MIXED TRAFFIC

225 – October 2021

The 3mm Society Magazine

Tony Briddon's SCRATCHBUILT LMS PACIFICS

The building of 8P Princess Class 4-6-2 46203 *Princess Margaret Rose* – seen here emerging from the tunnel on Tony's Billton Goods layout – is described in this issue.

Tony has also built an 8P Coronation 4-6-2, the 1947-built 46256 *Sir William A Stanier FRS*, which he has finished in British Railways' early blue livery. He photographed it leaving Billton Station, at the other end of the layout.

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Editor: John Sutton
Research: Norma Knill and Bryony Bolus
Design: Clothilde Poubelle de Trélazé

Produced by SH Print Services, 69 Beaumont Street, Netherton, Huddersfield HD4 7HE

Materials for publication should be sent to John Sutton, [redacted]
E-mail [redacted]

If you receive a magazine with missing or miscollated pages, please contact Tim Barnard [redacted] for a replacement, giving your name and address. Tim also stocks back numbers.

Cover

Tony Briddon photographed his Stanier 8P Princess Class Pacific on a trial run prior to painting. The finished engine appears opposite. Turn the page to read about some serious scratchbuilding.

EDITORIAL

On readers' behalf I must begin by thanking Paul Hopkins for getting together the collection of illustrated articles about the projects which kept members of the Southdown & Solent Group busy during the Covid-19 pandemic lockdowns of the last eighteen months. Together with the work of Tony Briddon, Vern Brown and those who have contributed to "What's New" and "Blastpipe", they make this a rich and varied issue which I hope you will enjoy as much as I have enjoyed putting it together. The January issue is already beginning to take shape, with more good things from our friends in the East Midlands and South Downs & Solent Groups, who continue to throw down the gauntlet to other Groups – which I expect have just as many productive modellers, though they seem at the moment less keen to put fingers to keypad or camera shutter.

I'd like to chuck in a challenge of my own for would-be contributors. I've always found it fascinating deciding which details to include on a 3mm model and which to omit, and which ones to reproduce exactly and which to represent more impressionistically. We've come a long way since the 1960s, when wire handrails made a loco "super-detailed", but there are still interesting judgments to make when creating trackwork, a loco, rolling stock, signals or a scenic setting. Let me therefore invite you to consider sending articles, snippets, diagrams and photos that could come under the umbrella heading "Telling detail" – and it doesn't matter if it's loco fire irons, washing on a line in a back garden, sacks, parcels, trunks and cases on a platform barrow or coal merchant's scales in the coal yard (been there, done that). Whatever it is, how you made it is bound to be riveting....

A ROYAL BIRTH

How TONY BRIDDON built 46203 *Princess Margaret Rose*

When John asked me to write this article my first thought was "Why?" Those who are not interested in scratchbuilding wouldn't be interested and those who are have their own tried and trusted methods of doing things. However, here goes.

A couple of years ago I built a Coronation Class Pacific just for the challenge. I suppose the question to ask is why, when my fiddle yard will only take four coaches (or five if they are very short ones) would I want another large Pacific locomotive? An answer is that if I could run a six-coach train this would be long enough to extend beyond the station throat (the left-hand scenic break) and the tunnel mouth (the other break) and never be visible to onlookers in its entirety, when it would look silly and an absurdly short train for a Pacific to haul. The fiddle yard therefore needed to be extended, and to enable it to box up in the normal way for transport and still fit in the car this was done by making a hinged flap extension which folds back for transport. Another reason for building a Princess Royal was that it would complete my LMS/BR loco stud. (I simply cannot justify a Garratt on the layout, tempting though it is.)

Working outline drawings were produced by copying and enlarging the plan from *LMS Locomotive Profiles No 4* (Wild Swan) and bits cut from these to act as templates. For the chassis two pieces of 0.4mm brass were sweated together using solder paste and a micro blow torch (Parkside/Lidl) and a paper template stuck on as a guide for milling to shape. The same technique was used for the cab sides, tender frames and tender sides. The frames were fastened together using Society spacers and aligned using a Poppy Woodtech jig before soldering in permanent spacers. Where possible I use earth pins from 13A plugs for spacers as they are exactly the right width for 12mm-gauge chassis, perfectly straight and add useful weight to the chassis. [*I use these too, and can vouch for their usefulness – Ed.*] Coupling rods are articulated about the centre crankpin to allow sideplay on the rear driving wheels. Valve gear was built up using bits from my spares box. Some

rods needed modifying and some had to be made from scratch.

Driving wheels are Society SQ shorted on one side using phosphor-bronze shorting bars from Scale Link: to compensate for this a similar thickness is skimmed off the back of the wheel. These work well but are designed to fit Romford axles, so the central square holes need enlarging slightly – but this is not critical as long as electrical contact with the axle is okay. As the High Level Compact gearbox is no longer available I used a 50:1 gear cradle.

