



## Elke Brooks no rival...

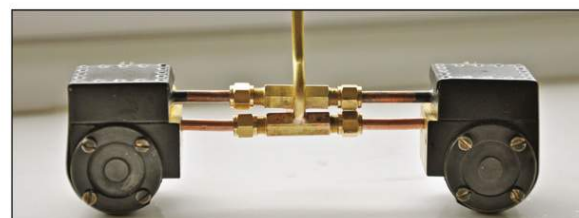
Robert Cant begins his two-part coal-fired loco building project.

I had been looking for something different for sometime now, as much as I enjoyed my existing engines there seemed to be a gap, just a feeling something was missing. I have been volunteering at Bala Lake Railway for more than ten years, including many turns on the footplate and I came to realize the missing element was the sight and smell of coal firing – because this is how the real thing works.

I was intrigued by a small item in *Townsmans Round*, about a Dutch coal-fired engine that offered long running times between firing and refilling the boiler. I found this of great interest and was pleased to see that Riverdale Locomotives would be having a stand at the 16mm Association AGM where I discovered that there were two models on offer, 'Elke' which was based on the Roundhouse 'Billy' and 'Amy' based on the same manufacturer's 'Lady Anne'. After looking at the display models for a while, I went on my way with a flyer, which contained basic details of the models on offer and contact details.

I had a look at Riverdale's website where as well as the brief overview that I already had I found more detailed information about the models on offer and several video links showing the engines in action. Basically you can buy a fully-finished locomotive, convert an existing gas-fired engine (note it needs to be one with the current type of cylinders) or build a new model with a combination of Roundhouse and Riverdale kits and parts. There are also options for radio control, whistle, firing irons and an electric blower, rather helpful is a list of the Roundhouse items required and the estimated cost involved.

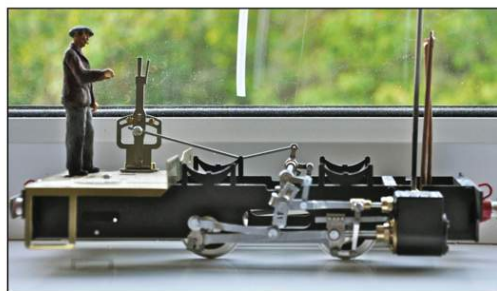
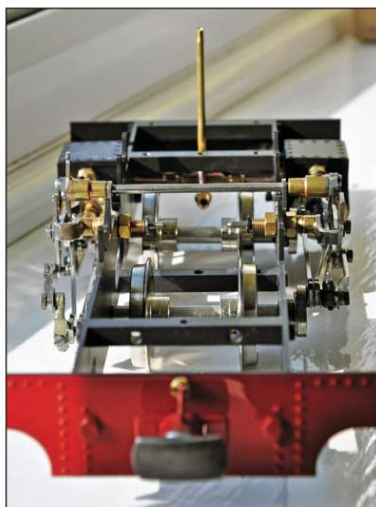
After much thought and checking of bank account I decided that I would go for building an Elke, having decided that an 0-4-0 was far more typical of what was seen on the British narrow gauge scene. I have never been over keen on the low-slung looks of the admittedly popular Lady Anne, which to my eyes, looks like a squashed-up 'Jinty'. Although Billy was also a freelance model with a nod towards Orenstein and Koppel I could point out that



**Heading:** The completed 'Elke'. This loco has a working whistle and I have added dummy twin slidebars, droplink and combination lever to the valve gear – a simple job giving the appearance of full working Walschaerts valve gear.

**Centre:** Modified cylinder assembly is to the left, standard fit as Roundhouse intended on the right.

**Above:** Trial assembly of the modified cylinder assembly with new inlet manifold and blastpipe.



**Far left:** Completed chassis from the rear showing the two extra holes in the rear chassis spacer.

**Left:** Boiler wrapper after modification, shortening one end and enlarging existing hole to diameter of 15mm.

**Above:** The running chassis here ready for an air test, with an impatient driver in attendance.

Koppels were copied (and maybe improved?) by Andrew Barclay and therefore very British indeed!

### DIFFERENT MANNER

Mid April saw me send the first of many e-mails to Joep Janssen, the proprietor of Riverdale, expressing an interest in purchasing an Elke boiler kit and enquiring about what modifications needed to be made to the Roundhouse parts required for the project. I was provided with a brief rundown of what I would need to do with the Roundhouse parts, followed by a further e-mail showing the chassis modifications so that I could build the chassis while waiting for the boiler kit to arrive. Now I am not going to describe how to build the engine nut by bolt but I will try to explain some of the basics, and describe where I did things in a different manner and hopefully even added some improvements to the basic design.

