

The
VIRTUAL MUSEUM
of the
LANCASHIRE & YORKSHIRE RAILWAY

Accident Reports.

2 November 1903

BoT Report into Accident at
St Johns Level Crossing, Waterloo.

(6 Pages).

when a light engine is waiting to cross from one line to another, but do order it to be carried out in the case of a train being shunted from one running line to another. Under these circumstances Albon is not to blame for not carrying out the rule.

I have, &c.,
E. DRUITT,
Major, R.E.

The Assistant Secretary,
Railway Department, Board of Trade.

APPENDIX.

DAMAGE TO ROLLING STOCK.

Engine No. 104, working 6.40 p.m. Manchester to Bradford.—Engine framings badly damaged at leading end; bunker end knocked in; right-hand side tank knocked in; cylinders broken; foot-steps broken off on the left-hand side; whistle broken off; smoke box badly damaged; blast and steam pipes in smoke box damaged.

Engine No. 1,262 (light engine).—Leading buffer plate broken off; framing on both sides badly bent; cylinders broken and displaced; radial guide bolts sheared off; leading springs and links knocked off; smoke box badly damaged.

Engine No. 1,404, working 7.10 p.m. express Leeds to Liverpool.—Bogie castings all smashed; framings broken and bent; cylinders broken and displaced; all bolts sheared off and slide bars knocked out; smoke box destroyed; steam pipe broken; motion all damaged; drag plate displaced, bolts all sheared away; footsteps broken; hand railing bent; right-hand tender axle box broken and tender end knocked in; driving axle bent a little.

7.10 p.m. Train, Leeds to Liverpool.

Bogie Third Van, No. 663.—Body completely broken up; bogies displaced; and body frame badly damaged.

Lavatory Bogie, No. 835.—One sole bar, two headstocks, one cross timber, one longitudinal, one buffer casting, nine leg irons, double vacuum cylinder, two gas cylinders, two friction blocks, all footboards, five roof boards, one quarter light,

gas globes, vacuum train pipe, steam pipes, one draw bar, spiral springs, brake work and end panels, &c., broken; one bogie, seating, doors, &c., damaged; two screw shackles, one draw bar, and three leg irons bent.

Bogie Third Van, No. 2,750.—Vacuum train pipe, I. R. pipe, one steam pipe, end panels, casing, boards, intercommunication, gas fittings, and one opal light broken; one draw bar and two buffers bent; seating displaced; and body moved.

Bogie Third Van, No. 2,732.—One opal light broken and gas pipe joints shaken.

Lavatory Bogie Composite, No. 832.—Body moved and gas pipe joints shaken.

Bogie Third Van, No. 858.—Body moved and gas pipe joints shaken.

6.40 p.m., Manchester to Bradford.

Bogie Third Van, No. 2,991.—One bogie bolster, one buffer casting, one folding door pillar, one gas side lamp, and one steam trap broken; one bogie bolster and gas pipes damaged; two buffers bent; and body moved.

Bogie Composite, No. 848.—One door light and frame, and four footboards broken; one headstock and one bogie iron frame slightly damaged; and two leg irons bent.

Parcel Van, No. 76.—Two buffer rods bent.

Damage to Permanent Way.

50 chairs broken; 30 sleepers broken; one rail broken.

Printed copies of the above Report were sent to the Company on the 30th December.

LANCASHIRE AND YORKSHIRE RAILWAY.

Railway Department (Board of Trade),
8, Richmond Terrace, Whitehall, London, S.W.,
30th November, 1903.

SIR,

I HAVE the honour to report, for the information of the Board of Trade, in accordance with the Order of the 11th November, the result of my inquiry into the circumstances which led to a fatal accident about 6 p.m., on the 2nd November, at St. John's Road level crossing, near Waterloo Station on the Lancashire and Yorkshire Railway.

In this case, an old lady was crossing the railway on foot, when she appears to have been struck by the 5.55 p.m. up passenger train, travelling from Hall Road to the Exchange Station, Liverpool. The lady was found lying unconscious at the foot of the bank on the east side of the railway, close to the level crossing, and died shortly afterwards. She approached the crossing from the west.