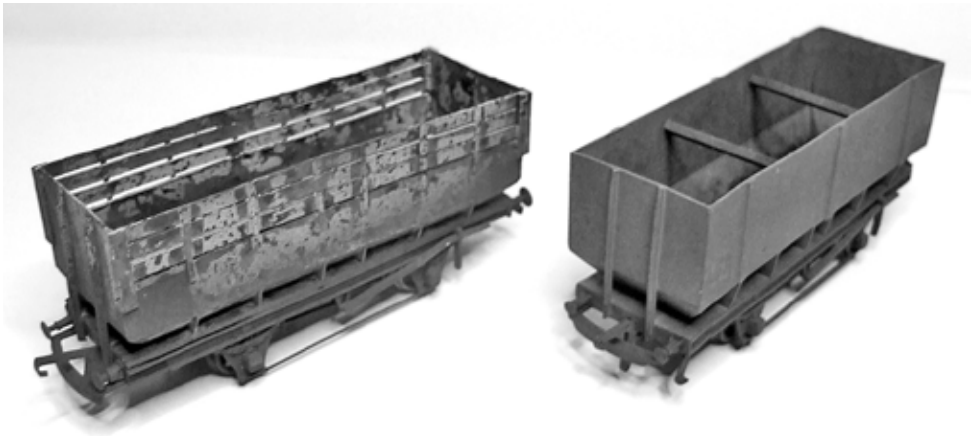
I started the body by turning the smokebox and door from a single piece of bar, thus ensuring that everything was perfectly round and concentric. The centre was bored out to reduce weight but is still quite heavy and adds useful weight to the loco. The chimney was also turned, but the dome/top-feed is white metal. The boiler is brass tube, slit along the bottom and widened out at one end to form the taper, fortunately very slight on this loco. As always with Stanier locos the firebox is a nightmare. With much cutting, hacking and bad language a cardboard template was made from which to cut the brass. The shape is much easier to form if the brass is first annealed by heating to cherry red over the kitchen stove. This does, though, soften it and small ripples may later need filling (with car body filler smoothed with fine wet-or-dry paper used wet to avoid tearing the surface of the filler). Some years ago I was given some spare etches from a black5, including a cab roof, so that did very nicely, thank you. I make steps by soldering 1 x 2mm brass-angle treads to a brass backplate and this has given me problems before. Either I lose steps when the loco is in service or it becomes unsoldered when the assembly is soldered to the chassis. This time I silver-soldered the steps to the backplate using the trusty blowtorch and silver solder paste from Metal Clay, Wareham. A small syringe is quite cheap and lasts for ever. Believe me, things silver-soldered stay soldered. Smokebox door hinges are from thin strips of triple-thickness Sellotape and boiler bands from double thickness.

The other electrical pick-up is from the tender, so these wheels needed shorting. I used 2-thou brass which is easily cut with scissors. The axle hole was drilled and reamed slightly undersize to ensure good electrical contact and the arm soldered to the back of the tyre. All of this class had riveted tenders and the rivets are quite noticeable, so they were applied using Archer detailing transfers. I have never used them before but became aware of them after someone mentioned them on the e-Group. They are very user-friendly and I am impressed by them. Tender beading was formed from soft copper wire.

My layout, Billton Goods, is set in the 1953-4 period and locos are decorated appropriately. *Sir William A Stanier FRS*, my Duchess Class loco, retained its blue livery until mid 1954, but 46203 was painted BR green in May 1952 and retained that livery for the remainder of its working life. Ford Laurel Green (Halfords rattle can) was used. I have so far been unsuccessful in obtaining 3mm-scale lining from Model Masters so used 2mm scale from Fox Transfers and I don't think it looks too bad. I'm not sure what I can do next to keep me out of the pub!

COKE HOPPERS

HUGH MARTIN builds wagons to serve the steel industry



The LMS Diagram 1729 was the first of a series of wagons built to transport coke from the coke ovens to the steel works at various locations around the country. The basic design was a 20ft chassis with a steel bottom half to the body and timber raves to the ends and sides. This was subsequently changed several times, Diagram 1/151 with side raves and all-steel ends, Diagram 1/152 all steel welded body, later riveted, for calcined coke, and finally diagram 1/150 for use as a sand hopper. Photographs of some of these types can be found on pages 45 and 46 of *British Railway Wagons: Opens and Hoppers* by Geoff Gamble (Cheona Publications, ISBN 1 900298 01 5). A drawing of the D1729 LMS wagon can be found on page 17 of *Rolling Stock Worth Modelling* Volume 2 (Bradford Barton).

I am from the steel town of Scunthorpe and model the railway in that area that I remember in the late 1950s and early 60s. I needed two trains of 20T coke hoppers (full and empty). The wagons use the Society Parkside PP032 chassis kit and have handbuilt bodies. The chassis are built up in the usual way on a 74mm x 22mm 20-thou Plastikard base, but require a longer solebar, which is made up by putting a 5mm extension on each end to give a chassis length over buffer beams of 74mm. I used a similar section of 1.5mm channel section. To ensure a closer coupling I use Peco Anita couplings.

To build the body I used 20-thou Plastikard for steel body parts and Kenline No 43 wagon strapping with bolt spacing of 3mm for side-rave support and Plastruct 1.2mm T section No 90561 for end-rave support. The raves themselves are Plastruct 2.5 x 0.5mm strip No 90725, with 10-thou Plastikard for the reinforcing corners.

The construction starts with the main body sides and ends, which are formed

from strips of 20-thou styrene 8.5mm wide for all the wagons with raves and 18.5mm wide where steel sides/ends are used. Form these into a rectangular box with outside dimensions of 74mm x 24mm. The bottom hopper part is formed of 6mm-wide 20-thou sheet with the ends angled at 55º. Line these up on the bottom of the sides and ends and lean them in to form the hopper and glue in place. *Make sure the body is square.*

For easy assembly of the raves, I made a jig up so that they were all alike. The jig was made from an offcut of thin timber with track pins of 0.5mm diameter (heads cut of and filed flat to prevent snagging) placed at 2.5mm spacing to allow the 2.5mm wide strip to be placed in between. The strip was cut to 74mm length for the sides and 23mm for the ends (to fit inside the sides). The two end reinforcement corners were formed from 10-thou plastic sheet 2.5mm wide fitted flush with the top and ends and allowed to project 3mm below the bottom rave. Mark out the position of the strapping as follows, at 11, 21, and 32mm centre from each end. This should leave a centre gap of 6mm. The strapping should be fitted as were the end corners. For the ends the raves should be spaced the same as the sides, with gaps of 0.5mm. The T-section supports are cut to 27mm long and fitted 6mm in from the ends of the rave. The tops of the T sections need to be cut at a 45° angle sloping bottom to top (see photos and drawing).

The raves are now ready for fitting to the body sides. The side raves are fitted first, ensuring a gap of 0.5mm from the steel bottom section to the underside of the rave. Then fit the ends inside the sides. The T sections are long enough to pass below the chassis floor and over the headstocks. The end reinforced corner can now be fitted flush with the outside edge of the side reinforced corner strip. For the steel-ended body (D 1/151), fit the side raves outside the steel end and fit the T section as described above. For D1/152 the steel sides need three reinforcement strips of 10-thou 2mm-wide strip flush with the top down to the bottom of the side, set 9mm in from the ends and on the centreline of the side. Corner reinforcement is not needed on the all-steel bodies. You should now have a complete body – or bodies – of your choice.

