

The **NARROW GAUGE**



THE NARROW GAUGE RAILWAY SOCIETY

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Editorial

It is with great pleasure we announce that Richard Morris has arranged the supply of a very attractive binder for your "NARROW GAUGE" in dark green with gold title, the 'Easibinder' will hold 18/24 copies of the magazine. His address is 193 Main Road, Longfield, Dartford, Kent. Price 12/6d. + 1/-d. P.P.

Not so cheering was the response to the offer of the superb Rheidol drawing to 1/36 full scale from magazine 44. As only three people showed interest we could not afford the 35/- for the necessary printing plates and reluctantly withdrew the offer.

As a member of the Committee of the NGRS I feel that a word of apology is due to many of you, especially new members. Unfortunately, the Society "image" has suffered badly during the last 12 months due to various difficulties, mainly on the membership side. Many unanswered letters have now had the attention of Mike Swift, and many extra copies of the last 3 magazines have gone out to people who were not on our mailing lists. A complete new mailing list has now been prepared and we hope that the end of "the troubles" is in sight. We ask your indulgence and hope the quality of the last two magazines and the last newsheet will make up for any trouble you have had.

All the best,

HENRY HOLDSWORTH.

Cover Photo

"DOLDABARN" emerging from tunnel at Dinorwic Quarries Sept. 1961.

photo - Ivo Peters.

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1966 PHOTO COMPETITION *FURTHER ENTRIES*







A FURTHER SELECTION FROM OUR 1966 PHOTO COMPETITION ENTRIES

1. SANTANDER-BILBAO Railway at ASTILLERO with 4.4.0 T No. 110
'MOLINAR' - Dubs & Co., 4219 of 1902. Maurice Billington.
2. 'TRIUMPH' & 'CHEVALIER' 16th May 66 at Bowater, Sittingbourne.
M.A. Reynolds.
3. A MAFFEI IN MADRID 0.8.0 No. 107 at Madrid Sugar Refinery 10.9.65
Maurice Billington.
4. Another Madrid Sugar Loco 0.6.0 No. 102 built by KOPPEL 1900. 60 cm gauge.
Maurice Billington.
5. 'COUNTESS' No. 2 of Welshpool & Llanfair Railway, unloaded at
Welshpool Market Yard 6.10.62 P.J. Smith.

MAID MARIAN

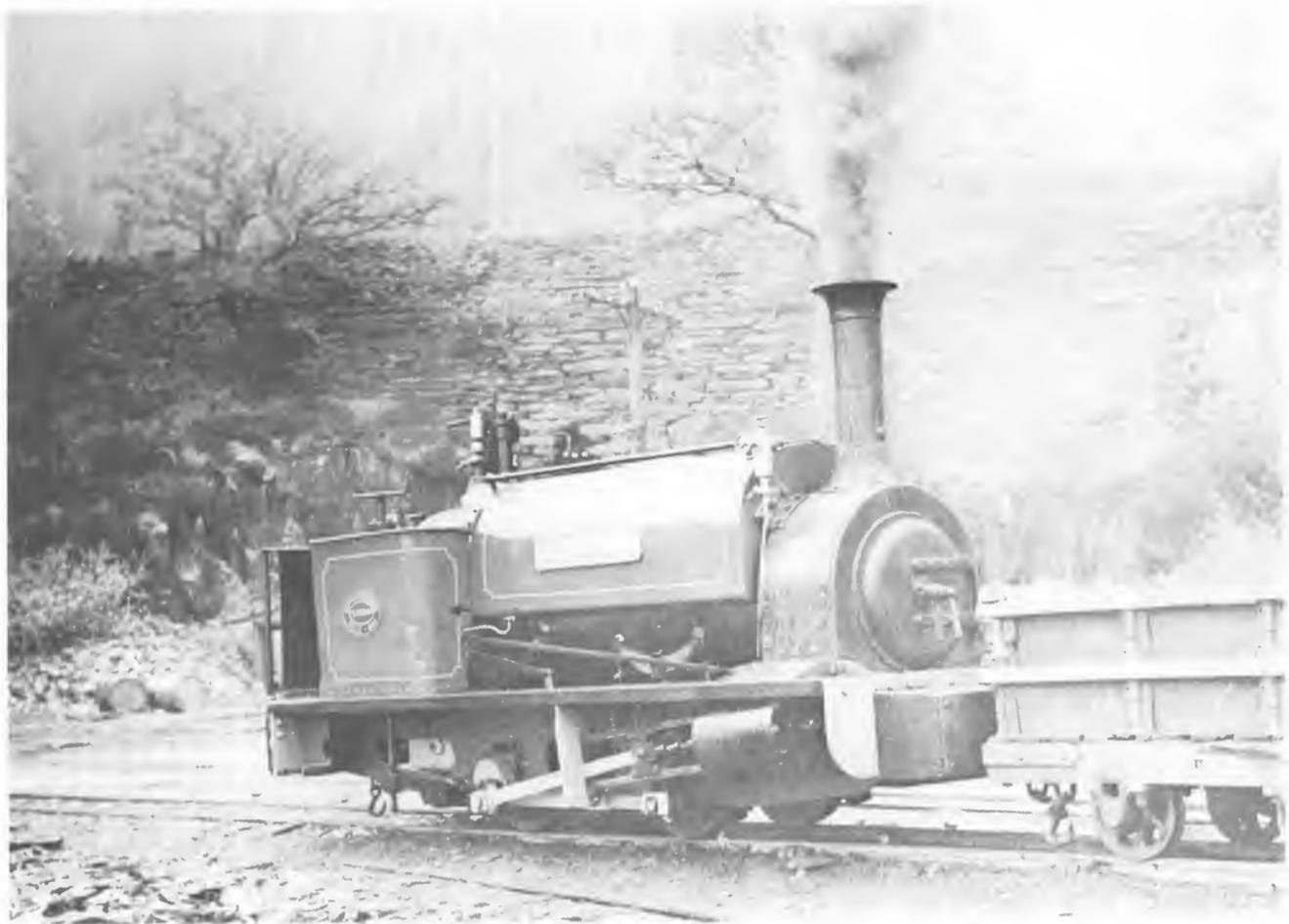
By D. C. Carrington

The big day had arrived, the day we had thought of at traction engine rallies and railway exhibitions was here. It was six o'clock in the morning when we left Manchester and nine o'clock when we turned into the yard at Dinorwic Slate Quarries, Llanberis. Something was happening as smoke was coming out of the stack on the workshop roof. "Oh look! they have done us proud." There was a train ready marshalled in a siding and in front of sixteen seated slate waggons were the three "yellow trucks", those unusual vehicles with angled seats and double flange wheels. They had been built for conveying quarry officials up the many quarry inclines and had last been used some years ago for carrying members of the Royal Family. Out of the car and into the workshop and there she was. The fire was already lit and there was 20 lb. showing on the gauge. "Who has got the metal polish? I will bull up the brass," announced 'Nat' our Welsh speaking member. "Hugh would you like to put the car park signs near the level crossing."

At half past nine Hugh Jones, the quarry engineer, boarded her, put her in reverse gear, brakes off and gradually opened the regulator. She slowly began to move up the slope out of the shed into the morning sunshine. Her new maroon paint and scarlet lining shone and her brasswork gleamed. Someone said it was well worth getting soaked at Lowton traction engine rally.

Members were now beginning to arrive from as far away as Glasgow and Southampton. In the workshops for our inspection there was still "Velinheli" and "Sybil" waiting for collection. "Rough Pup" was being made more presentable for static exhibition at Towyn. There was "No. 1" withdrawn the previous week from active service. Only two steam locomotives were still working in the quarry. "Holy War" and "Dolbadarn" and these were due to finish any day. We were witnessing the last days of slate quarry steam. We gave a sad moment's thought to all of those wonderful names of locomotives that had passed in and out of these workshops - "King of the Scarlets", "Red Damsel", "Irish Mail", "Amalthea" and the rest. There was then a blast on a whistle outside and we were once again in optimistic mood.

Out we went and Hugh Jones was now backing her down on to the train. After coupling up he pulled forward over the points to the "station" alongside the workshops. The clock over the workshop entrance was now showing 10.30. "Ladies and Gentlemen, please take your seats on the train." All 40 of us seated, there was a hoot on the whistle and we were off on a journey which as far as is known was unique, the quarries first and no doubt last passenger train. Along we trundled in the unsprung waggons, the ride surprisingly smooth. Over the level crossing with Llyn Peris on our right and Snowdon appearing under a greying sky. On we went past the brickworks along a length of track specially dug out for our visit. It had sunk due to the passage of heavy lorries.

