COWAN RAILWAY STATION

A CASE STUDY IN DEPARTMENTAL FRUGALITY, WITH A TWIST OF WASTE

WHY BOTHER TO VISIT COWAN?

No. Visitors in 2022 to Cowan will not see 36 class steam locomotives on passenger trains; nor will they see CPH rail motors; they will not see the old, shortened platforms; they will not see the fettlers' trike sheds; they certainly will not see the semaphore signals and they will not see the open pole line. They will not see the goods siding nor will they see fettlers' tents within the corridor. Nope. They will not see any of those really yummy things that go together to make the historical railwayscape so interesting.[1]

Nevertheless, there is no better surviving station on the New South Wales railway system than Cowan that consistently demonstrated from its opening in 1889 the inadequate levels of capital funds provided by New South Wales governments at all times for station facilities. Thus, while individual pieces of railway fabric no longer survive, the story of their existence continues. It is that history that survives and flourishes in these notes.

There is another reason to focus attention to Cowan station. There are very few remaining stations on the double track New South Wales railway system that have timber buildings on both side platforms. Outside Sydney, examples survive at Exeter, Bundanoon, Wingello, Thirroul and Austinmer. The only example in the Sydney metropolitan area is Cowan and that depends on whether Cowan is regarded as "metropolitan", considering suburban trains no longer operate to the station.

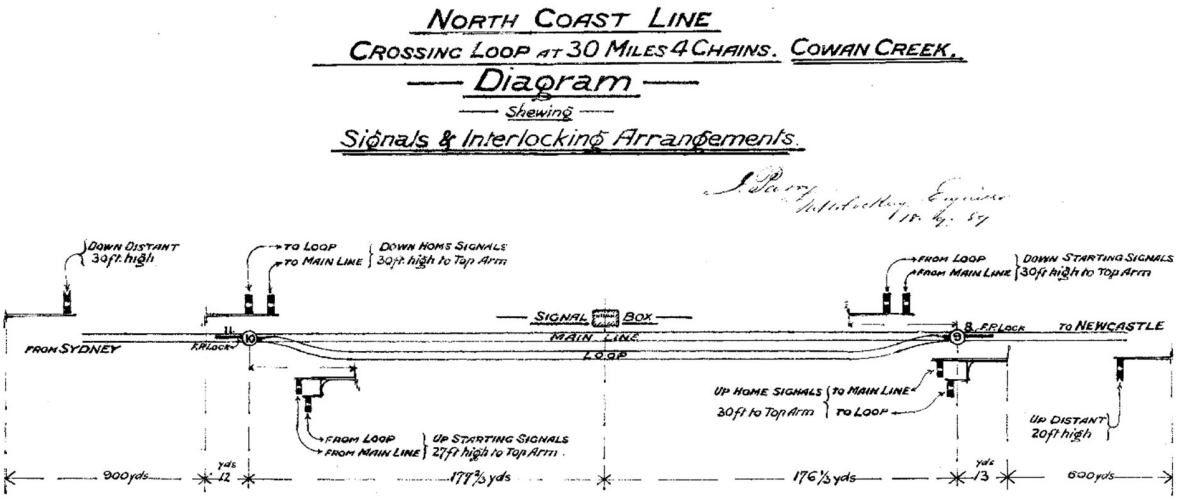
LINE AND STATION OPENING – 1887-1901

The line between Hornsby and Hawkesbury River opened on 7th April 1887. John Forsyth's station history notes state that the station was opened on 30th September 1889 as an "interlocked loop", though the interlocking diagram shows no platform. It is doubtful that the 'station' was opened to the public in 1889. Forsyth states that the name first appeared in the public timetable for 6th October 1901 at which time a platform was constructed and the name was changed from Cowan Creek to Cowan. A month later, the station opening was announced in the Sydney press but no details were provided.[2] The real benefit of the station opening was not to any local residents but was to fishermen who could then reach more easily the excellent fishing in Jerusalem Bay.[3]

[1] The photograph on the cover is No. 010361 at ARHS Resource Centre taken in August 1938. Murray recollection. The rail motor is standing in the goods siding to await the departure of the passenger train to Gosford and, possibly, beyond.

[2] *Sydney Morning Herald*, 28th October 1901, p. 6.

[3] *Sydney Mail and NSW Advertiser*, 21st December 1901, p. 1609.



There are two features worthy of note in the above diagram dated 1889. The first is the absence of a platform. The second is the location name, which changed from Cowan Creek to Cowan when the crossing loop opened as a public station on 12th October 1901. The initial Hawkesbury River bridge opened on 1st May 1889 and the above signal and interlocking circular with diagram was issued four months later on the railway anniversary date of 26th September 1889. While it does not appear on the above diagram, the circular was headed 'New South Wales Government Railways'. That was a significant title as, following the opening of the bridge, no longer were the titles GNR and GSR appropriate as the system had been unified. However, long-serving employees had much difficulty in abandoning their old practices and the terms, GNR and GSR, continued to be used for quite some time by some staff. Cowan was described in the circular as being on the North Coast Line and this was an early use of the term. Previously, the Short North had been known in the second half of the 1880s as the Southern and Northern Junction Railway or the Homebush to Waratah Railway. The track diagram indicates a very comprehensive signalling installation with split home and starting signals. Signalling and safeworking whiz kid, Graham Harper, confirms Forsyth's comment that the 1891 timetable incorporated the first use of Cowan as a station for paying passengers. Also, he says, in 1891, on 8th November, the staff and ticket working was superseded by electric train staff. ***SOURCE:*** *NSW Track and Signal Diagrams, ARHS.*

OFFICIAL RESIDENCES – 1891-1897

Two official residences were constructed at the station. The first was in 1891 for a signalman, which later became the Station Master's cottage and the second was in 1897 for a Night Officer. While the Night Officer's house has been replaced by a commuter car park, the Station Master's dwelling survives. Frugality was manifested by the small size and timber construction of the dwellings; the use of the less expensive lapped weatherboards and their location close to the running lines where no land acquisitions were necessary.

