MINISTRY OF TRANSPORT AND CIVIL AVIATION

RAILWAY ACCIDENTS

REPORT ON THE COLLISION

which occurred on

4th July 1958

at

MAZE HILL

in the

SOUTHERN REGION
BRITISH RAILWAYS

LONDON: HER MAJESTY'S STATIONERY OFFICE
1959

THREE SHILLINGS NET

MINISTRY OF TRANSPORT AND CIVIL AVIATION,
BERKELEY SQUARE HOUSE,
LONDON, W.1.

19*th December* 1958.

SIR,

I have the honour to report for the information of the Minister of Transport and Civil Aviation in accordance with the Order dated 7th July 1958, the result of my Inquiry into the collision which occurred at 10.25 a.m. on Friday, 4th July 1958, at Maze Hill on the North Kent (via Greenwich) line in the Southern Region, British Railways.

The 9.41 a.m. 4-coach electric passenger train from Gravesend Central to Charing Cross ran past the Up home signal at danger and collided head-on with a 9-coach empty steam passenger stock train which was being shunted slowly from the Up sidings across the Up line towards the Down line. The accident occurred as the empty train was entering the crossover leading from the Up to the Down line. The passenger train was approaching the station at about 40 m.p.h. when the motorman, who had failed to observe the home signal, saw the obstruction ahead and applied the brakes. His action was too late to be effective and the collision occurred at a speed of about 25 m.p.h.

The force of the impact drove the empty train backwards for 11 yards and lifted the engine which mounted the leading coach of the electric train. The Up and Down lines were blocked and the electric current was cut off immediately by the heavy short circuit. There were about 50 passengers in the electric train, and 43 of these, together with the motorman and guard, were taken to hospital where five were detained, but none was seriously injured.

In response to an emergency call made by the station staff the first of a fleet of ambulances arrived at 10.35 a.m. and Police and Fire Brigades were also soon on the scene. There was no delay in the rescue work and all casualties were removed to hospital by 11.15 a.m.

Breakdown cranes were ordered promptly and both lines were opened to traffic at 7.54 p.m. after a stoppage of 9½ hours. During this interval trains were diverted via Blackheath and Charlton, and passengers for Greenwich line stations were carried by bus between New Cross and Charlton.

The morning was fine and clear, and the rails were dry.

DESCRIPTION OF THE TRAINS AND THE EFFECTS OF THE COLLISION

1. The electric train started from Gravesend Central with 10 coaches, but six of these were detached at Slade Green. The remaining 4-coach set was made up of the Region's standard post-war suburban stock, close coupled in the usual way with a motor saloon second brake at each end. The underframes were of rivetted steel construction and the bodies of all-steel welded construction. The Westinghouse and electro-pneumatic brakes operated on all wheels and gave a pressure of 103 tons, equivalent to 76·4% of the total tare weight of 135 tons. The length over buffers was 257 ft.

2. The 9-coach empty stock train was hauled by a Class C tender engine with 0–6–0 wheel arrangement weighing 82 tons in working order; it was driven from the right hand side. The coaches were all of pre-war construction with wooden bodies on steel underframes. The vacuum brake was in operation on all wheels of the train and it gave a total pressure of 305 tons, equivalent to 65% of the total weight of 384 tons. The length overall was 620 ft.

3. As already mentioned, the steam engine mounted the first coach of the electric train and came to rest with the leading wheels on top of the underframe. The front 15 ft. of the coach including the motorman's cab and guard's van were telescoped into the leading passenger compartment, and the front of the underframe and the motor bogie were badly damaged. The rest of the train stood up remarkably well to the shock of the collision. The underframe of the second coach was bent and the centre buffing gear was damaged. Some of the seat cushions were displaced, but none of the windows or door lights of the last three coaches was broken.

The front of the steam engine was badly damaged, the main frames being distorted and much of the brakegear and pipework broken. The tender frame was also badly damaged. All coaches of the steam train were damaged to some extent and most of the headstocks and a large number of the diagonals were bent. All vestibules except those of the last coach were damaged, and many seats were displaced.

SITE AND SIGNALLING

4. The double line through Maze Hill carries a heavy suburban passenger traffic amounting to 65 Up and 78 Down trains on a weekday with a peak of 6 Up and 8 Down trains in an hour during the morning rush period. In addition to the station platforms and a Down Bay loop, there are carriage sidings on each side of the running lines, as is shown by the accompanying drawing. These are used for stabling spare passenger coaches, mainly steam stock, which are normally required only for week-end working and special trains.

