

Miniature Railway

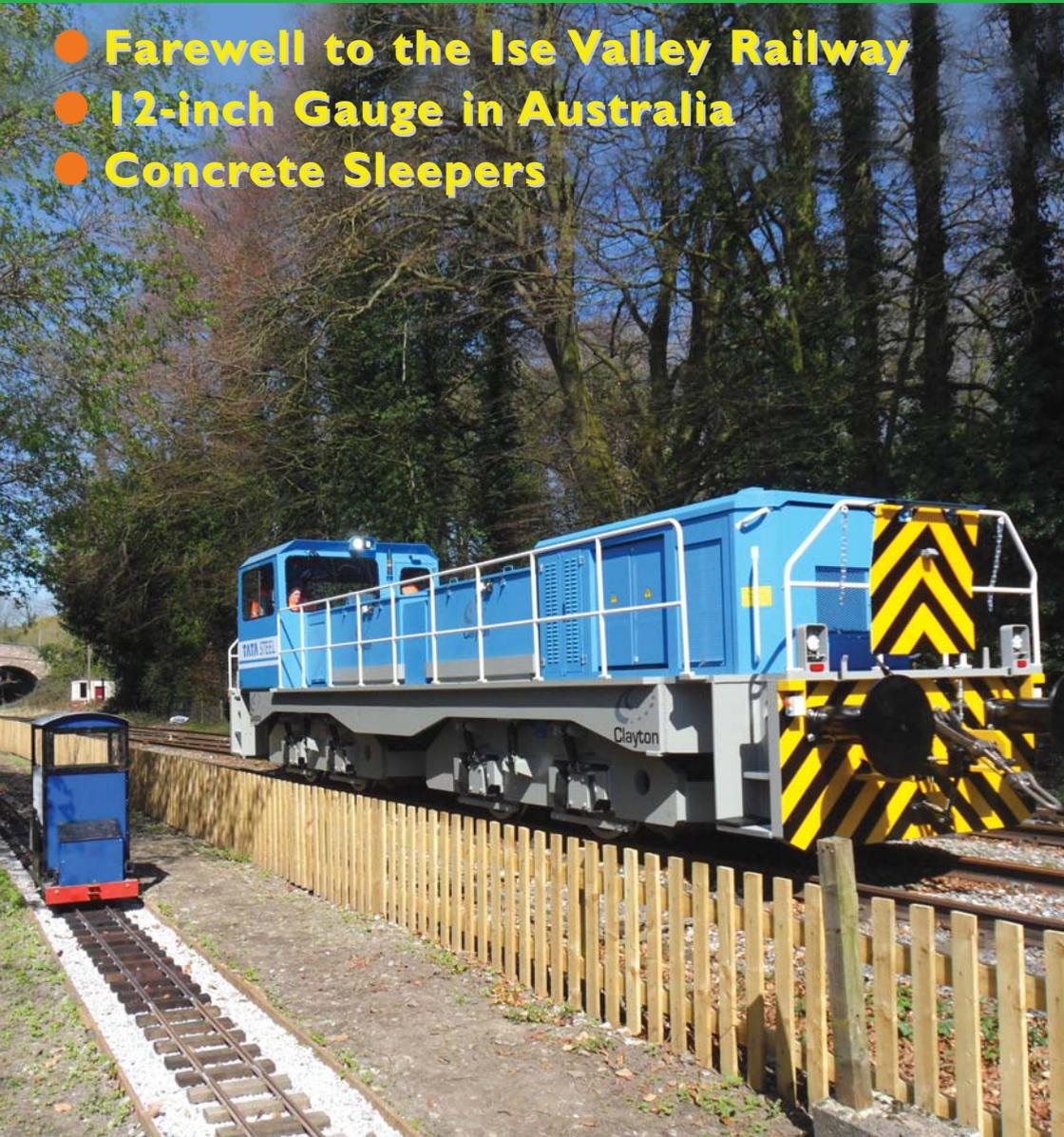
Issue 49

Early Summer 2020

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Issue 49 Early Summer 2020 FINAL 31st May

Miniature Railway 40 Manor Road, Dorchester, DT1 2AX, England
tel 01305 259998 . **ISSN** 1751-3103

editorial and subscription email rail@miniature-railway.com

web miniature-railway.com . **UK loco database** miniature-locomotives.org.uk

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Thanks to Iain McCall, Paul Middleton

Printers Henry Ling, Dorchester . **Next deadline** 29th October 2020

With pretty well every public miniature railway in the world under 'lock-down' for the duration, you wouldn't expect too many 'live' articles in this issue, but we made it to Ise Valley hours before PM Johnson announced this inevitable curtailment of liberties and with the luxury of a large garden, and captive children back from school and music college, our own railway is very much in business - as one assumes are many other private lines. So we're still here in paper and digital form, and as busy as ever, for which we must thank all those who have joined or re-subscribed these last few weeks. And finally... if you visit our Facebook page you can see our locomotives making a fair bit of noise for the NHS: www.facebook.com/miniaturerailwaymagazine

DAVID HENSHAW



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Cover: Clayton CBD90 hybrid at the Ecclesbourne Valley Rly, passing Wirksworth Miniature Rly 'Tubby', 2019 Photo: Clayton Equipment Ltd

Letters

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Confused & Poorly Recorded...

I recently discovered the enclosed photo taken by my father at Skegness, and dated by him 1951. I think that's me at the far left of the photo (fair hair, white shirt), with my mother, aunt and cousin nearby.

I checked the list of Line Profiles on the Miniature Railway web pages, and Skegness has not been covered, but perhaps you have covered it somewhere else that I cannot recall? I have found out very little, just a few photos, but no comprehensive history. It seems that a line opened in about 1923, and there are photographs of a steam loco with the amusement park in the background. The 1961 edition of the Ian Allan *ABC Miniature Railways* has only a brief entry, and no photo. It says that a 10¹/₄" line opened on 31st March 1951, which fits with my visit. After a brief description it lists the locomotives as being a petrol and a 4-6-2 steam. However, the loco in the photo is clearly a 4-4-2.

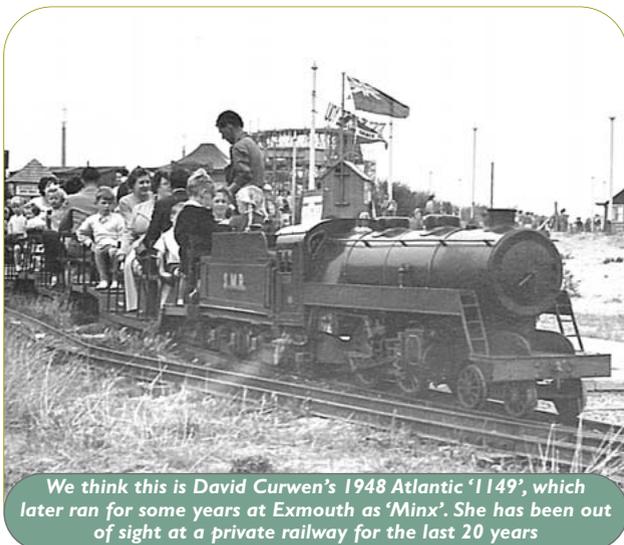
Apparently another line opened in 1979 and operated until 1993. In the mid- and late-1990s, visiting Skegness with my children, I seem to remember seeing various sections of abandoned track, and being disappointed at the lack of a working railway in this very suitable location. Were the 1923, 1951 and 1979 lines all in the same location? On top of this, we also had the line just up the coast at Butlin's Camp - altogether a lot of miniature railway history in a small area!

What other information does anyone have, especially about the loco in my photo? Is there a published history about any or all of the Skegness lines?

John N Hunt
Oakham, Rutland

Strangely, the busiest miniature railways in big seaside towns are often poorly documented, while the history of quieter rural ones is usually easier to find. Part of problem is that they often came and went rather rapidly, sometimes on the same site, even following the same trackbed.

For Skegness (we stand to be corrected), we've found: c1923-1928, 15" gauge from the Pier to Pleasureland, 1946-c1952, a 10¹/₄" line 'from Tower Esplanade', 1951-c1970, another 10¹/₄" line from Tower Esplanade to Princes Parade, and a third 10¹/₄" line on the same route (possibly the same trackbed), c1972-1993. (Ed)



We think this is David Curwen's 1948 Atlantic '1149', which later ran for some years at Exmouth as 'Minx'. She has been out of sight at a private railway for the last 20 years



Looking north from the lighthouse at Dungeness. The RH&DR comes into view top left and commences a big loop

And at East Worthing...

I thought you might be interested in the following photograph taken in happier days (actually 27th July 2019), after popping in to see to the Romney Marsh Model Engineering Society. This view is from the top of Dungeness lighthouse, which is open to the public, and gives absolutely fantastic views in every direction, including the RH&DR balloon loop and station. Here, I witnessed the 16:15 departure of diesel locomotive 'J B Snell', and back on terra firma, I saw the 17:00 departure (the last train of the day) behind Henry Greenly's 4-6-2 Pacific 'Green Goddess'.

In the last few weeks I've had plenty of time to go through my books and do some internet research. One thing I read was that a Mr H G Cookson of Billingshurst, West Sussex was awarded the concession to operate the 12¹/₄-inch gauge Littlehampton Miniature Railway in May 1948, which is fairly well-known. But what particularly caught my eye was that Mr Cookson was already operating a miniature railway at nearby East Worthing with the Thurston locomotive '2010', that would subsequently move to Littlehampton with sister '1005', from 15th May 1948. Eight open-bodied coaches able to carry eight adults or 16 children apiece were also provided at Littlehampton, some of these having apparently transferred from East Worthing too.

But internet searches, railway books and even books on Worthing's history have revealed no further information, or any photographic evidence, regarding a miniature railway at East Worthing. Naturally, this should not be confused with The Brooklands Miniature Railway which operated at Brooklands Pleasure Park in East Worthing between 1965 and 2018. Was Mr Cookson's East Worthing Miniature Railway a temporary affair? Do any photographs or postcards exist of such a line? And where was it located?

Graham Lelliott

Sompting, West Sussex

Another busy seaside town, and another rather confused and poorly recorded miniature railway history. Perhaps Mr Cookson was exaggerating to impress the planning officer? (Ed)

Interesting History

Combining the articles by Richard Ellam on Leatham's early fascinating 2-2-2 built in Heath, Wakefield (described technically in MR47), with his follow-up letter on 'Early Origins of Miniature Railways' in MR48, brought to my mind a number of personality and locality connections he may have missed! In particular the Heywood connections with Yorkshire.

I lived in Wakefield for 30 years, during my later years there, I researched and had published *'The Blakesley Hall Miniature Railway & the Bartholomew Family'*. My researches revealed the extensive presence of the Heywood family in the town and the 'gentrified' neighbourhood, including their ownerships of several of the local land-owning estates.

Indeed, my book included a partial family tree of the Heywood family, linking Sir Arthur Heywood with various members of the Bright family as well as establishing that no less than three Wakefield-based Heywoods were Directors of the Aire & Calder Navigation at the time that Thomas Hamond Bartholomew was made their engineer (the latter being uncle to Charles William



This early miniature locomotive was probably built around 1840 by Albert Leatham of Wakefield, whose family very likely knew the Heywood clan

Bartholomew of Blakesley Hall).

