



# The Times

January 2009

A journal of transport timetable history and analysis



**King Coal  
Railways' reason for being**

**Inside: How coal made the railways  
Bradshaw on Bradshaw**

RRP \$2.95  
Incl. GST

# The Times

Journal of the Australian Association of Time Table Collectors Inc. (A0043673H)

Print Publication No: 349069/00070, ISSN 0813-6327

January 2009

Issue No. 298 Vol 26 No. 01

## —Contents—

<b>COAL TRAIN TIMETABLES</b>	<b>3</b>
<b>BRADSHAW ON BRADSHAW</b>	<b>11</b>

### On the front cover

Sight of sights! Sound of sounds! We are at Montgomery Tunnel near Christianburg, Virginia., in 1955 on the Norfolk and Western Railway. Ace photographer O Winston Link has grabbed a pair of locals to pose for one of his renowned night-time shots of the N&W. The train is a coal train headed by one of N&W's hulking Y-class 2-8-8-2 compound engines, capable of over 6,000 horsepower, with probably another pushing in the rear. Every one of those 12,000 horses was needed on the steep grades of the N&W as it ascended the Blue Ridge. The train is carrying coal of course— probably 4,500 tons of it. Coal was the life blood of the N&W- there is even a pile of coal on the ground for the tower operator's stove. N&W eschewed the diesel locomotive in favour of locomotives which burned the product which sustained it. There was a nice symmetry about that. Twenty of these trains ascended the Blue Ridge every day.

The AATTC has just completed its 25th year of existence and, in March, *The Times* odometer will tick over to issue No. 300. To mark these events, President Victor Isaacs has begun work on a short history of the organisation, its people and its magazines and other productions. In the course of his research many long-forgotten gems have been unearthed. Many of our members have been with us for all of that quarter-century and probably know of many more such gems. If you have something you would like to see written into this history, (including photos of AATTC events and personalities) please contact Victor by e-mail at [abvi@webone.com.au](mailto:abvi@webone.com.au), or send a letter to him at 43 Lowanna Street BRADDON ACT 2612.

<b>Contributors</b>	Geoff Lambert, Victor Isaacs		
<b>The Times</b>	welcomes articles and letters. Send paper manuscripts or word-processor files on disk or via e-mail to the editor at the address below. Illustrations should be submitted as clean sharp photocopies on white paper or scanned GIF or TIF format images with at least 300 dpi resolution on disk or via e-mail.		
<b>Reproduction</b>	Material appearing in <i>The Times</i> or <i>Table Talk</i> may be reproduced in other publications, if acknowledgment is made.		
<b>Disclaimer</b>	Opinions expressed in <i>The Times</i> are not necessarily those of the Association or its members. We welcome a broad range of views on timetabling matters.		
<b>The Times</b> on-line	AATTC's home page: <a href="http://www.aatc.org.au">http://www.aatc.org.au</a> has colour PDF versions of <i>The Times</i>		
<b>President</b>	Victor Isaacs	43 Lowanna Street BRADDON ACT 2612	(02) 62571742
<b>Secretary</b>	Geoff Lambert	179 Sydney Rd FAIRLIGHT NSW 2094 G.Lambert@unsw.edu.au	(02) 9949 3521
<b>Editor, The Times</b>	Geoff Lambert	.....	
<b>Editors, Table Talk</b>	Geoff Mann	19 Rix St GLEN IRIS VIC 3146	<a href="mailto:geoffwm@bigpond.com.au">geoffwm@bigpond.com.au</a>
	Victor Isaacs	43 Lowanna Street BRADDON ACT 2612	(02) 62571742
<b>Distribution Officer</b>	Len Regan	PO Box 576 KOTARA NSW 2289	(02) 4957 9229 <a href="mailto:tp@hunterlink.net.au">tp@hunterlink.net.au</a>
<b>Membership Officer</b>	Dennis McLean	P.O. Box 734 NUNDAH, QLD, 4012	(07) 3886 4204.
<b>Webmaster</b>	Lourie Smit	<a href="mailto:lsmit@ozemail.com.au">lsmit@ozemail.com.au</a>	(02) 9527 6636
<b>Adelaide Convenor</b>	Roger Wheaton	2C Bakewell Street, TUSMORE SA 5065	(08) 8331 9043
<b>Canberra Convenor</b>	Ian Cooper		
<b>Brisbane Convenor</b>	Brian Webber	8 Coachwood St KEPERA Qld 4054	(07) 3354 2140
<b>Melbourne Convenor</b>	Stephen Ward	12/1219 Centre Rd SOUTH OAKLEIGH VIC 3167	(03) 9540 0320
<b>Sydney Convenor</b>	Geoffrey Clifton	GPO Box 1963 SYDNEY NSW 2001	0405 387478





we examine.

Although it was the *r'aison d'être* of railways, coal was not always welcome on them. Early railways took their cue from the Stockton & Darlington, but refused to countenance its coal. Capt. W. Bruyeres, a dour martinet from the London and North Western Railway, expostulated, "What! Carry coal by railway?... They will be asking us to carry dung next." To which George Stephenson reportedly retorted, "Tell 'B' when we carry him by railway, we *do* carry dung". Bruyeres eventually relented, but insisted that no more than 3 trucks be carried at a time and that the coal be covered with tarpaulins to avoid embarrassment. Nemesis dealt squarely with that policy and eventually the L&NWR was not above carrying dung, either.

### Stockton and Darlington

Although the Stockton and Darlington did not dream up the idea of carrying coal by railway, it was nevertheless an icon, being the first public steam-powered railway to emerge from the extensive network of coal-carrying tramroads scattered throughout England and Wales. It was here that the Stephensons made their mark with the introduction of steam engines like "Locomotion". When it began in 1825 (picture, page 3), the coal won from the Yorkshire seams was carried to the coast and shipped to London for domestic and industrial purposes.

An experimental passenger service was established, initially a horse-drawn coach with horse provided by the driver. While passenger carrying was contracted out, locomotive coal trains were either paid by the ton, contractors providing their own fuel—which meant they tended to use the cargo (coal)—or by fixed wages.

The organisation of the S&DR bore little relation to that of most modern railways and was run in the traditional manner of the wagonways of the time. The S&DR merely owned the tracks and did not operate trains; anyone who paid the S&DR could operate steam trains or horse-drawn wagonloads on the line. This separation of track from trains resembled the canals,

where canal companies were often forbidden from operating any boats. There was no timetable or other form of central organisation. Trains ran whenever they wanted, and fights often broke out when rival operators came into conflict over right-of-way on the tracks.

This chaotic situation was tolerable on completely horse-drawn traffic wagonways, but with faster steam trains it soon

became unworkable. New operating methods had to be developed.

By 1833, the S&DR had become entirely steam-operated, and it gradually began to resemble a modern railway. The S&DR became the sole train operator on the line, double tracks were built for trains travelling in opposite directions, timetables came into being and a crude signaling system was established. These methods of operation became standard on railways across the world.

The S&DR was absorbed into the North Eastern Railway in 1863, which merged into the London and North Eastern Railway (LNER) in 1923. Much but not all of the original S&DR line is still operating today

Our timetable (page 3) is from the LNER—a WTT for its North Eastern area dated 4-Jul-1933, a book of some 523 pages. Most of the "Goods" trains here were probably coal trains. In this area, a considerable number of collieries had their own lines which fed the LNER.

Tonnage Ratings and Weather Reductions for Locomotives									
BLUEFIELD OR RADFORD TO ROANOKE—Without Pusher									
CLASS OF ENGINES	Class of Service	Rating A	Rating B	Rating C	Rating D	Rating E	Rating F	Zero to 5° Below	
		Normal	31° to 24°	23° to 16°	15° to 8°	7° to Zero	Zero to 5° Below	5° to 10° Below	10° to 15° Below
Y-5 or Y-6	Slow	4650	4418	4185	3953	3720	3488		
	Time	4200	3990	3780	3570	3360	3150		
A, Y-2, Y-3 or Y-4	Slow	4300	4085	3870	3655	3440	3225		
	Time	3500	3325	3150	2975	2800	2625		
Z	Slow	2850	2707	2565	2422	2280	2137		
	Time	2300	2185	2070	1955	1840	1725		
K	Slow	2350	2232	2115	1997	1880	1762		
	Time	1900	1805	1710	1615	1520	1425		
M-2	Slow	1950	1852	1755	1657	1560	1462		
	Time	1600	1520	1440	1360	1280	1200		
M or W	Slow	1500	1425	1350	1275	1200	1125		
	Time	1200	1140	1080	1020	960	900		
BLUEFIELD OR RADFORD TO ROANOKE—With Pusher									
Y-5 or Y-6 with Y-5 or Y-6 Pusher	Slow	9300	8835	8370	7905	7440	6975		
	Time	6000	5700	5400	5100	4800	4500		
Y-5 or Y-6 with Y-3 or Y-4 Pusher	Slow	9000	8550	8100	7650	7200	6750		
	Time	6000	5700	5400	5100	4800	4500		
A, Y-2, Y-3 or Y-4, with Y-3, Y-4, Y-5 or Y-6 Pusher	Slow	8600	8170	7740	7310	6880	6450		
	Time	5500	5225	4950	4675	4400	4125		
SPECIAL RATINGS									
BLUEFIELD TO RADFORD—Short Run									
Y-5 or Y-6	Slow	7300	6935	6570	6205	5840	5475		
Y-3 or Y-4	Slow	6500	6175	5850	5525	5200	4875		
Z	Slow	4500	4275	4050	3825	3600	3375		
ROANOKE TO BLUEFIELD OR BRISTOL—Without Pusher									
Y-5 or Y-6	Slow or Time	2800	2660	2520	2380	2240	2100		
A, Y-2, Y-3 or Y-4	Slow or Time	2300	2185	2070	1955	1840	1725		
Z	Slow or Time	1500	1425	1350	1275	1200	1125		
K	Slow or Time	1250	1188	1125	1063	1000	938		
M-2	Slow or Time	1050	998	945	893	840	788		
M or W	Slow or Time	800	760	720	680	640	600		

R-19

BRISTOL TO PULASKI										
CLASS OF ENGINES	Class of Service	Rating A	Rating B	Rating C	Rating D	Rating E	Rating F	Rating G	Zero to 5° Below	
		Normal	31° to 24°	23° to 16°	15° to 8°	7° to Zero	Zero to 5° Below	5° to 10° Below	10° to 15° Below	
Y-5 or Y-6	Slow or Time	3100	2945	2790	2635	2480	2325			
	Slow or Time	2500	2375	2250	2125	2000	1875			
A, Y-3 or Y-4	Slow or Time	1650	1567	1485	1402	1320	1237			
	Slow or Time	1350	1283	1215	1148	1080	1013			
M-2	Slow or Time	1150	1092	1035	977	920	863			
	Slow or Time	850	808	765	723	680	638			
PULASKI TO RADFORD										
Y-5 or Y-6	Slow or Time	3400	3230	3060	2890	2720	2550			
	Slow or Time	2800	2660	2520	2380	2140	2000			
Z	Slow	1850	1757	1665	1572	1480	1387			
	Slow	1350	1283	1215	1148	1080	1013			
ABINGDON BRANCH										
BETWEEN DISTRICTS	Class of "W" and "M" Engines	Rating A	Rating B	Rating C	Rating D	Rating E	Rating F	Rating G	Zero to 5° Below	
		Normal	31° to 24°	23° to 16°	15° to 8°	7° to Zero	Zero to 5° Below	5° to 10° Below	10° to 15° Below	
Abingdon and Damascus	North	750	712	676	638	600	562			
	South	900	855	810	765	720	675			
Damascus and Taylor's Valley	North	1200	1140	1080	1020	960	900			
	South	450	427	405	380	360	337			
Taylor's Valley and Whitetop xx (Nells)	North	1200	1140	1080	1020	960	900			
	South	325	309	293	276	260	244			
Whitetop and West Jefferson xx (W. Jeff.)	North	350	333	316	298	280	268			
	South	1000	950	900	850	800	750			

xxIndicates basing point.

