



MINISTRY OF TRANSPORT

RAILWAY ACCIDENTS

REPORT ON THE COLLISION
which occurred on
4th July, 1949, at
CHESTER STATION
in the
LONDON MIDLAND REGION
BRITISH RAILWAYS

LONDON : HIS MAJESTY'S STATIONERY OFFICE

1949

TWOPENCE NET

LONDON MIDLAND REGION
BRITISH RAILWAYS

MINISTRY OF TRANSPORT,
Berkeley Square House,
London, W.1.

22nd August, 1949

SIR,

I have the honour to report for the information of the Minister of Transport, in accordance with the Order of 6th July 1949, the result of my Inquiry into the collision which occurred at 10.11 a.m. on 4th July in Chester Station on the Crewe-Holyhead Main line in the London Midland Region, British Railways.

The 7.20 a.m. Express Passenger train, Derby to Llandudno, collided at about 10 m.p.h. with the rear of the 9.20 a.m. Express Passenger train, Crewe to Holyhead, which had just begun to move from No. 5 Down Platform.

The Crewe train was crowded, with many travellers standing in the corridor, and 43 passengers and 7 railway servants were injured, of whom 4 passengers were detained in hospital. Requests for doctors and ambulances were made promptly; injured persons were treated initially by the railway staff and all those requiring hospital treatment were conveyed to the Chester Royal Infirmary in under an hour. Fortunately there were no really serious casualties and the last was discharged from hospital on 9th July. Most of the uninjured passengers continued their journey in the first six undamaged coaches of the Crewe express, which left at 10.54 a.m.; the remainder followed in other trains.

The Crewe train of 10 coaches was hauled by a Class 5 XP engine, 4-6-0 type; its overall length was 674 feet and the total weight was 426½ tons. The six coaches of the Derby train were hauled by a Class 5 engine, 4-6-0 type, with left-hand drive, weighing 126 tons in working order; the overall length of the train was 428 feet and its total weight 310 tons. The steam brake operated on the coupled and tender wheels of the engine, and the vacuum brake on all wheels of the coaches; the combined brake power was 76.5 per cent of the total weight. Both trains were screw coupled throughout and 13 of the 16 coaches were fitted with shock absorbing buffers. All underframes were of steel; ten of the bodies were built of steel panels on wood framing, and the others were of all wood construction.

Damage was confined to some bent solebars, headstocks and buffer rods, displacement of some fittings and breakage of two window lights. There was no derailment nor damage to the permanent way or signalling. Normal working was resumed at 11.25 a.m. on the same morning.

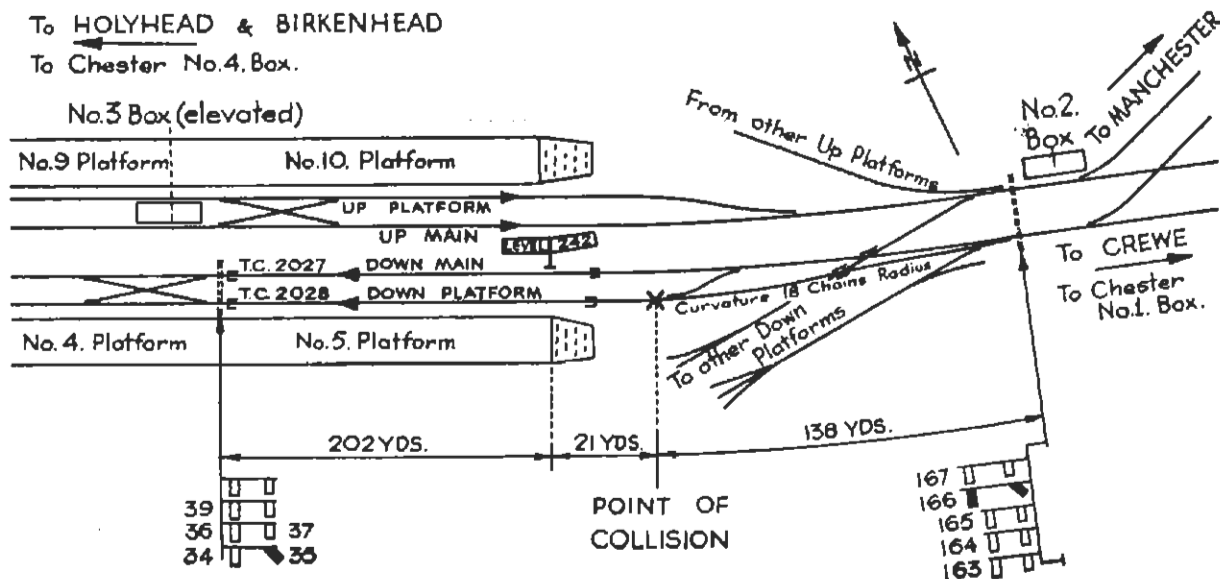
The weather was fine and clear.

