



THE NORTH STAR CHRONICLES – a newsletter primarily for the model railway fraternity

Volume 14 no 10 October 2026

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Editorial

My original plan for the feature article in the October NSC was to be 'The former sugar industry narrow gauge steam locomotives – Where are they now?', with the article that follows to be placed on my website.

However, life became complicated so the following article can be considered an introduction to the subject dealing with just one branch of the matter, specifically one manufacturer, Bagnalls of Stafford.

Next month will cover the ex sugar industry locos that remain in South Africa and December those that were exported.

The Tongaat Bagnalls

The Tongaat Sugar Company had a supply relationship with W G Bagnall of Stafford England which endured over 40 years and involved 14 locos for its 2' gauge tramline system. In fact only one of Tongaat's steam locos bought new was not a Bagnall and that was the first loco the company purchased which was a 0-4-0 Fowler named 'HOPE' – works number 8123 of 1898. (Three additional steam locos were acquired second hand when Tongaat acquired the Umhloti Valley Central Sugar Company - an Orenstein and Koppel 0-4-0 no 3460 of 1909, an Andrew Barclay 0-4-2 no 1459 of 1916 named 'UMHLOTI' and allegedly an 1899 Avonside purchased from Rand Mines in 1920. There is scant information about this last loco.)

The first three of Tongaat's 14 Bagnalls, all 4-4-0 tank locos apart from the first which was a 2-4-0, were works numbers 1800 of 1906, 1873 of 1907 and 1929 of 1910 named 'TONGAAT', 'SUCCESS' and 'REPEAT'

respectively. These had cylinder sizes 9" x 14". Some sources allege that the first loco namely 'TONGAAT' was sold to Rustenburg Platinum Mines as their no 1 but Allan Baker believes the loco was scrapped in 1932. (Refer article on the History of the Tongaat Bagnalls by Allan Baker later in this newsletter). It is perhaps significant that another loco of the same name arrived in 1933. 'REPEAT' was scrapped probably prior to the Second World War. 'SUCCESS' was sold to R Scott in 1948 but whether this was the entire loco or just the boiler which was not removed from the boiler register until July 1953 is not known.

The next 11 locos all had larger cylinder sizes – 10" x 15" and were numbered and named as follows:

2287 of 1926 – 'SINEMBE'

2342 of 1928 – 'MONA'

2374 of 1929 – 'ISIBUTU'

2471 of 1932 – 'WEWE'

2479 of 1933 – 'TONGAAT'

2522 of 1935 – 'SIMPOLA'

2599 of 1939 – 'WJ MIRRLEES'

2627 of 1940 – 'A BOULLE'

2647 of 1941 – 'EDWARD SAUNDERS'

2819 of 1946 – 'CHARLES WHYTOCK'

2820 of 1946 – 'EGOLOMI' (renamed 'ROBERT ARMSTRONG')

Bearing in mind the 11 locos were built over a period of 20 years it is not surprising that there were many quite significant differences between them e.g. tanks, bunkers, boiler sizes, boiler pressure, even wheelbases and types of design and construction. (drawings and a schedule of differences between the locos – both compiled by Leith Paxton later in this document.).

Inevitably, given the passage of time and the dimming of memories, there is also some controversy surrounding the locos. For example, a distinguishing feature of many Bagnall narrow gauge locos including the Tongaat ones was that they were built with a so called marine (circular) firebox and "bull head" boilers. Some have alleged that the former made maintaining the fire and clearing the firebox of ash a more difficult task than normal. Others refute this and maintain that the task was 'dead easy'!

The proponents of "bull head" boilers would maintain that that they had significant advantages, namely:

- Cheap to build because of the relatively low number of stays
- Easy to repair
- Foolproof in use (unskilled personnel could handle them without damaging them)
- Not susceptible to bad water/scaling/sand etc (Graeme Walton-Binns has reported that he took barrow loads of muck, mainly sand from the shells of his locos inferring that maintenance was minimal at least in their later years. He also reported finding scores of bits

of old electric household wire stuffed in the 'lube' system of two of the locos. Despite the neglect and abuse to which they were subjected, they still worked – a tribute to the designers and builders).

However, even the company in the form of the then Managing Director of W G Bagnall, W A Smyth, following a visit to South Africa in 1954 intimated that:

“All our locomotives here have the ‘bull head’ boiler which gives a fair amount of trouble with cracked throatplates and boiler rings (details available). When the new inquiry is issued we should offer a conventional steel firebox and not the ‘bull head’ type.”