Class "G" engine's tonnage one-third less than "W."

## Coal Traffic vs The Rest

	Coal tonnage	Total tonnage	%age coal		
<b>Great Britain</b>	1889	212	298	71%	
<b>Great Britain</b>	1935	169	266	64%	
<b>N&amp;W</b>	1951	<b>62</b>	70	89%	<i>estimate</i>
<b>BNSF</b>	2007	<b>440</b>	<b>1070</b>	41%	<i>estimate</i>
<b>VIC</b>	1958	2.5	8.9	28%	
<b>QLD</b>	2006	162	183	88%	
<b>NSW</b>	1964	13	26	52%	
<b>NSW</b>	1996	70	81	87%	
<b>World</b>	<b>1999</b>	<b>5000</b>	<b>7793</b>	<b>64%</b>	

### Thunder on Blue Ridge- Norfolk and Western

In 1885, several small mining companies representing about 400,000 acres of bituminous coal reserves in Virginia grouped together to form the Flat-Top Coal Land Association. Norfolk and Western Railway bought the Association and reorganized it as the Pocahontas Coal and Coke Co.

As the availability and fame of high-quality Pocahontas bituminous coal increased, coal demand swelled. The countryside was soon sprinkled with tipples, coke ovens, houses for workers, company stores and churches and towns. These coal towns flourished. The small community of Bramwell, West Virginia, boasted the highest *per capita* concentration of millionaires in the country.

In 1886, the N&W tracks were extended directly to coal piers at Lambert's Point (page 4, upper left- I like that name!), just north of the City of Norfolk on the Elizabeth River, where one of the busiest coal export facilities in the world was built to reach Hampton Roads shipping.

The opening of the coalfields made N&W prosperous and Pocahontas coal world-famous. By 1900, Norfolk was the leading coal exporting port on the East Coast. Transported by the N&W, and later the neighboring Virginian Railway, it fueled half the world's navies. Today it stokes steel mills and power plants all over the globe. Total freight traffic carried by the N&W reached 70 million (short) tons in the early 1950s. Most of it was coal.

Norfolk & Western was especially famous for one thing- it used the product which it carried to fuel its locomotives, long after other roads had shifted to diesel power. The demands of the traffic and N&W's infatuation with the steam locomotive led to the development of some of the world's most powerful engines, including a massive steam turbine electric locomotive, the *Jawn Henry*.

As with most U.S. roads, N&W dispensed with *timetabled* coal services before the middle of the 20th century, all trains running when needed and sent over the line not by timetable but by flexible dispatch-

ing methods. The Employe Time Table (ETT) did however contain tables of the coal loads that could be hauled by the various locomotives. On our page 4 is one such table from the Radford Division ETT of 25-Apr-1948. This covered the steepest part of the line, where "pusher" locomotives were required. Most of the traffic was handled by Y-class locomotives of varying stages of development. All of these engines were true Mallet locomotives- that is 4-cylinder compound expansion engines. N&W stuck with compounding to the end in 1961, long after other roads had abandoned it as a bad idea. Engines like this could exert some 156,000 of tractive effort.

There are tables here for loads for "Time" freight (non-coal) and for "Slow" freight (coal); for trains with and without a pusher. The notes at the foot of the table regarding trains 99 and 85 refer to Time Freights, rather than coal trains. The times of Time Freights and passenger trains did appear in the timetable section of the ETT, but those of the coal trains did not.

N&W's successor Norfolk Southern hauled 50 million tons of coal in the third quarter of 2008, an all-time quarterly high driven by strong export demand and more shipments of domestic metallurgical coal. Export coal tonnage was up 55 percent over the same period in 2007, to 6.26 million tons from 4.05 million tons, the majority of it used to make coke for steel production.

### In the valley of the Powder River

One hundred trains, each grossing some 10,000 tons, set out every day from Wyoming's Powder River basin for points up to 1,500 miles to the east. This is the heaviest, most intense and longest-haul of coal in railroad history, anywhere in the world. The traffic is new and is the consequence of U.S. anti-pollution legislation designed to reduce atmospheric levels of sulphur dioxide. The biggest source of low-sulphur coal is in the Powder River basin, where some 150 billion tons of it lie under the rolling landscape.

These trains are run by the U.S.A.'s two biggest railways the Union Pacific (40

trains) and the Burlington Northern (60 trains). Track capacity is increasing at an dizzying pace, with lines being doubled, tripled and even quadrupled continuously.

On our page 6 is a page from BNSF's Powder River ETT of 28-Apr-2004, the last to appear on the BNSF's web-site before the Department of Homeland Security banned their publication. The ETT, which covers most of Colorado also, has some 66 pages, not one of which contains a train time. We can see how intensively the line must be used however, through the listing of the number of tracks required to handle it... a good proportion is triple track (3ML- Main Lines), all of them CTC-signaled for bi-directional running and with crossovers every few miles.

### Victorian Railways- Lignite and Briquettes

Victoria has no black coal to speak of, though there are small deposits at Wonthaggi which were used to fuel VR engines at various times and others at Korumburra. VR felt this lack particularly because it had to rely on interstate coal to fuel its engines. It was the political imperative of making VR independent of coal miners' union action in NSW which led the Victorian Government to set up its "State Mine" at Wonthaggi.

But this was never enough and VR forever remained beholden to NSW and a 700 mile haul to obtain its coal. Worse yet, the coal had to be transhipped by back-breaking manual shovel work from one gauge to another at Albury. It was positively Dickensian. Carrying its own locomotive coal from Albury was the predominant coal traffic task of the VR. When engine coal consumption peaked at 0.7 million tons per annum in the 1930s, VR was carrying a mere 0.2 million tons of other peoples' coal.

But, Victoria has plenty of Lignite or brown coal. This stuff, generally regarded as young black coal yet to be properly matured by geological processes, occurs in rather large fields in Victoria, but it is an inferior fuel in many ways. Chief among these are its low heat content and its high water content. These mean that power stations must burn more of it to release the same amount of energy and that much of this energy is wasted because the temperature of combustion is so much lower. One method of overcoming these difficulties is to powder the coal, dry it and then compress it into hard dry dense "briquettes". After such processing brown coal is almost the equal of black coal for heating and steam-raising purposes. Briquettes were also easier to transport and did not disintegrate like lignite. Briquetting was not only suitable for brown coal, but could be used for other low-energy fuels and even stuff that wasn't ever meant to be a fuel- cement for instance.

40 POWDER RIVER DIVISION—No. 6—April 28, 2004—Orin Subdivision

Length of Sliding (Feet)	Station Nos	Mile Post	Orin Subdivision MAIN LINE STATIONS	Rule 4.3	Type of Oper.	Line Segment	Miles to Next Stn.
		127.3	BRIDGER JCT	J			1.1
		126.2	ORIN JCT	J	CTC		2.6
		123.6	FISHER JCT	J			0.4
		123.1	EAST FISHER				5.5
		117.1	SHAWNEE JCT	JX(2)	ZMT		7.1
		110.6	CROSSOVER 110.6	X(2)	CTC		7.0
		103.6	CROSSOVER 103.6	X(2)			7.9
33182		95.7	CROSSOVER 95.7	X(2)			5.2
		90.5	CROSSOVER 90.5	X(2)			5.0
		85.5	EAST BILL	JX(2)			4.7
		80.8	WEST BILL	JX(2)	ZMT		8.3
		72.5	CROSSOVER 72.5	X(2)	CTC		7.1
33160		65.4	CONVERSE JCT (To Antelope 2.2)	X(2)			2.9
33158		62.5	EAST NACCO	X(2)T			0.9
33158		62.2	NACCO WYE JCT (To Rochelle 4.7) (To North Antelope 4.7)				0.3
33158		61.9	WEST NACCO				3.8
3158		58.1	CROSSOVER 58.1	X(2)			5.6
33142		52.5	CROSSOVER 52.5	X(2)			3.0
		49.5	MP 49.5	J		186	2.2
33142		47.3	CROSSOVER 47.3	X(2)			3.7
		43.8	CROSSOVER 43.8	JX			0.8
33142		43.0	MP 43.0	J			0.9
33142		42.1	CROSSOVER 42.1	JX			0.7
8,000		41.4	HARMON				7.3
		34.1	CROSSOVER 34.1	X(2)			7.6
33125		26.5	EAST COAL CREEK	X	ZMT		0.3
33125		26.2	COAL CREEK JCT (To Coal Creek 2.1)				0.3
33125		25.9	WEST COAL CREEK	X			1.4
		24.5	SUNEDCO JCT				0.7
		23.8	EAST CORDERO JCT (to Cordero 2.2)	X			2.7
		21.1	WEST CORDERO JCT	X			3.3
		17.8	EAST ROJO JCT	X			0.4
33117		17.4	ROJO JCT (To Caballo Rojo 0.7)				0.1
33117		17.3	WEST ROJO JCT	X			0.9
33115		16.4	EAST BELLE AVE JCT (To Belle Ave 1.8)				1.4
33114		15.0	CABALLO JCT (To Caballo 0.4)	X			0.3
		14.7	CROSSOVER 14.7	X			6.5
		8.2	CROSSOVER 8.2	X			7.8
30587		0.4	DONKEY CREEK JCT	JX			128.9

Radio Channel 66 in service MP 127.3 to MP 21.1.  
Radio Channel 85 in service MP 21.1 to MP 0.4.

Radio Call-In		
Walker - 62(X)	Bill - 63(X)	Logan - 67(X)
Reno - 65(X)	Coal Creek - 66(X)	
Emergency - Call 911		
For Dispatcher X=0, For Mechanical X=2, For Field Support X=3		

Train Dispatcher Telephone Numbers  
(817) 234-6181 or (817) 234-6180

- Speed Regulations**
  - Speed—Maximum**

MP 127.3 to MP 15.4, including trains 100 TOB and over	50 MPH.
MP 15.4 to MP 0.4	35 MPH.
  - Speed—Permanent Restrictions**

Nacco Jct. to North Antelope and Rochelle Mines	20 MPH.
North Antelope Lead	25 MPH.
On east and west legs of wye at Rojo Jct., Coal Creek Jct., to Reno Sub and Nacco Wye Jct.	25 MPH.
MP 49.5 to North Rochelle Mine	20 MPH.
  - Speed—Switches and Turnouts**

Through turnout Donkey Creek and both legs of Wye	25 MPH.
Through all turnouts equipped with dual control switches and on sidings unless otherwise specified	25 MPH.
  - Speed—Other**

Trinity Rail Services at Bill all tracks	10 MPH.
--	---------

**Temperature Speed Restrictions**  
Hot Weather—When temperature exceeds 90 degrees Fahrenheit, do not exceed the following speeds:  
Trains 100 TOB and over ..... 40 MPH.  
Trains up to 100 TOB ..... 50 MPH.