You can now mate the bodies and chassis. Note the end T stanchions should be cut flush with the bottom of the headstock, and also note that the body is wider than the chassis. Ensure the body is in line with the chassis and glue the hopper body to the floor. The bottom of the hopper needs some triangular support between it and the floor, by using some 10- or 15-thou plastic sheet and using the 55° angle used before. Cut triangular pieces to fit between the chassis floor and the hopper sides. The supports are fitted in line with the strapping or at similar spacing on the all-steel types. Note the outside edges of the triangles fit flush with the solebar at the bottom and slope out to be flush with the body sides.

If you are running the all-steel wagons empty you need to fit some internal supports. These were intended to stop the sides from spreading out and were six-inch angle iron – but I used 1.5mm-square plastic strip 23mm long. Two supports

are required, fitted 3mm down from the top and at one-third spacings along the wagon length.

The wagons are now ready for painting. The underframe is black with white handles to the brake levers and the body freight grey. Add weathering as required. Don Rowland's book *British Railway Wagons* lists the wagon number range: D1/150 B44700 to B447499, D1/151 B447500 to B448649 and D1/152 B448650 to B449199. As I have built 15 wagons to D1729, 6 to D1/151 and 4 to D1/152 I needed a lot of transfers. Instead of commissioning some I decided to print my own numbers, tonnage and tare-weight transfers myself.

I have split the wagons into two groups, twelve running with a load and thirteen running empty. To ensure a reasonable length of train I have added to the handbuilt wagons eight full and ten empty wagons using the Society kit PP004, using SL2 underframes. These have also had my own transfers applied, with faded private-owner names and numbers. To complete the full wagons I obtained some coke from the steelworks at Scunthorpe and crushed it down to a suitable size. Pieces of foamboard 3mm thick were cut to fit inside the bodies and fixed 10mm below the top of the raves. Coke was then added and fixed with a 50-50 PVA/water mix. All this work gives me another two trains of appropriate wagons to go with the 23 handbuilt 27T iron ore wagons (built prior to the Society Parkside kits) and the 30 empty Society kit wagons.

[*Colour pictures of these wagons appear on page 12 – Ed.*]

NORTHGATE GARAGE

PAUL HOPKINS on models of local prototypes

The local bus company had a garage in the Northgate area of Chichester and I thought that could stimulate a model garage to house the Southdown vehicles that populate our Southern Region layouts (Portsea and Stedham Mill). The building in Northgate was a brick-and-flint building which closed in 1956 – but parts of it remain and most of the area has become a car park for adjacent offices. The roof of the main structure was demolished, and the lower part of the external walls are all that remain of the main structure and now form the boundary wall of the car park. The building that is still standing was originally part of the first electric cinema in Chichester, converted in 1926 to become part of the garage.

Details of the site when occupied by the bus company have not been forthcoming and no photographs have been found. The site has therefore been modelled as a diorama in the condition it exists today, including part of the adjacent office complex, while the buses are of the types that would have been garaged at the time of closure but parked in the open area that would have been the original garage. The model fits on to a board measuring 30cm by 70cm, as shown in the photographs opposite and on page 12.

An aerial view of the diorama and a closer look at the former cinema (below).

ON THE LEVEL

MERVYN TURVEY forms the landscape

Those members of the Society who saw my exhibition layout Alston will remember that it had a viaduct passing over a creek in which there was a marina. The layout was designed to enable continuous running of trains so that visitors to exhibitions would be entertained with a succession of movement. The secret was that the main line was on the level all the way. The baseboards for the layout were constructed from plywood strengthened by vertical cross pieces. The depth was two inches, a depth with gave plenty of room for point motors or signal controls to be hidden. However, to enable the marina to be constructed a section of the baseboard was removed and a sheet of ply set into the base. That means the viaduct was something like 16 feet high in scale.

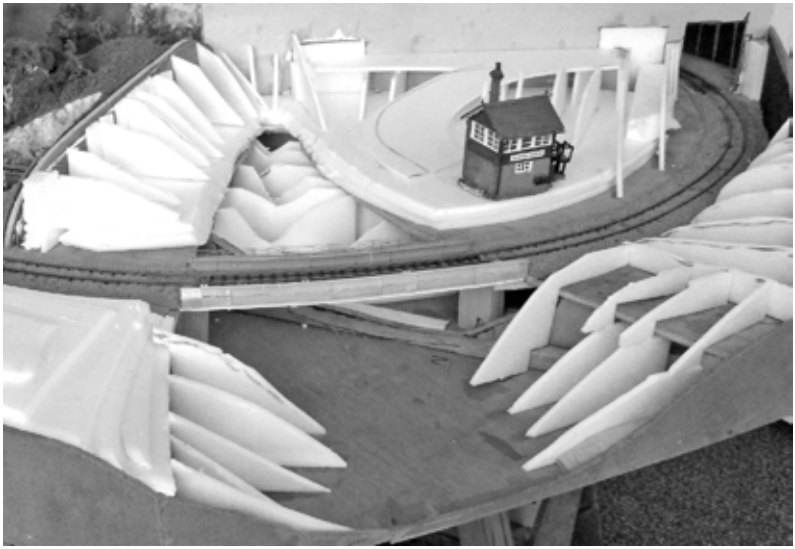
The day arrived when I decided that I did not want to take the layout to exhibitions any more as it was becoming a chore setting it up and taking it down at the end of shows. So it was erected in my spare room and operated for a few years. Then the next problem arose. To control the layout I had to crawl under the baseboard into the centre, an exercise that was becoming more difficult every day as age took its toll. I decided to dispose of it and it has moved to the care of Paul Hopkins, a member of the South Downs and Solent Group. Paul has converted it to his own uses and the viaduct and marina remain.

In the marina there were two special models, a 3mm-scale “Silhouette” class yacht which I owned and sailed when I lived in Plymouth, and another yacht which sits in the Titchfield Haven not far from where I live. Paul kindly allowed me to keep both models.

