For the average BRITISH RAILWAY enthusiast

1993 Toy Fair Report
LNER articulated coaches • East Brent revisited
Festiniog Hunslets — scale drawings
Ambleforth is a popular destination point for steam and diesel excursions as the shot proves. The V2 has brought a Charter Train from Glasgow while class 50 'Teddy Elgar' awaits on the return London leg of a 'Gricer' Special.

Ambleforth
An OO scale diesel-era exhibition layout
Built and described by Gary Thomas and Ian Harper
Photographs by PECO Studio

A class 26 returns a Research Train to Derby comprising Test Car 10 and Laboratory Coach 6. Glimpse the wedding party outside the church!

A 47/8 swings round the curve past Kitchener Road with a Plymouth-Edinburgh service. The factory on the left makes components for the car industry.
Diversionary workings from the ECML are commonly seen passing through Ambleforth.

THE ARTICLE that follows can be best described as a warning on how not to build an exhibition layout. But first our story must go back many years to when I was just a young lad and had far more hair! Being interested in the contemporary railways scene and keen on detailing locomotives, I decided to construct, with the help of friends, a small diesel depot for exhibition use. Anglia Common was its name and we trundled it around many local shows, and though I do say, it was very popular. In due course when its operational potential had been exhausted it was decided to put it out to grass and look to the future. Well time went by and the learning process went on to better modelling etc. I built some new baseboards for a future layout but these were put to one side. At this point and through work I met another model railway enthusiast, modern image to boot. Gary was his name; we'd quite often go out on various rail trips and to shows and be heard to criticise — "we could do better". With swap meets a popular pastime, indeed still is, you can imagine the amount of stock we have accumulated.

As I wanted to get back into the exhibition circuit I discovered that Gary was interested too, so Ambleforth was conceived. It was basically a layout that was to be big enough to run scale length trains and keep them moving. Originally our thoughts were on the lines of Carstairs because of its operating potential. However, we soon moved our location to Yorkshire to enable us to run the widest variety of stock possible bearing in mind what we already possessed. We eventually decided on a fictitious junction north of Leeds giving alternative routes to Scotland and the North East of England. The time period modelled ranges from the early 70s to the current scene but with the introduction of so many colourful liveries in recent times we have found ourselves concentrating more on the present day. Based on this premise we drew up a plan for a three-platform through station with bi-directional roads and with a double-track junction at the north end. At this time we were working on a length of 10'0".

From the outset the two of us were intending to build the layout without any help from outsiders within about a year. We were later to realise a bit more help was to be much appreciated. About the time the front baseboards had been completed and laid we began to realise that we did not have enough space on the other side of the layout for a comparably sized storage yard. After much scratching of heads we hit the bullet and decided to add another 4'0" to the length making 20'0" x 9'6" overall. Fortunately we could add another baseboard section to the station area without altering the track layout. Our aim of being ready in a year was realised when we exhibited the layout at the Norwich show in March 1991, but only by recruiting some like-minded enthusiasts was this target achieved. Through placing an advert in our local model shop we got to meet John who has since been attracted away by the opposite sex, Terry the carpenter who turned up just after we had completed the last baseboard, and Chris who was originally a steam man but who has since been seen buying diesel locos.

Construction

The first problem was where to build a layout of this size. Construction initially started outdoors during the summer of 1990. Fortunately the weather was good but as autumn started to draw in a new location had to be found. Fortunately we were offered the use of a garage, but we only had a space of about 12'0" x 8'0" available to build a layout 20'0" x 9'6". As luck would have it our works canteen was available at weekends and this gave us the opportunity of being able to erect the layout all at once. We were then able to check the track, thankfully everything fitted first time and only minor adjustments of the track joints were necessary.