RELOCATION OF THE WAITING SHED FROM THE NORTHBOUND TO THE SOUTHBOUND PLATFORM

This 1996 photograph of the southbound platform building shows the relocated waiting room with the subsequent addition of an office/ ladies' waiting room on the righthand side.

After the opening of the station in 1901, the next big event was track duplication which occurred in 1909. In May 1908, a plan was issued for the relocation of the then existing two room structure on the northbound platform, containing an office and waiting room, to the southbound platform. The former office was converted into a ladies' waiting room. That structure is possibly the original station building dating from 1901 and the early origin of the structure is reflected in the use of wide weatherboards; the fluted timber door frame; the rusticated weatherboards on the external walls and the absence of ornamentation under the window sill. The waiting shed, with its replica (but fake) internal seat, remains in position in 2022. It was in 1909 that the second platform was provided and, like the one built for the station opening in 1901, it had a frame of timber with a timber deck. Frugality was demonstrated in the extensive use of timber and the reuse of an existing structure.

The platform buildings have received the attention of Sydney Trains. This image shows the authentic treatment of the internal walls of timber platform buildings throughout the rail system between 1890 and 1931. Timber framing was sheathed externally but without internal walls. However, not all the fabric on display in 2022 is authentic. The seats inside both the waiting sheds have the appearance of authenticity but are fakes. Life Member, Gary Hughes, spots one of the fake seats. He enquiries, unsuccessfully, as to the location of the interpretive plaque. Taken on 18th December 2019.

THE SIGNAL BOX - 1889 (DEMOLISHED IN 1990)

Dr Bob Taaffe, the virtuoso of interlocking equipment and signal box designs, writes that the design was first used in 1884 and last used in 1899.[4] This type was the first expression of signal boxes placed at platform level. Including the signal box that existed at Cowan, there were 12 examples of the type. Bob describes the structure as timber framed, with the external walls covered with weatherboards and possessing a gabled roof covered in corrugated iron. One elegant touch that denoted a structure built in the 19th century was the provision of timber finials on the roof gables.

[4] R. T. Taaffe, *Signal Boxes of New South Wales Railways and Tramways*, Vol. 1, Hobart, Taaffe Press, p. 240-246.

The above photograph of the signal box and ticket office dates from 5th February 1977. The external walls of the ticket office featured two types of weatherboards – rusticated on the front wall and lapped on the side wall. The timber moulding surrounding the ticket window was very decorative. The blue "Be Tidy" rubbish bin was typical of the times. Note the shelf below the ticket window so that ladies could rest their handbag while they secured the correct money for their ticket. Those were the days when bureaucracy cared a little bit about their customers. The photograph shows a local resident walking towards the open door of the signal box to determine from the Signalman whether his intended train was running on time.

The now demolished signal box was located at the south end of the Northbound platform. The floor of the box was below the platform level from the time of the platform reconstruction in 1959. When the platform was provided, the floor of the signal was consistent with the then height of the platform. This is clear in the photograph on page 12. Bob Taaffe points out that the Signal Engineer at the time would not have paid too much attention to the height of the platform had there been an existing platform because signal boxes and platforms were managed by different branch of the organisation. Bob states that the height of the signal box was pre-determined because there existed a standard height of platform level signal boxes, notwithstanding the provision or otherwise of a platform.[5] The signal box came before the platform by 12 years. The raising of the platform in 1959 created a vertical difference between the signal box and the platform.

[5] Email from Bob Taaffe on 5th January 2020.

The frugality of the signal box, which dated from 1889 at the time of the opening of the crossing loop, was reflected in the absence of an awning over the windows facing the railway line. Behind the signal box in later years was an electrical relay building which was timber framed, clad in Fibrolite and, seemingly inconsistent, possessed a roof covered with terracotta tiles. Certainly, the use of tiles was not an expression of frugality but it was an expression of the virtual autonomy of the branches of the Railway organisation to spend and, in this case waste, money without accountability. A significant number of relay huts were built wearing an inconsistent combination of frugal wall material and extravagant roof material. Bob Taaffe defends the Signalling and Telegraph Branch by suggesting that "the terracotta roofs of relay huts may have also been to reduce the heat load on the relays". Cowan was one of those examples and Bob Taaffe has a photograph (on page 241) of the signal box in volume one of his multi-volume work on signal boxes.

THE TICKET OFFICE

Adjacent to the signal box on the northbound platform was a timber framed and timber clad ticket office with the ticket window facing directly onto the platform. The location of a ticket window facing on to the platform was not too unusual for a very small, insignificant station as Cowan was.[6] It had a single-pitched roof sloping to the rear. The juxtaposition of the signal box and the ticket office was a reflection of frugality, and also of good sense, in that it allowed one person to both work the interlocking frame and undertake coaching business. Had the signal box being located at the platform level, perhaps a ticket window would have been placed in one wall of the box, thus avoiding the need to construct an additional building.

[6] The standard NSW practice from 1855 to 1960 was to locate the ticket window facing into the general waiting room.

Taken on 23rd February 2008. Member, Jim Longworth, stands at the former ticket window in the ticket office, seeming to have received his ticket through a mysterious, super-natural force, known as modern technology, that could penetrate Plywood. The window has since been removed and the ticket office repainted. The 1891 residence is to the right of the image. Note the replacement timber sheathing on the walls.

THE FIRST PROPOSED ISLAND PLATFORM - 1906

A plan was issued in 1906 for the provision of an island platform at Cowan in conjunction with the proposed track duplication. The decision not to provide an island platform was a tell-tale sign of Departmental frugality.

STORM DAMAGE - 1914

Lightning struck the Cowan station building on 10th February 1914. The press reported:

> "An examination of the wrecked building showed that the force of the explosion drove splinted glass into the surrounding woodwork".[7]

The two block telegraph instruments in the 'signal box' were destroyed in the storm and the Station Master was buried in debris. It is unknown where the so-called 'signal box' was located at that time and the absence of plans for every platform building at Cowan means that the mystery continues. Possibly, the block instruments were not in the signal box but in the Station Master's office.

[7] *Evening News*, 10th February 1914, p. 6.

This photograph shows the different types of weatherboards. The older boards are those on the right with a shaped profile, which the Railway Department called rusticated, on the northbound waiting shed. The newer boards, called lapped, have been used on the male toilet.

