



NG15 Class 2-8-2 'Kalahari'

A pre-production inspection of Accucraft's latest conducted by **Stuart Moon**.

The NG15 2-8-2 tender loco is a classic design of South African narrow gauge locomotive, the other being the NGG16 Garratt. Having evolved from engines designed for heavy-duty work across the dry terrain of what is now Namibia, they later migrated eastwards to other South African narrow gauge lines, following the conversion of their original systems to 'Cape gauge' (3ft 6in). NG15s were designed for arid country with long gaps between water and fuel stops, requiring locomotives operate with very large tenders and needing railways with turning facilities at either end; a situation somewhat at odds to their new home on the Welsh Highland Railway (WHR).

On the 1:1 scale prototype, the leading driven axle is semi-articulated in a subframe combined with the leading pony truck this arrangement of the mechanicals known in railwayist terms, as a 'Krauss-Helmholtz' truck. On a dry rail or after the application of adequate sand (Snowdonia not normally noted for its arid conditions), the NG15 is able to give Garratt-like haulage making it ideal for working the demanding Welsh Highland line.

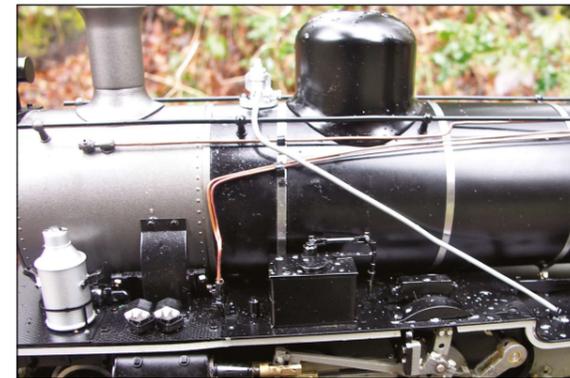
January 1998 saw two South African Railways (SAR) NG15 imported to the UK, for a planned railway scheme on the Yorkshire coast. This unfortunately ran into difficulties and was abandoned; with its rolling stock put up for sale. The Welsh Highland Railway (WHR) Project stepped in and purchased both NG15s and ex-SAR Garratt No 87 would later find its way from Exmoor into the

(WHR) fleet. Currently none of the three are running but one of them is under restoration.

So that should give a little verisimilitude for those wishing some history to back up the appearance of a gurt hoooge model on their bosky branchline operation. Although, few garden railwayists will have either the terrain or heavy traffic needed to support such a large model (and this is a BIG model in every sense). Measuring a full 915mm in length, with height to the top of chimney of 170mm this may cause a few issues with any overbridge. The overall width at 135 mm may also cause a few difficulties at platforms and similar long established lineside features.

When Accucraft initialised the project, the final physical appearance of the NG15s on the WHR was under debate, so the final design settled on producing models in ex-SAR form. It will be interesting to see who offers the first WHR-style tender to trail behind the loco. Currently there is no 1:19 scale South African Railway rolling stock available, although there are trade rumours of kits to suit and **GardenRail** will be the first to name the manufacturer; the thought of long strings of tiny slate wagons attached to Kalahari's couplers will no doubt amuse a few.

No matter how you look at £3500.00, it is a large amount to pay for a toy train, although in fairness one need look no further than the US branch of Accucraft or Aster G1 to see that prices are comparable on similarly pieces of heavy engineering 'writ small'.



Left: Accucraft UK's NG15 'Kalahari.' One of the largest locomotives to run on the Little Bovey and Heathfield Tramway. Ruggedly functional in her sober black livery. The damp conditions are evident in this shot.

Top: The detail parts applied to the running boards. Just creeping into view are the dual safety valves. Whilst slightly over-size they look much better than the more usual offerings.

Above: Under the dummy coal load is a manual feed water pump delivering via a similar 'push in' connector to that fitted on the boiler. The gas tank takes a modest amount of space in a generous water bath and you should just be able to see the dual gas injectors and feed pipe. The boiler return feed allows either excess water OR steam to pre-heat the feed-water. At the rear of the water bath is an empty space, which could take batteries for lighting, powered water pump or a radio control receiver.

