Smallwood

This multi-level digitally operated 'OO' gauge layout is the latest to be completed by the Redditch Model Railway Club. **GUY CRADDOCK** *takes us back to the 1970s – the era of British Rail blue, rattling DMUs and steam heated Mk 1s.*

PHOTOGRAPHY, MIKE WILD.

1 **A Class 47 weaves into the station past the stabling point as the Class 03 station pilot shunts vans at the parcels depot and a Hunslet 'Austerity' 0-6-0ST returns to the exchange sidings below with TTA tankers.**

SCALE	GAUGE	SIZE	PERIOD	CONTROL
4mm: 1ft	'OO', 16.5mm	15ft x 18in	1976	DCC, Roco Z21

IT IS 1976 which is best remembered for the long hot summer and the Montreal Olympic Games. On television we had the delights of *When the Boat Comes In*, *George and Mildred* and *Noel Edmonds' Multi Coloured Swap Shop* has just started on Saturday mornings. Steam traction ended nearly 10 years ago and the railways have yet to change significantly other than the total use of diesel and electric power. Down in the railway backwater of Smallwood, somewhere in England, we have a terminus station and town that have both seen better days.

The scrapyard features a collection of 1950s and 1960s vehicles which have been suitably weathered and modified to suggest their end is near.

The 1970s were an interesting period in railway history with continual under-investment and a 'make do and mend' attitude set against the general industrial unrest that the decade is remembered for. Smallwood is a microcosm of that era. Much of the glass has long since gone from the overall station roof and the provision of four platforms is from an era of far more affluent times. The station still boasts a parcels depot as well as a small stabling point for both locomotives and diesel multiple units. At a slightly lower level below the station are the remains of another station that now serves as exchange sidings for a number of local industrial concerns. These sidings would only just see out the 1970s, becoming part of the town's bypass road.

Modelling the 1970s is a departure for the Redditch Model Railway Club as all our other exhibition layouts – Arrowmouth (HM3), Chilcompton (HM8), Dagnell End (HM33) and Oakenshaw (HM88) - that we have built in the last 20 years, all of which have been featured in this magazine, have been firmly set in the 1950s and 1960s steam and diesel transition period.

We have been planning a 1970s layout based in the West Midlands for a number of years and Smallwood was designed as a testbed that could help develop these ideas and our use of Digital Command Control (DCC) for the operation of our layouts. Up to now our only other DCC operated layout is Dagnell End. As with the other layouts the scale of Smallwood is 4mm:1ft using 'OO' gauge track. The key to the package we have created with Smallwood is the correctly formed and weathered trains for the era portrayed.

CONCEPT

The layout is effectively two layouts in one that are not physically connected. The higher level features a four-platform station, a locomotive stabling point and a parcels depot. The passenger trains are a mixture of two and three car Diesel Multiple Units and three to five coach locomotive hauled trains, mainly made up of BR Mk 1s. The parcels trains are made up of a mixture of Mk 1 and pre-nationalisation parcels »

vans. The station still boasts a station pilot that is nearly always a Class 03 shunter with the obligatory match truck to help activate track circuits and assist drivers with sighting when coupling to trains.

On the lower level are the remains of a station that were once connected by a now blocked subway for passengers. This low level station closed in the 1960s and was turned into exchange sidings for a number of local rail connected industrial concerns. All these are off scene so the rail movements on the layout consist of freight trains arriving from the mainline into the exchange sidings. The locomotive is removed and an industrial engine is attached to trip work the wagons to the final destination. The return moves are the reverse of this procedure. Much of the freight traffic is oil although other trains consist of coal and steel. The industrial locomotives are a mixture of steam and diesel. Some of the former railway land has been given over to a scrap yard full of old cars from the 1950s and 1960s that have all seen better days.

The name for the layout, Smallwood, follows the club tradition of naming our layouts after places in and around Redditch. Smallwood is a district of Redditch and it takes its name from one of the old Redditch families who funded and built many of the Victorian era public buildings in the town such as the hospital and the Smallwood Alms Houses. The latter was the home of our club for nearly 30 years until the mid-1990s.

FOUNDATIONS

The baseboard frames are made from 15mm plywood that is topped by 12mm plywood which have formed a very solid basis for the layout. Being on two levels, the design has created deep and complicated structures.

