



On the Settle to Carlisle line

The Settle to Carlisle line runs through 72 miles of some of the finest scenery in the British Isles as it climbs to a height of some 1169 feet above sea level at Ais Gill, the summit of the line.

Opened in 1876 the line was intended to give the Midland Railway its own direct route to Scotland avoiding running over the lines of the rival London & North Western Railway.

Built as a high speed main line it is generally regarded as a remarkable feat of railway engineering having to traverse some very difficult terrain. The fact that between Settle Jc. and Carlisle there are no less than 21 viaducts and 14 tunnels tells it's own tale.

By the 1980s the line had become nothing more than a secondary passenger route with freight traffic diverted elsewhere and all but two of the stations on the line closed. Closure was obviously the aim and in 1983 the closure notice was published for the entire route from Settle Jc. to Petheril Bridge Jc. just outside Carlisle.

The campaign to save the line continued until in 1989 the Government eventually came to the correct decision to keep the line open.

It is interesting to note that now the line is busier than ever. The stations closed in 1970 have reopened and freight traffic has returned. Indeed, so busy is the route that additional signalling is about to be installed to increase the capacity of the line.

Let's start our journey from the south end of the line.

1. Once steam hauled trains began running over the Settle to Carlisle line again in the late 1970s enthusiasts soon began to appreciate the possibilities for locomotive performance over the route. In the northbound direction interest centred on performance over the 15 mile climb from Settle Jc. to Blea Moor Tunnel, mostly at 1 in 100. This climb was often referred to as the Long Drag.

The first real clue we would get as to the likelihood of a fast climb was how our driver approached the start of the climb at Settle Jc.

On the 13th October 1984 the LNER A4 Pacific 4498 *Sir Nigel Gresley* was motive power for the 13 coach Cumbrian Mountain Express with Leeds driver Jim Melia in charge. Jim, as enthusiastic as we were, had been responsible for some excellent runs in the past and as you can hear in this recording, judging by the way he is driving the A4 passing Settle Jc. this run will not be an exception.

As things later turned out, a good climb to Blea Moor wasn't a possibility when we ran into that recurrent Autumn problem; fallen leaves. Beyond Settle rail conditions were so bad that despite Jim's efforts we slipped to a stand and required diesel assistance to continue. Jim was not best pleased!

2. In the late 1980s, when the line was still under threat of closure, railtour operators were keen to take advantage of the situation by running lots of steam hauled tours over the line. Among these was a series of mid-week dining trains, The Pennine Limited, operated by Flying Scotsman Services.

The train on 13th July 1988 was hauled by LMS Black 5 4-6-0 5305 which was on its way to Fort William to work trains on the West Highland line through the rest of the summer. I wouldn't normally have even considered travelling on a dining train as they tend to be far too expensive and the need to sit down for meals does rather interfere with sound recording activities but on this occasion I had been invited for a ride in the locomotive's support coach.

With closure a possibility, maintenance of the line had been minimal and 'temporary' speed restrictions had appeared in many places.

A speed restriction close to Settle station had denied 5305's driver the chance to 'take a run at the bank' so as this recording begins we are well into the 1 in 100 climb, not far from Stainforth approaching Taitlands Tunnel, the first of those 14 and 5305 is maintaining around 30 mph. Nothing wrong with that with 400 tons on the drawbar.

3. The 1 in 100 gradient from Settle Jc. to Blea Moor is not quite continuous being interrupted briefly by slightly easier gradients at a small number of points. For the most part these easings of the gradient give almost no respite for the loco or footplate crew but there is one short section of level track for about a $\frac{1}{4}$ mile at Helwith Bridge which allows trains to regain a little speed.

As this recording begins 5305 is travelling over this level section and accelerating well. Our driver decides to work the engine a little harder but on this damp July day, rail conditions are not good enough, the loco slips and the driver has to ease the engine. The fireman must be well up to his task as the safety valves lift immediately the regulator is closed.

Soon the 1 in 100 gradient resumes and speed settles down again.