THE FIRST PERIOD OF NOTHINGNESS – 1930-1955

For three decades, New South Wales governments decided to suspend adequate investment in its railway system, despite it having a monopoly on land transport.

In the thirty-year period, there was only one improvement to the station. It was connected to the local electricity supply in 1949.

This photograph has been taken from the north end and shows the southbound platform. The deck of the platform has been raised. A kerosene fuelled light has been thoughtfully placed at the end of the platform to facilitate pedestrian access across the tracks. ***SOURCE:*** *Photograph by R. B. McMillan on 10th February 1949 No. 000147 ARHS collection.*

THE SECOND PROPOSED ISLAND PLATFORM

The Department of Railways was considering the idea of centralising station facilities in a common structure located on an elevated concourse and leaving the platforms free of structures. This was suggested by a plan for a proposed island platform at Cowan in 1958 in conjunction with the extension of electrification. Of course, all the effort to prepare the plan was wasted.

PLATFORM RENEWAL – 1959 AND 1960

Whilst the proposal for an island platform was approved by the boss of the Way and Works Branch, Norm Vogan, it did not proceed to construction. Instead, the existing side platforms were renewed using a frame of old railway lines and concrete decks in 1959 and 1960, but the existing timber buildings were not replaced. The design on which the platforms was based was introduced at Tascott in 1935 and used extensively until 1940. The design became known as the “Tascott type”. There was a lull until 1958 when the design was reinvented and applied initially at Cowan. The only change was to the deck. Instead of recycling old timber sleepers, the Department used a concrete deck, which was then poured in situ rather than precast. The reinvented design became known as the “Cowan” type and was used occasionally up to 1978.

This photograph of the rear wall of the southbound platform building clearly shows the vertical join between the 1901 waiting shed and the subsequent addition of the office/ladies' waiting room, which is identified by the rear window. The building was raised in 1960 to meet the new platform height.

There is little doubt that the lack of finance and the radical nature of the island platform with overhead concourse would have combined to kill the project. A second opportunity arose in 1971 to implement the idea (at Como) but also failed. A third opportunity witnessed the notion become reality in 1973 - not at Cowan but at Mount Druitt.

One interesting feature of the new platforms was the use of galvanized pipe to provide two-rail fences at the rear of the platforms. This was possibly one of the last uses of pipe for fencing before the introduction in the early 1960s of roll-top, galvanised steel mesh fencing.

ELECTRIFICATION - 1958

Electrification was extended to Cowan on 16th November 1958.

Graham Harper, the pundit in all things relating to safeworking and signalling, writes:

> "The Working Timetable of 27th November 1983 indicates that between a third and a half of the suburban trains throughout the 24 hour period ceased to run to Cowan, instead turning back by way of a new facility at Berowra. There was a greater concentration of Berowra terminators in the pm peak. Probably a number of these trains were new services which had previously terminated at Hornsby.

By 1989, only six trains turned back at Cowan compared with 25 at Berowra. One of these was a trial working; the four in the evening appeared to be because the Assistant Station Master at Berowra had gone off duty.

The large increase in interurban trains meant that turning trains back at Berowra with its bypass loop for down non-stopping trains was far more expedient, because no main line was blocked while the driver changed ends, went to the toilet, changed the taillights or anything else that forms part of turnback procedures. Most of Cowan Box's work disappeared in this change. From this time on, Cowan was mostly only involved with the refuging of trains as required. I would assume that the last train in 1992 followed a further slide in the number of trains terminating at Cowan".[8]

The last suburban train to terminate and start at Cowan operated allegedly on 10th January 1992, after which all trains terminated and commenced their journeys at Berowra.[9] A photograph of the last terminating train at Cowan appeared in *Railway Digest*, March 1992, page 118 with a plaque on the front carriage showing the date as 11th January 1992.

This photograph has been taken, allegedly, one week before the opening of electrification and shows the signal box and the residence, mostly obscured, painted in the old stone colour scheme while the waiting shed on the southbound platform has been painted in one of the post-1952 pastel colours. Both platforms have been renewed using a substructure composed of old

[8] Email from Graham Harper dated 9th January 2020.
[9] Photograph No. 011435 ARHS Resource Centre shows the last train.

railway lines with concrete decks. Pedestrian access between the platforms was primitive. ***SOURCE****: Photograph by Peter Sage on 9th November 1958 No. 553146 ARHS collection.*

PUBLIC TOILETS – 1961

The 1961 toilets added to each side of the 1909 waiting shed. It was policy on the New South Wales Railways to separate the toilets for the two sexes to minimise loitering by men outside the female facility. This was achieved in this instance by placing them either side of the then existing waiting room. Men are on the left and women on the right.

Norm Vogan approved on 13th June 1961 the addition of new public toilets at platform level at Cowan station. The previous toilets were off-platform. The new toilets formed the only improvement in platform facilities for the travelling public since the station opening in 1901 and remained the only improvement. They were located on the northbound platform. The male toilet was added to the south side of the existing timber waiting shed and the female toilet was added to the north side of the same shed. The additions are obvious not only in the different pitches of the roofs but also in the style of the boards on external walls. The original waiting room in the centre has rusticated weatherboards and the toilets have lapped boards. The pressure on the Department to save money was reflected in the decision to attach the toilets to the existing waiting room as such action eliminated the need to construct one wall of each facility. Also, frugality was displayed in the small size of the closets. The standard floor area for toilet cubicles was 231 square feet at those at Cowan were only 180 square feet. The

Department spent the next few months reflecting upon the adequacy or otherwise of the length of the urine absorption trench connected to the toilets and, in late 1961, officers decided to provide parallel trenches 12 feet apart for length of 40 feet between the station and the adjacent Pacific Highway. In 1963, the Department installed a 450 gallon septic tank.

With the public toilets now locked, it is impossible for visitors to inspect the facilities provided in 1961. Luckily, this 1996 photograph gives us a snippet of information. The stainless-steel urinal held two simultaneous users. Toilet-goers at Cowan were extremely fortunate as the installation of mirrors in male toilets was highly unusual for most New South Wales station toilets.