We developed the layout to be transported in two sections which have their legs permanently attached as well as the backscene, lighting pelmet and a roof panel. The two sections are on casters and at the

A Class 37/0 accelerates away from Smallwood with its inspection saloon while in the background a Class 108 ticks over in the station. On the left is the stabling point for multiple units.

The interior of the parcels depot is fully detailed and open for public viewing when Smallwood is on show.

recent Great Electric Train Show a number of our fellow layout exhibitors were amazed at how quickly we were able to move the layout out of the venue at the end of the event. At the beginning of a show it means we can have the layout up and running in less than ten minutes of arrival with placing of stock on the layout taking far more time.

All the track on the layout is Peco Streamline code 75 and is laid on cork and then ballasted with Woodland Scenics fine granite chippings, which have been glued in place using diluted PVA glue, in the conventional manner. Once the track was laid the rail sides were painted a rust colour and the whole formation has since been toned down using a variety of watered down acrylic colours.

During the laying of the track a number of permanent magnets were installed underneath the running lines to operate automatic couplings on the trains. We have experimented with a number of coupling types including the American Kadee coupling system. Currently we are using modified standard tension lock couplings you get with ready-to-run Hornby and Bachmann stock onto which we have soldered a piece of wire made from a staple which the magnet attracts and uncouples the vehicle.

If there is a down side on the layout it is the storage yard. The off-scene yard is on two layers to accommodate the two levels of the layout. This does making getting at the lower yard a little restrictive. The trains are kept on cassettes which can accommodate the locomotive and full length of the train. The cassettes are made of 15mm chipboard each with two lengths of extruded aluminium L section for the trains to run on. Electrical continuity is done by Bulldog clips attached to the top edge of the L girders. We use a separate table behind the layout to store the trains that are out of use.

TAKING CONTROL

The layout is wired for DCC operation. There are three busbars running the full length of the layout, one for the control signal from the DCC unit, a 16 volt AC for point control and a 12 volt DC one for the lighting. Everything is wired into the relevant busbar. This means only six wires cross each of the baseboard joints with all the other wire joints contained with the boards. Point control is via Lenz six output static decoders which operate Peco solenoid motors.

When we built Dagnell End, our first DCC operated layout, around 10 years ago, we looked at the various DCC systems on the market and went for the NCE system. We found the system worked well, but with the need to key in locomotive addresses, this slowed the operation on a tail-chasing layout when compared with our analogue operated layout.

After keeping a watch on the developments of the various DCC systems as they came onto the market we have now acquired the Roco Z21 system. The system consists of a small black box and a wireless router. Actual control is via any tablet or mobile phone capable of downloading an app to it. All you do is connect the device to the closed Wi-Fi system via the passcode and you can control the trains and any other item connected to the system.

In the case of Smallwood we control the trains and points via the system. We have control stations at each end of the layout with a tablet tethered to the control point (so we can keep it fully charged) that can control both trains and points. We than have further smaller tablets that we use for shunting.

STRUCTURES

Every building on the layout is scratchbuilt. The smaller buildings are based around a thick card structure that is covered in various plastic facings. Virtually all of the windows we use either come from the plastic Dornaplas range made by Springside or the Brassmasters range of etched brass windows and doors. There are a few from the Langley range though we tend to use more of their general white metal fittings. The larger buildings, such as the parcels depot, have MDF as the bases with pieces of balsa wood as strengtheners.

Within the club we are lucky to have three or four members who are good at the skilled bits of finishing buildings including weathering and detailing. We have a larger nucleus of willing less skilled or experienced members who do the easier parts of construction such as aplying finishes or the initial painting.

The station overall roof always proves a talking point at exhibitions and is completely scratchbuilt. The curved girders that form the structure are made from very thick card. This card started life as the outsides of cable drums that had been discarded by one of the other tenants in our club room complex. Two girders were created out of each circle of thick card. The cross beams were made of a mixture of »

5 A Sentinel 0-4-0 shunter emerges on the industrial line with a rake of TTA tankers as a Class 128 parcels unit heads into the parcels depot for loading.

BR blue dominates at Smallwood on the mainlines as a Sentinel 0-4-0 passes underneath on the industrial line.

card, metal rod and plastic girder. Glazing the structure proved harder with a number of experiments with different techniques before some thick tape was found on the internet that was used to create the glazing bars. The whole structure was weathered which has proved to be a double edged sword as it looks very realistic but does make the station area rather dark.

