

DEPARTMENT OF THE ENVIRONMENT

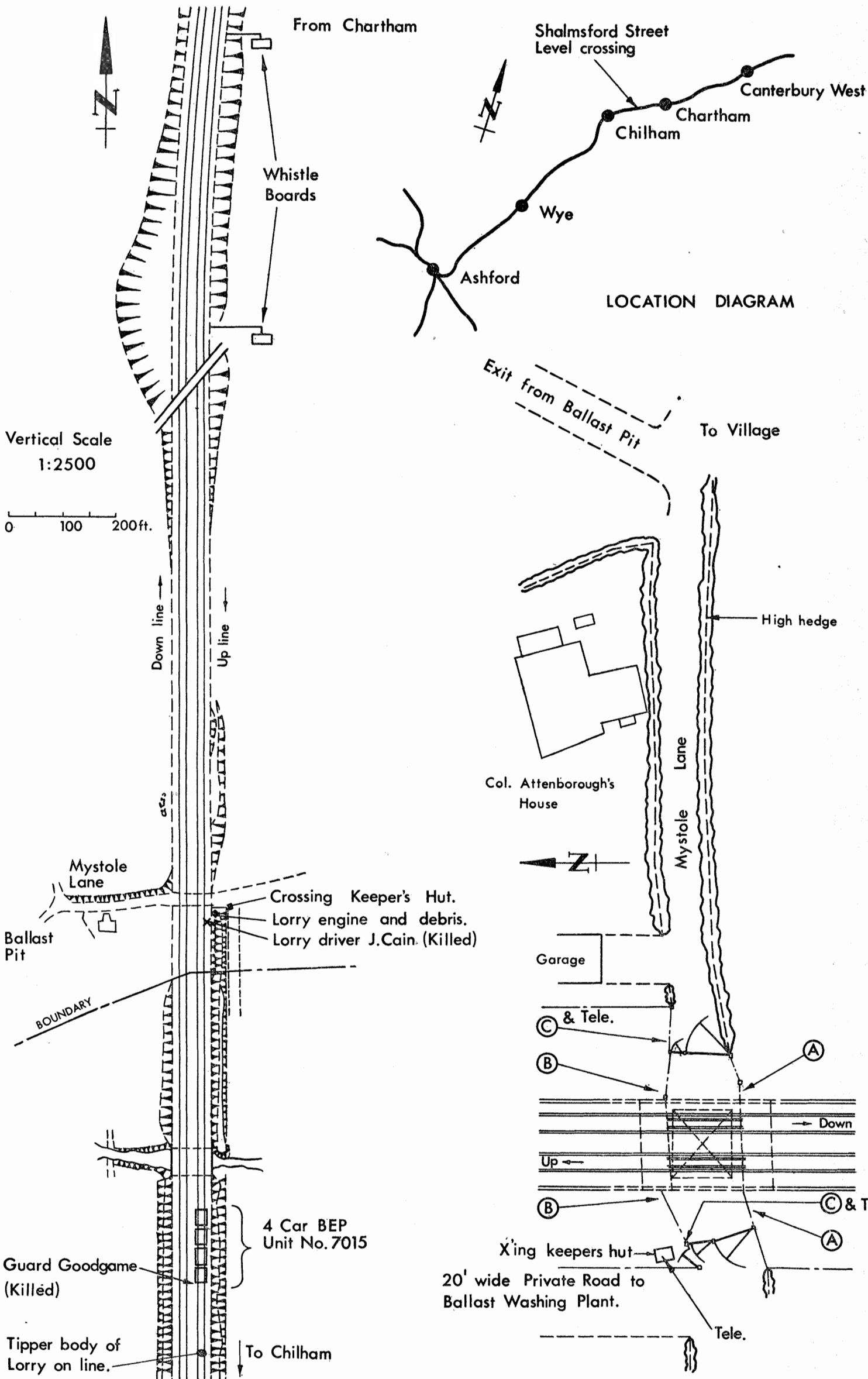
# RAILWAY ACCIDENT

Report on the Accident  
that occurred on 15th July 1970  
at Shalmsford Street Occupation  
Level Crossing  
near Canterbury

IN THE  
SOUTHERN REGION  
BRITISH RAILWAYS

LONDON: HER MAJESTY'S STATIONERY OFFICE

1971



Vertical Scale  
1:2500

0 100 200ft.