I suppose the easy way out would be to order a ready-built loco from Riverdale, but I had decided to build my model tailored to my own taste and opted for the Elke boiler kit at 890 Euros (around £745, Jan 2012, Ed), together with whistle, firing irons and a radio-control fittings kit. I would also need the Roundhouse parts, which were estimated at six hundred of our British pounds. Adding this lot up it seemed to be possible to have my very own coal-fired steed for somewhat less than 2000 sovs and have the pleasure of seeing it develop in front of my eyes.

On ordering I paid a modest deposit of 100 Euros and then purchased the Roundhouse Billy chassis kit HBK 1. Instructions on how to build this (and all other Roundhouse kits) can be found on the company's excellent website – along with just about everything you may ever need to know about this well established company with an excellent reputation for logistical backup.

I would recommend that, if you choose to build your own locomotive, you also order a Roundhouse superheater pipe, which you will need to test your chassis on air during the construction. Following the instructions supplied, you should have no problems in building up a standard Billy chassis, but we need to make a few simple mods along the way. Supplied in the kit are four spacers, three of which are identical to one another and a fourth one which includes a countersunk hole. We need to drill two further holes in this as per the Elke instructions. Now the illustrated Riverdale instructions suggest using a centre point (or a nail if no centre point is available) then drilling out the holes on a pillar drill. I am lucky enough to own a small lathe with the necessary attachments to be able to do this job accurately without having to trouble a poor innocent nail.

The other area that needs looking at is the exhaust pipes, which will need to be modified at some stage. I would certainly recommend screwing these in loosely so although they are pointing in the roughly the correct direction do not fully tighten them as you will need to remove them later.

Once built and painted, my chassis was tested on air for which you will need the previously mentioned superheater pipe fitted between the cylinder inlet pipes. I used a small compressor (some just use an inflated tyre) to supply the necessary air for testing that all turned over smoothly and that the valve timing was set correctly. Please note that unless you are lucky enough to use a compressor with a built-in oil feed then only run the chassis for short periods, say ten minutes at a time, and make sure you are using a light oil such as 3 in 1 to lubricate the inside of the cylinders, rather than the steam oil that you would use when the engine is in steam.

Roundhouse recommends that you drill and pin the return cranks – provided that you are happy that the valve timing is correct. Although my own chassis was cheerfully turning over in both directions on less than 5psi, I chose not to pin at this point, because the cylinders would later need to be removed, exhaust pipes modified and Riverdale parts fitted so there was the potential to disturb the valve timing.

Although I found the chassis quite easy to build, I did encounter a couple of problems. Do you remember the Airfix kits? (*They are still around! Ed*) They included a little piece of paper requesting that you check for any missing or damaged parts and how to contact Airfix if anything was wrong. Well, I did not check this particular kit but during construction I discovered that I was short of one crank pin, so I phoned Roundhouse, resulting in an apology and a promise to send a replacement. Next day Postie dropped a pack of six crank pins through my letterbox... I also managed to strip the threads out of one of the outside cranks – oh bother – another phone call to Roundhouse saw another small parcel arrive, with a shiny new crank inside, supplied gratis!

### SWEET RUNNING CHASSIS

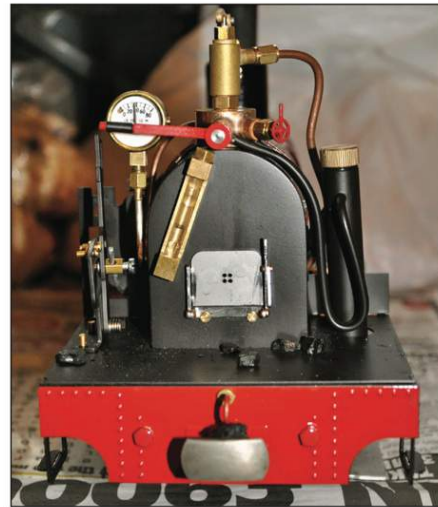
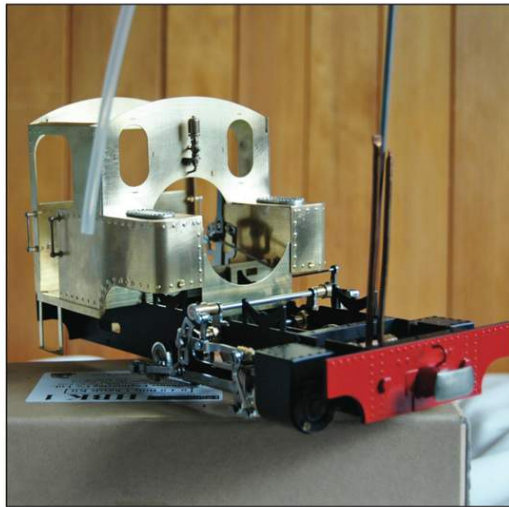
Now this is a sweet-running chassis – which I modified slightly. I chose to add the ready-painted buffer beams as supplied by Roundhouse but, instead of using the roundhead screws supplied I sourced some hex-head 3mm bolts. These were primed then painted with Plasticote gloss red and the shank of the centre buffers similarly treated. Look at the pictures and see what you think – I certainly prefer this to the standard screws.

