SOMERSAULT

NOVEMBER 2005
Vol 28, No 6

SIGNALLING RECORD SOCIETY OF VICTORIA INC

It has now been thirteen year since the mechanical signalling at Ballarat was replaced by light signals, and these fine examples of Victorian signalling were swept away. Post 21B applied to Up movements from No 1 Road (the main platform). The top arm (2) signalled moves to the Up main via the inner Crossover 56/62. The bottom arm (12) applied to moves to No 1A Road (the Down main) and thence to the Up main via the outer Crossover 68. The outer Crossover 68, and Home 12, were provided in 1974 when the Overland was regularly too long to fit in No 1 Road. The lefthand disc (39) applied to moves to 'Goods Yard Z' and thence to the goods yard roads, and the righthand disc (38) applied to moves to the Goods Track or the Loco Track. Note that Disc 38 is mounted in front of the post to provide a better view of the signal. These signals were originally mounted on Post 21, the wooden mast that can be seen behind Post 21B. The new batten mast was provided sometime between 1967 and 1974. Ballarat A signalbox can be seen in the background.

Society Contact Information

Published by the Signalling Record Society Victoria Inc (A0024029F)

EDITOR: Andrew Waugh, 7/92 Wellington St, Collingwood, VIC, 3066

Phone (03) 9495 6588 (AH), (03) 9348 5724 (BH), email andrew.waugh@gmail.com

PRESIDENT: David Langley, P.O. Box 8, Avenel, VIC, 3664,

Phone (03) 5796 2337 (AH), (03) 5792 2823 (BH)

SECRETARY and MEMBERSHIP OFFICER: Glenn Cumming,

19 Peace St, Glen Iris, VIC, 3146. Phone (03) 9885 8546 (AH), (03) 8600 8421 (BH)

NSW CONTACT: Bob Taaffe,

12 Western Crescent, Westleigh, NSW, 2120, Phone: (02) 9481 9994.

QUEENSLAND CONTACT: Phil Barker

PO Box 326, Samford, QLD, 4520, Phone: (07) 3289 7177, email: signal-1@bigpond.com

Unless articles use copyrighted information, articles may be reprinted without prior permission but acknowledgment is required. Opinions expressed in articles appearing in *SOMERSAULT* or supplements are not necessarily those of the S.R.S.V. (Inc.)

Minutes of Meeting held Friday September 16, 2005, at the Surrey Hills Neighbourhood Centre, 1 Bedford Avenue, Surrey Hills

Present: - N.Bamford, J.Black, W.Brook, B.Cleak, G.Cumming, M.Drew, G.Dunn, C.Gordon, G.Henderson, W.Johnston, K.Lambert, D.Langley, S.Malpass, B.McCurry, T.Murray, C.Rutledge, B.Sherry, R.Taaffe, R.Whitehead & R.Williams.

Apologies: - K.Ashman, J.Gordon, J.D.McLean, G.O'Flynn, T.Penn, P.Silva, F.Strik, S.Turnbull & A.Wheatland.

Visitors: - V.Findlay & G.Hampson.

The President, Mr. David Langley, took the chair & opened the meeting @ 20:12 hours.

Minutes of the July 2005 Meeting: – Accepted as published. S.Malpass / W.Brook. Carried.

Business Arising: – Nil.

Correspondence: – A number of faxes and letters had been sent to arrange the bus for the signal box tour.

A phone call from the Surrey Hills Neighbourhood Centre advised of an increase in the rent for the use of the meeting room.

Letters had been exchanged with the S.R.S.U.K. regarding missing issues of the U.K. "Signalling Record".

Various items of sundry correspondence were sent and received in relation to the organisation of the forth-coming signal box tour. B.Sherry / R.Williams. Carried.

Reports: – Tours. Glenn Cumming described the final arrangements for the Signal Box Tour to be held on Monday 19 September 2005 in the Geelong and Ballarat Districts. Many questions regarding the tour were answered.

Archives. David Langley and Bob Whitehead described a recent attempted break in at the Archives Room in Seymour. Minor damage to one door had been repaired. The white ant invasion was still being treated.

General Business: – Keith Lambert reported that automatic signal H334 between Canterbury – Chatham is to be converted to a controlled automatic signal as part of the Overlap Project. The signal will be controlled from Camberwell.

Keith Lambert advised that point renewals at Lyndhurst will result in the points for the Cement Siding being laid on concrete bearers.

Bob Whitehead reported on a recent derailment at Stony Point where the track spread underneath the train.

Bob Whitehead noted that Kent Donaldson, formerly of Railcorp, was now the Chief Operating Officer.

Bob Taaffe reported that Sefton Park Signal Box in New South Wales is to be abolished at the end of January 2006 and will be replaced by remote control from Sydenham. The power frame will be relocated to the Power House Museum.

Bob Taaffe advised that work on the duplication of the Cronulla Line is to commence soon.

Bob Taaffe noted that during the construction of the new Platform No.5 at Hornsby, the former signal box is to remain untouched because of its heritage classification.

Graeme Henderson described arrangements to celebrate the 150th Anniversary of railways in New South Wales.

Chris Gordon reported that a new timetable for Marshall would come into effect on Monday 26 September 2006. It is believed that Train Staff and Ticket working will be provided between South Geelong – Marshall.

Bob Whitehead reported that the straight track over the road over bridge at Craigieburn had been returned to service.

Graeme Henderson described the arrangements following the introduction of the new timetable in Sydney.

Glenn Cumming thanked Graeme Henderson for his work with the August 2005 issue of Australian Railway History which featured the Armstrong article by Andrew Waugh accompanied by photographs from the collections of Keith Lambert and Chris Wurr.

Steve Malpass noted that the banner signal at Footscray was still on trial.

Glenn Cumming asked when the shut down of the Ballarat Line was to commence. Colin Rutledge answered Saturday 1st October 2005.

Chris Gordon advised that the control panel at Ballarat will be relocated to another room over the first weekend in October 2005.

Chris Gordon noted that Sunbury – Kyneton is due to be returned to service on Monday 10th October 2005.

Chris Gordon reported that the re – signalling of Eltham – Hurstbridge is now a priority because of "safety concerns".

Chris Gordon described "active speed boards" that are provided where speed drops from 160 km/h to 130 km/h.

Colin Rutledge outlined some design features of the RFR projects involving signals protecting level crossings with different approach lengths for level crossings.

Chris Gordon advised that work will commence in November 2005 at Warragul to re – signal in the Up direction to Pakenham.

Chris Gordon reported that additional signals are to be provided at Traralgon.

Syllabus Item: - The President introduced member Bob Taaffe to present the Syllabus Item.

Bob presented a selection of images slides from his collection featuring material from a recent trip over-seas including visits to Thailand, Russia and Europe; with a bias towards railway signalling (of course).

At the completion of the Syllabus Item, The President thanked Bob for the entertainment & this was followed by acclamation from those present.

Meeting closed at 22:14 hours.

The next meeting will be on Friday 18 November, 2005 at the Surrey Hills Neighbourhood Centre, Bedford Avenue, Surrey Hill, commencing at 20:00 hours (8.00pm).

SIGNALLING ALTERATIONS

The following alterations were published in WN 32/05 to WN 38/05 and ETRB A circulars. The alterations have been edited to conserve space. Dates in parenthesis are the dates of publication, which may not be the date of the alteration.

05.08.2005 **Kilmore East** (SW 167/05, WN 32/05)

Commencing Friday, 5.8., the refuge siding was booked out of service.

09.08.2005 **Kooyong** (SW 203/05, WN 32/05)

Between Monday, 8.8, and Wednesday, 10.8., the existing mechanical wickets were replaced by motor operated pedestrian gates. These are worked by levers 12 and 13 in the signalbox.

12.08.2005 **Spencer Street** (SW 207/05, WN 32/05)

On Friday, 12.8., the co-acting signal for Home 128 was replaced by a LED (R4 type) unit.

13.08.2005 **Victoria Park** (SW 208/05, WN 32/05)

On Saturday, 13.8., additional track circuits were provided as part of the turnout fouling project.

16.08.2005 **Spencer Street** (SW 211 & 215/05, WN 33/05)

On Tuesday, 16.8., theatre LED route indicators were provided on Homes 536 (No 8 Track) and 548 (No 8A Track). The indicator on Home 536 will display 'R' when the route is set to the dead end or to No 8 South track, and 'M' for all other movements. The indicator on Home 548 will display 'R' when the route is set to the dead end of No 8 Track or to No 8 South track, and 'M' for all other movements. (Note that this description, taken from the WN does not make any sense as the only routes past these Homes are to the dead end or No 8 South Track.) Amend diagram 29/05.

17.08.2005 **Spencer Street** (SW 214/05, WN 33/05)

On Wednesday, 17.8., a co-acting signal was provided for Home 121 (No 9 Track).

17.08.2005 **Lake Boga** (SW 168/05, WN 32/05)

On Wednesday, 17.8., Flashing Lights were provided at Old Lalbert Rd (329.848 km) and Station Street (330.420 km) at each end of Lake Boga. The flashing lights are operated by level crossing predictors. 5P keyswitches are provided at the main line points to control the flashing light signals during shunting (note that the siding remains booked out as per SW 82/05). Boards lettered 'Shunting trains are not to enter the crossing unless flashing lights are operating' are provided near the main line points.

21.08.2005 **Clifton Hill** (SW 216/05, WN 33/05)

On Sunday, 21.8., additional track circuits were provided as part of the turnout fouling project.

(23.08.2005) **Geelong - Maitland Street Sidings** (SW 175/05, WN 32/05)

Nos 4 & 5 Roads were restored to use.

27.08.2005 **Keon Park - Epping** (SW 225 & 226/05, WN 34/05)

On Saturday, 27.8., additional track circuits were provided as part of the turnout fouling project.

28.08.2005 **South Geelong** (SW 176/05, WN 33/05)

On Sunday, 28.8., the level crossing at Wood street on the Down side of the station was closed and replaced by two level crossings which form part of a roundabout. One leg of the roundabout is 80 metres in the Up direction of the former crossing (74.911 km) and the other 18 metres in the Down direction (75.721 km). Boom barriers were provided at both crossings and will operate simultaneously.

28.08.2005 **Craigieburn** (TS 36/05, WN 34/05)

On Sunday, 28.8., the Up line was restored to its former alignment over the new bridge.

28.08.2005 **Camberwell** (SW 228/05 & 237/05, WN 34/05)

On Sunday, 28.8., the control panel faceplate was replaced in preparation for future signal overlap project works. A new button, CAM345 was provided but will not be commissioned.

28.08.2005 **Riversdale** (SW 229/05, WN 34/05)

On Sunday, 28.8., the co-acting signal on Up Home 11 was replaced by a 40 dot LED type.

28.08.2005 **Chelsea - Bonbeach** (SW231/05, WN 34/05)

On Sunday, 28.8., pedestrian gates were provided at the Wellwood Rd/Broadway pedestrian crossing (34.385 km)

04.09.2005 **Craigieburn** (TS 37/05, WN 35/05)

On Sunday, 4.9., the Down line was restored to its former alignment over the new bridge.

07.09.2005 **Laverton** (SW 246/05, WN 36/05)

On Wednesday, 7.9., Points 5 (at the Up end leading to No 3 Road) were booked out of service due to rust. The Down end points to No 3 Road (Points 9) had been previously booked out of service.

11.09.2005 **Dandenong - Cranbourne** (SW 244/05, WN 36/05)

On Sunday, 11.9., alterations were made to the operation of certain signals. At Lyndbrook Loop, Up Automatic LBK683 and Down Automatic LBK680 are now approach cleared when the Home signal in advance protecting the single line (Up Home LBK 781 and Down Home LBK 782 respectively) is at stop. A 200 metre timing track circuit is provided in the rear of each automatic signal and the signal will clear when the track circuit has been occupied for 9 seconds. At Cranbourne the approach clearing of Down Home CBE790 was removed. Down Automatic CBE682 now requires Points 690 to be set for a clear road before it will display a proceed indication.

