MINISTRY OF TRANSPORT

RAILWAY ACCIDENTS

REPORT ON THE COLLISION which occurred on 30th November 1949 at LITTLEHAMPTON in the SOUTHERN REGION BRITISH RAILWAYS

LONDON : HIS MAJESTY'S STATIONERY OFFICE

1950

SIXPENCE NET

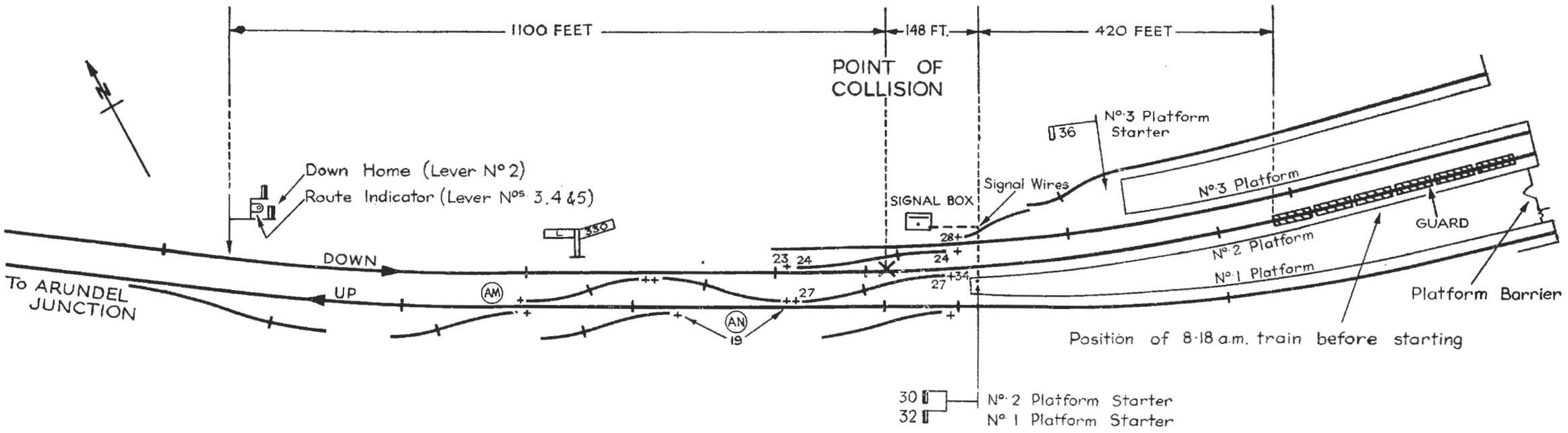
SOUTHERN REGION

COLLISION AT LITTLEHAMPTON

30TH NOVEMBER 1949

DIAGRAM NOT TO SCALE

ONLY RELEVANT POINTS, SIGNALS & TRACK CIRCUITS INDICATED



SOUTHERN REGION
BRITISH RAILWAYS

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

28th February, 1950.

SIR,

I have the honour to report for the information of the Minister of Transport, in accordance with the Order of 1st December 1949, the result of my Inquiry into the collision which occurred at 8.19 a.m. on 30th November 1949, at Littlehampton in the Southern Region, British Railways.

While the 8.4 a.m. eight-coach electric passenger train Bognor Regis to London Bridge (via Littlehampton) was entering No. 3 platform under clear signals at approximately 20 m.p.h., it collided with the 8.18 a.m. six-coach electric passenger train Littlehampton to Ford which left No. 2 platform with the Starting signal at Danger.

There were about 20 passengers in the incoming train and between 150 to 200, including a large number of school children, in the other, but fortunately there were no serious casualties ; ten passengers and one railway servant were slightly injured. Prompt steps were taken to summon assistance and doctors and ambulances arrived in six minutes.

The 8.4 a.m. train consisted of four 2-car units of a total weight of 301 tons and length of 518 feet. The 8.18 a.m. train consisted of three 2-car units ; its weight was 223 tons and length 388 feet. Coaches of both trains were of composite construction on steel underframes. The Westinghouse brake operated on all wheels and brake power of each train was 58% of the tare weight.

At the moment of impact the outgoing train had just been stopped by an emergency brake application, but the off-side corner of the first coach was foul of the Down line. The leading bogie was derailed and the corner of the motorman's cab was driven in ; twelve window and door lights were broken in this vehicle and five in the third. The incoming train came to a stand with the leading end 215 feet past the point of collision and the first two coaches were derailed all wheels. The off-side panelling of the front coach was ripped off for a length of 25 feet and a number of lights in this and the next were broken. The other stock of both trains sustained little or no damage.