I have replaced Alston with Shalston, a play on words, retaining the brand

name that I have used for fifty or so years and connected to the creation of a module which has buildings modelled on Shillingstone station on the Somerset & Dorset Joint Railway. Some years back the South Downs and Solent Group committed its efforts to creating a modular exhibition railway, which gave each member of the group a purpose for modelling a contribution to the group effort. My module is five feet long and 21 inches wide. I have added two semi-circular ends and a board at the back to fit and have a continuous-run layout. It enables me to watch a train running when I wish and is also a test track for the models I continue to build.

Half of the semi-circular ends require half a board of scenery, so I decided that one would contain a double layer, the normal baseboard level and two inches below a drop to enable to create some sort of gorge leading to a small estuary and a sandbank for the yacht to stand on. Creating the board was easy and the lower level was just glued to the bottom of the internal supports. These have to be cut carefully to ensure there is room to create a viaduct and add appropriate scenery. A member of the group donated some polystyrene tiles and some of these have been cut to shape to create the landscape formers. They are of course very light and easy to glue using basic wood adhesive. That is shown in the next photograph.



The formers were covered with papier mâché, using wallpaper paste and torn-up newspaper until the desired landform was created. Then it was painted a base colour green using powder paint mixed with water, and features such as the road to the signal box and the rocky sides of the small canyon-type valley which leads to the seascape. This has been built up using small pieces of cork to represent the rocky structures around the entrance to the stream. The viaduct itself was made from parts found in an Airfix kit for a bridge.

Concluded on page 22

SINGLE-DECK BUSES AND COACHES

PAUL HOPKINS models some Southdown types

The Southdown bus company provided an interchange outside many of the Southern Railway stations in Sussex, serving some of the outlying villages in the immediate localities, with connecting services to the trains which were advertised in their respective timetable booklets. Apart from the Guy Arab and Bedford OB (Southdown had two of each), none of the other 3mm-scale kits available are suitable, but with some modification they can be modified to represent the various vehicle types that Southdown operated.

The Society kit of the AEC single-deck bus is a type that has a front entrance for passengers which is incorrect for Southdown, as is the bodyside profile, but it can be made to represent alternative vehicles. In all cases the rear destination box must be removed. By shortening the bodysides, roof and floor and taking out the door entrance and the corresponding offside window, and filing a passenger door into the mid section on the near side, it can be made to represent the Leyland Cheetahs used on coach services to Hayling Island. A weak bridge at Langstone required lower-weight vehicles. The kit can be modified to represent other Leyland Tiger coach types, but in each case the nearside passenger entrance door must be filled in and a new door made immediately behind the rear wheel. The driver's cab will also need some modification to suit, as will the rear window and the roof. The two Bedford OB coaches were purchased by Southdown specifically for the Hayling Island service and can be made from the Brynkits kits with no modification.

Brynkits supply the LT RF bus. With some modification it can be made to represent a Leyland Tiger Cub single-deck bus if one excuses the six-inch difference in width between the types. The modifications necessary include changing the wheel arches to round mudguards, cutting a driver's door and modifying the front and the passenger entrance doors as well as removing the rear destination screen.

BET bus companies were able to obtain Eastern Coachworks bodies until nationalisation and Southdown had a batch of them. S&T supply the Bristol L single deck bus and it can be modified to suit, mainly by removing the rear destination box and modifying the front box and bodyside panelling.

For the period modelled Southdown had two different liveries for their coaches and single-deck buses. The traditional livery was mid-green bodyside and dark green wheels, mudguards and roof, which was changed from the early 1950s to all-over mid green but retaining the original livery for wheels and mudguards. Bodyside embellishments were normally primrose.

[*These buses are shown in colour on page 12 – Ed.*]

INTERPRETING COLOUR – 9

TIM SHACKLETON and JOHN SUTTON pore over a Pannier

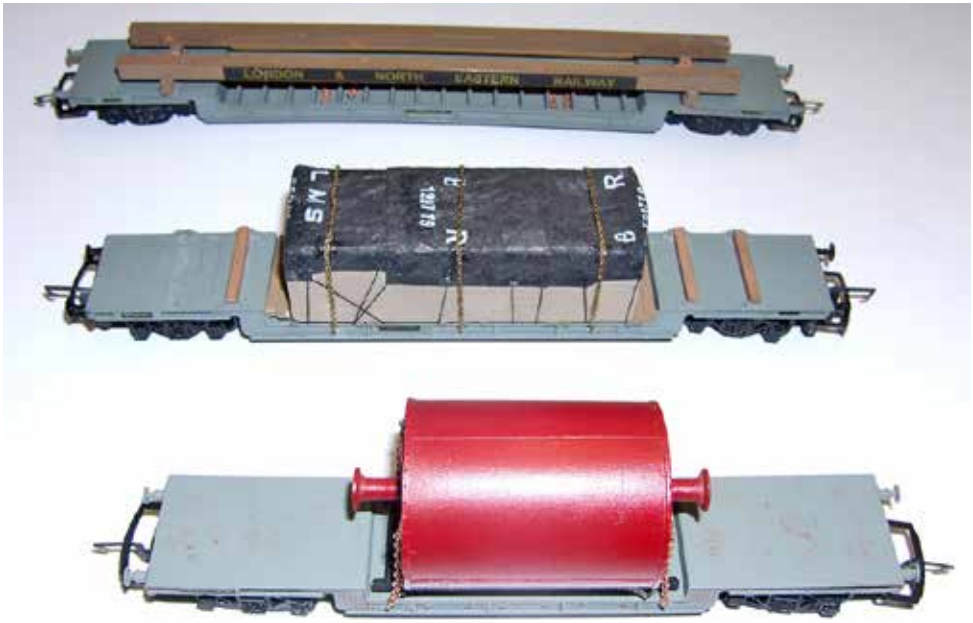
Westbury-allocated WR 8750 Class 0-6-0PT 9790, built at Swindon in 1936, shunts the Fyffe's sidings at nearby Warminster on 14 July 1965. *Photo courtesy Keith Chester*

