

The Kildwick Rail Crash of 1875

Part 2 – Inquests, inquiries and reports

Introduction

This is Part 2 of an investigation by Farnhill and Kildwick Local History Group into the Kildwick rail crash of August 28th 1875. In this crash, 7 passengers died and around 50 others were injured, when an express mail train ran into the back of an excursion train that had been pulled up because of a faulty rear light.

In Part 1, we looked at the accident and its immediate aftermath. In this part, we will look at the various inquests, inquiries and reports that followed the crash. These, along with various newspaper reports, are considered in chronological order. We consider a range of factors that could have contributed to the crash such as human error, signalling systems, weather conditions, train speed and stopping distances. There is conflicting evidence, denials, and lots of finger-pointing. It all ends with a manslaughter charge, and a remarkable trial, which we will describe in Part 3.

Coroner's inquest, Kildwick – 30th August 1875

The coroner's inquest on the five people who died at the scene of the crash was opened, at the Junction Hotel, on the morning of Monday 30th August¹. After the swearing-in of a jury, identification evidence and a brief viewing of the bodies, lying in an upstairs room, by the foreman, the inquest was adjourned until Tuesday 7th September (see later).

The death of William Muckel the following day, bringing the death-toll to six, caused the inquest to be reopened briefly for the necessary identification evidence to be recorded.

Board of Trade inquiry – 2nd September 1875

A note on signalling

The Board of Trade inquiry reports can only be understood if we first spend a little time looking at how rail traffic was controlled on the Kildwick to Skipton stretch in 1875.

The first thing to note is that between Leeds and Keighley the Midland Railway Company used the signalling system that is still in use on most railways today. This is the "block system". In essence, sections of track, are treated as "blocks". Signals are used to ensure that no train enters a block if another train is within it. This has the effect of keeping trains a minimum distance apart.

From Keighley onwards, however, although plans to institute the block system were well advanced and some of the necessary equipment had been purchased, the less-reliable "timed interval" system was still in use. Signals were used to advise drivers when there was traffic on the line ahead of them and to keep trains at least 5 minutes apart.

Semaphore-arm signals were used and, at night, the signals were lit:

- **White** – All Clear.
- **Green** – Danger, proceed with caution – be prepared to stop, there is a train less than 5 minutes ahead.
- **Red** – Dead stop.

The opening of the inquiry

The Board of Trade inquiry, chaired by Captain Tyler, the Government inspector, took place on Thursday 2nd September¹.

The morning was taken up with an examination of the scene of the accident and of the signals and signal-boxes between Skipton and Kildwick. The subsequent report published by the inquiry² included the following diagram of the approach to Kildwick station.

