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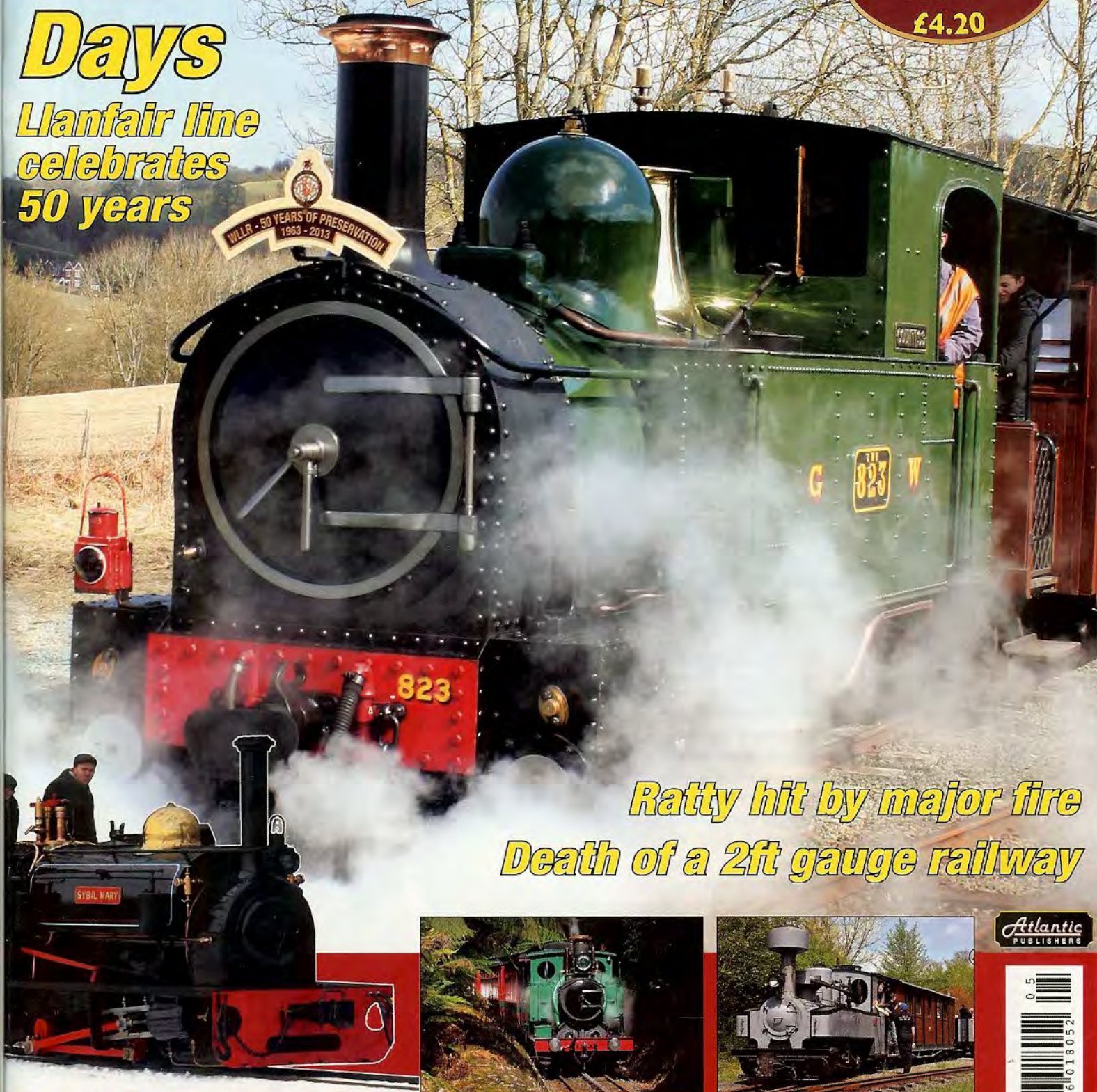
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Sweet Steam by the Zambezi

As related by *David Joy* in our last issue, the collapse of narrow gauge operations in a remote corner of Mozambique left behind a remarkable graveyard of steam. The second part of this feature looks at the inspirational rescue and restoration of many of its locomotives.