5. The stations on the North Kent line are closely spaced, but the only ones to which reference need be made are Gravesend Central (24 miles from Charing Cross) which was the starting point of the electric train; Dartford (17¼ miles) where the motorman took over the train; Slade Green (15½ miles) where the rear six coaches were detached; Charlton (7½ miles) which is the last block post before Maze Hill (6¼ miles from Charing Cross). Between Charlton and Maze Hill there is a minor station called Westcombe Park which lies about half-way between Maze Hill Up distant and home signals.

6 The line is straight through Westcombe Park station and it then runs into a cutting under a road overbridge (No. 540) where the line curves to the left at 230 chains radius and later at 76 chains radius. After passing through the Vanbrugh Hill overbridge (No. 539) in a deep cutting, the line again is straight for just over 100 yards and then curves to the right into Maze Hill station. The gradient from Charlton is rising, first at 1 in 66 and then at 1 in 340 to Westcombe Park where it begins to fall at the London end of the platform, first at 1 in 482 and then at 1 in 143.

Signalling at Maze Hill

7 The relevant signals are shown on the drawing. The running signals are upper quadrant semaphores and the ground signals are discs. No. 29 Up home is over 500 yards from the signal box and No. 30 Up distant is a further 804 yards in rear. The abutment of No 540 overbridge and the curvature restricts the view of the Up home signal from Westcombe Park station to some extent, so that the signal cannot be seen from the 4-car stopping mark. It comes into view at the 6-car mark and it can be seen clearly from the end of the platform onwards; the signal is thus in full view for 270 yards. It is well sited on the left hand side of the line and the arm is 14 ft. above rail level. The background is good and there is nothing to interfere with a motorman's view of it.

8. The Sykes Lock and Block system of block working is in operation between Charlton and Maze Hill, and there is continuous track circuiting throughout the Up line from the berth track circuit on the approach side of No. 29 Up home signal. Under this system the Charlton Up starting signal cannot be cleared until the block instrument in that box has been freed by the Maze Hill signalman pressing a plunger in the instrument in his box. This release cannot be given unless Maze Hill No. 30 Up distant signal arm is at caution and track circuits C and D are clear. It is not possible to plunge again until No. 29 Up home signal lever has been pulled and replaced, and this lever cannot be fully restored to normal until track circuits D and E are occupied.

The block instrument at Maze Hill has two apertures in its face: normally the upper shows " FREE " and the lower is blank. After plunging, the lower shows " TRAIN ON " and when the home signal is cleared the upper aperture shows " LOCKED ". There is also a switch hook which is turned when the signalman receives " Train Entering Section " from Charlton. This action maintains the Charlton semaphore arm indicator (situated above the section instrument) at the " Line blocked " position until the Maze Hill signalman releases it by restoring the switch hook to normal, which he does not do until he sends the " Train Out of Section " bell signal after the train has arrived at his station.

9. Trains may be accepted under full " Line Clear " up to No. 29 signal at danger, provided track circuits C and D are clear which allows an overlap of 433 yards beyond the home signal. In these circumstances, shunting from the Up sidings to the Down line is permitted under the protection of No. 20 ground signal and No. 29 home signal. These movements are made through Nos. 15 and 18 points. No. 22 points only lead to the Green Lane sidings.

10. The relevant mechanical interlocking is:—

No. 30 Up distant is released in the usual way by Nos. 29, 28 and 27 (the Up home, starting and advanced starting signals).

No. 29 Up home is released by No. 20 ground signal and it locks No. 15 points.

No. 20 ground signal is released by No. 17 lock bar and it locks No. 18 points.

No. 17 lock bar locks Nos. 12, 13 and 14 ground signals.

It will be seen from this that when the route from the Up sidings is set to the Down line through Nos. 15 and 18 points, Nos. 20 and 29 signals are both locked at danger.