Cold Weather Restrictions—When the temperature is minus 10 degrees Fahrenheit or colder, do not exceed the following speeds:  
Trains 100 TOB and over ..... 30 MPH.  
Trains up to 100 TOB ..... 45 MPH.

See Item 1 of the System Special Instructions for additional speed restrictions.
- Bridge and Equipment Weight Restrictions**

**Maximum Gross Weight of Car**  
Bridger Jct. to Donkey Creek ..... 143 tons, Restriction A
- Type of Operation**

**CTC—in effect:**  
Bridger Jct. to Donkey Creek Jct.

**Two Main Tracks**  
MP 0.0—MP 58.1  
MP 103.6—MP 123.1

**Three Main Tracks**  
MP 58.1—MP 103.6
- General Code of Operating Rules Items**

**Rule 1.10**—On the Orin Subdivision, crews on trains being delayed on mine property may read magazines, newspapers, or other literature not related to their duties while their train is stopped.

**Rule 6.19**—When flagging is required, distance will be 2.0 miles.

**Safety Rule S-13.5**—Getting On and Off Moving Equipment is modified as follows:  
When the following conditions exist, it is permissible to get on and off moving equipment only when necessary to perform required duties.

  - Employees are allowed to get on and off moving equipment only from the lead locomotive.
  - Employees are allowed to get on and off moving equipment only during the coal loading process.
  - Employees are allowed to get on and off moving equipment only when operating under pacesetter control under 2 MPH.

When all these conditions are met, employees can get on and off moving equipment only at the mines. At all other times GCOR Rule 1.48 remains in effect as found in the System Special Instructions.

In the 1958 WTT shown on page 7, there is a paucity of trains by the standards of other railways, but listed are both briquette trains (from Morwell) and brown coal trains (from Yallourn). The right-hand columns are for Sunday trains, when the briquette traffic dominated.

**Queensland Railways Central Coal Lines**

Queensland's first steam train (to Ipswich) was powered by local coal (from Ipswich). This conjunction seems eminently logical. For most of the time that QR ran steam trains, Ipswich is where it got its coal. Railway and domestic demand ate all the coal, none went to export. This was true even when its great rival in coal, NSW, was already establishing a coal export industry. Apart from the timetables for the Bundamba field near Ipswich, coal traffic did not warrant anything called a "coal train".

We probably have Joh to thank for the emergence of the coal export industry and the consequent coal railway network in Queensland. He was apparently very fond of the stuff (there was some under his peanut farm). Railways would have been the natural choice to haul the coal anyway, but as a good agrarian socialist, he leapt upon the idea of having *his* railway do the job. Queensland quickly grew to be the biggest coal exporter in the world and Joh's bucolic little railway grew to be one of the biggest and slickest coal transporters in the world too. The coal comes from the Bowen Basin one of Australia's huge coal deposits

Despite being ostensibly an Open Access regime, an iron curtain of timetable secrecy has rung down across the QR system and it has proved impossible to uncover a timetable for this very busy railway. This was not so in the last century, where QR went so far as to publish a separate volume of the WTT devoted entirely to Coal Train Services in its Central Division. On page 8, I show a page from the 1990 edition, when coal traffic was barely one-third of its current level.

The two main ports for coal from the Central Division were Hay Point (near Mackay) and Gladstone. A good deal of the line from Coppabella to Hay Point was double track by this time and considerable sections of the Blackwater-Gladstone line had also been doubled. All of these lines were electrified.

Compared with many of the "timetables" we have examined so far, this page is bewilderingly intense with times—there are some 420 of them. About 45 of this 52-page booklet looked like this. An arrival and departure time is given for each location, probably at each end of a loop. The loops on the single line were generally about 1800 metres long and the trains moved at about 60 km per hour. Where a

Briquettes had first been produced experimentally at Morwell in the 1890s, but the technology could not be perfected and was abandoned for another 60 years. It is not something that Victorians liked to think about much, but the briquetting process really came from Germany, as did the other processes which Victoria adopted to handle the vexatious problem of lignite—the Lurgi gasification process and the Stugg process for firing locomotives. It was the briquette which, at long last, gave the VR something it could call "coal" to carry on its trains for its customers. The first briquettes started to flow from the Morwell Briquette Plant in the 1950s. "Coal" traffic rose to over 2 million tons—a trifling amount by the standards of this story, but still a 900% increase on what had gone before and a 25% boost to overall traffic levels. That was something worth having.

Commissioner Harold Clapp saw a great future for the traffic and convinced the

Government to approve electrification of the line to Traralgon to accommodate it. As well as electrification, a considerable program of regarding took place between Drouin and Warragul more than halving the grade to 1 in 110 and a completely new line was constructed through the Haunted Hills between Herne's Oak and Morwell. It was all part of *Operation Phoenix* designed to raise the VR from the ashes of war.

Electrification was a mistake, as indeed it was in NSW where the Lithgow line was electrified on a similar unfulfilled promise of massive coal traffic.

Brown coal was also carried from other places in Victoria, most notably from Bacchus Marsh, where 3 trains per day (300,000 tons per year) of the stuff was railed to Melbourne. Lignite was also transported by rail in the Latrobe Valley mines of course—millions of tons of it—but this does not quite fit the category of coal transport by rail—"common carrier" rail, anyway.

(BT)

<b>TRARALGON ES W</b> ... .. dep.	5 10-30	...	6 50-119	7 10	10 10E	12 10-203	...	...	...	...	...
Maryvale ES NC (See note, page 9)	{ arr. 5 22	...	...	...	...	...	...	...	...	...	...
	{ dep. 6 15	...	...	...	...	...	...	...	...	...	...
Morwell Briquette Siding ... arr.	...	...	...	...	...	...	8 45	...	4 45	6 55	...
Morwell ES W... .. { arr.	-133	...	7 5	7 25	...	...	...	...	...	...	...
	{ dep. 6 25	...	-133	7 30	9 15	-203	10 25	12 25	8 55	4 55	7 5
Herne's Oak ES NC (See note, page 9)	...	...	...	...	121A, 53, 41	-243	...	...	...	...	...
<b>YALLOURN ES</b> ... .. dep.	...	7 40-193	...	...	...	...	...	3 36-229	...	...	...
Moe ES W ... .. { arr.	6 42	...	7 49	9 34	...	...	9 15	...	5 12	7 22	...
	{ dep. 7 15	7 58	-139	-203	-243	...	9 35	3 48	5 32	7 42	...
Trafalgar ... .. { arr.	...	...	...	...	...	...	...	...	...	...	...
(See note, page 9)	{ dep. 7 28	8 9	8 28	10 21	10 53	12 53	9 48	3 59	5 45	7 55	...
Yarragon ... .. { arr.	...	...	...	...	...	...	...	...	...	...	...
Darwin O ... .. { dep.	7 38	8 19	8 38	10 31	11 1	1 1	9 58	4 9	5 55	8 5	...
(See note, page 9)	{ dep. 7 45	8 26	8 45	10 38	11 7	1 7	...	...	...	...	...
<b>WARRAGUL W</b> ... .. { arr.	8 0	...	9 5	10 55	11 30	1 25	10 15	4 30	6 10	...	...
	{ dep. 9 0	-53A, 205	-205	-215	-223, 110	...	...	...	...	...	...
		...	...	Tue. to Sat A.M.	...	...	...	...	...	...	...
		...	...	12 5	11 45	3 0	...	...	...	...	...
		...	...	-124, 223	...	...	...	...	...	...	...
	<b>78</b>	<b>122</b>	<b>90</b>	<b>110</b>	<b>124</b>	<b>130</b>	<b>98</b>	<b>152</b>	<b>100</b>	<b>102</b>	...

E.—Authorised load No. 124 Traralgon-Melbourne Fast Goods 700 Tons.

greater time between arrival and departure is shown, a cross with an opposing train probably occurred but the timetable, frustratingly, does not show these crosses in the old-fashioned way. I have a feeling these times are only notional anyway and have been generated by a simple-minded computer program (like a spreadsheet), rather than by proper train planning program. If one casts them into graphical form, the timetable becomes full of single line collisions.

At this time the Gladstone-Bluff section (now part of the "Blackwater System") carried some 12 trains per day each way, pretty evenly-spaced throughout the 24 hours.

### NSW Hunter Valley

One of Australia's first "railways" was built at Newcastle in 1829 for coal traffic—a short skip road down to a wharf. "Real" railways came to Newcastle in the 1850s and were also mainly for coal. Carrying coals to Newcastle had become a big industry by the end of the nineteenth century. Most of the mines were in a belt around the city and many operated their own private railways to connect with the Government system. One notable private line became a common carrier—the South Maitland Railways and had its own passenger service for many years. Its coal trains were handed over to the New South Railways at East Greta Junction, just outside Maitland. From here the NSWGR hauled them forward Port Waratah, developed in the late 1800s.

Traffic over the lines from Maitland to Port Waratah was very intense, but relatively slow because the trains were composed of 4-wheel unbraked hoppers. They got in the way of faster passenger and goods trains and so, by 1913-1914, the already double-tracked line was quadruplicated. After this, the shambling coal trains trod their own path, although they still crossed the "Main" line at an inconvenient crossing near Hanbury Junction. After a flyover was built here, the separation was complete.

Largely at the initiative of local area managers, the NSWGR produced a special WTT covering the Newcastle area only, in the early 1960s. It focused on coal trains, but as an added bonus, had several pages SMR passenger trains. At this time the SMR operated its own diesel rail cars. Neither of these tables appeared in the "normal" Northern District WTT of the day, although the coal trains appeared in other periods. These tables originally covered also the coal lines which ran to the south of Newcastle, but these seem to have disappeared some time early in the 20th Century. Until the 1950s the coal tables had also included trains which ran on the coal lines for only a short distance before diverting to another private network radiating from Wallsend— but there were not many of them. In the Newcastle-only WTTs, there were also separate tables for coal trains running on the line beyond Maitland to Muswellbrook. Such a table never appeared in the North book.

I have a couple of these Newcastle "specials" and, on our page 9 appears a

page from the April 1962 edition for the East Greta-Waratah coal traffic. There are 6 pages like this one and a total of over 1,360 trains per week are listed. Trains numbered in the 1000 series are all coal trains running mainly on the coal lines between Port Waratah and either East Greta Junction or Hexham, where there was an exchange with another private railway, that of J&A Brown. The latter are referred to as "Brown's Coal" in the table. A few trains ran to Bloomfield— where there was another short private line. Trains with numbers under 10000 run further afield, mostly to the Main North line, but also in later years to collieries developed on the North Coast line.