With the railway buildings we have not gone for any set railway architecture that instantly sets the layout in particular location. The signalbox is a British Railways standard design that was mainly used in the North East of England although other regions built flat roof signalboxes. The station buildings under the canopy are very nondescript, as is the parcel depot that could be set anywhere in the country.

All of the walling that splits the two levels is made from a thick foam board plastic sheet that started life as a shop sign. This forms the structure of the wall and it is then covered in Slaters brick Plastikard. The bridge girders were scratchbuilt to fit the location from plastic sheet. A feature to break up the otherwise bland brick wall is a high level water pipe we have added over the railway line. This again is based on a similar structure over the canal in Stratford-upon-Avon. We have even modelled the spikes on the pipes which stop anyone attempting to walk over them. We made ours from metal wire soldered to a jig that was then soldered to the pipe which in turn was made from a piece of standard copper water pipe.

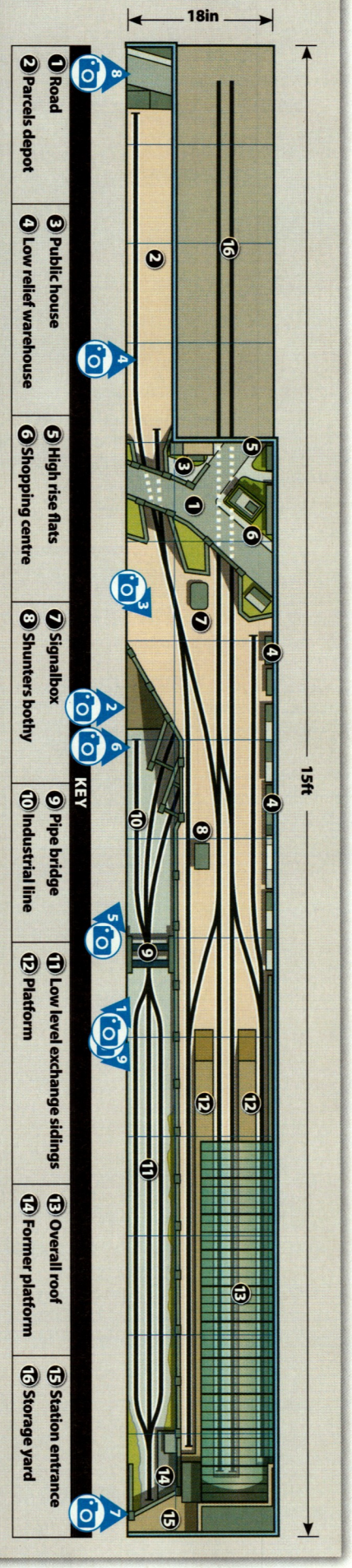
A finishing touch to the station and the parcels depot is the use of bespoke signage produced by Sankey Scenics. As well as producing standard signs for many aspects of railway modelling, they are able to produce bespoke signage which in our case incorporates the Smallwood name into them. With some suitable weathering they very much add to the layout.

BACKSCENES

The backscenes on our layouts always provoke a fair amount of comment at exhibitions as they are three-dimensional and have become a signature feature of our layouts. This gives a very effective sense of depth without taking too much space. »

SMALLWOOD TRACK DIAGRAM

(Not to scale)



07 At the station entrance a Royal Mail Morris Minor van is dropping off the post. You can almost hear the rattle of the exhaust from the Class 25 under the roof.

First of all we paint the whole backscene a sky blue colour and then add clouds using an old sponge dipped into white and light grey paint before the pictures are added. Whilst on previous layouts we have used old calendar pictures, we have found it much easier to take suitable pictures using a digital camera and then manipulate them to form the backscenes. The pictures are mounted on card and using two or three layers of these pictures, with card spacers between them, the 3D effect is created. Once these are made up there has to be some careful painting of some pictures using poster paints to remove modern-looking items such as cars and satellite dishes. Before they are installed, the picture units are matt varnished to remove the shine. In the case of this layout the views behind the station canopy are the buildings seen from the platforms on Worcester Foregate Street station, the large church is local to Redditch at the nearby village of Hanbury and the other buildings are drawn from Hereford city centre and South Birmingham. In the case of the church the actual picture was flipped to be a mirror image to get the shadows right from the sun with the other buildings in this part of the layout.