Nevertheless, the fact that Tongaat kept going back for more is indicative of operational robustness and that overall the advantages of the locos outweighed the disadvantages.

Photos

W. G. BAGNALL, LTD.

FOUR WHEELS COUPLED WITH FOUR WHEEL LEADING BOGIE.

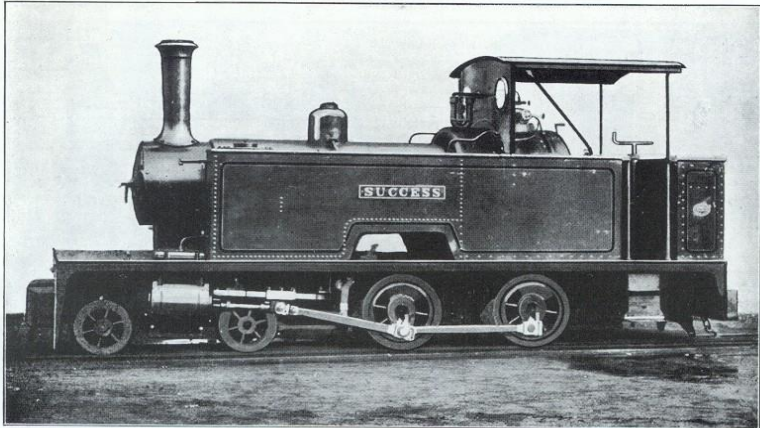


Fig. 332.

TYPE—"SUCCESS."

Code Word—Deedifca.

Side Tank Locomotive with 4 wheels coupled and 4 wheel leading bogie. A very well balanced engine and specially designed to suit the requirements of Tea and Coffee Planters, Sugar and Rubber Estates, and all Mines and Quarries having narrow gauge railway and sharp curves. All wearing parts have ample wearing surfaces and the details have been carefully thought out. Fitted with steel fire box and steel tubes. Suitable for gauges of 2' 6" to 3' 6".

SIZES AND APPROXIMATE SHIPPING PARTICULARS.

Size of cylinders in inches.	Approx. H.P.	Weight in working order tons	Code word.	Packed in one case.		Packed in parts.	
				Gross weight cwt.	Measurements.	Heaviest package cwt.	Total cubic feet
7 x 12	40	9	Deedifim	165	16'-0" x 6'-0" x 7'-6"	67	800
8 x 12	60	11	Deefest	202	17'-9" x 6'-1" x 8'-5"	80	930
9 x 14	80	13½	Deegel	270	20'-0" x 6'-6" x 8'-6"	84	1170
10 x 15	90	17	Deegelbau			89	1300

Can be fitted for burning wood fuel, with extra large fire box and wood rack, and can also be made suitable for using oil as fuel. Spark arrester and any type of cab can be fitted to suit special requirements. Other additions and variations to design can be made on receipt of full particulars. For particulars of loads engine will haul, see page 4.

WHEN ORDERING USE PRIVATE CODE AT END OF CATALOGUE.

CASTLE ENGINE WORKS, STAFFORD.

29

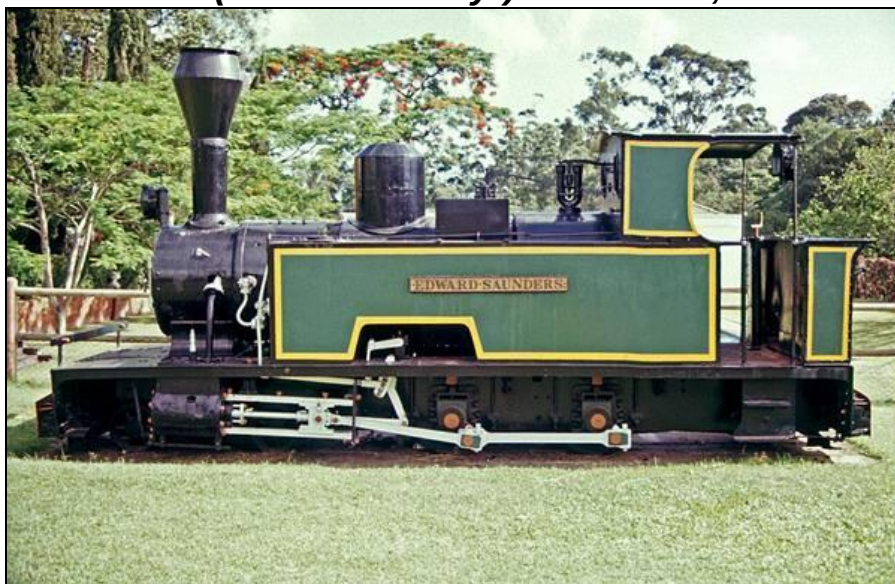
1. 'SUCCESS'



2. 'A BOULLE' at Sezela? Photographer unknown.



