

## LONDON MIDLAND AND SCOTTISH RAILWAY.

Ministry of Transport,  
4, Whitehall Gardens,  
London, S.W.1.  
25th May, 1932.

SIR,

I have the honour to report for the information of the Minister of Transport, in accordance with the Order of 15th April, the result of my Inquiry into the collision which occurred at about 8.45 p.m. on Monday, 11th April, 1932, near the East Junction box at Victoria Station, Manchester, on the London Midland and Scottish Railway.

While a train of empty stock to form the 11.45 p.m. Manchester to London passenger train was waiting at Millgate down south home signal, with its rear vehicle foul of the crossing at the junction of the up slow line from Cheetham Hill, it was run into by another empty train comprising the stock for the 9.0 p.m. Manchester-Southport passenger train, approaching under clear signals from Red Bank sidings. The leading engine of the Southport train struck the left front corner of the rear brake van of the London train, which was thrown over on its right side.

I regret to report that the guard of the London train, T. Tingle, who was travelling in this van, was killed. It is probable that at the time he was looking out of the window on the side remote from the oncoming train, and was thrown down and crushed under the van. The driver of the Southport train was also injured.

The body of the brake van of the London train, of modern all-steel construction, with shock-absorbing buffers, was little the worse for the collision; its frame and bogies were however considerably damaged. The vehicle next ahead of it had a broken drawbar; the rest of the stock was fit to be left in traffic. The leading engine of the Southport train sustained damage to its front end but the other engines were undamaged. The damage to permanent way was trifling.

The London train was drawn by 0-6-0 type engine No. 4460 with 6-wheeled tender weighing in working order about 90 tons, and running tender first. The train consisted of 6 bogie vehicles; its weight including engine and tender was about 240 tons and its overall length about 366 ft.

The Southport train, to which was attached the engine and stock for another parcels train, was drawn by 2-6-4 type tank engine No. 2313 leading and running chimney first; the second engine was No. 10421, 4-6-0 type, also running chimney first. No. 2313 weighed in working order about 86 tons, and No. 10421 about 111 tons including 6-wheeled tender. The train consisted of 7 bogie vehicles; its total weight including engines was about 377 tons and its overall length about 505 ft.

At the time of the accident it was dark, but there was no fog and the rail was dry.

### *Description.*

The line from Manchester Victoria towards Cheetham Hill diverges to the North East at Manchester East Junction from the main line running East through Millgate towards Miles Platting. There are 4 roads on the Cheetham Hill line, arranged from West to East as follows: down fast, up fast, down slow, up slow.

The main line towards Miles Platting also has 4 roads, arranged as follows from North to South: down North, up North, down South, up South. The "down" direction is away from Manchester in both cases.

The East Junction box, situated opposite the junction points on the North side of the line, controls the four sets of junction points where these two 4-track lines meet. The points in the down lines are facing, those in the up lines trailing.

On the South side of the four main lines referred to are four other running lines, controlled from the Turntable box, which is situated almost opposite the East Junction box, on the South side of the line. These lines serve the South part of Victoria Station and are known as the North Group Bays and connecting lines. The former join the up and down South lines by junction crossovers East of Millgate box.

The point of collision was at the diamond where the up slow line from Cheetham Hill crosses the down South line to Miles Platting.

The gradients on both roads are about 1 in 59 rising towards Cheetham Hill and Millgate. The adjacent boxes are Footbridge on the Cheetham Hill line, situated close to the South end of Redbank sidings which are on the South-East side of this line, and Millgate on the Miles Platting line.

The down home signals of the East Junction box are carried on a gantry opposite the box over the junction points. The up slow home signal of the East Junction is a colour light signal on a gantry with a route indicator above it, which shows the number of the line to which a train is to proceed. The next signal in rear of it is the down starter of Footbridge box, which is a semaphore signal showing red when at danger, with a colour light distant below it, which when "off" shows double yellow or green according to the condition of the track ahead.

Millgate home signals are carried on a gantry across the track. They are of standard semaphore type. A fireman's call plunger is provided on the post supporting the gantry.

A track circuit extends on the down South line from Millgate down home signal to a point about 67 ft. East of the point of collision; it operates an electrical "train waiting" indicator in Millgate box and locks the trailing crossover points at the Millgate down home signal in normal position. This track circuit is also indicated on the spotlight diagram in the East Junction box, but performs no locking function there.

The approximate distances from the centre of the East Junction box are:—

Point of collision	...	...	...	...	35 yards East.
West end of track circuit on down South line	66	"	"		
Millgate down home signals	160	"	"		
East Junction up slow home signal on Cheetham Hill line	176	"		North-East.	
East Junction up distant and Footbridge box starter	319	"	"	"	

#### *Report and evidence.*

The six empty coaches for the London train had been propelled from Red Bank sidings by driver H. Hall with engine No. 4460 into No. 20 road at Victoria Station a short time before the accident. After standing there for a few minutes, the starting signal was lowered at about 8.40 p.m. for this train to go towards Millgate on the down South line. Hall said that he brought the train to a stand with the end of his tender, which was leading, 2 or 3 yards short of the Millgate down home signal, which was at danger. His fireman, Wallace, got down and carried out Rule 55 by operating the plunger of the fireman's call box and received an acknowledgement from the signalman. Wallace estimated that to do this he had to walk 2 or 3 yards beyond the end of the tender. The collision occurred after they had been standing at this signal for 3 or 4 minutes.