Summary of Events

11. Passenger trains were running normally up to the time of the accident, and the timings of the relevant trains through Maze Hill are given in the following table:—

Running of Trains through Maze Hill

Train	Time at Maze Hill: Booked or calculated a.m.	Time at Maze Hill: Actual a.m.
Down		
9.55 a.m. Charing Cross—Dartford	10.11½	10.13
10.8 a.m. Cannon Street—Plumstead	10.21½	10.23
10.20 a.m. London Bridge—Slade Green	10.34	diverted
Up		
9.10 a.m. Gillingham—Charing Cross	10.3	10.3
9.41 a.m. Gravesend Central—Charing Cross	10.27	10.25 (involved in accident)

12. As soon as the 9.10 a.m. Up train had left Maze Hill station, a light engine running tender first was accepted from Charlton and it arrived at the country end of the Up platform at 10.7 a.m. Directly after the 9.55 a.m. Down train from Charing Cross had passed, the light engine was shunted on to the Down line via No. 18 points, and then backed through No. 15 points on to a 9-coach empty steam stock train

standing in No. 1 Up sidings. On completion of this movement, the signalman replaced No. 18 points to normal and cleared the Down signals for the 10.8 a.m. train from Cannon Street. He did not attempt to replace No. 15 points because he intended to shunt the empty stock train on to the Down line immediately after this passenger train had passed, and to get the stock train into the Down Bay before the 10.20 a.m. Down train arrived. In any case he could not have done so because No. 15 points were held reversed by the front wheels of the engine which were over the London end of the points, since there was not quite sufficient room in the siding for nine coaches and the engine.

The 9.41 a.m. Up train from Gravesend Central had been accepted at 10.16 a.m. but as it was not due to leave Maze Hill until 10.27 a.m. the stationmaster and signalman had decided to move the empty stock train on to the Down line directly after the Cannon Street train cleared the section at 10.23 a.m. This shunting movement was being made under the protection of No. 20 ground signal and No. 29 Up home signal, both of which were locked at danger when the collision occurred.

Evidence

13. Stationmaster B. H. Highwood, who is in charge of Maze Hill and Westcombe Park stations, said that he went to the Maze Hill signal box at about 9.27 a.m. to make arrangements for the shunting of the empty stock train from the Up siding and for its despatch to the Herne Hill sorting sidings at 11.5 a.m. in accordance with instructions which he had received that morning. The stock had to be drawn out of No. 1 Up sidings on to the Down line and then propelled into the Down bay after which the engine would run round via the Up line through Nos. 11, 18, 7 and 8 points. This was a rather long movement, and it was necessary to select suitable opportunities between trains.

Mr. Highwood explained that there is a regular movement of empty stock trains during the week-end, but he was often called upon to supply stock on other days, and the movement which was being made at the time of the accident was quite a usual one. Line occupation was rather heavy and sometimes passenger trains were delayed.

On this occasion he discussed the shunting with the signalman and they decided to make the move from the Up sidings after the 10.8 a.m. Down train from Cannon Street had passed, and if necessary delay the arrival of the 9.41 a.m. Up train from Gravesend Central. The running round would have followed after this train had left Maze Hill. Having made the plan it was the signalman's responsibility to carry it out, but Mr. Highwood stayed in the signal box to prepare the details for the week-end work.

Mr. Highwood said that the 9.41 a.m. Up train was accepted in the normal way because the line was clear up to No. 20 ground signal, and Signalman Gardener set the route for the empty train in due course as planned. Temporary Porter Formstone, who was in charge of the shunting, gave a hand signal to the driver and the train had moved about three coach lengths when Mr. Highwood saw the incoming train as " a flash of green " and called to the signalman " The Up's run by ". There was no time to do anything before the collision, but the signalman sent " Obstruction Danger " to the boxes on each side directly afterwards. Mr. Highwood added that he saw the two enginemen jump from the steam engine a second or two before the impact and he thought that the empty train was still moving. He could not estimate the speed of the electric train which he only saw for a moment, because the corner of the signal box obstructed his view.

He checked the position of the signal levers immediately and noticed that Nos. 15 and 18 were reversed as was No. 13 ground signal which authorised the shunting movement. Nos. 29 and 30, the Up home and distant signal levers, and No. 20 ground signal were all normal. The lower aperture of the Up block instrument was showing " TRAIN ON ", but he could not recollect the indication in the top aperture.

He reported the accident to the Control Office and the Electrical Controller at the Lewisham sub-station and then he instructed his booking clerk to call the emergency services, which arrived very quickly.