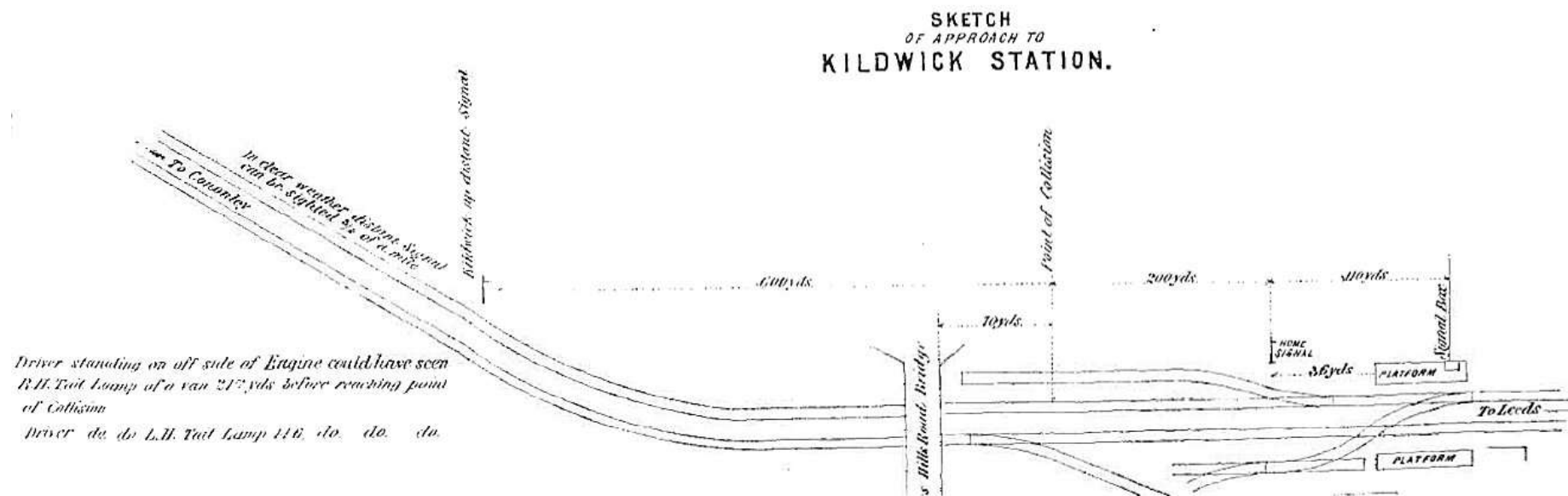


Fig 1: A map of the approach to Kildwick station.

In the afternoon, proceedings were moved to Leeds where sworn statements were taken from many of the railway staff who were on the two trains, those employed along the route, and other officials of the Midland Railway Company. The key submissions are summarised below.

Harrison Palfreeman – driver of the mail train

He had been an engine driver for the Midland for over 10 years and, prior to that, a fireman for 6 years. He had worked on the Airedale line for the full 16 years of his employment.

The mail train drew out of Skipton 10 minutes behind schedule.

Having left Skipton, the distance and home signals at Robinson's sidings (between Skipton and Cononley) were set to All Clear; he passed the signal box travelling at 15 to 20 mph. Both the Cononley home and distance signals were also showing All Clear, and he passed the Cononley signal box at about 40 mph.

The next signal was the Kildwick distance signal. He did not see this signal until he was about 100 yards from it. He did not see it sooner because it was awkward to see, except at a certain place. Unless he caught it at a particular point, he could not see it until he got quite close – the view was obstructed by trees. The night was also hazy, with drizzle.

The Kildwick distance signal was set to Danger/Caution – be prepared to stop. He shut off the steam and told the fireman (William Dobson) to apply the brake. He whistled the guard in the brake van (William Wiggins) to apply his brake.

The train passed the Kildwick distance signal at 30 to 40 mph and slowed to an ordinary speed, so as to be able to stop at the Kildwick home signal. He was keeping a look-out for anything on the track ahead.

He then caught sight of a brake light ahead of him (the right-hand lamp of the excursion train, visible from a maximum of 217 yards – see Fig 1). He told the fireman to apply maximum brake, reversed the engine and applied the water brake. He also whistled the brake van to apply maximum brake.

At the point of collision he estimated the speed of the train to be 10 to 15 mph.

He was asked to comment on the entry in the rule book for drivers:

When an engineman finds a distance signal exhibiting the danger signal he must immediately turn off steam and reduce the speed of his train, so as to be able to stop at the distance signal, but if he sees that the way is clear he must proceed within the distance signal, having such control of his train as to be able to stop it at any moment ...

He responded by saying that, in practice, drivers seeing a danger signal reduced speed but did not routinely stop at the distance signal, but continued on.

He concluded by saying that beyond the distance signal he saw nothing in the way up to the bridge. He did not know that the excursion train had left Skipton station before the mail train.

William Dobson – fireman on the mail train

Palfreeman's account was confirmed by William Dobson, fireman on the mail train, who said that both the Cononley distance and home signals were set to All Clear and that he did not see the Kildwick distance signal – set at Danger/Caution – until they were less than 100 yards from it.

He thought they ran past the distance signal at around 30 mph. He did not think they were wrong in running quickly past the Kildwick distance signal, as all signals up to that point had been set to All Clear.

William James Wiggins – head guard on the mail train (in the brake van)

He clearly saw the Cononley home signal showing All Clear. He did not see the Kildwick distance signal until he was hard up against it.

He did not think that the driver was going too fast within the distance signal. They were running nicely towards the station, with a very light train.

He thought they passed the Kildwick distance signal at 8 to 10 mph and were travelling at 6 mph at the time of the collision.

