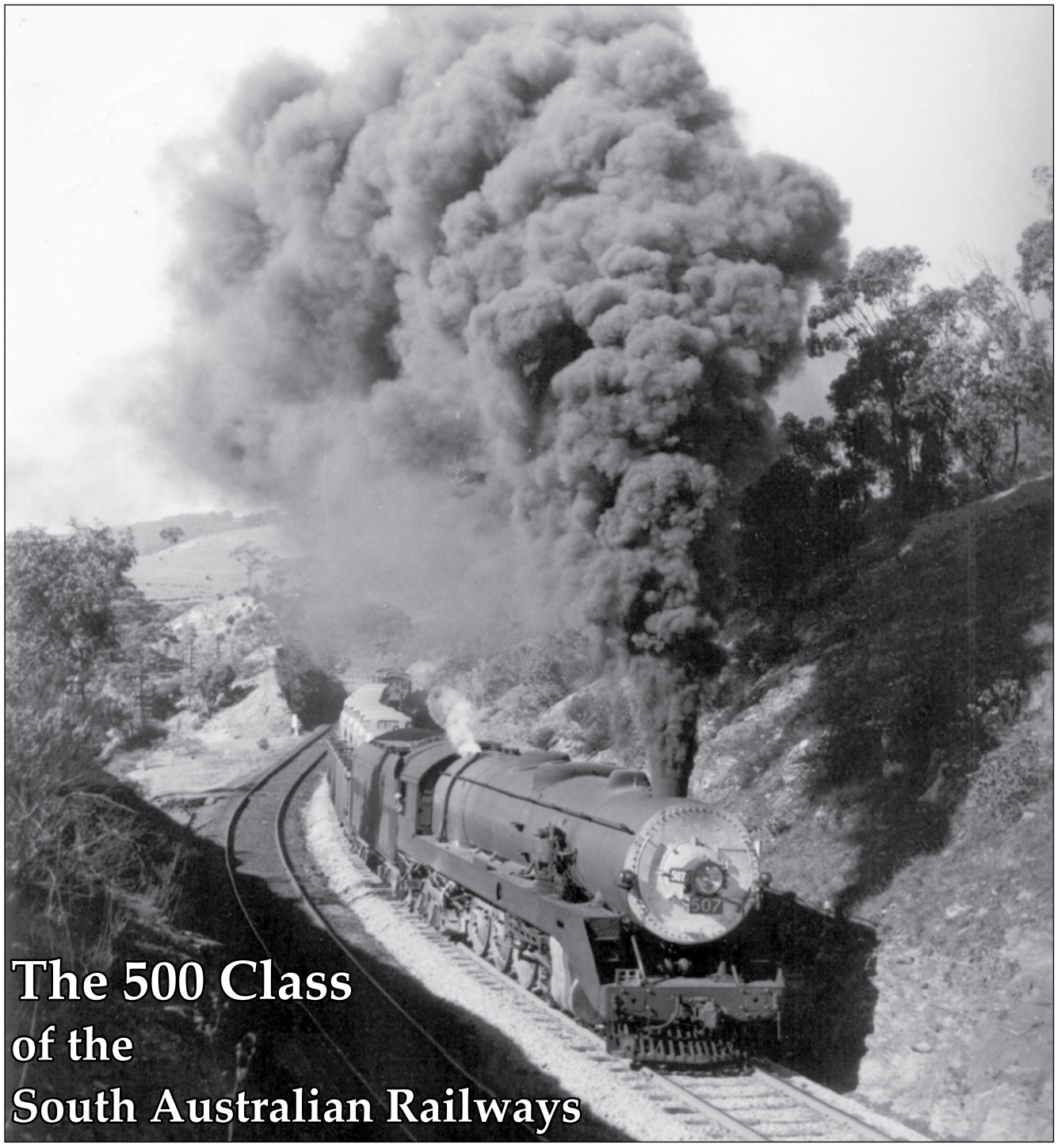


The 500 Class of the South Australian Railways

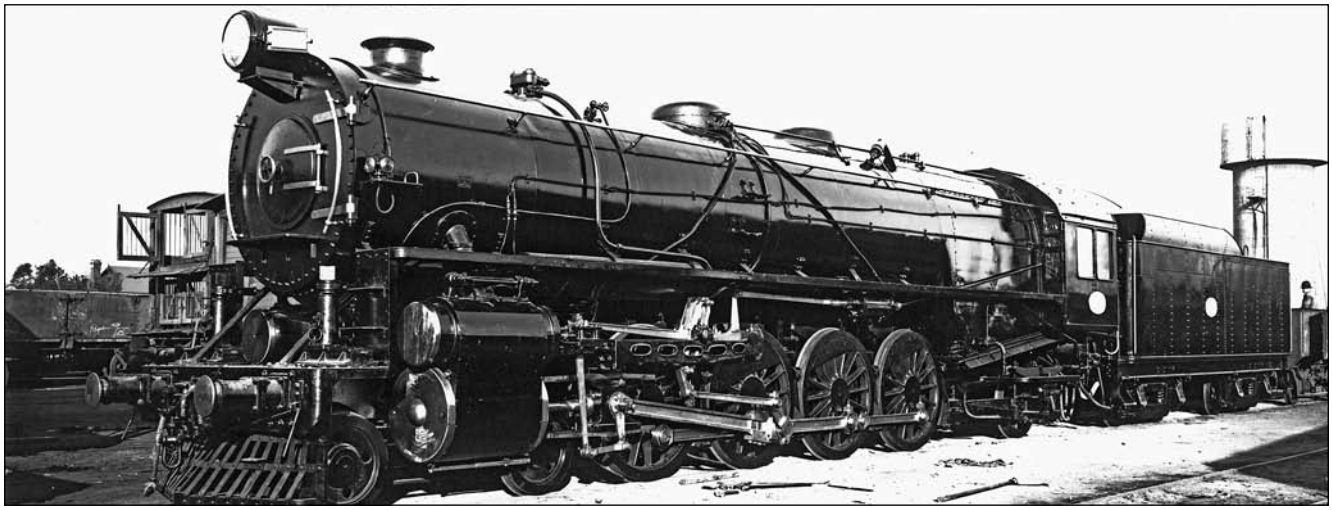
It is doubtful whether any railway event in South Australia has attracted as much sustained interest as the introduction and subsequent service of the 500 Class steam locomotives. ***Rob Burford*** *gives us this account of these mighty locomotives.*

Above: 507 hard at work approaching Eden Hills, with auto body wagons leading the consist. Photo: Ross Hurley collection.