Damage to track and signals was slight ; it was confined to the points and crossings at which the collision occurred. Current on the Down and Nos. 2 and 3 Platform lines was cut off by the opening of the high speed breakers on short circuit ; current on the Up and No. 1 Platform lines was switched off six minutes later. A special 'bus service was arranged between Littlehampton and Ford and normal working was resumed into Nos. 1 and 2 platforms at 6.14 p.m. the same evening. No. 3 platform was brought into use again at 3.35 p.m. on the next afternoon.

The weather was fine and visibility was good.

DESCRIPTION.

1. Littlehampton is the terminus of a short double line from Arundel Junction where the route bifurcates to Ford and the West Coast line on the one hand and to London (via Horsham) and Brighton on the other. The line is level approaching the station and then rises at 1 in 330 for the last 500 yards. There are three platforms on a curve ; Nos. 1 and 2 are 840 feet and No. 3 is 570 feet long, and they are all covered with verandahs for 280 feet from the buffer stops. When a train is standing at No. 2 platform, view of the Starter is obscured from the station end (i.e. for the first 150 feet to 200 feet, depending on the length of the train). This signal can, however, be seen from No. 1 platform or through the periscope in any of the brake compartments. The layout, relevant signals and track circuits, are shown on the diagram.

2. Both running lines to Arundel Junction are fully track circuited, train describers are installed and there is no manual block. The signal box, which is on the Down side and nearly opposite the end of No. 2 platform, contains a mechanical frame of 37 working and 7 spare levers with mechanical interlocking, electric point and bolt detection and track circuit controls. In order to hold the road, running signals, when reversed, are back-locked until the appropriate track circuits ahead are occupied ; a key is provided for release of the back-lock when necessary. Signals are of the upper quadrant type and a route indicator alongside the Home signal displays the number of the platform for which the route is set.

3. Movements of trains in and out of Littlehampton Station immediately before the accident were as follows :—

TIME	MOVEMENT IN OR OUT	TRAIN	PLATFORM NO.
7.57 a.m.	Out	7.50 a.m. Ford to Bognor (via Littlehampton).	2
8.0 a.m.	Out	Littlehampton to Arundel.	3
8.9 a.m.	Out	Littlehampton to London Bridge.	1
8.10 a.m.	In	7.21 a.m. Brighton to Littlehampton.	2

The last named train formed the 8.18 a.m. Littlehampton to Ford and stopped with its leading end close to the buffers so that the rear of the train was about 420 feet from the Starting signal.

4. Signalman F. G. Booker, of Littlehampton box, said there were no shunting movements during this period and a few minutes after the arrival of the 8.10 a.m. train in No. 2 platform he began setting the road for its departure. He pulled Nos. 19 and 34 bolt levers but failed to reverse No. 27 crossover and so could not work No. 30 lever controlling the Starter. He thought, however, that he had set the road correctly and had cleared the Starter. At 8.17 a.m. the 8.4 a.m. Bognor to London Bridge train was described to him from Arundel Junction, so he set up the parallel route into No. 3 platform and pulled the route indicator and Home signal levers. He was standing by the lever frame when he saw the incoming train approaching and at the same time noticed the outgoing train leaving No. 2 platform. He was not alarmed because he felt sure he had cleared the Starting signal, although he could not actually see it from his position in the box ; even when he heard the brakes applied he thought the driver was stopping because of some station requirements and not for the emergency. A moment later the collision occurred in front of his box. He immediately sent the "Obstruction Danger" signal to Arundel Junction and replaced No. 2 Home signal to Danger. He then checked the levers in the frame and noticed for the first time that he had not pulled Nos. 27 and 30. He was therefore surprised when he saw from the cabin window that No. 2 platform Starter (No. 30 lever) was off. He remembered seeing it at Danger after the departure of the 8.9 a.m. train from No. 1 platform, and both the motorman and guard confirmed this. It was discovered later that a derailed wheel had driven the signal wire so deeply into the ballast that it had pulled off the signal arm.

5. Motorman C. C. Young and Guard W. Gander, of the 8.4 a.m. incoming train, both saw the Home signal "off" and they estimated the speed of their train to be 10 to 20 m.p.h. when the collision took place. Young added that the route indicator was set for No. 3 platform, which was the usual one. The fact that a train was leaving No. 2 platform when he was entering the station did not make any impression on him, as he had often passed it at about the same place. He did not observe the position of the platform Starters, though after the accident he saw No. 2 was "off."