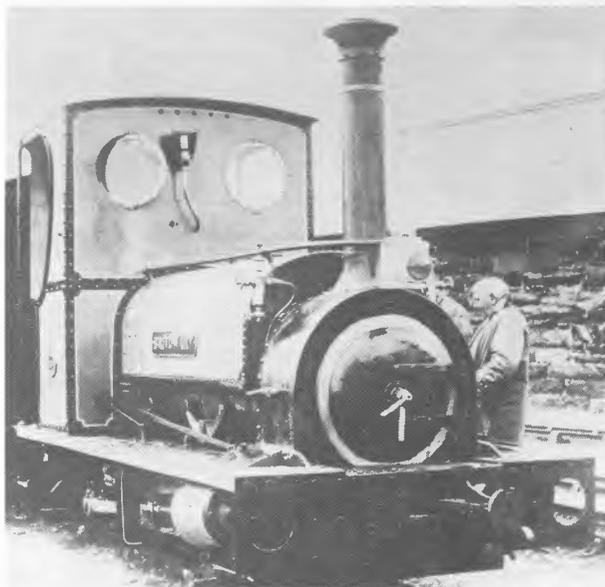


On our left the quarry opened up, tier upon tier stretching up to the 2,000 foot level. There was not much left on the mountainside as far as engines are concerned, only "Holy War" and the forlorn and derelict "Alice". On past the flooded "sinc" on our left with its brilliant blue-green colour. "Whoa Whoa, waggon off the track." This was soon remedied and we were off again. Another whistle blast, we were entering the quarter mile long tunnel. In the dim electric light we could see where side tunnels had gone off to other parts of the quarry. Out into the light again and past the shed which had so recently housed "No. 1". On our left three levels up was the spectacular Wellington Bridge. What a sight it must have been to see locomotives crossing it. A short heavy shower but no one seemed to mind. We were now at the foot of the eastern inclines and as far as we could go on the bottom level. The engine was uncoupled, the cameras clicked, and she ran round the train ready for the return journey. All aboard and we were off again. I ran ahead to get some cine shots. The day must have been a Kodak's benefit. The train went on past me and there on the back of the last waggon one of our number had fastened the "Maid Marian" headboard, previously seen above our stand at exhibitions. Back at the workshops more photographs, another shower. "Maid Marian" was uncoupled, the fire dropped, and driven into the shed after what was probably her last steaming at the quarry.

After lunch we left the quarry and proceeded to Portmadoc for a special steaming of that other quarry engine "Britomart". What an excellent job they had made of her. This was followed by an 'M.M.' special on the Ffestiniog Railway behind ex-quarry locomotive "Linda". Tea was served on the train halted at Garnedd West. On return to Portmadoc the party finally disbanded after an unforgettable day, a day which was made possible by the great understanding and co-operation of the Dinorwic Slate Quarries Ltd., and its staff.

"MAID MARIAN" HUNSLET 822/1903

"BRITOMART" HUNSLET 707/1899





MOTNEY HILL TO ORCHARD FARM

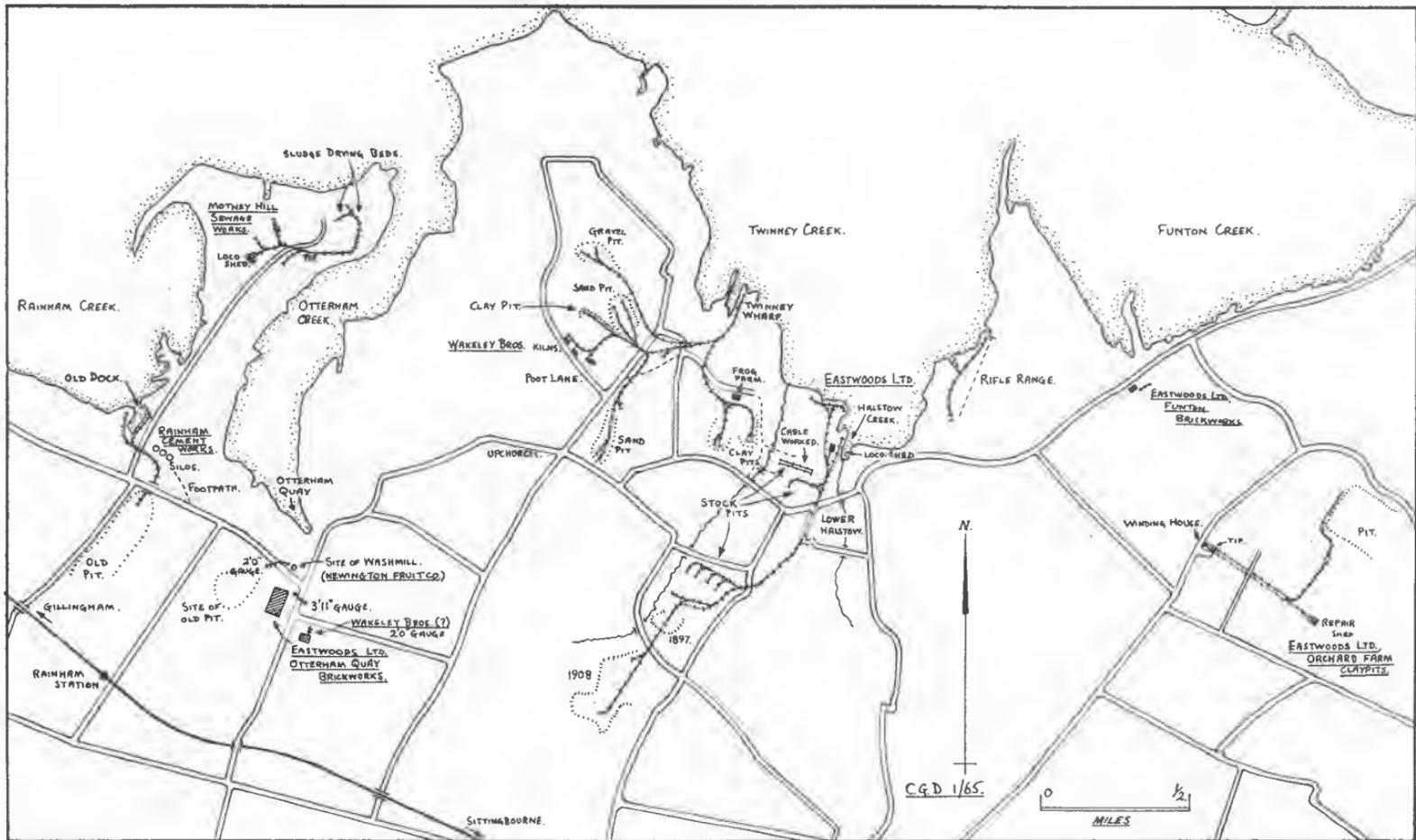
By Chris Down

(This article does not pretend to be a comprehensive survey; rather a collection of observations up to January 1965 that might be useful to anyone wishing to explore - on foot - these fascinating little lines.)

The rather obscure places mentioned in the title are to be found between the Southern Region Gillingham-Sittingbourne main line and the sea, or more correctly, the sprawling mouth of the River Medway. The major industry here is, and was, brickmaking, the brickworks being situated on the higher ground behind the mud flats where the wharves were sited. Most of these works are "stock brickworks"; that is, clay is dug from a pit often some distance from the works and conveyed to the washmills by various means, though usually a tramway or pipeline. Here, the clay is made into a slurry, and piped out to the stock pits to dry out, after the fashion of a sewage works. When dry, the clay is loaded into cable-hauled skips and taken up an incline to the works. This is in marked contrast to the method employed in other parts of the country. However, let us begin at the beginning.

If one alights at Rainham Station and walks down the main street to the end, a number of gaunt silos can be seen on the left, half buried in vegetation. These belonged to the old APCM Rainham Cement Works, that boasted a 2'0" gauge railway system worked by a Baldwin 4-6-0 pannier tank and two Bagnall 0-4-0 saddle tanks until it was closed many years ago. A footpath leads off the road and up to the silos. The bridge by which the railway passed under the road to the pit is still visible, though any sleeper marks that could have remained were obliterated recently when a main sewer was laid along part of the trackbed and under the bridge. If one walks past the silos and across the road that leads to Motney Hill Sewage Works, the more tangible evidence of a railway can easily be found - Jubilee track running along the edge of the small dock. The old buildings here have a curiously Grecian air about their empty shells.

Motney Hill is reached by following the road out to the low hillock that is visible out towards the estuary. From the road, it can also be seen that the area is bounded by sea wall, extending, in fact, along most of the coastline of the land as far as Sittingbourne. At Motney Hill is a sewage works railway, 2'0" gauge and worked by two modern Simplex diesels. One of these works at a time, propelling skips of sludge cake from the drying beds to the tip. It is quite a job hanging onto the loco when it is lurching madly around the right-angled bends that abound on the line. The locos are stabled in a large shed-cum-repair shop past the tip. The whole line used to be of 1'8" gauge, and some traces of track and wagons from this system can still be found; indeed, the whole line is worthy of inspection.



