1984

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**Description**

**Publisher**
Illawarra Historical Society, Wollongong, 65p.

This journal article is available at Research Online: [http://ro.uow.edu.au/ihspubs/11](http://ro.uow.edu.au/ihspubs/11)
RAILWAY HISTORY IN ILLAWARRA

NEW SOUTH WALES

C. C. SINGLETON
Railway History in Illawarra

New South Wales

by

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Illawarra Historical Society
WOLLONGONG
1984
Hurstville Railway Station about 1910 showing suburban train about to leave for Sydney. The two tracks in the centre are passing loops for long distance non-stopping trains.

—OLD POST CARD

Como single track bridge in the 1890's.

—OLD POST CARD
RAILWAY HISTORY IN ILLAWARRA

By the early seventies of the last century the fertile Illawarra District of New South Wales had developed to such an extent that it became evident that some definite improvement to the transport serving this semi-isolated area was long overdue.

The low-lying coastal strip, overshadowed by the escarpment of the Illawarra Range, varying in elevation from about 1,000 to 2,500 feet, was most difficult in approach from its landward side. Among the few then existing tracks descending the range, only Bulli Pass could be classed as a road, and even so its single-figure gradients were more suitable for bullocks than horses and all hale passengers on the Wollongong-Campbelltown coaches were expected to walk up the whole length of the Pass.

At its summit two roads diverged—one to Appin via King's Falls, the other, a revival of Mitchell’s abandoned Illawarra Road, northward above the line of cliffs to enter the plateau of Bottle Forest, thence to Sydney via the punt at Tom Ugly’s Point in place of Mitchell’s route via Sabugal Pass at the Woronora River crossing, the Lugarno ferry, Bexley, Arncliffe and Tempe.

Practically all freight was handled by sea on account of the unsatisfactory roads, mostly used by passengers fearful of the seasickness associated with the small craft then in use.

But the lack of sheltered harbours in rough weather made the shipping service undependable. There was then only one reasonably effective port, Belmore Basin, Wollongong, for Robertson Basin, Kiama, was not completed until 1876. Public wharves at Kiama and Gerringong and coal loading jetties at Bulli and Bellambi Points could only be used in calm weather.

PROPOSALS FOR RAIL CONNECTION WITH SYDNEY

The question of rail communication with Sydney received much local attention during 1872, and with the object of organising private interests for the construction of a line a trial survey was carried out in 1874. The estimated cost discouraged any hopes of financing the venture by private enterprise.

Agitation continued, however, to such effect that the Government was finally spurred into action. John Whitton, Engineer-in-Chief for Railways, was instructed to locate a suitable route for the railway between Sydney and Kiama.

The greed of the owners of the Holt-Sutherland Estate prevented the obvious crossing of Georges River at Tom Ugly’s Point, as they held out for an extravagant price for the right-of-way, and the route was altered to a crossing at Como, this setting back the development of Sylvania for 50 years. Land jobbers’ lobbying contrived to divert the route over the Hurstville ridge with its otherwise unnecessary steep grades in both directions.
Whitton’s earlier location of the three trunk lines through the Hawkesbury Sandstones surrounding Sydney had taught him to avoid wherever possible the treacherous and unstable shale measures. After the Como crossing of Georges River, he took his lines up to follow the Bottle Forest Road along the watershed between the Woronora and Port Hacking Rivers.

Whitton originally intended to keep up on the sandstone cap as long as possible and to enter the Stanwell Park Amphitheatre at the higher level of today’s deviation (where the old pegs were found when making the survey 35 years later), but baulked at the slippery sidling that has given so much trouble in later years.

**ROUTE SELECTED**

Leaving the site of the first station at Waterfall at the head of Waterfall Creek, the line commenced the descent from the highest point into the valley of Port Hacking River through very steep gullies, sandstone at the higher and Narrabeen shales at the lower level. The line crossed the valleys of Frew’s, Cawley’s, Wilson’s and Camp creeks on high embankments with large culverts, and tunnelled through the ridges between, to emerge finally into the Port Hacking River valley, up which it continued for two miles. The line then turned towards the sea beyond the Garawarra Range and passed under Bald Hill through the Otford Tunnel, nearly a mile in length, to emerge into the Stanwell Park amphitheatre at a lower level than the present location. Leaving the site of the old Stanwell Park station, only 98 feet above sea level, the line then climbed again to a narrow ledge above the cliffs, which it traversed until entering the Clifton Tunnel under Mount Michael, or Coal Cliff, as it is sometimes called. Its southern portal opens on to the northern extremity of the Illawarra coastal strip under the cliffs of the Illawarra Range towering above.

During the descent along the talus of the range to the flat area a little above sea level, the earthworks were not particularly difficult, but this section has ever since been the seat of trouble with rock falls and landslides. The coastal plains presented few obstacles, except the crossing of several streams, until the line entered into the basalt country approaching Kiama, where there were several deep cuttings in the hard igneous rock, and entry to the town of Kiama was postponed for some years by the necessity for a long and expensive tunnel.

The extension to the Shoalhaven River passed through basaltic spurs of Saddleback Mountain involving the construction of five tunnels. Timber viaducts crossed three streams on this section of the line, but as the residents of Nowra preferred a road bridge over the Shoalhaven River to a railway bridge, the terminus still remains on the north bank 1½ miles from the town.
EARLY COLLIERY RAILWAYS

Several private railways were operating in the Illawarra well before the Government line from Sydney was built. These were owned by local collieries and conveyed coal from various mines to nearby jetties for shipment. There is no doubt that their presence and successful operation stirred the local people in their agitation for a railway from Sydney.

The first line in the district was opened as far back as 1859, being a horse tramway of the unusual 3 ft. 8 1/2 in. gauge from the Osborne-Wallsend Colliery at Mount Keira to the Bulli Road, later extended to Belmore Basin, Wollongong. The line was converted to the more usual 4 ft. 8 1/2 in. gauge in time for the landing of the first steam locomotive in November 1879, eight years before the Government line was finished past the point of crossing.

The Bulli Coal Company constructed a horse tramway of standard gauge between the incline of Bulli Colliery and a jetty on Bulli Point in 1861, and in May 1867 operated its first steam locomotive, the first in the Illawarra district, built by Henry Vale in Sydney.

In 1863, the Mount Pleasant Coal Company opened a horse tramway including two inclines from the Mount Pleasant Colliery to Belmore Basin using the 3 ft. 8 1/2 in. gauge, which was retained when the line was converted to locomotive haulage between the foot of the second incline and Wollongong Harbour in 1884. As the Mount Keira line was of standard gauge, there were portions of mixed gauge using a third rail at Wollongong Harbour.

Thomas Hale operated a horse tramway between his colliery and a small jetty at Bellambi Point, but abandoned it in 1863. In 1887 the Bellambi Coal Company rebuilt the line for steam traction to connect the foot of the incline from Woonona Colliery with a third jetty at Bellambi Point, the crossing of the new Illawarra line under construction being arranged at a spot known to the Railways as Woonona.

Between 1861 and 1864, Taylor and Walker operated a horse tramway from their South Bulli mine to a second jetty at Bellambi Point, crossing Hale's line nearby. In 1887 it was revived as a steam railway from the foot of the South Bulli Colliery incline to a fourth jetty at Bellambi Point. The crossing of the Illawarra line was named Bellambi.¹

Mount Kembla Coal and Oil Company opened a railway from their mine on Mount Kembla to the first jetty at Port Kembla during 1882, the original locomotive for the Company being landed for construction purposes in November 1881. The subsequent crossing of the Illawarra line built in 1887 was known as Mount Kembla.

¹ There were never more than two jetties at Bellambi at any one time.—W.A.B.
North Illawarra No. 1 Colliery was situated close to the site occupied later by North Bulli Colliery opposite Coledale Station. A horse tramway of standard gauge ran from the mine downhill to a jetty on Hicks Point opposite the present day “Headlands”. The loaded trucks gravitated to the jetty, the horses being used to haul the empties back to the mine. This line would appear to have been closed in or before 1882, as the contract plans based on the original surveys for the Illawarra line contained no sign of it, and the crossing of the centre lines of the two railways were at a difference of levels of six feet.

A standard gauge line descended the incline from North Illawarra No. 2 Colliery on the hillside behind Austinmer. The crossing was made under the Illawarra line, then under construction, the Coast Road being crossed on the level to the high level jetty at Hicks Point. A steam locomotive worked between the foot of the incline and the jetty.

The Southern Coal Company’s railway did not actually pre-date the Illawarra line. It was constructed a couple of years later to the colliery’s jetty at Port Kembla, crossing the main line on the level at Mount Kembla signal-box, which also operated the crossing signals for the Mount Kembla railway.²

CONSTRUCTION OF THE ILLAWARRA LINE

The contract for the first section was signed on 12th September 1882 by C. and E. Millar for the construction of 23 miles 13 chains of line between Illawarra Junction and Waterfall, the portion as far as Hurstville to be of double line, the remainder single, also including the short single line into Loftus (National Park).

When earthworks had been completed for 13 miles from Illawarra Junction and partially completed for the next five or six miles, a halt was called to all work beyond the “thirteen mile” by the Premier of the day, a self-appointed expert on railway location. He “preferred” a route via the Port Hacking River valley to the one approved via the Bottle Forest plateau, and called for a fresh investigation of the location of the line. However, after much heated argument, Whitton managed to uphold his original planning as less expensive and asked the contractors to resume their work.

Millars, however, heartily sick of being humbugged, refused to touch any work beyond the “thirteen mile’ and raised so much commotion that they were granted 20,000 pounds to compensate them for the flagrant breach of contract. They had in the meantime concentrated on their work.

² See also Appendix 1.
Como Station with picnic train passengers leaving for the boat sheds in the 1890's. The hillside at the far left end of the bridge has now been cut away for new bridge tracks.

—OLD POST CARD

on the Sydney side of the “thirteen mile” and in conjunction with the Department’s quadruplication from Wells Street to Illawarra Junction, the line was opened for traffic as far as Hurstville on 15th October, 1884. Much to Whitton’s disgust, he was refused the money to build a double track bridge over Georges River at Como in anticipation of future duplication, as was his custom with major works on trunk lines. The crass stupidity of the Government in this decision is shown by the fact that Eddy, when appointed Commissioner, duplicated the line beyond Hurstville only five years later, but found Como Bridge too tough a nut to crack.

To break the deadlock in construction, a fresh contract was made in July 1884 with Rowe and Smith to take over the section between the “thirteen mile” and Waterfall, a distance of 10 miles 16 chains, abandoned by Millars. Rowe and Smith were already hard at work on the second section beyond Waterfall.

