

# God's Wonderful Railway, part 1

*By Alfred Barten*



A southbound coal drag heads into Cyfforddilan.

**A** year and a half ago I had the good fortune of being asked by my employer to take a series of two-week assignments in the United Kingdom. I took my wife with me, and after each assignment we spent time visiting different parts of the UK and Ireland. One of the highpoints of our excursions was the night we spent in Llangollen in North Wales. (For those who are unfamiliar with Welsh, the double-el is pronounced something like "chl" in which the ch is like the ch in "Chanukah" -- not the ch in "chowder." It takes some getting used to and a lot of practice to say "Chlan-ga-chlen," but it CAN be done.)

Our visit to Llangollen was timed to coincide with the Llangollen Male Voice Choir rehearsal every Friday night at the Hand Hotel, where we stayed. Afterward everyone retired to the hotel pub, where the REAL singing began, visitors chiming in. It was a great event, capped by the warmth and hospitality of the hosts who made a point of stopping by our table to chat and welcome us to their town.

Our time in Llangollen was limited by our need to meet the ferry to Ireland from Holyhead later the next day. We marveled at the beauty of the rugged landscape as we clung to the narrow roads, up and down, around the bends, and .... LOOK OUT!! Whew!! I regret not having time to stop for photos or to visit the nearby Ffestiniog Railway.

Still, there was much for this old rail fan to enjoy at Llangollen. There was an operating tourist railway, a terrific model railroad museum, and the home of Dapol -- manufacturer of OO scale model railroad equipment.

It was there in Llangollen that my interest in the Great Western Railway was kindled. Only later did I learn that GWR stood for "God's Wonderful Railway." How different from the American nicknames, which run along the lines of "Saint Jesus and Long Coming" or "Broke and Mutilated." I returned home with a pair of OO scale GWR tank locos and later sent for a string of 4-wheel wagons, mostly the colorful 5- and 7-plank private owner coal wagons. Now whenever I see one of these wagons at the Trainz Download Station (DLS) I get a twinge of nostalgia and an urge to model the GWR. Finally I decided to have a go at it. Thus the Welsh Junction was born. In this and succeeding articles I'll tell you about my adventures in building the WJ.



## The plan

I designed the WJ as an excuse to operate British tank locos and colorful 4-wheel coal wagons. Naturally Wales would be the setting, GWR the railway. But I quickly ran into a conflict. North Wales was predominantly slate oriented. Coal was the domain of South Wales. I wanted to model North Wales, but most of the equipment -- at least the open wagons -- was more suitable for South Wales. So I designed the junction to work for either setting. I oriented the main line in the north-south direction and decided that for North Wales the line would run north to the sea; in South Wales it would run south to the sea. In each case the "sea" is where the east-west trunk lines take the coal or slate to London and other large metropolitan areas.



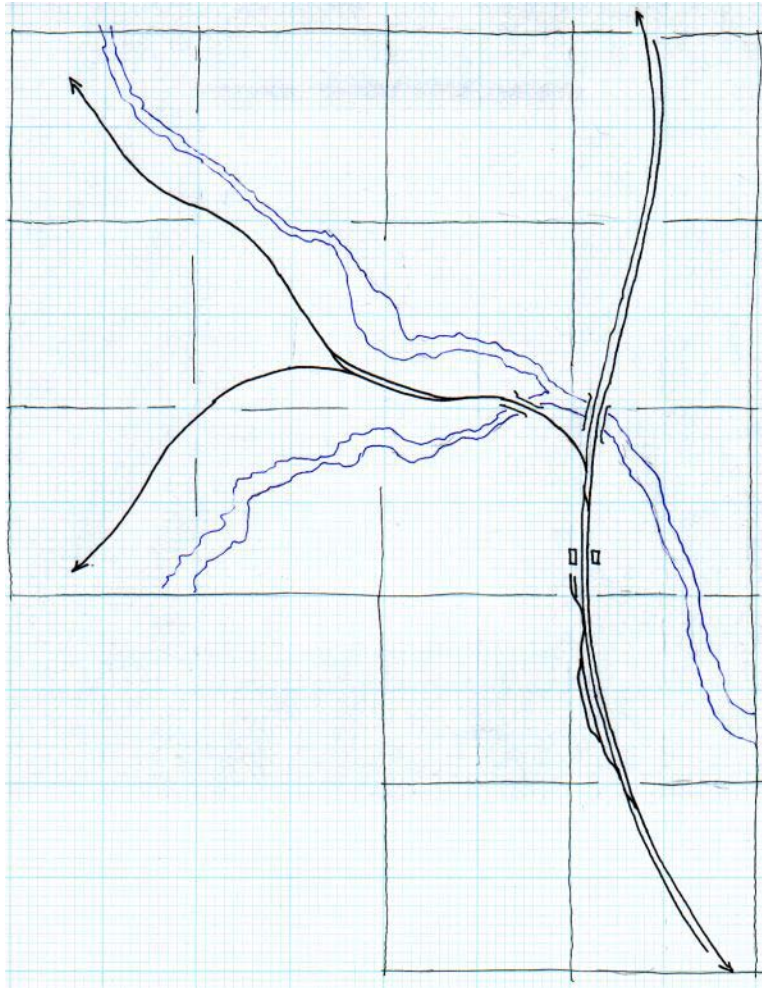
Llangollen from the stone bridge over the River Dee.