The marshes have an atmosphere all of their own (NOT due to the sewage works) that is accentuated in certain weather. The normally quiet and deserted mud flats seem even more desolate and melancholy when there is a heavy drizzle falling and the enthusiast is trudging, head bent, along the top of an icy, windswept dyke. However, one can walk along the dyke from Motney Hill and it is a short cut to Otterham Quay. Formerly, this was a dispatch point for the brickworks here, but in this respect, Otterham Quay is in retirement. The quay is still in use though, and one can easily picture the days when the flat-bottomed sailing barges would sail gently up at high tide to take on their cargo of bricks. From the quay, a private road owned by the Newington Fruit Co. Ltd. (a subsidiary of the London & Rochester Trading Co. Ltd., whose depot is at the quay) leads towards the public road and the Otterham Quay Brickworks of Eastwoods Ltd. Just to the right in the public road is a length of 2'0" gauge track running into the yard of the Fruit Co. where washmills were once situated. The line was worked up to its closure in about 1940 by a four-wheeled petrol locomotive, that hauled clay from pits on the south of the road across to the washmill. This line is said to have been owned by the Fruit Co. and does not seem to have had any connection with Eastwoods Works next door. This latter in fact does not seem to have had a railway at all, except for a small internal tray system. The claypits are now planted with fruit trees.

The next thing to see is found just to the right at the T-junction. It is a length of 3'11" gauge track embedded in the road that carried bricks from a dump down to the quay. It was horse worked, closing in 1936 or 1937, and was probably owned by Wakeley Brothers (Rainham, Kent) Ltd. In the brickworks was until a year or so ago a 2'0" cable worked line serving stockpits and using the standard V-skips. Many traces of this line still remain.

From here, probably the most interesting course is to go north for a mile or so until one reaches Upchurch, for this village was the centre of activity of Wakeley Brothers. The road runs NNE, but we turn left after a quarter of a mile down Poot Lane. On the right hand side are a couple of old brick kilns. Cutting up to the right through the orchard reveals another old kiln, and the foundations of other buildings of Wakeley's Poot Lane Brickworks, while a little further along is the depression in the ground marking an old pit. Now down to the right through a shallow cutting, and the first sign of the once extensive tramway is found - a short length of bridge rail of very light section, with which, it is believed, the whole tramway was laid. At the end of the cutting is the road, and turning left brings one soon to a couple of farm houses and a large hay barn. This latter can be inspected with the permission of the owner and can be seen to have once housed 18 horses that used to haul the wagons to the various clay, sand and gravel pits on the system. A further 9 horses were stabled at the brickworks for working the main line to Twinney Wharf, to which bricks were taken on flat wagons for shipment on barges. If one can struggle through the mire of the pig yard, a brick can be seen in the wall of the stable, engraved "E. Dodd 1845", while nearby the stable, on the course of a quarry line, is a longer length of bridge rail. Now we can continue to Twinney wharf. From here, coal was carried to the brickworks by horse and cart, not by rail. The carts took a short cut across a field (now an orchard) and created what is still a public footpath, though by custom and not by law.



The gauge of the line was in all probability 3'11", as is the length of track at Otterham Quay, the stockman at the farm giving a rough measurement with his arms. Twinney wharf is utterly derelict, wild and windswept. Here, in the heavy January drizzle, the writer found the end of a sleeper protruding from the bank with two spikes in it. In an attempt to determine the gauge of the line, a long time was spent hauling the sleeper out of the dirt, only to find that for some reason, there were no spikes in the other end.

One can now turn southwards, along the course of the branch to Frog Farm pits, but turning off to the left at the road, there being no traces of the line on the far side of the road. At the end of the road, there is a narrow footpath leading to the right, the pits being clearly seen here on the right of the path, though they are now planted with fruit trees. Following this path across a field and along a narrow alley brings one to the workshops of Eastwoods Ltd., Lower Halstow Brickworks. In the yard of the workshops is a 2'0" gauge Orenstein & Koppel diesel locomotive; it is not known from which pits it came, as it carries no works number. On the left are the stockpits, and walking around the back of them brings one to the back of the brickworks. Between the stockpits was a double track cable worked line but this was removed in 1964 and small tipper lorries now work the stockpits. Also at the back of the works is a short cable-worked standard gauge line between the pressing sheds and the kilns. The main interest here is however is the remains of what was a most remarkable railway.

This seems to have been laid just prior to 1896, and was 2'0" gauge, being worked presumably by horses. It brought clay and flints from pits north of Boxted to the brickworks at Lower Halstow and near to the pits, as can be seen on the map. But in 1900 or 1901, the line was electrified with a single overhead wire supported on wooden poles. This is a very early example of the use of such traction on the narrow gauge, or indeed, any railway. The line was immediately elevated from the commonplace to the unique. At any rate, it was sixty years before the Southern Region copied the idea! The locomotive was four wheeled with a warning bell and electric headlights; it was built, according to the former driver, by A. Hurst & Sons of Dewsbury. The main point of note was the extreme tallness and narrowness of the design, a factor that caused the death of a foreman when the loco once toppled over on him. A crew of two was carried, the driver and the "arm boy", whose job it was to stop the trolley pole from leaving the wire or, when it did (as frequently happened), to put it back on again. Some of the skips were modified from the usual V-tippers in that they had a platform and brakes, the brakesman (probably the arm boy) standing on the platform to work them. Electricity did not displace all the horses, some of which were used for haulage on the non-electrified pit lines until they were replaced in about 1906, by two petrol locomotives, when the railway was extended to Boxted. How far the overhead wire extended is not sure; the locomotive however was stabled by the wharf, its shed still standing



The history of the line subsequently is uncertain. It seems probable that the line was out of use by about 1916, and the whole thing was closed about 1927 (possibly earlier) the electric locomotive being sold to M. Lynch & Sons Ltd., for scrap. It was a sad end to such an advanced line for its time. The course of the line, and the pits can be distinguished in parts. One part of the trackbed is now a public footpath, known to all as "the tram-roads".

If, as the writer did, one starts early, it is now time for lunch, and the public house by the brickworks wharf makes a good resting place. Now, if one can summon the energy to proceed further, there is a very interesting line to visit. But more of that in due course.

One leaves Lower Halstow on the Funton Road, and shortly comes to the site of a 2nd World War firing range railway. The writer has never explored this, but was told that there are now no remains. The line was hand worked by two men, about once a month - not a very busy affair.

Now one can look across the bleak expanse of marsh and mud flat towards the smoking chimneys of Queenborough or, more pleasantly, to a small chimney that hardly smokes at all; that of Funton Brickworks (Eastwoods Ltd.), a small factory that nestles, half hidden, at the foot of the hill. Here there used to be a small hand worked railway to claypits at the foot of the hill, which were abandoned twenty years ago when landslips buried the track.

One now retraces one's steps to the previous road junction and turns to climb a hundred feet, over the highest hill in the area. One may be lucky and get a lift from one of the lorries that carry clay from our objective to Funton and Lower Halstow Brickworks. From the crest of the hill, the roadside terminus of the Orchard Farm Claypits line can be seen, and is reached by turning left at the bottom of the hill. This line is 2'0" gauge and one of the largest of this gauge in Kent - it is certainly the largest existing clay-pit tramway.

It has a stock of six locomotives - five Simplex and one Simplex/Hibberd type. It is easiest to walk down the track, as the line is surrounded by orchards. Four locos are kept at the roadside terminus under the old winding house - the line was once cable worked for some way, and this explains the double track for part of the way. Immediately in front of the winding house, the track doubles and the covered tip is situated. Here, clay is transferred to the lorries in the winter (in the summer, the line is closed and the lorries work right into the pit). The track runs dead straight, under a bridge carrying a farm track and through the orchards - all very picturesque - to a junction. Here, one line continues through the undergrowth to the repair shed, inside which two locos can usually be found. The other branch, heavily checkrailed, performs miracles in dodging the apple trees and swings violently to the left, running along the edge of a field for $\frac{1}{4}$ mile or more, finally reaching the pit edge. Clay is dug by dragline down to about ten feet below ground level, after which the bottom is levelled and returned to agriculture. On a sunny day, this is indeed a pretty line to see working.

And this is a convenient place to finish. Now try finding your way back to Newington Station!

PHOTOS

- ||—————||
- 1 - Eastwoods Ltd., Lower Halstow, c.1900.
Electric tramway at Halstow Wharf. "Arm boy" on left, driver right.
 - 2 - Wakeley Bros. Twinney Wharf.
Silted up dock marked by line of piles.
 - 3 - Cutting on site of line near Upchurch Road, branch to sand pits
went off right here.
 - 4 - Wakeley Bros. Photos 6.1.65. C.G. Down.
Remains of brick kiln at Poot Lane Works.



Modellers Survey

PART II

From W.A.D. Strickland, Modelling Secretary , Narrow Gauge Railway Society, 55 Whitestile Road, Brentford, Middlesex:-

At a meeting at Caxton Hall on 11th February, the following recommendations were approved.

Where a narrow gauge railway is to be laid jointly with a standard gauge layout and obviously to the same scale, and where another standard model gauge is to be used for the narrow gauge line; - it is recommended: - that the prototype and its gauge be selected to have a maximum gauge error not exceeding 5% or 6%, and when this is not possible the narrow gauge be adjusted to be within this tolerance.

Example A:- 4 mm scale 16.5 mm gauge, accurate gauges for 2'3" prototypes would be 9 mm and for 3'0" would be 12 mm, but for 1'11 $\frac{1}{2}$ " and 600 mm prototypes the gauge should be 8 mm.