Baseboards were built in the time-honoured manner from 3" x 1" framing but we diverted Sunday working in operation as the permanent way gang are seen hard at work preparing to move sleepers for later transfer to the Engineers train presently occupying the main line.
from normal practice by topping the frames with ¹⁄₄" chipboard followed by ¾" Sundeala board in an effort to prevent warping. However, this proved none too successful and in future we would be tempted to use plywood. The maximum size of board was kept to 4'0" × 2'0" to make transportation easier but the downside was the number of joints in the track. Boards are joined using hinges with removable pins giving a fast and accurate method of aligning the boards. The whole is supported on 2" × 2" legs. Compared to some layouts we have seen ours appears to be of battleship proportions possibly because a civil engineer was involved in the construction! Hence it's quite usual for us to take up an hour and a half after a show to pack everything away, by which time most of the other people have left!

**Track**

Original thoughts were to use PECO Code 75 track but when we constructed the layout only a small selection was available, for example concrete sleepered track was not obtainable. As a result we decided to go for Code 100 but if we started again Code 75 would be preferable. Turnouts are a mixture of live and dead frogs, because some were retrieved from previous layouts and the local model shop did not have sufficient live frog points in stock.

The trackplan was arrived at by drawing out the plan in full size on sheets of brown paper using the actual turnouts as templates. We aimed to achieve a five-platform station with a centre through road leading to a junction which permitted as much bi-directional running as possible in line with modern practice. Originally the diverging line to the Newcastle was to be double tracked but in order to simplify the junction layout we decided to model it as being rationalised and reduced to single line.

The second line can be seen in the process of being dismantled and for this an old piece of PECO steel rail track, which had become realistically rusty, was used.

**Scenery**

Although I'd always enjoyed the scenic aspect of the hobby I was able to try out some new techniques that I had not attempted on previous layouts and, to be honest, was quite pleased with the results. With a layout of this size it was going to be a problem as it had to be as realistic as possible but needed to keep baseboard weight to a minimum. It was decided that the approaches to the storage yard would only feature one overbridge carrying the Ambleforth by-pass. Hill effects were achieved by using blocks of expanded polystyrene covered with MeDroc and allowed to dry. When dry ready-mixed Polyclay was wet brush-painted on to the MeDroc to give it a smoother and stronger surface. Care was taken to achieve realistic terrain particularly around the approach to the tunnel. In order to give the tunnel a realistic 'black-hole' effect a removable dummy tunnel painted inside with blackboard paint, was made to cover the track behind the entrance. The excellent Woodland Scenics scatter was used to good effect on the scenery, applied over gloss green paint. Then once dry, matt clear varnish was sprayed over to bring in other scenic scatter colours. I must admit that when it came to buildings I have always relied on plastic and card kits and Ambleforth was no exception. I'm afraid. One of our main problems was that with a station this size a suitably large building was required. It appeared that nothing was available in the British kit market and due to time constraints a scratchbuilt structure was not practicable. But luck was with us for in the
Local freight operations are epitomised in this shot of a class 58 working a heavily laden coal train bound for the Slagerton ‘B’ Power Station.

Faller catalogue we found a very impressive HO kit of Bonn station.

It looked as if with a bit of modification it could pass as a British building. After a few evenings of kit building and some alterations, particularly of the roofs, we achieved a passable British-style building.

The station platforms boast well over a hundred painted figures along with obligatory BRUTE trolleys. Many railway workers are also scattered over the layout. A recent addition has been some extra scenery boards at the back of the station to add depth to the scene. This has allowed us to include a church with its own wedding ceremony just taken place!

**Electricity**

Initially the layout was wired up with a cab control system using a common return with two controllers. Since then, by popular demand a third controller has been added. Sections are switched using double-pole centre-off toggle switches mounted on a schematic layout plan. These switches also operate red and green LEDs to indicate which controller is connected to which section, a boon during busy operating sessions. The third controller was incorporated in a separate panel, the section switches being simple on/off switches which trigger miniature relays mounted inside the main panel and overriding the main switches. Turnouts are also operated by miniature toggle switches mounted on the trackplan, power being supplied by capacitor discharge units, one for the station area and another for the storage yard. Most of the controllers are by Gaugemaster, of the hand held feedback type which plug into the panels using five pin DIN connectors and appear to be capable of withstanding much abuse such as being dropped on the floor and called on to power strings of up to five locomotives at once during the mad half hour at the end of exhibitions.