The combined work of Millars and Rowe and Smith permitted the opening of the single line section between Hurstville and Sutherland, including the Como Bridge, a distance of 6 miles 20 chains, on 16th December 1885. On 9th March 1886 Rowe and Smith handed over 8 miles 58 chains of single main line and also the branch to National Park (then known as Loftus). Coaches then began to ply between the railhead at
Waterfall and Wollongong, running via Blue Gum Forest, Bald Hill and the Cliff Road. The first Waterfall station, then the temporary terminus, was situated 32 chains south of the present station, and immediately adjoined the level crossing of Bulli Road near the turn-off of the road down Waterfall Creek to the upper weir on Port Hacking River. The stations after leaving Hurstville were Como, Sutherland, Loftus Junction, Heathcote and Waterfall.

The contract for the Second Section was signed by Rowe and Smith for 10 miles 67 chains of single line between Waterfall and a spot about ¼ mile south of the present Coal Cliff platform. The only intermediate station was Otford.

This was one of the most difficult sections ever put in hand up to this time, for in the comparatively short distance of seven miles there were seven tunnels, one nearly a mile in length. In addition there were numerous and deep rock cuttings and brick arch culverts of 15 feet to 30 feet span over the large creeks. The main camp was at Cawley’s Creek and another for tunnel workers, mostly Italian, at Otford. The contractors’ engine was an 0-6-0 box tank built by Henry Vale of Auburn in 1884. It also helped in building the siding and yard at the Helensburgh Colliery (later Metropolitan) where it was afterwards retained as the yard shunter by the colliery owners until the end of its active life.3

It is hardly surprising that this work dragged badly so that the isolated section from North Clifton to North Kiama was opened ahead of it. It was not until 3rd October, 1888 that the trains commenced to run between Sydney and North Kiama.

The contract for the Third Section was signed on 30th October, 1883 by Proudfoot and Logan for 26 miles 15 chains of single line between a spot a mile north of Clifton Tunnel and the north bank of Macquarie Rivulet (near Yallah), this work to include the construction of Clifton Tunnel, 3,289 feet in length. The workers in this tunnel were mostly Italians, so their camp became known as “Little Italy”. The main camp was at Robbinsville (Thirroul), while a construction depot was established on the present site of David’s Foundry, Wollongong. The blue metal ballast was obtained from Logan’s Quarry on the Mount Kembla Colliery line near Unanderra. The laying of track was hurried between the Mount Keira and Mount Kembla crossings so that materials could be handled to the site from Wollongong Harbour or Logan’s Quarry.

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3 This little engine finished working about 1943 and was scrapped in 1963.—J.L.N.S.
CLIFTON-WOLLONGONG-BOMBO OPENED

The Illawarra people, seeing their local lines nearing completion but the Waterfall-North Clifton link lagging far behind, were most disturbed. The continued passage of the contractors' road vehicles having rendered the roads almost untrafficable, they agitated for the early opening of the Wollongong lines so that the roads could be again put in order. As a result of constant pressure a section of 13 miles 24 chains, between Clifton (later South Clifton) and Wollongong, was opened for traffic on 21st June, 1887. The coach journey was shortened to convey passengers between the railheads via Blue Gum Forest, Bald Hill and Cliff Road, the fare being five shillings.

The opening of the southern end of the contract coincided with the completion of the Fourth Section contract, and on 9th November, 1887 the section of 21 miles 19 chains between Wollongong and North Kiama (now Bombo) was brought into use.

With the completion of the Clifton Tunnel, rails were laid through it to the northern end of the contract about a mile beyond. A temporary terminus was laid in at North Clifton at a convenient point accessible to the coaches, and trains from North Kiama and Wollongong were extended to the new terminus on 25th July, 1888. This spared the coach passengers the ordeals of the negotiation of Patterson's Hill and the ford of Stony Creek at its foot. Careful search of surviving railway records has failed to find any reference to this extension, so it is assumed it was arranged locally, if somewhat unofficially. In the course of the Main Roads Board's reconstruction of the South Coast Road, any possible clues to the location of the terminus were obliterated by spoil banks from its excavations. As it would seem unlikely for the terminus to be established on the 1 in 40 or 1 in 51 grades, it would probably be close to the Sydney end of the existing Coal Cliff platform but at a slightly lower level than the present deviated line.

Proudfoot and Logan's construction engine was a tender type 0-6-0 named "Gladstone" built by Beyer Peacock (No. 1585 of 1879) which ran resplendent in green with brass dome cover and facings. When on a material train, it came into collision with No. 2 Mount Pleasant engine at the crossing of the two lines at North Wollongong, some say as the result of contesting the right of way. A further mark on its history card was made on the termination of the contract when the Mount Kembla Colliery people, who were dunning the contractors for alleged debts, found "Gladstone" stored in Logan's Quarry, promptly removed the rail connection and seized the engine as part payment. Apparently they were in the right, for they used the engine on their work for many years.4

4 The engine "Gladstone" finished working in 1936 and was scrapped in 1940.—J.L.N.S.

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During June 1887, rolling stock and materials were landed at Belmore Basin, Wollongong, to be hauled thence over the Mount Keira private line to the Illawarra line under construction. There is some doubt as to how the vehicles were transferred from one line to the other at the square crossing, for the triangle was not officially put in until 1890. There might have been a temporary connection laid in by the contractors, or the vehicles may have been manhandled at the crossing, but no evidence in support of either theory can be found.

Contractors' trains were pressed into service for conveyance of passengers on special occasions, when trucks and ballast hoppers were cleaned out and fitted with makeshift seats.

The contract for the Fourth Section was signed by Monie and Company for the construction of 10 miles 28 chains of single line between Macquarie Rivulet and North Kiama (now Bombo), which remained the terminus for a further five years.

This section in contrast to those preceding, was comparatively easy, the only items worth recording being the long timber viaducts over Macquarie Rivulet and Minnamurra River, while the 132 ft. long tunnel with only 20 ft. overburden between Oak Flats and Shellharbour is a sample of the queer things one can see on a railway.

The contractor's engine was "Murrumbidgee", one of the 0-6-0 tender type built by Kitson (No. 2029 of 1875). With the completion of the Third Section contract, the section from Wollongong to North Kiama was opened for traffic on 9th November, 1887, at which date the stations and signal boxes were Wollongong, Mount Kembla Crossing, Unanderra, Dapto Watertank, Dapto, Albion Park (later Yallah), Oak Flats (later Albion Park), Shellharbour and North Kiama (now Bombo).

The contract for the extension to the Shoalhaven River was signed by Pritchard and Company in August 1890 for 22 miles 73 chains of single line between North Kiama and the northern bank of the Shoalhaven River opposite Nowra. Station buildings were provided under separate contract with Messrs. Featherstone and Barber.

The negotiation of the basalt spurs of Saddleback Mountain jutting into the sea was a difficult matter necessitating the construction of no less than five tunnels in as many miles. Between the first and second tunnels a station right in the town of Kiama was provided. The section was opened for traffic on 2nd June, 1893 at which date the stations were North Kiama (Bombo), Kiama (new station in town), Omega platform, Gerringong, Toolejooa platform (spelling changed to Toolijooa in 1897), Berry, Jaspers Brush platform, Nowra-Bomaderry.
There are several items worth recording concerning the operation of the Government's isolated line centred on Wollongong. Rolling stock had to be taken to Wollongong Harbour by sea, as had been done previously with the contractors' engines and rolling stock, and worked over the Mount Keira private line to the main line.

To provide motive power for the Wollongong line, the Government purchased a second-hand locomotive named "Bogan" from the railway contracting firm of Monie and Company. It was of similar type to the N.S.W. Railways "A" class with 0-6-0 wheel arrangement and six-wheel tender, and was taken into the stock of the southern and western systems under the number of 386. Its introduction to the district was hardly a dignified one. Shipped by S.S. Kanahooka in company with two carriages, just before the official opening of the Wollongong to Clifton section, it was unloaded by the new steam wharf crane on to the rail track alongside, there to be reassembled. It was then found too large to pass under the coal loading staiths that blocked its egress to the landward side, and had to be dismembered again. There was therefore insufficient time to reassemble it before the official opening ceremony on 21st June, 1887, so the contractors had to come to the rescue by lending their engine "Gladstone" in its stead. During the gala day other special trains were run by engines from the Mount Keira and Mount Kembla private lines hauling trucks fitted with seats.

As a relief engine was required for "Bogan", the tiny "John Bull" was shipped to Wollongong. This was a four-wheel Wilkinson's Patent steam-tram motor that had been running in Sydney's streets "on approval" but had made itself thoroughly unpopular with the management, so was given its last chance on the Illawarra line. It had a vertical boiler and cycloidal drive to the rear wheels. There were complaints in the local press that it could not be depended upon to haul even one carriage. It was eventually returned without thanks to the makers, Beyer Peacock and Company of Manchester, who used it as a shunter in the works yards, where it was ultimately preserved as a relic. On 20th September, 1888 old "Governor

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5 It is generally accepted that the engine "Bogan" built in England by Beyer Peacock and Co. of Manchester in 1881, was purchased by the N.S.W.G.R. from Monie and Co. in November 1887 on the completion of their contract for the line to North Kiama. With the "super classification" of N.S.W.G.R. locomotives in 1924 it was renumbered 1958. During and after World War II Australian Iron and Steel Ltd. overcame shortages of locomotives by the hiring of N.S.W.G.R. locomotives and No. 1958 again ran on Illawarra lines working for Australian Iron and Steel Ltd. for varying periods from 1939 to 1959 but in 1964 lay derelict at Enfield locomotive depot.—J.L.N.S.
Train leaving the northern end of the old Otford tunnel showing the mountain above it.

—C. C. SINGLETON COLLECTION
General”, an 0-4-2 with four-wheel tender, was able to get through on rails from Sydney, although the line had not been officially opened, giving the necessary relief until the through trains commenced to run. No. 5 ended up by being used to supply steam for the crushers in Bombo quarry.

On 20th September, 1888 trucks passed through from Sydney conveying materials for the station buildings at South Clifton and Bulli, together with the turntable for Wollongong.

On 3rd October, 1888 “Bogan” hauled a first class and second class carriage as the first train in the celebrations at North Kiama to mark the official opening of the through service from Sydney to that spot.

OLD OTFORD TUNNEL

The tunnel between Otford and Stanwell Park, almost a mile in length, shared the notoriety and discomfort with the bores of Old Glenbrook and Ardglen. It was on a grade of 1 in 40 throughout, rising from Stanwell Park, and had a very tight cross-section for its single track, while its lower end with curve at the portal scooped in any south or south-east wind from the sea. While the passenger with closed windows in an up train had an unpleasant journey and the guard used newspapers for stuffing up the door cracks in his van, the unfortunate enginemen underwent a shocking ordeal. On tender engines, both knelt on the footplate, coats over heads, to breathe the air coming from under the engine, the apron plate being raised for this purpose. Though the air was hot from passing through or round the ash pan, it was none the less welcome. In the earlier years mineral and goods trains were mostly hauled double-headed by saddle tank engines of the “I” class. To keep the loads down, a third of the train was worked through the tunnel at a time, the remainder being left standing on the main line, until called for by the return of the engines from Otford. On these engines there was no apron to raise for air, so the enginemen would then ride on the steps to keep them below the smoke and steam exhaust. When, as was common, the engine lost its adhesion and slipped to a stand, the driver had to get on his feet to re-start, or back the train out for a breather, not a very safe proceeding in the days before Westinghouse brake became universal.

