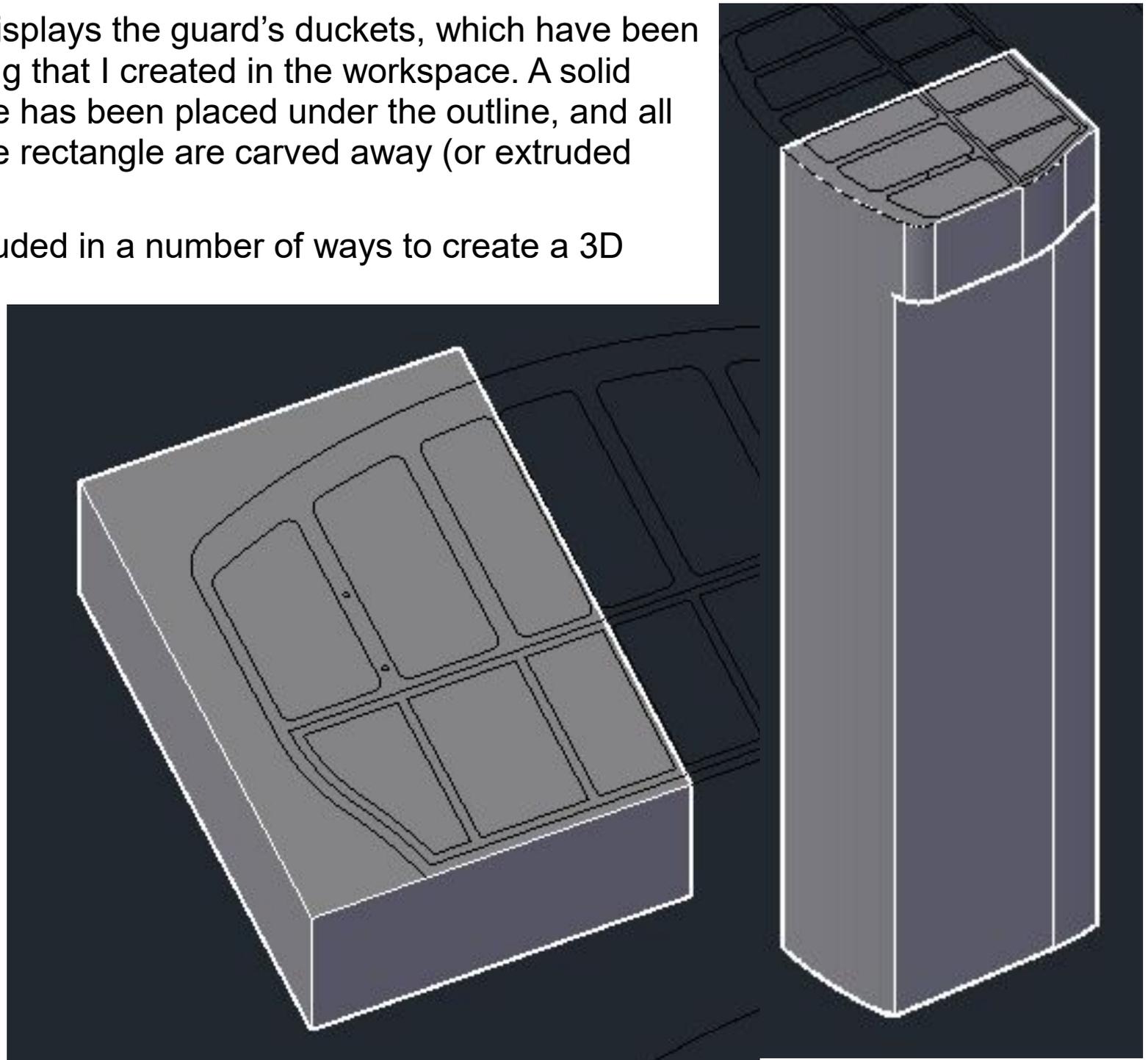
To start, I needed a reliable set of drawings. While I don't currently have a copy of LB&SCR Carriages: Volume 1, I had been provided a scanned set of drawings by my friend in Brighton modelling, Gary Kemp, who has done a comprehensive review of the Hornby

Carriages in the previous edition of the Digest. To start, I had inserted the drawings and, as best as I could, traced over them the drawing space that the CAD program provides. Some key dimensions are used to help me scale the traced drawing to HO. A few details are omitted here as I like to work on them separately. I can reuse the details, and a few sections of the finished body for the other carriages when I address them; though for the CAD portion I'll only be covering the D34 Brake.

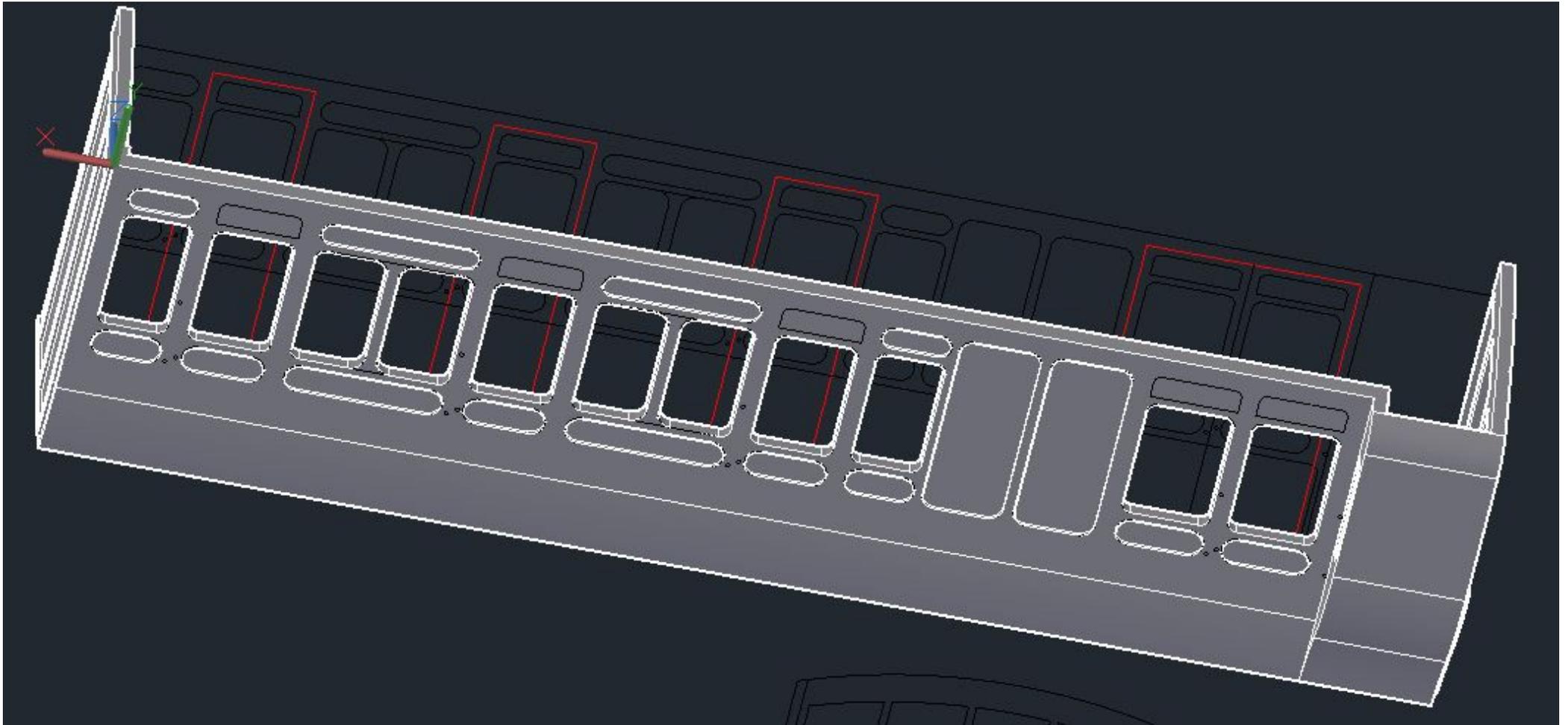
From here I have oriented a few of the drawing sections for extruding, which in the content of the CAD software, is a process where lines from the drawing are made solid, either by pulling them out, or pushing them through an existing solid. The first part to extrude was the main outline of the carriage body.

The picture to the right displays the guard's duckets, which have been extruded from the drawing that I created in the workspace. A solid block such as a rectangle has been placed under the outline, and all the unwanted parts of the rectangle are carved away (or extruded away).

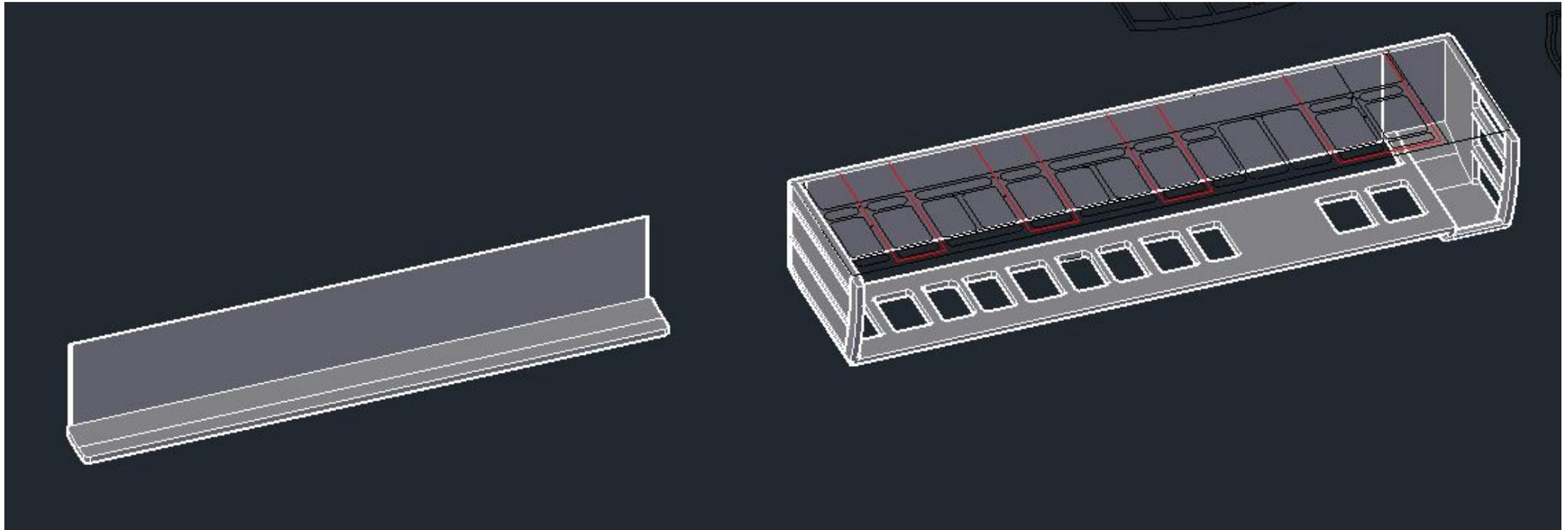
The drawing can be extruded in a number of ways to create a 3D model, and can be manipulated to reproduce the shapes required for the Stroudley design. There are a few things that will have to be adjusted for a printed model, as for example the current thickness of the ductet outer wall would be quite frail in HO. Luckily, the wall does not need to be increased by very much - a few thousandths of an inch - to the minimum thickness that is required for a strong 3D print.