11.09.2005 **Brighton Beach - Hampton** (SW 242/05, WN 36/05)

On Sunday, 11.9., pedestrian gates were provided at Holyrood Street pedestrian crossing (16.824 km).

(13.09.2005) **Footscray** (SW 245/05, WN 36/05)

The trial of the banner indicator was extended to Sunday, 25. 9.

17.09.2005 **Ringwood** (SW 252/05, WN 37/05)

On Sunday, 17.9., additional track circuits 233T and 324T were provided as part of the turnout fouling project.

18.09.2005 **Ringwood** (SW 253/05, WN 37/05)

On Sunday, 17.9., additional track circuits 215T, 325T and 334T were provided as part of the turnout fouling project.

19.09.2005 **Spencer Street** (SW 223/05, WN 37/05)

From Monday, 19.9., absolute occupation was granted for No 7 South Track and the dead end of No 8 Track. No 7 South Track will be baulked 40 metres on the Up side of Points 305U. Home 312 will now only display a Low Speed aspect, and Homes 153, 154, or 155 will only display a Low Speed aspect for moves to No 7 South Track. No 8 Track will be baulked on the Up side of Points 435D. Homes 536 and 548 will be prevented from setting a route towards the dead end.

22.09.2005 **Morwell** (SW 183/05, WN 36/05)

Between Monday, 19.9, and Thursday, 22.9., the plunger locked crossover leading to No 2 Road at the Down end and the crossover leading to the SEC Siding were spiked normal. The auxiliary frame was abolished. The disc on Post 8 was secured at Stop. The Home on Post 8 and the Discs on Posts 9 and 10 remain in use and are worked from the platform. Amend Diagram 6/94.

01.10.2005 **Sunshine - Ballarat** (SW 191/05, WN 38/05)

From 0400 hours on Saturday, 1.10., the line between Sunshine and Ballarat will be closed for RFR works. At Sunshine Points 625, 635, and 655 will be secured normal and Homes SUE743 and SUE753 secured at Stop. At Ballarat the line was baulked at Home 54 and that Home secured at Stop.

The ATC sections Sunshine - Deer Park - Deer Park West (both North and South lines) - Rockbank Loop - Melton - Parwan Loop - Bacchus Marsh - Bank Box Loop - Bungaree Loop - Ballarat were abolished.

In summary, between Sunshine and Deer Park West most of the existing signalling will be secured at Stop. At Rockbank, Melton, Bacchus Marsh, and Bungaree Loop the signals and points were abolished. At Parwan and Bank Box Loops the signalling was taken out of use. All Automatic signals on the line beyond Deer Park West were abolished.

(Continued on Page 108)

CARNEGIE (ROSSTOWN).

David Langley.

Yet again we take a look at one of the stations on the suburban portion of the eastern main line, this time Carnegie. The line between South Yarra and Oakleigh was opened on 2 April 1879 and the only intermediate station was Caulfield.

On 7 May 1879 all the present stations between South Yarra and Caulfield were opened, and, one week later, both Carnegie and Murrumbeena were opened. Carnegie was then known as Rosstown but was renamed Carnegie on 1 May 1909. Ross had been a major land owner in the area, and built a railway line between Elsternwick and Oakleigh that carried one train. Thomas O'Callaghan's book "Names of Victorian Railway Stations" says that Carnegie was named "in honour of the American Scottish millionaire, who had displayed great liberality in his gifts of libraries to various places."

By December 1881 Rosstown had a carriage dock and a cattle race but it was not shown as open for goods of any description. Safeworking still appeared to be timetable working on the single line between Caulfield and Oakleigh but was staff and ticket beyond Oakleigh. And this probably worked quite fine with trains meeting each other at recognised crossing stations viz. Caulfield and Oakleigh. The morning Through Mixed from Princes Bridge to Sale (due 1.45pm) is shown meeting No 1 up suburban train from Berwick at Oakleigh as well as overtaking No 3 down Warragul goods there.

But in February 1882, a new train is put on, the 8am ex Oakleigh, and this train is clearly shown waiting at Rosstown from 8.6 til 8.9 for No 3 down Sale passenger train, which departed Princes Bridge at 7.40am. We know nothing about a loop being provided so did the suburban train go into the carriage dock for the cross? The down Sale continued to cross the up Berwick suburban train at Oakleigh as well as overtaking the down goods. So this is an example of regular crosses occurring within the non-token safeworking area. There were, of course, other places where this took place but they did get into a bit of bother near Hawthorn on the evening of 2 December 1882 and this bit of bother started the demise of timetable working in the suburban area. It is interesting to note that practically all the expanding country system had the staff and ticket system applied from opening, but it was apparently regarded as too slow for slick suburban operations. Well the Hawthorn incident fixed that notion up.

The December 1882 WTT now shows Caulfield as being a staff station working with Oakleigh to the east and Rosstown is certainly NOT shown as a staff station but the cross between No 1 up and No 4 down still took place, so the rules as written by Rafferty seemed to be in daily use here. A note at the bottom of page 26 shows that "No 3 Down runs independent of Staff Regulations between Caulfield and Oakleigh", whilst a note on page 29 showed that No 1 Up did the same thing and thus they managed to have a cross in the middle of the staff section.

These arrangements came to a halt the following year when, on 7 February 1883, the line was duplicated between Caulfield and Oakleigh, but we are not told what the safeworking system became. Block telegraph working was not established between Caulfield and Oakleigh for another five years so I rather feel that it was time interval working. At least you weren't going to have a head-on prang.

The October 1884 WTT makes reference for the first time to block working for up trains only between Armadale and South Yarra, but nowhere else on the Oakleigh suburban line. There was also some telegraph block (using the morse instruments) over the hilly sections between Bunyip and Darnum, and again between Moe and Traralgon.

The WTT dated 3 December 1885, makes the first mention of Winter's block telegraph on the Gippsland line, and shows the sections to be South Yarra-Hawksburn-Toorak-Armadale-Malvern-Caulfield. A note in the January 1887 WTT makes reference to the fact that "the block system is not enforced between Hawksburn and Caulfield from departure of last passenger train each night til 6am the following day." This was reduced to between Hawksburn and Armadale by the December 1887 WTT. I draw the conclusion that these arrangements were directly related to the provision of interlocked gates at these stations, Toorak being the last set of gates provided on this stretch of line.

The 1885 WTT also shows Rosstown as now being open for "goods not requiring shed accommodation, such as sawn timber, firewood, stone, oats, chaff. &c., in truck loads, at owners risk." We are still none the wiser as to siding accommodation except for the previously mentioned car dock but the cattle race is no longer shown so that may have been a typographical error.

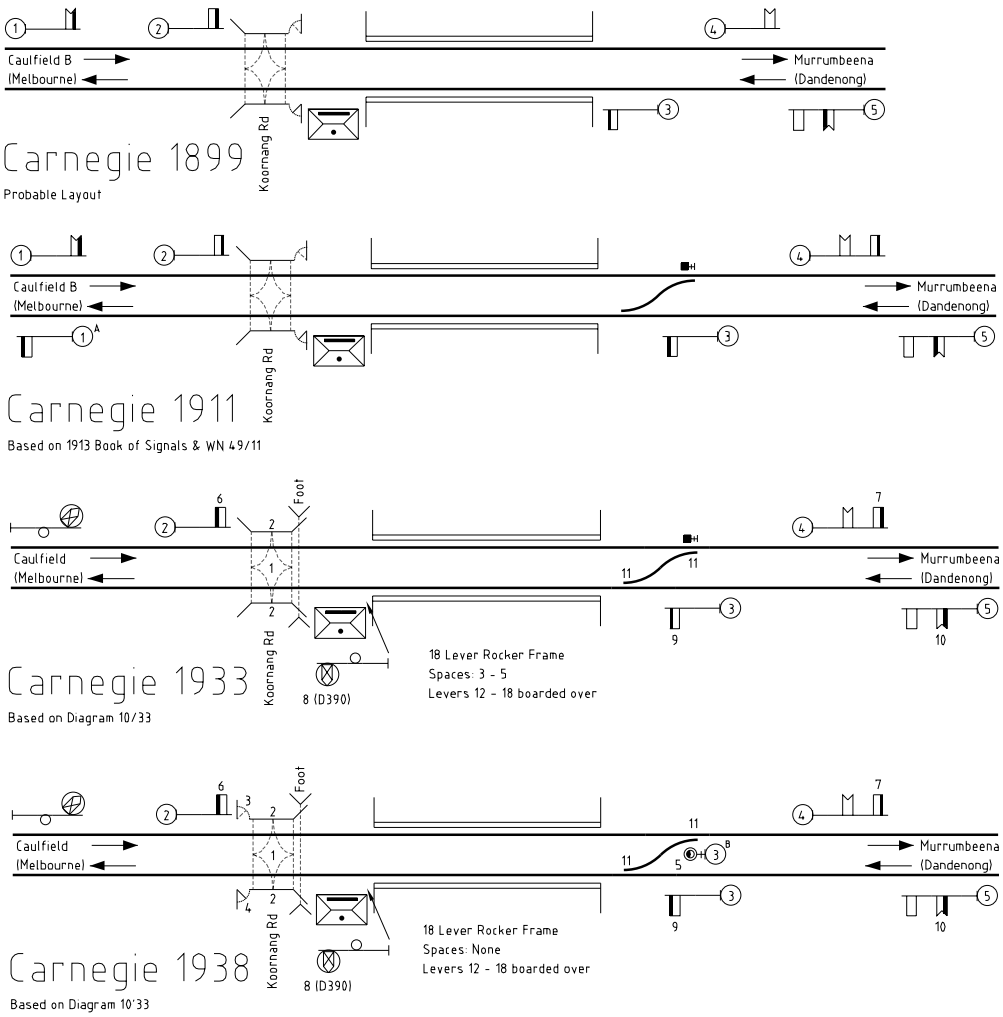
Winter's block telegraph system was extended to Oakleigh on 18 January 1888 with the sections being Caulfield-Rosstown-Murrumbeena-Oakleigh. Circular C62 of 1888 shows the block sections at night now to be South Yarra-Armadale-Malvern-Caulfield B Box-Oakleigh so we can deduce that Hawksburn, Toorak, Caulfield A, Rosstown and Murrumbeena had block switches provided. This information is also shown in the WTT dated 8 May 1888. Full time block working was resumed about 1891 and is shown thus in the WTT dated 24 March 1891.

I guess that signals were in use at Rosstown, and, presumably, we had the usual situation of distant, home and starting each way and worked from quadrant levers probably located on the up platform adjacent to the Stationmaster's office.

The first interlocking was an 18 lever machine, with 14 levers working, provided on 26 March 1890. We know that gates were provided, and, although no mention is made about wicket gates, in 1899 we are told that there were two wicket gates so we can assume that they were there from the beginning. As for the purpose of the remaining levers alas I cannot say unless someone can come up with a diagram for the period.

Probably in effort to reduce costs during the depression of the 1890s, Rosstown was closed as a block post on 26 November 1894. The block section became Caulfield B - Murrumbeena and the up and down starting signals were placed out of use. It appears that the gates remained in operation and so someone would be needed to swing them, but no doubt, gatekeepers on lower wages than station staff were appointed. On the Reservoir line, when these sort of cuts were made, the gates were made hand operated and the signalling of trains performed by station staff with quadrant levers replacing the signal boxes. But that didn't happen here at Rosstown.