14. Signalman G. Gardener, who was on duty at Maze Hill, said that he accepted the light engine and shunted it into No. 1 Up sidings as already described. He re-set No. 18 points to allow the 10.8 a.m. Cannon Street train to pass and it cleared the Down line at 10.23 a.m. Meanwhile, he had accepted the 9.41 a.m. Up train at 10.16 a.m. and had received " Train Entering Section " at 10.22 a.m. No. 29 Up home signal was locked at danger with No. 30 distant signal at caution and acceptance was permissible because the line was clear up to No. 20 ground signal.

As soon as the Down train passed he reversed No. 18 points and cleared No. 13 ground signal for the shunting movement. Having seen the signal respond to the lever he went to the train register to make some entries and he was standing there when Mr. Highwood shouted to him. Gardener said that he did not see the collision but he sent " Obstruction Danger " to Charlton and North Kent East signal boxes immediately afterwards. At the moment of the collision levers No. 13, 15 and 18 were reversed and all others were normal in the frame. No. 29 Up home and No. 30 Up distant signal repeaters were showing " on ". The indications on the Up line Sykes Lock and Block instrument were " TRAIN ON " and " FREE ", and the hook was over the plunger.

Gardener explained that as the 9.41 a.m. train was not due to leave Maze Hill until 10.27 a.m. he should have had sufficient time to make the shunting movement on to the Down line without causing undue delay because he reckoned that the empty 9-coach train would have cleared the Up line within three minutes. It will have been noted that the accident occurred 2 minutes before the Up train was due to leave the station.

15. Temporary Porter T. Formstone said that he was on duty at Maze Hill on the morning of the accident and at about 10.10 a.m. the light engine was backed on to the empty stock train in No. 1 sidings. He coupled up, connected the vacuum train pipe and took off the hand brake. He informed the driver

and then walked across to the signal box and told the signalman that the train was ready to leave. A few minutes later the route was set and No. 13 shunting signal was cleared. Formstone thereupon gave a hand signal to the driver and the train moved out of the siding. He heard the crash and saw the engine " bunch up " when it was hit head-on by the electric passenger train. He could not estimate its speed, but he thought that the steam train was moving at about 3 m.p.h.

16. Passed Fireman G. D. Harbour said that he took charge of the steam engine of the empty stock train as soon as it arrived at Maze Hill Up platform. He backed it on to the empty stock in the Up siding and after the shunter coupled up he tested the brakes which were satisfactory. A few minutes later the ground signal was cleared and he moved out of the siding. He had reached a speed of about 5 m.p.h. when he saw the electric train approaching. He first saw it about half way from the overbridge and for a moment he " could not believe his eyes ". He closed the regulator, applied the brake, told his fireman to jump, and then followed suit. They both ran across the lines and they had just reached the grass verge alongside the signal box when they heard the collision.

17. Fireman R. Haynes, who was working with Passed Fireman Harbour, described the shunting movements and said the empty train had moved about 20 yards when he saw the electric train coming towards them. The driver told him to jump, and they both ran across the lines towards the signal box. After the collision the driver went to the box and Haynes went back to the train to see if he could do anything for the motorman. He got through the steam train and found him sitting on the bogie frame below the cab. He helped him to the ground, but the motorman did not speak to him. After helping some passengers to get out of the electric train Haynes returned to the signal box.

18. Lineman L. W. Haines said that he heard of the accident at 10.55 a.m. and with two other linemen he proceeded to Maze Hill via Westcombe Park. He saw No. 30 Up distant and No. 29 Up home in the " on " position, and No. 20 ground signal was also showing " on ". He then went into the box and noticed the position of the levers and block instrument which were as described by Signalman Gardener. Later he and his mate tested the Up distant and home signals and found the arms working freely with the repeaters showing correct indications in the signal box.

19. Signal Inspector F. W. Mann said that he was off duty on the day of the accident, but he heard about it in the evening and immediately made his way to Maze Hill. He carried out comprehensive tests of the electrical and mechanical interlocking and the working of the block instruments and found everything correct.

20. Area Maintenance Assistant R. J. Gibson said that he arrived at Maze Hill at 11.5 a.m. and immediately examined the controls in the motorman's cab on the electric train. The master key and the master switch were both " in " and the forward and reverse switch was in the forward position. The master controller handle was in parallel, which would give approximately two-thirds power, and the dead man's handle had been released. The electro-pneumatic brake valve handle was about midway between the release and the full application positions. He thought it was possible that the master controller handle might have moved as a result of the collision, but he did not think that a full emergency Westinghouse brake application had been made with the handle because if it had he doubted whether the brake handle would have moved back to the position in which he found it.

