RAILWAY ACCIDENTS

REPORT ON THE ACCIDENT which occurred on 7th September 1950 at HOPWORTHY FARM OCCUPATION LEVEL CROSSING in the WESTERN REGION BRITISH RAILWAYS

LONDON: HIS MAJESTY'S STATIONERY OFFICE 1951
SIR,

I have the honour to report for the information of the Minister of Transport, in accordance with Order dated 8th September, 1950, the result of my Inquiry into the fatal accident which occurred at 5.29 p.m. on the 7th September, at Hopworthy Farm Occupation Level Crossing between Holsworthy and Whitstone-and-Bridgerule Stations on the Halwill to Bude single line in the Western Region. A passenger train, travelling at about 50 m.p.h., collided with a farm tractor and trailer, and I regret to report that the three persons who were riding on the trailer were killed instantly.

The train, which was the 5.8 p.m. Down passenger train from Halwill to Bude, consisted of a Class M.7, 0-4-4 tank engine, left-hand drive and travelling bunker first, and two passenger coaches. Vacuum brakes were in operation on the coaches and the driving wheels of the engine, and the brake power of the train was 64.2 tons, i.e. 51.7% of its total weight of 124.2 tons. Damage to the train was light; a buffer beam and a step of the engine were bent, and axle boxes, step boards, a battery, and various panels of the coaches were broken or damaged. The tractor, which was a Fordson Major weighing 1 ton 19 cwt., and the trailer, which was of the heavy farm 2-wheeled type, weighing probably over 1/2-ton, were completely destroyed.

The Civil Police were advised of the accident at 5.38 p.m. and attended with two doctors, at 6.05 p.m.

The weather at the time was fine and the rails were dry.

DESCRIPTION

The Line.

The line from Halwill to Bude is single; it is open from 5.30 a.m. to 9.30 p.m. and carries a light traffic of 9 Down and 9 Up passenger trains a day, in addition to 8 freight trains or light engines. After leaving Holsworthy, 217 m. 52 ch., it rises gradually for 1½ miles and then falls at a gradient of 1 in 82 past Hopworthy Farm Crossing, 220 m. 40 ch., to Whitstone-and-Bridgerule, 222 m. 60 ch.

About 370 yards before reaching the crossing, the line assumes a left-hand curve of 40 chains radius which continues past it and beyond for a further 300 yards. At the crossing itself the line enters a shallow cutting, the shoulder of which, on the Down or left-hand side, from which the tractor emerged on this occasion, commences a few yards in the Holsworthy direction. An engineman's view of the Down side of the crossing as he approaches from Holsworthy, is thus obscured by a bank about 6 to 8 feet high; neither the gate nor the approach to it from the fields can be seen at all, and the front of a tractor, standing inside the gate, only comes into view at a distance of about 170 yards.

The running time allowed between Holsworthy and Whitstone-and-Bridgerule is 8 minutes for the distance of 5 miles 8 chains. This includes the rising gradient for the first 1½ miles from Holsworthy; speeds for the remainder of the distance are therefore relatively high for this type of line, and reach 50 m.p.h. past the point where the accident occurred.

The Crossing.

Hopworthy Farm Occupation Level Crossing is of the usual construction, and is provided with iron field type gates, which open away from the railway, and which are kept padlocked when not in use. The roadway is 9 feet wide and is made of ballast laid up to the level of the rails. The gates are 29 feet apart, the Down side gate is 18 feet from the nearer rail, and the Up side gate is 6 feet 6 inches.

The approach to the crossing from the Down side is by a farm track which runs parallel to the railway and then turns sharply to the left through a right angle. The crossing gate is immediately round this corner and, until the turn has been made, the railway and the crossing are out of sight. On account of the cutting and the thick hedges which grow on top of the banks, a view up or down the line cannot then be obtained until the crossing gate has passed through the gate and reached a point well inside it, when it is possible to see 200 yards in each direction. From the seat of a tractor, such as was involved on this occasion, it is necessary to move 11 feet through the gate, bringing the front wheels to a point 7 feet from the rail, before any view can be obtained at all; a man walking must approach several feet closer.

From the Up side gate the curvature of the line and the formation of the ground allow a better view, but it is, even so, somewhat obscured by hedges. No lamps, signals or warning bells are provided at the crossing, and there are no whistle boards on the line in either direction to cause warning to be given of an approaching train. A notice is fixed to each gate, reading "Penalty for not shutting gate £2".