It was all steam of course. In 1962 Port Waratah loco housed 48 steam locos and Broadmeadow an astonishing 140. Many an hour have I spent standing in the Hexham swamp photographing them as they came and went along the coal lines, with the traffic so heavy at times that one had to pass up every second train in order to properly photograph the first.

Many of the Main North trains were hauled by 60-class Garratt locomotives, but the great bulk of the shuffling coal trains were drawn by Standard Goods engines of the 50- and 53-class. A small number of 19-class 0-6-0 engines, already 90 years old, in the 1960s were retained at both Port Waratah and Broadmeadow to shunt the coal trains within the yards.

**BLUFF TO GLADSTONE:COAL TRAIN SERVICE—MONDAYS to FRIDAYS**

		EK63	E465	E567	EK69	E471	E573	EL75	
<b>LOADED RUNNING</b>									
Stations									
		xx							
<b>Bluff</b>	arr	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	p.m.	..
Ditto—CTC	dep	<b>12 05</b>	<b>12 35</b>	<b>4 29</b>	<b>5 39</b>	<b>6 36</b>	<b>10 49</b>	<b>12 12</b>	..
Walton	arr	12 14	12 59	4 49	5 59	7 24	11 14	12 34	..
Ditto—CTC††	dep	12 22	1 02	4 51	6 01	7 26	11 16	12 36	..
Parnabal	arr	12 27	1 07	4 56	6 06	7 31	11 21	12 41	..
Ditto—CTC††	dep	12 29	1 09	4 58	6 08	7 33	11 23	12 43	..
Umolo	arr	12 34	1 14	5 03	6 13	7 38	11 28	12 48	..
Ditto—CTC††	dep	12 40	1 16	5 22	6 15	7 40	11 30	12 52	..
Dingo	arr	12 46	1 22	5 28	6 21	7 46	11 36	12 58	..
Ditto—CTC†	dep	12 48	1 24	5 30	6 27	7 48	11 38	1 00	..
Duaranga	arr	1 00	1 36	5 42	6 39	8 00	11 50	1 12	..
Ditto—CTC††	dep	1 02	1 38	5 44	6 41	8 18	11 52	1 14	..
Wallaroo	arr	1 14	1 50	5 56	6 53	8 30	12 06	1 26	..
Ditto—CTC††	dep	1 16	1 52	5 58	6 55	8 32	12 08	1 28	..
Tryphinia	arr	1 29	2 05	6 11	7 08	8 45	12 21	1 41	..
Ditto—CTC†	dep	1 31	2 07	6 13	7 10	8 47	12 23	1 43	..
Aroona	arr	1 40	2 16	6 22	7 19	8 56	12 32	1 52	..
Ditto—CTC††	dep	1 42	2 18	6 24	7 21	8 58	12 34	1 54	..
Edungalba	arr	1 52	2 28	6 34	7 31	9 08	12 44	2 04	..
Ditto—CTC††	dep	1 54	2 30	6 36	7 33	9 10	12 46	2 06	..
Tunnel	arr	2 06	2 42	6 48	7 45	9 22	12 58	2 18	..
Ditto—CTC††	dep	2 08	3 00	6 53	7 47	9 24	1 00	2 30	..
Grantleigh	arr	2 15	3 07	7 00	7 54	9 31	1 07	2 37	..
Ditto—CTC††	dep	2 17	3 09	7 02	7 56	9 33	1 09	2 39	..
Windah	arr	2 28	3 20	7 13	8 07	9 44	1 20	2 50	..
Ditto—CTC††	dep	2 30	3 22	7 15	8 09	9 46	1 22	2 52	..
Westwood	arr	2 41	3 33	7 26	8 20	9 57	1 33	3 03	..
Ditto—CTC††	dep	2 43	3 35	7 28	8 22	9 59	1 35	3 05	..
Wycarbah	arr	2 51	3 43	7 36	8 30	10 07	1 43	3 13	..
Ditto—CTC††	dep	2 53	3 45	7 38	8 32	10 09	1 50	3 15	..
Stanwell	arr	3 05	3 57	7 50	8 44	10 21	2 02	3 27	..
Ditto—CTC††	dep	3 07	3 59	7 52	8 46	10 23	2 04	3 29	..
Kabra	arr	3 15	4 07	8 00	8 54	10 31	2 12	3 37	..
Ditto—CTC††	dep	3 19	4 09	8 02	8 56	10 33	2 14	3 39	..
Gracemere	arr	3 27	4 17	8 10	9 04	10 41	2 22	3 47	..
Ditto—CTC†	dep	3 50	4 43	8 38	9 33	11 05	2 45	4 12	..
Rocklands CTC††	arr	3 57	4 50	8 45	9 40	11 12	2 52	4 19	..
<b>Thence As No.</b>	..	<b>EF14</b>	<b>EF16</b>	<b>EF18</b>	<b>EF20</b>	<b>EF22</b>	<b>EF24</b>	<b>EF26</b>	..
Rocklands—CTC††	d	3 59	5 07	8 47	9 43	11 14	2 54	4 21	..
Midgee	arr	4 06	5 14	8 54	9 50	11 21	3 01	4 28	..
Ditto—CTC††	dep	4 44	5 32	9 02	9 52	11 23	3 08	4 44	..
Archer	arr	4 51	5 39	9 09	9 59	11 30	3 15	4 51	..
Ditto—CTC††	dep	4 53	5 41	9 19	10 01	11 32	3 17	4 53	..
Bajool	arr	5 05	5 53	9 31	10 13	11 44	3 29	5 05	..
Ditto—CTC†	dep	5 08	5 56	9 34	10 16	11 47	3 32	5 08	..
Marmor	arr	5 15	6 03	9 41	10 23	11 54	3 39	5 15	..
Ditto—CTC††	dep	5 18	6 06	9 44	10 26	11 57	3 42	5 18	..
Raglan	arr	5 28	6 16	9 54	10 36	12 07	3 52	5 28	..
Ditto—CTC††	dep	5 30	6 32	10 08	11 00	12 39	3 58	5 30	..
Epala	arr	5 37	6 39	10 15	11 07	12 46	4 05	5 37	..
Ditto—CTC††	dep	5 39	6 45	10 17	11 09	12 48	4 07	5 39	..
Ambrose	arr	5 44	6 50	10 22	11 14	12 53	4 12	5 43	..
Ditto—CTC††	dep	5 46	6 52	10 24	11 16	12 55	4 14	5 45	..
Mount Larcom	arr	5 50	6 56	10 28	11 20	12 59	4 18	5 49	..
Ditto—CTC†	dep	5 52	6 58	10 30	11 22	1 01	4 20	5 51	..
Aldoga	arr	6 02	7 08	10 40	11 32	1 11	4 30	6 01	..
Ditto—CTC††	dep	6 04	7 10	10 42	11 34	1 13	4 56	6 03	..
Yarwun	arr	6 11	7 17	10 49	11 41	1 20	5 03	6 10	..
Ditto—CTC†	dep	6 14	7 20	10 52	11 44	1 25	5 06	6 13	..
Mount Miller	arr	6 18	7 24	10 56	11 48	1 29	5 10	6 17	..
Ditto—CTC††	dep	6 21	7 26	11 11	12 01	1 31	5 21	6 21	..
Callemondah	arr	<b>6 30</b>	<b>7 35</b>	<b>11 20</b>	<b>12 10</b>	<b>1 40</b>	<b>5 30</b>	<b>6 30</b>	..
		a.m.	a.m.	a.m.	p.m.	p.m.	p.m.	p.m.	..

xx EK63 Arrives Bluff at 11.55 pm Sun to Thursday.

Steam haulage of coal trains on the Government system ceased in 1973, but persisted into the 1980s on the private lines. Coal coming off the private lines also gradually dwindled as the small mines they served became uneconomic or worked out. Traffic from Hexham disappeared many years ago, but coal trains continued on the SMR with Government diesels until they too finally disappeared.

But bigger things were afoot. There had for many years been mines further up the Hunter Valley, as far as Singleton. Some of these were developed to feed Government power stations, but many produced coal for domestic consumption and for export. The early mines strung out along

this railway were small underground mines run by small companies and the line in many ways resembled that closer to Newcastle. Later mines were much larger developments and were mainly for export traffic. Several were open cut mines. The coal basin here is one of the largest on the planet and extends all the way north and west to Gunnedah and Ulan respectively. Mine development at the latter led to the re-awakening after 30 years of the never-completed Sandy Hollow line and coal trains now flow along it from Ulan to Port Waratah. Coal traffic from Gunnedah is now exceptionally heavy. On the line between Maitland and Muswellbrook literally dozens of mines opened (see map, page 9,

courtesy of "Australian Railway Routes") and fleets of trains of an intensity to rival those from East Greta Junction in the old days now rumble down the line. But these trains are different from those of 40 years ago. A typical train can stretch to 1,500 metres and trains grossing up to 10,000 tonnes have been run as a trial. Such a train carries more coal than a week's worth of trains which came off the SMR. These trains run to Kooragang Island, adjacent to Port Waratah.

The line is choked with trains and the inability to move them exacerbates problems already existing at the ports. A massive program of duplication, triplication and extension of crossing loops is taking place on the Muswellbrook line. A flyover like that at Hanbury Junction has been built at Sandgate to remove a flat crossing of the Coal Lines with the Main Lines. There is even talk of eliminating the onerous crossing of the Liverpool Range by a major tunnel underneath it. Under current ARTC plans, it is hoped to more than double annual export of coal traffic to 200 million tonnes— if the Enhanced Greenhouse Effect doesn't kill the idea first.

The coal basin extends also some distance up the North Coast line and, at Stratford, more major coal mines have been developed. Coal trains to Stratford are the focus of our next coal train timetable. In contrast to all the other timetables here, this is a graphical timetable. Although timetables like this have been around since 1843 and are the standard method of representing train paths by modern timetabling software, they rarely make it into the public arena. This is an exception. It has been produced by the people who manage ARTC's NSW lease (the ARTC National people have had such a TT for some years) and still shows signs of teething problems— or at least signs of a roundabout production process.

These are not graphical timetables in the form that a purist would prefer because the vertical axis is not distance-based and so the speed of trains is often distorted. But, with a little bit of tweaking, we have made something visually comprehensible out of it. For some reason not explained, ARTC-NSW does not publish a graphical WTT for its Main North coal lines, but this North Coast version is a good second choice for displaying how coal traffic still dominates railways in the 21st century.

The chart covers the whole line from Islington Junction to Acacia Ridge. Thus it covers all coal trains out to Maitland and the coal trains to Stratford, but they are all dreadfully scrunched up in the Maitland region. Beyond Stratford there are vast tracts of white space on the page, even though this is a busy line by Australian standards and already at capacity.

The southern section has been unscrunched in an enlargement below the main chart, enabling us to see that, even in the wee small hours of Thursday morning, 4 to 6 trains per hour make their way across the Hexham swamp. Those that appear or disappear in the region of Sandgate are the coal trains, some are clearly coming off the lines to the south, but the majority come and go from the north.

