

NARROW GAUGE WORLD

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Return to Steam of a Rare Pacific



Dave Richardson celebrates the completion of a remarkable South African locomotive restoration, which he feels has few rivals.

Prior to the end of steam in South Africa in 1991, the then Transnet Heritage Foundation put a number of locomotives back into service at its Bloemfontein Workshop as part of the National Collection. The mastermind behind these restorations was one man, Lukas Nel, who probably deserves the title of 'Mr Steam' in South Africa.

With the coming of democratic government to the country in 1994 many priorities changed and sadly railway preservation slowly slid down the list. Many private groups leased locomotives from Transnet and put them back on the rails as part of their operations but one area that saw little attention was the 2ft gauge.

As most lines had closed in the late 1980s it was left to the Apple Express in Port Elizabeth and the Banana Express in Port Shepstone to keep the flag flying. In 1999 a new operator appeared with the Sandstone Heritage Trust putting down its first rails in the Eastern Free State. The history of Sandstone is well known and at the heart of it all in the locomotive arena was Lukas Nel who was to restore 24 locomotives (including one 3ft 6in gauge example) in the period up to March 2019 and his retirement. Many project locos could politely be described as wrecks but this did not deter the man who was to become the master restorer of the 2ft gauge. Surprisingly, as it turned out, the 24th locomotive for restoration was

Above: The 2019 edition of Stars of Sandstone did not benefit from the usual consistently superb weather but there were some good days. Star of the show, the completed NG10 no 61 is seen here in crisp sunshine. Photo: Rob Tibbits

Below: Working days – no 61 at Humewood Road steam shed, Port Elizabeth. Photo: Leith Paxton

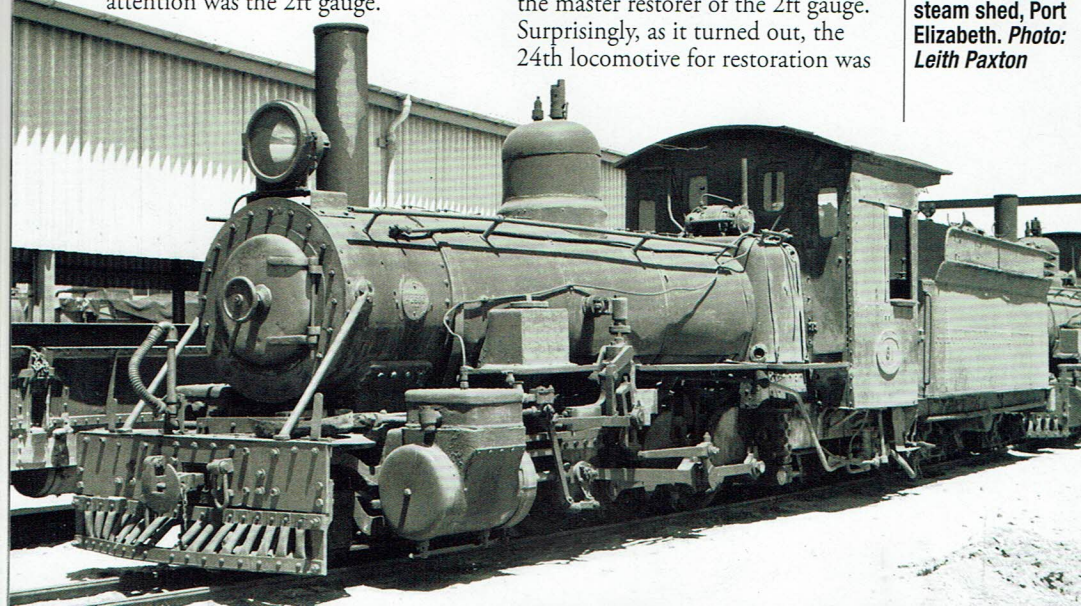
to become the most difficult project ever undertaken by Lukas Nel, NG10 number 61.