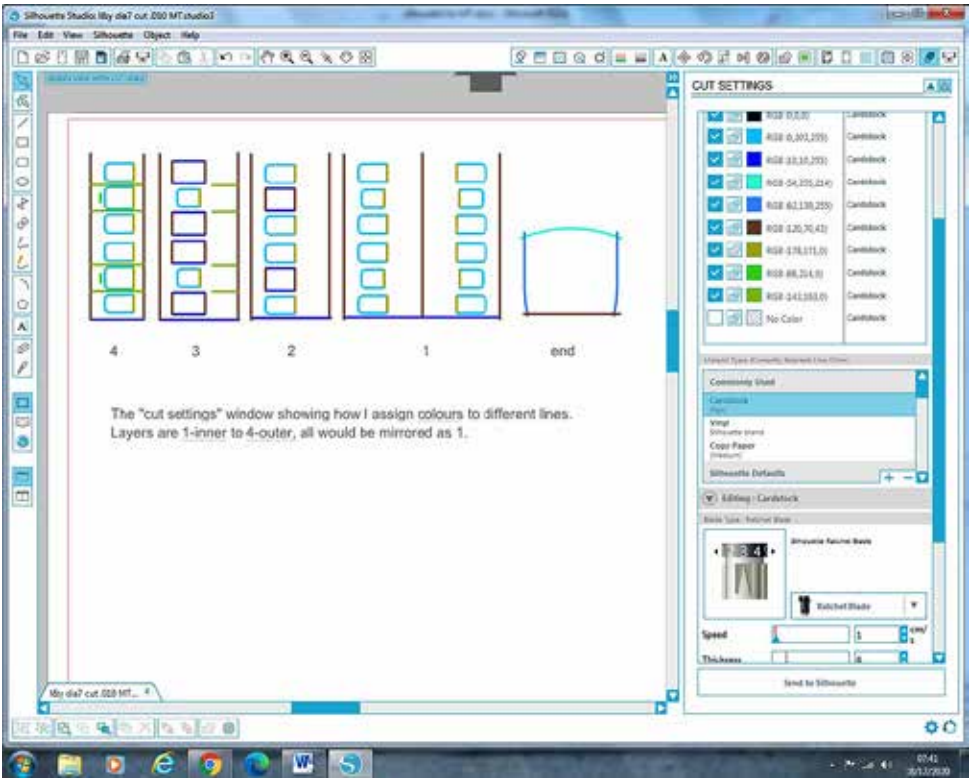
Here are all the details perceptive modellers could want. Most apparent is the contrast between the freshly-painted ex-LMS 12T van on the right, with later-pattern data panel, and the blackened and rusty-ended BR banana vans (which had also been shiny bauxite once), identified by yellow circles at the left-hand end, now much faded, and prominent traders' labels. Bananas were shipped by company trainload. Fyffe's and Geest were the main importers, slapping their marks in the same position on each vehicle and not always removing them at journey's end. Rust and grease on the axleboxes, springs and w-irons repay study.

The rails (some flat-bottom) are well rusted, and notice how their colours echo the shovel on the back of the loco and the build-up of brake-block dust on the lower parts of 9790. The loco is in a typical end-of-steam state, not black above the footplate but fifty shades of grey – overall its colours are far lighter than many modellers seem to imagine, while that other great cliché, rampant corrosion, is conspicuous by its absence. Have a look at the dirty rear buffer beam's colours and note the shiny parts of beading and handrails buffed by touch. For once, the footplateman's faded jacket and trousers match – often one would be quite new, or a darker blue, while the other was washed out.

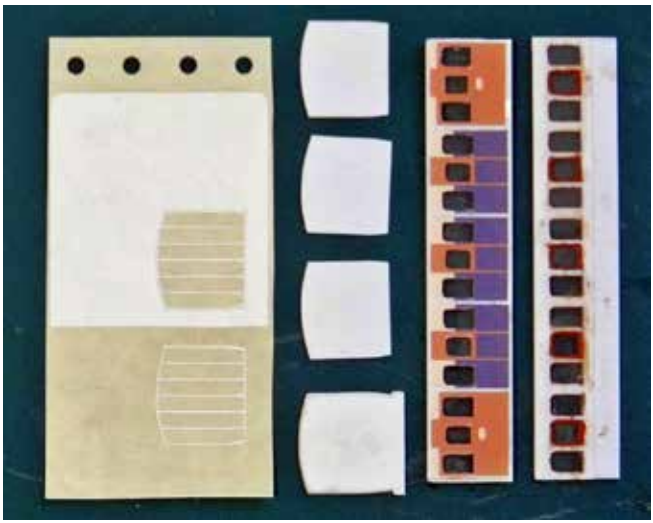
SOUTH DOWNS & SOLENT SPECIAL

Hugh Martin built the coke wagons opposite and modified and loaded the Triang Weltrols below. Paul Hopkins adapted kits to create a fleet of Southdown buses and modelled a local prototype, Northgate Garage. Stedham Mill, above, is the Group's latest exhibition layout.





The picture below shows sides glued together, one end, the end beading and partitions. The interior colour scheme, on self adhesive label, is also done on the Silhouette, using the facility to print with registration marks which the cutter then recognises and cuts. Contacta Professional is used to fix the partitions and floor. *Vern Brown*



SILHOUETTE-CUT L&YR COACHES

VERN BROWN explains his methods

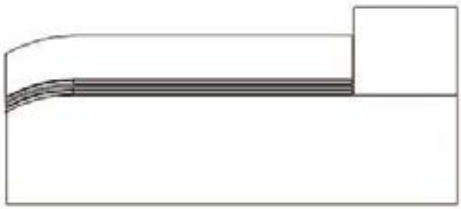
My interest is in pre-group L&YR, whose coaches are, thankfully, of fairly simple construction without beading on the sides. I use the Silhouette cutter to produce layers of 0.010in Plastikard to build up a side in four layers. Beading is possible, but does show some stretching. If this happens it could be applied in shorter lengths, either 10- or 5-thou thick. Ten thou looks rather deep. The vinyl used by Richard Brice and described in *Mixed Traffic 224* may be an alternative, if it will take paint.