The Accident.

The 5.8 p.m. train from Halwill left Holsworthy on time at 5.24 p.m. When it was at a point about 100 yards from the crossing, and travelling at 45-50 m.p.h., the fireman saw from the left-hand side of the engine in the direction of travel a tractor emerge from the Down side of the crossing. He shouted to his driver who immediately applied the brakes, but a collision was unavoidable as, by this time, the tractor and trailer were astride both rails. The engine hit them in the centre, and stopped about 400 yards beyond the crossing.
The tractor was struck at its rear end by the right-hand corner of the engine buffer beam; it appeared, when inspected afterwards, to have been thrown against the gate post of the crossing, and slewed round so that its front again came in contact with the side of the passing train, smashing steps, axle boxes and a battery, and denting the panels of the second coach. It was completely demolished and its engine, which broke away from the chassis, had been bundled along the line by the wheels and steps of the train, dis-integrating as it did so. The trailer had been cut in half just in front of its wheels; the rear half fell back into the ditches, but the front half had been crushed between the rails and under the wheels of the engine and carried along under the train. Debris and pieces of the tractor engine were found strewn along the line for nearly 100 yards. The driver of the tractor was thrown over a hedge and into a field by the impact, and was only slightly hurt, but unfortunately his father, mother, and sister, who were riding on the trailer, were killed instantly.

The family had been carrying corn to the farm from some fields on the far side of the railway, and had made a number of journeys over the crossing during the day. On this occasion the son, who was driving the tractor, thought that he had already seen the 5.8 p.m. train pass towards Bude; in consequence, when he came to cross again with the tractor, he looked down the line towards Bude, but did not pay much attention to the Up direction. The gate on the Up side had been left open from the previous trip, but that on the Down side was closed. A small boy, who was travelling on the tractor with the son, opened the Down gate, and then went back to the field from which they had just come in order to shut another gate. The son, without realising that a train was approaching, and being unable to hear it on account of the noise of the tractor engine, put his tractor into gear and started to move across; he heard his father say "Look out", but by this time the train was almost upon them and there was nothing he could do to avoid the accident.

EVIDENCE

Mr. L. Cawsey, the driver of the tractor, said that he had been on the farm for over three years. He had used the crossing frequently and knew it very well, including the times of all the trains which passed. When collecting in the harvest from the far side of the line he thought that he might perhaps make a dozen round trips a day over the crossing and back. He was an experienced tractor driver and had driven the particular machine involved in the accident for over two years. On this occasion he was about to cross from the farm to bring another load from the far side, so he went to start the tractor engine. Mr. Cawsey said that, as he did so, he thought he saw a train "go down towards Bude". With his father, mother and sister sitting on the trailer, and a small boy beside him on the tractor, he then drove across a field and down the cutting to the crossing. He stopped at the Down side gate, and the boy jumped down and opened it; the Up gate had already been left open from the previous trip. After opening the gate, the boy did not go on to the track and look up the line, but went back into the field to close another gate. Mr. Cawsey then put his tractor into gear and proceeded through the gate and across the line. On coming through the cutting on to the crossing he did not stop, but continued straight across. As he did so, he looked down the line towards Bude but did not pay much attention to the Up direction because he thought he had just seen the 5.8 p.m. Down train go past. He then heard his father shout, but by that time the engine was almost upon them. He said that the noise of the tractor engine was not particularly great but it was sufficient to make it impossible to hear an oncoming train.

Mr. Bassett said that he was the uncle of the tractor driver. He had known the crossing for 45 years and had experienced no trouble there himself, but he said that it had nearly "had" his brother-in-law some years ago. His nephew, Mr. Cawsey, knew the crossing well and was a careful driver, and the family in the farm had always been particular in the way in which they used the crossing, and in closing and locking the gates afterwards. There was only one key for the padlocks which was kept at the farm.

Fireman P. G. Solman said that the train left Holsworthy on time and everything was normal. He was not firing at the time but was looking out from the left-hand side of the engine when, about 50 yards from the crossing, he suddenly saw a tractor move slowly on to the line. He did not see the tractor driver or notice which way he was looking, neither did he see the trailer which was hidden by the cutting. He immediately shouted to his driver to stop and the brakes were applied at once. Fireman Solman said that there was no possible chance of avoiding the crash, which took place almost as soon as he shouted, and the train pulled up in about 400 yards. He thought it probable that the engine hit the back end of the tractor and the front end of the trailer.