These researches convinced me there was little doubt that the Heywood, Leatham, and Bright families around Wakefield knew each other well (and probably the Bartholomews too). There were Heywood family members at around this time in the Wakefield area at Stanley Hall, Wentworth House, Badsworth Hall, Lupset Hall; and Ackton Hall. Unfortunately, although Sir Peter Heywood - the present Baronet - lent me copies of the Heywood family tree when I was researching my book, I restricted my link investigations to Bartholomew matters, and have since returned the documents.

The Quaker connections are equally interesting. However the book *'Worthies of Wakefield'* (ed. Kate Taylor) indicates that after Leatham married in 1839, they lived at Woodthorpe, Sandal, until moving to Heath in 1843. In this year they also moved their religious affiliations to the Church of England.

I must congratulate Richard Ellam on producing such an interesting and thorough technical treatise on such an early miniature locomotive, and sharing it with us in *Miniature Railway* magazine.

Dr Bob Tebb
Ravenglass, Cumbria

Postcard Plot Thickens

The hand-coloured postcard featured on page 7 of MR48 is a strange one. What can be seen is a Paxman 4-6-2, with no super-heated patches on the smokebox, so an original boiler, but it does have an Ashford Southern Railway-style tender. As a 4-6-2 it cannot be locomotive No. 7 or 8, as they would have the third cylinder front covers beneath the smokebox. It therefore has to be either No. 1, 2 or 3.

According to Wikipedia, *'The Southern Railway's Ashford works built four tenders in 1946'*. Ashford No. 1 ran coupled to *'Hercules'*, but was built too high because John Iron, the Southern's draughtsman, was sent over to New Romney to 'measure a loco', but took his measurements from a Canadian-type Pacific and not a British-outline one. The design of subsequent tenders was hurriedly altered after this and the second one, Ashford No 2, was coupled to *'Typhoon'*. The design was further refined and two more were constructed. Ashford No 3 was coupled to *'Green Goddess'*, and Ashford No 4 to *'Southern Maid'*.

So my guess is that the postcard depicts either No. 1 *Green Goddess* or No. 3 *Southern Maid*. From memory new super-heated boilers were supplied and fitted from the late 1940s to approximately 1956, so the postcard must date from c1947-1956.

It looks like a bogie luggage vehicle behind the tender, then an observation car, with one of the four-wheel 'jumping jack' luggage trucks as the fifth vehicle in the train, but I'm sure the archivist at the RHDRA could point out even more...

As to the lorry, my guess is a Ford Thames ET6 Refuse Lorry. The petrol-engined Fordson Thames ET6 (with side-valve Ford V8 or 4-cylinder 'Cost Cutter' engine), and Perkins diesel-engined ET7, were first introduced in 1947, 'ET' standing for English Truck. From 1957 when the Fordson name was dropped and became Ford again, the Fordson Thames ET6/ET7 models became the Thames 500E/502E.

Keep safe, Peter Wilson
Broadstairs, Kent

Jeff Colledge suggests the lorry might be a 1938 Morris Commercial. (Ed)



One of two gates that appear to have guarded the Lakeside Railway in Battersea Park

Did the Crossing-gates Survive?

I read with interest the article in MR28 on The Far Tottering & Oyster Creek Railway in Battersea Park. I remember riding on the later Lakeside line when I was a youngster.

One of my recollections of the railway was the 'level-crossing gates' that were built into the wrought iron railings of the park next to the East Carriage drive wherever there was a pathway off the drive. When reading the article and noting your comment that 'only a cutting survives as a memorial', I checked on Google Street View and the level-crossing gates remain in situ in two locations, one of which is shown in the photo.

David King,
London SW11

Fond Memories of Mull

It was nice to see the article about the Mull & West Highland Railway in MR48.

We made a number of visits to Mull over the years, mostly in October, just after the railway had closed for the season.

The first time we visited, we found the usual notice in the ticket office window giving



ABOVE: Dave Hill's 1997 slide of Craignure, and (LEFT) Roger Stapleton's image from a near identical viewpoint 19 years later. We try to avoid getting too sentimental, because miniature railways are essentially ephemeral things, but this line really shouldn't have been allowed to die in such a brutal way

the time of the next train:
'EASTER'!

Another memory I have of the Mull railway is staying on the adjacent campsite, and watching the two wind generators on Craignure station building up, then spinning rapidly in the fresh October breeze.

Our last visit to Mull, after a gap of several years, was in June 2016 after the line had closed, and we visited the Craignure station site to see what was left. We found that there was a plaque near the site of the turntable and the line of the track was still discernable, if you knew what you were looking for. The distant view is looking towards Torosay and Duart Castle is just visible in the distance. Sorry about the raindrops on the plaque, I don't carry a squeegee and it is Mull after all!

Roger Stapleton
St Andrews, Fife

Uncle Tommy Mann & Dove's 'Coronation'

Just enjoying reading your latest magazine, and I have a couple of points for you.

Regarding my short letter on the Fairy Glen Miniature Railway in MR47, I came across Tommy Mann again recently in the archives, this time requesting a site in Skegness for a miniature railway in December 1947. He was turned down.

The 4-6-2

'Coronation' was built by Ernest Dove (not Alfred Doves). It made its first public

appearance displayed on the ground-floor of the Griffin & Spalding department store (now Debenhams), Long Row, Nottingham from 3rd-18th April 1946. It was then steamed for the first time in public on Easter Saturday 20th April 1946 on a temporary line on the Victoria Embankment by the River Trent in Nottingham.

It didn't get to Christchurch until the opening of that railway on 20th June 1953 and was there until 1978. It was sold to Arthur Thomson in 1979 and ran at Syon Park from June 1993 until that line closed on 29th August 2005. When it went to Eastleigh in April 2007, it was still in the ownership of Arthur Thomson.

Peter Scott,
Reading

Where is the Crocodile?

Following on from my article on the Tan-y-Bwlch railway in MR44, could I ask for any information on the whereabouts, subsequent history and condition of Brian Hollingsworth's Swiss Crocodile?

Regards from a storm-battered and now snowy North Wales.

Trevor Warner
trevor_w_warner@yahoo.co.uk

We're curious too. If you have any information, please email MR magazine, or Trevor direct. (Ed)



Another Tram Design

Following the article on the two new trams (MR48, page 12), I've sent some photographs of my own recently completed effort at tram-building based on a Phoenix Hefty chassis.

The tram has twin bogies, each driven by a 750-watt motor, an iDrive 200-amp, 24-volt controller and disc brakes. Because the bodywork is my own, I had some trouble fitting and modifying the handbrake system. It now works, but not entirely satisfactorily. By the way, the Ride-on-Railway tram controllers are excellent.

Julian Garratt
via email



The battery-electric tram format does seem particularly well-suited to garden railways: they're compact, practical, instantly reversible, able to carry a token passenger and/or haul a decent load, and economical to build and run. Four-wheelers are remarkably effective, but if you want to haul decent loads, the luxury kind has twin bogies. Like so much in the miniature sphere, they have quietly evolved to fill a space that no-one had really spotted.

The RoR controllers work well and really look the part. They cost £322 each. (Ed)

A Dying Show?

I notice your comments regarding the 7 $\frac{1}{4}$ -inch Gauge Society stand at Ally Pally in MR48. There appears to be a lack of members willing to bring locos for display to shows at present. My own loco was part of the display this year. Might the difficulties of getting it into the hall, and from the car to the stand at the designated set-up time be the reason why?

In the early 1960's, Bassett-Lowke commissioned Ernest Steel, the son-in-law of Henry Greenly, to design a 7 $\frac{1}{4}$ -inch tank locomotive. The brief was for a 'Practical' locomotive that could be used on commercial lines, but easily built by amateur builders using many of the existing castings from the Royal Scot class locos that Bassett-Lowke had in stock. The resultant design was a slightly over-scale 0-6-0T that bears a family resemblance to Greenly's 2-6-0 mogul from the 1930s.

This particular locomotive was built in 1967/8 by a Mr P Ware of Church Knowle, near Wareham, Dorset. It then passed to a new owner in Kings Newnham, near Rugby and ran

on a line around its owner's house known as the K N L R (Kings Newnham Light Railway) No.1. In June 1973 the locomotive was listed for sale by model locomotive dealer Cherry's of Richmond. The loco is described as a 2-6-2T with leading and trailing trucks, a modification believed to be made at Kings Newnham.

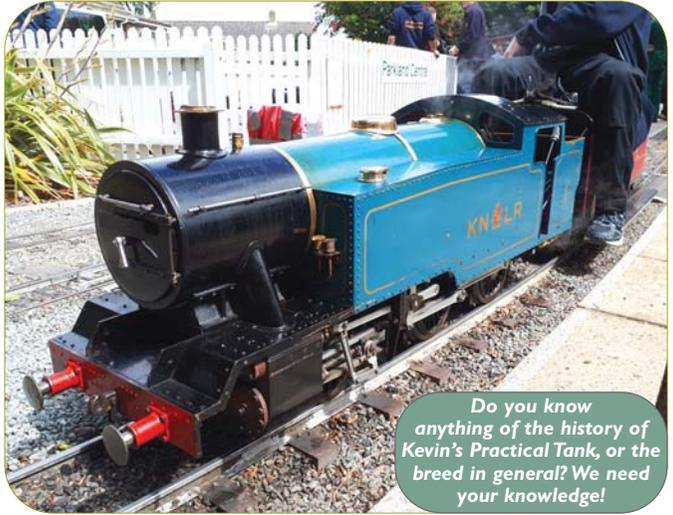
By September 1977 the locomotive had passed to a Mr Mitchell of Chalfont St Giles, thought to be the famous band leader, who reported that the previous owner had removed the leading & trailing trucks. The last paperwork I have is a boiler test certificate for Mr Mitchell dated October 1988.

The subsequent history is unknown, so if anyone can fill in the gaps on its history I would be most grateful.

Kevin West

Hinckley, West Midlands

We were disappointed by Alexander Palace, which was short of interesting stands, and very quiet at times. We don't intend to go again. As for the Bassett-Lowke, we would be delighted to follow the Halton Tank article with something similar, so get searching those archives! (Ed)



Do you know anything of the history of Kevin's Practical Tank, or the breed in general? We need your knowledge!

Items For Sale

● **Two 10 $\frac{1}{4}$ -inch gauge right-hand points**, constructed from 9lb rail with circa 1:6 and 1:14 turnout ratios. Both virtually unused, but one is constructed from worn stock rail, and there's some surface rust associated with outside storage. Circa 4.2 x 1 metre each, thus heavy. Rail clips are bolted all the way to steel sleepers which permits an element of adjustment to suit your requirements. Supplied with 24 fishplates as well as 12 adjusting fishplates to connect with heavier rail (e.g. 14lb). Bogie and other reasonable inspection tests welcomed. Buyer collects from Mid Sussex, £1,895 or reasonable near offer.

David Adams, 07707 987316 or david10.25adams@btinternet.com



Book Review

Lost Miniature Railways

Jonathan James

Specialist publisher Mainline & Maritime seems to have hit the nail on the head once again, with its latest miniature railway title, 'Lost Miniature Railways'.

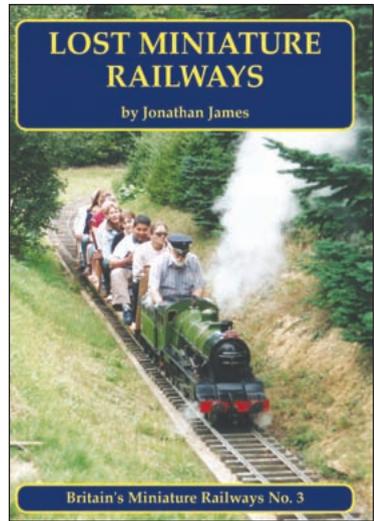
You'll have noticed that we're being a shade cautious in this review, because we only have seriously advance information, but that's the rather odd lock-down era we're living in.