3. 'ISIBUTU' (the real McCoy!) Maidstone, Charlie Lewis



4. 'EDWARD SAUNDERS' ('SINEMBE') at park in Maidstone. Photo Errol Ashwell



5. 'SINEMBE' at Welsh Highland Railway. Photographer unknown.



6. 'ISIBUTU' ('EGOLOMI') at Knebworth Park. Photographer unknown.



7. 'ISIBUTU' ('EGOLOMI') at Statfold Barn.



8. 'PROSPECTON' ('CHARLES WHYTOCK') at Prospecton in early seventies. Photographer Errol Ashwell.



9. 'TONGAAT' ('MONA') in Bulwer Park. Photographer Errol Ashwell.



10. 'MONA' at Inchanga. Photographer unknown



11. 'ROBERT ARMSTRONG' ('EGOLOMI') at Sezela.
Photographer unknown.

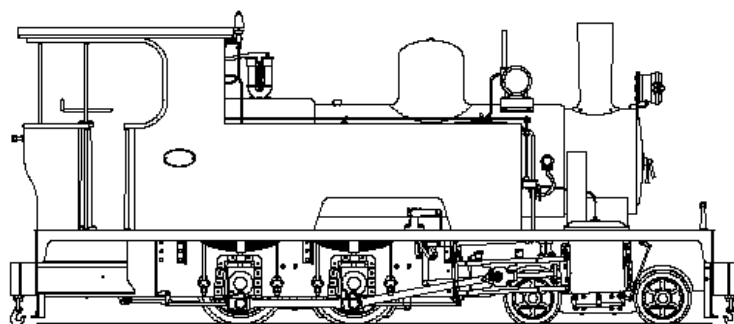


12. 'ROBERT ARMSTRONG' ('EGOLOMI') also at Sezela.
Photographer Ken Barnes



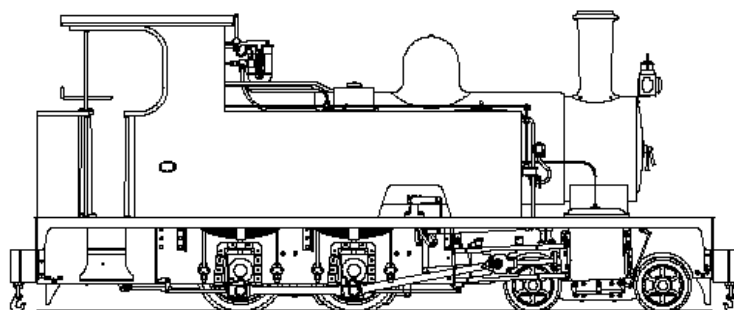
13. 16mm live steam model of 'ISIBUTU' ('EGOLOMI'?) by Keith Butlich.

Drawings by Leith Paxton



*W.G.Bagnall 2819/4.6 for Tongaat Sugar Co. "CHARLES WYTOCK"
W.G.Bagnall 2820/4.6 for Tongaat Sugar Co. "EGOLOMI"*

Drawn by L. Paxton 2005



*W.G.Bagnall 2342/28 for Tongaat Sugar Co "Mona"
W.G.Bagnall 2374/29 for Tongaat Sugar Co "Isibutu"*

Drawn by L. Paxton © 2005

Loco features. Schedule by Leith Paxton

	Horns	Posi of Check from tubeplate	Cab Roof	Bunker parallel	Tank cutout	Water lifters	Whistles	Steps	Chimney	Sand boxes	Frt Buffer beam H/R	Life gaards	Outside Steam pipes	Electric lighting	Dome	Turret
2287 SINEMBE	?	6"	short	no bunker	long+with water in front space	yes	one	short	flare	yes	no	yes	inside	no	small	On S/V's
MONA 2342/28	parallel	6"	short	parallel	small+no water in front	yes	one	short	flare	yes	no	yes	inside	no	small	On S/V's
ISIBUTU 2374/29	taper	3"	short	parallel	small+no water in front	yes	one	short	flare	yes	no	yes	inside	no	small	On S/V's
WEWE 2471/32	taper	3"	long	rollover	long+with water in front space	no	two	short	flare	yes	no	yes	inside	no	small	On S/V's
Tongaat 2479/32	taper	3"	long	rollover	long+with water in front space	no	two	long	parallel	yes	no	yes	inside	no	small	On S/V's
SIMPOLA 2522/34	taper	3"	long	rollover	long+with water in front space	no	two	long	parallel	no	yes	angle	inside	no	small	On S/V's
W.J.MIRRLEES 2599/38	taper	3"	long	rollover	long+with water in front space	no	two	long	parallel	no	yes	angle	inside	no	small	On S/V's
A BOULLE 2627/40	taper	3"	long	rollover	long+with water in front space	no	two	long	parallel	no	yes	angle	Outside	yes	small	On S/V's
EDWARD SAUNDERS 2647/40	taper	3"	long	rollover	long+with water in front space	no	two	long	parallel	no	yes	angle	Outside	yes	small	?
CHARLES WYTOCK 2819/44	taper	3"	long	large	long+with water in front space	no	two	long	parallel	no	yes	angle	Outside	yes	large	In Cab
EGOLOMI 2820/44	taper	3"	long	large	long+with water in front space	no	two	long	parallel	no	yes	angle	Outside	yes	large	