**The future for coal railways**

All of the above sounds pretty exciting to a railway administration and even to railway aficionados. But what if it goes pear shaped? What if the global financial crisis and an emissions trading scheme mean the demise of coal? What will happen to the railroads; what will happen to the towns and societies that depend on both? Many railways will go down the gurgler. Will the towns also die when coal dies? Perhaps not. Gilfach Goch didn't.

**Gilfach Goch**

Gilfach Goch's main claim to fame is that it is the childhood home of Richard Llewellyn, the author of the classic "How green was my valley", written at the end of the Depression, about life in his Welsh coal-mining town 40 years before (picture left bottom, page 10). Gilfach was served by a single line branch off a single line branch from the Ely Valley branch of the Great Western Railway when *How green was my valley* was written. The line had been opened in 1864 as a broad gauge line. It was worked under electric staff conditions, plus an extension to the terminus worked under train staff and ticket. In typical Welsh fashion, there had been up to a dozen collieries clustered around the railway in this valley, but at the time Llewellyn wrote his book, the major colliery was the Britannic Extended, which used its own engine to bring coal to the sidings, from where the GWR trains took over. There were no passenger trains (though there had been in the 1890s and there were to be again after the Depression had lifted), but the line was served by "mineral" trains—i.e. coal trains. The GWR WTT of the time didn't show tables for mineral trains, but it did display a summary table of what coal "trip train" services were worked from certain depots. From this, we can see that a shuttle service of 3 coal trains ran during daylight hours, working for a total of 32 hours per day. They delivered coal to the junction at Llantrisant on the South Wales Main Line, a distance of just over 7 miles, so we can surmise that the service would have been nearly continuous. This was only a minute fraction of the coal services then running in Wales. It was estimated that some 300 trains per

**Time-tables for Coal Trains East Greta Exchange Sidings to Port Waratah** 101

WEEK-DAYS

UP	1174	1170	678	1172	1176	674	1008	1004	1006	1010	1012
East Greta Exch. Sdgs.	ME a m	ME a m	ME a m	ME a m	ME a m	ME a m	a m	a m	a m	a m	a m
Maitland	Brown's Coal. 12 31	12 31	12 42	1 0	1 26	2 M	Brown's Coal. 1 55	2 21	2 41	2 56	
Metford		12 35	12 52	1 4	1 30	2 12	Brown's Coal. 1 59	2 25	2 45	3 0	
Thornton		12 47	...	1 16	1 42	...	2 11	2 37	2 57	3 12	
Hexham	12 50	1 9	1 18	1 38	2 4	2 39	2 25	2 33	2 59	3 19	3 34
Hanbury Jct.	1 7	1 24	1 33	1 53	2 19	2 54	2 42	2 48	3 14	3 34	3 49
Scholey St.											
Pt. Waratah (lever W)	1 37	1 54	2 3	2 23	2 49	3 24	3 12	3 18	3 44	4 4	4 19
Formed by...	1173	1169	687	1171	1175	...	1007	1003	1005	1309	1011

UP	278	1014	1016	1024	1018	1020	676	1026	642	1032	1028
East Greta Exch. Sdgs.	ME a m	a m	a m	a m	a m	a m	ME a m	a m	a m	a m	a m
Maitland	N 3 11	3 21	3 31	Brown's Coal. 4 21	4 36	4 51	5 11	5 21	6 11	6 31	5 35
Metford	3 16	3 25	3 35	Brown's Coal. 4 25	4 40	4 51	5 15	5 27	6 11	6 31	5 39
Thornton		3 37	3 47	4 37	4 52	4 51	5 27	5 27	6 11	6 31	5 51
Hexham	3 42	3 59	4 8	4 40	4 59	5 14	5 24	5 49	6 11	6 31	6 13
Hanbury Jct.	3 57	4 14	4 24	4 57	5 17	5 29	5 39	6 4	6 11	6 31	6 30
Scholey St.											
Pt. Waratah (lever W)	4 27	4 44	4 54	5 27	5 47	5 59	6 9	6 34	6 41	6 52	7 0
Formed by...	299	1013	1015	1023	1017	1019	675	1025	641	1031	1027

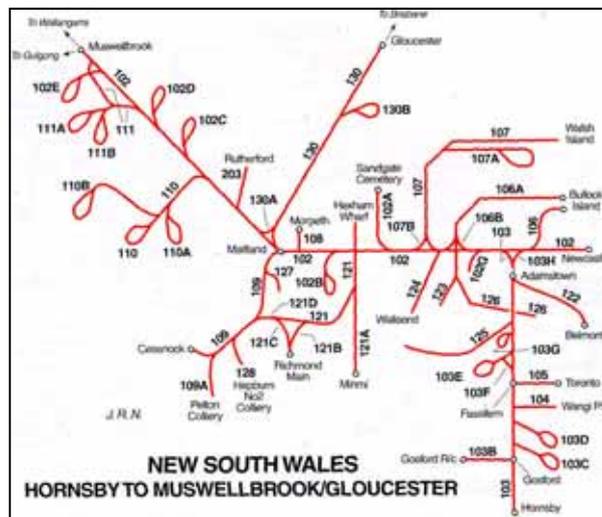
  

UP	1030	1034	1034a	1040	974	1036	978	1038	1040a	1044	1046
East Greta Exch. Sdgs.	a m	a m	a m	a m	a m	a m	a m	a m	a m	a m	a m
Maitland	5 58	6 29	From Bloomfield Colliery. 6 14	Brown's Coal. 7 30	From Old Lambton Colliery, at 7.19 a.m. 7 36	7 40	7 45	7 49	8 26	8 20	8 31
Metford	6 2	6 33	6 45	7 30	7 52	8 14	8 1	8 8	8 26	8 24	8 35
Thornton	6 14	6 45	7 5	7 30	7 52	8 14	8 1	8 8	8 26	8 36	8 47
Hexham	6 36	7 7	7 18	7 30	7 52	8 14	8 1	8 8	8 26	8 48	9 9
Hanbury Jct.	6 51	7 22	7 33	7 47	8 1	8 29	8 24	8 38	9 3	9 13	9 24
Scholey St.											
Pt. Waratah (lever W)	7 21	7 52	8 3	8 17	8 23	8 59	8 46	9 8	9 33	9 43	9 54
Formed by...	1029	1033	1032a	1039	973	1035	977	1037	1039a	1043	1045

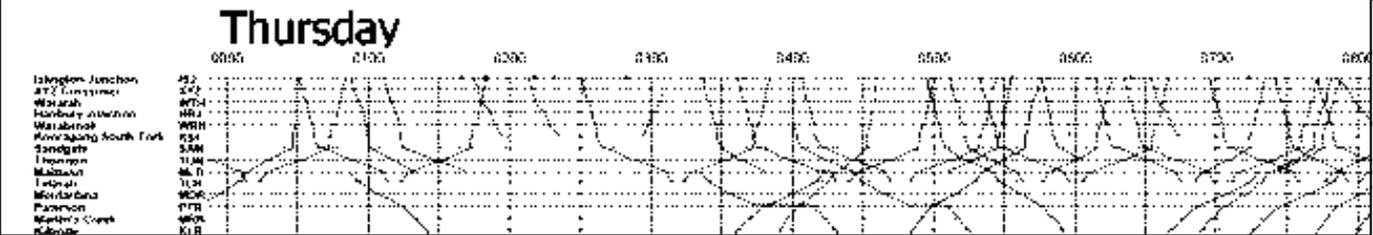
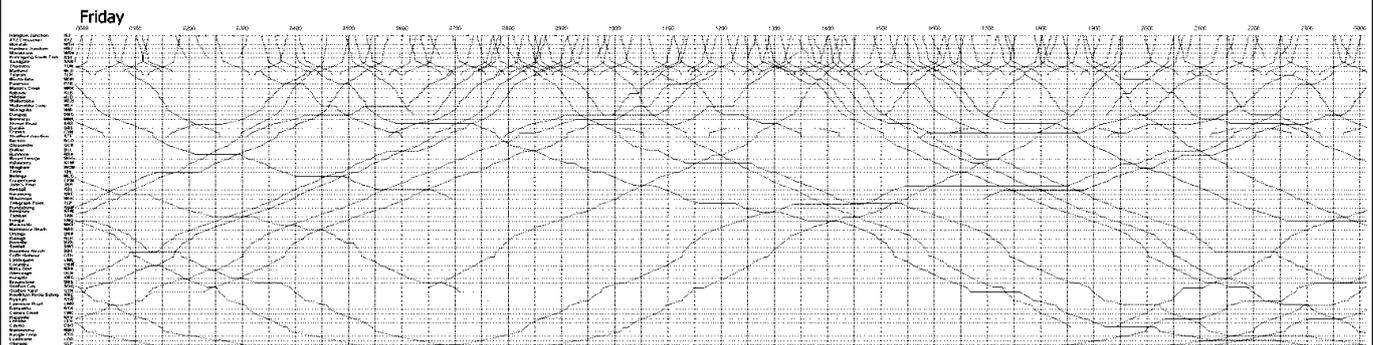
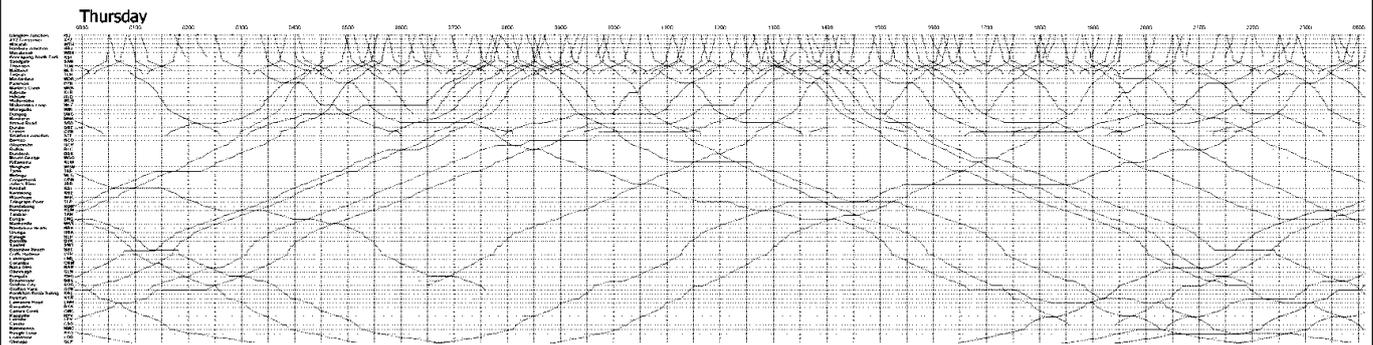
  

UP	1048	1050a	1050	1058	1052	982	984	1054	162	644	1060
East Greta Exch. Sdgs.	a m	a m	a m	a m	a m	a m	a m	a m	a m	a m	a m
Maitland	8 46	From Bloomfield 9 6	9 10	Brown's Coal. 9 52	9 31	Purified Coke works at 9.29 a.m. 9 35	9 47	9 54	9 38	10 11	From Bloomfield Colliery. 10 30
Metford	8 50	9 10	9 22	9 52	9 35	9 47	9 54	10 6	9 55	10 11	10 30
Thornton	9 2	9 20	9 44	9 52	10 9	10 18	10 28	10 17	10 32	10 37	10 43
Hexham	9 24	9 32	9 59	10 9	10 24	10 33	10 43	10 32	10 32	10 52	10 58
Hanbury Jct.	9 39	9 48	10 9	10 9	10 24	10 33	10 43	10 32	10 32	10 52	10 58
Scholey St.											
Pt. Waratah (lever W)	10 9	10 18	10 29	10 39	10 54	10 48	11 18	11 13	11 2	11 22	11 28
Formed by...	1047	1049a	1049	1057	1051	981	983	1053	151	643	1059

A—From Ayrfield Colliery.  
 N—From Newdell.  
 M—From Muswellbrook.  
 For times north of Maitland, see page 106.