I began by designing an operation that would work with the existing coal wagons. I noticed that the available colorful private-owner wagons were empty, and the loaded ones were the drab GWR gray ones (sorry, GWR). How would I handle the operation? My solution was to have two branches feeding the junction. A single tank loco would deliver loaded GWR wagons to the junction from one branch, and then deliver empty private-owner wagons from the junction to the other branch. Interwoven in this, one main line train would pick up the loaded wagons and carry them to the sea, while another main line train would deliver empties from the sea. Mix in passenger operations on the main and branches and there would be plenty of operation.

My plan was to begin with the junction, then expand outward along the mains and branches. There would be a fiddle yard at each line end until I got around to modeling the terminals in detail. As I got building the junction I began thinking that the main line could just as easily be a continuous loop, so that is how I'll handle it.

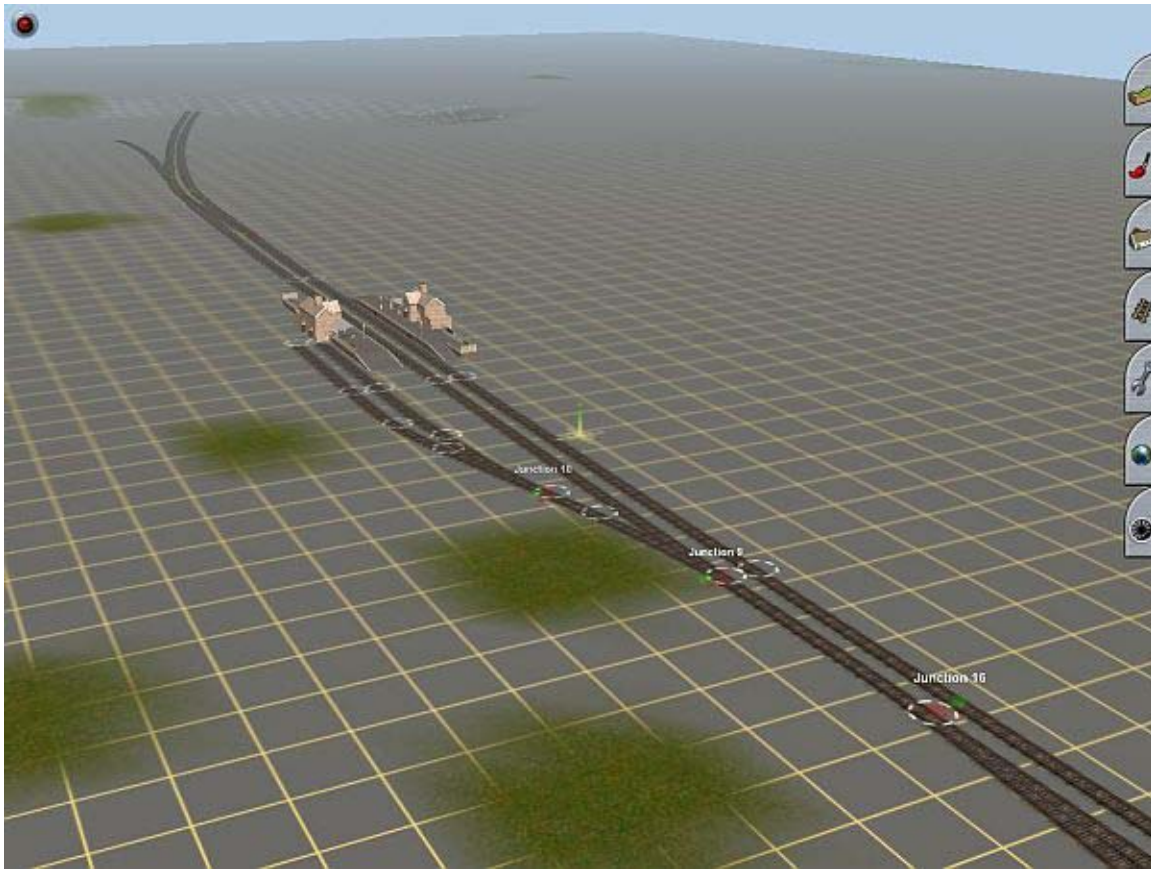
## Blocking out the junction

I began by sketching the junction plan on quadrille paper. When I found something I liked, I inked it in with a technical pen. In the sketch, each major square represents a baseboard. (In retrospect, I may have made the plan too spacious, but doing so makes for smoother curves, especially at switches ... err, **points**.)



My original sketch. North is up.

I began by placing the baseboards. In order to keep track of the baseboards for measuring and orientation purposes I sprayed a little green foliage at each corner and midpoint along the sides.



Green patches mark the original baseboard edges and corners.

Next I placed track. Then I dug the riverbeds and positioned track and road crossings. The method I use to get a uniform river bottom and depression is to lay temporary track along the river. I set the track elevation to some point below grade and then use the Smooth spline height 'S' tool to lower the track. When set, I remove the track. (Initially I set the riverbed to minus 10 feet, but found that pushed the river surface too high for my liking in regard to the stone arch bridges I was using, so I lowered the riverbed to minus 15 feet and set the river height to minus 10 feet. These settings may vary in other parts of the layout when I get to them.)