THE SECOND PERIOD OF NOTHINGNESS – 1960-1989

Between 1960 and the establishment of CityRail in 1989, New South Wales governments once again abandoned the notion of sustaining their investment in the rail system by grossly underfunding station renewals. This was reflected at Cowan by the total absence of any improvements to structures and conditions for staff and customers.

The above photograph shows the colour scheme of station buildings that was typical of the 1970s and 1980s. The typical colours were white or cream for buildings and orange for platform seats and garbage tins. Between the ticket office on the left and the waiting shed on the right is the out of room, the walls of which are sheeted with corrugated iron. The original timber fence at the rear of the platforms has been replaced by pipe fencing. The 1961 approved separate male and female toilets have been added to each side the of the waiting shed. The station name boards are of the circle and bar variety, which was in use between 1926 and 1960. ***SOURCE:*** *Photograph by G. Dorman c1985 No. 027046a ARHS collection.*

Retired electrical engineer, John Watsford, recalls:

> "The station had great importance during the 1970s and later when Kevin Gill, the Chief Traffic Manager, lived there. He would board an inter-urban around 5am each day so that he could get to work at Central and review the previous day's train delays. Branch responsibilities were allocated in preparation for the 'Morning Prayer Meeting' with the Commissioner and all Branch Heads.[10]

[10] Email from John Watsford on 7th February 2020.

THE IMPACT OF CITYRAIL – 1989

The sign in 1999 says it all – Building Better Railways. The platform seat is in the early CityRail colour scheme of red and white. The loop top fencing was painted green rather than the far more usual white. The selection of green was meant to be an acknowledgement that CityRail was aware of the natural bush setting and was providing station upgrading facilities that reflected its understanding of the sensitivity of the station location.

Following the establishment of CityRail in 1989, there was a major change at the south end of the northbound platform which involved the demolition of the signal box, the ticket office, the relay hut and the out of building. All were located on or behind the northbound platform. A new relay hut was incorporated into a new signalling building behind the platform some time about 1990.

Tenders closed on 1st March 1989 for the erection of a two level signalling building behind the northbound platform at Cowan.[11] It opened in 1990 and facilitated the end of terminating trains at the station in 1992.

While the fencing at the rear of the platforms is the typical CityRail pool fencing 1990s, it is painted dark green rather than usual white. The use of green paint was usually only

[11] *Railway Digest,* May 1989, p. 190.

applied where there was community protest about the ugliness of the white paint against the green foliage given the location of stations in bushland settings.

This image shows the early version of the back-lit station name sign used by CityRail between 1989 and 1995 or so. The 1889 signal box has been demolished and replaced by the 1990-opened new signal box and signal relay building, comprised of a brick base and Hardie Plank walls, complete with fungal growth. The impact of CityRail following the cessation of suburban electric passenger services in 1992 is most obviously seen in the construction of a shelter shed adjacent to the Pacific Highway for those periods when trackwork prevents train operations. Another marker of the CityRail period is the posts for pre-Opal ticket card readers adjacent to the green fencing at the station entrance for an electronic ticketing system which was never brought into service. They were small monuments to the large waste of taxpayer money. Taken on 23rd February 2008.

The foregoing image shows the platform structures in 1996 looking south. The northbound platform is on the right.

THE WORK OF SYDNEY TRAINS 2011-PRESENT

Sydney Trains has put up its new corporate signage all over the place, as would be expected. However, it has also put a lot of effort into restoring some heritage-listed stations, including Cowan. The image below is an internal view of the waiting shed on the northbound platform. CityRail had installed two of its standard design, commercially-available platform seats. The arm rests were provided to prevent people from lying on the seats and inconveniencing other passengers. These have since been removed and replaced by replicas appropriate for the opening of the station in 1901. The dirty floor in the image has since been cleaned and the floor boards covered with a stain. The internal wall treatment is unusual in that part of the top portion of the wall has been covered. This is possibly due to the construction of the male and female toilets which adjoin each side of the structure.

The image of the northbound waiting room shows seats that no longer survive. Perhaps Sydney Trains was eager to replace them, considering both were positioned off-centre in the waiting shed. No doubt that would have been an ongoing irritation to local train users who thought that the asymmetrical position of the seats was psychologically troublesome. No matter what the reason was, the seats had a short life of only ten or so years and have been replaced by a

replica seat reflecting a design of the 19th and early 20th centuries. Let us hope that the seats in the picture were reused at another location. ***SOURCE:*** *The image has been taken from the website of the New South Wales Department of Environment and Heritage.*

Stuart Sharp

18th January 2019 and revised on 25th April 2022

COWAN TRAIN WORKING IN THE STEAM ERA – A PERSONAL HISTORY BY RAY LOVE, LOCOMOTIVE AND STEAM-ERA SPECIALIST

INTRODUCTION

These notes aim to explain the importance of Cowan during the steam era, particularly with the handling of bank engines and terminating passenger trains. My father was a Driver attached to Hornsby locomotive depot in the 1950s and I was most fortunate to accompany with him and other Drivers in their daily routines.

LINESIDE TENTS

By the late 1940s into the late 1950s, there were between 30 and 40 residential tents beside the Main North line between Asquith and Cowan. These tents were on both sides of the line.

I have used the term 'residential' (my term) to differentiate between tents which were used as permanent residences for railwaymen and their families and those used to provide temporary shelter for track workers (fettlers).

I have also used the description *'beside the Main North line'*. 'Beside' is the operative word. The side walls of the some of the tents were only a couple of metres from the track ballast of the per-way, brought about by the proximity of the nearby road on one side and the railway on the other side – no clear space to erect the tents away from the track. In many locations, rock cuttings and dense bush dictated where the tents had to be placed. As result of the terrain, tents tended to be located in clusters along that stretch of the Main North line.

The residential style of railway tents incorporated two or three canvas tent structures linked together to form a home, which comprised a kitchen/living area, two or three bedrooms and some elements of furniture in those rooms. Flooring throughout the arrangement of tents and the bathroom arrangements varied but commonly, a rough,

corrugated sheet-steel ‘dunny down the back’ was built, serviced by the local municipal council sanitary contractor.

