

Arrowmouth

The West Coast Main Line in the 1960s

Arrowmouth is the Redditch Model Railway Club's homage to the West Coast Main Line in the 1960s. With scale-length trains, impressive scenery, and a seaside location, the layout is still popular on the exhibition circuit 15 years after it was built. **GUY CRADDOCK** describes Arrowmouth and reveals how it was built.

Photography, Mike Wild.



1 The 10am 'Royal Scot' from Glasgow to London Euston rumbles over the River Arrow with Brush Type 4 D1859 in charge. Scale length train formations and weathered locomotives and rolling stock all add to the 1960s West Coast Main Line image.

You can almost imagine leaning out of the front carriage window as the 10am 'Royal Scot' from Glasgow Central to London Euston bursts out of Arrowmouth tunnel and onto the bridge across the River Arrow hauled by a Class 47 diesel. This is what Arrowmouth is all about, capturing the West Coast Main Line (WCML) as it was in the 1960s during the change over from steam to diesel traction.

The layout was completed in 1992 by the Redditch Model Railway Club, and it has been popular on the exhibition circuit from day one. Observers at exhibitions have even said that watching the layout in action is like trainspotting without the wait, and there are even some who believe they have caught a train from this fictitious location!

The layout is a continuous run measuring 22ft x 8ft in total and it includes a station with

two through roads, two platform loops and a bay platform together with the distinctive bridge across the aptly-named River Arrow and many other detail features.

Arrowmouth is a fictitious seaside town and it follows the Redditch MRC's tradition of naming layouts after places and areas in and around Redditch. The River Arrow is actually the river that flows through Redditch, but the layout is based on the north west coast of England close to the location of the real Hest Bank station that once stood between Lancaster and Carnforth.

The real line's proximity to the coast allowed us to model a coastal setting for Arrowmouth - something that was a little unusual back in 1992. The era has been set between 1963 and 1968, when steam was in its Indian Summer in this area of the country, and five years before the West Coast Main Line from London to Glasgow was electrified north of Crewe. The station is an ideal place to stop and watch the trains pass by as Stanier's remaining designs, including '8F' 2-8-0 and 'Black Five' 4-6-0, handle goods trains whilst 'Duchess' and 'Princess' class 'Pacifics' haul the heaviest expresses. Of course that isn't all

that appears. Other locomotive designs including the mighty Riddles BR '9F' 2-10-0s, Ivatt '2MT' 2-6-2Ts, '4F' 0-6-0s and Hughes/Fowler 'Crab' 2-6-0s also make appearances at the head of goods and passenger trains alongside the first influx of diesels.

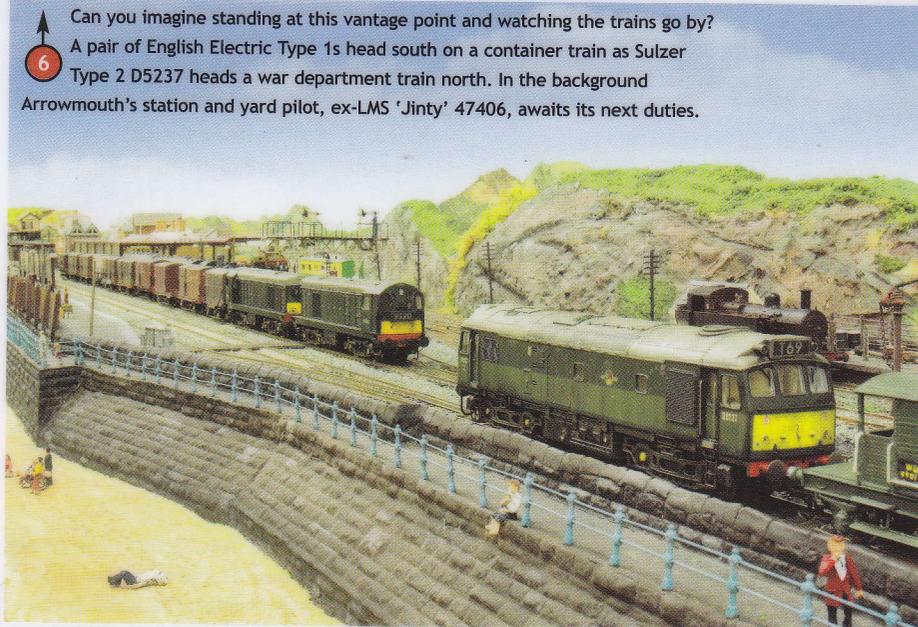
A key to the package we have created with Arrowmouth is correctly formed and weathered trains. This does not mean detailed locomotives pulling out-of-the-box ready-to-run stock, as all rail vehicles receive the same treatment when it comes to detailing. We have had spectators at shows not only taking locomotive numbers, but the numbers of the carriages and wagons running behind them too!