The monopoly once achieved by John Fowler of Leeds in supplying virtually all forms of equipment to Sena Sugar Estates had left behind a legacy that some saw as even more important than the numerous narrow gauge locomotives. It was the steam ploughing engines that were the prime attraction for Peter Court, owner of a quarry at Avon Dassett in Warwickshire and a keen traction engine enthusiast.

Once it was known that the engines had survived the protracted civil war in Mozambique, Peter

decided to embark on a recovery operation that was truly heroic in scale. In order to obtain what he really wanted, he had to take a job lot that included most of the surviving locomotives. The upshot was probably the largest consignment of narrow gauge motive power ever to be received in Britain, with no less than 27 ex-Sena Sugar locos arriving at the Warwickshire quarry in batches between 1998 and 2000.

They were mainly 'Feldbahn' 0-8-0Ts, some of which had been

Above: Taken under difficult conditions and of poor quality, this photo nonetheless captures the steam graveyard left at Marrameu after operations ceased. Numerous locos among the remnants of belt-driven machinery include Fowler 0-4-2Ts nos 16 and 20. No 16 is now under long-term restoration at the West Lancashire Light Railway. *Photo: Sandstone Heritage Trust Photo Library*

derelict for more than 30 years and were beyond hope of ever working again. Despite this most of the imports were soon sold on to various preserved lines and museums in the UK and Germany. Creating the greatest interest in Britain by virtue of their rare pedigree were eight Fowler locomotives, several of which are still undergoing long-term restoration today. Against many odds, two of them are operational and have inevitably attracted the greatest attention.

Fowlers at Bredgar

Two of the Fowler locomotives were quickly acquired by the Bredgar & Wormhill Light Railway in Kent. The younger of the two was built in 1930 for Wigglesworth & Co Ltd, a British company that was – and still is – active in growing and marketing raw sisal from east Africa. Delivered to the firm's Namagoa sisal estate in the north of Mozambique, it later moved south to the 60cm gauge system at Sena Sugar's Marrameu mill on the banks of the Zambezi.

The 0-6-0WT closely resembles well tanks produced at this time by manufacturers such as Orenstein & Koppel. German products had lost their patent protection during the



Left: This Fowler 0-6-0WT was the first Sena Sugar loco to be returned to steam in 2003. It now operates as no 9 'Limpopo' in the attractive setting of the Bredgar & Wormhill Light Railway. *Photo: James Waite*

Above right: Sena Sugar no 10, a 'Feldbahn' 0-8-0T built at Chemnitz by Hartmann in 1919, has now returned to the Eisenbahn-museum in its home city. Dieter Harnisch has undertaken a lone ten-year restoration programme, seen nearing completion in 2011. Photo: Mike Swift



Below: The boiler of the Fowler 0-4-2T built in 1912 receives a steam test at Bredgar in November 2007.

Below right: Restoration of the 0-4-2T with its distinctive outside frames was virtually complete in July 2010. It returned to service the following year, nicely in time to celebrate its centenary. For the first time in its long life, it is now fitted with brakes! Photos: James Waite

First World War and thus Fowler was one of several builders able to copy the design. It was both rugged and substantially cheaper than the equivalent British designs.

What was described as 'a ground-up rebuild' was required before the locomotive made its debut as no 9 in the Bredgar fleet in 2003. It was the first ex-Sena Sugar locomotive to be returned to steam and, apart from one brief period out of service for repair, it has run ever since. It retains its black livery and in honour of its original home railway has been named 'Limpopo' – another great African river that reaches the sea in Mozambique.

The second Fowler at Bredgar represented a very different challenge. It is the 50cm gauge 0-4-2T, which as related in the first part of this feature was discovered by Geoff Cooke at

Quelimane in 1975 after an intrepid journey by boat and light aircraft. It is thought to have been the fourth locomotive to be supplied by Fowler in 1912 to the pioneer Mopeia mill, where it remained in service until about 1965. Before being put on display in Quelimane, it had been liberally coated with paint that effectively covered many of the valuable brass fittings. Hence these escaped the attention of metal thieves during the civil war, but sadly the name and number plates 'disappeared' during the journey back to the UK by ship.

