

# The Times

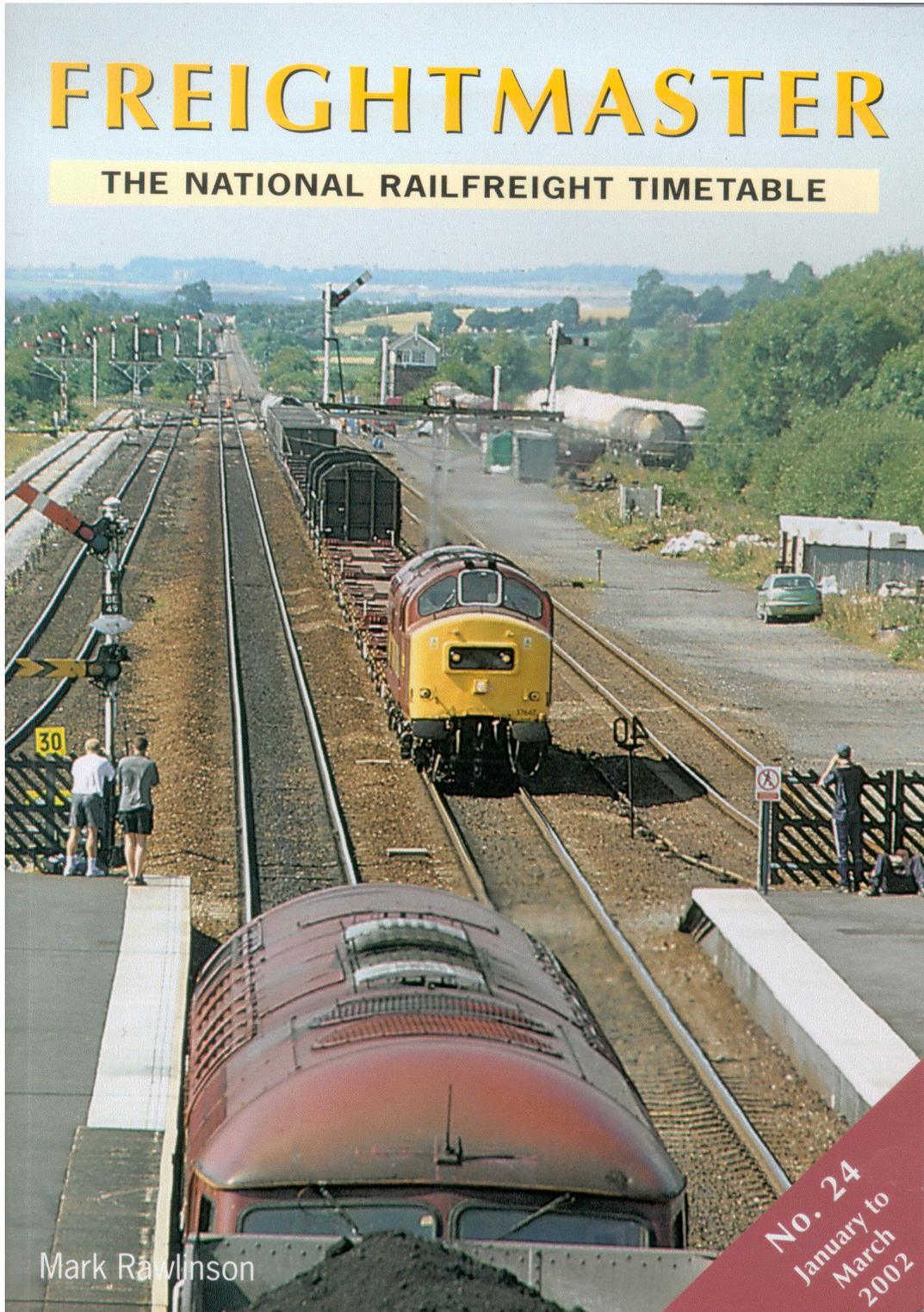
Journal of the Australian Association of Time Table Collectors

RRP \$2.95

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

July, 2002

Issue No. 220 (Vol. 19 No.7)



## FREIGHTMASTER

THE NATIONAL RAILFREIGHT TIMETABLE

Mark Rawlinson

No. 24  
January to  
March  
2002

# The Times

EAST OF THE RAILWAY, NORTH OF HORNSBY LETTER	3
THE ROUTE 800	7
NEW SOUTH WALES RAILWAYS IN 1866	7
FREIGHTMASTER- THE NATIONAL RAILFREIGHT TIMETABLE	11
BROAD GAUGE WTT IN THE APPLE ISLE	14
GRAPHIC INSIGHT #78	16

## About The Times

The Times is published monthly by the Australian Association of Time Table Collectors (AATTC) as our journal, covering historic and general items. Current news items are published in our other journal, *Table Talk*.

## The Times on-line

AATTC's home page: <http://www.aatc.org.au>

## Editor

Geoff Lambert

## Editorial Team

Victor Isaacs, Duncan MacAuslan.

## Contacting the Editor

The Times welcomes articles and mail and will be pleased to receive yours. Please send articles and letters to

Geoff Lambert, 179 Sydney Rd FAIRLIGHT NSW 2094

Email: [G.Lambert@unsw.edu.au](mailto:G.Lambert@unsw.edu.au)

Phone 61 2 9949 3521; Fax 61 2 9948 7862

## How to submit copy

Submit paper manuscripts or word-processor files (MS Word preferred) on disk or via e-mail. Illustrations should be submitted as clean sharp photocopies on white paper or scanned GIF format images with at least 300dpi resolution on disk or via e-mail.

## Editorial deadlines

Contributions should reach the editor by the first day of the month preceding the date of publication.

## Subscriptions

Membership of AATTC is \$45 and includes subscriptions to both *The Times* and *Table Talk*. Individual copies of both journals are available at \$2.95 per copy from the Railfan Shop in Melbourne and the ARHS bookshop in Sydney.

## Reproduction

Material appearing in *The Times* or *Table Talk* may be reproduced in other publications, provided acknowledgment is made of the author and includes the words "The Times, journal of the Australian Association of Time Table Collectors". A copy of the publication which includes the reference must be sent to the editor.

## Disclaimer

Opinions expressed in *The Times* are not necessarily those of the Association or its members. We welcome a broad range of views on timetabling matters.

## AATTC Who's who

<b>President</b>	Chris Brownbill	37 Grange Rd BLACKBURN SOUTH Vic 3130	(03)9803-2880
<b>Vice-President</b>	Graham Duffin	P.O. Box 13074 Brisbane George St. Qld 4003	(07) 3275-1833
<b>Secretary</b>	Stephen Ward	12/1219 Centre Rd SOUTH OAKLEIGH Vic 3167	(03) 9789-2263
<b>Treasurer</b>	Dennis McLean	53 Bargo St ARANA HILLS QLD	(07) 3351-6496
<b>Auctioneer</b>	Albert Isaacs	Unit 5, Whitehall, 22 Burwood Rd HAWTHORN Vic 3122	(03) 9819-5080
<b>Distribution Officer</b>	Steven Haby	24/53 Bishop St BOX HILL VIC 3128	(03) 9898-9724
<b>Editor, The Times</b>	Geoff Lambert	179 Sydney Rd FAIRLIGHT 2094	(02) 9949-3521
<b>Editor, Table Talk</b>	Albert Isaacs	Unit 5, Whitehall, 22 Burwood Rd HAWTHORN Vic 3122	(03) 9819-5080
<b>Membership Officer</b>	Victor Isaacs	43 Lowanna St BRADDON ACT 2612	(02) 6257-1742
<b>Production Manager</b>	Graeme Cleak	PO Box 315 NUNAWADING Vic 3131	(03) 9877-4130
<b>Promotions Officer</b>	Bruce Cook	PO Box 563 SUTHERLAND NSW 1499	0412 845 123
<b>Committee member</b>	Duncan MacAuslan	19 Ellen St ROZELLE NSW 2039	(02) 9555 2667
	Michael Smith	9/26-30 Linda St HORNSBY NSW 2077	0407 218 962
<b>Adelaide Convenor</b>	Robert Field	136 Old Mt Barker Rd STIRLING SA 5152	(08) 8339-2065
<b>Brisbane Convenor</b>	Brian Webber	8 Coachwood St KEPERA Qld 4054	(07) 3354-2140
<b>Canberra Convenor</b>	Ian Cooper	GPO Box 1533 CANBERRA ACT 2601	(02) 6254-2431
<b>Melbourne Convenor</b>	Albert Isaacs	Unit 5, Whitehall, 22 Burwood Rd HAWTHORN Vic 3122	(03) 9819-5080
<b>Sydney Convenor</b>	Bruce Cook	PO Box 563 SUTHERLAND NSW 1499	0412 845 123

# East of the railway, north of Hornsby

**JIM O'NEIL** explores more of Sydney's rail to bus by-ways.

The suburbs along the Pacific Highway, running north from Sydney, provide a belt of housing of relatively narrow dimension, dropping away at the edges. This has presented problems for the provision of bus services, except those running along the highway itself, like the route 55, discussed in the October 2000 *Times*. This was particularly noticeable on the eastern side of the railway line running north of Hornsby station, where, as can be seen on the accompanying map (on page 6), there was less housing than on the western side, where the highway ran.

Around 1960, this area was serviced by two different bus routes, both operated by the same company, the Hornsby District Bus Company. The eastern side of Mt. Colah was served by route 220, for which the undated timetable, current around 1958 is on the right. On Mondays to Fridays it operated to and from Hornsby via the Pacific Highway (the territory of route 55) and ran on a loop round the east side of Mt. Colah. Two services, the 10.35 and the 1.35, ran on to Bobbin Head. If you wanted to go to Bobbin Head for three hours in the middle of the week, you could get there by the route 220. Otherwise the 220 provided a suburban service, with one bus running at a bit under half an hour in the peak hours, and providing four services (9.02, 10.35, 11.35 & 1.35) in the off-peak.

At weekends, the service to the popular picnic spot of Bobbin Head came into its own. All Saturday and Sunday buses ran there, apart from the 11.00 on Saturday, which ran only to Mt. Colah. It was presumably a picture bus, and the unexplained sign after the 4.55 and the 11.00 departures from Hornsby presumably indicates "or on Termination of Pictures". But it doesn't say so any-

where. On Saturdays there is an additional timing point, at the Koala Reserve. The headings Depart A.S. (Authorised Stand) Bobbin Head and Arr. and Dep. Koala Reserve have been transposed by the printer. Was the Koala Reserve only open on Saturdays? There are half hour gaps in the service after 12.25 and 3.02, which give the driver crib breaks.

Sunday services run without a break (requiring two drivers) and without any intermediate timing points. But it takes 27 minutes on most runs to Bobbin Head, whatever day of the week you look at, so operating direct via Chase Road doesn't seem to have saved time. The timetable gives the *Time of Journey* as 29 Minutes. This longest time is found only on three Saturday journeys from Bobbin Head,

the 9.56, 10.56 and 11.56.

The East side of Asquith Station was served by the route 104. My earliest timetable for it was obtained in the early 1960s - see page 4 (the 220 was also issued on paper run-off by Roneo at this time). Asquith Golf Links are half way between Asquith and Mt. Colah stations. The 104 ran about as often as the 220 in peak hours, but had a regular half-hourly service in the off-peak. Some runs extended beyond Hornsby, to Pretoria Parade, on the western side of the main Northern Line. Not all services did this, so we should probably not read "Every 30 minutes to" after the 1.15 bus as also including its extension to Pretoria Parade at 1.40. Certainly there were no services there on Saturday afternoons. The 10.45 Saturday service on the

Hornsby Station - Bobbin Head (Via Mt. Colah and Koala Reserve)							Hornsby - Bobbin Head ★			
TIME TABLE - ROUTE 220							Time of Journey: 29 Minutes			
Depart A.S. Hornsby	Arr. and Dep. Bolton Ave., Mt. Colah	Arrive Bobbin Head	Depart A.S. Bobbin Head	Arr. and Dep. Mt. Colah	Arrive A.S. Hornsby	Depart A.S. Hornsby	Arrive A.S. Bobbin Head	Depart A.S. Bobbin Head	Arrive A.S. Hornsby	
<b>MONDAY TO FRIDAY INCLUSIVE</b>										
a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	
6.43	6.27	6.55	6.55	6.55	7.07	8.42	8.42	8.45	9.12	
7.11	7.23	7.36	7.48	7.48	7.36	9.15	9.42	9.45	10.12	
8.38	8.50	9.02	9.14	9.14	8.00	10.15	10.42	10.45	11.12	
10.35	10.47	11.02	11.05	11.05	9.02	11.15	11.42	11.45	12.12	
11.35	11.47	11.59	11.47	11.47	11.32	12.15	12.42	12.45	1.12	
p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	1.15	1.42	1.45	2.12	
3.30	3.42	2.25	3.42	3.42	3.54	2.15	2.42	2.45	3.12	
4.55	4.20	4.40	4.40	4.40	4.34	3.15	3.42	3.45	4.12	
5.08	5.20	5.20	5.20	5.20	5.32	4.15	4.42	4.45	5.12	
5.50	6.02	6.02	6.02	6.02	6.14	5.15	5.42	5.45	6.12	
<b>SATURDAYS</b>										
Depart A.S. Hornsby	Arr. and Dep. Bolton Ave., Mt. Colah	Arr. and Dep. Koala Reserve	Arrive Bobbin Head	Arr. and Dep. Koala Reserve	Depart A.S. Bobbin Head	Arr. and Dep. Mt. Colah	Arrive A.S. Hornsby			
a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.			
8.05	8.17	8.24	8.32	8.35	8.27	8.50	9.02			
9.25	9.37	9.44	9.52	9.56	10.02	10.11	10.23			
10.25	10.37	10.44	10.52	10.56	11.02	11.11	11.23			
11.25	11.37	11.44	11.52	11.56	12.02	12.11	12.23			
p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.			
1.05	1.17	1.24	1.32	1.35	1.27	1.50	2.02			
2.05	2.17	2.24	2.32	2.35	2.41	2.50	3.02			
3.35	3.47	3.54	4.02	4.05	4.11	4.20	4.32			
4.55	5.07	5.14	5.22	5.26	5.31	5.40	5.52			
6.00	6.12	6.19	6.25	6.32	6.41	6.50	7.02			
11.00	11.12				11.12	11.24				

NOTE: All journeys to Mt. Colah on Mondays to Fridays operate via Pacific Highway, Belmore Parade, Cowan Road, Grey Street, Bolton Avenue, Chase Road and Pacific Highway.

All journeys on Saturdays, Sundays and Public Holidays, Good Fridays operate via Chase Road direct to Bobbin Head.

**NO SERVICE ON CHRISTMAS DAY.**

**ALL PREVIOUS TIMETABLES CANCELLED.**

Authorised by Commissioner of Road Transport and Tramways. 99 Macquarie Street.

WARNING: This Timetable is an indication of times bus will operate to. But no guarantee is given that this can be adhered to.

**Route 220: Hornsby Station - Bobbin Head. Undated, but current around 1958.**

HORNSBY STATION - ASQUITH GOLF LINKS				HORNSBY STATION - PRETORIA PARADE			
Hornsby Depart	Asquith Arr/Dep	Hornsby Arrive	Pret. Pda. Arr/Dep	Hornsby Depart	Asquith Arr/Dep	Hornsby Arrive	Pret. Pda. Arr/Dep
Monday to Friday Inc.				Saturday.			
6.52am	7.02am	7.12am	7.18am	7.00am	7.10am	7.20am	7.25am
7.24	7.34	7.44		7.35	7.45	7.55	
7.50	8.00	8.10	8.20	7.55	8.05	8.15	8.25
8.34	8.45	8.55	9.03	8.35	8.45	8.55	9.03
9.08	9.18	9.28		9.10	9.20	9.30	
9.45	9.55	10.05	10.10	9.45	9.55	10.05	10.10
10.15	10.25	10.35		10.20	10.30	10.40	
10.45	10.55	11.05	11.10	10.45	10.55	11.05	11.10
11.15	11.25	11.35		11.15	11.25	11.35	
11.45	11.55	12.05pm		11.45	11.55	12.05pm	
12.15pm	12.25	12.35		12.20pm	12.30	12.40	
12.45	12.55	1.05		12.50	1.00	1.10	
1.15	1.25	1.35		1.28	1.38	1.48	
Every 30 minutes				3.10	3.20	3.30	
3.15	3.25	3.40	3.45	4.06	4.16	4.22	
3.50	4.00	4.10		5.20	5.30	5.40	
4.20	4.30	4.40	4.45	6.18	6.28	6.38	
4.53	5.03	5.13		7.00	7.10	7.20	
5.28	5.38	5.48		10.45	or Termination of Pictures.		
5.52	6.02	6.12	6.20				
6.25	6.35	6.45					
7.00	7.10	7.20					

HORNSBY DISTRICT BUS CO.  
PHONE: JU2750

**Route 104: Hornsby - Asquith Golf Links & Pretoria Parade Undated, but current around 1961.**

104 is clearly marked "or Termination of Pictures".

The July 1978 Timetable on the Route 104 (at last we have a date!) can be seen on page 5. Queen's Road is at the southern end of the Asquith Golf Links and Cowan Road is the start of the weekday loop on the old 220, which used Bolton Ave, at the other end, as its timing point. The 104 has taken over the suburban section of the 220 and the service to Bobbin Head has ceased. The Pacific Highway has been left to the route 55, now also operated by the Hornsby District Bus Co. The southern end of the 104, to Pretoria Parade, was now operated by diversions of the 148, Hornsby to Pennant Hills, a further run of the Hornsby D. B.C.

Service on the 104 was still half-hourly to the Golf Course, though not all of them went to Cowan

Road. There were no services on Saturday afternoons. Three off-peak buses diverted via Dudley St and Baldwin Avenue (marked A. on this timetable and the longer route south of the Golf Club on the map). There is no indication how you got back to Dudley and Baldwin. Did the bus divert if you asked the driver, did you get off on the way back, or did you have to walk? Note also that the 4.05 from Hornsby TERMINATES at Mt. Colah. I take it that another bus took up the service at 4.40.

My final timetables come from the 3 March 1997 Mt. Colah timetable of Shorelink, successor to the Hornsby D.B.C. As we can see from the map (on page 6) this covers services both to the east and west of the railway line. I have only given the eastern services

here. Route 104 has been replaced by the 593, which crosses back over the railway at Mt. Colah, in the reverse direction to the old 220, to cover the Parklands Road loop, which had been an extension of the Mt. Colah services of the 55 (see page 6). The extended service now runs only hourly, but Saturday afternoon service has been restored.

C indicates "Bus starts from Mt. Colah Station" - the first morning service on all days does not include the Parklands Road loop. H indicates "Bus operates directly via Pacific Highway". The 9.03 departure from Hornsby leaves before the 9.06 arrival of the previous service - the only place in the 593 timetable where a second bus is required. More buses now run via Baldwin and Chelmsford Rd, inbound in the morning and outbound in the afternoons. Peak hour travellers can get there in the

evening, but there are no morning peak buses for them. Some off-peak buses continue down the eastern side of the railway, to include the Westfield shopping centre, before crossing the line to terminate at the regular stand on the western side of the railway.

In addition to the 593, there is a peak hour service to the Leighton Place Industrial Area, the 591 (right). Located in the deep valley of Hornsby

Creek, this cannot be served conveniently by diverting either the Asquith Golf Club & Parklands Road bus to the west, or the Hornsby Hospital bus to the south, so a special service taking ten minutes for the outward run and twelve for the inward, has been provided.

Route 591:		HORNSBY TO LEIGHTON PLACE INDUSTRIAL AREA			
		Weekdays			
		am	am	am	am
Train from Gosford arrives		6:27	6:47	7:17	7:47 8:14
Train from Strathfield arr		6:15	6:42	7:20	7:49 8:17
Train from City arrives		6:25	6:43	7:09	7:42 8:17
HORNSBY Station		6:33	6:53	7:23	7:53 8:23
Salisbury & Sherbrook Rds		-	6:58	7:28	7:58 8:28
End of Leighton Place		6:43	7:03	7:33	8:03 8:33

		Weekdays			
		pm	pm	pm	pm
Salisbury & Sherbrook Rds		3:57	4:27	4:57	5:27
End of Leighton Place		4:02	4:32	5:02	5:32
HORNSBY Station		4:10	4:40	5:10	5:40
Train to City departs		4:19	4:46	5:21	5:51
Train to Strathfield departs		4:20	4:56	5:13	5:43
Train to Gosford departs		4:16	4:45	5:16	5:46

Shorelink timetable, 3 March, 1997.

HORNSBY DISTRICT BUS CO.

July, 1978

3 Pretoria Parade,  
HORNSBY, 2077

ROUTE 104

Telephone: 476.2369

MONDAY TO FRIDAY

HORNSBY STATION TO COWAN RD., MT. COLAH VIA

ASQUITH GOLF LINKS

Hornsby Depart	Queens Road Arrive & Depart	Cowan Road Arrive & Depart	Queens Road Arrive & Depart	Hornsby Arrive.
		6.52a.m.	6.56a.m.	7.04a.m.
7.17a.m.	7.23a.m.	7.26	7.30	7.38
7.38	7.45	7.49	7.53	8.01
8.05	8.13	8.17	8.21	8.30
8.30	8.38	8.42	8.46	8.54
8.55	9.04	9.08	9.12	9.20
9.40	9.48	9.52	9.56	10.04
10.10	10.18	10.22	10.26 A.	10.34
10.40	10.48	10.52	10.56	11.04
11.10	11.18	11.22	11.26	11.34
11.40	11.48	11.52	11.56	12.04p.m.
12.10p.m.	12.19		12.19 A.	12.28
12.40	12.48	12.52	12.56	1.04
1.10	1.24		1.24	1.33
1.40	1.48	1.52	1.56	2.04
2.10	2.19		2.19 A.	2.28
2.45	2.53	2.57	3.01	3.09
3.15	3.24		3.24	3.33
3.35	3.45	3.49	3.53	4.01
4.05	4.13	4.17	TERMINATES	
4.40	4.48	4.52	4.56	5.04
5.03	5.16	5.20	5.24	5.32
5.33	5.45	5.48	5.52	6.00
5.05	6.13	6.17	6.20	6.27

SATURDAY

7.30a.m.	7.37	7.40	7.43	7.50
8.15	8.22	8.25	8.28	8.35
9.00	9.07	9.10	9.13	9.20
9.45	9.52	9.55	9.58	10.05
10.30	10.37	10.40	10.43	10.50
11.15	11.22	11.25	11.28	11.35
12.00	12.07p.m.	12.10	12.13	12.20

A. Via Dudley St. & Baldwin Avenue

Timetable, July 1978, Hornsby to Mt Colah, via the Asquith golf links.

**Right: Shorelink timetable, 3 March, 1997 Route 591: Hornsby - Leighton Place.**

**Route 593: HORNSBY - PARKLANDS ROAD, MOUNT COLAH - HORNSBY**  
via Asquith Golf Club **Weekdays**

	am	am	am	am	am	am	am	pm	pm	pm	pm	pm	pm	
HORNSBY Station	-	-	8:27	9:03	10:01	10:55	11:55	12:55	1:55	2:55	3:55	4:35	5:23	6:17
HORNSBY Edgwith David Ave	-	-	-	-	-	-	11:57	12:57	1:57	-	-	-	-	-
Baldwin & Chelmsford Rd	-	-	-	-	-	-	12:08	1:08	2:08	-	4:03	4:43	5:31	-
Queens Rd & Royston Pde	-	-	8:35	H	10:09	11:03	12:10	1:10	2:10	3:03	4:05	4:45	5:33	6:24
Cowan Rd & Belmont Pde	-	-	-	H	-	11:09	12:16	1:16	2:16	3:09	4:11	4:51	5:39	6:30
Parklands Road loop	C	7:23	8:40	9:14	10:14	11:14	12:21	1:21	2:21	3:14	4:16	4:56	5:44	6:35
Cowan Rd & Belmont Pde	6:29	7:28	8:46	9:20	10:20	11:20	12:27	1:27	2:27	-	4:22	-	-	-
Queens Rd & Royston Pde	6:35	7:34	8:52	9:26	10:26	11:26	12:33	1:33	2:33	-	4:28	-	-	-
Baldwin & Chelmsford Rd	-	-	-	9:28	10:28	11:28	-	-	-	-	-	-	-	-
HORNSBY Shops	-	-	9:03	9:39	10:39	11:39	-	-	-	-	-	-	-	-
HORNSBY Station	6:43	7:42	9:06	9:42	10:42	11:42	12:41	1:41	2:41	-	4:36	-	-	-

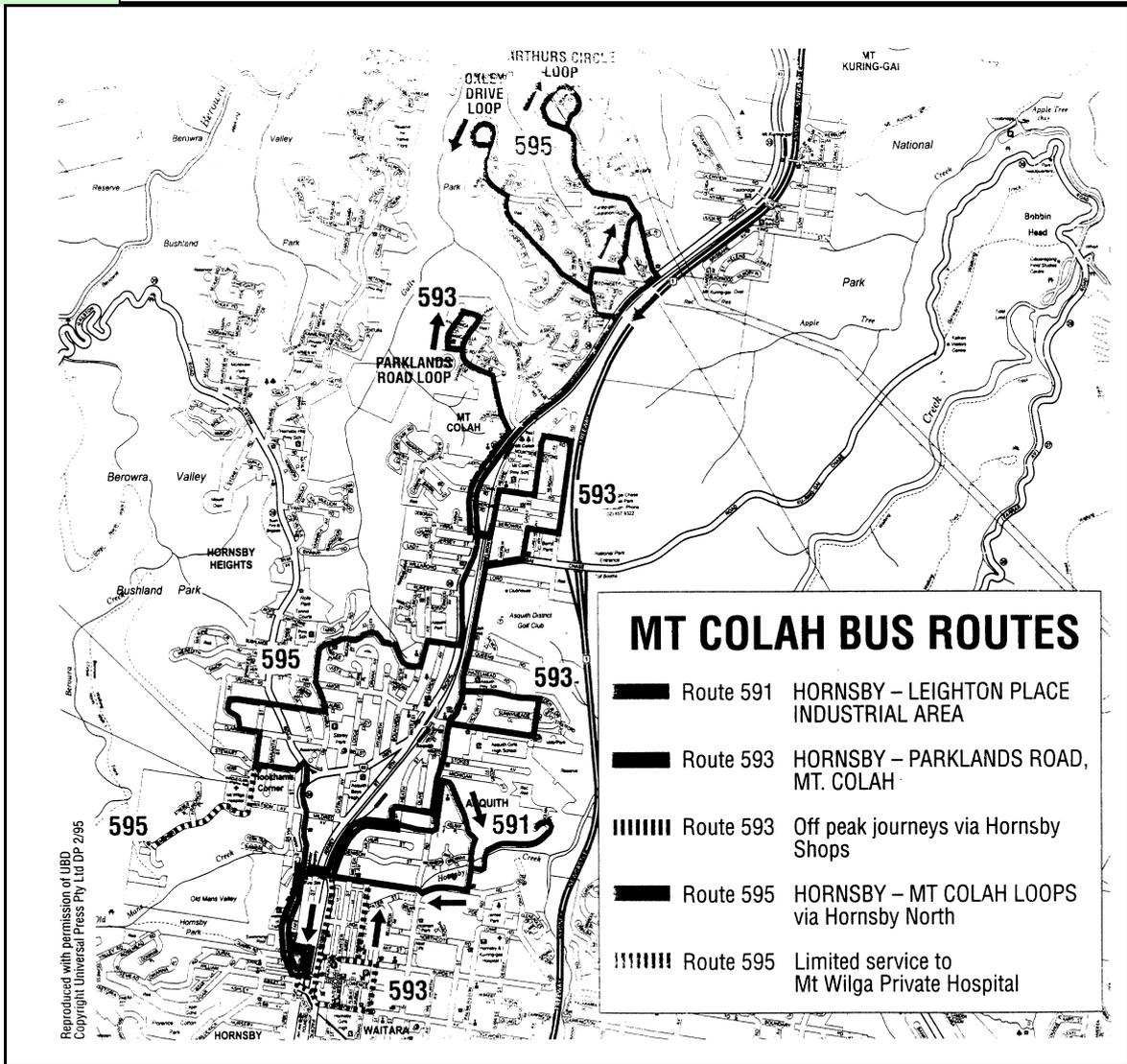
*For additional services between Mt Colah and Hornsby please see Route 594 in the Berowra Bus Timetable.*

**Route 593: HORNSBY - PARKLANDS ROAD, MOUNT COLAH - HORNSBY**  
**Saturdays**

	am	am	am	am	am	am	pm	pm	pm	pm
HORNSBY Station	-	-	8:55	9:55	10:55	11:55	12:55	1:55	2:55	3:55
HORNSBY Edgwith David Ave	-	-	-	-	-	11:57	12:57	1:57	2:57	-
Baldwin & Chelmsford Rd	-	-	-	-	-	12:08	1:08	2:08	3:08	-
Queens Rd & Royston Pde	-	-	9:03	10:03	11:03	12:10	1:10	2:10	3:10	4:02
Cowan Rd & Belmont Pde	-	-	9:09	10:09	11:09	12:16	1:16	2:16	3:16	4:08
Parklands Road loop	C	8:29	9:14	10:14	11:14	12:21	1:21	2:21	3:21	4:13
Cowan Rd & Belmont Pde	7:40	8:35	9:20	10:20	11:20	12:27	-	2:27	3:27	-
Queens Rd & Royston Pde	7:46	8:41	9:26	10:26	11:26	12:33	-	2:33	3:33	-
Baldwin & Chelmsford Rd	-	-	9:28	10:28	11:28	-	-	-	-	-
HORNSBY Shops	-	-	9:39	10:39	11:39	-	-	-	-	-
HORNSBY Station	7:54	8:49	9:42	10:42	11:42	12:41	-	2:41	3:41	-

*For additional services between Mt Colah and Hornsby please see Route 594 in the Berowra Bus Timetable.*

**Below: Map of Mt. Colah Bus Routes**



## The route 800

*Letter*

**ROBERT HENDERSON** *writes.*

In talking about Route 800, Jim O'Neil has chosen another interesting Sydney bus route. May I fill in a little extra detail?

As hinted at by Jim, Route 800 was the first private bus route in Sydney to be allocated a number in the Sydney-wide route renumbering scheme, which even now in 2002, has not quite been completed. Under this scheme, routes are given numbers with a geographic context, using the Government bus route numbering series in the 100, 200, 300, 400 and 500 series as a base. Routes starting with 8 are those in Sydney's south-western suburbs, with at least one terminus at a railway station between Granville and Campbelltown.

Route 800 started on 2 November 1981, when Bosnjak's Bus Service issued not one, but two timetables. One, printed in red, showed all trips over the whole route starting or finishing at Cabramatta, while the other in green showed all trips to or from Parramatta. In both this timetable and that of October 1982 (actual starting date, I believe was the 24<sup>th</sup>), there are late-night shopping trips to and from Parramatta. On the latter date, the route between Canley Vale Station and St Johns Park was altered from St Johns Road to Canley Vale Road, following a significant agreement about territories reached between Bosnjak's and Calabros (whom the Bosnjaks later bought out anyway!).

The portion of Route 800 between Cabramatta and Edensor Park was incorporated into already existing Route 833, Fairfield - Edensor Park - Cabramatta via Polding Street and

Canley Vale Road from 3 December 1984. That Route 833 was renumbered 823 on 21 September 1987 and it was in turn supplanted by parts of current Routes 826 and 827 in Westbus's big re-arrangement of 4 February 1991.

It was on 21 September 1987 also that Route 800 was re-routed away from Cabramatta to Liverpool, as it still does today, leaving Route 823 to serve the area along Canley Vale Road, as well as the diversion via Parklea Parade, mentioned by Jim.

The renumbering/amalgamation of Route 800 as part of Route 600 from 20 March 2000 was accompanied by another change of route between Wakeley and Liverpool and the part of the route no longer served by the 800 was given a service by new Route 838, running only a very infrequently on weekdays, compared with the Route 800 service it replaced.

After Westbus had sold out to the National Express Group, the new management reversed the amalgamation of Routes 600 and 800 as from 28 January 2002 and Route 800 re-emerged as a separate entity, running along the pre-20 March 2000 route. From that date, the half hourly service between Parramatta and Liverpool on weekdays was retained, but the hourly timetable on Saturdays was slashed to two-hourly and the Sunday service discontinued.

The starting date of the timetable illustrated and mentioned in Jim's text as 14 October 1991 should read 14 October 1996.

## New South Wales Railways in 1866

**VICTOR ISAACS** *has been down at the National Library, thumbing through the NSW Government Gazette. Here he describes where you could go on the NSW Railways in 1866, 11 years after the first train chuffed out to Parramatta.*

**H**ere is the complete timetable of the New South Wales Government Railways for 1 February 1866. The NSWGR then comprised two systems based on Sydney and Newcastle. Lines reached inland only to Picton, Penrith, Richmond, and Singleton. The hard work of construction over the mountains was still to come.

The timetable of the Great Northern Railway (page 10) shows goods trains as well as passenger trains. There are 3 passenger trains and one goods scheduled, although more trains shuttled back and forth on the branch to the then important port of Morpeth.

The Great Southern and Western system (pp 8-9) had three passenger trains on each of its two main lines and two on the Richmond branch. The 2 am departure from Picton and 3 am from Penrith were probably for the mails, as probably also the 5 pm from Sydney. There were additional trains as far as Parramatta and Homebush. An extra excursion train ran on Saturdays to and from all three destinations. On Sundays there were two trains plus one as far as Parramatta.

These timetables are from a NSW Government Gazette of February 1866. As mentioned in the *The Times* No. 35 (Feb. 1987, p5),

Government Gazettes are an excellent source for early railway timetables for NSW from 1855 to 1888, Queensland 1865 to 1889 and Western Australia 1885 to 1897. They are in every major library. However, they have to be handled very carefully because of age and fragility.

The times at Picton are missing from this copy because of tight binding. The missing times are weekdays (which then meant Mondays to Saturdays): 9.55 am, 11.20 am and 7.25 pm, Saturday additional: 3.40 pm, Sundays: 11.31 am and 7.31 pm.

GREAT SOUTHERN, WESTERN, AND RICHMOND RAILWAYS.

TIME TABLE FROM AND AFTER 1st FEBRUARY, 1866, UNTIL FURTHER NOTICE.  
DOWN TRAINS.

STATIONS.	DISTANCE.	SUNDAY TRAINS.										SATURDAY TRAIN (ADDITIONAL.)	SUNDAY TRAINS.				
		1.	2.	* 3.	4.	5.	6.	7.	* 8.	9.	10.		11.	12.	1.	2.	3.
Great Southern Line.	(SYDNEY .....	A.M. 6:45	A.M. 8:40	A.M. 9:0	A.M. 10:15	NOON. 12:0	P.M. 2:0	P.M. 4:30	P.M. 5:0	P.M. 5:30	P.M. 6:30	P.M. 7:30	P.M. 11:30	P.M. 1:30	A.M. 9:0	P.M. 2:15	P.M. 5:0
	Newtown.....	6:52	8:46	..	10:21	12:6 P.M.	2:6	4:36	..	5:36	6:36	7:36	11:40	*..	9:7	2:21	5:7
	Petersham .....	..	8:51	..	10:24	12:10	2:10	4:41	..	5:40	6:40	7:40	11:45	*..	9:12	2:26	5:12
	Ashfield.....	7:2	8:57	..	10:30	12:16	2:16	4:47	..	5:46	6:46	7:46	11:53	*..	9:19	2:31	5:19
	Burwood .....	7:9	9:5	9:17	10:36	12:21	2:23	4:53	5:20	5:52	6:53	7:52	12:0 A.M.	*..	9:25	2:35	5:25
	Homebush .....	8	..	9:7	10:40	12:25	2:27	4:55	..	5:54	6:57	7:54	12:5	..	9:28	2:40	5:28
	Haslem Creek.....	11	..	..	10:48	..	2:34	..	5:30	..	7:4	8:4	..	..	9:36	2:47	5:36
	Parramatta Junction.....Arrival	13	7:27	..	9:35	10:54	..	2:38	..	5:38	7:10	8:10	12:20	2:0	9:42	2:53	5:42
	Parramatta Junction.....Departure	—	7:30	..	9:40	10:56	..	2:41	..	5:45	7:11	8:11	12:30	2:3	9:50	2:55	5:50
	Parramatta .....	14	7:35	..	9:47	11:0	..	2:45	..	5:52	7:15	8:15	12:40	2:13	10:0	3:0	6:0
Great Western Line.	Blacktown .....	..	..	10:5	..	..	..	..	6:10	..	..	1:11	2:38	10:25	..	6:25	
	Rooty Hill .....	..	..	10:14	..	..	..	..	6:19	..	..	1:30	2:45	10:34	..	6:34	
	South Creek .....	..	..	10:27	..	..	..	..	6:32	..	..	1:50	2:55	10:45	..	6:45	
	Penrith .....	..	..	10:37	..	..	..	..	6:42	..	..	2:5	3:5	10:55	..	6:55	
	Blacktown .....	—	..	..	10:5	..	..	..	6:10	..	..	..	..	2:38	10:22	..	6:22
Richmond Line.	Riverstone .....	28	..	..	10:37	..	..	..	6:42	..	..	..	3:10	10:54	..	6:54	
	Mulgrave .....	32	..	..	10:58	..	..	..	7:3	..	..	..	3:25	11:15	..	7:15	
	Windsor .....	34	..	..	11:9	..	..	..	7:14	..	..	..	3:33	11:26	..	7:26	
	Richmond .....	37	..	..	11:25	..	..	..	7:30	..	..	..	3:45	11:42	..	7:42	
Great Southern	Fairfield .....	18	7:53	..	9:51	..	..	..	5:56	..	..	..	2:14	10:3	..	6:3	
	Liverpool.....	22	8:15	..	10:4	..	..	..	6:9	..	..	..	2:26	10:16	..	6:16	
	Campbelltown.....	34	8:58	..	10:34	..	..	..	6:30	..	..	..	2:55	10:46	..	6:46	

\* Train will stop at Stations marked thus \* to pick up Passengers for Stations beyond Parramatta.

	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	P.M.									
<b>Great Southern Line.</b>																		
PICTON.....	—	2.0	7.5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Menangle .....	13	2.36	7.37	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Campbelltown.....	19	3.5	7.55	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Liverpool.....	31	3.56	8.23	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Fairfield .....	35	4.18	8.32	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>Richmond Line.</b>																		
Richmond .....	—	..	6.55	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Windsor .....	3	..	7.10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mulgrave .....	5	..	7.20	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Riverstone .....	9	..	7.41	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Blacktown .....	16	..	8.13	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Blacktown.....Arrival		..	8.13	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>Great Western Line.</b>																		
Penrith .....	—	3.0	7.45	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
South Creek .....	5	3.25	7.58	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rooy Hill .....	9	3.42	8.7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Blacktown .....	13	4.0	8.20	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Parramatta .....	20	4.25	7.55	8.38	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Parramatta.....Arrival		..	7.55	8.38	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>Great Southern Line.</b>																		
Parramatta Junction .....	40	4.35	7.59	8.43	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Parramatta Junction.....Depart.		4.50	8.0	8.48	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Haslem Creek .....	42	..	8.6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Homebush .....	45	..	8.14	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Burwood .....	46	..	8.19	9.5	9.13	11.39	12.52	3.26	5.55	5.4	6.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
Ashfield .....	48	..	8.25	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Petersham .....	50	..	8.31	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Newtown .....	51	..	8.35	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
SYDNEY .....	53	5.10	8.45	9.25	9.35	12.5	1.15	3.47	6.12	5.25	6.25	8.25	8.25	8.25	8.25	8.25	8.25	8.25

N.B.—Passengers by Nos. 2 and 7 Down Trains from Intermediate Stations beyond Parramatta Junction, will be forwarded by Nos. 3 and 8 from Burwood. Nos. 3 and 8 Up Trains will stop at Burwood to set down Passengers only, and Passengers for Intermediate Stations will change into Nos. 4 and 10. Trains will stop at Haslem Creek and Rooy Hill by Signal only, and Trains marked \* will stop at Homebush also by Signal.

No. 1 Up, and Nos. 1 and 11 Down Trains, are Goods Trains with Passenger Carriage attached.

Note.—Special No. 12 Down Train will stop at Intermediate Stations to set down Passengers only. Season Tickets will not be available for this train. Down Trains will stop at Douglas Park, if required, 10 minutes after leaving Menangle; and Up Trains, 20 minutes after leaving Picton.

Department of Public Works,  
 Sydney, 29th January, 1866.  
 JOHN RAE, (r.s.)  
 Commissioner for Railways.

GREAT NORTHERN RAILWAY.

Time Table for February, 1866, and until further notice.

DOWN TRAINS—NEWCASTLE STATION.							
Distance. Miles.	STATIONS.	Passengers.	Passengers.	Passengers.	Goods.	SUNDAY TRAINS.	
		a. m.	a. m.	p. m.	a. m.	Passengers.	Passengers.
—	Trains leave—						
—	NEWCASTLE .....	7·15	11·35	3·20	10· 0	7·15	3·20
1	Honeysuckle Point .....	7·20	11·40	3·25	10· 7	7·20	3·25
4	Waratah .....	7·30	11·50	3·35	10·25	7·30	3·35
10	Hexham .....	7·47	12· 8	3·52	10·52	7·47	3·52
18	East Maitland .....	8·10	12·31	4·15	11·22	8·10	4·15
—	East Maitland .....	8·15	12·36	4·20	11·32	8·15	4·20
20	West Maitland .....	8·25	12·47	4·30	11·42	8·25	4·30
—	West Maitland .....	8·30	12·52	4·35	11·57	8·30	4·35
22	*Wollombi Road .....	8·35	12·58	4·40	12· 5	8·35	4·40
27	Lochinvar .....	8·47	1·12	4·52	12·27	8·47	4·52
35	Branxton .....	9·11	1·36	5·16	1· 5	9·11	5·16
49	SINGLETON .....	9·45	2·15	5·50	1·50	9·45	5·50

UP TRAINS—SINGLETON STATION.							
Miles.	Trains leave—	a. m.	a. m.	p. m.	p. m.	a. m.	p. m.
—	SINGLETON .....	7·15	11·30	3·10	2·50	7·15	3·20
14	Branxton .....	7·50	12· 5	3·43	3·48	7·50	3·55
22	Lochinvar .....	8·12	12·27	4· 7	4·20	8·12	4·17
27	*Wollombi Road .....	8·25	12·37	4·20	4·40	8·25	4·30
29	West Maitland .....	8·30	12·42	4·25	4·46	8·30	4·35
—	West Maitland .....	8·35	12·47	4·30	5· 5	8·35	4·40
31	East Maitland .....	8·43	12·57	4·40	5·15	8·45	4·50
—	East Maitland .....	8·50	1· 2	4·45	5·25	8·50	4·55
39	Hexham .....	9·13	1·25	5· 8	5·55	9·13	5·18
45	Waratah .....	9·30	1·43	5·25	6·25	9·30	5·35
48	Honeysuckle Point .....	9·43	1·56	5·38	6·45	9·43	5·48
49	NEWCASTLE .....	9·48	2· 0	5·43	6·50	9·48	5·53

NORTHERN BRANCH.														
STATIONS.	Pass.								Goods.		SUNDAY TRAINS.			
	Pass.	Goods.	Goods.	Pass.	Pass.	Pass.	Pass.							
	a.m.	a.m.	p.m.	p.m.	p.m.	p.m.	p.m.	a.m.	p.m.	a.m.	a.m.	p.m.	p.m.	
WOLLOMBIRUPETH .....	8· 0	8·35	12·20	12·50	2·10	4· 5	4·30	11·10	5· 5	8· 0	8·35	4· 5	4·40	
EAST MAITLAND .....	8·10	8·45	12·30	1· 0	2·20	4·15	4·40	11·25	5·15	8·10	8·45	4·15	4·50	
WEST MAITLAND.. Arrive	8·25	....	12·47	....	2·33	4·30	....	11·42	....	8·25	....	4·30	....	
WEST MAITLAND .....	....	8·35	....	12·47	2·40	....	4·30	....	5· 5	....	8·35	....	4·40	
EAST MAITLAND .....	8·15	8·50	12·35	1· 5	2·50	4·18	4·45	11·30	5·20	8·15	8·50	4·20	4·55	
WOLLOMBIRUPETH .....	8·25	9· 0	12·45	1·15	3· 0	4·25	4·55	11·40	5·30	8·25	9· 0	4·30	5· 5	

\* Trains will stop at Wollombi Road by Signal only.

☛ Platforms at which Passengers will be taken up and set down if required:—Falkner's, Belford, Allandale, Woodford, and Hexham.

(L.S.)

JOHN RAE,

Commissioner for Railways.

1st December, 1865.

# Freightmaster— the National Railfreight Timetable

*Frustrated train watchers, who didn't know which way to turn at line-side in England, now have a pocket timetable to guide them. GEOFF LAMBERT and MARK RAWLINSON report.*

Trainspotting is (or was) one of the great national pastimes of British youth. Any visitor to Great Britain will recall the typical end-of-platform scene, with a clutch of pimply youths, school ties askew and notebooks in hand, gazing down the line, looking for the latest 'cop'. These days, the spotters have a privately-produced freight timetable in their back pocket, telling them what to expect, and when— *Freightmaster*

## A brief history of Freightmaster— Mark Rawlinson

Back in the early 90s, I was doing a lot of videoing - I even released some titles - the *37s in Focus* and *47s in Focus* series. I was also becoming interested in freight, but after the demise of 'Freightfax', I had trouble finding out what was running and where to go.

I visited Collectors Corner in London and bought a full set of just-out-of-date freight WTTs. However, I found these very difficult to read 'in the field', constantly having to flick between 'up' and 'down' sections to find out what was due next.

So for ease of use, I typed out lists of what was due in both directions at a particular location, together with what type of train it was, and what it should be hauled by.

When I showed people these lists, they said I should publish them in a book, so in Winter 1994, the first 'Freightmaster' appeared, photocopied and stapled together, costing £4.95.

The book was immediately a huge success, and during 1995, each edition sold more than I could produce!

In Summer, I was contacted by a particularly impressed reader from Swindon who happened to be a business consultant as well as a railway enthusiast who said that he thought Freightmaster had massive potential, but I needed to get the project out of first gear, starting with getting the book properly printed and bound, rather than just photocopied.

From the Spring 1996 edition, therefore, the book has been printed by Tekprint in Swindon. The reader's name was Martin Buck, and since early 1996, he has been responsible for the production of Freightmaster, from overseeing design and production at Tekprint through to the distribution of the books to the shops!

He has also been responsible for the development of Freightmaster, and our many brainstorming sessions over the years has led to several revamps of Freightmaster:

Having the book professionally printed enabled us to relaunch the book, with more tables, a new 'Freight Encyclopedia' section, and a rather jazzy metallic silver front cover!

Sales continued to grow during 1996, but readers complained that the metallic covers were easily damaged, so from the Winter 1996 edition, the book gained a laminated full colour cover. The first picture to grace the cover of the book was appropriately taken at Swindon!

In 1997, we were busily preparing for the launch of Freightmaster's passenger companion volume 'Class One', so I had little time to make improvements to Freightmaster itself. However, I

had been taking note of readers' comments received during the year, so in spring 1998 came Revamp #2.

The book was printed on expensive eggshell paper using metal plates; this gave the book a 'quality' feel, with maps and fine text reproduced pin sharp. The book was also expanded by twenty pages, to accommodate twenty new locations, plus the expansion of many existing ones to full 24-hour coverage. Although the printing costs rose significantly, we only put the cover price up by 80p!

We then left the book alone for a couple of years, but in 1999, after doing an extensive survey of our subscribers, we decided to 'relaunch' the book for the new millennium.

This time, the revamp concentrated on the 'hotspots', getting rid of so-called "timing points" such as Margam and Wembley yards, which are virtually inaccessible, and replacing them with the top-requested locations in our customer survey. This added many locations, such as Willesden, Oxford, Leicester, Preston and Cardiff, the last three also achieving more parity with Class One.

## What you get

The timetables in the book are chosen to give maximum coverage of the network so, as well as busy locations such as Stafford and Newport, there are also a number of more 'scenic' locations such as Dawlish and Crianlarich.

The locations are grouped into geographical areas. At the start of each area there is a map showing all freight terminals/yards within that area, plus the location of the

'hotspots'. There is a full index of locations covered at the back of the book.

**Train performance** The tables list the trains that were running at the time of writing, including many additional services not shown in the working timetables, plus most Merry Go Round (MGR) coal workings, although services to East Midlands power stations are not included due to their unpredictable nature.

Also, due to the nature of railfreight traffic, some trains may be retimed/finish altogether during the currency of each edition. Full details off all such changes are regularly added to the web-site **Freightmaster Online**.

The times in Freightmaster are not 'booked' times but the average times the trains actually run, based on TRUST reports and readers' observations. Freight trains are prone to early/late running or cancellation

to varying degrees. For example:

**1. Cancellation/running on different days.** In normal circumstances, the following services will always run as booked:

- Mail trains.
- Freightliner Intermodal services.
- Enterprise trunk services.
- Automotive/Binliner services.

All other types of freight traffic are liable to be cancelled/amended to run on different days, especially coal, construction and petrochemical services. Any train can be cancelled, not just those shown as 'Q' (as required) in this book.

**2. Early/late running** Under normal conditions, the following services rarely run early or late:

*All mail trains.* In fact, the Royal Mail contract includes a penalty clause, which makes EWS financially liable for late running beyond a preset margin (above av-

erage performance is rewarded in the same way).

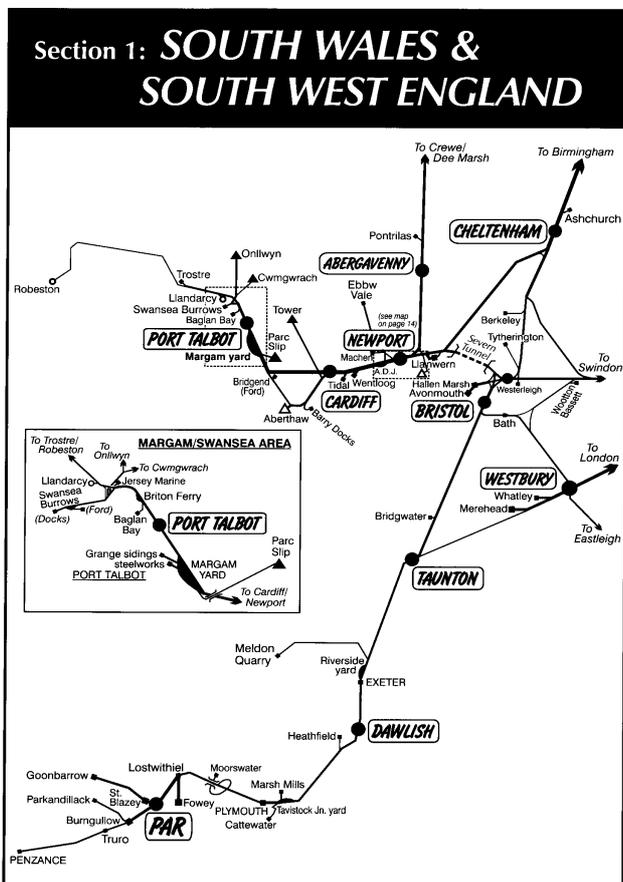
*All Freightliner* services which, due to their 75 m.p.h. timings, are usually given fairly tight pathing by railtrack, and are therefore unlikely to run early.

The publishers say they go to great lengths to ensure accuracy, but the timetables in Freightmaster are only a guide to what *should* run and circumstances on the day (e.g. availability of loco/driver/traffic, etc.) will dictate whether trains run as shown (or at all!).

The following conventions are used throughout Freightmaster:

Times: Split into columns for North/South; East/West, etc., with the following codes:

- 18:20** = passing time (train not booked to stop)
- 18c20** = stops for crew change—arrival time given unless otherwise noted)
- 18L20** = stops for loco change—



South Wales & West

PAR/DAWLISH

		<b>PAR</b>			
		[07:00-22:00]			
West	East	Hcode	Runs	Train	Traction Type of train
07:00	-	6C59	MD	06:27 St.Blazey-Penzance	EWS 67 4-wheel fuel oil tanks
07:00	-	5C40	MX	06:07 Plymouth-St.Blazey	EWS 67 empty TPO stock
-	09:00	6C00	FO	08:50 St.Blazey-Heathfield	EWS 66 empty vans
-	10:00	6S55	WD	09:40 Burngullow-Irvine	EWS 66 loaded china clay tanks
-	10:05	5C02	MX	08:59 Penzance-St.Blazey	EWS 67 empty TPO stock
-	11:00	6C11	MD	10:22 Penzance-St.Blazey	EWS 67 4-wheel fuel oil tanks
-	13:40	6C43	TFD	13:33 St.Blazey-Exeter Riverside	EWS 66 loaded china clay
15:25	-	6C02	FO	13:18 Heathfield-St.Blazey	EWS 66 bogged china clay(In vans)
16:25	-	6C03	TTNO	15:10 Moorswater-St.Blazey	EWS 66 empty cement tanks
16:45	-	5C01		16:20 St.Blazey-Penzance	EWS 67 empty TPO stock
-	17:00	6M72		16:55 St.Blazey-Cliffe Vale	EWS 60 loaded china clay
-	18:10	5M59		18:08 St.Blazey-Plymouth	EWS 67 empty TPO stock
18:55	-	6V70		08:58 Cliffe Vale-St.Blazey	EWS 60 empty china clay
-	20:40	1C01		19:30 Penzance-Bristol Parkway RMT	EWS 67 Mail(TPO)
-	21:15	6M91	TTNO	21:10 St.Blazey-Earles sidings	EWS 66 empty cement tanks
<b>Saturdays:</b>					
-	08:50	6M68		08:33 Burngullow-Warrington	EWS 66 loaded china clay tanks
-	10:05	5C02		08:59 Penzance-St.Blazey	EWS 67 empty TPO stock
<b>Sundays: NO BOOKED TRAINS</b>					

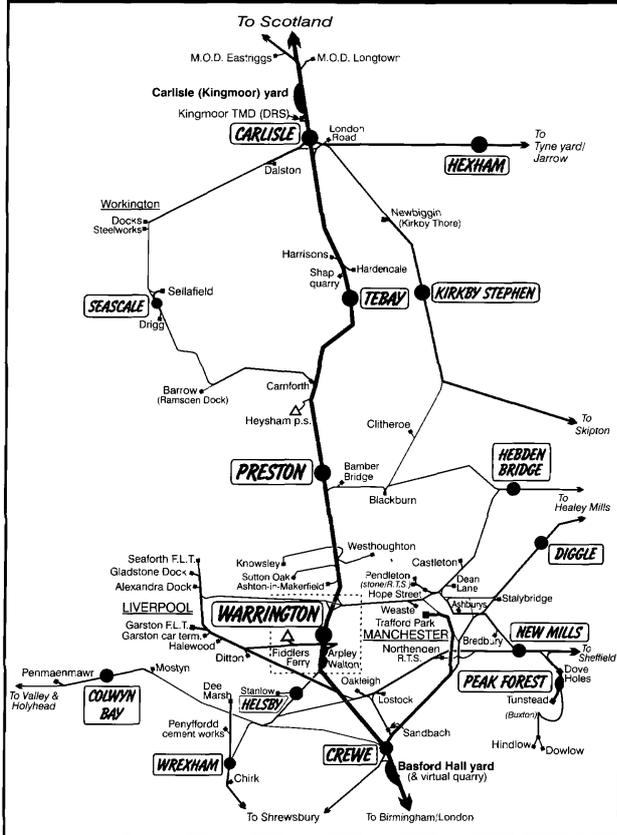
Cornish china clay

In addition to the trains shown above, a complex system of trip workings operates during the period 06:00 to 21:00 (Mondays to Fridays) and 06:00 to 14:00 (Saturdays), to link the loading points at Drinnick Mill, Burngullow and Rocks(Goonbarrow) to the china clay export terminal at Carne Point (Fowey) via a reversal at Lostwithiel.

Other trips run to Carne Point from Marsh Mills (near Tavistock yard, Plymouth).

		<b>DAWLISH</b>			
		[07:00-22:00]			
North	South	Hcode	Runs	Train	Traction Type of train
12:00	-	6S55	WD	09:40 Burngullow-Irvine	EWS 66 bogie china clay tanks
14:40	-	1C06		13:53 Plymouth-Bristol(-London)	EWS 67 Mail
15:30	-	6C43	TFD	13:33 St.Blazey-Exeter Riverside	EWS 66 loaded china clay
15:55	-	1E43		15:09 Plymouth-Low Fell	EWS 67 Mail
-	17:00	6V70		08:58 Cliffe Vale-St.Blazey	EWS 60 empty china clay
18:05	-	1E41		17:23 Plymouth-Low Fell	EWS 67 Mail
-	19:00	6C62	MD	17:01 Westbury yard-Tavistock Jn.	EWS 66 4-wheel tanks
-	19:00	6V62	TFD	13:34 Fowey-Tavistock Jn.	EWS 66 4-wheel tanks
19:00	-	6M72		16:55 St.Blazey-Cliffe vale	EWS 60 loaded china clay
19:55	-	1M65		19:15 Plymouth-London	EWS 67 Mail
-	20:55	1V33		15:58 London-Plymouth	EWS 67 Mail
21:35	-	6034	MTFO	(22:25)Tavistock Jn.-Eastleigh yard	EWS 66 empty 4-wheel tanks
-	22:00	1V62		16:44 Warrington-Plymouth	EWS 67 Mail
<b>Saturdays:</b>					
11:00	-	6M68		08:33 Burngullow-Warrington	EWS 66 bogie china clay tanks
<b>Sundays: NO BOOKED TRAINS</b>					

Section 4: NORTH-WEST ENGLAND



North West England

CREWE

CREWE

[24-hour]

Mondays-Fridays:

North	South	Hcode	Runs	Train	Traction	Type of train
-	07:30	6076	MX	22:53 Mossend-Hoo Junction	EMS 92	'Enterprise'
09:50	-	4M14	MX	02:56 Doldons Moor-Trafford Park	EMS 66	Intermodal(ex. Muzen)
10:10	-	4M95		03:43 Southampton-Trafford Park	F.Liner 66	Freightliner
10:30	-	6272	MX-Q	08:44 Ironbridge p.s.-Ayr	EMS 66	empty MGR
11:10	-	4M18	THO	03:17 Doldons Moor-Trafford Park	EMS 92	Intermodal(ex. Paris)
-	11:10	6K39	MX-Q	10:15 Garston-Gresty Lane	F.Liner 66	empty carriages
-	-	S11R25	S498	11:18 Crewe h.s.-London	-	2 empty 325 units
-	-	S11-35	6F17	11:27 Sandbach-Warrington Arpley	EMS 37	'Enterprise'
12:15	-	4F58	(Q)	12:10 Crewe Bas.Hall-Seaforth	F.Liner 57	Freightliner
12:45S	-	5F90		12:42 Crewe sth.yd.-Warrington RMT	EMS 90	empty mail vans
12:50S	-	6F17		11:27 Sandbach-Warrington Arpley	EMS 37	'Enterprise'
-	13:20	6K22	MTW0	11:00 Penmaenmwr-Bosford Hall VQ	F.Liner 66	loaded ballast boxes
13:20	-	6H55	MX	09:12 Bletchley-Peak Forest	EMS 60	empty RMC hoppers
13:30	-	1M59		09:12 Bristol Barton Hill-Warrington RMT	EMS 90	empty mail vans
-	13:35	4071	THO	12:38 Trafford Park-Doldons Moor	EMS 92	Intermodal(to Paris)
-	14:15	4069		13:13 Trafford Park-Doldons Moor	EMS 66	Intermodal(to Muzen)
-	14:40	7252	(Q)	10:19 Liverpool Bulk term.-Rugeley p.s.	EMS 66	loaded MGR
-	15:20	4029		14:14 Trafford Park-Millbrook	F.Liner 66	Freightliner
-	15:55	1A90		15:32 Warrington RMT-London	EMS 90	Mail
-	16:10	6M40	MO	07:24 Ayr-Rugeley p.s.	EMS 66	loaded MGR
16:25	-	4554		16:18 Crewe Bas.Hall-Coatbridge	F.Liner 90	Freightliner
-	16:45	6V66	THO-Q	14:22 St.Helens-Cardiff Tidal	EMS 66	empty bogie tanks
-	16:50	1M90		13:23 Shildmuir RMT-London	-	Mail(3x325 units)
-	17:05	1V62		16:44 Warrington RMT-Plymouth	EMS 90	Mail
17:10S	-	5F97		Crewe-Warrington RMT	-	empty 325 unit
-	17:10	6K05		13:15 Carlisle yd.-Basford Hall VQ	EMS 56	departmental
-	17:20	4K58		15:26 Seaforth-Crewe Bas.Hall	F.Liner 57	Freightliner
17:20	-	4F71		17:16 Crewe Bas.Hall-Garston	2 F.Liner 86s	Freightliner
17:40	-	4M87		12:49 Ipswich yd.-Trafford Park	2 F.Liner 86s	Freightliner
18:00S	-	1F01		15:44 London-Warrington RMT	EMS 90	Mail(2x325 unit)
18:30S	-	1S96		16:00 London-Shildmuir RMT	EMS 90	Mail
18:50	-	4S87		10:44 Ipswich yd.-Coatbridge	F.Liner 90	Freightliner
18:55S	-	6266	(Q)	17:22 Rugeley p.s.-Warrington Walton	EMS 66	empty MGR
19:00	-	4M76	(Q)	12:20 Doldons Moor-Trafford Park	EMS 92	Intermodal
19:05	-	6M79	MWFO	15:01 Newport A.D.J.-Warrington Arpley	EMS 66	'Enterprise'
19:05	-	6M79	THO	13:55 Cardiff Canton-Carlisle yd.	EMS 66	'Enterprise'
-	19:15	4K28		18:18 Trafford Park-Crewe Bas.Hall	2 F.Liner 86s	Freightliner
-	19:25	6E28		17:01 Castleton-Bescot	EMS 37	Departmental
-	19:30	4645		18:36 Holewood-Washwood Heath	EMS 66	covered car carriers
19:30S	-	6286	T/THO	16:00 Attercliffe-Liverpool Alex.Dock	EMS 66	loaded scrap metal
19:35	-	4M61		12:30 Southampton-Trafford Park	F.Liner 66	Freightliner
-	19:35	6L36		19:11 Garston-Dogenhorn	F.Liner 66	empty carriages
19:40S	-	1S81		16:05 Bristol Parkway-Shildmuir RMT	EMS 90	Mail
-	19:45	4L60		15:00 Coatbridge-Ipswich yd.	F.Liner 90	Freightliner
-	19:55	4L71		18:30 Ditton-Garston-Ipswich yd.	2 F.Liner 86s	Freightliner
19:55S	-	6375		10:42 Walsall-Mossend	EMS 92	'Enterprise'
20:00	-	6555	MO	09:40 Burnagullie-Irvine	EMS 66	china clay tanks
-	20:05	7K73	FX	15:35 Sellafield-Crewe South yd.	2 DRS 20s	Nuclear flasks
-	20:10	4A08		19:13 Trafford Park-Southampton	F.Liner 57	Freightliner
20:20	-	6X73		18:15 Washwood Heath-Garston	EMS 66	Ford cars

CREWE

North West England

North	South	Hcode	Runs	Train	Traction	Type of train
-	S20c20	1A91		19:57 Warrington RMT-London	EMS 92	Mail(325 unit)
-	S20c25	1M03		16:38 Mottershall TMD-Walsall	EMS 67	MIA vans
-	S20-30	1V04		16:55 Shildmuir RMT-Bristol	EMS 90	Mail
20:30	-	6X48	MWFO	13:13 Dogenhorn-Mossend	EMS 66	Ford cars
-	20:40	4083	MO-Q	15:47 Mossend-Doldons Moor	EMS 92	Intermodal('CNC')
-	S20-50	1A97		20:28 Warrington RMT-London	-	Mail(2x325 units)
20:50	-	4H54		20:46 Crewe Bas.Hall-Trafford Park	2 F.Liner 86s	Freightliner
20:55	-	4S78	TO-Q	19:10 Daventry-Mossend	EMS 92	Intermodal('CNC')
21:05	-	4S59		15:13 Millbrook-Coatbridge	2 F.Liner 86s	Freightliner
21:15S	-	1F43		20:12 Birmingham-Warrington RMT	EMS 90	Mail
21:20	-	6275	MO	20:14 Rugeley-Warrington Walton	EMS 66	empty MGR
21:30	-	6S77		17:11 Wenley-Mossend	EMS 92	'Enterprise'
-	21:30	4K82		20:55 Garston-Crewe Bas.Hall	F.Liner 57	Freightliner
-	21:35	6L47	MTIN	13:18 Mossend-Dogenhorn	EMS 66	empty carriages
-	S21-45	6M25	MX-Q	16:11 Mossend-Crewe Gresty Lane	F.Liner 66	empty carriages/flots
21:50S	-	4S46		20:10 Daventry-Mossend	EMS 92	Intermodal('Seaco')
-	22:00	4A09	MX	21:08 Trafford Park-Willesden E.T.	EMS 92	Intermodal
-	22:10	6V41	MTHO	16:25 Irvine-Burnagullie	EMS 66	china clay tanks
-	22:10	6K01	FO	18:43 Carlisle yd.-Crewe Bas.Hall	F.Liner 66	empty ballast boxes
-	22:15	4K91		21:29 Garston-Crewe Bas.Hall	2 F.Liner 86s	Freightliner
22:20	-	6M75		19:26 Newport A.D.J.-Warrington Arpley	EMS 66	'Enterprise'
-	22:25	4M80		18:15 Coatbridge-Crewe Bas.Hall	F.Liner 90	Freightliner
-	22:30	4011		21:57 Trafford Park-Millbrook	2 F.Liner 86s	Freightliner
22:40S	-	1S06		20:28 London-Shildmuir RMT	-	Mail(325 unit)
-	S22c40	1A94		22:15 Warrington RMT-London	EMS 92	Mail(325 unit)
-	22:45	6012		17:26 Carlisle yard-Castleigh	EMS 92	'Enterprise'
23:00	-	6C00	MO	22:53 Crewe Bas.Hall-Shop	F.Liner 66	empty ballast boxes
-	23:00	4L81		18:56 Coatbridge-Tilbury	2 F.Liner 86s	Freightliner
-	23:05	4021		22:23 Garston-Southampton	F.Liner 57	Freightliner
23:10S	-	1F00		20:45 London-Warrington RMT	EMS 90	Mail(2x325 units)
23:15S	-	4S49	THO	21:40 Daventry-Grangemouth	2 DRS 37s	Hi-cube wagons
-	S23-25	1V68		19:48 Shildmuir RMT-Cardiff	EMS 90	Mail(TPO)
-	S23-35	1A92		23:10 Warrington RMT-London	EMS 90	Mail
23:35S	-	1S09		20:05 Cardiff-Shildmuir RMT	EMS 90	Mail(TPO)
23:40	-	4S81		18:48 Cardiff Wentloog-Coatbridge	2 F.Liner 86s	Freightliner
-	23:40	6674		22:45 Garston-Washwood Heath	EMS 66	empty carriages
-	S23c50	1A95		21:20 Carlisle-London	EMS 90	Mail(TPO)
-	23:55	4L58		19:28 Coatbridge-Ipswich yd.	2 F.Liner 86s	Freightliner
23:55	-	6S51	(Q)	19:28 Crewe Bas.Hall-Mossend	F.Liner 66	Ford Transits/cars
-	00:05	6V72	(Q)	21:53 Liverpool Alex.Dock-Swindon	EMS 66	empty box wagons
-	00:10	4L82		23:15 Trafford Park-Ipswich yd.	2 F.Liner 86s	Freightliner
00:20S	-	6M65		15:19 Ipswich yd.-Carlisle yard	EMS 92	'Enterprise'
00:40	-	4S88		18:25 Ipswich yd.-Coatbridge	F.Liner 90	Freightliner
-	00:40	5K00		00:09 Warrington RMT-Crewe	-	2 empty 325 units
-	00:45	6L48		23:45 Garston-Dogenhorn	EMS 66	empty carriages
-	00:50	6M66		19:55 Mossend-Wenley	EMS 92	'Enterprise'
01:00	-	4E53		00:56 Crewe Bas.Hall-Leeds-Wilton	F.Liner 57	Freightliner
01:00S	-	6M73	SX-Q	19:27(FX-Q) Swindon-Liverpool Alex.Dock	EMS 66	scrap metal
01:10	-	4S83		18:33 Tilbury-Coatbridge	2 F.Liner 86s	Freightliner
-	01:10	4K85		00:18 Trafford Park-Crewe Bas.Hall	F.Liner 57	Freightliner
-	01:20	4M50	THO	18:15(MO) Grangemouth-Daventry	2 DRS 37s	Hi-cube wagons
-	01:25	6B10		23:41 Peak Forest-Bletchley	EMS 66	loaded RMC hoppers
-	01:30	6V71		01:02 Warrington Arpley-Cardiff Tidal	EMS 66	'Enterprise'
01:30S	-	1F02		23:10 London-Warrington RMT	-	Mail(2x325 units)
01:35S	-	1C00		23:18 London-Carlisle	EMS 90	Mail(TPO)

North West England

CREWE

North	South	Hcode	Runs	Train	Traction	Type of train
01:40S	-	1S03		00:59 Walsall-Aberdeen	EMS 67	Parcel(s)in MIA vans
-	01:45	4M06		21:09 Coatbridge-Crewe Bas.Hall	2 F.Liner 86s	Freightliner
01:50S	-	4M58		19:48 Southampton-Trafford Park	F.Liner 66	Freightliner
01:55	-	4F96		01:50 Basford Hall yd.-Garston	2 F.Liner 86s	Freightliner
02:10	-	4M40		20:45 Southampton-Trafford Park	F.Liner 57	Freightliner
-	05:25	4022		07:17 Trafford Park-Southampton	F.Liner 66	Freightliner
-	S02c15	1M97		22:59 Shildmuir RMT-Birmingham	EMS 90	Mail
-	02:30	4M97		22:08 Coatbridge-Crewe Bas.Hall	F.Liner 90	Freightliner
02:30S	-	1S00		08:10 London-Shildmuir RMT	EMS 90	Mail(110mm)
-	02:40	4M21		20:58 Wilton-Crewe Bas.Hall	F.Liner 57	Freightliner
-	02:55	6M13		17:48 Ayr-Bescot	EMS 66	loaded MGR
-	S03-00	5K71		02:35 Warrington RMT-Crewe	EMS 92	2 empty 325 units
03:00	-	4H31		02:54 Crewe Bas.Hall-Trafford Park	F.Liner 90	Freightliner
03:05	-	4M37		21:41 Tilbury-Garston	F.Liner 90	Freightliner
03:10	-	4M53		21:54 Ipswich yd.-Trafford Park	2 F.Liner 86s	Freightliner
03:45	-	4M57		21:09 Thamesport(Grain)-Traff.Park	F.Liner 57	Freightliner
-	S03-45	4M38		20:17 Deanside-Daventry	EMS 92	Intermodal('Seaco')
-	03:55	6M27		17:50 Hunterston-Ironbridge p.s.	EMS 66	loaded MGR
04:00	-	4F01		01:05 Washwood Heath-Holewood	EMS 66	empty car carriers
-	04:10	4L89		03:30 Garston-Ipswich yd.	2 F.Liner 86s	Freightliner
04:30	-	4M73		23:08 Ipswich yd.-Ditton(via Garston)	F.Liner 57	Freightliner
04:35	-	6C02		04:27 Basford Hall VQ-Carlisle yd.	EMS 56	Departmental
-	S04-35	6V60		21:48 Mossend-Newport A.D.J.	EMS 66	'Enterprise'
-	S04-40	4033	(Q)	03:50 Trafford Park-Doldons Moor	EMS 92	Intermodal(to Bari)
05:00	-	4M42		23:25 Ipswich yd.-Garston	2 F.Liner 86s	Freightliner
05:25	-	4F82		05:22 Crewe Bas.Hall-Seaforth	F.Liner 57	Freightliner
-	S05-30S	4S99		02:50 Willesden E.T.-Mossend	EMS 90	Intermodal
05:40S	-	4M75		01:45 Mossend-Willesden E.T.	EMS 90	Intermodal
05:45	-	6M28	TX	05:33 Crewe South yd.-Sellafield	2 DRS 20s	Nuclear flasks
05:50	-	4H72	TFX	02:15 Willesden E.T.-Trafford Park	EMS 37	Departmental
05:55	-	6F39		05:49 Basford Hall-Garston	F.Liner 66	Ford cars
-	05:55	4L97		04:56 Trafford Park-Ipswich yd.	F.Liner 90	Freightliner
06:00	-	6X41		00:34 Dogenhorn-Garston	EMS 66	Ford cars
06:05S	-	6D21	TWO	05:58 Basford Hall VQ-Penmaenmwr	F.Liner 66	empty ballast boxes
06:10	-	6S13		04:53 Bescot-Ayr	EMS 66	empty MGR
06:40	-	6M50	Th-Q	02:35 Cardiff Tidal-St.Helens	EMS 66	loaded bogie tanks

**Saturdays:**

-	07:00	6076		22:53(Fri) Mossend-Bescot	EMS 92	'Enterprise'
10:20	-	6272	(Q)	08:44 Ironbridge p.s.-Warrington	EMS 66	empty MGR
10:35	-	4M14		02:56 Doldons Moor-Trafford Park	EMS 66	Intermodal
11:35	-	4M86		05:05 Ipswich yd.-Trafford Park	F.L	

arrival time given unless otherwise noted)

**18R20** = stops to run round

**18T20** = stops for traffic—arrival time given) - mail trains only.

**18D20** = stops to set down wagons;

**18U20** = stops to pick up wagons

Brackets around originating times are used where a train runs consistently very early, which would otherwise make the originating time look incorrect.

**Headcodes** These are used by Railtrack to keep track of trains. The full 'Train I.D.' used by the 'TOPS' computer actually consists of seven characters, but in everyday use, a shortened form, consisting of two letters and two numbers is used:

The first letter denotes the train type: **0**= light engine **2**= stopping passenger train **4**= 75 m.p.h. freight (e.g. Freightliners) **6**= 60 m.p.h. freight **8**= 35 m.p.h. freight **1**= Mail/TPO(& express passenger) **3**= 90 m.p.h. freight (rarely used) **5**= empty mail vans/empty stock **7**= 45 m.p.h. freight **9**= Eurostar passenger services

The second letter represents the

destination Railtrack zone:

**E** = Eastern

**I** = Anglia

**M** = London Midland

**O** = Southern

**S** = Scottish

**V** = Western

Other letters are used where the train remains within a former region for its whole journey. One-off or short term special workings use a 'Z' code (**G** in the North East & South Wales), which is used where the train does not have a regular, fixed path with Railtrack.

The last two numbers identify the particular train, e.g. 1V64, 6S75, 4M30.

**Days Run** For ease of use, each table is split into three sections: *Mondays-Fridays, Saturdays and Sundays*. In the Mondays to Fridays section, this column indicates the days each train is booked to run. (e.g. **TO**= Tuesday Only; **MX**=**Mondays** excepted (i.e. runs Tuesdays to Fridays). Trains which run as required are denoted by the suffix - **Q** e.g. **WFO-Q** indicates a train which runs on Wednesday and/or

Friday (or neither!). Similarly, **W/FO** denotes a train which runs on Wednesdays or Fridays (but not both). Finally, (**Q**) on its own means the train can run on any or all days (or not at all!). If this column is blank, the train normally runs every day.

Illustrated on pages 12 and 13 are typical pages from Freightmaster, showing the southwest of England, and the 130 trains which are listed for Crewe every day.

In Cornwall, where the two "spotting" locations are Par and Dawlish, a number of china clay trains also operate but, owing to their irregular nature, Freightmaster does not show them. All the trains in these tables are run by EWS—English Welsh and Scottish Railway.

Crewe has always been one of the busiest spots for trains in the country—passenger and freight—and, in 2002, it still is. But to see the freight trains, you really have to stand by the line at night—less than 20% of the trains listed run during mid-season daylight hours.

## Broad gauge private railway WTT in the Apple Isle

*A couple of decades ago, TASMANIAN RAIL NEWS published the following gem of timetable history.*

**N**ineteenth century private railway working time tables are a rather rare breed—and when they are the WTT for a dual broad and narrow gauge line that lasted only 17 years, they are practically unique.

On the opposite page is the 1st November 1876 working time table of the Launceston and Western railway, which ran from Launceston to Deloraine in Tasmania.

Opened in February 1871, this 5ft 3in gauge private railway was taken over by the Tasmanian Gov-

ernment in 1872 and converted to 3ft 6in gauge in 1888.

In 1876, there was another railway sharing the track between Launceston and Evandale Junction (later called Western Junction). This was another private line, the 3ft 6in gauge Tasmanian Main Line Railway Company, completed earlier that year. The TMLR laid a third rail on the L&WR right of way and the two operators shared the track— not always amicably. Both L&WR and TMLR trains are shown in this WTT.

**Not** shown are the safeworking arrangements. It appears that each railway had its own Staff and Ticket system for the Launceston-Evandale Junction section and it would seem that they may have operated each independent of the other. Whether this was an oversight due to ignorance, or a result of antipathy is not known, but it would have raised the hackles of an inspector from the British Board of Trade's inspecting section.

PRIVATE.



LAUNCESTON AND WESTERN RAILWAY.

WORKING TIME TABLE.

On and after Wednesday, 1st November, and until further notice.

DOWN.

MILES	STATIONS.	1 Main Line Train.†	2. 1 and 2 Class and Goods.	3. Main Line Train.	4. 1 and 2 Class and Goods.	5. Main Line Train.	6. 1 and 2 Class and Goods.
4	Launceston.....	A. M. 6 0		A. M. 8 30	P. M. 12 30	P. M. 5 0	P. M. 5 0
7 1/2	St. Leonards .....	6 12		8 40	12 40	5 9	5 9
11 1/2	Breadalbane .....	6 25		8 50	12 51	5 13	5 13
14 1/2	Evandale Road.....	6 45		9 5	1 6	5 31	5 31
17 1/2	Perth .....			8 42	1 17	5 42	5 42
17 3/4	Longford ... Arr. * }			8 50	1 26	5 50	5 50
21 1/2	Ditto..... Dep. * }			9 0	1 36	6 0	6 0
22 1/2	Wilmor's Lane .....			9 11	1 47	6 11	6 11
24 1/2	Little Hampton .....			9 14	1 50	6 14	6 14
26 1/2	Bishopsbourne .....			9 18	1 59	6 15	6 15
28 1/2	Oaks.....			9 22	2 4	6 22	6 22
28 3/4	Glenore .....			9 29	2 13	6 29	6 29
31 1/2	Hagley .....			9 38	2 24	6 38	6 38
35	Westbury .....			9 49	2 36	6 49	6 49
41 1/2	Exton.....			10 6	2 56	7 6	7 6
45	Deloraine .....			10 15	3 10	7 15	7 15

UP.

MILES	STATIONS.	1. 1 and 2 Class and Goods.	2. Main Line Train.	3. 1 and 2 Class and Goods.	4. Main Line Train.†	5. Main Line Train.	6. 1 and 2 Class and Goods.
3 1/2	Deloraine.....	A. M. 7 25	F. M. 12 0	P. M. 12 0	F. M. 4 25	F. M. 4 25	P. M. 4 25
10	Exton.....	7 34	12 14	12 14	4 34	4 34	4 34
13 1/2	Westbury .....	7 51	12 24	12 24	4 51	4 51	4 51
18 1/2	Hagley .....	8 2	12 46	12 46	5 2	5 2	5 2
18 3/4	Glenore.....	8 11	12 57	12 57	5 11	5 11	5 11
19 1/2	Oaks.....	8 18	1 6	1 6	5 18	5 18	5 18
20 1/2	Bishopsbourne.....	8 22	1 11	1 11	5 22	5 22	5 22
21 1/2	Little Hampton .....	8 26	1 15	1 15	5 26	5 26	5 26
22 1/2	Wilmor's Lane .....	8 27	1 18	1 18	5 29	5 29	5 29
27 1/2	Longford ... Arr. * }	8 40	1 34	1 34	5 40	5 40	5 40
27 3/4	Ditto..... Dep. * }	8 50	1 44	1 44	5 50	5 50	5 50
30 1/2	Perth.....	8 58	1 53	1 53	5 58	5 58	5 58
33 1/2	Evandale Road .....	9 9	2 4	2 4	5 35	5 35	5 35
37 1/2	Breadalbane .....	9 21	2 19	2 19	5 50	5 50	5 50
41	St. Leonards .....	9 31	2 30	2 30	6 0	6 0	6 0
45	Launceston .....	9 40	2 40	2 40	6 10	6 10	6 40

\* Up and Down Trains pass each other at Longford.

† This Train is only run when required.

By order, R. W. LORD, Manager.

# Graphic Insight #78

By **CHRIS BROWBILL**

**G**raphic Insight takes a look this month at a timetable for a mode of transport and location never before reported in *The Times: Outer Space!* Man-made earth-orbiting satellites are essential to our modern way of life, facilitating transmission of electronic communications, as well as having numerous scientific and military uses. They orbit the earth, and they do it to a timetable - so it's appropriate for us to take a look!

Satellites in earth orbit can be seen from earth. They appear to the terrestrial observer just like a star moving across the sky. Generally speaking, they are visible only when the sun reflects off the satellite yet the background sky is dark - ie just around dusk and dawn when the satellite is not in the shadow of the earth. The time, position, speed and brightness can all be determined in advance by understanding the orbit, and your own location. This information is published for everyone to see - in effect a timetable. The website <http://www.heavens-above.com> enables you to enter a location and a time, and it will tell you what satellites will be visible from that place at around that time. It will also produce a star-chart showing the path of the satellite across the sky. Our graph this month is an example of one of these star charts.

The graph printed here is for the evening of Friday July 12th 2002. It shows the path of a satellite called "Resurs 01 Rocket".

At first glance, the chart appears to be upside-down with East and West reversed, but remember it must be read from below - it's a map of the sky after all. The position of the satellite for a viewer in Sydney is shown by a solid curved line in relation to the background stars and planets, whilst its position for a viewer in Melbourne is shown by the dotted curved line. (Note Venus and the Moon located in the constellation Leo top right).

On Earth, the location of a vehicle can be described fairly simply by naming the place - e.g. 'High Street, Stop 54', or 'Central Station', etc. In outer space, landmarks and place names are less common, so a different mechanism is used. The positions of the background stars are to all intents and purposes fixed relative to each other, although they appear to move around the sky because the earth rotates. It is possible to describe the position of a satellite as being relative to this background pattern of stars. The problem with this is that because the satellite is so much closer to us than the stars, it will appear to be in a different place depending from where you view it (the parallax effect). To illustrate this, there are two different positions marked on the chart - one for observers in Sydney and one for Melbourne. The satellite's apparent path for the Melbourne viewer is further east in the sky because Melbourne is somewhat west of Sydney.

The text presented with the chart describes the satellite as rising above the southern horizon for the Sydney viewer at 17:47:32, passing maximum altitude at 17:54:17, and setting over the northern horizon at 18:00:55. For the Melbourne viewer it rises as 17:47:24, passes maximum altitude at 17:53:52 and sets over the northern horizon at 18:00:15. Note the precise timings - to the second. Unlike timetables for other transport modes timekeeping is precise because as Sir Isaac Newton observed, an object will continue to move at a constant velocity unless an external force acts on it. The forces in outer space are known and predictable unlike here on Earth!

Of course even with all this precision and technology, nobody will see it at all if it's cloudy!