Example B:- 7 mm scale 0 gauge, narrow gauges of 2'3" to 2'6" come within 5% and 6% tolerance on 16.5 mm, but for 1'11 $\frac{1}{2}$ " prototypes the gauge should be 14 mm and for 3'0" prototypes the gauge should be 21 mm.

For narrow gauge scale modelling of 1'11 $\frac{1}{2}$ " and 600 mm gauge prototypes for 16.5 mm gauge, an exact ratio of 1/36 be adopted, the maximum errors for gauge and wheel back to back dimensions being less than .5% of B.R.M.S.B. Standard Dimensions. A table of scale dimensions has been prepared, based on .3333" = 1 foot, the metric equivalent being 8.5 mm.

—————|

From Sydney Leleux, Keighley:-

I have great admiration for the standards Mr. Strickland sets in his recent article, but I think that he is, in general, aiming too high. I agree that for any one scale and prototype gauge there is only one model gauge which is accurate, but in 7 mm scale at least this will force great difficulties on to most modellers owing to the lack of any commercial gauges exactly corresponding to any narrow gauges. Wheels are the greatest problem, or rather, loco driving axles. I have tried a number of well known model firms and none would entertain the idea of making 14 mm or 21 mm axles to order.

One can, of course, choose a standard track gauge and adjust the scale of the model to suit - e.g. 8 mm and 16.5 mm track. This is of no help to the modeller committed for one reason or another to a standard scale. I think that a dead scale rail gauge is beyond most modellers without trade support, so the answer lies in intelligent compromise. Before anyone objects strongly to the word "compromise", I would remind them that the majority of narrow gauge locomotive manufacturers designed their products so that they would be

suitable for a variety of gauges. For example, some Peckett locomotives were advertised in their catalogue for gauges 1'9" to 2'6", 2'6" to 3'6", 2'5" to 4'8½".

The question which remains is the degree of compromise permitted. Standard gauge 4 mm scale modellers using 18 mm gauge track accept an error of 2½", or 4.4%. The 16.5 mm gauge modellers have an error of 7" or 12.4%. If

3" error, or 10%, was considered permissible, 9 mm gauge would be suitable for 2'6" in 4 mm. In 7 mm scale the various commercial gauges would be reasonable compromises for the following gauges -

Gauge	Prototype Equivalent	Range of Prototype Gauge for Model showing gauge difference and % error.					
9 mm	1'3.43"	1'3"	+0.43"	2.8%	1'6"	-2.67"	14.3%
12 mm	1'8.57"	1'8"	+0.57"	2.8%	2'0"	-3.43"	14.3%
16.5 mm	2'4.29"	2'0"	+4.29"	17.9%	2'3"	+1.29"	4.8%
					2'6"	-1.71"	5.7%
18 mm	2'6.86"	2'6"	+0.86"	2.9%	2'8"	-1.14"	3.6%
22.2 mm	3'2.06"	3'0"	+2.06"	5.7%	3'6"	-3.94"	9.4%

This gives a recognised gauge for all the common narrow gauges, and except for 18" and 2', all are within 6% of the exact gauge. Unless 14 mm equipment becomes available, I suggest the standardisation of 12 mm for 2' gauge in 7 mm scale as it is a better approximation than 16.5 mm.

In the course of my enquiries, I have obtained the following information. The Festiniog Railway produce a number of 7 mm scale components, including 14 mm gauge wagon wheels and a kit for a slate wagon (s.a.e. to Portmadoc for full list). Victors (75 Chapel Market, Islington, London N.1.) stock wheels and other parts for 10.5 mm gauge (exactly 1'6" in 7 mm). This is, of course, to the American HO₃. Victors can also obtain ½" and ¾" gauge equipment, for On2 and On3. 'S' gauge wheels, loco. driving axles and other parts are stocked by the "S Gauge Model Railway Society" (81 Riverview Road, Ewell, Surrey). The subscription is 10/- p.a. and parts are available only to members. At 22.2 mm it is a reasonable approximation to 3' gauge.

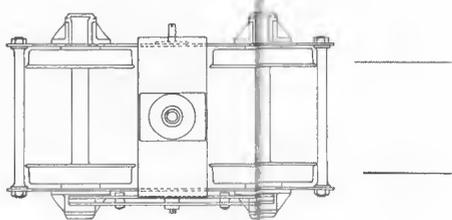
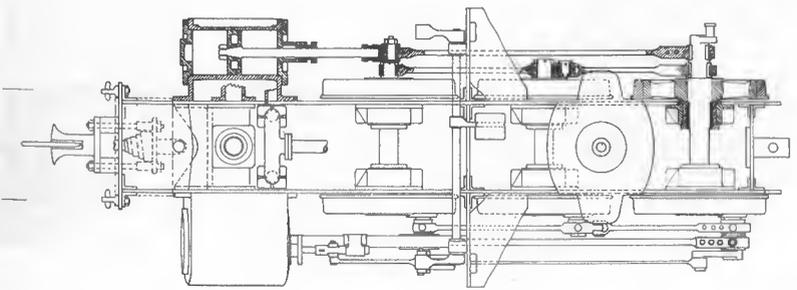
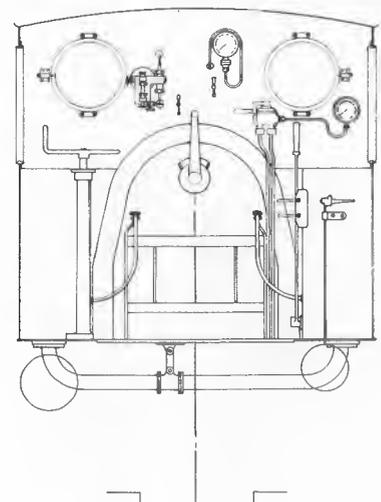
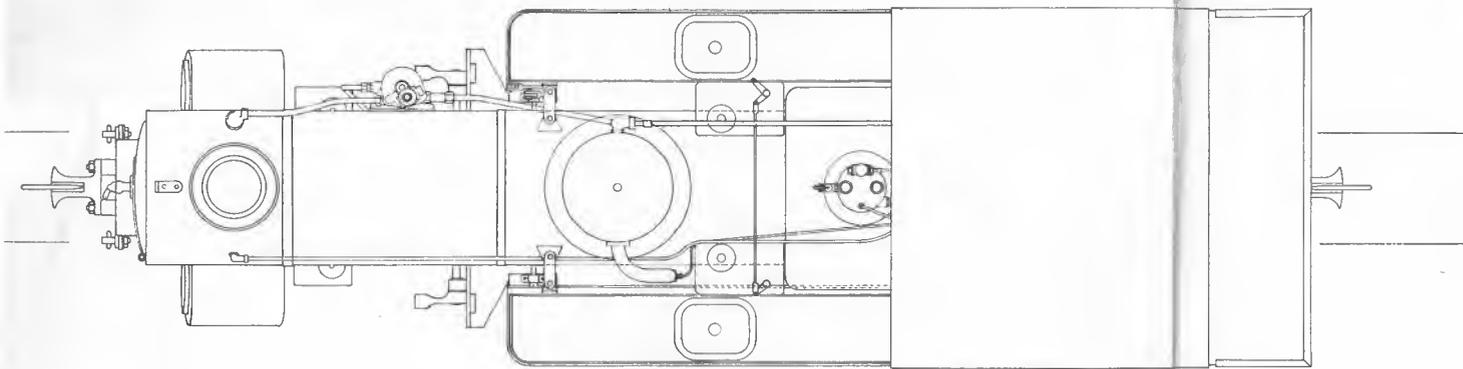
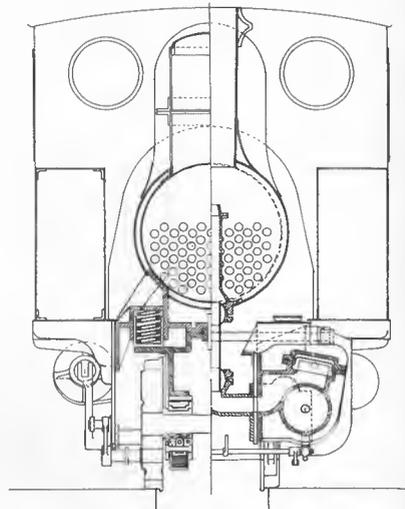
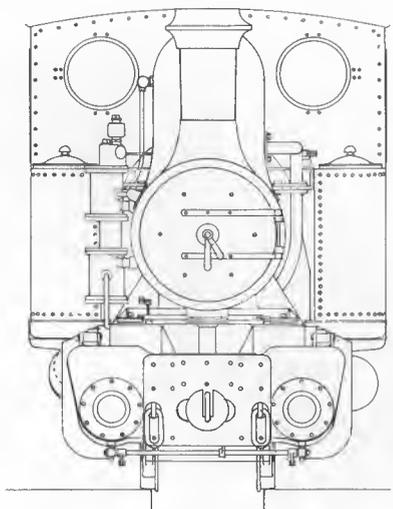
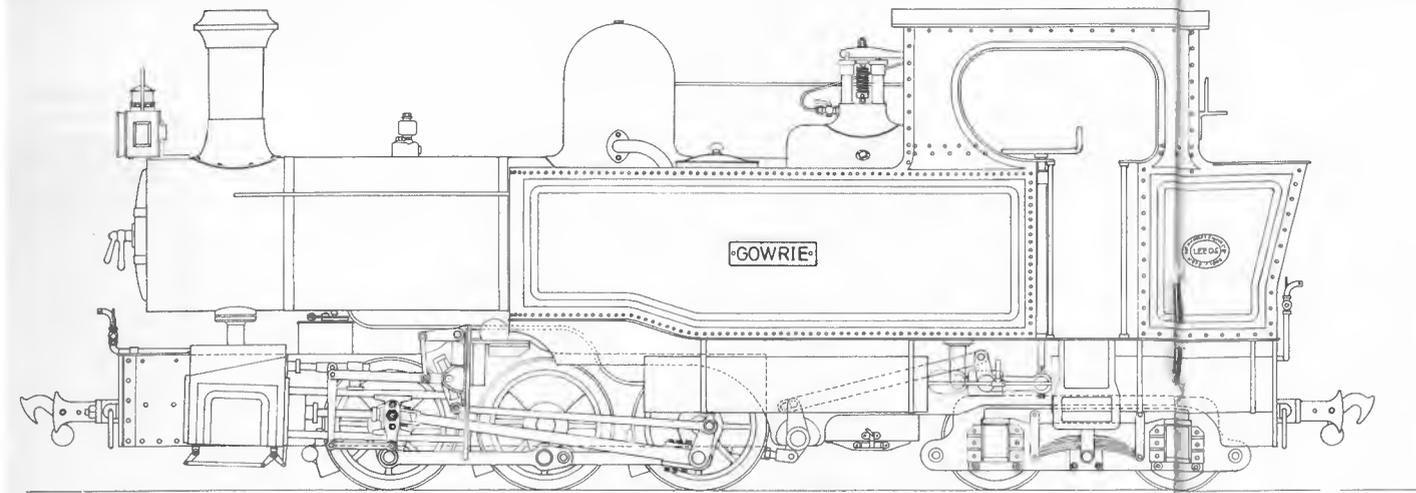
To sum up; while adjustment to the scale will solve problems for some modellers, for those committed to standard scales there is still a problem. In many cases, especially for 7 mm modellers, insistence in exact scale gauges would probably discourage most people, but compromises using the nearest commercial gauge need not introduce great errors, and gives the modeller access to trade components.