Luckily, the title is self-explanatory. The book covers 37 miniature railways that have closed over the years, from the Channel Islands to the North of England. Some were well known and much visited, such

as the Liverpool Garden Festival Railway, but expect plenty that were off the beaten track.

This may or may not reassure you, but we were confident enough to pre-order a batch for our own shop, sight unseen. And there's another special reason we want to get the information out ASAP: £4 from every book sold will be donated to the Fairbourne Railway Coronavirus Appeal. Not for the NHS on this occasion, but a very worthwhile cause all the same. The Fairbourne probably has the weakest finances of all the railways on the Welsh Atlantic coast and is simply unable to endure lock-down without support.

Incidentally, we were left with so many unfulfilled orders for Mainline & Maritime's Pictorial Special No. 1 'One Foot & Above' that we've had a fresh batch printed ourselves, so for the time being we can supply both books, covering everything from 7 1/4-inch gauge upwards for £16.95 each, or £31.90 the pair. But they're not going to hang around forever by the look of it!



Above: Mantjke Dethlefs No 8022 leaving Fenn Street station on 1 July 2017.
Right (top): 'Holding locomotive' (H&B), an O-4-2 built in 2014 and No 4 DAVANNA O-4-0 'top-and-rolling' train on the initial opening day on 20 May 2016.
Right (lower): Mantjke Dethlefs No 8022 passing the tunnel and Joe enclosure on 3 September 2016.

An early proof-page covering the Fenn Bell Inn MR - a particularly tragic recent example of a 'lost' railway. The book has the usual 'clean' M&M house style

Lost Miniature Railways • Jonathan James 2020 • 64 pages • Price £12.95 (including £4 to the Fairbourne Railway Coronavirus Appeal) • Publisher Mainline & Maritime Ltd • www.mainlineand-maritime.co.uk • Contact 01275 845012 or orders@mainlineandmaritime.co.uk • From numerous outlets, including the Miniature Railway Shop, page 46

Miniature News

Pietermaritzburg, South Africa

The team behind the successful **miniature steam train world record** in 2017, led by Andries Keyser, is considering another attempt. Their 24-hour record of 205.1 miles has not been bettered in three years, but our own Greenspeed X4 pedal-recumbent achieved a non-ratified distance of 117.4 miles in 12 hours at the Isle Abbots Railway in 2018, the equivalent of 234.8 miles in 24 hours. The record-breaking South African loco 'Doreen' had been fitted with Vesconite polymer bushes in the more inaccessible places, and these needed no oiling throughout, greatly reducing servicing time. Another aid to speed is that Keyser has opened a new railway at the Stellenbosch Winelands outside Cape Town in South Africa, incorporating the longest possible straight. Our hunch is that the team at the Winelands Light Railway will go for doubling our 12-hour distance. How about a response from a British team?

W www.winelandsrail.co.za

The impressive straight on Andries Keyser's Winelands Light Railway, which must be one of the best miniature lines in South Africa... It's clearly built from the start to secure the world speed record!



UK

The **Triang Minic Narrow Gauge Railway Society**, for some years one of the more interesting (and surely most specialist?) miniature railway societies has decided to wind up its affairs. Formal membership and sponsorship will cease, but railway visits are expected to continue in some form. The announcement in

February was followed by the death on 30th March of **John Hall-Craggs**, one of the Triang railway's greatest supporters. His Brightwalton Light Railway is one of a handful of 9½-inch miniature railways, but also incorporates a 10¼-inch Triang circuit. It is unknown at this stage what will happen to either line.



History

12-inch Gauge in Australia!

With Robert Worland



Mitchell Library, S Hood

This 12-inch railway at the Sydney Showground in Moore Park seems to have been one of the first in Australia, although like most early 'permanent' lines it was little more than a circle of portable track planked down in a park and equipped with crude four-wheeled carriages. It's thought that James Wilson of Creswick, Victoria, built the Stephenson Patentee for the St Kilda line in Melbourne. We don't know when, but it had clearly already seen some use when this photo was taken in 1927. The loco would play an important role in popularising 12-inch gauge

Miniature Railway has often

discussed how and why miniature railways fanned out - generally from England in the very early days - to conquer the world. Well, not quite, but they're pretty widespread today, from a scattering in Australia, across Western Europe and in every corner of Canada and the United States, where railways hold a special place in people's hearts (even if they don't actually use them very often!). Australia has a thriving miniature scene today, but for various reasons, the 12-inch gauge is especially strong here, yet it remains rare elsewhere in the world. How, and why did this happen?

Two of the earliest surviving photos are of an 1860-pattern Stephenson Patentee 2-2-2 running at St Kilda, Melbourne, then at Moore Park, Sydney in 1926-27. The circuit at St Kilda, near Luna Park behind the Palais Theatre, was typical of the time, but travelling showmen often visited the amusements at Luna Park across the road, so the railway effectively showcased a series of 12-inch locomotives. It survived until 1958, during which time, coincidentally or otherwise, many Australian showmen had opted for 12-inch gauge for their own fairgrounds and travelling shows. As 10¹/₄-inch was almost unknown in Australia, and there were no 7¹/₄-inch public railways until 1950, the choice was actually a pretty straightforward one.

The *Sydney Mail* of 9th March 1921 reports a live steam 4-4-0 locomotive at a school fete, which was said to resemble a New South Wales Government Railway Class 17.

Today, the Melbourne Steam Traction Engine Club (a machinery museum) owns a similar NSWGR Class 17, which is thought to have been built in Sydney in 1926. All three of these early 12-inch machines - the 2-2-2 and both 4-4-0s - have survived: the Patentee now owned by George King, while the second 4-4-0 was last seen at Victor Harbor near Adelaide, although this railway closed in the late 1990s.

“...in the early 1920s, miniature railways were very rare... and no gauge was recommended...”



These simple, rugged locomotives are classic early showman's machines. They had to be small enough for easy transport, and rugged and simple enough to be carried on rough outback roads. Rolling stock had to deal with boisterous, unaccompanied children! Twelve-inch gauge handles those conflicting requirements rather well.

The St Kilda railway is in the little park in the foreground, sandwiched between the beach and the Palais Theatre. Its proximity to the Luna Park Funfair made it very influential



This charming scene dates from about 1931. The 2-6-2 and sophisticated bogie carriages are a world away from the equipment in the Moore Park photo

State Library of Victoria, A Green

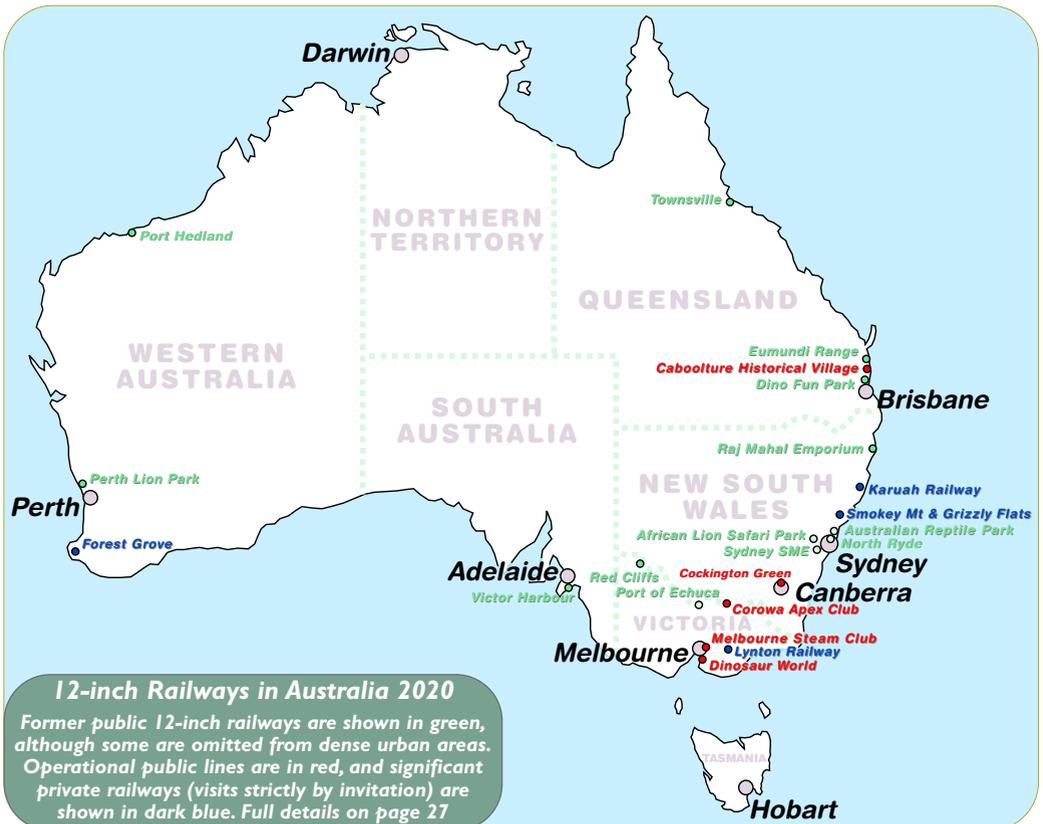
In Australia in the early 1920s, miniature railways were very rare. No track gauge was set or recommended, so a builder could pick a gauge to suit the loco design and the potential traffic.

“...large permanent railways did not start to appear until the 1950s, and many were built to 7¼-inch...”

If they went narrower they reduced the carriage stability, and if they went wider the locomotives tended to be big and heavy. Even for those showmen who had never seen the railway at St Kilda, the nice round figure of a foot would have grabbed their attention and gone on to do the job pretty well.

Post-War

In contrast to Britain, large permanent miniature railways did not start to appear until the 1950s, and many were run by volunteer groups who built to 7¼-inch gauge to save money and make it easier for owners to transport the stock on running days, because equipment tended to live off-site. The huge cost of establishing a 15-inch gauge steam-hauled railway would have required a very wealthy benefactor with a passion for such things. The closest we came in those early days, was Captain J E P Howey, who of course channelled most of the income from his Melbourne property portfolio back to Britain, where he established the Romney Hythe & Dymchurch Railway. He is known to have visited the 7¼-inch gauge Chelsworth Park Railway, in Ivanhoe, a suburb of Melbourne, but it is not known how much encouragement he gave to the local crew.





The Sydney Society of Model Engineers was founded in 1906 as the Summer Hill Society of Model & Experimental Engineers, making it one of the oldest model clubs in the world. It was also the first club in Australia to build a 12-inch gauge railway, at Ashfield, Sydney

ABOVE: This chunky 0-4-0 diesel was built by member Keith Mears in 1961, and was the work-horse of the railway. Note the typical rolling stock of four-wheeled S-wagons and bogie sit-astride carriages, which must have given quite an exciting ride over the Luddenham trestle bridge. This is April 1987.

Photo: R WORLAND



LEFT: Sam Mears' restoration of the 1920s-vintage Stephenson Patentee 2-2-2 encouraged the club to add a 12-inch running rail. The stretched frames and taller funnel are a great improvement. Photo: R WORLAND

Sadly, the club rather inexplicably dropped 12-inch gauge in the early 1990s, but the equipment was all recycled, the diesel going to the Melbourne Steam Club and the 2-2-2 to George King of Sydney

In the early years, the wider gauge railways, like 18-inch, often had rough-looking locomotives powered by car engines, avoiding the huge cost of building a proper steam locomotive, although by the 1960s the number of 12-inch gauge steam locomotives had increased significantly, and they could often be found running on portable tracks at fetes and fairs, or on the handful of small permanent railways.

