# **UNDERGROUND**

NUMBER 11

ISSN 0306-8600

Metropolitan and Underground Rolling Stock for the Isle of Wight



# UNDERGROUND

This issue of Underground is my first attempt after taking over the editorship from David Hayward. However, I did produce issue No. 4, which was totally different, and have been involved, to a greater or lesser degree, in the production of all subsequent Undergrounds. I therefore knew what I was letting myself in for —or at least I thought I did. As members will have noticed, it is now rather a long time since Underground IO appeared in May 1982, and this is partly due to my having to get to grips with the job while continuing nearly all my other Society tasks unaltered. As Sales Manager, I have noticed that since the publication of "The "COP" Stock Story" and Underground No. 9—The Northern Line Extensions—there has been a significant change in the sales activity of the Society with a far greater proportion of sales being of Society publications. The COP book and Underground No. 9 had far larger print runs than anything we had produced before, and have both been sold by shops and other societies. The COP book was intended to be self financing, and indeed is just about breaking even now. As a first attempt, I think that all concerned can be justifiably proud of the result.

As far as Underground is concerned, No.9 caught us unawares. Demand was immediate and substantial, and very quickly we had another 500 copies printed. However, with the benefit of hindsight, even this was not enough, and Underground 9 is now virtually out of print. Sales of No.9 generated interest in previous issues such that these too are now virtually sold out.

The success of Underground with non-LURS, members, has fully justified the relatively small expenditure on the extra copies. The income covers a large proportion of production costs, thus subsidising members' subscriptions. I therefore intend to continue producing Undergrounds that are both interesting to members (who will continue to receive them free) and likely to generate outside sales.

The subject of this issue started off as a developed version of Brian Hardy's talk on Isle of Wight tube stock. However, in seeking to fill some of the gaps, we have gained considerable extra material. Consequently, in order to broaden the appeal of this issue to non-members, I am including it all in six distinct sections, although some is strictly outside the normal scope of The London Underground Railway Society.

BOB GREENAWAY, Editor.

Front Cover: Two trains at Sandown on 7th August 1982. The car on the left is 1929 U.C.C. driving motor No. 522 in the second island livery, the one on the right is 1928 U.C.C. No. 520 in the third and latest livery, which positions the unit number where the original destination panel was situated.

All photographs by R. J. Greenaway unless separately credited.

UNDERGROUND is published by The London Underground Railway Society. Editor: R. J. Greenaway, 26 Fishery Road, Hemel Hempstead, Herts., HP1 IND. Correspondence and material for future issues should be sent to the Editor at the above address. All enquiries regarding membership of the Society should please be sent to The Registrar, T.L.U.R.S., 67 Weltmore Road, Luton, Bedfordshire, LU3 2TN, England. Opinions expressed are those of the contributors and not necessarily those of the Editor or Society.

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Printed by Crown Press (Keighley) Limited, Chapel Lane, Keighley, West Yorkshire, BD21 2AJ, England.

## METROPOLITAN AND UNDERGROUND ROLLING STOCK FOR THE ISLE OF WIGHT

### INTRODUCTION — RAILWAYS IN THE ISLE OF WIGHT by Brian Hardy.

Before the stories of Metropolitan and Underground rolling stocks on the Isle of Wight are told, it would be useful to survey the railway network on the island - how it was built up and how it subsequently declined. This is not within the normal scope of the L.U.R.S., but is included to provide a background to the main subjects.

It was in the railway "mania" age of 1845 that railways for the island were first considered. Opposition to the idea caused early proposals to be abandoned, and it was not until 1862 that the first line was opened, having been authorised by an Act of Parliament

in August 1859.

Subsequently, five separate railway companies operated on the Isle of Wight. The first to commence operation was the Isle of Wight Central Railway between Cowes and Newport on 16th June 1862. The Isle of Wight Railway itself opened its first section between Ryde (now Ryde St John Road) station and Shanklin on 23rd August 1864, followed by a southern extension to Ventnor on 10th September 1866. The third railway company to open its line was the Freshwater, Yarmouth and Newport Railway which first carried passengers on 20th July 1889. The various sections of line to open, were:

Company	Between	Mileage	Total Mileage	Date
I.W.C.R.	Cowes—Newport	41	41	16.6.1862
I.W.R.	Ryde (St Johns Rd)—Shanklin	71	111	23.8.1864
I.W.R.	Shanklin—Ventnor	4	151	10.9.1866
I.W.C.R.	Sandown—Shide	81	231	1.2.1875
I.W.C.R.	Shide—Pan Lane	1	241	6.10.1875
I.W.C.R.	Smallbrook Junc.—Newport	8	321	20.12.1875
I.W.C.R.	Pan Lane—Newport	1/2	323	1.6.1879
L.&S.W.R. & (		3	331	5.4.1880
L.B.&S.C.R.Jt.		1	34	12.7.1880
I.W.R.	Brading—Bembridge	23	363	27.5.1882
F.Y.&N.R.	Newport—Freshwater	12	483	20.7.1889
I.W.C.R.	Merstone—St Lawrence	51	541	20.7.1897
I.W.C.R.	St Lawrence—Ventnor West	11	551	1.6.1900

The total route mileage of the railways on the Isle of Wight amounted to 55½, and was made up as follows:

Ryde Pier Head-Ventnor: 121.

Brading-Bembridge: 21.

Smallbrook Junction—Cowes: 12¼. Newport—Sandown: 9¼. Merstone—Ventnor West: 6¾.

Newport-Freshwater: 12.

From the turn of the century this 55½ route miles of railway was to remain intact for over 50 years. The Isle of Wight, being very much a holiday island, saw heavy passenger traffic in the summer season, but during winter months traffic was very light, especially on the branches, and the pace was leisurely to say the least. Apart from the Ryde Pier Head to Smallbrook Junction section, which was double-tracked, the rest of the network was single-tracked, with passing loops at some stations. These were at Brading, Sandown, Shanklin, Ashey, Whippingham, Whitwell, Ningwood, Yarmouth, Carisbrooke and Merstone (see map on page 2). Newport was signalled and worked as double track between the North and South signal boxes.

An important inclusion in the early railway history of the Isle of Wight is that of the tramway at Ryde, which eventually plays a part in the tube stock story. A horse-drawn service was provided from 29th August 1864 along the length of the pier. It was extended through the streets of Ryde in August 1871 to St Johns Road, which was then the terminal railway station, providing a connection between ships from the mainland and the railway network of the Isle of Wight. This tramway extension was short-lived, operating for just nine years. The L.B.&S.C.R. and L.&S.W.R. in 1877 jointly obtained an Act of Parliament to build a new pier at Ryde and to extend the railway from its terminus at

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St John's Road in new tunnels under the streets of Ryde (to avoid numerous level crossings) and along the new pier to the Pier Head. An intermediate station was also to be built at what is now Ryde Esplanade, originally identified as Pier Gate. Trains began running along the pier in the summer of 1880, and from then the tramway reverted to pier operation only, running parallel to the railway. Steam locomotives replaced horses as the motive power on the tramway in 1881 but horses returned in 1884. In March 1886 the horse tram service was replaced by electric trams, operating on an outside third-rail system, the third rail being located 18 inches above the pier decking.

The railway scene was relatively stable in the first quarter of this century and no significant alterations took place until sometime after the formation of the Southern Railway on 1st January 1923. This included the 1sle of Wight Railway and the 1sle of Wight Central Railway. The Freshwater, Yarmouth & Newport Railway disputed the proposed terms of amalgamation and did not become part of the Southern Railway until 1st August 1923. New passing loops were installed in 1925 at Wroxall and in 1926 at Haven Street he latter replacing that at Ashey. In 1927 the single-line section between Brading and Sandown was doubled, and in the same year electric traction was replaced on the Ryde Pier tramway by Drewry petrol railcars. It should also be mentioned here that the tramway also came under Southern Railway control in 1924. The present signalbox at Ryde St Johns Road was originally located at Waterloo Junction in London, but was made redundant and transferred to its present location when the lines into Charing Cross and Cannon Street were electrified in 1926.

The working of the double-track section South of Ryde St Johns Road was very interesting. Up to 1926, it was worked as two independent single lines, with the Ventnor trains using the East track and the Newport/Cowes trains using the West track. In 1926 a junction was installed at the point of divergence of the two routes—Smallbrook Junction. From then until the end of the Cowes Line in 1966, during the summer the line from Ryde St Johns Road to Smallbrook Junction was worked as a normal doubletracked line, but during the winter it reverted to the previous arrangement, thus obviating the need for a signalman at Smallbrook Junction during the winter.

The period after World War Two saw the obliteration of many thousands of miles of Britain's railways. The Isle of Wight did not escape this and the 55½ route miles was reduced to 25½ in the period 1952-1956. First to go was Merstone to Ventnor West on 15th September 1952, followed a year later on 21st September 1953 by Newport to Freshwater and Brading to Bembridge. From 6th February 1956 the Newport to Sandown route was closed, then leaving just two routes — one to Ventnor and one to Cowes — both from Ryde.

#### 2. THE CARRIAGE STOCK OF THE ISLE OF WIGHT RAILWAY by Ken Benest

When the Isle of Wight Railway opened from Ryde (St Johns Road) to Shanklin on 23rd August 1864, it had obtained from The Railway Carriage Company of Oldbury, Birmingham (subsequently referred to as Oldbury's), two dozen passenger train vehicles comprising four brake vans, four three-compartment first-class, twelve three-compartment composite first-and-second-class (2.1.2), and four four-compartment second-class carriages, apparently numbered, in that order, from 1 to 24. They were all four-wheeled, with a body length of 21ft 0in, a single-arc roof of a radius such that it was all but flat, a lack of brake power tempered only by such force as was exerted by the guard through a handwheel upon the wheels of his van, and a total deficiency of artificial lighting. (The Board had specified that four of the twelve composites should be provided with break [sic] compartments and it would appear from early photographs that such had been provided with a raised roof, glazed on all four sides; also that there should be eight second-class carriages and no vans. This is but one of several uncertainties which bedevil any attempt to arrive at the truth of what actually occurred, largely owing to the inadequacies of the company's minute-books, which frequently record decisions whilst failing to confirm that they were carried out to the letter.) The company paid for these vehicles with 100 shares and the offer of first refusal of contracts for all future rolling-stock requirements.

The railway was completed to Ventnor on 10th September 1866. The only additional stock acquired by this date had been two tramway carriages from the Ryde Pier Tramway following an unsuccessful experiment in steam operation before the tramway opened. They had been first and second class coaches, respectively, sold to the Lo.W.R. in 1865 through the agency of Mark Huish, a former general manager of the London & North Western Railway, who, though retired to the island, took an interest in local railway flairs. The Lo.W.R. quickly converted them to passenger luggage vans to cope with the

middle-class Victorian family's multifarious personal necessities for an annual vacation. Two more luggage vans, Nos. 27 and 36, appeared in 1872 and 1876 respectively.

Hitherto, no third-class accommodation had been provided and the mandatory Parliamentary train requirement had been met by conveying the lowest orders in specially reserved 2nd class compartments, but, perhaps following complaints from later passengers, in 1873 five four-compartment 3rd-class carriages were obtained from Oldbury's to enable the complete segregation of the working classes, although only to give proper effect to the law with no intention of providing a general 3rd class service.

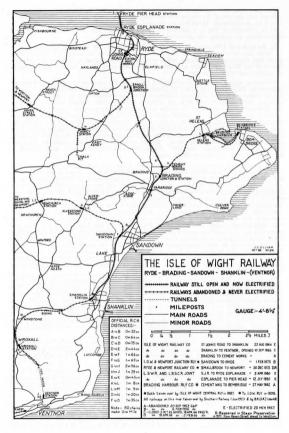
At the same time, after effecting a comparison of the cost of lighting individual carriages with that of installing gas pipes through the Ventnor tunnel, it was decided to return to the system of handlamps in the carriages, and not to change the existing mode of lighting the tunnel (which was presumably by the same means).

Three four-compartment 2nd class carriages were purchased in 1875. These were numbered 33 to 35, and were but little different from those which preceded them.

In 1878 the general manager put forward a proposal for the adoption of the continuous brake, the estimated cost, however, £1,600, was considered too onerous a burden and the matter was deferred. No more passenger stock was ordered until April 1882 when Oldbury's received an order for two three-compartment composites together with two (later increased to four) four-compartment 2nd class coaches, respectively Nos. 37 to 38 and 39 to 42. Authority was also given in August 1884 to alter three second-class coaches to brake carriages. This could have been but a small change as the sum allowed for each was only £21 10s 0d and probably involved the installation of the brake gear and a hand-wheel in the end compartment.

The next transaction with Oldbury's possessed some distinctly unusual features. In the first place, it was the Carriage Co. which approached the Railway Co. with the offer, in August 1885, of three carriages. This offer the I.o.W.R. took up subject to a satisfactory report and the price not exceeding £500. Kidner, in his "Carriage Stock of Minor Standard Gauge Railways", mentions that The Golden Valley Railway (which ran from Hay to Pontrilas in Herefordshire) began its impecunious career in 1881 with a 3rd and a composite from Oldbury, but in 1885 financial problems caused them to be sold back to the makers. C. L. Mowat, in a history of the G.V.R., states that Oldbury's terms had been £1,075 in cash or deferred payments for five years at £260 per year and that by Nov-ember 1882 they were suing the G.V.R. for payment. In 1885 the G.V.R. offered to sell the carriages back to Oldbury's at a fair price and to give debentures for the balance of the sum claimed. He added that the remainder of the Company's rolling stock consisted of one brake van and four luggage barrows; it never owned any goods wagons. It seems possible that, although the G.V.R. made a return of one brake van under the heading of goods and mineral rolling stock, this vehicle was actually a passenger guard's and luggage van, so recorded because a model form of the half-yearly return, provided a column for brake vehicles only under the goods section. It would explain how the G.V.R. had a goods brake van, yet no goods wagons, and also how Oldbury's had 3 second-hand vehicles to dispose of, recovered from a company which only admitted to two.

Turning back to the I.o.W.R., we find in the half-yearly report for January-June 1887 (the first available since the completion of the transaction) an addition of one 1st, one 2nd and one passenger brake van. These would, in all probability, have taken the numbers next available, viz., 43 to 45 respectively. In view of the absence of any mention of reconstruction, or of any reason for renumbering, in the years down to 1923, it comes as a shock to find that these numbers, in the list of stock taken over from the I.o.W.R. by the Southern Railway in that year, were allotted to three five-compartment 3rd class coaches, allegedly the former property of The North London Railway and having in common the body length of 26ft 6in! Nowhere does the N.L.R. appear to record the sale of any coaches to the G.V.R. at that time, and had it done so, one can imagine no go-between less likely to act for the principals, than The Railway Carriage Company. Moreover, although the N.L.R. had dealt with Oldbury's in its early days, since 1862 it had constructed all its own rolling stock at Bow Works, standardising, for passenger coaches on a body-length of 28ft 0in since 1864, the building date attributed to the three coaches in the S.R. list. The N.L.R. does claim to have sold four second hand vehicles to the G.V.R. (2 x 2nd class and 2 x composite) but this was in 1889 and is not mentioned by Mowat, unless the hire of carriages in June/July 1896 relates to this transaction. It seems that all these pieces of information are basically relevant to the matter, but that somewhere along the line, blind guess-work has supervened.



For how long the practice had obtained is obscure, but in December 1887 it was ordered that the use of Parafin [sic] in the lamps of carriages passing through the Ventnor tunnel be discontinued. There was no suggestion as to what illuminant, if any, should be used in substitution, but it is difficult to accept that, with the longest night of the year approaching, no lighting was provided.