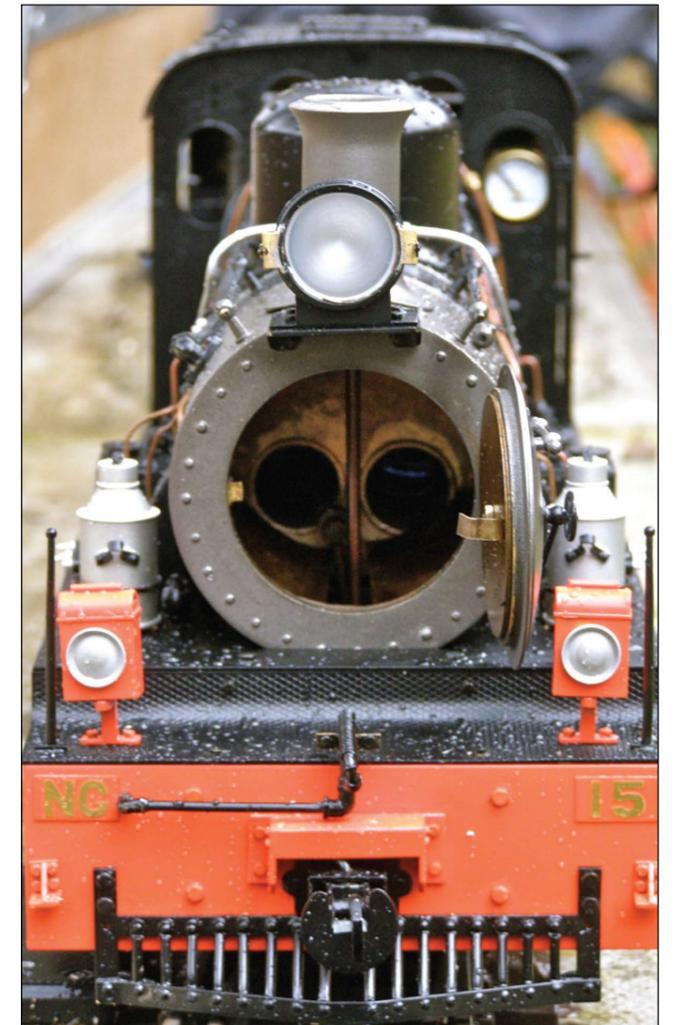
But it is a very nice model; and it has presence, looming large on the steaming bay or station yard.

But let us pass beyond the superficial matter of fiscal demand, and look at what that investment of cash procures. The basic Accucraft live steam locomotive bits and pieces are present, so potential owner/drivers with experience on the footplate of 'Edrig' should be able to set Kalahari into action. It is just the volume of fuel, water and lubricating oil that alter.

Oiling round is a challenge, turning the model over to access all the bearing metals can be a little fraught. Balancing this model on its roof is a heart stopping operation the first time. Fortunately, there are not too many fragile items to remove before the indignity of an inversion. Add the fact that the cab roof is mostly flat, thus once inverted onto a chunk of medium density foam the locomotive is fairly steady; but a stabilising hand would not go amiss as the oil can is administered to the numerous pivot and bearing points.

Once back onto its wheels we can connect the water feed and bypass connections between tender and boiler, fit the dual burners into their fire tubes before starting to add the gas, water and steam oil. Lifting the dummy coal load on the tender reveals the gas tank and manual water-pump. When the air temperature is below 12 degrees Celsius it is important to add a good fill of warm water around the gas tank if the locomotive is to 'fire' correctly. The demands of the dual burner being sufficient to 'frost' the gas tank if you omit the warm-water bath.

It is at this point that one has to wonder if things are now



Above: The 'trademark' opening smokebox door reveals dual fire tubes. The lamps are cosmetic mouldings, a shame.

slightly beyond the abilities of 'open' burner gas firing. Certainly it would be possible to have made Kalahari internally coal or spirit-fired with a multi-tube boiler complete with blowers, axial water pumps and similar complications. However, this simplicity means owners have no new techniques to learn, they can confidently demonstrate their latest acquisition without climbing the associated vertical wall of operational knowledge.