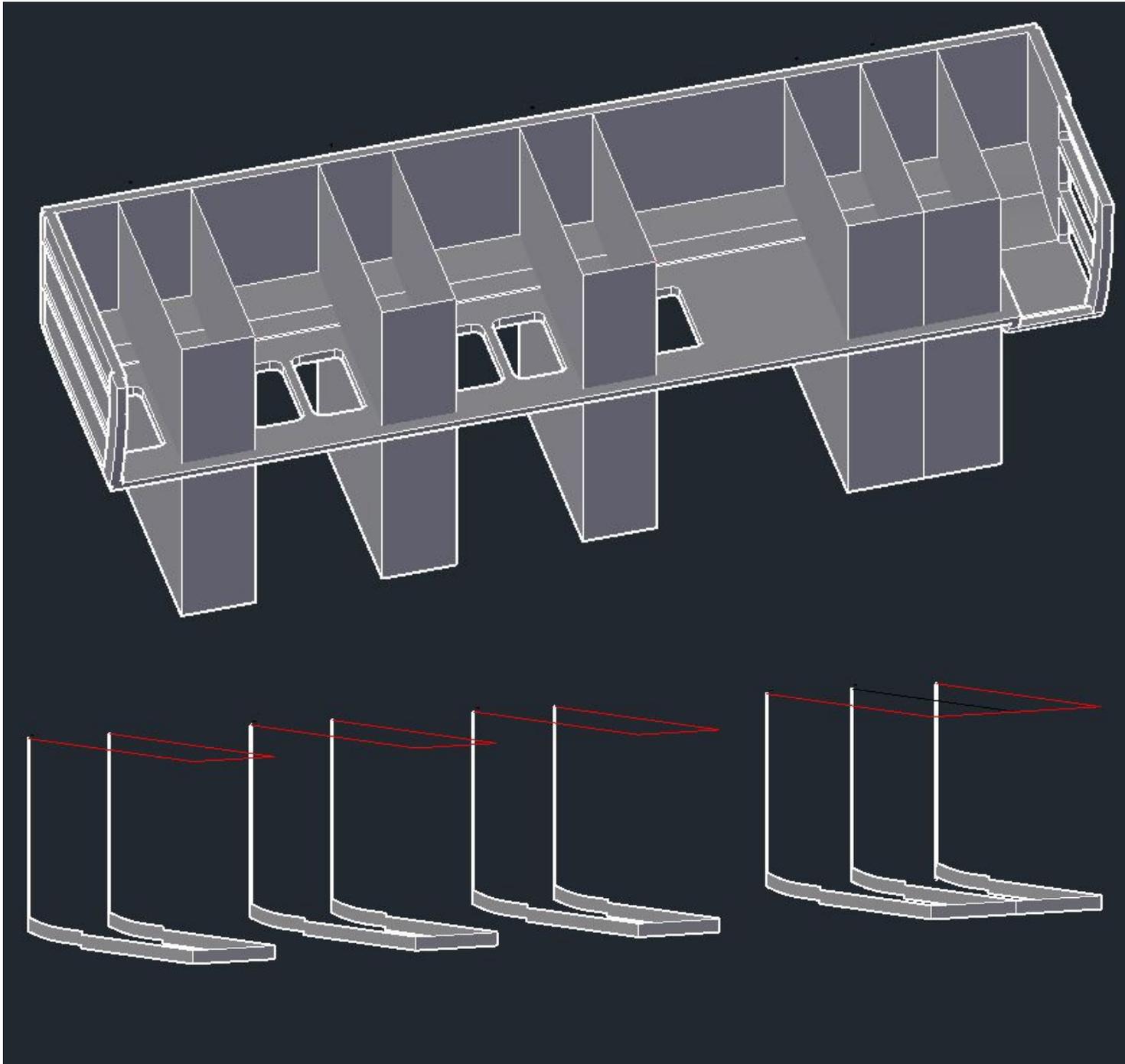


From here on, there are plenty of other extrusions to be made. These shapes of various details are adjusted to a depth I can work with. Some shapes go through the carriage model: others are set into the carriage body to create an engraving. Window frames and panels are such parts, they must be subtracted from the main body of the carriage in order to create the desired engraving.



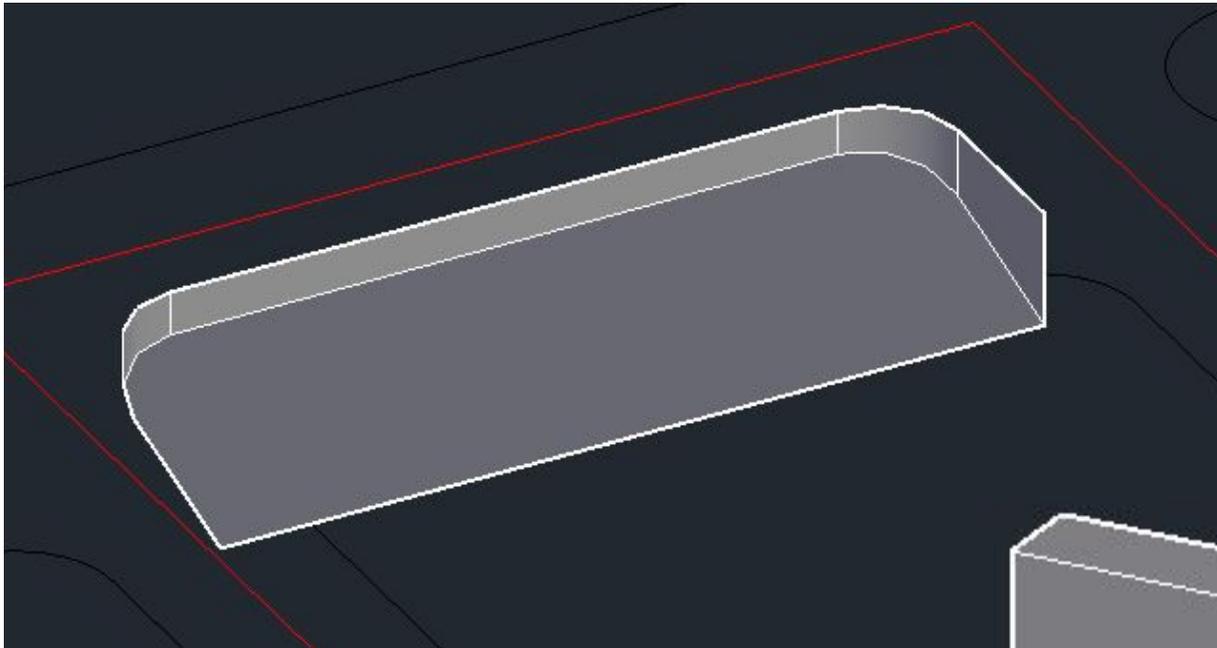
An example of a rather difficult part to extrude is the tumblehome. An extrusion, although a great tool, is applicable only as a flat surface in a 3D modelling program. These are done as a square or a rectangle, or perhaps any surface with a flat edge. In the case of the tumblehome, the surface is part flat, part curved. Despite this, we can still use an extrusion to create the panel engraving for the tumblehome. The carriage body is copied off to the side. From there we can create a panel section by extruding the outline of the panel and erasing all the unnecessary bits. This process is reversed for the original copy of the carriage body, and the two pieces are brought together to create the desired panelling effect .





This nearly completes the main carriage body. A few additional details are required such as door frames. Here you can see the frames after they are extruded and pulled through the body. The frames are crafted by subtracting the body wherever the outline for the frame for the door intersects, and the remaining pieces are tapered off to create a seam.

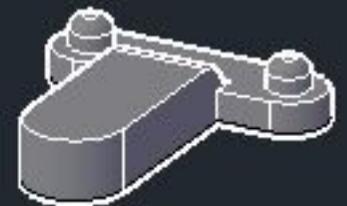
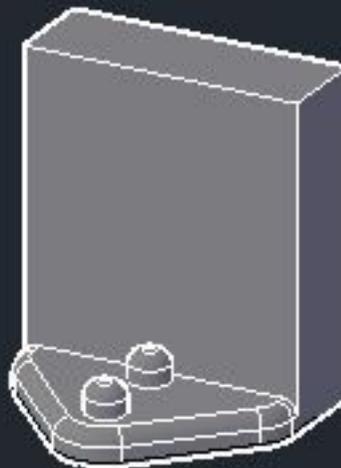
After completing the door frames, detail parts are required to finish it. I consider detailing a 3D model to be “the other half” of the 3D modelling process, as details take three to four times as long to finish on a model as the main body does. Luckily we do not have very many on this carriage; locomotives take far longer, especially the rivets!!



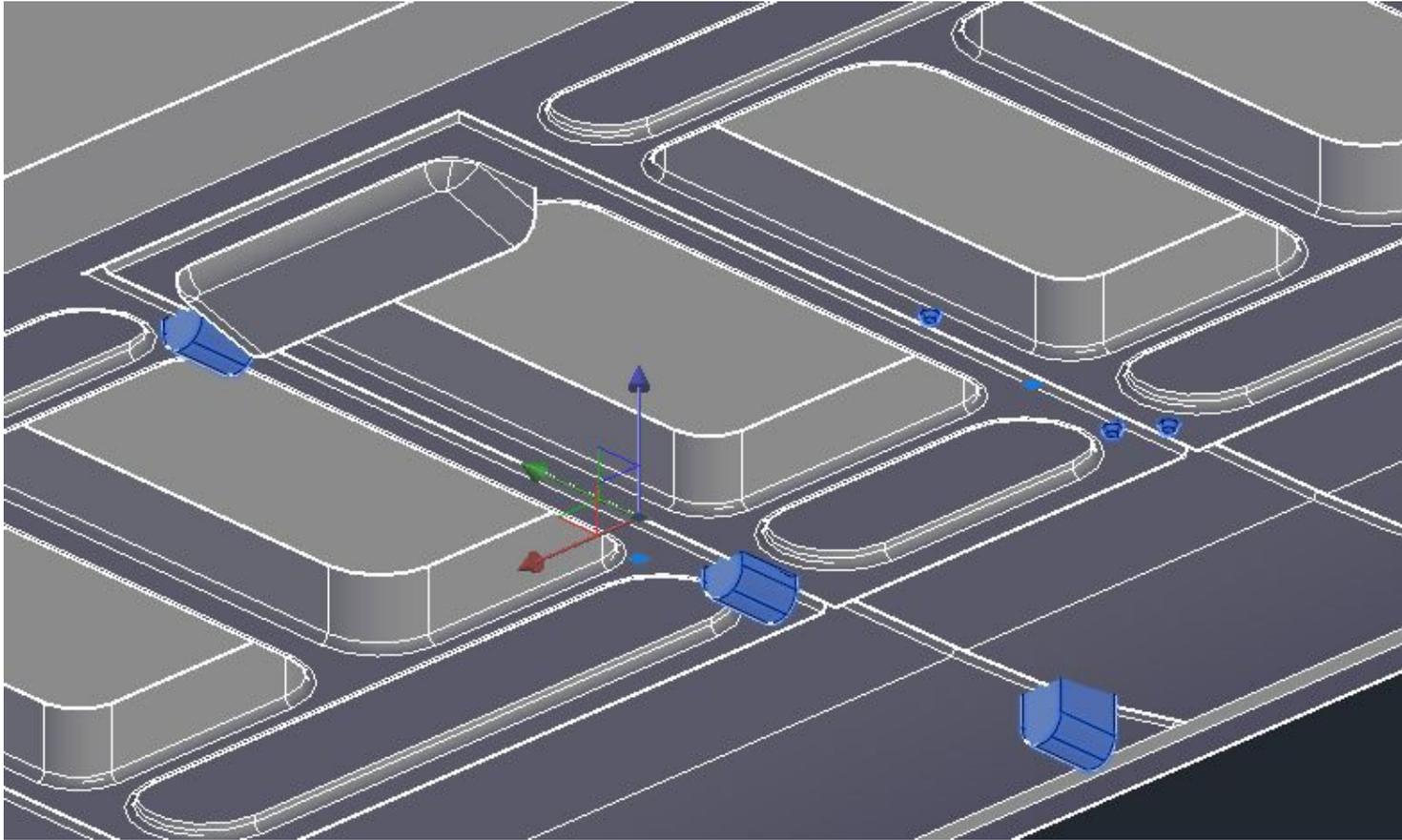
The door vents have been extruded and carved at an angle. The resulting block is rounded at the edges to represent the vent cover.

However, not all parts have to be carved from a shape through extrusion. I have built up the hinges of the doors

out of cylinders and rectangles, the Guard's end steps from a triangle and two rectangles and the rivets are made of up two cylinders, which have been rounded off. The same applies to the lamp iron, which is made up of cylinders and rectangles. All these objects take quite a long time, and are located manually into their respective places.



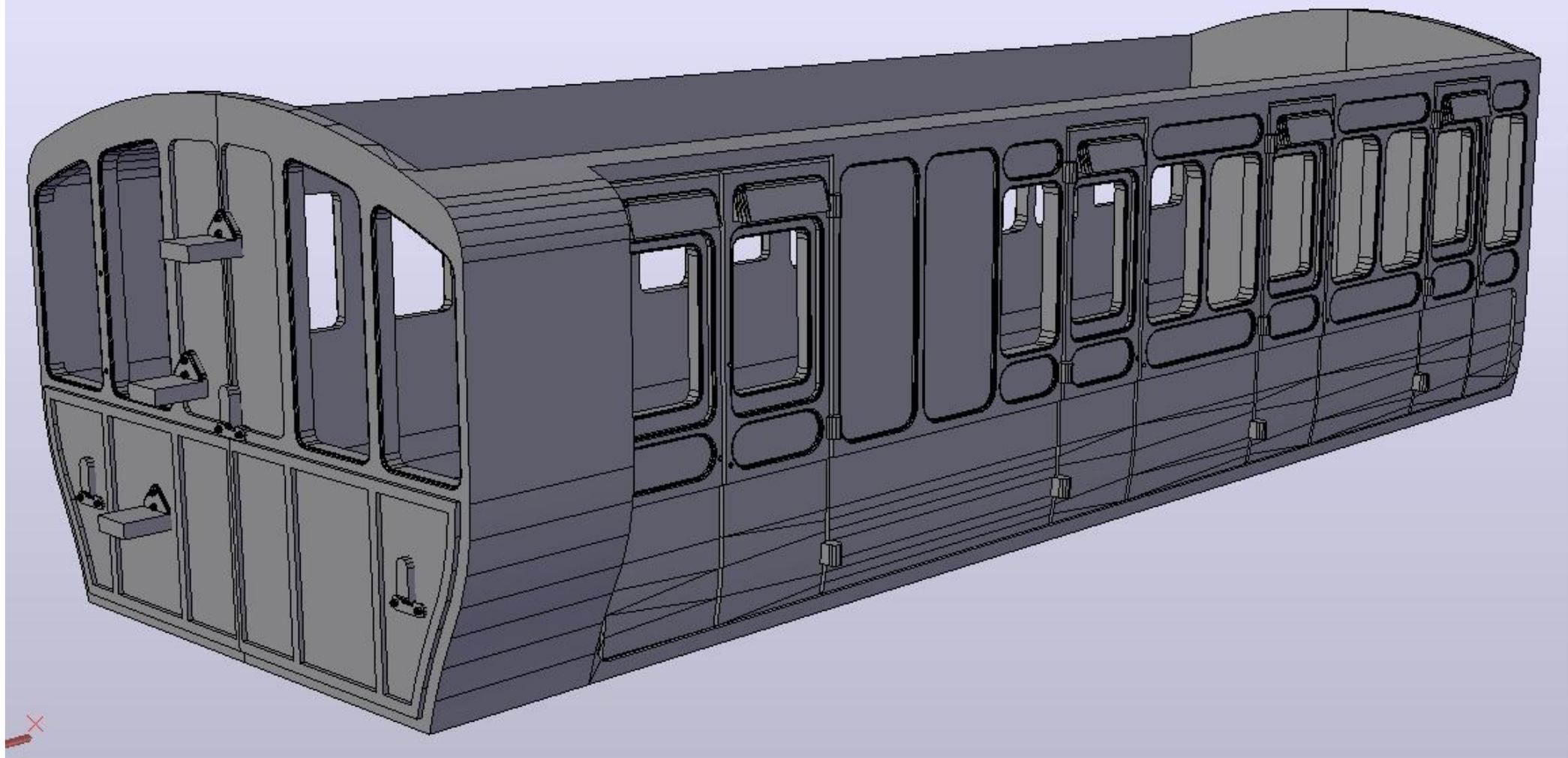
During this period, I have also rounded off a number of the panels where required. In addition, drill spots are placed for grab irons, using simple spheres which are subtracted from the main body.



