MINISTRY OF TRANSPORT

RAILWAY ACCIDENT

REPORT ON THE COLLISION

which occurred on

9th October 1961

at

HALL ROAD STATION

in the

LONDON MIDLAND REGION BRITISH RAILWAYS

LONDON: HER MAJESTY'S STATIONERY OFFICE
1962
THREE SHILLINGS NET

MINISTRY OF TRANSPORT,
ST. CHRISTOPHER HOUSE,
SOUTHWARK STREET,
LONDON, S.E.1.

26th February, 1962.

SIR,

I have the honour to report for the information of the Minister of Transport, in accordance with the Order dated 17th October, 1961, the result of my Inquiry into the collision between two passenger trains that occurred at about 7.34 a.m. on Monday, 9th October, at Hall Road station on the electrified line between Liverpool Exchange station and Southport, in the London Midland Region, British Railways.

At the time of the accident trains were being run on both the Up and Down lines between Hall Road and Eccles Crossing, Formby, the second box from Hall Road in the Down direction, under Block Regulation 25 (failure of block signalling apparatus) because the signalman at the intermediate box, Hightown, which had no block switch, had not reported for duty. The signalman at Hall Road had allowed the 7.4 a.m. Down multiple unit electric passenger train from Liverpool Exchange to Southport to proceed to the starting signal, which he kept at Danger, without giving any instructions to the driver or guard about the emergency working. The signalman then authorised the 7.10 a.m. Down multiple unit electric passenger train also from Liverpool Exchange to Southport to pass the home 2 signal (the platform starter) and the starting signal at Danger, and to proceed cautiously to Hightown. Soon after the second train had started from the platform, the signalman cleared the starting signal. The driver of that train observed that the signal had been cleared and assumed that it was for his train, and he accelerated. He did not notice the stationary 7.4 a.m. train ahead and, after travelling some 400 yards, his train collided with it at about 35 m.p.h. The brakes of the latter train had been released in preparation for re-starting, and it was pushed forward for a distance of some 20 yards, the brakes having again become fully applied by the severing of the airpipe as a result of the impact.

There was some telescoping between the front end of the leading car of the 7.10 a.m. train and the rear end of the 7.4 a.m. train, and the driving cab of the former train was wrecked. The second coach of this train also telescoped slightly into the leading coach. The trailing bogie of the rear coach of the 7.4 a.m. train was derailed. Forty-one passengers and the driver and guard of the 7.10 a.m. train were injured, and were conveyed to the hospital at Waterloo, about 1½ miles on the Liverpool side of Hall Road. With the exception of two passengers one of whom was seriously injured, and the motorman, all were discharged on the same day.

An emergency call for ambulances was made at about 7.40 a.m. from the Electrical Control Room at Hall Road. Three ambulances arrived with commendable promptitude at 7.50 a.m., and others were called later. All the injured had been removed to hospital by 8.20 a.m. No call was made for the fire service, the police or doctors.

The current was removed from the Down line and from the sidings adjacent to the scene of the accident by the circuit breakers opening on short circuit as a result of the collision, and the line was then isolated by the electric control operator, Hall Road. The Up line was not obstructed and single line working was introduced over it at 8.44 a.m. Breakdown equipment was summoned without delay and the damaged vehicles were removed and normal working was resumed at 5.20 p.m.

It was a wet morning but it was not raining heavily at the time of the accident. It was nearly full daylight and visibility was good.

DESCRIPTION

The line and the site

1. The line between Liverpool Exchange station and Southport (18½ miles distant to the North) is electrified on the third rail system at 650 volts D.C. For the first 4 miles from Liverpool Exchange there are four tracks and thereafter there are two tracks. The line carries a heavy traffic of commuters to and from Liverpool. The signal boxes referred to in this Report are as follows:—

	Approximate distance between Boxes	*Approximate distance from Liverpool Exchange Station*
Brook Hall Road		6 miles
	½ mile	
Blundellsands and Crosby Station		6½ miles
	½ mile	
Hall Road		7 miles
	2 miles	
Hightown		9 miles
	2 miles	
Eccles Crossing, Formby		11 miles

Some of the morning services to Liverpool Exchange (Up direction) start from Hall Road and Hightown and some of the evening services terminate at these stations. The signal boxes at Brook Hall Road, Hall Road, Hightown and Eccles Crossing each control a level crossing.

2. Figure 1 of the plan shows the signalling between Brook Hall Road and Eccles Crossing, Formby, signal boxes and figure 2 shows, in more detail, the layout and the relevant signals at Hall Road. At the latter station there are two electrified sidings on the Hightown side of the station. One is between the Up and Down lines, and it is known as the Middle Siding; the other is on the Down side of the Down line, and it is known as the Wall Siding. They are used for stabling the passenger stock for trains starting from and terminating at Hall Road and Hightown. In the Down direction the lines through Hall Road lie on a slight right-handed curve which extends up to the starting signal, and they fall on easy gradients.

3. The signals throughout the section are semaphores. The relevant signals in the Down direction at Hall Road are the home 1 signal, which is 70 yards on the Liverpool side of the box, the home 2 signal (the platform starter) and the starter which are respectively 176 and 689 yards ahead of the box. The standard mechanical interlocking, including the sequential locking of levers, is applied. Three-position block instruments are in use, but there is no Line Clear Release on the starting signal of some of the boxes, including Hall Road. The line between the home 2 signal and the starting signal at Hall Road is track circuited, and the track circuits control the home 2 signal.

4. Blundellsands and Crosby station box and Hall Road box each have a block switch the operation of which switches out the block instruments in the box and connects together the block instruments in the adjacent boxes on each side for block working. Brook Hall Road, Hightown and Eccles Crossing boxes have no such switch. In normal working the skeleton booking of trains is permitted and a special abbreviated Train Register is provided for this purpose. Up trains are recorded on the left side and Down trains on the right side of each page and the headings of the columns for each are:—

Eng. No.	Description of train	Train	Line	Arrive or Pass	Depart

5. The supply of electrical energy to the whole of the section is through sub-stations which are controlled remotely from the Electrical Control Room at Hall Road, the location of which is shown on the plan. There are sub-stations at Hall Road and Hightown, and the former has an additional circuit breaker for the control of current to the sidings mentioned in paragraph 2 above and some other sidings. That circuit breaker has an automatic reclose relay which, if the circuit breaker is opened on overload, recloses it after 20 seconds; if it re-opens it then becomes locked out. The main line circuit breakers are also fitted with reclose relays but they are not in use.

The multiple-unit electric trains

6. The 7.4 a.m. train comprised 2 motor coaches with 3 trailers between them; it weighed 155 tons and was 348 feet long. The 7.10 a.m. train comprised 2 motor coaches with 4 trailers between them; its weight was 179 tons and its length 417 feet. Both trains were of similar design and were equipped with the Westinghouse airbrake, with brake power of 75 per cent of the weight of the train. The stock was of all steel welded construction and was built in 1939 and 1940. The buffers were of the shock absorbing type.

