



# BULLETIN

Volume XXXII

January, 1981

Number 519

Registered for posting as a  
publication — Category B  
Recommended Price \$1.50



*The Andrew Barclay locomotive shown at the head of a train of the early type of dump car was acquired by the Metropolitan Board of Water Supply and Sewerage in 1913. It was purchased from the Public Works Department, but ultimately one of six locomotives acquired for work at Potts Hill in the construction of the No. 2 Reservoir. These smaller dump cars proved too small for the work.  
(Photo: M.W.S. & D.B.)*

## **THE POTTS HILL LINES IN RETROSPECT** by N.J. Thorpe, K.T. Groves and N.J. Pollard

**(NSW)**

This story is about railways and water. It details the contribution made by the iron horse in the construction of the second balancing reservoir at Potts Hill, south of the Sydney suburb of Lidcombe, in the early years of this century; and the provision of coal to the pumping station at the same location, a task extending over a period of almost fifty years.

Before detailing the work of the railways, brief mention will be made of the part the Potts Hill complex plays in the Sydney water supply system.

The two reservoirs function as intermediate major storages for the City of Sydney and its immediate eastern, western and southern suburbs; the total capacity of the two reservoirs being 1,286 megalitres or 271,985,000 gallons. Potts Hill, named after Joseph Hyde Potts who was granted 625 acres of land there in 1835, is located on the watershed of the Cooks, Georges and Parramatta Rivers. The top water level of the reservoirs is 177.7ft (54m.) above sea level.



*This photograph shows a train of the smaller (earlier) dump cars. The cars are part of the 2'6" narrow-gauge system used by the Board. The locomotive is a Fowler 0-4-0T type of uncertain origin. The presence of the Ruston Proctor steam shovel dates the photograph to 1914. (Photo: M.W.S. & D.B.)*

They are filled from Prospect Reservoir located in the outer western suburbs, via a canal augmented by a six foot and seven foot pipelines feeding water to the screening chamber at Pipe Head near Guildford on the Granville-Liverpool railway line. From Pipe Head the water passes to Potts Hill via three, six foot diameter steel mains on the surface and a ten foot diameter underground tunnel.

Distribution from the reservoir is by two subterranean tunnels and numerous cast iron mains. Most of the water so distributed is pumped by various smaller pumping stations to numerous local storage reservoirs but a sizeable quantity of water gravitates to areas joining the northern and western shores of Botany Bay. Potts Hill Pumping Station was the second last of the Water Board's steam driven stations.

The first section of the article deals with the construction of the second reservoir. The history of the railway from Rookwood (Lidcombe) is discussed first, followed by its extension to the construction site at Potts Hill.

#### **The Rookwood (Lidcombe) to Bankstown Railway**

There were three main reasons for wanting to

construct a tramway from Rookwood towards Bankstown. The most important of these was the need for a cheap form of transport to carry cement and other materials for the construction of a second balancing reservoir at Potts Hill, a few kilometres south of Lidcombe, for the Metropolitan Board of Water Supply and Sewerage as it was known at this time (for the rest of this article this instrumentality will be known as the Board). Tenders for the new reservoir were due to be called in June 1911.

The first balancing reservoir was constructed between 1888 and 1892. During the construction of this first reservoir a tramway had been laid, probably along Joseph St., for the supply of materials and was removed by the contractor upon completion of the work.

Secondly the Managing Director of the Auburn Brick Company Ltd. was anxious for some sort of tramway to be built to assist in the production of building materials. This company was located near Princes Rd. north west of the present railway station at Regent's Park. The company raised the matter with the Minister for Public Works in the early months of 1911. They were so anxious to have better transport facilities that they offered to pay the interest on the cost of construction for a

reasonable period after the line was completed.

The Municipal Council of Rookwood also showed interest in the tramway. A deputation waited on the Minister for Public Works on 31st May, 1911 with the object of urging its construction. Such a line would save the Council expenditure on the maintenance of roads, which would otherwise be damaged by the passage of heavy vehicles. The district was said to be a special building locality, the only drawback being the distance from the railway station. The construction of this tramway would alleviate this problem.

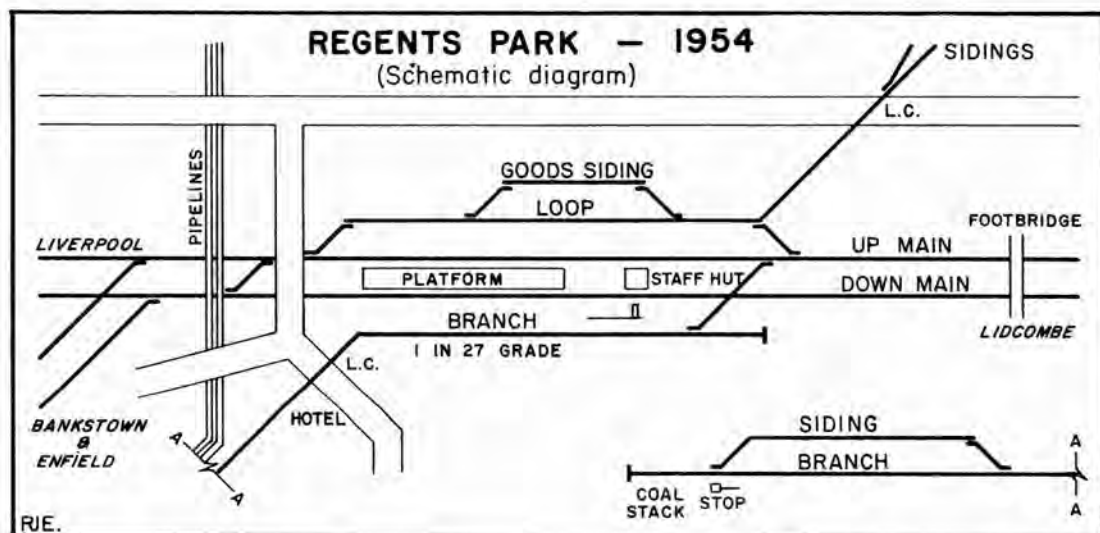
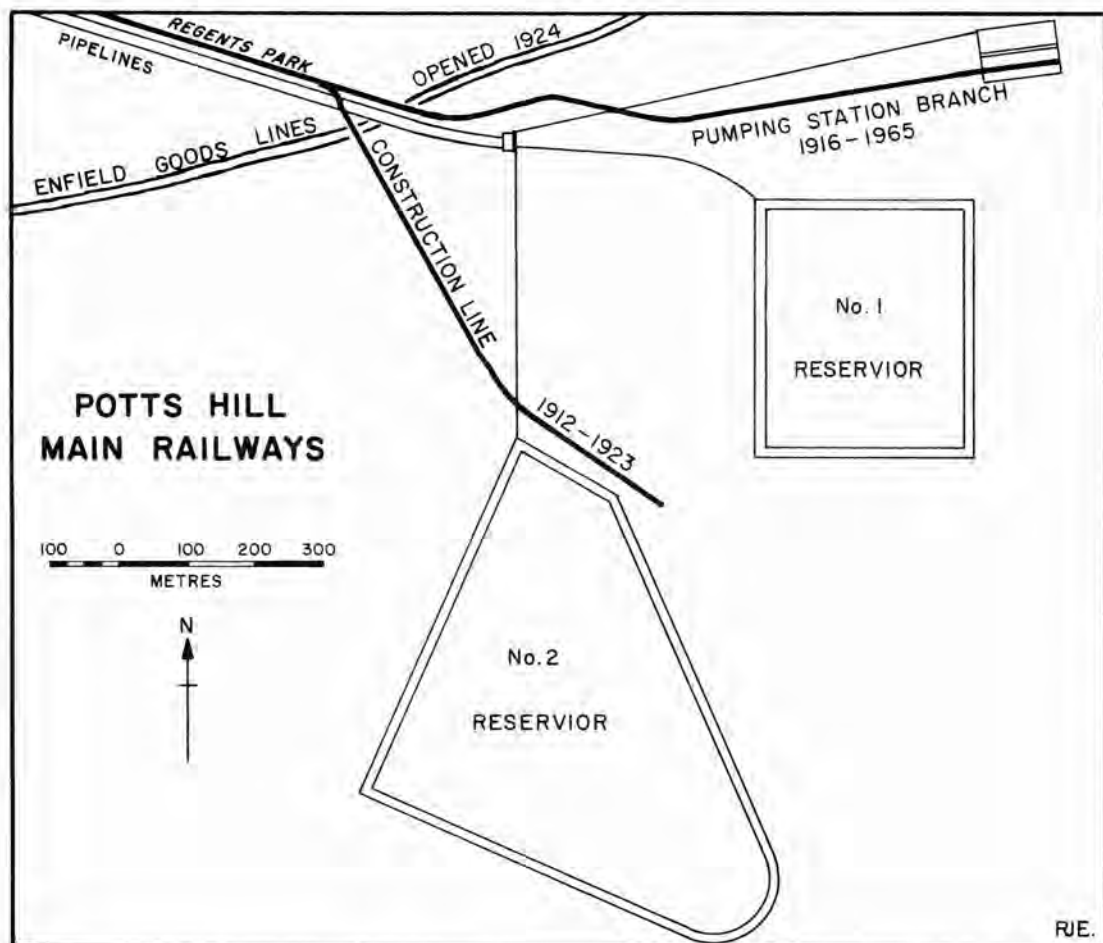
It might be convenient at this point to ask why a tramway was contemplated south of Lidcombe and not as might be expected, a railway. The answer lies in the government's transport policy of the time where arterial railways were built from the city outwards and feeder tramways were built from selected railway stations to tap traffic from the surrounding areas. The following tramways around and about Sydney had already been constructed as part of this policy or were in the process of construction at the time; Parramatta to Castle Hill, Ashfield to Burwood, Arncliffe to Bexley, Kogarah to Sans Souci and Sutherland to Cronulla. A tramway from Rookwood (Lidcombe) to Bankstown would merely have been an extension of this policy.

Lidcombe was to be the third name of that railway station. The first name given was Haslem's Creek on 1st November, 1858. The name was changed to Rookwood in 1876, and finally the name Lidcombe was bestowed on the station on 1st January, 1914. The derivation of the latter name is interesting. Because of the proximity of Rookwood Cemetery and State Hospital (known as Old Men's Home) the citizens of Rookwood Municipality requested a change of name. The argument which resulted was resolved by using the names of two Mayors of the Municipality, Messrs. Lidbury and Larcombe.

Two main routes for the tramway were discussed. The first was along Joseph St., the second was along the more favoured route of Kerrs Rd., York St., and Park Rd. to the water supply pipes (later known as Regent's Park). A modification of this route mentioned by the Mayor of Rookwood, was along Kerrs Rd., south along Nottinghill Rd., and west along Hyde Park Rd., and then onto York St. The proposed route of the line beyond the pipelines to Sefton Park and Bankstown is difficult to determine due to changes in the layout of the suburbs and the changes in street names. It is known, however, that the terminus of the tramway was to be at the end of the newly built railway from Belmore to Bankstown, completed in 1909.



*A Bucyrus steam shovel is shown working in a cutting, while loading a train of the later Western dump cars in 1914. The train is hauled by one of the Vulcan locomotives. (Photo: M.W.S. & D.B.)*





Aerial photograph taken about 1955, showing the area of the Potts Hill Reservoirs and Pumping Station. Regent's Park station is at the top left, with the line to Bankstown proceeding down the left side of the photo. The line from Sefton Junction to Chullora and Enfield runs across the upper third of the photo. The pipelines from Prospect can be seen running from the top left hand corner towards both the Pumping station and the No.1 Balancing Reservoir at the right side, while the No.2 Reservoir is the irregular area at the lower border. The branch line from Regent's Park to the Pumping Station can be followed as it follows and crosses over the pipeline. The former construction branch left the Pumping Station branch at a point to the left of the site on the photo where the pipeline crosses over the Sefton Park to Chullora line. The branch then ran to the Terminus at the top end of the No.2 Reservoir. (Photo: N.S.W. Lands Dept.)

It was suggested that the first two miles of the four and a half mile route be constructed first, that is, from Rookwood to the pipelines at present known as Regent's Park. The cost was to be £13,000 (\$26,000) with an extra £1,500 (\$3,000) for a temporary line from the pipelines to the site of the construction of the second reservoir at Potts Hill. A siding was also to be provided for the Auburn Brick Company.