Signalman T. Meek who was on duty at the time in Millgate box, said that he accepted the empty London train at 8.40 p.m. and that he understood that it was to be set back via Turntable box into No. 15 road at Victoria Station. This train was detained at his home signal to allow two other booked trains to pass on the down North group road, which would be fouled by the intended movement. He said that this is the normal procedure, and involved about 5 minutes detention of the empty train. It was explained by other witnesses that it is necessary to work in this way to clear the platform line in the station, which would otherwise have to be occupied by this empty train. There is another possible route for this movement, but its use is infrequent owing to other shunting movements.

The Southport train, as already noted, was double headed. Driver E. Baines who was in charge of the leading engine said that the colour light distant signal under the Footbridge box starter was showing a double yellow indication as he approached it; the East Junction home signal was showing a single yellow light, which meant that he must be prepared to stop at the next

signal, situated on the platform to which his train was routed. He did not see the van standing foul of the line on which he was running as he was on the left hand side of the engine, i.e. the outside of the curve at the junction. His fireman, F. Hammill saw the obstruction first, and when he shouted Baines immediately made a full brake application but too late to avoid the collision, which occurred immediately he had done so. Baines estimated the speed as 3 to 5 miles an hour at the moment of collision. Baines' evidence as to the signal indications and speed was confirmed generally by Hammill and also by the crew of the second engine, driver T. Smith and fireman C. Rowlands.

The signal box at Victoria East Junction, which has 83 working levers, is manned by 2 signalmen and a booking lad. Signalsman D. Higginson was on duty at the time and was working the portion of the frame which controls all the slow lines. The other signalsman in the box with him was not therefore involved. Higginson said that the London train was offered to and accepted by Millgate at 8.39 p.m. and passed the East Junction box at 8.41 p.m. He was aware that it had been brought to a stand at Millgate down home signal, as he saw the stationary tail light. He said that he could see the position of the crossing from the window, and as he thought that the London train was clear of it, he accepted the Southport train from Footbridge box at 8.42 p.m. and lowered his signals. He did not realise that anything was wrong till he heard the crash, and could give no explanation of his failure to realise that the crossing was not clear. He said that there was nothing to distract his attention at the time.

Evidence was given by Mr. Hopwood, Superintendent, and Mr. D. T. Evans, assistant Stationmaster on duty at Victoria Station at the time, to the effect that the normal load of the London train was 5 bogie vehicles, but that as no restriction was placed on it, it was given a larger load whenever necessary, as happened on the occasion in question.

#### *Conclusion.*

Measurements made at my request show that the distance from the Millgate down South home signal to the crossing of the junction, at which the collision occurred, is 354 ft. The length of the London train was about 366 ft. and if, as stated by driver Hall, it was brought to a stand 2 or 3 yards short of the signal, it follows that the tail of the train must have been standing foul of the crossing by about 15 or 20 ft. Had the train only consisted of 5 bogie vehicles, as was usually the case, it would have been clear if the engine stopped at the same place.

The collision was entirely due to misjudgment as to the position of this train by signalsman Higginson. His evidence was clearly given and he frankly admitted his mistake, for which he could suggest no reason. He is a very experienced signalsman, with 41 years service, 18 years of which have been spent in this box. He was given a very good character by the Company's officers, and has in the past been commended by the Company for good and prompt action in averting accidents on no less than three different occasions.

No blame can be attached to any of the trainmen concerned. Driver Baines had his train properly under control, and was proceeding under clear signals. In all the circumstances I do not think that he could have taken action to avert the collision more promptly than he did.

#### *Remarks and Recommendations.*

The position of the signal box in relation to the fouling point of this junction is such that the difference in bearing from the window, from which Higginson looked out, to the point of collision and to the fouling point is about 5°. His error therefore really amounts to a failure to estimate the direction of the tail light correctly by this small angle in the dark. The existing track circuit ends about 67 ft. short of the point of collision and therefore affords no assistance in this respect.

This junction, situated immediately adjacent to and outside the area equipped with track circuits and colour light signals some 3 years ago, is a busy one. At my request a record of movements was obtained by the Company's officers on

another Monday evening for the same hour, from 8 p.m. to 9 p.m., in which the collision occurred. The results were as follows:—

(1) Number of light engines signalled on the block	...	5
(2) Number of loaded passenger trains signalled on the block		9
(3) Number of other coaching stock trains signalled on the block		8
(4) Number of freight trains signalled on the block	...	7
(5) Number of shunting movements dealt with between 8 p.m. and 8.42 p.m.	... ..	12
		—
Total	... ..	41
		—

This record illustrates the pressure under which the signalmen are working even with the present traffic density.

Under normal circumstances it is not usually considered necessary to provide at a junction, such as this, situated under the close view of a signalman, mechanical or other aids by which he can assure himself that the junction is clear. But in this case, having regard to the circumstances of this accident and to the conditions described, particularly the necessity for detaining trains at Millgate down slow home signal, I think that the Company should be asked to consider the provision of some means, such as clearance bars or track circuiting, to ensure that the junction is clear before signals are lowered for a conflicting movement.

I have the honour to be,

Sir,

Your obedient Servant.

E. P. ANDERSON,

*Lieut.-Colonel.*

The Secretary.

Ministry of Transport.