A trip along the line

Rejoining the 10am 'Royal Scot', today hauled by a BR green Class 47 and formed of 11 Mk 1 carriages, the train enters the scenic section of the layout through Pitcheroak Tunnel before travelling along an embankment above Park Farm. Soon after the line plunges into Arrowmouth Tunnel to pass through the headland cliffs which protect the properties behind from the ravages of the Irish Sea. Then



6 Can you imagine standing at this vantage point and watching the trains go by?
 A pair of English Electric Type 1s head south on a container train as Sulzer Type 2 D5237 heads a war department train north. In the background Arrowmouth's station and yard pilot, ex-LMS 'Jinty' 47406, awaits its next duties.



we cross the bridge over the River Arrow, one of the most prominent features of the layout, before rumbling along the raised sea wall which protects the main town from the sea.

On the approach to the station the train passes under a typical London and North Western Railway (LNWR) gantry signal box before crossing the pointwork of the station throat. The 'Royal Scot' passes through non-stop on the centre roads whilst in the platform a '4F' waits patiently with a local train and the station's glass screens rattle as the Class 47 continues its journey south. After the station the line swings inland and passes a farm machinery factory, the mudflats of a small river and campers on the Arrowmouth campsite before disappearing out of view through a deep cutting into the fiddle yard.

Building Arrowmouth

Arrowmouth was born out of the desire to build a new exhibition layout for Redditch Model Railway Club's 25th Anniversary in 1992. We looked around model railway shows in the area and decided to set our new railway on the coast. The layout was proposed in late 1990 as a replacement for our Bordesley Parkway layout, which had not been seen for a number of years.

After many hours of debate amongst members, the plan for Arrowmouth was created and it was an amalgam of a number of ideas put forward by members of the Club. The resulting track layout is simple yet flexible and the continuous run allows intensive operation of trains to keep spectators happy at exhibitions.

The baseboards are of a conventional solid top construction of softwood and chipboard. A sub base which carries the track has been added two and a half inches above the solid top. Again this sub base is made of chipboard. The result is a very firm and solid base for the railway but, as our members will testify, the boards are very heavy to carry around. The boards are joined together using patternmaker's dowels for alignment, which are incorporated in a metal plate. There are two of these in the ends of each board and the plates also incorporate a hole for a nut and bolt as well as the dowel. The dowels allow the layout to be assembled quickly at shows with the track correctly aligned every time and have stood the test of time and work as well now as they did back in 1992. The whole layout is supported on trestles, each with a chain to adjust the height.

Being a club layout we decided to use the universal 4mm scale 'OO' Code 100 track (Code 75 track wasn't available at the time of construction), as using any of the finer scales would have meant that members might have to convert existing stock to suit the layout's track type. As a club, we feel that 'OO' scale track portrays the railway well enough, and after all, it is more about creating the effect of a real railway that all our members can enjoy.