The whole matter of the proposed construction of the tramway was subject to an Inquiry by the Chairman of the Tramway Proposals Committee. His Report outlining the findings of the Committee was dated 24th June, 1911. The last paragraph stated, 'In view of all the circumstances the Committee is of the opinion that a Tramway proposal would not meet the requirements of the district and it is suggested to the Hon. Minister for Works to whether some form of branch railway should not be given some consideration'.

Two reasons were given for this view, first it was said that wider grooves would be necessary in the roadway beside the rails to permit the passage of goods wagons over the line. This could endanger vehicular traffic. (This condition existed on the Kogarah to Sans Souci and the Sutherland to Cronulla lines without causing trouble). Secondly, the existing tramway motors were only capable of

hauling limited loads which would necessitate many trips having to be made along the line to carry the expected tonnages.

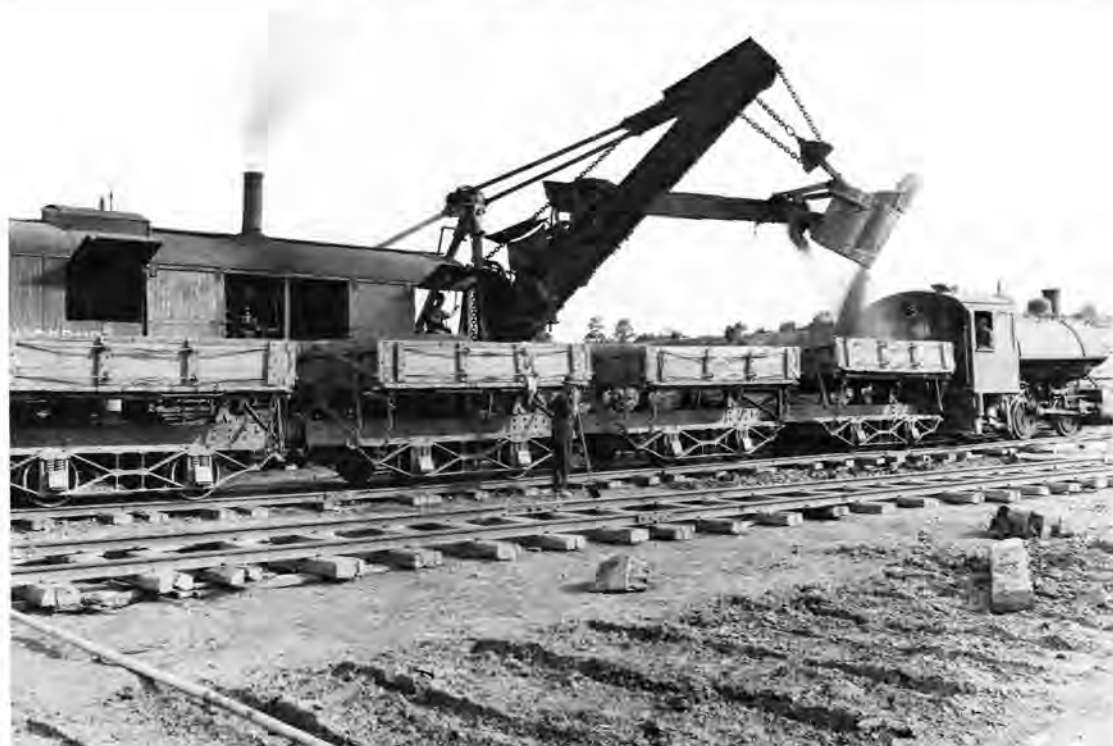
#### The Railway is Constructed

Attention was thus directed to the construction of a railway. In July, 1911 the Minister for Works directed that a railway be constructed, and by the following month the permanent survey along with the plans and specifications were completed. The survey stated that the line from Rookwood to the vicinity of Regent's Park was to be 1 mile 73 chains in length. At the junction of the line Bridge St. was to be crossed by an overhead timber bridge. Provision was made for the future construction of a steel bridge at this location. Vaughan St., Kerrs Rd., Tilba and London Sts. and Kingsland Rd. were to be level crossings. Arthur St. (Jenkins St.) was to be an underpass, and Mary St. (Kent St.) was also to be a level crossing. After some thought it was decided that there were to be too many level crossings in such a short distance; consequently it was decided that London St. should only be a pedestrian crossing and Kingsland Rd. should be closed altogether.

In connection with the construction of the railway there was some reorganisation of streets in the vicinity of the line. Kerrs Rd. was to be diverted to the western side of the line (Woodburn St.) and a



*Bucyrus steam shovel loading rock by means of chain slings into a rake of dump cars on 24th January, 1914.  
(Photo: M.W.S. & D.B.)*



*A Bucyrus steam shovel is shown transferring spoil into Western dump cars, hauled by one of the two Vulcan 0-4-0T locomotives on 9th December, 1921. A good view is shown of the dump cars which were of the side-dump type, controlled by the lever shown at the end of each wagon. The track was laid as required over the floor of the reservoir by a team of fettlers employed by the Board.*  
(Photo: M.W.S. & D.B.)

new access road, Campbell St., was to be constructed between Regent St. and Kingsland Rd. A road was also to be constructed on the western side of the line between Prince's Rd. and York St. (Wrights Ave.)

The line was to be laid on the level except at each end. Near the junction there was to be an embankment whilst at the terminus end there was to be a cutting.

The estimated cost of construction was to be £14,200 (\$28,400) (later given as £14,500 (\$29,000)). The ultimate cost of the line was £26,229 (\$52,458). At the terminus a temporary line was to be built to the construction site at Potts Hill. When construction of the reservoir was complete the Construction Branch would buy back all the materials used.

The ceremony to turn the first sod was held on 7th August, 1911 at the corner of Kerrs Rd. and Matthew St. A large crowd from Rookwood, Bankstown, Sefton Park and Auburn watched Mr. F. Flowers, Ministers for Lands perform the ceremony.

There are three notable points of historical interest which should be related regarding the construction of the line. The first of these concerned the numerous delays which plagued the

construction of the line. The Water Board were anxious to commence construction of the reservoir and pressed the authorities to have the line constructed as soon as possible. The Minister for Works originally told the Board that the line would be completed by 12th November, 1911 but in fact the line was not completed from Rockwood to Regent's Park and handed over to the Railway Commissioners until 3rd July of the following year.

Mr. Chaplin, Engineer in charge of construction presented a lengthy report dated 11th June, 1912 giving reasons why the line was taking so long to complete. Some of the reasons he gave were, the impossibility of getting materials in the stated time, unavoidable delays in the design drawings, delays in gaining possession of land and delays in the arrival of ballast from Kiama due to the shortage of suitable rail trucks.

A second point worth relating concerns a number of petitions and deputations received during the construction of the line. A deputation was received from the Rookwood Municipal Council on 26th October, 1911. The chief complaint aired at a meeting of the Council and the Minister for Works concerned the closing of a large number of streets to make way for the railway. One case was given where the Council



*The Ruston Proctor steam shovel is seen on an intermediate level, with a rake of Western dump cars on the floor of the reservoir. At this stage a good idea of the amount of excavation necessary in a large civil engineering project can be obtained, the date would be about 1917-18.*

*(Photo: M.W.S. & D.B.)*

had spent £1,500 (\$3,000) on a road in the vicinity of Rookwood but now the Minister had closed it 'with one stroke of the pen'. The Council was also concerned about the depreciation of land brought about by the closing of the roads with the consequent reduction in the value of the rates. The Minister replied that if the Council incurred any expense as a result of the railway he would bear a fair share of the costs.

The petition to the Minister concerned the possibility of erecting a platform mid way between Rookwood and Regent's Park. This was granted by the Minister and the name Torrington was given to it. According to the booklet, 'Station Names', produced by the Archives section of the P.T.C. of N.S.W., the names Sidmouth and Bareela were also early names. All these names appear to have been used during the construction of the line as from a very early period the station was known as Berala, an aboriginal word meaning 'musk duck'. The platform was on the Down side of the line and its dimensions were 247' by 12' (75.2m by 3.6m). A small waiting shed was also provided. The location of this platform was 28' (8.5m) north of the present station.

The third point was, who was to pay the construction costs of the line. In a letter to the Water Board from the Under Secretary for Public Works it was stressed that the line was basically being built

for the benefit of the construction of the reservoir. It was expected that 58,000 tons of material would be carried on the line for its construction. It was thought only fair that the Board should debit half of the original estimate of the cost against the cost of the new reservoir, that is £7,500 (\$15,000). The cost of the line from Regent's Park to the reservoir was to be entirely paid by the Board. They thus agreed to pay £12,168 (\$24,236), being half the cost of the line to Regent's Park and the total cost of the reservoir line. In minutes of the Board dated 24th September they agreed to pay an extra £329 (\$658) for the Rookwood to Bankstown railway. After further discussions the Railway Dept. agreed to the carriage of material from Rookwood to Potts Hill free of charge.

The Auburn Brickworks were still anxious to have their own private siding at Regent's Park. The Department finally agreed to construct the line to Park Rd. The cost of the line to the railway boundary would be borne by the Railways and the section to Park Rd. borne by the Brickworks. The section of line beyond Park Rd. to the company's works was to be constructed by the Company themselves. The siding subsequently became known as Clay Industries Siding in February, 1940 and was finally closed on 17th March, 1951.

Whilst on the subject of the Lidcombe to Regent's Park railway it might be worthwhile to very briefly

relate some of the subsequent history of the line. The decision to construct a railway from Regent's Park west to Cabramatta and to direct all south-bound traffic by this route to avoid the congestion of the Lidcombe-Granville section of the Main Western Line, necessitated the complete reconstruction of the single line between Lidcombe and Regent's Park. The new double track between Lidcombe and the new station at Regent's Park became fully operational on 8th October, 1924. The section beyond Regent's Park west to Cabramatta was opened on 19th October of the same year. At the same time a short length from Regent's Park to Chullora was opened to permit the southern goods trains to be free from the suburban lines at Regent's Park. The Regent's Park to Bankstown link was opened in 1928.

The new double track line between Lidcombe and Regent's Park followed fairly closely to the original line. Basically the single track line occupied the position of the present Up track between

Lidcombe and 10m. south of London St. From there to Regent's Park the old line occupied a position slightly west of the present lines. The original Regent's Park station was a single sided platform on the Down side of the line. The station was located just west of the footbridge leading off Kent St., near the boundary of Babcock and Wilcox car park.

#### **The Extension of the Line from Regent's Park to the Construction Site at Potts Hill**

Plans for the extension of the line beyond Regent's Park to the construction site of the reservoir were drawn up during the latter part of 1911. The Board was not happy with the initial plans because the line would terminate a kilometre from the actual construction site thus adding to construction costs. In early January of the following year the Board requested that the survey be continued beyond the original point to overcome this problem. They requested an assessment of the cost of the extension, including



*A Bucyrus Steam Shovel at work in 1915. Three men were necessary to work the shovel. A Fireman tended to the needs of a locomotive type boiler at the rear of the machine, the cylinders of the engine can be seen in the centre opening of the body. A Driver in the front of the shovel controlled the luffing (or side to side movement) of the boom, and also controlled the forward and backward movement of the shovel up to the working face. On the boom can be seen a further small cabin, in which was situated the Boom Operator. His functions were to control the run in and run out of the shovel arm, and also to release the bucket latch as required. Only the forward bogie of the shovel was powered.*

*(Photo: M.W.S. & D.B.)*

a bridge over the two 72 inch water pipes. The survey was completed a month later. On 8th March, 1912, the Board, in a letter to the Under Secretary for Public Works announced acceptance of the route as surveyed but expressed dismay that the terminus would not be closer to the centre of the construction site.

The extension was finally opened on 11th November, 1912 at a cost of £5,068 (\$10,136). The line continued south from the original Regent's Park station and then curved east through an eight chain curve. A few hundred metres or so further on the line crossed Amy St (the present day main street of Regent's Park). A set of catchpoints were located here indicating the end of that part of the line owned by the Railways Department and the beginning of the Board's private siding. From here the line continued more or less south east and after crossing over the two water mains continued for a few hundred metres where it terminated at the northern end of the construction site, a distance of a little over a mile from the level crossing at Amy St. Facilities at Potts Hill terminus appear to have been very rudimentary, no interlocking of any kind was in existence. The whole line beyond Regent's Park seems better classed

as a siding than a branch.

