

ROUNDHOUSE at 40

The Editor visited Doncaster for a chat with Harri Harrison, General Manager, and Alex Sawford, Production Manager, to find out what makes the country's most prolific steam locomotive producer tick, and what the future holds.

Garden Rail - Let's start at the beginning. Where did Roundhouse come from?

Harri - Roger Loxley started things in 1982, and initially handled all aspects of design and production. A steam tram called 'Victoria' set the ball rolling. The original premises were in an old cold store in Cherry Tree Road, near the railway, which was quite nice. As work increased, he was later joined by Barry Vaughan, who came into the company as a partner and, as the business continued to grow, a couple of employees followed. We stayed there until the winter of 89/90 and came to our current premises on the Churchill Business Park.

Alex - Don't forget they were running a bed company as well as making locomotives.

Harri - True. Five years in, when things eased off, they had plenty of brass tube around, perfect for making bed frames, which they did under the name 'Moni Molloy'.

GR - And you've expanded a lot since then. Every time a unit came up next door, you seem to have bought it.

Harri - The first addition was the machine shop, but we've expanded massively since then. We now occupy five units, which has allowed us to increase production capacity over the years.

GR - Back in 1982, setting up a company was a brave move wasn't it? At the time, there wasn't much in the way of reliable,

live steam loco manufacture.

Harri - Merlin, Archangel, Lindale and a few others that were mainly small batch or one-off models.

Alex - Roger's background was in manufacturing with kit car maker Spartan cars. He took what he learned there and thought, "Hold on, I could apply this to making model steam locomotives."

Harri - Instead of one bloke making everything, the aim was to split the tasks up in the same way as other industries. This dramatically increased the number of models we could make, and allowed for a very consistent high-quality product. We adopted methods and processes that ensured when a locomotive left the factory, it was the best we could make it.



GR – Some of the older builders, and their products, could, I am told, be a little ‘idiosyncratic’. How did Roundhouse aim to be different?

Harri – From the word go, everything was done properly. Every single loco that has left this factory has been test run, from the very first model.

Alex – Two test runs, first as a chassis and boiler, then with the bodywork. After that, it’s run again and passed by a manager, then cleaned up for the customer. Before any of that though, the chassis spends a day running on compressed air to ensure all the moving parts are properly bedded in. Every Roundhouse loco has covered a few miles before we let it go.

GR – Was the aim was to make something user-friendly, so you didn’t need to be an engineer to run a steam locomotive?

Harri – Someone walking in off the street who is interested in steam, but has no interest in engineering, can run one of our models without a problem. Sometimes, we have visitors to the factory who are nervous, thinking it will be too complicated. I usually demonstrate a model on our layout to show them that they can operate a fully working steam loco, and they are amazed at how easy

it is. Our ethos is that you should be able to take the model out of the box and run it with a minimum of fuss.

GR – Do you have an idea how many locos have been produced?

Alex – It’s roughly 720 per year now. We aim to build 40 from the Classic Series and 20 basic models or diesels each month.

Harri – We started numbering the locos back in the early 1990s and we’re up to 13,000 on the classic series alone now. The basic locomotives and diesels each have their own separate number series. Added to that are the locomotive kits, which we’ve never really kept a count of, but they are always extremely popular.

GR – That’s a lot of models, but then there are more than four people in the firm, how many people work here now?

Harri – At the moment, 19. The guy who’s been here the longest has been here 26 years. I started in 1997. Generally speaking, we don’t have a high turnover of staff. It’s a very good team and a nice place to work.

GR – Making a loco is still a very manual process isn’t it?

Harri – Oh yes. Apart from the machine

shop with the CNCs, everything else is manual.