LOCATION DIAGRAM

From Chartham  
Shalmsford Street Level crossing  
Canterbury West  
Chartham  
Chilham  
Wye  
Ashford

To Village

High hedge

Col. Attenborough's House

Mystole Lane

Garage

Crossing Keeper's Hut.  
Lorry engine and debris.  
Lorry driver J.Cain. (Killed)

& Tele.

(B)

(A)

(B)

(C) & Tele.

X'ing keepers hut

(A)

20' wide Private Road to Ballast Washing Plant.

Tele.

Ballast Pit

Mystole Lane

Down line

Up line

BOUNDARY

4 Car BEP Unit No. 7015

Guard Goodgame (Killed)

Tipper body of Lorry on line.

To Chilham

DETAILS OF THE CROSSING

(A)

ON 'UP' SIDE ONLY:-

SOUTHERN RAILWAY  
WARNING  
IS HEREBY GIVEN UNDER SEC 97(2) OF THE  
SOUTHERN RAILWAY ACT 1924 TO PERSONS  
NOT TO TRESPASS ON THE RAILWAY  
PENALTY NOT EXCEEDING 40/-

ON BOTH  
SIDES:-

WARNING  
STOP, LOOK & LISTEN  
BEFORE CROSSING THE LINE

(B)

BRITISH RAILWAYS  
DANGER  
DON'T TOUCH  
CONDUCTOR RAILS

(C)

SOUTHERN RAILWAY  
WARNING  
STOP LOOK LISTEN  
BEFORE OPENING EITHER GATE OBTAIN PERMISSION BY TELEPHONE.  
OPEN TELEPHONE BOX, TURN HANDLE, LIFT RECEIVER AND WAIT FOR  
SIGNALMAN TO ANSWER.  
IF SIGNALMAN GIVES PERMISSION TO CROSS, OPEN FAR GATE FIRST, PASS  
OVER CROSSING WITHOUT DELAY THEN CLOSE & SECURE BOTH GATES.  
(PENALTY FOR NOT CLOSING & SECURING GATES 40/-).  
ADVISE SIGNALMAN BY TELEPHONE THAT CROSSING IS CLEAR & GATES  
CLOSED.  
GIVE NOTICE TO NEAREST STATIONMASTER WHEN A VEHICLE OF  
EXCEPTIONAL WEIGHT CONVEYING AN EXCEPTIONAL LOAD  
HAS TO BE TAKEN ACROSS THE LINE.

MINISTRY OF TRANSPORT,  
ST. CHRISTOPHER HOUSE,  
SOUTHWARK STREET,  
LONDON, S.E.1.  
9th November 1970.

SIR,

I have the honour to report for the information of the Minister of Transport, in accordance with the Order dated 16th July, the result of my Inquiry into the accident that occurred at 10.07 on 15th July, at Shalmsford Street Occupation level crossing on the Ashford to Canterbury line, Southern Region, British Railways.