In 1891 an attempt was made to improve conditions by re-opening the original construction shaft of 7 ft. diameter, but with no appreciable result. The top of that shaft may be seen in the valley between Mt. Bulgo and Bald Hill.

In 1908 a more serious attempt was made by installing a large ventilating plant at the upper (Otford) end, but results were not up to expectations, as the fan blew the air down against the heavily steaming locomotive, forcing the smoke into the cab and carriages under pressure, the conditions being further aggravated when the southerlies blew. Naturally there was a considerable amount of criticism from ventilation experts from the local
mining fraternity, for the Departmental attitude was rather difficult to justify. Similar stupidity was shown on every public holiday when a train was sent empty to Stanwell Park, hauled by an “S” class tank-engine, to deal with the crowd of picnickers. The return trip loaded was a fiasco, for the train invariably stalled in the tunnel and had to be backed out and divided, these manoeuvres becoming a routine matter at holiday time but not exactly encouraging the travelling public to repeat the visit. Standing instructions in the later years of the tunnel’s existence limited the passage of drivers to two “up” trips per day and prohibited double-heading during southerly weather, this latter restriction making for saturation of the Illawarra Line. The use of respirators in tunnels was unknown at the time.

Railwaymen and passengers alike were delighted when the tunnel was superseded by the Stanwell Park Deviation of 1920.6

LANDSLIPS

Between Otford and Bulli the railway passes through a treacherous terrain, although this was not apparent during the time of construction, which covered a particularly dry spell. It was later realised that the narrow ledges forming the footholds for the railway hung up between mountain and sea were filled with a talus of rotten shale and drifts composed of sandstone boulders mixed with decomposed shale interspersed with pipeclay bands. This mixture, porridge-like in wet weather, was not improved by the inward dip of the strata in the rock shelf, where the water percolating through the overburden accumulated and finally caused the mud to slip out under pressure. Strange to say, this collection dried out so hard that a pick was necessary to break through the crust.

In the middle of 1889 the drought broke, and an abnormal fall of 20 inches in three days nearly washed the line away. The cutting below Hargrave’s residence at Stanwell Park fell in and the embankment at the southern end of the Stanwell Park amphitheatre slipped until it fell into the sea some 120 feet below. Forty-eight inches of rain fell in three months of 1890, and caused serious damage. By drastic remedial methods, including permanent drainage of the soil on the ledges, the Stanwell Park section was at last brought under reasonable control, but constant vigilance was needed to see that culverts and drains were kept clear from silt and falling stones. With the opening of the 1920 deviation the troubles started all over again and in very wet spells a very crooked temporary single line weaved between the holes in the double track formation. In later years careful drainage and encouragement of grass on the slopes of the hills have given a reasonable measure of control, although small washouts and settlements still occur.

Similar troubles occurred on the Clifton ledge and as far south as Austinmer. At Scarborough the Coast Road, which had been moved out towards the sea to make room for the railway, was then found to be too close to the edge of the cliffs to be trusted, and with each successive major downpour it had to be moved inwards as the earth slipped away from the seaward side. Luckily the railway goods yard became redundant as motor road vehicles developed, and was encroached on by the road until today the Lawrence Hargrave Drive is a very narrow thoroughfare tucked in alongside the rails.

Between the southern portal of the Clifton Tunnel and Scarborough Station the railway alignment has been readjusted several times.

The great rains of 1950, which caused the destruction of many homes on the talus between Clifton and Austinmer, did tremendous damage to the railway, 100 feet of one platform at Wombarra sinking into an embankment from which it was never recovered. The worst feature was the extraordinary upheaval of the floor of a cutting opposite Hicks Point as a result of the pressure of a quarter-mile of spongy talus sliding down from the higher ground and meeting an uptilt of rock strata. Day after day the cutting floor rose and was levelled off, only to rise again overnight. The section between Coledale and Thirroul was reduced to a single line for nine months while this problem was wrestled with and the roadbed became stabilised.

WOLLONGONG HARBOUR LINE

As mentioned earlier, the Osborne-Wallsend Coal Mine horse tramway of 3 ft. 8½ in. gauge from the foot of Mount Keira Mine incline to Wollongong Harbour had been converted to 4 ft. 8½ in. gauge as a steam operated railway in November 1879.

The Government of the day, which had developed Belmore Basin with the idea of making it a central port for all the Illawarra collieries, passed an Act for the purchase of that portion of the Mount Keira Railway to the eastern side of the Illawarra Government Railway. On 10th April, 1890, it completed a triangular connection between the two lines. On 1st July, 1890 the eastern end of the colliery line was resumed and handed over to the Railway Commissioners to maintain, although they never bothered to operate it. No N.S.W. Railways' trains ever worked over the line, but a few loads of coal were worked through by private locomotives from other colliery lines via the triangular connection. The Mount Keira trains continued to run in the normal manner, paying wayleave and, as a sign of fealty, carrying the train staff.

Australian Iron and Steel Pty. Ltd., after taking over the Mount Keira properties in December 1937, discontinued the shipment of coal at Belmore Basin and consigned it all to Cringila.

7 For R. L. Stevenson's description of conditions at Clifton, see Appendix V.
As N.S.W. Railways had placed an embargo on private engines operating on the main line through Wollongong, the process of building up a train at Mount Keira Crossing was very lengthy, as there was only the triangle road available beside the two main lines. A.I. and S. then opened exchange sidings on the opposite side of the main line on 10th June, 1940 and proceeded to dismantle the line to the harbour from the main line crossing, together with the points at the harbour end of the triangle. The remaining portion of the triangle was used for supplying trucks of coal or material to the local gasworks.

**FIRST DUPLICATIONS OF 1890-91**

Commissioner Eddy's programme of duplication as applied to the Illawarra line aimed at continuing the double line from Hurstville to Waterfall. The crossing of Georges River, however, presented a problem, for to replace a bridge only five years old was unthinkable. He used the "gauntlet" device of interlacing the tracks so as to avoid facing points, so dreaded at that period, but it still remained a virtual single-line bottleneck.

There was need for haste in the completion of this duplication for Sutherland was the only crossing place between Hurstville and Waterfall and the time occupied in the Hurstville-Sutherland section was extended by the need to stop twice to apply and release hand brakes on northbound goods trains on account of the steep descent to Como, with its narrow bridge.\(^8\) Short lengths of duplication were opened as they became available to ease the situation as rapidly as possible.

This duplication was responsible for the removal of the Waterfall Station to the second site, 16 chains nearer Sydney, where there was room for the necessary two platforms at the end of the double line.

\(^8\) Construction of the double track high level bridge to replace it began in 1969.—W.A.B.
Separate tracks converge on the northern side of Como Bridge to form gauntlet tracks (above) leading on to the bridge (below).
—WILLIAM A. BAYLEY

Como Bridge showing gauntlet tracks.
—WILLIAM A. BAYLEY
WATERFALL NEW YARD AND OATLEY REGRADING

Freight traffic from Illawarra continued to expand, heavy loads of blue metal from the Railway Quarry at Bombo, dairy products from south of Wollongong, and the full production of coal from Metropolitan Colliery, mostly for Eveleigh locomotive depot, all tending to choke the Como bottleneck. Drastic treatment to reduce the number of trains by increasing their load became imperative. It was found that by providing a ruling grade of 1 in 80 between Waterfall and Sydney against northbound trains a "50" class engine could haul 540 tons instead of 387 tons.

While the regrading work was in hand a large storage and assembly yard was provided at Waterfall so that northbound goods trains might be made up to full loads for a shuttle service to and from Eveleigh. The passenger station was moved again to the present (third) site at the southern end of the yard, the work being completed on 4th September, 1905.

The section from Hurstville to Mortdale was regraded on its original centres, except for a slight diversion to permit the erection of a new island platform at Penshurst. Between 4th January and 12th April, 1905 single line working was instituted, one line at a time, controlled by temporary signal-boxes at Hurstville South and Mortdale.

Between Mortdale and Georges River the Oatley Deviation, opened on 7th July, 1905 was provided on the western side of the original line, which it rejoined about half a mile on the Sydney side of Como Bridge. Owing to regrading in the latter vicinity, single line working was in force between 4th March and 7th July, 1905. A temporary signal-box, Georges River, was used to control this working. A new station with island platform was provided at Oatley, replacing the double platform some one hundred yards east of it, later buried under a park.

MAJOR DUPLICATION AND DEVIATION AREA

After the double line had reached Waterfall in 1890, a halt was called to a continuation in a southerly direction owing to the high cost involved in such difficult terrain, which could be greatly increased if the policy laid down by Commissioner Eddy of improving steep grades in the "up" direction to a maximum of 1 in 75 or 80 were carried out. Even simple duplication meant the abandonment of eight tunnels, one nearly a mile in length. Surveys were made in 1908 of possible deviations, and two, both of a major character, were found giving the 1 in 80 grade, coinciding with the Oatley Bank, but only at the price of curves as sharp as 10 and 12 chains radius which have since prevented any increase of speeds.

Meanwhile the single line was nearing saturation, the worst bottleneck being the Otford Tunnel. Crossing loops, installed at Cawley and Stanwell
Como Railway Station showing train from the South Coast composed of corridor carriages drawn by a steam engine formerly classified as "P" class.

—WILLIAM E. BAYLEY

Park in 1901, only just kept the line working, but with intolerable delays. Therefore, as soon as men were released from the even more vital Glenbrook Deviation on the Blue Mountains, work was commenced on the Helensburgh Deviation.

HELENSBURGH DEVIATION

The route selected, commencing a mile south of Waterfall, was 5 miles 65 chains in length, increasing the distance to Wollongong by 2 miles 27 chains. Instead of cutting through the ridges between the valleys of Cawley’s, Wilson’s and Camp Creeks, it would round their contours in three huge “U” shaped loops with five semi-circles, involving three tunnels, to rejoin the original line at the southern end of Lilyvale platform.

A new branch had to be built to serve the Metropolitan Colliery which was now a quarter of a mile farther from the main line.

The first section of the Helensburgh Deviation commenced just south of the opening out of the old No. 1 Tunnel at Waterfall and rejoined the old route near the crossing of Wilson’s Creek at Helensburgh. It was opened as single line on 26th January, 1914, the second track being added on 27th February following. The temporary signal-boxes at each end were 3 miles 16 chains apart via the new line but actually were only a mile distant “on the map”. On 17th August, 1914 the double line south of Waterfall was

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9 See “LAPSTONE ZIG ZAG RAILWAY” by William A. Bayley.
DEVIATIONS OF THE ILLAWARRA LINE
Commencement of the work of opening out the single track tunnel at Waterfall to convert it to a double track cutting.