He made a thorough mechanical examination of the brake gear and found it in very good condition. The slack adjustors were positioned correctly, and the brake blocks were well bedded in. They were all about 1 in. thick (scrapping thickness is approximately $\frac{1}{2}$ in.).

A few days later he tested the working of the brakes of the three rear coaches and found that the triple valves responded correctly and that brake cylinder pressures were up to standard. It was not possible to make a complete test of the equipment in the leading coach owing to the damage, but all undamaged parts were in good order.

21. Mr. Gibson stated that when he made his first examination of the train he noticed a heavy burn on the conductor rail which had been made by a short circuit from the rear shoe. This would have been caused when the power jumper receptacle at the front was broken by the impact. The burn was 45 ft. from the place where the rear shoe came to rest and since the front of the train had been telescoped for approximately 12 ft., this mark indicated that the electric train moved forward 33 ft. after the collision.

22. Motorman P. W. Hurst, who was in charge of the electric train, said that he got up at 3.30 a.m. on the morning of the accident and went on duty at Slade Green at 4.28 a.m., after having had his breakfast at about 3.45 a.m. He prepared two trains and then left Slade Green at 5.48 a.m. in charge of a train to Cannon Street. After this he took charge of another train to Hayes where he arrived at 7.0 a.m. He returned to Charing Cross and then worked back to Dartford arriving at about 8.45 a.m. He had a cooked breakfast in the motorman's lobby at about 9.0 a.m. and he took charge of the 9.41 a.m. Gravesend Central train when it arrived at Dartford station at 9.57 a.m.

There were 10 coaches on the train, and before starting he tested the electro-pneumatic brake. At Slade Green the six rear coaches were detached and after this he tested the electro-pneumatic brake again while the guard tested the Westinghouse brake by making a train pipe reduction from 70 to 45 lbs. per square inch. The brake cylinder pressure gauge registered 50 lbs. per square inch at each test. On leaving Slade Green he had a clear run to Charlton, stopping at all stations. Hurst said that after leaving Charlton he saw the Maze Hill Up distant signal at caution; it was on the left hand side and easy to observe.

He stopped with the cab opposite the four car mark at Westcombe Park and started again on receipt of the guard's signal. Although he remembered leaving the station he had no recollection of seeing the home signal. He shut off power when he reached the Vanbrugh Hill overbridge and shortly after passing it he saw the steam engine in front of him. For a moment he thought it was in the sidings, but, on realising it was on the main line, he applied the electro-pneumatic brake and released the dead man's handle.

He remained in his cab and after the collision he climbed through the left hand window on to the wreckage below. He had a remarkable escape and only received minor cuts and scratches.

23. Hurst further stated that he had been on early turn throughout the week and on the day before the accident he had come off duty at 12.43 p.m. His home at Slade Green was only a few minutes walk from the Depot, and after he had had his dinner at 1.0 p.m. he went to bed at 2.0 p.m. for three hours. He then had tea and watched television until he went to bed again between 10.0 and 10.30 p.m., after having a drink of hot ovaltine and a couple of biscuits. He said that he slept well and had nothing to upset him.

He explained that whenever he was on an early turn it was his usual routine to rest for three hours in the afternoon and then to stay up for the evening until 10.30 or 11.0 p.m. He smoked a pipe, and as regards drink, he said " I very rarely drink. If I have a pint of beer during the month, I have had a lot ". He had never previously had an experience when his mind might have gone blank, nor had his memory failed him as on this occasion. He said that he had had a television set for nearly three years and he sat up watching it on most evenings. He explained that even before he got it he and his wife stayed up in the evenings, even when he was on early morning turns, and that his practice on these occasions of having a broken seven or eight hours in bed, i.e partly in the afternoon and the remainder at night, had been his routine ever since he started work on the railway 17 years ago.