Article by Frank Jux 'Steam at Tongaat' from the Spring 1979 edition of the Industrial locomotive the journal of the Industrial Locomotive Society

STEAM AT TONGAAT

by Frank Jux

One of the more exotic of the imported industrial locomotives in this country is the Bagnall 4-4-OT at present at Knebworth, and owned by our Chairman, Bernard Latham. It was one of a number built for the Tongaat Sugar Co. Ltd., but although I was in South Africa for several years, I never saw one working. My first sight of the class was in August 1963, by which time Tongaat's mill was served by road transport, the first of the big South African mills to abandon its tramway haulage. Two of the Bagnall 4-4-OT's were in use as stationary boilers, while the remainder were reposing in the shed. All, that is, except SIMPOLA, which had been hired to Illovo Sugar Estates to the south of Durban. Illovo drew cane from a large, somewhat scattered area, and their line ran inland for quite a distance towards Pietermaritzburg, in contrast to the usual 'spiders web' pattern of track surrounding a mill. As far as I know, they still operate this main line with Hunslet diesels. However in 1963, before the delivery of a second 230hp Hunslet bogie diesel, they had used SIMPOLA, and as the season was drawing to an end, had put her through the workshops to emerge resplendent, ready to be returned to store at Tongaat. My contact with Natal was unfortunately then broken, as I had to move to Cape Town, over 1000 miles away, and I was unable to note the exact movements of the Tongaat stock. Two went onto plinths for display, one by the swimming pool at Tongaat, and the other in Bulwer Park, Durban. Most of the others went to Reynolds Bros. Ltd., inveterate collectors of second-hand steam locomotives before they too changed over to road transport. They used them on the Sezela mill system, and also on the isolated Umwalumi Valley Estate whose tramway fed cane to a main line siding for transport to Sezela. In 1970 Frank Jones and I visited Sezela Mill, only to find almost the entire stock lined up in the yard awaiting disposal. That season the cane had been brought to the mill by independent road hauliers, and the railway rolling stock kept as standby. However, it had not proved necessary to use tramway haulage at all, and it had been decided to sell all the stock. Some, indeed, had already gone, the engineer having once been aroused from his sleep by a transatlantic call from America asking to buy one of the Bagnall articulated locomotives which they had acquired from Hulett's. On return to England, we publicised the availability of these locomotives, and several have returned to this country, including another loco. at Knebworth, an Avonside 0-4-OT of a class popular in Natal.

Their work in this country is a far cry from their use overseas, and unless you have visited a sugar mill, it is difficult to imagine the atmosphere. Tongaat is a big mill, and in the 1960s was claimed to be the largest in the Southern Hemisphere; whether this claim still holds I do not know, but it is certainly among the largest. Like all long established mills, it started in a small way before the advent of railways to the area provided access to wider markets. A small and primitive ox powered mill commenced operations in 1854, but the output was very small. By 1861 steam power had been applied, and gradually more machinery was acquired to handle an increasing crop. Just before the turn of the century a number of events important to the history of the estate occurred. In 1894 a Bill was

passed allowing extension by private enterprise of the railway along the coast north of Durban to serve the outlying sugar estates, resulting in the construction of the Zululand Railway, although the track did not reach Tongaat until 1897. With expansion in the air, capital was required, and a new partnership was formed in 1896 between the former manager (but by 1896 the owner of the Tongaat Estate) Edward Saunders and W.J. Mirrlees, the son of the senior partner in the firm of sugar machinery manufacturers, Mirrlees, Watson and Yaryan. However, expansion was so rapid that more capital was required, and an English company, the Tongaat Sugar Co. Ltd. was formed in 1899; this existed until 1918, when another company of the same name was formed in South Africa to take over the assets.