### **Planning for extensions**

If you plan to add baseboards to a layout, take my advice and don't alter the terrain along the baseboard edge(s) where you plan to extend. Doing so will make it very difficult to get a smooth transition between baseboards. I learned this on my Northeastern Junction layout and ended with a nasty groove in the mountains. After much fussing with hand manipulated contours I gave up and made a rocky mountain top, which worked out fine, but was not in my original plan. For the WJ I'm letting all outer baseboard edges remain at zero elevation until I'm certain beyond a doubt that I don't plan to extend a particular baseboard.

## The town of Cyfforddilan

Cyfforddilan is the heart of the layout. The name is a literal English to Welsh translation of "Railroad Junction Village." I apologize to the Welsh if my translation is a bit clumsy. Cyfforddilan has a station on both sides of the main line and a pair of sidings for local goods vans to be set out for unloading. To the south is a pair of parallel sidings -- one for setting out loaded mineral wagons for pick up by the trains headed to the sea; the other for empty drop offs from trains returning from the coast. The empties will be distributed at the mines along the branch lines.

Three-dimensional modeling involves a bit of skullduggery. In this case I cheated a bit on the rows of shops and houses. Normally the buildings would be on both sides of the street, but I wanted to keep the number of objects I used to a minimum, so I only placed buildings facing the station. I terraced the hillside to give more visibility to all the buildings.



Terraced buildings, one side of the street only.

## The village of Nepellan

To the west of its intersection with the main line, the branch line splits into two branches. At this point I had planned a passing siding, though I wasn't sure at the time that it would be needed. As I got into laying track and digging rivers and raising mountains, I began to see possibilities for this area. I decided this would be a good place for a small village, which I named Nepellan (which is my literal translation of Far Village) for lack of any better idea. Again I apologize if my translation is clumsy.

Nepellan became a good place to service the branch locomotives. Thus it has developed well beyond my original plan.



Nepellan, looking west.

### **Selecting rolling stock and buildings**

GWR fans are in for a treat when they go to the DLS. Thanks to a dedicated group of authors, there is a wealth of items available for the GWR. Last issue I speculated that there were probably more items available for the Sandy River & Rangeley Lakes 2-foot gauge line than any other road, but I may have to eat my words after seeing the collection of material, not all GWR, by tafweb, paulhobbs, johnwhelan, Jonny211, andi06, Blue, and Mstnoodle. This group has created a combined 723 items, and no doubt there are other contributors as well. The number of items yielding to a straight "GWR" search by all creators is 185.