"—————"

Top - 'LAUTOKA' No. 18 (FIJI)
Hudswell Clark 1118 of 1915 model 16 mm. to 1 ft. scale by Don Boreham. (Some further details of this in "Model Railway News" for August 1967).

Lower - 'KANGRA' North Western Railway (INDIA)
model using Hornby Dublo mechanism for 16.5 mm. track by David Piringer.





**HUNSLET 0-6-4T "GOWRIE"
WORKS N° 979. DATE 1908.**

Gauge 1' 11 1/4"
 Cylinders 9 1/2" bore 1' 2" stroke
 Wheels driving 2' 4", bogie 1' 10"
 Wheelbase: coupled 5' 6", bogie 3' 3"
 total 14' 0"
 bogie pivot centres 8' 7 1/2"
 Boiler: working pressure 160 lbs. p. s. i.
 heating surface:-
 65 brass tubes 1 1/2" dia = 252 sq. ft.
 firebox above bars = 30 " "
 total = 282 " "
 grate area = 5 " "

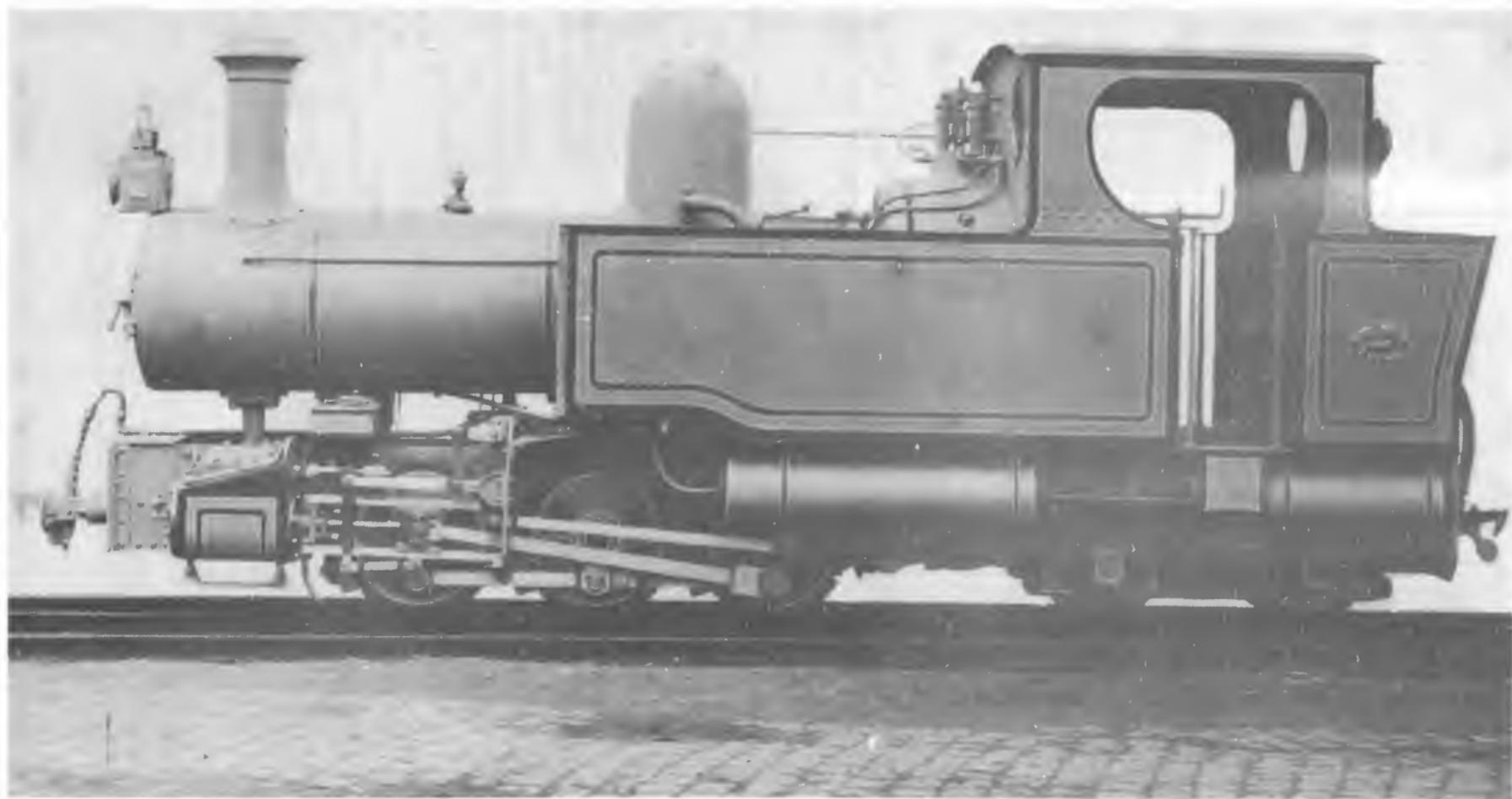
Tractive effort at 75% boiler pressure: 5415 lbs
 " " " 85% " " 6137 "

Load engine will haul: on level - 280 tons
 up 1 in 100 - 140 "
 up 1 in 50 - 75 "

Weight: Ton Cwt T C T C T C Tons Cwt
 working order 3-17+4-5+3-4+7-4 total 18-10
 empty 3-16+3-7+2-10+5-6 14-19
 Ratio adhesive weight ÷ tractive effort 4.7
 Minimum radius of curve engine will
 traverse with ease = 60 feet.
 Tank capacity 400 gallons
 Fuel 50 cu ft. - 1 ton 2 cwt

*W. G. D. ...
July 1914*





ONE HUNDRED MINUTES TO FLORAC

By Vic J. Bradley

If you have read Bryan Morgan's book "The Fastness of France" you will know that, somewhere in the middle of that great country, there is a block of mountains known as the Massif Central. One day, maybe, you will go and visit these mountains - places where peaks are snowcapped even in early summer, and where the S.N.C.F. operates lines which run for mile after mile at heights of over 3000 feet. One such line bisects the area on its journey from Clermont-Ferrand to Nimes - travelling south the train climbs to the summit at La Bastide, then gradually descends through a succession of tunnels, past great lakes and dried up rivers, down to the dusty coal mining district around Grande Combe. During this descent the train will pause for a few minutes at a lonely station, perched on a treeclad hillside, rejoicing in the name of St. Cecile d'Andorge. And it is at this station that you should leave the train, for this is the junction for Florac.

Not that St. Cecile looks like a junction - it doesn't. But after the main line train has proceeded on its way to the hot south, a great peace will descend on the station, and you will be able to take stock of your surroundings, and over on the other side of the S.N.C.F. tracks you will find the rails of the narrow gauge "Ligne de la Lozère" rusting in the sun. In the goods yard a varied collection of goods vehicles lie awaiting transshipment - though some just lie. There is an empty locomotive shed at the end of the platform, directly in front of which is a small turntable. The silence, until now disturbed only by grasshoppers, is suddenly shattered by the blast of a two-tone horn from the trees across the valley, and a steady rumbling noise which grows to a roar as "it" crosses the viaduct and rolls into the platform.