Virtually all the track has timber sleepers, although concrete-sleepered track has been used in the station area and on one of the corners, so typical of the era we have modelled. The track is laid on cork and then ballasted with loose granite chippings stuck in place using diluted PVA glue. The sleepers on the track immediately each side of the baseboard joint have been replaced with a



length of copper cladding, notched in the middle with a file to prevent short circuits. The ends of the rails were then soldered to the copper-clad for added strength. 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 aerosol-spray colours.

Building the 'townscape'

All the buildings on the layout are scratchbuilt, mainly using thick card for the basic structure. The basic card structures of the buildings were covered with either brick papers or plastikard to represent stone or brick finishes. Various grades of sandpaper have also been used to represent concrete rendering, which is so often found at seaside towns.

All the railway buildings are based on LNWR structures and drawings. The main station building is based on the one that was at St Albans, and the small waiting room and signalbox are based on standard LNWR drawings. In common with many other railway companies, the LNWR produced standard buildings made of wood from panels of a standard size. Each of these panels would either have a door, window or plain planking, or a combination of any of the three. This meant that a building could be formed to fit the purpose and location required by joining these standard panels together. We have done just that with the models, as the real railway did, and constructed a waiting room and signal box by this method. Each building is designed to fit its location and purpose, and is constructed using standard sized panels.

Arrowmouth also has protective glass screens on the platforms, which our operators are often quizzed about by spectators at exhibitions. The screens were common on the North Wales Coast route and were used to protect passengers from the weather and the sea whilst waiting for trains. We constructed ours from scratch using plastic strut H section girder and plastic glazing material to represent the glass. The glazing bars, which were added to the plastic glazing material, were originally made using strips of plastic card painted cream. We found that it was difficult to stick these strips permanently and they have since been replaced with thin strips of masking tape which is handily the correct colour!

Both the station buildings were completed by the addition of canopies made from card, complete with valances also made of card. During more recent improvements to the layout the goods yard was extended and a loading dock for parcels has been added together with another canopy made of card.



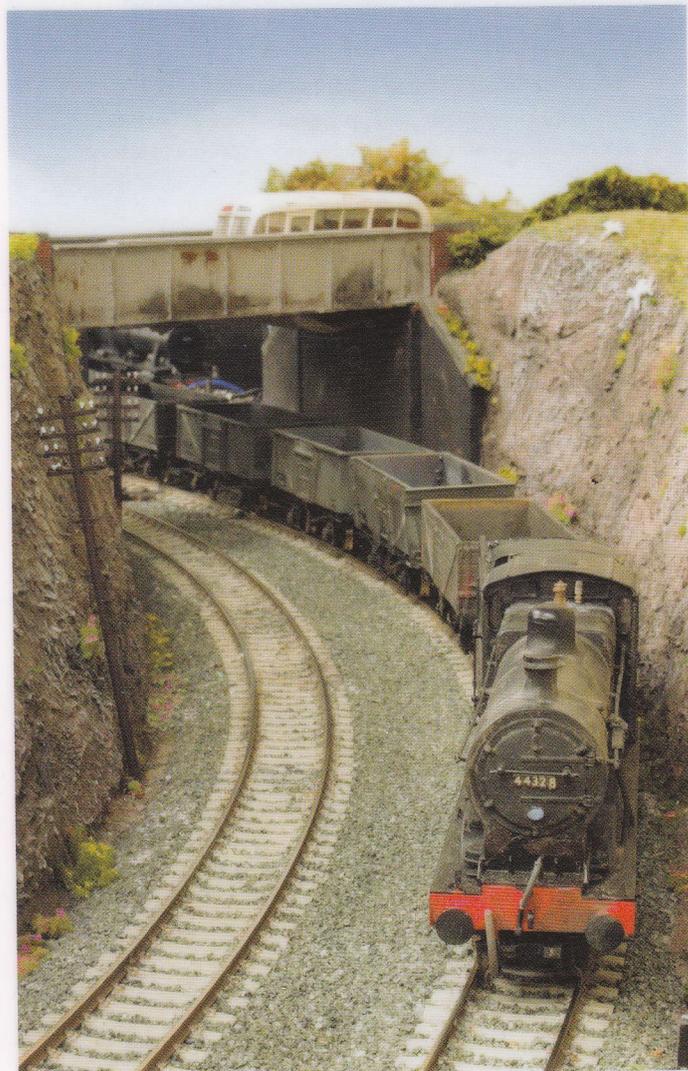
3 BR 'Standard Five' 73040 pauses in the station with a northbound train. The stone walling was built using 7mm scale brick plastikard.