One of a kind

In any heritage collection it is pleasing to say one has the last survivor but in the case of the NG10 this is particularly so. Although a similar locomotive exists at the Brecon Mountain Railway in Wales, it is not a South African Railways (SAR) NG10 but an industrial engine built to a similar design.

During World War I, British locomotive manufacturers were unable to satisfy demand at both home and abroad and the SAR looked to America to meet their requirements. Initially six 4-6-0s were supplied in 1915 and 1916 by Baldwin and classified NG9, followed in 1916 by six 4-6-2s numbered 61 to 66 which were classified NG10. The class spent most of their lives on the Avontuur railway, either banking trains out of Loerie or on the Patensie Branch, although two examples (nos 63 and 64) did spend some time from 1948 in South West Africa. By 1962 all were withdrawn but no 61, the first of the class, Baldwin number 42633 of 1915, was set aside for preservation at Humewood Road in Port Elizabeth.

The NG10s were well liked by



crews with their large cabs. They were very American in appearance and were the only SAR type to feature a number plate on the smokebox door, although these disappeared along with their ornate chimneys during their time in service.

No 61's initial time in preservation did not treat the locomotive well as the corrosive sea air in Port Elizabeth wreaked havoc on it. This was to prove extremely problematic many years later during Sandstone's rebuild. After being moved from the steam depot to the diesel depot at Humewood Road, the deterioration continued and Sandstone stepped in and moved 61 to its Bloemfontein workshop in 2006 for an assessment for restoration. At the same time Baldwin in America was very keen to acquire the locomotive and ship it back to the USA but Sandstone moved quickly to purchase it so that it would remain in South Africa.

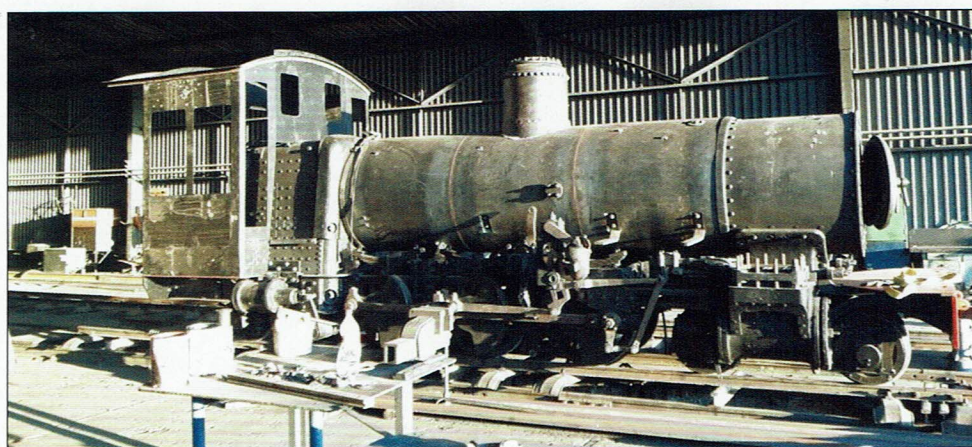
Doubtful future

A first inspection by Lukas and the Sandstone team deemed the loco unrestorable with the frames bent, the boiler completely wasted, the cab a write off and virtually no original boiler mountings. The tender tank was only fit for the scrap heap and the tender frames extremely rusted. With other projects underway the NG10 was consigned to the back of the workshop with a huge 'maybe' as to its restoration. It was only in late 2016, after the completion of NGG11 no 52's restoration, that it was decided to attempt the NG10 with a target date set of April 2019 for its launch at the Stars of Sandstone event.

The first task was to remove the boiler from the frames at Bloemfontein and despatch it to Keith Stevens's mechanical engineering facility at Howick. While stripping the loco it was discovered that many of the boiler mounts and fittings were actually wooden replicas and a long search began for bits and pieces with the prospect of making many items from scratch. Keith Stevens's crew replaced many sections of the boiler barrel together with a new inner firebox and smokebox.