On 21 February 1895, most signals and all points were disconnected from the frame (the Weekly Notice, perhaps belatedly notified the abolition of the carriage dock in December 1895). Now Rosstown box had eight working levers and 10 spare levers. Shortly afterwards, on a date that has not been recorded, the 18 lever frame was reduced to one of 10 levers by simply boarding over levers 11-18. When the



new interlocking register was commenced on 1 July 1899, we now learn that Rosstown had 4 signals, 2 wicket gates and 1 set of gates (i.e. stops lever and gate wheel), which accounts for the eight working levers with two spares.

A minor change occurred in December 1908 when the down home signal was moved 40 yards further out. A more substantial change occurred on 1 May 1909 when the name was changed to Carnegie. One month later, in June 1909, Carnegie was reopened as a block post without starting signals according to weekly notice No 23 of 1909. This suggests that the previous starting signals had been removed and therefore needed to be replaced rather than just merely brought back into service when block working was resumed. Carnegie was required to obtain line clear from the box in advance before allowing the approaching train to draw inside the home signals to stand at the platform. Normal block working could be resorted to on 15 June 1909 when up and down starting signals were provided. The diagram above is based on the description in the 1913 Book of Signals (which references Diagram 317/10). The placing of the Up Starting is unusual, but WN 25/09 states that it was 325 yards from the Signalbox. There were now no spare levers in the frame, remembering that levers 11-18 were boarded over and the interlocking register regarded Carnegie as having a 10 lever machine.

On 1 November 1911, a crossover was provided at the down end of the station, and to work this crossover, one of the boarded over levers – No 11 - was un-boarded and brought into service. Quite why this crossover was provided is a bit of a mystery, as there are no goods sidings and a perusal of the nearest timetable I have doesn't show any clever moves at Carnegie. Perhaps they needed it for single line working from time to time.

On 12 November 1923, the wicket gates were removed due to the construction of the subway on the platform side of the level crossing. Wicket gates were again provided on 31 May 1936 but this time they were located on the Melbourne side of the level crossing.

In between these changes to the wickets gates, three position signals had been provided from Caulfield on 26 November 1933. This was in conjunction with the provision of the power signal box at Caulfield which replaced the two mechanical boxes. The story goes that auto signals were provided to avoid having a double line block instrument in the Caulfield signal box - you cannot have the ancient in with the modern. Maybe someone objected to this sort of thing after Dandenong was resignalled in 1929 with a power frame. Perhaps they shouldn't have worried because we quite happily mounted Winter's block instruments in with SSI equipment at Newport and Sydenham.

With the provision of three position signals from Caulfield, the down distant and up starting signals were removed. Lever 5 became spare but lever 8 was altered to control D390 signal located at the up end of the up platform and which protected the gates. The locking sketch shows that signal replacers were provided on signals 6 and 10 which is in line with Victorian policy at stations where three position signalling junctions with two position signalling.

Ground disc No 3B, governing moves from the down line to the up line through No 11 crossover, was provided on 31 May 1938. A curious addition until you peruse the 1938 suburban working timetable, and you discover a Carnegie local train. A suburban train came on at Flinders Street at 6.54am and arrived at Carnegie at 7.15am. At about 7.18am, the 6.54am up Dandenong suburban train, which had stopped all stations from Dandenong to Murrumbeena,

ran express through Carnegie and then to Richmond after stopping at Caulfield. The local then crossed over to the up line and followed the express, departing at 7.22am for an all stations run to Flinders Street. There are no other Carnegie locals so it looks like the signal was provided to save having to flag the train through the crossover. But, to provide a express run from Carnegie for the up Dandenong, makes it look as though we actually were running trains for the public, something that we seem not to do in later years. This terminating train was the subject of a special instruction to the Signalmen on 24 June 1938:

Shunting of 7.15 am down local arrival

When crew has changed ends at down platform it will be the duty of the signalman to instruct the driver that he must not move the train without first receiving his (the signalman's) permission to do so. [...]

Three position signalling was extended to Oakleigh on 8 December 1940. Just prior to this date, the crossover and dwarf signal were relocated 49 yards and 32 yards out respectively, but the reason why it was done has not been recorded; maybe they were extending the platforms or maybe it had something to do with the position of the new signals. With these new signals, came a minor change to the working levers. Levers 7 and 10 were made spare but the new signal at the down end of the platform was given lever 6, previously the down home (arrival) signal and so lever 5 was brought back into use to work automatic signal D387.

On 21 May 1943 motor 331M derailed at No 11 points when the train was being shunted from the down line to the up line. This occasioned some unofficial tests by the signalman who was up before the inquiry. The Block and Signal Inspector takes up the tale:

At 12.20 am today, I was advised bythe train despatcher that the signalman at Carnegie, when making tests, was able to get No 11 point lever to the reverse position while the 'N' and 'R' indications were showing.

A check on this statement disclosed that this could only be done under certain conditions and that the signalman (Ryan), who is to attend an inquiry today concerning a derailment at No 11 Pts at Carnegie, inserted a small piece of wood between the blade and the stock rail. This enabled him to fully reverse No 11 Lever whilst the 'N' and 'R' lights were showing, also to operate No 12 Dwarf signal lever and place No 12 Dwarf signal at proceed.

I visited Carnegie signal box at 6 am and made several tests.

The 'N' and 'R' lights both came up when the lever was moved a few inches out of the notch from either position. The dual indication was maintained until the lever passed a point about one inch from 'Normal' in the Normal direction and 1 3/4" from Reverse in the reverse direction.

When the lever was fully normal or fully reverse, the correct indication and one indication only showed.

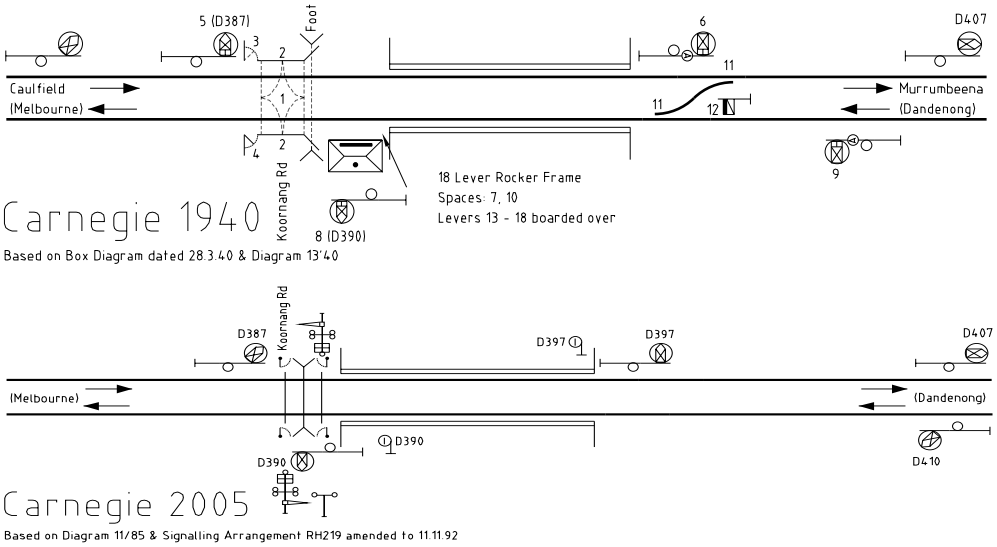
I then arranged for operating porter Bruce to place a small piece of 1/2" hardwood between the blade and the stock rail and operated No 11 lever. The pull was not noticably hard and I was able to fully reverse the lever whilst the 'N' and 'R' lights were showing. I then operated No 12 dwarf signal lever and got a green light indication. The indications were then showing 'N', 'R' and green light over No 12 lever.

In order to guard against trains being signalled over these points whilst a dual indication is showning, I am issuing suitable instructions to the signalmen at Carnegie. Copies of instructions, also the piece of wood used for test, attached herewith.

Unfortunately, the instructions were not attached, but we can guess that they instructed the signalman to observe the indicators for No 11 points when operating the point lever. This didn't appear to save signalman Ryan, as the cause of the accident was listed as 'signalman's error' in the inquiry summary, but perhaps it was enough to reduce his punishment. Clearly as a result of the derailment, the crossover was provided with a signal detector on 8 March 1944 and this indicates that whilst the dwarf signal was a three position one for the purpose of the rules, it was actually wire worked and thus could only show two aspects. The crossover was relocated again around May 1954.

A further perusal through the timetables reveals that the terminating train had disappeared by 1959, being extended to start from Dandenong whilst the down had become an Oakleigh local. The 6.52am up Dandenong continued to run express through Carnegie but this had disappeared by the 1963 WTT, the next one in my collection. As a consequence, the crossover and dwarf signal were abolished on 11 October 1966.

The box itself lasted only a further eight months, being abolished on 4 June 1967. The interlocked gates at Koornang



Road were replaced by boom barriers. The only significant change since was on 22 December 1992 when pedestrian gates were provided at Koornang Road. Keyswitches were provided on the Up platform by 1974, and on the Down platform in 1985. The Down keyswitch is provided to hold Automatic D397 at stop as the Down platform is in the holding section for the Murrumbeena Road boom barriers.

The signals used beyond Carnegie were GRS searchlights, the first large scale use of these signals in Victoria. When the Caulfield resignalling took place in 1933, three position signals were also provided to Glenhuntly and it is believed that these were Style R type signals. The question now is whether style R signals were provided between Caulfield and Carnegie in 1933 and were replaced in 1940 by GRS searchlights? Signal 23 at Caulfield was a GRS searchlight and may have been provided from the 1933 resignalling, so it is possible that the signals to Carnegie were searchlights. Maybe someone has some information about this?

MURRUMBEENA

David Langley.

The next station in the down direction from Carnegie is Murrumbeena and is located at 14.4km from Spencer Street. The marked mileage of Murrumbeena is 8 miles 16 chains and 54 links. The line between South Yarra and Oakleigh was opened on 2 April 1879 and the only intermediate station was Caulfield. On 14 May 1879, both Carnegie and Murrumbeena were opened for traffic. According to the book "Names of Victorian Railway Stations" (O'Callaghan 1918), the name Murrumbeena is a corruption of Mirambeena and is an aboriginal name meaning amongst other things – "belonging to you".

The single line was duplicated on 7 February 1883 but it was another five years before Murrumbeena appeared to take any part in the safeworking of trains. On 18 January, Winter's Block was established between Caulfield B and Oakleigh with both Rosstown (later Carnegie) and Murrumbeena being made block posts. The signals at this stage would have been worked by quadrant levers located on the up platform, but on 26 March 1890 a signal box was provided at the Melbourne end of the station. If an old locking sketch is to be believed, it was quite some distance off the up end of the up platform. In fact the locking sketch shows a carriage dock between the signal box and the station (refer to the diagram below).

This signal box has an 18 lever rocker machine and worked six signals, four sets of points, two pairs of wicket gates and, the gates stops and wheel for the gates over Murrumbeena Road. That left four spares although in the usual Victorian way, they would have been spaces and not spare levers.