The diagram opposite shows a sample of the four layers and an end, with different colours assigned so that the blade cuts one figure at a time. One of the contributors to the Silhouette thread on RMWeb did a trial and found that rectangles were better cut as 4 individual lines rather than as one figure, which gave a slightly uneven corner as the blade turned. The cutter blade is slightly offset to allow it to follow the computer-drawn cut line around shapes. I have found that when cutting sides I get greater uniformity between layers if they are arranged vertically as in the diagram.

Layer 4 is the outermost, with cut-outs for all window and door droplight apertures. This layer is reduced height on L&Y coaches, extending to the bottom of the waist “panel” only. Layer 3 has reduced window openings for the droplight frames and square-cornered cut-outs for the main glazing. It is the same length as Layer 4. Both of these layers have a vertical score line marked in green for the door edges and a witness line for positioning the vents on the tops of the doors.

Layer 2 has window apertures as Layer 4 and cut-outs for droplight glazing and is 1mm shorter to allow for a staggered joint with the end. Layer 1 has window apertures as Layer 4 and droplights as Layer 3 and is the same length as Layer 2.

As these sides are only three layers thick at the bottom I assemble them over a wooden former with a corresponding clamping piece, simply made from hardwood offcuts planed and sanded. Limonene is used as the solvent to give time for some adjustment. Paint the edges of all cut-outs at this stage.

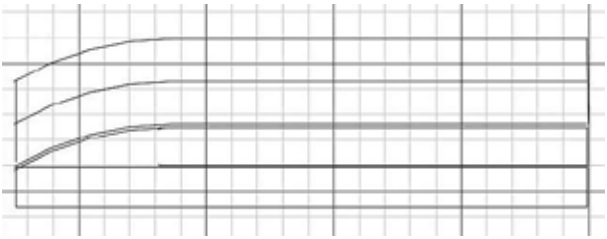


Apply Limonene to Layers 1 and 2, cramp up in the former and allow to dry overnight. Fit the droplight glazing in the rectangular cutouts in Layer 2 with a

spot of suitable adhesive and allow to dry (I found this out the hard way) before fixing Layer 3, then clamp and allow to dry. Fit the window glazing as before and then Layer 1. When dry you have the first side. Ensure when fitting 2 to 3 that the step at each end is equal and correctly sized for the end.

Ends are two layers of 0.020in sheet, the outer fitting between the side Layers 3 and the inner between Layers 1. The dimensions of the inner layer are adjusted to account for the thickness of the sides and also for the design of the floor, which can again be built from two layers of 20 thou with or without an offset. The end beading is cut from a good-quality self-adhesive label.

For coaches with more conventional side construction an amended David Jenkinson method can be used. The two inner layers and the two outer layers are glued up flat and when dry the two outer layers are curved to form the turnunder by laying the lower edge over the edge of a steel rule and the shape gradually worked in with a suitable round ended tool. This method usually uses at least five layers but if using only four layers of 10 thou, the bottom of Layer 2 would need to be filed to allow enough turnunder.



I do all my rolling stock drawings for the cutter using the Silhouette program (an older version) and whilst it is not cutting edge it is simple for those with no CAD knowledge – and free to download. Many people use Inkscape, again free, which is much more versatile but can have issues when loading the drawings into Silhouette. Whichever way, you can experiment to see what you might be able to achieve. Bear in mind the Silhouette is produced for crafters, not as a precision CAM machine for industrial production, and as such has much less accuracy than an expensive industrial machine. But for the price.... The minimum width of a piece that can be cut in styrene is about 0.5mm and the label about 0.4mm.

The machine comes with a Silhouette blade, but an alternative is available on eBay, the Graphtec CB09. Both of these that I have bought seemed to stop working correctly after not being used for a long period, so I removed the blade and made a scriber by fitting a tight-fitting drill bit, shortened and ground to give about a 90-degree point. When using this, in the cut-setting menu set the blade to sketch pen. The normal blade is offset, which allows it to swivel as the direction of cut alters and this is allowed for in the program. Strange aberrations appear if the wrong setting is used.

I will put some useful links on the e-Group for those who wish to look further.

STEDHAM MILL

PAUL HOPKINS on a layout built during lockdown

The Redford Junction layout needed a makeover and overhaul, but once that job had started it was decided to scrap parts of it and salvage others, incorporating those into a new layout, which would consist of six baseboards measuring 4 feet by 21 inches (though two are slightly wider to contain hidden sidings and the layout's main control panel). The branchline track, entrance to the fiddle yards and the electrical wiring use the South Downs & Solent modular convention.

Stedham Mill was built during the Covid-19 lockdown. It is set in West Sussex during the 1950s and is the junction between the LSWR branch to Petersfield and a proposed but never built LBSCR extension from Midhurst to Haslemere. The branch remains a steam line, but the extension includes third-rail electrics to operate the majority of the services and as much double track as the space allowed. Several Central Division stations on the Southern Region have one of the tracks with a platform on each side and I wanted to incorporate that feature into this layout as well as a passenger subway to connect the platforms.

We couldn't visit model shops during lockdown, so as much as possible had to be salvaged or made from existing items. Many of the buildings on the layout were salvaged from Redford. I already had some other buildings for another project that didn't materialise and built others as I needed them, including the crossing keeper's cabin and the adapted Swanage signal box controlling the west end of the branch bay and platform. The track layout is much simpler than Redford's, which enabled all of the trackwork and point motors to be re-used. The layout is now operational but there is still some work in progress on signalling and the detailed scenery features which should be completed soon. I still have to build a low-relief mill building. The photographs give an indication of the progress made so far.

SOME LINCOLN LOCOS DIESELS

The work of DENNIS BUNGE and PAUL HOPKINS

Several members of our Group have acquired locomotive bodies from Lenny Seeney. At present the most completed are the diesel locomotives and railcars, such as the WR Hydraulic Class 22 and the AC Cars and Park Royal railbuses.