The damage

7. The stock stood up to the impact extremely well on the whole and, although both trains suffered considerably, the main damage was confined to the front and rear ends of the leading coach of the 7.10 a.m. train, the driving cab of which was driven in, the front end of the second coach of that train, and the rear end of the 7.4 a.m. train, which was telescoped to the extent of about 6 feet. Remarkably few windows were broken and the seats were not displaced. The track was slightly distorted and some coaches of the 7.4 a.m. train were pushed against and caused slight damage to some passenger stock which was stabled on the Wall sidings. The damage generally was consistent with a colliding speed of about 35 m.p.h.

Rules and Regulations

8. The following are extracts from the British Railways Rule Book:—

Rule 38 (*b*) Home signals where starting signals are not provided, starting signals where advanced starting signals are not provided, and advanced starting signals, control the entrance of trains into the section ahead, and must not be passed at Danger except as follows:—

(xiii) When a train is required to enter a section during failure of instruments and/or bells and the Driver is instructed verbally by the Signalman (Block Regulation 25).

Rule 39 (*a*) When a stop signal is at Danger the stop signal next in rear of it and worked from the same signal box must not be lowered for an approaching train until the train is close to such signal and has been brought quite or nearly, to a stand.

Rule 40. When a Signalman wishes to communicate verbally with a Driver he must stop the train at the signal next in rear of the signal box for this purpose, but if it is not then possible for the verbal communication to be made, he must lower the signal (or subsidiary signal where provided) for the train to draw forward, and stop it

at the signal box by exhibiting a red hand signal. The Driver must not proceed until he clearly understands the verbal communication and has received the necessary authority.

Rule 54. After a train has been brought to a stand by a hand Danger signal from a signal box, the Driver must not move, although the hand Danger signal may have been withdrawn, until a green hand signal has been exhibited by the Signalman. This All Right hand signal will not authorise the Driver to pass a fixed signal at Danger unless he has been verbally instructed by the Signalman to do so.

9. The relevant parts of Regulation 25, Failure of Block Signalling Apparatus, of the Regulations for Train Signalling on Double Lines by the Absolute Block System, are given in Appendix I. Briefly this Regulation lays down:—

(i) A train must not be allowed to pass into the section where the failure exists without the driver and guard being advised of the failure.

(ii) The driver must be instructed to pass at Danger the signal controlling the entrance to the section ahead in accordance with Rule 38 (*b*) and to proceed cautiously.

(iii) When telephone communication is available, Line Clear messages must be exchanged over the telephone (clause (*a*) (iii)).

(iv) When neither telephone communication nor bell signals are available, trains must be worked on the time interval basis (clause (*a*) (iv)).

(v) When clause (*a*) (iii) is in operation all block messages sent or received on the telephone must be recorded whether the ordinary block signals are usually recorded or not.

(vi) When the failure has been rectified, normal working may be resumed after the signalman at the rear end of the section has sent by the driver of the last train running under the emergency arrangements, a restoration ticket to the signalman at the forward end of the section.

It will be noted that Block Regulation No. 25 refers to the *failure* of block signalling apparatus. Neither it, nor any other Regulation or Rule specifically refers to the sort of circumstances that arose in this case, in which it was not possible to use the block apparatus, not because of any electrical or mechanical failure, but because a signalman at a box with no block switch was not available to operate it. I was informed, however, that it was customary for Block Regulation 25 to be applied in such circumstances.

Narrative

10. At the time when this accident occurred, the arrangements were that the signal boxes mentioned in paragraph 1 were closed on Saturday night, and after the last train on Sunday until Monday morning, when Brook Hall Road, Hightown and Eccles Crossing, Formby, were required to open at 5.0 a.m., Hall Road at 6.15 a.m. and Blundellsands and Crosby station at 7.0 a.m. As already mentioned, there is no block switch at Hightown box. On the day of the accident the boxes at Brook Hall Road and Eccles Crossing were opened according to the programme but the signalman at Hightown did not report for duty.

After failing to get any response to block bell signals to Hightown box, the signalmen at Eccles Crossing and at Brook Hall Road spoke to each other on the telephone and they decided to introduce emergency working under Block Regulation 25 (*a*) (iii). The Control Office was advised of the situation. Trains were run under this Regulation until Hall Road box was opened at 6.15 a.m. when normal working was resumed between that box and Brook Hall Road. Emergency working, still under Regulation 25 (*a*) (iii), was continued between the Hall Road box and Eccles Crossing box. Throughout this period the porter at Hightown operated the level crossing gates under instructions from the signalmen on either side, but he did not operate the signals.

11. Several Down trains were passed between Hall Road and Eccles Crossing, Formby, before the signalman at Hall Road accepted the 7.4 a.m. Down passenger train. Except for one train, the 6.10 a.m. passenger train, they were stopped at the Hall Road home 1 signal and then at the box, and the signalman advised the driver of the situation and gave him authority to pass not only the starting signal but also the home 2 signal at Danger. The 6.10 a.m. train was not checked at the home 1 signal nor was it stopped at the box and the driver was authorised by the Hall Road porter to pass the other signals at Danger. At about the same time that the 7.4 a.m. Down train was accepted by Hall Road a relief signalman, who had been called by the Control, arrived at Hightown and opened the box, recording 7.22 a.m. as the time of opening. The signalman at Hall Road said that he obtained Line Clear for the 7.4 a.m. train from Eccles Crossing Box on the telephone, but it seems that he obtained it on the block instruments from Hightown, and he cleared the home 1 signal, without checking the train or stopping it at the box, and the home 2 signal but not the starter, for it; consequently neither the driver not the guard were aware of the situation. After the platform duties had been completed the driver drew the train up to and stopped at the starting signal. In that position the train was occupying one of the track circuits between the home 2 signal and the starting signal, and the former signal was therefore locked at Danger.

12. In the meantime the signalman at Hall Road had accepted the 7.10 a.m. Down passenger train. He stopped it at the home 1 signal and then at the box and advised the driver of the situation; he made over to him a restoration ticket to be taken to Hightown box for normal working to be resumed on the Down line, and told the driver to proceed to Hightown. After stopping at the platform the driver started the train. It had only travelled a short distance when he saw that the starting signal had been cleared, and he accelerated. There were coaches standing on the Middle and Wall sidings and he did not see the 7.4 a.m. train on the main line between the sidings until immediately before the impact. The guard of the latter train had, soon after it had stopped at the starting signal, got down from his brake van and was going towards a telephone to advise the signalman that the train was stopped. The driver, however, saw that the starter had been cleared and recalled the guard by sounding the horn, and he had released the brakes in preparation for starting. The guard was on his way back to rejoin the train when he saw the 7.10 a.m. train start from the station. He ran towards it in the four-foot waving his arms, but the driver did not see him and he was only just able to jump clear in time.

13. It was evident that in the working of trains under Regulation 25 (*a*) (iii) the signalman at Hall Road and some other signalmen had committed a considerable number of breaches of the Rules and Regulations. Furthermore, none of the signalmen in the boxes mentioned in paragraph 1 had complied with section (*a*) (vi) of the Regulation, in that they had, whilst the emergency working was in operation, continued to book nothing but the skeleton timings of trains.

14. There was a difference of opinion between some railway officials as to whether, in circumstances such as obtained in this case, trains should have been worked under clause (*a*) (iii) or (*a*) (iv) of Block Regulation 25 (see Appendix I).