The train in question was drawn by a four-wheels-coupled tank engine, driven bunker first. The engine and train were fitted with the vacuum automatic continuous brake, which was in good working order.

Description.

The scene of this accident is about a quarter of a mile north of Waterloo Station on the Company's Liverpool, Crosby and Southport branch line.

There are bridges at the south and north ends of this station carrying roads over the railway, known as Crosby Road and South Road respectively. Between the last-named overbridge and St. John's Road level crossing, a distance of about 350 yards, and on the west side of the railway, lies the Waterloo Station goods yard. Brooke Road level crossing to the north of St. John's Road, is distant about 640 yards.

The railway lines approach the level crossing from the south on an easy curve. Northward of the crossing the railway approach is straight. A train approaching the crossing from the south travels over rising gradients varying in inclination from 1 in 85 to 1 in 210. The gradients also rise towards the crossing from the north, but are very easy (1 in 500 to 1 in 1100).

The roadway crosses the railway at right angles, and the road approaches on either side of the crossing are practically level and straight. The conditions, therefore, which govern the view available to engine drivers and the general public using the crossing, are as favourable as can be expected.

There are three lines of rail crossing the roadway. The eastern and central lines are those used for up and down traffic respectively, while the western line is a shunting neck or siding approach to the goods yard. Access to this siding is provided by two sets of points. One of these (on the down line), is about 70 yards north of the crossing; the other, a set of slip points on a cross-over road between the two main lines, is about 40 yards south of the crossing.

In addition therefore to the ordinary traffic passing over the main lines, any shunting of goods trains into the goods yard also takes place over the level crossing.

There are wide gates provided on each side of the level crossing, which fence in the railway, or the roadway, when they are open for railway or road traffic respectively. These gates are provided with red lamps in accordance with the Board of Trade requirements. Besides these large gates, there is a wicket gate on either side for the use of foot passengers, and the whole crossing is trunked over with timbering in the usual manner.

Alongside each of the wicket gates there is a gas lamp fixed to light the crossing, the lamps being about 20 candle power.

Immediately adjoining the crossing, on the west side of the railway, there is an elevated signal cabin, from which a good view of the crossing is obtainable.

The large gates are opened and shut from the signal cabin by means of the usual gate wheel, and the lever releasing the gate stops is interlocked with the up and down signals, as well as with the points above referred to, and the goods yard signals.

The wicket gates are controlled by a single lever which is, as usual, free of any interlocking, in order to allow foot passengers to use the crossing until the near approach of a train.

Evidence.

William Cavanagh, signalman, states: I have about 22 years' service, 20 years as signalman. I have been five years at St. John's Road signal cabin. My hours of duty on the 2nd November were from 2 till 10 p.m. The signal cabin is called Waterloo signal cabin. The accident happened about 6.2 p.m. A down train from Waterloo Station passed the cabin at 5.58 p.m. I remember pulling the wicket gate lock before this train passed. It is the custom to lock the wicket gates when a stopping train in the down direction is leaving Waterloo Station, and in the case of an up train, when the train is passing Brooke Road about halfway between Crosby and Waterloo signal cabin. I remember loosing the wicket gates after the 5.58 p.m. train had passed. The next train that passed was the 5.55 p.m. up train

Hall Road to Liverpool. I do not recollect opening the road gates after the 5.58 p.m. down train had passed. The up train passed about 6.2 p.m. I remember locking the wicket gates also before this train passed. There was no one waiting at the crossing when I locked the wicket gates, and I did not see anyone on the crossing between the gates. The night was dark and rainy, with a kind of mist. The lamps just alongside the wicket gates were alight, there are two of these one on each side, and the light given is generally sufficient to illuminate the crossing on clear nights. Even if anyone were shut in between the gates there is room to stand clear of the lines close to the gates. I heard the driver of the 5.55 up train sound his whistle before reaching the crossing; they are always accustomed to do this. After