2 As Stanier '8F' 2-8-0 48773 heads south with a mixed goods, BR '9F' 2-10-0 92136 heads north with another goods train along the causeway that separates the town of Arrowmouth from the Irish Sea.



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As a goods train rattles the glass screens at Arrowmouth, Ivatt '2MT' 2-6-2T 41278 pauses in the loop with a short local train. All the buildings and structures on Arrowmouth have been built by members of the Redditch Model Railway Club in typical LNWR fashion.



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Antiquated Fowler '4F' 0-6-0s still make an occasional appearance at Arrowmouth on coal trains, despite being in their final years of service. 44328 rounds the curve from the fiddle yard with coal empties.

The platforms are constructed from chipboard topped with hardboard with edging made from balsa. Passengers cross from one platform to another via a subway instead of the usual footbridge, and the inside has been modelled throughout using card – it even has tiling on the walls throughout its length.

The largest building on the layout was developed to hide a corner joint. This area of the layout was originally going to be a harbour, but it soon became apparent the sort of boats that would use it would not get under the bridge we were able to provide. The harbour was therefore filled in and part of it now forms mudflats, whilst the remainder is taken up by a farm machinery factory. This factory provided the reason for the large building. It is again made around a basic structure of card with a brick covering from plastikard sheets. The building is very effective in forming a focal point for the corner and taking the viewer's eye away from the joint. The factory has its own siding with a loading dock to allow materials to be delivered by rail. The cobbled area at the front of the complex is normally full of tractors and agricultural equipment awaiting delivery to customers.

All the station area is raised up above sea level on protective walling made from Slater's 7mm scale embossed plastic card. The large stones give a good representation of sea walling.

The bridge over the River Arrow

The main railway structure, other than the station is the bridge over the River Arrow. The design is a copy of those found on the Cumbrian coast line, which is close to the area where the layout is based.

The bridge is constructed around a piece of chipboard as the decking. The stone supporting pillars are made from shaped pieces of wood

Arrowmouth stats

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|--------------|-------------------------------------|
| Owner: | Redditch Model Railway Club |
| Builder: | Redditch Model Railway Club |
| Built: | 1990-1992 |
| Gauge: | '00' |
| Track: | Peco Code 100 |
| Length: | 22ft |
| Width: | 8ft |
| Layout type: | Continuous run |
| Period: | 1960s BR steam to diesel transition |

covered in embossed stone. The track on the bridge has been laid on strips of wood to represent the longitudinal timbers used on the prototype instead of normal sleepers. The railings on each side are made from metal. The uprights are pieces of SMP rail and the railings are pieces of welding rod. These have then been soldered to the uprights. This has formed a very solid and durable structure. In an attempt to get a prototypical noise when trains pass over the bridge, the rails have been notched at scale 60-foot intervals to represent jointed track. A pedestrian walkway has been added on the inland side of the bridge, with a sewage pipe on the other. The latter is made from suitable diameter copper tube joined with pipe joiners. The joints are brazed together, just like real heating or water pipes are. The smaller bridge by the farm machinery factory is made in much the same way. PECO girders have been substituted for the railing on the larger bridge. The signals have been constructed from Ratio and Model Signal Engineering kits, to suit their locations and all have been suitably weathered. The signals do not work at the moment, although we are experimenting with making them operational, in the future.