He heard the driver whistle for the brakes when they were a short distance from the bridge.

Thomas Breward – signalman at Skipton North

The mail train was stopped at his cabin until the excursion had left Skipton station. He thought that the excursion would have been clearly visible from the mail train, being stood at the platform just 70 yards ahead.

He said that he talked to the fireman of the mail train (William Dobson) and told him that they were being held up by the excursion. Palfreeman (the driver) asked him whether the excursion would shunt into one of the sidings to let him pass. Breward enquired and then reported back that the excursion would move out of Skipton station shortly.

He assumed that Palfreeman would have a schedule of excursion trains.

Palfreeman interrupted to say that he had no such programme. This was confirmed by the superintendent Mr. Adams, who said that he would not expect drivers to have such a schedule.

Jonathan Baldwin – signalman at Cononley

As the excursion train passed, he noticed that the tail light was out (signalmen at boxes prior to this point had reported that all three brake lights – left, right and the tail-light – were all working normally) and he signalled forward to Kildwick to stop and examine the train.

After the excursion passed, he left his signal on Danger/Caution for four minutes before setting it to All Clear. He did not think there was any need to stop the mail train as he could see the distance signal at Kildwick was against it. He did, however, use a hand-lamp to show a Danger/Caution signal to the mail train as it passed.

Captain Tyler read the rule about signals being set to Danger/Caution for a minimum of 5 minutes after a train had passed and asked if he (Baldwin) should not have left the signal on for 5 minutes after the excursion. Baldwin gave no reply.

William Henry Adams – locomotive superintendent, Midland Railways

Adams said that knowing the type of locomotive used on the mail train, and that it was pulling just five coaches and a brake van, and assuming that the rails were in a slippery state, the driver would have been able to stop the train if he had been going at the speed at which he would commonly approach Kildwick station within a distance of 600 to 700 yards.

The Kildwick distance signal being set at Danger/Caution he would expect the driver to have been able to bring the train to a halt just past the signal. It was not necessary for the driver to stop at the signal and he might reasonably run through it at 20 to 25 mph.

Captain Tyler's conclusions

The conclusion of Captain Tyler's report reads:

... there is no doubt that ... the signalman at Cononley station ought, after ringing forward to Kildwick, to cause an exceptional stoppage and examination of the excursion train, rather to have taken extra precautions in warning the driver of the mail train by means of a red light of his proximity to the excursion train, than to have lowered his signal from danger within the period prescribed by his regulations; and that the engine driver of the mail train ought ... to have approached the Kildwick station more cautiously on finding the distance signal operated from that station at "danger".

It is therefore impossible to do otherwise than to attach blame to these two men – to the signalman at Cononley for not exhibiting a danger signal at Cononley, and to the engine-driver for not obeying with sufficient promptness the distant signal from Kildwick; but it is right at the same time further to observe that the causes which thus led to this collision are more or less incidental to the system of working by time-intervals, and of trusting to the distant signal of a station for protection in the case of an obstruction between it and the home signal, when drivers of fast trains are allowed by the regulations to pass those distant signals at such speed as they may in their discretion consider safe under varying circumstances, and are in the habit in their daily practice of so passing them at high speed. Under such circumstances, a little extra speed and want of judgement on the part of an engine driver, expected to keep time with a fast running train, in passing a distant signal at danger, when he is mistaken as to the cause for which it is exhibited, or is unable, in consequence of a bridge or cutting, as in the present instance, to see for any great distance the obstruction of which it is intended to warn him, may at any time lead to a serious collision; and it is on account of dangers of this description, and other descriptions connected with the system of working by time-intervals, that recommendations have so frequently and so strongly been made from the Board of Trade to substitute for this system of time-intervals the block-system of telegraph working, under which intervals of space are secured between trains following each other on the same line of rails.

If the block-system had been in force on this section of railway, and had been properly worked, the home and distant signals of the Cononley station would both have been kept at danger against the mail train until the excursion train had passed the Kildwick station, and there would not have been the same risk of such a collision.

In short:

- Baldwin changed the signals at Cononley too early and should have slowed the mail train rather than allowing it pass through without any warning.
- Palfreeman should have had better control of the engine and should have been better able to bring the train to a halt after passing the Kildwick distant signal set at danger.