the train had passed, a woman, who was crossing the line, drew my attention to the fact that a woman had been knocked down. I asked the goods clerk, who had just come into the cabin, to go down and look. He went and found a woman lying on the bank outside the up road, and on the Waterloo side of the crossing. The woman who told me said she thought she saw the accident occur. For this reason I think the accident was caused by the 5.55 up train, though I have no certain knowledge to this effect. My cabin contains a frame with 22 levers, of which four are spare. There are two block instruments, and a ringing bell to Brooke Road level crossing. There is one telephone instrument communicating with Marsh Lane Junction cabin and Crosby Signal cabin on either side. The level crossing road gates are opened and closed with a wheel, which is fixed by one of the levers which holds the stops. This lever is interlocked with the up and down home signals, and the signals out of the goods yard. The cross-over points and the trailing points on the down line are also interlocked. The crossing is used considerably by both vehicles and foot-passengers. I am not aware of any previous accident at this crossing. In foggy weather there is a man appointed to give assistance to the signalman if necessary in protecting the public. We can ask the stationmaster (Waterloo) for the services of a man whenever we think it necessary. I did not think it necessary on the evening in question. The evening was drizzly rather than foggy, and it came on suddenly. The normal position of the gates is across the roadway. There are a large number of school children using the crossing daily. I have not found the duties of signalman too heavy for one man. I have to book the times of trains also.

Alfred Edward Voce, stationmaster at Waterloo, states: I have about 33 years' service with the Company, and have been $4\frac{1}{2}$ years stationmaster at Waterloo. I know of no accidents on this crossing previous to the one on the 2nd November. I know Cavanagh well; he is a steady, reliable man, and there is nothing against him. The signalmen at Waterloo signal cabin are instructed to ask me for assistance at the crossing when required. If the weather is windy or foggy they do so ask; and I have never refused to send them a porter or platelayer. The man assists in opening and shutting the large gates in windy weather, and in foggy weather he tells the signalman when the wickets can be closed. I remember the night of the 2nd November, it was drizzling and rather misty. It was not so bad as the other occasions on which assistance has been asked for. I received a telephone message from the cabin shortly after 6 p.m. on the 2nd November and went there, arriving about 6.15 p.m. I first, however, telephoned for the ambulance to be sent. I went to the box, it was still drizzling and the lamps on both sides were alight. I could see over the crossing fairly well, and could have seen anyone inside the gates. Sometimes people after passing through the wicket gates stand inside them before crossing. I have seen such cases. The lady killed is stated to have been 74 years of age. The body was two or three yards from the gates on the Waterloo side. There is a great deal of inconvenience to the public from this and other crossings.

William Roughley, driver, states: I have about 24 years' service, and have been driving 12 years. My hours of duty on the 2nd November were from 8.25 a.m. until 7.25 p.m. I was driving the 5.55 p.m. up train from Hall Road on the 2nd

November. On approaching the St. John's Road level crossing the up distant and home signals were at safety, and my speed was about 12 miles an hour. The train was due to stop at Waterloo. The night was dark and misty, and I saw no one on the crossing. I was driving a 4-wheels coupled tank engine, bunker leading, and was on the right-hand side of the engine. I sounded the whistle when I was 30 or 40 yards away from the crossing. I felt something as if a lump of coal had fallen on to the bunker coal slide, but it was not a sufficient jar for me to take much notice of, and so I did not stop the train. When we got to Waterloo Station, I said to my mate "Is it a spring we have broke?" but we found nothing amiss, and no marks of any sort on the engine. The engine and train were fitted with the vacuum continuous brake, and it was in good working order. I know of many narrow escapes of persons from being run down at the crossings between Southport and Liverpool, but in these cases the gates are not interlocked with the signals and controlled by a signal cabin.

Thomas Baker, fireman, states: I have over 20 years' service with the Company. I was with Roughley on the 2nd November, and my hours of duty were similar to his. I was on the left of the engine and saw no one on the crossing. The driver sounded the whistle when he was about 30 yards from it. The night was dark and misty. I was closing the damper of the engine as we went over the crossing, and therefore was not looking out at the time. I felt as if some coal had rolled down the bunker plate, but on examination at Waterloo I could find no marks anywhere.