They call "It" a Micheline - Chaix tells us "It" is an autorail, - but for my money "It" is a bus; and it probably is the nearest thing to a railbus that you can find today in the whole of France. "It" is a battered De Dion, its once red paintwork somewhat faded, its chromiumplate tarnished. It has a driving compartment at one end only, so they have to turn it on the turntable before they are ready to tackle the return journey.

Although the Lozère Line is operated by a private company, the Chemins de Fer Departementaux, you purchase your ticket for the journey from the S.N.C.F. booking office. It is a printed ticket, giving the fare as 5.05 N.F. and the class as third, but it costs you only 4.90 and you travel in the only class there is. Soon, "It" shudders into motion, the whole thing vibrates and bounces, and you realise that its wheels are perfectly square. Down, away from the main line, over the valley on a lofty viaduct, and then the long hard climb commences, up into the mountains to distant Florac, some 49 kilometres away.

Very soon it is evident that this is a real light railway. The track is sinuous and weedgrown, the stations are dilapidated, the staff have no uniforms. Halts come and Halts go, but rarely does "It" stop. Up and up into the hills, the scenery is so fantastic that, despite the vibrations and incessant roar from the engine, you are glad that the journey will last for as long as one hour and forty minutes.

St. Frézal de Ventalon is the principal intermediate station, it is here that you will pass another De Dion proceeding back down to St. Cecile, and it is here that you will find a few items of battered rolling stock abandoned in the small goods yard. Most of their stock is kept at Florac, of course. Up there they have a very modern "garage" for the De Dions, of which they have four, although one of them is very much out of the running. They also have a Billard railcar and a Billard trailer and two 0-6-0 Diesel locomotives built on the chassis of steam locomotives, and used for the freight trains. But best of all, they still have two steam locomotives as well. These are mallet 2-4-4-0 tanks - one No. 325, is used when necessary, but the other, 324, is beyond use now.

Think, then, of these huge steam locomotives, as you grind your way up the mountainside from St. Frezal, for after a tunnel or two the station you have just left is visible, laid out like a child's toy, hundreds of feet below you. Imagine how they looked when, in years gone by, they hauled the daily goods train up these gradients and around these curves. Think too of your destination - a small town set high in the mountains, with pure air, cold water and no traffic at night. But when you do arrive, think carefully before choosing a cheap hotel - this is primitive country and anything less than best is liable to be awful.

Up and up climbs the De Dion, pausing awhile at wayside stations as remote as can be imagined, until at last the valley bottom climbs up to join the line, and you run alongside a mountain river and then a road, until suddenly the valley opens out and the town is visible a short way ahead. Around the last bend you grind, and pull up in the platform, the engine giving a final cough before it dies, and you realise that you have arrived and another unique and thrilling experience has ended. Yes indeed, it is seven shillings, thirtyone miles and one hundred minutes to Florac.

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Editor's Note:- This article was written in 1965, it is believed the railway is now closed.

PHOTOS

Top - Time for a chat - 50% of the lines operational stock rests in the sun at St. Frezal.

Lower - The depot at Florac. 27.5.67.



IRELAND '66

PART THREE — GUINNESS REPORT

By Rich Morris

ARTHUR GUINNESS, SON & CO. LTD., ST. JAMES GATE BREWERY, DUBLIN

Gauge 1'10".

This "universally well-known" location was visited on 15.7.66 situated right in the heart of Dublin city.

Steam on the N.G. had finished a few months previously but the somewhat pruned lines were still in consistent use. The famous Semi-Round House (brick built) has had a few roads taken out and only three now remain, these being host to the following F.H. "Planet" 4WD's -

"26" 3255 of 1948.

"27" 3256 of 1948.

"31" 3446 of 1950.

"34" 3448 of 1950.

"36" 3449 of 1950.

"36" 3447 of 1951.

3447 has a brass plate stating:- "EXHIBITED AT 1951 EXHIBITION, SOUTH BANK, LONDON, BY COURTESY OF MESSRS. ARTHUR GUINNESS SON & CO. LTD."
(This was of course, the Festival of Britain).

Outside the loco shed is the wooden turntable and nearby four all wood roofless carriages (screw brake fitted), these are in the "Guinness Blue" livery.

Shunting in the tunnels were:-

"25" F.H. 3068 of 1947.

"29" F.H. 3258 of 1948.

"30" F.H. 3259 of 1948.

"32" F.H. 3444 of 1950.

Although we were told all steam had gone a pleasant surprise awaited us in one of the tunnels!

"21" W. Spence of 1905

"22" W.S. of 1895



The guide gave us some surprising "gen" on No. 22, this is really No. 15 having changed identities with No. 22 many years ago during a boiler change.

No. 22 still exists preserved privately as reported in the last Narrow Gauge. No. 21 is virtually still complete although it has been out of use for 5 years. No. 22 (15) consists of Frame/Wheels/Cylinders and Tanks only, the boiler was recently scrapped, this has been out of use for 12 years.

Outside open to the elements and very derelict (having been so for many years) are Diesels:- "28" F.H. 3257 of 1948 and "33" F.H. 3445 of 1950. These have been cannibalised to keep the other Diesels going and are certain never to run again.

Down the yard awaiting despatch to Brockham Museum were - "23" W.S. of 1921 and BROAD GAUGE CONVERTER No. 4 built 1903. Both were under the lifting gantry which was also due to depart for Brockham.

Steam loco "24" was reported cut up on site in September 1965. The only other loco on the premises was found in the Guinness Museum. This is "17" W.S. of 1902 immaculate in Olive Green and Red Livery and with gleaming brass and copperwork. No. 17 was renovated at the Brewery and has been in the Museum for 18 months. The plates on the loco proclaim it to be "17.L. 1902" and "WILLIAM SPENCE. S. GEOGHEGANS. PATENT 1902. DUBLIN 1902".

The Museum is as yet far from complete. However, in addition to the steam loco there is also a Beam engine, numerous models in glass cases and many historical photographs, many depicting "steam in its element", and a multitude of other miscellanea awaiting display.

Rolling stock at the Brewery now consists of 210 all steel hoppers (some by Allens of Tipton), also noted were miscellaneous stock in the form of a bogie flat, a small open and a tank wagon - all out of use.

Perhaps the most surprising item to be seen is a rail-mounted SAFE!! still in use every week, being shunted to various parts of the Brewery on pay-days.

Trackwork - previously 7 miles now pruned to 3 miles (one more of which will go in 1967). There is a further 8-9 years future for that then remaining.

The winding subterranean tunnels rise 25 ft. at 1 in 39 for 300 yds. and are well worth a visit, these being complete with colour light signalling.

A rail bridge within the Works has a plate reading:- WILLIAM SPENCE, CORK ST. FOUNDRY & ENGINEERING WORKS, DUBLIN". The actual rail in use is of heavy tramway section. There is only one point lever, this is located in the tunnels, a points stick being used elsewhere.

All F.H. 4WD's are in Blue livery, Cab fitted, Brass Radiators, Top Tanks and Number Plates, they have exterior exhausts and some have "GUINNESS" emblazoned on the side panelling.

Steam loco No. 14 recently reported as being still extant as a "Works Wagon" was confirmed as definitely NOT being there.

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Spelling corrections to last article Magazine 44.

- Page 22. Line 3 - SLIEVEARDAGH HILLS
Para 2 - Last 3 are 4W diesel, the first MR petrol. (Ruston did not build a petrol loco).
- Page 23. Heading - BORD SOLATHAIR AN LEICTREACHAIS
ALLENWOOD POWER STATION
PORTALINGTON - near LAOIS border
- Page 24. Para 2 - RH 264244 is No. D1
Bottom item - BALLINAMORE
- Page 25. Heading 1 - ANDERSONSTOWN
Heading 2 - IRISH C.E.C.A.
- Page 28. Heading 1 - BELLAGHY CO. LONDONDERRY.

The Editor's compliments go to our typists for getting the rest of this complicated work correct. HH.

<u>No. 4.</u>	<u>2-B</u>	<u>Battery electric 40V</u>	<u>Livery:-</u>	<u>Dark Green</u>
<u>No. 5.</u>	<u>-B-</u>	<u>Battery electric 24V</u>	<u>Livery:-</u>	<u>Maroon</u>

These machines were constructed in the early days of the line and have provided reliable stand-by power ever since. Each can work for an afternoon without charging, No. 4. resembling a Bulleid diesel electric, can work loaded passenger trains, while No. 5. is usually employed on lighter duties.