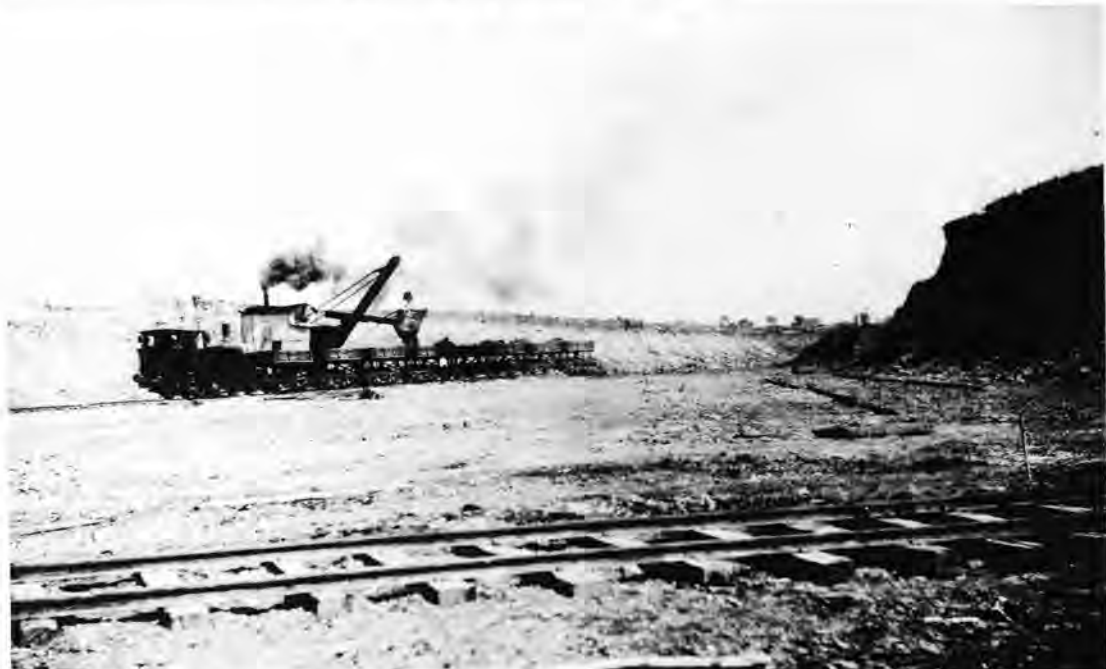
Tenders were called for the construction of No. 2 reservoir during 1912. Griffiths and Company Contractors Australia Ltd. forwarded a proposition that they construct the reservoir on a percentage basis. After quite a lengthy discussion as to the merits of this system, the Board decided not to accept the recommendation. The only other tenderer was that of Hendrickson and Knutson at a price of 16½% above the scheduled rate. The Board accepted the tender on the advice of the Engineer in Chief, but the Minister for Public Works refused to accept it. The result was that on the 5th October, 1912, the Board decided to construct the reservoir by day labour at a cost of £346,000 (\$692,000). After a short delay due to lack of funds, construction commenced in February of the following year.

Under an agreement between the Railways and the Board, railway engines were permitted to haul the Board's goods right up to the terminus at Potts Hill, but in September 1913, a communication was received from the District Superintendent that the railway beyond Amy St. had been declared unsafe and that in future all loading for Potts Hill would be left at Amy St. or the goods siding at Rookwood.



*Men at work in rather heavy going following wet weather. In the foreground is a Vulcan locomotive with its loaded cars of spoil. The steam shovel is a Bucyrus which is rail-mounted. In the background at a higher level is seen the narrow-gauge Fowler locomotive.*

(Photo: M.W.S. & D.B.)



*The Andrew Barclay locomotive is seen in charge of a further line of dump cars, while being loaded by the Ruston Proctor shovel about 1915.  
(Photo: M.W.S. & D.R.)*

The Board would then have to use its own locomotives to haul goods beyond the crossing.

As this would cause disruption, the Board made hasty enquiries to ascertain what was wrong with the line. They were informed that track curvature was out of alignment, especially on the bridge over the water mains. Some of the embankments needed widening and strengthening. Two months later Mr. Simpson from the Railways inspected the track; and apart from a minor adjustment or two found all in order.

After further enquiries as to when government engines would resume duties to Potts Hill, and when it would be possible to run the workmen's passenger train straight through to the terminus the Railways Department informed the Board that certain safeworking appliances would have to be installed at the terminus first.

The Board were disappointed to say the least, especially now that the special workmen's train had been replaced on 28th February, 1914 by a public passenger train which only operated as far as the platform at Regent's Park; thus adding an extra half a mile for the workmen to walk. The timetable of the new service did not suit the Board either. The train was scheduled to arrive at Regent's

Park at 7.17am., giving just thirteen minutes to walk the mile and a half to be ready for work at 7.30.

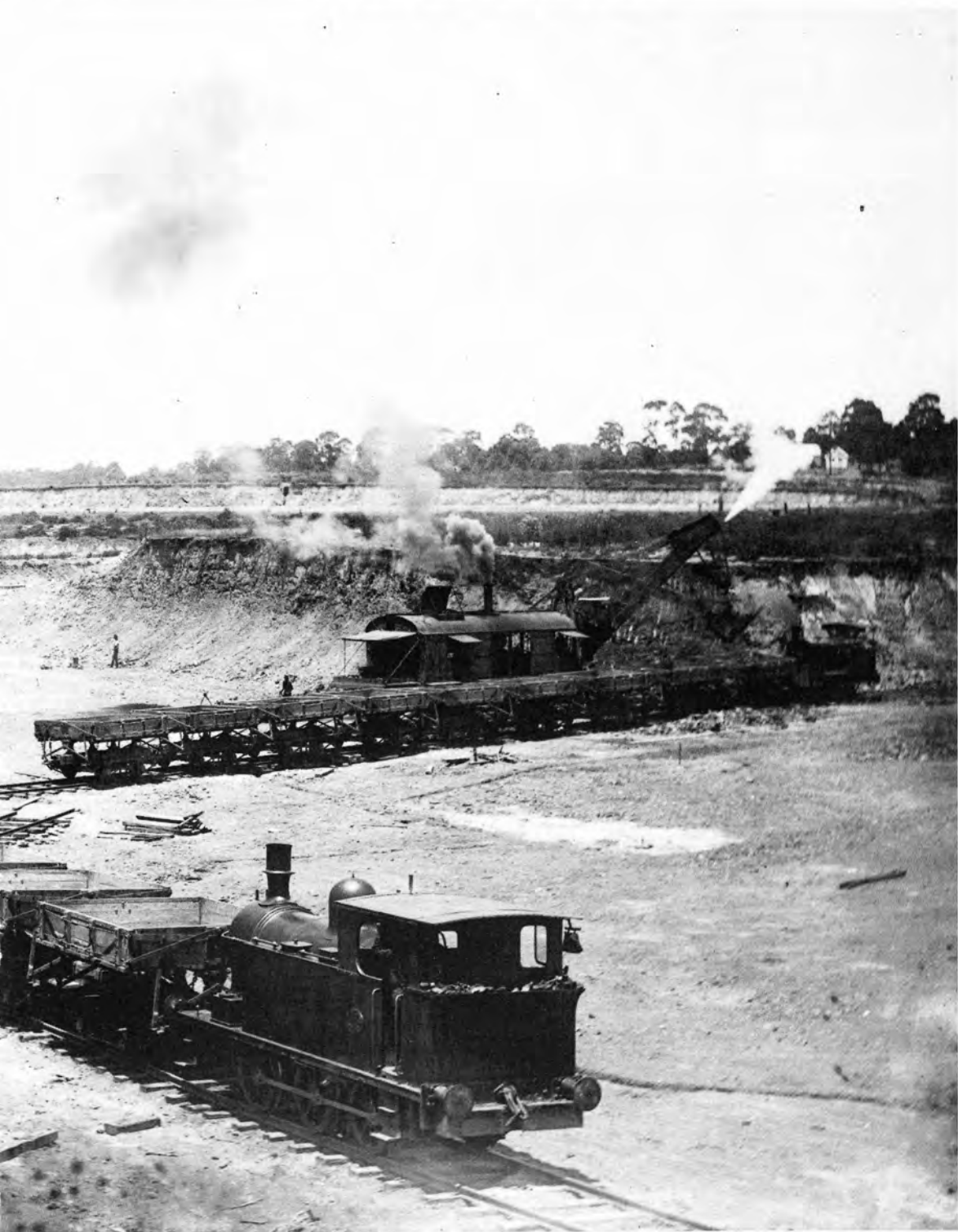
The decision to commence a public service was no doubt due in part to the pressure exerted by the Auburn Brickworks. As far back as November of the previous year they wrote to the Board asking that about 35 workmen be permitted to travel on their special train to Regent's Park. The Board saw no objections provided they helped to pay the guarantee to the tune of £52 (\$104) per year. The Railways refused to accept this arrangement on the ground that the train was a private arrangement between the Board and themselves.

Communication between the Railways and the Board continued unabated on all aspects of the operation of the line to Potts Hill. The derailment of a wagon at the terminus raised the problem as to who should re-rail it. The incident highlighted the need for the Railways to assume full control of it; and so be responsible for all maintenance. Friction developed over the payment of £217 (\$434) for the safeworking apparatus. The Board felt it should not be debited to their account since they had already paid the full amount for the construction of the line beyond Amy St. They did, however, sub-

*(Overleaf: pages 12 & 13) Work proceeding in the No.2 Balancing Reservoir about 1915. In the foreground is the Andrew Barclay 0-6-0 on a train of Western dump cars, being loaded by the Ruston Proctor steam shovel. To the right of the photograph is a similar train hauled by one of the Manning Wardle 0-4-0 tank locomotives being loaded by one of the Bucyrus steam shovels. In the left distance a Vulcan locomotive is proceeding down to the floor of the reservoir for loading.*

*(Photo: M.W.S. & D.B.)*







A scene at the Potts Hill terminus in 1914. The line in the foreground is the Main Line from Regent's Park, while the middle line is the engine run-around Loop. In the background is shown a train of the early type of dump cars, behind the Andrew Barclay locomotive on the Board's private line. The line crossing on the level is one of the Board's lines for the dumping of spoil, this being the crossing that was the cause of some dispute with the Railway Department, as regards safe-working procedures. (Photo: M.W.S. & D.B.)

sequently agree to pay it.

With safeworking installed at Potts Hill to the satisfaction of the Railway Department one would have thought that agreement between the two departments had been reached but not so; one further obstacle remained. It concerned one of the Board's tramways from the construction site to a tip on the opposite side of the main line. The crossing was made on the level by means of a diamond crossing on the Regent's Park side of the newly interlocked loop. The Board was not anxious to close the tramway but expected the arrangement would only last another month or two until the tip was filled with the spoil from No. 1 shovel. To leave it unfilled would lead to increased costs in the future. In a letter dated 18th April, 1914, Mr A.T. Jacobs, Resident Engineer at Potts Hill suggested that the impasse might be broken by a conference with the Railways.

The deadlock was indeed broken; the Department agreed to run across the tramway to deliver wagons into the loop but workmen had to alight from the passenger train on the Lidcombe side of

it, as only empty passenger carriages were permitted to cross the tramway. A Stop Board was erected informing all concerned of this rule.

Finally the following announcement appeared in Weekly Notice No. 22 of 1914.

On Sunday 31st May, 1914 the Regent's Park branch line which has been extended to Potts Hill, a distance of one mile two chains (mileage 12.0-13.2) will be brought into use for the purpose of conveying workmen in the employ of the Water and Sewerage Board and also goods traffic for the Board to and from Potts Hill.

The passenger service commenced the following day. Weekly Notice No. 29 of 1914 informed all concerned that E, L304, and M classes were the only locomotives permitted beyond Regent's Park.

The matter as to who would maintain the line beyond Regent's Park was not resolved until the following August, from then on the Railway Department agreed to its upkeep.

The following timetable was in operation in 1917 between Lidcombe and Potts Hill.

		Mondays to Fridays											
		1.	3.	5.	7.	9.	13.	17.	19.	21.	25.	27.	29.
		goods.	pass.	pass.	pass.	pass.	pass.	pass.	pass.	pass.	pass.	pass.	pass.
		am.	am.	am.	am.	am.	pm.	pm.	pm.	pm.	pm.	pm.	pm.
Lidcombe.		3.55	6.20	7.00	8.12	10.00	11.59	2.00	3.00	4.42	5.52	6.36	7.14
Berala		—	6.25	7.05	8.17	10.05	12.04	2.05	3.05	4.47	5.57	6.41	7.19
	arr.	4.05	6.29	7.09	8.21	10.09	12.08	2.09	3.09	4.51	6.01	6.45	7.23
Regent's Park													
	dep.	4.30		7.10						4.52			7.25
Potts Hill.		4.37		7.17						4.59			7.32

The return services ran a short time after the above timetable with the following exceptions. No. 1 goods returned to Regent's Park from Potts Hill with the empty passenger cars and took up the return trip to Lidcombe, leaving Regent's Park at 6.00am. No. 29 passenger to Potts Hill stowed the passenger cars at the terminus and returned as a goods train, leaving Potts Hill at 7.40pm., arriving at Lidcombe at 8.40pm. All goods trains originated from Clyde Sidings. A similar timetable operated on Saturdays.