John Botham, goods clerk at Waterloo, states: I went to the Waterloo signal cabin from the goods yard about 6 p.m. and saw the 5.55 p.m. up train pass me before I reached the cabin. I did not see anyone knocked down, but I may not have been looking. I heard a peculiar noise from the engine as it passed, and walked across the lines to see if anything had been run over. I saw nothing and went into the cabin. Just then a woman shouted that a woman had been run over. So I got a lamp and went across the metals, and found the body about four or five yards from the crossing at the bottom of the bank. Both the lamps were lit and in ordinary trim. I could see over the crossing from the cabin, and could have seen anyone on the crossing. There was a drizzle of rain and I could therefore not have seen through the window; but the window was open, so there should have been no difficulty in seeing.

Mr. Gervase Roberts, gas manager, states:— There are two gas-lamps one on each side of the crossing immediately adjoining the wicket gates. They are each of about 20 candle-power. Under normal conditions they provide sufficient light to allow of a good view over the crossing. In the case of fog, of course, the light would be obscured more or less, and a drizzling rain would also reduce the illuminating power. The lamps have about the same power as those at other level crossings. I have made a recommendation that incandescent burners should be substituted in these lamps, and this has been agreed to by the general manager. The power will be thereby increased from 20 to 50 candles for each lamp. I have not heard of any previous complaint as regards the lighting of this crossing or similar crossings with three lines of road. I have been to this crossing since the accident, and can read a newspaper walking over

the crossing, by the light of a single lamp, on a fine night.

Mr. William Worthington, engineer, states: The Liverpool, Crosby and Southport line was constructed under the Act of 1846. The crossing known as St. John's Road was then an occupation or private one. In 1885 gates were first worked from the signal cabin and interlocked with the signals. There are three lines of road, one of which is a goods shunting neck line. The only previous accident at this crossing that I am aware of was on November 11th, 1884, when an unknown man was killed. The road approaches to the crossing are straight and level, and there is not, therefore, any special risk in these respects. The Company have been in negotiation from time to time with the Waterloo and Seaforth Urban District Council for many years past with a view to meeting the wishes of the Council that something should be done with regard to this level crossing. In 1898 the Company definitely proposed three alternatives for the acceptance of the District Council:—

- (1) To make a road bridge over the railway in lieu of the crossing, provided the District Council would make the approaches for the bridge.

- (2) To erect a foot bridge entirely at the cost of the Company on condition that the level crossing was closed for foot passengers.
- (3) To construct a subway for foot passengers if the Council would make and maintain the approaches thereto.

Parliamentary powers would have been required for the diversion of the foot traffic in alternatives (2) and (3). The result of the correspondence, however, was that neither of the three alternatives was accepted by the Council except under conditions which the Company could not entertain. In 1901 and 1902 the Council again pressed for the abolition of the crossing, but nothing has however resulted. I have no doubt that the Company will still be prepared to carry out their offer of one of the alternatives above mentioned. The Company's scheme for electrification will not affect the level crossings. Probably the train service will be more frequent than at present. This will, of course, mean that the crossing gates will be more frequently closed, but in my opinion the danger will not in any way be increased. The conductor rails are stopped short at all level crossings (about four feet at St. John's Road) from the edge of the timbering, and the current is carried under the roadway by a buried cable.

Conclusion.

The unfortunate lady who was killed in this sad accident passed through the wicket gate on the west side of the level crossing just before it was locked by signalman Cavanagh for the passage of the up train. The train travelled on the line of rails nearest to the east gate. She had therefore crossed two lines of way, and must have been crossing the third line when she was struck by the engine, and received fatal injuries.

Cavanagh, who was at the time responsible for the safety of the public using St. John's Road level crossing, states that he saw no one on the crossing at the moment when he locked the wicket gates. He attributes this to the fact that the night was dark, and a drizzling rain was falling. There does not however appear to have been much fog, and the lamps at either side of the crossing were burning. In any case he did not consider the atmospheric conditions were so bad as to render further assistance necessary for the protection of the crossing. This assistance he might have obtained by telephoning to Waterloo Station.

Moreover, the statements of stationmaster Voce and goods clerk Botham, who arrived shortly after the accident had occurred, are to the effect that the darkness and rain were not sufficient to preclude the possibility of seeing from the signal cabin whether anyone was on the crossing.