BUT:

- An accident such as this is always likely to happen on a time-interval signalling system.

Newspaper editorials – September 4th 1875

The first local newspapers following the accident came out on Saturday 4th September. By this time, they had had time to digest the facts of the accident, the opening of the coroner's inquest, and Captain Tyler's inquiry for the Board of Trade. This is what they had to say on their editorial pages.

Keighley News

The Keighley News¹ came down heavily against the railway staff at Cononley, those at Kildwick, and against the Midland Railway Company itself:

By a piece of reckless blundering, which has not yet been brought thoroughly home to those who were guilty of it, an excursion train containing over a thousand passengers was brought to a stand some distance from Kildwick station and an express was deliberately allowed to run into it, causing the death of seven persons and the injury of nearly half a hundred. ...

How it came to pass that the people in charge at Cononley, who were cognisant of the fact that the excursion train had only just gone by, permitted the express to pass before the signal had been received from Kildwick that the excursion was "all right" it is difficult to comprehend, especially in the face of the regulations referred to by Captain Tyler. But the express travelled on through the darkness, unconscious of the fate it was rushing upon until it was too late to do anything to avert the catastrophe. ...

The chief responsibility for this accident lies, as in nearly all other railway disasters, with the railway company. ...

At present the line beyond Keighley is worked on the "time-interval" principle; but this system, in the hands of dull, inexperienced, or overworked officials, is altogether inadequate in an emergency. It seems strange that railway directors, after the many hard lessons they have received, should still show so much dilatoriness or reluctance to avail themselves of the best appliances at command to secure safety. ...

Strong stuff.

Craven Herald

The Craven Herald³ was rather more measured and suggested other possible, although unsubstantiated, explanations:

... The question at once arises, if the Bradford Excursion train could be stopped by the signals a hundred and fifty yards short of Kildwick station ... how is it that the Scotch Express [the mail train] could not also be brought up in time to prevent a collision ? ...

The Express was undoubtedly slackening speed at the time of the collision ... but whether this was done in obedience to the danger signals, and was the fullest extent of the obedience that was possible to them; or whether the Express driver missed seeing the signals as soon as he should have done, and shut off steam only so that he might stop at the station in the ordinary way; or whether he was intending running through the station without stopping ... are questions we must leave the evidence to answer. ...

We can only insist upon it, that if trains are to be sent forward so rapidly one after another, the arrangements for preventing collisions must be unimpeachable. What we have before us now is a case in which the very effort of trying to prevent an accident proved the means of causing one.

Coroner's inquest, Kildwick (reopened) – 7th September 1875

The coroner's inquest on the six passengers who died at Kildwick reopened on Tuesday 7th September^{4,5}, to hear from witnesses and to come to a verdict.

It took evidence from many of the same railway staff who had addressed the Board of Trade inquiry headed by Captain Tyler on 2nd September. Harrison Palfreeman and Jonathan Baldwin (the driver of the mail train and the signalman at Cononley) were present but were not required to give evidence: "as it was supposed that further proceedings might arise with respect to them".

The evidence

In essence, the evidence given to this inquest was the same as that given to Captain Tyler's inquiry, with following additional information coming to light.

William Dobson, the fireman on the mail train: He again said that he had no idea that the excursion was directly ahead of them. He specifically denied having had any conversation with the signalman at Skipton (Thomas Breward, see earlier and below).

They were 10 minutes late leaving Skipton and were travelling at about 40 mph when they passed the All Clear signal at Cononley. He saw the Kildwick distance signal set to Danger/Caution but not before the train was less than 100 yards way from it (due to the weather conditions and poor visibility on account of trees close to the line). He estimated that, taking into consideration the speed of the train and the weather conditions, that the train would have taken 900 – 1000 yards to stop once the Kildwick distance signal had been spotted.

[Captain Tyler's map shows that the Kildwick distance signal is just 600 yards from the point of collision; see Fig 1.]

Thomas Moss, foreman porter at Skipton station: He started the express train 5 minutes after the excursion. He did not tell the driver what was ahead of him.

Edward Newbould, porter at Cononley station: He was in the signal box, with Jonathan Baldwin the signalman, although this was against regulations.