The earliest transport would have been performed by bullock cart, in much the same way as cane is still hauled to mills in some countries today. Expansion would have taxed the roads, and portable railway tracks were introduced extensively throughout the world in the latter half of the nineteenth century to move sugar cane. Tongaat is said to have bought its first locomotive, and laid its first tramline to the fields at the Inyaninga section of the estate in 1897, but bullock operated track may have been used earlier, as the order to John Fowler by W.J. Mirrlees for a locomotive stated that track by Koppel and Dick Kerr was in use on the estate. Fowler's supplied a small 5½" x 10" 0-4-OST for 24" gauge track in 1896, their number 8123. Named HOPE it had originally been allocated to an order for an Egyptian sugar estate, but was probably sent out to South Africa to meet the urgency of the order, for the cattle disease rinderpest had decimated the transport animals, and more orders for locos. were envisaged. None came Fowler's way at that time, but the plague probably influenced other estates to use loco. tramways, and Avonside started a long connection with the South African sugar estates in the next few years. Bagnall's first locomotive for Tongaat was a 9" x 14" 2-4-OT in 1906, and we must wonder whether HOPE laboured single-handed in the intervening period, or whether Koppel or Dick Kerr sent a loco. along with their track. HOPE's diminutive size suggests that the existing track was light, and it was undoubtedly laid to heavier section in later years. Her haulage capacity was hardly suitable for Natal conditions, where few estates, Tongaat NOT included, have level ground, and most tramways labour around the sides of hills. Nevertheless, the track expanded out into the fields of the growing estate, and more locos. were needed, the requirement being largely provided for by the purchase of 4-4-OT's from Bagnall. In 1922 the nearby Umhloti Valley Mill & Estate Co. Ltd. was acquired, and its mill moved to the present site at Maidstone, joined after a few years by the mill plant from Tongaat itself. With Umhloti came a Barclay 0-4-2T, which in more recent times has stood outside the office at Maidstone, but whether this was their only locomotive has not been confirmed. By 1955 statistics showed that the company owned 11 steam and 2 diesel locomotives, operating with almost 3000 cane wagons over 76 miles of permanent track, and with a further 70 miles of portable and semi-portable track in the fields themselves. Matching the network to the map at Knebworth would provide some of those intriguing comparisons beloved by journalists, and might even link up with that other "South African" line, the Whipsnade and Umfolosi. In South Africa, the Umfolosi Sugar Estate still operates a railway (on 2'6" gauge, be it noted), though with diesels only. They too had a Bagnall, though of 2-6-2T wheel arrangement - but that is another story.

Bagnalls for Tongaat

by Allan C. Baker

Elsewhere in this issue, Frank Jux has mentioned that Bagnall supplied much of the motive power at Tongaat, and the following notes may be of interest. The Tongaat Estate ordered their first Bagnall in February 1906 and the Castle Engine Works produced an engine based very much on their established practice. Works no. 1800 was a 2-4-0 side tank with inside frames $\frac{3}{4}$ " thick, outside cylinders 9" x 14" and fitted with Bagnall-Price valve gear. A steel boiler, having a circular steel marine type firebox and brass tubes was utilised and this was fed by two No.5 m/m Gresham patent backhead injectors from comparatively large tanks holding 300 gallons of water. A rear bunker, spartan cab, circular smokebox and single mounted sandbox completed the design. Carrying the name TONGAAT and costing £690, this locomotive was delivered later the same year. It had a standard Bagnall cast iron chimney on despatch, but this seems to have given way to an ungainly spark arrester which Tongaat appear to have manufactured themselves. All later engines left Stafford with either the cast variety or a simple stovepipe only to be fitted with spark arresters on arrival.

The second engine was supplied in the following year (works no. 1873) named SUCCESS; she differed from the first by being of a 4-4-0 wheel arrangement but, apart from the substitution of a leading bogie for the pony truck and consequential lengthening of the main frames, the design was substantially the same. The firebox carried Ramsbottom safety valves, braking was confined to a hand arrangement and a sight feed displacement indicator, mounted in the cab, provided an oil feed for valves and pistons. An identical machine, works no. 1929 named REPEAT, followed in 1910.