Dennis Bunge's Class 22 is powered by two Halling motor bogies with spoked wheels. They are mounted on to a Plastikard sub-frame with small screws, nuts and washers. The sub-frame is fixed to the body with a screw to the casting "nodule" left from the production process on the underside of the roof. Any slack between the sub-frame and bogies or rocking from the bogies is taken up by adjusting the bogie fixing screws. The livery is taken from colour photographs of the class in operation, and the headcodes taken from photographs and the Ian Allan headcode booklet to get the appropriate regional accuracy. The loco performs very well on the test tracks at all speed ranges and has a good top speed and superb pulling power.

Paul's Class 22 is partially finished and also uses a Halling drive system, but with a single motor bogie and a cosmetic trailing bogie, which will be satisfactory for the trains used on the layout. A Plastikard housing is fixed to the motor bogie, which provides the mounting screw and mounts for the bogie sideframes. The bogies are fixed by screws to an aluminium sub-frame, as shown on the left.

The sub-frame is screwed to a Milliput pad stuck along the inside of the roof. Livery is BR green, but is modelled as one of the few that were released to traffic with headcode boxes but without the yellow warning panel.

Dennis's Park Royal/AEC railbus is powered with a Halling 54mm-wheelbase motor unit with no modification which means it is 3mm too short but works well, though a little noisily. It is mounted into the body using card packing. The livery for this is based on its time on the Midland region when based at Bedford. The lining and "whiskers" transfers came from Modelmaster. Glazing is incomplete.

Paul's AC Cars railbus will be used on the Modbury Torr layout. It also uses a Halling 54mm-wheelbase motor unit, which is reliable and smooth in operation. Some modification was necessary to the underframe body strengtheners to enable the motor unit to fit. It is located to the correct height with Plastikard strips fixed to the bodysides. Livery is the later BR green as in service on the Western region. The lining is a combination of Modelmaster and Q kits, some adapted from 4mm scale. It too is awaiting glazing.

WHAT'S NEW

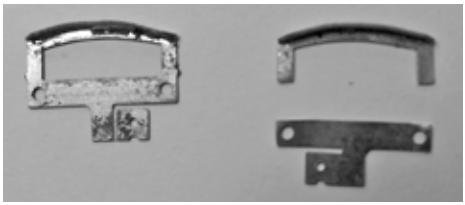
BR CLASS 03 0-6-0 SHUNTER
Geoff Helliwell and Lincoln Locos

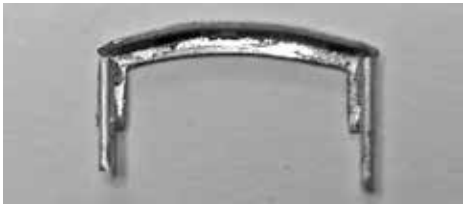
Geoff Helliwell is synonymous with work designing and producing power bogies and loco chassis. Lenny Sweeney has become famous for a continually expanding range of steam, diesel, and multiple unit bodies in his Lincoln Locos range. This potential marriage made in 3mm-scale heaven has produced the first of a series of almost ready-to-run locomotives, a BR class 03 0-6-0 small diesel shunter. In truth, the loco is ready to run. The body is fitted to the chassis and if you put it on the track and apply power it will move. However, the buffers are loose, helpfully as I found it easier to fit couplings before fitting them. The body comes unpainted.

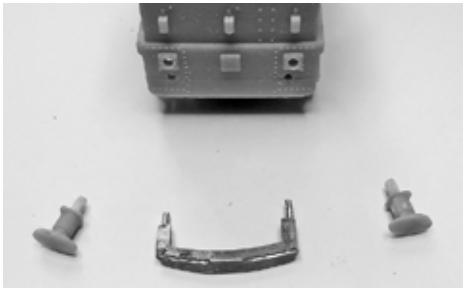
This lovely little loco has a solidly-made powered 0-6-0 chassis designed and built by Geoff and an exquisitely moulded body supplied by Lenny. The chassis has pick-ups on all six wheels and is superbly free-running from a slow crawl to a scale speed far in excess of the prototype's maximum. The wheels feature accurate centres moulded by Lenny and are fitted to Society square-ended axles. It is a powerful little beast and from the box I was able to put the loco on my layout and get it to shove a mixed rake of a dozen wagons through the exit to my station's goods yard with no problems.

The body is moulded in the final condition of most of the locos from the mid 1960s, with the steps removed from the front side of the bonnet and featuring the "steam engine" style of exhaust stack. What immediately impressed me was the very fine rendition of the handrails along the top edges of the bonnet. The remaining handrails are all undersize moulded ridges, which Geoff rightly suggests are probably best replaced with wire. More of this anon. The only loose items you have to fit on receipt are the buffers, which benefit from an attack with a nail-burnishing stick or a file to thin the heads down slightly. I suggest installation is done after fitting couplings as they can get in the way.

This little engine has a very deep buffer beam. As I use the Triang-style hook and bar on my layout, with the top of the bar the standard 8mm above the railhead, this precludes putting a wire across the buffer faces as it would be too high. I therefore cut the brass coupling as shown in the photographs and soldered short lengths of 20-thou brass rod to the underside. Using my coupling height gauge I marked the buffer beam then offered up the prepared coupling to ensure the holes would be in the correct place. After drilling the holes the couplings were pushed home and the buffers fitted, a touch of Superglue keeping everything in place.







I think that by trimming the hook element of a B&B coupling and soldering it to a

piece of rod it could be fitted in the same manner.

I coupled up a rake of 20+ wagons and set the loco off. It pulled away without even a hint of wheel slip. Thirty wagons proved too much until I balanced some lead on top of the bonnet. This is probably way more of a load than any of us will hang on an 03, but fitting additional weight in the bonnet and between the chassis members will improve pick-up as well as haulage.

The next matter is probably unique to me. King's Lynn shed only had two diesels allocated before it closed, a pair of 03s which came from the first 33 locomotives with conical exhaust stacks. As these were the two I wanted to model I needed a fix. The solution was to cut off the supplied stack very carefully and replace it with a trimmed-down 4mm-scale traffic cone.