In the spring of 1888 requests were received from sundry local boards for the provision of third-class accommodation on all trains. To all such, the Secretary was instructed to reply that the present third-class trains were run at times most suitable to the requirements of the Working Classes and that cheap tickets were issued to the General Public by seven trains during the day.

Following upon the Armagh collision of 1889 and the consequent safety requirements imposed by Parliament, the Board of Trade issued an Order in December 1890 as to the use of continuous brakes, the inter-locking of points and signals and the provision of block working, resulting in the Lo-W.R., in common with the other Island railways, adopting the Westinghouse Automatic Air Brake among other long-overdue improvements. The difficulty in obtaining this and other equipment occasioned by the sudden rush of orders swamping the production capacity of the various manufacturers, there being a three-year time limit imposed for the satisfaction of the Requirements, delayed effective action by a full year. The cost of the brake equipment alone amounted to £1,224, to which was to be added £528 14s 10d for fitting. This, together with the cost of the signalling improvements, left the Company very little change from £2,750. The work was charged to Revenue Account, spread over three years.

The purchase of seven carriages from Mr W. Jones was reported in December 1897. (Mr Jones operated a business from an office in Upper Thames Street as agent between flourishing railways with a surplus of time-expired equipment and impecunious railways which were unable to afford the luxury of new stock and were compelled to buy in the second- or sometimes third-hand market.) For these, the I.o.W.R. paid Mr Jones he sum of £750. This did not allow for local carriage, for which was added an extra £775 0d to Southampton Town Quay, plus £65 90 df reightage across the briny. The N.L.R. minutes reveal that Mr Jones had purchased from that company one third-class and six first-class carriages, less vacuum brake-gear, for the sum of £470. All the first-class coaches had four compartments each, and were taken into service by the I.o.W.R. as one first, one composite (2.1.1.2) and four second-class carriages respectively, with the third-class wehicle being reconstructed as a passenger brake van. However, Kidner shows all the second-class vehicles demoted to five-compartment thirds! Probably the assumption has been made that, with 27ft 0in bodies, four internal partitions would provide adequate intervening spaces for the use of the lower orders. He does, in fact, query the other two vehicles, shown as 3.3.1.1.2, asking "What was the fifth compartment?" in effect. These seven became I.o.W.R. Nos. 46 to 52.

The numerical list was completed by the absorption into the company's list of the three vehicles built for, or at any rate acquired by, the Brading Harbour Railway in 1882. There were two second-class six-wheeled saloons with non-vestibuled end platforms and what would appear to have been a Bke/2nd four-wheeler. These three, Nos. 33 to 55, were taken over in 1898 and it would seem from the half-yearly returns that the two saloons were converted to passenger brake vans in the following year, although Kidner's list suggests 1912 for this operation, at which time neither minutes nor returns make any mention of such alteration. The four-wheeler, also appears to have resolved itself into a plain van without official recognition.

No more additions were made to the capital list hereafter; a second-class coach was altered to a composite in early 1907, and a passenger luggage van became a passenger brake van later in that year (add one brake wheel and valve?). Neither vehicle can be identified with any certainty.

A tender by the Leitner Electrical Company was accepted in the sum of £1,191 for equipping the stock with electrical lighting. The work was completed in late summer of 1907, and was described as completely satisfactory. In fact, probably due to the advanced age of some of the earlier stock, not all vehicles were fitted with electric lighting, although some 1864 vehicles were not withdrawn until 1930!

Towards the latter end of 1912, approaches were made to several of the major railway companies with a view to the purchase of second-hand carriages suitable to the needs of the Lo.W.R. First favourite was the L.B.&S.C.R., which had opted for the Westinghouse brake system, advantageous to the Island railways in that the cost of a new set of brake

gear was avoided. On this occasion, nothing was available and the L.&S.W.R. and the L.&S.W.R. proved no more helpful. The matter was therefore deferred for a twelvemonth period, when in May 191 six second-hand coaches were purchased from the Metropolitan Railway at Neasden for ESO each. These were renovated and equipped with electric lights and the Westinghouse brake as quickly as possible to work the summer

In September of that year the Metropolitan announced more of the same type for disposal; the Low W.R. moved immediately and secured a further twelve at £22 10s oft each at Neasden. These represented the last purchase of passenger vehicles made by the competition of the passenger vehicles was also the first replacement of capital stock since the original purchases of 1864! At the same time the capacity of the new vehicles was about double that of an equal number of the old ones. In fact, the eighteen new coaches took the numbers of the stock which they displaced, but three other carriages were also taken out of service at the same time, leaving the numbers 24 (2.2.2.2 of 1864), 28 (3.3.3.3.3 of 1873) and 33 (2.2.2.2. of 1875) to be taken by the three ex-Brading Harbour vehicles, formerly Nos. 53/4/5. In those last years of the First World War, another vacancy occurred in the list by the passing of No. 27, the passenger luggage van of 1872, which was filled by renumbering No. 52, the ex-N.I.R. third-class purchased in 1898, but by this time long-converted to a passenger brake van. The original numbers of these vehicles were never to be re-used to

#### 3. THE METROPOLITAN RIGID 8-WHEELERS by Ken Benest

The former Metropolitan carriages of the early eight-wheeled design peculiar to that railway have acquired a certain notoriety over the years, some of it perhaps undeserved. They seem to have originated, in recognisable form, in the "Long Charleys" of the Great Western Railway in 1852. Here were to be found the seven-compartment composite arrangement (2.2.1.1.1.2.2), the very long body for the period (38ft 0in), the four axles in two non-bogied groups with large (4ft 0in diameter) spoked wheels, the all-but rigid wheel-base being 28ft 4in, the cross-braced tie-bars between the axle horns and the limited side-play permitted to the outer pairs of wheels. These, together with some new carriages built by Brown, Marshalls in 1862 especially for the service, eventually came to operate on the Metropolitan at its opening in January 1863. [Hamilton Ellis published a photograph of one of the latter type, in disarray, together with a conjectural reconstruction of the 1852 "Long Charley" whiche, in his "Kaliway Carriages in the British Isles from 1830 to 1914" (George Allen and Unwin Ltd, 1965).] After the quarrel of 1863 between the Met. and Great Western, they were withdrawn, save for through services to the City from the G.W.R. main line and from the Hammersmith & City line, which lasted until broad-gauge workings were withdrawn in 1869.

The Met's own version, first built by The Ashbury Carriage and Iron Company, was 38ft 6in over body by 8ft 3in wide and 7ft 1in from floor to roof. The total wheel-base was 28ft 0in, the inner axles being set in 5ft 6in originally, but later 6ft 0in. First-class carriages had six compartments seating four-a-side, second- and third-class had eight compartments apiece, each seating ten. Composite first/second-class vehicles (there appear to have been a few first/thirds) were arranged as in the Long Charleys mentioned above, with seven sections, three first-class occupying the space of four of inferior class. First-class accommodation was comfortably appointed with fully-upholstered seats and high backs to match. Padded arm-rests were provided in the corners and centrally, the latter possibly to discourage radicals from asserting a claim to a one-fifth portion to the discomfort of the four first-comers. Second-class travel was alleviated by the provision of thin squabs on the seats and a narrow shoulder-pad at an inconvenient height. Third-class passengers were provided with seats — only!

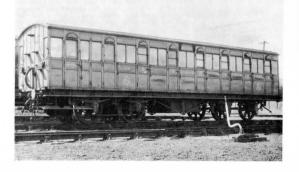
In 1882, racks were provided for the stowage of umbrellas. Whether the inconvenience of holding one of these lethal instruments outweighed the discomfort of receiving the exudations of a travelling companion's hastily-furled gamp dripping through the perforated-zinc trough upon the unfortunate beneath, is not known. The board considered that they had conferred a great boon upon their customers—a belief open, perhaps, to dispute. These racks were only some seven inches in width and quite inadequate for the deposition of parcels of any size.

A more useful facility, provided in the early seventies, was the fitting of the articles which, even before the end of the century, were erroneously referred to as "draught excluders". They were fitted in the first instance at the instigation of a director, a Mr.



Met. Rly, train at Quainton Road Station. The rigid 8-wheeled coach is probably of 1883/4 vintage and is a brake/3rd in original condition, save that the compartment adjacent to the guard's compartment has had the intervening partition removed, the doors permanently secured and the handles removed. [Real Photographs Ltd

Metropolitan Railway rigid 8-wheeler Brake/3rd No. 236—one of the batch modified in the early 1900s from ones similar to that shown above. Note the absence of the chimneys previously fitted for the Pintsch oil-gas lighting, the removal of the small top windows, the lower footboard (except by the brake compartment) and the change in the lower panelling arrangement. [L.&G.R.P., coutreey David & Charles



Nasmyth, as a "finger board", and not, as modern designers appear to have believed, an effete piece of mid-Victorian embellishment. The purpose of these, again, was not so much the elimination of the human suffering occasioned by the slamming of the compartment door upon the unwarily-positioned digits of a rising or subsiding traveller, as the avoid-ance of claims for damages ensuing from such incidents. It was another railwayman who observed, concerning the false identification posited above, that claims against the company for inducing upon the claimant a bout of influenza were quite unknown!

This serves as a reminder that inside door-handles were unknown on the Met. until the early eighties when such were fitted, with all due caution, initially only to first-class vehicles. They were of the off-set loop type, mounted upon the inner end of the shaft of the outside handle—spring locks of the Wethered type were still much in the future.

Looking to matters of illumination, the early carriages were lit by two glass-enclosed gas jets, set in the roof, one on each side of the boxed rubber bags in which supplies of town gas were stored, looking, from without, like an unglazed clerestory. Suitable terminal stations were equipped with stand-pipes from which temporary connection was made for recharging the bellows. Subsequently batches of carriages were more economically lit by providing only one lamp per compartment on alternate sides. The partitions, formerly of full height, were cut down level with the bottom of the quarter-lights by which means each lamp afforded a modicum of illumination to the two adjoining sections. Would-be readers who found themselves on the wrong side of the extreme end seats of the coach also found themselves largely deprived of their pleasure.

However, in February 1873, consideration had been given to the employment of Silber's petroleum lamps, but there was some delay, owing to the board's desire to make one lamp serve each compartment. Not until mid-March was the scheme approved and a St John's Wood line train equipped. On 25th May, Miles Fenton, the general manager, recommended that the use of these lamps be discontinued. He was doubtless influenced by the experiences of the North London Railway, whereon similar experiments had been conducted, showing a very satisfactory saving of 31.6%, somewhat reduced by the cost of replacement lamp-chimneys. Unfortunately, a lamp, otherwise in good order, had exploded in a first class compartment of a train in passenger service, an event for which no cause could be allotted. The decision of the N.L.R. board to discontinue the use of such unpredictable equipment clearly had its effect on the Met, and although the board resolved to continue experimentation for a further month, using a heavier grade oil, Mr Silber was thereafter politley shown the way out.

The matter was nevertheless pursued with another inventor, who, very wisely, had confined his investigations to the use of the more-stable hydro-carbons. Julius Pintsch employed a heavy oil-gas, stored in cylinders at a pressure of 90lbs/sq.in. and in 1876 fitted all the St John's Wood Railway line stock with his wares. With the old coal-gas storage bags removed, it was possible to centralise the single lamp provided per compartment for the lower orders, but, at £7 10s 0d per lamp, the board baulked at the expense and ordained three lamps between four compartments. First-class travellers, of course, received their full £15's worth! The work was completed over a period of three years.

Experiments were made in 1883 to determine the relative merits of Laycock's Patent Hair Blinds and of curtains with poles and fittings (as used on the Metropolitan District Railway), a train to be equipped, one coach with blinds, the remainder with curtains. Mention is made five years later of an order for three gross maroon horschair blinds and a similar quantity of blue merino carriage curtains with monogram, the latter clearly for the embellishment of first-class compartments. One cannot draw any hard-and-fast conclusion from these figures, save that, 29% of compartments being of first class, and allowing for damage, the laundry bill must have been quite high! One may also note in passing, that however long these adornments may have lasted on the Met., and that may not have been all that long, history inevitably repeats itself. The new standard "semi-fast" multiple-unit stock of British Railways came into service flaunting brilliant orange curtains, together with matching loops, after some decades of bare quarter-light.

Turning now to the underframes, the essential feature of the design was the grouping of the axles. The all-up weight of a third-class coach, say twenty-two tons (fifteen tons tare and seven of depressed humanity) would not have been excessive for a six-wheeler, although the length — 42ft clin over buffers — was perhaps on the limit, so that something on the lines of the Cleminson truck might have been thought acceptable. In his arrangement, there were three single-axle trucks; the middle one slid laterally, and was connected by radius bars with its fellows, which were pivoted. (For modellers, the arrangement is exemplified by the Hornby six-wheeled milk van.) The difficulty arose when the

very sharp curvature of some portions of the underground lines came to be considered. If a vehicle of the length under consideration is not to be involved in buffer-locking mishaps, then the outer axles of a six-wheeler need to be spaced twenty-eight feet apart, otherwise the excessive overhang of the headstocks will result in just that condition, particularly when traversing reverse curves (as over crossovers). On the other hand, with this minimum spacing, the central axle, on a curve of three chains radius, would require a lateral movement of six inches and correspondingly more as the radius was decreased!

Clearly the only practical solution, barring the use of bogies, which would involve both additional weight and additional expense (the latter doubtless weighing more with the directors) was to fudge the issue by duplicating the middle pair of wheels and moving them outwards as near to the outer axless as was possible. One may wonder why the expedient of reducing the wheel diameter to an extent that would enable them to clear the underside of the solebars with comfort was not adopted. Possibly all were still under the influence of the great Brunel, who believed in large diameter wheels as conducing to a lower angular velocity and therefore to a reduced liability to overheat. They had already risked damnation by reducing from the master's 4ft foil diameter standard, which required wheel-arches above floor-level—and sometimes extended across doorstays—to a modest 3ft 7½in, which fitted nicely; but that was evidently as far as they were prepared to go.

The actual arrangement is described in "The Engineer" for 19/7/1895, from which the

following is extracted:

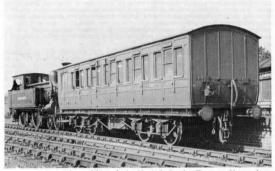
"The carriages were carried on four axles, grouped in pairs at each end, and attached

to the main frames by a peculiar arrangement, giving a flexibility of movement and a radiation of axles analagous to, although materially different from, that of an ordinary four-wheeled bogie, the purpose in view being attained with remarkable lightness of parts. ... The main features of the arrangement were that there was no centre pin of any kind, the attachment to the main underframes being merely through the medium of links hung from the ends of the springs at an angle of about 30 degrees, this angle being adopted to exercise the necessary control over the movement of the 'bogie' in the absence of a centrepin. In the second place, the parallelism of the axles was secured simply by bent bars attached to the upper and lower ends of the axle-boxes. Thirdly there was no cross attachment between the side bars except through the axles themselves. A further feature was the triangular compensating attachment between the inner ends of the springs on each side, to equalise the weights. The hornplates at each side of the axleboxes took no part in guiding the axles, and were there for the mere purpose of limiting the movement of the bogie in the event of a breakdown. Strange as it may seem in view of the apparent want of stability of this arrangement, it worked with sufficiently satisfactory results to be retained to the time of writing in the twenty-four first Metropolitan carriages to which it was fitted, although the G.W.R. broad gauge coaches to which it was originally applied had long since disappeared from the G.W. system with the total abolition of the broad gauge."