Under the circumstances it is perhaps questionable whether signalman Cavanagh exercised sufficient care in his control of the crossing.

The evidence given before the Coroner, however, makes it clear, I think, that the closing of the wicket gates, after the lady was on the crossing, was not the cause of the accident, and that even if Cavanagh had seen the lady, and left the wicket gates open, the accident would still have occurred. It could in all probability only have been prevented by the closing of the wicket gates at an earlier moment.

But, in my opinion, it is quite impossible, having regard to the convenience of the general public, for a signalman always to choose such a moment for closing wicket gates at level crossings as will preclude the possibility of all danger to foot passengers.

There is a certain amount of risk attached to the use of wicket gates at all level crossings, and there is the same, and no greater, risk at St. John's Road crossing.

For these reasons I agree with the verdict of accidental death given by the Coroner's jury, and do not consider that Cavanagh displayed any culpable negligence with regard to his duties.

The history of this level crossing is similar to that of many others in England. The Liverpool, Crosby and Southport Railway was constructed under powers granted by the special Act of 1847. At that time there was no public road, and provision was made merely for a private or occupation road for the use of the landlord or tenant of the property. As an occupation crossing the special and general Acts gave the Board of Trade no

powers to deal with it. In those days the district was very thinly populated, and quite of a rural character. The population of Waterloo has increased from 3,000 in 1856 to 25,000 at the present day. Continuous streets of houses have been built on each side of the railway, and the crossing to all intents and purposes is now that of an important public road. At the same time the railway traffic has probably increased in the same proportion as the population.

The railway company recognised the growing importance of the level crossing in 1885 by equipping it in the manner required by the Board of Trade for a public road.

The inconvenience such crossings cause to the general public in populated districts is great. From this point of view, therefore, it is highly desirable to replace them, wherever possible, by over or under bridges.

But on the score of inconvenience the Board of Trade possess no powers to deal with public road level crossings.

Where danger is anticipated, or the safety of the public is endangered, power has been given to the Board in later Acts to call upon a railway company to construct a bridge in lieu of a public road level crossing. This power does not apply to St. John's Road, which, as I have shown, was authorized as a private road crossing.

No danger can reasonably be anticipated to vehicular road traffic at level crossings where gates have been provided, and interlocking arranged for with the signals which govern the traffic on the railway.

Similarly, if wicket gates were interlocked with the railway signals, the danger to foot passengers at level crossings would be reduced to a minimum. This however would entail so much inconvenience that a control only of the wicket gates is retained by the signalman, and the moment for locking them has been left to his discretion.

On a dark and foggy night, or in the case of some slight error of judgment as regards the closing of the wickets, there is, as I have pointed out, some risk attendant upon the use of wicket gates at level crossings by foot passengers. The public have in such cases to exercise to some extent the precaution which is called for at all times at public foot-path level crossings. This risk naturally increases with the extent of traffic on the railway.

At the present moment, the maximum number of trains passing over St. John's Road in 24 hours amounts to 158, of which two only are goods trains. From the list attached (*vide* Appendix), it will be seen that from 8 to 10 a.m., from 1 to 3 p.m., and from 4 to 7 p.m., the railway traffic is heaviest, and varies from 10 to 13 trains per hour.

It has been stated that the electrification of the railway will enhance the danger at this and other level crossings on the railway. So far as vehicular traffic is concerned this is not the case, as the interlocking of the gates with the signals will afford the same security as at present. No doubt the number of trains will be very considerably increased, and therefore delays will be more frequent, and the inconvenience increased.

As regards foot traffic the risk to users of the level crossing will, as I have shown, be increased by the growth of traffic, so long as the present system of controlling wicket gates, which has been adopted for the convenience of the public, remains in force.

To meet this enhanced risk I think that the railway company will be well advised to erect a foot bridge over the railway at St. John's Road and other level crossings on this line of a similar nature, and to do away, if possible, with the wicket gates. The lighting also of the level crossing should be improved.

I understand that the Company are prepared to erect a foot bridge within the limits of their own property, and in my opinion such action will adequately meet the case so far as danger is concerned. They also propose to increase the candle-power of the lamps, by incandescent burners, from 20 to 50 in each case.