In Melbourne and other big cities in the 1960s, the commercial miniature railways were disappearing and club-based lines were emerging, usually operated for their own entertainment by an engineering club, with occasional public running.

A move to 10¹/₄-inch gauge was being considered by some of those running on 7¹/₄-inch gauge, as part of a general move to larger scale equipment, including the first appearance of scale model rolling stock. The early commercial railways tended to use narrow gauge roofed carnival-style carriages, while the club lines generally built their own cheap and cheerful sit-astrides. Authentic-looking carriages were rare, but the clubs were increasingly looking for authenticity, which brought the limitations of 7¹/₄-inch track into focus. But there was no opportunity to start a 10¹/₄-inch railway, because the growing ranks of club tracks stayed loyal to 7¹/₄-inch, while amusement parks and fairground railways stuck with 12-inch gauge.

One complication that helps explain the enduring popularity of 7¹/₄-inch gauge for club lines is the need for railways above 8-inch gauge to hold an 'Amusement Device' certificate, procurement of which involved extra paperwork, insurance and certification costs. One of the earliest club lines was opened by the Sydney Society of Model Engineers at Ashfield, Sydney, where it had a short 8-inch gauge line built for its sole locomotive! When club member Sam Mears bought the 12-inch gauge Stephenson 2-2-2, the club simply put in a third rail, with Keith Mears adding a 12-inch 0-4-0 diesel in 1961. The club later moved to a bigger site at Luddenham, west of Sydney, where an impressive dual-gauge track was built, but the legislation, and a general feeling that the gauge was a bit 'showman's', resulted in the

Australian Railway Historical Society, A Grunbach



This very typical 4-4-2 was built in Ballarat in 1956 by Alan Lewis. The little circuit is at Port of Echuca in Victoria and seems to be a portable railway that put down roots! Operated by Dave Billings, it was a long way from being the most exciting 12-inch gauge railway in Australia, but it was one of the first, opening in about 1964, and closing five years later. The locomotive was purchased by the Melbourne Steam Club in 1984, finally putting to rest the club's various 10¹/₄-inch schemes



PHOTO: R Worland

In the 1960s, Arthur Birch was planning the Smokey Mountain & Grizzly Flats Railroad, and in 1967 he commissioned Jim Jackson of Brisbane to build this handsome 2-6-2 Baldwin (LEFT). Based on the much-loved Denver, South Park & Pacific three-foot gauge locos, No. 43 was built to 1:3 scale. At 14 feet long, it's a relatively large machine by any standards. The Australian Reptile Park opened in the early 1960s, and during a period of rapid growth, the owner agreed to Arthur building a 12-inch gauge railway within the park. The railway closed in 1975, and the locomotive finally went to Arthur's Smokey Mountain & Grizzly Flats Railroad, where it still operates.

BELOW: On the other side of Sydney at Warragamba, showman Stafford Bullen was setting up the African Lion Safari Park as a permanent home for his circus animals. The park opened with an integral railway in 1968. Little is known about freelance 4-4-2 No. 121. It was built by Clarrie Hall, probably in the late '50s, and ran at numerous sites, including Lake Goldsmith Machinery Museum near Ballarat. The Lion Park closed in 1991



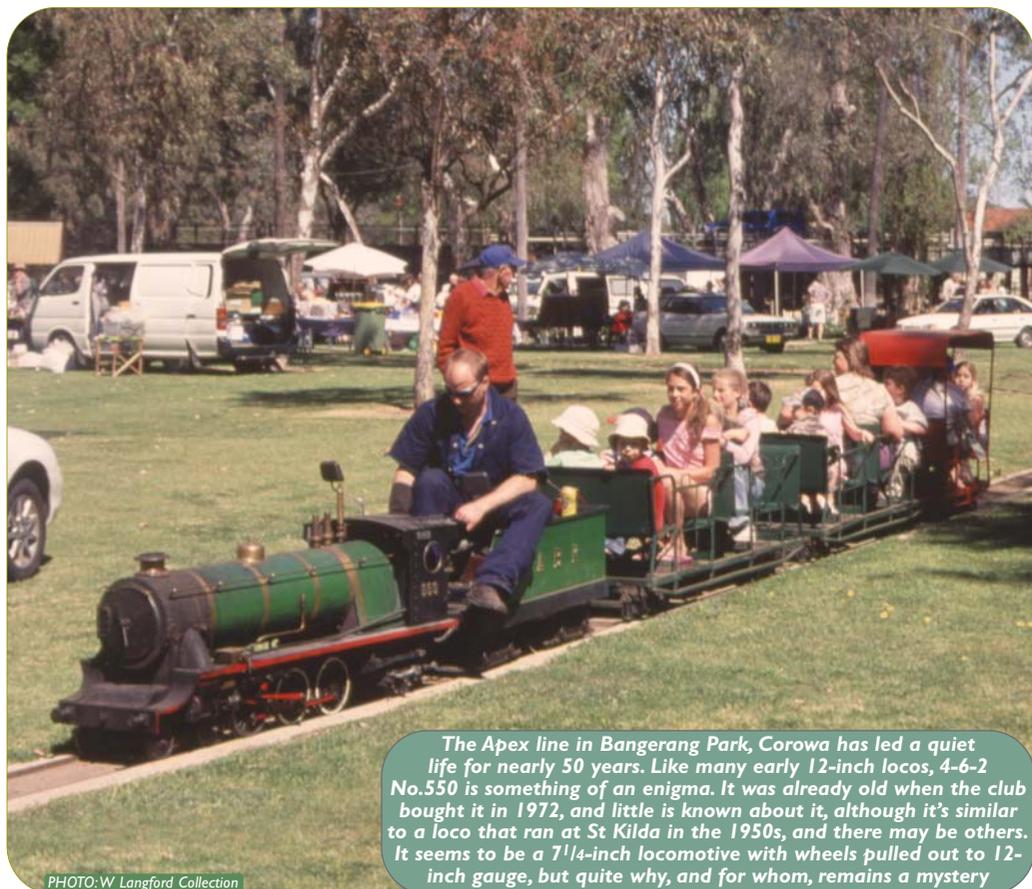
PHOTO: Jim Hall Collection

12-inch rail being removed in the early 1990s. The Society still runs 7¹/₄-inch at Luddenham.

Of course, it could be argued that the 'red tape' did particular harm to the advancement of 10¹/₄-inch gauge, which wasn't broad enough to satisfy the big tourist sites, but had to deal with the same legislation to carry passengers.

There was certainly plenty of enthusiasm for 10¹/₄-inch gauge, and in 1969 the construction of a large railway commenced as a private venture at Noojee, Victoria, some 60 miles east of Melbourne. But with volunteer staff, a site far from any major city, and the need for serious work to cut the formation along the side of a valley, construction was abandoned after a few years and the volunteers dispersed. The desire was still there to build something grand, although it was proving difficult to secure a good-sized block of public land. Private land gave no security for a long-term venture.

By the 1970s Melbourne was developing newly-reserved metropolitan parks, some of which were huge tracts of public land with plenty of space for a couple of miles of track, which seemed to favour 10¹/₄-inch gauge. It was not to be, and 12-inch gauge railways were built as added attractions at two sites, both in New South Wales: The African Lion Safari Park at Warragamba, and the Australian Reptile Park at Gosford. In 1974 they were joined by a park line built by the Apex Club of Corowa Inc near Albury, New South Wales. Apex clubs are non-political 'community service organisations' open to 18-45 year olds. There are more than 300 in Australia, but Corowa seems to be the only one with a miniature railway!



The Apex line in Bangerang Park, Corowa has led a quiet life for nearly 50 years. Like many early 12-inch locos, 4-6-2 No.550 is something of an enigma. It was already old when the club bought it in 1972, and little is known about it, although it's similar to a loco that ran at St Kilda in the 1950s, and there may be others. It seems to be a 7¹/₄-inch locomotive with wheels pulled out to 12-inch gauge, but quite why, and for whom, remains a mystery

PHOTO: W Langford Collection

In Melbourne, one metropolitan park manager was keen to have a 10¹/₄-inch gauge railway, which looked promising to one of the new railway clubs, because all the negotiations and the initial funding would be with the one government authority. A proposal was submitted to the authority chairman, but unfortunately it stalled there long enough for momentum to be lost and supportive staff to retire.

The Melbourne Steam Club may have tipped the balance in the battle of the gauges. It was seeking a permanent site for a museum of industrial and mobile engines, and in 1972 it was proposed to include a 10¹/₄-inch gauge railway in the scheme, although, again, nothing happened for a while. Seven years later, in 1979, a miniature railway was being planned for Cockington Green Gardens in Canberra, and the gauge decision seems to have been influenced by the closure of the nearby 12-inch line at the Yarralumla Historic Brickworks, which liberated a large 1949-vintage 12-inch steam engine. Cockington Green subsequently became a successful tourist attraction, helping to lift the profile of 12-inch lines.

Although no longer used by the showmen and amusement parks, the gauge was coming out of the shadows, and becoming increasingly visible. The trains were big, bold and ambitious, which suited the buoyant and confident mood of the times. And a good variety of 12-inch gauge steam locomotives were available, as showmen's families released the locomotives from storage, and they came up for sale. At Cockington Green, Stan Hennock built the line, then drove the Yarralumla loco, which had been built by his father. Soon after, in 1984, the Melbourne Steam Club purchased the ex-Echuca 12-inch gauge steam locomotive, and began to enthusiastically promote the gauge.

Meanwhile, the prospects for 10¹/₄-inch gauge continued to fade away. In the early 1980s the short Gol Gol Railway in New South Wales was the only public railway at this gauge, and it subsequently closed, leaving little incentive to build 10¹/₄-inch gauge steam locomotives in Australia.

Two fine 10¹/₄-inch Royal Scots had been built - Dan and Peter Seccombe's at Coffs Harbour, and Reg Colter's. Reg built his in the 1970s, but he had nowhere to run it and it eventually appeared for sale in *Miniature Railway 31*.

"...the 12-inch trains were big, bold and ambitious, and suited the buoyant mood of the times..."



PHOTO: S Daly

In 1986, Cockington Green Gardens retired the 1949-vintage 4-6-2 from Yarralumla Brickworks (it's now on static display at the Binalong Motor Museum) and commissioned a new half-scale narrow gauge machine, based on the type of 0-4-0 Fowler sugar-cane locos, once common in Queensland. Originally coal-fired, it is now fuelled with LPG gas, which is unusual, but may become more common as climate change legislation becomes ever stricter. It's a good example of the next generation of 12-inch locos



The Melbourne Steam Club (the 'traction engine' bit is usually dropped today) has become the primary 12-inch gauge club site in Australia, and it was No. 1200 'Franklyn Flyer' that started it all in 1984, when the club bought the loco from Dave Billings, who ran it at Port of Echuca (see page 18). It thus played a pivotal role in launching, or 'relaunching', the modern 12-inch gauge movement. The photo is taken on 5th May 2016 during a visit from the Australian Men's Shed Association



In August 2016, the Club extended its circuit up to the East Link Toll Road. Few heritage locomotives have seen a gradient or a straight, and they can have a decent gallop here. The original straight is on the left and the part-finished extension and summit on the right. Photos: R WORLAND



During the Club's annual three-day Steamfest, there's plenty to see. On the left is Phill & Laura Hayes' unusual 4-6-0 tender loco, which has a water-tube boiler. It seems to have been built in the early 1960s and operated on several small private railways in Queensland. On the right is the club's 11-inch gauge showman's engine (confusingly, there were a handful made). Thought to date from 1960, it is due to be regauged to 12-inch. Photo: R WORLAND

Not surprisingly, new-build 12-inch steam locomotives now outpace the construction of 10¹/₄-inch by 10:1.