Known throughout their lives as the 'Mountains', correctly when introduced as a 4-8-2 type, and incorrectly when converted to a 4-8-4, the 500 Class were truly the mountain kings. Men and boys gazed in awe and respect as these powerful brutes slogged over the Mount Lofty Ranges with *The Overland* or hauled impressive length freight trains northward.

It is history that the old SAR was not keeping pace with the demands put upon it in the early part of the twentieth century. Rx, S, Q and K Class locomotives hauled wooden framed rolling stock, with a load of 8 tons in each, over lightly constructed track. The solution to the need for more power was often to add another Rx. Something had to be done and Mr W.A. Webb was chosen from a large field of applicants to become the new Commissioner of the South Australian Railways and drag them into the twentieth century.

Amongst the whole gamut of changes he wrought was the introduction of three classes of heavy locomo-



tives: the 500 Class Mountain type 4-8-2s, the 600 Class Pacific 4-6-2s for passenger service, and the 700 Class Mikado 2-8-2s for freight service. The 500 and 600 locomotives in particular had heavy axle loadings and led to some tracks being relaid with 80 lb rail, or even heavier through the Hills, and main line bridges and culverts being strengthened or even replaced.

The relatively tight loading gauge meant that locomotives had to be designed to fit into existing tunnels and under bridges, although some 'shoe-horning' did occur. Because of these constraints, coupled with the Irish gauge of 5 ft 3 in, it was not possible to go out and buy a ready-to-run locomotive, especially from an American manufacturer. However, the Chief Mechanical Engineer of the new SAR did receive a lot of help and co-operation from many of Mr Webb's former associates in the USA when he set out to design the three classes of locomotives deemed desirable for SA's situation.

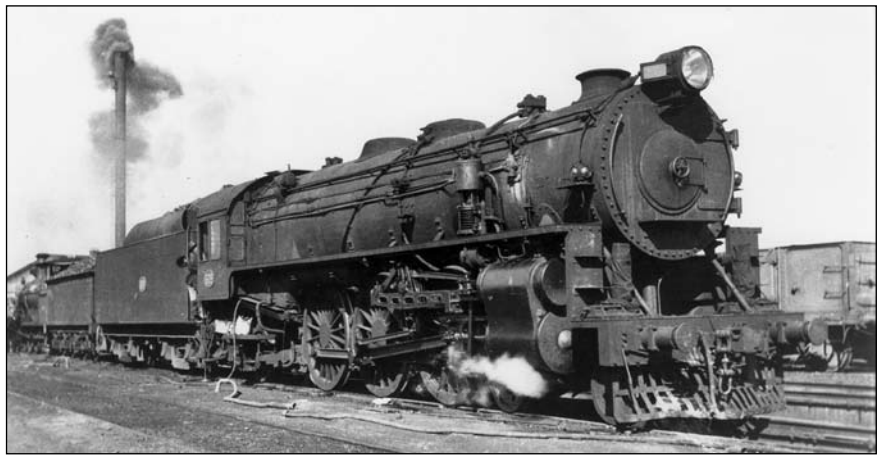
The 500 bore a close resemblance to the United States Railroad Administration (USRA) light Mountain design, albeit modified to meet the constraints of operation on the SAR. Similarly, the 600 is evocative of the USRA light Pacific.

When the design of the three classes of locomotives had been established, builders were sought. The political climate of South Australia at the time made it more desirable to seek tenderers in the United Kingdom than in the USA, even though the latter would have seemed more logical. The successful tenderer was the engineering works of Sir W. G. Armstrong-Whitworth of Newcastle-on-Tyne, UK, a company

Above: A 500 in very original condition. The coal load has not been increased, it still has its two-wheel trailing truck, small sand dome, marine type big ends on the connecting rods and has not yet been named. Photo: National Railway Museum collection BU01346.

Below: A 600 Class locomotive which was introduced at the same time as the 500 Class. The Pacifics were designed to handle passenger traffic on the more level areas of South Australia. This is 609 in its early years, prior to naming in 1934. Photo: Ross Hurley collection.

Bottom: The 700 was the freight workhorse of the SAR. They were very successful and were the basis of the 710 and 740 classes as well. 701, as shown here, is in its final form with enlarged sand dome. Photo: Ross Hurley collection.



which had never built a locomotive as large as this before. Even the ships which transported the finished locomotives to South Australia when they were finished had to have heavy lift equipment to handle their loading and unloading.

Mr F.J. Shea had designed the locomotives in a very short time in 1923. When tenders had been let he travelled to England to be involved in the construction process. Many of the fittings were of American origin. The locomotives rode on cast steel bar frames manufactured by the Baldwin Locomotive Works of Philadelphia, USA. Westinghouse brakes, Nathan non-lifting injectors, Franklin Precision power reversing gear, US style headlights and generating gear were just some of the American contributions. A first for Australian locomotives was the provision of a Duplex stoker (Locomotive Stoker Company of Pittsburgh, USA) to enable coal to be fed into the 66.6 square feet of grate area.