#### Track Arrangements at Potts Hill

With the introduction of interlocking, a loop siding was provided. The crossovers at each end of the loop were worked from ground frames unlocked by a key on the train staff for the section Regent's Park-Potts Hill. No fixed signals were provided and the terminus was unattended. In addition to the main line sidings there were a large number of construction lines operated by the Board and worked by their own locomotives and rolling stock, mainly spoil wagons used to remove rock and waste from the floor of the new reservoir. Government wagons appear to have been permitted to travel on some of these lines. In addition temporary lines were built to permit the operation of the fleet of track mounted steam shovels. The lines on the floor of the reservoir were shifted

frequently by teams of fettlers hired for that purpose. Other more permanent lines were laid to tipping sites as well as servicing the loco sheds, cement store and other buildings.

A series of photographs accompanying this article show details of the terminus taken sometime after the middle of 1914. Three parallel tracks are shown leading to dead ends. The track closest to the camera was the main line. Government locomotives could operate on all of these lines but were prohibited from using some crossovers. Railway records indicate that a siding known as Water Board Siding was opened on 9th June 1915. Just where this siding was located is not known; it may have been one of the lines mentioned above.

On 3rd September, 1919 a Water Board Tramway was brought into use at the terminus; this line crossed the government line at the Sydney end of the yard by means of a diamond crossing. The safeworking arrangements associated with the tramway crossing are quite interesting and are paraphrased below from the Metropolitan Local Appendix of 1st February, 1922. A two lever ground frame known as Frame C was located near the intersection of the two lines. On arrival at the crossing the guard unlocked No. 1 lever by means of a Guards Key; pulling over this lever opened the



*This photograph with the following two presents a panorama of the terminus at Potts Hill of the line from Regent's Park. The view shown is looking east to the dead end. The run around points are in the foreground, with the Main Line at the left side. The frame controlling these points is at the foot of the stairs.*

*(Photo: M.W.S. & D.B.)*



*Above: The next view is looking to the south-east, with the reservoir construction in the right background. The engine sheds for the Board can be seen, with construction on the wall of the reservoir proceeding beyond the middle shed. Below: The view to the south-south-east shows a Vulcan climbing with its train out of the floor of the reservoir. (Photos: M.W.S. & D.B.)*



catchpoints in the tramway on each side of the main line. Lever 2 could then be pulled over which cleared the Up and Down main line signals on each side of the tramway.

An interesting argument occurred between the Board and the railway Department in January 1922. The latter asked the Board to pay a £2.00 (\$4.00) fee for medical tests on the Board's locomotive crews. The reason for the test was that

since these crews travelled over some of the Department's lines at Potts Hill they should have the appropriate medical tests. Despite a deal of correspondence the Board remained firm and refused to pay.

Number two reservoir was finally completed in July, 1923 and was opened by the Minister for Works. Details of the old and new reservoirs are given below.

	<b>No. 1 Reservoir</b>	<b>No. 2 Reservoir</b>
Top water level	175 ft. (53.34m.)	178.5 ft. (54.40m.)
Max. length	1194 ft. (363.9m.)	1820 ft. (554.7m.)
Max. width	894 ft. (272.4m.)	1,600 ft. (487.6m.)
Available depth	15.5 ft. (4.75m.)	12.5 ft. (3.81m.)
Lake area	25.4 acres. (9.9ha.)	52 acres. (21ha.)
Capacity	96,110,000 gals. (432,495,000 litres.)	175,750,000 gals. (790,875,000 litres.)

With the completion of the construction of the reservoir the line from the junction of the Pumping Station Branch (to be discussed later in the article) to the construction site became redundant and was subsequently removed. However, an entry in weekly Notice No. 47 of 1923 is a little difficult to interpret and is rewritten in part below.

The dead end at the terminus at Potts Hill has been slewed over and connected to the sidings in use by (The Board) . . . As it is not practicable for engines to run around their trains at Potts Hill, trains are not to be worked thereto, but must in all cases proceed to the Pump House Sidings, where the engine will run around the

train and traffic for Potts Hill will be placed leading. On arrival at the junction, the whole of the train must be secured clear inside the catchpoints and the traffic for Potts Hill is to be detached and propelled to Potts Hill.

Since the reservoir had been completed by this time, the above instructions must be in response to the partial removal of track at the terminus.

No further reference to the section from the Pumping Station siding to the terminus at Potts Hill appears to have been made. Circular No. 446 of 8th October, 1924, for example only refers to train working to the Pumping Station.



*A view looking south from the area of the terminus of the construction branch. An appreciation of the large civil engineering work can be gained. Numerous construction trains can be seen on the floor of the reservoir.*  
(Photo: M.W.S. & D.B.)



One of the Manning Wardle locomotives takes a break from duties while cement is being unloaded from what appears to be a Government railway wagon on 9th September, 1921. In the background at the higher level can be seen the terminus of the branch from Regent's Park. The reservoir was about two years from completion at this date.  
(Photo: M.W.S. & D.B.)

### The Water Board Private Locomotives and Construction Equipment

Details of the Board's locomotives are incomplete. It is hoped that this article might stimulate further research in this area.

There were six private locos used altogether, 5 standard gauge and one 2ft. 6ins. gauge. The narrow gauge engine was a Fowler but its origins are unknown. Reference is made to the payment of £275 (\$550) to the Customs Department for, 'Duty on Tank Locomotive', on 9th July, 1913, this engine could be the one to which the entry refers. It appears to have been working at Potts Hill in October of that year where reference is made in pay sheets to the driver of the N.G. (narrow gauge?) loco.

Of the standard gauge locos the first to arrive was an 0-6-0 built by Andrew Barclay. This was probably the six wheeled loco mentioned in the Board's Accounts for payment on 7th August, 1913. The loco is shown there to have been purchased from the Public Works Department for £1,412.85 (\$2,824.84).

The next two locos purchased were Manning

Wardles (0-4-0). They are almost certain to have arrived with the first Bucyrus Steam Shovel ex. railway construction work on the North Coast. They arrived at Potts Hill in December, 1913. Approval for payment of £7,969.56 (\$15,938.55) to the Public Works Dept., for the locos, steam shovel and dump trucks was given on 20th May, 1914. A study of page 90 of 'A Century Plus of Locomotives', 1965 edition shows that these two locos could have been similar to P.T.C. loco 1021. Five locos are noted as having worked on railway construction on the North coast. Numbers 1213 to 1216 are noted as having been sold prior to 1917. Two of them may have found their way to Potts Hill. Upon completion of work at Potts Hill, at least one Manning Wardle found its way to the Board's Pumping Station at Ryde, and is now preserved as No. 4 in the Museum of Applied Arts and Sciences at Ultimo.

The last two locos were Vulcans imported from America. In the Board Minutes of 28th January, 1914, the Engineer-in-Chief recommended that an additional locomotive and another Bucyrus Shovel be imported. On 4th March, 1914, it was resolved

that the offer of William Adams & Co. be accepted for the shovel, and after some further discussion, for the locomotives also (apparently the Board in the meantime had decided to purchase more than one). £2,570 (\$5,140) was paid for them. The shovel, locos and some dump cars, which had also been purchased were noted in Sydney on 5th August, 1914.

One of these Vulcans is on display at the N.S.W. Rail Transport Museum at Thirlmere. In the publication entitled 'The Locomotive Guide', published by the Museum we learn that the engine was built in 1912 at the Vulcan Works, Wilkes Barre Pennsylvania U.S.A. After working at Potts Hill, the loco was sold in 1921 to the Emu and Prospect Gravel Company. In 1924 it was transferred to the company gravel pits at Emu Plains. It was purchased by the Steam Tram and Light Railway Preservation Society and came into the R.T.M. collection in 1971.

There were thoughts of ordering another Vulcan locomotive for use at Potts Hill but the cost appears to have been too high.

Four steam shovels were purchased for use at Potts Hill. Two of them were Bucyrus rail mounted

Steam Shovels, their history has been related above. A Ruston Proctor Steam Shovel was purchased through Gibson Battle & Co. Ltd. for £1,239 (\$2,478). Payment was approved on 17th February, 1914.

A Bucyrus Drag Line Bucket Engine was purchased from Adelaide in June 1915. Among the other items at Potts Hill was a spreader car purchased from the Public Works Department for £100 (\$200). This unit also saw service on construction of the North Coast Railway. The large number of dump cars were mainly purchased from E.D. Morrison & Co. Ltd., W. Adams & Co. and the Public Works Department.

#### **The Construction of the Railway to the Pumping Station**

In 1912 a small steam driven pumping station was built to boost the flow of water in the two original 48 inch supply mains from Potts Hill to the Crown St. reservoir in Sydney. Amplification of the system to meet the rapid development of the Sydney suburbs soon became necessary and in 1913 a much larger pumping station was approved.

To cater for the construction of such a station and the supply of a greatly increased quantity of



*This view shows the fourth steam shovel which was acquired in 1915. It was a Bucyrus drag line bucket engine and ran on tracks, rather than rail-mounted, and is seen helping with the concrete work in 1921. On the wall of the reservoir can be seen two Manning Wardle locomotives, and the Vulcan on a train of dump cars and the spreader car.*

(Photo: M.W.S. & D.B.)

coal for the enlarged station, the Board considered the construction of a coal delivery siding off the Potts Hill line essential.

The Resident Engineer at Potts Hill, Mr. Jacobs prepared a sketch plan in August, 1912 for a branch to the boosting station. The design provided for a single line to leave the reservoir line at the point where it crossed over the two 72 inch water mains. The proposed branch would then climb at grades of 1 in 76 and 1 in 43.7 to the top of the old spoil bank at the northern end of the old no. 1 reservoir - a rise of 36 ft. (11 m.) in just under a kilometre.

Nothing apparently came of the scheme because in August 1914 a revised scheme over Mr. Jacob's signature was presented; providing for an extension off the end of the existing construction line to skirt the southern and eastern sides of No. 1 reservoir, then curve to the west to a shunting neck where trains would be reversed and propelled onto the bunker siding. A branch off this line would continue northwards parallel with Rookwood Rd. and terminate at a new road to be built through the pumping station grounds. The branch line was presumably to serve the Rookwood Asylum.

The third and final scheme and the one adopted was a refinement of the first scheme, being more

or less a continuation of the existing line from where it curved over the 72 inch pipelines. From here the plan was for a nine chain reverse curve to cross another water main and the line would end in a two road siding at the rear of the pumping station.

At the Board Meeting of 24th February, 1915 a communication was received from the Public Health Department regarding the construction of a loop siding for the Asylum. There is no indication as to what this communication was.

On 12th May, 1915 the Board accepted an offer from the Railway Department for the supply of rails, fishplates and other items of hardware for the siding at an estimated cost of £500 (\$1,000) plus a safety appliance for a further £66 (\$132). So apparently at this stage the Board intended to construct the line itself. However, they must have had a change of heart for at the Board Meeting of 13th August, 1915 they accepted an offer by the Railway Department to construct the line for £1139 (\$2278) or actual cost. The final cost accepted by the Board on 21st June, 1916 was £1,159-10-0 (\$2,319); the extra cost being due to the substitution of 7½lb. rails for 60lb. per yard rails. The Pumping Station branch was finally opened on 17th February, 1916.



*A Manning Wardle with its train of Western dump cars, bringing sand to the concrete mixers, about 1921.*  
(Photo: M.W.S. & D.B.)



*The reservoir had reached an advanced stage of construction when this photograph was taken, about 1922. One of the Manning Wardle locomotives is seen in the foreground with gravel for the concrete mixers. A Bucyrus steam shovel is still at work removing spoil from the reservoir floor. One of the Vulcan locomotives is seen in the right background with its rake of cars. (Photo: M.W.S. & DB.)*

The junction between this line and the existing Potts Hill was half a mile on the Regent's Park side of the Potts Hill terminus. A staff locked ground frame secured the junction points. A catchpoint was also located on the Pumping Station line just beyond the junction. Facilities at the Pumping Station consisted of two dead end sidings connected by a crossover. Another set of catchpoints secured by a chain and padlock were located at the Regent's Park end of the yard. The siding was to be worked during daylight hours only. Wagons of coal were propelled from Regent's Park.