2020 & Beyond

Generally, the handful of Australian 12-inch gauge public railways are far apart, and few own an abundance of rolling stock, so they can't usually spare equipment to help others. Long-term survival can be tenuous, and of at least 25 public lines built to date, only five have survived, although many new ones are planned or under construction.

Life is somewhat easier in Melbourne. Phill and Laura Hayes don't have a railway of their own, so their loco is stored for most of the year, and they bring it to the annual Melbourne Steam Club Steamfest event, so we can better handle the traffic.

George Landolfo is building a circle of track as an added attraction for his Dinosaur World attraction at Somerville, Melbourne, and last year he kindly lent us his Class 44 diesel loco to assist with the extra traffic. I'd like to think we can return the favour one day if his loco fails for an extended time. He is only a half hour drive from our railway.

For technical consultation we have much in common with the 7¹/₄-gauge Diamond Valley Railway at Eltham. This might seem odd, considering the disparity in the gauges, but like many of the bigger narrow gauge public lines, they build diesel locos and rolling stock to 1:6 scale, and our heritage 12-inch gauge locos are about the same scale.

Private Lines

Why would a billionaire settle on 12-inch gauge? For some time the richest man in Australia was the late Lang Hancock, who mined iron ore in northern Western Australia (WA). Lang's business associate and fellow billionaire Michael Wright desired to build a private miniature railway and he chose 12-inch gauge on the advice of prominent people in the hobby in Perth, the WA capital, including Keith Watson (Wato Engineering), Ian Willis (closely connected with Keith's loco-building operation) and Ken Austin.



PHOTOS: Kentin Engineering

When serious money bumps into a hobby, things get interesting. Billionaire Michael Wright made his money running some of the longest and heaviest trains in the world, so it's perhaps not surprising that his 12-inch railway in Forest Grove near Perth has been equipped with some heavy machinery.

ABOVE: Fancy a 12-inch gauge South Australian Railways '400' class Garratt? How about two? This 1:3.5 scale pair were built by Kentin Engineering of Malaga, Perth in 2012. The original class of ten hauled heavy metal ore trains from 1952. As they were on the big side for heritage groups(!), only two have been preserved, and neither is operational, making the miniatures all the more special.

BELOW: A pair of Western Australian Government Railway (WAGR) 'W' class Beyer Peacock 4-8-2s, built to 1:3.5 scale by Kentin Engineering in 2010. Complete with tender, they weigh 7 tons apiece.

The 3' 6" gauge 60-strong 'W' class was light on its feet, enabling it to run anywhere on the network, reliable, powerful and long-lived. A handful were kept in reserve long after dieselisation, the last being withdrawn in 1980, and 15 of the 60 survive on heritage railways.



Keith had built a 12-inch gauge steam locomotive, and when Ken Tate, (Victoria 12-inch gauge) built his Sweet Creek steam locomotive it was initially going to be 12-inch gauge, although he was persuaded to build it to 7¹/₄-inch. Ken worked with Keith Watson on the design, and much later, the locomotive was converted to 12-inch gauge. So, in Perth, there was an awareness of the rapidly spreading 12-inch gauge renaissance on the eastern side of Australia, some 2,000 miles away.

“...at 15-inch gauge you need a lot of land for the sweeping curves... it’s more manageable with 12-inch...”

There are special factors in Western Australia that have helped to popularise the use of large-scale locos on miniature lines. It’s the largest state in Australia, and although it’s also the fourth most populous, only 2.3 million people live there, 8% of them in the capital Perth. As often happened in less populous places, the Western Australian Government built its main line to 3’ 6” gauge, so scale models on 15-inch gauge would be huge - almost 1:3 scale. And even in Australia, you need quite a big farm to accommodate a railway of that size! If you want to drive a big locomotive fast, you need a lot of land for sweeping curves, and that’s a bit more manageable on a typical farm with 12-inch gauge.



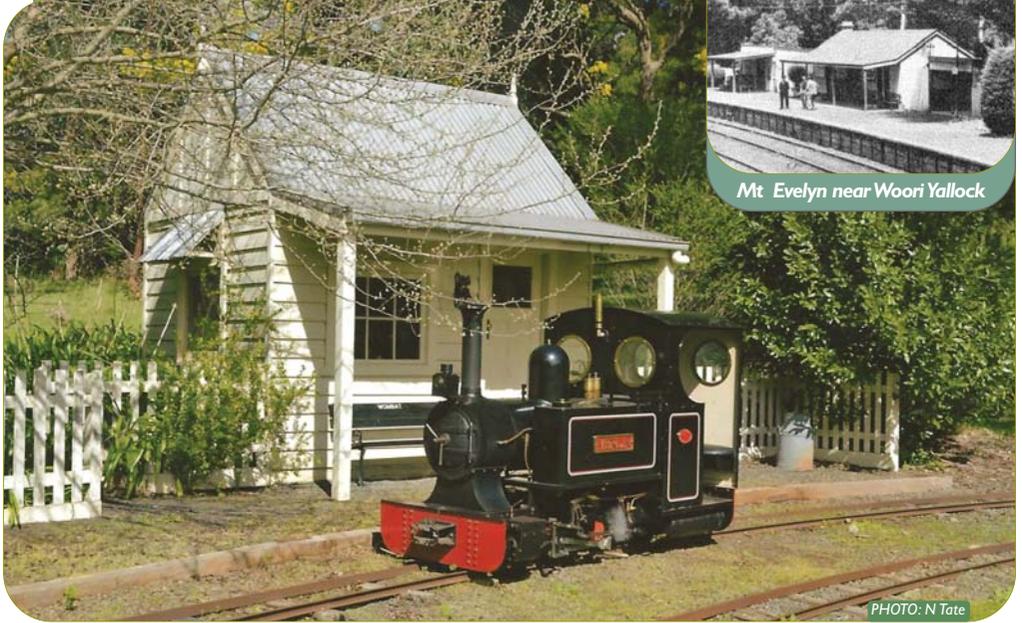
Not all private 12-inch gauge lines are built to that sort of scale! The Smokey Mountain & Grizzly Flats Railroad at Warnervale, New South Wales has around 5,000 feet of single-track main line running between two balloon loops. Owner and operator, the late Arthur Birch ran public services here from 1975 to 1998, but these were killed off by insurance and admin costs, although the railway is still in use. Interestingly, Arthur and his father originally intended to build a 7¹/₄-inch railway, but in 1928 they rejected the gauge as too unstable, a decision that eventually gave us one of the best miniature railways in Australia. Smokey Mountain has an extensive stable of steam locomotives, mostly larger machines, such as No.43 ‘Clive’, originally built for the Australian Reptile Park in 1967 (see page 19). In April 1987, ‘Clive’ speeds by with a well-filled public train. Photo: R WORLAND



One of the best known private lines is the Lynton Railway, run by Dr Ken Tate and friends at Woori Yallock, Victoria. 'Merlin' is a charming little 1:2 scale 0-4-2T based on a typical two-foot gauge Kerr Stuart industrial locomotive. Built by Ken, the loco has slightly elevated cab, funnel and dome to give a more comfortable driving position.
 BELOW: Wombat station is typical of the wayside halts that used to abound in rural Australia, as indeed at Woori Yallock itself (RIGHT)



Mt Evelyn near Woori Yallock



Public 12-inch Gauge Railways:

NOTE: Railways were often short-lived, so some dates are uncertain! Former public lines are in **Green**, operational lines in **Red** and significant private railways in **Blue**

African Lion Safari Park, Warragamba, New South Wales (1968-1991)

Australian Reptile Park, Gosford, New South Wales (1967-1975) 1,000ft end-to-end

Bass Hill Drive-in, Sydney, New South Wales (c1957-1960s?)

Caboolture Historical Village, Caboolture, Queensland (1990 on) 1,500ft circuit

Canberra Brickworks, Yarralumla, Australian Capital Territory (1979-1980)

Cockington Green Gardens, Nicholls, Australian Capital Territory (1979 on) 700ft circuit

Corowa Apex Bangerang Railway, Corowa, New South Wales (1974 on) 900ft circuit

Dino Funpark, Tanawha, Queensland (1981-1990)

Dinosaur World, Somerville, Victoria (opening 2020) 900ft circuit

Eumundi Range Railway, Eumundi, Queensland (1991-1992?)

House of David, North Ryde, New South Wales (c1927-1959?)

Melbourne Steam Club, Scoresby, Victoria (1993 on) 2,500ft circuit

Melbourne Zoo, Victoria (c1929-??)

Myer Emporium, Melbourne, Victoria (1936-1953)

Perth Lion Park, Western Australia (1976-1978?)

Port Hedland, Western Australia 1976-1990?)

Port of Echuca, Victoria (1964-1969?)

Port Melbourne, Victoria (c1926-1927?)

Raj Mahal Emporium, Woolgoolga, New South Wales (1989-2009?) 500ft circuit

Red Cliffs, Victoria (??)

St Kilda, Melbourne, Victoria (1926-1958)

Sydney Society of Model Engineers, Luddenham, New South Wales (1961-??)

NOTE: The Sydney SME line still runs 7 1/4-inch trains at Luddenham

Townsville, Queensland (1974-1980?)

Victor Harbor, South Australia (1994-1997?)

Williamstown, Victoria (1965-1970s?)

NOTE: The only public 10 1/4-inch gauge railway at the time of writing is:

Highlands Pioneer Village, Highfields, Queensland. (2017 on)

Private 12-inch Gauge Railways:

Smokey Mountain & Grizzly Flats Railroad, Warnervale, New South Wales (public running 1975-1998, then closed to public, following an increase in insurance costs) 5,000ft of main line, single track between loops

Lynton Railway, Hoddles Creek, Victoria (built from early 2000s by Ken Tate and friends)

Single line with a loop at the far end, giving a 3,500ft run

Forest Grove Railway (not it's real name), Forest Grove, Western Australia (2010 on). Two mile circuit

Karuah Railway (not it's real name), Twelve Mile Creek, New South Wales (under construction from 2010 by Noel Langbein. Proposed 4,000ft main line, single track between two loops)

The following are proposed:

Kerrisdale, Victoria

Lake Goldsmith, Victoria

Shoreham, Victoria

Yarck, Victoria

Champions of the 12-inch gauge park railway movement include:

Arthur Birch - Australian Reptile Park and Smokey Mountain & Grizzly Flats

Keith Mears - Sydney Society of Model Engineers (see photo, page 17)

Reg Murton - Melbourne Steam Club

Ken Tate - Lynton Railway

For further reading on the history we recommend 'Amusement Railways of Australia', Jim

Longworth, Transit Australia Publishing, 2015.

SKU: 1658900

Jim gives a good general picture of amusement park train history. Mail: jimlongw1952@gmail.com

Technology

Concrete Sleepers

Chris Baker



Chris's track-laying is superb and an object lesson in 'all-planes' alignment. The deep concrete sleepers should help to keep it that way for a very long time, whilst allowing the rail to move longitudinally with temperature changes. Two other essentials for a stable formation are visible here: the rail fastenings are stainless steel and the rail joints are well-greased. If any components seize up, the rail will grip the sleepers and move them around in the ballast, a recipe for rapid deterioration

Why Concrete?