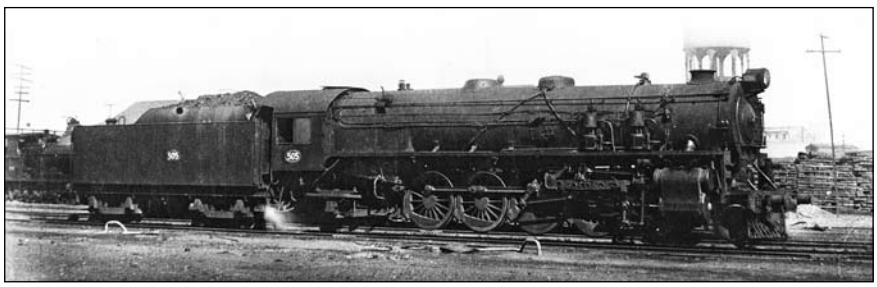
The SAR appeared to stage manage the arrival of the new locomotives as cunningly as any car maker leaking the details of a new model would today. The press featured drawings of the projected locomotives well before they arrived so that when the event did actually occur it appears to have caused quite a buzz of excitement. Alas, this same press was soon pouring scorn on these same locomotives as their introductory runs seemed to be beset with apparently insoluble problems. Late running because of overheated journals and trouble with the springing because of tighter than allowed for curves were all seen as evidence of poor design and the engines were soon seen as white elephants. [Does the dealing of the press with the Collins class submarines seem familiar? Nothing much changes. - Editor] However, the engineers and tradesmen at Islington successfully overcame these problems and the new locomotives soon settled into their routines.

No longer did *The Overland* need up to three Rx engines to haul it over the Mount Lofty Ranges as the new 'Mountains' did it unassisted and much more briskly. Once over the Hills the train was sped across to the Victorian border by a long-legged 600, where a couple of venerable A2 Class engines took over for the run to Melbourne. A saving of one hour in running time was all achieved on the SA side of the border! Freight tonnages over the Hills increased dramatically too.

When introduced to service in South Australia the locomotives had some teething problems. These were mainly concerned with a lack of clearance and flexibility when dealing with the tight curves and gradients experienced on the SAR, particularly in the rugged Hills section. However, these problems were quickly and efficiently dealt with by the SAR engineers.

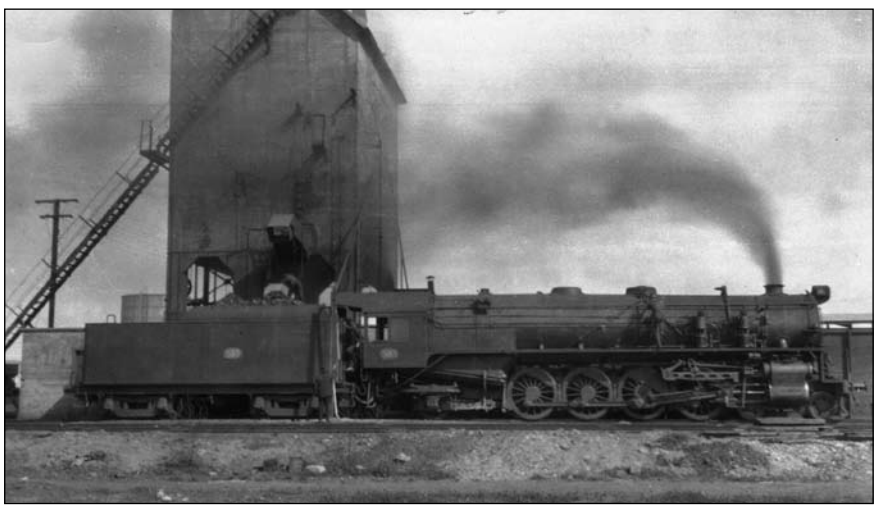
After the initial running-in problems were overcome the 500 Class locomotives were found to be very effective, but Islington was keen to make them even better. It was normal practice on *The Overland* for the 500 to haul the train over the Mount Lofty Ranges to the new locomotive facility at Tailem Bend and then be replaced for the rest of the journey to Serviceton by the 600 Class Pacifics. It was considered that the 6 ft 3 in drivers of the Pacifics enabled them to run very efficiently on the flat terrain of that section. However, some wanted the 500s to be able to operate right through from Adelaide to Serviceton. The 12 tons of coal carried in the tender was not enough for this task so the back plate of the coal deck was shifted back nearer the rear of the tender and the coping of the sides of the tender was extended by 10 feet to accommodate this. This resulted in an increased capacity of 5 tons to give a new capacity of 17 tons.