4. One of the main reasons given for the need to close the line, aside from the rundown in traffic, was the state of Batty Moss Viaduct which, of course, is more usually referred to as Ribbleshead Viaduct. British Rail felt that the cost of repairing and maintaining this structure couldn't be justified. A speed restriction was placed over the viaduct in the early 80s and in 1984 the line over the viaduct was singled and slewed to the centre of the trackbed.

While this meant that it was no longer possible to pass over the viaduct a full speed; at least it gave passengers longer to appreciate the excellent views!

We now hear 5305 still on the 1 in 100 gradient approaching Ribbleshead station. Our Black 5 has done well maintaining around 35 mph on the climb but now the regulator is eased ready for the 20 mph speed restriction over the viaduct.

5. In 'real' steam days William Stanier's Black 5s would have been regular performers on the route working both passenger and freight trains but another of his designs would have been far more rare.



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- On 23rd March 1985 the ex LMS Coronation Pacific 46229 *Duchess of Hamilton* was motive power for the Thames - Tyne Express which after reaching Carlisle, continued across country to Newcastle.
- Even with trains weighing 500 tons or more 46229 had proved itself more than capable of maintaining 50 mph or more on the climb to Blea Moor and on this occasion, despite a signal check at Settle Jc. had managed to exceed 50 mph for most of the climb until adverse signals at Ribbleshead had brought the train to a stand.
- In this recording, with a clear road and having crossed Ribbleshead Viaduct 46229 is heard accelerating past the isolated Blea Moor signal box and climbing the last of the 1 in 100 gradient into Blea Moor Tunnel
6. Among the route's many claims to fame is Dent station which at 1150 feet above sea level is the highest main line station in England although it does have one major drawback. Should you wish to alight at Dent station with the intention of visiting Dent village you should be aware that the two are some 4 miles apart and you will have over 600 feet to climb on your return, 400 of which are in the final $\frac{1}{2}$ mile to the station!
- Despite Dent station's inconvenient situation it is in a remarkably scenic spot with extensive views back down the line towards Blea Moor Tunnel and over Dentdale to the west. For this reason steam hauled trains occasionally made photo stops here and in this recording made on 5th July 1984 the ex LMS Black 5 4-6-0 44767 is heard departing with the northbound Cumbrian Mountain Express.
7. A more regular stopping place was at the next station; Garsdale.
- After the long climbs from Settle Jc. or Appleby locomotives often need to take water and, as there was usually a good supply (when it didn't freeze!), Garsdale was a convenient place.
- In days gone by a stop here would not have been required as just a short distance to the south on a level section of the track were Garsdale water troughs where steam locomotives could take water on the move.
- Another class of locomotive to have been regularly seen on the route were the British Railways Standard Class 9F 2-10-0s. These powerful engines were often employed on freight trains on the line.
- On 21st April 1984 the northbound Cumbrian Mountain Express was hauled by 92220 *Evening Star*, the very last steam locomotive built by BR.
- Although these locos were only rarely employed on passenger trains in steam days, when they were, they could certainly show a good turn of speed. Witness the acceleration as *Evening Star* departs from Garsdale and starts on the final climb.
8. For many years after the return to steam on the main line in the early 70s British Rail refused to allow steam hauled trains over the Settle to Carlisle line until, in 1978 they relented. That first northbound train was hauled by the LNER V2 2-6-2 4771 *Green Arrow* and, if my memory serves, the train was run in dreadful weather, not a rare occurrence on the line.
- I wasn't on the train that day but the V2 has been a regular and excellent performer on the route over the years and I have travelled behind it many times including a very good northbound run on 8th September 1990.
- Ais Gill at 1169 feet above sea level is the highest main line summit in England and in this recording you can hear 4771 climbing the final yards in fine style.
- From Ais Gill to Carlisle it is almost all downhill so let's head for that Border city and begin the journey south.
9. The Settle to Carlisle line, although built as a high speed passenger route was always very important for freight and one class of engine would have dominated that traffic right up to the end of steam on the line. That class was the LMS Class 8F 2-8-0 and since steam returned to the Settle to Carlisle line two examples have worked trains over the line, indeed one has even worked a freight train!
- Like the 9Fs mentioned previously, 8Fs were only very rarely seen on passenger trains, usually only in emergencies but when given passenger trains to haul they cope well.
- On 20th May 1989 8F 48151 hauled a charter train which started in Manchester both ways over the Settle to Carlisle line and in this recording is heard departing from Carlisle at the start of the return journey.
- On the footplate was Skipton driver Edwin Altham. We knew Edwin well as a driver who could always be counted on to do his best for us and what's more he was a real gentleman. This day was Edwin's final day before he retired; talk about going out in style!
10. Steam hauled trains heading south from Carlisle usually managed to get a non-stop run to Appleby. But not always.
- On 22nd October 1988 the ex Southern Railway Unrebuilt Bullied Pacific 34092 *City of Wells* worked its final main line railtour before it's 7 year boiler certificate expired.
- The train was organised by a Lancashire newspaper and ran both ways between Hellifield and Carlisle.
- Being well into leaf fall season we had problems with slipping during the outward journey and had actually slipped to a stand requiring diesel assistance to restart.
- In view of what had happened on the outward journey our departure from Carlisle on the return was a little late and, after a little slipping near Scotby, we seemed to be in for a fast run to Appleby with 34092 in the hands of Carlisle driver Tommy Hayton.
- Going so well we were disappointed to be stopped at Culgaith signal box merely to be informed of the arrangements for watering the loco at Appleby!
- Still, the sound of the loco accelerating after this check was some compensation.
11. The main interest from the point of view of loco performance travelling southbound is the climb from Appleby to Ais Gill.
- While this climb has long sections at 1 in 100 and is of about the same length as the northbound one to Blea Moor Tunnel it is not quite as difficult as there are a number of sections where the gradient eases particularly around Crosby Garrett and Mallerstang. Nevertheless, no one would claim that it is easy for either locos or crews, indeed on more than one occasion we have seen struggles of epic proportion!
- I have already touched upon the fallen leaves causing adhesion difficulties and the Autumn of 1983 was not immune from this particular problem however, on 8th October 1983, it wasn't as simple as that.
- Our loco for the southbound Thames - Eden Pullman that day was the LNER A3 Pacific 4472 *Flying Scotsman* and the slippery rail was compounded by appalling weather conditions with rain carried on a gale force westerly wind.
- As you can hear in this recording made as 4472 departs from Appleby, the loco struggles with adhesion even on the slightly rising gradient