This was, however, an unsuitable arrangement to which to apply continuous brakes, and led to Robert Harvey Burnett re-designing the suspension. Burnett had been responsible for the detailed design, under Charles Beyer, of the locomotives constructed by Beyer, Peacock for the Met. and had followed them to become that railway's locomotive superintendent. His first attempt employed radial axle-boxes, moving in curved horns, on a batch of carriages constructed in 1865. Still disastisfied, he followed these with a second batch in the following year incorporating an outside-framed "pony truck". It was unfortunate that William Bridges Adams had devoted considerable time to similar design work and was able to produce evidence of his patent rights. As a result, following a somewhat actimonius correspondence in the engineering press, Adams broke off relations with Burnett and instructed his solicitor to bring a claim against the Met. for violation of patent. Mr Nasmyth eventually arranged a settlement.

Braking was originally a matter for close co-ordination between driver and guard. The driver had control only of his engine brakes, applied to the driving wheels only. Similarly, the guard could control no more than the inner wheels of the carriage that he was occupying. In 1869, Fenton drew the board's attention to the system devised by John Clarke, the forerunner of the chain brake which achieved notoriety when later developed iointly with F. W. Webb of the L.&N.W.Rly. Backed by the recommendation of Nasmyth, Fenton secured the adoption of the brake, a commencement to be made with the conversion of five trains, the remainder to be similarly dealt with thereafter.

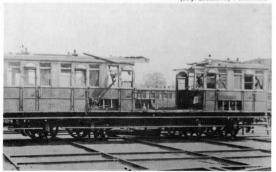
After the opening of the St John's Wood Railway and of the Brompton extension of the Met. in 1868, carriage construction was in abeyance for over ten years. Indeed in July



Ex-Metropolitan Railway rigid 8-wheeler No. 41 in London Transport Metropoitan Line livery at Quainton Road station in 1935. This was one of the coaches built in 1865/6 with flat sides and straight tops to the doors. In 1895/6 five had new bodies built on the old underframes. Numbered 41, 44, 45, 72 and 89 the new bodies were designed to match the Rothschild saloon, and 41 and 45 were used at each end of the first train on the Uxbridge Branch. This coach was built as a 6-compartment first class whiche, but on rebuilding it became a Brake/1st (reduced later to 3rd).

[Photomatic Ltd Rigid 8-wheeler thought to be No. 93 after terrorist action during Irish "troubles" in the 1890s. The coach was a 6-compartment first class vehicle and the incident is thought to have occurred at or near Praed Street, Paddington,

[R. J. Greenaway's Collection



1871, when the District took over the working of its own lines, the Met, had a surplus of stock which it had to stow away in odd corners of the system. A couple of short sidings behind the outer-rail bay platform at Moorgate Street and the roads between the Inner Circle and the City Widened Lines under the Farringdon Market, among others, were occupied for some years in this manner.

In 1873, it was resolved to make trial of Chaplin's patent electric break (sic) the patentee to bear the whole cost. If the matter was taken further it must have resulted in just that, for the brake was not adopted!

I. Tomlinson, who had succeeded Burnett in October 1872, following the reorganisation instituted by Sir Edward Watkin, had had a St.J.W.R. train equipped with the Smith (simple) Vacuum Brake for three months when he presented a comprehensive report on brakes in October 1874, recommending the Smith brake as a future standard. Fenton was instructed to report, in turn, on the terms to be secured for equipping all stock. As the first company so to do, these terms were exceptionally favourable, the total cost of fitting it to 44 engines and 180 carriages being £3,335, and the first train so fitted ran on the main line on 4th October 1875. On test, the train running at 20mph was stopped in 120 yards.

It was in this state, then that the final batches of "rigids" were constructed in the years 1879-1884, and solely from their number that the vehicles destined to end their days in Vectis Insula (the Roman name for the Isle of Wight) ultimately came to be drawn. All were equipped, c. 1892-93 with the automatic vacuum brake, following the outcry about the Armagh collision in 1889, which had led to new statutory requirements being laid upon all railways in the United Kingdom in the fields of train control and of signalling. The main feature was that any equipment failure should result in the safer condition prevailing. Thus, a broken brake pipe should result in the brakes being applied throughout the train rather than that all brakes should be released. In the same way, signals were to be incapable of being lowered until facing points over which they read had been proved bolted in the correct position, whilst the signal arm itself should fly to the danger position in the event of a wire or other connectional breakage, without reliance on counter-weights or the weight of connecting rodding to assist its return movement.

Following closely upon electrification of the Metropolitan in 1905-06, the majority of the older coaches were disposed of, some were sold to bargain hunters, over one hundred went to the breakers, but seventy-six were retained by the Met. There were made up from these, three six-coach sets which were put through Neasden works for complete refurbishing. They emerged with new side panelling - the old pattern, in which the waist and lower panels were of approximately equal depth, were replaced by an arrangement with a narrow waist panel of the proportions fitted to the Bogie Stock of 1898—1900 ("Ashbury Stock" was a soubriquet applied by the L.P.T.B. in 1933), the lower panels taking up the remaining space. They were also equipped with shoe gear, through H.T. cabling (600 volts D.C.), wiring for lighting and heating, and were rubbed down, re-lined, numbered and lettered in the appropriate style and adorned with the newly-designed "coat-of-arms". Thus equipped, they went into service, electrically-hauled, on the inner suburban services in 1909. The make-up of these sets, as recorded in 1910, was as follows:

LB/3rd	3rd	1st	1st	3rd	3/LB	Notes:
199	298*	282±	277‡	289*	214**	* formerly 2nd class.
266**	288*	274±	204±	287*	263**	** sold to Rhymney Ry 9/1914
261†	271+	203†	202†	270+	251†	† sold to R. Frazer 4/1911 ‡ sold to I.oW.R. 1914
						1 D 1

LB = long brake compartment.

Additionally, there were five six-coach sets of rigids retained for steam traction only. They were intended as reserve stock against failures and for seasonal excursion work. Minimal work was done on them to render them acceptable to regular patrons under emergency conditions, but they retained their gas lighting and vacuum brakes (initially, at least). By 1911 with the first accession of "Dreadnought" stock, one set was sold to Frazer's together with that mentioned above, and, from that time on, the others did very little work. The record of the time shows the following formations, but these may not have been fixed:

SB/3rd	3rd	1st	Compo	3rd	3/LB	Notes: As above, and:
300	223‡	280‡	209‡	217‡	249**	$\P = G.L.3.3.3.3.3.3$ with
236	294**	240‡	208‡	220‡	226	wide-doored luggage-body,
295	194±	239±	210±	187±	268	built for Harrow
213€	292	279±	278±	285**	273**	extn. 1880.
269+	301+	283+	264+	237+	252+	SB = short brake compartment.

This accounts for seventeen of the eighteen vehicles destined for the Isle of Wight. The odd one could have come only from one of the three-coach Chesham sets of the period, also made up from rigid stock. Although there were twenty-two other rigids in and about Neasden, none of these was a straight-sided 1st class vehicle. The choice, therefore, was limited to Nos. 281 and 284 and it is not known which of these was sold to the Lo.W.R.

It is not clear when the accommodation was reallocated, whether before the coaches were put into island service or after the transfer to S.R. control; the latest record shows that 1st and 3rd class status was allotted to compartments having regard only for the convenience of forming blocks of the same class; so that a 3rd class passenger might have more knee-room, and a 1st class traveller less, than he would normally expect. However, local passengers seem to have appreciated the change, if only for the better riding qualities of the 8-wheelers. All the new arrivals received electric lighting, as well as the Westinghouse brake before entering service. The S.R. operated these vehicles in block sets of six, which they numbered 485 to 487, but whether this had always been the practice is not known to the writer.

As it is now impossible to associate individual "island numbers" with the Met. numbers originally carried, the following list is set out in accordance with the number of compartments per carriage.

Lo.W.R. ex-Metropolitan Stock as at 1930

Met. No.	Year Built	Builder		I.W.R. No.	Compartments	S.R. No.	S.R. Set	Scrap Year
204	1880	Ashbury	1 (	15	3.3.3.3.1.1	6340	486	1928
274	1884	Gl'ster	) = (	35	3.3.3.1.1.1	6345	487	_
277	1884	Cravens	) (	14	3.3.3.3.1.1	6339	485	1924
278	1884	Cravens	1 1	16	3.3.3.3.1.1	6341	485	1928
279	1884	Cravens		17	3.3.3.1.1.1	6342	487	1928
280	1884	Cravens	(=)	31	3.3.3.3.3	2439	487	_
281	1884	Cravens		32	3.3.3.3.3.3	2440	487	_
282	1884	Cravens	) (	36	3.3.3.1.1.1	6346	485	_
239	1883	Bn.Mar.	1 (	29	3.3.3.3.3.3	2437	486	1926
240	1883	Bn.Mar.	)=1	30	3.3.3.3.3	2438	485	-
208	1880	Ashbury	) (	21	3.3.3.3.1.1.1	6343	486	1924
209	1880	Ashbury	} = {	22	3.3.3.3.1.1.1	6344	486	1926
210	1880	Ashbury	) (	9	3.3.3.3.1.1.1	6338	486	1928
187	1879	Ashbury	) (	5	3.3.3.3.3.3.3	2432	485	1921
194	1879	Ashbury	) = (	6	3.3.3.3.3.3.3	2433	485	1929
217	1883	Bn.Mar.	) (	7	3.3.3.3.3.3.3	2434	486	1929
220	1883	Bn.Mar.	} = {	8	3.3.3.3.3.3.3	2435	487	1928
223	1883	Bn.Mar.	1 1	23	3.3.3.3.3.3.3	2436	487	1925

Note: Bn.Mar. = Brown, Marshalls.

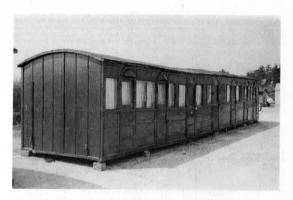
Gl'ster = Gloucester Carriage & Wagon Co. - S.R. shows Manchester = Ashbury. R. W. Kidner (Carriage Stock of Minor Standard Gauge Railways; Oakwood Press) shows (p.22) seven seven-compartment coaches and only six six-compartment, the number of eight-compartment coaches being in agreement with quantity listed in Met. records.

Although 13 of the ex-Metropolitan coaches are listed above as having been scrapped, the bodies of many of them survived for further use. Twelve are still in use as beach huts and refreshment huts at St Helens, I.o.W., and another body remains at Gurnard Marsh. Others that have not survived to the present day were located as follows:

<sup>1</sup> in a garden at Carisbrooke;

in a garden at Newport; 1 at Alverstone;

<sup>1</sup> at Newport shed.



Grounded body of one of the Isle of Wight ex-Metropolitan Railway coaches in use as a beach hut at St Helens, I.o.W., 2nd June 1979. This example was a seven compartment 151/2nd (2.2.1.1.1.2.2) originally.

A row of nine ex-Metropolitan Railway coaches in use as beach huts at St Helens, Lo.W., 24th September 1970. In addition to the coaches the breakwaters at St Helens were also made from redundant railway materials in the shape of rails and sleepers.



#### 4. FURTHER LIFE FOR TUBE STOCK by Brian Hardy

By the early 1960s the fortunes of railways in Britain had altered considerably and, but for good luck of a political change, all the remaining lines on the Isle of Wight would have closed, as Dr Beeching's proposals would have been carried through, except perhaps, for the section between Ryde Pier Head and St Johns Road. However, before the closure proposals were announced, British Railways Southern Region were concerned about the condition of the existing coaching stock and the problem of continued steam operation on the island, for much of it dated back to the first world war and earlier. The locomotives had originated on the L.&S.W.R., and the coaches mainly with the S.L.&C.R. and the L.B.&S.C.R. They were of smaller loading gauge than normal, necessitated by the restricted clearance of the tunnels at Ryde, which reduced the height of the Island railway cross-section by 10 inches compared with main line railways. Any replacement rolling stock would have to meet this requirement, and thus standard EMUs or DMUs were out of the question unless very expensive alterations were made to the Ryde tunnels.

The first known traces of L.T. involvement with the Isle of Wight dates back to 24th Cotober 1961, when the first letter was sent from the Southern Region to London Transport's Chief Mechanical Engineer. In this letter is was stated that the Isle of Wight coaching stock was of "considerable antiquity" and shortly needed replacement. The S.R., at this stage, were considering using 65 underground tube trailer cars, forming them into block train sets and operating them with push-pull power cars used as locos. (The B.R. class 73 electro-diesels are a development of a proposal for an Io.W. motor luggage van.) A favourable reply was sent back from L.T. to the S.R., saving that investigations would

be made into which cars were available and suitable.

In the wake of the Beeching Report, published in March 1963, which recommended that all but the 1½ mile section between Ryde Pier Head and Ryde St Johns Road be closed, contact between B.R. and L.T. waned, to await the outcome of the various public enquiries into the proposed closures. Correspondence was resumed in October 1963, when B.R. stated that proposals to use tube stock were now "likely" rather than being just a talking point, and requested two driving motor cars and four trailers be made available. L.T. said they were prepared to sell D.M. cars at £280 each, without traction motors, and trailers at £120 each. If necessary L.T. would store the cars for the Southern, but proposed to use diesel traction in one of two ways. The first was to convert the trains to diesel-electric multiple units (D.E.M.U.) by installing a diesel generator with a minimum of control gear in each of the driving motor cars. One or two traction motors would be required for each of these cars, and prices were requested from L.T. London Transport stated that they would sell motors for £75 each. The second alternative was diesel-electric transmission, and tentative agreements were made with the Southern Vectis Bus Company that they would maintain the engines provided that they were the same Gardiner engines as those used in the buses.

By 1st May 1964 six cars were earmarked for the S.R. Being of the 1931/4 type, these were 3253, 3706, 7166, 7167, 7173 and 7189, (L.T.'s numbering system was that pre-1938 tube stock driving motor cars were numbered 3xxx, trailers 7xxx and control trailers 5xxx. Because they were not reversible, they were divided into "A" and "D" cars. On the Isle of Wight "A" cars have cabs at the Ryde end, "D" cars have their cabs at the

Shanklin end.)

At the end of May 1964, the Southern asked for a total of twelve cars, by which L.T. assumed four D.M.s and eight trailers were required. However, there were not enough trailers available and the S.R. were promised four 1923 Cammell Laird trailers which would become available in October 1964. On 6th June 1964 a revision to the plans for changing over the Northern City Line stock was made by L.T. and six D.M.s and six trailers (all 1931/4) were made available to the Southern Region. In addition to the six cars noted above, the other six were 3074, 3141, 3702, 3703, 7159 and 7181. The Southern had also said that they would be interested in some control trailers from the Northern City Line which would also become available in October. The cars from the Northern City Line were in relatively good condition, because of the light duty working and tunnel conditions of that line, but the 1923-30 cars were to be replaced by those of 1931-4 origin from the Piccadilly Line. While it was realised that the older cars were in as good, if not better condition than the newer ones, facilities for coupling and uncoupling trains were to be lost with the closure of the line from Drayton Park to Finsbury Park. This was to facilitate Victoria Line construction work at Finsbury Park which was where coupling operations were carried out. With this being the case, permanently coupled four-car sets of identical 1931/4 stock were chosen instead of two or six car formations of the older stock.



Diesel loco D6540 hauling the first train of pre-1938 "Standard" stock past Raynes Park to be stored at Micheldever, August 1964.

Meanwhile, the public enquiry into the proposed closure of the remaining lines on the Isle of Wight was held in June 1964.