—SYDNEY MAIL 2/10/1912. P. 13

Construction of double line cutting at Waterfall replacing the single track tunnel well advanced.

—O. B. BOLTON
put through to join the deviation section. The second section of the deviation was brought into use on 30th May, 1915 for a distance of 2 miles 48½ chains. The double line was continued on to Otford on the same date, this portion including a short regrading on centre lines and a slew over a new culvert over the Port Hacking River.

**Sydney-bound goods train on the new double track deviation north of Cawley in 1915. The earlier formation from which the rails have been lifted can be seen below.**

—O. B. BOLTON

**DUPLICATIONS**

With Wollongong as the southern end in view, duplications were put in hand in urgently required short sections, provided they did not include heavy earthwork. To permit the shunting of industrial sidings with less delay, the short sections from Mount Pleasant to Mount Keira and Woonona to Bellambi were opened as double line on 14th May and 25th September, 1913 respectively.

A start was then made on the Scarborough to Thirroul section, the duplication to begin at a new station to be provided between and in lieu of the Clifton and Scarborough stations on the single line. To permit the provision of a uniform grade of 1 in 75 in place of a series of sharper pinches between Scarborough and Coledale, the new single line was brought into use on 14th June, 1914 while the old line was being regraded.

Duplication between the new station and Thirroul was opened on 14th November, 1915, a short extension bringing the double line to Bulli Coal Siding on 25th October, 1916. At this point World War I temporarily put an end to duplication work, although Thirroul was selected as a central
South-bound afternoon train passing through duplication work on the single line leading to the first Helensburgh tunnel in 1913.

—O. B. BOLTON

Single line tunnel at Cawley after removal of the tracks following opening of the Helensburgh deviation in 1915.

—O. B. BOLTON
traffic and locomotive depot for the Illawarra district, and a large yard was brought into use on 28th February, 1917.

The cost of duplicating the Clifton Tunnel being found to be out of the question, the section from Coal Cliff to Scarborough remains single track, but as it is only about a mile in length, little delay is experienced.

**STANWELL PARK DEVIATION**

This highly desirable work, which involved the elimination of the ill-famed Otford Tunnel, was delayed by World War I. It retained the desired 1 in 80 grade against north-bound trains but involved the use of 12-chain-radius curves, its length being 4 miles 4 3/4 chains, 53 1/4 chains longer than the original line. Starting at Otford station, the new line followed up Hacking River Valley for a mile and then by means of the new shorter Otford Tunnel of only 1270 feet in length on easy grades, emerged to the Australian railways' most magnificent seascape. Stanwell Creek gorge was crossed by a spectacular curved brick viaduct 215 feet above the creek, approached at its ends by tunnels. The old line was rejoined at Coal Cliff platform. The full duplication (4 miles 29 chains) between Otford and Coal Cliff box was opened via the new route on 10th October, 1920 but up goods trains used the deviation on one line for a few weeks before the completion of the second and were thus able to avoid the passage of the Otford Tunnel so much earlier. The new Stanwell Park station was rather unfortunately placed up on the mountain side 289 feet above sea level.

The Main Roads Board in 1925, when re-aligning the South Coast Road (now Lawrence Hargrave Drive) used the abandoned formation through the Stanwell Park amphitheatre, passing through the old station site where a small retaining wall that once protected the signal-box is now the only sign of the railway occupation.

**LATER DUPLICATIONS**

In 1922 work was resumed on the duplication, beginning with the remodelling of Wollongong yard and provision of a new platform and large brick station building with refreshment rooms, and the duplication from Mount Keira box to the new Wollongong signal-box at the southern end of the yard, which also controlled the junction of the Port Kembla branch. These works were brought into use on 29th April, 1923.

Bulli Coal siding to Woonona signal-box was then duplicated on 20th May, 1923 and the last link, Bellambi to Mount Pleasant, on 27th May, 1923, giving an almost continuous double line from Sydney to Wollongong, the exceptions being the gauntlet tracks over Como Bridge and the mile of single track between Coal Cliff and Scarborough through the Clifton Tunnel.

With the duplication of the Port Kembla branch to Port Kembla North on 15th July, 1941, the two separate single lines into Wollongong were converted into double track by the transfer to Coniston of the junction of double and single line.
Construction of a double track tunnel during duplication work. This is the Sydney end of the Metropolitan Tunnel at Helensburgh.

—O. B. BOLTON

Boiler room, air duct and 51 feet extension at the northern end of Otford tunnel installed in 1908 to improve ventilation.

—NEW SOUTH WALES GOVERNMENT RAILWAYS
Mixed train with milk vans blasting up the bank to enter Otford tunnel in 1906.

—SYDNEY MAIL 7/3/1906

Train of coke hoppers climbing the bank from old Stanwell Park station toward Otford tunnel in 1915.

—O. B. BOLTON
STATIONS AND SIDINGS

(This section sets out in geographical order the dates of opening, closing or important alterations to all stations and sidings on the Main Illawarra line south of Waterfall.)

WATERFALL had three locations, the first being brought into use on 9th March, 1886 with the opening of the line, its single platform being about 32 chains south of the present site, adjacent to the original level crossing, later replaced by the second overbridge south of the present station. This platform was on the western side and the only track accommodation was the crossing loop north of the platform. Water for engines was taken at a tank 60 chains north of Heathcote. On 13th April, 1891, with the opening of the duplication from Heathcote, a new station was provided 16 chains south of the present site. It had double platforms, the end of the double line being immediately south of the station. A goods siding, still in use, was provided, and shortly afterwards an engine shed, turntable, and storage siding were added on the eastern side opposite the present station. On 14th September, 1905 the third station, with island platform and new marshalling yard, was brought into use. Only minor alterations were made for the duplication southward in 1914. A siding for the Woronora Dam Construction was in use between 1929 and 1952.

SOUTH WATERFALL (temporary) signal-box was situated at the Sydney end of the Helensburgh deviation and was in use between 15th December, 1913 and 9th December, 1914.

CAWLEY signal-box was opened on 22nd November, 1901, to operate a crossing loop as an additional relief to the long stretch of single line between Waterfall and Otford. It was closed when superseded by the opening of Helensburgh Deviation on 22nd February, 1914.

HELENSBURGH JUNCTION was a temporary signal-box in use between 22nd February, 1914 and 30th May, 1915 as part of the stage work of the Helensburgh Deviation.

HELENSBURGH: The original station, first mentioned in the timetable of 1st January, 1889, was queerly situated between two tunnels with an approach by a level crossing. A short goods siding with shed was added in 1891. This station was abandoned on the opening of the second section of the Helensburgh Deviation on 30th May, 1915, being replaced by an island platform on the deviation with an approach by a stepway from a new overbridge.

METROPOLITAN COLLIERY JUNCTION on the original single line was situated right at the southern portal of a tunnel, the short branch serving the Metropolitan Colliery. The latter yard was being prepared for the contractors for the second section of the Illawarra line, but the work was not completed in time for the opening of the line. Officially opened on
5th February, 1890, for its first year it was known as Helensburgh Colliery Junction. The new junction that superseded it on the deviation was further down the Camp Creek Valley and was opened on 30th May, 1915. The new layout is peculiar in that the branch diverges to the eastern side and then crosses over the main lines to ascend the valley to the colliery.

LILYVALE platform is first mentioned in the timetable on 1st October, 1889, in which it was mis-spelt Lilydale. The present new platforms were built at the end of the new alignment of the deviation opened on 30th May, 1915. A siding for Coal Cliff Land and Coal Company, later Saywell’s, was opened on 30th October, 1900, renamed Vickery’s Siding from 31st October, 1915, and finally put out of use on 23rd January, 1939.

RIVERBRAE was the name last used for a short timber-loading siding on the western side of the line between Lilyvale and Otford. It was opened for Foster on 12th January, 1907, became Hamilton’s Siding on 6th April, 1912, was renamed Riverbrae on 11th October, 1913, and was closed on 17th July, 1936.

OTFORD station, opened with the line on 3rd October, 1888 is in a confined but picturesque location on a long 10-chain radius curve on the steep eastern side of the Port Hacking River Valley. A crossing loop was provided on 11th January, 1892 “down and up” working, making a second platform necessary, was arranged so that a runaway siding could be
The last regular steam train on the Illawarra line entering Otford Station where it terminated in October 1965.

—WILLIAM A. BAYLEY

Morning train for Sydney stopping at Otford Station in 1964. The water column, very necessary in the early days, became little used with the coming of bigger engines.

—WILLIAM A. BAYLEY
Passenger train running down from Otford tunnel to the original Stanwell Park Station in the nineties.

—ILLAWARRA HISTORICAL SOCIETY

Picnic train, southbound, leaving Stanwell Park Station after 1901 when the station was built on the western side; that on the east being relaced by a passing siding for some years.

—OLD PRINT
Sydney-bound passenger train of box carriages leaving Stanwell Park Station about 1910. The embankment is now the main road.
—ILLAWARRA HISTORICAL SOCIETY

Double headed passenger train arriving at Stanwell Park Station about 1910 after the eastern platform and footbridge had been constructed.
—C. C. SINGLETON COLLECTION
provided to catch anything detached from the rear of Sydney bound trains. Watering was allowed for on each track, the jibs on the twin tanks on the “down” road being noted for dribbling water down the necks of passengers using the duckboarding on the exit from the platform. The coal siding for the fan engine was provided on 9th August, 1908, and there were two dead-end storage sidings for staging up trains through the tunnel. The Fan Siding was closed on 3rd August, 1920, during the last stages of the Stanwell Park Deviation. On 5th March, 1921 two dead-end refuge sidings were provided at the Sydney end of the station. The locomotive water supply has been little used in recent years since the advent of superheater engines.

STANWELL PARK has had many changes since the first small platform was opened on the low level line on 14th March, 1890 for Lawrence Hargrave. This was changed to the western side of the line to make room for the new crossing loop opened on 23rd December, 1901. As the traffic was expanding rapidly, and becoming more difficult to work owing to the proximity of the Otford Tunnel, the crossing arrangements were altered to provide for “down and up” working where runaway sidings could be added to permit of two trains approaching simultaneously. An additional

*Passenger train of box carriages from Sydney rounding the bend on sea bank at Stanwell Park in 1911.*

—TOWN AND COUNTRY JOURNAL, 1/12/1911, P. 30
Coal Cliff Colliery with the South Coal Cliff platform in the foreground near the battery of coke ovens. The train is about to enter the tunnel at the right.

—WILLIAM A. BAYLEY

platform was necessary for this re-arrangement, and as it was becoming a busy tourist stop, the waiting accommodation was enlarged, and a footbridge provided between the two platforms. These works were brought into use on 17th May, 1909. Two storage sidings were added on 17th December, 1912 for stowage of loads left when assisting engines were banned through the tunnel during southerly weather. The new station on the deviation on the higher level was opened on 10th October, 1920, as was a dead-end goods siding (removed on 4th June, 1953).

