

# steamsounds Riding behind steam Bulleid's Pacifics

Shortly before World War II, Oliver Bulleid, the Southern Railway's Chief Mechanical Engineer, received approval to begin building a new express passenger locomotive. This design became the Southern Railway's Merchant navy Class Pacific and while other railways were concentrating on the production of motive power to aid the war effort, the first of these locomotives emerged from Eastleigh Works in 1941. The initial order was for 10 locomotives and the last of these entered service in 1942.

These locomotives were of a radical new design incorporating many features that had never been seen in the UK before. Prominent among these features was the valve gear which was chain driven, running in an enclosed oil bath; a design intended to reduce maintenance which wasn't entirely successful. Perhaps the most obvious design feature to the casual observer was the appearance with the boiler covered in what Bulleid described as an air-smoothed casing.

After the initial batch of 10, two further batches of 10 were produced, the last of these entering service with British Railways in 1949.

The Merchant Navy class proved to be heavy locomotives. Too heavy for some routes and Bulleid felt that a lighter version was required to give greater route availability however, during the war years, the railways were restricted in what they could build and a new express passenger locomotive would not have received approval! Bulleid overcame this problem by classifying his new design as a mixed traffic locomotive despite the fact that even a cursory examination would suggest that these were obviously intended primarily for fast passenger trains. The first batch of these lighter Pacifics was ordered in 1941 but production was delayed and the first locomotive emerged from Brighton Works in 1945. In design, although being lighter than a Merchant Navy, these locomotives had all the same radical features including the chain driven valve gear and air-smoothed casing, a feature which Bulleid explained wasn't streamlining but to enable the locomotives to be cleaned in a carriage washing facility thus helping to reduce post-war manpower requirements!

These locomotives, which due to their naming, became known as the West Country & Battle of Britain classes, continued to be built with the last entering service with British Railways as late as 1951. The class eventually numbered 110.

Although, in theory at least, the enclosed chain driven valve gear should have led to a reduction in maintenance, the opposite proved to be the case as the oil bath frequently leaked and the valve gear itself suffered from rapid wear often resulting in the locomotives having very uneven valve events at times.

In operation under BR these problems almost led to scrapping in the mid-50's but as they did have some very good features, the decision was taken to rebuild them with some of Bulleid's less successful features removed. This included the replacement of the chain driven valve gear with the more conventional Walschaerts gear and the removal of the casing.

Although the unrebuilt locomotives had proved themselves to be excellent performers when in good order, the rebuilt variety continued to provide good performance but required less maintenance and both the Merchant Navy and the West Country & Battle of Britain classes remained in service with BR until the end of steam on the Southern Region in 1967.

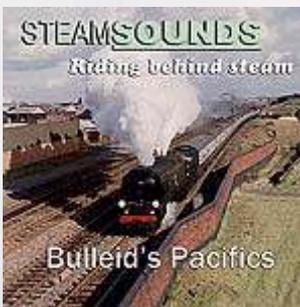
Both types were extremely popular with enthusiasts, particularly those who enjoyed high speed running, often producing speeds around 100 mph right up to the end.

After withdrawal no fewer than 30, 11 Merchant Navy and 19 West Country & Battle of Britain locomotives, have been preserved with a few examples seeing use on the main line.

Let's start this disk with an unrebuilt locomotive...

1. 34092 *City of Wells* has always been based on the Keighley and Worth Valley Railway and, from that location, was ideal for the loco to be part of the pool for the Scarborough Spa Express running from York in the 1980s.

While working these trains, 34092 showed what fine performances these locomotives could produce when well



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maintained and put in some good, often record breaking performances both on the flat and climbing hills.

One of the sections ideal for fast running was the first part of the 'evening circle', the run from York through Leeds to Harrogate and back to York, with the aim of reaching Leeds in under thirty minutes and on this July evening in 1985 one of the more enthusiastic York drivers had promised to do his best for us.

After leaving York things were going well and, given a clear road, an under 30 minute run was definitely on the cards. Sadly a clear run was just what we didn't get and adverse signals at Church Fenton put paid to any chance of a record.

So instead of sweeping through the station at speed we crawled through and began the ascent beyond at around 15 mph.

This recording starts as, once round the curve beyond Church Fenton station, our driver begins to see green signals and gets the loco back opened up again.

The gradient beyond Church Fenton, usually referred to as Leeds Bank, isn't particularly steep, 1 in 133 at the steepest, but it is still steep enough to require some hard work from the locomotive so, with a driver still determined to do his best for us, that is exactly how 34092 was worked and, by the time this recording ends near Micklefield (where more adverse signals were encountered) we had accelerated to a little over 50 mph.

What a fine performance!