EVIDENCE

Signalmen

15. The Signalmen concerned in this case were:—

Name	*Signal Box*	*Time arrived on duty*
E. Waydock	Brook Hall Road	5.0 a.m.
J. Kerwick	Hall Road	6.15 a.m.
A. Parker	Hightown	Did not report for duty
G. E. Evans	Relieving signalman at Hightown ...	7.22 a.m.
A. E. Smith	Eccles Crossing, Formby	5.0 a.m.

The evidence of Waydock and Smith is recorded first, then that of Kerwick and Evans in the order in which they came on duty, and then that of Parker.

16. The following are the booked departure times at Blundellsands and Crosby, Hall Road, Hightown and Formby stations of the 7.4 a.m. and 7.10 a.m. trains and of the two preceding trains:—

	6.30 a.m.	*6.50 a.m.*	*7.4 a.m.*	*7.10 a.m.*
Blundellsands and Crosby	6.45	7.5	7.19	7.25
Hall Road	6.48	7.8	7.22	7.28
Hightown	6.51	7.11	7.25	7.31
Formby	6.54	7.14	7.28	7.34

20 seconds is allowed in the running time for station time.

There is no station at Brook Hall Road. The passing times of trains at that box are approximately 1 minute before the departure times from Blundellsands and Crosby. Hall Road and Hightown signal boxes are close to the station platforms.

17. Appendix II shows the entries made in the skeleton Train Register books for the abovementioned trains, and other relevant entries.

18. Signalman Waydock had been a signalman for 10 years and had worked at Brook Hall Road signal box for five months. He said that when he and Signalman Smith were discussing the situation on the telephone, having failed to get any response to their block bell signals to Hightown, the Hightown porter came on the telephone and said that he could operate the level crossing gates at that station. Waydock said that, having got that assurance, he and Smith discussed as to whether they should introduce working under Section (*a*) (iii) or under (*a*) (iv) of Block Regulation 25, and they came to the conclusion that Section (*a*) (iii) was the correct one. He said that he had never received any instruction in this matter. He stopped Down trains at the Brook Hall Road signal (there is only one signal in the Down direction), called them forward to the box by waving his arms, and advised the drivers of the situation. He did not know what signals there were at Hightown and he did not give the drivers any authority to pass them but he told them to proceed cautiously after getting an assurance from the porter there that the gates were closed.

19. Waydock went on to say that when Hall Road signal box was switched in he did not adopt the correct procedure for restoring normal working on the Down line by sending a restoration ticket, although he knew that it should have been done. He added that he did not receive a ticket for the restoration of normal working on the Up line. He was aware that the Regulations required him to

keep full bookings when Regulation 25 (*a*) (iii) was in force and could give no reason for having failed to do so. He also agreed that he had not used the correct form of wording in the exchange of block working messages as required by Regulation 25 (*a*) (iii) (see Appendix I) and had merely said to the signalman at Eccles Crossing, for example in the case of a baggage car train, " Baggage cars on the way to you ".

20. Signalman Smith had been a signalman for 5 years and had been at Eccles Crossing, Formby, for nearly one year. He said that, having failed to get a reply to his block bell signals to Hightown, he decided to introduce working under Block Regulation 25 (*a*) (iii) between his box and Brook Hall Road. He added that the question of working under Section (*a*) (iv) had not entered his mind and that he had not been given any instructions to work under that section in such cases. Smith said that the Hightown porter was travelling in the first Up train to leave Formby and that the man had assured him that he could work the level crossing gates at Hightown. Smith agreed but told the porter not to work any of the signals. He went on to say that he obtained an assurance from the porter that the gates were closed to the road before he allowed any train to leave, and that he cautioned the driver of every train to pass the signals at that station at Danger and to proceed cautiously.

21. Smith said that he sent a restoration ticket to Hightown when that signal box switched in and that he had recorded as much information as was possible in the skeleton book supplied to him. He had not got a train register book for full booking, and he added that if he had done the full booking of trains some delays might have resulted. He was insistent that when Block Regulation 25 (*a*) (iii) was in operation the exchange of block signalling messages was strictly in accordance with that Regulation.

22. Signalman Kerwick, who was 57 years of age, had been a signalman for 33 years and had worked at Hall Road for 8½ years. He said that when he came on duty, having been on rest on the previous day, he spoke to the signalmen at Eccles Crossing and Brook Hall Road, and he understood that Hightown box was not open and that trains would be worked between his box and Eccles Crossing under Block Regulation 25 (*a*) (iii). He said that he had stopped all trains at his home 1 signal, drawn them forward to the box and cautioned the drivers as required by that Regulation, except that he did not stop the trains again to caution the guards and that he omitted to caution the driver and guard of the 7.4 a.m. Down train at all. He agreed that he might not have cautioned the 6.10 a.m. driver in this way, and he might have told a porter to caution him. Just after he had had the 7.4 a.m. train accepted by Eccles Crossing (its acceptance is not recorded at that box) a signalman at Hightown box telephoned and said that he was going to open it. Kerwick said that he then got the opening bell signal (5–5–5) at 7.22 a.m. or 7.23 a.m. but he did not record it. He thought that he must have told the signalman at Hightown that Eccles Crossing had accepted the 7.4 a.m. train; he was sure that he had not sent the Is Line Clear bell signal (3–1–2) to Hightown for that train.

23. Kerwick went on to say, " I then proceeded to the desk to prepare a restoration ticket and on starting it I looked round. I know I did not have much time to give it to the 7.4 a.m. train, as it was almost by my signal. I must have walked away then and automatically failed to caution that train." He was certain that the train was near the home 1 signal when he cleared it, and he then cleared the home 2 signal also, but not the starter. When asked why he cleared these signals and did not caution the driver, Kerwick replied that it was " through being distracted with the telephone and the restoration ticket."

24. Kerwick said that he was not certain whether he had asked Hightown for Line Clear for the 7.10 a.m. train. If he had done so it would have been on the telephone and not on the block instrument. He stopped that train at the box, asked a railwayman to take the restoration ticket which he had prepared to the driver and saw him do it, and told the driver to hand the ticket to the signalman at Hightown. He also told the driver to pass the home 2 and starting signals at Danger. He said that he had given similar instructions to the drivers of all trains except the 7.4 a.m., and that he had kept the home 2 signal at danger and had told the drivers to pass it in addition to the starting signal because he thought that it was less confusing for them. He stated that in giving these instructions to the driver of the 7.10 a.m. train he must have forgotten the 7.4 a.m. train.

25. Kerwick continued by saying " The 7.10 a.m. train seemed to be one minute in the platform longer than his ordinary station duties, so I lowered the starter, thinking there was some confusion, and to get him going. It was the only time I did pull the starter." He was insistent that that was his only reason for clearing the starter. He was not certain whether he had tried to pull home 2 signal as well (he could not have cleared it because the track circuits ahead were occupied by the 7.4 a.m. train) and he agreed that he could not have observed the track circuit indicator in his box. He could not remember whether he had given Train Entering Section for the 7.4 a.m. train and repeated that he must have forgotten about that train because he was busy getting the stock of an Up train out of the sidings.