COAL CLIFF unattended island platform was installed with the Stanwell Park Deviation, but portion of it was brought into use in August, 1920.

COAL CLIFF COLLIERY SIDING was opened on 10th August, 1909 in order to develop the new shaft colliery that was to supersede the original Coal Cliff drive from the jetty on the ocean front. The signal-box, Coal Cliff, controlled at the crossing loop and the entrance to the colliery yard, and was brought into use on 27th September, 1910. The colliery sidings were on sharp curves crossing Stony Creek on a high embankment. On 12th June, 1914 the Illawarra Coke Company opened a set of sidings to serve their coke ovens on the other side of the main line, coal being supplied from the Coal Cliff mine by an overhead conveyor. For the convenience of workers at the colliery a Miners’ Platform was provided close to the portal of Clifton Tunnel in 1911. Later this was given the name COAL
CLIFF SOUTH in March 1926, and on 22nd October, 1930 it became a public utility. The double track ends just beyond the signal-box.

CLIFTON platform, south of Clifton Tunnel, was opened as North Clifton on 3rd October, 1888, the date the line was connected with Sydney, but the name Clifton is shown in the timetable of 1st January, 1889. It served the village of Clifton, which clusters around the hotel of that name perched on the top of the cliffs overhanging the sea. Closed on 15th August, 1915 with the opening of the new central station, it was revived as a short miners’ platform on the same site on 4th July, 1934.

SCARBOROUGH: The present station was opened on 15th August, 1915 midway between the stations of Clifton and Scarborough. “Down and up” working was maintained through the two platforms before the duplication was opened to Thirroul on 14th November, 1915. The South Clifton Colliery yard, and the 70-chain single line siding to South Clifton
Tunnel Colliery were connected in at the new signal-box. The former South Clifton colliery and coke works have long since disappeared but a number of the sidings have been retained for the working of South Clifton Tunnel Colliery and storage. As mentioned elsewhere, the goods yards has ceased to exist.

SOUTH CLIFTON, as it was known for the greater part of its existence, was opened on 21st June, 1887, under the name Clifton, being the northern terminus of the isolated section until 25th July, 1888. Local jealousies between the twin townships on the ledge above the sea resulted in the change of name to Scarborough on 1st October, 1903, it being located opposite the hotel of that name. It had a typical country-type timber station building and the officer’s residence still exists. A crossing loop and goods yard adjoined the yard of the South Clifton Colliery, built shortly after the opening. In 1908 the New South Clifton Colliery was opened 60 chains southwards, and was connected to the old colliery yard by an independent siding alongside the main line. Its name was changed to South Clifton Tunnel Colliery in 1910. Coke ovens were opened in the old yard at an early date. A small engine shed in the departmental yard housed an “I” class saddle tank that worked the blue-metal trains from Bombo Quarry. The station was closed and replaced by the present Scarborough station on 15th August, 1915.

*Sydney-bound morning train about to enter Coal Cliff tunnel.*

—WILLIAM A. BAYLEY
Greatest steam power used on the Illawarra line was the 57 class here seen passing along the single track at Clifton where the mountains rise straight from the sea.

—WILLIAM A. BAYLEY

A C36 locomotive draws a passenger train into the Scarborough Station.

—WILLIAM A. BAYLEY
Streamlined 38 class Pacific locomotive released after Blue Mountain Railway electrification passes Scarborough signal-box where the driver takes the staff to enter the single line Clifton-Coal Cliff section.

—WILLIAM A. BAYLEY

The old South Clifton yard where the lines converge to enter the present Scarborough Station and the single line.

—WILLIAM A. BAYLEY
WOMBARRA was opened on 12th February, 1917 as a miners’ platform conveniently located near South Clifton Tunnel Colliery and on 10th December, 1917 it became a public utility. Its road approach to the overbridge is notable as having a 1 in 4 gradient, which must be the steepest road ever shown on a railway plan.

COLEDALE was the name given later to the site of a yard of the North Bulli Colliery, the first siding of which, opened on 19th April, 1902, was laid in to assist in supplying materials for the development of the new mine, yard, incline to mine and coke sidings. A small timber platform was provided for passengers in June 1902, and was named Coledale. Crossing facilities were provided on 5th September, 1906. The large local population that settled around the mine deserved something more than the primitive platform; accordingly an island platform with brick station building and “down and up” working was provided as from 27th September, 1912, so that when duplication came in 1915 little alteration was needed. With the closing of the mine, the sidings were abandoned except for one kept as a refuge. The attempts to revive the coke-making in 1932 finally petered out and now all sidings have been removed, only an emergency crossover being retained.

NORTH ILLAWARRA COAL COMPANY'S SIDING, opened in 1891, was a triangular connection with the company’s private line, which ran under the Illawarra line from the foot of the Austinmer Colliery incline to Hicks Point Jetty. Departmental engines picked up trucks of coal left by the private locomotives in the company’s low level sidings. Although mining operations ceased in 1896, the rails and points in the main line remained until 10th August, 1911.
Austinmer Railway Station in the opening 1900's. On the left is an old 2nd Class carriage.

—ALGERNON WINN

AUSTINMER, once the site of the original North Bulli Tank, became a public platform on 1st September, 1887, the public goods siding being added on 23rd December, 1891. With the 1915 duplication the second platform was added and carried a timber station building. In 1917, as part of the new Thirroul yard, the goods siding was transferred to the Nowra side of the overbridge that replaced the original level crossing at the Sydney end.

KIRTON'S SIDING was opened on 16th March, 1911 as a small loop siding with connecting tracks from the screens fed by a skipway from the Excelsior Colliery under Bulli Pass. It was connected with Thirroul Yard in 1917 but was abandoned in recent years, the points of the connections being removed on 3rd December, 1963.

THIRROUL MARSHALLING YARD was provided in 1917, together with a new locomotive depot and roundhouse with modern coal and ash handling plants. On 28th February, 1917 Thirroul North and Thirroul South signal-boxes were brought into use, as the yard was virtually complete. South box took over the working of Thirroul station with the aid of a subsidiary ground frame at its southern end.
THIRROUL was originally known as Robbinsville, being a platform on the eastern side of the line opened with the isolated section on 21st June, 1887. A goods siding was added on 28th August, 1891 and the timetables of 1st November 1891 show its present name. A crossing loop was added on 23rd March, 1912. The new up platform with a timber station building was opened on 14th November, 1915 when it became the end of the duplication from Scarborough, and at this period the level crossing of the South Coast Road was replaced by an overbridge, while a footbridge connected the two platforms. On 27th February, 1938 a back platform road and carriage sidings were provided to assist in handling the local traffic.

NEWBOLD'S GENERAL REFRACTORIES LTD. SIDING was opened between Thirroul and Bulli Coal Siding on 15th July, 1919 under the name Vulcan Firebrick Siding, but became Newbold's Siding in 1934, receiving its present name in April 1940.

BULLI (originally North Bulli) COAL SIDING was close to the site of the North Bulli Colliery Crossing where the isolated portion of the Illawarra line opened in 1887 crossed the old private line of 1867 to Bulli Jetty. The name of the crossing was changed to Bulli Colliery Crossing.
Engine roundhouse at Thirroul marshalling yards in the 1960's.
—WILLIAM A. BAYLEY

Early morning local passenger train from Coal Cliff arriving at Thirroul where it was made into an eight-car train for Port Kembla.
—WILLIAM A. BAYLEY
Local passenger train between Thirroul and Bulli with the Illawarra Mountain Range in the background.
—WILLIAM A. BAYLEY

Coal train bound for Port Kembla Steelworks waits in Bulli coal siding in the 1960’s.
—WILLIAM A. BAYLEY
before 1890. It received its present name on 9th August, 1890 when a triangular connection was opened between the two railways. In 1936 Bulli Colliery was acquired by Australian Iron and Steel Pty. Ltd., which set about modernising the plant in 1942. In the course of these alterations, in 1949, the low level line with its level crossings of the Illawarra line and the Princes Highway was closed, being replaced by a high level line from the new mine to exchange sidings on the seaward side of the Illawarra line, Bulli Jetty having been abandoned. The triangular connection was adjusted to connect with the exchange sidings so that Departmental engines could lift vehicles left there by the private locomotives.

BULLI station was opened with the isolated section of the line on 21st June, 1887 and the original timber station building still remains practically unaltered on the eastern platform. The yard had the usual crossing loops and goods siding arrangement until 1916. During the duplication of 1923 the western platform and brick station building were added.

WOONONA platform was opened on the western side of the single line on 25th August, 1919 at the Park Street level crossing some 30 chains north of the old Woonona Crossing. With the duplication of 1923 a second platform was added opposite.

WOONONA Crossing Signal-box was opened on 13th May, 1889 to control the crossing on the level of the railway between Model Colliery, Woonona and Bellambi Point Jetty, which followed the original location of Hales' old tramway for the greater part of its length. On 14th June, 1898 a triangular connection had been made between the two railways so that private trucks could be worked to Wollongong Harbour. On 19th July, 1907 a siding was opened for the Illawarra Fireclay and Brick Company immediately on the Nowra side of the crossing. Although the Model Colliery closed down in 1903, the private line was retained to serve Pendlebury's Brickworks built on the Bulli Road, now Princes Highway, shunts being made by the South Bulli engines. A new signal-box replaced the original on 25th September, 1913 to operate the end of the duplication to Bellambi, and also the connections to BELMONA sidings of the Broken Hill Proprietary Coke Works (opened on 2nd March, 1903 and closed in 1935). In 1940 Pendlebury's Brickworks abandoned rail transport and the line was closed, the crossing being removed on 8th October, 1940. On 14th January, 1941 Woonona Signal-box was permanently closed and removed.

BELLAMBI was the name later adopted for the South Bulli Crossing of the private railway in operation before the opening of the Illawarra line between the foot of the incline of the South Bulli mine and Bellambi Point Jetty, following the alignment of Taylor and Walker's Tramway. The name Bellambi first appears in the timetable of 1st January, 1889, when a passenger platform was shown, it being located immediately on the Nowra
Bulli Railway Station when a single platform with passing loop and coal siding about 1912.

—ALGERNON WINN

Southern Aurora, Sydney-bound from Melbourne, passing through Bulli Railway Station when re-routed on 10/12/1967 due to derailment on Picton viaduct.

—WILLIAM A. BAYLEY
side of the crossing. On 17th January, 1902 a triangular connection was made between the two lines so that private trains could work to Wollongong Harbour via Mount Keira Crossing. The 1913 duplication produced an island platform and the connection of the South Bulli Sidings with the Belnona entry off the Illawarra line. Bellambi Jetty was damaged by a gale in 1955 and was dismantled in 1957, together with the line on the eastern side of the Illawarra line, the crossing being removed on 13th March, 1958. The South Bulli Railway is noted for having an interlocked set of gates at the Bulli Road (Princes Highway) level crossing with protecting signals, as the result of a fatal accident in 1908 when the company's train destroyed a coach.