This arrangement did not last long for on 9th May, 1917 a loop sliding was provided in lieu of the existing arrangement. Propelling of trains from Regent's Park was then no longer permitted. The 1922 Local Appendix makes mention of another siding at the Pumping Station. Additional sidings were added on 28th October, 1924.

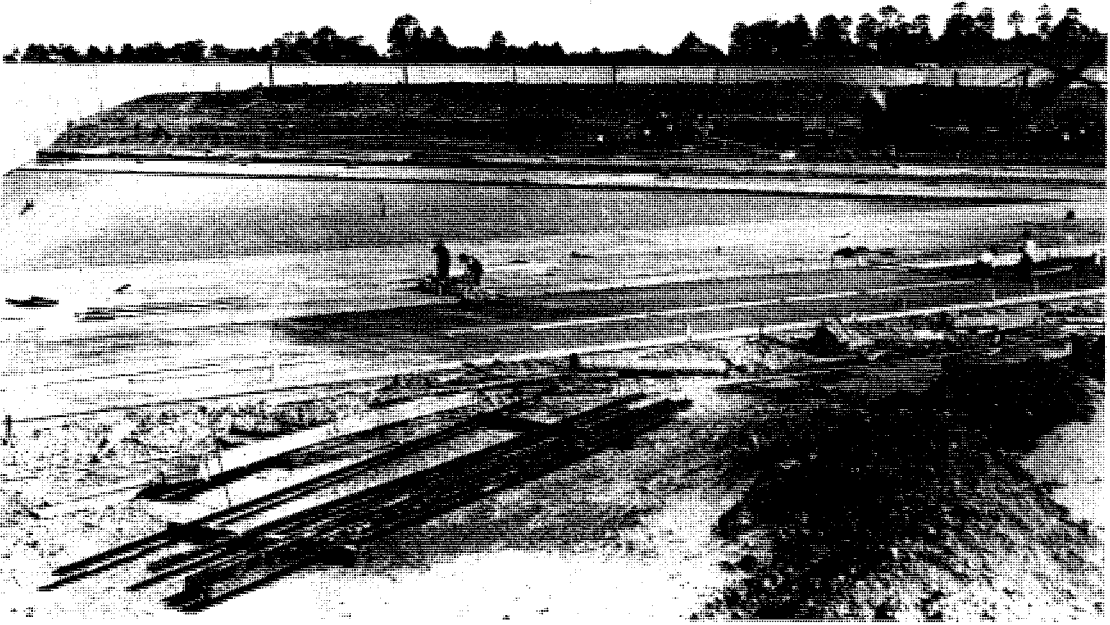
With the duplication of the line between Regent's Park and Lidcombe and the opening of the new station on 8th October, 1924, new junction arrangements were brought into use. Connections to the

branch were made to both Up and Down Main lines.

Slight modifications were made to the Pumping Station terminus on 9th March, 1925 when the chain and padlock operated catchpoint was replaced by a lever and slotted connection which meant that Down trains could pass over the catchpoint without the necessity of manually closing it. A stop board was placed at the entrance to the yard and trains were only free to pass the point when the Guard had satisfied himself that all was clear.

Further modifications were carried out to the yard on 2nd February, 1927 when a new loop was provided 420ft. in length. All other sidings were abolished. Regrading of the siding was also carried out. A further Stop Board was placed at the end of the yard, beyond which government engines were not permitted. Wagons of coal were winched up the last few metres by Board staff and the coal was unloaded into a Staith.

The connection between the Down Main and the branch was removed on 13th July, 1939, whilst on



*Above: This scene shows a late stage in the construction of the reservoir, about 1922-3. While concreting is proceeding in the foreground, further clearing and excavation is taking place, with one of the Manning Wardle locomotives in charge of a train unloading cement in the background. Below: The Terminus of the branch line from Regent's Park looking east, in 1915. The two lines nearest the camera are the Department tracks, with the Board tracks beyond. The frame controlling the Main and engine run around roads can be seen.*

*(Photos: M.W.S. & D.B.)*





*The No. 2 Balancing Reservoir almost at the stage of completion in 1923. This view is one of the few to show the Workman's Train used on the branch, and is seen at the terminus. The Manning Wardle locomotive seen would be on the Board's private siding. The train was usually hauled by a 20-class locomotive, and is here composed of two clerestory and one semi-elliptic roofed cars.*

*(Photo: M.W.S. & D.B.)*

8th May, 1943 the Up Main connection and associated signals were relocated 8 metres closer to Lidcombe.

Apart from a change in locking at the Pumping Station in 1962 the line appears to have undergone little change since the mid forties.

With the conversion of the pumps from steam power to electric power around 1965 the branch became redundant and the line closed with little ceremony sometime during that year. The official closing date is given as 9th July, 1966 although signal and interlocking equipment were removed a couple of months earlier.

As the following paragraphs show, the line at that time was already in the stage of being dismantled by the South Pacific Electric Railway Cooperative Society. The rails and sleepers were needed for

the extension of the tram museum in The Royal National Park, near Loftus south of Sydney.

Volunteers from this Society commenced lifting rails in November, 1965. Some of the rails lifted were found to be of American origin and were 39ft. in length, standard in the U.S.A. Agreement was reached with the Board to store rails and sleepers at the Pumping Station until they could be relaid at Loftus.

By February, 1966 all rails and sleepers had been lifted between Regent's Park and the bridge over the goods lines; in addition rails had been lifted from the coal stage at the Pumping Station. Two months later less than half a mile remained to be lifted.

(To be continued)

#### **FOOTPLATE EXPERIENCES ON THE SOUTH**

**(Bulletin No. 490 - August, 1978)**

Mr P. Rogers writes:

For the sake of historical accuracy, the caption to the photograph on page 161 of the August 1978

Bulletin should be corrected in the following manner. The date of this photograph would appear to be 21st January 1943, in which case it would be

the special test train which departed Rozelle at 12.05 p.m. on the previous day and arrived at Wallendbeen at 6.00 a.m. the following morning. The loaded train, comprising a load of 31 RU trucks and bogie brake van departed at 3.25 p.m. on 21 January, 1943 and arrived at Rozelle at 9.00 a.m. on 22 January, 1943.

Folio 1042 of the N.S.W. Parliamentary Papers (Fourth Session of Thirty-Third Parliament) Joint Volume of 1943/44 and page 10 of the New South Wales Railways Annual Report for 1942/43 state that the object of the test train run during January, 1943 was to "... ascertain for future guidance the turnround obtainable with a 1000-ton load of bulk wheat over a round trip of 500 miles."

In any case, the date 1935 is incorrect. The first RU wagon, No. 2970, was converted from a U truck of the same number in May, 1941 (Weekly Notice 25/1941; p.14); initially carrying the reclassification of CCU (for completely covered U truck?), but this coding was altered to RU in August, 1941 (Weekly Notice 38/1941; p.14). The 650 "production run" RU wagons were commissioned between August, 1942 and March, 1946.

The "capacity" of wagon types given on page 168 of the article are very much like gross tonnages. The U wagon, for instance, was originally conceived as a 20-ton capacity utility truck, and indeed the first 501 units of this class (prototype

9283 built by the N.S.W.G.R. to a shop order raised about 1921 and cars 21484 - 21983 built by Tulloch Ltd to satisfy Contract No. 3/1922) were rated as such. From about 1925 or 1926, some of these wagons were upgraded to 25 tons capacity, but these and the 20-ton variant were soon stabilised at a 24-ton standard. The first K trucks also appear to have been delivered as 24-ton capacity units, but most were given the 25-ton rating when new. I suspect that the handful of these vehicles which for a brief period carried the lower rating were actually the tail-end of one of the orders for U wagons, as in the late 1920s there appears to be several more K trucks than the quantity shown in the contract lists. Certainly, some of the U wagons delivered around this period were used as water carriers in the Broken Hill district when new and it was several months before they return to Sydney to be "completed" by the addition of sides, doors and ends.

The remaining ratings shown on page 168 likewise appear to be gross masses. The D wagon was actually a family of differing types, ranging from 6 to 10 tons capacity (with a few apparently rated as high as 12 tons loading), the BD wagon was of 24 tons capacity and the S and SS types, of a nominal 15 tons capacity. Average tares of the U/K, D, BD and S/SS types were roughly around 11 - 12 tons, 6 - 8 tons, 12 - 13 tons and 8 - 10 tons, respectively.

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<b>BULLETIN EDITOR:</b>	A. Bisits, 231 Burraneer Bay Rd., Caringbah, N.S.W. 2229	524-8636
	P. Rollason, 5 Redgrave Rd., Normanhurst, N.S.W. 2076	487-1229

#### DIVISIONAL SECRETARIES

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*Newey & Beath Printers Pty. Ltd., Broadmeadow 2292.*

# BULLETIN

Volume XXXII

February, 1981

Number 520

Registered for posting as a  
publication — Category B  
Recommended Price \$1.50



*A busy scene with both the Bucyrus rail-mounted steam shovels at work during the construction of the second Potts Hill reservoir. In the background can be seen a Manning Wardle locomotive with Western dump cars and the spreader car operating.  
(Photo: M.W.S. & D.B.)*

## THE POTTS HILL LINES IN RETROSPECT

(N.S.W.)

by N.J. Thorpe, K.T. Groves and N.J. Pollard

Continued from Bulletin No. 519 - January, 1980

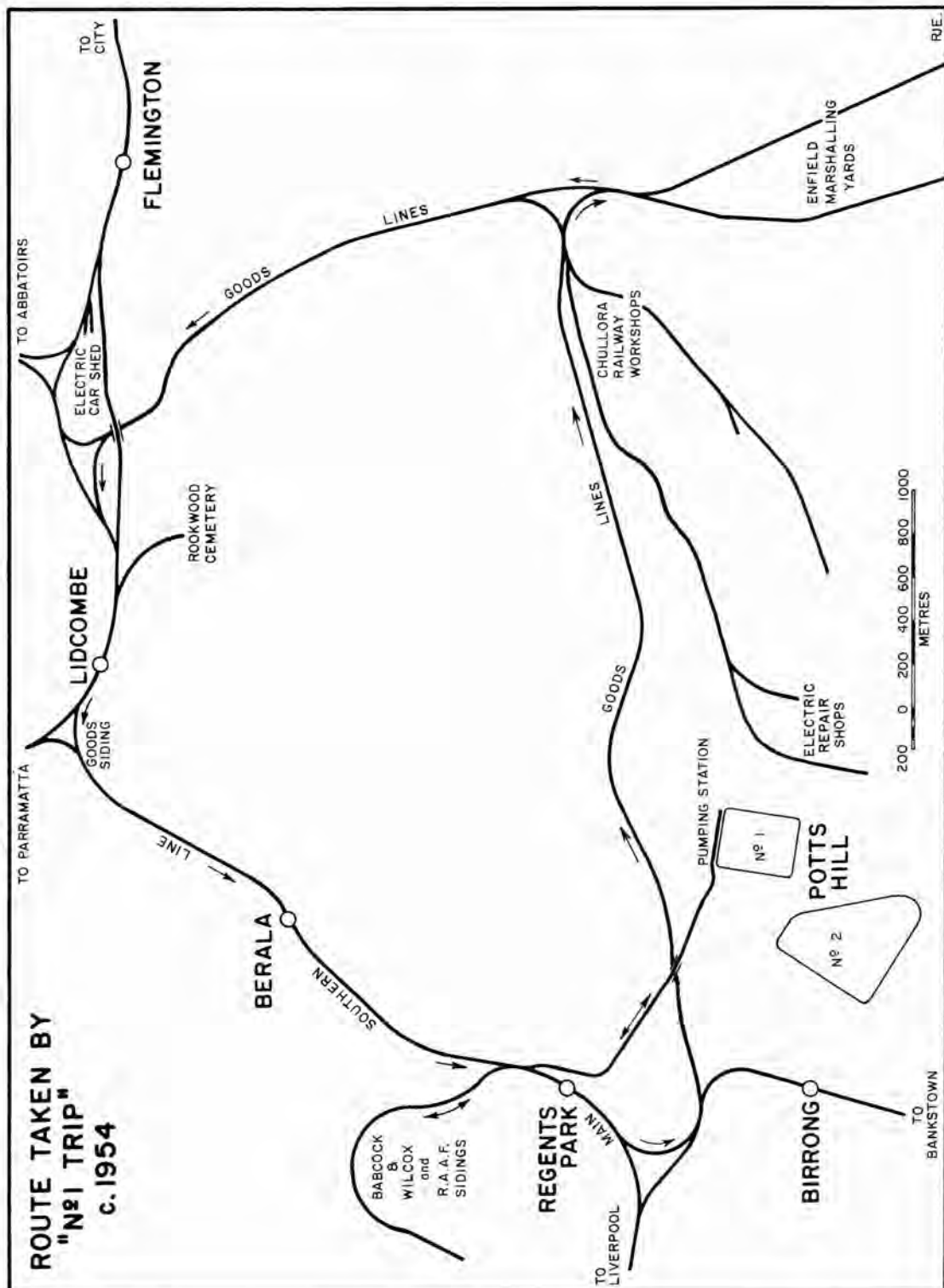
### **Train Working on the Line**

To illustrate how this interesting line was worked we will allow Driver K. Groves to take up the story and describe a typical trip around 1954.