This completes the majority of the carriage body! I have since added in a few intermediate arches to help keep the intended plasticard/polystyrene roof from sagging. In addition I had to create a separate set of half-light frames for the doors which I had forgotten to implement early on. Luckily these things can be added as needed. I have applied techniques used here for a variety of different models, though perhaps they can be

simplified and optimized somewhat. In the end, I have a model that represents the model I want very closely, and in a scale in which it would not normally be obtainable. I hope to follow this up with the second half of the CAD build, which covers the underframe, roof details, and of course the printing of this HO scale carriage body.

ew][Current]



In memory of my late father.

Images copyright Javier

[Return to contents page](#)

# New Buildings at Ashcombe Down

Mike Cruttenden



Two road engine shed as built, waiting to be sealed, undercoated and brick papered. It will hold four tank engines.





The coaling stage - awaiting a delivery of coal. Will someone please produce a Stephenson Clarke coal wagon!



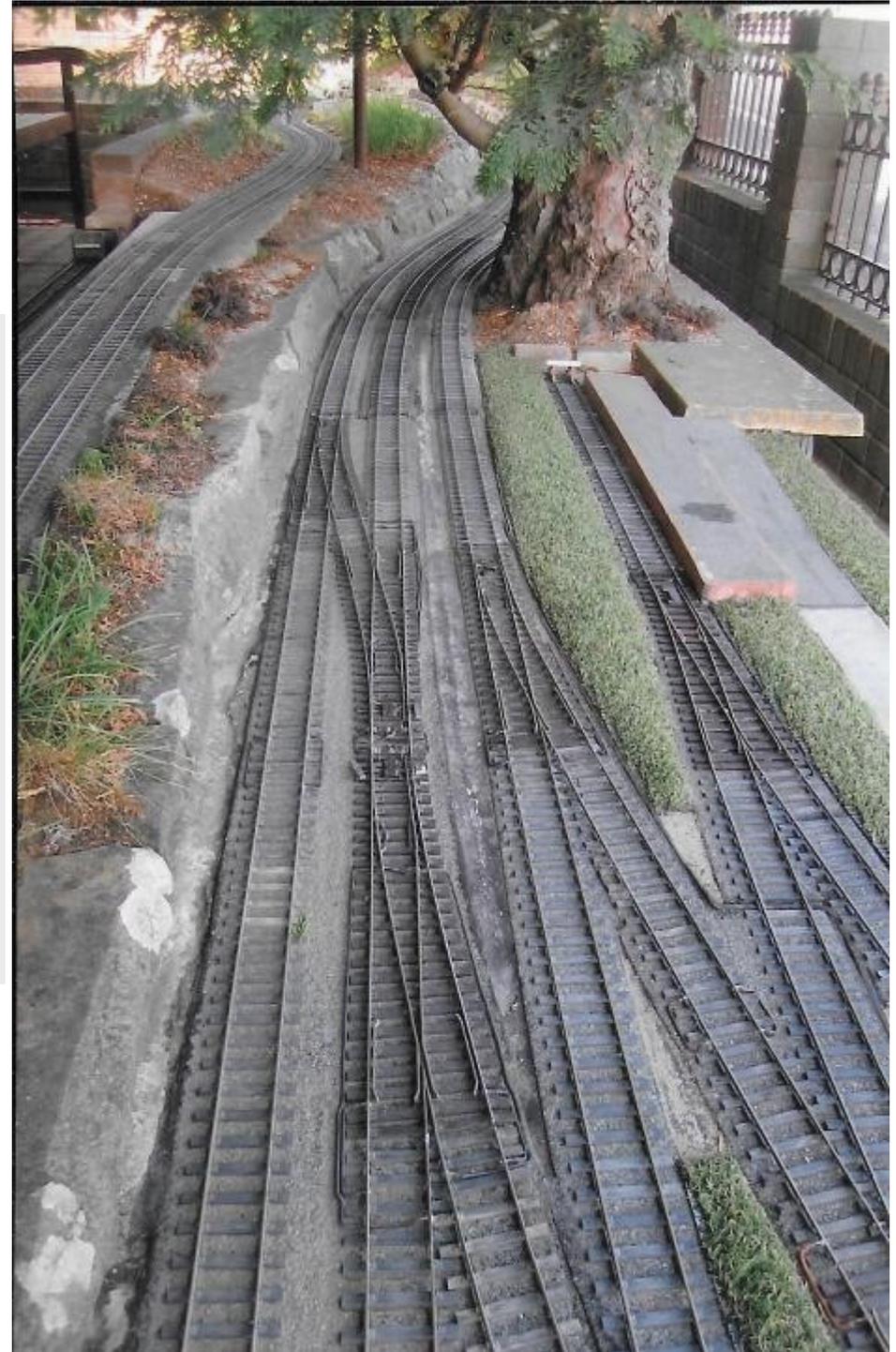
42 foot turntable. Just had to get a Dapol Terrier in there somewhere!

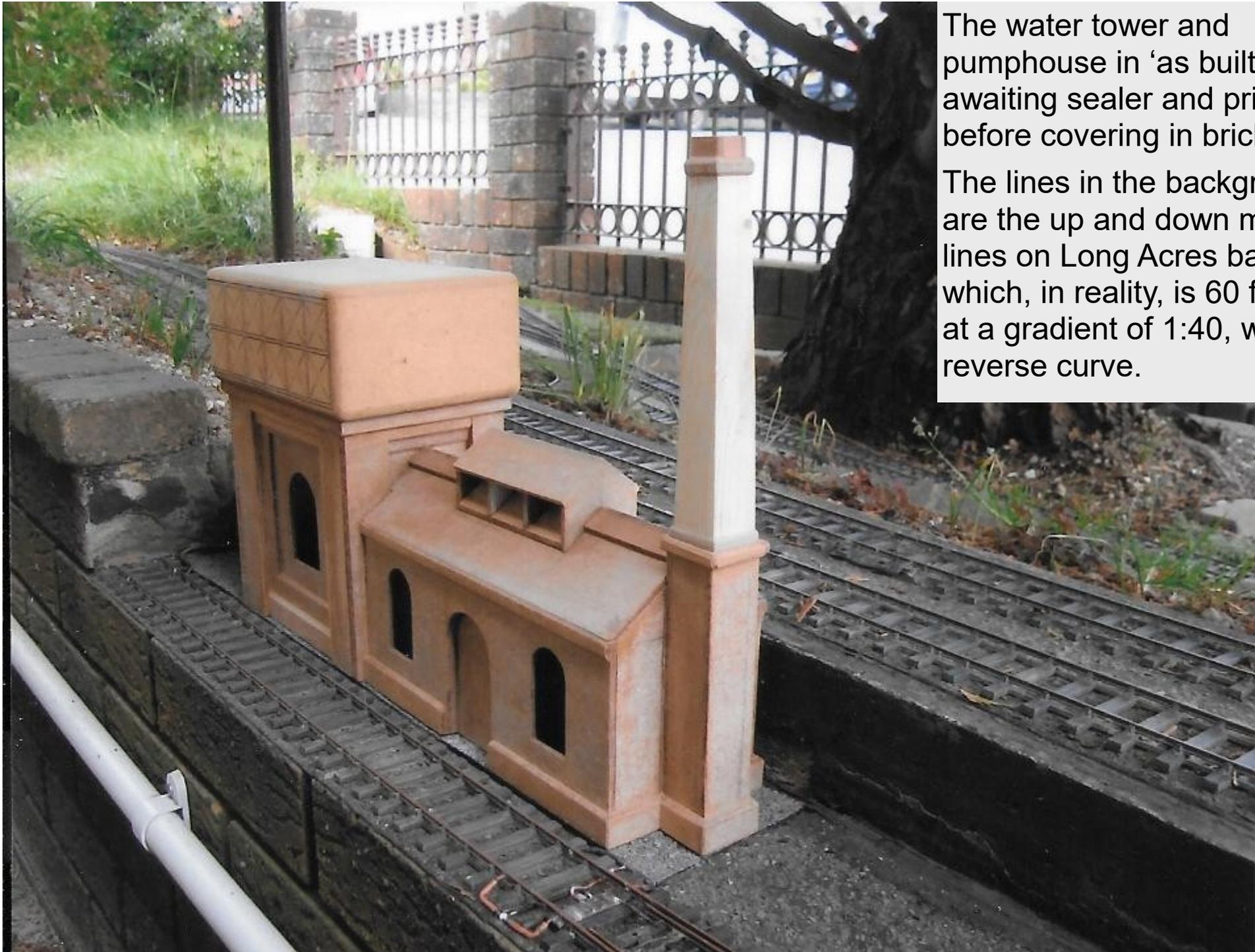
The northern approaches to Ashcombe Down.  
Lines from left to right.

Up/down main avoiding lines of Long Acres bank,  
looking towards Summit bridge, rising at 1:40.

Up/down main lines to Ashcombe Down station and  
down relief line on the right leading to Sandrocks  
Junction. This line runs into either Ashcombe Down  
loop line or the Somerfield branch terminal platform.  
This view looks north towards Sand Rocks junction.

To the extreme right is the horse box loading bay  
platform for the racecourse.





The water tower and pumphouse in 'as built' state, awaiting sealer and primer, before covering in brickpaper. The lines in the background are the up and down main lines on Long Acres bank, which, in reality, is 60 feet long at a gradient of 1:40, with a reverse curve.



The water tower in undercoat. Note the new sleeper built stop block - wooden sleepers with concrete fill.

The line in front of the building is the carriage shed/loco shed headshunt.





The 3 road carriage shed caters for 9 bogies coaches.  
Windows are laser cut in plywood.  
The line nearest the camera is the loco yard headshunt.



The carriage shed attached to the base of the yet-to-be-completed second control cabin.

The hinged flap in the up position.....

.... and shut when the shed is not in place.





Interior view, looking from the control cabin end



Operators' view of the shed.



Interior view of the control cabin, showing the luxury, tip-up seats.

Photographs copyright Mike Cruttenden

[Return to contents page](#)

# Bishopsgate by Bernard Miller

Richard Barton

I was stunned after Peter Korrison's sad death to be told he had left me his Terrier "Bishopsgate", which was the first Brighton loco Peter had acquired. He must have remembered a comment I made some 25 years ago that, of all his many locos, I felt Bishopsgate best typified how IEG might have looked. Looking through my files a couple of years later I came across the a picture of "Bishopsgate" on the cover of the Model Railway Constructor for February 1979. Every detail seemed exactly the same as my model but what I felt was conclusive was the oversized tool box behind the bunker and the hand lettered name. The caption read 'An LB&SCR 'Terrier' 0-6-0T loco No 49 'Bishopsgate' in 7mm scale built by James S Beeson before the war. It is fitted with a small Rocket Precision motor picking up through the driving wheels but using split axles and an insulated frame'. The text accompanying illustrations of other other Beeson locos says 'they were operating an extensive service on a large 55ft by 20ft layout... which is the ultimate in perfection'. It is unclear whether "Bishopsgate" was also from this layout and to whom the layout belonged.