In the late 1980s I was a member of a model railway club in Germany, where I've lived and worked for many years.

We used wooden sleepers for a combined 5-7¹/₄-inch gauge ground-level track, and at that time, the only hot-rolled steel rail available was a small profile better suited to 5-inch than 7¹/₄- gauge.

The rail was fixed directly to the sleepers with L-shaped clamps on each side of the foot, and an M4 x 45mm bolt right through the sleeper. The head was underneath and hammered into the wood. This method was halfway successful until creosote was banned. The environmentally-acceptable replacements protected the wood from rotting, but did not make it waterproof. Through cycles of wet and dry conditions, the wood expanded and contracted, loosening the fittings after only a few weeks. It was about this time that I realised how advantageous it would be if one could fix the rail rigidly in gauge, but allow longitudinal movement, enabling the rail to expand and contract without moving the sleepers and ballast.

“...Through cycles of wet and dry conditions, the wood expanded and contracted, loosening the fittings...”



This is how it works. The stainless-steel bolts are secured rigidly in the concrete sleeper, and the nyloc nuts are fully tightened, but the spring clips allow the rail to creep longitudinally if required. The rubber pad helps it to slide across the sleeper, while the recess in the concrete helps keep the rails to gauge. Note the air bubbles in the concrete. This early example was made before Chris had established a vibrating system, and shows the potential weakness. Vibrating the mould allows trapped air bubbles to escape

Ordinary steel has an expansion coefficient of ten parts per million (ppm)/°C. It doesn't sound much, but in everyday terms, it translates as 1mm per metre length per 100°C.

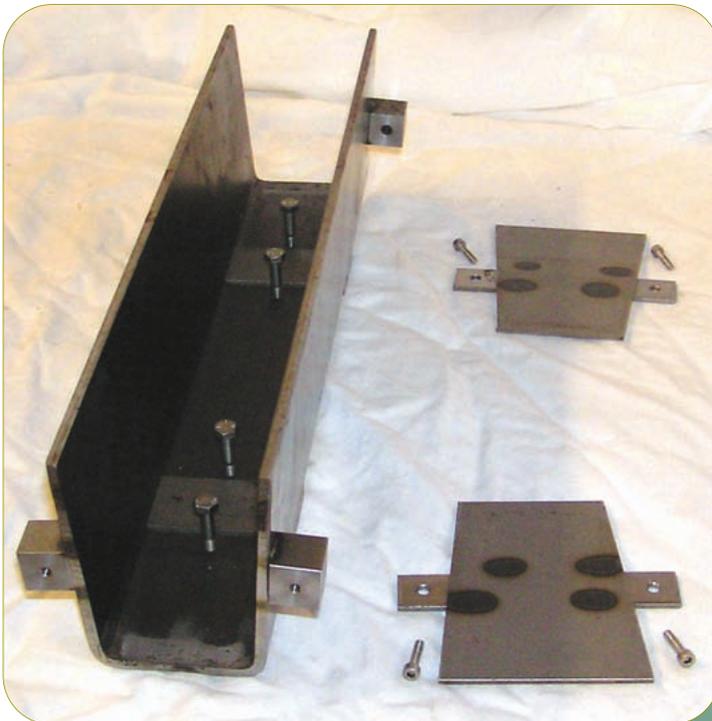
We have had winters in Germany where it has been below -20°C, while in summer the black oxide rail surface can get up to +70°C in direct sunlight. That's not quite 100°C difference, but a more graphic indication of the problem is that on a twenty-metre length of straight track one can expect up to two centimetres of movement!

Incidentally, aluminium is even more of a problem, expanding by 23ppm/°C, and as aluminium absorbs and loses heat faster, it can do a lot of moving on a day with patchy cloud. If the rail and the sleepers are rigidly held in gauge *and* longitudinally, the whole track panel will move with expansion, forcing the sleepers to move in the ballast. This phenomena usually makes itself known on curves, where sleepers can end up at crazy angles as the track wanders about in the ballast.

“...Aluminium is more of a problem, expanding by 23ppm/°C... it can do a lot of moving on a day of patchy cloud...”

A Railway of my Own

In 1990 I bought a house with 1¼ acres of ground, intending to build a ground-level 7¼-inch railway in about five years. Thirty years later, it's still going to take me five years, but that's another story! I wanted to construct a maintenance-free track, which meant laying track sections in the ballast with confidence that the sleepers would stay where they were. The gauge fixing needed to be rigid, but the rail had to be free to move in a longitudinal direction, which was not generally the case in all the other methods I had seen - typically broad-headed bolts screwed into the wooden sleeper at an angle, with the head resting on rail foot and sleeper.



I didn't want to use wood for the reasons mentioned previously. And although wood is cheap, you need to pre-drill every

The mould needs to be made as strong as possible, as it will be reused many times and life for a concrete mould is surprisingly tough - Chris's are formed from 5mm steel. The removable end plates add to the cost, but they make removal of the sleepers and cleaning of the mould much easier.

Note the stainless bolts ready in position for the casting. The hexagonal heads will end up deep in the concrete. The little plates between the bolts create the recess for the rail

sleeper and there is the problem of water absorption. An alternative is recycled plastic and I was able to source 7 x 7cm plastic fence posting locally in lengths of up to 2.8 metres, producing seven 40cm sleepers per length. This material is not as cheap as you might think (typically four Euros or £3.50 a metre) and it needs pre-drilling for the rail fixings, so for normal track work I decided to look into the possibilities of making my own from concrete, keeping the plastic ones for turn-out construction.

Full-size railways use sleepers pre-stressed with reinforcing wire, which can make them several times stronger in tension, but this requires much more complex moulds and other equipment, so it is never going to be viable for model use. Even unstressed reinforcing bars bring complications, so I decided to avoid steel altogether, and make the sleepers rather deeper than scale examples, as the extra depth of material would not be visible when laid in suitable ballast.

Without reinforcement, it's important for the bottom of the sleepers to be well supported in the ballast, but the result can be very strong indeed. I decided at this stage to cast the fixings for the rail in with the sleepers, so that once the sleepers had cured they would be ready to use, saving a lot of hard work afterwards.

I settled on sleepers 40cm long, 10cm deep and tapering from 7.5cm wide at the base to 6cm at the top. The moulds for these were made from 5mm hot-rolled steel sheet bent by a local metalworking firm, the open-ended form requiring end-plates to be mounted, which meant a lot of extra work, but their removal makes cleaning of the moulds much easier. The finished moulds weigh five kilograms, but they have to be much tougher than you might think if they are to be successfully re-used numerous times.

The firm also punched out the 6mm holes for the track fixing bolts, which saved a lot of work. The bolts are stainless-steel, and placed in the mould before casting, so the hexagonal bolt heads end up rigidly buried in the sleeper, creating a rugged fixing system that should last several decades, like the sleepers themselves.

The track is secured with stainless nyloc nuts, which won't work loose, even if torqued down relatively loosely. This is the key to the system. The sleepers need to live in a solid (but not rigid) bed, yet allow the rails to expand and contract without shifting in the ballast.



The finished sleeper. Water-proof and frost-proof, with corrosion-free fittings and strength to spare, they should last for several decades, but look after the bolts - they'd be hard to repair!

Mould Preparation & Casting

A commercial release agent (usually an organic oil) is essential to stop the moulds going rusty and ensure a clean separation. I have found the easiest way to do this is outside, using a spray gun with low-pressure air supply. After spraying, I turn the moulds over and leave them to drip for 24 hours.

For low-stressed garden projects, you might just throw together three parts of aggregate, two of sand and one of cement, but there are all sorts of commercial recipes and I didn't really know what concrete mix would be suitable. The problem was solved by a fortuitous meeting at a social event with the head of the concrete research department of Zurich University! What he recommended is available as 'finished dry mix' in most building markets (normally called cement mortar). It's basically cement powder and aggregate with a particle size of less than 2mm.

This mixture contains agents to make it waterproof, which also makes it frost-proof, a very important attribute for ground-level track. I recommend using some form of vibration when casting, as this makes the trapped air bubble out, dramatically improving the homogeneity and strength of the finished product. The sleepers are left for a week before being removed from the moulds. After removal I recommend storing them under water for a further week, and longer if possible, to ensure that the cement cures optimally. This method is obviously not the only way of approaching the task, but it seems to work well and I think the finished result looks good.

Using 52 moulds, I have made about 600 sleepers so far, and assuming 21 sleepers per three-metre track section on the straight and 15 per section on curves (some as sharp as 8.5 metre radius), I calculate I need around another 1,000. After that, the moulds will be surplus to requirements here, so I would be willing to discuss loaning or selling them, as concrete sleepers could be a very worthwhile investment for a club line, or longer private line looking for a railway formation that won't need constant fettling to keep it in place, and won't need replacement for quite a while.

Chris can be contacted at chris.baker@gmx.de but if you're interested, bear in mind that you will be carrying a total of 250kg home from Germany!



History

The Ise Valley Railway

Thanks to Alex Henshaw & Frances Terry



A typical scene from a very untypical railway. 'Cobber' takes the Riverbank-Rosebud Junction link, avoiding the loop to remote Ise Dock. These three carriages were the only remaining passenger stock at the end: two Quarrymen's coaches and the ornate, but rather small Ledbury carriage

Francis Terry is a former civil servant and academic, with a special interest in transport and transport economics. Like many others, he just sort of fell into miniature railways, recalling his Damascene moment as a visit to Lambeth's annual Agricultural Show in the 1980s (yes, there was such a thing - part of the 'city farm' movement), where he spotted a short 7¼-inch gauge portable railway operated by Chris Finken.

At this stage in Terry's blossoming career, miniature railways would have to stay very much on the back-burner, but in 1993 he became Head of Research at Nottingham Business School and as his wife Rachel would still be working in London, the couple found themselves searching for a suitable home some half way between the two cities, and settled on Kettering, which offered excellent commuting in both directions. The family chose an interesting former mill near the village of Burton Latimer, which came with five acres of land, much of it wooded, and extensive outbuildings that could be converted into a granny annex for Francis' widowed father, then in his early 90s.