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away from the station. What will conditions on the climbs be like?

12. Although our driver did his best to gain as much speed as possible on the falling gradient onto Ormeside Viaduct, once onto the first section of 1 in 100 beyond, Flying Scotsman was soon in trouble and, just short of the easier gradients at Griseburn we slipped to a stand.

Although the sanders on the loco were working, the strong wind was blowing the sand off the rail head before it could do any good. The only way we could get away from this spot, without sending for diesel assistance, was to resort to hand sanding the track ahead.

In this recording, as the loco gets on the move again on the sanded track the driver whistles a warning to the crew members who had sanded the track ahead and still on the ground to get back on board.

Although the sand helps a little the loco is soon slipping again. Wind and rain roar around the train as the loco struggles to accelerate on the easier gradients beyond Griseburn.

13. Despite having recovered some speed on the easier gradients to Crosby Garrett problems soon resumed once back on the 1 in 100 gradient and the struggle continued through Kirkby Stephen and Birkett Tunnel.

The easier gradients at Mallerstang gave a little respite but conditions on the last part of the climb to Ais Gill were, if anything, getting worse and 4472 slipped and struggled on the final gradient to the summit with this heavy train.

Heard in this recording, with speed down to around 5 mph Flying Scotsman reaches Ais Gill summit.

As the summit is passed the driver sounds a triumphant whistle. And well he might, many would have given up and awaited diesel assistance.

The complete climb from Appleby to Ais Gill took an unbelievable 110 mins., not the kind of record run anyone wanted!

14. Thankfully, reaching Ais Gill wasn't always like that.

On 20th July 1985 the LMS Jubilee 4-6-0 5690 *Leander* worked the Thames - Clyde Express which was to be steam hauled from Kilmarnock via the Glasgow & South Western route to Carlisle the over the Settle to Carlisle line to Hellifield.