He saw Baldwin telegraph to Kildwick to stop and examine the excursion train. He also saw Baldwin pull the signal lever half-way over, to signal, he thought, Danger/Caution, before the express passed. Baldwin had his hand-lamp out of the window, but he (Newbould) could not say what signal was showing.

Samuel Watson of Airedale Mill, Kildwick: He was a witness to the crash from the rear of the mill building.

The excursion train, when he saw it, was standing or nearly standing, opposite the distance signal, and he watched it being drawn forward until it passed under the bridge. A minute or two later he heard another train approaching. He saw a short train pass the signal post. The driver had shut off the steam but the train was still going at a good speed. The speed slowed as it approached the bridge and further still as it passed under it. He watch it until it ran into the other train.

The night was dark and it had just begun to mizzle with rain.

Edward Needham, Midland Railways line superintendent: He said that he thought that an interval of five minutes between the two trains was quite sufficient. The signalman at Cononley should have kept his signal on for five minutes, but only four minutes had passed after the excursion had passed before the signal was set to All Clear.

He said that because the mail train had a more powerful locomotive and was hauling a much lighter load, it could have been stopped much sooner than the excursion. There was certainly sufficient time for the driver to stop the train between the Kildwick distance signal and the Crosshills road bridge. The train could have been slowed from 50 mph to a full stop in 400 yards.

Thomas Breward, signalman at Skipton North: He repeated his evidence to Captain Tyler that he had had a conversation with the driver [Palfreeman] and fireman [Dobson] of the mail train, and had told them that the excursion would be leaving ahead of them.

Palfreeman interrupted at this point and denied that he had heard this conversation.

Coroner – Was there any conversation between the signalman and your fireman that you heard ?

Palfreeman – No. It was an utter impossibility with the engine blowing off [steam] as she was at that time.

Coroner (to Breward) – Was the engine blowing off ?

Breward – I did not notice.

Coroner's summing up

The coroner's summing up of the evidence was, to say the very least, somewhat one-sided:

... starting the express train so soon after the other at Skipton seemed to have been almost an oversight ... But that had been in accordance with the company's regulations, and they could say nothing more about it.

The jury had been down the line and he thought they were all agreed that there was ample opportunity for the driver of the express to see the distance signal, especially at night, quite in time enough to pull up before the bridge.

[The man in charge at Cononley, Baldwin,] let a train pass within four minutes of a preceding train ... [This man] had deviated from his duty [but this] had not led to the accident, and the jury could hardly look upon it as an act of culpable negligence ...

There was another witness, Dobson, the fireman of the express, who he was afraid had not given his evidence in an impartial manner. He seemed to forget almost everything in one direction and to remember everything in the other. He was scarcely to be relied upon in some of the statements he made as to the time required for stopping. ...

He thought that the description given by the mill-owner from Farnhill ... was a correct description of what took place. ... Watson's evidence showed that the excursion train came slowly and cautiously past the distance signal and under the bridge, while the driver of the express seemed only to shut off his steam at the signal post, and was running quickly and at a speed which struck the spectator himself as being dangerous, under the bridge. He thought that [the jury] must come to the conclusion that the driver had been guilty of negligence, and of such culpable negligence as to warrant them in finding a verdict of manslaughter against him. ...

So, the coroner told the jury what he thought – and he told them what they should think too.

The verdict of the jury

The jury, having been led to their verdict by the coroner, duly delivered it.

[they] find Harrison Palfreeman, the driver of the express, guilty of manslaughter through disobeying the signal at Kildwick station; they also censure Jonathan Baldwin, the signalman at Cononley station, for altering the signal one minute too soon.

The jury, in giving their verdict, take the opportunity of conveying to the representatives of the Midland Company the desirability of removing the passenger station and signal apparatus to a point at or near the railway bridge so as to lessen the danger of similar accidents ...

Palfreeman was then committed to appear before Skipton magistrates.

Mr. Needham, said he would lay the recommendations of the jury before the directors of the Midland, and he had no doubt that they would receive attention.