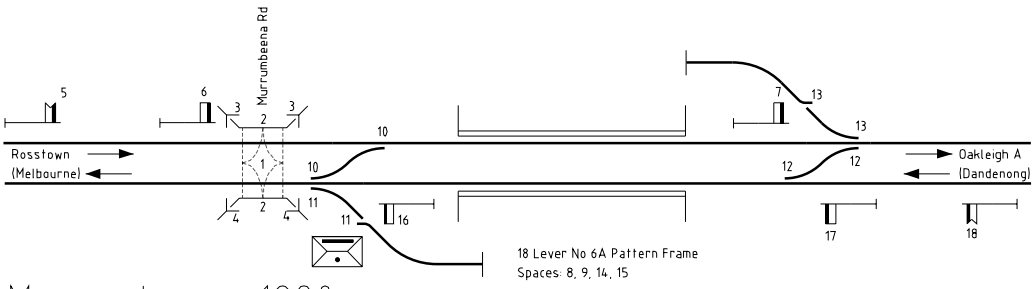
Murrumbeena was closed as a block post on 9 July 1896 and this might have been a direct result of the need to cut back expenses during the depression of the 1890's. Train numbers would have been down and the need for all the block posts (and staff stations) was reduced. The closure was not for long because the block was re-established again at Murrumbeena on 13 June 1898 with the sections becoming Caulfield B Box-Murrumbeena-Oakleigh A Box. Like Rosstown, I assume that a gatekeeper worked the gates at Murrumbeena in the meantime. I recall that Edithvale was a similar arrangement – switching the block but still having interlocked gates – and there the normal station staff worked the gates so I don't really know what that achieved. I visited a friend of mine who was SM at Edithvale one night and it was quite strange working the gates but not the block.

The interlocking register shows that alterations were carried out on 20 July 1896 in connection with 'new platform', perhaps the station was rebuilt nearer Murrumbeena Road and the platforms lengthened. The up side siding disappeared at this time along with both crossover roads between the up and down main lines. A perusal of working timetables for this period show that no passenger trains terminated at Murrumbeena, and it is hard to work out just why the crossovers were needed unless an up goods train needed to run round to shunt the down side siding. The up side siding would have had to have been very short and was probably never used for goods traffic.

The new interlocking register of 1899 shows that Murrumbeena's frame had been reduced to one of 11 levers and we know that it was done just like Rosstown, the spaces 12-18 were simply boarded over. A later locking sketch I have dated 19 June 1941 shows the remark 'levers and floor plates removed'. Murrumbeena was now just six signals (three in each direction), a siding off the down line and a full set of wickets and gates at Murrumbeena Road, leaving no spares in the frame. An educated guess on the layout at Murrumbeena, based on the locking sketches and our knowledge of Victorian practice, would be as shown in the diagram below with levers 5, 6 & 7 working the down signals and 9, 10 and 11 the up signals.

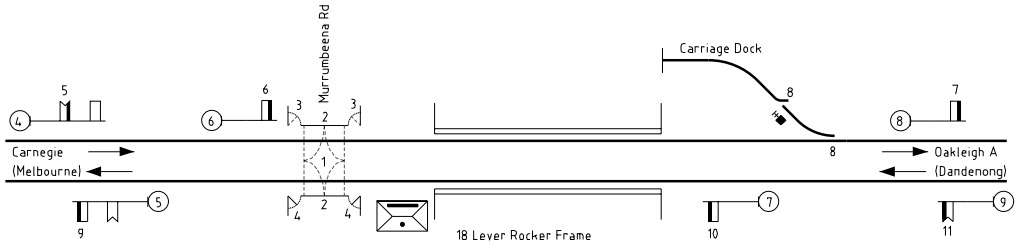
A minor alteration occurred on 7 August 1922 when the down home signal – post 6 – was moved 60 feet further out from the station, but why that would be necessary is anyone's guess. Another minor alteration was the wiring of the goods siding which was published in A3088/25 dated 11 December 1925.

On 30 December 1927 wicket gates were provided on the up side of the level crossing. The original locking sketch



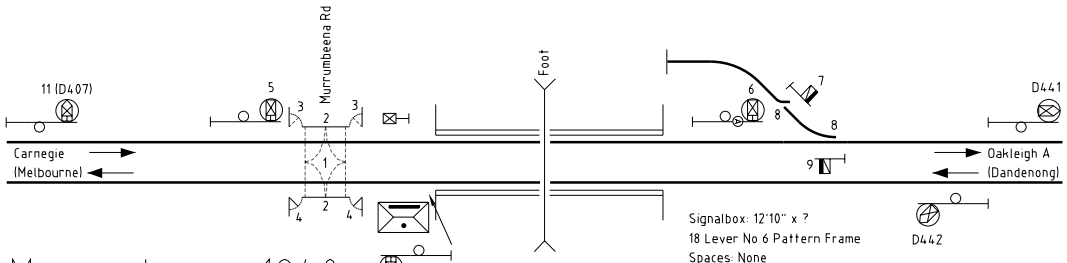
Murrumbeena 1890

Based on McKenzie and Holland Locking Sketch dated 23.12.89



Murrumbeena 1910

Based on 1913 Book of Signals & Diagram 10/33



Murrumbeena 1940

Based on Locking Sketch A611 amended to 1.10.72, Box Diagram dated 28.3.40, & Diagram 13'40

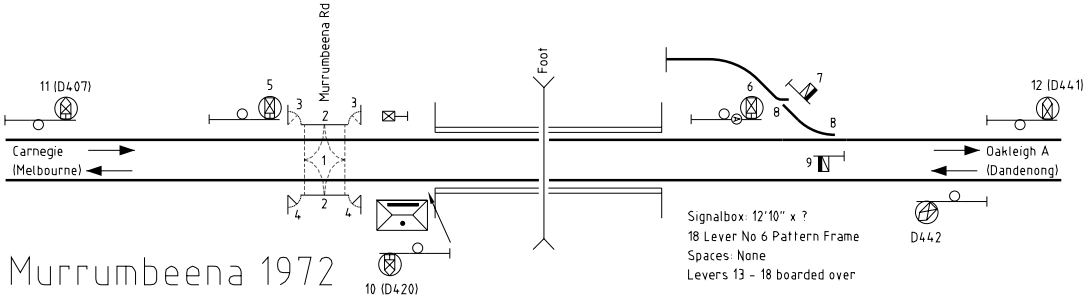
show four wicket gates and the sketch dated 19 June 1941 also shows four wicket gates but we are not told when the two wicket gates on the upside were removed, in order that they could be restored at this time. Perhaps they were never provided in the first place; I wish I had a copy of diagram No 317'1910.

When power signals replaced Winter's block between Carnegie and Oakleigh on 18 December 1940, lever 7 (formerly the down starting signal) was altered to work a dwarf signal leading from the goods siding whilst lever 9 (formerly the up starting) became a dwarf signal for setback moves into the siding or to the down platform. Normal Victorian practice where interlocked gates are located in power signalled areas is to provide automatic signals, not homes, to protect the gates whilst they are closed across the line, and the up signal at Murrumbeena was true to type. But the down signal was a home signal. Although it did not protect any points, it did protect a small portion of two way running main line – the down platform road. To enable goods trains to shunt at Murrumbeena, a Limit of Shunt board was provided at the Melbourne end of the down platform and this, combined with the provision of the home signal No 5, permitted dwarf signal No 9 to be cleared for moves in what otherwise appears to be a wrong road move. D407, further in the rear of home signal No 5, was also controlled by a lever, this time No 11 the former up distant lever, and this was done to provide the necessary overlap between any train tripping past it and a shunting move that has dwarf signal 9 at proceed for the down platform road. A train tripping at home signal No 5, the otherwise first red signal, probably would not have sufficient room to be stopped before coming into collision with the shunting move. A further interesting feature of the signalling at Murrumbeena at this time was the provision of illuminated letter 'A' light on Home 6, although no closing lever was provided in the box. Presumably, the letter was displayed if the signal was being held at stop by the track circuits in advance, but not if lever 6 was normal or if Points 8 were not normal. A similar feature was provided at Carnegie for the signals protecting the crossover.

D441 was made a controlled automatic signal when boom barriers replaced the hand operated gates at Poath Road, Hughesdale, on 1 October 1972. This was, of course, to prevent Poath Road booms from being held down whilst a train was shunting at Murrumbeena and in doing so occupying the down outer approach to Poath Road whilst an up train had them lowered for its passage through the level crossing. The outer approach circuit may well have extended back into the down platform at Murrumbeena but certainly would have extended back to dwarf 9. The provision of lever 12 caused the floor in Murrumbeena box to be altered to allow for additional floor plates to be added to the frame to accommodate the new lever.

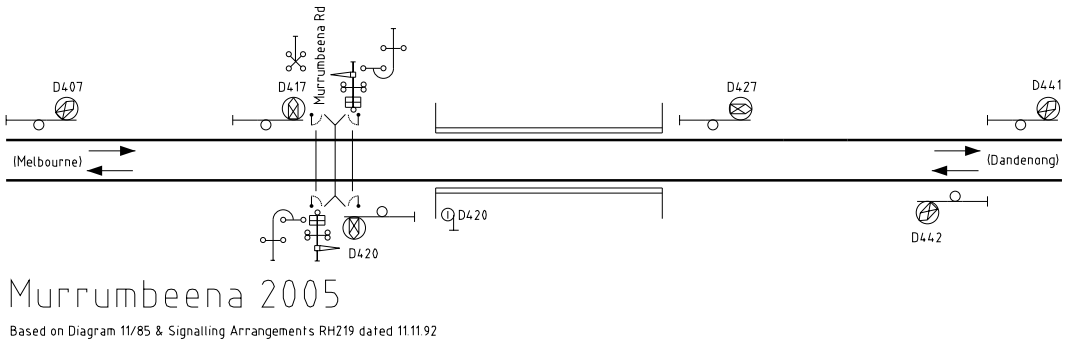
The goods siding at Murrumbeena, which was reduced in length in April 1972 to just 77 feet, was closed in 1977 and signal alterations were carried out on 22 June where the two dwarf signals and the Limit of Shunt board were removed. The siding points probably were lifted in December of that year along with the siding as Weekly Notice No 49 announced the siding's removal.

Progress toward complete replacement of all sets of interlocked gates in Victoria reached Murrumbeena on 29 April 1979 with the commissioning of manually operated booms. The two down home signals were converted to automatic signals D417 and D427, whilst the control of signals D407 and D441 was removed. Murrumbeena now had just



Murrumbeena 1972

Based on Locking Sketch A611 amended to 1.10.72, Box Diagram dated 14.6.72



three working levers – a boom lever (the former gate stops lever) and two signals. This would have been a very boring job and it is just as well that it was only a temporary stage before the complete abolition of the signal box on 7 June 1979 inconjunction with the provision of co-ordinated traffic lights. My copy of the locking sketch dated 19 June 1941 has the scribbled remark made by the SRSV's first life member – Alan McKenna – "CANCELLED 4/7/79 AMcK".

The remaining alteration at Murrumbeena, which was announced in Weekly Notice No 17 of 1993, was the provision of pedestrian gates inlieu of the former crib crossings – all part of the removal for the need for humans to take responsibility for their actions however stupid they might be.

Poath Road Hand Gates, Hughesdale

Andrew Waugh

The gates at Poath Road Level Crossing were situated 8 miles 63 chains (14.2 km) from Melbourne on the Eastern Line. The gates were located roughly halfway between Murrumbeena (48 chains distant in the Melbourne direction) and Oakleigh (60 chains the other way).

There does not appear to have been a level crossing at Poath Road when the line between South Yarra and Oakleigh was opened in 1879. Poath Road first appears in the 1885 Sands and McDougal's Directory and so was presumably constructed in 1884 or early 1885. The crossing might have been open for the first year or so as a Gatehouse did not appear in the Directory until 1886.

The regulations governing the working of level crossings required that "unless special authority is given to the contrary, Gates must always be kept shut across the roadway..." (Regulation 139, 1907 Rulebook). Before opening the gates to allow a road user to cross the railway, the keeper had to "satisfy himself that no train is near." This was achieved by a thorough knowledge of the timetable and a good look up and down the line before the gates were opened. The gatekeeper at Poath Road was fortunate as the straight line of the railway would allow him (or her) to see down trains before they departed from Murrumbeena and up trains just after they departed Oakleigh.