These three locomotives seem to have sufficed for the traffic over the next few years and not until 1925 was a further order placed; this was given works number 2387 and named SINEMBE. In this locomotive the design was altered somewhat while retaining the 4-4-0 wheel arrangement. To assist stability outside frames were used (the bogie retaining inside frames) together with an increase in cylinder size to 10" x 15". Still retaining the circular firebox, a barrel mounted dome to house the regulator replaced the previous firebox mounted arrangement. However, Ramsbottom safety valves were retained on this and all subsequent orders, sandboxes being removed to the tank tops. Forward mounted injectors, on the fronts of the side tanks, were used instead of the former back-head type, the feed clacks being mounted immediately above them. Cab design was improved to give the crew more protection but the rear bunker gave way to two side mounted ones in the cab itself; this arrangement was destined to be used on only this one locomotive, later orders reverting to the rear type. Brass boiler tubes gave way to steel and the price increased considerably, to £1485.

As events turned out, successive orders over the following years were based very much on SINEMBE but with slight variations; as already noted the side bunker arrangement was not proceeded with and in the next engine, works no. 2342 of 1928 named MONA, the fixed wheelbase was reduced slightly to 3'6" and the water capacity increased.

About this time Bagnalls submitted to Tongaat, presumably at their request, a design for a much larger engine with a 4-4-2 wheel arrangement. This was clearly based on the 4-4-0 design but with larger dimensions all round and a total weight in working order of some 20 tons; it would have made a handsome machine. However, nothing was done with it and 4-4-0's continued to be the order of the day. MONA was followed by ISIBUTU (2374/29), WEWE (2471/32), TONGAAT (2479/33), SIMPOLA (2522/35) and W.J. MURPLES (2599/39).

From 2471 the water tank capacity was reduced a little but general strengthening of the design increased the weight by over a ton. All these and later engines had axle boxes fitted with wedge adjustment, heavier springing and stop cocks fitted to the boiler feed clacks. In addition, again from 2471 onwards, two whistles were provided, one high and one with a low note. Nos. 2287, 2342 and 2374 were equipped with Gresham & Cravens No.4 water lifters together with a length of hose for line side replenishment of their water tanks. For some strange reason there was no sand gear fitted to any Tongaat engine after 2479, and that fitted to those locomotives already delivered seems to have been dispensed with.

The remaining engines were A. BOULLE (2627/40), EDWARD SAUNDERS (2647/41), CHARLES WYTOCK (2819/46) and EGLOMI (2820/46). These had an increased boiler pressure, outside steam pipes and electric lighting; the latter consisted of a turbo generator and standby battery: it would seem that the earlier locos. were similarly fitted on site. The higher boiler pressure had the effect of increasing the tractive effort.

Tongaats were obviously pleased with their Bagnall engines to keep coming back so often. In 1954 W.A. Smyth, Managing Director of W.G. Bagnall Ltd. made a business visit to customers old and new in South Africa; a visit to Tongaat was included and a copy of his report is included as an appendix to this article. Note the comments about the 'Bull-Head' boiler (i.e. circular type firebox) and mention of a new locomotive. This never came to fruition, nor did they go to another manufacturer; instead, they gradually phased out the rail network.

It now remains to record how the locomotives performed and what eventually happened to them. Some modifications carried out on site have already been mentioned and it would also seem that most of the fleet eventually received the outside steam pipes used from new on the more modern examples. The following spare boilers were supplied over the years although it is not always possible to say for which locomotive they were intended: all were built to carry the higher boiler pressure of 160psi:

General Order 8319 of 12/1944 - One boiler
General Order 4867 of 2/1947 - One boiler for works no. 2374
General Order 6093 of 9/1947 - Three boilers for 2287, 2342 and 2471.
General Order 5820 of 5/1953 - Two boilers (see Mr. Smyth's report)
In November 1956 Tozer, Kemsley & Millburn Ltd. of South Africa ordered for works no. 2471 WEWE a collection of parts, said to be for conversion of this locomotive to a diesel. Given general order numbers 7505-9, a self changing gears 4 speed epicyclic gearbox, a self changing gears final drive unit and a set of propeller drive shafts and couplings were supplied. Strangely, nothing further is known about this and there is no mention in Bagnall records of any design work being done or any diesel engine being ordered. However,

there seems to be no doubt that these parts were actually supplied. At about this time Tozer, Kemaley and Millburn appear to have been involved in ordering spare parts for a number of Bagnall locomotives operating in South Africa although A. & H. McNay were the official Bagnall agents for Tongaat and a number of other sugar plantations.