CORRIMAL station was opened with the line on 21st June, 1887. At the same time a siding was provided for loading from a horse tramway from the Broker's Nose Colliery opened in December 1888. When the Corrimal Coal Company was taken over by the Southern Coal Company in January 1890, a standard gauge line was built from the foot of the colliery incline to Corrimal station and the private coal trains operated over the Government line to Mount Kembla Crossing, thence by their line to Port Kembla. On 27th September, 1904 a crossing loop was added. Corrimal-Balgownie Collieries Ltd. constructed a cokeworks in 1912 at the rear of the platform at Corrimal, but shunted the siding with their own engines. A second platform was added with the duplication of 1923. Tancred Bros. took over the goods sidings in August 1957.

TOWRADGI, with two platforms, was opened as a passenger station on 18th September, 1948.

BALGOWNHIE COAL COMPANY'S SIDING was opened off the single line near the later Towradgi on 23rd January, 1913, was renamed Orielton Siding on 7th January, 1914, and closed later. Re-opened on 27th July, 1922 as Frost's Balgownie Extended Colliery, it was closed on 26th October, 1936, and it is now difficult to find any reminder of this spur.

FAIRY MEADOW was opened as Para Meadow on 3rd October, 1888, a goods siding being added on 6th May, 1891. It was renamed Balgownie on 13th December, 1909, a second platform came with the duplication, and its present name was adopted on 22nd January, 1956.

MOUNT PLEASANT COKE WORKS SIDING was opened on 24th March, 1910 to serve the cokeworks of Figtree Bros. Its dead-end is adjacent to the old location of the Mount Pleasant Railway which also had a siding for the cokeworks.

MOUNT PLEASANT CROSSING was opened with the Illawarra line on 21st June, 1887 where it crossed the older 3' 8½" gauge Mount Pleasant Tramway on the level and at right angles, being also intersected diagonally by the Bulli Road level crossing. On 3rd October, 1890 a siding was
opened that ended under shoots served by the narrow gauge line. With the duplication of 1913 the gates of the Bulli Road level crossing were interlocked and operated from the new signal-box. By the time the duplication to Bellambi had been opened in 1923, the Bulli Road crossing had been diverted on to a skew overhead bridge that crossed at the intersection of the two railways, there also being a large brick drain at the same place. With the signal-box set in a recess in the overbridge abutment, it was one of the most complicated pieces of engineering to be found on the system.

NORTH WOLLONGONG station was opened on 19th July, 1915 to serve that end of the town. A footbridge connects the two platforms. It is very close to Mount Pleasant signal-box, which either operates or supplies keys for all the nearby sidings. Vacuum Siding, opened on 19th July, 1926, was later used by Peters as an ice cream depot and in November 1956 by Gladstone Motors, but was closed in 1963. Union Siding was opened on 12th September, 1928.

MOUNT KEIRA Signal-box was opened with the Illawarra line on 21st June, 1887 at the crossing of the already existing Mount Keira Colliery Railway running from the foot of the mine incline to Belmore Basin.

FEDERAL COKE SIDING was opened on 29th April, 1901 to serve the large battery of coke ovens of the Federal Coke Company. After taking over the Mount Keira properties, Australian Iron and Steel Pty. Ltd. opened its exchange sidings alongside the coke works on 10th June, 1940 so that the flat crossing could be removed. However, when the company had completed its Kemira Colliery and coal from Mount Keira had been diverted on to the company’s Mount Kembla railway, the exchange sidings became redundant and were removed at the end of 1954.

SHELL SIDING was opened on 14th January, 1926. The original Mount Keira Signal-box of 1887 was replaced by a new box which operated Gipps Street interlocked booms from 29th July, 1951. Portion of the old triangle still remains, being used by the local Gas Works as a coal siding.

WOLLONGONG station with its brick building on the eastern side was opened with the line on 21st June, 1887, as were the goods shed and part of the present goods yard. Little alteration was made until the duplication of 1923, when the whole yard was remodelled and enlarged, a second platform with large brick station building and refreshment room being added. The signal-box was replaced at the southern end and operated the junction of the double and single line as from 29th April, 1923. It also controlled the new junction of the Port Kembla single line which had been brought nearer from its original junction at Mount Drummond (now Coniston). Riverstone Meat Company opened a siding on 1st June, 1939 and M.H.P. on 21st March, 1960.
Engine 150 standing at the head of a train ready to depart from Wollongong Railway Station, northbound, in the single line days.

—OLD PRINT

Early Sydney-bound milk train standing in Wollongong Station in the nineties.

—OLD PRINT
CONISTON was first opened in 1924 under the name Mount Drummond, as a platform on the Port Kembla track near its divergence from the main right-of-way. It received its present name on 1st November, 1925. The junction points for the construction of the Port Kembla branch were brought into use on 1st April, 1916, the branch being officially opened on 31st July, 1916. With the completion of the duplication of the branch to Port Kembla on 15th July, 1941, the two single lines, which had been extended into Wollongong yard, were reclassed as double main line and the junctions of double and single line and of the Illawarra main and the Port Kembla lines were moved to Coniston Box, new station platforms being provided. Coniston signal-box was closed on 30th October, 1963, the date of opening of the new branch to Port Kembla coal-loading plant, when all connections in the vicinity of Coniston platform, including the junction to Port Kembla, became controlled from Wollongong Signal-box.

UNANDERRA NORTH JUNCTION is the name given to the connection of the Port Kembla line triangle with the Illawarra line opened on 28th November, 1961, its other junction being at Allans Creek. Its points and signals are remotely controlled from Unanderra station 1 3/4 miles further south.

MOUNT KEMBLA was the name given to the flat crossing of the Mount Kembla Colliery line between the mine incline and a jetty at Port Kembla that gave its name to the busy centre of today. This line had been in use for six years before the opening of the Illawarra line past this point to North Kiama on 9th November, 1887. The signal-box also controlled a triangular connection between the two lines. On 20th June, 1889 a second crossing was opened on the Sydney side of the original one for the new line of the Southern Coal Company between its mine incline on the eastern side of the Mount Kembla spur and its separate jetty at Port Kembla. The mine was a failure, and the Company took over the mine at Corrimal. In order to provide for its trains to run from Corrimal along the Illawarra line to Port Kembla, a triangular connection was opened on 26th October, 1909, the private coal trains being hauled throughout by the company’s engines.

The Australian Coke Company established its ovens adjacent to the second crossing. They were served by a siding on 1st October, 1889, later becoming enclosed by the triangle tracks, but in 1912 the Corrimal-Balgownie Collieries Ltd. established its cokeworks at Corrimal, and the Mount Kembla Crossing works were closed.

The Southern Coal Company’s old crossing lay abandoned for many years and its triangle sidings near the site of the cokeworks were closed on 16th June, 1917.

Australian Iron and Steel acquired the Mount Kembla Company’s properties in 1945 and developed a modern colliery at Nebo. Mount Kembla was connected through by tunnel with the Mount Keira Colliery, and the combined colliery renamed Kemira.
To avoid the level crossings of the Illawarra line and the Princes Highway, the Mount Kembla line was carried overhead at a higher level and the crossing was closed on 23rd October, 1949, when the Departmental name Mount Kembla went out of existence with the closing of the signal-box.

UNANDERRA was opened with the section on 9th November, 1887, as a platform and goods siding, but was made a crossing station on 19th August, 1925. On 21st August, 1928, G. and C. Hoskins opened exchange sidings connected with a new line from the steelworks under construction near Port Kembla, later to become the huge plant of Australian Iron and Steel Pty. Limited. This was to give the firm access to Wongawilli Colliery for coke. On 20th August, 1932 the cross-country railway to Moss Vale was opened, the junction being some distance south of the station on account of two watercourses which would need bridging. With the remodelling of the yard on 2nd November, 1941 this junction was brought into the station limits. The war-time Commonwealth Sidings, opened in haste on 18th June, 1941 to dump a shipload of bauxite, were later taken over by the Railways for storage purposes.

KEMBLA GRANGE platform was first mentioned in a timetable of 1st January, 1890 and is situated at the level crossing of West Dapto Road. A private loop siding and a loading bank for horses were opened for the local race club on 25th March, 1912. After horses ceased to be carried by train the siding became disused and was removed on 6th April, 1942.

DAPTO TANK was one of the original water supply points on the extension from Wollongong in 1887, it was situated at the southern end of the timber viaduct over Mullet Creek. It seems to have been discarded by 1907, as the pipeline was then taken into Dapto station.

WONGAWILLI was the name given to the siding opened for G. and C. Hoskins on 25th October, 1916 for the construction of that firm's line to Wongawilli Colliery, where coke was to be produced for the Lithgow blast furnaces. In 1928 trains of Australian Iron and Steel Pty. Ltd. commenced to run over the Departmental line from Unanderra on their journey between the Steelworks and Wongawilli Colliery. A short spur from the branch serving South Kembla Colliery was operated intermittently between 1928 and 1932.

DAPTO station, opened in 1887 with the extension to North Kiama, had a country-type timber station building which still exists, together with the usual crossing loop and goods siding. On 12th December, 1895 a private branch line with three dead-end exchange sidings at the junction was opened for the Australian Smelting Company. In 1907 all operations ceased, as the smelters were to be transferred to Port Kembla, and the line was abandoned, only one of the tracks being allowed to remain for refueling purposes, Clarke's timber-yard using a short length at the dead-end from 22nd March, 1939.
LAKE ILLAWARRA CROSSING was a signal-box established on 23rd December, 1895 for the purpose of controlling the crossing of the privately-owned railway of the ill-fated Illawarra Harbour and Land Corporation Ltd. with its grandiose schemes of a harbour on Lake Illawarra and mines in the South Kembla area. There is no record of any trains working on this line except those of the contractor during construction, and the crossing was finally removed on 17th July, 1902.10

DAPTO SUB-STATION SIDING, eight chains on the Sydney side of Yallah, was opened for the State Electricity Commission on 27th November, 1961 for the purpose of installing heavy plant for the station.

YALLAH platform was opened with the Kiama extension in 1887 under the name of Albion Park, but gained its present name on the opening of the through traffic from Sydney on 3rd October, 1888. Its location was due to its nearness to the level crossing of the road leading to Albion Park township.

TALLAWARRA POWER STATION SIDING was the junction for a 2 mile branch to the power station on the shore of Lake Illawarra, and was constructed for the purpose of installing heavy machinery. It was opened on 25th October, 1951, the points being four chains south of Yallah.