Finishing your previous shift around mid day the Roster Clerk at Enfield verbally advises you to sign on the following morning at 1.13am for No. 1 trip. This particular trip always seems to have been early morning working right from the earliest days

of the line's existence. Sign on times have varied between 1.07am and 1.25am. In 1921 it was slightly later at 2.45am.

I came to Enfield in 1950 and at that time there was a roster called the 'Steam Roster' which operated in 27 week cycles with 27 sets of men. In this cycle you were rostered on No. 1 trip three times, on the seventh week there were two trips, on the Thursday and the Saturday, and on the





*Locomotive 2022 of the Z20 class could well be awaiting her next trip to Potts Hill. The scene is at the No.2 engine shed at Enfield in August, 1957. Alongside can be seen locomotives of the D53, 40 and 42 classes. (Photo: K.T. Groves)*

twentieth week the trip was made on the Tuesday. I came off this roster in 1957 and made the trip about three times after that. The trip was not popular with engine crews as it was early morning work, and employed the use of mainly 20 class tank engines which were not superheated.

After tea the previous night it was early to bed; for shortly after midnight you were woken up by the Call Boy tapping at the bedroom window. Although only half awake you understood that he was saying, '1.13am for No. 1 trip'. Having mustered enough energy to acknowledge his message you left your warm bed which believe me is very difficult on a winter's night.

Once dressed in overalls you collect your work bags and leave quietly through the back door, locking it carefully so as not to wake the rest of the household.

Off you go towards Enfield, sometimes by push bike and sometimes on foot. The sight of the darkened streets and the feel of the crisp morning air makes you wonder what fate caused you to take up this particular career, that of a locomotive engineman.

Despite the early hour 'Loco', is a hive of activity as one crosses the footbridge from Wentworth St. Everywhere there is a smoky steamy haze; its pouring up thickly through the roundhouse roof vents and from three or four engines simmering in

the vicinity. Not far away a couple of standard goods move slowly towards the examination pits and a '57' class makes its way slowly towards the coal stage. Beneath you an ageing 19 class trundles by on the pretext of being busy, the monotonous clanking of its side rods adding further noise to that generated from hissing steam and falling coal in the roundhouse area.

The engine board informs you that your steed is to be 2033, she's in No. 2 shed being readied by the Fitter for her turn of duty. The thought of having a '20' class doesn't surprise you for even though most light type locos are permitted to work the Potts Hill branch; 20 class have done the lion's share of the work. This was even true in 1921 where the following list gives a brief insight into working at the time.

**Table 1**  
**Use of 20 class to Potts Hill on selected days in 1921**

6th September	38 (2025)
7th September	933 (2030)
8th September	935 (2032)
10th September	936 (2033)
12th September	935 (2032)
17th September	291 (2027)
20th September	197 (2012)

In more recent times the same was the case as the following list shows.



Z20 class locomotive 2029 was the last survivor of the class, and is seen near the examination pits at Enfield "Loco" in December, 1966.  
(Photo: K.T. Groves)

**Table 2**  
**Locomotive Working to Potts Hill, selected days in the 1950's.**

9th March, 1953	2009
1st February, 1954	2032
3rd February, 1954	2005
4th February, 1954	2032
21st June, 1954	1919
13th September, 1954	2022
2nd December, 1954	2033
6th March, 1955	2414
16th July, 1955	2027
(on this day, the 20 class came from Clyde)	
16th July, 1957	2417
21st January, 1958	2024
3rd February, 1958	2010
21st May, 1958	2413

To give readers some idea of the light type locomotives which were available to work to Potts Hill (taken from the 1953 Enfield Loco Allotment List) they are listed below. They were 1021, 1022, 1023, 1709, 1711, 2009, 2011, 2019, 2020, 2025, 2026, 2027, 2029, 2032, 2033, 2612, 3007, 19 class would have been available from Eveleigh Loco if required by the Chargeman at Enfield if he had no light type engine available.

In the 1924 Load Book the following engines were listed as being permitted to work to Potts Hill 12, 13, 14, 16, 17, 21, 22, 19, 20, 24, 25, 27, 30, 30T, 26 and 28 classes.

With the scrapping of the 20 class in the early

1960's the last two or three years services to Potts Hill were maintained almost exclusively by 30 class tank engines. One guard told me he remembers having a 13 class and a 27 class during this time also. 48 class diesel electrics made the trip on a handful of occasions, mainly on Monday mornings in February, 1965 just before the closing of the line. For example 4847 on 8th February.

In the Sign On room you meet your mate for the night who has arrived a few minutes before. The clerk hands you the Working Sheet and its off to the store to collect a kit. 2033 is in No. 2 Shed in company with a motley collection of other small engines. There's another 20 class under repair; two standard goods engines simmering quietly in company with an oil burning 59 class. In No. 1 shed the 'Big' engines are housed whilst in No. 3 Shed the 60 class Beyer Garratts spend their idle hours whilst not engaged in the short north working.

The first job to do after climbing aboard your steed is to turn on the dynamo and check the condition of the headlight. You must have a good headlight to show you the way to Potts Hill. The dingy little cab light gives you enough illumination to check the level of the water in the gauge glass and the amount of steam pressure so far built up.

Whilst in the cab the firebox is examined, taking particular note of the condition of the brick arch, you also see if any firebox stays are leaking. The air pump is turned on, it commences a slow monotonous pounding and soon there's seventy pound

per square inch in the main reservoir. The sanding gear is checked meticulously; on this trip it is a necessity that sand can be applied to the rails when required as readers will see later in the narrative. Before descending to the ground for further locomotive preparation, the pump is turned off.

In the meantime your mate has been busy checking out the contents of the kit, all items are found to be in order. He hands you the oil feeder and flare lamp and climbs into the cab. You pass the rest of the kit up to him. The fireman's duties are to fill the lubricator, oil the steam end of the air pump, check the interior of the smoke box taking note of any leaks from the tubes and the condition of the spark arrestor. Finally his job is to spread the fire using the fire iron dart and small pricker and build up the firebed to check the 'blowing off' point of the safety valves.

Whilst the fireman is doing these chores you light your kerosene flare lamp and check the outside of the engine by walking around it slowly. Then its down into the dark oil stained pit to see if the valve gear motions are intact, and the ashpans and bridge are clear of ashes and the cages are locked.

Back outside the oil feeder is filled from the tin of loco bearing oil and the side rods and axle boxes are oiled; they don't require much oil as the

mileage of '20' class are not great.

The next item of preparation is to climb the small ladder near the smokebox and see that the door is tightly closed. Sometimes the Driver checked the smokebox details and the door, sometimes it was the Fireman's duty. Whoever did it gave the door a good whack with the coal pick to make sure it was tight. Generally the Fireman was responsible for this job when oiling the pump.

Back in the cab, the steam pressure is noted and with the aid of the blower she 'blows off'. A glance at the steam pressure gauge tells you that the safety valves have gone off at the right pressure - 150 pounds per square inch. You then turn the pump on again and soon there's 100 p.s.i. in the main reservoir. A check on the coal supply is about all that remains to be done. You don't have to check your mate's work who has just finished his preparations - he's an old hand.

The No. 2 Shed Chargeman appears at the cab and checks to see that everything is O.K. You answer with a nod. 'Right I'll get you the 'table', he calls out as he walks away. Soon there's a green light from the Turntable Operator and its bunker first to the turntable. The turntable gives a loud clanging noise as the wheels of the engine move onto it. He stops you with a red light. The turntable moves slowly and surely around. A green light lets you know that the pawl is locked and it is right to



*Scene looking north towards Sydney, at Regent's Park station in the 1970's. The Up side sidings can be seen at the left of the photo. The line to Potts Hill left on the Down side of the yard, and the footbridge in the distance is the point at which trains charged the 1 in 27 grade up to the Amy St. level crossing, on the branch line.*  
(Photo: K.T. Groves)

move forward. It's a light steam, engine first to the water column making sure that the loco is brought to a stand just at the right place. Your mate swings out of the cab and opens the lid. After the hand brake is firmly applied, its onto the ground to swing the column across for your mate who places the bag into the tank. The wheel is rather difficult to turn to start the flow of water, the previous operator must have jammed it.

'It's nearly half full', shouts your mate. This gives you the cue to stand back; you don't want to get splashed when the water bubbles over the side tanks. This lets you know the front tanks are full.

With the water turned off, its back into the cab; the lids of the water tanks are checked to make sure they are closed; the handbrake is released, and then it's up to the Engine Shunter's cabin where you give him a 'pop' on the whistle to let him know you are around. He responds with a green light. Since there are a number of other engines in the vicinity it is necessary to keep a sharp lookout for there are at least 12 engines due out of 'Loco' between 12.45am and 2.30am. Some are coming from No. 1 Shed, others from No. 3.

It's the Shunter's job to hold the points whilst your engine reverses slowly down the yard. Another Shunter appears almost from nowhere and jumps onto the steps of the cab as it is his job to couple you up to your train.

On coupling up to your train the wheezing air pump commences to fill the train's brake pipe with

air. A Brake Examiner appears from somewhere in the steamy atmosphere and the brakes are applied to his satisfaction. Off he goes again into the darkness.

There is time now for a quick cup of tea to set one in the mood for the trip. Before partaking of the repast there is a little housekeeping to do in the nature of washing the cab appointments. There is time to note what is going on around your train. On one side there is an impatient 57 class coupled up to a long string of four wheelers for the south or west; on the other is a quieter 60 class heading north. All are undergoing brake examination prior to departure.

A flashing light alongside your train lets you know that the Guard is busy noting the numbers and destinations of the wagons on the train. In a short time he's reached the engine and informs you that there's a maximum load of 450 tons on the train with a full 'swag' for Potts Hill.

A waving light from the back of the train is a signal that the Examiner requires the brakes to be released. He soon returns to the cab and says, 'O.K. the brakes Driver'.

'Thanks', you reply. A glance at your pocket watch reveals the time to be a quarter to three and you give the Guard a blast on the whistle to inform him that you are ready to start. The fireman proceeds to shovel a charge into the firebox. He knows from experience not to overfill the boiler with water as the engine does not have a super-



*The site of the Amy St. level crossing, looking north, at Regent's Park. The railway station roof can be seen in the left background.  
(Photo: K.T. Groves)*

heater and is liable to prime when lifting the load out of the yard towards South Box.

The Guard responds to a blast on the whistle by 'pulling the tail', railway jargon for opening the air tap in the brake van and closing it again.

The Despatching Shunter, meanwhile has received advice from the Signaller at South Box that everything is ready for the train to set back and so he gives the Guard a green light. He commences to wave you back and you steam lightly towards South Box until the points are cleared under the Punchbowl Rd. overbridge. After the appropriate road has been set the journey begins in earnest, to North Box by way of the Main Line.

The following timetable was issued for No. 1 Trip in the 1951 Working Timetable.

#### No. 1 Trip Weekdays

Enfield Yards	2.40am.
Enfield North	3.03am.
Lidcombe	3.18am. to 3.43am. This time is given to shunt the Lidcombe Goods Siding.
Regent's Park	3.51am. to 5.14am. Thirty minutes of this time to work to Potts Hill. The rest for shunting the sidings west of the station, plus a cup of tea.
Sefton Park Jn.	5.37am.
Chullora Jn.	6.04am. 12 minutes between these points to shunt the non-existent Lidcombe State Hospital Siding.
Enfield North	6.07am.
Enfield Yards	6.11am.