<u>No. 6.</u>	<u>2-B</u>	<u>Petrol</u>	<u>Livery:-</u>	<u>Blue.</u>
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The latest (1965) H.V.R. Locomotive is unquestionably narrow gauge, and fully in the Heywood tradition. An attractive steeple-cab design, it towers over everything else, being approximately 5 feet tall. The prime mover is an 8 h.p. Ford engine, which drives one bogie through a Ford 3-speed gear box and separate reverse gear; there is cardan-shaft drive to a bevel unit from which both axles are driven by chains. A disc brake is fitted to the transmission, and the locomotive is equipped with electric lighting, two-tone horns and wind-screen wipers. Few i.c. locomotives make an impression by their exterior appearance - this is an exception.

ROLLING STOCK

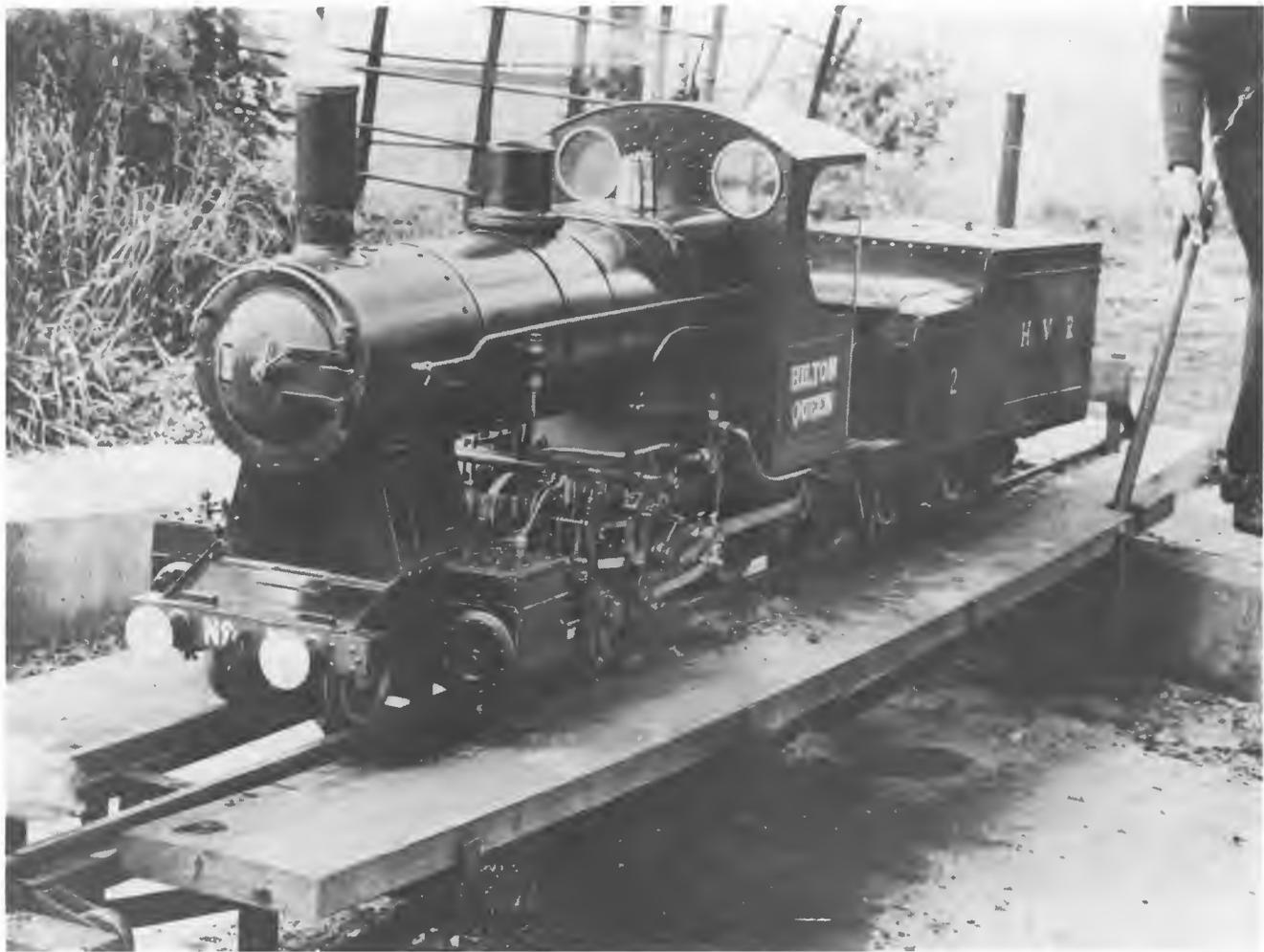
Modern bogie coaches, marshalled into sets of three, have been constructed, and are admirably suited to the line. The bodies are wooden - framed with aluminium cladding, the frames are steel and the bogies have ball bearing axle-boxes. The bogies are interesting in that the axleboxes are rigidly mounted, all springing being concentrated in the bolster assembly, as on the Budd "Pioneer III" lightweight coach. Couplings are simplified Norwegian pattern. These coaches are extremely stable and ride smoothly at all speeds. There must be a lesson here for other coach designers.

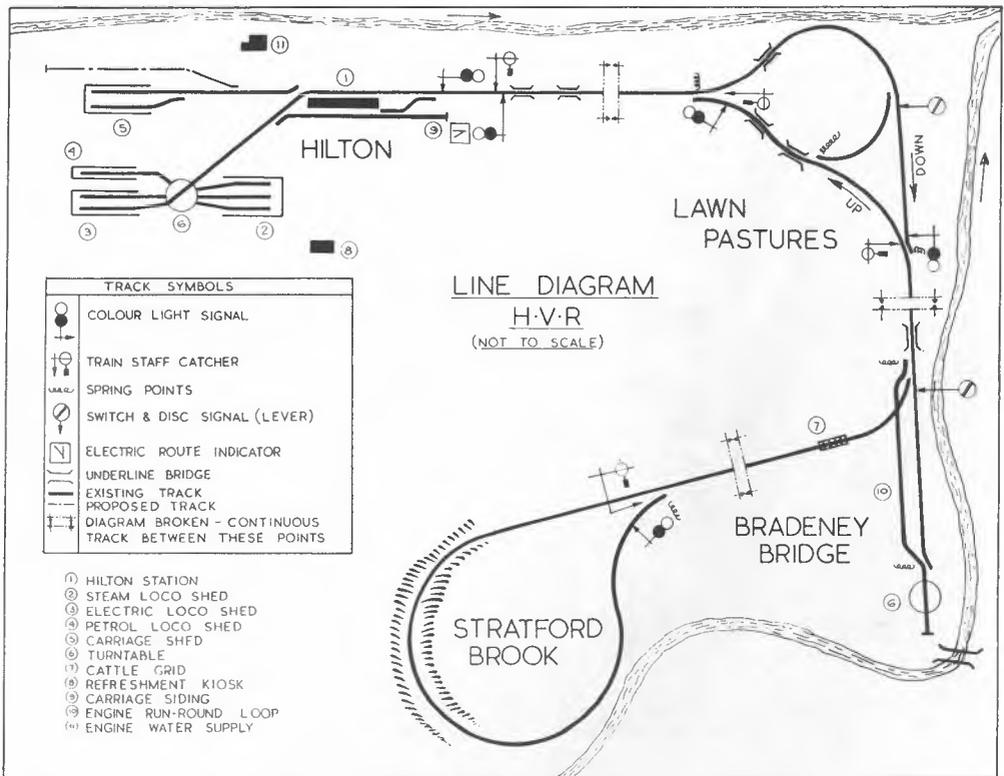
No. 7, 8, 9	Seats - 5	Livery:-	Blue, Built 1957/8
No. 10, 11, 12,	Seats - 6	Livery:-	Dark Green, Built 1960
No. 13, 14, 15,	Seats - 6	Livery:-	Maroon, Built 1963.

A new four unit articulated set is currently in hand (1967) to increase the carrying capacity of the railway, which carried over 22,000 passengers in 1966. There is a small four wheeled wagon, No. 16, for works use.

OPERATION

A comprehensive signalling system has been installed during 1966/7. Colour light signals interlocked with the staffs used on the single line sections provide absolute block working at all times. The method is simple but effective:- when not in use the staff for each section hangs on a "catcher" at the entry to the section. The arm of the catcher is sprung and therefore depressed by the weight of the staff. A microswitch actuated by the arm works the associated entry signal, showing "clear" when the arm is depressed and "danger" when it is raised. Thus it is impossible for a train to be signalled into the single line unless the staff is on the catcher at the appropriate end of the section. The staffs are coloured distinctively for each section and so are the catchers.





The colour light signal controlling entry to Hilton has a route indicator and is interlocked with the points. It is controlled by a plunger on the platform and there is a timed cancelling device built into the system. The signal is cleared as a train approaches it and after the predetermined interval returns to danger, thereby ensuring that the platform staff are aware of the train's approach (by virtue of having to clear the signal) while guarding against the possibility of a "clear" indication being shown to the next train through forgetfulness.

At present three trains are in service at peak periods. One leaves Hilton immediately after the arrival of an Up train and passes the next Up working on the intermediate loop. It then runs round the terminal loop to become an Up train. In future, no doubt, four trains will be in service, in which case the Down working just described would enter the terminal loop while the fourth train was waiting in that loop to become an Up working. Trains run at intervals of five minutes, the return trip taking approximately ten minutes, although this will probably be extended somewhat with four trains in service.