I also purchased from Roundhouse the optional cosmetic combination lever, union link and crosshead set together with double slide bars and unpainted cylinder covers. The simplified gear supplied as standard is purely for reversing – and the above fit I have added for purely cosmetic reasons so that it looks like 'proper' Walschaerts. The cylinder cladding was painted the same satin black that I used on the rest of the chassis. Cylinder end caps and screws were treated with Birchwood Casey brass blackener.

To shorten the exhaust you will have to remove your cylinders without disturbing the valve timing, and with this in mind I wrapped masking tape around the valve spindles to prevent them turning.

**Right:** The body shell here offered up to the chassis. Beginning to look the part....

**Far right:** The working locomotive without body is here demonstrating the sort of clean cab layout that many strive for. Might be worth fitting a wooden cab floor at a later date.



You now need to shorten and straighten your exhaust pipes so they are the same length, and parallel to the inlet pipes.

Now Riverdale suggests in the instructions that you clamp the soon to be discarded ends of the exhaust pipe in a vice then, supporting the cylinder in your hand, cut through the pipe with a fine small saw and remove any burrs with sandpaper, holding at an angle to prevent swarf entering the cylinder. I was glad that I had left my exhaust pipes loose so that I could do the job as I wished.

After removing the cylinders I unscrewed the exhaust pipes and annealed with a butane blowtorch (which you will need anyway for soldering up the bodywork). Once annealed and cooled, I started to bend them straight using finger pressure only. If and when you feel the pipes go rigid then re-anneal them and continue to straighten them. I had two attempts before being reasonably happy that they were straight. I then clamped what would be the discarded ends into a vice and carefully cut to length. I cleaned up with fine needle files and blew through to remove any swarf before refitting to the cylinders. I screwed them in as tight as I dared with a thin smear of Loctite 243 on the pipe threads.

Riverdale supplies in the boiler kit a new inlet tee to replace the superheating pipe on the inlet pipes and an exhaust tee incorporating the blastpipe to fit onto the modified exhaust pipes. I would strongly suggest that you do a trial assembly of these parts first before attempting to fit the cylinders back on the frames, as there are some extremely tight O-rings to use in the assembly.

Having completed my chassis to the running-on-air stage I then revisited the Riverdale website and recorded the other Roundhouse parts needed. This list comprised the Billy body kit, a Billy boiler wrapper, a smokebox (and you will remember to ask for the door to be left unsoldered won't you?) and various other sundry items

### AIRTIGHT SEAL ESSENTIAL

The Roundhouse smokebox as supplied was a nice clean finished casting, but the door itself was a different story being rather rough and unfinished. Quite apart from the visual effect we do need the door to be a good tight fit into the smokebox with no air leaks to create the vacuum required to draw the fire in a Stephenson's locomotive. I had to clean up the front of the casting with fine files and turn the rear face smooth and flat on my lathe. I am not sure if this was an oversight by Roundhouse but check when ordering, because this airtight seal is essential. As supplied Billy has what I could best describe as a continental-style cosmetic handwheel in the door. Because this has to function to seal the door, I requested that the British-style twin handle assembly be supplied as I felt it would be easier for me to fumble with.

If you follow the supplied instructions you should have no problem at all in ending up with a nice square body shell. Although you will discard the footplate supplied by Roundhouse in favour of the one in the Riverdale kit, it is worth attaching it to the chassis

just to check that your body is folded and soldered square. You will need to use your butane gas torch for this. Roundhouse kindly supplied a casting that was used on the Penrhyn 'ladies', although there are various castings out there. One thing that I am really not keen on is raw brass handrails so I filed these to size, soldered them into the handrail knobs and finally attached them to the body shell prior to painting.