Most modellers do not have sufficient stock or line length to impose the kind of demand that call into question the ability of LPG to produce sufficient steam, even with a dual burner. In the brief time available for preview testing, it was possible to over fire the boiler and have the safety valve lift continuously. Subsequently it transpired that one of the burners was partially blocked so one flame was more than adequate to ensure a good head of steam albeit when running light engine.

One item that large cylinders demand are proper cylinder drains and Accucraft have fitted two sets of manually operated drains. They work very well, a quarter-turn of the neat Tommy-bar shoots hot water onto the ballast with each admission of steam. All of which makes the warming through process that little bit easier, although owners will still need a good 25-30ft of track before Kalahari is freed to run unaided down the mainline.

With the regulator eased a little wider, off she goes in a smooth, quiet and controlled manner. Here is one aspect that needs a little attention, a loco this size should SHOUT its presence at low speed, and one would hope that the factory will tune the production model



Above left: The view into the cab reveals that much of the 'standard' Accucraft layout exists on this much larger loco. The pressure gauge peers out of the nearside cab window. The Tommy-bar fitted lubricator cap hides beside the height adjustable crew seat, the green disc. The black disc is the boiler fill cap and below that is the regulator one-step lower and the dual burner mounts are viewed. The feed water return is the black item with the length of tube leading out of the cab. Finally, the reverser stand snuggles up to the boiler side. With the other 'green smartie' crew-seat visible at the cab doorway.

Above: That is one big tender... Will the Welsh Highland versions use quite such an enormous fuel container?



Left: A clearer view of the valve motion. Note too the cylinder drain cocks, these manual cocks really do help the warming through process when starting the model from cold or after a station stop.

chuff pipe to produce a stronger 'voice' and reinforce the otherwise admirable display of controlled power.

In the brief time available there seemed to be little adverse to say about the performance of the model. With the addition of some warm water to bathe the gas tank, Kalahari coped easily with low air temperatures, flooded ground and constant soaking drizzle, a combination that drove the assembled testers indoors long before the water or gas was exhausted.

In summation, this is a very nice model of an interesting prototype. It will need a garden line with wide-open spaces and 8-12ft radius curves to deliver its best performance. On pounds per millimetre, one could enquire if is money well spent, there is little doubt that this model will continue to keep Accucraft UK's name central in the world that is narrow gauge garden railfaring, and value for money? I think you should make your own judgement.

THE PROS

A model with abundant presence, mass and performance, can you ask for more? Copes with LGB R3 set track, which is probably the tightest practical working radius. Fortunately, the loco has sufficient power to deal with any 'pinching'. Manual control only, factory fitted radio control is unlikely.

THE CONS

Beyond the pockets of many modellers. A little too large for bosky British narrow gauge lines. No supporting rolling stock...yet, although this could all change in the not too distant future. Solid moulded lanterns are questionable on a £3,500 model, one hopes the finished models will have something more in keeping.

CONCLUSION

Along with the W&L 'Countess' and NG16 Garratt; Kalahari is a landmark locomotive in Accucraft's progress into the demanding

world of fine scale models. The level of engineering involved is exemplary for a ready-to-run model. The addition of a loud chuff and a chime whistle would be the icing on this particular cake. A few years ago, such large and costly models would have been the preserve of wealthy modellers who could commission a bespoke locomotive from one-man operations working in their garden-shed workshop. Modern materials and manufacturing processes have turned that world on its head. Never has series production of complex items been more affordable. If your line has the space and you have the means then this may be the model to fill that empty road in your running shed.

SPECIFICATION

- Scale: 1:19 Scale, 32mm/45mm gauge adjustable
- Minimum Radius: 1.2M (48 inches) LGB R3 is feasible
- Power: Butane
- Length: 915mm (36ins)
- Width: 135mm (5 3/8ins)
- Height: 170mm (6 3/4ins)
- Boiler: Gas fired, twin flue
- Valve: Simplified Walschaerts
- Boiler Fittings: Safety valves, pressure gauge, water sight glass, boiler water feed valve Cab Controls: Steam regulator, reverse lever, lubricator with under floor drain valve, hot water return valve for tender.
- Tender: Gas tank and hand water pump in warm water tank, A return valve for reheating the gas tank warm water tank when needed.

GardenRail Resource

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