Scenics

The scenery has been built around the track formation to create the illusion of the railway being built through the landscape rather than the other way round. As mentioned earlier, the track formation has been laid on sub bases

above the main boards so, whilst the track remains level, the changes in scenery levels creates the illusion of an undulating track formation.

The scenery is supported on expanded polystyrene covered with plaster bandage with additional Polyfilla. Much of the recent scenic detail is down to one club member, Derek Collett, who by his own admission concedes he had not done any scenic modelling before this project. A speciality of his is now the rosebay willow herb, which was prolific on railway embankments. Each plant is individually made around a bristle from a broom. Coloured pieces of foam from the Green Scene range are stuck on and once dry parts are highlighted with poster paint. Each one is individually 'planted' on the layout. We estimate there are over 100 individual plants on the layout.

A recent new feature on the layout is the addition of stone walls around the farm between the tunnels. We pioneered the

construction method on one of our other exhibitions layouts, Gorcott. It was important to portray them effectively and as realistically as possible. There are several commercially produced wall sections on the market, but when around 20ft was needed for Gorcott it proved to be rather expensive. We had to find some way of making them, without the expense of using commercial products. After experimentation we hit upon the idea of using cork tiles. These were broken up into small random stones of suitable sizes and then individually laid horizontally to make up the wall. The tops were made from more suitably-shaped tile pieces laid this time vertically. Once assembly was finished the whole wall was spray painted with grey car undercoat paint as a base colour and then weathered to create the final effect.

The water features on the layout were originally created using resin, on top of a painted base. The resin was applied in January,

Contacting the Redditch MRC

Redditch MRC website:

www.redditch-mrc.com

General e-mail:

guy@redditch-mrc.com

Club Secretary and Exhibition Manager: Guy Craddock

Club President: Mick Clements

E-mail: mick@redditch-mrc.com

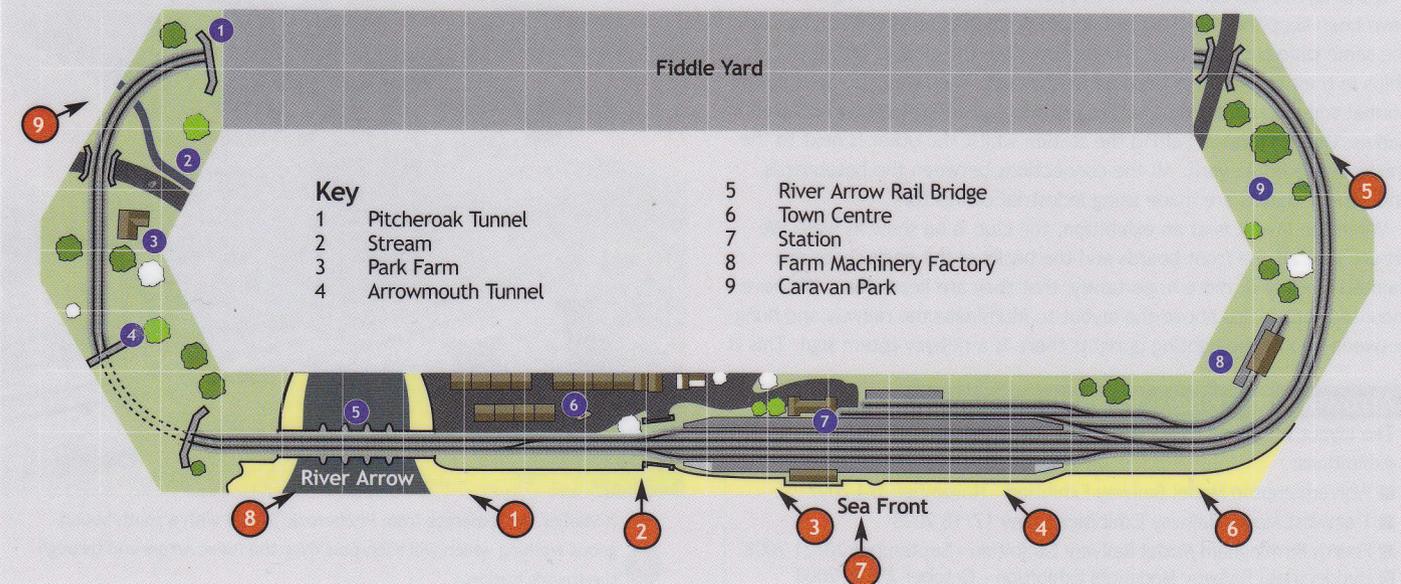
Telephone: 01527 67544

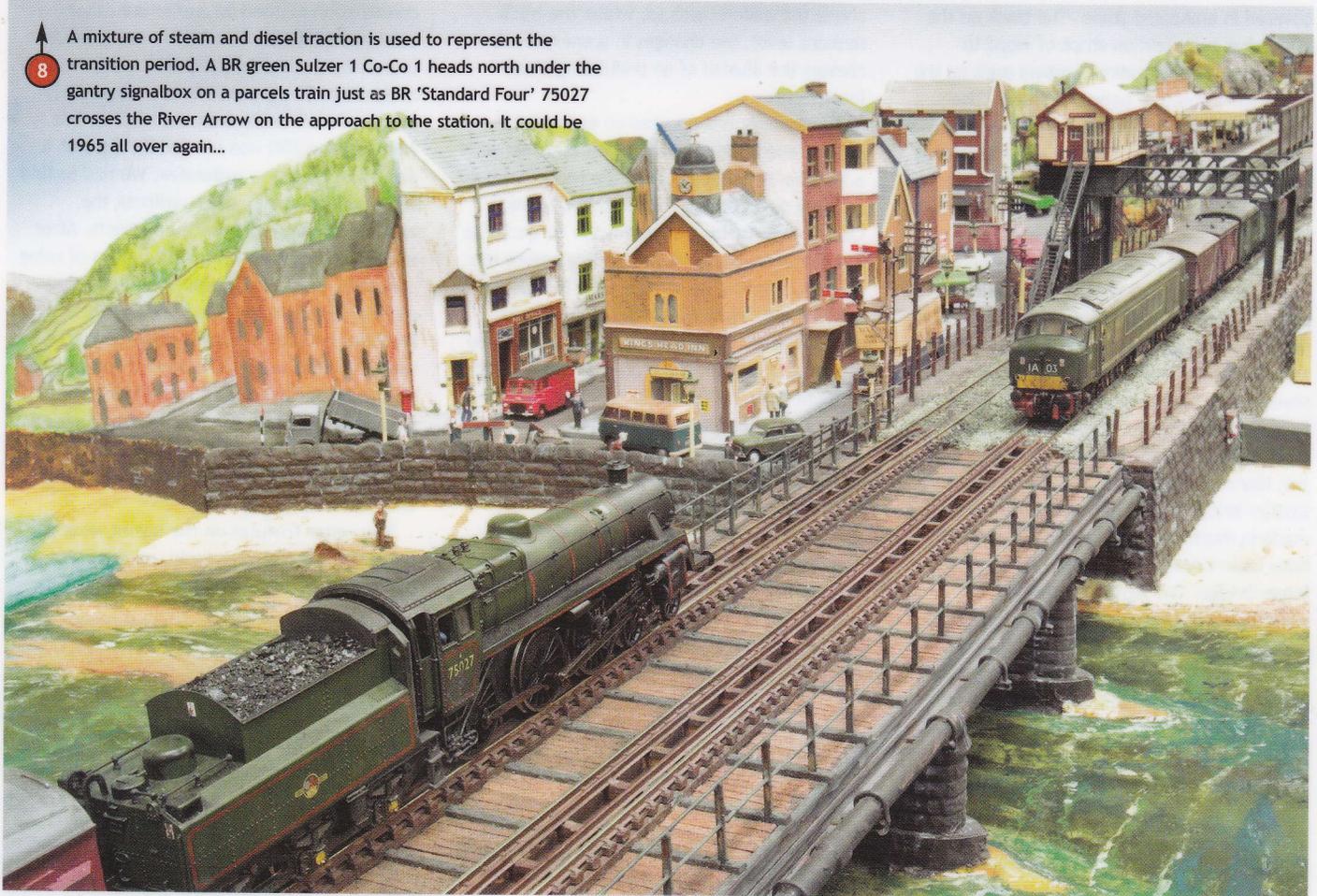


7 The scratchbuilt station building captures the atmosphere of the 1960s on the West Coast Main Line. An express train rushes through the platforms as the ladies of Arrowmouth enjoy a relaxing moment on the seafront.

Arrowmouth Track Diagram

(Each square represents 1 square foot: Not to Scale)





8 A mixture of steam and diesel traction is used to represent the transition period. A BR green Sulzer 1 Co-Co 1 heads north under the gantry signalbox on a parcels train just as BR 'Standard Four' 75027 crosses the River Arrow on the approach to the station. It could be 1965 all over again...

normally one of the coldest months of the year, and after two weeks without it drying the whole lot had to be scraped off and replaced with varnish. This was applied in the time-honoured method with individual layers, which have to be left to dry between coats.

Operation and presentation

Having a continuous circuit of track on the layout, it is quite obvious that trains leave the fiddle yard and travel round the layout to re-enter the fiddle yard at the other end. This makes the running of the layout very simple and the art is to make what the spectators see out at the front as realistic as possible. To make this as interesting as possible, we have a variety of types and lengths of trains. The formation of the track at the front, with the platforms on loop lines off the main line, allows trains to be held in the platforms as non-stop trains race through the centre roads.