If further facilities are desired by the local authorities in the shape of an over or under road bridge, to do away with the inconvenience caused by the level crossing, it appears to me that the question is one for mutual agreement, and the cost of such a work should, in equity, be shared by both the local authorities and the railway company, since the district and the railway have mutually benefited, the one from the other.

I have, &c.,
J. W. PRINGLE,
Major, R.E.

The Assistant Secretary,
Railway Department, Board of Trade.

APPENDIX.

PASSENGER TRAINS PASSING OVER ST. JOHN'S ROAD CROSSING, WATERLOO. WEEK-DAYS.

Between.	Up Line.	DownLine.	Total.	Between.	Up Line.	DownLine.	Total.
5 and 6 a.m.	1	1	2	Brought forward	43	39	82
6 and 7 a.m.	2	2	4	3 and 4 p.m.	4	4	8
7 and 8 a.m.	4	2	6	4 and 5 p.m.	4	6	10
8 and 9 a.m.	6	4	10	5 and 6 p.m.	5	8	13
9 and 10 a.m.	7	4	11	6 and 7 p.m.	5	7	12
10 and 11 a.m.	5	4	9	7 and 8 p.m.	4	5	9
11 and 12 noon	4	4	8	8 and 9 p.m.	3	3	6
12 and 1 p.m.	5	4	9	9 and 10 p.m.	3	3	6
1 and 2 p.m.	5	6	11	10 and 11 p.m.	3	4	7
2 and 3 p.m.	4	8	12	11 and 12 midnight... ..	1	2	3
Carried forward	43	39	82		75	81	156

NOTES.—On the up line two of above trains do not run on Saturdays. On the down line nine of above trains do not run on Saturdays, and three run on Saturdays only. There is in addition one goods train in each direction.

Printed copies of the above Report were sent to the Company on the 31st December.

LONDON AND NORTH-WESTERN RAILWAY.

Board of Trade (Railway Department),
8, Richmond Terrace, Whitehall, London, S.W.,
3rd February, 1904.

SIR,

I HAVE the honour to report for the information of the Board of Trade, in compliance with the Order of 28th December, 1903, the result of my inquiry into the collision that occurred at about 1.23 a.m. on the 5th idem at Penrith Station, on the London and North-Western Railway.

In this case, the 8.10 p.m. goods train from Liverpool to Carlisle became divided as it was approaching Penrith Station. The driver, on reaching the station, improperly stopped the first portion of the train, causing the rear portion to come into violent collision with it, with the result that several waggons were wrecked, and one or more of them thrown on to the up line. At that instant the 1 a.m. express (sleeping car) train from Carlisle to London reached the place, and collided with the waggons which were foul of the up line.

The engine of the express remained on the rails, but the tender was overturned, and all the coaches were derailed and badly damaged.

No passengers were hurt, but the driver of the express was burnt and scalded about the head, legs, and hands, and the fireman was bruised and shaken.

The goods train consisted of a four-cylinder compound goods engine, six-wheeled tender, 31 waggons, all loaded except one (the third from the engine), and a brake van. The engine and tender were fitted with the steam brake, with blocks on all their wheels, and the usual hand brake was available in the van.

The passenger train consisted of a four-coupled passenger engine, tender, and six vehicles, in the following order from the front, viz. :—

- Six-wheeled van.
- Eight-wheeled bogie parcel van.
- Eight-wheeled bogie composite.
- Eight-wheeled bogie family saloon.
- Eight-wheeled bogie sleeping saloon.
- Eight-wheeled bogie brake van.

The engine and tender were fitted with the steam brake, and the coaches with the automatic vacuum brake, the two brakes working in conjunction with each other.

The positions of the trains after the double collision were as follows :—

Goods train.—Engine, tender, and waggons 1 and 2 on the road about 300 yards north of the station ; waggons 3, 4, 5, 6, 7, off the road and badly smashed, about 150 yards north of the station ; waggons 8 and 9 off the road and damaged ; 10 to 14 on the road (9 and 10 being buffer locked) ; 15 and 16 off the road, and damaged ; the remainder on the road and uninjured.