Provision of suitable drinking water to these residences was essential. A number of circular galvanised water tanks were mounted on suitable supports adjacent the tracks and the tents and an arrangement of water piping and taps allowed water to be provided to these individual residences.

Every second Monday morning, when a ‘gap’ appeared the northern main line rail traffic, a ‘Water Train’ would depart Hornsby railway yard. The train comprised two or three four-wheel K trucks fitted with square water tanks and with a brakevan marshalled at each end of this train. The whole arrangement was worked by one of Hornsby depot’s 30 class tank engines with a Hornsby crew (driver, fireman two guards).

The water train serviced the tents on the down side of the line stopping to fill the line-side tanks in turn until Cowan was reached. There, the train was refuged to allow any mainline traffic to pass through; the engine ran around the train and, again, with a gap in the traffic, commenced its return run on the up main line, filling the line-side tanks adjacent to the up main line.

COWAN RAIL MOTORS (FREQUENTLY REFERRED TO AS THE ‘MOTOR TRAIN’)

Normally, two CPH rail motors and one CTH rail motor driving trailer were kept at Hornsby for Hornsby-Cowan passenger train shuttles. Sometimes, these were run as a single rail motor, two rail motors or a rail motor plus trailer. The rail motors mostly worked off-peak services. If it were to be a single rail motor, then it was referred to as a ‘rail motor’ in the Working Timetable. If two motors or one motor and a trailer, then referred to as a ‘motor train’.

Sometimes, a rail motor and trailer would work out to Cowan in late afternoon then stable the trailer in the short-dead end siding which trailed off the Hawkesbury River end (north end) of the run-in refuge siding. This dead-end siding was protected by catch points and a shunting signal controlled from Cowan Signal Box. On the following morning, the first service to Cowan with a single rail motor would retrieve the trailer from the siding and work back to Hornsby.

Approximately six Hornsby drivers were qualified for the rail motors. All rail motor drivers worked steam engines when not needed for the rail motor roster.

COWAN SQUIRTS

At peak passenger periods and at school times, the rail motors were replaced by a steam-hauled passenger service between Hornsby and Cowan. The train comprised a four-car set of American suburban cars (known as end-platform cars) and worked by one of Hornsby's 30 class tank engines.

Railwaymen knew the train as the 'Cowan Squirt' but the local residents of Hornsby, Asquith and along the line incorrectly called the rail motors, the 'Cowan Squirt'. The term applied only to steam-hauled passenger trains.

This photograph shows 5422 and 5420 passing the 1889 signal box on 21st August 1951. The defining features of the signal box were its location at platform level; its gabled roof and the absence of an awning over the windows on the rail elevation. Adjacent to it is the ticket office with the ticket window facing onto the platform. Note that the seat in front of the ticket office is on a slope, marking the ramped end and pedestrian access point to the platform. ***SOURCE:*** *Photograph by R. B. McLaughlin No. 017234 ARHS collection.*

BANK ENGINES

In the late 1940s and 1950s, Hawkesbury River bank engines were supplied by Hornsby locomotive depot. Commonly, two bank engines were on constant duty on the 'River' bank and even if rail traffic was at a low level, one bank engine could be found at Hawkesbury River. In times of heavy traffic, both passenger and goods traffic, up to six engines could be in service on bank work.

The Standard Goods engines (50, 53 and 55 classes) were in constant use on Hawkesbury bank, with one of Hornsby's 30 class tank engines being sent 'light engine' to Hawkesbury River on occasions to assist any marginally overweight up passenger or mail train. Usually, the 30 class remained attached to the train engine through to Hornsby where it was then detached.

Three sets of crews (each crew comprising a driver and a fireman) were based at Hawkesbury River either living there or travelling out to sign on at Hawkesbury River station. This meant that there was always a crew available for each shift. All other bank engine crews were Hornsby men who worked the River bank as part of their fortnightly roster. The Hornsby men commonly brought a 'fresh' bank engine (tender-first and running light-engine) from Hornsby depot to Hawkesbury River. The 'old' bank engine was then brought back to Hornsby by the crew who had finished their shift on that day or night. If no light-engine were to go to the 'River, the fresh crew would travel 'passenger' to Cowan on the local rail motor, meet the 'old' crew there, take over the bank engine at Cowan and allow the 'old' crew to return to Hornsby.

As described by Ray Love, the photograph shows 5227 running from Hornsby to Hawkesbury River as a 'fresh' engine to take up bank duties. This photograph also shows several interesting features. The decks of both platforms have been raised with what looks like concrete positioned directly on top of the original timber deck. On the Southbound platform are two seats. Both date from the 19th century. The one closer to the camera is older and has the ornamental arm rests while the one further away is a simplified version with curved bases and no armrests. The fencing at the rear of the platforms has been repainted from white to dark stone. Cowan was a

well-known location where fettlers' tents existed and one is visible adjacent to the Northbound line. **SOURCE:** *Photograph No. 012511 ARHS collection.*

WORKING OF BANK ENGINES AT COWAN

In the days of the steam bank engines, the Up Refuge at Cowan was not a loop. It was a run-in/back-out type, whereby any up goods train requiring refuge after coming up the bank would run through the facing points in the up main line a short distance past the signal box and proceed cautiously toward the dead-end of the refuge siding. When signalled to do so, the train was propelled out of the siding back on to the main line. Of course, part of the load would now be on the 1 in 50 falling grade toward Hawkesbury River, adding to problems of starting the load.

Run-in/back-out refuge sidings were not common on double line sections (Otford comes to mind) but could be found on single line sections.

All up passenger trains requiring assistance up the 'River bank were assisted at the front with the bank engine coupled in the lead of the train engine. Some goods trains were also assisted with the bank engine coupled ahead of the train engine. On arrival at Cowan, the train stopped short of the facing points for the refuge siding in front of signal box, the bank engine was uncoupled and proceeded into the refuge siding thereby allowing the passenger or goods train to continue on toward Sydney. At the appropriate time, the bank engine departed the refuge siding, crossed over to the down main line and proceeded tender-first back to Hawkesbury River.