24. Guard R. V. Collen said that he was in charge of the 9.41 a.m. train from Gravesend Central. At Slade Green the six rear coaches were detached, after which he made the brake test. The motorman first made the electro-pneumatic test and the brake cylinder gauge in the van in the rear coach registered 49 lbs. per square inch. Collen then made his test by reducing the train pipe pressure to 25 lbs. per square inch. The brake cylinder gauge again registered 49 lbs. per square inch, and when the motorman released the brake the train pipe pressure returned to 65 lbs. per square inch and the brake cylinder pressure to nil.

After Slade Green the train stopped at all stations and arrived at Charlton on time (10.22 a.m.). Collen said that on leaving this station he saw the Maze Hill distant signal at caution. Thereafter the train made the booked stop at Westcombe Park and left at 10.24½ a.m. according to his watch. Collen stood by the compartment door until the train had gathered speed and then returned to his seat, but instead of looking out for the Maze Hill home signal, he began making entries in his service book. He thought that the train was running at its normal speed when it was approaching Maze Hill and he did not notice any brake application.

25. District Driving Inspector H. G. Gardner, who up till recently had been Hurst's foreman for five years, said that Hurst was a very good man, very steady and a cautious driver. Foreman Motorman A. Hoit, who has had Hurst under his charge for the last four years, described him as " a quiet sort of chap; carries out his duties in a good manner." He considered him " a studious man driving a train " and concluded by saying " He is very interested in his future from a foreman motorman's point of view and is always asking questions about stock working and maintenance ".

Conclusions

26. I am satisfied that the Up distant signal was at caution and the Up home signal was at danger when the electric train was approaching Maze Hill. The electrical controls and mechanical interlocking were thoroughly tested after the accident and were in good order. Consequently the Up home signal lever was locked at danger when the route was set for the shunting movement from the Up siding to the Down line. The signal arm was working freely and there was no question of it having stuck in the " off " position. The shunting movement was being made under the protection of No. 20 ground signal and No. 29 home signal between which there was an overlap of 433 yards, and the acceptance of the electric train by Signalman Gardener was in order.

27. The curvature of the line running in a cutting under the Vanbrugh Road overbridge obstructed Passed Fireman Harbour's view of the oncoming electric train, and he had no time to do more than attempt to stop the empty stock train before the collision.

28. Motorman P. W. Hurst, who was in charge of the electric train, admitted seeing the distant signal at caution, but he could not recollect seeing the home signal when he passed it at danger. He carried on as if the signal was clear and made no attempt to stop the train until well past the overbridge when he realised that the engine which he saw ahead was on the main line and not in the sidings. I accept his statement that he then immediately applied the brake and lifted the dead man's handle thus cutting off power and making a full emergency brake application. This action reduced the speed from about 40 m.p.h. to about 25 m.p.h., but it was too late to prevent the collision, and Motorman Hurst must accept responsibility for this accident.

Hurst is 33 years old and has 17 years' railway service with a clear record. He has been a motorman for the past 9 years. He was medically examined at my request and found to be well balanced and in good health both mentally and physically. He is a keen railwayman and his supervisors speak very highly of him. Two years ago he was specially commended for his vigilance and prompt action in preventing an accident to a passenger.

The signal which he passed at danger is well sited on the left hand side of the line with a good background. It is in sight from the motorman's cab for 270 yards, i.e. for about 15–20 seconds depending upon the rate of acceleration from Westcombe Park station, and there was nothing to interfere with a motorman's view of it.

Hurst had been on duty for six hours and he had had a meal about an hour before the accident. He said that he had slept for seven hours before coming on duty, but in broken periods. He assured me, however, that this was his normal custom and that he was not feeling tired, nor had he any worries on his mind. He had controlled the train properly until it left Westcombe Park, but after that he evidently failed to concentrate on his work as he was approaching the Maze Hill home signal. He must have recovered himself by the time he reached Vanbrugh Bridge because he acted promptly when he realised there was an obstruction on the line ahead.

29. Guard R. V. Collen failed to keep a good look out when leaving Westcombe Park station, and he did not see the Maze Hill Up home signal. This would have been in full view at the end of the platform either from the door or through the periscope which is fitted to the roofs of guards' compartments of Southern Region electric stock. If Guard Collen had been doing his duty properly he would have had ample time to make an emergency brake application and to have stopped the train after the driver ran past the home signal at danger. Guard Collen must, therefore, bear some measure of responsibility. He is 38 years old and has been in the railway service for 22 years, of which he has been a passenger guard for the last three years. He has had a clear record.