The first twelve tube cars, plus twelve extra traction motors were moved in two trainloads from Ruislip to Wimbledon on Friday 14th August 1964, from where they were taken into the S.R. depot. All twelve cars were then moved to S.R. sidings at Micheldever (between Basingstoke and Winchester) on Sunday 16th August 1964 (see appendix I). The S.R. required the sill-plates to be removed because the platforms between East Pumey and Wimbledon had no overhang — just a vertical face flush with the platform edge. The negative shoes were to be raised to their maximum working height and the tripcocks cut out. These twelve cars would have provided enough rolling stock assuming all lines but Ryde Pier Head to Ryde St Johns Road were closed. If this had come into being (fortunately it did not, q.v. below), a new bus interchange complex was planned for St Johns Road.

In October 1964 the S.R. stated that they were still awaiting a decision from the Minister of Transport about the future of the island's railways, but were assuming that the Ryde to Shanklin section would stay open. This turned out to be good foresight, but with this then still being speculation, they estimated that one 4-car and five 7-car sets would be required, the 4-car being spare. Thus, 11 further D.M.s and 16 trailers would be required in addition to the twelve cars already purchased and at Micheldever. If the

Opposite Top: Trailer car 7276 at Acton Works on 23rd April 1959 after overhaul This car was one that was made available to the Southern Region in October 1964, but the offer was not taken up.

[H. Clarke/L.U.R.S.

Opposite Centre: Trailer car 7281 in store at Ruislip after withdrawal from the Northern City line in October 1964. This car now runs on the Isle of Wight as S44. [H. Clarke/L.U.R.S.

Opposite Bottom: U.C.C. Driving Motor car No. 3035 in store at Ruislip depot. Built in 1928, it is one of the first U.C.C. motor cars not to have door pillars. The car wateransferred to Micheldever in July 1965 but was subsequently rejected, returned to Ruislip and then scrapped.







option of locomotive-hauled trains instead of D.M.U. operation was to be exercised, 23 trailers and 23 control trailers would be required instead. Some of these cars would be converted from driving motors though, with the equipment compartments being used as luggage space. The possibility was also considered that all the remaining railway netwomight be allowed to stay open, in which case, the requirement would be for 27 D.M.s and 34 trailers, in addition to the 12 already bought. With this in mind, L.T. agreed to hold all cars displaced from the Northern City Line in October 1964, but charge the S.R. for storage on L.T. metals, as they would be occupying space required for other purposes, and for provision of a regular patrol to prevent damage by treespassers. By January 1965 L.T. stated that there were 61 cars available at Ruislip—22 D.M.s, 18 trailers and 21 C.T.s, as listed in appendices 2 and 3. All D.M. cars had the shoegear removed to reduce the risk of traction current earths in Ruislip Depot yard, and L.T. agreed to check the cars daily and water-wash fortnightly.

A start was made in April 1965 in preparing for the transfer of the above cars from Rusilip to Micheldever. B.R. match wagons 18312081 and 18498101, which were previously used on tube stock scrap trains, were taken from West Rusily to Wimbledon Park via B.R. on 28th April 1965, and plans were made to start noving the cars from May. On each occasion, two formations of four cars between pilonewire to be formed. All cars destined for the Southern were to have their sill plates revowed for the reason given earlier, but this was not always done, much to the Southern's moternation! In addition all shoegear was to be removed and triprocess latched up. Such more than several more common Depot at 20.10 and 20.50 for Wimbledon. So that the cars could deser from Wimbledon to Micheldever by a B.R.C.W. Type 3 (D65xx, now class 33) sides! locomotive, one of the match wagons was modified with a Westinghouse air pipe. This would ensure that the eight tube cars would have operative brakes while travelling on the Southern. It was necessary to shunt some of the existing twelve cars at Micheldever to accommodate the others.

On arrival at Wimbledon Park it was proposed that the leading pilot car would uncouple and shunt forward, while the rear pilot would just uncouple. A Southern Region sleet unit and match wagon would then come from the depot and couple to the tube cars, taking them straight into the depot. The two pilots would then couple together and return to Ealing Common depot via Wimbledon. With a 20-minute District Line service, it was expected that this could be achieved without delaying the service. However, when it was reied for the first time on 14th May 1965, the District service was delayed and so an alternative scheme was used subsequently as follows. The transfer train went to Wimbledon station where it was shunted so that the pilot cars were coupled "back to back" at the East end of the train. The train then proceeded to Wimbledon Park (Eastbound) platform, where the L.T. pilots uncoupled from the remainder of the train. The Southern Region unit and match wagon then came out of the depot, coupled to the tube cars and took them back into the S.R. depot, the tube pilots returning to Ealing Common.

The second batch of eight cars, in two separate trains were transferred on 1st June 1995, by which time the Southern had purchased all 61 ex-Northern City cars which had been at Ruisilp since October 1964. It was proposed that 24 more cars would be transferred on 9th and 23rd July and on 6th August. In the event, only 16 were moved (on 12th and 23rd July) as the rest could not be made up due to the Ward couplers from some of these cars having been removed for further use on engineers' vehicles. To overmome the situation partly, eight Ward couplers from already scrapped Q stock were obtained from the scrap dealer, Cashmore's of Great Bridge. The couplers, being of the type used on surface stock, had to be modified before being used on tube stock, and this work was done at Acton. Thus, at 1st August 1965, there were still 29 S.R.-owned tube cars at Ruisilp Depot. These were as shown in appendix 2.

In the meantime, in the summer of 1965, the Minister of Transport, Mr Fraser, announced that the line to Newport and Cowes and the Shanklin to Ventnor section should be closed as recommended, but, as anticipated by the S.R. in October 1964, the Ryde to Shanklin section should remain open, as it carried the bulk of the holiday traffic. But perhaps the greatest surprise of all to both L.T. and S.R. was that the Minister announced that this section should also be modernised. British Rail itself favoured dieselisation, while local authorities were for electrification.

In October 1965 the Southern decided, as a result of the Minister's announcement, that the line between Ryde and Shanklin would be electrified and operated with 46 of the tube cars set aside for them. The decision to convert the tube cars to diesel operation was discarded as the cars would only last a short while. Although costs for dieselisation and

electrification were very similar, the question of motive power would arise again relatively quickly. With electrification, when the cars needed replacement, there would probably be further tube stock available.

The Southern Region confirmed at the beginning of November 1965 that the British Railways Board had approved the electrification scheme, and the use of 46 tube cars. In opting for electric traction with the old vehicles, the whole question of the condition of the control gear and cabling came under review. It turned out that the cars needed re-cabling and also minor alterations to equipment, as an earthed negative would be used instead of a fourth rail negative. The total cost allowed for the modernisation project was £1m. Much of this was to be spent on altering Ryde Pier Head station, reducing the number of tracks to two with three platform faces, and raising the permanent way at other stations along the line to eliminate a big step between train and platform. At Ryde Esplanade, however, the track was to be left untouched, but the platforms had to be lowered at the insistence of the Minister of Transport! Through Ryde tunnel the track and drainage was to be renewed, with track simplification at other locations. Third rail electrification at 630V d.c. was chosen and new substations were to be built at Ryde St Johns Road, Rowborough (about one mile on the Ryde side of Brading), and Sandown. Electricity was to be obtained from the South Eastern Electricity Board at 33kV. The electrical control room was located at Ryde, but is now at Havant on the mainland, operation being by land line telephone.

In December 1965 the Southern Region issued plans for the new service, anticipated to commence by Easter 1967. For the winter, two 4-car units would be required, four 7-car trains on summer Mondays to Fridays and six 7-car trains on summer Saturdays. One 4-car set, to be kept as a spare, was also envisaged. At this stage, the Southern proposed to keep the pre-1938 tube stock only until the 1938 tube stock became available. The total stock requirement was as follows:

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Requirement Already on S.R 7 "A"D.M. (3x1931/34, 5x1927/8) 13 "D" D.M. (10 "D" D.M. (3x1931/34, 7x1927/8) 10 "A" C.T. 7 "A" C.T. (7x1924/34) 7 "A" C.T. (7x1924/34) 9 "D" C.T. (4x1925) 4 "D" C.T. (4x1925) 4 "C.T. (4x1925)
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As can be seen from the above table, the numbers of each type of car already on the Southern were not quite what was wanted. Three of the 10 "A" Control trailers required were intended to be used as trailers, and their places were taken by 3 of the 4 surplus "D" Control Trailers. The fourth one took the place of the 16th trailer required. Although this now meant that the Southern was only two cars short of its total number of cars, it had one "A" D.M. too many, and three "D" D.M.s too few at Micheldever. Over the next few months various changes were made which ultimately sorted this out.

The condition of the additional 29 S.R. cars stored at Ruislip depot was reported upon by L.T. to the S.R. in January 1966, twelve of them having defects as follows:

Cab door dented and pitted: 3010.

\* Cars fitted with roller bearing axle boxes.

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Rusting panels and guttering: 3009 3045 3288 3315 5262 5273 5277 5281 5285 5289 7298
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The other 17 cars were said to be in reasonable condiiton, with no apparent defects. These were:

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3040 3041 3062 3064 3313
5270 5287 5294 5412
7029* 7276 7277 7279 7281 7290 7295* 7296
```

The cost of rehabilitating 46 cars was estimated by L.T. to be £90,000. This included 20 motor cars at £2,850 each and 26 trailers at £1,250 each, but was in addition to the £14,860 paid for the cars at scrap prices in the first place.

At this point, the Southern decided that out of the 44 cars at Micheldever and 29 still at Ruislip, 27 could now be scrapped, leaving the necessary 46 for refurbishment and subsequent use in the Isle of Wight. They were also in favour of one-man operation of the

trains on the island, and approached L.T. for estimates of the cost of putting door controls in the driving motor car cabs. This was put at £1,000 per cab, but fell out of favour as the cab doors were small and would cause difficulties for the driver, outweighing the fact that one-man operation would save substantially on crewing costs.

In March 1966, ten cars at Micheldever were deemed to be unfit for further use and were rejected. Thus a total of twelve cars were selected from those still at Ruislip which, fortunately, had not been scrapped (Appendices 4, 5 and 6). These were chosen to replace the ten rejected and also to make up the shortase of two mentioned earlier.

The cars rejected at Micheldever were:

"A" D.M.s 3028 3044 "D" D.M. 3033 (1928 U.C.C.)
C.T. 5248
Trailers 7159 7166 7167 7173 7181 7189 (1931 Gloucester C.&W. Co.)

The replacement cars from Ruislip were:

"A" D.M. 3010 (1929 U.C.C.)
"D" D.M. 3041 3045 (1928 U.C.C.) and 3313 3315 (1927 M.C.W.)
C.T. 5294 (1925 M.C.W.)
Trailers 7279 7281 7290 7295 7296 7298 (1923 Cammell Laird)

It is perhaps difficult to understand why six 1923 Cammell Laird trailers were chosen instead of 1931 Gloucester cars, being eight years older. This was because the 1923 cars seated eight extra passengers, had four less doors per car to maintain and, having been on the Northern City line for most of their life, were in good condition.

Meanwhile, on the island, those services not saved by the Minister of Transport were withdrawn. These were from Smallbrook Junction to Cowes from 21st February 1966, followed by Shanklin to Ventnor on 18th April 1966. This left just the Ryde to Shanklin section open —84 route miles out of the original 554.

Work started on overhauling and modifying the cars at Acton Works in March 1966, starting with those stored at Ruislip, and thus charges to the S.R. for storage of the stock at Ruislip ceased from 31st March 1966. Arrangements had to be made for those cars at Micheldever to be returned, and transfers of these 25 cars commenced in May 1966 (Appendix 8). The work at Acton included overhauling the braking and electrical equipment, and modifying the latter to provide the earth return for operation on the Southern's third rail system. This involved shorting out all the negative fuses, taking off the negative shocebam and bolting the negative shoclead to the motor frame using the bolt holes which had held the shocebam. Some cars also had their many layers of paint stripped off down to bare metal, so that the condition of the bodywork could be examined.

In May 1966 London Transport were considering replacing at the end of the year, the 4-car sets of 1931/4 tube stock on the Northern City Line with 1938 tube stock. This was made known to the Southern and agreement reached whereby work on the U.C.C. Feltham cars would be deferred so that advantage could be taken of the newer cars. This would also reduce costs as the 1931/4 cars were already re-cabled in Egatube conduit. The Feltham cars on which work had already started, however, were retained.

In August 1966 the cost of rehabilitation was found to be higher than originally anticipated. Consideration was given to abolishing the 4-car spare set to save £9,000, or to run 6-car trains instead of seven, saving £8,000. In September, the Southern decided to reduce the stock by three cars and have only one spare D.M. car. In consequence of this and with the imminence of the 1931/4 cars being available from the Northern City Line, a further ten cars (Appendices 9, 10 and 11) were rejected, nine from those stored at Micheldever (1928 U.C.C. D.Ms. Nos. 3035, 3037, 3037, 3292, 3301, 3303, 3311; 1927 M.C.W. D.M. No. 3314, and 1925 M.C.W. C.T. No. 5296) and one at Ruislijn (1923 Cammell Laird Trailer 7295). Seven 1931/4 cars (Appendix 12) were selected from the Northern City Line as replacements (D.Ms. Nos. 3084, 3185, 3209, 3223, 3251, 3696, 3705).

After completion at Acton the cars were then transferred to the Southern via Wimbledon between pilot motors. The first of these took place on 13th May 1966. At Wimbledon, after detaching the pilot cars, fuses were able to be replaced and the 1sle of Wight cars then travelled to Stewarts Lane depot via East Putney under their own power. At Stewarts Lane depot the trains were painted in B.R. blue livery with brown underframes—they were the first complete B.R. stock to be painted in this livery—with yellow cab ends on D.M.s and control trailers used as such. Control trailers used as trailers were painted blue all over. D.M. cars carried the B.R. double arrow emblem in white and all



First train of ex-L.T. stock for the Isle of Wight to be painted at Stewarts Lane, 4th June 1966. The car in the foreground is S2SS (ex-3313), one of the two 1927 M.C.W. driving motor cars, both now scrapped. [Alan A. Jackson

cars had car numbers in white. Lugagge shelves were also fitted, and prototype conversions were carried out at Stewarts Lane on cars 3010 and 7283. In D.M. cars three longitudinal seats on the East side of the cars, were replaced by these shelves, and in each trailer and control trailer, two bays of lugagge shelves were provided, one on east side, with the loss of six seats. At each lugagge shelves were provided, one on east side, with the loss of six seats. At each lugagge rack position, one window has had to be panelled over. The interiors were painted in mushroom with white ceilings, but the L.T. seating moquette was kept (the seats having been retrimmed on cars that needed attention) as well as the red and green leather armrests. The "bar-and-circle" moquette however, was replaced from the start! For three car transfers a four car unit already transferred was used as a pilot. As these had already been painted in the new livery, the whole formation often comprised cars in blue and red liveries together with some unpainted cars! The last set to leave Acton for Stewarts Lane did so on 16th February 1967. The S.R. formed cars into four- and three-car units, classified 4-VEC and 3-TIS respectively, which when coupled into a train presumably became "7-VECTIS", thus reflecting the Roman name for the Island. The 43 cars were numbered as follows:

Driving Motor Cars S 1-11/13/15/19-23/25 Control Trailers S 26/28/30/32/34/36 Trailers S 41-49, 92-96

C.T.s used as trailers S 27/29/31/33

(See Appendix 14)

Each car number also had an "S" suffix which normally indicated a vehicle of Southern Railway origin!

As some cars were transferred to the Southern before the decision was made to reduce stock requirements from 46 to 43 cars, some renumbering took place before the cars entered service with their new owners. S12S (set 043) and S17S (set 036) were remumbered S22S (set 042) and S21S (set 044) respectively and S23S was reformed from set 044 to set 045 (see appendices 14, 15 and 16). In addition, control trailer S26S (ultimately in set 043) was formed into set 037. S38S was, in fact, the first car to arrive on the island, doing so on 1st September 1966. It was coupled to a match wagon and with class 02 0-4-4T locomotive No. 24 "Calbourne", worked to demonstrate for the Minister of Transport the difference in height from platform to car floor level. For this, a pair of passenger doors had to be made operative and this was achieved by connecting an air pipe to the locomotive, and using the outside door "butterfly" cock. The train ran between Ryde and Shanklin on 4th September 1966.

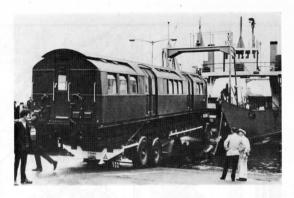
Units completed at Stewarts Lane were worked on the S.R. main line for trials between Wimbledon and Woking, later being based at Fratton for crew training between there and Haslemere. From Fratton, cars were loaded on to a Pickfords low loader by two cranes (one steam, one diseal) until the special rail loading ramp was ready, and then carried on the Portsmouth to Fishbourne car ferry, which could only be done when the weather and tides were favourable. As the driving motor cars were much heavier than the traillers, two Pickfords tractors were required for loading on and unloading off the ferry, and a special bridge'n had to be used to avoid placing excessive weight on the boar's drawbridge. Thus driving motor cars had to be transferred on special trips on a rising tide, whereas trailers were transferred on "service" boats. At Ryde St Johns Road depot, the cars were unloaded on to a special ramp constructed in the yard. Here the cars were shunted by the remaining operational class O2 steam locomotives into the correct formations. Three 4-car and one 3-car sets were shipped in the last seven weeks of 1966, the remainder being shipped in 1967.

Three cars were damaged during transfer to the Isle of Wight. 1923 Cammell Laird trailers S46S and S49S were both damaged during the unloading of the former, which was the only car finally selected to have roller bearing axle-boxes. S46S moved down the ramp at Ryde St Johns Road before the winches could be attached, and rolled down colliding with S49S. Damage was sustained by both cars, including broken windows, slight distortion of body sides and damaged drawgear and underframe. Motor car S22S, while being prepared for shipment at Fratton was struck by a main line vehicle at buffer level. This damaged the receptacle box lids and door pillars, and broke cab windows and headlight glasses. The car was taken to the island in damaged condition, where repairs were made to it and the two trailers under guidance from L.T. staff based at Ryde. This was done in the locomotive shed at St Johns Road (located on the West side of the station) as the works (on the East side) were closed for modernisation. The working conditions here could only be described as primitive - compressed air to test doors, for example, was obtained from a suitably positioned stationary steam locomotive. A modification made at the last minute was to the operation of the Guard's sliding door on 1931/4 cars. This was made totally independent from passenger doors - even when the guard's position was unoccupied. On L.T., unoccupied guard's positions and their doors on 1931/4 cars could be used by passengers. The 1927 M.C.W. and 1928/9 U.C.C. driving motor cars had hand-operated slam-type guard's doors which had never been intended for passenger use.

In preparation for electrification, and with only a Ryde to Shanklin steam train service left after April 1966, this service was cut back to Ryde Esplanade after 17th September 1966 so that work on remodelling Ryde Pier Head station (started in 1964) could continue uninterrupted. Work also started in Ryde tunnel and with only one line available for use and no reversing facilities available at Esplanade station, trains had to have a steam locomotive at each end between there and St Johns Road. The service was withdrawn completely after 31st December 1966 so that final work on electrification could take place—then set for completion in March 1967. Meanwhile a bus service was provided.

Some trains of electric stock were stored on the down line between Ryde St Johns Road and Smallbrook Junction. Traction current was switched on and the first trial runs were made in earth March 1967. The new service commenced on Monday 20th March 1967. Being eached the stand by them, but by 20th May 1967 all trains had entered service. On the first day—indeed, not all the sets entered service on the first day—indeed, not all charge as the stand by them, but by 20th May 1967 all trains had entered service. While the basic service was hourly during winter and half-hourly in the summer, it was on summer Saturdays that the maximum rolling stock was called for, with six trains providing a 12-minute service throughout the line. This left only one driving motor car spare. The working of six trains at Shanklin required both platforms to be in use, the down to the up platform shunted beyond the station in the Ventnor direction, for about a train's length or so. When less than 6 trains were running, the up line was not normally in use, the down platform being sufficient to deal with all passenger movements. A spare train was often to be found stabled in the up platform. The signal box at Shanklin was opened only when the two platforms were in use. At other times the up starter from the down platform (which was worked by motor and controlled from Sandown box) was used.

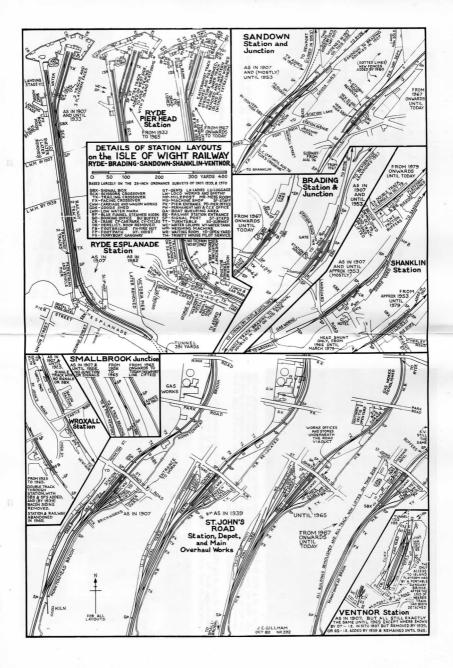
By August 1967, serious consideration was being given to re-opening and electrifying the line beyond Shanklin to Ventnor, and for this the Southern were ideally looking for a further eight cars, one seven-car train and one spare D.M. car. At this time the amount of stock available was as follows:



Control Trailer being loaded on to the Isle of Wight car ferry at Broad Street, Portsmouth,

Class 02 0-4-4T No. 24 "Calbourne" and match wagon easing a control trailer down the unloading ramp at Ryde St Johns Road. [R. J. Greenaway Collection







Interior of a 1925 M.C.W. control trailer showing one of the luggage racks on the left. This car has retained nearly all its white handgrips — unusual on L.T. — but has lost its armests during recovering the seats in blue B.R. style moquette. Note the louvred door with circular window between the saloon and the cab. This type of door was unique to "Standard" stock control trailers.

Interior of one of the 1931/4 M.C.W. driving motor cars looking towards the guard's compartment. Note the "No Exit From These Doors" notice on the guard's draught screen and the tool cupboard and ambulance box fitted in the double doorway.



\* 2 x 1931 "A" D.M.s. \* 1 x 1931 "A" D.M. without bogies (these had already gone to the Isle of Wight as

spare bogies). 2 damaged D.M.s.

3 x 1928 U.C.C. D.M.s. previously at Micheldever.

2 x 1923 C.L. trailers. 1 x 1924 C.L. "A" C.T. 3 x 1925 M.C.W. "D" C.T.s. \*32 x 1931 B.R.C.W./G.R.C.W. trailers. 6 x 1931 G.R.C.W. trailers at Micheldever.

All except \* had been previously rejected.

With no "D" D.M.s available, it was proposed to form an extra four-car unit 047 by coupling spare D.M. S10 to set 036, form two new three-car units (036/7) each with one "A" D.M., one 1923 Cammell Laird trailer in the middle and one "D" Control Trailer. A spare two-car unit (one "A" D.M. and one "D" C.T.) would also have been provided. It was also decided that if the 1923 trailers were not in good enough condition, 1931 trailers would be used. The previous problem of extra doors to maintain, and having less seating accommodation would have been eliminated as the end single doors would have to be sealed or panelled over, because the Minister of Transport banned their use owing to the excessive gap between train and platform on the down line at Rvde Esplanade.

Also by August 1967, the Isle of Wight were in trouble with heavy rail and wheel flange wear, to such an extent that a 30mph general speed restriction had to be imposed, and lomph over all points and crossings. This was caused by the ‡in difference in gauge between the L.T. and B.R. track systems, the latter being true 4ft 8½in, L.T. being 4ft 8½in, O. the island, check rails were installed similar to L.T., but there were initially no wheel flange lubricators. These were huriedly installed, 13 by August 1967, and a further six as soon as possible afterwards.