Neal Munro photographed locomotive 3820 on No. 32 Newcastle Express on 29th December 1970. Clearly, bank engine assistance was not required. ***SOURCE:*** *Photograph No. 462937 ARHS Archives*

Rear-end assistance of up goods trains (pushing at the rear of the train) from Hawkesbury River to Cowan was a different matter. All Garratt-hauled goods and all diesel-hauled goods trains were required to be assisted in the rear on Cowan bank, but other goods trains could either be assisted at the front or at the rear of the train depending on traffic conditions.

Rear bank engines were not coupled to the rear of the train, simply buffered up to the rear of the brake van. On arrival at the top of the grade approaching Cowan, the bank engine crew eased off to allow the train engine to take the load and continue on toward Sydney. If, however, the up goods train was signalled to enter the up refuge, the bank engine crew waited and then drew up to the signal box once the goods had entered the refuge. The signalman then signalled the bank engine crew to cross to the down main line in order to return 'light engine' to the 'River.

WHAT HAS THIS GOT TO DO WITH COWAN?

All this information is provided to show how busy Cowan Signal Box could be in handling through trains (goods and passenger), terminating rail motors, the 'Squirts', many bank engine movements and return of 'light engines' to Hawkesbury River.

ELECTRIFICATION

In November 1958, the Sydney suburban electrification was extended from Hornsby to Cowan. As a result, the steam hauled suburban trains between Hornsby and Cowan were replaced by suburban electrics in either two-car, four-car or eight-car sets. The off-peak shuttles between Hornsby and Cowan were provided by two-car sets marshalled as Power Car + Driving Trailer Car. The steam bank engines continued until April 1959, when the electrification was extended and opened into Hawkesbury River.

This official photograph taken on 12th November 1958 shows the last regular rail motor service and the first electric train service. ***SOURCE:*** *ARHS Archives, Photograph No. 127531.*

In April 1959, steam bank engines were replaced by 46 class electric locomotives between the 'River and Cowan. Rear-end banking ceased and all trains requiring assistance had the assistant engine (or engines) coupled in front of the train engine.

Ken Winney was on hand on 11th May 1947 to witness the bank engine detaching from the goods train. Note the kerosene lamp. ***SOURCE:*** *ARHS Archives, Photograph No. 113176.*

Electricity had been connected to the station when John Ward visited the site in 1965.

THE IMPACT OF ELECTRIFICATION

In late 1958, with electrification extended to Cowan, the residential tents were removed, and the occupants moved into railway-constructed cottages in the nearby district. The ‘water train’ was no longer needed.

Hornsby locomotive depot supplied the steam bank engines, rail motors and crews and electrification saw a major reduction in activities at the depot with many enginemen transferring to Enfield or Eveleigh depots with others becoming suburban electric train drivers based at Hornsby Car Sheds.

Ultimately, the dead-end up refuge at Cowan was extended to form a loop (allowing up trains to depart without reversing out) and, in more recent years, was extended again toward the south in order to handle much longer freight trains.

When electric locomotive bankers came into use, they were uncoupled in Cowan platform, crossed over and despatched immediately to Hawkesbury River.

Termination of suburban trains at Cowan ceased in 1992, with the local suburban services then being terminated at Berowra in lieu. The stop for passengers at Cowan was catered for by additional stops by some inter-urban services.

The last suburban train was a SETS tour. ***SOURCE:*** *ARHS Archives, Photograph No. 110701.*

FURTHER READING AND REFERENCES

- *Roundhouse* Magazine, October 1984. Page 4. *Byways of Steam* 'Hawkesbury River and Hornsby'.
- *Roundhouse* Magazine, January 1985. Page 4. *Byways of Steam* 'Cowan – Hornsby'.
- *Byways of Steam 7* (1993). 'Hornsby to Hawkesbury River'.

Ray Love

1st January 2020

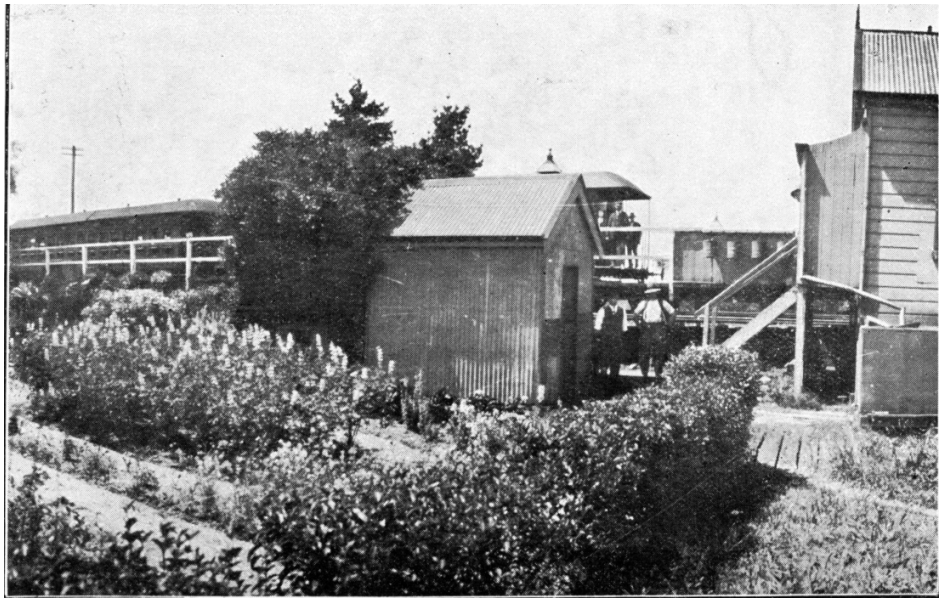
A POTTED HISTORY OF SIGNALLING AND SAFEWORKING AT COWAN BY GRAHAM HARPER

Cowan Creek was opened as a fully signalled crossing loop on 30th September 1889, probably to allow more operational flexibility for the increased traffic anticipated from the opening of the first Hawkesbury River Bridge. The working to Hornsby and Hawkesbury River was staff and ticket.