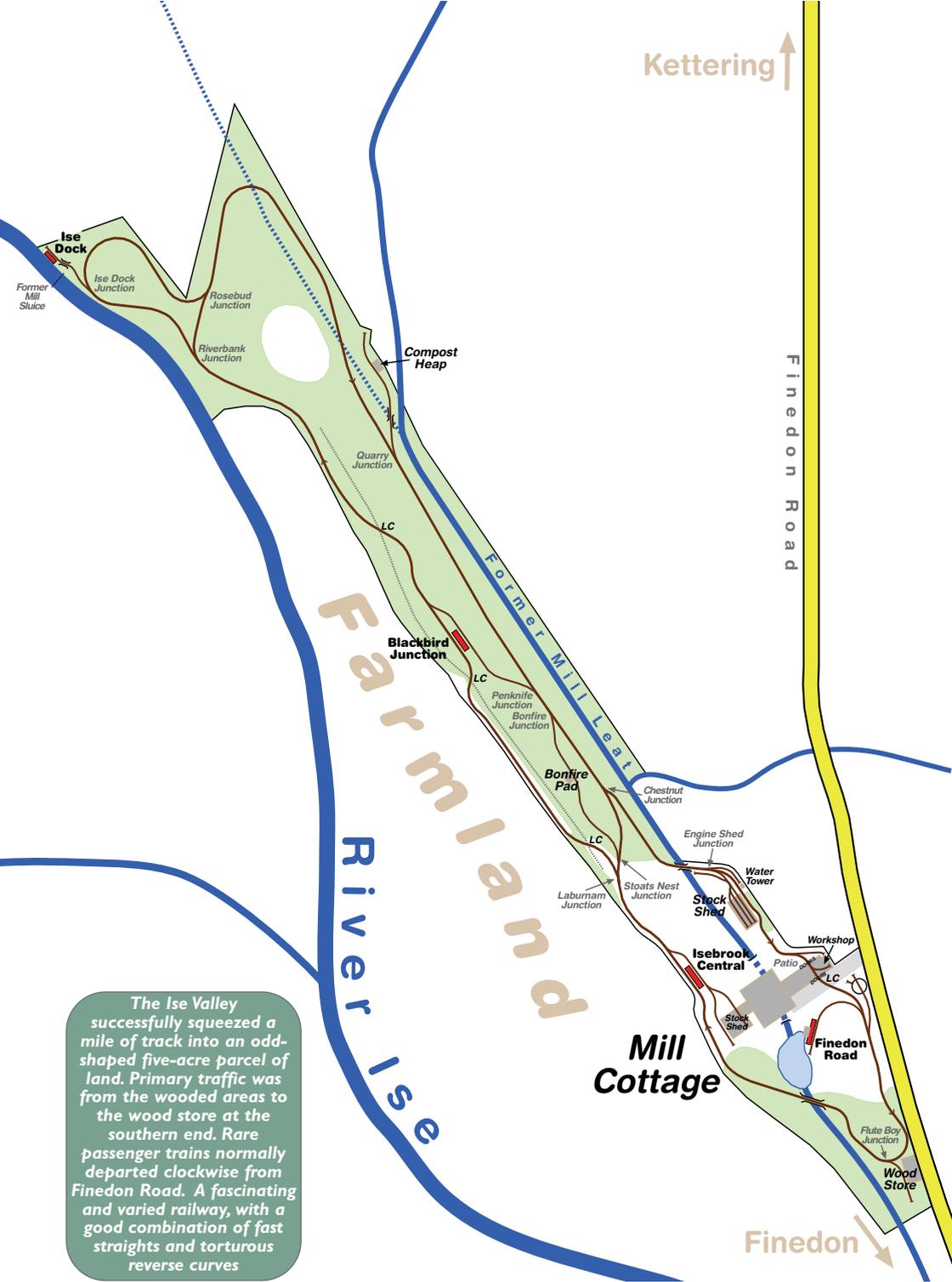
The house was convenience itself, but the physical layout of the rest of the property was something of a challenge, the five acre plot being in the form of a long thin strip of land beside the River Ise, a tributary of the Nene, which rises near Market Harborough, just a few miles away. It's not a big river, but liable to flood in winter, and the Terry's land was definitely part of the flood-plain. It was also a complete wilderness.

“...all good practical stuff for a miniature railway, avoiding the ‘untidiness’ of using a tractor...”

As you might expect from a Professor with a special interest in transport economics, Francis aimed from the start to build a ‘minimum gauge’ railway that effectively paid its way, as well as providing entertainment for friends and family. With a wealth of wood on the property, and three wood-burning stoves in the house, the *raison d'être* was obvious, and the railway was designed from the start to link the wooded acreage largely to the north of the property with a slightly raised wood-seasoning area to the south. All good practical stuff for a miniature railway, which would take up far less space than a gravel track, and avoid the inevitable ‘untidiness’ of transporting wood over damp ground by tractor.



The Ise Valley was a rare example of a 7¼-inch gauge freight railway. There should be more, because the ability to deal with sharp curves makes the gauge ideal for a modest and constricted acreage, and loads of a ton or more are quite practicable with the right equipment. This is the store where wood is cut and seasoned, either in one of the sheds or stacked up along the track. 'Joan' waits patiently in the siding with No.31, a 2019 bogie coal wagon and No.20, a 1984 flat wagon rebuilt in 2014



Kettering ↑

Finedon Road

Farmland

River Ise

Mill Cottage

Finedon ↓

The Ise Valley successfully squeezed a mile of track into an odd-shaped five-acre parcel of land. Primary traffic was from the wooded areas to the wood store at the southern end. Rare passenger trains normally departed clockwise from Finedon Road. A fascinating and varied railway, with a good combination of fast straights and tortuous reverse curves



*ABOVE: The short, steep incline from the turntable to Flute Boy Junction is the only gradient of any note
BELOW: There are a lot of points! The spacious yard includes a water tower a three-road shed and plenty of stock sidings. Note the heavy rail and galvanised sleepers*



There is a precedent for narrow gauge industrial railways in this part of the East Midlands, because Kettering and Corby were at the heart of the ironstone mining area for many years, although you'd never guess it today. Even leafy Burton Latimer had its own ironstone quarry, although the 2ft and 3ft gauge industrial railways here were nearly all gone by the 1950s.

“...many of the sleepers are in excellent condition after more than 20 years...”

Ise Valley Railway

Construction commenced in 1994 using 9lb/yd steel rail bought from Tony Harris, who operated a line at a garden centre in Redditch. The track was supplied on wooden sleepers, but because of the wet ground conditions, Francis later decided to relay the entire line with 1" x 4" galvanised steel sleepers, which proved quite an undertaking with a line that eventually grew to nearly 6,000 feet in length. More rail - 12lb/yd this time - came from the late John Milner's abortive scheme to build a miniature railway at Chirk near Llangollen.

The sleepers are superb things. Ideal for heavy use on soft ground conditions, and Francis is delighted that many are still in excellent condition after more than 20 years. If you are tempted by steel, the steel pressing work was done by West Herts Tools & Pressings of Dunstable, and the galvanising by Clark Drain of Yaxley near Peterborough. Perhaps surprisingly, both are still very much in business. Today, you should expect to pay a little under £8 a sleeper, plus £1 for galvanising. More expensive than wood or plastic, but their life can be measured in decades, and the resale value must be pretty good too.



The railway was primarily a freight operation and the stock is an unusual mixture of scales, from model standard gauge to seriously practical minimal gauge wagons. On the right are the generator van and coal wagon, both built here, and in the middle road, No.21, a bogie well-wagon built by T Harris in 1984



ABOVE: Unlike the 'minimal gauge' fleet, 'Secundus' is a diesel-hydraulic sit-behind club-style 0-4-0. Built by Alderson Loco Works in 1991, it ran at Ise Valley right from the beginning

BELOW: 'Cobber', dating originally from 2003, is much newer, but technically more interesting. The 14hp Loncin motor drives a pair of alternators, feeding two vertically-mounted motors - one on each bogie



Twelve pound/yard rail on steel sleepers wouldn't look out of place at 12¹/₄-inch gauge, so it's pretty heavy equipment for a 7¹/₄-inch line, although very much in keeping with the industrial theme. It can certainly handle anything the woodland can throw at it, and for a while the railway was home to a ³/₄-ton Tinkerbell too.

“...Twelve pound/yard rail on steel sleepers is pretty heavy equipment for a 7¹/₄-inch line...”

With such a complex layout, the railway has plenty of points, and we reckon there are at least 20 sets in total. All are controlled by nice simple over-centre mechanical levers, the key ones being equipped with locks to avoid accidental changes, although there are no signals or confirmatory indicators. The points were mostly fabricated by Roderick McCrae of Stroast, near Chepstow.

Flooding has always been an issue here. The Ise drains quite a large area of farmland, and the valley is rather flat. Any flood plain is going to be vulnerable, but this one particularly so, and the top end of the property around Ise Dock can suffer from flooding in winter. Incidentally, the disused Mill Leat on our map is still there, and creates an effective drain for this area during wet periods.

For reasons of practicality, the real donkey-work has always been done by four similar 0-4-0 and 0-4-2 internal combustion locos. ‘*Secundus*’ is a diesel-hydraulic; ‘*Joan*’, a petrol-hydraulic; ‘*Cobber*’ a Bo-Bo petrol-electric, and the forth is an interesting little petrol-mechanical loco built using parts from Ledbury Light Railway No. 3 ‘*Sherpa*’, which has featured in *MR* before. Other locomotives - both steam and internal combustion - have



Not unusual for light railways from any era, ‘*Finedon Road*’ is the only station of any importance, yet it’s nowhere near *Finedon*, and operationally quite hard to use. It’s in a lovely position though. The pond just beyond the buffer stop is part of the old mill leat.



ABOVE: 'Blackbird' is the only station at the wilder end of the property. This simple concrete slab platform was the standard pattern... Isebrook Central was exactly the same

BELOW: There were three major bridges on the Ise Valley line - two simple beam structures with wooden hand-rails, but the siding to the compost heap crossed the old leat on a more interesting 'A' type truss



come and gone over the years, but by 2020, only these 'sensible' locos remained.

The petrol-electric 'Cobber' is an unusual machine. Originally a more conventional 0-4-2 petrol-hydraulic, the balance between the axles was found to be uneven, which tended to throw weight onto the front bogie and lead driving axle, causing the rear axle to derail. In 2009 it was rebuilt as a Bo-Bo petrol-electric by former fork-lift engineer Derek Moss of Wigan. Derek's specialism explains the decision to go for the unfashionable electric transmission, with twin car alternators feeding vertical fork-lift motors, one on each of the two bogies. When the original Tecumseh engine failed a couple of years ago, it was replaced with a 14hp Loncin, but it seems bullet-proof otherwise.

Passenger stock is rare here! Only three passenger coaches remain, one being another Ledbury refugee, an ornate but rather compact two-person sit-in carriage. There are also two open quarrymen's bogie coaches that carry two facing adults in relative luxury. The rest of the stock is for freight. At one stage the railway was home to more than 20 wagons, from mineral wagons to water tanks, but these have thinned out a good deal, leaving a small, but equally eclectic mix of stock, some general purpose, and some - like the generator van - more specialised. Most are four-wheeled, but there are a couple of bogie wagons, one an impressively long well-wagon that looks capable of hauling back whole trees if required.

Operational details are never going to be fixed in stone with a railway like this, but passenger trains for visitors generally ran clockwise around the circuit, starting from Finedon Road station and ending up on the patio, just north of the house. The train could then run through the workshop to the turntable, and

"...passenger trains generally ran clockwise, from Finedon Road to the patio behind the house..."



Final word must go to the lonely halt at Ise Dock, where Alexander waits for the 17.15 to Finedon Road, which, sadly, will never run return. The detritus shows how regularly the river floods here, but the galvanised sleepers have lasted very well

reverse back into Finedon Road, ready to go again. There were no signals, as the line generally operated on a 'one engine in steam' basis, or by arrangement if busy!

The railway has only been used by friends and family members because of the cost and sometimes unrealistic stipulations of insurance, which simply isn't getting involved in for very occasional running days. Indeed, the only major open days have been for Kent Rail, and in 2011, the Railway Correspondence & Travel Society, of which Francis is a keen member.

A final farewell visit by members of the Sandtoft Trolley Bus Museum on 21st-22nd March 2020 had to be cancelled at the last minute due to the rapidly worsening coronavirus situation. This was to have been a final goodbye (not entirely though, see below), but it will not be possible now. By pure luck, we squeezed in our visit on the final day before the government lock-down, presumably making our photos the last.

The Closure

Once Francis and Rachel had both retired, the *raison d'être* for maintaining such a large labour-intensive property in the East Midlands had gone. Francis had already begun to sell off a few bits and pieces, the little Maxitrak in 2009 and petrol-hydraulic 'Dougal' in 2011.