I chose to replace the moulded handrails with wire ones. After a chat with Geoff he supplied templates for drilling holes in the right places. Apart from the vertical rails either side of the door they are bent from 0.3mm wire. On the bonnet side I drew vertical lines above the moulded rails to help with the lining up of the jig. Having drilled the holes, I pared away the moulded remains with a curved scalpel blade before a quick buff with a nail-polishing stick. The handrails either side of the door are mounted in Society handrail knobs and use slightly thicker 0.4mm wire to reflect the prototype. I have also added the steps and handrails which were removed or not fitted to later builds and the vertical rail in the front step area for the shunter to hold on to.

Final detailing involved the inside of the cab. Geoff's chassis has the motor where the real one was, inside the bonnet, thereby leaving the cab wide open and with no floor the rear wheels visible. ASLEF would not have approved.

I made up a front for the cab, including the instrument panel and control desk as one unit. The seats were fitted individually as was the cabinet on the rear cab wall. All were painted before fitting, the interior walls of the cab and the cabinet in cream, the desk, instrument panel and seats black. I have made this sound simple but in truth it was quite fiddly, especially squeezing it in, but well worth the effort in the end. The driver is from Modelu. At the time of writing I am still trying to make or source the brake handwheel and once that is done I'll finish the floor by extending the rear fixing block to the cab front.

I painted the loco body in Brunswick green, just as they were delivered in 1958, before the introduction of the yellow and black front and rear stripes. The chassis, wheels, buffers and the top of the footplate are black with the buffer beam and buffer shanks in signal red. One nice touch is the brass beading around the windows. I still haven't decided what to do about the glazing. It is going to be fiddly, even more so as I rushed into fitting the cab detail which will probably get in the way. I am also still waiting on the number and BR emblem which are on order from Railtec.

Though you have to do a bit of work before the 03 is totally ready for use, when you have finished you will have a delightful little beauty to be proud of.

Paul Furner

ROAD VEHICLES
www.battlefield3d.com

Browsing through war games websites I found two appropriate vehicles, an Austin 10 saloon car and an Austin K2 lorry, on the *www.battlefield3d.com* site. They are in the "WW2 – Britain" section. They are detailed models measuring up to 1:100 scale. There are some vertical moulding lines on the doors but when painted these are not visible from normal viewing distance on a layout. I consider them good value at £4.00 for the car and £6.00 the lorry. I have cut off the K2's tailgate and dropsides to make a flatbed coal

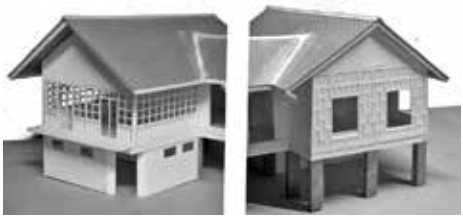
merchant's lorry, painted dark grey and with several coats of dirty thinners to give the impression of coal dust covering the vehicle. The sacks are simply lengths of Milliput cut to 10mm length.

Adrian Westbury

BLASTPIPE

Like Richard Brice (July issue), I bought a Silhouette cutter a number of years ago. I have found it an invaluable tool, not least because it can work with drawings produced in Inkscape, an Open Source drawing package I have been using for over fifteen years now. The transfer of drawings from Inkscape to the Silhouette control software provided with the machine is a little bit involved so a few years ago I paid the $25 to upgrade to a Silhouette version that allows a direct integration. I have made carriages using the Silhouette to cut 5- and 10-thou Plastikard layers, which I then laminate together. It is particularly good for cutting out the windows and panelling of the early nineteenth-century carriages I am interested in. Even the curved quarter-lights used on early first-class carriages can be cut accurately.

I found the Silhouette was even more useful when it came to modelling lineside buildings. Cutting out window frames is now an automated process instead of a tedious grind. I tend to use Plastikard, but I must try the adhesive vinyl approach some time.



I have cut vinyl to make stencils for freight stock lettering. Outrageously, Fox Transfers don't have State Railway of Thailand in their catalogue so I have had to try other methods. Black lettering for cream-coloured vans can be printed on to transfer film with a home deskjet printer, but white lettering needs a sort of printer I don't have. There are people who will do bespoke transfers, but their minimum order amounts to two lifetimes of modelling for me. However, the Silhouette can cut accurately enough – with the blade at minimum height – to cut letters a millimetre or two high. The letters are then carefully picked out and the resulting stencil stuck to the vehicle side and the lettering spray-painted with an airbrush. Early results are encouraging and it should be easier when I get round to lettering the container flats I have under construction – if for no other reason than the prototype has the markings stencilled on too.

The Silhouette really came into its own

on a task I really think would stretch the 3D printers. My Maenamburi layout has a temple behind the carriage sidings. Thai temples have very ornate carved gable ends and carved features on the roofs. Initially I got some of these ends etched, but the trouble with that process is you have to make the building fit the etch – which is troublesome if you change your mind when the building is taking shape in front of you. That is likely to happen when you have to rely on photographs and deduce measurements from things like parked cars or standard doorways. The Silhouette can cut accurately enough to reproduce these carvings, as shown below.

Quite soon a tool like the Silhouette will be superseded in usefulness by desktop 3D printers. I'd get one of those now if it weren't for having to learn an entirely new software suite to get much use out of it. But I can use 2D drawing packages and the cutter does a lot of what I want when I can draw it out in Inkscape.

Wim Harthoorn
Horsham

ON THE LEVEL

From page 9

The exact position of the yacht has still to be completed as there remains the need to add the water and further items of scenic material, grass, bushes, trees and so on. There remains much to do and I hope to show the results as the project develops.

OBITUARY

Peter Cornelius, who died in July, was active in the London Group in the 1960s. After moving to Rangiora in New Zealand he became a respected pillar of his local model railway club and men's shed. He was a frequent contributor to the Society e-Group and chronicled his life-long 3mm odyssey engagingly in *Mixed Traffic 213.*

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GALLERY

Paul Furner evaluates the Helliwell/Seeney BR Class 03 0-6-0 shunter – seen here part painted – in this issue. Victor Hall will describe how he built this LMS 42ft Van in the January issue. Robert Maidment-Wilson's BR Clan Pacific 72002 *Clan Campbell* is a Lincoln Locos body on a Triang Britannia chassis. *Paul Furner, Victor Hall, Robert Maidment-Wilson*