DESCRIPTION

1. The double track Main line from Crewe enters Chester from the east as indicated on the sketch, which only illustrates the section of the station where the collision occurred. The line is straight to No. 2 box and then enters an 18 chain right-hand curve on a falling gradient of 1 in 242, which extends as far as No. 5 platform line, which is straight and level. No. 4 platform is in prolongation, and is entered either from No. 5 platform line or from the Down Main through a scissors crossing.

The signal boxes concerned are:—

- CHESTER NO. 1 On the Crewe Main line at the eastern entrance to the station.
- CHESTER NO. 2 at the junction of the Crewe and Manchester lines.
- CHESTER NO. 3 in the centre of the station.
- CHESTER NO. 4 at the western end at the junction of the Holyhead and Birkenhead lines.



STATION WORKING

2. Exemption from Absolute Block working, required under the Regulation of Railways Act 1889 was authorised by the Board of Trade (prior to the formation of the Ministry of Transport) on the Up and Down Main and Platform lines between Nos. 2 and 4 boxes. The Permissive Station Yard Block system is in force and relevant extracts from the Regulations are as follows :—

“REGULATION 4.

* * * * *

(d).....

WHERE PERMISSIVE STATION YARD BLOCK IS IN OPERATION, when a train is already in the section and another train is required to be sent forward into that section, the Signaller must send the IS LINE CLEAR signal to the box in advance, and the Signaller there, provided he does not desire to keep the train at the box in rear, must acknowledge the IS LINE CLEAR signal by sending the special bell signal (4-2), when, after the provisions of clause (e) have been carried out, the train may be allowed to enter the section. The TRAIN ENTERING STATION signal must then be sent and must be acknowledged by one beat.

* * * * *

(e) (ii) Where a CALLING-ON signal is provided on the stop signal controlling the entrance to the section ahead, it must be used, in accordance with Rule 44, when permission has been given by the special bell signal (4-2) for a train to proceed, and where a WARNING signal is provided on the stop signal controlling the entrance to the section ahead, it must be used, in accordance with Rule 45, when permission has been given by the special bell signal (4-3) for a train to proceed. In these circumstances it will not be necessary to verbally instruct the driver or exhibit a green hand signal.”

3. The relevant extracts from the Rule Book are :—

CALLING-ON SIGNALS

44(a). Calling-on signals, where provided, are placed below the signal controlling the entrance to the section ahead, and when lowered authorise the Driver to proceed forward cautiously into the section ahead as far as the line is clear.

The lowering of the calling-on signal does not authorise the next stop signal to be passed at Danger.

(b) Except where authorised, the calling-on signal must not be lowered until the train has been brought to a stand at it.

STATION YARD WORKING

97. When a train is allowed to proceed towards the rear of another train which is moving forward, the Driver of the second train must follow cautiously and at such a distance as will enable him to avoid colliding with the first train in the event of its being stopped, and he must not pass a signal which has been lowered for the first train until it has been replaced to Danger and again lowered.

98. When a signal is lowered for a train to leave a station or siding to run towards a train ahead of such signal, the Driver must proceed at such a speed as will enable him to stop before reaching the train ahead”.

4. Three position single needle Permissive Block instruments, recording at the receiving end only, are installed and signals are standard lower quadrant semaphores worked mechanically. Track circuits along the Down Platform and Down Main lines control the respective Home signals, each of which is provided with a Calling-on arm; the Home and Calling-on arms are electrically selected so that only the latter can clear when the track circuit ahead is occupied. Plungers are provided on Nos. 4 and 5 platforms for warning signalmen in Nos. 3 and 4 boxes when Down trains are ready to depart. The plunger on No. 5 platform rings a bell in both these boxes.