ALBION PARK station was opened in 1887 under the name Oak Flats, receiving its present name on 3rd October, 1888. It was nearer to the township than Yallah, but a direct road had to be constructed to reduce the distance to one mile. The crossing loop was added on 22nd July, 1891. The Illawarra Central Co-operative Dairy Company’s Siding was opened on 6th January, 1913, later coming under the control of the Dairy Farmers’ Co-operative Milk Company.

OAK FLATS was opened as a cream stage at the Shellharbour Road level crossing on 1st January, but was closed on 1st September, 1890. On 9th March, 1925 a passenger platform was opened at the same site.

CROOM was a cream stage opened on 24th April, 1925 close to the northern portal of the short tunnel. It was later listed as a passenger stop for some trains but was closed some years later.

SHELLHARBOUR platform and goods siding were opened with the North Kiama extension in 1887 on the nearest level section of track to the small seaport of that name three miles distant. The small village that sprang up near the station is known as Dunmore. A crossing loop was added on 31st July, 1911. On 15th August, 1923 a spur line 64 chains in length was

10 See “The Old Dapto Smelting Works” by J. P. O’Malley.

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opened to Shellharbour Quarry. It was closed during the depression in 1933 but re-opened on 26th October, 1937 by N.S.W. Associated Quarries. A small tank engine built by Manning Wardle was in use at one time shunting on the floor of the quarry.

MINNAMURRA platform was opened on 23rd December, 1891 near the residence of the Fuller family near the north bank of the Minnamurra River, where there was also a watering point up to 1906 or so. On 5th November, 1923 a new steel bridge was opened over the Minnamurra River alongside the original timber bridge. During an investigation into the extension of various platforms on the Illawarra line, the guard of a train drew attention to the fact that the original platform only served one home, while a considerable settlement had grown up on the southern side of the river-mouth. The new platform was then erected 57 chains south of the original very short platform and adjacent to the seaside resort, and brought into use on 10th October, 1943.

FEDERAL QUARRY SIDING was opened on 22nd January, 1923 to serve a large blue metal quarry undertaking that operated until the depression of the early thirties. The main line points were removed on 9th September, 1936.

TREVETHAN'S QUARRY SIDING was opened on 2nd September, 1912 to serve a blue metal quarry which was later taken over by N.S.W. Associated Bluemetal and was abandoned when that firm concentrated on one or two larger undertakings. The points in the main line were removed on 14th February, 1943.

BOMBO RAILWAY QUARRY SIDING (1) The original siding to serve the first basalt quarry on the headland was opened as a spur on the northern side of the huge ridge of that rock jutting out into the sea. Opened on 28th July, 1889 it adjoined the loading jetty in the bay where the bluemetal was first handled, although all signs of the port have long since disappeared. On 14th September, 1890 a pair of sidings turning away under screens were brought into use on the Sydney side of the first siding for the Department, and were known as North Siding. The original spur was then abandoned for loading purposes, but was named South Siding and retained to hold the engine of a terminating trains while the hoppers were gravitated into North Sidings to the screens. When the quarry working was transferred to the southern side of the ridge on Bombo Beach, South Siding was abandoned. Owing to the steep grade North Sidings were retained for staging metal trains from Bombo station (then North Kiama) and renamed Bombo Staging Sidings, being closed on 1st May, 1914, when metal trains were first permitted to back out of Bombo station to the portal of Kiama Tunnel and then make a run at the bank, which could be negotiated by a single load for the other sections.
Passenger train leaving Bombo Railway Station, first called North Kiama, in the nineties.

—BLUE HAVEN FROM WESTON COLLECTION

First train to Kiama entering the station in 1893 before the platform buildings were completed.

—WESTON COLLECTION
CAMERON’S SIDING was opened on 28th July, 1890 to serve the large privately owned blue metal quarry on the opposite side of the South Coast Road, now Princes Highway. It was closed on 9th September, 1936.

BOMBO RAILWAY QUARRY (2) was opened at the northern end of Bombo Beach and was developed to such an extent that it occupied almost the whole of the headland, which became so denuded of basalt as to be uneconomical to operate. It was closed in September 1949. During its period of working it supplied the bulk of ballast for all railways within 100 miles of Sydney.

BOMBO STATE QUARRY SIDING, whose points adjoined those of the Railway Quarry Siding just described, was opened in 1921, and after much political juggling was taken over by Quarries Ltd. in July 1937. It was purchased by the Department of Railways on 7th October, 1947 to replace that on Bombo Head on the opposite side of the main line and is now named BOMBO QUARRY SIDING, supplying all railway ballast except that obtained from Ardglen and Martin’s Creek.

BOMBO station was first opened on 9th November, 1887 under the name North Kiama as the terminus of the line from Wollongong. In the timetable of 1st May, 1889 it was optimistically referred to as Kiama, but with the opening of the extension to Nowra on 2nd June, 1893 it reverted to its original name, as the new station called Kiama was located in the heart of the town. On 29th June, 1907 it received the present name. On 16th July, 1925 a crossing loop was added to facilitate the handling of the metal trains, as the original run-round had been removed when it was closed as a staff station in 1893. The original dead-end goods siding, which had fallen into disuse, was revived and fitted with a high loading bank for McSweeney’s quarry vehicles, and still exists as the public goods siding. The original turntable was transferred to the new Kiama station on 12th April, 1897.

KIAMA was opened with the Nowra extension on 2nd June, 1893 with its present island platform and running roads arranged for “down and up” working. The State Metal Works opened a double-track 2 ft. gauge tramway down Terralong Street from Pikes Hill Quarry to Robertson Basin, and in the following year built a single line spur along Manning Street to the goods yard where a loading staith was provided near the overbridge. The quarry and tramway were taken over by Quarries Ltd., but in 1940 the tramway was removed. The Dairy Farmers Co-operative’s loading shed on the short spur at the southern end of the yard was taken over by the Jamberoo Co-operative Dairy Company in 1945. The N.S.W. Produce Company opened a siding in the goods yard on 24th February, 1947.
CARSON'S SIDING was a loading point on a dead-end siding half a mile south of the station for loading of blue metal from road vehicles from Carson's quarry, and was opened on 21st June, 1918. It did not have a long effective life, but the points were not removed until 17th February, 1943.

OMEGA platform and siding at the level crossing of the South Coast Road were opened with the line on 2nd June, 1893 but the siding was closed on 11th December, 1951 and subsequently removed. In 1937 the deviated Princes Highway avoided the level crossing, but the latter remained to serve the town of Gerringong, which otherwise would have been bypassed.

GERRINGONG was opened as a manned station with the line on 2nd June, 1893 but has never been a crossing place, merely having a loop siding for the public goods yard. On 7th September, 1908 a dead-end siding was opened for the Gerringong Dairy Company's factory. A fine modern station building replaced the old timber skillion roof structure destroyed by fire.

TOOLIJOOA platform was opened with the line on 2nd June, 1893, the mis-spelling Toolejooa being corrected in February 1897. The short dead-end siding was opened on 12th March, 1900 but was closed on 11th December, 1951.

HAY'S SIDING was opened on 4th November, 1909 as a dead-end siding serving a sawmill. It was closed on 10th June, 1937.

BERRY station was opened on 2nd June, 1893 with the extension to Nowra. It was a typical country station with a small timber station building with crossing loop, goods and stock sidings, but on account of light traffic the crossing loop was never brought into use at the outset and was removed on 25th June, 1895. It was, however, restored on 13th June, 1913. The Berry Co-operative Dairy Society's Factory is located on the goods siding.

JASPER'S BRUSH platform and siding were opened with the line on 2nd June, 1893. The milk depot was removed in December 1939, and the siding closed on 11th December, 1951.

NOWRA has been the terminus since the opening of the extension from North Kiama on 2nd June, 1893. The dead-end of the main line extends over a timber viaduct across Bomaderry Creek in its approach to the northern bank of the Shoalhaven River with a view to its extension into the town—forlorn hope.

The name board shows NOWRA BOMADERRRY.
The original temporary mean station building of timber was conveniently destroyed by fire and the commodious brick station building that took its place is far more in keeping for this important terminus, the facilities, both passenger and goods, being fully taxed with through road traffic for the lower South Coast, which is without rail connection. The Coastal Farmers Co-operative Milk Company established a factory on 28th September, 1912. Shell Siding was opened on 9th January, 1928 and Vacuum Siding on 5th November, 1929. In 1938 the Nowra Dairying Company took over the milk depot and replaced it with a modern factory. To make room for this the stock siding was re-sited at a distance of 23 chains out along the main line towards Sydney. With the increase of local traffic during wartime, additional sidings were laid in 1941. A privately-owned branch line runs off the station yard towards the river to Horlick’s Works a quarter of a mile distant, and this was extended a further 29 chains to Wiggins Teape and Nash Paper Mills Ltd’s factory on 13th February, 1956. Hayes and Kidd’s Siding was opened in September 1953.

Daily fast milk train for Sydney beside Nowra Co-operative Dairy Factory at Bomaderry.

—WILLIAM A. BAYLEY
APPENDIX I

COLLIERY RAILWAYS IN 1887

A Department of Mines map of the Illawarra District was included in a report by John Mackenzie of the Coal Seams Worked in N.S.W. It is dated 1887 and the following are some interesting details shown on the map.

The Illawarra and South Coast Railway is shown in existence as far as Para Creek (North Wollongong) and the private railway crossed at Bulli is shown as that of the Bulli Coal Mining Co.

The town of Bulli is shown on either side of this crossing, while villages shown at the present Bulli Station and further south near the present Ambulance Station are known as “Bulli (South)”.

Another interesting feature of the map is the reference to the North Illawarra jetty. The two lines, one from the tunnel above the present Coledale and the other from above the present Austinmer, are both shown crossing the N.S.W.G.R. converging to Hicks Point but the jetty is shown as “proposed”.

South Clifton Coal Co. is not shown, nor is the Woonona Colliery. The Bellambi Coal Mining Co. is only shown where the present South Bulli Colliery is now. A revision of this map is in the Annual Report of the Department of Mines of 1891 and it shows all three including the two lines crossing the N.S.W.G.R. and converging on Bellambi Point.

The Metropolitan Colliery at Helensburgh is shown as the Cumberland Coal Mining Co. and the lease is held by Coghlan and Co.

Other towns and villages shown on the map are as follows:

Bottle Forest at the present Heathcote.

The Clifton private village at the foot of the hill north of the present Clifton and just south of Coal Cliff jetty.

An unidentified jetty is shown on the point just below the present Clifton village and within the Coal Cliff Mining Co. lease.

Robinsville private village is shown on the west side of the present road bridge over the N.S.W.G.R. at Thirroul.

Woonona village is shown in its present position on the Highway.

No other towns are shown between there and Wollongong.

The main Illawarra and Sydney road is shown as the Main Illawarra Coast road up the present Bald Hill then to Helensburgh, generally following the present Highway from there to Heathcote then striking due north to cross the Woronora River at Sabugal Pass.

The Bulli Pass road is shown dotted.