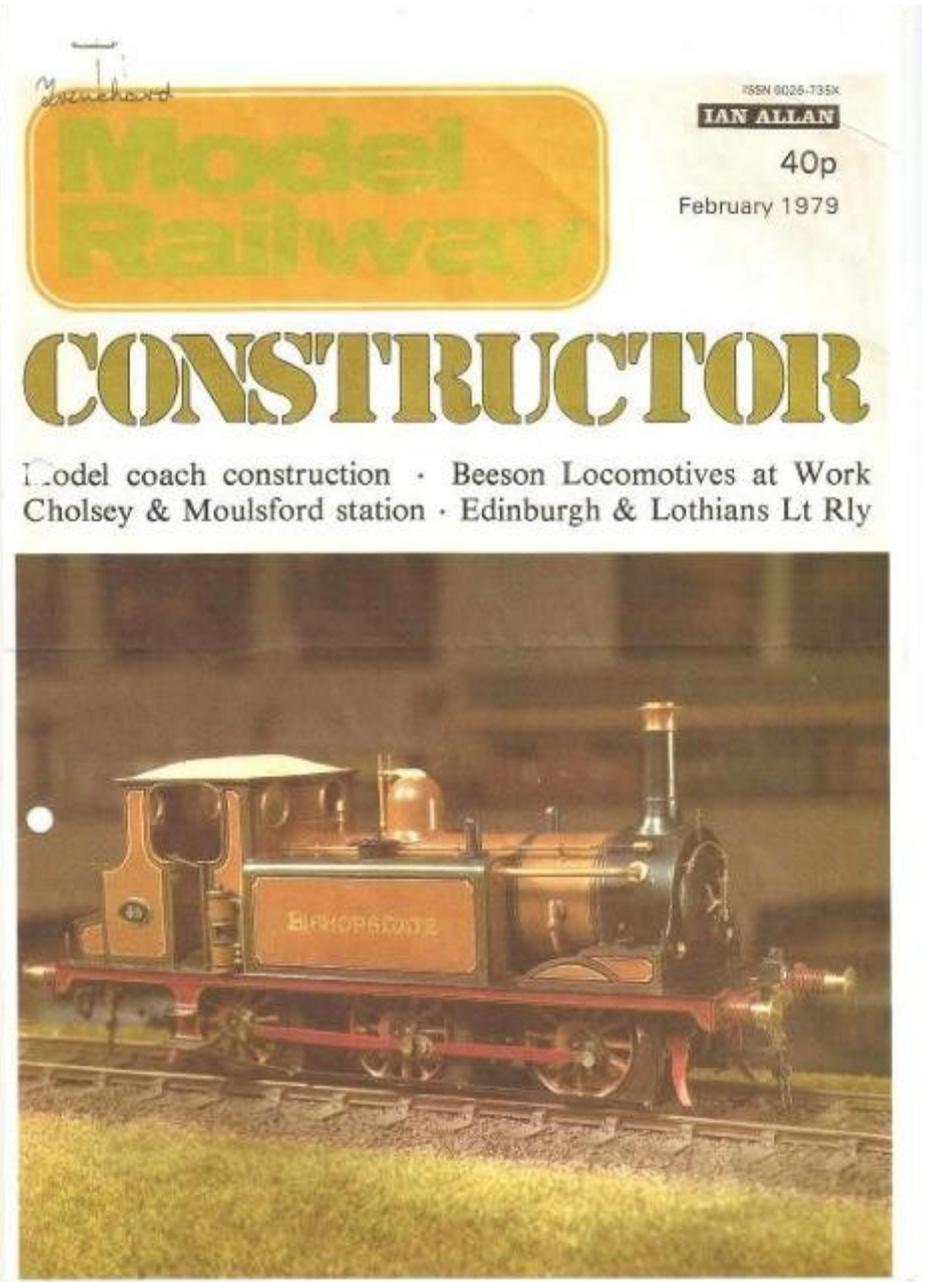
Knowing Lee Marsh's knowledge of Beeson locos I had a meeting with him to look at the loco body and chassis in detail. From the style of construction he was pretty sure that it wasn't by Beeson but the quality of the painting suggested it might have been built by Bernard Miller. When Peter moved down to Felpham he lived not far from Bernard Miller

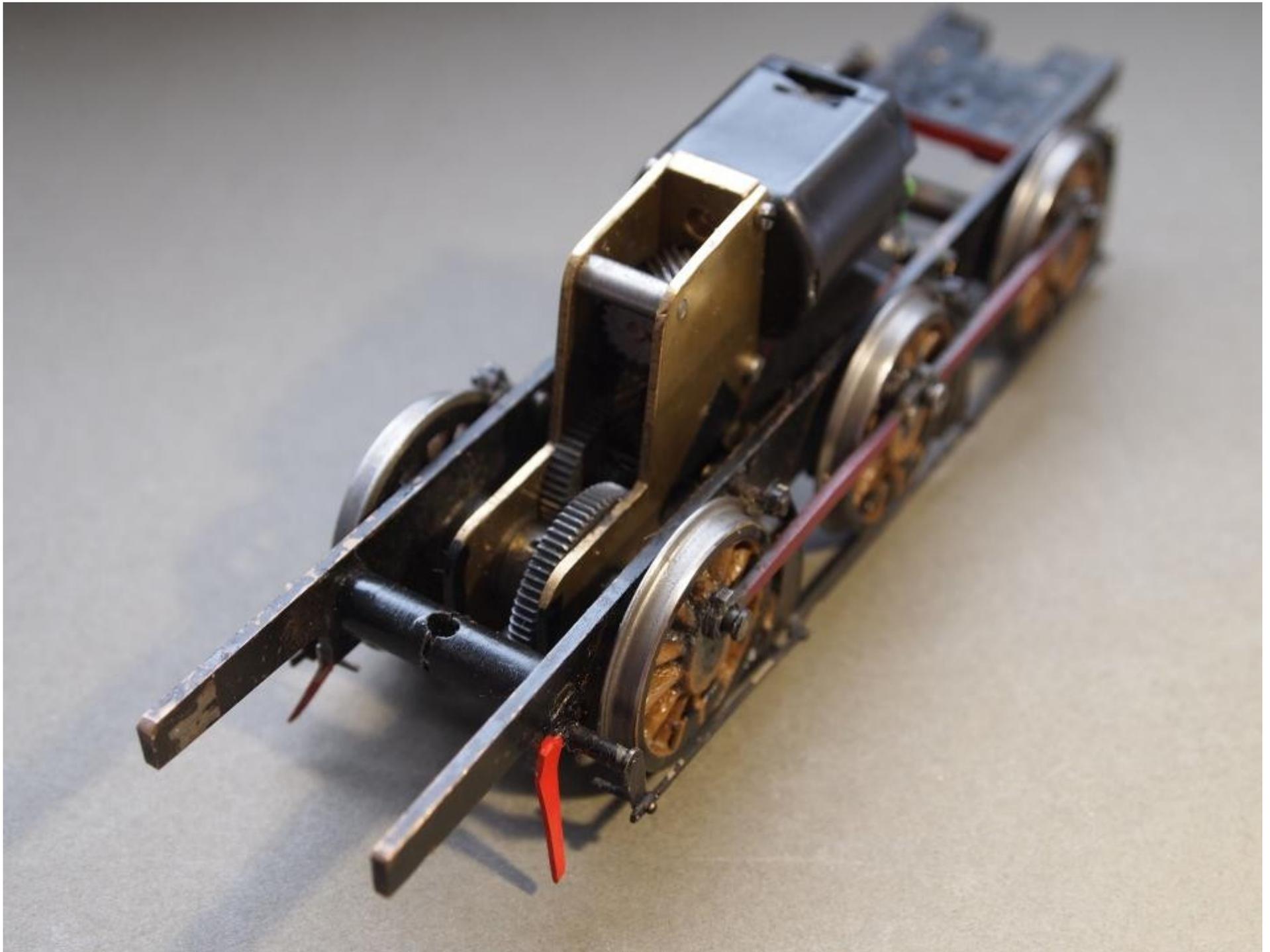
and frequently spoke of him. Peter must have told me about the origin of “Bishopsgate” but, if he did, I had long forgotten. David Lowe, however, visited Peter in St Albans many years ago and operated “Bishopsgate” on Peter’s layout. He remembered being told it was a Bernard Miller model.

For the record the scratch built body is in brass, with the side tanks and boiler/smokebox bolted to the footplate. The chassis has the original 70 thou side frames but the motor and gearbox have been replaced by an ABC gearbox and a Mashima 1824 motor. When this was done the coupling rods were reversed: I seem to remember that there are photos of prototypes showing this modification, expert opinion being that it might have been done to balance wear and tear.

For anyone interested in the work of Bernard Miller, Malcolm Harrison has gathered together information and illustrations from a variety of sources, which can be found on [www.milbromodelrailways.co.uk](http://www.milbromodelrailways.co.uk), in the section entitled “Miller Swan and Bernard Miller”.

No matter that “Bishopsgate” never visited Hayling Island, it has pride of place in memory of a good and much missed friend.









Photographs copyright Andy Nicholls

[Return to contents page](#)

# Stroudley Park

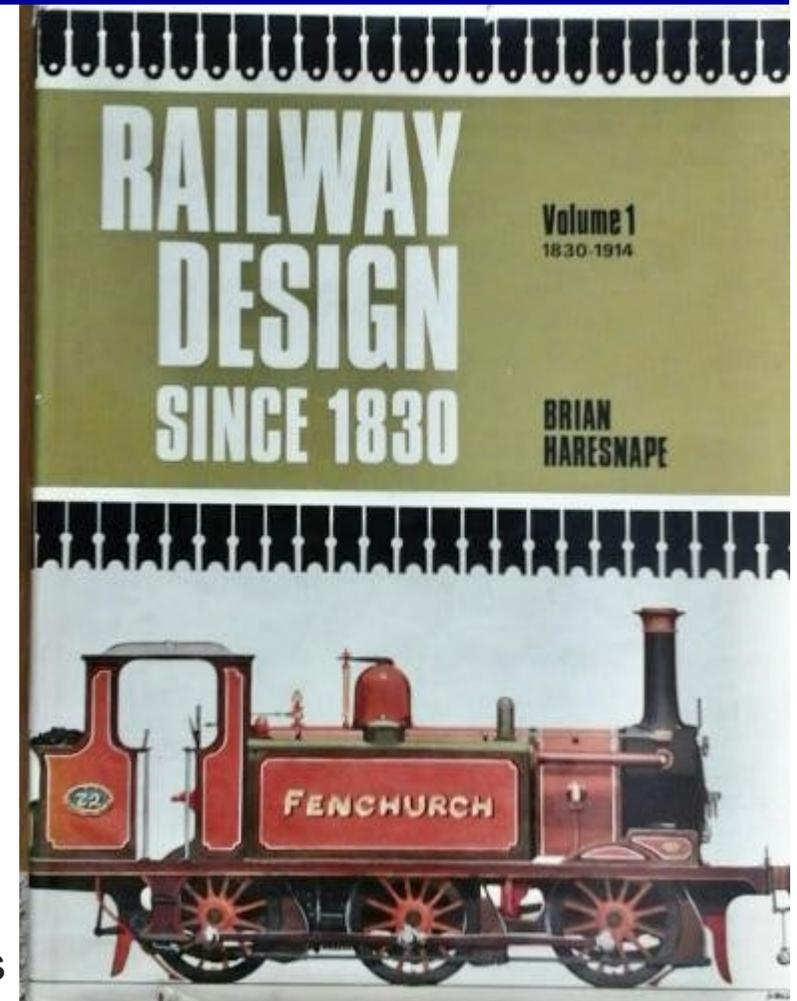
- an ex LB&SCR urban terminus

Ian Metcalfe

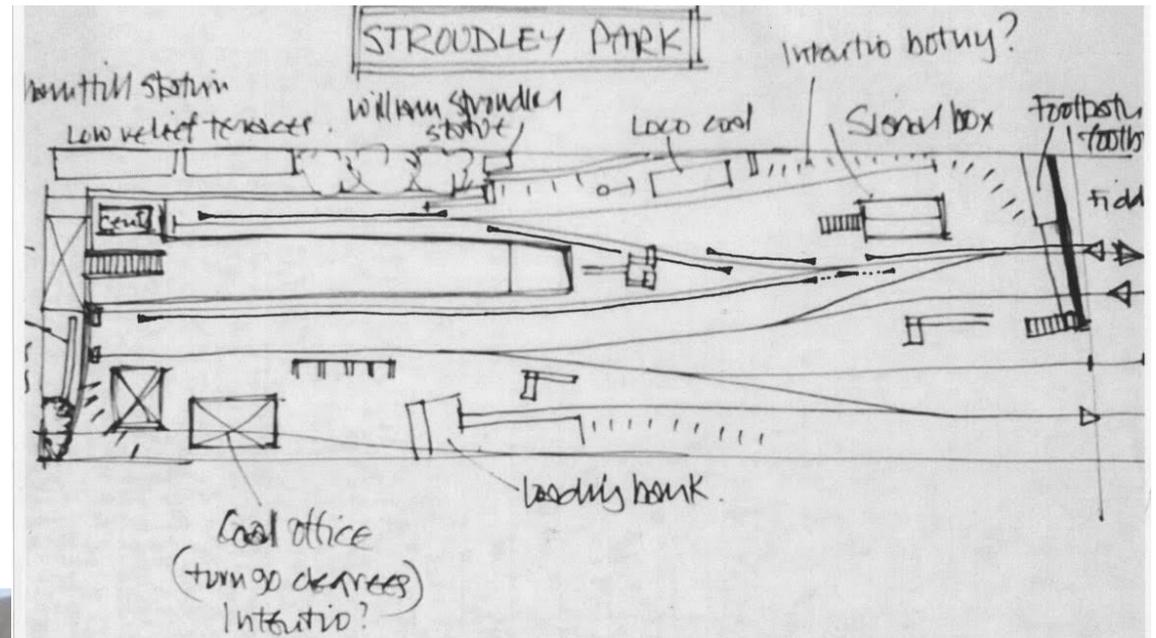
I was first introduced to the 'Brighton' in 1969 when I was attending art college and studying graphic design, I was fortunate to win the course typography prize and selected a book entitled Railway Design Since 1830 by Brian Haresnape. The cover featured a Brighton Terrier and that is an image I found very inspirational.