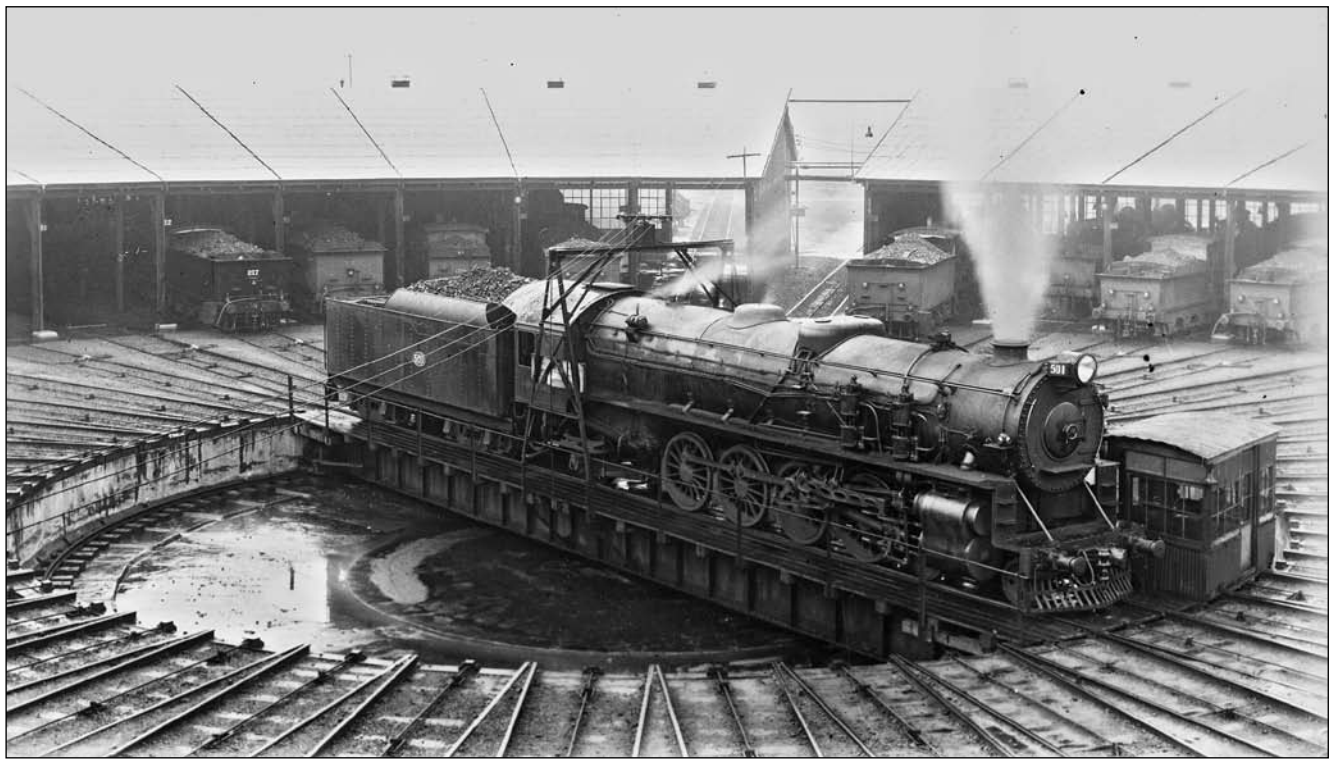
In 1927, 706, a Mikado, was fitted with a booster to its trailing truck to gain extra traction, especially when starting and at low speeds. This was successful so thought was given to adding a booster to the 500s. Accordingly, 506 was admitted to the Islington workshops in 1928 and emerged in July, 1929, with a Delta cast steel four-wheeled trailing truck which was booster equipped on the rear axle. Steam was supplied to the booster per medium of a steam pipe which ran along the top of the left hand side running board, but eventually all locomotives had the supply



Above: No 505 at Mile End early in its career. Note the position of the turbo-generator high on the side of the firebox and the two single compressors. Photo: National Railway Museum collection BU08910.

Below: No 503 takes on coal early in its life. Photo: National Railway Museum collection BU21739.





Above: No 501 on the turntable at Mile End on 24 August 1929. It has already had its sand dome enlarged but this appears to be the only modification at this stage. Photo: S.A. Archives, National Railway Museum collection BU06757.

pipe placed beneath the running board on the same side. Exhaust steam was effected through a pipe on the right hand side in front of the cab.

As the conversion was a success 500, 502, 504 and 507 were altered similarly in 1929 and then 501, 505 and 509 followed in 1930. 503 and 508 were not altered until 1936, thus completing the modification of all of the class from 500 4-8-2 to '500B' 4-8-4, the 'B' indicating 'booster'. The name 'Mountain' was now technically obsolete but in true South Australian fashion it stuck. They were certainly never referred to as 'Northerns' except in interstate publications. (The 720 Class was never known as 'Berkshire' in South Australia either - the name 'big Mikado' was the general term used, in deference to their 700 Class ancestry.)

Left: 500 at Murray Bridge on 4 June 1934. Photo: National Railway Museum collection BU05248.

The increased performance achieved was quite dramatic and later became even better when the single blast pipe was replaced with radially ported exhaust nozzles. The main marine-type bearings of the connecting rods were replaced with a solid type of bearing. Thus *The Overland* in the 1930s was allowed 500 tons, which equalled ten E type passenger cars, over the Hills and a freight was allowed a similar tonnage. This would equate to about 13 or 14 loaded M vans.

In 1936, 620 had appeared as the leader of a new class of locomotive for the SAR. Designed and built at Islington it was streamlined and painted green. This was in line with a move overseas to present locomotives in a streamlined and softened guise. It was considered appropriate to attempt a similar effect on *The Overland*. The passenger cars were painted green with black and yellow narrow stripes along each side and the train's nomenclature in chromium plated letters on the sides above the windows. Engine 507 was taken into Islington and emerged later with a cladding over all of the boiler which concealed the piping and a long green skirt along the running boards. Seven of the rest of the class were treated similarly so that eventually only 502 and 506 were left looking as they had always done. All of the class had their smokebox front painted silver and the headlight was mounted centrally on the smokebox door in all cases.

Other changes occurred during their lifetimes. Smoke-stacks were altered, probably when the exhaust blast pipes were modified. A single cross-compound air compressor

Above: Loco 501 seen on *The Overland* in 1938 is newly streamlined with an all silver smokebox, buffer beam and cowcatcher.
1st car is a D type mail van, appears red;
2nd car is a BE;
3rd car an E type sleeping car in the green livery;
4th car appears to be a VR air-con E type sleeper which was introduced at that time, assumed VR red;
5th car is a Pullman sleeper (*Mt Lofty* or *Macedon*), colour possibly green;
6th car is dining car *Adelaide*, assumed red;
7th car an AE in the green livery;
8th car is a BE in the green livery;
9th car is a CE brakevan.
All timber passenger cars are fitted with chromed *Overland* insignia above the window line.
Photo: N. Thorpe collection.

replaced the two single pumps originally fitted. Buffers were removed during the 1940s as the conversion to automatic couplers was completed on the SAR.