Cowan was signalled in a manner typical of its time, that is its ten signals were accommodated on six posts. The signals for one direction included bracketed home and starting signals main and main to/from loop, while the other had the home and starting signals each placed one above the other. Which direction got which type of signals was determined by the main line home signal having to be placed above that to the loop, in accord with the usual left to right route – top to bottom signal arm rule. At Cowan, the

loop was located on the up side, so the down signals were placed one above the other and the up were bracketed.

In other words, the home signals in the down direction could be placed one above the other on the same post because the rule dictated that the top signal always referred to the left, being the main line. This was not the case in the up direction whereby the left-to-right rule resulted in the top signal being theoretically referred to the loop. Hence, a signal bracket was required to avoid the misinterpretation of the top signal referring to the main line.



Taken in 1920, this photograph of the beautiful station entrance shows that the Northbound platform did not extend to the signal box. The two men are standing at the platform entrance. The shed sheeted with corrugated iron is probably the lamp room. While the location of the tin shed is poorly chosen at the station entrance, it probably pre-dated the construction of the platform. ***SOURCE:*** *Photograph No. 347978 ARHS Resource Centre.*

The pressure of ever-increasing rail traffic must have an issue as, on 17th September 1897, an up refuge siding was provided off the crossing loop at the Sydney end. The purpose of this siding was to allow an overlength train, presumably a down train, to be put out of the way for a crossing. However, Singleton, in the ARHS *Bulletin*, says it was used to keep bank engines awaiting a path back to Hawkesbury River.

On 12th September 1901, the crossing loop was extended at the Hawkesbury River end. As the points at this end were out of range for operation from the signal box, a ground frame was provided to operate these points and associated loop signals.

The proliferation of bank engines and the need for down goods trains to stop and pin down brakes (and again at Hawkesbury River to release them) made the Cowan Bank

an early priority for duplication, and the first short section of double line was opened between Cowan and [the first] Boronia Signal Box on 15th November 1907. As part of the duplication works, a short additional (up) platform was provided at Cowan.

Duplication reached Cowan from Kuring-gai on 28th February 1909, while on 27th June of the same year the section from Boronia to Hawkesbury River was similarly duplicated. Boronia was retained as a block station. Block working using Tyer's One Wire Three Position instruments was in force over all the double line sections in the vicinity.

The above photograph shows the following fixed station infrastructure: timber framed and timber decked platforms; two-rail, timber fence at platform rears; timber waiting shed on Southbound platform; no waiting shed on Northbound platform; male toilet off platform with arched roof; steps for the Station Officer to walk between his house and the station; 1891 and 1897 official residences; ticket office and signal box at the extreme South end of the Northbound platform; platform lighting and pot plants only on the Northbound platform. ***SOURCE:*** *Photograph by O. B. Bolton in December 1932 No. 000147 ARHS Resource Centre.*

One feature of the layout at the duplicated Cowan was the head in, back out Up Refuge Siding. Singleton says that the backing out process was slow and dangerous, but it was probably no more so than backing into the much more common back in, head out refuge sidings that proliferated throughout the double lines of the state. In any event, the goods train to be refuged may well have had the train following it waiting at the Boronia starting signal, so to go straight into the refuge would be the best option for getting out

of the way quickly. The refuged train could then back out during the time the overtaking train took to clear Kuring-gai, and then be on its way.

Duplication of the Cowan Bank had greatly eased congestion, but the slow progress of up goods trains still tended to disrupt following passenger services. So, suddenly one day it was decided to install a new Up Relief line halfway up the bank. This was introduced in 1912, and the old Boronia block box was supplanted by two new boxes, one at each end of the new relief line. You can imagine the problems when a full goods load, having been refuged in the new relief line, tried to start moving on a sharply curved 1 in 40 grade! The relief line quickly became a no-go zone and was only used when a train in difficulties had to split its load to make it to Cowan.

Interestingly, a number of peculiar additions were made to the signalling and track work around the state in 1912. One of these was an Up Refuge Siding at Douglas Park, which was unworkable because the grades were all wrong. It was replaced by a refuge loop three years later. Another was the complete resignalling of Picton involving a second attended signal box with no operational advantage and thus with very little for the signalman to do. That arrangement lasted until 1919, when a more rational scheme was implemented involving the abolition of North Box after only seven years' service. The fully interlocked loops at Nimmitabel and Bolivia were likewise basically unnecessarily extravagant 1912 installations.

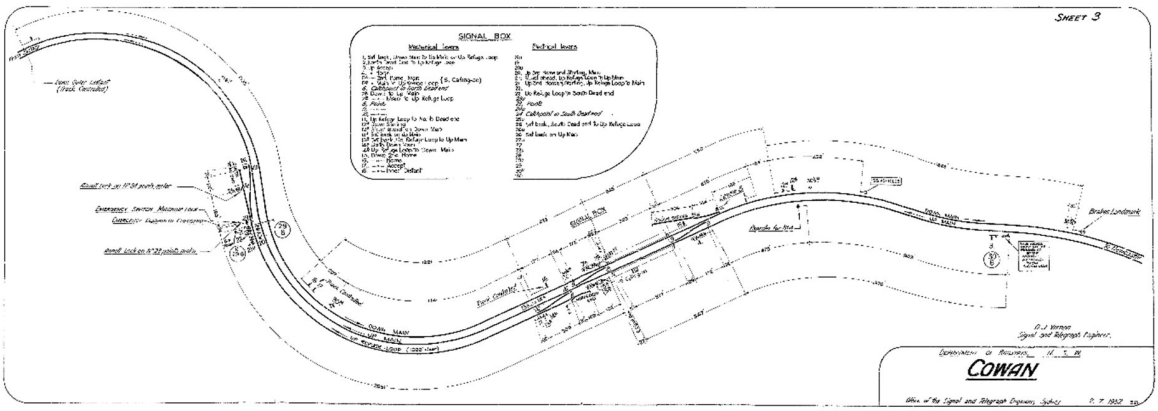
This foregoing photograph shows the goods siding with a trailing connection to the Down Main line at the north end of the station. The date of the installation of the goods siding is unknown, but it was in place in 1930. It retained the name of the goods siding until 1990.