If the layout was started from scratch today then the wiring could have been simplified by the use Digital Command Control (DCC), but at the same time there is some resistance within the club to install DCC chips in their locomotives because of the cost. The layout is wired by the normal common return method, to provide cab control via two control panels. One is situated behind the station whilst the other is next to the tracks in the fiddle yard. All the connections between the baseboards and control panels are made using industrial connectors.

When the layout is at an exhibition, the club is on show as well. We ensure that all the front boards and the backs of the backscenes are painted black and, more importantly, that they are kept clean. We have mounted spot lamps above the layout to illuminate the railway and hung between two of the lighting uprights there is a railway totem sign. This is

a full sized metal replica of a British Railways style station totem made by a specialist manufacturer, which clearly shows the name Arrowmouth to the spectators.

Arrowmouth has been a popular layout on the exhibition circuit, and we have travelled as far north as Barrow-in-Furness in Cumbria and south to the West of England Model Railway Show in Cornwall with the layout. To date Arrowmouth has attended 36 shows and travelled over 3,800 miles in the back of hire vans to and from exhibitions. The layout has been voted best in show on three occasions by the visitors and this means a lot to us, as they are showing their appreciation for the layout.

As you might expect the Club members have enjoyed taking Arrowmouth out to display it for the public, and there are more visits to come in the next couple of years – look out for us and say hello! 



9 A Stanier '8F' emerges from Pitcheroak Tunnel with a south bound goods working which will soon pass over the River Arrow and through the town's station.

Arrowmouth - where to see it

The layout is booked to appear at the following model railway exhibitions:

- Wolverhampton Model Railway Exhibition - November 3/4 2007
- Trainwest Model Railway Exhibition - May 17/18 2008
- Fourth Birmingham Model Railway Exhibition - September 20/21 2008
- Huddersfield Railway Modellers Exhibition - October 25/26 2008