The 500 Class was not restricted to the Hills (or, if you prefer, the Mount Lofty Ranges). They were able to run through to Serviceton, which was why the tender was altered. They were also able to run to Terowie and to Port Pirie, where the easier grades enabled them to haul quite large freight trains. Victor Harbour and Angaston were also approved destinations as well as Nuriootpa and Penrice. At very reduced speeds they were also able to work Oakbank race trains (10 mph was the allowed limit from Balhannah to Woodside).

During and after World War II coal was in very short supply and often was of poor quality. To try and overcome these problems the SAR tried two major alternatives. The first was to burn Leigh Creek coal, which had a very high ash content as well as a very low thermal output, mixed with bunker oil. At other times they burnt plain bunker oil. It would seem that the determining factor was the cost at the time. The ARHS book *500* by Douglas Colquhoun, Ron Stewien and Adrian Thomas gives a representative sample of what fuel was used by which locomotive and this is reproduced to allow modellers to perhaps get it right if they want to model a particular locomotive at a given time (see table below).

Some further minor modifications occurred towards the end of a few of the 500s' lives. Numbers 504 and 508 at least had their original lattice cowcatchers replaced with a pressed steel unit such as graced the 740 and Rx class locomotives. Presumably this was as a result of the original being damaged beyond repair in some sort of accident.

Number 500 had its original balanced regulator replaced by a front-end type throttle such as was fitted to the 710

FUEL BURNT IN 500 CLASS LOCOMOTIVES.

Engine No	Date Converted to Oil/Coal	Date Restored to Coal	Reconverted to Oil/Coal	To Oil	To Coal
500	13/4/49	Not known	10/7/53	15/6/55	
501	21/7/49	2/10/52	3/7/53		15/2/57
502	29/6/49	2/12/52	7/7/53		1/3/57
503	24/6/49	20/11/52	14/7/53		28/2/57
504	25/6/49	14/9/53		29/9/54	7/3/57
505	25/6/49	13/7/53		9/8/54	26/4/57
506	1/7/49	14/11/52	4/7/53	24/9/55	
507	25/6/49	11/11/52	9/7/53		
508	25/5/49	9/12/52	8/7/53	Dec '54	
509	23/5/49	23/1/53	19/12/53	10/11/54	20/3/57

This chart is taken from the Australian Railway Historical Society book *500: the 4-8-2 and 4-8-4 Locomotives of the South Australian Railways*, by Douglas Colquhoun, Ronald Stewien and Adrian Thomas.

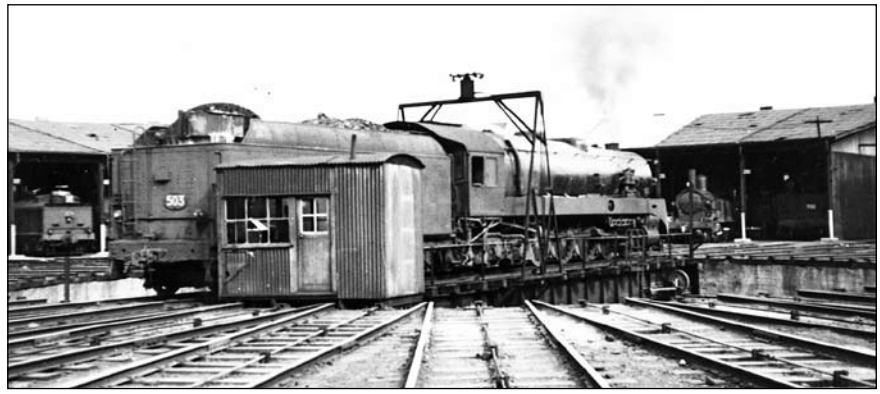
Class from new, but it is not known if any other locomotives of this class had a similar device fitted.

At this stage no commercial model is available of the 500 Class. Some fine live steam models have been built but they have been 'one-offs'. In HO scale, most models have been one-offs also and have often used a commercially available US prototype as a starting point. Dean Schluter used a DJH NSWGR D57 as a starting point and this turned out as a fine model. As far as is known at present no-one is planning to built a ready-to-run model of a 500, but it would be nice!

BGM is planning to create a white-metal and brass craftsman type kit in the foreseeable future and we look forward to that. It will be a model of number 504 as it looks in the National Railway Museum today.

I would like to thank the people at the National Railway Museum for their assistance in preparing this article. Their photographic collection has been very useful as has their permission to photograph and measure the prototype and to reproduce the individual locomotive histories on the opposite page. Hugh Williams' fine drawing was created to accompany this article and is a fine complementary item. To others who have given assistance and encouragement go my grateful thanks.

See page 12-89 for a colour Photo Gallery of the 500.