### Islington Junction to Glenapp



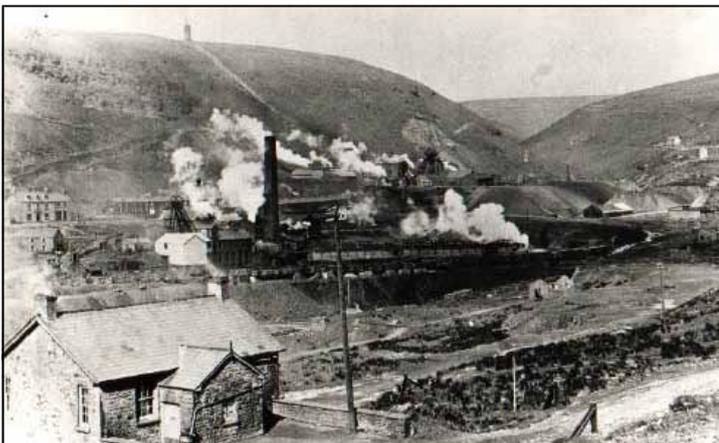
day passed through the bottleneck at the Pontypridd junctions near Cardiff.

Now the coal is gone; the trains are gone; the railway is gone. But Gilfach Goch is still there. The coal railways and power stations which so blighted the landscape have been replaced by wind turbines strung out in serried ranks above the valley (below right).

*How green is my valley now.*

### LOCAL GOODS AND MINERAL TRAINS.

		LLANTRISANT DEPOT.	
Z.1	a.m.	Llantrisant	Clydach Vale and Trips (16 hours.)
Z.4	6 30	"	Gilfach and Trips (16 hours.)
Z.6	7 20	"	Gilely and Trips (8 hours.)
Z.8	8 40	"	Cowbridge Branch
	5 50	"	
	Noon.		
Z.10	12 0	"	Gilfach and Trips (8 hours.)
	p.m.		
Z.6 R	4 15	"	Penygraig and Trips (8 hours.)
Z.11	5 40	"	Pontypridd
Z.12	6 15	"	Gilfach and Trips (8 hours.)





brief history" in the *Times* December 2004, no. 249).

*Evidence (continued):* This good service of 1890 is confirmed in *Railway Guide Book and Time Tables for Melbourne, Ballarat, Adelaide and all Intermediate Stations also Gazette for Bacchus Marsh, Ballan, Melton, &c., and Almanac for 1891* published by Crisp & Lane of the "Express" office in Bacchus Marsh. This also shows a return working of the Saturday night train departing Ballan for Ballarat at 10.55 pm. Perhaps only the elves were around to travel on that. This worthy publication perhaps never raised its head again after 1890.

The good times soon disappeared as the great depression of the 1890s took hold. *Bradshaw* for April 1897 showed a mere two trains daily on the direct line from Melbourne to Ballarat. Among the drastic cutbacks, even the Intercolonial Express had returned to travelling via Geelong. The two survivors departed Spencer St station at 7.12 am and 6.50 pm. In addition the Ballan-Ballarat local also ran, now 7.5 am ex Ballan and 7.30 pm ex Ballarat.

In 1905 *Bradshaw's Guide*, however, there was no longer Ballan-Ballarat and v.v. trains – only the two Melbourne-Ballarat trains. These would stop at Bradshaw if required. They departed Melbourne Spencer St at 7.40 am and 6.10 pm (7.15 pm on Saturdays). No times were provided for the request stop for down trains, but were given for up trains. The Adelaide Express was back via the direct line, but of course ignored Bradshaw.

*Bradshaw* for April 1921 showed things were getting better for Bradshaw. There were now three Melbourne-Ballarat trains, 7.40 am, 5.6 pm and 7.0 pm, plus 8.0 am on Mondays only. Of these, the 7.40 am, 8.0 am MO and 7.0 pm would stop at Bradshaw if required. And, all praise to the Highest (the VR Commissioners), the Ballan-Ballarat local train had been reinstated. The VR Official Timetable for this period said this train was a "Steam Car" [This was the unique Kerr-Stuart car, illustrated on our page 16. It did not last long – it "oscillated" too much – Ed]. It departed at 6.55 am from Ballan and 4.45 pm from Ballarat. This suggests it was fulfilling the function it retained for the rest of its life, mainly conveying school-children. And, it even stopped definitely, rather than on request, at Bradshaw!

The Mondays only extra disappeared. Otherwise times changed slightly, but services basically remained the same through the 20s and 30s. The Ballan local became a Rail Motor, but, not surprisingly, the stop at Bradshaw reverted to being conditional.

A new station, Llandeilo, opened between Bradshaw and Gordon. This was an even lower place than Bradshaw! The only train that recognised Llandeilo's existence and would stop there, if required, were the Ballan locals.

By 1 April 1937, there were even trains, morning and evening each way on Sundays! They would even stop (only if required, of course) at Bradshaw! (Additional sentence for the perfectionists:

They departed Spencer St at 9.25 am and 7.25 pm, Ballarat at 10 am and 7 pm).

After the last, final and ultimate *Bradshaw* timetable of August 1942, we simultaneously enter the long, long drought from 1941 to 1954 of VR Official Public Timetables brought on by the War.

Turning therefore to Working Timetables, we see that for the "Restricted Train Service" of 2 October 1944, the 7.55 am ex Melbourne only ran on Mon, Wed, Fri and Sat and would, if required, stop at Bradshaw. The 5.30 pm ex Melbourne ran only on Mon, Tue, Thur and Sat and would also take us – if required – to Bradshaw. Our old friend, the Ballan-Ballarat AEC Rail Motor (on Monday to Saturday) would also do likewise.

In the timetable of 2 December 1945 both the morning and evening Melbourne-Ballarat trains are restored to Daily. "Daily", of course, being a word which meant "Mondays to Saturdays". Never on Sundays.

In the timetable of 13 April 1953 the only trains which would now deign to stop at Bradshaw were the Ballan-Ballarat Rail Motors at 7.52 am ex Ballan (7.55 am on Sat) and 4.30 pm Mon-Fri, 12.20 pm Sat ex Ballarat. These trains were notorious for their unreliable timekeeping, the morning down being affected by the frequently late-running "Overland" express from Adelaide which was crossed at Ballan immediately before the local's departure and the afternoon return by other trains on this single

**Bradshaw Apr 1891**

M		S		D		W		T		F		S		S	
Stn	Time	Stn	Time	Stn	Time	Stn	Time	Stn	Time	Stn	Time	Stn	Time	Stn	Time
Suburban	7.15	Ballan	7.15												
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15	Ballan	7.15
Ballan	7.15	Ballan													

DOWN.—Melbourne to Ballarat, Stawell, and Adelaide (South Austr FARE TABLE

Table with columns for Station, Time, and Fare. Includes stations like Melbourne, Ballarat, Stawell, Adelaide, and various intermediate stops.

UP.—Adelaide (South Australia) to Stawell, Ballarat, and Melbourne. FARE TABLE

Table with columns for Station, Time, and Fare. Includes stations like Adelaide, Ballarat, Stawell, Melbourne, and various intermediate stops.

Does not stop... Will stop when required... Stop when required to pick up or set down passengers... Passengers desiring to alight must give notice to the Guard at the previous stopping station.

Bradshaw 1905

track line. But Bradshaw was better off than its neighbour, Llandeilo, which now disappeared off the face of the earth.

With Bradshaw now served only by the local Rail Motors, a better name had to be found. Therefore, between the timetables of 16 August 1954 and 13 August 1956, some railway genius renamed it with the far more beautiful and melodious name of Rail Motor Stopping Place No. 77. The Ballan-Ballarat Rail Motor, while mainly

for schoolchildren, also ran on Saturdays (7.55 am ex Ballan, 12.20 pm ex Ballarat) - but not however stopping at RMSP 77.

Sometime between the timetables of 6 November 1967 and 4 May 1970 - the relevant timetable not being available to the Crown Prosecuting Service - the burghers of towns to the east of Ballarat finally had their darling offspring transported to school by new-fangled buses instead of being transported. The local Ballan-

Ballarat Rail Motor disappeared down the gurgle hole of history, and took with it Rail Motor Stopping Place No. 77.

His Honour: Manifestly, the defendant should be found guilty! But the case is dismissed merely because not even 12 residents of Bradshaw can be found to constitute a jury.

Bring on the next case about the measuring of distances from Miles, Queensland.









SERVICETON-BALLARAT-MELBOURNE. Passenger Service—Continued from pages 48 and 49.