6. Motorman R. S. Willcocks, of the 8.18 a.m. train, said he had been in charge of it every alternate week for the last 19 months. On the morning of the accident he arrived as usual in No. 2 platform with the 7.21 a.m. train from Brighton and stopped with the leading coach close to the buffers. He walked to the other end and on his way there he saw the Starter was "off"; so, after fixing the head-code in front of the cab, he got out and began talking to some children in the leading coach. While he was still speaking to them, he heard the guard's whistle and on receipt of the "Right away" he got back into the cab and started the train. He said he looked at the signal again and it was still "off". He was quite sure it was for his platform and not for the adjoining one.

On being questioned, Willcocks thought he might not have seen the Starter "off" until he had fixed the head-code on the front of the train, but he was emphatic that the signal was Clear from the time he got out of the cab until he started. He explained that it was his usual practice to remain in the cab but he admitted that on this occasion he got out because the children in the train had spoken to him. He also agreed that he had talked to them on several previous occasions.

Continuing his evidence he stated that when he was passing the Starter he noticed the incoming train and, as it appeared to be coming straight towards him, he immediately dropped the "dead man's handle" and made an emergency brake application. He stopped with the off-side corner of the cab foul of the Down line. He said that although he had worked this train out of No. 2 platform on many other occasions, he had not realised a parallel movement into No. 3 platform was possible at the same time. He thought he usually passed the incoming train between the signal box and the Home signal. When questioned regarding the emergency action which he took, he affirmed that he did this because his train was travelling straight ahead into the path of the incoming train and not because he had passed the Starter at Danger.

7. Passenger Guard W. G. Shelton, of the 8.18 a.m. train, was not a satisfactory witness ; his recollection of incidents in connection with the accident was hazy and his evidence was contradictory. He said that he arrived with the train from Brighton at 8.10 a.m. and immediately went to the guard's room. He returned in a few minutes and at starting time he received the signal from the porter at the ticket barrier. In his first statement, he said that he walked across the platform, saw the Starter was "off", then returned to his brakevan (at the rear of the fourth coach) and gave the "Right Away" to the driver ; he watched the signal through the periscope in his van and it was still "off" when the collision occurred. Later he retracted this evidence and said that, in view of statements made by other witnesses, he was now

uncertain whether he walked across the platform and saw the Starting signal at all, nor could he be sure whether he saw it at Danger when he looked at it through the periscope. Although he was not injured in any way he said he suffered from shock and only had fleeting memories about what had occurred.

8. Station Foreman C. Turner, who was on duty at Littlehampton Station, stated that after the arrival of the 7.21 a.m. train in No. 2 platform he was called to the telephone and only returned as the 8.18 a.m. train was leaving. He was in time to see Porter Humphrey close the platform barrier and give the signal to Guard Shelton, who was standing outside the brake compartment near the middle of the train. Shelton turned round, gave the "Right Away" to the motorman, and got into the train ; he did not walk across the platform. Turner said that he could not see No. 2 Starter from his position but later when he walked down the platform after the accident he saw the signal was "off".

9. Temporary Porter F. Humphrey, who was acting as ticket collector on No. 2 barrier, said that when it was time for the 8.18 a.m. train to depart, he closed the barrier and gave the signal to the guard, who got into his brakevan, waved his flag to the motorman, and the train started. A few seconds later Humphrey heard the noise of the collision and ran up the platform to render assistance. He then saw the Starter for the first time and noticed it was "off".

10. Signal Lineman F. J. Morgan said that when he arrived at Littlehampton at about 9.20 a.m. No. 2 Starting signal was in the "off" position. He walked round the trains, saw the set of the crossover roads and examined the levers in the frame, where No. 30 lever was in the normal position. He then crawled underneath the 8.4 a.m. train and found that one of the wheels of the leading bogie of the second coach had run over the signal wires to Nos. 1 and 2 Starters and had driven them into a sleeper and at least a foot into the ballast. The wire to No. 1 Starter was cut but the other was still intact and very tight. The strain in it had pulled off the signal which immediately flew back to Danger when he released the wire on the crank. He said that he had examined these signals a week before the accident and had found everything in very good condition.

11. Area Inspector C. W. G. Allaston, who arrived at 8.40 a.m., and Signal and Telegraph Inspector H. G. Rutherford, who reached the scene at 10.30 a.m., both checked the levers in the signal box. They confirmed that the route was correctly set through No. 24 crossover to No. 3 platform, and that Nos. 27 and 30 levers were locked normal in the frame with Nos. 19 and 34 bolts reversed. Inspector Rutherford also checked the run of the signal wires to Nos. 1 and 2 Starters and found conditions as described by Morgan.