At the time, I was modelling in 4mm scale, having recently scratch built from plasticard a model of Glynde station building. Over the years, despite modelling several different railways, including US and German, the desire to model the LBSC or SR Central Section has never gone away.

Bringing us nicely to my present project called Stroudley Park, it is a small (for 0 gauge) Southern Railway, central section urban terminus somewhere in the Croydon area. It is based unashamedly on Cyril Freezer's Minorities concept and set loosely around the 1930's. An estate agent would describe Stroudley Park as bijou and deceptively spacious as



it is just under eight feet long and 23 inches wide. The fiddle yard cannot be erected in my modelling room but that does not really concern me as I am really a modeller rather than an operator. I can however, run a few locos and shunt a few wagons about to keep me happy. I fully intend to build a fiddle yard at some time in the future.



I opted to use Peco track as the geometry suited my small layout. I'm currently in the process of installing cab control and point crossing switches after deciding that DCC was not for me. I found that some of my locos had issues with insulation because of large bogie wheels very close to the frame and chip installation issues with some locos that should have had more available space for fitting the sound chip, speaker and stay alive. Life is much easier for me with analogue control although DCC did add a different dimension.

The station building is based on Streatham Hill and is my first scratch built 7mm scale building. Because of the supposed location near Croydon, the roof features the station name as inspired by Banstead station. The large white letters are to aid pilots to locate Croydon Airport. William Stroudley presides over the layout in the form of a statue outside of the 'Park' thereby justifying the station's name!



My approach to building Stroudley Park has been very different to any previous layouts. Sharp eyed readers will notice there is not any ballast.....yet. I wanted to get a feel for the visual aspect of the layout before the track was ballasted. This situation with track was not helped by my decision to sell my Lenz DCC system. This came about because I could not find a way to install DCC sound in my USA tank despite looking to have a cavernous interior. Plus the Marsh I3 had front bogie wheels a gnat's whisker away from the frames. Blowing a sound chip is an expensive exercise and I wasn't prepared to do that again!

Back to my approach. Given the limited length and width of the layout, it's just under eight feet long and twenty three inches wide which is challenging for an urban terminus in 0 gauge. The end result so far is something with which I am quite pleased. At home, I will be able to shuffle a few wagons about and that keeps me happy.

The station is also rather compressed; the majority of passenger services will be pull-push using a balloon driving trailer and an arc roofed third or EMU's which barely fit in the platform.



My real interest is in model making rather than operation and I really enjoy creating and photographing believable scenes and cameos . At the time of the first pandemic lock down, Stroudley Park was bare boards with a few lengths of loose track. Building Stroudley Park has helped to keep me fairly sane during a very challenging period, although the huge support from my friends in the King's Lynn 0 Gauge Group has been a great help and I am very grateful for their support, especially John Minnis, a supplier of evocative photographs and considerable encouragement.



Photograph copyright Ian Metcalfe

[Return to contents page](#)

# Interesting Trackwork for Modellers

Nick Holliday

For those who build their own track, this example may, perhaps, provide a bit of inspiration.



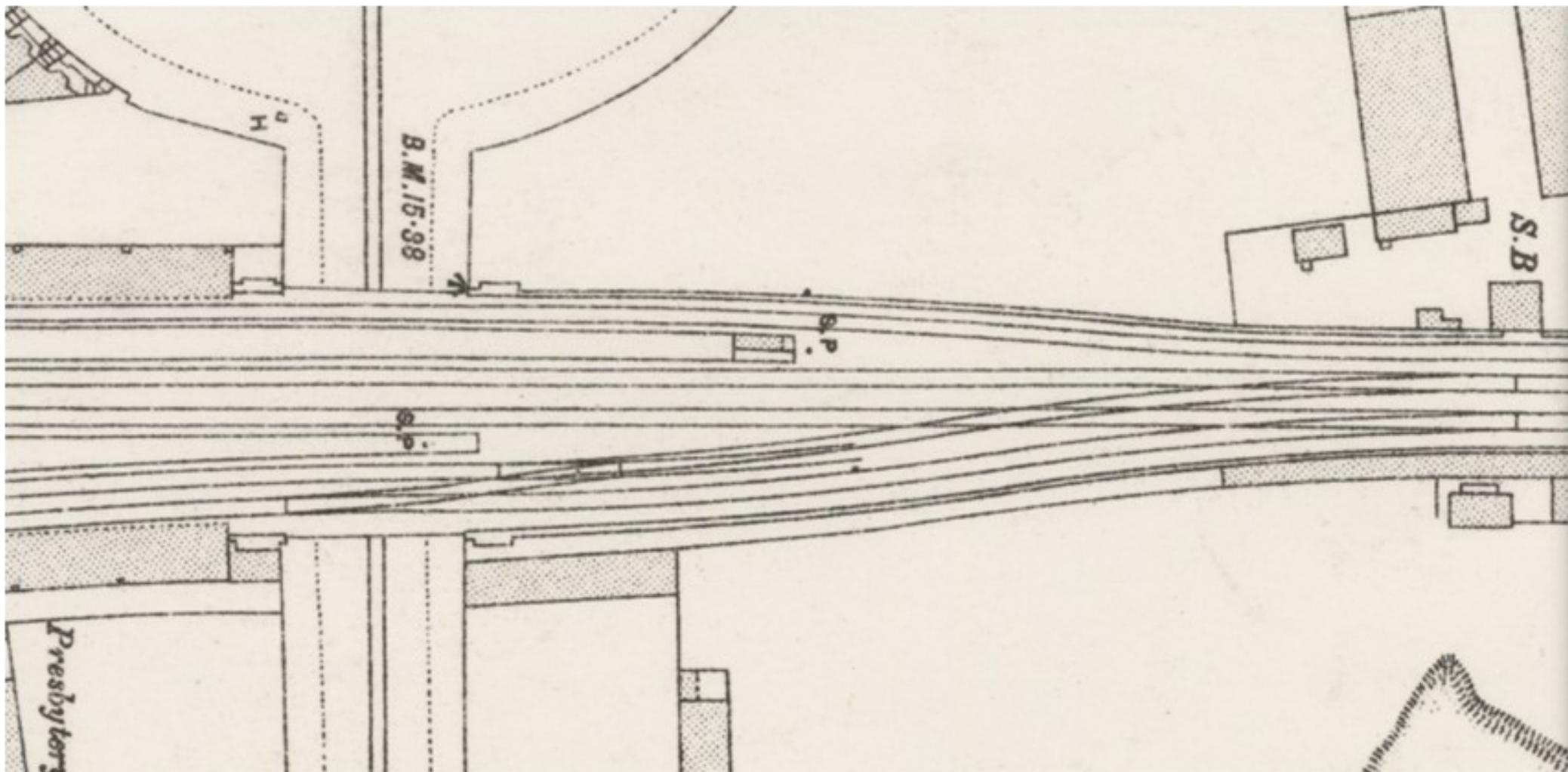
Photo taken from Plate 97 of  
Klaus Marx's Bennett Collection



At Battersea Park station, prior to its relaying in 1908, in connection with electrification, several South London Line trains terminated in the SL platform, presumably to reduce congestion in Victoria Station, the passengers having to change platforms to catch the next up local train. Having discharged the passengers, it would be necessary for the loco to run round the coaches, to make the return trip to London Bridge. However, this would normally mean the loco venturing onto the main line, and finding a window of opportunity to do this would have been a problem, so the Brighton permanent way staff came up with an ingenious solution.

They created a headshunt for this manoeuvre within the existing tracks, interlaced with the up line, with cast stop blocks on the ends of the rails to prevent the loco straying too far. Presumably there was adequate clearance between a loco on the

headshunt and those passing on the main line, but it must have been a terrifying sight for a driver on the main line to see a loco coming towards him on what would look like a collision course, if he weren't fully aware of the system.



The precise configuration is difficult to understand, but below is my best interpretation, based on the 1:1,056 scale OS map, available on the National Library of Scotland website. The curvature of the crossover appears to be somewhat sharper than normal, but as only small tanks would be using it, this would not cause a problem.



Going back to the photograph on the first page, can anyone advise the name of the “motor car company”, whose factory appears in the background on the left hand side?

# 4mm Scale Wagons

Hywel Rees



The covered van is from a Nucastr kit with Alan Gibson P4 wheels. I got it already assembled, but in need of some renovation and, although it is not compensated, it is squarely built and quite heavy, so track holding doesn't seem to be a issue. It is fitted with single V hanger single side brakes and a spare metal brake lever from a Hornby PO wagon.

The PO wagon is from a POWsides prepainted and lettered Slaters 5 plank Gloucester wagon. I substituted MJT white metal axle boxes of the correct pattern and fitted MJT etched brass compensated W irons and Alan Gibson P4 split spoke wheels. I did feel that their choice of Humbrol 100 was a bit too orange for my own interpretation of "red oxide" for the body colour, but I am prepared to live with it. Perhaps some weathering may be appropriate.

# Building a Gauge 1 Billinton Carriage in Wood

Tim Pringle

## Tools required.

Sharp craft knife.

Fine sandpaper.

Waterproof/exterior PVA glue.

Small bristly craft brush to apply the glue.

A mini glue gun is useful for tacking parts that are not easy to clamp together. The glue is then easily scraped off later when the PVA has set. They are about £5.00 from craft shops.

A small set square

Light pin hammer.

Box of standard 13 amp/1.5 mm cable clips or similar.

Clothes pegs and other small clamps if available.

1 ft long steel ruler.

Clingfilm.

Building-block made from a piece of flat planed timber, 67 mm wide X 400 mm or so, a little longer than the carriage body, by 25+ mm thick. The longitudinal edge needs to be planed to a 15 degree angle.

2 x round head or c/s wood screws small enough to go through a slot in the floor.

A soft damp cloth for wiping away excess glue.

Before you screw the floor down to the building board, plane or sand a bevel to the long edge. The lower edge needs to be about 1 mm in from the original edge. Drawing a sharp pencil down that edge 1 mm in will help.

Once that is done, wrap the cling-film around the building-board and screw the floor in place making sure that the floor is central to and dead parallel with the building board.

Try the inner partitions for size in the slots first. If all is good, then glue them in place, ensuring that there is glue all along the bottom edge, and that the partitions sit down fully onto the floor. A gentle tap with the pin hammer on a piece of wood usually gets them to sit down firmly. Ensure that all the partitions are vertical, 90 degrees to the floor.

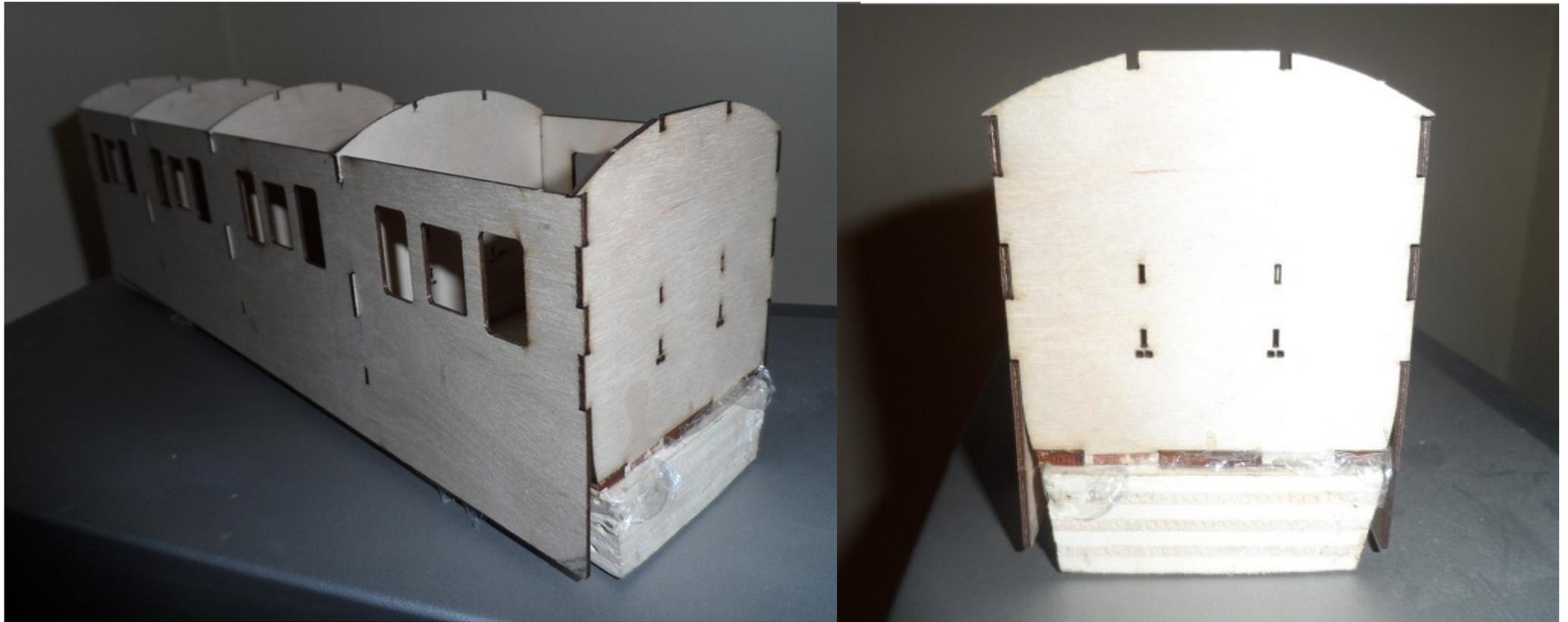
Glue on the outer partitions in between the slots on the floor end. Because the slots are open, you will have to make sure that the partitions are first held firmly against the floor end, and secondly that they dry truly vertical. As my building block was only a little longer than the floor, I was able to use a couple of cable clips tacked onto the block end. You could try screwing a piece of wood tight up against the ends. Or knocking in a couple of clips and rotating them so they force the bottom of the partition up against the floor end.