**Locomotives.** There are currently seven steam locomotives available for the GWR, all by Jonny211. Three are tank types; four have tenders. My plan at the moment is to use the 0-6-0 tank locos (56xx Class and 94xx Class) on the branch lines for freight and passenger service. On the main line I'll use the 0-6-2 56xx Class tanks for coal drags, the 2-6-0 43xx Class Mogul for general freight, and the 4-6-0 Castle Class Ten-wheeler for heavy passenger duty. I learned from reading a *Model Rail*

review of Bachmann models that the 56xx Class locos were designed for coal drags and ran with the boiler facing the upgrade to help keep water over the firebox. The trailing wheels were effectively lead wheels on loaded trains running down to the sea.

There are also some AEC diesel railcars available by andi06. I'm sure I'll find a place for these gems. By the way -- they are listed at the DLS under Rolling Stock, not Locomotives.



A pair of AEC railcars. Four-wheel carriages are in the background.

**Freight wagons.** There are numerous freight wagons available, especially in GWR livery. I'll add a few goods vans with other liveries just for variety. Look for wagons by Jonny211 and paulhobbs in particular.

**Coaches.** There's a good helping of GWR coaches including an older 4-wheel carriage. Look for coaches by johnwhelan. The 4-wheel carriage is by Mstnoodle.

**Maintenance wagons.** I'll add a few maintenance wagons on sidings mainly for show. These wagons are by Jonny211.

**Buildings and structures.** Fortunately Jonny211 has produced some authentic GWR stations and maintenance buildings. For houses I found tafweb's masonry buildings to be perfect. In general I used stone structures wherever I could. Unlike America, the UK builders use (or used?) a LOT of stone.

**Track accessories.** Again, Jonny 211 to the rescue. He's provided GWR double-arm semaphores and shunt discs for switches, among other things. I'll place these as part of my next installment of this article series.

**Trees, people, vehicles.** I placed a few trees, but haven't settled on my standards yet. I found some great people in the Britain section of the objects part of Surveyor. Vehicles are generally vintage American types, since I couldn't find anything else suitable. The GWR operated from 1838 till 1 January 1948, when Britain's railways were nationalized. So if I'm going to operate the layout as GWR, the time frame is pre-1948.

### Selecting a palette

It's best not to go overboard with differing textures, for aesthetic reasons as well as frame rate concerns. At the core you will need textures for the roadbed and yard areas, village areas, open fields and meadows, rivers and embankments, stone outcroppings, and distant hills. I discovered early on that the gravel I had selected for the roadbed wasn't completely covering the ground. I could see the grid lines peeking through in places. So I decided to put down a base coat of dark brown earth



Palette of textures.

everywhere. This guarantees coverage and offers me the flexibility of letting the dirt show through in areas to add variety. I chose brighter greens than I use for North American routes because it rains more frequently in the UK, which in turn yields a lush green. I also chose a sky, EP-1 – Sky #14, that has interest in it. I found that on most days in the UK there was something interesting going on in the sky.

The above picture shows the basic textures of dark brown earth, gravel roadbed, mown grass, meadow, stone embankment, and river water.

### **Next installment**

In part 2 of this series I'll build the continuous main line loop. It wouldn't be a legitimate UK route if I didn't include some pastures, stone walls, and sheep. LOTS of sheep! I'll probably add signals and add detail around Nepellan.

Meanwhile, I've placed the wj\_b1 beta route on the *VMR Journal* web site for you to download if you care to have a closer look. See [http://vmrj.com/Library/wj\\_b1.cdp](http://vmrj.com/Library/wj_b1.cdp).

### **References**

**Internet.** There are numerous web sites covering the GWR and Welsh mining. The following are good starting points.

*GWR MODELLING:* <http://www.gwr.org.uk/>

*GENERAL HISTORY OF WELSH MINING:*  
[http://www.users.globalnet.co.uk/~lizcolin/w\\_gen.htm](http://www.users.globalnet.co.uk/~lizcolin/w_gen.htm)

*The Great Western Archive:* <http://www.greatwestern.org.uk/>

*The Slate Industry of North and Mid Wales:* <http://www.penmorfa.com/Slate/>

**Books.** I came home from our last trip with three relevant books. No doubt there are many more out there. Here's what I have:

*Cheshire and North Wales* by Paul Shannon and John Hillmer (Number 6 in the BRITISH RAILWAYS series *PAST and PRESENT*)

*Gone With Regret* by George Behrend (close up and personal view of the GWR with lots of appendix information)

*The Railways of North Wales* by Walter Turner (covers railways currently in operation)

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