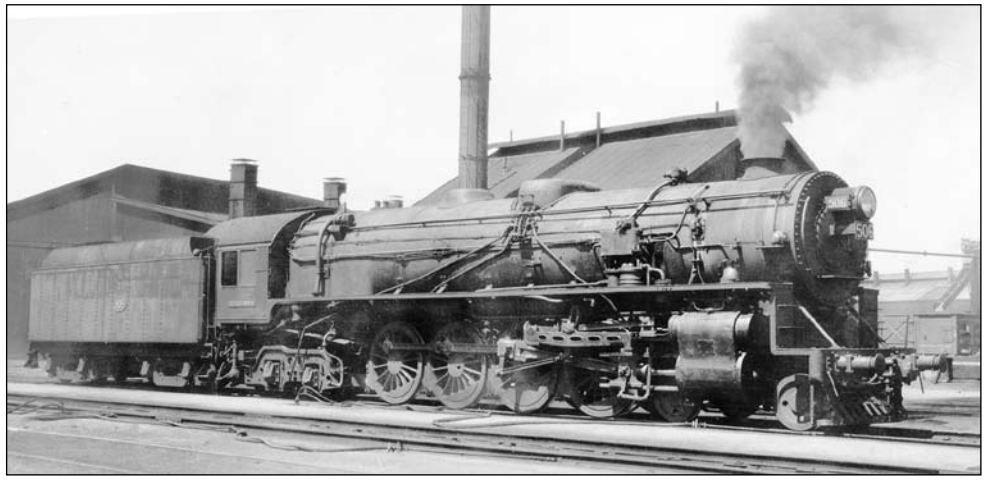
Top: 500 *James McGuire* at Tailem Bend. Note the sand pipe to the booster, later deleted. Photo: John Buckland, National Railway Museum collection BU11015.
Above: No 503 showing the rear of its tender in this August 1959 photo by Murray Billett. Note the water conditioning equipment on the rear deck. The plate just above the rear number plate was the original position for the reversing lamp which is now located above the rear deck. Contrast this with photo of number 506 opposite. Photo: Murray Billett, National Railway Museum collection BU04426.
Below: Number 509 gives a good view of the rear of its tender in this shot taken at Mile End in April 1954. The reversing lamp is high above the rear deck but there is no plate showing its original position as there is on 503. The water treatment plant shows up well on this photo. Photo: A.R.Jaggard, Noel Bruce collection, National Railway Museum collection AB14757.

500 *James McGuire*	
4 Jun 1926	Entered service. Works No.633
Sep 1928	Named *James McGuire*
30 Sep 1929	Fitted with booster to 4-8-4 wheel configuration
11 May 1963	Class leader was the last in traffic, so run to Angaston was organised.
12 May 1963	Withdrawn
12 Feb 1965	Scrapped
James McGuire was born in 1856. He entered railway service at Port Adelaide on 15 February 1870 and eventually rose to be station master at Crystal Brook in 1876 and then at Port Pirie a year later. He became the South East Superintendent in 1888 and went on to become Superintendent at Peterborough in 1895 and at Adelaide in 1910. He was appointed Traffic Manager in 1915 and Commissioner in June 1916. James McGuire died at Largs Bay on 25 June 1927.	
501 *Sir Henry Barwell*	
2 Jul 1926	Entered service. Works No.634
27 Sep 1926	First 500 on Melbourne Express
1927	Named *Sir Henry Barwell*
10 Apr 1930	Fitted with booster to 4-8-4 wheel configuration
26 Mar 1958	Withdrawn
25 Nov 1958	Boiler sold to Jon Products of Challa Gardens
29 Mar 1961	Scrapped
Henry Barwell was born in Adelaide on 26 February 1877. He became Attorney General and Minister of Industry in 1917. In 1921 as Premier, he launched a Royal Commission into the public service, and in 1922 he appointed W.A. Webb as Railway Chief Commissioner. Henry Barwell was deposed as Premier on 16 April 1924, was a federal senator from 1925 until 1928 and then became South Australian Agent-General in London. He returned to South Australia in 1940 but failed to win pre-selection and so retired from politics. In 1922 he was knighted in London. Sir Henry Barwell died on 30 September 1959.	
502 *John Gunn*	
22 May 1926	Entered service. Works No.635
-	Named *John Gunn*
8 Jun 1929	Fitted with booster to 4-8-4 wheel configuration
6 Jul 1961	Withdrawn
25 Aug 1962	Scrapped
John Gunn was born on 16 December 1884 at Rheola, near Bendigo, Victoria. He entered the South Australian House of Assembly in 1915 and was elected the leader of the Labor Party in 1918. He became Premier on 16 April 1924. He allocated the Minister for Railways portfolio to himself in 1925 and thereafter held the two positions concurrently. John Gunn died at Waterfall, New South Wales, on 27 June 1959.	
503 *R L Butler*	
23 Jul 1926	Entered service. Works No.636
-	Named *R L Butler*
9 Oct 1936	Fitted with booster to 4-8-4 wheel configuration
9 Jul 1962	Withdrawn
16 Feb 1963	Scrapped
Richard Layton Butler was born at Yattalunga, near Gawler, on 31 March 1885. He was elected to the House of Assembly in 1915, lost his seat in 1918 for supporting conscription, was elected again in 1921 and then held his seat until 1938. On 8 April 1927 Richard Butler became Premier, Treasurer and Minister for Railways. Butler resigned from state politics in 1938 to seek a safe federal seat but was defeated and was unable to gain pre-selection at any level. Sir Richard Butler died in Adelaide on 21 January 1966.	
504 *Sir Tom Barr-Smith*	
18 Oct 1926	Entered service. Works No.637
-	Named *Sir Tom Barr-Smith*
23 Aug 1929	Fitted with booster to 4-8-4 wheel configuration
9 Jul 1962	Withdrawn
23 Jul 1965	Presented to the National Railway Museum (formerly Mile End Railway Museum)
Tom Elder Barr-Smith was born in Woodville on 8 December 1863. He was educated at St Peter's College, and Cambridge and worked with Elder Smith for his whole working life, becoming Chairman in 1921. Barr-Smith was a director of the Adelaide Steamship Company and a council member of Adelaide University from 1924. Sir Tom Barr-Smith died in Adelaide on 26 November 1941.	
505 *Sir Tom Bridges*	
28 Oct 1926	Entered service. Works No.638
-	Named *Sir Tom Bridges*
19 Aug 1930	Fitted with booster to 4-8-4 wheel configuration
9 Jul 1962	Withdrawn
29 Apr 1963	Scrapped
George Thomas Molesworth Bridges was born at Eltham, Kent, England on 20 August 1871. He was educated at the Newton Abbot and Woolwich Military Academies in England. Fought in World War I where he was promoted to Major-General. He accepted appointment as the Governor of South Australia in 1922. Sir Tom Bridges returned to England in 1927, where he died at Brighton, Sussex on 26 November 1939.	
506 *Sir George Murray*	
25 Oct 1926	Entered service. Works No.640
-	Named *Sir George Murray*
16.7.1929	Fitted with booster to 4-8-4 wheel configuration
9 Jun 1959	Withdrawn
20 Jul 1962	Scrapped
George Murray was born at Magill, Adelaide on 27 September 1863. He took an Arts degree from Adelaide University in 1883. Murray studied law at Cambridge and returned to Adelaide in 1889. George Murray became Chief Justice of the Supreme Court in 1915, was knighted in 1917 and was Lieutenant-Governor from 1916 until 1942. A philatelist, art collector and close friend of W.A. Webb, Sir George Murray died in Adelaide on 18 February 1942.	
507 *Margaret Murray*	
12 Oct 1926	Entered service. Works No.641
-	Named *Margaret Murray*
4 Apr 1927	Locomotive Royal Train
17 Apr 1929	Fitted with booster to 4-8-4 wheel configuration
26 Mar 1958	Withdrawn
17 Sep 1962	Scrapped
Margaret Murray was not the wife of Sir George, as might be imagined, but his unmarried sister. Living at Murray Park, she fulfilled the role of the Lieutenant-Governor's companion at official functions. This was one of the few locomotives in the world named after a woman.	
508 *Sir Lancelot Stirling*	
14 Sep 1926	Entered service. Works No.642
-	Named *Sir Lancelot Stirling*
27 Dec 1929	Derailed whilst hauling 2nd division *Melbourne Express*, Callington
13 Nov 1936	Fitted with booster to 4-8-4 wheel configuration
9 Jul 1962	Withdrawn
26 Nov 1962	Scrapped
John Lancelot Stirling was born at Strathalbyn on 5 November 1849. He was educated at St Peter's College and Cambridge. He entered Parliament in 1881 and from 1891 he was Member for the Southern Districts in the Legislative Council and its President from 1901 - 1932. Sir Lancelot Stirling died at Strathalbyn on 24 May 1932.	
509 *W A Webb*	
24 Aug 1926	Entered service. Works No.639
-	Named *W A Webb*
18 Jul 1930	Fitted with booster to 4-8-4 wheel configuration
6 Jul 1961	Withdrawn
8 Oct 1962	Scrapped
William Alfred Webb was born on 16 May 1878 in Eaton, Ohio. He began his railway career at the age of twelve as a messenger. Over the next ten years he worked in a variety of clerical positions, becoming secretary to the President of the Colorado and Southern Railway. He then worked his way up to General Manager and then Assistant Vice-President in 1911. W A Webb was recruited for the position of Chief Commissioner of the South Australian Railways in 1922 to revitalise a railway system that had deteriorated through poor initial planning, lack of reserves, and ravages of the war effect. He introduced substantial change and by the time he returned to Dallas in 1930 the system had improved to a pre-eminent position in Australia. He died on 9 August 1938 at the age of 58.	