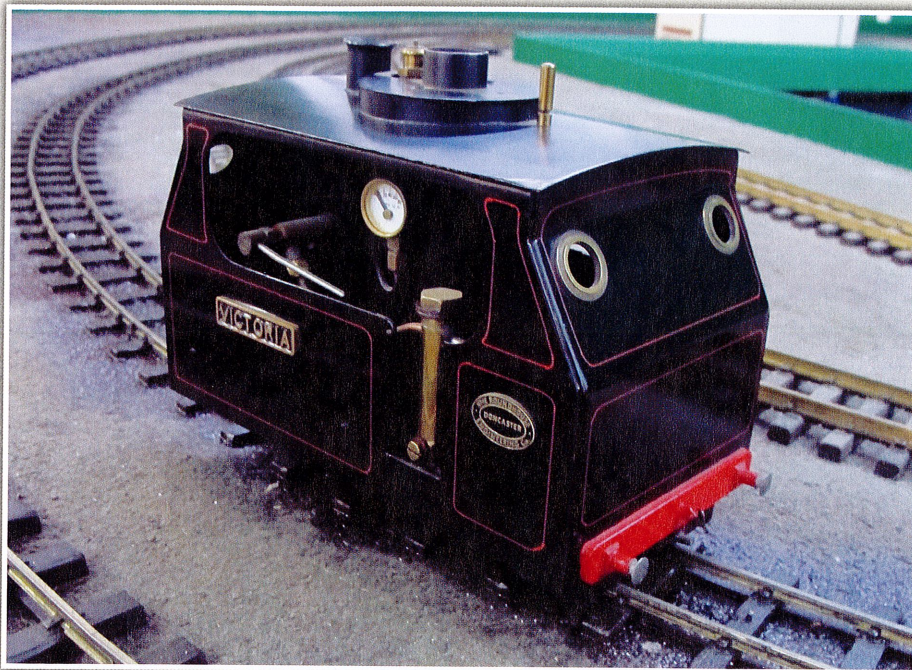
Alex – Things have moved on from the days when absolutely everything was hand-built. We now have the CNC machines, CAD design, 3D printing, laser cutting, centrifugal casting, all to improve the process, but all the final assembly is still by hand to ensure the product is to the quality that we demand.

Harri – In the old days, we used to buy a lot of parts in, but we’ve brought a lot of work in-house, so we have more control over the process and can ensure the quality. Eventually, though, it’s all hand-made. For example, the bodywork etchings arrive, but someone has to put the rivets in, form the shapes and solder them up.

Alex – The paint shop is the same. Some places would just hang the bit up and automatically spray them, we have a couple of guys with spray guns working on each one.

GR – Presumably, everyone is a specialist in their role then.

Alex – Yes. For example, we have two people who make all our pressure vessels, boiler and gas tanks, from start to finish. They cut the parts, solder them, pressure test and then add the serial numbers at the end.



The first locomotive

'Victoria' was an interesting choice for Roundhouse's first locomotive in 1982. The prototype was an 0-4-0 with a vertical boiler and tram-like bodywork. The locomotive was built by Messrs John Slee & Co of Earlestown, the only locomotive that the company made. Delivered to Plynlimon and Hafan Tramway in 1897, it ran poorly and never entered revenue-earning service. The somewhat more successful model stayed in production for two years.

There is also a pool of people who can turn their hands to everything, so if someone's off, they can jump in and keep production going.

GR – Where do you find the people who work for you?

Alex – The loco builder is the hardest role to fill. You need someone with an eye for detail, but who can also work quickly. We've had people who have built for a hobby, but often, while they can produce the quality, they can't manage the speed. You need to look at this as an assembly job, not a hobby.

GR – How many members of staff build large-scale railways outside of work?

Alex – You could count on the fingers of one hand those who still consider garden railways a hobby. Doing it day to day turns you off. I do have the beginnings of a line behind my house though.

Harri – We used to talk to the local job centre – roles like paint spraying were easy to fill. However, in the age of social media, we can now put out an advert into the hobby. It's a big advantage to find someone who knows the product and knows how it works. It takes the pressure off – but then we have trained people up who have no idea and they are brilliant workers.

GR – One of your most famous models is Silver Lady from the TV show *The Biggest Little Railway in the World*. Do you think anyone else could have produced a loco reliable enough to run 71 miles across Scotland?

Harri – One big advantage we have is logistics. The engine was totally abused, but



All locomotives are born on Rob's CAD screen. Each model is drawn up based on plans of the prototype. Working closely with the production side, which can be found outside his office door, ensures designs can be assembled efficiently.

I was able to load spares in the back of a car and Chris Lee could maintain the model in a hotel room. Our production process means that you can swap parts and you know they will fit. There wasn't any fettling required.

Alex – We've got parts for models going back many years. Everything is made under one roof and there's a good chance that we can dig out a part for a model.

GR – So, I could buy an old loco in an auction and you'd be able to service it and supply parts?