In October 1967 L.T. offered seven cars for the Southern's proposed Ventnor extension, comprising three "A" D.M.s (3082, 3310, 3312—the last two having been re-numbered by 1965 from 3110 and 3112 to avoid duplication with new 1967 tube stock), three "D" C.T.s (5273, 5277 and 5285) and one "A" C.T. (5270).

At the end of 1967, car S15S (L.T. 3253) was damaged in a shunting mishap in Ryde Works. Being placed on blocks on a pit road in the shed, another motor car was being shunted outside. This over-ran the entrance doors and ran into S15S, pushing it off the blocks. The driving end landed on the floor, while the trailing end fell on to one of the bogies. The estimated cost of repair was put at £3,600 and not surprisingly it was recommended not to proceed with this. Thus the Southern was looking for yet another car as replacement. All L.T. could offer was withdrawn car 3271, which itself was damaged, but to a lesser extent than the car it was to replace. The cost for this car was £4,300 (£1,300 for repair, £2,700 for rehabilitation and £300 scrap value). Authority to scrap 3271 had been given on 25th February 1967 but it had remained at Acton for a further year.

In March 1968 the Southern Region were considering withdrawing the Ryde Pier tramway, and with this in mind, estimates for rehabilitation of the seven additional cars were requested, the cars going from Ruislip to Micheldever on 9th July 1968. The estimates were also for the conversion of one "A" D.M. to a "D" D.M. The costs were:

3 D.M. cars rehabilitated - £4,500 each. 4 C.T. cars rehabilitated - £1,800 each.

Conversion of one D.M. "A" to "D" - £1,100.

L.T. stated that the work would take at least eight months, in addition to that on the replacement car.

No doubt the question of finance played an important part on future decisions, as the additional seven cars did not get rehabilitated for the Ventnor extension (which was not authorised) nor as an extra train to replace the pier tramway. Instead, just 3271 was agreed upon, to replace damaged car S15S, making do with existing stock, even when the tramway closed. The Ryde Pier tramway closed in January 1969 and a replacement train service was introduced between Pier Head and Esplanade, using one train shuttling between Pier Head and Cempty from Esplanade to St Johns Road). St Johns Road was used for reversal as the old crossover at the South end of Ryde Pier was only signalled for emergency use.

As the shuttle service committed one of the train sets, the main service had to be reduced to four trains on Summer Saturdays, and the frequency reduced from 12 to 15 minutes. This rendered the "up" platform at Shanklin superfluous and was not used again for passengers, the subway under the track being permanently closed. Nevertheless. the maximum service was still provided over the section that required it most—along Rwde Pier.

Ryde Pier Head Signal Box was becoming structurally dangerous, and the scissors crossover due for renewal. Whilst a specially fabricated replacement crossover existed, the lack of a practical method of lifting in the new components at the seaward end of the pier—and the cost of sea-proof point motors—militated against its installation. So from October 1973, single line working was instituted over the up line. The scissors crossover was replaced by plain track and a crossover installated south of Ryde Esplanade station, giving indirect access to the old down line along the pier for exclusive use by the pier shuttle service. A pinch-check-rail trap protects any overshooting pier shuttle train from running away down the 1 in 50 gradient towards the tunnel where the double track section now commences. New colour light signals were installed and the whole area controlled from Ryde St Johns Road Box as from Mty 1974, Pier Head Box being abolished. The pier shuttle train is normally isolated on the East-side track on the pier for its day's turn of duty.

The special scissors crossover has since been acquired by the Bluebell Railway who have incorporated it in their layout at Sheffield Park!

In 1978 the up platform track and shunting neck beyond Shanklin station were removed. The down platform was extended at the Ryde end and cut back at the Ventnor end, so that the line finished on the North side of the bridge across the road. The bridge was demolished in October 1979 and the trackbed beyond is now largely a woodland walk.

At the end of November 1968 the Southern gave authority for the repair, overhaul and refurbishment of 3271 to replace \$158\$, the bogies and certain other other items being reclaimed from the damaged car. They were hoping that L.T. would be able to complete the work by April so that the "new" car would be available for the 1969 summer service (It must be remembered that at this time they ran 6 x 7-car trains on summer Saturdays and without \$158\$ or a replacement, had no spare cars at all.) Unfortunately, due to staff shortages in the Repair Shop at Acton Works, immediate repair of 3271 was not possible. In January 1969 the alternative was suggested that as 4 pilot cars were about to be withdrawn, one could take the place of 3271. The repair work would be unnecessary and both cost and time reduced, although completion could only be in time for the summer season of 1970. Two M.C.W. cars were offered -3273 of 1931 and 3707 of 1934, of which 3273 was in better condition. Protracted discussions ensued, but at about the time work might have started, there was a three month strike at Acton Works.

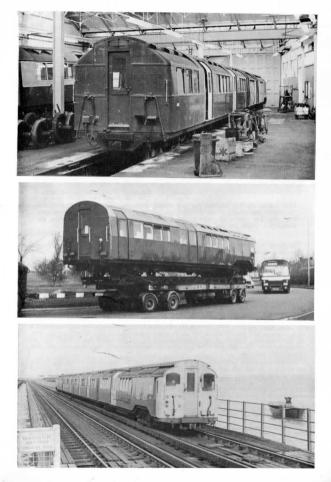
After the strike was over, L.T. had a large backlog of work and hence asked the Southern if they could do the work themselves. This was not thought feasible, and eventually 3273 entered Acton Works on 8th October 1970. The price had increased to £4,330 for overhaul and refurbishment only, plus £200 scrap price for the car body. The bogies and motors from \$155 were delivered to Acton during December and January. Arrangements were made with Pickfords and the Southern to move the replacement

Arrangements were made with Pickfords and the Southern to move the replacement car from Acton on 20th March 1971. A 45ft length of second-hand track was purchased by the Southern from L.T. at scrap prices, and this was placed on a low loader at Acton. Due to weight restrictions at Portsmouth and the desire not to use the special "bridge" on the ferry, the traction motors were not fitted but returned to Ryde by B.R. lorry. The refurbished car, painted in B.R. livery by L.T., was transported, complete with its bogies, on the low-loader, which with the track made a toal height of 14ft 7ins — only four inches less than the clearance on the ferry. Being also numbered S15S, it entered service for the summer season, the original car having been scrapped in May 1969.

Opposite Top: Interior of Ryde Works, 18th October 1982, with trailer S44 in the foreground.

Opposite Middle: The replacement S15S (ex-3273) en route for Ryde near Staines on 21st March 1971. This was the only car to be painted in B.R. livery at Acton Works and the only one to go direct from Acton to Ryde by road.

Opposite Bottom: The replacement S15 in service in a 4-car train forming the pier shuttle, 18th October 1982.





1928 U.C.C. car S19 working the pier shuttle. Note that the car no longer retains the curved side panels below the windows, and that this car is now withdrawn eee page 39). The curved platform at this station is well emphasised in this view, although the "Mind the gap" signs can only just be seen painted on the platform.

[B. R. Hardy

In about 1970, some trial collector shoes were tried. They were provided by Morgan Crucible—makers of many carbon products—and were made of a carbon and copper mixture. They had square ends rather than the standard upturned shape, and were fitted to the East side of trains only so that a direct comparison could be made with metal ones both for wear and rail condition. They were not successful, especially in the wet when they turned to "mush" and consequently wore out quickly.

Another trial, this time successful, was to change from using "Osglim" pilot light bulbs and use standard fridge-type 15w pygmy bulbs instead. The difference in price was considerable - £27s 6d against 6d!!

The fleet of 43 cars on the island has been reduced over the years due to various mishaps. Already mentioned was the replacement of \$155 in 1971, which then depleted L.T. of all its available pre-1938 tube stock. On 10th September 1973 a collision occurred at \$2 Johns Road between sets 035 and 045. This led to the withdrawal of three cars and a good four-car unit was thereby made up from the remaining four cars (Appendix 20). This in fact comprised one car of 045 and three of 035, and the whole combination was renumbered 045. This left a gap in the three-car unit numbering sequence and thus 036 was renumbered 035.

On 8th September 1975 driving motor \$25\$ from unit 046 was severely damaged by fire at \$1 Johns Road and was immediately withdrawn from service, being totally beyond repair. The three cars of 046 (M-T-T) were used as required, coupled to another four-car set, but it was not until October 1980 that it was officially recognised as a three-car unit, then being renumbered 036. As the south end of the unit was a trailer with no cab, and thus not painted yellow, the set number 036 was in black lettering on a yellow rectangle located at the top of the communicating door. In 1982 the D.M. and C.T. of 033 were withdrawn (the D.M.s between 033 and 043 having been previously exchanged) — the age of the stock now starting to take its toll. The current fleet comprises five three-unit cars (031/2/4/5/6) and five four-car sets (041-5), plus a spare D.M. (\$10) and trailer (\$93 from set 033). This reduction in stock explains why in 1982 a further reduction was made to the summer Saturday service with three trains instead of four, running every 20 minutes instead of 15, plus, of course, a pier shuttle.



An example of reformations common on the island these days. S6 from unit 045 is coupled to the only 1927 control trailer, S36 at the Ryde end of unit 035. The remainder of unit 045 was coupled to the South end of the train.

All cars were given a new exterior coat of paint in the winter of 1971/2, the interiors being repainted during the following winter. From 1976, external repaints emerged from Ryde works with the passenger doors painted grey, enhancing the appearance of the trains, and the "S" suffix on car numbering was also dropped. The B.R. standard blue and green seating moquette was also being introduced at this time, first being dealt with at Swindon, now carried out at Ryde Works. The L.T. leather armrests are now being phased out. A new interior colour scheme was introduced in late 1981, when lime green and white replaced the drab mushroom and white, the first unit to be done being 032. Perhaps the greatest surprise of all came in early 1982 when exterior repaints saw the introduction of the Inter City blue and grey livery, with black painted cab window surrounds and "Isle of Wight" lettering on the D.M. car sides. By May 1982 two complete trains had been repainted in the new livery, and the interiors in the new lime green and white. These were units 031, 036, 041 and 043. Since 1969, a system of class numbering for B.R. E.M.U. rolling stock has been in existence. The Isle of Wight sets were classed 451 (3-TIS) and 452 (4-VEC), but a review of B.R. class numbering in 1973 altered them to classes 486 and 485 respectively. It was not until the advent of the Inter City livery, however, that these class numbers were first used, being placed in the space occupied by the old destination plates. As "Isle of Wight" letter transfers were not available to start with, S5 ran without these or a B.R. logo for a while, and S13 and S20 had no B.R. logos for a short period, but did have Isle of Wight names - hand painted on. All cars were properly signed by early May 1982. It was reported on television on 5th July 1982 that the Isle of Wight County Council approved a grant of £15,000 for internal refurbishing of all the rolling stock on the island. New orange/brown moquette, as used on L.T.'s "D" stock will be fitted by summer 1983, and new orange lino will be used on the floors. It now seems that the trains, varying in age from 49 to 60 years, and which were given a 10-year lease of life in 1966-7, have no end to their service. Alternatives to using the pre-1938 tube stock have been considered by the Southern Region, but the advantages of the old trains greatly outweigh their disadvantages. Among the options considered was the use of 1938 tube stock, scrapping of which commenced in 1973. These were deemed to be unsuitable because of the underfloor mounted equipment, which would be exposed to the elements on Ryde pier in bad weather, and expenditure which would be required to



Spare driving motor car \$10 coupled to unit 035 and another 3-car unit at Shanklin, 2nd June 1979. This car is the only one to retain its train number bracket which is used to indicate to which unit it is attached. Work on extending the down platform is in evidence on the left, while on the right can be seen the disused up platform. This has now been removed together with its track.

[B. R. Hardy

enable Ryde Works to attend properly to the underfloor equipment. Currently under consideration is the use of 1959 tube stock in about ten years time, but alternative arrangements will have to be made with the electrical equipment as this is also located beneath the floor.

#### Acknowledgements

The Editor of this booklet would like to express his appreciation to Brian Hardy and Ken Benest for their work in writing it and to the following, who have helped with advice and information:

F. W. Ivey;

M. H. Kennard:

I. Whitlam (Wight Locomotive Society);

A. J. Barter (Project Manager of the electrification scheme 1966-7);

British Rail Southern Region (C.M.&E.E. Department) Croydon;

In addition, special thanks are due to John Gillham for providing the maps and line diagrams, and to Les Coote, retired Depot Foreman at Ryde St. Johns Road, and the present Foreman Keith Bowden, whose combined iniative and enthusiasm have enabled the rolling stock to be kept going.



Sandown Station, 13th August 1967, with units 032 (left) and 031 (right).



The same view 15 years later on 7th August 1982 showing how much has changed at Sandown. Only the signal box remains on the up platform, but unit 032 keeps soldiering only



1923 Cammell Laird trailer in the latest livery on 7th August 1982. This type of car has side droplights, although with restricted opening, one of which is open on this car, S47. The fourth window in the centre bay has been blanked off where the luggage racks have been fitted.

Interior of 1923 Cammell Laird trailer S47, 7th August 1982. This car has had its wooden floor lagging replaced with dark grey linoleum, its seating recovered in B.R. blue moquette, has lost its armrests, but retained the white handgrips.



#### 5. IDENTIFICATION OF PRE-1938 TUBE STOCK by Brian Hardy

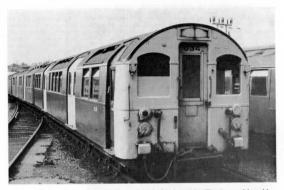