REPORT AND EVIDENCE

5. The booked times of arrival and departure of the Down trains concerned are as follows :—

TRAIN	PLATFORM	Time of	
		ARRIVAL	DEPARTURE
8.35 a.m. Manchester to Llandudno	4	9.48 a.m.	9.55 a.m.
9.20 a.m. Crewe to Holyhead	4	9.56 ..	10.05 ..
7.20 a.m. Derby to Llandudno	4	10.09 ..	10.13 ..

6. On the morning of the accident the Manchester train was running a few minutes late; consequently the Crewe express, which was on time, was accepted before it and was stopped at No. 5 platform with the engine clear of the scissors crossing. Owing to its length the rear of the train was projecting some 21 yards beyond the end of the platform.

The Manchester train arrived at 10.0 a.m., and was taken into No. 4 platform via the Down Main, its engine was changed and the train left at 10.08 a.m. In the meanwhile, the Derby train, which was checked at No. 1 box, arrived at the Home gantry of No. 2 box at 10.06 a.m., slightly ahead of time.

Signalman Evans offered it on the Down Main to Signalman Large of No. 3 box, but it was not accepted immediately.

As soon as the Manchester train left No. 4 platform, the Crewe express was accepted by No. 4 box under Permissive Block Regulation No. 4, special bell signal 4-2 and Large lowered Calling-on arm No. 35. At about 10.10 a.m. Assistant Station Master Hodge rang the departure bell for the express, but the train was held up for another minute to complete loading of parcels; Passenger Guard Lansdell then gave the "Right Away" and Driver Breen, who was waiting for this signal, opened the regulator immediately. The brakes were off and the express had just started to move, when it was struck at the rear by the engine of the Derby train and driven forward for 15 yards.

7. Signalman Evans, of No. 2 box, said that after the Derby train had been standing for a few minutes he asked Large whether he could take it on the Down Main so that he could clear the Manchester line junction for another train which he expected shortly. Large replied that the Crewe express was just leaving and the Derby train, which he had by then accepted under special bell signal 4-2, could follow it down the Platform line. Evans, thinking that the Crewe express was about to move, walked from the telephone in the centre of the box to the Crewe end (40 feet away) and pulled lever No. 166, controlling the Home and Calling-on signals for the Platform line (as this line was still occupied the Calling-on arm cleared).

The Derby train started at once and Evans thought it was moving unusually fast considering there was a train in front of it. He was not alarmed, however, and walked back to the station end of the box. By this time the engine was half way between the box and the platform and was travelling at about 10 m.p.h. He realised there would be a collision but was unable to take any preventive action.

Evans explained that, although regulations allowed him to lower the Calling-on arm when the Platform line was occupied, he normally did not do so until the train ahead was moving. He had sometimes allowed a train to go forward to an occupied platform so as to clear the Manchester line junction, but on these occasions he usually warned the driver concerned. The Calling-on arm was also frequently used for shunting movements throughout the day, but during his 26 years' service in this box he had never known of any accident due to a driver entering the station too fast.

8. Signalman Hughes, who was in charge of the centre of No. 2 box, said that at the time of the accident he was having a meal and was sitting on a chair beside the telephone; he listened to the conversation between Evans and Large and then saw Evans walk to the end of the box to pull the Home signal lever. He also heard the Derby train engine start and realised almost at once that it was going too fast. He jumped off his seat, went to the station end of the box (50 feet away) and shouted to the driver to stop, but he was not in time to prevent the collision.

Hughes described the practice regarding Permissive working and confirmed that the Calling-on arm was used constantly. He had had 27 years' service in No. 2 box and recalled that some years ago there had been a similar accident when he was on duty. On that occasion the driver, although warned, had started away too fast and had collided with a stationary train at the end of No. 5 platform.

9. Driver Hayward, in charge of the Derby train engine, said that after being checked at No. 1 box, he was stopped at No. 2 Home gantry for about three minutes, after which the Calling-on arm for the Platform line was lowered. He partially opened the regulator, but closed it after travelling a short distance and coasted into the station, keeping a sharp lookout from his driving position on the left-hand side of the footplate. Suddenly he saw the Crewe train ten yards in front of him; he applied the brake but it was too late to avoid a collision. He did not hear anyone shout to him from the signal box.