Automatic signalling came early on the Cowan Bank, being introduced on 23rd March 1921. The Boronia relief line was still available for use, but two days' notice had to be given to the Railway Electrician prior to its full use. This would no doubt be in order to stop train controllers from using it without first giving it much thought and deliberation. Complicated arrangements were available to allow a guard to stow portion of his train from the southern end at any time when the signal box was unattended.

On 10th April 1930, automatic signalling was introduced between Kuring-gai and Cowan. Although the signal frame was retained at Mt Kuring-gai, it was only available for use for single line working or emergencies. It was an early use of the dreaded Pilotman's Lock, the operation of which meant that any emergency use would have to be planned well in advance.

Signalling at Cowan remained lower quadrant signals, except for the new Up Accept and Home, a single signal. The Down Accept lower quadrant signal was a two armed with separate home and distant arms. Another example of this rare occurrence could be seen at Marulan.

After all this activity, things settled down for the next three decades or so. On 2nd July 1957 further changes occurred. The Up Refuge Siding was extended and made into a loop, and a short dead end siding was provided at each end of the loop to take a bank engine. Three new double light colour light signals replaced mechanical signals and, to accommodate the new arrangements, an additional 12 switch Kellogg Key panel was provided to supplement the 18 lever frame still in use. The arrangements were then as shown on the diagram below.



On 27th and 28th October 1958, the automatic signals between Hornsby and Cowan, and most of those at Cowan were converted to single light indication. The interlocking and track layout at Cowan remained unchanged, while the automatic signals between Cowan and Hawkesbury River were subsequently converted to single light colour lights.

The old (and original) signal box had fewer and fewer suburban trains terminating after 1983 from which time an increasing number terminated at Berowra. The 1889 Cowan signal box succumbed to progress on 15th December 1990 when a new signal box was provided as part of a new station. This new box comprised a route set panel with all mechanical functions having been converted to power operation.

Automatic pedestrian barriers were brought into use at the Sydney end of the station on 3rd March 1991 to protect the odd passenger from the interurban services.

On 5-9th April 1996, bi-directional signalling was introduced between Cowan and Hawkesbury River. This arrangement allowed great flexibility in operations, with a faster train able to overtake a slower one on the fly.

Finally, control of Cowan passed to Hornsby Box on 30th September 1999. After 110 years, local control of the signalling was no more.

The photographer is looking towards Hornsby and shows the southern approach to Cowan, the photograph having been taken after the closure of the old signal box in 1990. The signal is the Up Starting signal from the Down platform, as reconfigured in 1996.

What do the indications mean? At the top is a route indicator, which has two indications when activated. The first is the symbol and letter, "\R", which allows trains to operate from No.2 Platform to the Up Refuge Loop. The second is the symbol and letter, "\U", which permits a train to proceed from No.2 Platform to the Up Main. Below that is a standard, three-position colour light signal. This signal head contains a single red light which never changes. It stops trains proceeding to the Down Main.

Next is a nameplate that gives the information:

- *the letter, "C", for Cowan*
- *the number 18, which is the route number in the signal box at Hornsby*
- *the letter "DM", meaning Down Main, which is the location of the signal*

The next box down the post is a standard fitting and has provision for six lights. These lights are used to indicate a turnout with the lights showing to indicate the direction of the turnout. This one at Cowan has only the lights operable from the bottom right to the top left as there is no right hand turnout at this location. The three lights when lit would show "\". The indication as to whether the Up Main or Up Refuge has been selected is given by the top route indicator. When the lights are lit, they pulse.

Also, in the box is one right at the top of the nest in the centre. This is the signal's red marker light, which is another standard arrangement that provides a back-up in case the main red light in the signal head fails. The marker light shows red, except when one of the signal indications to proceed has been activated. Once that occurs, the marker light is extinguished.

At the very bottom of the post is a shunting signal that allows trains to shunt from the Down Main to the Up Main or Up Refuge. The selected route is shown by the two square indicators immediately above the shunt signal. Indications are "UR" for Up Refuge and "UM" for Up Main, but are only lit when the shunt signal has been cleared.

With the indications explained, let's have a look at the signal's history. The signal started its life as a shunting signal in the 1940s, became a double light colour light starting signal in 1957, was converted to single light indication in 1958 and finally had its main light as a fixed red in 1996, with the movements past it signalled, once again, as a shunting movement.

The conversion to a starting signal in 1957 was due to the impending electrification. Prior to that year, trains terminating at Cowan comprised a mix of loco hauled stock [where the engine had to run round its train] and railmotors which did not. The 1960 working timetable indicates all Cowan terminators were suburban electric rolling stock, which meant that turnaround times were reduced to five minutes where necessary. By 1982, 28 trains terminated at Cowan each weekday.

The provision of an economical facing point lock on the connection nearest the camera made the starting of Up trains from the Down platform a lot easier as it dispensed with the [theoretical] need to clip the points for such a movement.

The 1996 resignalling gave the signaller the choice of directing an arrival directly into either platform. Unfortunately, by that stage, the opening of Berowra for terminating trains had reduced Cowan terminators to about eight per weekday, mostly after the Berowra Station Master had gone home leaving nobody there to operate the panel.

Also seen in the distance are the Up refuge entry points and the facing crossover which provided direct access to the Up platform. The track in the grass on the left leads to two per way sidings, which are an extension of the engine siding at the north end of the refuge loop. Goods traffic was handled at the goods siding at the northern end of the station, which was connected to the Down Main.

Graham Harper

8th January 2020 with additions on 23rd January 2022

ACKNOWLEDGEMENTS

These notes would not have been possible without the assistance of the volunteers in the ARHS Resource Centre, most notably in this case Geoff Lillico and Michael

Thompson. In addition, Bob Gibson, Dr Bob Taaffe, Ray Love OAM, Graham Harper, Gary Hughes and Ed Tonks OAM, also assisted in the presentation of the product, which is much the better for everyone's contribution. Thank you.

Our visit to Cowan is over and it's time to enjoy the train ride back to Sydney Terminal with American-style, open end loading cars and a 46 class electric locomotive. Oh, for the pleasures of 1965 with the outing ended and the film expended!

Stuart Sharp

19th January 2020 and revised on 25th April 2022