The new Kildwick station was opened on a Sunday in May 1889 (not quite 14 years after the accident). It cost £1000 and was positioned 400 yards nearer Skipton. The "Airedale Magazine" reported that local Methodists were disappointed: "We regret that out of the seven days of the week Sunday should have been chosen as the day of the opening."⁶

Coroner's inquest, Bradford– September 10th 1875

Because six people died at Kildwick, but a seventh (William Holston Taylor) died in Bradford, a second inquest was required. Unlike the travesty at Skipton, this was a model of judicial impartiality.

The coroner heard identification evidence, and evidence from the injured John Priestley, who was interviewed in his home, that Taylor had been on the excursion train. The jury then heard statements from those who had been called at the Skipton inquest.

The coroner then summed up⁴:

... there was no doubt that Baldwin (the signalman at Cononley) had [kept up the] danger signal after the passing of the excursion train for one minute less time than he ought to have done. Whether that neglect had anything to do with causing the accident was for the jury to consider.

... the express driver, having passed Cononley one minute before time, seemed to have cut off the steam on passing the distance signal, and ... they were in a position to have stopped at the home signal or the station platform.

The station was no doubt awkwardly situated, the tail lights of a train standing near the station not being in a position in which they could be seen by the driver of an approaching train much before coming under the bridge.

Under these circumstances it was for the jury to say whether they thought anyone had in the discharge of his ordinary duties acted in such a negligent or rash manner as to make him guilty of manslaughter, or whether the deceased had come by his death only from misadventure.

The jury's verdict:

... accidentally killed; but that the officials at Skipton showed a great lack of caution by allowing the express train to follow so closely after the excursion train; that Jonathan Baldwin showed a want of caution by allowing the express to pass before the time allowed; and that Palfreeman had not had his train sufficiently under control after passing the distance signal at Kildwick.

So, one set of events; two inquests; and two different verdicts.

Newspaper editorials – September 11th 1875

The editorials for the September 11th newspapers were written before the outcome of the Bradford inquest was known, and so addressed the verdict of the Skipton inquest only. Unlike the coroner's jury, they weren't about to be told what to think – and their view was somewhat different.

The editorial in the Craven Herald which, by cruel coincidence, was positioned adjacent to a Midland Railway advertisement for future Saturday excursions from Bradford to Morecambe, had this to say:

The verdict of the jury last Tuesday ... not only fails to give unanimous satisfaction ... but even goes so far as to condemn itself. ... there is a general feeling that Baldwin was as much to blame as Palfreeman ... a great deal of sympathy is felt for Palfreeman as the consequences of a defective system, and the “contributory negligence” of another servant, are laid upon his head [alone].

You will observe too, that the jury, in returning their verdict, “also recommend ... the desirableness of removing Kildwick station to a point on or near the railway bridge, so as to lessen the danger of similar accidents ...”. They therefore virtually say that it was not altogether Palfreeman’s fault; it was the fault of the company as well ... Palfreeman would seem to be a condoning sacrifice to the public for the sins of his company and a fellow servant, as well as those of himself ... I should not be surprised if the verdict is reversed at the assizes. ...

There was also this in the Keighley News:

The coroner’s jury have found Palfreeman, the driver of the express, guilty of manslaughter ... Whether the evidence was altogether of such a nature as to warrant this verdict may be open to question ... until it can be proved that Baldwin showed a green [Danger/Caution] and not a white [All Clear] signal to the fast train, the driver can hardly be regarded as altogether responsible for the accident.

... altogether the evidence goes to prove that the system in operation for the protection of passengers on the Midland line above Keighley was quite inadequate. ... and it is a thousand pities that the new system was not in force to prevent the lamentable tragedy that was the result.

We trust that the few simple facts that want bringing out on the trial will not be lost sight of, and it is to be hoped that neither the Midland nor other railway companies will fail to profit by the lessons that the Kildwick disaster teaches.

So, the Keighley News called for a clarification of a “few simple facts”. Unfortunately, on the very day that this appeal was published, another court case was adding a further level of confusion. Palfreeman was appearing before Skipton magistrates.

Magistrates court – September 11th 1875

An appearance before Skipton magistrates was required in order that Palfreeman could be committed to trial at the assizes.