There is a hole at the bottom of each dummy water tank at the front for screws securing to the under boiler bracket. In fact Riverdale supplies a replacement bracket with cut outs for the new pipework. I wanted to do away with the screw heads, so drilled further holes above the existing ones and fabricated some more handrails. A glance at the pictures should make this clear.

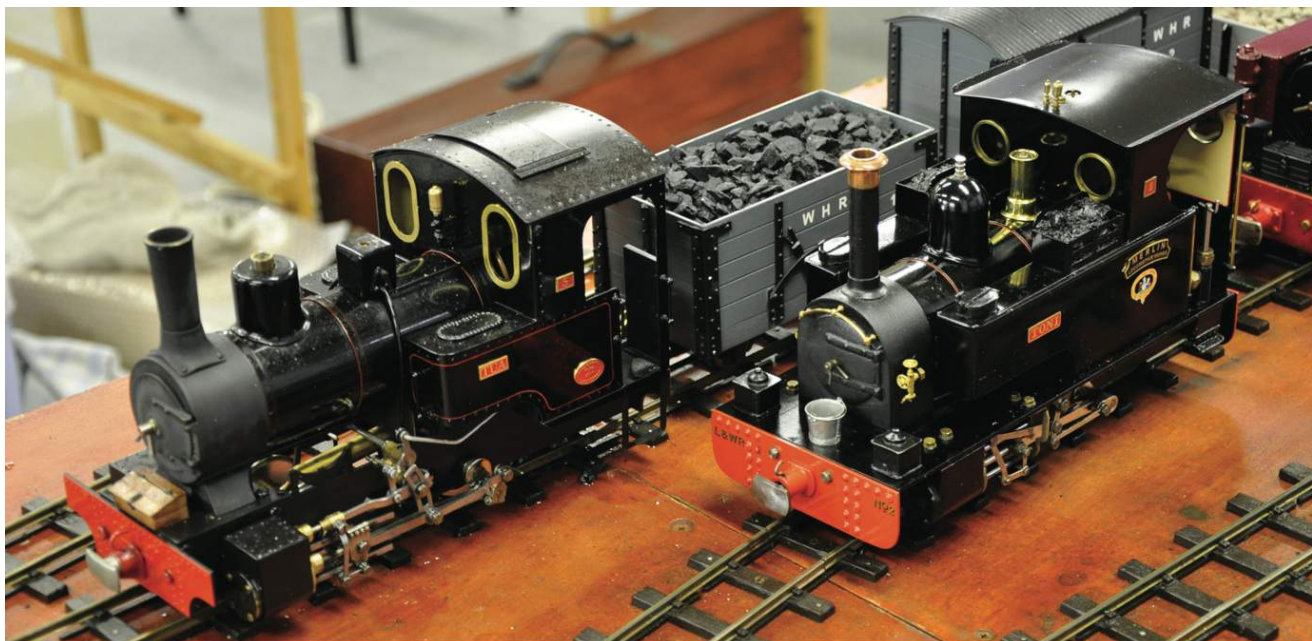
### BAGS OF COAL

The Riverdale kit arrived, complete with a 32-page manual and set of instructions, a check-off list for the parts, the required legal certification for the numbered boiler and a couple of bags of coal. I settled down to read the documentation. As a general rule it is worth doing this several times before undertaking any work. The booklet is comprehensive and with drawings at every stage and in this article I can only provide an overview and highlight a couple of areas where I have diverged from the set text!

The Roundhouse boiler wrapper has to be modified by shortening at one end and enlarging an existing hole to a diameter of 15mm. This should be done with a jigsaw but, not having one of these items, I had to make my own arrangements, completing the job with a half-round file (*For more details of this operation contact the Editor*). While the instructions say to shorten the boiler wrapper, it became apparent that, on the Riverdale boiler, you end up with a gap between the front of the wrapper and the back of the smokebox exactly the same width as a Roundhouse boiler band – the idea was that the boiler band filled this gap instead of going around the wrapper and standing proud. Quite frankly I thought this was going to look rather strange particularly as I was having my boiler bands lined, and so I fitted another boiler band (with tabs removed) under the original to raise it to the correct height.

Given my limited skills and equipment I decided to have the locomotive body, including bodysell, dome, boiler bands, boiler wrapper and sand dome professionally painted by Rhos Helyg Locomotive Works. This meant I could continue working on the model while this was being done.

Turning back to the instructions I now came to folding up the new cab floor and assembling the ash pan and grate. I can offer nothing further here, just follow the instructions and everything should be fine. My boiler came with the water gauge and steam dome already fitted so I followed the fitting instructions 'backwards' (if you see what I mean) to remove these parts so that I could paint the boiler with my chosen brand of heat-proof black



**Above:** The editor could not resist this shot of *Tua* in company with Merlin 'Mayflower', *Toni* – the original Longlands and Western locomotive No 1, now sold out of service...

paint and in fact I only sprayed what would be visible once the locomotive was assembled.

Much of Riverdale's publicity surrounds the 'special damper' that allows for controlling the heat of the fire and contributes to the long run times that can be achieved. Now I was expecting a controllable damper attached to the ashpan assembly here, but it is in fact the firebox door which can be propped open at any position to control the flow of air at any given time. The instructions now tell us how to assemble this. One word of caution – one has to peen over the edges of a couple of minute copper rivets which if dropped onto a coloured carpet will disappear for ever – don't ask me how I know this! Luckily there are more than enough spares so unless you are really clumsy, this should be achievable without too much industrial language.

#### ASSOCIATED PIPEWORK

We now turn to our previously fettled and painted smokebox to 'trial fit' a couple of parts. These consist of the crossmember that your smokebox dart will screw into and a smokebox inner tube which fits onto the end of the boiler then slides into the smokebox (hence the gap between the wrapper and the smokebox). Basically I played around with all these parts and attached them to the chassis to give me an idea of how to assemble it all once I had my boiler wrapper back from painting. Apart from lining up everything square you have to mount the smokebox in the correct position on its footplate and there is also the steam dome and associated pipework to be fitted. After several dry runs I put everything away wondering how it would all go together successfully, it seemed like a three-handed job to me but I could not do anything until my painted parts came back so I pressed on with preparing other bits that would be required.

Although I had ordered the radio-control conversion kit, I decided that I would keep it manual to begin with so that I got more of a 'hands-on' experience when learning to drive the completed engine. I therefore needed to source a manual regulator handle and so turned to Simon Whenmouth of Imp Models/Anything Narrow Gauge who, as well as having a huge selection of new and secondhand engines, also carries a wide range of spares and dress-up parts. Simon sent me a rather neat brass handle, which I promptly painted red along with the blower valve handle.

On receipt of my painted parts from Rhos Helyg Locomotive Works, I began by slipping the newly-painted boiler wrapper over the boiler and positioned it as best I could before semi-tightening the fixing screws and boiler bands, at this stage leaving the rear boiler band loose for final adjustment when the cab goes on. To assist in getting the wrapper in the right place, attach the front boiler band and push the smokebox and inner tube on hard. When happy you can tighten the screws and boiler bands, and this was where I slipped my extra boiler band under the front one before tightening so that it would stand proud of the wrapper, I then trial fitted it all to the chassis again.

Next the steam dome and its pipework needs to be fitted and it

needs to be maneuvered somewhat to achieve this. I cannot really describe how to do this but if you have the parts and instructions in front of you it is fairly easy to work out. The blower pipe is in front of the boiler and the smokebox inner tube slips over it and onto the front of the boiler. There is a detachable nozzle to be screwed onto the end of the blower pipe (this can be removed later for cleaning should the blower get blocked for any reason).

#### HEATPROOF SILICON

As we have a proper Stephenson's front end here it's critical for functionality that everything is airtight. The instructions recommend wrapping PTFE tape around the inner tube so that the smokebox is a tight (air-tight) fit over it. Wrap plenty of tape on and then remove it a bit at a time until a tight push fit is achieved. Having done this I must admit that I ran a bead of heatproof silicon around the inside of the smokebox to be doubly sure as I did not want to strip it all apart again. We are now close to marrying the boiler to the chassis and I performed one last trial fit – only this time after I was happy that the smokebox base plate was in the right position.

If at this stage you have not fitted the Riverdale cab floor (held on by one screw), now is the time to do so, because you will not get it on after the boiler is in place. The boiler/smokebox assembly is now lowered into place, making sure the blast nozzle slips through the hole in the bottom of the smokebox inner tube provided for it. The whole lot is fixed to the chassis by two bolts at the rear, (that's why we modified the rear frame spacer) and three screws through the smokebox base plate. As these three are visible I chose to replace them with hex-head bolts. Having got this far I was feeling pretty chuffed and collapsed in an armchair with a mug of tea.

Next month I will detail the conclusion of my build. **GR**

### GardenRail Resource

**Rhos Helyg Locomotive Works.** E-mail: [locoworks@rhoshelyg.me.uk](mailto:locoworks@rhoshelyg.me.uk) Web: [www.rhoshelyg.me.uk](http://www.rhoshelyg.me.uk)  
**Riverdale Locomotives.** Tel: +31 499 476808. E-mail: [mail@riverdale-loco.com](mailto:mail@riverdale-loco.com) Web: [www.riverdale-loco.com](http://www.riverdale-loco.com)  
**Roundhouse Engineering Co Ltd.** Units 6-9, Churchill Business Park, Churchill Road, Wheatley, Doncaster, DN1 2TF. Tel: 01302 328035 E-mail: [sales@roundhouse-eng.com](mailto:sales@roundhouse-eng.com) Web: [www.roundhouse-eng.com](http://www.roundhouse-eng.com)  
**Imp Models.** Tel: 01409 259009. E-mail: [simonstrains@gmail.com](mailto:simonstrains@gmail.com)  
**Shawe Steam Services.** Howgate. Kimpton Road, Welwyn, AL6 9NN. Tel: 01438 714398/716591.  
*Please mention GardenRail when contacting suppliers*



# Elke Brooks no rival

**Robert Cant** concludes his Riverdale coal-fired loco build project.

**L**ast month saw me settled with a cup of tea after undertaking the bulk of the work on my coal-fired locomotive project – and so now we are on the home straight and various parts such as safety valve and pressure gauge can be fitted. Chances are that you have purchased a new safety valve and pressure gauge from Roundhouse but the safety valve will be set to 40psi so this will need adjusting to four bar or 58psi. It is worth having your new pressure gauge tested against a calibrated test rig, as these small miniature gauges can be less than accurate. I had got a gauge handy which had been tested a short while back, so I decided to be somewhat cavalier and adjust my safety valve against that whilst the engine was in steam.

A working steam test was conducted before fitting the bodywork. Out came the rolling road along with some paraffin-soaked charcoal prepared earlier and the supplied blower to get everything started. At this stage the chassis was still not run in so I carefully lubricated all the bearing surfaces and filled the large lubricator with steam oil. Placing the engine on the rolling road I checked the ashpan and grate were properly attached and followed the instructions regarding firing her up. Same as any other coal-fired little dragon really, charcoal followed by the real black stuff as pressure rises, then remove the electric fan at 30psi and open the engine's own blower.

## WITH SCALDED PINKIES

At this stage I was feeling pretty chuffed – but all too soon I came unstuck. At 40psi the safety valve blew as Roundhouse intended so I leapt into action with the valve adjuster on the Roundhouse-supplied MultiTool. “Oh rats – it ain't 'alf hot Mum!” After much cursing and with scalded pinkies, I managed to set the safety valve to blow off at the required pressure – all this went on whilst also shovelling on coal, pumping in more water and adjusting the blower to suit.

I suppose I really should have stopped now but flushed with success and steam, I decided to open the regulator and hopefully watch the wheels turn round. First I moved the reversing lever to

the forward position then... Yes, I had read the instructions, and yes, I do know about condensate and where it goes when there are no draincocks, but leaning over my pride and joy I was dismayed when the wheels revolved about 90 degrees then stopped. By now, wanting to see what was wrong, I opened the regulator some more and (you guessed it) hot oily water hit me smack between the eyes...

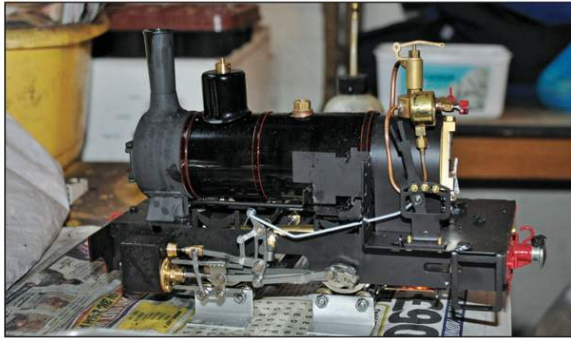
As I staggered back blinking, I could however, see the wheels turning. Time to cut and run, so I put a small tin under the ashpan assembly and pulled out one of the pins enabling me to catch the burning coal and the grate. Do please remember to leave the blower slightly cracked open and the regulator closed to stop the remaining oil being sucked out of the lubricator and into the boiler.

I now decided to drill and pin the return cranks as described in the instruction manual. I had purchased two drill bits for this job and used one for either side which I admit is quite possibly overkill but I didn't want any accidents which would involve stripping the loco back down, nor did I want any holdups whilst I purchased another drill bit. I also chose to fit the optional Regner whistle kit according to the instructions in the Riverdale manual, which upon completion gave me the excuse for another steam up, all was well with the timing and the whistle – toot, toot!

One of the advantages of the Riverdale design is the prototypically-clear cab space and in fact there is room for the driver, a fireman and their respective families. I had a driver figure to hand, so I lowered the body over the footplate to locate the best position for him. Once satisfied I removed the body, drilled a small hole through the platework and screwed the figure into position up through his leg. Not very dignified but, he doesn't jiggle around, well-trained lad that he is.

## SENSE OF PRIDE

I had by now received the various plates from MDC which I fixed to the body with the adhesive of my choice and, after allowing this to dry for 24 hours I then assembled the remainder of the bodywork as per the instructions. One final job was left which was to modify



Photos by Author

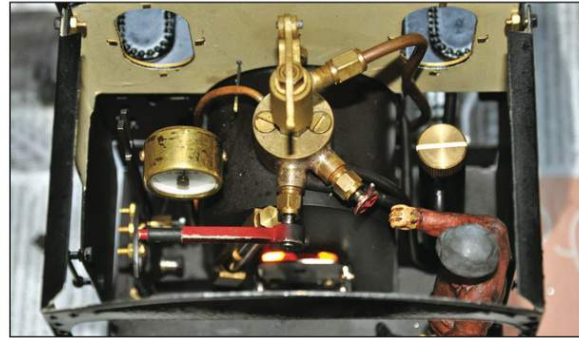
**Heading:** My 'Elke' on a running-in turn on the South Arbury Railway. I was delighted with the performance.

**Inset:** The completed loco. Look at that lovely clear cab with lots of room both for crew and for 12in/ft fingers. The radio-controlled version is almost as neat.

**Above:** First coal-fired steam test conducted on a rolling road. Note the glow in the ashpan and the Regner whistle valve.

**Above right:** Good fire and full head of steam on the rolling road.

**Right:** Preparing for steam on the South Arbury Railway.



the sand dome. This is well covered by the Riverdale manual and you should not have any problems. A quick coat of paint finished the job. While this was drying I contacted John Shawe of Shawe Steam Services and ordered one of his Ross-Pop safety valves, which he fits to his own highly-regarded range of coal-fired engines. Although the standard safety valve as supplied was doing its job, I wanted the added character that the Ross-Pop type gives, the sudden opening and smart closing of this safety valve just looks so good to me, along with the added aural dimension.

The engine was now effectively complete, so I had a couple more sessions on the rolling road to check all was well with the build and also to help me learn the technique required to keep her in steam, one area of concern was that the steam blower did not strike me as being particularly powerful but as she was keeping up the pressure I presumed all was okay.

If you are still with me on this you hopefully understand my sense of pride in that I now had a completed engine that I had been able to run successfully, albeit on a rolling road. I do not have my own railway so my mind turned to where I could try it out for real, that is to say, actually run on rails, hopefully. My mind soon turned to the recently completed narrow gauge super highway where huge trains were pulled and Garratt's ruled the roost. No, not the Welsh Highland Railway (wrong gauge you see) but my friend Chris Moody's newly rebuilt and extended South Arbury Railway.

A phone call to Chris secured a running slot and on the appointed day I piled everything into the back of the car and set off with some anticipation and I must admit some trepidation. A short while later saw me park in Chris's driveway and after meeting up with him I carried my precious cargo into his back garden where his magnificent railway was located. There is not really enough room here to fully describe this layout but it is huge, and most impressive, primarily designed for the use of massive coal-fired Garratts with the long straight runs and sweeping curves that these beasts thrive on.

## TWO SCALE MILES

'Elke', now christened *Tua*, was placed on the track for photography and, I must admit, just standing back and admiring as well. The fire was prepared and lit. Steam was raised and I

continued to work on the fire and boiler water level until I was reasonably happy that she was ready for the off. Seeking the confirmation of Chris that all was well, I moved the reverser into the forward position and gingerly opened the regulator. She moved a bit then stopped and, remembering my previous impromptu face-wash, I closed the regulator and selected reverse before again opening the regulator. A jet of oily water shot about a foot in the air and she started to move backwards.

Now with hands that (looking back) were trembling a bit, forward gear was selected again, the regulator opened and the steam blower closed. Off she went at a sedate pace, with me in pursuit camera in hand. This probably looked quite comical but Chris, gent that he is, restricted himself to watching the engine run. Every so often the safety valve lifted suggesting to me that all was well in the fire department and I was able to observe the water level in the boiler sight glass. Eventually I bought her to a halt after one full lap. This might not sound that impressive but I should point out that a lap of the South Arbury Railway is approximately two scale miles and takes several minutes to achieve. Chris was really surprised by this and told me that he always stopped his coal-fired Garratt after half a lap to add more coal and water.

On stopping the loco I had turned on the blower to bring the pressure up so I could add more coal and water. This was not successful so we dropped the fire and started again. We had several more runs and it became apparent that the steam blower was not properly doing its job. We had to drop the fire each time that we stopped for fuel and water regardless of whether it had run a full, or just half a lap. Despite this setback I was chuffed with how she had run and bidding goodbye to Chris, I took my pride and joy home.

Now, although I have not mentioned it, after every steaming session I have cleaned the engine very thoroughly and re-oiled all the bearing surfaces because, although coal dust and dirt might look most realistic, it also makes for a highly effective grinding paste when mixed with oil. Although I was after the realism of coal firing I did not really want to be doing frequent heavy overhauls.

## REMOVABLE BLOWER NOZZLE

After cleaning I removed the smokebox door to investigate what



**Above:** *Tua*, alone in the vast South Arbury hinterland where coal-fired Garratts roam.

was wrong with the steam blower. It is very important that the blower points up the chimney and, as this seemed to be correct, I decided to see if the blower was blocked in any way. Luckily this loco has a removable blower nozzle and I was able to unscrew it with thin long-nosed pliers. Provided with the kit is a piece of wire of the correct diameter to 'rod out' the nozzle, safe in the knowledge that you will not accidentally enlarge what is a very small but critical hole. After satisfying myself that the nozzle was now clear I reassembled the engine and steamed her up on the rolling road. When the pressure gauge reached 3psi I removed the electric blower and turned on the steam blower. I was rewarded with a healthy roar from the blower, far louder than I had experienced before, in fact I backed it off a bit as it was really quite fierce. Perhaps I should have checked before assembly... Anyway I ran *Tua* for 45 minutes and was able to use the blower to bring her back up to pressure after attending to the water and fire.

After another clean I put her away ready for the next running session. This came a couple of weeks later at an open day hosted by Chris on a bitterly cold December day. I ran for an hour and a quarter, doing full laps between pit stops and all appeared to be well with the blower performing well. In the end I dropped the ashpan and went for a hot cup of tea. Several gas-fired engines were struggling on this cold and blustery day.

After this welcome diversion I decided to run again so I swept out the tubes with the brush supplied then poked it down the chimney to clear out any build up of crud. I fired her up and disaster, the steam blower was blocked again, I really did not want to clean the nozzle on the spot so packed it in and went home for the day. The following day saw me clearing the blocked nozzle again and I admit I was somewhat frustrated at the thought of doing this on a regular basis. It did occur to me in the end that I could well be causing the problem when pushing the tube brush down the chimney, so now I place the back of a teaspoon over the blower and blast pipe nozzles when I perform this job. I have had several successful running sessions since and all has been well.

### LOOKS GOOD AND RUNS WELL


This pretty much finishes the story of how I built a Riverdale Elke so I will attempt to summarize how I got on. Any kit generally has two limiting factors, the first being the design of the kit. I

cannot compare this kit to any other for I have not built a steam engine before, but a great many people have successfully built up Roundhouse locomotive kits in the past and I would suggest that the Riverdale conversion is as equally well thought out and should not prove to be any more difficult. Remember that you can view the Roundhouse kit instructions online before taking the plunge and Riverdale is only an e-mail away.

The second factor is the builder's own skill which, in my case, several friends and acquaintances might consider to be a very limiting factor indeed. All I can say is that, yes, this is my first attempt and it successfully runs rather than lurking in a box somewhere under the bench, there was some head scratching, false moves and even some confusion at times – but I got there.

In fact what I have ended up with is a coal-fired locomotive that both looks good and runs well. The locomotive does not employ water tanks and axle pump, but I have found the large capacity of the boiler along with the easily-read water-level gauge a joy to use. Precisely because there are no space constraints in the side tanks, this locomotive is very suitable for R/C and the cab is not topped up with the 'gubbins' of gas firing and R/C.

The build is now finished, although in time I expect further detailing parts will be added. I am enjoying the running of this loco so much as it stands, that I suspect that I may not ever fit the radio control, although Riverdale assures me that this adds to the running pleasure with control of reverser, regulator, whistle and damper.

Riverdale Locomotives is a relatively new company. It deserves to succeed and I would hope to see many more Riverdale engines in use over the years, the design is well thought out, soundly manufactured, with good logistical backup and ultimately easy and pleasurable to run. 

## GardenRail Resource

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