The Saturday timetable was the same as the above to Regent's Park 3.51am. to 5.41am., Sefton Park 5.54am., Chullora 6.10am., Enfield North 6.13am., Enfield yards 6.17am.

Progress is quite slow because there are other goods trains in front of us. The Guard has previously told us that the first shunt will be at Lidcombe and his Assistant will be picked up there. Just where the Assistant Guard was picked up was a matter of what arrangements had been made with the Guard. Sometimes they signed on at Enfield; at other times the Assistant would be at Lidcombe. Regular Guards always worked the trip; they knew exactly what to do and helped each other as much as possible. Generally the same shunting arrangements held for each trip.

As the train steams under the bridge carrying the Main Lines you know you are at Flemington. In a short time headway has been made to West Junction where the goods lines meet the Main Lines not far east of Lidcombe. The sight of a red signal indicates that there is another train not far in front of you also proceeding around to Regent's Park or out to the west.

It's not long before the Signaller gives the all clear to proceed and it seems no time before it is necessary to bring the train almost to a stop whilst passing through Lidcombe station. The Assistant Guard hops aboard and the Guard is given the key

to shunt Lidcombe Goods Siding. When the Guard flashes the green light it is in order to proceed past the junction with the Main Western Line and on to the Main South. The train is brought to a stand at the Regent's Park end of the Goods Siding which is only a short distance from the junction with the western lines. A Guard who worked No. 1 Trip between 1952 and 1964 told me that it was absolutely necessary to leave the Lidcombe Goods Siding on time as the first electric train to Liverpool was due past at 3.48 am followed by one to Bankstown at 4.05am. If for some reason your train was late the full wagons were deposited in the siding and the empties were left for the following day.

On this particular day we are on time so the empties are pulled out of the siding and the full ones are left. When the Guard has completed coupling up he gives a green light and 2033 with a near full load asthmatically climbs its way up the rising grade through Berala and up to the bridge under Jenkins St. The regulator is shut and the train drifts down the slight grade to Regent's Park. Except for a street light or two the world around is dark and quiet.

At Regent's Park the train steams lightly past the platform and out under the road bridge and under the water supply pipes - the trip to Potts Hill is not far off.

The Guard indicates by a hand signal that the Brake Van has cleared the points. Your mate indicates that it is in order to reverse back across the Up Main and into the Loop, back you go until the water column is reached on the branch line to the R.A.A.F. (Commonwealth Sidings).

One Driver who came to Enfield in 1939 remembered making the trip to Potts Hill before the water column was installed there. There was such a need to conserve water that Drivers would not use the electric headlight up to Potts Hill so kerosene lights had to be provided in lieu. We Drivers are glad to stop and top up the water tanks here, you'd hate to run out of water half way up to 'The Hill'.

While the engine crew go about the ritual of taking water, the Guard and his Assistant have wandered across to the staff hut just near the junction with the Potts Hill line. The ordinary Staff is brought back to the engine, 'You've a full load of 270 tons', he tells you. A Guard told me once he took a load of 320 tons up to Potts Hill, that's 45 tons over the load. He had 2417 that morning and she was an excellent steamer.

Your load is all coal of course to generate steam to pump water. The train, however, could be made up of a wide variety of rollingstock; there could be a load of all four wheelers such as CH, K, S or U trucks. After the introduction of BCH coal hoppers about 1952 there could be one or two of these in the composition of the train. If that was the case there was always an S truck between the locomotive and the first BCH wagon as 20 class were not fitted with auto couplers.

The Assistant Guard goes back along the train and uncouples the wagons for Potts Hill. The rest of the train including the Brake Van is left near the water column until we return. Then we ease forward until the last truck is clear of the branch and then we reverse out of the northern end of the loop and onto the Up Main. Back we go for two or three hundred yards until we are roughly near the footbridge over the Main Lines. The reason for this lengthy reversing movement is because we have a steep 1 in 27 grade to tackle from the junction of the Potts Hill line to the level crossing over Amy St., at the western end of the shopping centre, a distance of five or six hundred yards. We require a good run up at this steep grade and need plenty of momentum (in fact lots of it!).

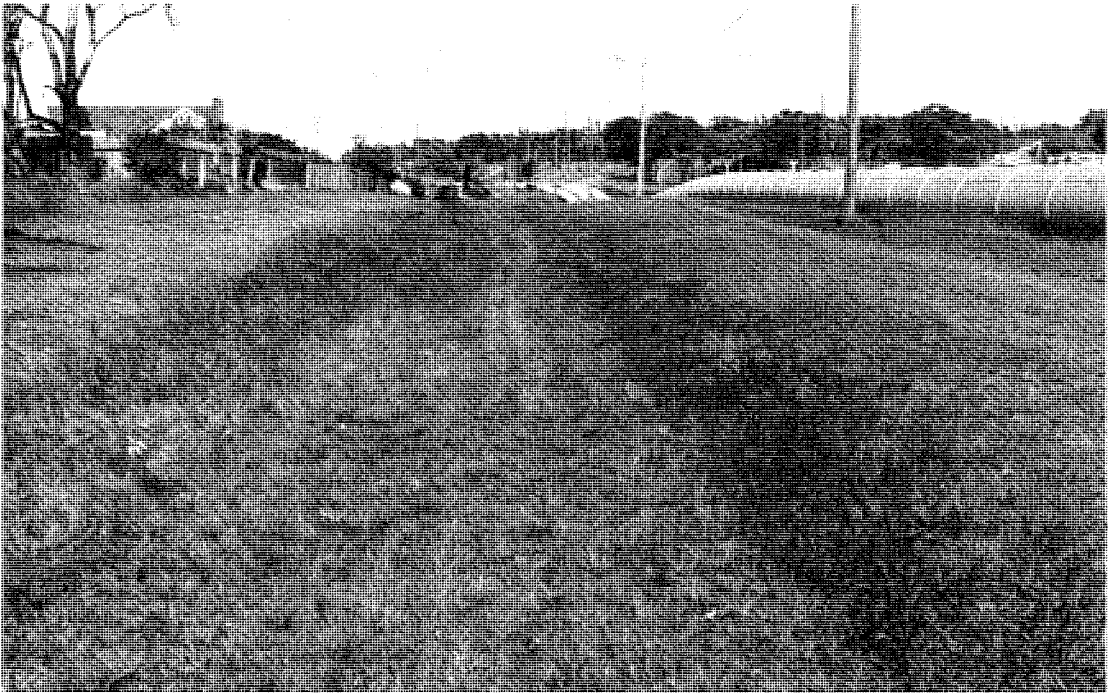
Sometimes only the Guard took you to Potts Hill, sometimes his Assistant did, sometimes they both went up especially if the load was small. The Staff Hut was a pretty cold place to stay on a frosty morning so they often both went up, perhaps for no other reason than to keep warm in the cab of the engine. On this particular trip the Assistant Guard opts to stay behind.

At the footbridge the fire is built up, not too much water in the boiler as the loco is liable to prime on the grade ahead.

When all is ready the regulator is opened to about three quarters and the reversing lever is wound back, slowly we gain pace, and cross the Down Main by means of a diamond crossing and

we are onto the branch and the start of the steep grade. An adequate amount of sand is applied to the possibly dampened rails and the reversing screw is let out gradually. The old engine loses her feet a couple of times but thankfully not enough to stall. I never remember having any difficulties climbing the grade but some Drivers say they found it necessary to make two or three attempts on occasions. One veteran Driver told me you could make a 20 class steam better by placing a jemmy (a piece of iron) over the blast pipe and in so doing could take over the maximum load in order to save making a second trip. I never interfered with my loco, as far as I was concerned they had to personally make it on their merits irrespective of engine, class or load.

Thankfully this morning we have no trouble and we are soon at the top watching for the Guard's hand signal on the roadway. He had made his way to the crossing well before we tackled the grade. Since the crossing is unprotected he has to supervise the roadway while we cross. It's also his job to open the gates across the line at each end of the crossing. The train is brought to a stand just beyond the crossing behind the Hotel. The Guard soon steps up into the cab and positions himself in the small area between the Driver's seat and the tank. We don't blow any whistles here, we don't want any complaints about excessive noise, but I'm sure at times we did make quite a noise getting up the grade.



*The formation of the former branch line to Potts Hill in 1976, between Regent's Park and the bridge over the Metropolitan Goods lines.  
(Photo: K.T. Groves)*



*The only remaining tangible evidence of the Potts Hill line. The photograph shows the bridge over the Metropolitan Goods line from Sefton Park Junction to Chullora and Enfield. The rails were still in place in 1976, but lifted in all other locations on the former branch. (Photo: K.T. Groves)*

The rest of the trip is quite easy, the speed is slow, the electric head light shows us the way. The grades for the rest of the journey are quite easy, there's some 1 in 40 and a little 1 in 47 but there are also stretches of 1 in 165 and 1 in 100.

Up past the Hotel we turn towards the east and run parallel with the water supply pipes which are on the right hand side, on the other we can make out the backyards of a few houses.

Soon our train crosses the Enfield Goods lines by a steel bridge. It doesn't look very elaborate but it does the job. In very short time we pull up at the terminus. Shunting arrangements are really quite simple; the full wagons are uncoupled and left in one siding and the engine is moved forward. We must be careful not to go past the stop board where the tracks lead to the coal staith. The wagons are moved from where we leave them to the staith by Water Board employees using winches. Gently the old loco is reversed back onto the parallel siding where we couple up to the empties. They will be propelled back to Regent's Park.

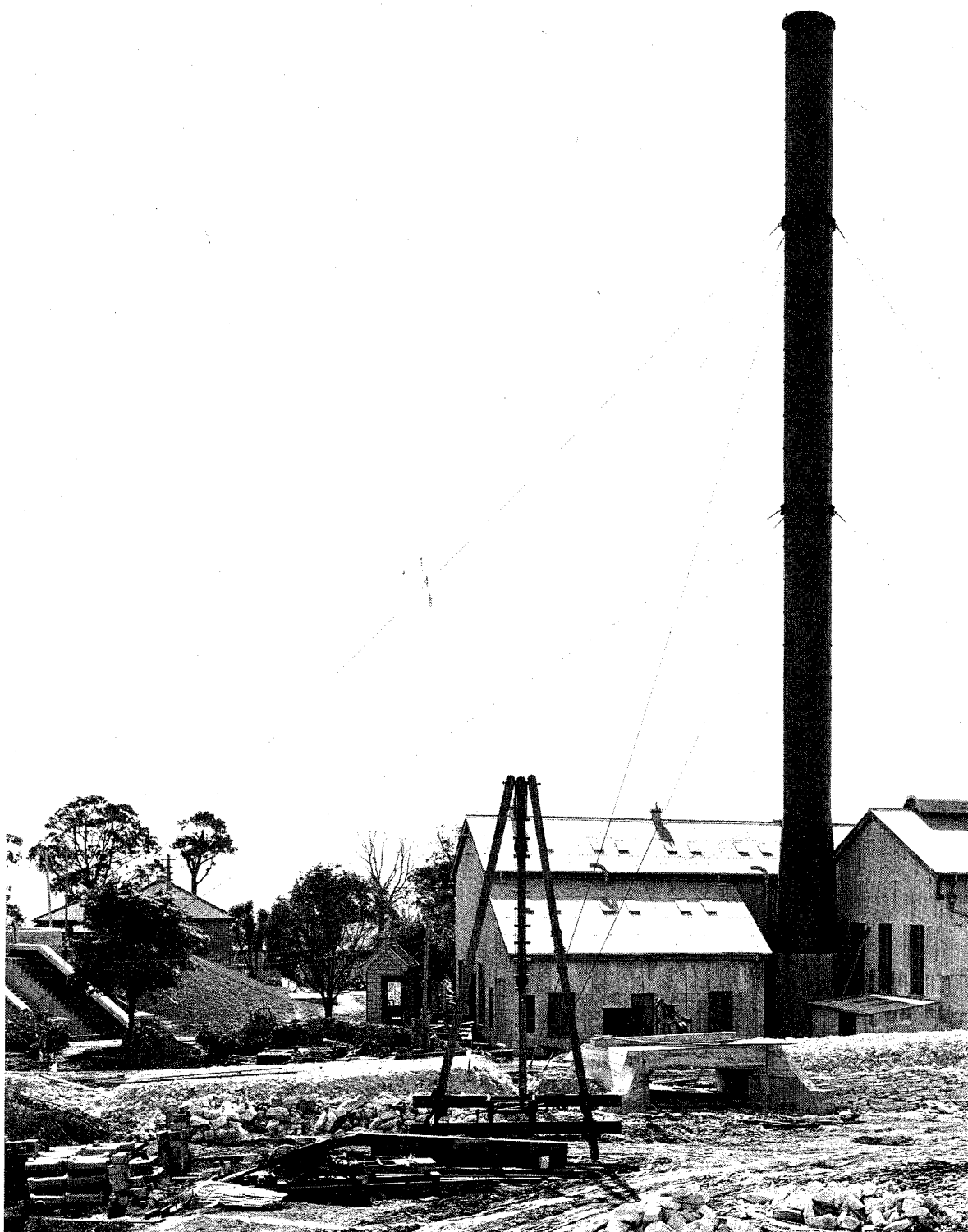
The trip was a bit tricky because there was a set of catch points not far from the edge of the sidings.