The committal reviewed the facts of the case yet again, once again taking evidence from the established cast of characters. This time, however, there was considerable dispute about the distance that might have been required to bring the mail train to a halt.²

Richard Staveley – signalman at Kildwick

The express (mail) train came in sharp, but he could not say at what speed; it was not cautiously.

Chairman: Supposing the driver missed seeing the distance signal where he could first get a sight of it, and suppose he was travelling at 40 mph when he came up to it, would he not be able to stop ?

Witness: [Having previously told the court that the distance between Cononley and Kildwick was $1\frac{3}{4}$ miles.] The signal can be seen on the Skipton side of Cononley.

Chairman: I see a note on the plan (see Fig. 1) – in clear weather the distance signal can be seen $\frac{3}{4}$ of a mile. Is that so ?

Witness: It can be seen.

Chairman: What sort of weather was it ?

Witness: It was a dark night. I did not notice any rain before the accident.

James Henry Bastow – passenger on the platform at Kildwick

The night was dark and foggy.

Albany Renton – driver of the excursion train

He saw the distance signal at 300 – 400 yards. It was rather dull.

William Dobson – fireman on the mail train

They were about 10 minutes behind time leaving Skipton. No one spoke to him at Skipton, and he saw no signals until they got to Cononley, where both the distance and home signal showed a white light [All Clear]. They passed Cononley at around 40 mph and the speed was increased until they [he and Palfreeman] saw the Kildwick distance signal about 100 yards before they came to it – we would be 600 – 700 yards from the station.

At the point of collision, they were travelling at 10 to 15 mph.

Chairman: What called your attention to the distance signal ?

Witness: My mate told me to put the brake on. As soon as he told me, I did so. I had it ready, as I saw the distance signal just as he spoke. ... When we got to the bridge we saw the back light of the excursion train. I got hold of the brake and held it till the collision took place.

Chairman: Under normal circumstances how soon would you be able to stop a train ?

Witness: I am not able to answer you that perfectly.

[Dobson had previously given a figure of 900 – 1000 yards to the coroner's inquest.]

Chairman: Was the engine reversed ?

Witness: I believe it was; but I did not see him do it. ... My opinion was that it was reversed, for I found it was so when we came to a stand.

Rule 70, requiring drivers on seeing a distance signal to shut off steam and reduce speed so as to be able to stop at the distance signal, was read to the witness.

Chairman: Was that acted upon ?

Witness: It's the rule, but it's not acted upon.

Chairman: Do you mean to say the practice is to disobey it ?

Witness: We only do a little at it if we intend to keep time ...

Chairman: You were nine or ten minutes late; were you making that up ?

Witness: If it was to be made up it had to be done somewhere on the road.

The witness added that it was a very dark, nasty, night and it was impossible to see the distance signal until they got near it. The Kildwick distance signal had been moved a few months earlier, to try and make it easier to see, but it was actually worse than it was before.

Prosecution: Under ordinary circumstances, could you have run up to the distance signal at the speed you were going that night, and then have stopped before you got to the station.

Witness: No.

Chairman: Could you have done it if all the brake power had been used and the engine reversed ?

Witness: Yes. We many times run up right to the platform when the signals are against us.

Edward Moore Needham – line superintendent

If the whole brake power had been used, and supposing the train had been going at 40 to 45 mph, the train could have been stopped without difficulty, according to the state of the rails, in from 300 – 500 yards, he should say 400 yards.

Chairman: You have heard about the practice as to Rule 70, that it is persistently disobeyed.

Witness: If that rule were persistently disobeyed we would have accidents almost every five minutes ... It is one of the most important rules ...

Chairman: What distance would the driver have had to stop in had he seen the distance signal 100 yards before he came to it.

Witness: From 900 to 1000 yards.

[Captain Tyler's report, from the Board of Trade Enquiry on 2nd September, which must have been available to Needham at this time, gives the distance from the signal to the point of collision as 600 yards. See Fig. 1.]

Chairman: Assuming that he did not see it till he was at it had he then ample time to stop ?

Witness: Certainly. If close to it, he had time to pull up the train.

Palfreeman charged with manslaughter

The driver of the mail train, Harrison Palfreeman was then formally charged with the manslaughter of the six passengers who died at Kildwick, and committed to trial at Leeds assizes. No mention was made regarding the death of the seventh victim, judged to have been an accidental death by the Bradford coroner.