Remarks

30. This accident was the result of the failure of a hitherto thoroughly competent motorman to observe in clear daylight a well sited semaphore signal at danger. Although he was nearing the end of his tour of duty there was apparently nothing in his condition or in the nature of his work to have caused him to have become unduly tired, and I am unable to offer any satisfactory explanation for his serious lapse. Fortunately this accident did not result in serious casualties, but in view of the grave consequences which can arise from motormen and drivers passing signals at danger the problem of reducing still further accidents from this cause, low though they be already, is being examined afresh. As pointed out in my Annual Report for 1957 on Railway Accidents, the British Transport Commission intend to make a special investigation with the help of a panel of scientific experts.

31. The completion of this report has been postponed until the criminal proceedings against Motorman P. W. Hurst were completed. He was tried at the Old Bailey before the Recorder on 15th and 16th December 1958 on a charge of endangering the safety of passengers by wilfully neglecting to conform to signals. He was found Not Guilty and acquitted. The charge was brought under Section 34 of the Offences Against the Person Act 1861.

I have the honour to be,

Sir,

Your obedient Servant,

C. A. LANGLEY,

Brigadier.

The Secretary,

Ministry of Transport and Civil Aviation.

(87022) Wt. 3282—V. 178 K.8 1/59 D.L.

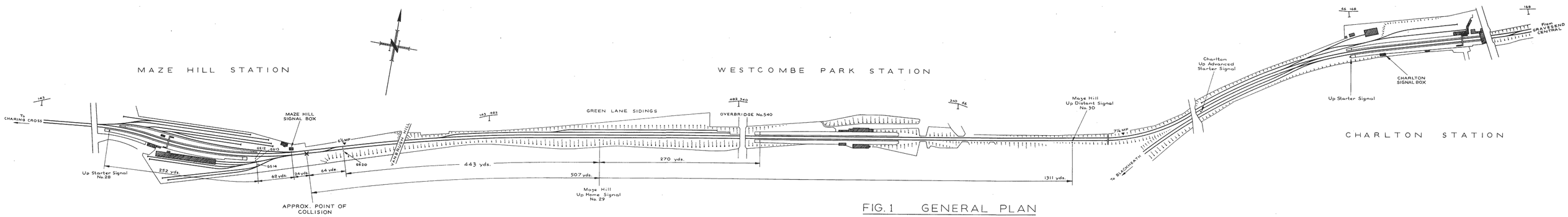

FIG. 1 GENERAL PLAN

SCALE: 1/2500

FEET 100 0 100 200 300 400 500 600 700 800 900 1000 FEET

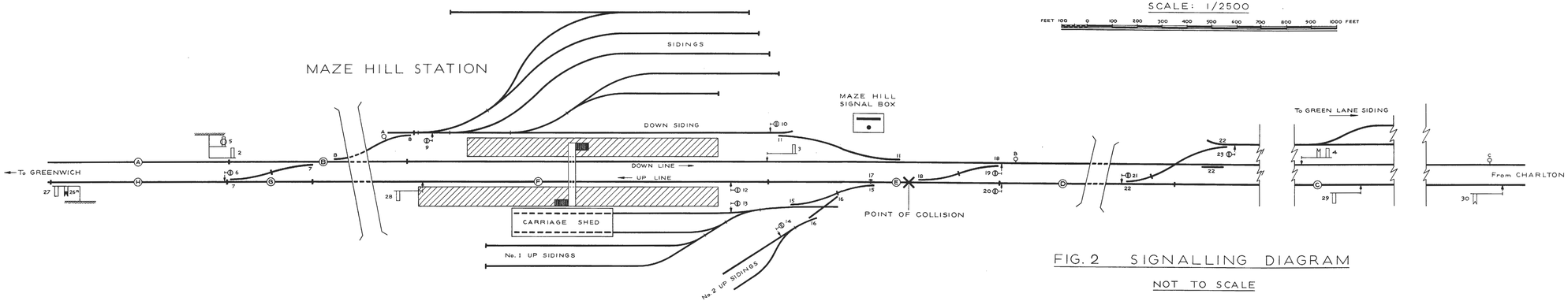

FIG. 2 SIGNALLING DIAGRAM

NOT TO SCALE

SOUTHERN REGION

COLLISION AT MAZE HILL

4th. JULY, 1958