Harri – Depends on just how old, but for parts, often yes. Servicing no. We don't have the time for that, but we have a network of service agents around the world listed on our website. They can get your old model running like new.

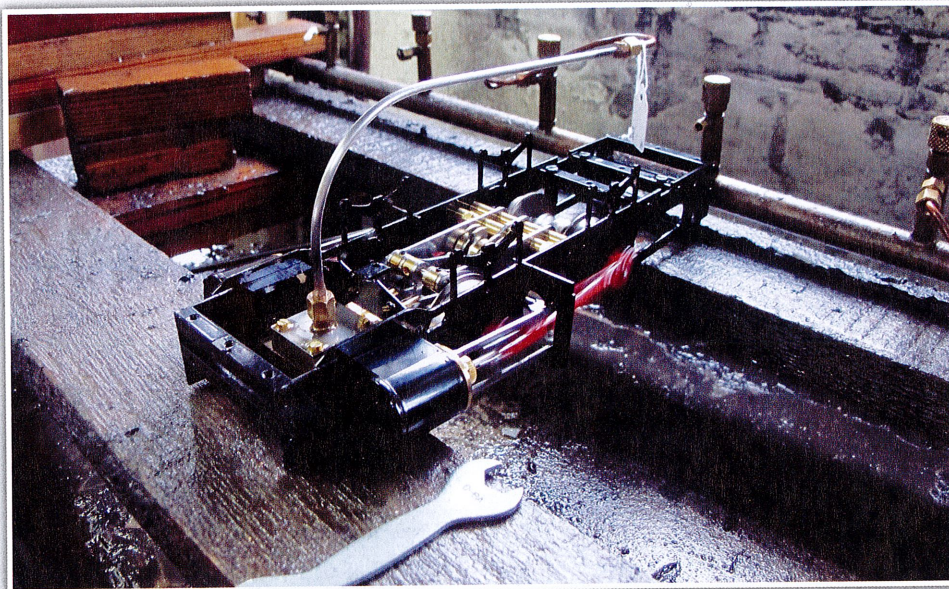
GR – Talking of the rest of the world, do you have a feel for where the locos end up?

Harri – 75% stay in the UK. Shipping costs are a factor, it costs £200 to send a locomotive to either the US or Australia now, and there's nothing we can do about this.

GR – As well as complete locos, you also produce a lot of spares. How does that work?

Alex – We support a small network of cottage industries and we've always been keen to do this. Plenty of builders start out buying components off us and construct their own locos, both as a hobby and commercially.

Harri – It's in our interests to see the hobby



Every chassis spends a day running on compressed air to bed the components in. The rig to do this can, and often does, hold 20 chassis at a time.

thrive and part of the way we do that is by supplying parts so others can build models.

GR - It must make customer service interesting. There's a wide variety of skills out there.

Harri - Sometimes, you can come off the phone a bit shell-shocked, but that's part of the deal. We'll help everyone. Customers appreciate the support, sometimes from the very same person who built their model!

GR - Does all this support impact future choices of model?

Alex - Mainly the kit range. For example, people always ask for the Garratt as a kit, but it would be far too complex. The models we make produce enough calls for fairly simple things, such as timing the valve gear. Anything more involved would be too time-consuming to support.

GR - Talking of the kits, how popular are they?

Harri - Very popular. It can be a seasonal thing - in the run-up to Christmas things can go crazy. Lockdown also saw an increase in demand.

Alex - The problem with that was that initially, we had to shut down for three months. After putting a lot of work in adding safety equipment such as screens separating workstations from each other, we were able to reopen, which was great as we experienced an increase in orders. A lot of people have had the spare time to invest in their hobby or have come back to it again. We're very grateful to our loyal customer base that comes back to us time and time again.

GR - Let's talk about new locos. Is there a list somewhere of potential Roundhouse models?

Harri - We tend to look at everything. On the warranty cards, there's a little bit at the bottom asking what loco people would like to see released next. There's feedback from other customers and we keep an eye on what's popular in the hobby. We also consider production and what's feasible to build. Generally, we have a three-year plan of the models we'll be aiming to bring out.

Alex - There are a few hour-long phone calls where customers explain why we should make a specific model!

Harri - It's fair to say that different models sell differently. 'David Lloyd George' will be very popular initially, but demand will peter out. That's why some models only appear for a few years and are then replaced. The freelance engines, 'Billy', 'Katie' and 'Lady

Anne' are always in demand, so enjoy a longer spell in the range.