26. Kerwick stated that he saw that the 7.10 a.m. train had stopped short of the starting signal and that he told a porter to go and find out the reason. A short time later he heard on the telephone that there had been a collision, but it was not until a relieving Station Master (Mr. Charnley) reached the box and told him the name of the driver of the 7.4 a.m. train that he realised that he had omitted to caution him. Kerwick said that when he heard about the collision he sent the Obstruction Danger signal to Blundellsands and Crosby at 7.30 a.m., but not to Hightown.

27. Kerwick had previously worked trains under Block Regulation 25, but he stated that he had never recorded the times of all block messages given and received on the telephone in the train register, and the reason he gave was that a proper train register book had not been provided for this purpose in his box. He had, however, not even recorded the full skeleton booking of trains and there was no record of the time of the opening of Crosby or Hightown boxes nor of the times of the 7.4 a.m. or the 7.10 a.m. trains. Neither had he made any entries for two Up trains. The only explanation that Kerwick could give was that he was busy on the telephone and with the stock for Up trains and that he would have recorded the times later. He admitted that when he switched in Hall Road box, he did not send a restoration ticket for the Up line to Brook Hall Road box and explained this by saying that it was " an omission." He said that he did not receive one for the Down line from that box.

28. Kerwick said that he was feeling quite well and that he had no troubles or worries at home, and that he had nothing on his mind. He said that he had been examined in the Rules and Regulations about two months before the accident and he agreed that emergency working had been covered at that time. He said that he had never been instructed to work to Block Regulation 25 (*a*) (iv) in such circumstances. He added that while he was working under Block Regulation 25 he had maintained his block instrument at Line Closed.

29. Signalman Evans, who had been a signalman for 15 years, said that when he arrived at Hightown box he inquired the position from the signalmen at Eccles Crossing and Hall Road. He was told that the Down line was clear and that the only train on the Up line was the 7.0 a.m. from Southport, by which he had arrived, and which was proceeding to Hall Road. He realised that Block Regulation 25 had been in operation and he assumed that the working had been under Section (*a*) (iii). Soon after giving the block bell signals for opening the box he was offered the 7.4 a.m. Down train on the block instrument by the signalman at Hall Road, which he accepted, and he turned his block instrument to Line Clear. Almost immediately he was given Train Entering Section and then turned his block instrument to Train on Line. Evans said that as the 7.4 a.m. train had not arrived at Hightown he rang the signalman at Hall Road and was told that it was standing at the starting signal. He rang about it again a short time later and was then told, " There are two trains going towards you now ".

30. Evans said that as soon as he received Train out of Section for the 7.0 a.m. Up train from Hall Road he was given the block bell signal for blocking back on the Up line at Hall Road and accepted it. He also accepted the next Up train, the 7.10 a.m. from Southport on the block instruments and got Line Clear for it from Hall Road in the same way. He agreed in fact that after opening Hightown box, he had started normal working on the block instruments straight away. He did however receive a restoration ticket for the Up line by the 7.10 a.m. from Southport and sent one to Hall Road by the same train.

31. Evans stated that the first entry in his skeleton Train Register (item (*b*) of Appendix II) must have been for the 7.4 a.m. train but he could give no explanation for having erased it. Nor could he give any explanation for the figure 29 and said that he had not anticipated the arrival time of the 7.4 a.m. train. He thought that the remaining entries (item (*c*) of Appendix II) may have referred to an Up train which he had inadvertently entered on the Down side of the book. He was definite that he did not receive a second Line Clear inquiry or a further Train Entering Section signal from Hall Road.

32. Evans said that even though Block Regulation 25 was in operation, he did not consider that there had been a block failure and he thought that, as soon as he opened Hightown box, he was entitled to resume normal block working without waiting for restoration tickets. He went on to say that he had on several occasions previously worked trains under Block Regulation 25 but that he had not kept a complete record of the times of all the block signals, as he had not done on this occasion, although he knew that he was required to maintain full bookings.

33. Signalman Parker, who had been a signalman for 3 years and had worked at Hightown for eighteen months, said that during the night of the 8/9th October his wife suddenly became ill. He lived 5 miles from Hightown and he went to the house of a neighbour to telephone to the station that he could not come on duty, but the instrument was out of order. He later went to a telephone call-box about 2½ miles distant and gave the information. He stated that he had worked trains between Hightown and Hall Road under Block Regulation 25 (*a*) (iii). He had not recorded the times of all block messages exchanged as required because there was no train register book in the box for that purpose.

34. G. L. Pinkstone, porter at Hightown, said that he was travelling in the first Up train on the section, the 5.0 a.m. from Southport, which was stopped at Eccles Crossing box at Formby. He heard there that the signalman at Hightown had not reported for duty, and he said that he could work the level crossing gates at that station. The train then proceeded and reached Hightown at about 5.45 a.m. Pinkstone got into the signal box through a window, closed the gates to the road, and the train proceeded to Hall Road. He maintained the gates across the road, except when he had to open them on two occasions for road traffic to pass, but closed them again immediately afterwards. On each occasion he had obtained permission from the signalmen at Eccles Crossing and Brook Hall Road. He said that he had not on any occasion worked any of the signals.

35. G. A. Stead, station foreman, Hall Road, came on duty at 7.0 a.m. and the first train he dealt with was the 6.50 a.m. train from Liverpool Exchange to Southport, which was due to leave Hall Road at 7.8 a.m. He said that he did not know whether that train had been stopped at the box, nor whether the home 2 signal had been cleared for it, but he did remember that the next train, the 7.4 a.m., had entered the platform without being stopped at the box; he did not notice whether the home 2 signal was cleared for that train. Stead was, however, certain that the 7.10 a.m. train was stopped at the box, and that it passed the home 2 signal at Danger. He was quite sure that it had stopped for no longer than was usual at the platform. He said that two or three minutes after it had left, Signalman Kerwick asked him to go and see what had happened to that train, because it had stopped. Stead walked towards the train and seeing a number of people running towards it, he realised that something must be wrong. When he got closer to it he heard that there had been a collision and went to a telephone and informed the Control. He then went back to the signal box and informed the signalman.

The train crews

36. The crews of the trains concerned were:—

Driver J. E. Williams	...	7.4 a.m. train, Liverpool Exchange to Southport.		
Guard A. E. Eedle...	...		do.	do.
Driver S. J. Costello	...	7.10 a.m.	do.	do.

The Guard of the 7.10 a.m. train was ill and I could not record his evidence.

I also took statements from:—

Driver W. Rigby ...	...	5.0 a.m. train, Southport to Liverpool Exchange.		
Driver J. T. Winrow	...	5.5 a.m.	do.	do.
Driver W. R. Martin	...	6.10 a.m. train, Liverpool Exchange to Southport.		
Driver J. Whalley ...	...	6.50 a.m.	do.	do.

Relief Station Master R. Charnley, who was travelling as a passenger in the 7.4 a.m. train.

37. Driver Williams had worked the 6.41 a.m. train from Hall Road to Liverpool and he knew about the emergency working between Hall Road and Eccles Crossing. On his return trip on the 7.4 a.m. he expected to be stopped at Hall Road box and cautioned, but instead he saw that the home 1 and home 2 signals were clear and he assumed that the emergency working had been cancelled. He could see from the end of the platform that the starting signal was at Danger and so, after getting the code ring from the guard on the communication bell for starting, he drew the train forward and stopped it about 6 yards short of the signal. The gradient was insufficient for the train to roll forward so he released the brakes in preparation for re-starting.