—J.L.N.S.
APPENDIX II

RAIL CROSSINGS ON THE LEVEL
(all now removed)

PRIVATE LINE  SIGNAL-BOX AT CROSSING  LOCATION
Bulli Colliery  Bulli Coal Siding  Between:
Woonona Colliery  Woonona  Thirroul and Bulli
South Bulli Colliery  Bellambi  Woonona and Bellambi
Mount Pleasant Colliery  Bellambi  Woonona and Bellambi

Mount Keira Colliery  Mount Keira  North Wollongong
Mount Kembla Colliery  Mount Kembla  Coniston and Unanderra
Southern Coal Company  Lake Illawarra  Dapto and Yallah
Illawarra Harbour and Land Company

APPENDIX III

TUNNELS

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† Opened out.
* Abandoned.

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### APPENDIX IV

**DUPLICATIONS**

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<td>Como Bridge “gauntletted”. See page 18</td>
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<td>Como-Sutherland</td>
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*Thirroul Railway Station after duplication and construction of the overhead traffic and pedestrian bridges.*

—OLD PRINT
APPENDIX V

THE ILLAWARRA LINE IN LITERATURE

Australian railways have not figured much in literature; but the Illawarra line made a considerable impression on two world-famous (or notorious) authors of very diverse types. In its very early days Robert Louis Stevenson, on one of his visits to Sydney, saw it and incorporated what he saw in Chapter XXII of *The Wrecker*, which describes the experiences of the remittance-man Norris Carthew on the not very permanent way during the period of the great landslides of 1889-90.

"The heavy rains continued, the country was already overrun with floods; the railway system daily required more hands, daily the superintendent advertised; but 'the unemployed' preferred the resources of charity and rapine, and a navvy, even an amateur navvy, commanded money in the market. The same night, after a tedious journey, and a change of trains to pass a landslip, Norris found himself in a muddy cutting behind South Clifton, attacking his first shift of manual labour.

For weeks the rain scarce relented. The whole front of the mountain slipped seaward from above, avalanches of clay, rock and uprooted forest spewed over the cliffs and fell upon the beach or in the breakers. Houses were carried bodily away and smashed like nuts; others were menaced and deserted, the door locked, the chimney cold, the dwellers fled elsewhere for safety. Night and day the fire blazed in the encampment; night and day hot coffee was served to the overdriven toilers in the shift; night and day the engineer of the section made his round with words of encouragement, hearty and rough and well suited to his men. Night and day, too, the telegraph clicked with disastrous news and anxious inquiry. Along the terraced line of rail, rare trains came creeping and signalling; and paused at the threatened corner, like living things conscious of peril. The commandant of the post would hastily review his labours, make (with a dry throat) the signal to advance; and the whole squad line the way and look on in choking silence, or burst into brief cheer as the train cleared the point of danger and shot on, perhaps through the thin sunshine between squalls, perhaps with blinking lamps into the gathering, rainy twilight.

One such scene Carthew will remember till he dies. It blew great guns from the seaward; a huge surf bombarded, five hundred feet below him, the steep mountain's foot; close in was a vessel in distress, firing shots from a fowling-piece, if any help might come. So he saw and heard her the moment before the train appeared and paused, throwing up a Babylonian tower of smoke into the rain and oppressing men's hearts with the scream of her whistle. The engineer was there himself; he paled as he made the signal; the engine came at a foot's pace; but the whole bulk of the mountain shook and seemed to nod seaward, and the watching navvies instinctively
clutched at shrubs and trees: vain precautions, vain as the shots from the poor sailors. Once again fear was disappointed; the train passed unscathed; and Norris, drawing a long breath, remembered the labouring ship and glanced below. She was gone.

So the day and nights passed: Homeric labour in Homeric circumstance. Carthew was sick with sleeplessness and coffee: his hands, softened by the wet, were cut to ribbons; yet he enjoyed a peace of mind and health of body hitherto unknown. Plenty of open air, plenty of physical exertion, a continual instance of toil, here was what had been hitherto lacking in that misdirected life, and the true cure of vital scepticism. To get the train through there was the recurrent problem; no time remained to ask if it were necessary. Carthew, the idler, the spendthrift, the drifting dilettante, was soon remarked, praised and advanced. The engineer swore by him and pointed him out as an example. "I've a new chum up here," Norris overhead him saying "a young swell. He's worth any two in the squad." The words fell on the ears of the discarded son like music; and from that moment, he not only found an interest, he took a pride, in his plebeian tasks.

The press of work was still at its highest when quarter-day approached. Norris was raised to a position of some trust; at his discretion, trains were stopped or forwarded at the dangerous cornice near Clifton; and he found in this responsibility both terror and delight. The thought of the seventy-five pounds that would soon await him at the lawyer's, and of his own obligation to be present every quarter-day in Sydney, filled him for a little while with divided councils. Then he made up his mind, walked in a slack moment to the inn at Clifton, ordered a sheet of paper and a bottle of beer, and wrote, explaining that he held a good appointment which he would lose if he came to Sydney, and asking the lawyer to accept this letter as an evidence of his presence in the colony and retain the money till next quarter-day. The answer came in course of post, and was not merely favourable but cordial. "Although what you propose is contrary to the terms of my instructions," it ran, "I willingly accept the responsibility of granting your request. I should say that I am agreeably disappointed in your behaviour. My experience has not led me to found much expectations on gentlemen in your position."

The rains abated, and the temporary labour was discharged; not Norris, to whom the engineer clung as to found money; not Norris, who found himself a ganger on the line in the regular staff of navvies. His camp was pitched in a grey wilderness of rock and forest, far from any house; as he sat with his mates about the evening fire, the trains passing on the track were their next and indeed their only neighbours, except the wild things of the wood. Lovely weather, light and monotonous employment, long hours of somewhat camp-fire talk, long sleepless nights, when he reviewed his foolish and fruitless career as he rose and walked in the moonlit forest, an occasional paper of which he would read all the advertisements with as much relish as the text: such was the tenor of existence which soon began to weary and harass him. He lacked and regretted the fatigue, the furious
hurry, the suspense, the fires, the midnight coffee, the rude and mud-bespattered poetry of the first toilful weeks. In the quietness of his new surroundings, a voice summoned him from his exorbital part of life, and about the middle of October he threw up his situation and bade farewell to the camp of tents and the shoulder of Bald Mountain.”

Many years later D. H. Lawrence in “Kangaroo” depicted the journey from Sydney to Thirroul (”Mullumbimby”) as it was in the early 1920’s.

“The train ran for a long time through Sydney, or the endless outside of Sydney. The town took almost as much leaving as London does. But it was different. Instead of solid rows of houses, solid streets like London, it was mostly innumerable detached bungalows and cottages, spreading for great distances, scattering over hills, low hills and shallow inclines. And then waste marshy places, and old iron, and abortive corrugated iron “works” all like the Last Day of creation, instead of a new country. Away to the left they saw the shallow water of the big opening where Botany Bay is: the sandy shores, the factory chimneys, the lonely places where it is still Bush. And the weary half established straggling of more suburb.

“Como”, said the station sign. And they ran on bridges over two arms of water from the sea, and they saw what looked like a long lake with wooded shores and bungalow: a bit like Lake Como, but oh, so unlike. That curious sombreness of Australia, the sense of oldness, with the forms all worn down low and blunt, squat. The squat-seeming earth. And then they ran at last into real country rather rocky, dark old rocks, and sombre bush with its different pale-stemmed dull-leaved gum-trees standing graceful and various healthy looking undergrowth, and great spikey things like zuccas. As they turned south they saw tree-ferns standing on one knobbly leg among the gums, and among the rocks ordinary ferns and small bushes spreading in glades and up sharp hill-slopes. It was virgin bush, and as if unvisited, lost, sombre, with plenty of space, yet spreading grey for miles and miles, in a hollow towards the west. Far in the west, the sky having suddenly cleared, they saw the magical range of the Blue Mountains. And all this hoary space of bush between. The strange, as it were, invisible beauty of Australia, which is undeniably there, but which seems to lurk just beyond the range of our white vision. You feel you can’t see—as if your eyes hadn’t the vision in them to correspond with the outside landscape. For the landscape is so unimpressive, like a face with little or no features, a dark face. It is so Aboriginal, out of our ken, and it hangs back so aloof. Somers always felt he looked at it through a cleft in the atmosphere; as one looks at one of the ugly-faced, distorted Aborigines with his wonderful dark eyes that have such an incomprehensive ancient shine in them, across gulfs of unbridged centuries. And yet, when you don’t have the feeling of ugliness or monotony, in landscape or in nigger, you get a sense of subtle, remote, formless beauty more poignant than anything ever experienced before.”
The train jogged on, stopping at every little station. They were near the coast, but for a long time the sea was not in sight. The land grew steeper—dark, straight hills like cliffs, masked in sombre trees. And then the first plume of colliery smoke among the trees on the hill-face. But they were little collieries, for the most part, where the men just walked into the face of the hill down a tunnel, and they hardly disfigured the land at all. Then the train came out on the sea, lovely bays with sand and grass and trees, sloping up towards the sudden hills that were like a wall. There were bungalows dotted in most of the bays. Then suddenly more collieries, and quite a large settlement of bungalows. From the train they looked down on many many pale-grey zinc roofs, sprinkled about like a great camp, close together, yet none touching, and getting thinner towards the sea. The chimneys were faintly smoking, there was a haze of smoke and sense of home, home in the wilds. A little way off, among the trees, plumes of white steam betrayed more collieries.

A bunch of schoolboys clambered into the train with their satchels, at home as schoolboys are. And several black colliers, with tin luncheon boxes. Then the train ran for a mile and a half, to stop at another little settlement. Sometimes they stopped at beautiful bays in a hollow between hills, and no collieries, only a few bungalows. Harriet hoped Mullumbimby was like that. She rather dreaded the settlements with many iron roofs and the wide, unmade roads of sandy earth running between, down to the sea, or skirting swamp-like little creeks.

The train jogged on again—they were there. The place was half and half. There were many tin roofs—but not so many. There were the wide, unmade roads running so straight as it were to nowhere, with little bungalow homes half-lost at the side. But they were pleasant little bungalow homes. Then quite near, inland rose a great black wall of mountain, or cliff, or tor, a vast dark tree-covered tor that reminded Harriet of Matlock, only much bigger. The town trailed down from the foot of this mountain towards the railway, a huddle of grey and red-painted iron roofs. Then over the railway, towards the sea, it began again in a scattered, spasmodic fashion, rather forlorn bungalows and new "stores" and fields with rail fences, and more bungalows above the fields, and more still running down the creek shallows towards the hollow sea, which lay beyond like a grey mound, the strangest sight Harriet had ever seen."
Locomotive "Illawarra" which, with "Cambewarra", was assigned to haul the South Coast Daylight Express, painted green and cream, in the 1930's.

— DAILY TELEGRAPH, 4/6/1936, P. 5