Hayward agreed that, owing to the right-hand curvature, the line ahead could only be seen for about five to ten yards from the left-hand footplate, and he admitted that he did not look out on the other side before starting. If he had done so, he would have seen the rear of the Crewe express, which was in full view from that side. He had a young fireman who had never been into Chester before and who could not be expected to know the route. Hayward said he did not speak to him about the signals, as he was firing when the engine was stationary at No. 2 gantry. Hayward, who gave his evidence in a clear and straightforward manner, frankly admitted that he knew he should be able to stop within sighting distance when proceeding under a Calling-on arm; he quite expected to find a train in No. 5 platform but did not think it would be standing out so far. He had entered Chester under a Calling-on arm before and had, on occasions, followed behind a train departing from the platform.

10. Fireman Toplass, of the Derby train engine, who was 19 years old, had been a passed cleaner since October 1947, and had been promoted to fireman in February 1949. He had worked on goods and local passenger trains, but this was the first time he had been on a long distance passenger train and it was his first trip into Chester in any capacity. He said that when the engine stopped at No. 2 box he saw a train on the Platform line in front of him but he did not pass any comment to his driver as he did not realise it was the line they were going to enter. He then started putting some coal on the fire, which he had allowed to get too low, and he went on firing until they moved forward again. He did not hear anyone shout, but when he looked out shortly before the collision he saw the train in front. He turned to his driver, who applied the brake, but it was too late to stop.

11. Goods Guard Bird, of the Derby train, who was travelling in the last coach, said he tested the brakes at Stoke and they registered 21 inches of vacuum. No difficulty had been experienced at previous stations on the route. On entering Chester the train was stopped at No. 2 box for two or three minutes and then made a normal start. Bird saw the Calling-on arm off and shortly afterwards the collision occurred.

CONCLUSION

12. This accident was due to the Derby train entering No. 5 platform under a Calling-on arm at too high a speed and responsibility rests with Driver Hayward, who frankly admitted his mistake. I have no doubt that he was surprised to find the rear of the Crewe express projecting beyond the platform but he had not taken any steps to satisfy himself about the condition of the line ahead, although he was thoroughly familiar with the working and knew that visibility from the left-hand side of the footplate was limited to a few yards. He is 47 years old with 31 years' service; he was appointed passed fireman in 1938 and had been a driver for the last eight years. He had a clear record.

13. It is unfortunate that his young fireman, Toplass, did not pass any comment about the train which he saw less than 150 yards in front of him. If he had done so I am sure Hayward would have crossed the footplate and seen the express at No. 5 platform. Toplass was entering Chester for the first time and it is surprising that he did not comment on the signals or layout, although he cannot be held responsible for failing to do so. It is, however, desirable that young firemen should be encouraged to ask questions about the routes over which they travel so as to learn them quickly and be able to assist their drivers in observation of signals, which is clearly laid down in Rule 128 as part of a fireman's duty.

14. Signalman Large at No. 3 box and Signalman Evans at No. 2 box acted in accordance with the Permissive Station Yard Block regulations. In view of the impending departure of the Crewe express, Large was quite correct in accepting the Derby train in No. 5 platform instead of taking it into No. 4 platform via the Down Main. Signalman Evans clearly realised the undesirability of allowing the Derby train forward while the Chester express was standing at No. 5 platform and consequently kept his signals at danger until he heard from Large that the express was about to leave. Evans would have been more prudent if he had waited until he saw the train moving before lowering the Calling-on arm; he was probably influenced by his desire to clear the Manchester junction in anticipation of the early arrival of another train.

REMARKS

15. In large and busy stations such as Chester, Permissive Station Yard working is essential to prevent accumulation of delays, especially when trains are running out of course and extra traffic has to be handled; in addition, coaches and vans have to be attached or detached and other shunting done. It is recognised that the enforcement of Absolute Block in these special circumstances would seriously interfere with through movement, and exemption therefrom is not attended with undue risk at the slow speeds involved, provided that ordinary care is exercised. In this case the collision was due to a serious error by an experienced driver and I have no recommendation to make regarding the present method of station working.

I have the honour to be, Sir,

Your obedient Servant,

C. A. LANGLEY,

Brigadier.

The Secretary,
Ministry of Transport.

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