Leave to dry for several hours.



Next, the inner sides. Try them for a fit first, as the tabs on the side of the partitions should not only line up, but slide into the corresponding slots in the carriage sides. If all is well, apply glue to the sides of the partitions only down to the bottom of the middle tab. Again make sure the sides are lying completely flat and totally up against the partition sides.

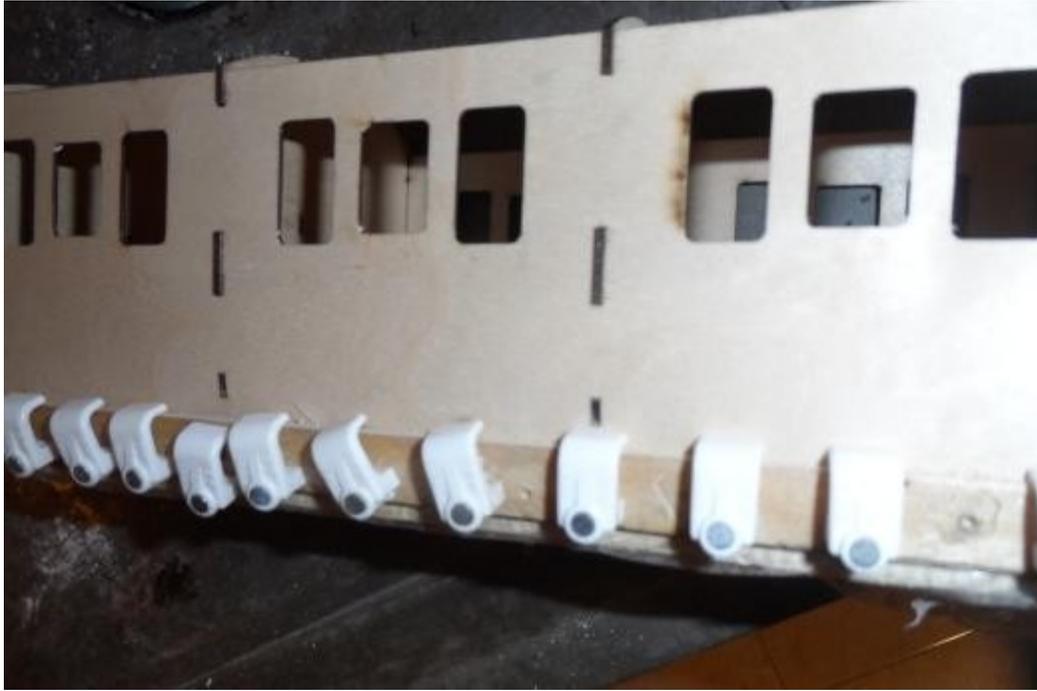
Leave to dry overnight or at least 12 hours or so.



Draw a pencil line above the lower edge of each side, that corresponds to the eventual finished edge, i.e. from either end of the lower edge of the floor. This will be a guide for when you hammer in your cable clips. Now apply glue to all the unglued edges/surfaces of the inner sides, including the join between the floor and the side. It does mean that copious amounts of PVA are spread around the carriage insides, but it can be mostly cleaned out with a damp cloth once everything has been clamped down firmly.

Force down the lower edge onto the building board and at the same time start hammering in cable clips. If you set the outer part of the clip just above your pencil mark, and then drive the small holding nail through the lower part of the side, you will then be able to use those clips for the remaining outer layers, by only slightly lifting them off the sides. I space each clip just apart enough to enable me to rotate the clip through 90 degrees without fouling its neighbour. So after hammering one in, turn it up vertically and repeat until the side is held tightly and uniformly against the building board bevel. Continue all along until you have the side completely forced down onto the building board.





In this photo I have used a small strip of wood between the clips and the side, but it really wasn't necessary.

Do the other side, and then check to see that no parts of the upper side have become unglued. This will cause them to bow outwards and will be near impossible to correct if not noticed prior to gluing on the further layers. If you find a loose area, that is where a glue gun comes in handy. Re-gluing and then holding in situ with a dab of hot glue was the most successful method I found.

Leave to dry again overnight or certainly for many hours. Then carefully lift up the clips by using a small screwdriver under the thick base of the clip. They need to come up about 1/8".



The next layers to add are the glazing bars. These take the final extension of the tabs on the partitions. Again try them in place first before gluing the upper half. You have to paint glue along each strip carefully. This is why I like to water down the PVA slightly and keep it in a small jar. It flows much better than the really thick stuff. Use clothes pegs to hold it down.



Once dry, remove the clothes pegs and check each fine extension to ensure they are well attached to the inner side. It is important as they are the sole attachment for the upper part of the outer side. If they are loose, the outer surface becomes slightly proud, and will flex in and out when touched. It is important to ensure that everything is well glued down. Apply copious quantities and then wipe off the excess.

Leave to dry again for many hours.

Next invert the carriage and apply glue to the lower part of the glazing section. Again put plenty in the gap between the two sheets, and then gently squeeze the parts together until you can see glue oozing out of the top of the crack between the two. Then rotate the ends of the cable clips until they are over the lower edge and push them down the shaft of the nail. Usually they will be tight enough to hold the ply sheet down firmly without any recourse to tapping down the nail head. I found that over exuberant use of the hammer can actually make a mark in the plywood, so although not important with the glazing sheet, not very good on the outer exposed layers.

Leave to dry.



The next layer is the outer skin. This is slightly longer than it needs to be, so ignore the leading and trailing edge. They should overhang the end partitions by about 1 mm. The top edge has a couple of serrations that should line up with the middle partition roof extensions. When these are set into the middle groove, the sheet should be in its correct position, the windows lining up perfectly with the inner windows, and the top edge should be running perfectly in tune with the inner partition's upper wall, but will be slightly above it.

The upper level part can then be glued to the glazing section. Try not to use too much glue here as the slide glass has to fit into the space, which is the same depth as the thickness of the glass.



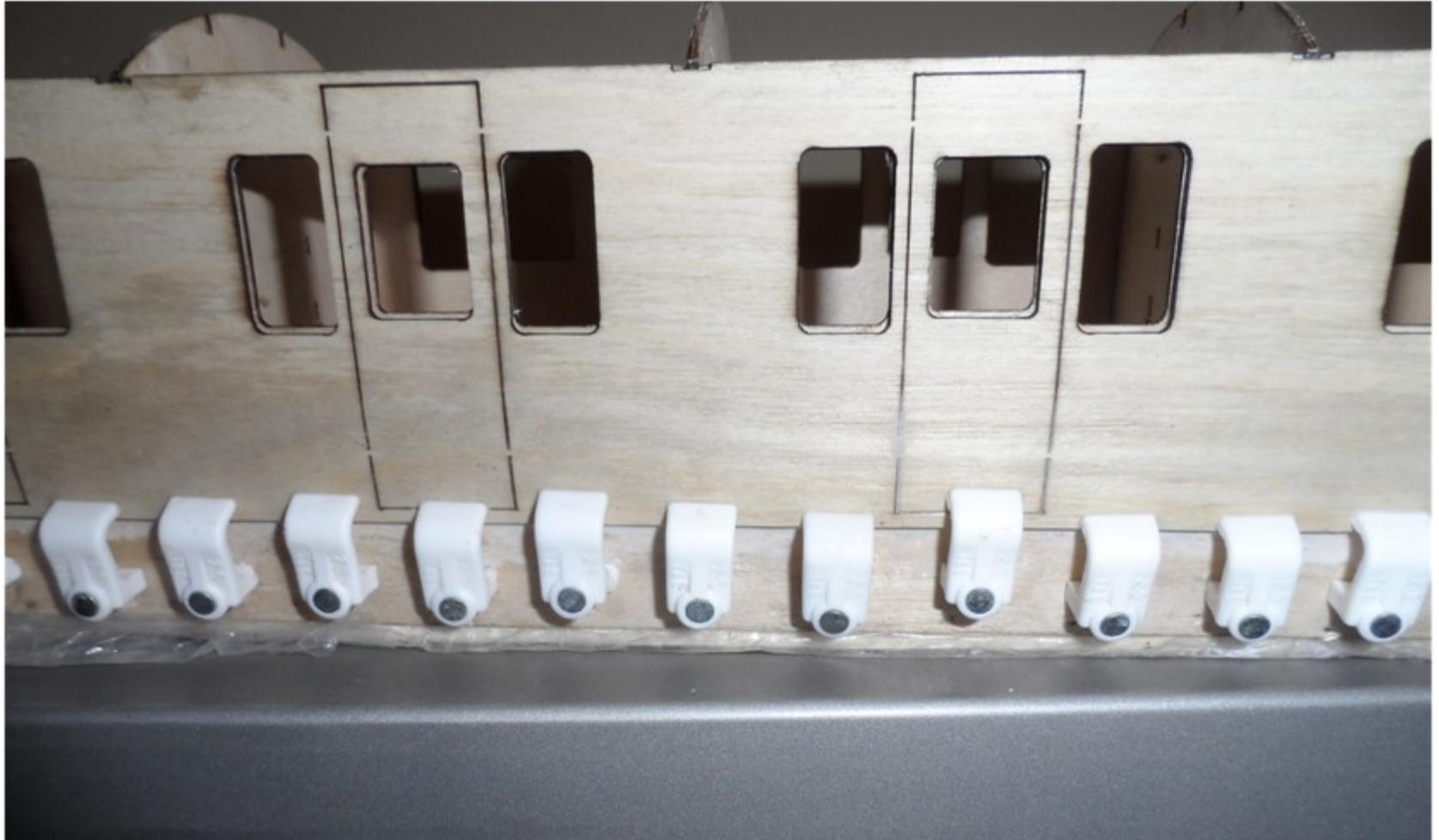
Again I use clothes pegs here to clamp as many surfaces together as possible. Leave to dry overnight, but check carefully for any loose sections. Re-glue and clamp as necessary. It is highly unlikely that every part will be glued up perfectly, but it is much more difficult to correct once the lower part has been clamped down as it causes any un-glued sections to bow out.

When all is good and dry, repeat the same process as with the glazing section. Again clamping with the cable clips.

When all is dry, cut out the remaining tag that sits beside the inner and outer partition roof sections. The 3 mm roof trusses will sit down there eventually. Then get your fine sandpaper and sand down the outer edges until they are flush with the carriage ends.

The outer flat end panels can now be glued in place.

They just have to be lined up as carefully as possible getting them central by eye alone. However, they too should be slightly larger than the present width of the carriage, and once dry can then be sanded flush with the outer skin.



At this point I put the seats in so as not to damage the fragile outer panelling. First of all set the un-tabbed seat support sections into each corner of the compartments. Next glue in the middle supports, popping the small set square against them to bring them vertical.



We now come to outer panelling. It is quite a thin fret, but tougher than you might realise. I tend to apply glue to both sections, and then wipe off the excess afterwards. Again it has the tabs along the top surface that should locate it directly against the roof points on the partitions. Watered down PVA is easier to handle here because as the glue dries it gets harder to move the fret around smoothly, and as a result you get a distortion along the length if you try and move it once it has initially stuck down. Try and make sure all the spacing around the windows is equal; it should be.



You can see that I have just carefully re-applied pressure along the bottom strip of the fret with the cable clamps. They are just carefully pushed down. Hopefully the bottom strip will not distort as I have made them slightly thicker so they can be sanded back to the under surface of the floor. But please check that it is dead straight as you apply pressure from the cable clips.

Again remove the middle tabs from the upper edge when dry. Check for any loose areas and re-glue where necessary. Giving it almost a wash with a damp cloth will remove most of the PVA as long as you don't leave it too long. Finally sand down the outer edges to be flush with the ends. Hopefully one should not have to use any Isopon filler.

Now add the door frets. These should just pop in neatly to the upper half of the door, and stick well with a nice thin coating of glue. After that, do the frets to the ends of the carriages, again doing it entirely by eye.

When all is dry and secure, take all the cable clips out. Then with a sharp Stanley knife or similar, just run the knife blade along the bottom edge of the finished sides several times until you have cut the lower section of the inner side away. The carriage body will come away from the building-board/cling film. Then it is just a matter of sanding the edge down to the floor, and sanding floor to clean off the dried glue.

To be continued.

# A Three Position Signal Demonstrator

Eric Gates

I have been working on a new layout, entitled Hurstmonceux. The project assumes that the Ouse Valley line was not interrupted by the financial crash of 1866, but that enough progress had been made for the Directors to complete an austere version of the line, rather than cancelling outright. Like all “what if” histories, this begs a mass of other questions.

It also requires some assumptions about the route that would have been chosen at the southern end, where the line would have joined the coast line. I can imagine the route crossing the future route of the Cuckoo line (which at that time still did not extend north of Hailsham) around Hellingly. From there, it might have run along the edge of the levels, although this would have run parallel to the main coast line itself. Alternatively, it might have chosen a hillier route further inland around Ninfield or Ashburnham, which would have probably generated more traffic and also irritated the SER, whose line went through Battle – in short, a win/win. The third possibility, which is probably the most likely if money was short, would have been to make an end on junction with the Hailsham branch. At that point, I decided that I was overthinking things, that Hurstmonceux was an interesting name and that it should have a station.