2. As well as working Scarborough Spa Expresses, 34092 was also a regular performer over the Settle to Carlisle line, a route quite unlike anything that it would have encountered down on the Southern Region.

During a run northbound over the route in April 1984 we were unlucky to suffer a signal check approaching Settle Jc. at the start of the climb to Blea Moor which, although it did not cause a stop, brought the speed down to around 20 mph before the signal cleared and then, with 12 coaches behind the tender, *City of Wells* could begin to accelerate on the 1 in 100 gradient beyond.

This recording is of the complete climb which, despite the handicapped start, provided some excellent noise and performance.

Thanks to a short section of easier gradient before Settle speed recovered to 35 mph by the time the station was passed then, on the 1 in 100 gradient beyond speed fell back to 30 mph before recovering to 37 mph on the level at Helwith Bridge. From there to near Ribbleshead where the loco was eased for the restriction over the viaduct we recorded a minimum of 32 mph. Once over the viaduct and back on the 1 in 100 gradient 30 mph was maintained until we enter Blea Moor Tunnel. An excellent performance with a heavy train.

3. Time to hear a Merchant Navy...

In May 1989 35028 *Clan Line* worked a train from Carnforth to Crewe via Manchester and Chester. This was a positioning train to get the locomotive to Crewe ready to take part in that Summer's programme of trains along the North Wales Coast.

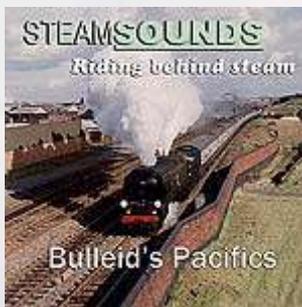
One of the best sections for performance was the climb of Whalley Bank where, from a minimum of less than 20 mph crossing the speed restricted Whalley Viaduct the Pacific was able to accelerate the 13 coach train to almost 35 mph before reaching the top of the gradient at Wilpshire making some fine sounds in the process.

4. Like *Clan Line*, the West Country Pacific 34027 *Taw Valley*, which unlike classmate *City of Wells* is a rebuilt locomotive, has also worked trains from Crewe to Holyhead.

The route along the North Wales Coast is fairly flat aside from a couple of sections, one of which is the 1 in 100 climb to Pemaenhos Tunnel during the return journey to Crewe. Although this climb is only short, for trains stopping at Colwyn Bay, it still requires some work from the locomotive and as this recording begins, *Taw Valley* is just departing with a driver who seems to want to take a run at the bank. The recording ends on falling gradients beyond the summit of the climb at Lysfaen.

5. Steam haulage on Southern Region had been tried in the mid-1970's but concerns over trespass on the third rail electrified lines had soon put a stop to that and the SR had become something of a no-go area.

However, the very enthusiastic Salisbury Area Manager, Gerald Daniels, saw no reason why steam hauled trains should not be run west of Salisbury where there was no electrification and, after a successful steam event



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earlier in the year at Andover, planned on 3 weekends in October 1986 to run steam hauled trains from Salisbury to Yeovil Jc. twice each day. These trains proved so popular that a fourth weekend had to be added. Appropriately, one of the locomotives to work these trains was 35028 *Clan Line* and on the Saturday morning of the second weekend, in this recording, we hear the Merchant Navy departing from Templecombe after a photo stop.

Over the coming years the Salisbury crews who worked these trains were to prove most enthusiastic and on this occasion our driver produces some fine sounds from this normally quiet locomotive climbing the 1 in 100 gradient towards Milborne Port.

6. In due course the steam ban on the former Southern Region was lifted and nowadays much of the steam activity in the South of England takes place south of the Thames.

I made a visit down south in February 1998 for a ride behind 34027 *Taw Valley* working a train from London Victoria to Salisbury and back out via Redhill, Horsham and the coast, returning via Basingstoke.

When the stock arrived at Victoria I walked up towards the front to find that our seats were in the third coach so I thought I would try to find a window to record from further forward.

At the back of the front coach was an acquaintance of mine who told me that he could have had a window in the front vestibule but as the roof tank was leaking and he didn't have his wellies and broly he had decided to give it a miss - no dedication some people!

Well, I wasn't put off by an occasional drip and found myself in a prime spot to record from on the correct side for the wind and right behind the tender as the support coach was attached at the rear of the train.

What with being banked out of Victoria by a diesel and a few signal checks there wasn't much to record in the early stages of the run until after our first booked stop at East Croydon.

This is how *Taw Valley* sounded departing and, soon after, a Brighton bound EMU overtakes on the fast line. On the 1 in 264 gradient 34027 makes some fine sounds. The gradient which continues for the next 7 miles to Mertsam Tunnel where this recording ends.