38. Williams went on to say that about three minutes later he got a code ring from the Guard indicating that he, the Guard, was about to leave the train in order to advise the Signalman, in accordance with Rule 55, that it was stopped. He thought that it was about a minute later that he saw the signal become clear and so he recalled the Guard by sounding the horn. The collision occurred almost immediately afterwards and the train was pushed forward past the signal. Williams received a severe blow on the back of his head, but he got down from the cab and proceeded backwards along the near side. He could not, however, get far because the stock of his train was in contact with stock on the Wall Siding. He did not know whether the current had been removed from the conductor rail, but he assumed that it had been removed; he did not, however, use the short circuiting bar that was carried in his driving cab.

39. Williams said that at the time of the accident it was more or less full light and that he had been able to see the arm of the starting signal from the end of the platform. The electric front lights and the illuminated destination boards at both the front and rear ends of the train were, however, still alight. There was a slight drizzle at the time, which later turned into heavy rain, but visibility was good.

40. Guard Eedle was unaware of the emergency working, and said that the train ran into Hall Road station in the usual way without being checked at the signals. He saw that the home 2 signal was clear and, when platform duties had been completed, gave the starting bell code to the driver. He confirmed Williams' account of the subsequent events but added that he had intended to carry out Rule 55 by telephoning to the signalman from an isolation telephone (this telephone was situated approximately 100 yards in rear of the 7.4 a.m. train and between the Down main line and the Middle Sidings; it is marked on the plan). Eedle recalled that he had picked up the telephone to speak to the signalman when he heard the sound of the train horn and he then saw that the starting signal had been cleared. He therefore went to rejoin the train, but on the way he happened to turn round and saw the 7.10 a.m. train leaving the station and coming towards him on the Down main line. He stated that he ran in the 4-foot towards the train waving his arms, but the driver evidently did not see him and he was only just able to jump out of the way before the train passed and went on to collide with his train. Eedle stated that he then went back to the telephone and advised the Electrical Control Room that there had been an accident, and told them to remove the current.

41. Eedle said that he had looked at his watch when he was going to the telephone on the first occasion and saw that it was then 7.25 a.m. He thought that the 7.10 a.m. train was accelerating in a normal way and estimated that it was travelling at 25/30 m.p.h. when it passed him, though he added

that he was not a good judge of speed. He could not see the driver's face, and he did not hear its brakes being applied. He stated that the tail lamp of the 7.4 a.m. train was still burning and that the rear destination board was still illuminated. He confirmed that at the time of the accident there was a steady drizzle of rain.

42. Driver Costello, of the 7.10 a.m. train, had worked electric trains on the Liverpool/Southport section for three years. He said that on approaching Hall Road box the home 1 signal was at Danger and he stopped at it. The signal was then cleared and he drew up to the box and was informed by the signalman that Block Regulation 25 was in operation. The signalman made over to him a restoration ticket for delivery to the signalman at Hightown and said that he was " Right Away to Hightown ", and gave him a green hand signal, and Costello drew the train into the platform. After the normal platform duties had been completed the Guard gave the starting bell code. The home 2 signal was still at Danger so Costello gave a blast on the horn, whereupon the Guard repeated the bell code and Costello started the train at, he thought, 7.30 or 7.31, two or three minutes late. He said that he had travelled less than a train length when he saw the starting signal become clear. He accelerated, but one pair of the motored wheels began to slip and so he cut out the motor. He switched it in, but again the wheels started to slip. He said that he was on the point of cutting it out a second time when he looked up and saw the 7.4 a.m. train about 20 yards ahead. He dropped the dead man's handle and applied the brakes fully, but the collision occurred almost at once. He added that it was raining heavily at the time. His windscreen wiper was not working very effectively but he did not think that this affected his view.

43. Costello said that he had not been told by the signalman at Hall Road to pass the home 2 signal or the starting signal at Danger, but he assumed that, having been told that he was " Right Away to Hightown ", he was authorised to do so. He had not been told whether the train was being worked under Section (a) (iii) or (a) (iv) of Block Regulation 25. He went on to say that it was normal to move the regulator from the series to the parallel position soon after starting from a platform, but he could not remember whether he had done so after leaving Hall Road; he thought that he might have put the handle into the parallel position. He said that he did not see the Guard of the 7.4 a.m. train waving at him, and the only reason he could give for this, and for having failed to see the 7.4 a.m. train sooner, was that he was occupied in correcting the wheel slip. He estimated that the speed of the train at the time of the impact was 25 m.p.h. He went on to say that it was quite usual for stock to be standing on the Middle and Wall Sidings. He had worked trains previously under Block Regulation 25 but he had not seen a restoration ticket before. He glanced at the one given him by the signalman at Hall Road while the train was standing in the platform and then put it in front of him; he was insistent that he was not reading it whilst the train travelled towards the 7.4 a.m. train.

44. Drivers Rigby and Winrow said that, when driving Up trains, they had been correctly stopped at Eccles Crossing Box and that the signalman had told them of the situation and advised them that Block Regulation 25 (a) (iii) was in operation. He had then told them to pass his starting signal at Danger, and also the signals at Hightown providing the level crossing gates at that station were closed across the road. Winrow stated that on his return trip on the 6.30 a.m. train, Liverpool Exchange to Southport, he was stopped at the Hall Road home 1 signal, drawn up to the box and given similar information by the signalman, but he was not given any authority to pass the signals at Hightown. He said that the Hall Road starting signal was maintained at Danger and that he was authorised to pass it; he could not remember whether the home 2 signal was at Danger or at Clear; he thought that it was kept at Danger and that he was authorised to pass it also.

45. Driver Martin, of the 6.10 a.m. Down train, said that when he was approaching Hall Road the home 1 signal was clear and he drew into the platform. He had not been stopped at the box. The station porter told him that the Hightown box was not open and that he was to proceed to Eccles Crossing cautiously, passing all signals at Danger, and the porter added that the Guard had been informed. Martin was certain that the Hall Road home 2 signal was kept at Danger but he could not be certain whether the starter had been cleared. He did not know under what Block Regulation trains were being operated.

46. Driver Whalley, of the 6.50 a.m. train, said that he was stopped at Hall Road home 1 signal, and then at the box, and was told that trains were being worked under Block Regulation 25 (a) (iii). He was also told to pass both the home 2 signal and the starting signal at danger.

47. Drivers Rigby, Winrow, Martin and Whalley all said that the signals at Hightown were maintained at Danger.

48. Mr. Charnley, Relief station master, joined the 7.4 a.m. train at Blundellsands and Crosby station, and was sitting down reading in one of the centre coaches. He was not on duty, and he had not heard that Block Regulation 25 was in operation. He said that the run to Hall Road was normal and he thought that the train was on time there. After leaving, it drew down to the starting signal, where it stopped. After about 3 minutes he heard the train horn and very soon after that the collision occurred. Mr. Charnley said that he got down on the near side, where he met Driver Williams who told him what had happened. He then walked round the front of the train to the off side, where passengers were beginning to detrain, and he assisted by releasing the emergency ladders from underneath the stock. Mr. Charnley said that at that time he did not know whether the current had been

removed from the conductor rail, although he assumed that it had been removed because there was no train air pressure, and he thought that there would have been short circuiting. He did not tell the driver to use his short circuiting bar.