The pre-1938 tube stock gained the title of "standard stock". This, however, was far from the truth, as the many different types, built over a period of 11 years, with different builders made it anything but "standard", but nevertheless the cars were operationally compatible. It is fortunate, from the enthusiasts' point of view, that examples of most types have been saved for use on the Isle of Wight, in the form of a motor, trailer or both. Cars not retained were the 1930 batch built specially for the Bakerloo Watford line, and the six-car experimental train built by the U.C.C. at Feltham at the same time, which was the prototype for the 1931/4 cars.

The 44 cars that went to the island can be summarised as follows, in order of age:

1. Fourteen trailers from a batch built in 1923 by Cammell Laird for what is now the Northern Line. Some of these cars were transferred to the Northern City Line in 1939, operating on that line until October 1964, when they were replaced by more modern cars of pre-1938 tube stock. It was fortunate that these cars survived until 1964, for the rest of the type were the first to be scrapped in 1960. The cars had thick waistbands, drop windows, and small rectangular ventilator scoops in sets of three. The rainstrips over the passenger doors were straight. One interesting survival from early days is that trailer S93 to this day retains chain grabs at the car ends, rather than grab rails as on other similar and later cars. These chains were used strung together between adjacent cars to deter people from entering between cars and were originally leather covered. Similar arrangements are common in U.S.A. and were used on District Railway F stock built in 1920.



1923 Cammell Laird Trailer S93 showing the chains fitted where most other cars have handrails. This is the only one remaining, but it is thought that in most cases L.T. replaced the chains with rails bolted on to the original brackets. On the control trailer on the right can be seen the round-headed rivets characteristic of these cars. Although common on older Underground stock, the round-headed rivets were superseded by flush countersunk ones on body panels from the mid-1920s.



Control Trailer S32 in Ryde Works yard, 18th October 1982. The boxes either side of the cab windows on control trailers are plunger switches which were operated by platform staff in L.T. days to close the doors on half the train. This car retains a section of rainstrip fitted over the windows of some cars when new, but now missing on most cars.

1925 M.C.W. Control Trailer car S33 in Ryde yard, 18th October 1982. This is one of the control trailers used as a trailer and hence has not got a yellow-painted end.



2. Nine control trailers from a batch built in 1925 by the Metropolitan Carriage & Wagon Co., also for the Northern Line. These are recognisable by having angled ventilator scoops which are largely hidden by the overhang of the clerestory roof, and ribbed doors with curved rainstrips over them. Five out of the nine cars are used as control trailers in their own right, complete with driving equipment and yellow ends. The other four cars have been converted for use as trailers, but the inoperative equipment in the cabs has been retained. The cab ends are painted blue. In the cab of one of these trailers, S31, de-icing equipment has been fitted. When required to spread de-icing fluid, a member of the staff from Ryde Works operates the equipment from the cab, turning the flow of fluid off while standing in stations. While running, collector shoes detect which side the conductor rail is situated and the fluid is applied by operating manual valves appropriately. Indicator lights in the cab show which side is spraying. One might consider this costly in manpower, but apparently two round trips in the course of a day is enough to keep the current rails clear in all but the severest weather.

The de-icing equipment was installed by enterprising staff at Ryde. A report of this "bargain basement" conversion which used materials to hand plus £5 for a few additional items, was reported in "Modern Railways" in April 1972, and so came to management's attention. A rebuke was served for not submitting plans and seeking authorisation —though it is believed that the Ryde men ironically, were later given a staff suggestion scheme award for their recalcitrant deed!

S31, another of the control trailers used as a trailer, but this one is fitted with decing gear. This can be seen as a small pipe on the shoebeam, to which is also fitted a shoe, which provides an indication of which side the conductor rail is, and also helps to spread the de-icing fluid over the railhead.



- 3. Two driving motors and one control trailer car built in 1927 by the Metropolitan Carriage & Wagon Co. This type was built for the Piccadilly, Bakerloo and Hampstead & City lines, the three island specimens having worked on the Piccadilly Line. This more modern version of the pre-1938 tube stock was reflected in having no overhang to the clerestory roof over the passenger compariments, thus exposing the angled ventilator scoops totally. These cars also had a smoother appearance than the 1925 batch, although these improvements were first made on the 1926 cars. Some of the motor cars had ribbed doors while others did not, although on all cars the door panelling was not flush with the frames. On the offside of the swich compariment the ventilator louvres of earlier builds were omitted, and plain sheeting used instead. The smoothness of the cars could be noticed by the windows being flush with the bodysides and the elimination of thick waistbands. The only survivor of these three cars is now the control trailer, the two motor cars having been withdrawn. The most noticeable difference between the 1927 C.T. and the 1925 C.T.s is that the newer car has all the headlights mounted under the offside cab window with internal shutters, whereas the older cars have four separate headlights, two on each side of the cab, and have external shutters.
- 4. Three motor cars built in 1928 by U.C.C. Feltham. These were part of a batch built for the Piccadilly and Bakerloo lines and differed from the 1927 M.C.W. cars in that the bodyside bulged below the waist and the rainstrips over the doors were straight. There was no rainstrip over the guard's door. Some of the U.C.C. motors had a centre door pillar (as do the three island examples) and were the last batch of tube cars to be built with these. The decision to do away with centre door pillars was taken during the construction of these cars, hence the fact that some were delivered without them. No doors had ribbing but neither were the door panels flush with the frames.

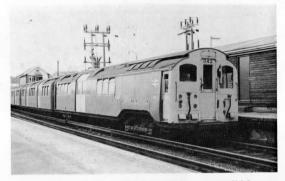


Above: S36 the only 1927 M.C.W. control trailer on the island. This car has a smoother finish than the other control trailers with a front end arrangement similar to driving motors of the same age.

Top Right: 1928 U.C.C. driving motor car S20 at Sandown, 7th August 1982. Middle Right: Withdrawn 1928 U.C.C. car S19 at Ryde, 7th August 1982, without shoebeams.

Bottom Right: S20 at Ryde Pier Head showing the slam-type guard's door and the fact that some roof ventilators have been blanked off. All three photos on this page show the central door pillar and the straight rainstrip over the doors.





S22 at Ryde St Johns Road, 18th October 1982. This is the only 1929 U.C.C. car on the island, and as such has various differences compared with the 1928 version shown on the previous page. The vents over the equipment compartment and the lack of a central door pillar are the most obvious. All the U.C.C. cars originally had curved side panels below the windows, but this curve can now only be seen by the cab door. The curved wooden framework was planed straight in the late 1970s in order to make it easier to fit replacement panels as necessary.

S1 at Ryde St Johns Road in the latest livery. This is a 1934 M.C.W. car and shows the white handrail by the cab door which, together with the rainstrip over the door, has been fitted to driving motor cars since arriving on the island. The only exception is that the soare D.M., S10, has no rainstrips.



- 5. One 1929 U.C.C. Feltham motor car. This batch of stock was an improvement over the 1928 version, in that the doors were completely flush with the frames. The ventilator louvres in the roof of the switch compartment were replaced by rectangular covers, open at the base, which curved with the line of the roof and whose top ends fitted under the clerestory overhang.
- 6. Fourteen motor cars, nine built in 1931 for the Piccadilly Line extensions, and five built in 1934 for increased Piccadilly Line services. The two types were indistinguishable except that in the case of the 1934 cars, the passenger saloon quarter lights were of the lift-to-open type and not spring toggle as on 1931 and previous cars. The 1931/4 cars were the last of the pre-1938 "standard" stock to be built. The motor cars had flat panels below the waist, curved rainstrips and a slightly altered front end design. Being slightly longer than their predecessors, the car ends tapered inwards slightly. Above all, these cars were the first, apart from the U.C.C. prototype, to have air-operated guard's doors, instead of the hand-operated slam type.

## 6. ANALYSIS OF EX-LONDON TRANSPORT "STANDARD" TUBE STOCK ON THE ISLE OF WIGHT by Brian Hardy

Appendix 1—12 cars from Ruislip to Wimbledon (14th August 1964) and Wimbledon to Micheldever (16th August 1964):

3074 3141 3253 3702 3703 3706 7159 7166 7167 7173 7181 7189

Appendix 2—29 cars ex-Northern City Line October 1964, available at Ruislip January

DM 3009 3010 3040 3041 3045 3062 3064 3288 3313 3315

CT 5262 5270 5273 5277 5281 5285 5287 5289 5294 5412

T 7029 7276 7277 7279 7281 7290 7295 7296 7298

Appendix 3—32 cars ex-Northern City Line October 1964, available at Ruislip January 1965 and moved from Ruislip via Wimbledon to Micheldever between May and July 1965:

Ru to Wn Wn to Mvr

23.7.65 25.7.65 3037 3303 3314 5293 5304 5312 7275 7293

Appendix 4—7 cars stored at Micheldever and rejected March 1966:
CT 5248 Trailers 7159 7166 7167 7173 7181 7189

Appendix 5—3 cars stored at Micheldever, rejected March 1966 and later returned to Ruislip:

DM 3028 3033 3044

Appendix 6-12 replacement cars selected at Ruislip, March 1966:

DM 3010 3041 3045 3313 3315

CT 5294

T 7279 7281 7290 7295 7296 7298

Appendix 7-17 cars rejected at Ruislip, March 1966:

DM 3009 3040 3062 3064 3288

CT 5262 5270 5273 5277 5281 5285 5287 5289 5412

T 7029 7276 7277

Appendix 8-25 selected cars returned from Micheldever:

DM 3074 3141 3253 3308 3702 3703 3706

CT 5279 5283 5290 5291 5293 5302 5304 5312 5350

T 7275 7280 7282 7283 7285 7286 7287 7292 7293

Appendix 9—1 car stored at Micheldever and rejected, September 1966:
CT 5296

Appendix 10—8 cars stored at Micheldever, rejected September 1966 and later returned to Ruislip:

DM 3035 3037 3047 3292 3301 3303 3311 3314

Appendix 11-1 car rejected September 1966 at Ruislip:

T 7295

Appendix 12-7 replacement cars selected from Northern City Line:

31.8.66 3084 3705

25.10.66 3251 3696

26.10.66 3185 1.11.66 3223

2.11.66 3223

Dates shown are those when cars left Drayton Park.

#### Appendix 13—Tranfers from L.T. to S.R. after overhaul and third rail conversion:

Ex-Acton

13.5.66 3010 3313 7283 7296

10.6.66 3045 5294 7279

8.7.66 3315 3702 7281 7290 18.8.66 3041 5291 5350

8.9.66 3141 3308 5279 7286

8.9.66 3141 3308 5279 7286

29.9.66 3074 3703 5293 7280 20.10.66 3253 3706 5283 7275

17.11.66 3084 3705 7293 7298

1.12.66 5304 7282 7285

5.1.67 3251 5290 5312 7287

26.1.67 3185 3696 5302

16.2.67 3209 3223 7292

Appendix 14 - Renumbering by Southern Region:

No.	Ex LT	Туре	Into Set:	No.	Ex LT No.	Type	Into Set:
DRIVI	NG MOTOR	CARS		CONTROL	TRAILE	RS	
S 1S	3703	1934 MCW	031	s26s	5294	1925 MCW	031
525	3706	1934 MCW	043	S28S	5304	1925 MCW	032
S3S	3251	1931 MCW	032	S30S	5312	1925 MCW	033
S4S	3702	1934 MCW	044	S32S	5290	1925 MCW	034
S5S	3185	1931 MCW	033	S34S	5302	1925 MCW	035
s6s	3084	1931 MCW	045	536S	5350	1927 MCW	036
S7S	3209	1931 MCW	034	*S38S	Renumb	ered S26S be	efore
S85	3074	1931 MCW	046		enteri	ng service	
595	3223	1931 MCW	035				
5105	3696	1934 MCW	Spare	CONTRO	L TRAILE	RS USED AS '	TRAILERS
S115	3705	1934 MCW	036				
S12S		ered S22S be		S27S	5279	1925 MCW	041
3143		ng service.		S29S	5293	1925 MCW	042
S135	3141	1931 MCW	0/11	S31S	5283	1925 MCW	043
	£3253	1931 MCW	042	S33S	5291	1925 MCW	044
S15S	13273	1931 MCW	042	0,00	2-2-		
5175		ered S21S be		TRAILE	RS		
3173		ng service.					
5195	3045	1928 UCC	043	S41S	7286	1923 CL	041
5208	3308	1928 UCC	041	8428	7280	1923 CL	042
5215	3041	1928 UCC	044	8438	7275	1923 CL	043
S228	3010	1929 UCC	042	5445	7281	1923 CL	044
S238	3315	1927 MCW	045	S45S	7293	1923 CL	045
S25S	3313	1927 MCW	046	s46s	7283	1923 CL	046
0230	22.2	.,.,		*S47S	7279	1923 CL	031
				s48s	7298	1923 CL	045
MCW -	Metropol	itan Carria	re &	S49S	7296	1923 CL	046
PIC.II	Wagon Co			5925	7285	1923 CL	032
				S93S	7282	1923 CL	033
UCC -		nstruction		5945	7287	1923 CL	034
	Finance	Co. (Feltha	m)	8958	7292	1923 CL	035
e1 -	Cammo11	Laird & Co.		s96s	7290	1923 CL	036

Apper	ıdix 15—P.	roposed	formatio	n for 46 cars –	– not used.			
Set				'D' D.M.	Set	'A' CT		'D' D.M.
041	S10S	S27S	S41S	S1S	031	S26S	S91S	S7S
042	S2S	S29S	S42S	S21S	032	S28S	S92S	S9S
043	S12S	S31S	S43S	S3S	033	S30S	S93S	SIIS
044	S4S	S33S	S44S	S23S	034	S32S	S94S	S13S
045*	S14S	S48S	S45S	S5S	035	S34S	S95S	S15S
046	S6S	S49S	S46S	S25S	036	S36S	S96S	S17S
Spare					037*	S38S	S47S	S19S

<sup>\*</sup>These units did exist briefly prior to entering service.

Appen	dix 16—Ir	nitial sto	ck forma	ation on the Isl	e of Wight —	43 cars.		
4-car ı	mits (4-VI	EC)			3-car t	inits (3-T		
Set	'A' D.M.	Trailer	Trailer	'D' D.M.	Set			'D' D.M.
041	S20S	S27S	S41S	S13S	031	S26S	S47S	SIS
042	S22S	S29S	S42S	S15S	032	S28S	S92S	S3S
043	S2S	S31S	S43S	S19S	033	S30S	S93S	S5S
044	S4S	S33S	S44S	S21S	034	S32S	S94S	S7S
045	S6S	S48S	S45S	S23S	035	S34S	S95S	S9S
046	S8S	S49S	S46S	S25S	036	S36S	S96S	SIIS
Spare	S10S							

Each 4-car unit as initially formed, contained one 1927/8/9 D.M. and one (longer) 1931/4 D.M. to ensure that all trains were of uniform length.

#### Appendix 17-Dates of entry into service on the Isle of Wight:

20.3.67 Units 031, 032, 042, 044, spare car S10S.

22.3.67 Units 036, 046.

Units 034, 035.

26.4.67

15.5.67 Unit 045 Units 033, 043, 20.5.67

#### Appendix 18-Additional cars to Micheldever from Ruislip:

9.7.68 D.M.s 3082 3310 3312 C.T.s 5270 5273 5277 5285

#### Appendix 19-Disposal of rejected cars:

- (a) Scrapped at Ruislip by Birds of Long Marston: 3040 3288 5289 7277
- (b) From Ruislip to Birds of Long Marston: 3009 3062 3064 3314 3033 3035 3047 3292 3301 3311 19.6.67 3.7.67 22.8.67 7276 3044 5262 5281 5287 7029 27.9.67 3028 3037 3303 23.11.67 11.12.67 5412 7295
- (c) From Micheldever to Birds of Long Marston: 5248 5296 7159 7166 7167 7173 7181 7189 14.9.68 11.8.70 3082 3310 3312 5270 5273 5277 5285

#### Appendix 20-Reformations and renumberings:

- (a) S15S condemned 10th May 1969 and replaced by S15S (3273 previously 3073) ex-Acton on 20th March 1971. Entered service by 17th July 1971.
- (b) Collision between 035 and 045 at Rvde St Johns Road on 10th September 1973. S48S, S45S and S23S condemned 4th May 1974. Spare car S6S coupled to unit 035 to form new unit 045: S6S, S34S, S95S, S9S. The previous unit No. 036 was then renumbered 035.
- (c) S25S destroyed by fire at Ryde St Johns Road on 8th September 1975 and scrapped in 1982. The remainder of unit 046 was renumbered 036 on 17th October 1980 although it has the driving motor car at the opposite end to all the other three car units and no control trailer.
- (d) Units 033 and 043 were reformed to a new unit 043 in February 1982. New 043: S2, S31, S43, S5. The remaining cars - S30, S93 and S19 were withdrawn but S93 was reinstated in May 1982. S19 and S30 were formally condemned in December 1982.