GR - How influenced are you by the opportunity to use components you have already developed?

Harri - 20 years ago, it was very much like that. Now, with the prototypes we are choosing, and the standards we want to work to, there's less opportunity. If you look at 'Palmerston', there's very little interchangeable with other locos in the range.

Alex - Rob, our designer, will start researching a loco, get hold of some plans and then blow them up to actual size. In the CAD software, he can add the working parts and a big part of his philosophy is that he wants to keep it as scale as possible.

Harri - That's why it took so long to produce an England loco. There were calls for it to be made available in 45mm gauge, but we drew it up six years ago and it looked terrible, so we shelved the project. Now, we think there is a market for a 32mm gauge only model, so we've produced it.

Alex - Rob's experience is key to deciding on new locos. If he thinks we can build it, then generally, he'll draw it up, and apart from the 45mm England, everything that has reached the drawing stage has made it into production. The important thing is that he talks to the production team to ensure we can actually make the model easily.

GR - How long does the process of taking a loco from idea to production take?

Harri - We release a new loco every year, so less than 12 months. Once designed, a prototype is built, and because we are such a close-knit team, the feedback is pretty quick. Then there's the testing. For a simple loco with Walschaerts valve gear that we're



Once run-in, the chassis moves on to assembly, where everything needed to make the locomotive run is added, including radio control (80% of models sold are fitted with RC).

familiar with, that's not too bad. However, for the Double Fairlie, it was a whole new ballgame. We ran it on our test track, but also on one of our team's garden line to check it was fine under lots of different conditions.

Alex - The first prototype always throws up issues that are ironed out before production. It's a real team effort and everyone is asked their opinion. That way, there are no surprises when it comes to production.

GR - We tend to think of you as a steam company, where did the diesel range come from?

Harri - Are we a steam company? I think we are a railway company. Rob and I set up a sideline in 1993 making diesels. It went very well, but extra family responsibilities meant we didn't have the time to devote to the job. We came back to Roundhouse and said, we know how to make diesels: and they decided to give it a go. The first model was 'Criccieth Castle' and we didn't know how well it would sell - but the model took off and we've not looked back since. I'm sure we could do another couple of prototypes, but we don't have the capacity at the moment.

GR - You recently brought out a coach, will there be more rolling stock?

Harri - People always come to the factory for locos and ask if we do any rolling stock to go behind them. The coach is largely down to Alex, who produced the three on display in our reception area, and he was happy to let us use the designs. We don't intend to get into the market really as we don't have the production capacity. If we are making rolling stock, we aren't making locos and the waiting list just gets longer.

GR - Has communication with your customers changed much over the years? You've been on the web a long time, for instance.

Harri - Our first website went live in 1995. Roger and Barry were very computer orientated and it was a very natural step. It stayed pretty basic for years before being replaced with the current version. The next big step was social media. I started this, but Alex coming on board has made a big difference.

Alex - It shows that the company is active and engages a different sector, including those up-and-coming modellers. We can be more human too - inject some humour into the chats and stop being a sterile website. I try for at least one post a week, but there's other work to do, too. We've not had to moderate anyone yet, but there is instant feedback!

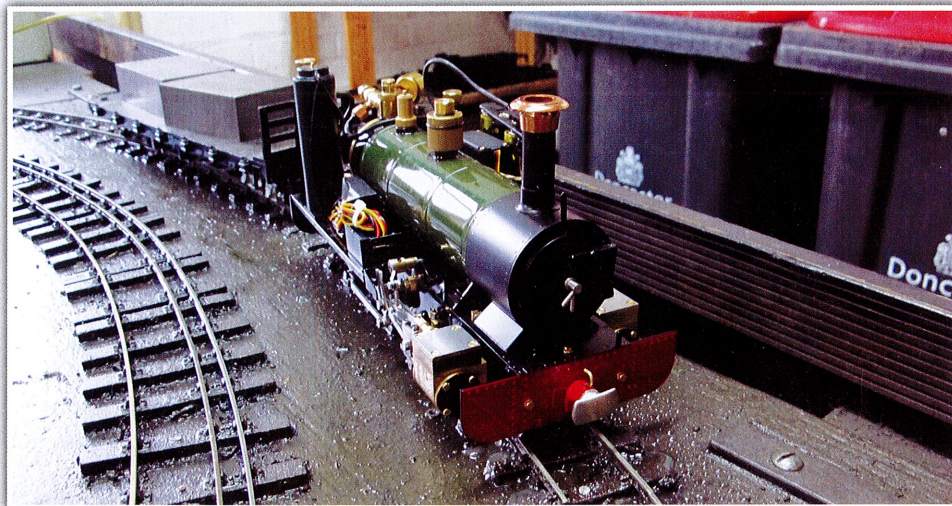
GR - You always take a big stand for shows. That's quite an overhead, is this just tradition?