Fears that the major task might be re-gauging proved groundless. Concealed by the outside frames were axles on which the wheels were simply held in position by spacers to suit either 50cm or 60cm gauge. By the time this locomotive was built,

Sena Sugar's main mill at Marromeu had just been established and it would seem the company had the foresight to order engines that could readily be transferred between the different gauges of its two systems.

It was the general fabric of the loco that was in 'a fearful state' and involved major restoration work over many years. The boiler and firebox had to be sent away for expert attention and items needing replacement included the side tanks, water pump, cab roof and chimney base. One key absence that had to be rectified was the lack of any brakes – all very well on an African sugar plantation but definitely unacceptable in today's Health & Safety culture! All was finally completed for the locomotive to return to service in 2011 as Bredgar no 10 with the appropriate name »





'Zambezi'. It was able to run alongside Limpopo and last year celebrated its centenary in style.

To Germany – and beyond

Some of the many Feldbahn 0-8-0Ts brought in from Mozambique remain in the UK awaiting restoration, but the greatest interest centres round those that have gone elsewhere. Although more than 2500 examples of this distinctive and durable design were built by 15 manufacturers between 1905 and 1919, few survived in Germany after the First World War. It is therefore hardly surprising that two of the ex-Sena Sugar locomotives should find German buyers.

No 10 was built by Sächsisches Maschinenfabrik – vormals Richard Hartmann, in Chemnitz, in 1919. It is fitting that it was acquired in June 2000 by the Sächsisches Eisenbahnmuseum at Chemnitz-Hilbersdorf, where a major

restoration programme has been undertaken by Dieter Harnisch. Funds are at present insufficient to cover a new boiler, so temporary cladding has been fitted to the existing. The side tanks and cab have been rebuilt and reassembly was sufficiently advanced for the locomotive to be exhibited at the annual Modell, Hobby, Spiel exhibition held at Leipzig in October 2012.

More progress has been made with no 19, built by Henschel & Sohn, Kassel in 1916 for service on the Western Front. It was purchased in May 2000 by the Feld und Grubenbahnmuseum Fortuna at Solms-Oberbiel, north of Frankfurt, which had been trying to obtain a 'Feldbahn' locomotive for many years. Although it appeared largely complete, it proved to be in poor condition and required extensive restoration. Funds were contributed by the Hessian Science Ministry and

Above: Typifying the state in which 27 Sena Sugar locomotives arrived in England between 1998 and 2000 is no 19, a Feldbahn 0-8-0T built by Henschel. Despite their condition, only three remained unsold by 2003.

Below: The Feld und Grubenbahnmuseum, north of Frankfurt, had long sought a Feldbahn. After purchasing the loco, it undertook major restoration that enabled no 19 to enter regular service in 2011. Photos: Walter Brück

the Hessian Museum Association as well as many firms and individuals. A local engineering company agreed a special price for a new boiler and finally in 2010 the locomotive was painted in field grey with black edging before being prepared for testing. It entered regular service in April 2011.

One other Henschel Feldbahn has made more extensive travels. Built in 1915, Sena Sugar no 2 was the last such unsold engine remaining at the Warwickshire quarry when in 2003 it was bought by a Swiss enthusiast. He decided to send it to the Sandstone Steam Railroad in South Africa for restoration, which was completed at the Bloemfontein workshops in 2006. It boasts the unique accolade of being exported to South Africa twice and to Europe once!

From Sena to Sandstone

By this time the Sandstone Steam Railroad had become closely involved with developments at Sena Sugar Estates, where several relatively new Peckett steam locomotives had been excluded from the earlier sale. They had been retained in case the railway should ever be reopened, but it soon became evident that this would never happen and by 2002 rumours of their imminent demise were rife. This prompted a rescue bid, encouraged by the knowledge that surviving Peckett drawings held at the National Railway Museum in York would greatly help in replacing missing parts. A visit to Maromeu resulted in the purchase of three 60cm gauge 0-6-0STs, including the last to be built in 1957.