The level crossing which is provided with gates opening away from the railway was temporarily manned by a crossing keeper because it was being used by lorries belonging to a firm of gravel contractors moving unwashed gravel from pits north of the railway (on the Down side) to plant on the south (Up) side. It was the crossing keeper's duty to ask the signalman's permission to open the gates to road traffic and to inform the signalman when they were again shut and the crossing clear. At 10.02 such a request was made and a lorry passed over from the Down to the Up side, but the crossing keeper took the opportunity of the open gates to carry a bundle of wood from the Down side to his hut on the Up side, and he then closed only the Up side gate before telephoning the signalman and telling him that both gates were shut and the crossing clear. A few minutes later a loaded lorry arrived on the Down side and entered the crossing although the Up side gate was still closed, and was hit by an empty 4 car electric multiple-unit (EMU) train travelling at about 55 m.p.h. on the Up line. The lorry was totally destroyed and the driver killed. The train came to rest some 275 yards beyond the crossing with the rear axle of the lorry wedged beneath the front bogie which was derailed, and the lorry's metal tipper body on the lines in front of it. The guard, who had been standing near the secondman's seat at the time of the accident, was also killed when that side of the train was stove in by the impact. Emergency telephone calls were made by the crossing keeper and by a gentleman who lives nearby and the police arrived at 10.15 and an ambulance at 10.20. The accident automatically caused the power to be cut off from both lines. Damage to the track was light and after the train was re-railed and the debris cleared, traffic was restored on the Down line at 15.45 and on the Up line at 16.18.

#### DESCRIPTION

##### *The Crossing*

1. Shalmsford Street level crossing, details of which are shown opposite, was reduced from a manned public level crossing to Occupation status with a public footpath by the British Transport Commission Act of 1955, Section 15. Telephones to Chartham signalbox for the use of the public, and ex-Southern Railway signs telling the public how to use the crossing are provided as shown on the sketch and at the back of the report. Travelling in an Up direction the line curves to the left and then passes under a road bridge 319 yards before the crossing. Whistle boards are placed 217 yards and 32 yards respectively before the bridge, but because of the bridge, trains sounding their horns at these whistle boards are not easily heard at the crossing.

2. On 5th November 1969, British Railways became aware that Messrs Hooker Ballast Products Ltd. had begun operations over the crossing but three days later Southern Region forbade any further use until the surface of the crossing had been made safe and additional protection had been provided. The double-sleeper width surface of the crossing was relaid and operations recommenced with a crossing keeper in charge on 1st December. The crossing keeper was provided and trained by Southern Region but there was a financial arrangement between the Railways and the Company, and he was only on duty when the crossing was in use by the ballast lorries.

3. The existing crossing keeper's concrete hut on the Up side of the line was used, and an additional telephone placed inside it. The hut has four small windows through which both road approaches are clearly visible. Lorries, approaching on the Down side from the gravel pit exit which is 60 yards from the crossing, are visible when they are some 40 yards away from the crossing. The crossing keeper can see trains approaching along the Down line for a considerable distance but because of the hut's position he is unable to see trains approaching on the Up line until they are quite close.

4. The gates are of timber construction with crossed bracing and are painted white and easily visible. They open away from the railway but do not require to be latched to stay open to road traffic. Two small wicket gates on the west side of these gates lead onto the crossing and there are cattle-cum-trespass guards on both sides. I timed a complete cycle of operations and found that the crossing keeper can telephone, open and close the gates and telephone again, without hurrying, in under 2 minutes. A copy of the special instructions posted in the crossing keeper's hut is attached as Appendix "A" to this report.

##### *The signalling*

5. Shalmsford Street level crossing lies between Chartham and Wye signal boxes and is controlled from Chartham. Semaphore signalling is in operation and the line is controlled by Tyer 3-position Absolute Block

instruments. There are no track circuits and the control is "Open Block". The distance between Chartham and the level crossing is 72 chains. Shalmsford Street level crossing is worked under a Special Instruction which states that persons desirous of using the crossing for the passage of cattle, vehicles, etc., across the line will communicate with the Signalman at Chartham by means of the telephone and obtain his permission to do so. The signalman must ascertain particulars of the traffic to be taken across the line and provided no train is in section or has been accepted from the opposite end of the section, and there is sufficient time for the crossing to be used before a train is due to enter the section from either end, permission may be given. He may not allow a train to proceed towards the crossing from either end, except under caution, until he has been notified that the crossing is again clear.

#### *The Pattern of Rail Traffic*

6. There were 4 timetabled trains in every hour due to pass the crossing at about 18 minutes (Down), 21 minutes (Up), 41 minutes (Down) and 59 minutes (Up) past each hour. The train involved in the accident, the 09.45 Ramsgate to Ashford, although scheduled, only ran when required to do so, and was due to pass the crossing at about 10.07 following the last named train.