#### Appendix 21-Summary of Stock formations, May 1982:

Unit No.	DM	T/CT	Trailer	DM	
486 031		S26	S47	S1	
032		S28	S92	S3	
034		S32	S94	S7	
035		S36	S96	S11	
486 036	S8	S49	S46		
485 041	S20	S27	S41	S13	
042	S22	S29	S42	S15	
485 043	S2	S31	S43	S5	
044	S4	S33	S44	S21	
045	S6	S34	S95	S9	
spare	S10		S93		

It should be noted that the stock formations above are frequently altered temporarily to enable essential maintenance to be carried out, and to make best use of the available stock.

Appendix 22. LONDON TRANSPORT HISTORY OF THE ISLE OF WIGHT TUBE STOCK

Final LT No	Original No	Date Renumbered	S.R. No.	Туре	Date Delivered	Entered Service	Line			Transfer	5	Withdrawn from LT Service
DRIVING MOTOR CARS:												
3010	198	1/33	S22S	1929 UCC	9.6.30	14.10.30	P	P-C	1/54 C-NC 8/29 B-P	7/62		10/64
3041	227	6/31	S21S	1928 UCC	8.3.29	26.4.29	P	F−B B−P	8/29   B-P 5/32   P-C	4/31   P-E 5/62   C-N		10/64
3045	231	10/31	S19S	1928 UCC	26.3.29	6.5.29	P	P-C	5/62 C-NC	8/62 !	9,029	10/64
3074			s8s	1931 MCW	3.12.31	6.10.32	P	P-C	6/60 C-P	3/62		6/64
3084	1 1		s6s	1931 MCW	15.12.31	4.2.32	P	P-NC	10/64 1			8/66
3141			S13S	1931 MCW	15.3.32	18.9.32	P	P-C	5/60 ! C-P	11/62	1	6/63
3185	1 1		S5S	1931 MCW	20.4.32	9.1.33	P	P-NC	10/64			10/66
3209	1 1		575	1931 MCW	11.5.32	13.3.33	P	P-NC	10/64	i	1	11/66
3223			898	1931 MCW	1.6.32	5.1.33	p		10/64 !			11/66
3251			S3S	1931 MCW	21.6.32	30.9.32	P		10/64			10/66
3253			S15S	1931 MCW	21.6.32	20.9.32	P	1, 310	10,04	1		6/64
3273	3073	9/65	S15S	1931 HCW	3.12.31	31.8.32	P	P-C	6/60 C-P	9/61 !	i	8/64
3308	278	6/35	S 20S	1928 UCC	10.29	22, 11, 29	P	P-B	3/31 B-P	10/47 P-C	10/52 C-NC 8/6	2 10/64
3313	283	6/35	S25S	1927 HCW	11.6.29	15.7.29	P	P-B	2/31   B-C	4/39 I C-N		10/64
3315 †	285	6/35	S23S	1927 MCW	18.6.29	26.8.29		∫ P-B	10/29 ! B-P	11/31 P-E	2/32 B-C 11/3	10/64
	205	0/33	OLAG	192/ MCW	10.0.29	20.0.29	P	L C-NC	10/62			] 10/64
3696			S10S	1934 MCW	26.11.34	17.1.35	p	P-NC	10/64 1	1	i	10/66
3702	1 1		S4S	1934 MCW	14.1.35	4.4.35	P		!		!	7/64
3703	1 1		SIS	1934 MCW	26.11.34	5.1.35	P					7/64
3705			S11S	1934 MCW	11.12.34	18.1.35	P	P-NC	10/64 1	1	i	8/66
3706			S 2S	1934 MCW	18.2.35	1.6.35	P		1			7/64
CONTRO	L TRAILERS	1										
5279	1789	3/33	S27S	1925 MCW	23.8.26	9.9.26	N	N-NC	1/39 !	2 1	1	10/64
5283	1793	12/33	S31S	1925 MCW	25.8.26	19.9.26	N	N-NC	6/43			10/64
5290	1800	6/35	S32S	1925 MCW	18.9.26	29.9.26	N	N-NC	2/39	i	i	10/64
5291	1801	1/34	5335	1925 MCW	21.9.26	14.10.26	N	N-NC	4/39 !			10/64
5293	1803	3/35	5295	1925 MCW	6.9.26	13.9.26	N	N-NC	1/39	1		10/64
5294	1804	7/35	S26S	1925 MCW	31.8.26	13.9.26	N	N-NC	1/39	i	i	10/64
5302	1812	7/35	S34S	1925 MCW	6.9.26	10.10.26	N	N-NC	1/39 1	!		10/64
5304	1814	5/35	S28S	1925 MCW	24.9.26	17.10.26	N	N-NC	2/39	- 1		10/64
5312	1822	6/35	S30S	1925 MCW	5, 10, 26	24.10.26	N	N-NC	1/39 1	i	i	10/64
5350	1934	11/34	S36S	1927 MCW	22, 5, 29	24.6.29	P		12/29 B-N	7/31 ! N-P	12/34 P-NC 6/4	

UCC - Union Construction and Finance Co.Ltd. CL - Cammell Laird and Company

B - Bakerloo Line D - District Line

C - Central Line

N - Northern Line

P - Piccadilly Line

Appendix 22, LONDON TRANSPORT HISTORY OF THE ISLE OF WIGHT TUBE STOCK (Continued)

Final LT No	Original No	Date Renumbered	S.R. No.	Туре	Date Delivered	Entered Service	Line	Transfers	Withdrawn from LT Service
TRAILER: 7275 7279 7280 7281 7282 7283 7285 7286 7287 7290		2/34 5/35 1/35 5/34 5/34 6/33 5/33 4/33 3/35	\$43\$ \$47\$ \$42\$ \$44\$ \$93\$ \$46\$ \$92\$ \$41\$ \$94\$ \$94\$	1923 CL 1923 CL 1923 CL 1923 CL 1923 CL 1923 CL 1923 CL 1923 CL 1923 CL 1923 CL	15. 1 . 24 25. 1 . 24 25. 1 . 24 31. 1 . 24 26. 1 . 24 1. 2 . 24 31. 1 . 24 16. 2 . 24 15. 2 . 24	28. 1 . 24 1. 4 . 24 1. 4 . 24 1. 4 . 24 1. 4 . 24 8. 4 . 24 4. 3 . 24 26. 3 . 24 1. 4 . 24 4. 3 . 24	N N N N N N N N N N N N N N N N N N N	N-NC 2/39   N-NC 2/39   N-NC 2/39   N-NC 2/39   N-NC 2/39   N-NC 2/39   N-NC 5/39   N-NC 5	10/64 10/64 10/64 10/64 10/64 10/64 10/64 10/64
7292 7293 7296 7298	842 843 846 848	4/34 7/33 4/35 7/33	\$958 \$458 \$498 \$488	1923 CL 1923 CL 1923 CL 1923 CL 1923 CL	8. 2. 24 18. 2. 24 27. 2. 24 25. 2. 24	4.3.24 26.3.24 12.3.24 11.3.24	N N N	No details known (N-NC ?)	10/64 10/64 10/64 10/64 10/64

Notes: \* Transferred to Metropolitan Line for Stammore shuttle service, before being absorbed into the Bakerloo Line from 11/39.

‡ Cars 7:83 and 7:290 were used on Tube Refreshment service during World War II.

+ Car 3315 was stored at Hainault depot during World War II.

Appendix 23. LONDON TRANSPORT HISTORY OF CARS SELECTED FOR B.R. BUT NOT USED ON ISLE OF WIGHT

Final LT No	Original No	Date Renumbered	Туре	Date Delivered	Entered Service	Line			Transfers			Withdrawn from LT Service
DRIVING	MOTOR CARS:											
3009	195	10/31	1929 UCC	5.6.30	7.1.31	l p	P-C	6/62 C-NC	8/621			10/64 10/64 10/64 10/64 10/64
3028	216	8/31	1928 UCC	11.11.29	7.4.30	P	P-N	11/35 I N-P	3/37 P-C	2/53 C-NC	6/62	10/64
3033	219	9/31	1923 UCC	14.12.29	15.4.30	P	P-N	12/35 I N-P	3/37 1 P-C	8/59 1 C-NC	6/62 8/62	10/64
3035	221	8/31	1928 UCC	17.12.29	2.4.30	P	P-N	12/35   N-P	3/37   P-C	6/62 1 C-NC	7/62	10/64
3037	223	6/31	1928 UCC	19.12.29	9.5.30	P	P-B	7/31 B-P	1/32, P-C	5/62   C-NC	9/62	10/64
3040	228	10/31	1928 UCC	12.3.29	16.4.29	P	P-B	8/29 B-P	2/31; P-C	12/52   C-NC	6/62	10/64
3044	232	*	1928 UCC	28.3.29	26.4.29	P	{P−B P−C	7/29 B-P 9/57 C-NC	3/31 P-B 8/62	8/31   B-P	1/32}	10/64
3047	233	5/31	1928 UCC	12.4.29	7.5.29	P	{P−B P−N	8/29 B-P	3/31   P-B 3/37   P-C	8/31 B-P 5/62 C-NC	7/62	10/64
3062	250	7/31	1928 UCC	16.5.29	24.6.29	P	P-B	4/39 B-P	4/48 . P-C	6/49 C-NC	7/62	10/64

064	252	(Continued):	1928 UCC	27 . 5 . 29	28.6.29	р	P-B	7/31	В-Р	8/31	P-B	7/39	В-Р	7/47}	10/64
	-3-	// 54			31.8.32	P	P-NC	10/64	C-NC	10/62	i			-1	11/66
082			1931 MCW	15.12.31			(P-B	9/29	B_D	11/31	P_B	1/32	B_P	1/481	
288	258	10/33	1928 UCC	22.7.29	20.9.29	P	P-C		C-NC	9/62	1	1/32	D-4	1/40}	10/64
292	262	9/33	1928 UCC	5.9.29	2.10.29	P	P-B	10/29		12/48	P-C	10/52		7/62	10/64
301	271	7/34	1928 UCC	3.10.29	15.11.29	В	B-C	3/44	C-P	6/44	P-C	8/49	C-NC	6/62	10/64
303	273	6/35	1928 UCC	7.10.29	12.12.29	В		11/39		7/62	!				10/64
310	3110	7/65	1931 MCW	9.2.32	29.2.32	D	P-NC	10/64					!		11/66
311	281	3/35	1928 UCC	21.10.29	28.3.30	P	P-B	2/31	B-N	1/33	N-C	7/39	C-NC	7/62	10/64
312	3112	7/65	1931 MCW	9.2.32	29.2.32	D	P-NC	10/64	1		1			100	11/66
314	284	7/34	1927 MCW	11.6.29	22.7.29	P	P-B	10/29	В-Р	9/47	P-C	9/52	C-NC	10/62	10/64
ONTROL	TRAILERS:														
248	1758	6/35	1924 CL	8.9.25	16.10.25	N	N-C	4/40	C-P	11/40	P-NC	1/42	i		10/64
262	1774	6/35	1924 CL	29, 10, 25	12.8.26	N	N-NC	3/39	!		1		1		10/64
270	1780	4/35	1924 CL	8.1.26	15.6.26	N	N-NC	3/39	i				1		10/64
273	1783	6/35	1925 MCW	31.7.26	13.9.26	N	N-NC	2/39	1				1		10/64
277	1787	8/33	1925 MCW	28.7.26	28.8.26	N	N-NC	2/39	!				1		10/64
281	1791	6/33	1925 MCW	3.9.26	25.9.26	N	N-NC	4/39					1		10/64
	1795	1/34	1925 MCW	31.8.26	22.9.26	N	N-NC	3/39	í		i		1		10/64
285		6/34	1925 MCW	16.9.26	14.10.26	N	N-NC	3/39	i		i		1		10/64
287	1797	0/34	1925 MCW	20.9.26	3.10.26	N	N-NC	4/39	!		i		1		10/64
289	1799	7/34		14.9.26	14.10.26	N	N-NC	1/39	!		1		1		10/64
296	1806	3/35	1925 MCW	14.9.20	14.10.20		C P-B	9/29	B-P	3/31	P-N	3/35	N-B	2/38	
412	1980	†	1928 UCC	27.3.29	6.5.29	P	B-C					3/35	N-B	439	10/64
RAILER	St														
029	1289	6/31	1928 UCC	25.5.29	13.6.29	P	P-B	6/31	B-P	5/32	I P-NC	12/53	1		10/64
159		-701	1931 GRCW	19.3.32	9.1.33	P					1		1		5/64
166			1931 GRCW	19.4.32	9.3.33	P			i		!		1		5/64 4/64 5/64 5/64
167			1931 GRCW	19.4.32	9.3.33	P			1				1		4/64
173			1931 GRCW	3.5.32	12.7.32	P					1		1		5/64
181			1931 GRCW	1.6.32	22, 6 , 32	P			1		1		1		5/64
189			1931 GRCW	14.6.32	19.9.32	P			1		i		1		3/64
	826	1/34	1923 CL	24.12.23	8.4.24	N	N-NC	3/39	1 .		1		1		10/64
7276	8 27	8/33	1923 CL	15.1.24	1.4.24	N	N-NC	1/39	!		1		!		10/64
277	845	12/33	1923 CL	26. 2 . 24	11.3.24	N	N-M #		B-NC	4/41	Į!		1		10/64

Notes: \* Car 232 renumbered to 3044 5/31; subsequently renumbered 3779 4/50 and again renumbered 3044 6/57.

† Car 1980 renumbered 5012 9/31; subsequently renumbered 5412 3/61.

§ Used on District Line before Piccadilly Line western extensions were opened.

‡ Transferred to Metropolitan Line for Stammore shuttle service, before being absorbed into the Bakerloo Line from 11/39.



A summer Saturday afternoon at Sandown in 1982 showing the large number of holiday makers that the departing train has just brought.

Below: The end of the line! The remains of 1927 M.C.W. driving motor car S25S which caught fire 8th September 1975,

Back cover, top: One of the Isle of Wight Railway's ex-Metropolitan Railway rigid 8-wheelers in use, without its underframe, as a holiday home at St Helens on 24th September 1970.

Back cover, bottom: A seven car train at Ryde St Johns Road on 28th May 1982 showing six cars in the "Inter City" livery and one, spare car S10, in the older all blue livery with grey doors.



Appendix 24. London Transport Overhauls of Isle of Wight Rolling Stock.

appen	ary par por	don many	or c over in	410 01 101	e or argine	MOLLETING S	cock.						
3010	7 . 1 . 33	27 . 4 . 35	10.7.37	20.5.39	15.11.41	30.12.44	7.2.48	12.6.51	5.1.54	2 . 57	28.5.60		
3041 3045	3.10.31	1.7.33 26.8.33	16.11.35	22.10.38 11.9.37	13.9.41	9.12.44 26.6.43	26. 2 . 49	30.9.52	28.6.55	22.8.59		.5. 5.	
3045	13.10.34	12.9.36	26.3.38	9.3.40	14.8.43	2.3.46	1.12.45	25.9.48	6.11.51	16.3.54	26.10.57	17.2.	62
3074								17.6.52	28.9.54	8.2.58	3.12.62		
3141	23.6.34	14.3.36	3.10.37	13.5.39	4.7.42	19.5.45	4.9.48	1.4.52	11.1.55	6.9.58	10.11.62		
3141	12.10.35	22. 2 . 36	9.4.38	9.11.40	27.5.44	17 . 5 . 47	16.5.50	18.8.53	12.2.57	17.6.61			
3209	22.6.35	10.7.37 24.7.37	2.12.39	23.5.42	28.4.45	28.8.48	19.2.52	4 . 5 . 54	23.11.57	11.8.62	- 1		
3223	12. 1 .35	6. 2 . 37	17.6.39	20. 2 .43 4. 7 42	6.10.45	15.1.49 23.10.48	15.4.52 4.12.51	21.9.54	6.9.58 8.2.58	3.11.62			
3251	25.11.33	1. 2 . 36	23.4.38	1.3.41	30.9.44	9.8.47	29.8.50	28.4.53		1.9.62			
3253	14.9.35	18.9.37	23.9.39	25.4.42	19.5.45	26.4.48	1.5.51	17.11.53	30.10.56				
3273	13.4.35	17.4.37	23.9.39	22.8 .42	15.12.45	29.4.52	1.6.54	4.1.58	30.6.62	14.4.62			
3308	23. 1 . 32	13.7.35	12.2 .38	2.12.39	18.12.43	9.10.48	24.4.51	5.1.54	9.4.57	18.1.61			
3313	16.4.32	5.10.35	8.4.39	16.6.45	18.10.49	1.7.52	19.10.54	23.8.58	7.12.63	10.1.01			
3315	19.3.32	11.1.36	23.9.39	Stored	14.9.46	25.4.50	21.4.53	18.5.56	11. 2 .61				
3696	29.5.37	27.5 39	14. 2 .42	5.5.45	13.11.48	29.4.52	28.12.54	16.8.58	8.9.62				
3702	19.12.36	8.10.38	27.9.41	10. 2 .45	7.2.48	15. 2.51	24.11.53	29.1.57	10.12.60				
3703	5.6.37	27.4.40	29.1.44	16.11.46	25.4.50	5.5.53	1.1.57	20.5.61	10112100				
3705	27.2.37	8.7.39	6.6.42	14.4.45	10.5.48	19.6.51	20.4.54	24.9.57	22.9.62				
3706	24.4.37	18.3.39	4.9.43	29.6.46	18.10.49	13.5.52	1.2.55	7.2.55					
5279	5.5.28	31.8.29	6.6.31	25.3.33	21.9.36	13.11.37	28.11.42	8.2.47	28.9.54				
5283	18.2.28	27 . 7 . 29	11.7.31	16.12.33	21.3.36	14.5.40	31.8.46	9.2.54					
5290	8.9.28	8.11.30	14.1.33	12.10.36	5.3.38	28.2.42	23.11.46	8.4.52	22.1.57	5.10.63			
5291	15.9.28	19.4.30	13.2.32	20.1.34	29.8.36	15.4.39	19.1.46	8.5.51	19.4.58				
5293	4.2.28	17.8.29	28.3.31	4.3.33	30.3.35	24.4.37	18.7.42	22.3.47	6.4.54	1.6.63			
5294	18.8.28	16.8.30	24.9.32	20.7.35	26.3.38	7.3.42	5.10.46	23.10.51	20.9.55	29.4.61			
5302	2.6.28	10.5.30	27.8.32	6.7.35	14.5.38	11.4.42	13.7.46	4.12.51	19.6.56	23.3.63			
5304	8.12.28	4.10.30	9.7.32	23.2.35	11.12.37	24.1.42	19.10.46	27.5.52	14.2.56	14.11.61			
5312	3.11.28	20.9.30	10.12.32	27 . 7 . 35	27.11.37	7.3.42	1.6.46	21.8.51	10.4.56	2.6.62			
5350	26.11.32	10.11.34	22.5.37	10.8.40	7.4.45	20.12.49	16.3.54	10.10.59					
7 27 5	12.3.26	26.5.28	28.12.29	15.8.31	3.2.34	15.2.36	23.7.38	18.8.45	12.2.50	11.3.57			
7 279	4.2.26	30.4.27	6.10.28	8.11.30	5.11.32	18.5.35	3.2.38	9.1.43	4.10.47	6.7.54	7.12.63		
7 280	14.1.26	11.4.27	5.5.28	26.5.29	14.2.31	19.8.33	22. 2 . 36	24.9.38	10.11.45	6.3.51	24.9.57		
7 28 1	24.4.25	1.4.27	23.6.28	7.6.30	7.5.32	5.1.35	25.9.37	24.10.42	12.7 .47	26.1.54	5.10.63		
7 28 2	18.7.25	23.2.27	21.7.28	29.3.30	5.3.32	5.5.34	7.11.36	1.4.39	23.3.46	18.11.52	18.6.60		
7 283	16.3.26	19.11.27	12.1.29	17.1.31	10.6.33	31.8.35	7.3.38	6.5.39	11.5.46	26.5.53	10.11.62		
7 285 7 286	26.8.25	3.3.28	18.5.29	28.2.31	20.5.33	3.8.35	1.1.38	28.11.42	12. 2 .49	21.6.55			
7 287	17.7.25 2.3.26	21.1.27 5.11.27	10.11.28	6.12.30	8.4.32 30.7.32	9.3.35	15.1.38 18.9.37	25.11.44 24.10.42	13.9.49	29.3.55 25.1.55			
7 290	20.1.26	12.5.27	9.6.28	22. 3 . 30	17.10.31	21.4.34	10.10.36	25.5.40	8.6.46	10. 2 . 53	21.1.61		
7 29 2	30.5.25	30.10.26	9.6.28	25.1.30	14.11.31	14.4.34	24.10.36	18.3.39	13.7.46	22.9.53	20.4.63		
7 293	23.10.25	20.8.27	26.1.29	25.4.31	1.7.33	8. 2.36	13.8.38	26.1.46	18.8.53	2. 2 .63	20.4.03		
7 296	17 . 4 . 25	26.10.26	6.10.28	26.7.30	9.7.32	27 . 4 . 35	9.10.37	12.9.42	30.8.47	20.7.54	17.8.63		
7 298	1.7.25		4.5.29	18.4.31	8.7.33	19.10.35			18.10.49				

Note: The wider intervals between overhauls in later years is evident from the above. Even more noticeable are the greater intervals on cars of the Northern City Line (1923 CL trailers and 1925 MCW control trailers), most of which were transferred there in 1939.



# Metropolitan and Underground Rolling Stock for the Isle of Wight

£1.50



### CORRECTIONS TO UNDERGROUND No. 11.

Although included in good faith, Morganite Electrical Carbon Limited have pointed out that the last sentence of the first paragraph on page 30 of 'Underground' No. 11 is not true. The trial of carbon collector shoes was terminated on the Isle of Wight because the trial was transferred to the Brockenhurst to Lymington line where the collector gear was more suitable. The Morganite Carbon collector shoe carbons did not turn to "mush" in wet weather and in fact gave a performance, on far from satisfactory collector gear, of 10,000 miles in the summer and 8,500 miles in the winter. Further, the then C. M. & E. E. of Southern Region stated: "It is interesting to note that when originally put into traffic these (carbon) collectors had a shorter life than the previous (cast iron) shoe slippers, but that after a relatively short period the life increased and is now (July 1970) directly comparable with the previous type."

The Society, Editor and author would like to apologise unreservedly to Morganite Electrical Carbon Ltd. for the error and for the consequent embarrassment it has caused.

Page 13 - In the table, Met No 281 should be 281 or 284 (see P.13 line 5).

Page 28 - Second paragraph, 11th. line, 'Mty' should be 'May'.

Page 28 - Caption for the middle photograph - the date should be 20th March.

Page 28 - The top photograph has been printed reversed.

Page 32 - Penultimate line - 'iniative' should be 'initiative'.

PLEASE TURN OVER.....

It is unfortunate, but perhaps inevitable, that having published John Gillham's splendid details of station layouts on the Isle of Wight Railway, (Pages 24 & 25), a small number of errors have been pointed out. These are as follows:-

Smallbrook Junction - should be a scissors crossover from 1926-1965.

Brading - the siding on the west side of the line south of the station should have its caption reading ... & until 1966 not ... & until 1953.

Sandown - The entry to the goods yard should be:-

not:-

St. Johns Road - The goods shed and engine shed west of the station should be transposed in the 1907 diagram.

- The trailing crossover just south of the footbridge between the platforms should not appear in the 1939 diagram, but should be added to the 1907 one.
- In the 1939 diagram, omit the facing crossover and the first trailing crossover just north of the St John's Road bridge.
- In the 1965 diagram, add the southernmost trailing crossover as 1939
- The junction north of the station in 1907 should have been

Newport Line Ventnor Line

not:-