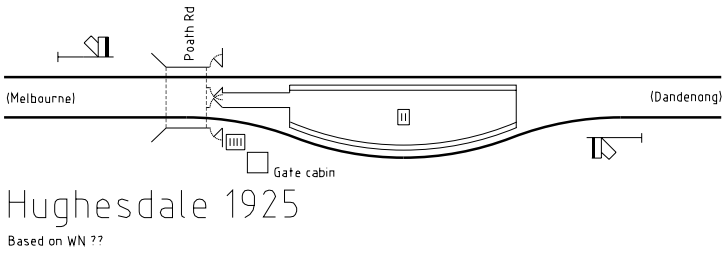
No signals protected the Poath Road.gates at this time. During the day, the white gates would have probably been more conspicuous than a signal anyway. At night, a lamp was provided showing "a red light in each direction along the line when the gates are closed across it." At Poath Road, this lamp had to be lit as soon as dusk commenced and had to remain alight until daylight.

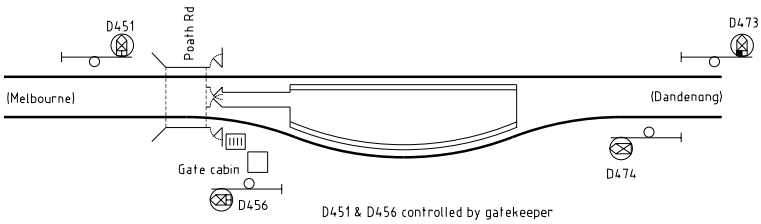
Just before turning in at night, the keeper had to secure each set of gate across the road with a padlock and chain. Any late travellers requiring the gates to be opened would have had to attempt to rouse the keeper. In practice, I suspect that locals would either go via Oakleigh or climb over the gates.

Apart from the rent free house, the wage received by a gatekeeper depended on their status. In 1923, for example, male gatekeepers received 12/0 per day and a widow only 9/0 per day. If, however, the gatekeeper was the wife or relative of an employee, she only received 3/9 per day as Poath Road was only a Class 3 gate.

The provision of the electric trains to Oakleigh in 1922 greatly stimulated housing development in the area. In 1925, a new station was opened to divide the 1 1/4 mile gap between Murrumbeena and Oakleigh. Named "Hughesdale," it consisted of an island platform situated on the down side of the Poath Road gates. Access to the platform was by a foot crossing adjacent to the gates and four wickets, worked by the gatekeeper, were provided to protect pedestrians crossing the line. Up and down home signals were provided to protect trains standing at the new platform and these were also controlled by the gatekeeper. The provision of the signals, however, did not affect the working of the gates. These were still kept across the road and the signals, normally at "proceed", would only be restored to danger when the keeper wanted to close the gates across the line. Hughesdale was opened for passengers on Saturday, 28 February 1925, but the home signals and wickets had been brought into use the previous Thursday.

The island platform would have reduced the gatekeeper's view of approaching up trains so on 19 August 1925 (at 11 a.m.!), electric bell communication was provided between the signalman at Oakleigh "A" box and the gatekeeper at Poath Road. The signalman sent 2 long rings as each up train departed Oakleigh. This signal was repeated back by the gatekeeper to the signalman as an acknowledgement. From April 1930, down trains were also rung on by the signalman at Oakleigh "A". One long ring was sent to Poath Road when the signalman received the "train departure" signal for down trains from Murrumbeena. At the same time, the use of the "canceling" signal (7 short rings) was permitted. The wording of the memo implies that these three signals were the only ones authorised for use at Poath Road.





Hughesdale 1940

Based on Diagram 13/40

This restriction, if it existed, had been lifted by the time the 1938 General Appendix was issued. The standard bell code then in use was: Down Train (1 long bell); Up train (2 long bells), Close gates for shunting operations (3 long bells); Repeat previous signal (6 short bells); Cancel previous signal (7 short bells) and Telephone signal (4 short bells). The shunting bell signal and telephone signal would not have been used at Poath Road.

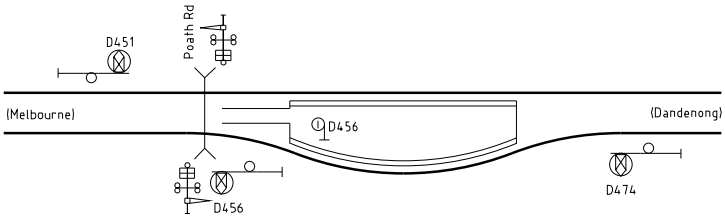
An additional bell signal, peculiar to Poath Road, was added from the beginning of October 1939. To permit the gatekeeper to go off duty after the passage of the last train early on Sunday morning, the signalman at Oakleigh "A" would send the signal "3 long and 3 short" immediately after the gatekeeper had acknowledged the bell signal for the last train. After the passage of this train, the gatekeeper could lock the gates across the line and go off duty. The gates would remain locked until the commencement of the the suburban service early on Sunday morning. The 1938 Sands and McDougall directory was the last to show a resident gatekeeper at Poath Road. It is likely that this indicates the removal of the gatehouse and the special bell signal was an expedient to avoid having to pay a gatekeeper to man the gates during these quiet hours when there were no scheduled trains.

Three position automatic signalling replaced double line block working between Murrumbeena and Oakleigh "A" box on 8 December 1940. The two home signals at Hughesdale were removed, but the gatekeeper was given control over the new automatic signals D451 and D456. The "ringing on" of trains from Oakleigh "A" box ceased and the track circuits were used to work "an automatic approach bell and light mechanism" situated in the gatekeepers cabin. The electric bell communication with Oakleigh "A" was still used to signal the last train on Sunday morning, although, for some reason, the signalman now indicated the last up train. The bell communication was also used when it was necessary for a train to shunt onto the up line at Oakleigh "A". This would operate the approach bell at Poath Road, so the signalman had to send the bell signal "5 short rings" so that the gatekeeper would know to ignore the approach bell. The canceling signal was also allowed and would have been used when the shunting train returned back to Oakleigh station.

When the automatic signals were provided in 1940, the instructions explicitly mentioned that the control on the signals was to be worked in accordance with Regulation 140. This meant that the gates were still to be normally closed for the road and only opened when the road traffic wished to cross the line. By 1940, this must have meant that the gates were almost always closed across the line. Weekly Notice 30/43, issued in late July, exempted Poath Road from this requirement and allowed the gates to be kept normally closed across the railway line.

The heavy wooden "slamming" type of wicket gates were replaced by light tubular steel gates on 2 December 1956. These normally stood open and were only closed when required for the passage of a train. Passengers going to or from Hughesdale platform with prams, shopping trolleys, or bicycles must have considered these new wickets a boon.

On 1 October 1972 the gates at Poath Road were replaced by automatic boom barriers. These were co-ordinated with the adjacent traffic lights. Whereas previously two signals were controlled by the gatekeeper, now no fewer than three signals were controlled. Down automatic signal D441 was controlled by Murrumbeena to allow the goods siding to be shunted without operating the boom barriers at Poath Road. This control was removed when the signal box at Murrumbeena was abolished in 1979, although it had been redundant since 1977 when the goods siding was removed. Up automatic signal D474 was controlled by Oakleigh "A" (and later by Oakleigh panel) so that trains shunting on the up line did not operate the boom barriers. Finally, a 5P switch was provided in the office at Hughesdale to allow D456 to be held at stop if a train was delayed at the up platform. The Weekly Notice specifically mentions its use while the up parcels coach was working at Hughesdale.



Hughesdale 1972

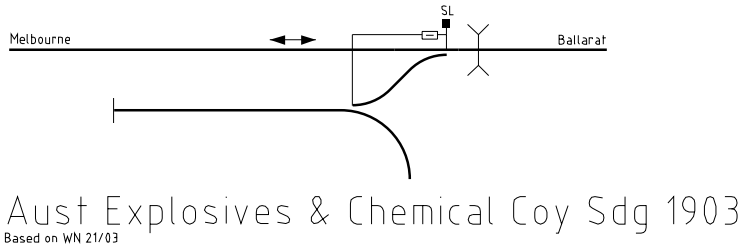
Based on Signal Arrangements RH219 amended to 11.11.92

ARDEER - DEER PARK - DEER PARK WEST

ARDEER (NOBEL SDG, FEDERAL MANURE SIDING) (9 MILES 70 CHAINS)

14.05.1903 One Staff Lock rodded to catch provided. (Special Locks Register I)

25.05.1903 The Australian Explosives and Chemical Coy's Siding opened at 9 miles 70 chains. Supervised by Deer Park. Work at siding to be performed by 0545 Down Goods unless otherwise arranged. Trucks for Up journey to be taken to Deer Park and thence by 0913 Up. No explosive consignments to be dealt with at siding. (WN 21)



c1908 Work to be performed by No 12 Down Goods. Trucks on Up trains to be taken to next staff station. No explosives traffic to be dealt with at siding (General Appendix)

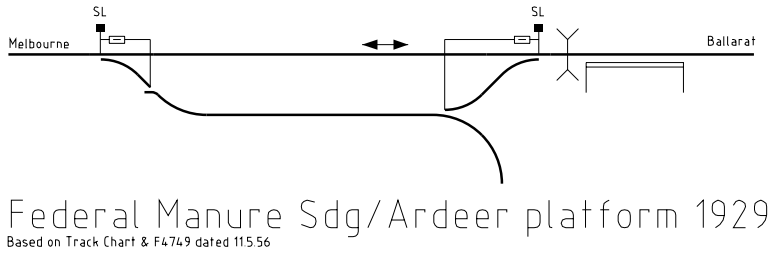
(07.02.1910) Connection provided at Up end. Points rodded to catch points and secured by a staff lock (WN 6)

(14.02.1910) By this date renamed the Federal Manure Siding (WN 7)

c1919 Worked by authorised Goods trains that works between Sunshine and Ardeer as arranged by SM Sunshine (GA)

(21.12.1926) Renamed Nobel (Aust) Pty Ltd Chemical Siding (WN 51 extracts)

02.04.1929 Local train service provided for employes of Nobels Pty Ltd between Sunshine and Deer Park. Ardeer platform (9 miles 78 chains) brought into use. No one in charge. Supervised by SM Sunshine. (WN 13, 28/18716)



c1930 Track chart shows Federal Manure Siding at 9 miles 57 chains 96 links, PCR at 9 miles 75 chains 27 links and Ardeer platform at 9 miles 78 chains 0 links (1908 PCR book, Track Chart)

(10.07.1934) Federal Manure Sdg (sic) renamed Ardeer Siding (WN 28, 34/6301)

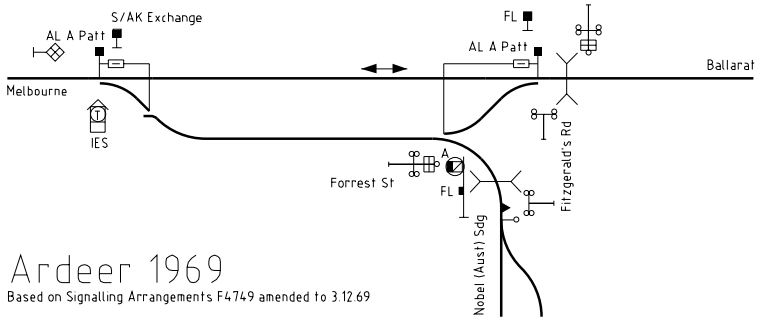
(28.08.1956) Ardeer passenger platform removed (WN 35, 54/12106)

28.08.1958 Up & down points renewed causing renewal of staff locks and rodded connections (CI)

30.09.1965 Intermediate Staff instrument provided in the Sunshine - Deer Park section. Note that this requires Deer Park to be switched in. (WN 41, ACTM 22/368/2)