Normally therefore there were 19 minutes between the last Up train in each hour and the Down train which followed it, but when the 09.45 was running there were only 8 minutes between the two trains.

#### *The Train*

7. The 09.45 Ramsgate to Ashford train was an empty four car EMU made up of a 4-BEP Express Buffet Stock unit on its way into workshops. It consisted of Brake Second Saloons leading and trailing with a Trailer Composite Corridor and a Trailer Buffet between them. The train weighed 151 tons and was powered by 4-250 H.P. English Electric traction motors. Its overall length was 265 ft and its brake efficiency about 78%.

#### *The Lorry*

8. The lorry was a standard Ford Thames "Trader" tipping lorry weighing 3 tons 15 cwt empty, and it was carrying about 6 tons of wet gravel. It was 16 ft 6 inches long overall.

#### *Accident Damage*

9. Damage to the train was mainly at the front. The impact with the lorry stove in the offside front of the unit about 3 feet, and the auxiliary cupboard in which the electrical equipment is housed and which forms the wall between the secondman's cubicle and the parcels van behind it, was forced back and wrecked so that it lay horizontally on the van floor. The body of the guard was found on this wreckage. The motorman's desk was pushed back and his cubicle door was torn off its hinges. There was considerable damage to the front power bogie and underframe and there was a scar down the near side of the front car caused by the the cab of the lorry, but damage to the other cars was light although transverse sliding doors were off their runners and some fittings, including mirrors, had broken loose. The lorry however was totally destroyed. Its engine, cab, and front axle were separately thrown along the left side of the line and were completely wrecked but the rear part of the lorry including the rear axle was carried along on the front of the train emptying its gravel on the lines as it went. The metal tipper body skidded along the lines in front of the train and finally came to rest 44 yards ahead of it.

#### EVIDENCE

10. *Signalman (Relief) K. E. Martin* was signalman at Chartham on 15th July. He told me that he had been signalman there for about one year. He reported for duty at about 07.00 and shortly afterwards Crossing Keeper Jarvis telephoned from Shalmsford Street level crossing to say that he was on duty. At 09.56 he offered the 09.35 Ramsgate to Ashford train to the signalbox at Wye and had it accepted and the train passed his box at some 60 m.p.h. at 09.58. At 10.02 Jarvis telephoned to ask for the gates and signalman Martin told me that although he did not say his name (as he was supposed to), he recognised his voice. Martin asked him if the Up train had passed and when Jarvis replied that it had he gave him permission to open the gates and entered it in the register kept for this purpose. He told me that this was the 10th time Jarvis had asked for the gates that morning. At 10.03 Jarvis again telephoned to say that the gates were closed and the crossing clear and this he recorded too. At 10.05 Wye gave him the Train Out of Section signal and he immediately offered the 09.45 Ramsgate to Ashford special and it was accepted. It passed his box doing 40-45 m.p.h. at 10.06 and he sent the Train Entering Section signal to Wye at the same time. At 10.10 Jarvis telephoned again saying there had been an accident. He immediately sent the Obstruction Danger signal to Wye and asked the signalman there, who had direct telephone access, to call for the emergency services.

11. *Driver A. S. A. Knott* was the driver of the 09.45 Ramsgate to Ashford (Chart Leacon) train. He told me that he signed on duty at Margate at 08.34 and travelled passenger to Ramsgate where he met his guard, Guard Goodgame of Victoria, and prepared his train. After carrying out a satisfactory brake test of both electro-pneumatic and Westinghouse brakes they left East Yard at about 09.35 and proceeded through Ramsgate to Minster where they were checked. They were also checked at Sturrey and at Canterbury West and on approaching Chartham the distant signal was On although the Home, Starting and Advance Starting signals cleared as he approached them. He said he used his EP brake throughout and it was working well. He told me that he estimated his speed to be about 40-45 m.p.h. when his guard came into the cab, and soon after they were approaching Shalmsford Street level crossing. As he approached the bridge at 50-55 m.p.h. the Downside gate of the crossing came into view and when he then sounded his horn the crossing was clear. He said that he then saw the lorry come onto the crossing from the Downside and it seemed to him to stop on the Down line clear of the Up line. He made a partial brake application but when he was only 50 yards from the crossing the lorry moved on again and although he made an emergency application he hit the lorry. He says he probably closed his eyes but when the train came to a stand he saw his guard on the wreckage beside him and he scrambled out to him. He felt for his pulse but he seemed to be dead. He could not then easily get back into his cab to collect his detonators so he went back to collect his guard's and then went forward to protect the Down line. When he returned the police had already arrived and he was taken to Canterbury hospital and then to his home.