Driver S. R. Jones was standing on the right-hand side of the engine in the direction of movement and so, on the left-hand curve, did not get as early a view of the crossing as did the fireman. When the latter shouted to him to stop he immediately applied the brakes and just caught sight of the tractor in front of the engine before the collision occurred. Driver Jones knew the line very well and also where all the crossings were. He said it was not his practice to whistle before reaching them, and that he had never seen anything at the crossing before. Driver Jones' evidence corroborated that of Fireman Solman in all respects.

Porter Guard A. Abbott described how he was in the Guard's van next to the engine. He felt the brakes being applied and looked out of the left-hand side window; he saw that debris was flying about, but he did not know at that time whether the train had hit anything or whether the engine had become derailed and was throwing ballast up. He had been on this line for the last 15 years and knew the crossing very well. He knew of no trouble having happened on it before, and said that the gates were always kept closed and that he had no complaint at all about the way in which the crossing was used.

Mr. T. Kingdon said that he was the Station Master at Holsworthy. He had known the line since 1913 but had never heard of any trouble at this level crossing and, as far as he knew, there had never been any cause for complaint in regard to the way in which it was used.

Inspector J. H. Littlejohn, Ganger W. Short, and Sub Ganger T. Lashbrook all said that the crossing was very carefully used by the farmer and other occupants of the farm.
CONCLUSION AND RECOMMENDATION

This accident was caused by the tractor driver's mistake in thinking that the 5.8 p.m. Down train had already passed, and in moving on to the crossing without assuring himself that it was safe to do so. Unfortunately he did not stop to look up and down the line after passing through the gate; if he had done so, the probability is that he would have seen the approaching train which, according to the evidence, was less than 200 yards away.

The driver of the train had no chance whatever of avoiding the collision and the train crew did all that could have been expected of them in the circumstances.

Hopworthy Farm Crossing is undoubtedly dangerous, because there are circumstances in which, although all the parties concerned take every reasonable precaution, an accident is almost inevitable. In my opinion, it is only the small number of trains passing over the crossing daily, the infrequent and intermittent use to which it is put by the farm, and the fact that all its users know the times of the trains, which explain why an accident has not occurred at this place before. The danger particularly applies to movements from the Down to the Up sides. Situated as the crossing is, in the shoulder of a cutting, the road approach to it, and the Down side gate, cannot be seen from an engine; even a vehicle standing inside the gate cannot be seen until the engine is within 170 yards.

To cross from Down to Up sides, a tractor must first stop 9 feet short of the gate to enable it to be opened, and must then proceed a further 20 feet until the front wheels are only 7 feet from the rail, and stop again. This is the first position from which the driver can look up and down the line, and he can then only see about 200 yards in each direction. All may be clear and nothing may be heard above the noise of the tractor engine, so he starts to move across. Having once started, with a trailer and tractor 24 feet in length, as in this case, he must move a distance of 40 feet before he is safely over the other side. At a speed of 4 m.p.h., this will take nearly 7 seconds, and if a train appears at 50 m.p.h. round the bend 200 yards away, at the moment when the tractor starts to move, it will take slightly more than 8 seconds to reach the crossing. The margin of safety, therefore, for the tractor driver is the negligible quantity of about one second.

By posting another man on a bank or on the far side of the crossing, a better view can be obtained, and the margin slightly increased, but the improvement is not of any practical value. There are, in fact, no reasonable steps which the user of the crossing can take which will really make its passage safe and certain.

I recommend, therefore, that negotiations should be opened with the owner of the crossing, in an endeavour to obtain his agreement to its closure. I understand that this may be possible without seriously affecting the work of the farm; if this is not so, it will be necessary to provide a telephone before the crossing can be regarded as safe. In the meantime, whistle boards should be erected at suitable distances from the crossing to give warning of an approaching train.

It was only by good fortune that the train in this case was not derailed, when the consequences would almost certainly have been even more serious. The accident has once again drawn attention to the risks which are being caused to rail traffic at crossings of this type by the increasing use on farms of heavy agricultural machines.

I have the honour to be,
Sir,
Your obedient Servant,
R. J. WALKER,
Colonel.

The Secretary,
Ministry of Transport.

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