As far as Appleby everything went well but we had been booked to follow the last service train of the day south from Carlisle and the DMU working that train picked that particular day to fail between Kirkby Stephen and Blea Moor. This caused us considerable delay at Appleby. Fortunately the SLOA stewards kept passengers supplied with information while the nearby Midland Hotel supplied the beer so our long wait to leave wasn't too unpleasant!

Our climb to Ais Gill was further interrupted at Kirkby Stephen where we had a signal check as the ailing DMU had not yet cleared Blea Moor.

Rather later than anticipated *Leander* passes Ais Gill summit at a little over 30 mph with this 9 coach train.

By the time we reached Hellifield where we were to leave the train and catch a connecting service to West Yorkshire we had missed the last train. Not to worry, a DMU was sent ECS from Skipton specially for just 6 passengers. Those were the days!

The last two tracks on this CD are of two complete runs over climbs from Settle Jc. to Blea Moor and from Appleby to Ais Gill, two remarkable runs and both with the same driver.

15. The ex LNER A4 Pacific 60009 *Union of South Africa* visited England during March and April 1984 and had provided us with some excellent runs.

60009 was booked to begin its return to Scotland at the head of a northbound Cumbrian Mountain Express on 28th April 1984.

Originally this was to have started with steam haulage from Leeds right through to Howe's Sidings not far from Carlisle but, thanks to the miners strike, the engine was stationed at Carnforth where they had coal rather than York where they didn't so this was changed to a Hellifield start.

Then, in view of problems during a previous run over the route during a prolonged spell of dry weather with lineside fires between Carlisle and Appleby the decision was taken that we would only have steam haulage as far as Appleby to reduce the risk of any more damage thus cutting the steam mileage from over 100 to just 46. Disappointing for the passengers certainly, but it was felt by the powers that be that this was preferable to cancelling the train entirely. Little did they know what they were letting themselves in for!

When we joined the train at Leeds to be diesel hauled to Hellifield we were handed a note which, after explaining the reasons behind the curtailed mileage, went on to tell us that, in view of the very high risk of lineside fire we should understand that the loco would have to be worked particularly easily.

Waiting for us at Hellifield along with No. 9, once again, was Skipton driver Edwin Altham with John Brown as his fireman. Edwin had already given us an excellent northbound run earlier in the month. What a pity, or so it seemed, he wasn't going to be allowed to do the same again! Leaving Hellifield we were soon stopped at a red signal while Settle Jc. cleared the road.

This recording begins as after a short pause the signal cleared to green and we soon began to realise that perhaps no one had given Edwin the instruction to work the engine easily or if they had, then his idea of 'easily' wasn't quite what the authorities had in mind!

On the falling gradients to Settle Jc. Edwin managed to work the engine up to 68 mph before starting on the 1 in 100 gradient beyond.

Through Settle station we were still doing 59 mph and speed fell to just 52 mph before the level section at Helwith Bridge.

Here we accelerated to 58 mph and from there until the engine was eased approaching Ribbleshead for the restriction over the viaduct speed was never less than 52 mph. A tremendous performance with 12 coaches weighing 450 tons behind the tender.

Once clear of the restriction Edwin soon had No. 9 accelerating again and our time from Settle Jc. to passing Blea Moor signal box was just 16 minutes 10 seconds, almost a minute faster than the earlier record run with the same loco and driver and this time with a heavier train!

However, this performance had a cost. The fears about fire risk were not without foundation and I well remember as we crossed Ribbleshead Viaduct looking back down the Ribble Valley where there was little to see apart from smoke from lineside fires as far as the eye could see!

Although there was almost no damage outside railway property the damage to signalling cables and equipment took almost 2 weeks to fix. Edwin wasn't very popular with his bosses for a while and, in view of the ensuing complete ban on main line steam which lasted until the end of



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May a few enthusiasts thought that although the performance had been magnificent, under the circumstances it seemed most irresponsible to say the least. Sadly, Edwin is no longer with us to put his side of the story so I will quote from a letter that I received from him soon after:

'You will no doubt be aware of the many fires that developed by our passing between Hellifield and Blea Moor. No instruction had been relayed to me regarding the fire risk in view of the disastrous fires in the Baron Wood region the previous Tuesday on the up line steam special. The assumption was that the grass had begun to grow and there was very little chance of lineside fires. Unfortunately we had been coaled with very fine dusty slack coal which hardly managed to reach the firebed before being exhausted through into the atmosphere and the resulting sparks fell onto the bankings that had not been controlled burned for three years. Our Area Manager requested a report from me in relation to the lineside fires.'