16.09.1969 Flashing Lights provided at Fitzgerald's Road (9 miles 75 chains). Staff locks at both ends of siding replaced by Annett locks and Staff-Annett key exchange apparatus provided at Up end points. Down shunting trains to stop at Up end points before reaching Approach Section Indicator Board. Up shunting trains must exchange staff for Annett key within 4 minutes of clearing crossing (WN 38, SLR III, Signalling Arrangements)

03.12.1969 Signal 'A' provided on Siding account provision of flashing lights at Forrest St on siding (SA)

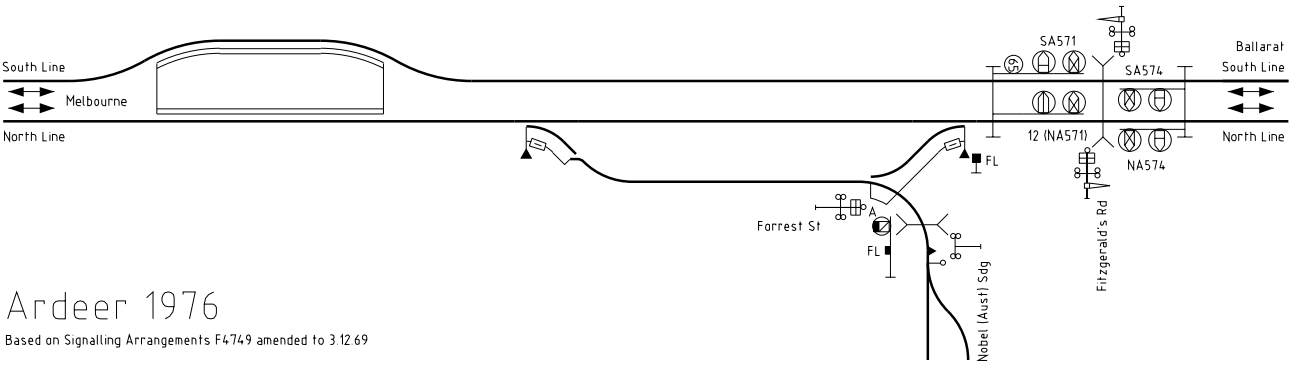


??.12.1972 Warning bell provided for the Nobel factory area (CI)

29.11.1972 Renewal of catch at up end and safety points at down end (CI)

03.10.1976 Duplication between Sunshine and Deer Park West brought into use. The two lines are signalled bi-directionally. Annett locks replaced by switch locks. Sunshine controls NA571 to prevent unnecessary operation of the flashing lights at Fitzgerald Rd. Diagram 6/76 provided. (WN 41, SLR III, Signalling Arrangement RB 1366)

02.05.1977 New Ardeer opened for passengers. Island platform situated at 9.5 km (on Up side of siding). Supervised by SM Sunshine. (WN 17, 76/1478)



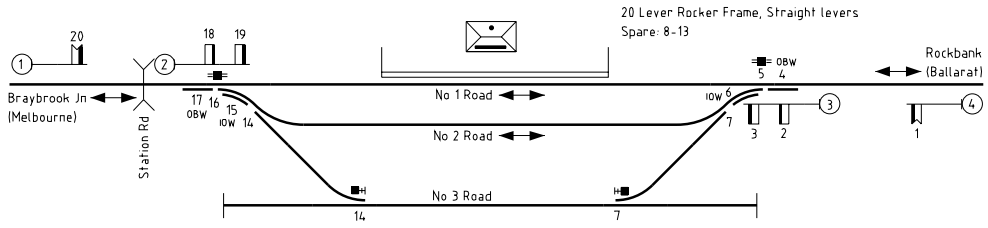
Ardeer 1976

Based on Signalling Arrangements F4749 amended to 3.12.69

07.12.1977 Boom barriers provided at Fitzgerald's Road. Express and stopping buttons provided in Sunshine signalbox. Control of NA571 retained. (WN 50)
23.02.1981 Nobel (Aust) Pty Ltd Siding named changed to ICI Aust Operations Pty Ltd (CI)
24.10.1990 ICI Siding abolished, together with Forest Road flashing lights and Signal B (SA RB1366)
21.04.1996 Pedestrian gates and traffic light co-ordination provided at Fitzgerald Road (SA RB1366, WN 25)

DEER PARK (11 MILES 7 CHAINS 66 LINKS)

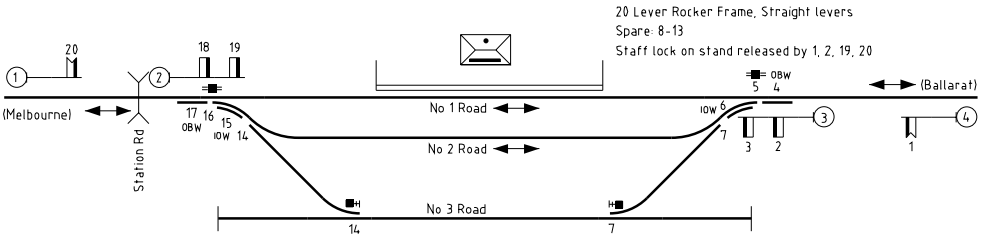
02.04.1884 Opened with line as 'Kororoit' for passengers (Chronological Register)
(30.06.1884) Goods traffic recorded by this date (Commissioner's Report)
16.02.1885 W. Blackwood granted contract to erect Goods Shed and platform for £292/1/1 (Government Gazette)
03.12.1889 Renamed Deer Park (CR)
(17.03.1890) By this date (since 12.8.89) opened as a Staff station with sections Braybrook Jn - Deer Park - Rockbank. Staffs: Braybrook Jn - Deer Park (No 7 Pattern with Blue boxes), and Deer Park - Rockbank (No 1 Pattern, White boxes (WTT, Staff Register)
24.03.1891 By this date (since 11.8.90) Winters Block introduced between Deer Park and Rockbank. Block working not in force between Braybrook Jn - Deer Park (WTT)
17.12.1894 By this date (since 21.5.94) Winters Block introduced between Braybrook Jn - Deer Park (WTT)
22.07.1898 Electric Staff working (large instruments) replaced Staff and Ticket/Single Line Block. Sections now Braybrook Junction - Deer Park - Melton. (WN 4, A1305/98)
09.11.1898 White lights altered to green in signals (WN 18)
09.05.1899 Station interlocked with 20 lever Rocker frame (6 spaces). Diagram 469/99 provided. By 1.7.99 the frame contained 6 signal levers, 4 point levers, 4 lockbar levers, and 6 spaces. (WN 45, Interlocking Register)



Deer Park 1899

Based on WN 45/99 & Locking Sketch dated 24.4.6

08.09.1903 Deer Park temporarily closed as staff station after passage of No 2 Up. Stationmaster replaced by Caretaker supervised by Braybrook Junction. The Home and Distant signals will be normally at 'all right'. Locking altered so opposing main line signals can be cleared at the same time. A staff lock on a stand was provided at the right hand end of the frame and staff is released when main line signals are reverse. Only daylight trains to shunt. Originally points leading to No 2 Road were to be disconnected from the frame and spiked for No 3 Road, but this was cancelled and No 2 Road left in use to allow engines running around trains (to serve Ardeer?). Staff for section used to unlock frame. New section Braybrook Junction - Melton (WN 35 & 36, Special Locks Register I, Locking Sketch)



Deer Park 1903

Based on Locking Sketch dated 24.4.6

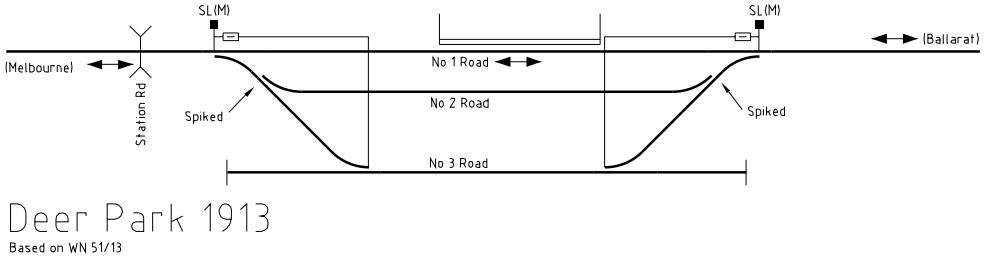
04.01.1904 Deer Park again temporarily closed as staff station. New section Braybrook Junction - Melton. Caretaker provided supervised by Braybrook Junction (WN 52)

11.01.1905 Points leading to No 2 Road disconnected from frame and spiked to lie for No 3 Road (WN 2)

20.04.1908 Open as a Staff station when Sunshine accident occurred. Only open during holidays. (Coroner's Inquest)

c1908 Guard to work frame when not a staff station (GA)

18.12.1913 Miniature electric staff installed on the Sunshine - Melton section. Probably closed as Staff station. The interlocking frame and all signals abolished. Main line points secured by staff locks and rodded to the safety points in No 3 Road. No 2 Road remains, but points still spiked for No 3 Road. (WN 22, SLR II, IR)

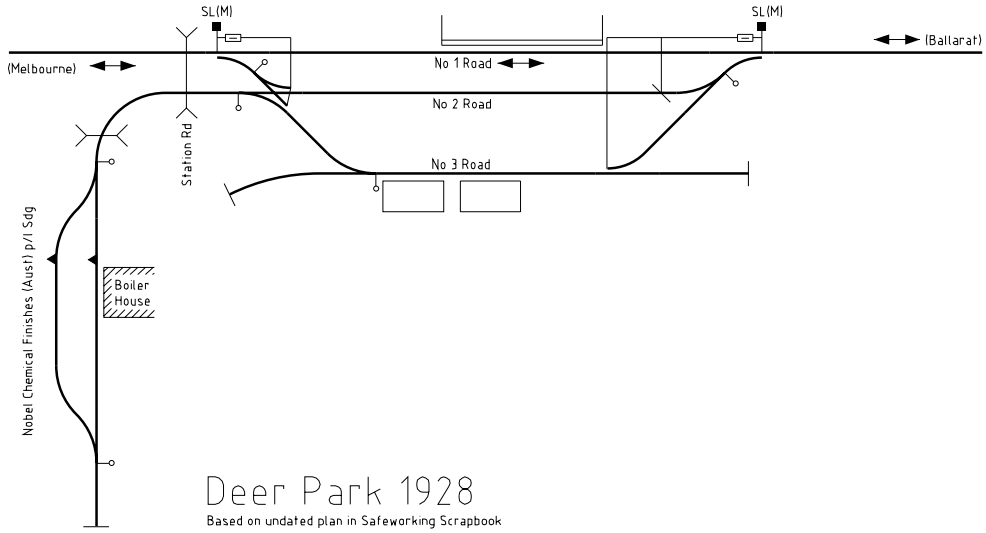


Deer Park 1913

Based on WN 51/13

12.10.1926 May open as block post in Sunshine - Melton section. Composite staffs provided in Sunshine - Rockbank section. (WN 41)

02.08.1928 No 2 Road provided. Double compound provided at Up end with No 2 Road being extended for construction of Nobel Chemical Finishes (Aust) Pty Ltd. (A736/28)



Deer Park 1928

Based on undated plan in Safeworking Scrapbook

(04.09.1928) Nobel's Siding open. Siding consists of lead for 900 feet and then a loop siding which can accommodate twenty 25 foot trucks, and then a dead end 100 feet long. (WN 36)

(02.04.1929) Composite Staff will be in use for the conveyance of workmen to Nobels factories at Ardeer and Deer Park (see S1500/29) in conjunction with the running of No 29 and 31 Express trains and the 1652 special (workmans). Signalman in charge of Deer Park. No 29 Down Express despatched on Ticket A, and 1652 Special on Ticket B/Staff. The Special must return in time to cross the No 31 Down Express at Sunshine. A Master Key is provided at Deer Park to allow the engine to run around. Key is secured in a box similar to a Staff Exchange Box and is released by Ticket B/Staff portion of Composite Staff, after which the Staff is secured in the box. (WN 14)