Conclusion

12. There is no doubt that the 8.4 a.m. train was entering the station under clear signals : it was under proper control and Motorman Young was in no way to blame for the accident. On the other hand, although Motorman Willcocks was emphatic in his declaration that the Starting signal was "off", all material evidence points to it being at Danger when his train left No. 2 platform. The sight of this signal in the "off" position directly *after* the accident undoubtedly convinced him that it must have been cleared *before* the collision.

No. 30 lever, controlling No. 2 platform Starter, was effectively locked by No. 27 crossover in the normal position and therefore the signal arm could not have been "off" unless it had failed to return to Danger when its lever was last replaced. The arm was seen, however, in its normal position, not only by Signalman Booker but also by the driver and guard of the Littlehampton to London Bridge train which left No. 1 platform at 8.9 a.m. Furthermore, the discovery of the signal wire driven into the ballast by a derailed wheel of the incoming train made it clear that the tightening of the wire pulled off the signal arm after the accident, and the fact that it flew back to Danger as soon as this wire was released indicated that it had not been sticking.

It is conceivable that No. 1 platform Starter might have been left "off" after the departure of the 8.9 a.m. train or else pulled by Booker in mistake for No. 2 Starter, but there was no evidence to this effect and Willcocks himself said it was at Danger. It if had been pulled by mistake it would have been back-locked until track circuits AN and AM were occupied and, although Booker could have used his key to release the lock and restore the lever, there is nothing in his evidence, or in the manner in which he gave it, to suggest that he did this. Even if No. 1 Starter had been at "Clear" there would have been no excuse for Willcocks to accept it as applying to his line because both signals are well apart from each other and can be easily distinguished.

It would seem that on this occasion Willcocks, who on his own admission was accustomed to talk to the children on his train, allowed his attention to be distracted, so that on receipt of the guard's "Right Away" he got into his cab, started his train, and then looked back to check that everything was correct—a natural precaution with so many children on the train. He probably did not look forward until he was near the Starting signal, when on seeing it at Danger he made an emergency brake application. A test after the accident demonstrated that if he had done this he would have stopped his train in the position in which it was actually found. If, on the other hand, he had not applied his brake until he realised he was running straight ahead instead of taking the diverging crossover, he might well have travelled 60 feet or more beyond the signal before appreciating this, and then he could not have stopped where he did. I therefore conclude that Motorman Willcocks irregularly started his train without observing the fixed signal at Danger and he must be held primarily responsible for the accident. He is 56 years of age, with 40 years' Railway service ; he has been a motorman for the last 18 years and he has had a clear record.

13. I am convinced that Guard Shelton did not cross the platform and observe the Starter before giving the "Right away"; nor did he look for this signal through the periscope in his van. If he had done so he could not have failed to see the signal at Danger and, as the train travelled 420 feet before reaching it, he had ample time in which to apply the brake and attract his driver's attention. Rule 143 makes it clear that the guard's "Right Away" is only an indication that station work is completed, but Rule 148(a) lays down that a guard "*must also keep a good lookout when leaving stations*", an important duty which Shelton failed to carry out. He must therefore bear a share of the responsibility. He is 52 years of age, with 36 years' Railway service and he has been a passenger guard for the last 6½ years. He has a clear record.

14. It is unfortunate that before clearing the Home signal, Signalman Booker did not set the route for the outgoing train which was due to leave half-a-minute before the other arrived. I am sure he intended to do so, and his failure to complete the lever movement is difficult to understand.

Remarks

15. Consideration has been given to changing the locking of No. 27 crossover so that the points at the platform end will lie normally for the Up instead of for the Down line. This alteration, though not providing a complete safeguard against collision, would have prevented the accident and I understand that this work is already scheduled to be carried out. It is not practicable, however, to design a terminal station of three or more platforms so as to avoid all possibility of collision in the event of an over-run and at the same time give adequate operating facilities.

Strict observance of signals is the fundamental duty of all drivers and motormen and on this, not only safety, but the whole system of railway operation must always depend. Unfortunately, a number of cases of trains starting against signals has shown that a few of these men have not maintained that high standard of discipline for which railwaymen are so justly renowned, but I have no doubt that suitable steps have been taken to impress upon them the vital importance of concentrating on their work at all times and of not allowing themselves to be distracted.

I have the honour to be,

Sir,

Your obedient Servant,

C. A. LANGLEY,

Brigadier.

The Secretary,
Ministry of Transport.