Miles from S'ton.	UP.	18	80	10	22	12		46	60	66	34
		Rail Mtr. (P.E.) Daily.	Pass. Mon. Tues., Thur., Sat.	'Overland' Daily, Sun. Incl.	Pass. Mon. Tu. Th., Sat.	Sat. Exco. Sun. Incl.	Sat.	Rail Mtr. (A.E.C.) Sat.	Rail Mtr. (A.E.C.) Sat. Exco.	Pass. Sat.	Pass. Mon. Wed, Fri. Sat.
213 1/2	<b>BALLARAT</b>	Arr. ...	a.m. 6 15	a.m. 7 10	a.m. ...	a.m. 9 5 B	9 25	p.m. ...	p.m. ...	p.m. ...	p.m. 5 20
	"	Dep. ...	6 40	7 35 A	7 57	9 20	9 40	1 15	4 25	...	5 45
213 1/2	Ballaratt East	"	6 43*	*	8 0	*	*	1 17	4 27	...	5 49
217 1/2	Warrenheip ES	"	6 55*	7 45*	8 13	9 36*	9 56*	1 32	4 42	...	6 2
219 1/2	Dunnstown	"	*	*	8 18§	*	*	1 38	4 47	...	6 8
222 1/2	R.M. Stop Place	"	...	...	...	...	...	Z	Z	...	...
223	Bungareo ES	"	7 7*	7 54*-23	8 27-23	9 48*-4	10 8*	1 44	4 58-33	...	6 17-55
223 1/2	Wallace	"	*	*	8 34	*	*	1 50	5 6	...	6 23
223 1/2	Millbrook	"	*	*	8 39	*	*	1 56	5 13	...	6 30
229	R.M. Stop Place	"	...	...	...	...	...	Z	Z	...	...
229 1/2	R.M. Stop Place	"	...	...	...	...	...	Z	Z	...	...
230 1/2	Gordon ES	"	7 19*-23	8 4*	8 45	10 0*	10 20*	2 5	5 18	...	6 37
233 1/2	Llandeilo	"	...	...	...	...	...	Z	Z	...	...
235	Bradshaw	"	...	...	...	...	...	Z	Z	...	...
236 1/2	R.M. Stop Place	"	...	...	...	...	...	Z	Z	...	...
237 1/2	Ballan ES	Arr. ...	...	...	...	...	10 30 E	2 25	5 35	...	...
	"	Dep. ...	7 29	8 12*	8 57	10 10*	10 40-27	...	...	...	6 50
242	Ingliston ES	Arr. ...	...	...	...	10 17-27	...	...	...	...	7 3 57
	"	Dep. ...	7 36*	8 17*	9 5	10 25*	10 47*	...	...	...	7 13
252 1/2	Rowsley	"	...	...	...	*	*	...	...	...	7 31
255 1/2	Bacchus M. ES	Arr. ...	...	...	9 25-27	...	...	...	...	...	7 38-60
	"	Dep. 7 14	7 55	8 37*	9 28	10 45*	11 7*	...	...	5 30	7 50
257 1/2	Parwan ES	"	7 23	8 4*	8 44*	9 36	10 53*	11 15*	...	5 40	7 59
263 1/2	Melton ES	Arr. ...	...	...	...	...	...	...	...	...	8 10
	"	Dep. 7 34	8 13*	8 52*-27	9 47	11 2*	11 24*	...	...	5 49	8 20
265 1/2	R.M. Stop Place	"	...	...	...	...	...	...	...	...	...
268 1/2	Rockbank ES	Arr. ...	8 22-27	...	...	-31	...	...	...	6 0-57	...
	"	Dep. 7 42	8 40 D	8 58*	9 55	11 10*	11 37*	...	...	6 9	8 29
271 1/2	R.M. Stop Place	"	...	...	...	...	...	...	...	...	...
276	Deer Park	"	7 53	8 50*-20	*-20	10 5	11 22*	11 49*	...	6 19	...
277	Ardeer	"	*	*	*	*	*	...	...	...	...
279 1/2	Sunshine ES	"	8 4	8 57*	9 12*	10 13††-31	11 30*-37	11 57*	...	6 27††	8 46
282 1/2	West Footscray	"	††	††	††	††	††	...	...	...	††
283 1/2	Footscray	"	8 14	9 8*	9 20*	10 22	11 38*	12 5 p.m.	...	6 38	8 55
286	North Melbourne	"	8 19	*	*	*	*	...	...	6 44	9 2
287	MFLB. (Spn. St.)	Arr. ...	8 24	9 20	9 30	10 35	11 50	12 15	...	6 50	9 10

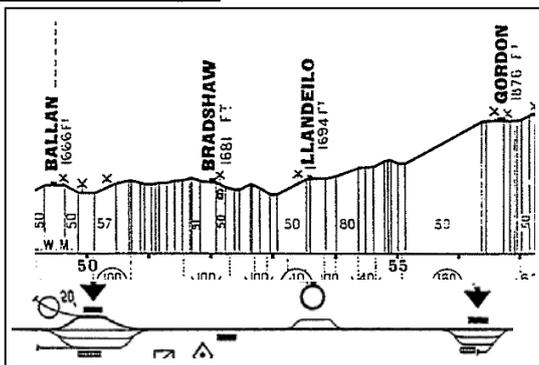
● No. 66 may depart Rockbank at 6.1 p.m., Deer Park 6.11 p.m. No. 34 may depart Ingliston 7.4 p.m., Rowsley 7.26 p.m., Bacchus Marsh 7.39 p.m., Melton 8.11 p.m. A—Passengers are not permitted to join "The Overland" at Ballarat. B—Arrives Ballarat 8.22 a.m. Sunday. D—Stops Rockbank for Departmental purposes only and may depart at 8.23 a.m. E—Stops for Departmental purposes only.

WESTERN AND SOUTH WESTERN DISTRICTS. MELBOURNE-BALLARAT. (Continued on Page 23).

DOWN.	23A Empty Car Mon.	23 Diesel Rail Car (153 H.P.) and Trailer Sat. Exc.	25 PASS. DAILY	49 PASS. DAILY	53 Rail Motor (Diesel Elec.) Sat. Exc.
MELBOURNE (Spencer Street) dep.	A.M. 5 15	A.M. 5 40	A.M. 8 40	P.M. 1 40	P.M. 4 23
North Melbourne	...	...	...	...	...
Footscray	...	...	8 49	...	4 31
Sunshine	5 32*	...	8 58	1 55*	4 42
Ardeer	...	...	...	...	...
Deer Park	...	...	9 5	...	...
Rail Motor Stopping Place	...	...	...	...	...
Rockbank	5 45*	...	9 18-21	2 9B	5 6
Rail Motor Stopping Place	...	...	...	...	...
Melton	5 56*	...	9 26	2 14*B	5 17
Staghton's Siding	...	...	...	...	...
Parwan	6 3*	...	9 35*P	2 22*B	5 29
Bacchus Marsh	6 20	...	9 41	2 28	5 37
Rowsley	6 28	...	9 41	2 28	5 37
Ingliston	...	...	10 11*P	2 56*	...
Ballan	arr. 7 55-2	7 52-2	10 21	3 4	...
Bradshaw	...	...	...	...	...
Llandeilo	...	...	...	...	...
Gordon	arr. 8 10-21	8 10-21	10 34	3 11*	...
Wallace	...	...	8 21	...	...
Millbrook	...	...	8 22	...	...
Bungareo	...	...	8 27	...	...
Dunnstown	...	...	8 31	...	...
Warrenheip	...	...	8 36	...	...
Ballaratt East	...	...	8 41	...	...
Ballaratt East	...	...	8 46	...	...
Ballaratt East	...	...	8 55	...	...
BALLARAT	...	...	11 30	3 55	...

BALLARAT-MELBOURNE. (Continued from Page 26).

UP.	24 PASS. (From Horsham) DAILY	46 Diesel Rail Car (153 H.P.) Sat.	60 Diesel Rail Car (153 H.P.) and Trailer Sat. Exc.	34 PASS. (From Serviceton) SAT. EXC.	34 PASS. (From Serviceton) SAT.
BALLARAT	arr. 11 50	P.M. ...	P.M. ...	P.M. 5 25	P.M. 5 25
Ballaratt East	dep. 12 5	12 20	4 30	5 45	5 45
Warrenheip	...	12 22	4 32	5 48	5 48
Dunnstown	...	12 14*	4 46	5 58	5 58*
Rail Motor Stopping Place	...	12 38	4 51	6 28	6 28*
Bungareo	arr. 12 21*	12 45	5 10	6 8	6 8
Wallace	...	12 50	5 16	6 13	6 13*
Millbrook	...	12 56	5 23	6 18	6 18*
Gordon	...	1 0	5 27	6 23	6 23
Llandeilo	...	...	...	...	...
Bradshaw	...	1 15	5 45	...	...
Ballan	dep. 12 39	...	...	6 34	6 34
Ingliston	arr. 12 45*	...	...	6 40*P-25	6 41*P
Rowsley	...	...	...	6 54*	6 54*
Bacchus Marsh	...	...	...	7 8	7 8
Parwan	...	...	...	7 13*P	7 13*P
Melton	...	...	...	7 25	7 25
Rockbank	arr. 1 23*	...	...	7 34	7 34
Deer Park	...	...	...	...	...
Ardeer	...	...	...	...	...
Sunshine	...	1 39*	...	7 49	7 49
Footscray	...	1 48*	...	7 58	7 58
North Melbourne	...	...	...	...	...
MELBOURNE (Spencer Street)	arr. 1 58	...	...	8 10	8 10



**TABLE 14—BALLAN, BALLARAT**

(continued on next page)

	Mon. to Fri.	Sat.	Mon. to Sat.	Mon. to Fri.	Sat.	Mon. to Fri.	Mon. to Fri.	Sat.	Sun. to Fri.	Sundays
<b>MELBOURNE R</b> (Spencer-st.) ... dep.	a.m.	a.m.	a.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	a.m.
North Melbourne ...	...	...	8 40	1 40T	1 40T	4 23M	5 25	6 23	9 0	9 5
Footscray ...	...	...	*	*	*	*	*	*	*	*
Sunshine ...	...	...	8 49F	*	*	4 31F	5 34F	6 31F	*	9 13F
Ardeer ...	...	...	8 58F	*	*	4 42F	5 42F	6 40F	*	9 21F
Deer Park ...	...	...	*	*	*	§	*	*	*	*
R.M. Stop. Place No. 64	...	...	9 5	*	*	§	5 48	6 46	*	*
Rockbank ...	...	...	9 16	*	††	††D	5 58	6 56	*	*
R.M. Stop. Place No. 65	...	...	...	*	††	††	...	...	*	*
Melton ...	...	...	9 24	*	††	5 17	6 5	7 3	*	9 41
Parwan ...	...	...	9 33§	*	††	5 29	6 14	7 12	*	*
Bacchus Marsh ...	arr.	...	...	*	...	5 37	...	...	*	...
Ingliston ...	...	...	9 40	2 28	2 31	...	6 21	7 19	*	9 54
<b>BALLAN</b>	7 52M	7 55M	10 7§	*	*	...	6 56	7 54	*	10 31
R.M. Stopping Place No. 77	§	*	10 16	3 4	3 7	...	...	...	*	...
Gordon ...	8 11	8 11	10 28	*	*	...	7 7	8 5	*	...
Millbrook ...	8 16	8 15	§	*	*	...	§	8 9§	*	...
Wallace ...	8 23	8 21	§	*	*	...	§	8 14§	*	...
Bungaree ...	8 27	8 25	10 40	*	*	...	7 21	8 19	*	10 50
Dunnstown ...	8 32	8 30	10 45	*	*	...	§	8 25§	*	*
Warrenheip ...	8 37	8 35	*	*	*	...	*	*	*	*
Ballarat East ...	8 43	8 40	10 55	*	*	...	7 37	8 35	*	*
<b>BALLARAT R</b> ...	8 55	8 50	11 2	3 40	3 45	...	7 45	8 45	10 50	11 20
dep.	...	...	11 18 To Serviceton (See table 16)	3 55 To Horsham (See table 16)	3 55 To Dimboola (See table 16)	...	...	...	11 10 To Mildura (See tables 11, 12)	...