Mr. Smyth's report indicated that in 1964 11 locomotives were still in existence and presumably 1800, 1873 and 1929 had been disposed of, the latter two for scrap but opinions differ on the disposal of 1800. The Railway Society of Southern Africa in their book 'Industrial Locomotives of South Africa' (Union Publications, 1963) state that she was sold to the Rustenburg Platinum Mines Ltd. as their No. 1; however, I have a note that she was scrapped in 1932. As the second TONGAAT arrived in 1933 it would be logical that she should disappear about this time. This book also states that by 1963 2479 had also been disposed of and that 2627 and 2819 were in use as stationary boilers, 2820 having been renamed ROBERT ARMSTRONG. An engine bearing the name TONGAAT but carrying number 2342 is now preserved in Bulwer Park, Durban and a further example, 2647 EDWARD SAUNDERS, reposes in the childrens playground at Tongaat.

Frank Jux paid a visit to Tongaat in 1963 and, apart from SIMPOLA which he mentions in his article, all the later 11 examples were present with the exception of WENE; perhaps this loco. had departed for conversion to a diesel and never returned. On closure of the Tongaat system at least five of the class migrated to the Reynolds Brothers' Umtwalumi Valley and Sezela Estates, as noted by F. Jux, and these were ISIBUTU, SIMPOLA, SINEMBE, ROBERT ARMSTRONG and A. BOULLE; however, it is obvious that much exchanging of cabs, tanks etc must have taken place as some of the works numbers did not tally and the engine carrying the name SINEMBE had the number 2374 and the short wheelbase. Apart from the one mentioned below, the subsequent fate of these locos. and those remaining at Tongaat is not known to me, but no doubt they are all scrapped by now.

One locomotive was fortunate enough to return to this country, due to the efforts of our Chairman. This engine, generally described (for reasons I know not) as ISIBUTU is WGB 2820; this works number seems to be stamped all over her - should she not be ROBERT ARMSTRONG, or better still BOLOMI? She is at present at Knebworth Pleasure Gardens in Hertfordshire and available for inspection whenever the gardens are open and the railway operating.

So ends the story of an interesting collection of South African industrials; rarely can one customer have been so faithful to one builder over such a long period of time and it is fitting that three examples should be preserved, including one in the country of its origin. In conclusion I would like to thank a number of people for assistance with this short article. In particular, Allen Civil, my co-author in 'Bagnalls of Stafford', W.A. (Bill) Smyth, Andy Forret of G.E.C. Traction Ltd. and, of course, G.E.C. Traction Ltd. themselves, as successors to W.G. Bagnall Ltd., for permission over many years to study the Bagnall records. Last, but by no means least, to Frank Jux, whose contribution is obvious.

Copy of a report prepared following a visit by Mr. W.A. Smyth, Managing Director of W.G. Bagnall Ltd. to South Africa.

1954

Customer: Tongaat Sugar Co. Ltd., Maitatone, Natal.
 Agents: A. & H. McNay (Pty) Ltd.
 Date of Visit: 25/2/64 with Mr. Olufsen (of McNay's)
 People seen: I.R. Gunn, Chief Engineer; J.H. Baker, Transport
 Manager; Arthur Keen, Locomotive Foreman;
 J.P.N. Bentley, Factory Manager.
 Gauge of Track: 2' 0 1/2" (Bagnalls always quoted gauge as built as 2')
 Track Mileage: About 90 miles, including one branch of 17 miles.
 Weight of Rail: 35lbs at present, new track to be 60lbs.
 Loco. Stock: 11 locomotives in commission, all Bagnall built.

General Report

This company, registered in 1899, is the largest of its kind in Africa and the second largest in the Commonwealth. Last year 750,000 tons of cane were processed to make 92,000 tons of sugar. 40% of this was transported over two unconnected railway systems. It is proposed to connect these two systems by a new line several miles in length. Throughout its history Tongaat have used only Bagnall locos. (sic) and have had no less than 14 of which 11 remain in service. No new locomotives have been bought since 1945 but it is hoped to order one or possibly two in the near future and these will definitely be ordered from us. They will be heavier than the existing types and full details of the track and loads to be hauled will be supplied with the enquiry. The maintenance here, unlike other places visited, is first class and in keeping with the high standard of cleanliness and efficiency noticed about the estate.

All our locomotives here have the "bull head" boiler which gives a fair amount of trouble with cracked throatplates and boiler rings (details available). When the new enquiry is issued we should offer a conventional steel firebox and not the "bull head" type. Two spare boilers now on order are urgently required (order no. 5820 of 1953-ACB) and everything possible should be done to see that they are delivered when due. The throat plate and back end on order are due in March and are urgently required.

Action: McNays will keep in touch and send on enquiry when issued.
 WOB to check delivery position of spares now on order and urge forward.