49. Mr. Charnley went on to say that some 7 to 8 minutes after the collision he met Guard Eedle, who told him that the current had been removed, and that ambulances had been called. He then took Driver Williams, who was injured, to the Electrical Control Room and spoke to the Traffic Control Officer. After that he went to the signal box and questioned Kerwick as to what had happened. The latter said at first that he had cautioned the 7.4 a.m. train but later, having heard the name of the driver, agreed that he might not have done so. Thereafter, Mr. Charnley did much useful work in organising single line working.

Supervisory Staff

50. Electrical Control Operator J. S. P. Jones was on duty at the Electrical Control Room at Hall Road. He said that the Hightown and Hall Road substation alarms sounded at 7.34 a.m. and he saw that the circuit breakers of the Down main line between those substations and the circuit breaker for the sidings at Hall Road had opened. The latter re-closed automatically and immediately re-opened and became locked out. He therefore left the main line breakers open. Very soon afterwards an electrical jointer ran into the Control Office and told him about the collision. Mr. Jones then informed the signalman, who appeared not to know what had happened, and then sent the jointer back to find out exactly what had occurred. A short time later the jointer telephoned and said that ambulances were required and Mr. Jones asked his assistant to dial 999 for them. He said that he was told that only ambulances were required, and that consequently he did not call any other services. He added that the clock in the control room was extremely accurate.

51. Mr. M. Melling had been station master at Hall Road for 4 years and was also responsible for Hightown. He lived at Formby. He heard of the accident soon after 8.0 a.m. and travelled from Formby to Hightown by the first available train. He went into the signal box and introduced single line working on the Up line between Hightown and Hall Road. He made and signed the following entry in the train register book: " Down line blocked. Single line working in operation on Up line—8.35 a.m." He said that when making this entry he did not notice whether any entries in the columns for Down trains had then been erased. When asked " Surely you would have noticed if they had been erased? " he replied " I cannot remember." He stated that he asked Evans what had happened, but Evans did not seem to know. Mr. Melling then went on to Hall Road box where he found Signalman Kerwick cool and collected, and carrying out single line working on the Up line quite normally.

52. Mr. Melling said that he had visited the signal boxes at Hall Road and Hightown regularly and had found the entries in the skeleton train register books satisfactory. He was aware that the full booking of all block messages exchanged when Block Regulation 25 (a) (iii) was in force had to be recorded, but he said that there was no book available for the purpose at Hightown or Hall Road. He also said that there had been a number of block failures but he had not checked as to whether the Regulations had been complied with. Mr. Melling concluded by saying that he considered that Kerwick was a calm and confident signalman, and also that he thought that he was quite fit.

53. Mr. W. F. Eachus, District Signalmen's Inspector, Southport, had been in charge of this district since his promotion to that grade four years ago. He travelled to Hightown and Hall Road with Mr. Melling, arriving at the latter station at 8.40 a.m. He also had gone into the signal box at Hightown but he did not question the signalman nor did he look at the Train Register Book.

54. Mr. Eachus stated that he considered that in circumstances such as arose in this case, trains should have been worked under Block Regulation 25 (*a*) (iv), and not 25 (*a*) (iii). He said that that was his own opinion, and that he had been given no instructions on the point. He added that he had not given any specific instructions to signalmen to work to Block Regulation 25 (*a*) (iv) in such circumstances, but that he had mentioned it to them in general conversation. He knew that signalmen were required to make full booking when trains were run under Block Regulation 25 (*a*) (iii), but he had not taken any steps to ensure that the Regulations were being complied with nor whether the correct books were available for the purpose. Mr. Eachus said that he could not explain Signalman Kerwick's actions. He had examined him in August last and had found his knowledge of the Rules and Regulations satisfactory.

Further Investigations

55. At my request investigations were made into the number of occasions on which signalmen had failed to report for duty over the past two years on the Liverpool/Southport section. They revealed that there were 41 such occasions. In 24 of them there was no need for Block Regulation 25 to be introduced because either the signalman already on duty had remained on duty until a relief arrived, or a block switch was available and the block was switched through to the boxes on either side. The remaining 17 cases were at boxes with no block switch and where there was no signalman already on duty; Block Regulation 25 should therefore have been applied in these cases.

56. In three of the latter cases the Train Register Books had been destroyed, and there was consequently no record of what action was taken. In one case, in October 1959, the emergency working lasted for 2½ hours. Block Regulation 25 (*a*) (iii) was applied but the full booking of block messages was not maintained. In the remaining 13 cases, in all of which the period was for less than 1 hour, the Train Register Books did not indicate that Block Regulation 25 (*a*) (iii) had been carried out.

Conclusions

57. The main cause of this accident was that Signalman Kerwick of Hall Road authorised the driver of the 7.10 a.m. train to proceed to Hightown having forgotten the previous train, the 7.4 a.m., which was standing at the starting signal.

58. Kerwick had committed many irregularities that morning. Among other things he had not, when he opened his box, sent a block restoration ticket to Brook Hall Road box and he had resumed normal block working with Hightown as soon as that box was opened without waiting for the exchange of restoration tickets. In spite of his insistence to the contrary, I am certain that he had offered the 7.4 a.m. train on the block instrument to Hightown and that it had been accepted; the first entry in the Train Register Book at that box (see item (*b*) Appendix II), which had been erased, must have been made for that train and the figure 29 was, I am sure, the anticipated time of arrival of the train and was based on the time of receipt of the Is Line Clear or Train Entering Section bell signal and the running time. Kerwick had also not carried out the Block Regulations in connection with the 6.10 a.m. train with the result that the driver was unaware of the situation and did not know whether Line Clear had been obtained on the telephone or whether he was working on time interval; he had not carried out the Block Regulations in connection with the 7.4 a.m. train with the result that the driver did not know that trains were being worked under anything but the normal Block Regulations; he had not complied with Rule 39 (*a*) in clearing the signals for the 6.10 a.m. or the 7.4 a.m. train; finally, he completely failed to carry out the Block Regulations in connection with the 7.10 a.m. train in that he authorised the driver to proceed to Hightown when he had not received Train out of Section for the previous train.

59. The only explanation that Kerwick could offer for all these failures was that they were omissions or that he was distracted. He certainly was busy at the time but he was an experienced signalman with a long and clear record, and there was no evidence that he was unwell or that he had anything on his mind. It should therefore have been well within his capacity to cope with the situation. I have little doubt, however, that, as a result of the very lax way in which he had been working, he had in fact become thoroughly muddled.

60. I cannot accept Kerwick's explanation that he cleared the starting signal for the 7.10 a.m. train because it had stopped for longer than usual at the Hall Road platform; there was no evidence that that was the case. I think that it may well be that he tried to clear the home 2 signal for that train (he had cleared it for the previous train), found that he could not do so because the lever was locked and saw, for the first time, that the track circuit indicator was showing " Occupied ". I think that he then realised that the 7.4 a.m. train was standing at the starting signal and cleared that signal in the hope that it would start and get away before the following train collided with it. The remark by relieving signalman Evans, who was on duty at Hightown, that Kerwick had said to him on the telephone " There are two trains going towards you now " was most significant.