12. *Mr. P. P. Pettenden of Hooker Ballast Products Ltd.* kindly attended my Inquiry. He told me that the gravel pit by Mystole Lane was being worked by 3 lorries which were licensed to run on only a short length of public highway, this being along the lane and over the crossing to the company road on the other side of the railway. He estimated that these operations would be completed towards the end of 1971. After describing the lorry involved in the accident he told me that driver John Caine who was killed and who was then aged 67 had worked for him for 10 years. He had stopped driving on 22nd November 1969 due to his wife's illness, but later she died and he started driving again on 12th May 1970. In all that time he had found him a careful steady driver and an experienced one, and he had never had an accident so far as he knew. He told me that up to June of this year his drivers had been paid a bonus according to the number of trips they made but following a wage increase all bonuses were stopped. None of his drivers had reported to him having found the level crossing gates irregularly open, and he had no complaints about the way the crossing was being worked. He also told me that on the day of the accident he estimated the 3 lorries in circuit had each completed 3 trips, a figure which tallies with that in the signalbox register. He knew about a near accident in January 1970 but told me that Mr. Caine was not involved at that time. He also said that Mr. Caine had not worn glasses and he thought his eyesight and hearing had been good.

13. *Railman (Relief) R. B. Jarvis* had been relief crossing keeper at Shalmsford Street since Monday 13th July only two days before the accident. He said he came on duty before 07.00 but telephoned the signalbox shortly after that time when he knew the signalman was on duty. He told me that he had got clearance for a number of lorries and allowed them across and properly closed the gates before asking for the gates again at 10.00 to allow a loaded lorry to pass from the Down to the Up side. He had previously cut up some wood for use in his fire and had left it beside the Down side gate and he said that he took the opportunity of carrying the wood over the crossing and then closed the Up side gate, and telephoned the signalman before he went to close the Downside gate. He then said that although he knew that the gate was open, he poured himself a cup of tea from his flask and stood with his back to the railway while he drank it. He neither saw nor heard the lorry approaching nor did he hear the train sound its horn until the lorry was passing through the Down side gate. He told me that he then went out of his hut to warn the lorry to wait but that the accident occurred before he could do anything about it. He then telephoned the signalman and when he went outside again he saw the gentleman from the cottage opposite come onto the crossing and heard him say he would report the accident, and Jarvis then telephoned the signalman again and told him that an ambulance would be required. He remained in a dazed condition until the police arrived.

14. When I questioned him Jarvis knew the procedure for operating the crossing but I had the impression that he had not properly read the instructions for he did not know if they covered the use of detonators in an emergency. When Jarvis was questioned by the Kent County Constabulary shortly after 13.00 on the day of the accident he had stated:—

“I would add that occasionally the gate nearest the village is left open for our convenience and there is an understanding between the gate keeper and the lorry drivers that they will wait for a signal from us before they attempt to cross the line. In this case we always ask permission from Chartham signalbox before we open the other gate and signal for them to cross but in this case I think the lorry driver misunderstood what I was about to do.”

When I questioned him on this point and whether he had ever left one of the gates open, he denied it and explained his statement to the police by saying that he was in a very shocked and dazed condition when he made it.