APPENDIX 2: DATES, COSTS and NAMES OF LOCOMOTIVES SUPPLIED.

No.	Date Ordered	Date Delivered	Cost	Name
1800	12. 2. 1906	5. 1906	£690	TONGAAT
1873	18. 9. 1907	1908		SUCCESS
1929	1. 10. 1910	1911		REPEAT
* 2287	12. 12. 1925	18. 3. 1926	£1485	SINEMBE
* 2342	28. 3. 1928	11. 6. 1928	£1585	MONA
* 2374	6. 2. 1929	12. 4. 1929	£1585	ISIBUTU
* 2471	21. 3. 1932	23. 5. 1932	£1585	WEWE
* 2479	21. 9. 1932	21. 1. 1933	£1550	TONGAAT
2522	25. 10. 1934	20. 2. 1935	£1550	SIMPOLA
2599	24. 8. 1938	1939		W.J. MIRRELES
2627	18. 3. 1940	1940		A. BOULLE
2647	4. 12. 1940	1941		EDWARD SAUNDERS
2819	3. 5. 1944	1946		CHARLES WYTOCK
2820	3. 5. 1944	1946		EGOLOMI

APPENDIX 3 - DIMENSIONS

<u>Works No. :</u>	<u>1800</u>	<u>1873</u> <u>1929</u>	<u>2287</u>	<u>2342/74</u>	<u>2471/9</u> <u>2522/99</u>	<u>2627/47</u> <u>2819/20</u>
Cylinders (ins.)	9x14	9x14	10x15	10x15	10x15	10x15
Dia. of driving wh.	2'3½"	2'3½"	2'6"	2'6"	2'6"	2'6"
Dia. of leading wh.	1'6½"	1'7"	1'7"	1'7"	1'7"	1'7"
Fixed wheel base	4'0"	4'0"	4'0"	3'6"	3'6"	3'6"
Total wheel base	8'6"	12'0"	13'0"	13'0"	13'0"	13'0"
Heating surface:(sq.ft)						
tubes	216	216	338	338	338	338
firebox	21.3	21.3	25.3	25.3	25.3	25.3
total	337.3	337.3	363.3	363.3	363.3	363.3
Grate Area (sq.ft)	5.5	5.5	6.5	6.5	6.5	6.5
Tank Capacity (galls.)	300	300	300	488	450	450
Bunker Cap. (cu.ft)	18	28	28	26	26	26
Weight Ety. (tons/cwt)-	-	-	13.2	13.2	14.9	14.9
Weight in Wkg.order "	13.15	13.10	16.9	16.9	18.1	18.3
Wkg.Pressure (psi)	150	150	150	150	150	160
Tractive Effort at						
85% Wkg. Pressure	5275	5275	6375	6375	6375	6800
Boiler Feed	All two No.5 m/m injectors					
Tubes	-	-	95 x 1½" outside diameter,			
			7'11½" long.			
Rail, to centre of	4'11"	4'11"	5'0"	5'0"	5'0"	5'0"
boiler						

Unfortunately, the above article contains an error which has been perpetuated by successive owners of the loco. The spelling of 'CHARLES WHYTOCK' was changed to 'CHARLES WYTOCK' by Allan Baker and the error was perpetuated by Graeme Walton-Binns when he ordered new plates for the loco. So the individual who bought the loco from Graeme Walton-Binns, John Heys, naturally assumed this was the correct spelling. Just for the record, Charles Whytock was a Scottish immigrant who rose to prominence in Natal in the whaling and sugar industries and also as a politician in post Union South Africa. Not only was a Tongaat Bagnall named after him but in 1925 the Union Whaling Company named one of its whaling ships in his honour. The vessel was requisitioned for minesweeping duty by the South African navy during the Second World War.

(<https://skipshistorie.net/Durban/DUR909UnionWhaling/Tekster/DUR90919250100000%20CHARLES%20WHYTOCK.htm>)

Accepting we are all human and make mistakes, Allan C Baker is a leading authority on Bagnalls and has written several books on the subject. The first is a massive 704 page tome, "**Bagnalls of Stafford: Builders of Locomotives for the World's Railways: the Firm and its Folk**" (Co-authored with T.D. Allen Civil; published in 2008 by the Phyllis Rampton Narrow Gauge Railway Trust) and one probably of greater interest to those wishing more information on the Tongaat Bagnalls: **Bagnall: A Narrow Gauge Legacy** (Published by the Narrow Gauge Railway Society) – A celebration of preserved Bagnall steam locomotives.

The end