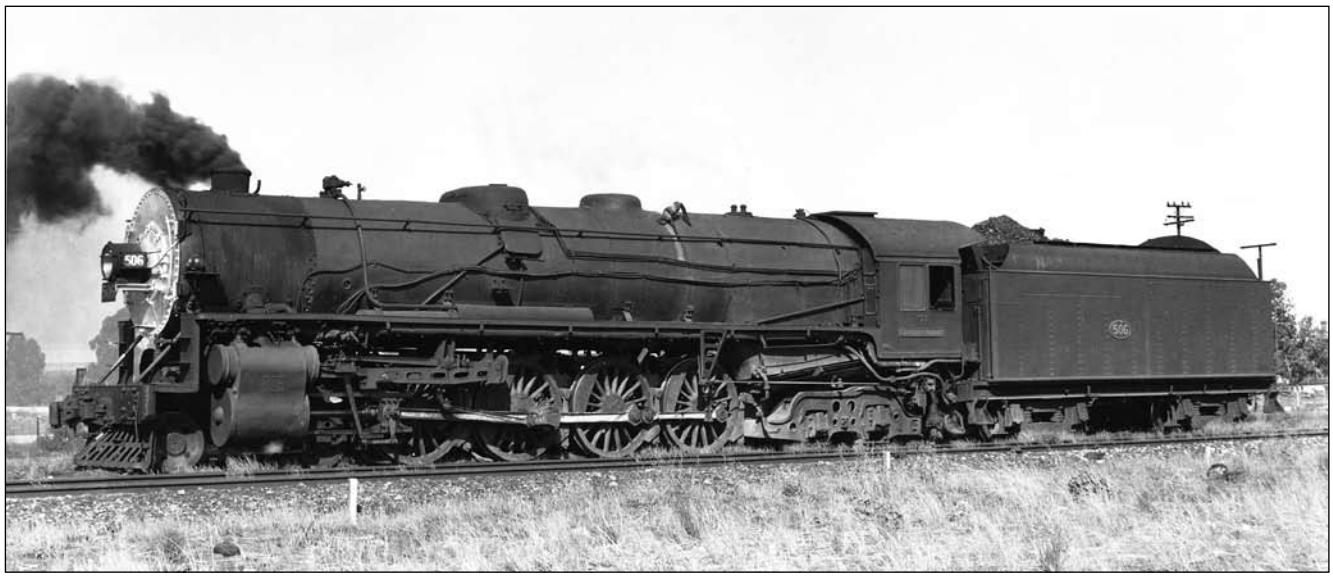
Above: Number 506 with extended coal deck but still carrying buffers, suggesting this photo was taken in the late 1930s. No water treatment plant on the tender and the turbo-generator is still high on the firebox side. Photo: National Railway Museum collection BU11608.
Below: 506 soon after its conversion to a 4-8-4. It still has its marine big end and the headlight has been relocated but is not yet to its final position. The steam pipe supplying the booster sits atop the running board. Photo: SAR, National Railway Museum collection BU06764.