08.03.1940 Down end connection to No 2 Road moved 455 feet further out. Points are rodded to catch point with deflecting rail (WN 12)

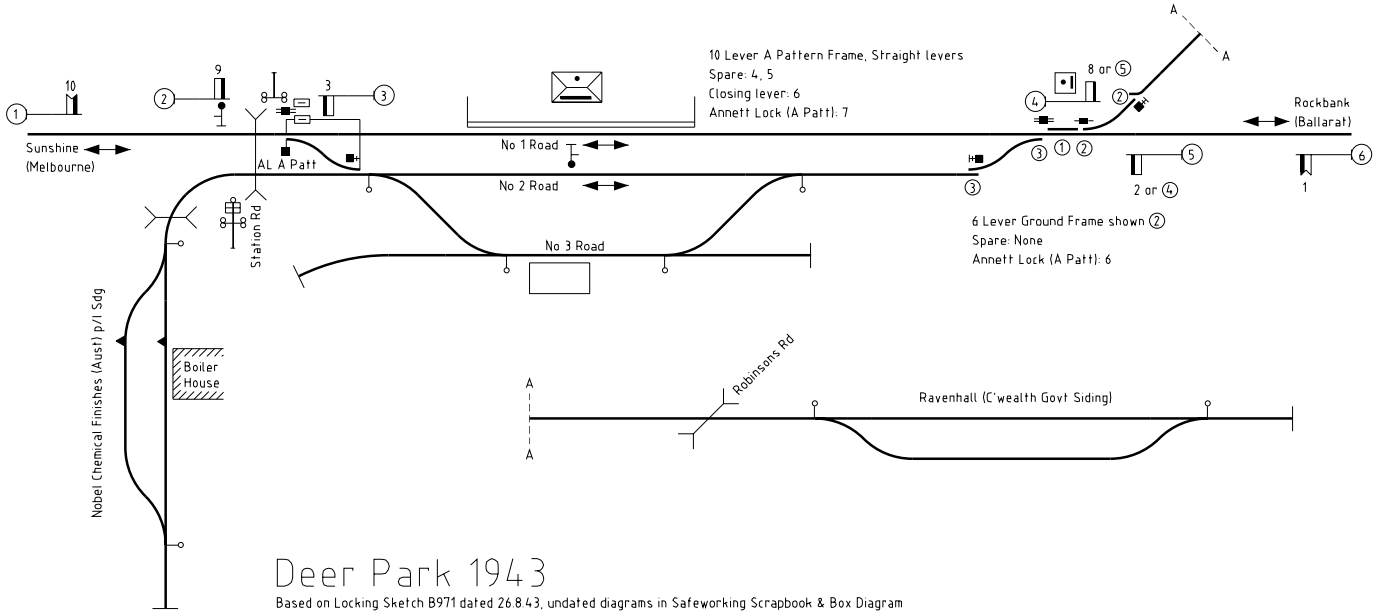
12.08.1940 May open as temporary Train Staff and Ticket station with sections Sunshine - Deer Park - Rockbank (part of the provision of emergency crossing loops on the Western and North Eastern lines). Train Staffs normally secured in special Miniature/Large Staff Exchange Box kept at Sunshine. Up and Down Home signals provided, but signals crossed (WN 34, SLR III, AGST 12/465/2)

02.03.1943 Flashing lights provided at Station Road (10 miles 77 chains) (WN 10)

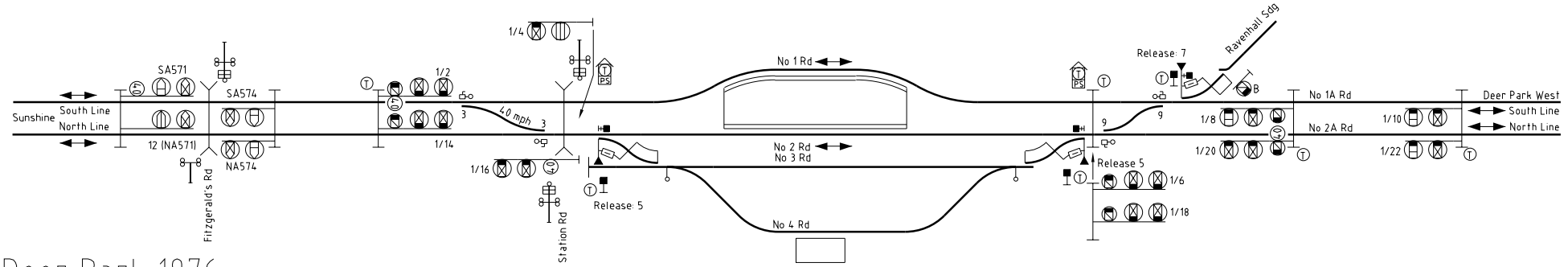
09.06.1943 Connection to Commonwealth Government Siding (under construction) provided at Down end. Points secured by staff lock and rodded to a catch points. (WN 24, SLR III has 4.6)

26.08.1943 Opened as a switch out electric staff station with sections Sunshine - Deer Park - Rockbank. Miniature interlocked 'Without train' switch out instruments provided. Temporary Train Staff and Ticket sections abolished. Up and Down Departure Home and Distant signals provided worked from a new 10 lever A pattern frame in new signal bay. Main line points at Up end secured by A pattern Annett lock. Six lever ground frame provided at Down end to work connection to Ravenhall Siding and Down end main line points. Ground frame secured by A pattern Annett lock. Staff locks removed from all points. Miniature Electric Staff Exchange Apparatus provided.Initially switched in MWF 0700-clearance of No 22 & 1630-1720, TuTh 0700-clearance of No 27 &

1630-1720, Sa 0700-1150 & 1630-1720. Diagram 6/43 provided. Ravenhall Siding opened. Siding points are at 11 miles 25 chains 95 links, and thence a lead 4600' long (70 chains), followed by a loop siding 500 feet between toes of points, and a dead end 700 feet long. Buffer stops 1 mile 32 chains, 64 links from points (WN 36, SS)



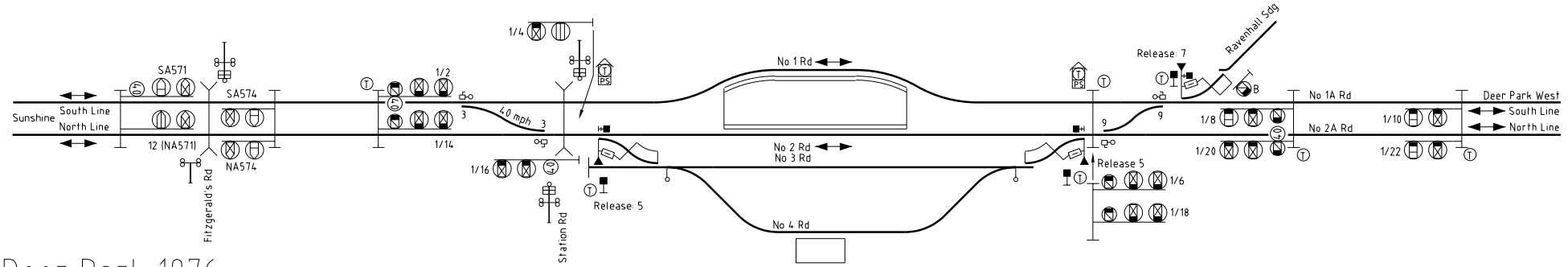
(17.10.1944) Staff balancing magazines provided for both sections (Sunshine - Deer Park - Rockbank) (WN 42, AGST 17/198/1)
(24.02.1948) Disestablished as intermediate Block post in Sunshine - Rockbank section. Composite Staffs removed. (WN 8)
(04.10.1955) ICIANZ siding (Nobel's) out of use and baulk secured across siding on station side of level crossing (WN 40, ACTM 18/331/1)
29.08.1963 Renewal of Auxiliary Frame and connections (CI)
11.09.1969 Flashing lights provided at Robinsons Road (11 miles 79 chains) on the Down side of Deer Park (WN 38)
18.04.1973 Repeaters provided for Up and Down distant signals (CI)
21.04.1974 Auxiliary Frame to be relocated to Up side of track due to duplication of line on Down side (CI)
(21.05.1974) Ravenhall Siding temporarily out of use due to duplication works (WN 21)
06.06.1974 Post 4 relocated to right hand side of line due to earthworks for duplication (WN 24)
20.08.1976 Flashing lights provided at Dermut Road (CI)
03.10.1976 Duplication between Sunshine and Deer Park West Junction brought into use. Both lines signalled for bi-directional running. Electric Staff system replaced by CTC worked from Sunshine. Switch out facilities, automatic staff exchangers and staff balancing magazines removed. All mechanical signalling abolished. Main line crossovers and signals worked from CTC panel in Sunshine signal box. Points to Nos 3 & 4 Roads and Ravenhall Siding secured by switch locks released by Signalman Sunshine. Low speed aspects on Posts 1/2, / 18, 1/14, & 1/20 are operated locally when switch locks are released. Platform became island. Diagram 6/76 replaced 6/43 (WN 41)
16.12.1977 Additional flashing light mast at Station Road (CI)
06.02.1978 Ravenhall Siding abolished. Points removed, and Dwarf 'B', switchlock, and low speed signals on Posts 1/6 and 1/18 abolished (WN 7, Signalling Arrangements RB1366)
29.01.1981 Boom barriers provided at Station Road. Stopping/Express button provided at Sunshine for Up trains, interlocked with Homes 1/10 and 1/22. Existing Stopping/Express button at Ardeer was extended to cover new boom barriers. When the Stopping button is operated for an Up train, Homes 1/4 and 1/16 will be approach operated. (WN 6, SA RB1366)
15.06.1981 Now worked under Caretaker conditions (WN 25 extracts)
18.08.1985 Illuminated '40' mph indicators on Posts SA571, 1/2, 1/16, 1/20 replaced by '65' km/h indicators (CI, SA RB1366)
(08.02.1987) By this date No 3 Road removed, together with switch locked releases and pushbutton controls (SA RB1366)
(29.03.1989) Diagram 8/88 replaced 6/76. Diagram still shows Nos 3 & 4 Roads at Deer Park (WN 12)
29.08.1989 Up end points of switch locked siding were removed, together with the switch lock and control buttons for the low speed aspects. Amend Diagram 8/88 (WN 38)
21.01.1990 Diagram 2/90 replaced 8/88. Nos 3 and 4 Roads removed by this date (WN 4)
26.06.1996 Pilot Staffs on both North and South line for Sunshine - Deer Park section removed (WN 27)



Deer Park 1976

Based on Signalling Arrangement RM1366 amended to 22.9.02, Diagram 6/76

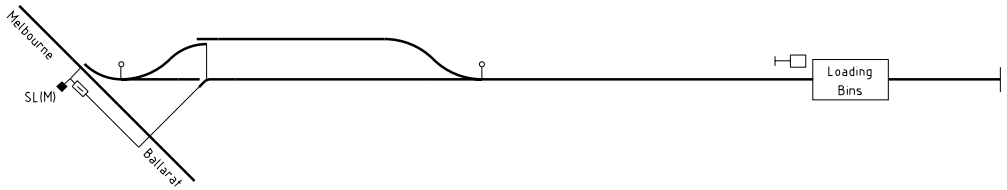
Worked from CTC panel in Sunshine signalbox



Deer Park 1976

Based on Signalling Arrangement RM1366 amended to 22.9.02, Diagram 6/76

Worked from CTC panel in Sunshine signalbox



Sandringham Quarry Trust Sdg 1925

Based on WN 36/25

SANDRINGHAM QUARRY TRUSTS SIDING
(11 1/2 MILES)