The sense of saving historic locomotives went a stage further, as the deal also included the two





0-6-0Ts that had been converted from 3ft to 3ft 6in gauge when the original 60-mile line to Caia was replaced in 1970 by a direct link with the Trans-Zambezi Railway. One of them was the last Peckett of all when built in 1958. Although unable to run on the Sandstone Steam Railroad, they were earmarked for the Bethlehem Steam Railway in the Eastern Free State of South Africa.

Above: This row of relatively modern Peckett 0-6-0STs looked a sorry sight when Sandstone Steam Railway began retrieval operations in 2002. Photo: Sandstone Heritage Trust

journey of well over a thousand miles that in parts could hardly have been more challenging. Yet it was unquestionably worth all the effort, as it was almost the final chapter in an amazing narrow gauge saga.

The California collection

One more country was to become home to locomotives rescued from Sena Sugar Estates. The fact that some went to the USA could have been influenced by the surprising choice of 3ft gauge for the line linking Marromeu mill with Caia. One of its original Fowler 0-6-2Ts of 1923 had become a playground exhibit when the more recent Pecketts were converted to 3ft 6in gauge, but there was no obvious home for it in Europe or South Africa. It was a different story in North America and it was appropriate that it should go to California, where the 3ft gauge was once commonplace.

The purchaser was Peter Nott, a collector who owns a restoration workshop in the small coastal town of Arroyo Grande and plans to develop a railway-type theme park. He has also acquired a number of 60cm

gauge locos from Sena including an oddity in the shape of an 0-4-0WT built by the Swiss Locomotive Works in 1944. It was supplied new to another Mozambican sugar estate at Namacurra before changing owners to see service at Luabo mill. It might be unusual but it is undoubtedly the Fowler that would be the prime exhibit. It has a fascinating pedigree and impressive dimensions. Any ideas that it could have had a new life on the 3ft gauge Isle of Man lines are wishful thinking!

The Sena Sugar story ranges over three continents and with the second part of this feature I am especially grateful to Walter Brück, Thomas Kautzor, Wilfred Mole of Sandstone Estates, Hannes Paling, Mike Swift and James Waite. **NGW**

More Information

■ Recommended for further reading are *Britain's World of Steam* by Paul Catchpole and *The Sandstone Steam Railroad* (2006). An informative article by A E Durrant appears in issue 10 of *Locomotives International* (1991) and a detailed account of the restoration of the Bredgar 0-4-2T in issue 171 of *Heritage Railway*.

Above right: Sena Sugar no 14, the last 60cm gauge loco to be built by Peckett in 1957, was the first to be restored at Sandstone. It returned to steam in 2006. Photo: Hannes Paling

Below: This 3ft gauge Fowler 0-6-2T at Marromeu was a playground exhibit until bought for a projected railway-theme park in California. Photo: Sandstone Heritage Trust

Acquisition is one thing but transport can be another – and this is certainly the case with Marromeu. The 3ft 6in gauge rail access had not been restored and the dirt roads were impassable during the rainy season. The sole option was Sena Sugar's sea-going barge, complete with its own crane, which provided the only way of taking out sugar when the weather turned wet. The historic 1957 Peckett, along with a sister 60cm gauge loco, were moved down to the loading wharf and hoisted on board, encased in bags of sugar as a protection against storms at sea.

After its passage down the Zambezi the barge headed out into the Indian Ocean to reach the port of Beira, where there was lengthy discussion on how best to get the locomotives to Sandstone. Eventually they went on a ship to Durban, where they were collected by low loader and were the cause of much relief when they reached their destination in May 2003. Fittingly, the 1957 locomotive was the first of the purchases to be restored and returned to steam in 2006.

Now that the trail had been successfully blazed, other Pecketts followed in the same way. One remained trapped behind a container stack and piles of machinery, and also left behind were several Baguley-Drewry diesel locomotives at the even more remote Luabo mill. For those making it to Sandstone, it was a