Finally, with a retirement move firming up, it became clear that the railway would have to be removed prior to the property sale. Then one of the neighbours expressed an interest in purchasing the productive woodland, and on hearing that the railway was going, asked if the most easterly section could be left intact and included in the deal, with enough track to reach his own property nearby. At the time of writing, this unusual arrangement looks the most likely option, leaving about 300 metres of the railway intact, but the precedents for a 'non-railway' householder rebuilding and maintaining even a simplified railway are not very good. *Miniature Railway 12* tells the sorry tale of disgraced MP Piers Merchant, who was feeling the heat from the media, and bought the Great Torrington Railway as part of a country bolt-hole. Within months he had melted the fusible plugs in the only locomotive, then dismantled the entire machine. The railway never reopened.

Without wanting to sound too negative, purchasing a railway sounds romantic, and running it looks as easy as mowing the grass, but it involves time-consuming and very specialised engineering jobs. If you are thinking of buying an existing railway, and you don't have the skills, the most practicable solution can be an arrangement with a local model engineering society, which can usually round up enough volunteers with sufficient time and knowledge to keep it running, but of course you'll have to accept some sort of access arrangement for work groups, and most likely visits to run their own locomotives.

What of the remainder of the line? Francis had already arranged for most of the railway to be donated to the Sandtoft Trolleybus Museum, and despite members missing their tea and cakes outing in March, that is still expected to take place. We'll keep you posted.

FACT FILE

The Ise Valley Railway

Location: Burton Latimer, Kettering, Northamptonshire

Length: 1,750 yards (1,600 metres)⁶

Operational: 1994 - 2020

Gauge: 7¹/₄-inch

Locos: c1980 Maxitrak **No.1** 0-4-0 battery-electric, SOLD 2009 ¹

: 1980 Williamson '**Louise**' 0-4-2T steam, SOLD 2018 ²

: 1991 Alderson Loco Wks **No.2 'Secundus'** 0-4-0 diesel-hydraulic

: 1998 Alderson Loco Wks **No.3** 0-4-0 petrol-mechanical ³

: 2001 Pucci Eng **No.4 'Joan'** 0-4-2 petrol-hydraulic ⁴

: 2003 Pucci Eng **No.5 'Cobber'** 0-4-2 petrol-hydraulic ⁵

: 2005 Pucci Eng **No.9 'Dougal'** 0-4-2 petrol-hydraulic, SOLD 2011

¹ Rebuilt by Derek Moss in 2005

² Reboilered in 2008

³ Included parts from Ledbury Light Railway No.3 'Sherpa'

⁴ Rebuilt by Derek Moss in 2010 as an 0-4-0 petrol-hydraulic

⁵ Rebuilt by Derek Moss in 2009 as a Bo-Bo petrol-electric

⁶ This is the basic circuit. The total, including sidings, is 1,823 metres

Business

Get Everything in Writing!

Stuart Madgin reflects on three successful miniature railways eliminated at the stroke of a manager's pen



Stuart's final move was to Hatfield House in Hertfordshire in 2012. The railway was stuck away on top of a hill, a fair way from the car park, but clearly visible, and the venture seemed to be successful until a new manageress decided to close it down. This is Easter Monday 2013, and steam-outline petrol-hydraulic 'Hasty' is ready to depart with a rapidly filling train. An unlucky loco, in July 2017 it was loaned to the already doomed Poole Miniature Railway, but is currently back in storage

Following on from the sorry tale of the demise of the Mull Highland Railway in MR48, I would like to recount my own experience of railway evictions. They are all the more distressing because - as with the Mull railway - each of my operations seemed to be secure. The moral of the story is that without a decent lease, anything can happen and usually does eventually.

The first upset was at the two-foot gauge railway at Knebworth Country Park in Hertfordshire. We had spent ten years upgrading and expanding the existing McAlpine railway and establishing a museum, which became quite an attraction in its own right. The owners then decided that - after all that time - we were too close to the house. OK we thought, and after clearing the site we persuaded them to accept a 10¹/₄-inch railway at the playground a mile away.

After 21 years, everyone seemed to be happy, including the average of 40,000 passengers each year. But no! The 'Enforced Retirement' notice was rather bizarrely posted on the internet in January 2012, before it was formally confirmed with me. The 'need' apparently was to save money, which they later spent on a rather nebulous water feature on the site of our former station. Clearly, we were no longer flavour of the month!

However, fortune smiled on us in the form of Hatfield House, only ten miles away, so we blitzed the Knebworth site and set up at the new site in time for Easter 2012. Here too, after six seasons, everything looked fine and all parties, including a loyal public, were in approval. Then, out of the blue, a new manageress waved her new broom in our direction and the railway had to go. No good reason was ever given, except for warblings about redeveloping the site (nothing has happened yet). As the lady in question was too up-market to even introduce herself to us, one has to conclude that for her, miniature railways should stay in theme parks where they obviously belong. Here we go again, we thought, and this time I had to take all the track up in winter, so as to get out before Easter 2018. Luckily I have another railway only 12 miles away at Vanstone Park, so after sadly disposing of everything except the locomotives (I'm getting a bit old for this lark!), we retrenched there. But again, I have only an annual lease.

“...railways are not just cash-cows. They create a bit of magic and give a lot of people a living...”

I don't wish to be too sentimental, but railways are not just cash-cows. They create a bit of magic and give a lot of people a living, and a reason to get out of bed in the morning. Children get hooked on them, and sometimes have to be dragged away, adults go train-spotting, and compile lists. In a grey world, such things bring a bit of colour and serve a valuable social purpose, but the career managers and purblind owners just don't seem to get it.

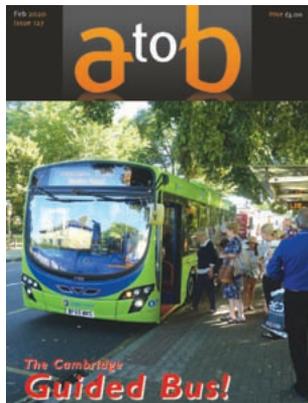
And they say lightning never strikes twice! We wish Stuart better luck with his next venture, and fervently hope it doesn't end up in the second edition of 'Lost Miniature Railways'



The layout was not ideal at Hatfield, but the station was reasonably visible from the car park and from Hatfield Park Farm, the 'petting zoo' that occupies several large fields just out of view to the left in this photo. You can only pet a goat for so long, so no doubt bored youngsters and dads made up most of the traffic

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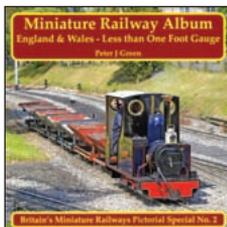
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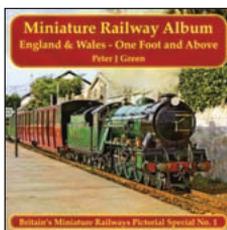


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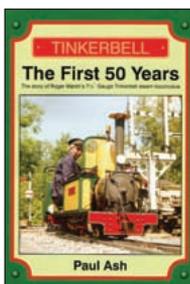
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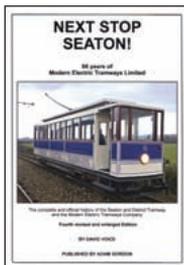
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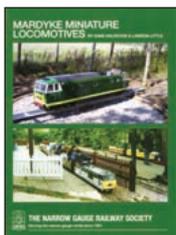


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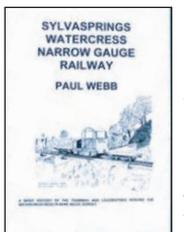


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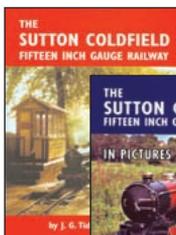


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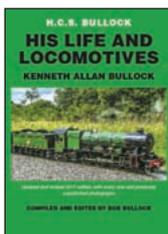


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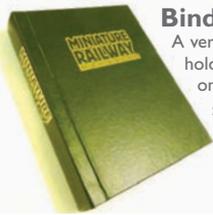
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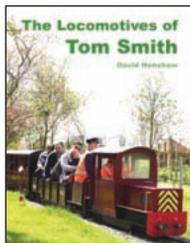
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Written by experts in the field, these books from the Narrow Gauge Railway Society are superb little reference works. Note that *RH&DR Engines, Carriages & Wagons* is almost out of stock. Please state if you prefer the 2013 issue now, or the 2017 issue in February. The titles speak for themselves! *Narrow Gauge Railway Society*

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It's not often we review something and immediately place an order, but we did in this case. These little documentaries from Railfilms are amongst the best films you are likely to see on miniature railways. Everything, from filming and editing to the quality of the interviews and background music, is top-notch. It's rare to see so much care go into the production of something so specialist, but here's the evidence that it can be done, and we look forward to more titles.

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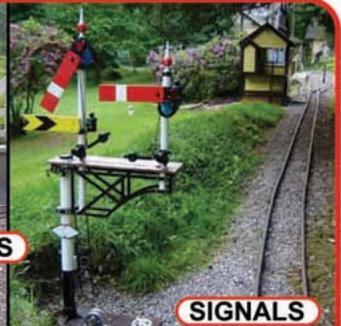
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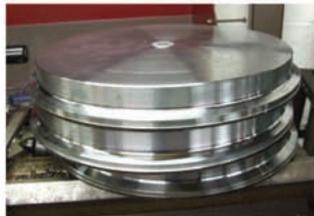
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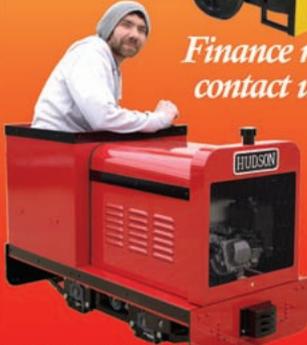


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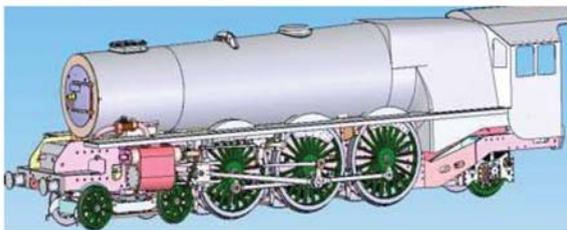


5" gauge GWR kit locomotive. A collection of unused new old stock machined parts for a GWR 14XX locomotive. The unopened boxes of kits for stages 1 to 6 will build into a rolling chassis with smoke box.

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5" gauge LMS Dutchess locomotive 1 only unopened kit boxes 1 to 12 plus some loose parts for 2 further kits (incomplete). This includes all tender kits and the majority of a rolling chassis for the locomotive with some motion and valve gear. This was the last model produced by Model works before closure.



1 only inc delivery (UK)

£2250



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Winson & Model Works spares we have a limited supply of machined spare parts for the range of locomotives manufactured by these firms. Some may be suitable for incorporation into other models please enquire.

Britannia or 9F cylinders

£175 pair limited stock



Printed assembly instructions and parts list with diagrams to help with the maintenance of your model available in book format



Solid model image

5" Gauge Prussian P8 live steam locomotive kit. A selection of machined prototype parts to build this locomotive. Included are 17 stages of parts* including a copper boiler to enable the design to be assembled and provide a demonstration model. This design did not reach commercial production by its designer so presents a commercial opportunity for small batch manufacture. Included are engineering drawings (2D) and parasolid files (3D), written assembly drawings with parts lists and assembly drawings. *List of parts available.