04.09.1925 One SL rodded to catch provided (Special Locks Register III)

(06.09.1925) Open for traffic inwards and outwards in full truck loads. Siding faces Down trains about 400 yards from Deer Park. Points secured by staff lock and rodded to catch points. Siding consists of a loop (on southern side) with accommodation for 20 25 foot trucks between catch and fouling point, and then single lead. Loading bins are erected 500 feet from buffer stops. Siding is 1451 feet in length from catch points to buffer stops. (WN 36)

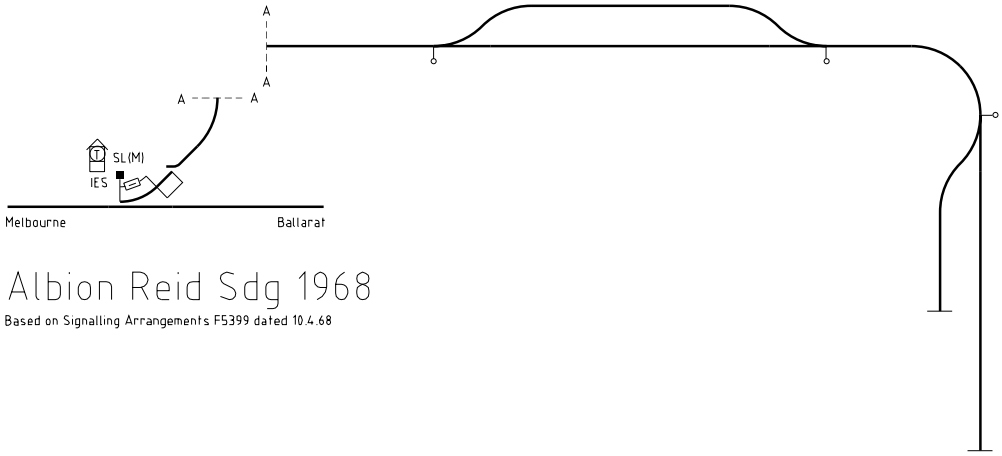
31.12.1930 SL removed (SLR III)

(10.03.1931) Siding out of use. Points and crossings removed. Staff lock removed but rodded connections remain. (WN 10, 23/20163 & 30/4570)

DEER PARK WEST JUNCTION (13 1/4 M) &ALBION READ SIDING (13 MILES 4 CHAINS)

20.03.1968 Albion Read Sdg under construction at 13 miles 5 chains. Main line points provided and equipped with staff lock. Intermediate Electric Staff instrument provided in local Deer Park - Rockbank section (WN 13)

10.04.1968 Siding open for traffic. Siding is situated at 13 miles 4 chains. and is 1 mile 26 chains in length. A loop with 1500 feet standing room is provided, as well as a short spur with 500 feet standing room (WN 17)

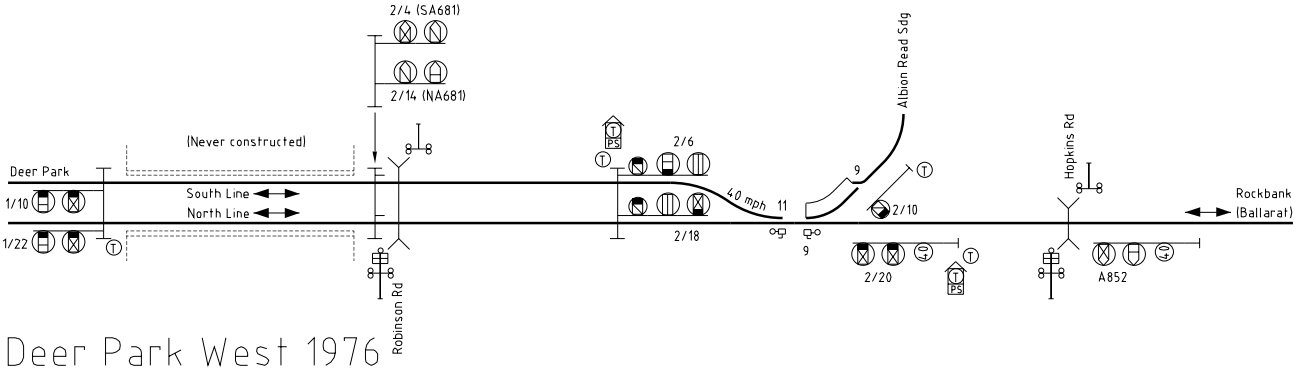


Albion Reid Sdg 1968

Based on Signalling Arrangements F5399 dated 10.4.68

(03.08.1976) Renamed Boral Resources Siding (WN 31 extracts)

03.10.1976 Line from Sunshine duplicated to 'Deer Park West Junction' immediately on Up side of Boral Resources Sdg. Junction and points to siding worked from CTC panel in Sunshine signalbox. Intermediate Electric Staff instrument abolished. Main line worked bi-directionally under CTC system. Diagram 6/76 provided. Diagram shows 'Deer Park West' station situated on Up side of Robinsons Road. This station was never provided. (WN 41)



Deer Park West 1976

Based on Signalling Arrangement RM1366 amended to 22.9.02, Diagram 6/76, and Box Diagram

29.01.1981 Boom barriers provided at Robinson Road (19.300 km). Stopping/Express button provided at Sunshine for Up trains. Existing Stopping/Express button at Ardeer was extended to cover new boom barriers (WN 6, SA RB1366)

21.05.1982 Provision of Boom barriers at Robinson Road (CI)

18.08.1985 40mph indicators changed to 65 kmph indicators on signals No 2/20 & A352 (CI)

21.01.1990 Rockbank converted to a power operated loop controlled from Bacchus Marsh. No physical changes at Deer Park West, but line between Deer Park and Rockbank now worked under Automatic and Track Control system instead of CTC. Deer Park West will be treated as an attended location and blocking jack was provided on the panel at Sunshine to secure Homes 2/6 and 2/18 at Stop. Diagram 2/90 replaced 8/88 (WN 4)

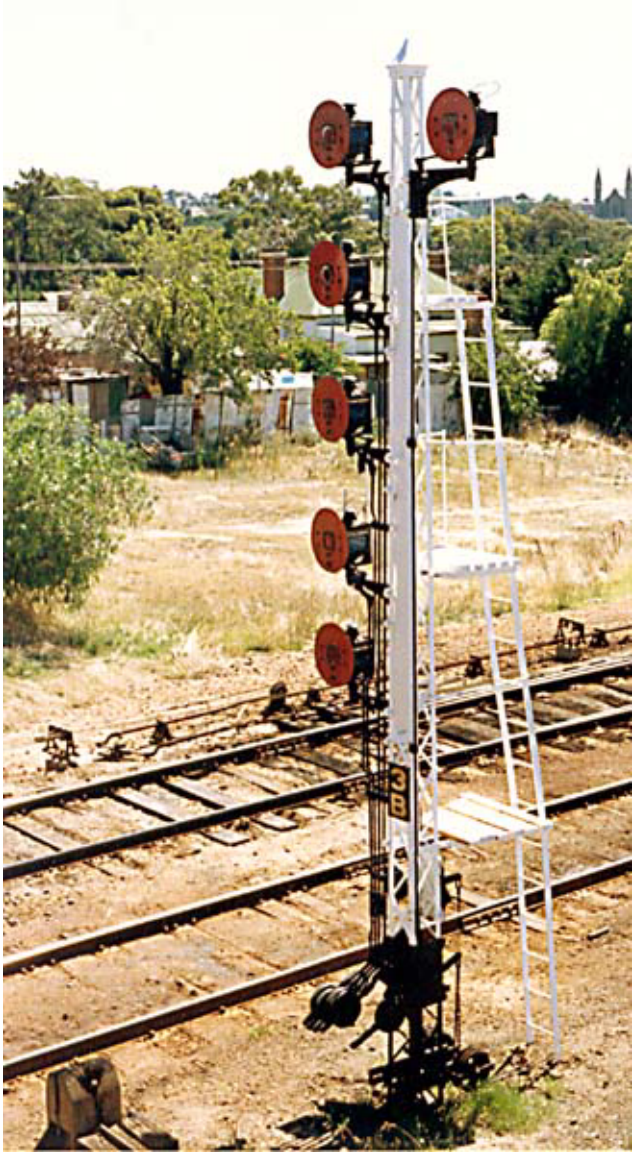
Signalling Alterations

(continued from page 84)

Between Sunshine and Deer Park West all the signals will be secured at Stop except for Home 1/6 at Deer Park and A852 at Deer Park West which were abolished. All points will be placed in the hand operating position. At Rockbank all points and signals were abolished (Automatics A933 & A332, Homes 6, 10, 12, 26, 30, & 32, and Points 7 & 27). At Melton the signalbox was abolished, and all points and signals were abolished (Automatics A353 & A394, Homes 1, 4, 5, 6, 7, 7P, 11, 16, & 17, and Points 6 & 15). At Parwan Loop the Home signals were taken out of use and the points placed in the hand operating position. Automatic A427, the emergency control panel, and the arrival clearing boards were abolished. At Bacchus Marsh the signalbox was abolished (including the control panels for Rockbank, Parwan, and Bank Box loops). The Carriage Dock was abolished. All signals except Posts 1, 1P, 9B and 10B were abolished, and these four posts were taken out of use. Points 9, 11, 12, 23, 16, & 36 were abolished. All Automatic signals between Bacchus Marsh and Bank Box Loop were abolished (A1862, A1863, A2003, & A2143). At Bank Box Loop Homes 6, 10, 12, 26, 30, & 32 were taken out of use and Points 7 & 27 were placed in the hand operating position. The emergency panel and the arrival clearing boards were abolished. All Automatic signals between Bank Box Loop and Bungaree Loop were abolished (A713, A714, A747, A748, A787, A790, A803, A818, A909, A910, A929, & A930). At Bungaree Loop, No 2 Road together with all points and signals, the emergency control panel, and the arrival clearing boards were abolished (Automatics A977 & A1030, Homes 6, 10, 12, 26, 30 & 32, and Points 7 & 27). At Ballarat, Automatic A1093 was abolished, Home 56 was taken out of use, and Automatic A1147 was secured at Stop. The panel for Bungaree Loop was abolished.

During the works, train crews are to observe all fixed signals with their faces turned toward the running line irrespective of whether signal lights are displayed. Movements past Home signals require a Signaller's Caution Order, and movements past an Automatic require observance of Rule 1, Section 3, Book of Rules.

Diagrams 14/04 (Ardeer - Parwan), 12/04 (Bacchus Marsh - Ballan) and 42/96 (Ballan - Warrenheip) were cancelled.



Post 3B at Bendigo A box applied to set back moves from the Up main line into the goods yard or Down main line. It illustrates the practice in Victoria of arranging the discs on the mast to reflect the direction of the signalled movement. The five discs on the left hand side of the mast apply to moves to the left of the Up main. The four top discs apply to moves to the five goods tracks on the Down side of the main lines, and the lowest disc applies to moves across to the Down main. The disc on the right hand side of the post applies to moves to the goods sidings on the Up side of the main lines. The use of five discs on one side of the mast required a slight complication in the rodding that worked the discs as only four balance levers could be accommodated in the bracket at the foot of the post. The balance lever for the fifth disc (the lowest) was mounted on the back of the mast. Post 3B was located immediately in advance of an arched overbridge which severely restricted the view of the signals, particularly if the shunting engine was at the far end of a rake of trucks. Accordingly, the signal engineer provided a post on the other side of the overbridge carrying a single disc signal, Disc 40. Disc 40 could only be cleared if one of the discs on Post 3B was at clear; essentially Disc 40 acted as a repeater for the discs on Post 3B. When the driver of the shunting engine saw that it was clear, he could be sure that one of the discs on Post 3B was at clear and begin to set back.