The storage yard tracks are equipped with diode-matrix route selecting systems allowing several points to be changed at the press of one button. Tracks are selected using rotary switches which also ensure that the track power goes to the right place. This greatly simplifies the yard operator’s task enabling him to concentrate on making up trains. As an additional aid he also has at his disposal a dedicated controller which can be switched in so as to carry out shunting movements. All of the ‘spaghetti’ required to make this work is carried across baseboard joints using 25-way D connectors as commonly used on computer systems.

**Rolling stock**

We like to treat all rolling stock equally so that as well as detailing locos we also upgrade the stock that runs behind them. Fortunately in our group we have a variety of interests so that as well as loco-hauled passenger trains we can run a variety of DMUs, freight trains and departmental stock. This has resulted in each of us taking on sectors such as Regional, Inter-City and RES.

Since completing the layouts we have been building up a roster of stock suitable for the area modelled. However, we try to keep abreast of the latest developments on British Rail and a number of items have been re-painted into the latest liveries.

Stock to be seen includes:

- Post Office Sorting Train — Southern Pride
- Postal Coaches with a mixture of Lima GUV

The impressive station building uses a modified Faller kit to good effect.
vans and converted Hornby Mk1 57'0" Full Parcel vans.
Trans-Pennine — Lima and Hornby Mk2 coaches modified to the correct sub-types with a converted Hornby Mk1 full brake, all in Provincial livery.

InterCity — A choice of four full-length sets of HSTs, an IC 225 (towed by a diesel loco) and various rakes of loco-hauled coaches. DMUs and Sprinters — A variety including a Class 114 converted from Lima using a Craftsman kit. The Sprinters and Pacers are fitted with Kadee couplings which are a reasonable representation of the BSI automatic couplings used on the prototype. Departmental Stock — Uses a mixture of Parkside and Cambrian kits suitably modified. We also have some research vehicles modified from ready-to-run coaches.
Freight — A large selection can be seen including coal, cement, aggregate and a coil train made from Cambrian BRA and RAA kits. Terry has a thing about ferry wagons.

Operation
Originally the layout was run on an 'ad hoc' basis but as we found that a lot of stock wasn't run much we now use a sequence timetable to keep things moving. We try to keep things on the move all the while to keep the viewing public interested during exhibitions. It appears a common complaint that on some layouts trains hardly ever run.

Extension
During early 1992 we decided that it might be a good idea to increase the layout by another 4'0" in length. Problems had arisen with train lengths growing beyond the capacity space of the storage yard, a full length IC225 with a diesel loco to haul it is a mighty length! This would increase operational scope because this would enable us to add a bay platform, allow access from the inner main line track to the centre road without fouling the outer track and increase the length of the storage yard roads. The last time the layout was exhibited in its original form was at Chatham 92, reappearing in October of that year in its new form.

The future
In the pipeline are projects for full colour-light signalling possibly using infra-red detection and the inevitable march of the 25kV! The layout needs a more permanent home which we're hopeful may become possible if Terry can find some tiles for his barn!

Conclusion
We've learnt an awful lot building this layout, in fact if we did it again it would be totally different. Apart from this we've enjoyed getting into the exhibition circuit and meeting people. Thanks are due to the people that have helped us out that have not been mentioned so far. Included are Model Junction for supplying the trackwork etc, Terry Hunt and Chris Mortimer who form the main road team. Exhibition managers who have asked us to their shows and PECO Studio for visiting us and taking the excellent photos.
You can see Ambleforth in operation at Derby this month and Nottingham next October.