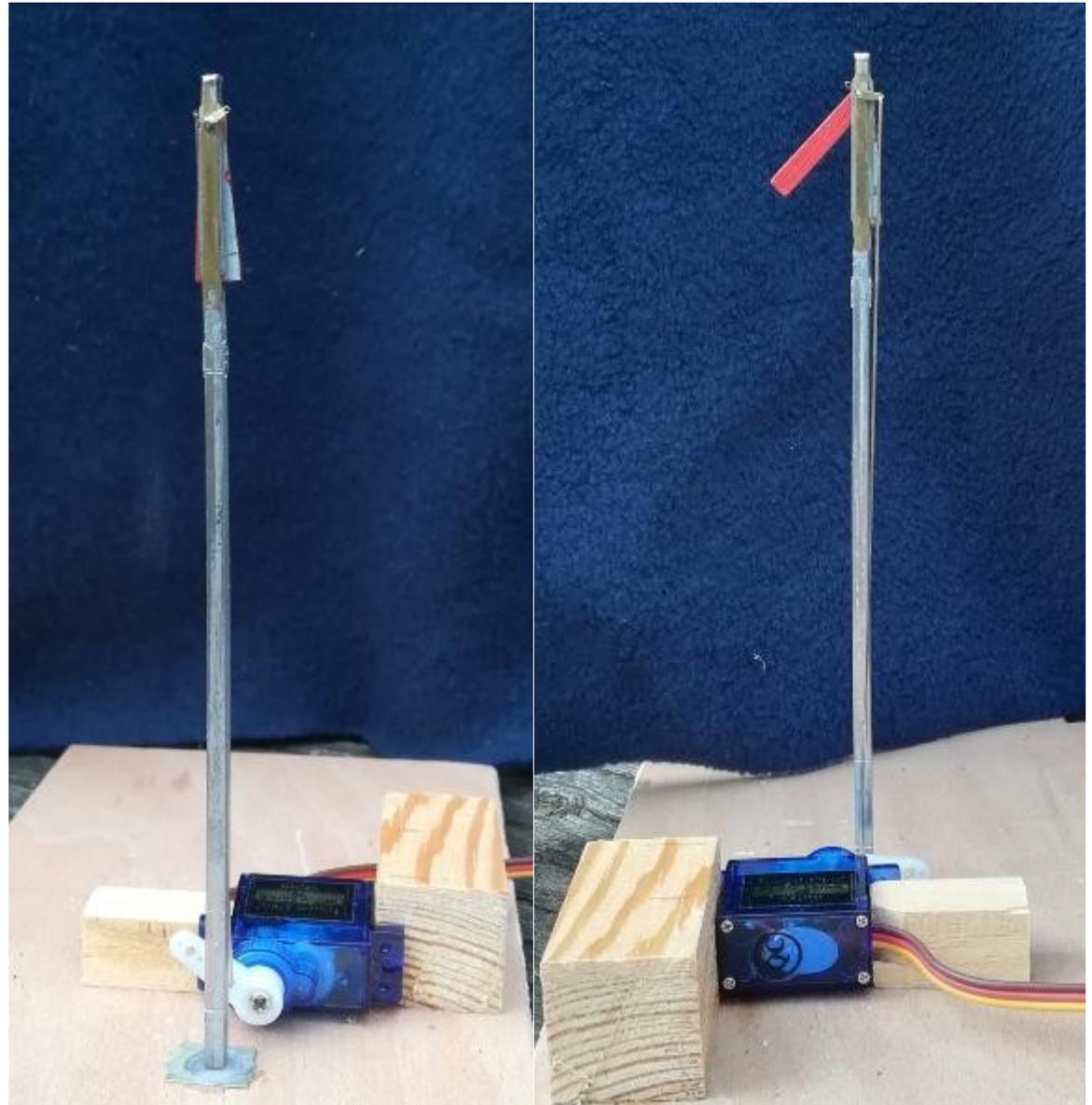
Since the project will be set in the late Craven/early Stroudley period, I believe that signalling of a new line in the mid 1860s would not yet have adopted full block working. I envisage a double armed station signal like that in the photo of Bexhill, possibly protected by double disc signals at the extreme ends of the station limits. The immediate challenge is that the station signals would have been three position and I needed a method of actuation.

Bexhill, illustrating the sort of 3 position station signal that I have in mind.



This question led to a series of further questions about how other signals and turnouts were to be actuated. A conversation on Zoom with other members of the North West Somerset Area Group of the EM Gauge Society (or NWSEMGsAG for short) introduced me to the idea of using servos. These have been widely used in the model aircraft and ship communities and are increasingly being used by railway modellers. The servos themselves are relatively cheap and the clever bit is the circuit that controls them. With the right design, it is perfectly possible to programme the signal to adopt three positions, unlike the binary choice that is usually available with a solenoid or tortoise type of switch. My initial attempt to buy a three position programme board from one of the online suppliers was a somewhat qualified success. Fortunately, my colleague in NWSEMGsAG who came up with the suggestion, Allan Jones, was able to help me through the process and built some boards to provide the necessary actuation. I therefore constructed a simple test rig, to allow me to play with the system and understand how it should work.

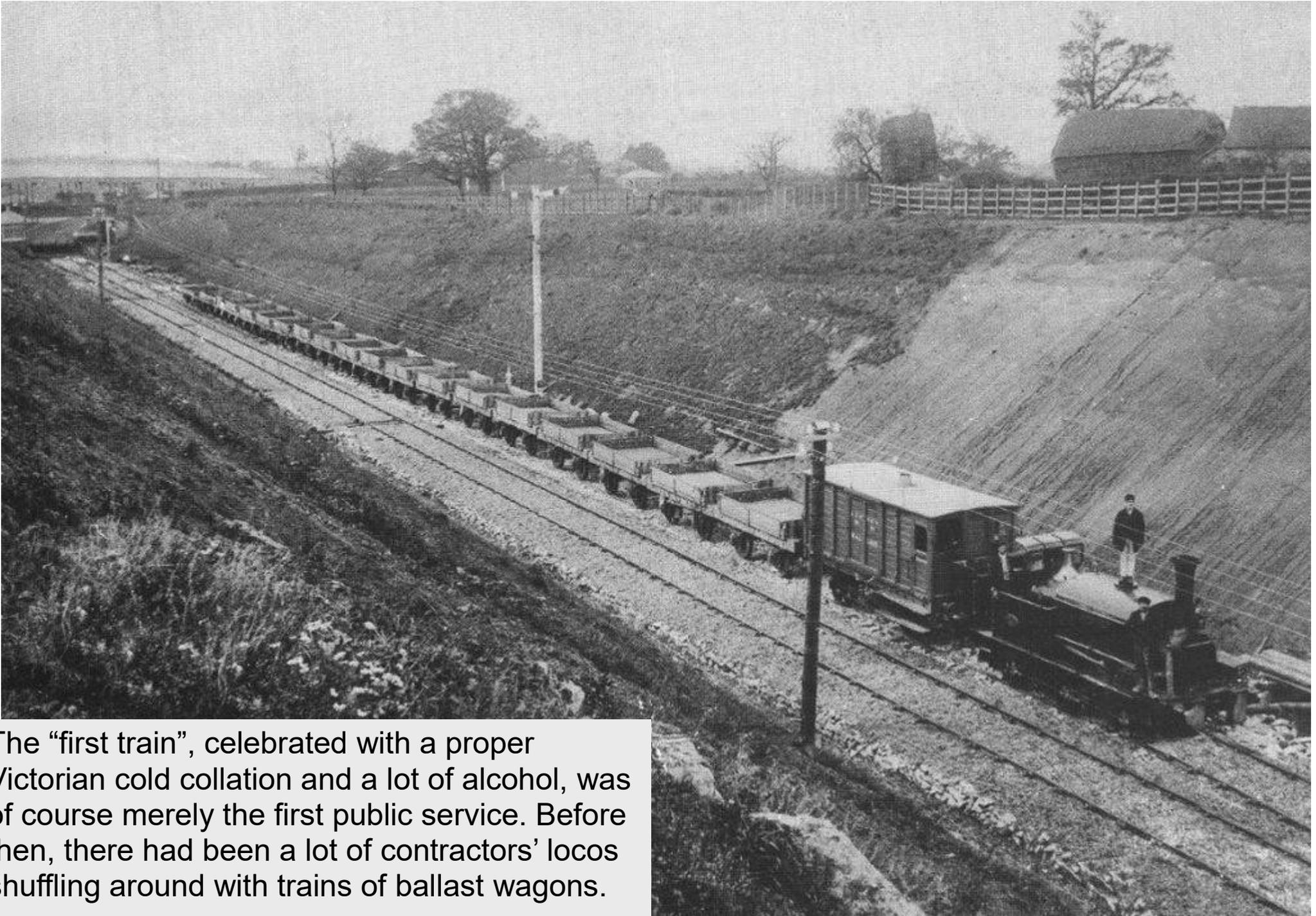
The results have been entirely encouraging and I shall be using servos for the majority of the other signals and turnouts.



Like all good research, study of the available photos of early signalling raises as many questions as it answers. Bexhill station seems to have no more than a sentry box at the foot of the station signal post. There is no obvious sign of cables coming out in front of the platform, to operate either the crossover or any remote distant signals. Presumably, this means that turnouts were operated locally with a simple lever.

The photograph below of Wallington shows a cable running along the front of the platform – presumably to a remote distant. And the lever, just in front of the foot crossing, suggests that the turnouts are locally operated. Don't miss the luggage barrow and rustic seats on the platform!





The “first train”, celebrated with a proper Victorian cold collation and a lot of alcohol, was of course merely the first public service. Before then, there had been a lot of contractors’ locos shuffling around with trains of ballast wagons.



Work on Hurstmonceux has progressed, with track laying under way. Unlike the previous photo, modern health and safety legislation does not allow footplate crew to stand on top of the saddle tank any more and scenery will follow track, rather than the other way around.



One of my ambitions with this layout is that it should be able to accommodate the Hastings coal train. The six foot long, 8 road traverser allows 20 wagons, a van at each end and a loco, although it is a snug fit.

[Return to contents page](#)

# Wanted!

## Albion Models E5 kit

Jack Pedersen is extremely keen to find an Albion Models kit for an E5/E6 0-6-2 tank - preferably not started. If anyone has one in their personal stash of unbuilt kits and is prepared to part with it, Jack would be grateful if you would contact him at [Southernrailwaymodelling@gmail.com](mailto:Southernrailwaymodelling@gmail.com).

For those who follow RMWeb, Jack contributes as Jack P, lives in New Zealand and models the [Southern Railway](#). He can arrange a UK address for postage, if posting to New Zealand is daunting.

# Rapido E Tank - 4mm scale

Plans for an E tank in 4mm scale continue, although now as a solely Rapido project. The most recent [Rapido Newsletter](#) outlines progress and discusses the sort of trade offs that will need to be made between cost and the range of variants within the class that can be included.

To help with this, [Rapido is running a survey](#), inviting comments on our preferences for the various possible variants that might be covered.

Detail options include Stroudley, Billinton, Marsh, Isle of Wight or British Railways condition.

Livery options include Stroudley passenger, Stroudley goods, umber, LBSC black, SR plain black and SR lined black.

Other questions address whether you have a preference for DCC fitting and what you would view an appropriate price.