Right: 506 again at about the same time. However, it has its final form of funnel which it had not received in the photo above. Photo: National Railway Museum collection BU08900.

Right: 506 again at about the same time, still with buffers but now sporting a new cross-compound air compressor. Photo: National Railway Museum collection BU19694.



Below: 506 in its final form. It appears to be a coal/oil burner in this June 1954 photo taken by Doug Colquhoun at Tailem Bend. 506 and 502 were never streamlined. Photo: Doug Colquhoun, National Railway Museum collection BU06115.



Above: No 503 before being streamlined in 1936. It has its final form of funnel and has become a 4-8-4. Photo: National Railway Museum collection BU12732.

Above: Oil fired 500 at Mile End on 21 February 1953. Photo: SAR, National Railway Museum collection BU08909.
Below: Number 501 in its final form, taken at Mile End on 28 November 1953 by Doug Colquhoun. It had been converted to coal/oil firing a couple of months earlier. Note the new position of the name plate *Sir Henry Barwell* on the centre of the running boards on each side. Prior to streamlining they had been on the cab sides. The turbo-generator is now on the front deck. Photo: Doug Colquhoun, National Railway Museum collection BU04908.

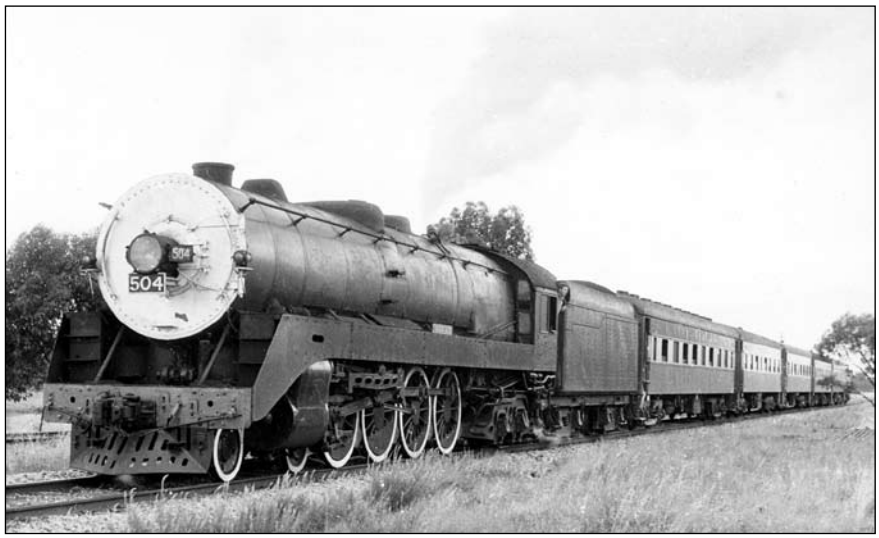
Above: 505 on a freight arriving at Victor Harbour. Photo: N.J. Thorpe collection.
Below: Coal/oil burner 504 at Mile End Loco. Photo: N.J. Thorpe collection.

Left: 504 on a downhill freight near Linton. The first few wagons look like they contain mallee roots. Mile End had a large firewood facility and many of the metropolitan stations with firewood sidings were supplied by local services from Mile End. Photo: N.J. Thorpe collection.

Left: 502 at Clapham in 1953 on a charter trip. The only concession to streamlining on 502 and 506 appears to be the cover over the sanding valves. Photo: National Railway Museum collection BU12682.

Below: No 501 after streamlining but before it became a 'Paleface' by having its smokebox front being painted silver, and before it had its buffers removed. Photo: National Railway Museum collection BU14525.

Above: Number 503 at Mile End locomotive depot in August 1959 alongside 525. Photo: Murray Billett, National Railway Museum collection BU04425.
Below: Number 502 at Mile End in December 1954 with 709 behind it. Photo: Doug Colquhoun, National Railway Museum collection BU03231.



Left: 504 on an ARHS special at Monteith on 15 October 1961. Note the pressed steel cowcatcher. Photo: John Buckland, National Railway Museum collection BU07761.

Left: Coal burner 509 at Tailem Bend, towards the end of its life. Photo: Peter Bartrop.

Below: 508 on train No.444 ex Pinnaroo at Tailem Bend. 508 features an extended smokebox and a pressed steel cowcatcher. The trailing vehicle, an RB type refrigerator car was normally detached at Murray Bridge; vehicles were not permitted to be trailed outside the brakevan through the Adelaide Hills section. Photo: Peter Bartrop.

Above: 508 has also got a pressed steel pilot/cowcatcher as it heads a freight out of town. Photo: National Railway Museum collection BU21038.
Below: 505 in February 1953. Photo: National Railway Museum collection BU08903.

Above: 504 looks a bit dirtier in this photo. Photo: National Railway Museum collection BU11010.
Below: Number 500 on an ARHS tour at Mount Barker on 17 March 1963. It has been repainted in the green and black livery. It now features a front end throttle on the rear of the smokebox. It is not known if any other 500s received this modification. Photo: National Railway Museum collection BU08902.