61. The Obstruction Danger bell signal was recorded as having been sent from Hall Road box and received at Blundellsands and Crosby box at 7.30 a.m. It was not sent to Hightown. I think, however, that the collision did not occur until about 7.34 a.m. which is the time recorded in the Electrical Control Room for the opening of the circuit breakers. The Train Register Book entries for the 7.10 a.m. train at Brook Hall Road and Blundellsands and Crosby and the evidence of the driver of that train that it left Hall Road two to three minutes late, tend to confirm this. It seems that the 7.4 a.m. train must have stood at the starting signal for nearly five minutes before Guard Eedle went back to telephone to the signalman. I do not, however, criticise the guard because the starting signal had a diamond sign indicating that the line on which the train was standing was track circuited and he was unaware that Block Regulation 25 (*a*) (iii) was in force.

62. Driver Costello of the 7.10 a.m. train did not see the train ahead until immediately before the impact, although he could have seen it from the end of the platform. The main line was, however, on a slight right-handed curve and there was coaching stock standing on the sidings on each side of it. This may well have misled him from a distance but it certainly should not have done so for the last 200 yards, and he did not even see the guard of the standing train who ran towards him waving his arms. Costello said that he was concerned with the slipping of the motored wheels of the train. The switching off and re-starting of a motor is, however, a simple process and should certainly not distract an experienced driver. I can only conclude therefore that he was not keeping a good look out ahead. If he had done so, the accident might well have been averted.

Remarks and Recommendations

63. This accident occurred when trains were being worked under Block Regulation 25 (failure of the block signalling apparatus) and it was caused by an experienced signalman who had been working in a very lax manner beforehand. Other signalmen also had not been complying with the Regulations. The strict compliance with the Block Regulations is essential for the safety of movement at all times, and it is all the more important when emergency working is in operation. Experience has shown that when signalmen become lax and adopt irregular methods of working, accidents are sure to occur sooner or later. I hope that this case will serve as a useful lesson generally.

64. Among other things, Block Regulation 25 lays down that when clause (*a*) (iii) is in operation the times of all block messages exchanged on the telephone are to be recorded. Yet not one of the signalmen concerned in this case had complied with this Regulation, and it is clear that the Regulation had not been obeyed in previous similar circumstances. The proper books for this purpose were not available, as they should have been, but even without them the signalmen could have recorded far more than in fact they did. Most of them had not even maintained the full skeleton bookings. Furthermore, and what is more serious, the subsequent investigations carried out brought to light that in at least 13 cases during the last two years, when signalmen had not reported for duty, as a result of which circumstances arose that were similar to those in this case, there was no evidence that working in accordance with Block Regulation 25 had been properly carried out. This all reflects adversely on the supervision of the work of the signalmen, and I am glad to report that very serious notice has already been taken of this aspect of the case. Again, I hope that it will serve as a useful lesson generally.

65. The signalmen at Hall Road box and some of the other boxes on this section are required to deal with over 100 trains per day in each direction, nearly half of which run during the morning and evening peak periods. There are, however, no block controls on the starting signals, and there is no Welwyn control. There are no booking lads in the boxes and it would be unreasonable to expect signalmen to maintain full train register books in normal circumstances, especially as nearly all the trains are of the same type. With skeleton bookings, however, a signalman has only to omit to enter one train and to forget that train, and he can then clear the starting signal for a second train. For traffic of this nature, full track circuiting and train describers are desirable, but this equipment is expensive. I do, however, think that at least a block release on the starting signals and the Welwyn control should be provided, and even though these controls might not have prevented this particular accident, I recommend that consideration should be given to their provision.

66. It will be recalled that there was a difference of opinion as to whether clause (*a*) (iii) or (*a*) (iv) of Block Regulation 25 should have been applied in this case. I am loth to recommend any expansion of the already lengthy Regulations, but I do think that it would be advisable for it to be made clear that a failure of a block instrument covers not only an electrical or mechanical failure as is implied, but also the failure of a signalman to report for duty, as a result of which the block instruments cannot be used. Furthermore, Rule 38 (*b*) (iii) and Block Regulation 25 both imply that the section signal (and only the section signal) must not be lowered in such circumstances, but they do not say this in so many words, and I think that it would be advantageous for this point also to be clarified. It will be recalled that the signalmen at Hall Road had instructed the drivers of most of the trains to pass both the home 2 and the starting signal at Danger.

67. A suggestion has been received that the accident might not have occurred if the rear end of the 7.4 a.m. train had been painted in some conspicuous way. I do not, however, think that this would have been the case because, as I have said, it is clear that for some reason the driver of the colliding train had not kept a good lookout. I would mention, however, that the British Transport Commission are taking steps to make diesel and electric locomotives and multiple-unit sets more conspicuous in order to assist the users of private level crossings, and the permanent way and other staff working on the line, in observing such trains from as great a distance as possible.

68. Finally, I would draw attention to two other points : firstly, the driver of the stationary train did not use the short circuiting bar although he did not know whether the traction current had been discharged as a result of the accident. This point has been referred to recently in the Reports on two accidents on the Southern Region, viz. those at Cannon Street on 20th March, 1961, and at Waterloo on 11th April, 1961. The short circuiting bar is provided specifically for use in cases such as this, and it should be used. Secondly, only the Ambulance service was called, though in the event this was the only service that was necessary, but I do not think that at that time anyone could have been certain that some of the other emergency services might not have been needed. It is important that in accidents such as this the Fire Service, the Police, and a doctor should also be summoned as soon as possible, even though it may become apparent later that their services are not required.

I have the honour to be,

Sir,

Your obedient Servant,

D. McMULLEN,

Colonel.

The Secretary,

Ministry of Transport.

REGULATIONS FOR TRAIN SIGNALLING ON DOUBLE LINES BY THE ABSOLUTE BLOCK SYSTEM

25. FAILURE OF BLOCK SIGNALLING APPARATUS

In the event of a failure of block signalling apparatus so that trains cannot be block-signalled in the ordinary way, steps must be taken immediately to have the apparatus put into working order and the following instructions observed in the meantime:—

(*a*) (i) Except as provided in clause (*h*) a train must not in any circumstances be allowed to pass a box into the section where the failure exists without having been previously brought to a stand and the Driver and rear Guard, also the Driver of an engine assisting in rear, if any, advised of the failure. Should there be no bell or telephone communication with the box in advance trainmen must, in addition, be advised of this to enable the provisions of Rule 56 to be complied with. The Driver or Drivers must also be instructed to pass at danger the signal controlling the entrance to the section ahead in accordance with Rule 38 (*b*), and to proceed cautiously.

When a Driver has been stopped at a box and advised by the Signalman of the failure, the Driver must be instructed to draw his train forward and bring it again to a stand with the brake van near to the box to enable the Signalman to verbally inform the rear Guard, and the Driver of an engine assisting in rear, if any, of the failure; the Driver of the train engine must also be told that, after this has been done, he must not start again until he receives a green handsignal from the Signalman.

(ii) The Signalman at whose box the block instruments and/or bells have failed must advise the Signalman at the opposite end of the section concerned of the failure, by telephone. Where telephone communication is not available, the Signalman at the box in rear must instruct the Driver of the first train that is being cautioned to stop at the box in advance and inform the Signalman of the circumstances.