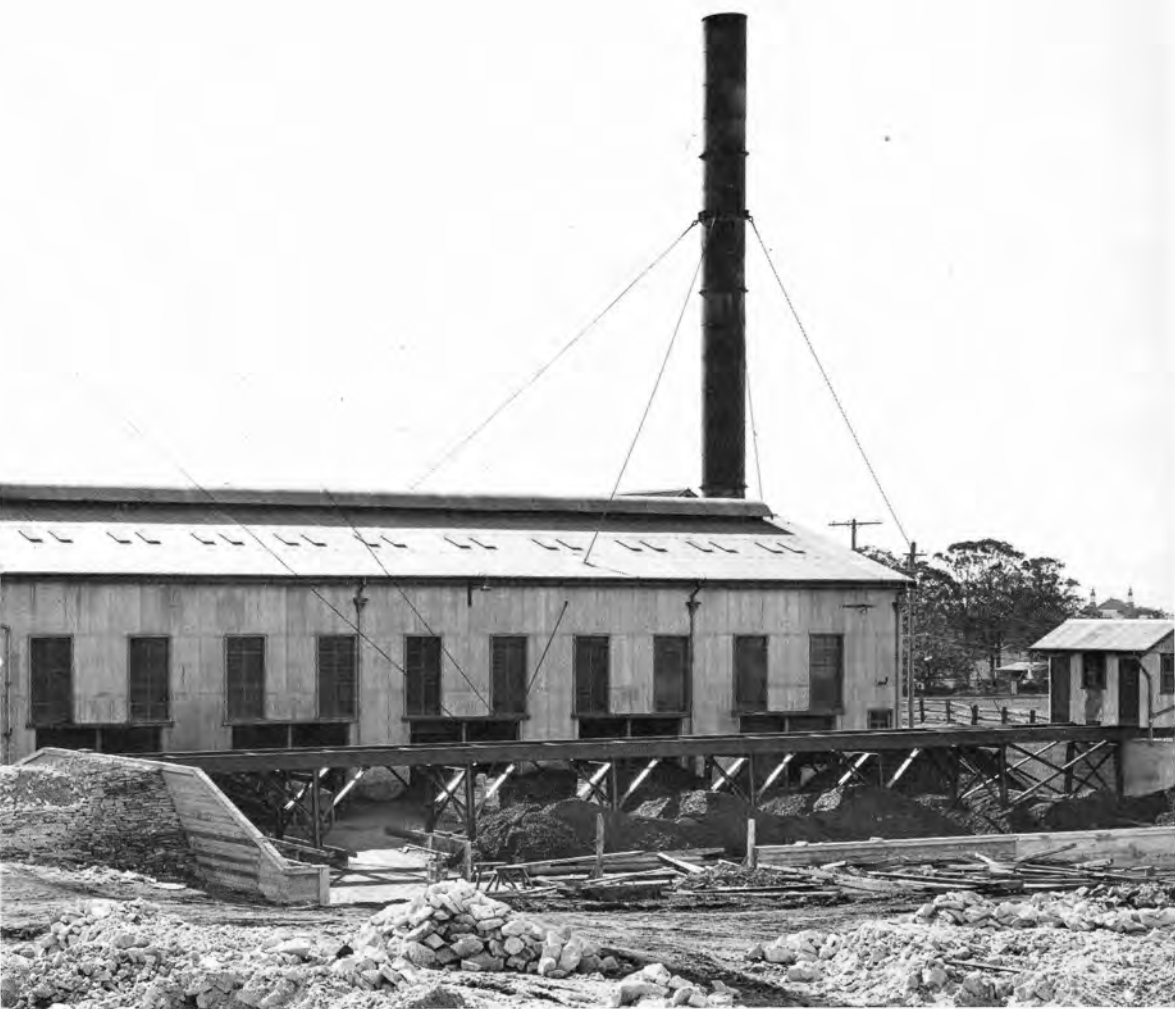
They are spring loaded so there was no need to worry about them on the forward journey, but on return they are open to make sure wagons don't runaway towards Regent's Park.

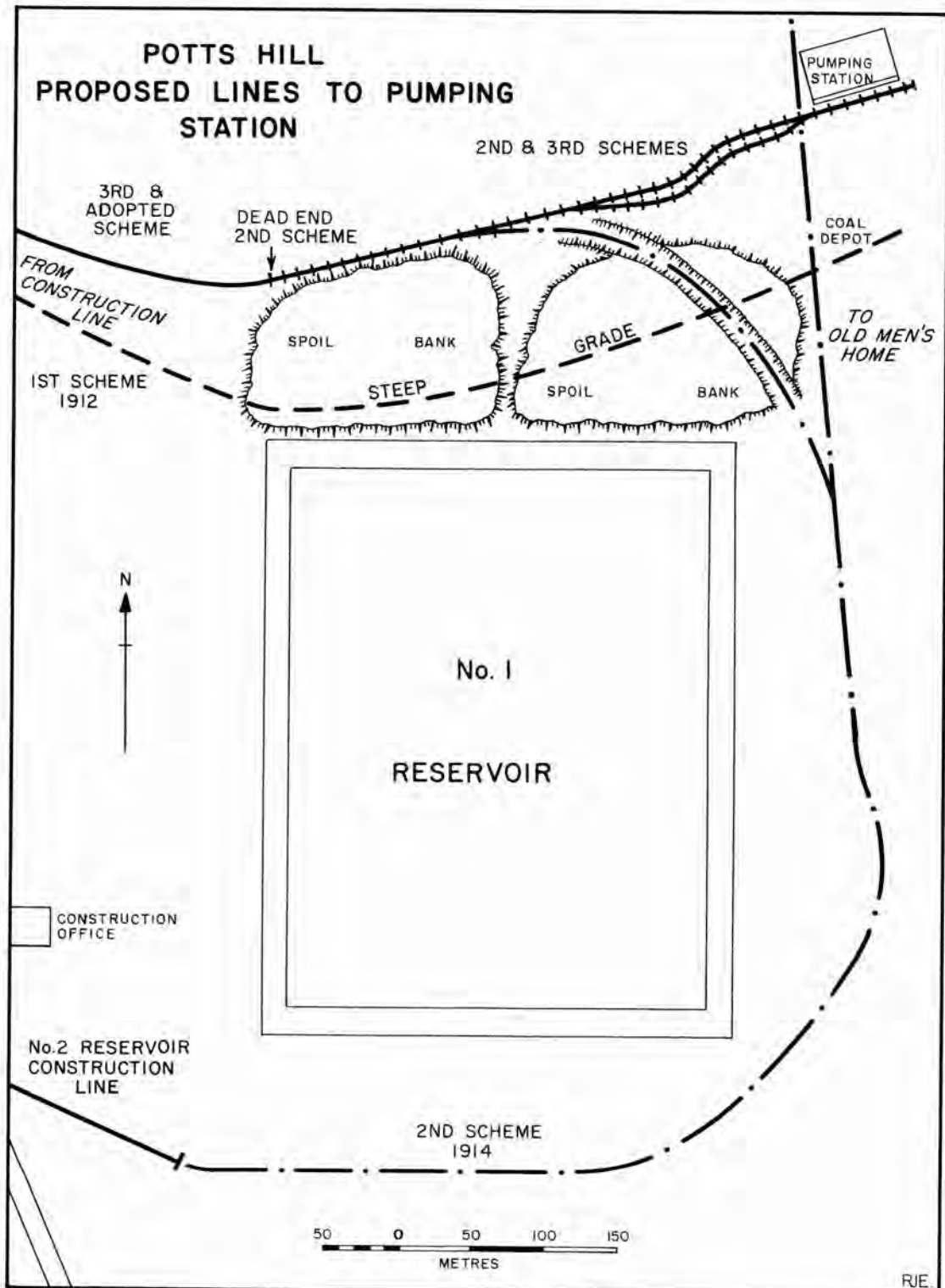
The Guard keeps an eye out for them and stops you just short of them. They are unlocked with the staff and he waves you past. After retrieving the staff he rejoins you and a leisurely trip is made back to the Hotel where the train is brought to a stand. He walks down to the roadway to protect it while we cross. His Assistant in the Box gives us the O.K. for us to descend the grade. We pick up the Guard and down we go. The signal at the junction is clear so we cross back over to the Up Main line and proceed boiler first into the loop and onto the rest of the train. The excitement for the night is over but there is still shunting to be done. Occasionally two trips were made to Potts Hill, when there were large amounts of coal to move but I only remember making one.

It is time to shunt the sidings on the western side of Regent's Park so we propel the whole of our train across Park Rd. which the Guard is protecting. Babcock and Wilcox Siding is shunted if necessary. Next is the R.A.A.F. or Commonwealth Siding to

*Overleaf: Pages 34 and 35. An excellent photograph showing the Potts Hill Pumping Station on 31st July, 1926. The view is looking north-east, and shows improvements under way to the new loop line and coal staith. The new line was opened on 2nd February, 1927, and all other sidings were abolished. (Photo: M.W.S. & D.B.)*









*The former coal storage bins at the Potts Hill Pumping Station in 1976. (Photo: K.T. Groves)*

shunt. This particular siding was open from 19th September, 1943 to 5th September, 1964. There are three gates to look out for on this siding and woe betide anyone who went through then unopened. We need to look out for them by the light of the marker lights on the back of the coal bunker.

After the completion of these shunts it was back to the water column where we took water again and proceeded in a south direction along the loop parallel to the station from where we shunted Regent's Park Goods Siding which was parallel to the loop.

It is time for a welcome cup of tea which we made with the hot water provided by the station staff. Since it has gone 5 o'clock the station staff have already signed on.

In the meantime the Guard has gone over to the station to telephone the Signaller at Sefton Park Signal Box. It is he who will give us the all clear to proceed. The traffic section was always keen to get our train away from Regent's Park on time as it was often difficult to get a clear passage between the early morning suburban electrics.

Soon we've got the signal from the Guard to proceed and we cross over the Up Main and rejoin the Down line and follow it through North junction and out towards Bankstown. There were two sidings in this section which some drivers remember shunting. They were the Sefton Park Substation Siding and the Lidcombe State Hospital Siding on the goods lines not far from

Chullora. A Driver who came to Enfield in 1939 remembers shunting this siding.

After arriving back at Enfield we worked the 7.30am. Loco Special which took coal and sand to 'Loco'. If there were no empties to return to the Yard you were allowed to proceed to 'Loco'. You then reported to the Chargeman who either told you there were no further duties for you or he sent you to relieve a crew of a goods train who had been on duty for long hours.

#### **Today**

Today over a decade after the closing of the line the only real evidence of the Pumping Station branch is the bridge over the Goods Lines which still remains. It is also possible to make out the location of the line from Regent's park as well as locate the crossing over Amy St.

#### **Acknowledgements**

Thanks is extended to Mr. J.H. Forsyth, Archives Officer, P.T.C. of N.S.W. for provision of material relating to these lines. Thanks are also extended to Mr. N.F. Reed, to the Water Board for permission to research through Board Minutes and use of photographs and to Mr. I.K. Winney for helpful advice and to the many people who answered our questions.

The following material was also used in compiling this article, Minutes of Water Supply and Sewerage Board 1911 to 1923, Official correspondence relating to the same period, Circulars, Weekly Notices and timetables of the period.

# THE AUSTRALIAN RAILWAY HISTORICAL SOCIETY

Bulletin No. 520 — February, 1981

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Selected issues of N.S.W. Digest, 'A Century Plus of Locomotives and 'Trolley Wire' the magazine of the South Pacific Electric Railway Cooperative

Society. Thanks are also extended to Mr. R. Eslick for completion of diagrams.