15. Jarvis told me that his wife had died some 18 months previously and that he had got into debt and had had to sell his house but had since moved into a Council house. He has 3 girls aged 17, 16, 13, and a boy aged 7 but the eldest girl had just left home and he was worried on account of the younger children when they got home from school before he did. He had a home help but she too had left. Mr. Jarvis looked much older than his 49 years and was clearly a worried man. He told me that he normally slept only 4 hours a night.

16. *Temporary Railman T. W. Cook* was the regular crossing keeper at Shalmsford Street level crossing. He took duty in May 1970 and at the time of the accident was attending the second week of a two-week course at Beckenham. He told me that the crossing was not a difficult one to operate and that the amount of road traffic other than Mr. Hooker's lorries was negligible. When I questioned him he said that he did not know of any arrangement whereby one gate would be left open to facilitate the flow of the gravel lorries, and he had not taken part in any such agreement himself.

17. I visited *Colonel S. Attenborough*, at Thruxted Cottage in Mystole Lane which is only a few yards from the Down side gate. In a statement which I read out at the Inquiry he said that prior to there being a crossing keeper he used to find the gates open from time to time, having been left open by members of the public. He said he knew the regular crossing keeper well and had never found the gates open when he had been on duty, but since relief crossing keepers had taken his place he had sometimes seen the Down side gate open when it should have been closed. Colonel and Mrs. Attenborough were worried about this because of their dog.

18. He also told me of a near accident that had occurred towards the end of January 1970 soon after 09.00 when two lorries crossing from the Up to the Down side had the gates opened for them by the crossing keeper and an Up train narrowly missed them, but he could not remember the name of the crossing keeper involved.

19. On the day of the present accident he was in his garden when he heard a loud bang and his wife came downstairs and told him that a train had hit one of Mr. Hooker's lorries. He ran through his garage to the Down side gate and saw the crossing keeper in a dazed state by the Up side gate and the lorry driver huddled up beside the Up line some 8 yards away. The train was still moving slowly at the time. He shouted to the crossing keeper to telephone the signalman and rushed back to his house and telephoned for the emergency services. He told me that he thought that the Up side gate was still closed when he saw it.

20. *Station Manager H. E. Upton* was on duty at Canterbury West Station when Signalman Martin called from Chartham at about 10.10 and having checked that the emergency services had been called, he went immediately to the site of the accident. On his arrival at Shalmsford the ambulance was already there. *Lineman Needham* came up to him and confirmed that the current had been isolated between Godmersham sub-station and Milton T P hut. He found Jarvis sitting in the crossing keeper's hut in a distressed condition, so he sent him to Canterbury hospital in a taxi. On checking he found that the level crossing instructions were on the wall of the crossing keeper's hut, and were in good condition in a glass frame. He then walked down the line to the train and saw the driver who was unhurt and he sent him home too.

21. He told me that Jarvis had worked for him for 3½ years, finally as leading railman at Canterbury West station. He knew of his domestic problems, and in conjunction with the local authorities' welfare officer he had tried to help him. He was quite satisfied that he was in every way suitable for duty as a relief crossing keeper. When I asked him if he had known of the incident in January he told me that the then crossing keeper had opened the gates without asking permission from the signalman and that the driver of the train had reported the incident.

#### CONCLUSIONS AND REMARKS

22. The accident was caused by the crossing keeper who, contrary to his instructions, telephoned the signalman that the gates were closed knowing that the Down side gate was still open. That he drank his tea before going to close the gate made his omission the more reprehensible. When I inspected the crossing keeper's hut I found written on the wall underneath the framed instructions, the four passenger trains scheduled to pass the crossing each hour, and I believe that Jarvis' lack of concern when he drank his tea was probably due to the fact that he was not expecting the special train.

23. Although the Railway notices to the public beside the telephones on both sides of the railway instruct drivers to open the far gate first before crossing over so that vehicles are not left standing on the lines, Mr. Caine clearly assumed that the lines were clear and that the far gate would be opened for him immediately. This is why I think he stopped his lorry on the Down lines and drove on again when he saw the crossing keeper come out of his hut. This accident stands as a warning to all drivers never to enter a level crossing unless both gates are open, whatever the circumstances. I do not believe that Mr. Caine could have heard the train sounding its horn by the bridge some 300 yards away over the sound of his engine.