Bail was provided by Mr. Needham and Mr. Adams of the Midland Railway Company.

Captain Tyler's accident reconstruction – September 27th 1875

Why was there no consistency with regard to estimates of the distance required to stop the mail train ? A possible justification is that if you operate a timed-interval traffic management system you don't actually need to know distances. The whole rationale of such a system is to keep trains separated by a minimum of five minutes.

So, by the end of the magistrates' hearing, the following estimates had been given:

- Edward Needham (line superintendent) – 300 to 500 yards, probably 400 yards
- William Adams (locomotive superintendent) – 600 to 700 yards
- William Dobson (fireman on the mail-train) – 900 to 1000 yards

Is it significant that the more experience someone had of being in charge of a train travelling at speed, the greater the estimated stopping distance ?

In an attempt to provide a definitive answer, Captain Tyler, who headed the Board of Trade inquiry on 2nd September, ran an accident reconstruction using a locomotive similar to that involved in the Kildwick crash. He was very clear why this was necessary: ²

I considered it important that these experiments should be made, in consequence of evidence having been given, after the termination of my enquiry, by one of the principal officers of the Midland Railway Company [this would have been Edward Needham], at the coroner's inquest, to the effect that the engine-driver of the mail-train would have been able, with the means at his disposal, if travelling at 50 mph, to stop his train in 400 yards.

So it was that on September 27th 1875, 50 years to the day since the very first passenger train ran between Darlington and Stockton, a series of four stopping-distance tests were carried out on the Midland Railway's Derby-Castle Donnington-Trent line; in bright weather with slightly greasy rails.



Fig 2: Midland Railways' locomotive no. 825, one of the same class of locomotives as that involved in the Kildwick crash. No. 819 was pulling the mail train; no. 814 was used by Capt. Tyler in his stopping-distance tests.

The results of these tests showed that a train travelling at 50 mph could be stopped in around 800 yards (the actual results for the four tests – using various combinations of braking equipment – were: 807, 813, 867 and 787 yards).

This figure represents a minimum figure, as Captain Tyler was clear to point out:

The engine driver of [the] mail train would not have been prepared, of course, so suddenly to do all that was required, as those who acted instantly on the word of command being given, on the experimental train; and the rails at Kildwick may not have been in so favourable a condition. The engine driver of the mail train, who awaits his trial for manslaughter, was therefore placed under a disadvantage as a result of the evidence referred to. Instead of 400 yards, upwards of 800 yards should, apparently, have been the distance given.

This information is critical in attempting to assign any responsibility for the Kildwick crash. Captain Tyler's survey of the line (Fig. 1) showed that the point of impact was 600 yards beyond the Kildwick distance signal. If the mail-train was travelling at 50 mph, and required a minimum of 800 yards to come to a halt, a collision was inevitable if full braking, using all means available, was started anything less than 200 yards short of the signal.

Both Palfreeman (the driver) and Dobson (the fireman), claimed not to have seen the Kildwick distance signal until they were 100 yards from it. Albany Renton, the driver of the slower excursion train, said he only saw the distance signal at 300 – 400 yards distance. Perhaps even that would have been too short a distance to prevent the crash ?

Given this, how important was it that the Cononley signals showed All Clear, rather than Danger/Caution, as the mail train passed ? But the Skipton coroner had already said that the incorrect signal at Cononley "had not led to the accident".

So, if Baldwin (at Cononley) wasn't culpable and if Palfreeman (driving the train) couldn't have stopped the crash, the only people who could possibly have been responsible were those who had recently moved the Kildwick distance signal but who had not ascertained that it was clearly visible; the same people whose line superintendent had been capable of misjudging by 100% the distance required to stop one of his trains as it approached this signal.

What next ?

In Part 3 of this investigation we will look at the trial of Harrison Palfreeman, for manslaughter, at Leeds assizes, and its dramatic conclusion.

We will also report the results of a claim for damages made against the Midland Railway Company by Mrs. Calvert, who lost her husband and a son in the Kildwick crash.

References

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- 2 http://www.railwaysarchive.co.uk/documents/BoT_Kildwick1875.pdf
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