See it at...

- **Stafford Model Railway Exhibition** – February 1/2 2020
- **Warley National Model Railway Exhibition** – November 21/22 2020
- **Spalding Model Railway Exhibition** – November 5/6 2022

Smallwood, like all of our layouts, is are available for exhibitions. Anyone interested in having one of our layouts at their exhibition can contact Guy Craddock via *guy@redditch-mrc.com*.

- **Visit *www.redditch-mrc.com* for more information.**

THE TRAINS

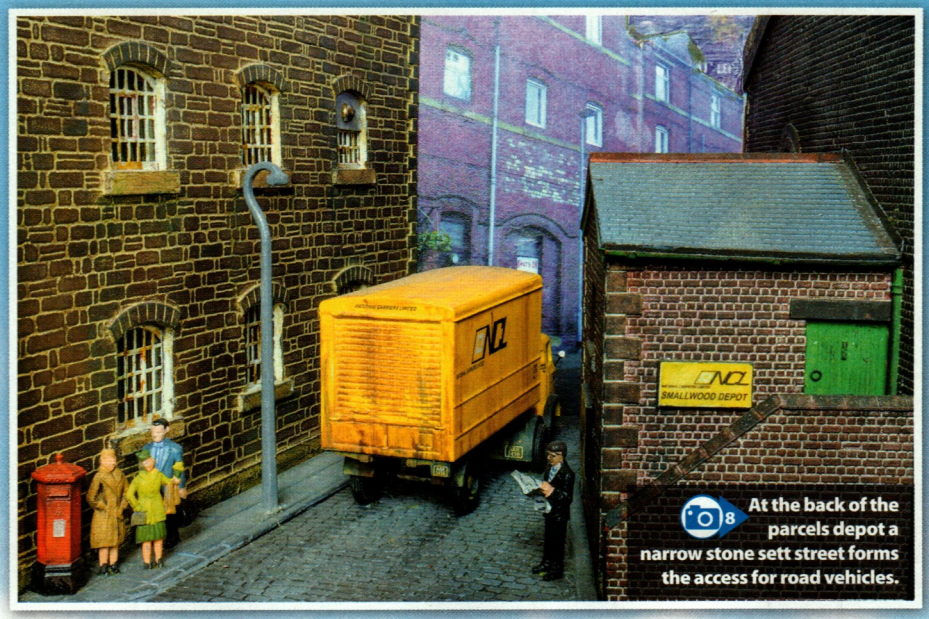
As with all of our exhibition layouts, all of the locomotives and trains are owned by the members and not the club. We have found this encourages members to want to provide stock for exhibition layouts and develop their own collections. All the locomotives and rolling stock used on the layout are a mixture of ready-to-run and kit built items all suitably detailed and weathered to portray the era and location of the layout. With this layout a number of club members have developed suitable freight trains for the lower level so we are able to operate oil, coal, cement and steel trains.

We have developed a bespoke set of locomotives for the layout which are mainly Bachmann and Hornby models that have been suitably detailed and weathered. Increasingly, the locomotives are being fitted with DCC sound chips. As with many similar layouts, having sound fitted diesel locomotives ticking over adds

to the atmosphere. All of the DMUs have also had passengers and drivers added. We also have an engineer's inspection saloon with passengers added inside and the end detail of pipes and couplings.

THE FUTURE

A layout is never finished and whilst Smallwood is complete enough to exhibit, we plan to continue to add detail to it. We also need to continue to perfect operation using the DCC system. We have already started on our next project which builds on the experience of Smallwood and is set in the same 1970s era and will be called North Grove. It is set on the former Midland Railway line in South Birmingham. Much of the influences will come from Northfield station, although we will draw elements from other locations in the area to give the layout added interest. Again this will be DCC operated and be in the same blue diesel era. Watch this space to see North Grove when it is completed. HMM



8 At the back of the parcels depot a narrow stone sett street forms the access for road vehicles.

9 The scratchbuilt station roof gives some shelter to the passengers waiting for the next departure. The Cravens Class 105 has just arrived while below a Class 25 runs round its tankers in the exchange sidings.