24. I am satisfied that Jarvis had asked the signalman's permission to open the gates each time a lorry wanted to cross. From Colonel Attenborough's evidence however it seems possible that one of the crossing keepers may have had an arrangement with one or more of the lorry drivers, whereby one gate was left open to speed their crossing, but I do not think Jarvis was involved.

25. There is no statutory requirement for British railways to provide any protection at this crossing, other than the gates opening away from the railway, but in my opinion they were right, in view of the nature of the user, to insist on having the crossing manned. Mr. Jarvis had opened and closed the gates 9 times between 07.00 and 10.00 a task that could not have taken him more than 20 minutes in all. There is therefore

no excuse for his failure, and the arrangements for operating this crossing should have been perfectly satisfactory.

26. Crossing keepers caused some 20% of train accidents in 1969 out of the total of 117 train accidents at level crossings. These accidents were mainly due either to their failure to read block circuit indicators, or to their failure to close or properly secure their gates. A system of protection whereby the signalman cannot clear his signals unless the gates are closed would not be acceptable to the Railways at this and similar crossings, because trains could not run if a member of the public left a gate open when the crossing was not manned. The safest solution is of course to close the crossing to road traffic.

27. Both ends of Mystole Lane connect with a road which crosses the Railway by bridge within a few hundred yards, and the lane's user other than Mr. Hooker's lorries is extremely light. I therefore recommend that as soon as the ballast-moving operation is complete that steps should be taken to reduce this crossing to pedestrian status.

I have the honour to be,

Sir,

Your obedient Servant,

A. G. TOWNSEND-ROSE

*Lieutenant Colonel*

The Secretary,  
Ministry of Transport.



## BRITISH RAILWAYS

## SOUTHERN REGION—SOUTH EASTERN DIVISION

## Special Instructions to Crossing Attendant

at

## SHALMSFORD STREET OCCUPATION LEVEL CROSSING

(at 66m. 18ch. between Chilham and Chartham)

The gates and wickets at this crossing must be worked in accordance with Rules 99 to 101 and 104 to 107 inclusive.

Before opening the large gates for the passage of road traffic over the crossing the Crossing Attendant must obtain from the Signalman at Chartham his permission to open the gates for road traffic to pass over the crossing, and after such movements over the crossing are complete and the gates properly secured the Crossing Attendant must immediately inform the Signalman that the lines are again clear for rail traffic.

If the Signalman is not able to give permission for the large gates to be opened at the time of being asked by the Crossing Attendant, the Crossing Attendant must again telephone to the Signalman after a suitable interval, and *MUST NOT OPEN THE GATE* until permission is obtained.

A telephone is provided at the crossing for the purpose of speaking to the Signalman, and messages to him must be made in the following form:—

"Crossing Attendant at Shalmsford Street level crossing speaking—May I open the gates?"

and the reply from the Signalman must be either,

"Yes, you may open the crossing gates" or "No" as the case may be.

When the movement is completed:—

"Crossing Attendant at Shalmsford Street level crossing speaking—The gates are now closed and locked against road traffic and the line is clear".

During a failure of the telephone, the Crossing Attendant must work in accordance with the provision of the last sentence of Rule 107, clause (a).

Should the running line or lines become obstructed in any way by an accident the Crossing Attendant must immediately inform, by telephone, the Signalman at Chartham.

ON EVERY OCCASION WHEN SPEAKING TO THE SIGNALMAN AT CHARTHAM BY TELEPHONE THE CROSSING ATTENDANT MUST SATISFY HIMSELF THAT HE IS SPEAKING TO THE RIGHT PERSON.

FOR D. S. BINNIE  
*Divisional Manager*

BECKENHAM  
November 1969  
(R/SB.92/8)

(Signed) M. J. SOUTHGATE  
*Divisional Movements Manager.*

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