7. During July 1988 Salisbury Area Manager Gerald Daniels, after previous successful and highly popular similar events, arranged for another three weekends of steam operation based on Salisbury, the intention being to celebrate the 21<sup>st</sup> Anniversary of the end of steam on the Southern Region. Although it hasn't proved to be the case, it was also thought at the time that these trains could well be the last to be steam hauled between Salisbury and Yeovil since, due to restructuring, the Salisbury area management was being disbanded ending Gerald Daniels work there; a pity as he had done much to promote rail travel in his area, and not just through running steam hauled trains. One of the locomotives for these trains was 34092.

I didn't manage to get down to Salisbury until the final weekend and, in view of what transpired, I'm certainly glad that I did!

After an excellent run from Salisbury with *City of Wells* on the Saturday, we arrived at Templecombe where we had a photo run past before departing for Yeovil Jc.

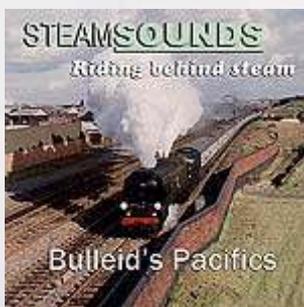
Gerald Daniels had arranged for an inspection saloon hauled by a Class 33 diesel to proceed the train to this point and by virtue of the fact that from Templecombe to Yeovil the line was double track and the up line signalled for reversible running, this saloon, filled with video and film cameramen, was going run in the down direction on the up line to Yeovil and pace our train.

This recording starts as we depart from Templecombe and you can hear the diesel begin to accelerate as 34092 reaches the double track section just beyond the station.

The driver on the Class 33 had been told that a speed of no more than 25 mph on the 1 in 100 gradient would probably be sufficient to keep ahead of 34092 but he reckoned without our driver who decided to turn this into a race.

At the top of the 1 in 100 gradient about 2 miles from the start 34092 had reached 30 mph and on the easier gradients beyond speed soon passed a mile a minute.

As you might expect, a Class 33 on 1 coach had no difficulty keeping ahead of us but beyond Milborne Port where



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the gradient begins to fall towards Sherborne the driver of the diesel was instructed to slow down and allow us to overtake; you can hear it pass just before this recording ends. Having allowed the entire train to pass the driver on the Class 33 found that it was no easy matter to catch up again. He had to use full power on the falling gradient and it was only after we had passed through Sherborne station travelling at only 6 or 7 mph slower than the maximum permitted for a Class 33 diesel that he was able to overtake us!

The Southern Region Training Centre Film Unit produced a video of this run and if you can get hold of a copy after all these years it makes most entertaining viewing. Fear not, I do not appear in it.

8. If we had though that the run outward to Yeovil Jc. recorded above was exciting, the return to Salisbury produced even more high speed running, I might even say, unprecedentedly high speed running at a time when the theoretical maximum for steam on the main line was still 60 mph. So, on the following morning, we arrived at Salisbury station wondering what we were in for.

After a rather interesting run to Yeovil and back in the morning behind the other loco there for the event, 8F 48151, a loco I might add permitted to travel at no more than 50 mph - in theory at least.

For the afternoon run we had 34092 once again with a Salisbury driver who, due to the management changes mentioned above must have thought that this was going to be his last chance with steam on the route and wasn't going to miss the opportunity to make the most of it.

The initial climb from Salisbury was completed in excellent style and once over the summit at Semley it soon became apparent that we were going to be treated to some more high speed running.

A little later, I found our passage through the loop at Gillingham was quite exciting at 65 mph and once I had regained my balance I recall thinking that, perhaps I should record this next bit. I'm glad I did for, while it is far from technically perfect, it proved to be one of those recordings that I thought I would probably never make.

Once clear of the loop our driver works 34092 up to 70 mph before the line begins to rise at 1 in 100 to Buckhorn Weston Tunnel. Speed only falls by 5 mph before we enter the tunnel where the gradient changes to 1 in 100 down.

Through the tunnel and on the subsequent 2 miles of falling gradients the regulator remains open and speed rises rapidly before the regulator is closed and the brakes have to be applied for the stop at Templecombe.

Throughout all this, obviously other than knowing that we were travelling extremely quickly, I had no idea of the actual speed achieved as I had been concentrating on getting as good a recording as possible in quite difficult circumstances but I do recall that, once the regulator had closed I turned my recorder off, microphone hand shaking slightly, and turned to one of the locomotive's support crew who had been calmly packing away sales items in the brake behind me while all this was going on. He said something to the effect that; "We seemed to be going quite fast just then!" Fast indeed, the maximum speed recorded was no less than ?? mph. (Buy the CD to find out!)