Hilton station has a canopy roof over the platform, a carriage shed currently being extended and a roundhouse shed radiating from a 12' turntable. There is a turntable also at Bradeney Bridge, which was used while this was the terminus of the line. The construction of the extension produced a layout at this point which must be unique on a passenger carrying line. Along the length of the line are several bridges to guard against flood damage.

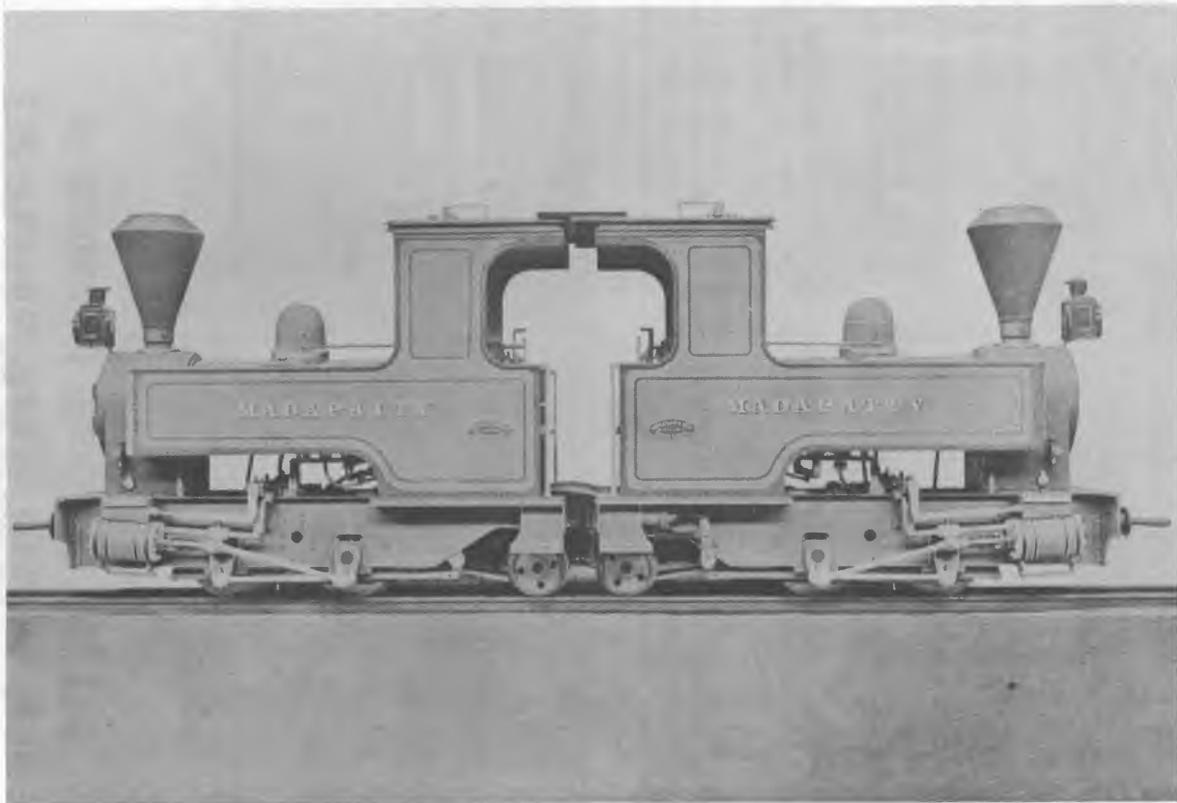
The attractive surroundings and friendly atmosphere contribute much to the popularity of this railway. It is a most refreshing change from the "conventional" narrow-gauge, and, sad to reflect, is now the only place near to Birmingham where steam locomotives can be seen regularly hauling proper loads and working hard.

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Hilton is in the parish of Worfield 9 miles from Wolverhampton on A454 - the station is adjacent to the Black Lion Inn.

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The author would like to thank Mr. Lloyd for his help in the preparation of this article and supplying the magnificent photographs. - Ed.



"MADAPATTY." DUPLEX LOCOMOTIVE.

Diameter of 4 Cylinders, 7 $\frac{1}{2}$ ". Stroke of Cylinders, 12". Gauge, 24". Total Heating Surface, 218 sq. ft. Total Grate Area, 8 sq. ft.
Total Tractive Effort, 7,690 lbs. Total Weight, 17 tons.

No. 1141 of 1910 Kerr Stuart.

from the Collection of R.N. Redman Esq.

The Narrow Gauge Locomotives of Hudswell Clarke & Co. Ltd.

PART 5

R. N. REDMAN

My research into the products of the 'Railway Foundry' has brought to light many fascinating small engines for far away places, this time I am giving a few notes in the hope they will prove interesting to members and that someone may be able to assist with further information on the railway concerned.

In 1909 4 tiny 0-4-0 tender locomotives were supplied through an order by S. Pearson & Sons of London for the 2'0" gauge Furbero Railway in Mexico. All attempts to locate the railway have failed, the locos were shipped to the port of Vera Cruz, Furbero is a tiny spot on the map about 125 miles up the coast and approximately 40 miles inland, on the fringe of the coastal plain. Locomotives of such a diminutive design are only likely to have been supplied for working on gradual grades, so it looks as if that's the place.

My letter to the British Chamber of Commerce in Mexico City found its way into the hands of an ex Pearson man, he had no recollection of any small locos being supplied through the Company into Mexico at that time. It was pointed out though that the area is in the vanilla centre and on the fringe of the coffee plantations. With this in mind they expect that the line was likely to have been on a large private hacienda, probably for transporting agricultural produce. Under the revolution's agrarian reform programme most of the large estates were liquidated and the line is expected to have come to a sticky end at about the same time.

The four machines numbered 1 to 4 were all oil fired and 0-4-0 tender locomotives with side tanks as well, for additional water capacity apart from No. 3 which had no tanks and presented rather an "Emmot" appearance to the world.

The Works photographs show Nos. 1 and 3, both prints are old and rather thin so don't blame the Printer.

SPECIFICATION OF THE ENGINE

Works Nos.	838, 839, 840, 873.	Rigid Wheel Base	4'3"
Railway Nos.	1, 2, 3 & 4.	Working Pressure	180 lbs.
Date built.	1909 Gauge 2'0"	Costs	
Cylinders	6" x 10" Outs.	838 & 9	- £638 each
Coupled Wheels	1'8" Dia.	840	£614
Tender Wheels	1'8" Dia.	873	£680
Sharpest curve it will negotiate	28'0"	Painted in	Midland Red.
Weight in working order apart from	840	7 tons	17 cwt.





FROM ANDREW OXLEY - CHALFONT ST. PETER

I am trying to obtain sufficient information to produce an accurate plan of Lynton Station following the early alteration to the engine shed road and crossover, with a view to producing a model in 7 mm. scale.

The Ordnance maps give no more assistance than the sketch plans appearing in the 2 books on the L & B. whilst some of the dimensions are difficult to reconcile with the track layout. Only Catchpole shows the platforms to be on a slight curve, radius unknown.

As I am anxious to make as accurate a model of this delightful little station as present day knowledge will allow I would ask if any other member has done research on this particular point.

DRAWING SERVICE

Bill Strickland has gone to some personal expense to make available to members larger scale copies of "GOWRIE" our centre spread drawing this month - will you please support his efforts by purchasing a set of these superb drawings.

"GOWRIE" 3 sheets available, two at a scale of 16 mm to ft. giving details of the loco, the third sheet shows the motion at $1\frac{1}{2}$ " to ft. Price 10/6 + 1/- Packing & Post from Colin Wilson, 32 Crown Rd., Portislade, Sussex.

Also available sister engine "BEDDGELERT" to a scale of $\frac{5}{8}$ " to 1 ft. Price 4/6d. + 6d. p.p. and a drawing by A. Stapleton Garner of "WINIFRED" 16 mm to 1 ft., price 3/6d. + 6d. P.P.

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LANCASHIRE	-	Vacant.

Kindly note that Messrs. J.R. HUXLEY, P.J. BURKILL, G.A. FOSTER and E. FOULKES no longer hold office in the Society having resigned.

Steam Locomotives FOR SALE

The Trans-Zambia Railway Co. Ltd. have the following Steam locomotives for disposal as lying at Inhaminga, Mozambique:—

Five No. "F" Class Tender Locomotives manufactured by North British, Glasgow, in 1942, 3ft. 6in. gauge, 4-6-2 wheel arrangement, working pressure 180 lbs./sq. in., tractive effort 19,440 lbs. at 75%, cylinder size 18in. x 24in., driving wheels 4 ft. 6in. diameter, fuel capacity 4,000 gallons water and 8 tons coal, weight in full working order 107.75 tons, adhesive weight 34.5 tons and axle load 11.5 tons on driving wheels.

The engines are accompanied by a quantity of spares and can be inspected where they are now standing. Tenders for scrapping will be considered. Any further details required can be obtained from the

Deputy General Manager,
P.O. Box 61, Beira,

to whom Tenders should be addressed not later than 31st December, 1966.

12544-D5

RHODESIA HERALD

5·12·66

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