He then went on to add:

'The old signalboxes at Settle and Horton which have not been in use for some time now will no longer be operative because of the fire damage to cables and installation. Many sections of the telephone and bell communication between Settle Jc. and Blea Moor have had to be renewed, but I am hoping that it will not prejudice future running of steam specials. I understand S.L.O.A. are responsible for fire insurance. The Baron Wood fire was estimated to cost £200,000. I do not know what will be the cost of our little day out!'

While no-one, including Edwin himself would deny that he liked to work locos hard, it would be wrong to suggest that he would have worked the loco as hard as he did had he felt that there was a significant risk involved. He was firstly and foremostly a railwayman and a good engineman as well as being a true gentleman. We had many more excellent runs with him as driver in the next few years before he took early retirement in 1989.

16. One of the first runs during which we became aware of Edwin's enthusiasm was on the southbound Thames - Eden Limited which was steam hauled between Carlisle and Leeds on 23rd April 1983 with the ex LMS Coronation Pacific 46229 *Duchess of Hamilton* as motive power for this 12 coach train.

Running from Carlisle to Appleby was well up to the standard that we had come to expect from 46229 and on arrival, after performing a few runs past, the train set back into the North Eastern sidings so that the loco could take water and to allow a service train to pass.

Shortly after the service train had cleared our train returned into the station and once all the passengers had got back on board the guard blew his whistle - and nothing happened! After three attempts Edwin finally acknowledged the guard and we departed for the climb to Ais Gill.

Soon after the start we realised that we were recording what obviously was intended to be a record climb to Ais Gill.

After a maximum of exactly 60 mph across Ormeside Viaduct speed fell to just 55½ mph which was maintained on the 1 in 100 gradient to Griseburn. On the easier gradients to Crosby Garrett speed rose once more to a maximum of 62 mph and on the climb beyond everything was going well and a record run seemed assured. Alas, it was not to be as, approaching Kirkby Stephen the distant signal was seen to be on. The service train which overtook us at Appleby hadn't yet cleared Blea Moor and we now knew why Edwin had been in no hurry to leave Appleby.

I can still recall quite clearly the great sense of disappointment as the regulator was closed and the record run that we were recording was dashed from our stopwatches!

As we crawled through Kirkby Stephen with the home signal still at danger it seemed that a stop was inevitable but just at the last minute the signal cleared.

After a heart stopping slip Edwin treated us to a demonstration of the sheer power of the Duchess.

From 5 mph at Kirkby Stephen we accelerated to 40 mph after Birkett Tunnel, just before the gradient eases at Mallerstang. Speed rose to slightly over 50 mph before the 1 in 100 gradient resumed and remarkably, continued to rise to an absolutely amazing 54½ mph at Ais Gill summit. A remarkable performance with almost 500 tons behind the tender.

Despite the check at Kirkby Stephen then entire climb had occupied no more than 26 minutes and 50 seconds!

From another of Edwin's letters, commenting on the run he said:

'The bad slip at Kirkby Stephen gave me a nasty moment getting the reverser into mid gear in order to shut the regulator.'

I regret on that run that I did not waste more time at Appleby to give the 15.35 Carlisle Leeds more time to clear Blea Moor but as I had ignored the guard giving me the right away three times and also remarks from another quarter I hoped that I may have had a clear run.'

Well, while it would have been interesting to see what sort of time we would have recorded from Appleby to passing Ais Gill, this run certainly gave Edwin the chance to produce one of the highest power outputs we ever recorded on the line. And the noise wasn't bad either!

Sadly Edwin is no longer with us but many will never forget him thanks to the runs like these he gave us over the Settle to Carlisle line.