If you are a 4mm scale modeller and an E tank is on your wish list, please have a look at the survey which is at

[E1 Locomotive Survey \(jotform.com\)](http://jotform.com)

# Jones and Potts 0-4-2 Tank - 4mm scale

Killian Keane

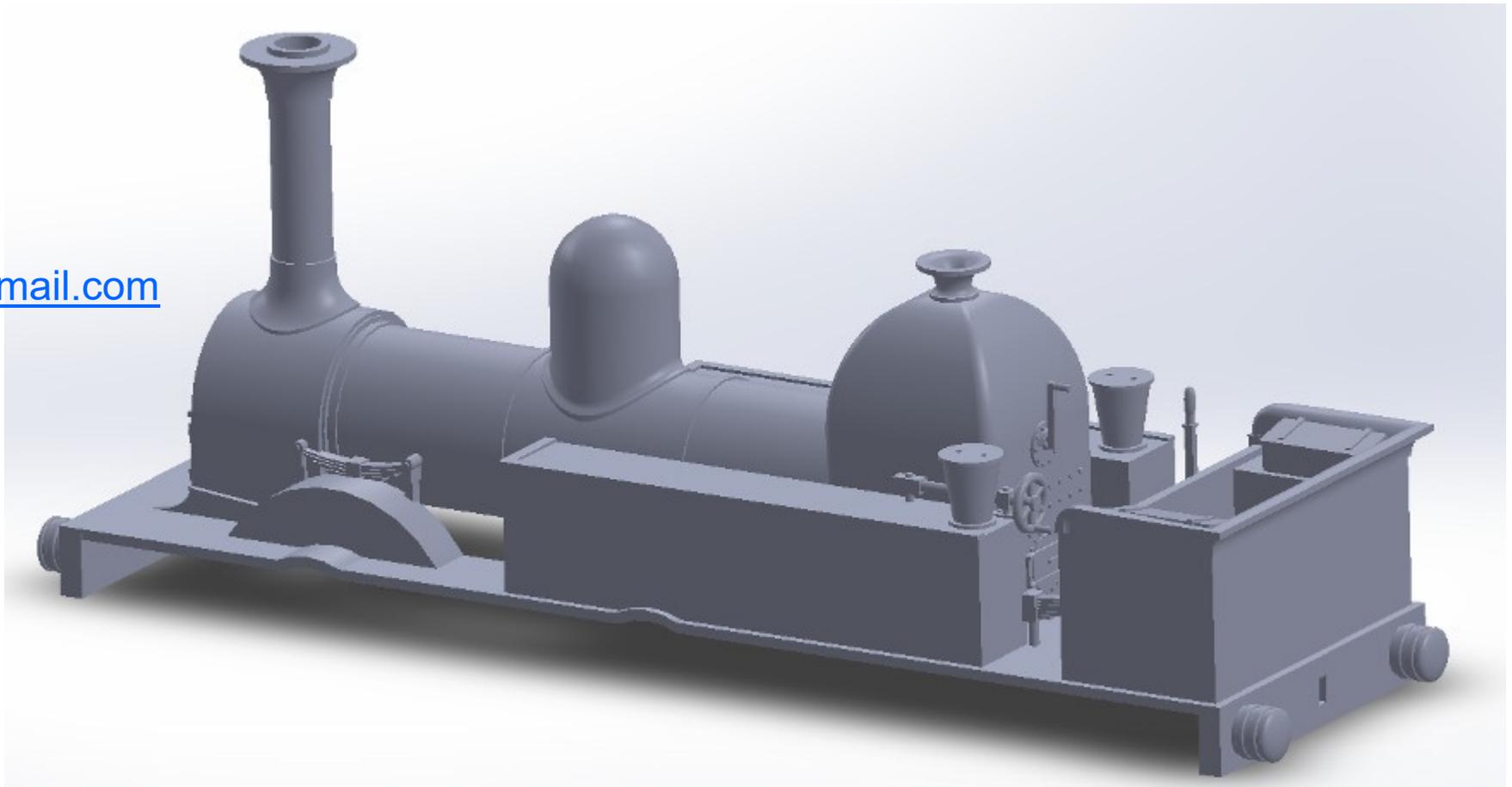
For those looking for another of Mr Craven's engines, this one dates from 1845, when four 2-2-2s were delivered to the London and Brighton Railway. Two rebuilds later, now as an 0-4-2 tank, number 115 left Brighton works in 1863 and lasted until final sale for scrap in 1880.

For a 3D print of the loco body, contact Killian Keane at

[keanekillian@gmail.com](mailto:keanekillian@gmail.com)

or via Small Loco Works at Shapeways.

The price is £34, plus £5 post and packing in the UK.





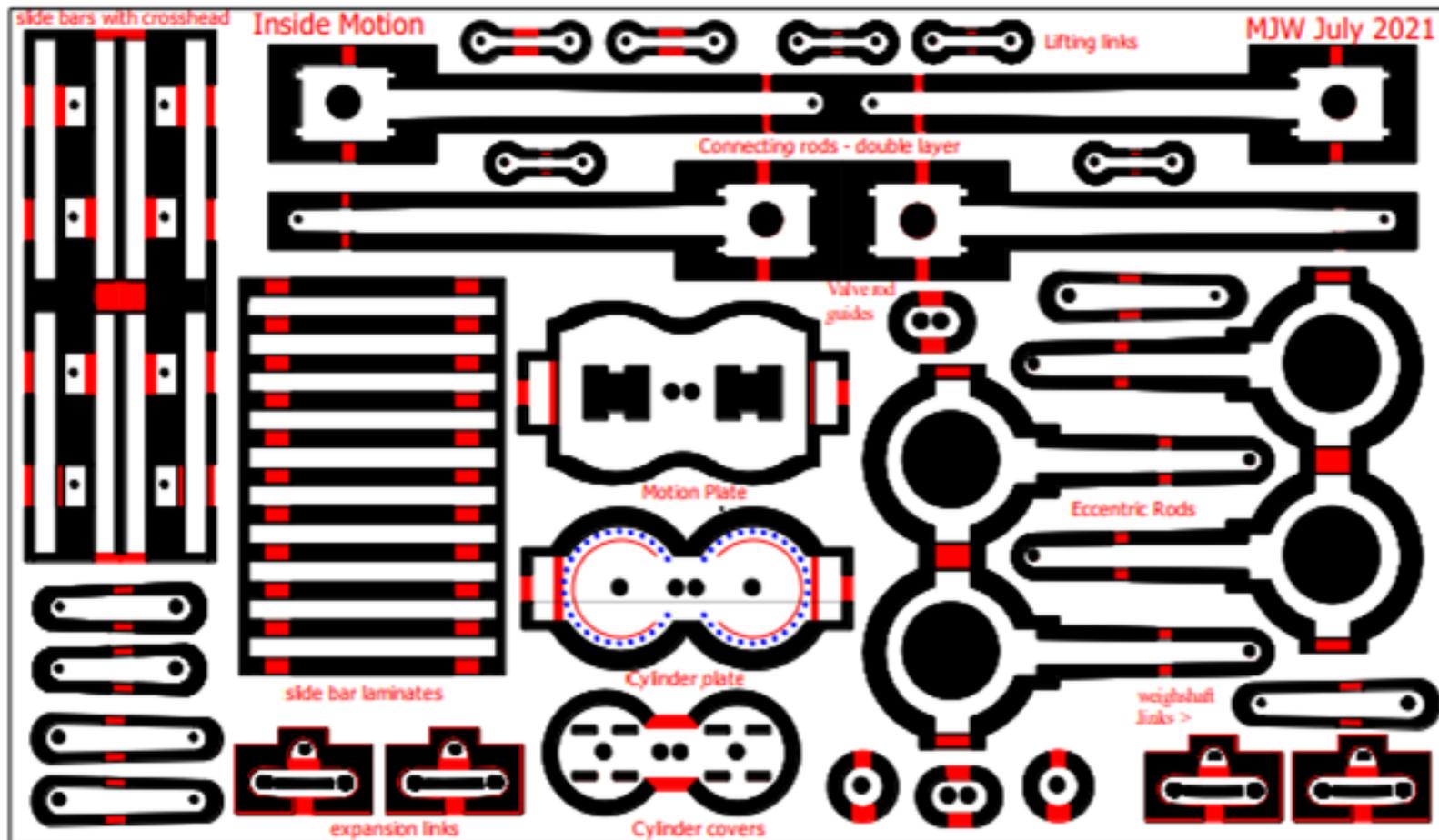
# Generic Inside Motion

By Mike Waldron

Many locomotives have a large and visible void between the frames and the underside of the boiler. Many kits, including those etched LBSCR ones that I designed for E B Models from 2004 to 2016, were like that – particularly singles with 6' 6" driving wheels. This fret is designed to enable the construction of a cosmetic (non-operating) semblance of inside motion for a wide range of locomotives, primarily in P4. It was primarily designed for Brighton Circle modellers - for those locos of the LB&SCR by William Stroudley, with Stephenson valve gear, with valves in between the cylinders. However, with ingenuity, adaptations could be made to represent other types. A laminated construction represents the rear of the cylinders, cover plates and valve rod guides, much of the front of which is frequently underneath the smokebox and not visible. To these, laminated slide bars with representations of crossheads are attached. These vary slightly in length from the laminates, to provide tabs to locate in the 4 slots in this part. This unit solders to the insides of the frames. The design is primarily for valves-between cylinders, but, again, adaptation is possible for the ingenious. A typically-shaped motion plate is provided with two 'H' shaped openings – to which the rear ends of the slide bars are attached, and also, itself, attaching to the insides of the frames, completing a strong unit. A cylinder rear 'plate' is provided, with riveted cylinder covers and valve rod glands, which forms the front attachment location. Again, these fit inside the frames. Connecting rods and eccentric sheaves and rods are also provided. The 'crossheads' are arranged so that both connecting rods are not at the same alignment, reflecting the quartering of the wheels. Expansion link attachment to valve rods is very

simply arranged, as they will be mostly hidden between the other parts, and it was considered unnecessary to completely follow actual practise. Nickel silver wire is needed to represent the valve rods, and also a thicker rod of some 0.7 to 0.9mm diameter for the weighshaft, on to which the lifting arms for the expansion links are attached. The frames will either need to be drilled or provided with some other means of support for the weighshaft rod, as well as being aligned with the reverser rod – which may or may not be provided in the kit or even visible.

## PARTS ON FRET



Copyright Mike  
Waldron

# New Figures

ModelU

ModelU now feature two versions of Circle member Chris Cox.

He was scanned in two poses at the Severn Valley Railway O gauge get together by Alan Buttler of ModelU.

The reason for these poses is that Chris wanted two figures for a hand shunting scene at Bricklayers Arms. However, since these appeared on Facebook, the pair have proved very popular and have now been officially added to the range under the sub-category of 'Workmen'.

1410



Priced at £4-50 for 4mm scale and £7-50 for 7mm scale. Other scales are available.

[ModelU](http://ModelU.com)

1409





Photograph copyright Chris Cox

# B2 in 7mm scale

## ACE Products

Ace Products are pleased to announce a kit in 7mm scale for the LBSCR B2 4-4-0 nicknamed Grasshoppers. On the following page is a photo of the kit assembled as No. 204 TELFORD in Stroudley livery, as a tribute to those members of the Guild who arranged the long standing annual convention and exhibition at Telford.

There is a completely new web site for the Ace Products range of locomotive kits and this is now available at [aceproducts.org](http://aceproducts.org).

Further details from -  
ACE Products.

7, Ringley Park Road,  
REIGATE RH2 7BJ

Tel 01737 248540 or e-mail [a4ace@talktalk.net](mailto:a4ace@talktalk.net).

Interest has been expressed in commissioning a 4mm scale version of this kit. To keep cost within a ceiling of £135, the chassis from the B4 would be used, involving a compromise of 1mm in the positioning of the front bogie. If anyone is interested in helping to launch this project and spread the initial cost, please contact [secretary@lbscr.org](mailto:secretary@lbscr.org).



# Brighton Layouts that you may see at Exhibitions

The following LB&SCR themed layouts are due to be exhibited over coming months.

**FERRING** (P4 scale Marsh era)

**PLUMPTON GREEN** (P4 scale Marsh era c1910)

**PULBOROUGH** (P4 scale Marsh era)

**SALTDEAN** (7mm Stroudley/Billington era)

# The Brighton Circle Facebook Group

There is a Facebook page (search for @LB&SCRBrightonCircle) and a lively and growing associated group, which currently numbers over 350 members.

See <https://www.facebook.com/groups/249226986001750/>

These are aimed at giving a presence on social media for the Circle. It is a place for people, including non-members of the Circle, to post material, find out about the Circle, see some local history and to ask questions.

Please do visit the page if you are on Facebook.

# The Brighton Circle

The Brighton Circle is the Historical Society of the London, Brighton and South Coast Railway (L.B & S.C.R.). It is dedicated to the research and publication of information about the company and it produces a quarterly newsletter and a historical journal entitled the Brighton Circular, which is published three times a year.

While the Circle is primarily focussed on railway historical research, there has been an important interaction with preservationists, particularly on the Bluebell Railway, and with railway modellers. The Bluebell line provides an important source of original artefacts, which contribute valuable information about the company's practice. Modellers have benefitted by access to data about the physical appearance of the company and its operations and, as a result, members of the Circle have been able to produce scratch builder aids, kits, paint and lettering on a limited run basis, which are made available among other members.

Membership of the Brighton Circle for 2022 is

£20.00 for full membership

Applications should be sent to

[secretary@lbscr.org](mailto:secretary@lbscr.org)

The Circle is also in contact with local historians, industrial archaeologists, family historians and other groups whose interests intersect with those of the Circle.

# THE BRIGHTON CIRCLE

Dedicated to the furtherance and publication of original research into the history of the  
London, Brighton and South Coast Railway

---

## MEMBERSHIP APPLICATION FORM

To the Hon. Secretary, Nicholas Pryor, 19 Sotheby Road, LONDON N5 2UP

I hereby apply for membership of the Brighton Circle.

**NAME**.....

**ADDRESS**.....

.....

.....**POSTCODE**..... (BLOCK CAPITALS PLEASE)

**EMAIL ADDRESS**.....

*Or telephone number if you do not have email*

What are your interests in the LB&SCR? Are you a modeller? If so, please give details.

Please enclose a cheque for £20.00 to cover twelve months membership/ £10 to cover six months membership (if joining after June 30<sup>th</sup>) of the Circle for the current calendar year. Cheques should be payable to 'The Brighton Circle'. Please send this form and your cheque to the Secretary at 19 Sotheby Road, LONDON N5 2UP

Alternatively, complete and sign this form and send a copy by email to the Secretary at [secretary@lbscr.org](mailto:secretary@lbscr.org) who will contact you to arrange payment of your membership fee, either online or via PayPal.

### Privacy statement

The personal information provided above will be stored on a computer database of members' details and used for administration purposes by the Circle's appointed representatives. By signing this form, you indicate that you agree to give the Circle permission to use your personal information for membership purposes, to communicate with you as a Circle member and to send you general information about the Circle.

You can request that your data not be used for any of these purposes at any time by contacting the Membership Secretary at the above address or by email:

[secretary@lbscr.org](mailto:secretary@lbscr.org)

**Signed**..... **Date**.....

L

V

[Return to contents page](#)