(iii) When the bells only, or bells and block instruments, have failed and a telephone is available, the Signalmen must send the necessary bell signals as messages on the telephone, for example:—

Is † .....line clear for * .....
† .....line is clear for * .....
* .....train entering section
} † Description of the line to be given; for example—up or down main, fast, slow or goods.

* .....train out of section
† .....line is clear for * .....
under the Warning Arrangement
} * Description of train to be given.

A Signalman sending signals in this manner must satisfy himself that he is speaking to the Signalman who should receive the communication.

When the bells have failed but the block instruments are still available, these must be worked in conjunction with the telephone messages.

When the block instruments only have failed, the bell signals must be sent in accordance with these Regulations.

A train must not be allowed to enter the section until permission has been received from the Signalman in advance in accordance with these Regulations.

(iv) When the bells have failed and telephone communication is not available, a train must not be allowed to follow another train until the time usually taken by the preceding train to clear the section, after allowing for the train having been stopped, has elapsed, but in no case with a less interval than three minutes. Where there is a tunnel in the section, an interval of not less than ten minutes must be allowed between two trains, unless the Signalman can satisfy himself that the tunnel is clear.

(v) In the event of a failure as described in paragraph (iii) applying to one line only, the normal signalling of trains must be maintained on the adjoining line or lines the block apparatus for which is in working order, but the Driver of the first train travelling on each such adjoining line or lines must be advised of the circumstances and instructed to proceed cautiously through the section.

In cases where trains on one line have to be worked in accordance with paragraph (iv), all trains on the adjoining line or lines must be stopped and the Driver of each train instructed to proceed cautiously. Trains, other than the first, on an adjoining line need not, however, be stopped and cautioned when the failure occurs on a line not worked in accordance with the Absolute Block Regulations.

(vi) When trains are signalled in accordance with paragraph (iii), all signals sent or received on the bell or telephone must be recorded whether the ordinary block signals are usually recorded or not, and when trains are being worked in accordance with paragraph (iv), the departure time of each train must be recorded.

(*b*) (i) Where trains are being worked in accordance with clause (*a*) (iv) and the telephone or bells are restored the Driver of the next train allowed to proceed through the section over the line or lines on which the failure exists must, when being cautioned, be supplied with a ticket which he must be instructed to hand to the Signalman at the next box in advance, intimating that the train carrying this ticket will be the last train to pass through the section in accordance with clause (*a*) (iv) and that, on receipt of this ticket, the working will then be in accordance with clause (*a*) (iii). On receipt of this ticket the Train out of Section signal must be sent for that train in accordance with the conditions of Regulation 6. The Signalman in rear must not offer a following train until this signal has been received.

(ii) When all the apparatus is in working order and has been tested in accordance with Regulation 26, the Driver of the next train allowed to proceed through the section over the line or lines on which the failure existed must be cautioned and supplied with a ticket intimating that the train carrying this ticket will be the last train cautioned through the section, and he must be instructed to stop at the box in advance and hand this ticket to the Signalman. The Signalman receiving this ticket must then send the Train out of Section signal in accordance with Regulation 6, and the ordinary method of signalling must be resumed. Particulars of the failure must be reported on the appropriate form without delay.

(*c*) When a box which has been switched out of circuit is being opened the Signalman must be advised by the Signalman on each side, by telephone or other means, that the block instruments or bells are out of order, or that a failure has been remedied but normal working has not been resumed. The Signalman so advised must act in accordance with clause (*a*) or (*b*) as may be necessary. If trains are being worked in accordance with clause (*a*) (iv), the Signalmen on each side of an intermediate box due to open must not decrease the existing time interval between trains until it is definitely ascertained that the box has been opened.

(*d*) Should the Driver of the first train that arrives at a signal box after it has been opened produce a ticket showing that the block instruments or bells have been out of order during the time the box has been closed, and that the failure has been remedied, the Driver (if the block instruments and bells of the section in advance are in working order) must be instructed to take the ticket forward to the next box. After the train has cleared the section in rear of the box which has been opened, the Train out of Section signal must be sent in accordance with Regulation 6.

(*f*) When the block instruments or bells fail and there is a level crossing in the section provided with block indicators or bells, but which is not a block post, the Signalman, if telephone communication with the crossing is available, must inform the person in charge of the crossing that the block indicators or bells are not in working order. If there is no telephone communication with the crossing, or the telephone has failed, the Signalman must instruct the Driver of every train proceeding in the direction of the crossing during the failure to approach the level crossing cautiously, sound the engine whistle and be prepared to stop short of any obstruction at such crossing. The time interval must also be extended sufficiently to allow for the additional time likely to be occupied in carrying out this instruction.

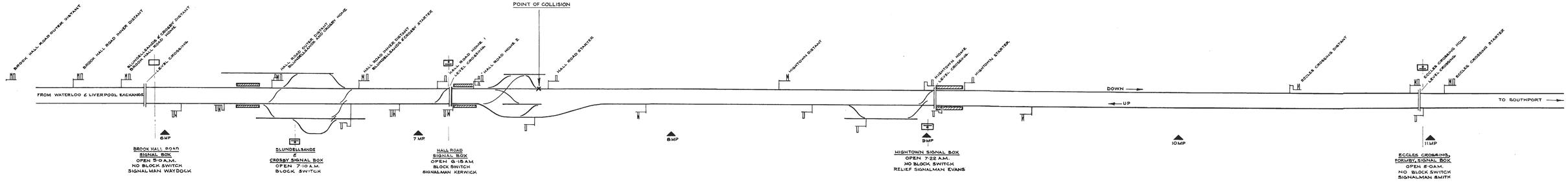

FIG. 1

NOT TO SCALE

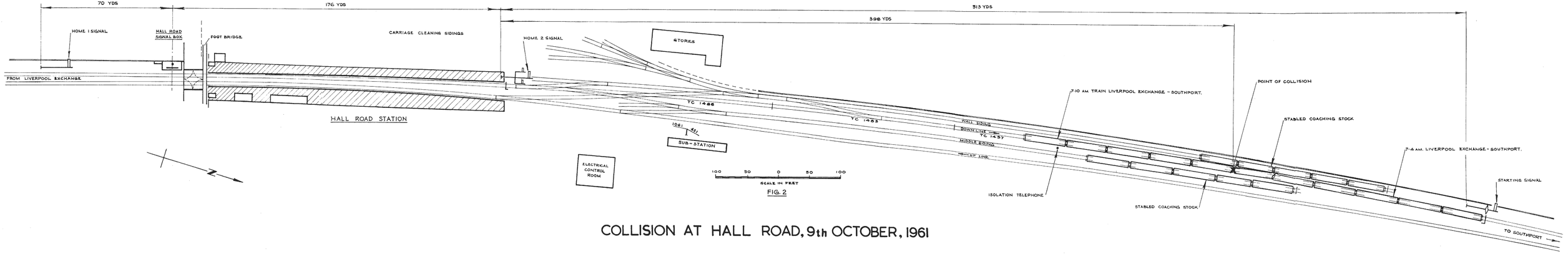

FIG. 2

COLLISION AT HALL ROAD, 9th OCTOBER, 1961