Back at Bloemfontein a new buffer beam was constructed together with many of the frame stretchers that had rusted away. The rear bissel bogie frame was also fabricated from new.

As Lukas and his team delved deeper into the loco they began to realise the magnitude of what they had taken on. There were now so many items to replace that they felt they were building a new loco. This myriad of small jobs had slowed visible progress and the team felt they



Top: No 61 preserved at Humewood Road diesel depot. Here corrosive sea air did serious damage. Photo: G. Barnes

Above: Restoration under way at Bloemfontein with the boiler and cab fitted back onto the frames.

Below: The same location in February 2019 with restoration now complete.

might not hit the Stars deadline.

By July 2017 the frames were taking shape and the new rear bissel bogie had been fitted. After refurbishing the front bogies, attention was turned to the front end with the wheels back in the frame and the rods and valve gear now in place. The cylinders were examined but only after cutting off the existing cover bolts, rusted solid after 56 years in the sea air.

While the boiler was under repair, a new tender tank had been constructed together with two period-style tool boxes. The tender bogie axle boxes differed but Lukas, via his contacts, managed to assemble a complete set in the original style. As

2017 drew to a close the tender frame was stripped, cleaned and repaired as necessary. Delays with the boiler meant that it did not return to Bloemfontein until March 2018 for mounting in the frames.

Countdown to the Show

With just 12 months to go to the Stars event in April 2019, Lukas and his team (and everyone at Sandstone) were becoming nervous as all knew of the large number of tasks still to be completed. No 61, after all, was to be the 'Star' of the show! However just one month later the boiler was in place complete with lagging and brass rings and attention moved to the cab floor and





"There were now so many items to replace that they felt they were building a new loco..."

Left: No 61 enters Hoekfontein station on 5th April 2019 after its first public run. Photo: Rob Tibbits

Below: Broadside view of the NG10 resting during a photo charter. Cosmos is in full bloom behind the loco. Photo: Andries Keyser

Uncredited photos by Dave Richardson

was manufactured and by the end of December 2018 the locomotive really began to look like the real thing.

With only a short Christmas break the tender frame was completed and the new tender tank put in place. Early January saw the locomotive and tender reunited. Work continued apace on the cab fittings and in late February the NG10 felt steam in its boiler for the first time in 58 years as it passed its steam test with only a few minor leaks and adjustments to be rectified. The hard work was over and a very tired Lukas Nel and his team breathed a sigh of relief.

However it was not a straight run to the finish, as the loco still had to be commissioned in terms of the South African Railway Safety Regulator procedures. These were completed on 26th March, just one week prior to the Stars of Sandstone 2019 event.

NG10 no 61 made its public debut on April 5th and in a small family ceremony was named 'Ouma' in memory of the mother of Sandstone founder Wilfred Mole. It proved to be a very capable locomotive at Stars of Sandstone but will require some remedial work on the regulator assembly which proved problematic at times during the event. All in all this was a minor hiccup following a three-year marathon for Lukas Nel and his crew, to whom Sandstone says a big thank you and best wishes for a well-deserved retirement. **NGW**

reconstruction of the cab itself.

Throughout the restoration the Sandstone team had been lucky to be assisted by referring to many quite detailed photographs of the NG10, particularly from the Transnet library (that also provided a full set of drawings) and from railway author and historian, Leith Paxton. As the loco took shape these pictures became invaluable in fitting the cab,

running boards and many other items of the jigsaw.

Throughout July 2018 the cab took shape and a new regulator assembly was built together with the reversing lever. As time seemed to be flying by, the new main steam pipe was fitted and work continued on the cab. By September all the fittings had been assembled from various sources, a new chimney in the original style

More Information

A blow-by-blow, bolt-by-bolt account of the restoration can be found on the Sandstone website on <https://www.sandstone-estates.com/index.php/component/search/?searchword=NG10&searchphrase=all&Itemid=161>