Express to Ballarat

**TABLE 14 (cont.)—BALLAN, BALLARAT**

	Mon. to Sat.	Mon. to Sat.	Mon. to Sat.	Mon. to Sat.	Sat.	Mon. to Fri.	Mon. to Sat.	Sundays
<b>BALLARAT R</b> ... dep.	a.m.	a.m.	a.m.	p.m.	p.m.	p.m.	p.m.	a.m.
Ballarat East ...	5 20	...	7 40	12 5T	12 20M	4 30M	6 10	8 50
Warrenheip ...	*	...	7 43§	*	12 22	4 32	*	6 15
Dunnstown ...	*	...	*	*	12 33	4 46	*	*
Bungaree ...	*	...	7 56§	*	12 38	4 51	*	*
Wallace ...	*	...	8 0	*	12 45	5 0	6 27	9 7
Millbrook ...	*	...	8 5§	*	12 50	5 6	*	6 32
Gordon ...	*	...	8 9§	*	12 56	5 13	*	*
R.M. Stopping Place No. 77	...	...	8 15	*	1 0	5 17	6 39	*
<b>BALLAN</b> ... dep.	5 53††	...	8 25	12 39	...	...	6 49	9 25
Ingliston ...	*	...	*	*	...	...	*	6 50
Bacchus Marsh ...	arr.	...	...	...	...	...	...	...
Parwan ...	6 14††	7 14B	8 49	1 2	...	...	7 13	9 49
Melton ...	*	7 23	8 56§	*	...	...	*	10 4
R.M. Stopping Place No. 65	...	7 34	9 5	1 16§	...	...	*	7 27
Rockbank ...	...	7 42	9 12	...	...	...	*	...
R.M. Stopping Place No. 64	...	¶	...	...	...	...	*	...
Deer Park ...	...	7 53	*	*	...	...	*	...
Ardeer ...	...	*	*	*	...	...	*	...
Sunshine ...	...	8 4g	9 36g	*	...	...	8 0g	10 36g
Footscray ...	...	8 14g	9 45g	*	...	...	8 10g	10 45g
North Melbourne ...	...	8 19g	*	*	...	...	*	8 9g
<b>MELBOURNE R</b> (Spencer-st.) ... arr.	7 5	8 24	9 55	1 58	...	...	8 20	11 0

\* Does not stop to pick up or set down passengers.  
 ¶ Stops only if required to pick up passengers.  
 § Stops only if required to pick up or set down passengers.  
 †† Stops only if required to set down passengers.  
 B Steam train Mondays, Rail Motor Tuesdays to Saturdays.  
 F Steam train, when substituted for Rail Motor, does not stop at this location.  
 g Stops definitely to set down only.  
 M Rail motor.  
 R Refreshment room.  
 T Restaurant Car attached.

TABLE 14 (cont.)—BALLAN, BALLARAT

VR PTT 1959

TABLE 14—BALLAN, BALLARAT

	Mon. to Sat.	Sat.				
<b>BALLARAT R</b> (Spencer St.) dep. 5:20M	7:40	7:43	7:0	7:2	7:5	12:20M
Ballarast East	...	...	...	...	...	...
Warrenheip	...	...	...	...	...	...
Dunstown	...	...	...	...	...	...
Bungaree	...	...	...	...	...	...
Wallace	...	...	...	...	...	...
Millbrook	...	...	...	...	...	...
Gordon	...	...	...	...	...	...
R.M. Stopping Pl. No. 77	...	...	...	...	...	...
<b>BALLAN</b> dep. 5:53M	8:24	8:24	12:39	12:39	12:39	...
Ingliston	...	...	...	...	...	...
Bacchus Marsh	...	...	...	...	...	...
Parwan	...	...	...	...	...	...
Melton	...	...	...	...	...	...
R.M. Stopping Pl. No. 65	...	...	...	...	...	...
Rockbank	...	...	...	...	...	...
R.M. Stopping Pl. No. 64	...	...	...	...	...	...
Deer Park	...	...	...	...	...	...
Sunshine	...	...	...	...	...	...
Footscray	...	...	...	...	...	...
North Melbourne	...	...	...	...	...	...
<b>MELBOURNE R</b> (Spencer St.) arr. 7:5	8:24	9:55	10:40	1:58	...	...

(continued on next page)

	Mon. to Fri.	Sat.	"Midura Sunlight" Tues., Wed., Thur.	Mon. to Sat.	Mon. to Fri.	Sat.
<b>MELBOURNE R</b> (Spencer St.) dep. 7:50M	8:25	9:15	9:40	10:15	11:40	12:40
North Melbourne	...	...	...	...	...	...
Footscray	...	...	...	...	...	...
Sunshine	...	...	...	...	...	...
Deer Park	...	...	...	...	...	...
R.M. Stopping Place No. 64	...	...	...	...	...	...
Rockbank	...	...	...	...	...	...
R.M. Stopping Place No. 65	...	...	...	...	...	...
Melton	...	...	...	...	...	...
Bacchus Marsh	...	...	...	...	...	...
Ingliston	...	...	...	...	...	...
<b>BALLAN</b> dep. 7:52M	7:55M	...	...	...	...	...
R.M. Stopping Place No. 77	...	...	...	...	...	...
Gordon	...	...	...	...	...	...
Millbrook	...	...	...	...	...	...
Wallace	...	...	...	...	...	...
Bungaree	...	...	...	...	...	...
Dunstown	...	...	...	...	...	...
Warrenheip	...	...	...	...	...	...
Ballarast East	...	...	...	...	...	...
<b>BALLARAT R</b> dep. 8:55	8:50	10:7	11:2	3:40	3:45	...

\* Does not stop to pick up or set down passengers. † Stops only if required to pick up passengers. ‡ Stops only if required to pick up or set down passengers. § Stops definitely to pick up only. ¶ Stops definitely to set down only. B Steam train Mondays, Rail Motor Tuesdays to Saturdays. D Steam train, when substituted for Rail Motor, will not stop at this location. M Rail Motor. R Refreshment room. ● Air-conditioned sitting carriages attached.

" Explanation of Symbols for Table 14 on page 49."

BALLAN, BALLARAT (continued)

	Mon. to Sat.						
<b>BALLARAT</b> (Spencer St.) dep. 5:40R	7:25R						
Ballarast East	...	...	...	...	...	...	...
Warrenheip	...	...	...	...	...	...	...
Dunstown	...	...	...	...	...	...	...
Bungaree	...	...	...	...	...	...	...
Wallace	...	...	...	...	...	...	...
Millbrook (R.M. St. Pl.)	...	...	...	...	...	...	...
Gordon	...	...	...	...	...	...	...
R.M. Stopping Pl. No. 77	...	...	...	...	...	...	...
<b>BALLAN</b> dep. 5:40R	7:25R						
Ingliston	...	...	...	...	...	...	...
Bacchus Marsh	...	...	...	...	...	...	...
Parwan	...	...	...	...	...	...	...
Melton	...	...	...	...	...	...	...
R.M. Stopping Pl. No. 65	...	...	...	...	...	...	...
Rockbank	...	...	...	...	...	...	...
R.M. Stopping Pl. No. 64	...	...	...	...	...	...	...
Deer Park	...	...	...	...	...	...	...
Sunshine	...	...	...	...	...	...	...
Footscray	...	...	...	...	...	...	...
North Melbourne	...	...	...	...	...	...	...
<b>MELBOURNE R</b> (Spencer St.) arr. 8:2R	9:20R	9:18R	8:45R	9:24R	10:35R	2:0R	...

VR PTT 1967

BALLAN, BALLARAT

(continued on next page)

	Mon. to Sat.						
<b>MELBOURNE R</b> (Spencer St.) dep. 7:40R	8:15R						
North Melbourne	...	...	...	...	...	...	...
Footscray	...	...	...	...	...	...	...
Sunshine	...	...	...	...	...	...	...
Deer Park	...	...	...	...	...	...	...
R.M. Stopping Place No. 64	...	...	...	...	...	...	...
Rockbank	...	...	...	...	...	...	...
R.M. Stopping Place No. 65	...	...	...	...	...	...	...
Melton	...	...	...	...	...	...	...
Bacchus Marsh	...	...	...	...	...	...	...
<b>BALLAN</b> dep. 7:40R	8:15R						
R.M. Stopping Place No. 77	...	...	...	...	...	...	...
Gordon	...	...	...	...	...	...	...
Millbrook (R.M. Stopping Place)	...	...	...	...	...	...	...
Wallace	...	...	...	...	...	...	...
Bungaree	...	...	...	...	...	...	...
Dunstown	...	...	...	...	...	...	...
Warrenheip	...	...	...	...	...	...	...
R.M. Stopping Place No. 73	...	...	...	...	...	...	...
Ballarast East	...	...	...	...	...	...	...
<b>BALLARAT R</b> dep. 8:40R	9:15R						

	Mon. to Sat.						
<b>BALLARAT</b> (Spencer St.) dep. 8:20R	9:15R						
Ballarast East	...	...	...	...	...	...	...
Warrenheip	...	...	...	...	...	...	...
Dunstown	...	...	...	...	...	...	...
Bungaree	...	...	...	...	...	...	...
Wallace	...	...	...	...	...	...	...
Millbrook (R.M. Stopping Place)	...	...	...	...	...	...	...
Gordon	...	...	...	...	...	...	...
R.M. Stopping Place No. 77	...	...	...	...	...	...	...
<b>BALLAN</b> dep. 8:20R	9:15R						
Bacchus Marsh	...	...	...	...	...	...	...
Parwan	...	...	...	...	...	...	...
Melton	...	...	...	...	...	...	...
R.M. Stopping Pl. No. 65	...	...	...	...	...	...	...
Rockbank	...	...	...	...	...	...	...
R.M. Stopping Pl. No. 64	...	...	...	...	...	...	...
Deer Park	...	...	...	...	...	...	...
Sunshine	...	...	...	...	...	...	...
Footscray	...	...	...	...	...	...	...
North Melbourne	...	...	...	...	...	...	...
<b>MELBOURNE R</b> (Spencer St.) arr. 9:10R	10:00R						

	Mon. to Sat.						
<b>MELBOURNE R</b> (Spencer St.) dep. 9:20R	10:05R						
North Melbourne	...	...	...	...	...	...	...
Footscray	...	...	...	...	...	...	...
Sunshine	...	...	...	...	...	...	...
Deer Park	...	...	...	...	...	...	...
R.M. Stopping Place No. 64	...	...	...	...	...	...	...
Rockbank	...	...	...	...	...	...	...
R.M. Stopping Place No. 65	...	...	...	...	...	...	...
Melton	...	...	...	...	...	...	...
Bacchus Marsh	...	...	...	...	...	...	...
<b>BALLAN</b> dep. 9:20R	10:05R						
R.M. Stopping Place No. 77	...	...	...	...	...	...	...
Gordon	...	...	...	...	...	...	...
Millbrook (R.M. Stopping Place)	...	...	...	...	...	...	...
Wallace	...	...	...	...	...	...	...
Bungaree	...	...	...	...	...	...	...
Dunstown	...	...	...	...	...	...	...
Warrenheip	...	...	...	...	...	...	...
Ballarast East	...	...	...	...	...	...	...
<b>BALLARAT R</b> dep. 10:05R	10:40R						

Symbols: —Non stop. —Stops, if required to pick up or set down passengers, mails or vans. —Stops, if required, to set down passengers only. —Stops, if required, to pick up or set down passengers only. C—Change trains M—Stop Mon. to Sat. to set down passengers holding reservations by "Intermodal Dvlt" for the same day. R—Refreshments available. X—Passengers are not permitted to use "The Overland" at Ballarat, except those holding reservations by "Intermodal Dvlt" for the same day. Z—Rail Motor Stopping Place. Stops when required for passengers only. ●—Reservation of seats optional, see page 32.

For explanation of symbols see opposite page.

**SPECIAL TRAINS TO COUNTRY RACES**  
Air-conditioned trains with dining facilities run on all the following dates: