

SOMERSAULT

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SIGNALLING RECORD SOCIETY OF VICTORIA INC.



As noted in the minutes of the May meeting (printed in this issue), there was a fire in the former Flinders Street "A" Box on the morning of 21 May 1993.

This photo was taken from the Viaduct (Western) end of "A" Box looking East towards the station. "A" Box contained a 280 lever Rocker frame constructed as two back to back frames of 140 levers. This was the largest mechanical frame in Victoria, although Flinders Street "B" (149 levers), Flinders Street "C" (184 levers) and Spencer Street No 1 Box (192 levers) had longer continuous runs of levers. Levers 1 to 140 are on the left and 141 to 280 on the right.

A variety of instruments can be seen on the block shelf above the levers. These include telephones of various descriptions, bell keys, signal and point repeaters and the odd time release. Perhaps the most interesting instruments are the SYX lever locks (the square faced boxes with the circular brass window). These had the same mechanism as the SYX (Sykes) Lock and Block Instruments.

In the centre of the photograph is the block recorder desk, with the train register open upon it and the telephone concentrator. The two square cabinets contain long rolls with the train service inscribed upon them. As the day progressed, the rolls are rolled past the central opening. Duplicate train service rolls can be seen on both block shelves.

"A" box was brought into service on the 17/9/1905 with a 260 lever frame. The frame was extended to 280 levers in 1917 in conjunction with the provision of the additional viaduct. The box was abolished on 12/12/1980 and, since then, the building appears to have been in intermittent use as a meal room for construction workers.

The photo was taken by Bob Taaffe on the occasion of the society tour of the Flinders Street Boxes in 1975. A better quality reproduction of this photograph has been printed on Page 2 of the June 1993 Australian Railway Enthusiast.

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Deadline for July 1993 issue is 27 August

MINUTES OF MEETING HELD FRIDAY MAY 21, 1993

Meeting held at 60 Kenmare Street, Box Hill North. (The Meeting was transferred from the advertised venue at short notice to avoid moving equipment for the syllabus item.)

Present :- J.McLean, J.Churchward, G.Cumming, M.Drew, A.Gostling, K.Lambert, D.Langley B.McCurry, & A.Waugh

Apologies:- A.Jungwirth, B.Johnston, G.O'Flynn, C.Rutledge.

In the absence of the President, the Vice-President, Mr Jack McLean, took the chair and opened the meeting @ 2015.

Minutes of the November Meeting:- Accepted as published. D.Langley/B.McCurry

Matters Arising :- Nil

Correspondence :- Andrew Waugh has received some correspondence from the U.S.A. regarding an incident on the New York Subway. A 16 year old teenager was able to impersonate a train driver who was on leave and proceeded to drive trains with passengers around the system. The impostor was caught after the train he was driving tripped at a red signal after speeding. When the impostor was unable to reset the trip, an Inspector was sent out to investigate the delay. Still unaware that the driver was an impostor, the teenager was taken for the mandatory drug test but escaped before arriving at headquarters. He was later arrested. This event received widespread media coverage in the U.S.A. and overseas.

General Business:- David Langley spoke about the last S.R.S.N.S.W. tour in April from Rydal to Orange. David noted that this section of line is to be resignalled in the near future. Already tenders have been called for the re-signalling of the Wallerawang - Tarana section. David then reminded the members of the forthcoming S.R.S.N.S.W. tour in June. The tour will visit a variety of new control panels in the Sydney metropolitan area. The proposed S.R.S.N.S.W. country tour in October, visiting all signal boxes from Orange to Broken Hill and some signal boxes in the Riverina district. Please contact the Secretary for further details.

Earlier today (21 May), there was a serious fire in Flinders Street "A" Box. The signal box is no longer used and there were only minimal delays to trains, however, the building was badly damaged internally and it is believed that the building may now have to be demolished if it is considered unsafe.

Reports have been received from various sources, including the daily papers, that a serious incident took place in the single line section between Emu Loop and Sutherland Loop. Two opposing trains (i.e. an Up train and a Down Train) were both in the section at the same time and both trains had a proper authority to enter the section. The incident took place at night. The two drivers were able to stop their trains before actually colliding and then refused to move the trains until an independent witness had seen both the authorities to be in the section that were carried by the trains. It is

believed that the delay to trains running on the Mildura line was approximately 6 hours. At the time of the incident, the Mildura line was being worked by Section Authority Working under trial. Section Authority Working has been deferred indefinitely and Train Order Working has been re-introduced. Official investigations are continuing.

Andrew Waugh spoke about the photograph on the front of the May 1993 issue of "Somersault". Andrew would be interested to hear any comments that reader of "Somersault" might have about including photographs in future issues of "Somersault".

It has been decided that the copy of "Somersault" sent to the U.K. will now be posted to the Editor of the S.R.S.U.K. "Signalling Record".

Glenn Cumming reported that over the Easter long weekend he had travelled to Adelaide and took the opportunity to inspect a number of locations of signalling interest. The following was noted during the trip. Naracoorte:- All signals have been removed and all mainline points are worked by switch stands. The frame remains in the station building which is unattended. The only sidings that remain are the good sidings and the crossing loop. The loco roads have been removed. Coomandook:- This C.T.C. crossing loop with upper quadrant signals is still in service. Cookes Plains:- The crossing loop and all points and signals have been removed and replaced by an up and a down permissive signal. Tailem Bend:- The signal cabin is now closed but the frame and other equipment remains in the building. The crossing loop is now controlled from Adelaide. All upper quadrant signals have been removed. Monteith:- The crossing loop and all points and signals have been removed. Murray Bridge:- No changes to the signalling but the Train Control Office is now closed. Upper quadrant signals are still in use. Monarto South:- No changes to the signalling. Upper quadrant signals are still in use. Callington:- The crossing loop and all points and signals have been removed and replaced by an up and a down permissive signal. Mount Barker Junction:- No changes to the signalling. Upper quadrant signals are still in use. Nairne:- The crossing loop and all points and signals have been removed. The control panel remains in the office but out of use. Bridgewater:- No changes to the signalling. Upper quadrant signals are still in use. The sidings and crossing loop see very little use. Aldgate:- The crossing loop and all points and signals have been removed. Mount Lofty:- No changes to the signalling. Upper quadrant signals are still in use. Belair - Tailem Bend:- Large numbers of upper quadrant permissive signals have been taken out of use in between these stations and have not been replaced. The sections between intermediate permissive signals are now very long. Mile End Junction:- One of only two signal cabins remaining in the Adelaide metropolitan area. A small control panel is still in use in the large signal cabin controlling points and signals in Mile End Yard and around the Adelaide Passenger Terminal at Keswick. The large McKenzie & Holland direct tappet frame remains in the building although it is now out of use. Dry Creek South:- This is the other signal cabin still in use in the Adelaide metropolitan area. A large control panel operates all AN points and signals at the Dry Creek Marshalling Yard, Islington Freight Terminal, and at the Gillman Marshalling Yard. In the near future, Dry Creek South will assume control of Mile End Junction using a computer terminal and the Mile End Junction Signal Cabin will be closed. Gawler:- The signal cabin still stands on the platform but it is no longer in use. The frame remains in the building but the staircase has recently collapsed. Roseworthy:- All upper quadrant signals have recently been removed and the points are now worked by switch stands. The G.R.S. frame with two double wire levers at the right hand end still remains in the building.

Andrew Waugh noted that the Weekly Notice item concerning the closure of Riddells Creek Signal Box contained a mistake as the crossover had been removed some years ago.

Syllabus Item:- The Chairman introduce David Langley who screen video footage taken on recent tours conducted by the S.R.S.N.S.W. At the conclusion of the Syllabus Item, David was thanked for the entertainment.

The Secretary then thanked Jack and Ena McLean for the kind use of their kitchen and television for the meeting.

Meeting closed :- @ 2205 hours

Next meeting:- The next meeting will be on Friday July 16, 1993, at the Uniting Church Hall, Hotham Street, Mont Albert, commencing at 2000 hours.

SIGNALLING ALTERATIONS

The following alterations were published in WN 15/93 to WN 22/93. The alterations have been edited to conserve space. Dates in parenthesis are the dates of the Weekly Notice.

- (05.05.1993) **Sunshine - Deer Park West Junction (Change of Signalling Systems)**
 Circular O.313/93 refers to the Signaller at Sunshine acting as Train Controller as to the routing and precedence of trains, and the authorising and issuing of Caution Orders for the respective sections Sunshine - Deer Park West Junction (North and South Lines).
Failure of Home Signals
 Provided the points are correctly set for the intended move, it will not be necessary for the Dual Controlled Points to be manually operated whenever it is necessary to issue an Arrival Message for the Home Arrival Signal or a Caution Order for the Home Departure Signal. The Signaller must apply the applicable Blocking Jack.
 Rules 5 and 18 are hereby modified.
 In the event of a failure of the Up Home Departure Signals at Bacchus Marsh, Parwan Loop, Melton, or Rockbank, or the Down Home Departure Signal at Sunshine, and a train is in the section Bacchus Marsh, Parwan Loop, Melton, or Rockbank to Sunshine, the Signaller at Sunshine may signal a Down train towards Deer Park West Junction.
 Rule 17, clause 1 is hereby modified (O.365/93, WN 15/93)
- (11.05.1993) **Spencer Street (No 1 Signalbox)**
 The following Point and Signal alterations have been carried out at Spencer Street.
 East Passenger Yard
 1) The new Broad Gauge connection from No 1 Track to No 1A Track (Points 251) has been brought into service.
 2) New Home signals No 276 (No 1 Track to No 1 North or No 1A Track), No 278 (No 1 North to No 1 Track) and No 280 (No 1A to No 1 Track), all protecting movements over the new connection, have been brought into service.
 3) Catch Points 8 (at the Down end of No 1A Track) have been abolished. Lever 8 is now a pilot lever. The adjacent signal, Dwarf 3, has been converted into a Home signal.
 4) Points 9 have been provided with a switch lock movement.
 5) Post SST178 (Up Home Signal from the Standard Gauge line to No 1 Track) has been altered to be capable of displaying Medium Speed aspects.
 6) Post 183 (Down Home from No 1 Track to Broad or Standard Gauge lines) has been altered to be capable of displaying Medium Speed aspects instead of Low Speed aspects for Broad Gauge movements
 7) A Platform Indicator has been provided for Home Signal No 276
 8) A new Control Panel has been provided to operate the new Points and Signals.
 Centre Yard
 1) The new connection from No 2 Track to No 2A Track (Points 249) has been brought into service.
 2) New Home signals No 270 (No 2A North to No 2 Track or No 2A Track), No 272 (No 2 North Track to No 2 Track), and No 274 (No 2 Track to No 2 Track or No 2A North Track), all protecting movements over the new connection have been brought into service.
 3) Catch Points 70 (at the Down end of No 2A Track) have been abolished. Lever 70 is now a pilot lever. The adjacent signal, Dwarf 63, has been converted into a Home signal.
 4) Catch Points 243 (at the Up end of No 2A Track) and the adjacent Dwarf 242 have been abolished.
 5) Post 62 (Down Home signal from No 2 Track) has been altered to display full aspects in lieu of Low Speed aspects for Broad Gauge moves.
 6) A Platform Indicator has been provided for Home Signal No 274.
 7) The existing Control Panel and Indication Panel have been modified to show the new track and signal layout.
 Signalling Diagram 17/92 replaced Diagram 4/90 (O.371/93, WN 16/93)
- (11.05.1993) **Williamstown**
 An Automatic Train Stop will be provided at Post No 73. A Fixed Train Stop will be provided for Up movements on the Down Line on the Up side of Points 7. Amend Signalling Diagram 37/88
 (O.359/93, WN 16/93)
- (11.05.1993) **Darling**
 A Fixed Train Stop will be provided for Up movements on the Down Line on the Up side of Points 6.
- (18.05.1993) **Noble Park**

- (18.05.1993) **Murrumbeena**
Pedestrian Gates have been commissioned at the Murrumbeena Road Level Crossing. Amend Signalling Diagram 11/85 (O.367/93, WN 17/93)
- (18.05.1993) **Spencer Street**
The signalling arrangements shown on Signalling Diagram No 17/92 are now effective and Diagram 4/90 is cancelled. (O.415/93, WN 17/93)
- (25.05.1993) **Geelong - South Geelong**
Boom Barriers at McKillop Street and Kilgour Street Level Crossings have been commissioned. (O.437/93, WN 18/93)
- (25.05.1993) **Brighton Beach (New Street)**
The electrical detection of the hand operated level crossing gates has been removed. See WN 1/90 (16/10/90). (O.443/93, WN 18/93)
- 13.06.1993 **Camberwell - Riversdale (LL&TC working replaced by ATC)**
As from 0001 hours on Sunday 13.6.1993, the Lever Locking and Track Control System of Signalling on Track 'X' between Camberwell and Riversdale will be replaced by the Automatic and Track Control System of Signalling.
- Book of Rules and Regulations**
Add the following as sub-clause (iv) to Clause B, page 412 (Automatic and Track Control System of Signalling):
- (iv) At certain signalboxes situated at each Crossing Station, an interlocked Control Lever is provided. Prior to a train being signalled into the section, the following procedures must be carried out by the Signalman.
Assuming Stations to be "A" and "B", the Signalman at "A" must, if the Section be clear, send the "Release Control" signal, i.e., one short, one long, and one short ring, on the Electric Bell; the Signalman at "B" must, if prepared to accept the train, place the Control lever to the full reverse position and acknowledge the Electric Bell signal by giving three short rings.
The reversing of the Control lever at "B" will permit the Signalman at "A" to exhibit the Signals for the train to proceed into the Section.
The train, on entering the Section, will replace to Stop the Fixed Signals at "A" and at the same time back-lock the Control lever at "B" in the pulled-over position until the train is clear of the fouling point at "B".
A similar procedure must be followed when it is required to dispatch a train from "B" to "A". (O.558/93, WN 21/93)
- (15.06.1993) **Yarragon - Maryvale**
The Signalling arrangements on Signalling Diagram 8/93 are now effective and Diagram 16/89 is cancelled. This diagram shows the situation after the abolition of the points, signals, and interlocking frame at Yarragon. (O.515/93, WN 21/93)
- (15.06.1993) **Book of Rules and Regulations**
The State Rail Authority, New South Wales, has advised that the White Tail Disc will no longer be displayed on the rear of intrastate and interstate passenger trains. Commencing forthwith, all Standard Gauge passenger trains between Melbourne and Albury will display a red light on the rear of the last carriage by day and night. In the case of emergency, an End of Train Marker may be placed on the rear of a Passenger Train. Insert a reference to the above on Page 91, Book of Rules and Regulations. (O.559/93, WN 21/93)
- (15.06.1993) **Trawalla and Buangor (Provision of Staff Exchange Box)**
A Staff Exchange Box has been provided at Trawalla and Buangor and must be operated by the Drivers of the specified trains. The Staff Exchange Boxes are only to be used for a train in one direction only. Commencing forthwith, the Staff Exchange Boxes at Trawalla and Buangor will be in operation for No 9150 Sundays. Any variation requires the authority of the Superintendent Safeworking. (O.563/93, WN 21/93)
- 16.06.1993 **Spotswood**
On Wednesday, 16.6.93, Pedestrian Gates were commissioned at the Hudson Road Level Crossing. The Pedestrian Gates will not be available for use until fencing is provided. Insert a reference on Diagram 9/87. (O.619/93, WN 22/93)
- (22.06.1993) **City Loop Lines**
The modified Lever Locking and Track Control System of Signalling of the City Circle, Burnley, Caulfield & Northern Viaducts and Underground Loop Lines will be abolished and the signalling of trains over those Lines will be by Three-position Signalling. The Pilot Keys will be removed at a later date. Remove the instructions for the modified Lever Locking and Track Control System from the General Appendix. (O.602/93, WN 22/93)

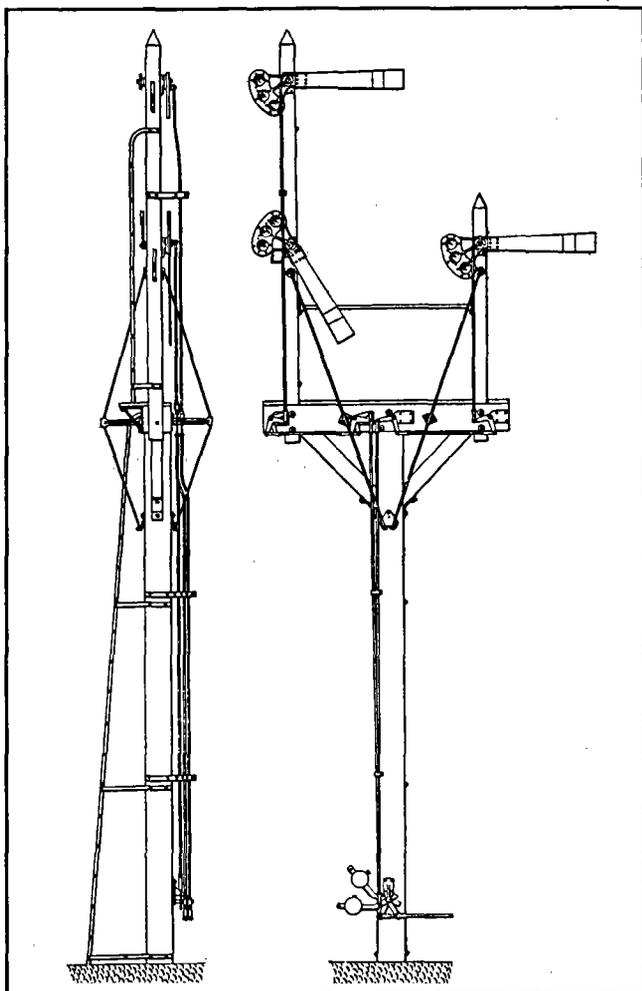
LETTERS TO THE EDITOR

Jack McLean writes :-

I have received a copy of the SRSGB Research Note "Index to Appendices." This is a list of all known UK General and Sectional Appendices together with the location of known copies.

I have also received permission to copy this Research Note locally for those who are interested. I am examining ways in which this could be done and I wish to gauge the approximate number of copies needed. Members who might be interested in a copy should contact me before the end of July. It is a fairly short document, only 10 double sided pages, so the cost should not be excessive.

My phone number is (03) 890 6764.



This drawing of a 'typical' US bracket signal illustrates a number of differences between US signaling and Australian signalling. The two dolls are not for separate routes; bracket signals were erected where there were two parallel lines. In this case the left line is less important than the righthand line so the left hand arm is lower. The right hand doll carries two arms. The top arm is for the straight route and the lower arm is for all the diverging main line routes. This is the ancestor of the US speed signalling system we use in Victoria. Although the spectacle plates have three lenses, these are two position signals. Two red spectacles are fitted to ensure a red light until the arm is well below the horizontal position. Note the very crude finish of the top of the dolls - no ornate finials here!

BOOK REVIEW

30 Years over Donner, Bill Fisher, Trans-Anglo Press, 1990. ISBN 0-97046-102-8. Copy obtained from the Railfan Shop, RRP \$27.00

Autobiographies by former railway employees are becoming relatively common. This one is unusual as it is the first autobiography by a signal maintenance technician. Even more unusually, it is from America.

When the book opens, Bill Fisher is a Signal Maintainer (a combination of electrical fitter and signal adjuster) on the Southern Pacific main line between Sacramento (California) and Reno (Nevada). This line is the original transcontinental and this is the section where the line crosses the Sierra Nevada's via the 7000 foot Donner Pass. The difficulties of maintaining the signalling system in an area which receives an average of 35 feet of snow during winter can well be imagined!

Bill later moved off the mountain as a Signal Foreman of a small gang which installed new work and performed maintenance jobs too big for the local Maintainer to handle. Any thought of getting away from Donner Pass was quickly squashed, however, as his gang spent most of the first winter repairing the pole line over the Pass during the worst season in twenty years. He then moved to the supervision of the local signal repair depot. He then was faced with the decision of whether accept promotion to Signal Inspector, a nomadic life which might take him anywhere in California. He decided against the move and ended his career as a Signal Maintainer on the Donner Pass.

The book contains an excellent set of cameos of life maintaining the signalling system on a such a mountainous, yet busy main line. The flavour of American Railroading is well captured with cab forwards, train orders, and brakemen.

One curious feature of the book is in the level of signalling detail. Railway autobiographies normally take great pains to be accessible to ordinary railfans. Although this book makes some effort to describe the more unfamiliar terms, by and large, however, the equipment, faults, and train operations are described as if the reader will be familiar with railway signalling technology and American train operations. It is quite possible that this is the correct decision; Bill Fisher's writing is clear enough that an average railfan could read and enjoy the stories, even if they do not understand what the problem Bill is trying to solve. Trying to explain signalling in sufficient detail to make everything clear would have been a difficult task and would have made the book much less easy to read.

I found only two small problems with the book. First, a map of the line would have assisted readers unfamiliar with the geography of the area; although facsimiles of the 1941 ETT are reproduced on the front and back endpapers. Second, Bill refers to the interlocking frame at Norton as a 'Saxby and Farmer' frame, when the photo on page 155 clearly shows that it is a GRS power frame.

I thoroughly enjoyed this book and it certainly whiled away many a vacant hour on a recent trip to Brisbane. My only regret is that I finished it just before the long plane flight home!

TASMANIAN RAIL, 1992

David Donald

In November 1992, I spent just over three weeks wandering around the island state of Tasmania, both as a tourist and briefly investigating the remaining elements of the local rail network. The following report is a description, neither comprehensive nor detailed, on some of the things that I saw during those couple of weeks, as a guide for members who might be considering a visit to the island in the near future. I should add that some of the material will incorporate some of my experiences from a trip in 1987.

Before starting, a few general comments and words of warning for any interested traveller.

There are two main rail operators in Tasmania, being: Tasrail, a division of Australian National, which took over operations of the former Tasmanian Government Railways in the late 1970's; and the Emu Bay Railway, a division of Pasminco, which operates into the hinterland from Burnie, and which is primarily concerned with railing ore concentrates from various loading points to Burnie.

Secondly, there has been some talk in recent years that the Tasrail system may be closed for economic reasons, though the current word seem to be that these suggestions will be ignored for the time being.

Thirdly, as is the case with most rail systems today, you will need to be very patient, and literally take what you can get, since, whilst there are a reasonable number of trains operating on most days, they do tend to run at awkward hours (such as during non-daylight hours) and you have to be in specific places at specified times to make the most of what does run.

Fourthly, if you are an Alco or Clyde-EMD fan, you will be disappointed, since Tasrail runs an all English Electric fleet made up of various types of Z-class units (including ex-Queensland 2350/2370 and 1300 class units) plus the odd older Y-class units. If you are lucky you might see a very occasional 830-class unit in operation (though this is rather doubtful). On the other hand, the Emu Bay Railway has a fleet of Walker-built DH's, using Caterpillar motors, with the newer units looking very much like the NSW 73-class, as well as a couple of unusual shunting locos.

Fifthly, the types of loadings being transported is very limited with the major commodities being: general freight and container traffic (container wagons only; there are no boxcars or louvre vans); log traffic on flat cars; cement traffic in special hoppers; coal traffic in hoppers; and specialised traffic, such as clay traffic in tankers, sulphuric acid in special tankers; and superphosphate in special hoppers. It should be noted that a significant number of the vehicles are ex SAR or AN (mainland; both standard or narrow), which were brought over from the mainland in the late 1970's and 1980's to modernise the Tasmanian fleet and to assist in the conversion to Westinghouse braking.

It is rumoured that Tasrail only has about 700 trafficable wagons, though there are plenty in storage around Launceston (many are mainland units, which have probably never been required), and in recent years there has been a decline in traffic offering, especially in log traffic.

On the EBR, all traffic is handled in special ore hoppers, though there are a few flat cars for special freight traffic since EBR still uses Vacuum braking.

Lastly, if you own a scanner, or are thinking of buying one, then I can assure you that it is a very useful tool to have in Tasmania (and, indeed, most places now where there are railways), especially if you have a few simple accessories such as an external mobile antenna, DC power source, and an external extension speaker can be useful. The reasons for the suggested use of a scanner, and its accessories, will become obvious a little later in this report.

I want to divide the remainder of this report into the following sections:

- a) a description of the lines open, complete with signalling and safeworking details on Tasrail;
- b) a brief overview of the signalling and safeworking practices and procedures being used on Tasrail;
- c) general comments about traffic patterns, train numbers, and opportunities for photography on Tasrail; and
- d) comments about Emu Bay Railway.

Tasrail

Today, Tasrail operates about 840 km of narrow gauge (1067 mm) track throughout the island. The current lines opened represent the main lines of what was previously an extensive network in all parts of the island with numerous branchlines leading from the Main lines to the hinterland. All of these branches have now been closed or have seen their services permanently suspended.

Launceston is the hub of the whole system, with the main administrative offices of Tasrail (including Train Control) being located in new premises on Hobler's Bridge Road, Newmarket, just near East Tamar Junction. All facilities at Launceston will eventually be relocated to sites around East Tamar Junction and yard, with rumours that the present Launceston site, fronting Invermay Road and the river, will be sold for public development. The current site contains the old passenger station, freight yard, workshops, and loco depot.

At present, the following lines are open for traffic:

- 1) Hobart Yard - Derwent Park - Claremont - Bridgewater - Conara Junction - Western Junction (the "South" Line);
- 2) The branch line from Derwent Park to the industrial areas around the Pasminco works;
- 3) The branch into Cadbury's is still available for use, and is currently the home to the historical organisation that runs monthly steam services on the Derwent Valley branch;
- 4) Bridgewater Junction - Boyer (Paper Mill) - New Norfolk (the "Derwent Valley" branch). The word is that the line beyond New Norfolk (right through to Florentine) is effectively closed, which could put doubt on steam operations; certainly there is now no regularly scheduled Tasrail traffic beyond Boyer;
- 5) Conara Junction - Fingal - Duncan's Siding (the old "Fingal Valley" line). The line is only open for coal traffic plus any offering log traffic. The

coal is from the Cornwall Coal Company (the only coal producer on the island) which is situated just to the east of Fingal. The station at St Mary's is now privately owned, and has been restored by local service clubs. An X-class diesel is also at St. Mary's.

- 6) Western Junction - East Tamar Junction;
- 7) East Tamar Junction - Launceston (primarily the Loco Depot and Workshops);
- 8) East Tamar Junction - Coldwater Creek Junction - Scottsdale - Tonganah - Tonganah Clay Siding (the old "North East" line). Services beyond Tonganah, to Herrick, have been permanently suspended (all log traffic now travels by road);
- 9) Coldwater Creek Junction - Bell Bay (the "Bell Bay" branch). This includes the sidings into Longreach and the woodchip mill;
- 10) Western Junction - Deloraine - Railton (siding into Goliath Cement plant) - Devonport -

Heybridge (siding into Tioxide plant) - South Burnie (APPM Sidings) - Burnie . Wynyard - Wiltshire Junction (the "Western" line).

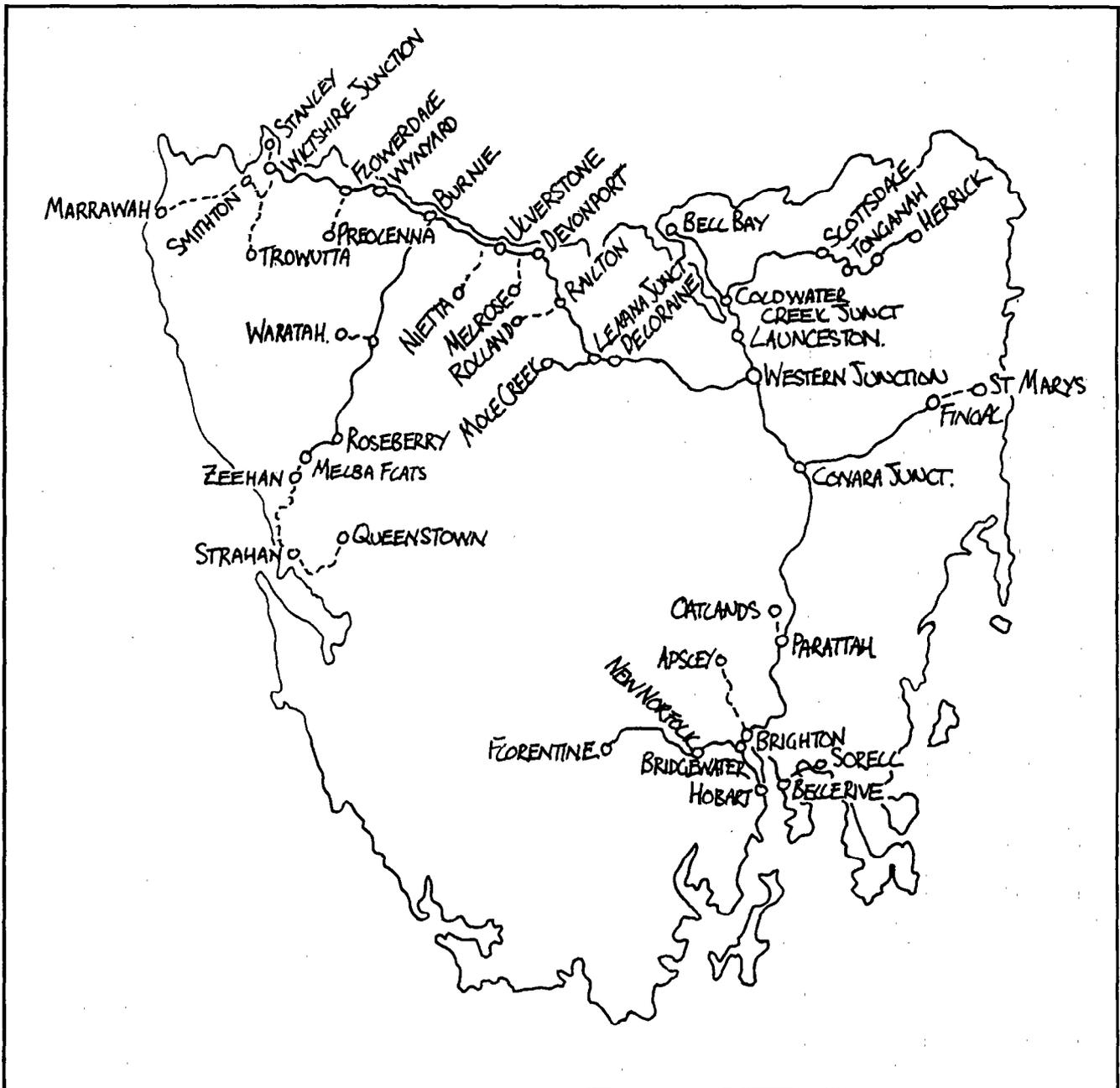
The most recent branchline to be closed is the Mole Creek branch. This junctioned from the Western line at Lemana Junction (just west of Deloraine). I believe that approval has been given to remove all track.

The South Line

This is what could be called the "Main line" of Tasrail, the most heavily trafficked, yet also rather sparse in facilities (some crossing facilities are up to an hour's running time apart). It is essentially the old Tasmanian Main Line Company line.

Starting at the southern end, we begin with Hobart Yard:

Hobart Yard: what is now Hobart Yard tends to be a bit of a sprawling area at the eastern end of Hobart proper, near the harbour and the wharfs. The former Hobart



Tasmanian Railways. The map is based on one drawn by C.C. Singleton in the September 1966 ARHS Bulletin with updates from the AN Corporate History "A Long Haul". Where are the Australian Railway Atlases?

passenger station has now become the home for the local ABC. There has been some downgrading of signalling facilities in the yard recently, but I believe that there is still a signal box, of sorts, to control the entrance to the yard (motor points).

Until the late 1970's, and the complete cessation of suburban and country passenger traffic, there was double track from Hobart to Claremont. This was controlled by Tyer's three position block instruments. There are still the remnants in a number of locations of the former facilities, notably in the form of some platforms, platform facings, and redundant signalling equipment.

Derwent Park: is probably the more important location in Hobart, with the branch to the industrial area. It is fully interlocked, with a signalling installation (including mechanical frame) housed in the station complex (which is still reasonably complete). The station seems to be equipped for Up and Down working and contains a mixture of semaphore and colour light signals. The area is well maintained. A branch used to go into Hobart Showground, but this obviously is now closed, but a stub is used as a general siding. Whilst we were there there was a ZC-class loco on permanent shunting duties, though I suspect that it goes back to Launceston for the weekend.

Claremont: has a run round (etc) to accommodate traffic from the former Cadbury's Branch.

From Claremont, the line runs through suburban areas until getting back to the river just near *Granton*. The station at Granton has been maintained by Tasrail, and seems to be being used by them as some sort of work base. Soon after leaving Granton, the line rejoins the highway, then crosses it on the level, before running on the western side of the causeway which both the highway and the railway use to cross the Derwent River. A bridge (with opening facilities) is located at the northern end of the causeway just before entering Bridgewater Junction.

Bridgewater Junction: is a rather curious place in that it is a triangular junction for the branch along the Derwent Valley. It still has a reasonably complete station complex including a separate high signal box. The signalling equipment is a mixture of semaphores (including somersaults) and colour lights, including special semaphore signals with a white cross on the arm protecting sets of level crossings equipped with flashing lights. I suspect that the location is not permanently manned, and there are times when crews are required to work themselves through the location (or else are assisted by mobile shunters).

From Bridgewater Junction, the crossing facilities start to get a little sparse, yet this is the area where most trains cross. The first siding is at *Rogerville*, just north of Bridgewater Junction, and is primarily a log loading point. The next town is *Brighton*, which used to be the terminus of the Suburban services; there is plenty of evidence to indicate this, but there are no actual facilities located there now. I should point out that all the way from Brighton right through to Western Junction, and even right into East Tamar Junction, there is evidence of former stations and sidings, with little more than a platform (sometimes the odd building) and some redundant signalling equipment.

Tea Tree Loop, situated about 11 km from Bridgewater Junction, is a relatively new facility (installed in the last five years or so), and is situated next to the main road just before the settlement of Tea Tree. It is

equipped with Trailable Facing Points (Up and Down Roads). The going starts to get a little tough from now on, as the line starts to climb into the ranges situated in the south-central part of the island; the real climb starts after *Campania*. *Campania* was the first crossing location north of Bridgewater Junction, but it was closed and all facilities removed, with the opening of Tea Tree Loop. *Campania* is still a reporting location.

Colebrook is the next crossing location, again equipped with Trailable Facing Points (Up and Down Roads). The climb from *Campania* to *Colebrook* is quite significant, and it becomes even stiffer from *Colebrook* to *Rhyndaston* and then through to *Parattah*. *Rhyndaston* is the location of the only tunnel, to my knowledge, on the South line, and the crossing loop/goods siding is still in situ, though not looking the healthiest.

Parattah is probably the most important location between Bridgewater Junction and Conara Junction, though it is now only a ghost of its former self. When the TML originally built the line, the actual alignment became quite controversial, upsetting the residents of the more important town of Oatlands (just to the west) which resulted in the government later building a short branchline into Oatlands. Again, *Parattah* is equipped with Trailable Facing Points, and also some of the special level crossing signals. The station building is still in quite reasonable condition. There are other sidings to cater for log traffic. In its heyday, *Parattah* used to see assistant engines attached and detached, or loads reduced or increased, due to the grades heading towards Hobart.

The sections are now *Parattah - Tunbridge* (Trailable Facing Points, Up & Down Roads) - *Conara Junction*, though *Ross* is a reporting station. This is a relatively easy section, compared to that south of *Parattah*, though the line does go for a couple of significant wanders to the east before *Ross*. The station at *Ross* is still reasonably intact, though the line has been aligned to ensure that it is a considerable distance from the platform. I am not sure what remains at *Campbell Town*.

I should have mentioned that it is possible to follow the line from Brighton through to Conara Junction, although with some difficulty and the aid of a map as it generally does not follow the highway, and the area concerned is quite mountainous (especially, as I suggested, between *Campania* and near *Parattah*). The line does follow the highway, more or less, from near *Ross*, through *Campbell Town* and *Conara Junction*, to a location called *Powranna* (about 22 km north of *Conara Junction*), where the railway swings away to the east, and is not really sighted again until it is almost into *Launceston*.

Conara Junction: Whilst a rather insignificant town (and possibly little more than a "railway town") situated on the Midland Highway at its junction with the A4, from a railway viewpoint it is quite significant. It is the location of the triangular junction between the South line and the Fingal Valley line and has log loading sidings at the northern end. The yard is not interlocked, per se, but there are a mixture of semaphores and colour light signals controlled by platform levers.

There is not a great deal north of *Conara Junction*, apart from the remnants of a siding at *Powranna* (it was probably a crossing point in the past) and the siding at *Evandale* which is used to load ballast.

Western Junction is probably one of the most important locations on the whole network, controlling

the junction between the South line, the Western line, and the line into Launceston. It is a fully interlocked triangular junction, equipped with crossing loops, sidings (numerous on the South line), and colour light signals worked from a panel. It is also one of the few locations of which I am aware (there are a few others) equipped with what could be called a "Landmark" (a yellow full triangle) facing trains from the South. It could be said that the "main line" is from Launceston towards Deloraine, since this was the original line. There is a very steep grade on the Launceston line for trains from Launceston.

There is now nothing between Western Junction and East Tamar Junction. There used to be a crossing loop at *Relbia*, about halfway between the two, and located near the bottom of the grade, but this has now been completely removed. It was controlled using CTC by the Train Controller located in Launceston.

East Tamar Junction: I don't think that I need to say a great deal about this location. It is a fully interlocked yard, complete with motor points and colour light signals, operated from a panel located in the administration building at the northern end of the yard. Eventually most of the railway facilities at Launceston will be transferred to sites within this area.

I have already briefly mentioned the likely fate of the Workshops/Station/Loco Depot site at *Launceston* which is situated on the northern side of the North Esk River, and facing Invermay Road. Today, this is little more than a storage area for disused or unwanted rolling stock and the Loco Depot which is situated at the northern end. There is a suggestion that the section between East Tamar Junction and "Launceston" is still worked by Electric Staff, though I can't confirm that. There is or was a small signal box located at the south-eastern end of the facility at the end of the single line towards East Tamar. There are also some sidings located on this single-line section, especially the Seapak Container Sidings. A walk along Invermay Road can be quite interesting and informative, followed by a drive down to Forster Street, and then a walk along the levee bank.

In essence, the sections/crossing locations on the South line are: Hobart Yard - Derwent Park - Bridgewater Junction - Tea Tree Loop - Colebrook - Parattah - Tunbridge - Conara Junction - Western Junction - East Tamar Junction.

Branches

Derwent Valley. As I said above, this line has been basically truncated back to Boyer or New Norfolk. I really don't know a great deal about the facilities along the line, though the station building (etc) still remains at New Norfolk. There is certainly some spectacular scenery west of New Norfolk, right through to around Maydena, and if you are prepared to take your time you can follow the line most of the way. It is worth starting at Bridgewater (Junction), and taking the road on the northern side of the river to New Norfolk, since there are a couple of rather interesting locations and structures in this section. I would think that the only crossing facilities are at Boyer and then New Norfolk, plus whatever remains west of there (which are not used).

Fingal Valley. Again this is a worthwhile trip, down the A4 all the way to St Marys, if only for the scenery. The rail line follows the highway for the whole journey. The station building at Fingal is quite old, and worth a

look, as indeed is the restored facility at St Marys. There may still be some facilities at Avoca.

Bell Bay. This is a relatively new line built in the 1960s when the Bell Bay area was developed into a port and a highly industrial area. The line is located to the east of the highway and you cannot see it for the greater part of the journey, basically until you get towards Bell Bay. It is an interesting trip, though you cannot guarantee seeing any rail traffic. I doubt that there are any crossing facilities between Coldwater Creek Junction and the sidings at Longreach, and then the "marshalling facilities" at Bell Bay.

North-East line. This is another strange line in that sections were totally upgraded less than fifteen years ago, but services have been suspended on the eastern end beyond Tonganah. Apart from the facilities at Scottsdale, and a few remnants at various places, there isn't a great deal left. There is a tunnel north-east of Lilydale. You can follow the line, with some difficulty, and the aid of a map, for the greater way out to Herrick, though much of the terrain in this north-east section of the state is quite mountainous and thus heavily graded. The only facilities that I know still existing are: the log siding at Blumont (this location is also used as a reporting station); the facilities at Scottsdale (including the colour light signals); the short siding at Tonganah; and then the siding into the Clay Pit. There may well be things still left at sidings/locations east of Tonganah (such as Legerwood). I suspect that there are no true crossing facilities between Coldwater Creek Junction and Scottsdale, since the only siding which still seems to exist is the log siding at Blumont, and this is likely to be occupied most of the time.

Western Line

It is relatively easy to state that the facilities between Western Junction and Burnie are as follows. There are also a number of redundant locations, but again there is little left apart from the sorts of things mentioned previously. The line has also been deviated some time in the past with a bypass built around the town of Latrobe.

Longford: Nothing remains, apart from a few remnants.

Hagley: Crossing loop equipped with Trailable Facing Points.

Deloraine. Crossing loop equipped with Trailable Facing Points and a few other sidings.

Lemana Junction: The former junction for the line to Mole Creek. Nothing now remains.

Dunorlan: Standard crossing loop.

Railton: Fully interlocked crossing loop with colour light signals and motor points, controlled by a panel in the station building. There is also the siding into the Goliath Cement Works. You can also see the remains of the former yard situated near the town centre when Railton was the junction of the line to Sheffield.

Devonport: Fully interlocked yard, with motor points and colour light signals, controlled (I suspect) from a panel located in "the station building". I did hear reference to a "signal box".

Don Junction: The terminus for the short line operated by the Don River Railway (Museum). There is an interchange line to get on to the main line.

Ulverstone: There is little left here now, though there is a loop which could probably be used if required. Once

again there are semaphore signals, including the specials for the level crossing at the Burnie end.

Penguin: Nothing remains though it is still a Control Point.

Howth: This is a siding for superphosphate traffic.

Heybridge: Could be used for crossing purposes, but is primarily there to serve the industries on the southern side of the highway. These are served by a branch leading off the Main at the western end of the yard (and which used to be worked by Ordinary Train Staff). There are semaphore signals, including protection for the siding.

South Burnie: A large series of sidings primarily designed to serve the large APPM plant, as well as the loading of log traffic. There are various types of signals, including the level crossing signals.

Burnie: The main centre in the western part of the state, which again is a panel-operated interlocked yard. Burnie is rather strange place in that it actually has two yards, one on the eastern side for Tasrail (which includes the wharf area), and then the southern area for EBR, with some facilities to transfer traffic between the two.

I am not fully certain what is west of Burnie, though there are certainly sidings at *Camdale, Somerset, Wynyard*, probably at *Rocky Cape* (more than likely the only possible crossing facility west of Wynyard, if it is ever required), and finally the terminus at *Wiltshire Junction*. This was the former junction for the line to Stanley and also further west to Smithton. It now has a log siding and normal sidings (which could also involve a balloon loop).

Safeworking

The whole island is controlled by Train Order working (with the possible exception of the section between East Tamar Junction and "Launceston") issued by the Train Controller situated in Launceston. All Orders are given by radio, as is any other information or safeworking instructions, and thus the effectiveness of having a scanner. From what I could determine Tasrail was using close to standard Train Order working practices and procedures, with Orders being issued as required. On one day whilst we were there I know of more than 65 Orders being issued. It was noticeable, though, that trains leaving Hobart were being given a through Order to Bridgewater Junction (or further), even though they would all shunt at Derwent Park. It was also noticeable that Orders were being issued to locations which did not have crossing facilities (such as Campania), and these seemed to be used as Control Points, since under Train Order working two trains cannot be in the same block. I guess that you could liken it to the use of Block Posts under Train Staff & Ticket working.

Train Working

Tasrail does use a slightly complex train numbering system, though it is quite easy once you master it. The State has been divided into three sections with each section having its own set of numbers. The first number is based on the standard AN practice of indicating the day of the week, starting with 1 for Sunday. The second number indicates the part of the state. Trains on the South line, including the Fingal Valley and Derwent Valley lines, are designated by 1. Trains on the Western line, west of Western Junction, are designated by 2, and any train working between the South and the West do

change numbers at Western Junction. Trains on the Bell Bay or North-East lines are designated by 4.

The third and fourth digits are the actual train number, but seems that the low numbers are used on the South line, the middle range (40's and 50's) are used on the Western line, and then the high range (60's, 70's, 80's) are used in the North-East/Bell Bay.

I should add that I don't know what system is being used for non-revenue traffic such as Works trains.

As a result, 5113 is a coal train from Fingal/Duncan's Siding to Boyer on Thursday, whilst 2250 is the regular freight out of Burnie, heading towards Western Junction, on a Monday.

I was never quite sure what was designated as an Up and Down train, except that trains carrying even numbers were heading towards Launceston, and those with odd were going away from Launceston. As a result, a coal train from Fingal to South Burnie would carry an even number between Fingal and Western Junction, and then an odd from Western Junction to South Burnie. However, a service from Fingal to Boyer would carry the same number (odd) right through.

It is always difficult to be definite about traffic movements, since they are inclined to change so rapidly. However, the following is a reasonable indication of what I saw during the visit. I should start by saying that I found Hobart and Burnie to be the best places to photograph traffic, since trains were leaving and arriving at these locations at respectable hours. I should also repeat that I only saw some of the traffic, since naturally I was doing other things, as well as relying on information coming via the scanner (and it is quite easy to track the movements of most trains by this method). It may well have been possible to find some traffic around Launceston and the North-East, but I did not really go looking for it.

There were two trains leaving Hobart each afternoon, heading towards Western Junction. The first, 108 (a full freight), would leave Hobart Yard in the early part of the afternoon with two or three engines and a few trucks, build up to a full load at Derwent Park, and then head north. It is tabled to cross 113 coal train at Colebrook (about 1630 to 1700), or sometimes Parattah, and then works north, crossing 115 and 117 sometime during the night between Parattah and Western Junction. The second, 116 (again a full freight), leaves Hobart with two or three units and a few trucks, builds up at Derwent Park, waits for 113 at Tea Tree Loop, and continues into the night; I believe that 116 becomes 243 at Western Junction, and continues through to Burnie. These two trains seem to run Monday to Friday, though how far they go on Friday night is open to question.

I have already mentioned 113, which is a loaded coal train from Fingal/Duncan's Siding to Boyer, and does the crosses as noted; I suspect that it would be getting to Boyer in mid-evening. I know nothing about its return to Fingal, except that it probably returns as 120. I believe that it runs from Monday to Thursday, and does not run on Fridays.

Mention has been made of 115 and 117, which I believe to be full freights, but about which I know very little. As you can imagine, they leave the Launceston/Western Junction area in the early to mid evening, and travel south to Hobart. As far as I know, 117 is the South continuation of 250 from Burnie.

From what I can understand there are three trains normally running on the Western line. The first is

104/249 coal train from Fingal to South Burnie, which leaves Fingal in the late morning and reaches South Burnie in the mid-evening, does its shunting, and then returns east as 256/103. I don't know how often this train runs but I suspect that it is not daily. The second is 257, which is a freight/empty log train from East Tamar Junction to Burnie, continues to Wiltshire Junction as 241, returning as 242 right through to East Tamar Junction. As 242 it shunts as required, especially at Burnie and Devonport, becoming a full mixed freight. It seems to reach Burnie just before dawn, heads out to Wiltshire (and I believe that it does also carry superphosphate to places like Wynyard and Wiltshire Junction), returns to Burnie during mid-afternoon, and then heads east in the latter part of the afternoon (even though I did see it at Devonport as early as 1430). Once again, I don't know how often it does run, but I suspect that it is quite regular. The third is 243 freight to Burnie, returning as 250. It seems to arrive in Burnie in mid-morning (having already shunted at both Howth and Heybridge), and leaves in the latter part of the afternoon (around 1700 to 1800). One of its primary roles is to pick up the container traffic from the harbour. I believe that this train does run each weekday, though how far on Fridays is questionable, and I have heard that it is not unusual for 250 to run on Sunday afternoon, often as a rather heavy load (60 wagons plus). I have yet to mention the yo-yo which runs between Devonport and the Cement Siding at Railton. I believe that there are at least three return trips daily, with trains operating as required.

In the North-East and Bell Bay lines, I believe that there is at least one train daily on each line. 465/480 works to Bell Bay, whilst 467 or 471 works to Tonganah returning as 478. The service to Bell Bay is primarily designed to pick up the freight traffic from the harbour, though it is likely that 242 might continue through to Longreach with its load of logs. The service to Tonganah does operate during the day (it seemed to be leaving Scottsdale in the latter half of the morning, and getting back into East Tamar during mid-afternoon), and is designed to shunt the Clay Siding (clay is used in the manufacture of paper, and the clay tankers are taken through to South Burnie), as well as any log traffic from places like Blumont.

I should note that there could well be more services than those indicated above, but these are the main ones that I saw. I do have have a rough WTT, which does indicate additional trains, but there has been a downturn in traffic in the last year or so, especially the log traffic.

All traffic was being hauled by either two or three units, of either the Z, ZA, ZB, and the occasional ZC classes. There aren't too many ZC's in existence and it is thought that the vast majority will either be scrapped or cannibalised. All trains, with the possible exception of the coal traffic, seem to be built up to full loads, irrespective of the real purpose of the service.

If one is prepared to be patient, there are plenty of photographic opportunities, especially to the north of Hobart and in the Burnie/Penguin/Ulverstone/Devonport area. The scenery is quite spectacular around Campania/Colebrook/Parattah, and then there is the scenic coastal road between Penguin and Ulverstone. Whilst I cannot personally confirm the fact, I believe that Tasrail officials and employees are quite friendly and open to providing information on train movements and so forth.

The Emu Bay Railway

The EBR, as it is usually known, is based at Burnie, and runs for about 130 km into the heart of the West, all on narrow gauge. The railway is privately owned, presently by Pasminco, has its workshops and administration centre in Wilson Street, Burnie, and has had quite a colourful history, which has been documented in numerous books. Its primary purpose is the transport to Burnie, for shipping to refineries elsewhere, of ore concentrates from three loading points: Melba Flats at the far southern end of the line, owned by Mount Lyell Mining for loading of the concentrates from Mount Lyell's Queenstown operations; Primrose Siding, which is the loading point for Pasminco's operations around Rosebery; and the newest loading point at Hellyer which is the loading point for Aberfoyle's operations. Hellyer is located on an 11.5 km branchline which junctions with the main line at Moory Junction, some 68.5 km south of Burnie.

There are, from what I can understand, normally four trains daily working somewhere on the line. Each tends to be hauled by four units of the 10 and 11-classes which are Diesel Hydraulic units built by Walkers (1004 was actually built by the TGR, using parts from Walkers), with 18 or 19 X-class ore wagons in tow. The first train of the day ("1 Train"/"2 Train") is a return run to Melba Flats, leaving Burnie in the early hours (0400/0430), returning from Melba at around 1030, and back into Burnie in mid-afternoon. The second ("3 Train"/"4 Train") only goes to Hellyer, leaving Burnie at around 0800, and then following "2 Train" back into Burnie. I know nothing about the other two since they seem to run in the late afternoon (there seemed to be another one leaving in the late afternoon, around 1600), and into the evening. You need to remember that EBR only have 11 locos, and four are used at any one time.

Safeworking on the line seems to be slightly obscure, again with the radio being the primary source of communications. There are no crossing facilities between Burnie and Moory Junction, and I doubt that there is now all that much between Moory Junction and Primrose (there used to be loops at places like Hatfield and Boco). There is a triangle at Primrose, primarily used for loading purposes, whilst there are a couple of sidings at Rosebery. Whilst I was there, there were references to the suspension of the Train Staff & Ticket system between Melba Flats and Hatfield (just south of Moory Junction) and the use of "Special Authority" working between those locations. Crews on trains do indicate, on the radio, as they pass through each location, whether existing or historical, in both directions, and there seems to be a situation whereby trains pass from one location to the next based on this radio advice, as well as allowing maintenance crews etc the ability to occupy sections under the same arrangement. The interesting point is that "Train Control" (sometimes referred to by the title of the person concerned: Traffic Superintendent) only seems to operate during daylight hours (or the day shift, say from around 0730 till 1630), and that means that trains operate "in the dark" for a greater period of the time. I can well remember going down to Melba Flats on 1/2 Train on a previous trip to Burnie, and the guard was required to inform the Traffic Superintendent of his train's movements when the Traffic Superintendent finally came on duty.

Since the decline in facilities on the line, there isn't all that much left of real interest. There is a reasonable amount to see around Burnie (including the original station building), a little bit at Guildford (though there is not much of its previous glory when it was the junction for the line into Waratah), and then finally around Primrose and Rosebery. There are plenty of photographic opportunities, especially now with the new highway following the line right through from Burnie to near Guildford, with some good spots in the Ridgley, Highclere, Hampshire, Goodwood areas, and then further south towards Rosebery.

Other Points to See

Whilst in Tasmania, the following additional railway oriented locations are worth visiting:

Tasmanian Transport Museum at Glenorchy. Unfortunately its opening times are quite limited (Saturday, Sunday and Public Holidays from 1300 to 1700), but it does have a good array of signalling and safeworking equipment as well as all sorts of rail and general transport items. It also has steam rides on a short section of track;

Don River Railway, just west of Devonport. This is open daily and has steam train rides on a section of track back towards the site of Don Junction. It also has the old Devonport signal box, complete with its double-wire frame, Electric Train Staff machines, Train Staff & Ticket equipment, and other items of signalling interest; as well as other things you would expect in a rail museum;

Zeehan Pioneers Museum at Zeehan. Primarily a mining and pioneers' museum, but there is a significant display of railway equipment from the area, including steam locos.

Miner's Siding, Queenstown. Located on the site of the former Mount Lyell Mining & Railway Company's station and yard. There is an ABT loco showing the rack system.

There are a number of preserved locos around the state, and other tourist points, with a rail flavour, but most of these (such as "the Bush Mill Steam Railway" situated just near Port Arthur; or "the Ida Bay Railway", Lune River, in the far south of the Huon Valley) are only worth visiting if you happen to be in the area. Personally, I wouldn't go to them just for the sole purpose of visiting them.

I trust that the foregoing report will provide an insight into the present rail operations in Tasmania.

Update

Subsequent to the material that was used to write my original article on Tasmania, a number of additional facts have come to light, primarily due to the visit of a friend

to the island a few months after my visit. The following comments indicate these new facts.

It has been indicated that the service to Bell Bay is supposed to leave East Tamar Yard at 0400 and return at 1600, whilst the Scottsdale/Tongonah job is tabled to leave at 0700 and return at 1900. However, both of these are subject to severe fluctuations.

It seems that the Fingal/Duncan's Siding coal service may run as a combined service between Conara Junction and Fingal. On arrival at Conara Junction, the rear section of the train seems to cut off to form the train (113) to Boyer, whilst the front continues north to Western Junction, and eventually South Burnie.

There is no reason not to believe that the steam service does not run between Cadbury's and somewhere on the Derwent Valley line.

From a safeworking Control viewpoint, the State is divided into two sections (the northern half - the more hectic action - and the southern half), with two "Control Boards". The two "Boards" apparently only operate during daylight hours, with one at night or when traffic doesn't warrant the two "Boards". Cellular phone is a major facet of their communications, but there is a chart depicting "dark" areas where radio communication is impossible.

Safeworking on the EBR is a rather complex affair, and I am still not convinced that I have totally worked out what happens. They use a mixture of Train Staff & Ticket and Special Authority working, intermingled with each other. I did start to try and put it all down, but it does get very complicated, and there are just too many variations. It has to be noted that there is only a Traffic Control Officer on duty during what could be called "Daylight hours" or an extended "Day shift". Staff and Ticket working is in operation for the first two "Down" trains of the day, leaving at 0400 and 0800. Staff and Ticket working is then suspended, being replaced by Special Authority working. It seems that at this stage there is "long section" working in place, with the Staff locked away at Burnie. These two trains return mid-afternoon to Burnie under Special Authority working. Staff & Ticket working is then reinstated for the departure of the first "Down" train in the afternoon, at 1530, but on two sections, Burnie to Ridgley and Ridgley to Melba. It then starts to get very complicated due to the destination of this train, and a second leaving at 1900, except to say that there is often a cross at Ridgley. There are also conditional trains, which are variations of the main trains, and which do vary the destination and thus the safeworking patterns..

If anyone wants additional information of any facet of Tasmania rail operations, I will only be too happy to assist where I can.

SECTION ORDERS

Andrew Waugh

(Continued from Vol 16 No 3)

Overtaking

If a following train was to overtake a preceding train in the Division, the Control Officer had to notify the Guard of the first train, in writing, of the time and place where his train would be overtaken. As a check on the Control Officer, the Guard was required to independently check his timetable for possible overtaking movements.

If the first train lost time in the Division, the Guard was required to communicate with the Control Officer at the station in the rear by telephone in "ample time" to allow the Control Officer to alter the overtaking point. Contacting the Control Officer was to be done even if no overtaking movement had been scheduled, but the first train was being followed "within a reasonable time" by another train. There was no provision in the Rules to ensure the first Guard protected his train in the rear if it became so seriously delayed that it was in immediate danger of being overtaken.

The Guard of the first train had to ensure that his train was side-tracked at the designated station "in ample time to permit the following train a having a clear run through the Station." The "ample time" was not further defined, but if the Guard of the side-tracked train wished to foul the main line for shunting purposes he had to have cleared the main line at least 10 minutes before the following train was due to arrive. At an unattended crossing station, the first train was required to arrive into the loop and the Guard was to ensure that the points were set and locked for the main line.

The instructions concerning the following train consisted of one short paragraph. The Control Officer had to instruct both the Driver and Guard in writing of the station at which they were to overtake the preceding train. The written instructions were also required to state that they were "to approach such Station cautiously." In one sense these written instructions were misleading and potentially dangerous. As described previously, if the preceding train had lost time it could actually be overtaken at any station. Although the following train, under the "Notice of Train Ahead" was required to "proceed cautiously," it would have been understandable human nature if they proceeded at a normal speed on the assumption that the preceding train would be overtaken at the station named in their written instructions.

No mention is made in the rules of what was to happen to the sidetracked train when it had been overtaken. Presumably the Guard issued the Driver with a "Notice of Train Ahead" and the departure had to be delayed for 40 minutes.

Yet another lack in the rules is any guidance on what happened if the following train was delayed (or cancelled). Could the first train be issued with fresh instructions to advance it past the station where it had been instructed to wait? If so, and the following train had merely been delayed, the following train would have to also be issued with instructions detailing a new station where it was to overtake the first train.

Finally, the Section Orders issued to trains did not mention any other trains moving in the same direction, even if the train to which the Order was issued was overtaking another train or being overtaken itself. Section Orders only contained information on opposing trains.

Shunting Outside the Home Signal

Apparently the only change to the Section Order Rules occurred around the beginning of 1928 when instructions were issued for shunting outside the Home Signal at a Control Station

If no Section Order had been repeated back to the Control Station at the other end of the Division, the procedures used under the Staff and Ticket System were used. The Control Officer at the station where it was necessary to shunt outside the Home Signal would ask permission from the other Control Officer by sending a message with the code word 'Agne.' The other Control Officer would grant permission by responding with an 'Audi' message. No Section Order could then be issued to travel towards the station at which shunting was taking place until the Control Officer at that station had sent the 'Awak' message. This was not sent, of course, until the shunting train had returned to the station.

Shunting could still take place outside the Home Signal even if a Section Order had been repeated back to the other Control Station provided there was ample time for the shunting to be completed before the opposing train would arrive at the station. Additional protection was provided for the shunting train by the requirement that a Hand Signaller be sent 600 yards from the furthest point the shunting train would reach. At that location the Hand Signaller would place three detonators on the line and exhibit a danger signal. The detonators were not to be removed until the shunting had been completed.

Trains not passing through the Division

The Rules allowed a train to run to an unattended intermediate station in the Division and then return to the original Control Station. Whilst at the unattended station, the train could be overtaken or crossed.

Before the train could enter the Division, the Control Officer had to issue Section Orders for both the forward and return movements and was required to check that the Driver(s) and Guard had timetables for both journeys. He also had to give written instructions to the Guard of the train informing him of the trains (and their direction) which would pass his train while he was at the intermediate station. The Guard also had to be instructed to communicate with the Control Officer at a specified time prior to the time fixed for the departure of the return movement to allow an amended Section Order to be issued, if necessary.

When the train arrived at the unattended station it was to arrive into the Crossing Loop and the points set and secured for the main line. Immediately upon arrival, the Guard had to contact the Control Officers at the Control

Stations to receive any additional instructions and to check on the running of any other trains.

The side-tracked train could shunt on the main line if necessary. Before doing so, however, the movement had to be protected. Two detonators were placed 100 yards and three detonators 440 yards from the outer facing points at each end of the station. These detonators were not to be removed until the main line was again clear and the points set for the main line. No mention in the instructions was made of shunting at unattended stations equipped with home signals.

The Driver of any train which passed the side-tracked train at the intermediate station had to be instructed in writing at the Control Station where it entered the Division of the circumstances and was required to approach the station cautiously.

There were no instructions in the Rules for running to an *attended* intermediate station and returning.

Junctions in Divisions

There were two locations in Victoria where a branch line junctioned from the 'main' line in a Section Order Division. The first was at East Natimuk (located in the Horsham - Balmoral Division), junction for the Goroke line. The second was Heywood (located in the Braxholme - Portland North Division) where the Mount Gambier line junctioned. Operation of trains to and from the Goroke and Mount Gambier was not covered in the Section Order Rules, but was the subject of special instructions in the General Appendix. The instructions for both were similar, so those for Heywood will be described.

Mount Gambier trains originated and terminated at Portland North. Trains proceeding to Mount Gambier were issued with a normal Section Order at the Portland North Control Station. This Section Order was collected and cancelled by the Signaller at Heywood when the train arrived there. A Staff or Ticket was then issued for the Heywood to Mount Gambier section. The arrival of the train was telephoned or telegraphed to the Control Officer at Portland North.

When it was necessary to obtain a Section Order for a Mount Gambier train to proceed to Portland, the Signaller at Heywood would request the Control Officer at Portland North to issue a suitable Section Order. The Signaller, Heywood, was to be kept informed of train movements in the Division and was only to ask for a Section Order if no Up trains had left Portland North

The Signaller at Heywood first sent the following message:

Heywood
<i>Station-master, Portland North.</i>
The _____ train from Mt. Gambier Line is approaching my Station, and I require authority to issue a Section Order for it to Proceed from Heywood to Portland North
The last Up train which arrived here was _____ at _____.
The last Down train left here at _____.
Signed _____
Time _____
Date _____

towards Heywood since the last Up train mentioned in this message, and the last Down train had arrived complete, the Station-master at Portland North would reply with the following message:

Portland North
<i>Station-master, Heywood.</i>
Your application for authority to issue a Section Order for the _____ train from Mt. Gambier Line.
The last train for which Section Orders were issued to proceed towards Heywood left here at _____.
The last Down train arrived here at _____.
I authorise you to issue a Section Order* for the _____ train from Mt. Gambier Line to proceed to this Station, and I will not permit any train or engine to depart for Heywood until _____ train arrives here.
Signed _____ S.M.
Time _____
Date _____
*Section Orders "A" to be used by Heywood.

The Signaller at Heywood would then issue a Form "A" Section Order to the Mount Gambier train to run to Portland North. Until the Signaller had received notification from Portland North that the train had arrived complete at Portland North, he could not let another Down train depart from his station for Portland North.

The use of Form 'A' Section Orders for the branch train meant that all opposing trains had to run as per the various timetables. This must have been inconvenient, although perhaps not as seriously as might have been thought as there were no crossing stations between Heywood and Portland North, so crosses could only have been scheduled at Heywood.

The junction at Heywood was the cause of at least one close call. A Down train from Hamilton had been instructed to cross an Up Hamilton train at Heywood. Upon arrival at Heywood, the train crew found a Down Mount Gambier train and, assuming that this was the train they were supposed to cross, proceeded on their way to Portland North. The late running Up train was eventually encountered near Gorea. Fortunately, both trains were stopped before a collision occurred.

This incident illustrates two problems with the Section Order system. First, there was no method of reliably identifying trains. In the U.S. (and S.A.R.) systems, trains were always identified by the locomotives and hence trains could always be positively identified. Second, the junction allowed trains to be in the Division which were not mentioned on the Section Orders.

The solution adopted was to make Heywood a Control Station. East Natimuk, however, was operated under similar instructions to those presented in this section until the Section Order system was abolished.

Master Keys

The facing points at non crossing stations -- and many crossing stations -- within Divisions were secured by Staff locks. Master Keys were provided to unlock the points as trains did not carry Staffs. The Master Keys were normally kept at the Control Stations.

In the current Train Order system, all the Master Keys for a particular stretch of line are labelled identically and are only distinguished by unique numbers. Under the

For the Colac - Beech Forest Division, for example, four Master Keys were provided. Two were kept at Colac and lettered "Colac - Beech Forest" and numbered 1 and 2. The other two were kept at Beech Forest, also numbered 1 and 2, but lettered "Beech Forest - Colac". The potential for confusion is obvious.

It was important to be able to account for all of the Master Keys as this was the only method for ensuring that intermediate facing points were properly secured. The rules used to manage the movements of Master Keys under the Train Staff and Ticket system were also used under the Train Section Order System.

The Section Order of any train which was to carry a Master Key would be endorsed with the words "Master Key". A telegram would then be despatched to the Control Station stating that the train was carrying a Master Key and at which stations the train would work. Upon arrival at the other Control Station, the Control Officer would collect the Master Key and send a suitable telegram to the originating Control Station. All messages relating to the movement of Master Keys were recorded in the Train Register Book. In addition each Signalman would note in the Register Book which Keys he held each Saturday night. When not in use the Master Key was securely locked away.

In the event of there being any intermediate Block stations in the Division, copies of the telegrams would also be sent to the Officer-in-charge of each Block post. The Driver was required to show the Master Key to the Signalman at each Block Post who then notified the Control Officers and the Signalman at the previous Block post that he had sighted the Master Key.

It is implied in the rules that when a train was overtaken or crossed at a crossing station, the Master Key was shown to the Guard in charge of the signalling. The Guard then had to notify both Control Officers that the key was in the possession of the Driver.

Conclusion

There were a number of problems with Train Section Orders. These included:

1. Two people were responsible for deciding on crosses and issuing Section Orders. This division of responsibility lead to the possibility of conflicting Section Orders being issued. Fairly elaborate administrative procedures were adopted to reduce this possibility, but having one person, the Train Controller, issuing Train Orders is much safer.

2. The use of different forms, each using a unique ink and coloured paper combination, to indicate the different situations that might occur in the Division was an ingenious idea. However, it was inflexible as there was no way to combine the different orders. Which Section Order, for example, should be used if one opposing train had been cancelled and a second was running late?
3. The organization of crosses within a Division was very inflexible. A cross might be organised within a Division and appropriate Section Orders issued to the two trains. The two trains leave the Control Stations, but one train runs unexpectedly late. The other train arrives at the station where the cross is scheduled to take place, but a new order cannot be issued to move it further along the line because a new order cannot be issued to the late train.
4. The time interval for following trains was set at 40 minutes and could not be altered.
5. The rules for overtaking movements at an unattended station were lax when compared with the rules for crosses. Overtaking trains did not appear on the Section Orders. Although a fixed point for the overtake was set in the written instructions, the actual overtaking movement could occur at any station before this point if the first train lost time. However, if the following train lost time, it was not possible to advance the first train beyond the station named in the written instructions.
6. There was no way of positively identifying opposing trains, unlike the U.S. system where all trains were identified by the locomotives hauling it.
7. The rules are poorly drafted. Related information was often scattered amongst several unrelated Clauses and sub-clauses. Rules were included for some situations, but other similar situations were not covered. Sometimes the rules could not be completely carried out.

None of these problems were, perhaps, serious if all parties concerned acted with common sense. However Safeworking Rules should not be drafted assuming that people will act with common sense; for people won't. Although no serious accidents have been recorded as a result of Train Section Order working, this has probably more to do with the limited use made of the Rules than any inherent quality in the Rules.

ODDS & ENDS

Unless otherwise noted, the following odds and ends have been taken from the Station Order Books kept by the Superintendent of Safeworking from the mid 1920s to the mid 1970s. These books are now in the AFULE collection held at The University of Melbourne Archives.

Memo from R.F. Stanistreet, Acting District Superintendent, Ballarat, to SMs of all stations Donald and beyond. Dated 3 September 1945

Donald - Mildura

Special instructions for obtaining a relief engine in the event of failure of the engine of No 75 Mildura Passenger train on Sunday Morning.

In order that a relief engine may be worked from a depot where it is available, to the end of a section on which the engine of No 75 Mildura passenger train may become disabled on Sunday mornings, the following instructions must be observed:-

1. Failure of engine of No 75 between Donald and Woomelang.

(a) Method of obtaining relief between Donald and Woomelang.

When the fireman proceeds for relief as in accordance with Rule 16, App VII, Book of Rules and Regulations, he must, if he arrives at an intermediate station where telephone communication is available, communicate with the Signalman at the Staff station in advance (or rear) and advise him of the circumstances. He must then proceed on his way to the nearest staff station as in accordance with Rule 16, App VII.

In the event of the engine of No 75 Mildura Passenger Train becoming disabled between Donald and Woomelang, Rule 16, App VII must be complied with. The relief engine will be obtainable from Donald.

(b) If the engine of No 75 becomes disabled between Donald and Woomelang, the Officer-in-charge who is appraised of the circumstances must immediately communicate with Donald.

(2a) The Officer-in-charge at Donald must, when he has been apprised of an engine failure to No 75, immediately arrange for a Rolling Stock Officer or employe to take charge of engine preparations at Donald. He must satisfy himself that such arrangements are promptly taken in hand. The relief engine must, as soon as practicable, be despatched from Donald.

(3) The Signalmen at Donald, Watchem, Birchip, and Curyo are rostered on duty until No 75 arrives at Woomelang on Sunday mornings, and the Signalman at each of the above stations must ascertain whether No 75 has arrived at Woomelang before he goes off duty. A note of such advice must be entered in the TR book by each Signalman concerned.

4) Failure of engine of No 75 between Woomelang and Ouyen.

When the fireman proceeds for relief as in accordance with Rule 16, App VII, Book of Rules and Regulations, he must, if he arrives at an intermediate station where telephone communication is available, communicate with

the Signalman at the Staff station in advance (or rear) and advise him of the circumstances. He must then proceed on his way to the nearest staff station as in accordance with Rule 16, App VII.

The relief engine will be obtainable at Ouyen. The Signalman who receives advice of the failure from the Fireman of No 75 must therefore immediately communicate with Ouyen, and in receipt of such communication, the Officer-in-charge at Ouyen will be responsible for advising the Rolling Stock Officers or employe responsible for preparing the relief engine which must be given despatch as soon as possible.

5) Failure of Engine of No 75 between Ouyen and Mildura

Ouyen - Hattah. If the point of failure be nearer Ouyen than Hattah, the Fireman must proceed with the staff to Ouyen. If nearer to Hattah, the Guard must proceed with the staff to Hattah.

The Officer-in-charge must be in attendance at Ouyen from the time that No 75 leaves Woomelang until it departs from Carwarp. Before going off duty, he must ascertain from Redcliffs whether the train has left Carwarp. A note of such advice must be entered in the TR Book by each Signalman concerned.

Hattah - Carwarp. Should the point of failure be nearer Hattah than Carwarp, the Guard must proceed with the staff to Hattah, and arrange for the working of a relief engine from Ouyen.

Should, however, the point of failure be nearer to Carwarp, the Guard must proceed with the staff to Carwarp. The Guard must in each case arrange for SM Ouyen to be communicated with by telephone from the nearest intermediate station when on his way for relief, and the Fireman must protect the disabled train in accordance with Regulation 239 in the opposite direction to that which the Guard has proceeded.

When the Guard has proceeded to Carwarp, SM Ouyen must, when he has been apprised of the failure, immediately arrange to place a competent staff worker at Hattah.

Carwarp - Mildura. Should the failure occur when No 75 is between Carwarp and Redcliffs, and the nearest staff station be Carwarp, the Guard must proceed with the staff to Carwarp, and on arrival there take charge of the signalling arrangements. The Fireman must protect his train in the opposite direction. The Guard must arrange for SM Redcliffs to be communicated with by telephone from the nearest intermediate station to the Breakdown. SM Redcliffs must then arrange for relief from Mildura. Should the breakdown be nearer Redcliffs, the Fireman must proceed to Redcliffs and the Guard must arrange for SM Redcliffs to be communicated with by telephone from the nearest intermediate station.

In the event of No 75 becoming disabled between Redcliffs and Irymple, or Irymple and Mildura, relief must be obtained from Mildura. The Fireman must take the

staff to the nearest staff station as in accordance with Rule 15, App VII.

The Guard of No 75 on Sundays must be a Qualified Electric Staff Worker.

Note: Particular regard must be paid to the prompt preparation of the relief engine.

The Officer-in-charge at Donald, Ouyen, and Mildura must closely peruse these instructions and be in a position to readily communicate with a Rolling Stock Officer or employe who will take the engine arrangements in hand.

A pre-arranged procedure for getting in touch with such Officer or employe of the Rolling Stock Branch must be agreed upon and each Transportation Officer on night duty at the respective stations must be fully conversant with such arrangements.

Normally, when a railway line was under construction the new junction would be opened as a staff station. There is no record, however, of Nowingi being opened as a Staff station whilst the Millewa South line was under construction (or afterwards, for that matter). This leaves the problem of how trains entered and left the branch. This A circular illustrates one way.

A1766/29 dated Aug 12 1929

Commissioners Visit of Inspection of Mildura and Millewa Lines on Saturday, 24th August 1929 (S4170/29)

Hattah - Carwarp Section

In order to permit of Commissioners' Special being diverted to the New Line under construction to Millewa South at Nowingi, as shown on S.4170/29, the following instructions must be complied with:-

(a) The Signaller at Hattah must withdraw a Staff for the Commissioners' Special in the usual way; informing the Signaller at Carwarp of the circumstances.

The Staff must not be handed to the Driver, but retained in the Signaller's possession until he receives the message from the District Superintendent at Nowingi, as set out in clause (b). On arrival of the train at Hattah the Staff must be shown to the District Superintendent and Driver. The District Superintendent will then authorise the Driver to proceed as far as Nowingi.

(b) On arrival at Nowingi the District Superintendent will arrange for the train to be promptly sidetracked to the New Line, and when the Main Line is clear and the Master Key has been removed from the Staff Lock, the District Superintendent will send the following message to the Signaller at Hattah and Carwarp:

Signaller
Hattah + Carwarp

Nowingi
(Date) ___/___/___

The Commissioners' Special has been sidetracked at Nowingi. The Main Line is clear and the Master Key has been withdrawn from the Staff Lock and is in my possession

Signed _____
District Superintendent
Time _____

On receipt of this message the Signaller at Hattah will insert the Staff in the Instrument and send the "Cancelling" signal to Carwarp. A Staff for No 14 must then be obtained at Carwarp and that train signalled through the Section in the ordinary manner.

(c) When the Commissioners' Special arrives back at Nowingi, the District Superintendent must, before permitting the Main Line to be fouled, communicate with the Signaller at Hattah and Carwarp and obtain their assurance that no train is in the Section Hattah - Carwarp, and that Hattah has withdrawn a Staff for the Commissioners' train.

The message to be worded as follows

To District Superintendent, Station _____
Nowingi (Date) ___/___/___

There is no train in the Section between Hattah and Carwarp, and a Staff for the Commissioners' Special has been withdrawn at Hattah.

Signed _____
Signaller
Time _____

(d) The Commissioner's Special may then proceed to Carwarp, and on arrival complete at Carwarp, and the Master Key has been shown to the Signaller, the following message must be sent to Hattah:-

To Signaller, Hattah Carwarp,
(Date) ___/___/___

The Commissioners' Special for which Line Clear was accepted at _____ (Time) has arrived complete at my Station, and I have seen the Miniature Master Key held by the District Superintendent.

Signed _____
Signaller
Time _____

The Signaller at Hattah may then insert the Staff in the instrument and send the "Cancelling" Signal and ordinary Electric Staff Working resumed.

(e) The messages sent and received must be dealt with in accordance with Clause 3, page 142, General Appendix, and at Hattah and Carwarp must be attached to the Train Register Book and forwarded with the Book to the Block and Signal Inspector.