Harri - We don't do as many shows as we used to, and the stand doesn't change very much each time. We feel we have to be seen at shows and our stand is very much

a destination at an event. People like to see what they will be getting even if they don't buy there and then.

GR - Looking to the future, what can we expect?

Harri - We've always got ideas in mind. If



Every loco is steamed and has to haul a 20lb weight around the test track while it is checked against a standard set of criteria. Any adjustments required for perfect running are made at this point.



A satisfied customer

Driving a Roundhouse live steam locomotive along the route of the Great Glen Way in Scotland is still, to this day, one of the proudest achievements of my railway career. The scenery along Loch Ness was truly breathtaking, but the reliability and performance of 'Silver Lady' was even more so.

The 'Lady Ann' design is a testament to Roundhouse Engineering and skill within its team. Never before have I witnessed a live steam locomotive being put through its paces in such an extreme way. She had many bumps, tumbles, and crashes on her journey. No matter what was thrown at her, she would always soldier on.

The joy from working 'Silver Lady' on the *Biggest Little Railway in the World* will stay with me forever and if you are contemplating purchasing a Roundhouse Engineering locomotive, then what are you waiting for? You will not be disappointed! - Andy Christie

there was a dip in business, we could bring out a new model, and because people always love something new, sales would pick up again. However, there's no sign for this happening right now, so those ideas can stay in the back of the mind for now, but there's always something in the background.

Alex - The hobby doesn't seem to have slackened off. Covid has pushed sales up, but even without it, we can't see much change. Waiting times for all of our models are long enough and we can't expand to bring them down, but people don't seem to mind. Of course, if someone really wants a model quickly, we point them at the dealers who often have models either sat on the shelf or second-hand who can deliver faster.

Harri - I don't see Roundhouse changing much in the future. Why try and reinvent the wheel? We'll refine some areas, but not dramatically. 3D printing has changed

things, for example. We don't need to spend three days making masters out of brass. Rob can draw something up, print it and if it works, we can get it cast.

Alex - I think, if you look at what we were doing 40 years ago, and compare it today, the business model and demand are very similar.

Harri - The general look of the company won't change that much. We'll still keep testing locos. I'm sure some business whizz-kid would come in and say, you don't need to be doing that: and tell us that we don't need to be testing something that should be OK, but that's not the way we do things.

Alex - We know what the formula is, and we've plenty of experience that tells us we're doing it right. Produce a quality product and support it well, seems to be the key to our success and we plan to keep doing this in the future.

GR - So, we can look forward to Roundhouse at 50?

Harri - Roundhouse was 15 when I started and there was speculation then that we'd do this for another five years or so, but here we are, still here, and there's no sign of us going anywhere.

As part of the 40th Anniversary, Roundhouse has released a surprise - read all about it in Product News on page 54. ■

Garden Rail Resource

Roundhouse Engineering Co.Ltd.
Units 6-10, Churchill Business Park,
Churchill Road, Wheatley, Doncaster,
DN1 2TF
www.roundhouse-eng.com

Please mention **Garden Rail** when contacting suppliers.

Left to Right: Roger, Chris, Tracy, Steve, Barry.



Left To Right: Alex (Production Manager), Andy (Assistant Manager), Harri (General Manager), Mark (Pressure vessels), Bren (Painter), Chris (Painter), Conrad (Jack of all trades), Louise (Kits, bits and homebuilders parts), Trev (Machine Shop Supervisor), Tony (Pressure vessels and pipework), Rob (Designer), Bob (Loco builder), Harry (Bodywork), Marlou (Chassis man), Pete (Machine shop), Matt (Loco builder), Itelhy (Loco builder), Ian (Machine shop). Not pictured: Joe (Budgets and diesels) Roger and Chris (Happily retired and currently on holiday).

