

The
VIRTUAL MUSEUM
of the
LANCASHIRE & YORKSHIRE RAILWAY

Accident Reports.

20 October 1903

BoT Report into Accident at
Luddendenfoot.

(6 Pages).

of the goods train corroborates fireman Littlewood's evidence in that he states that when the collision occurred he could not see lights at a greater distance than 50 yards. On the whole, therefore, I am not prepared to say that any blame can attach to the driver and fireman of the passenger train.

It may, I think, be regarded as certain that the coupling broke when the coal train proceeded forward on the lowering of the Locomotive Junction home signal. This train had never quite come to a standstill, and when the break occurred the rear portion of the train still continued moving slowly forward on account of the falling gradient. The guard of the coal train had, therefore, no warning of anything having gone wrong until he saw the lights of the passenger train behind him; no blame attaches, therefore, to him in the matter.

The coupling link, the breakage of which was the primary cause of this accident, was a comparatively new one, having been fitted to the wagon only a few weeks previous to the accident, when the wagon was in the shops at Cudworth for repair. It was of the usual size of the links of wagon couplings, being of $1\frac{3}{8}$ in. diameter, and it is stated to have been inspected carefully before it left the shops. The breakage did not show any distinct traces of a flaw, but from its appearance it had evidently been giving way gradually for some time previous to the final break occurring.

I have, &c.,
P. G. VON DONOP,
Lt.-Col., R.E.

The Assistant Secretary,
Railway Department, Board of Trade.

APPENDIX.

PARTICULARS OF DAMAGE TO ROLLING STOCK.

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| Denaby Main Wagons, Nos. 4210, 1877, 4994.—
Broken up. | Hull and Barnsley, Third Class Carriage, No. 23.
—One headstock broken and body shifted. |
| Denaby Main Wagon, No. 2789.—Two buffer
castings broken. | Hull and Barnsley, Third Class Carriage, No. 44.
—One headstock, one corner and one door pillar,
one sill plate, and end of vehicle broken in, and
vacuum brake pipes broken. |
| Denaby Main Wagon, No. 4902.—One buffer
casting broken. | Hull and Barnsley, Composite Carriage, No. 17.
—Two headstocks broken and body shifted. |
| Denaby Main Wagon, No. 4605.—One buffer
casting, one end board broken; corner plate
bent; two stanchions damaged. | Hull and Barnsley, Fish Waggon, No. 1618.—
Two headstocks, two soles, diagonals and end
pillars, top rails and middle bearers broken; two
sole plates bent, and vacuum brake pipes broken. |
| Denaby Main Wagon, No. 2130.—One buffer
casting broken. | Hull and Barnsley, Locomotive Coal Waggon,
No. 2841.—One coupling link broken. |
| Hull and Barnsley, Goods Brake, No. 5.—Broken
up. | Engine No. 34.—Smoke box, footplating, cab
and sheeting bent; blast pipe broken; all brake
gear bent and broken; buffer beam of engine
and framing of tender bent; tank shifted; tender
brake gear broken. |
| Hull and Barnsley, Luggage Brake Van, No. 2.
—One headstock and one side light broken. | |
| Hull and Barnsley, Third Class Carriage, No. 3.
—Two headstocks, two side panels, one pillar
broken. | |

Printed copies of the above Report were sent to the company on the 25th February, 1904.

LANCASHIRE AND YORKSHIRE RAILWAY.

Railway Department, Board of Trade,
8, Richmond Terrace,
Whitehall, London, S.W.,

SIR,

30th October, 1903.

I HAVE the honour to report, for the information of the Board of Trade, in compliance with the Order of the 23rd October, the result of my inquiry into the causes of the collision which occurred on the 20th October between a passenger train and a goods train at Luddendenfoot on the Lancashire and Yorkshire Railway.

In this case, the 10.35 p.m. down passenger train from Manchester to Bradford ran into the rear of the 7.45 p.m. down goods train from Mytholmroyd to Bradford at Luddendenfoot Station.

Four passengers complained of slight injuries.

The passenger train consisted of a ten-wheeled bogie passenger engine with six-wheeled tender, fitted with the automatic vacuum brake working on all the wheels of the engine and tender with the exception of the wheels of the bogie, and usual hand brake, and of the following vehicles in the order named, viz. :—

Bogie third-class,
Bogie third-class van,
Bogie Composite,
Bogie third-class van,

fitted with the automatic vacuum brake working on all the wheels.

The goods train consisted of a six-wheels-coupled goods engine with six-wheeled tender fitted with the automatic vacuum brake working on all the wheels of the engine and tender and with the usual hand brake, and of six empty and eight loaded waggons and a brake van. All the brakes are stated to have been in good order.

The brake van and two waggons were broken up and others damaged, four being derailed.

The accident occurred at about 11.36 p.m.

Details of damage to rolling stock are given in the Appendix.

Description.

The down line approaching Luddendenfoot Station is on a falling gradient of 1 in 631 to 1 in 325, and runs from west to east.

The East signal box is at the east or starting end of the down platform, and the West box 495 yards to the westward.

The down outer home signal for the east box is 166 yards to the west of it, and the down home signal for the west box 508 yards further west. The down distant signal for the west box is 815 yards beyond its down home signal.

The point of collision was about half way between the east box and the down outer home signal for that box, or 83 yards from each, and was thus 591 yards beyond the down home signal for the west box and 1,406 yards beyond the down distant signal for that box.

There is a cross-over road just opposite the east signal box, and a down siding connection just inside the down outer home signal for that box.

Evidence.

Frederick Tinker Barker, signalman, Luddendenfoot East box states: I have been in the service 18 years and a signalman 13 years, nine of which I have been at Luddendenfoot East box. On October 20th I came on duty at 10 p.m. to work until 6 a.m., having gone off duty the same morning at 6 a.m. I received the "Is line clear" signal from Luddendenfoot West for the 7.45 p.m. goods train Mytholmroyd to Bradford at 11.22 and I accepted it at the same time. The "Train entering section" signal was received at 11.31 and it arrived at 11.32. The engine did not come up to my box and on the driver drawing down with only part of his train I instructed him that he would have to set back and couple up to the remainder and then back across to the up line to clear the down line. This was necessary as the 10.35 p.m. passenger train from Manchester to Bradford had been circuited to me on the telephone as leaving Todmorden at 11.25, and I had therefore to shunt the goods train for it. The "Is line clear" signal for the passenger train was not given to me by West box, as I had not given "Train out of section" signal for the goods train. The next thing I knew was hearing the crash, which was occasioned by the passenger train running into the rear of the goods train. The goods train at that time was moving slowly down and the engine and about three or four waggons had got beyond my box. The collision occurred at 11.37 p.m. and I gave the "Obstruction danger" signal in both directions immediately. I received no signals from West Box with regard to the running of the passenger train, and even

if I had received "Train running away on right line" signal I could have done nothing. The driver of the passenger train came into my box some time after the accident and admitted that he had run past the signals. It would have taken longer to have put the goods train into the down siding, than to cross it, as there were a number of waggons already standing in the down siding.

William Scaife, signalman, Luddendenfoot West box, states: I have been in the service 21 years, a signalman 12 years 8 months. I have been working at West box since July last, previous to which I was at Luddendenfoot East and Cooper House siding. I came on duty at 10 p.m. on October 20th to work until 6 a.m. I went off duty the day previous at 10 p.m., so I had been off duty 24 hours. The "Is line clear" for the 7.55 p.m. goods train, Mytholmroyd to Bradford, was offered to me at 11.21, acknowledged at 11.21, "On line" 11.21, and it passed me at 11.30. It had been signalled to me from Mytholmroyd. I offered it to the East box at 11.21, and it was accepted at once. It took nine minutes for the goods train, which is about the usual time occupied. I gave "Out of section" for it at 11.30, and never received "Out of section" for it from Luddendenfoot East. I knew that this train had work to do at Luddendenfoot. Just before the arrival of the goods train I called the signalman at East box and told him that there were some waggons in the down refuge siding and he had better put the goods train across on the up line. I did this because I had the 7.45

p.m. Normanton to Miles Platting goods on the up line, which I put across into the down sidings before I accepted the passenger train, and if there are more than 45 waggons on it fouls the entrance to the sidings and stops the work in the yard. I had the 10.35 p.m. Manchester to Bradford circuted to me at 11.22. "Is line clear" was received by me at 11.32, acknowledged at 11.33, "Train entering section" 11.34, and it passed me at 11.36 p.m., and I kept my signals at "Danger," as it had not been acknowledged from East box—in fact, I did not give "Is line clear" for it to Luddendenfoot East because I had not received "Out of section" for the goods train. I heard the passenger train approaching, and thinking it was coming too fast and not going to stop, I picked up my hand lamp and gave the driver a red light. I cannot say whether he saw the light or not. I did not give "Train running away on right line" signal, as I was giving the driver a red light; before I had time to give the signal I heard the collision. It was running pretty fast, and I do not think the brakes were on. I heard signalman Barker call up the circuit at 11.37 p.m. and give information that both roads were blocked, and I did not see the driver or fireman of the passenger train, and I have not seen them since the accident and have had no conversation with them. I could not see what the driver was doing. I kept my hand lamp until the train had passed. When the engine passed me the driver was sitting in his usual position, and I kept the light showing until the whole of the train had passed and shouted so as to call the attention of the driver or guard. I do not think the driver had steam on, as I did not see any smoke coming from the funnel. I am confident that my signals were at "Danger," the back lights of the home signals showing a good light, and the repeater for the distant was on. The distant signal had not been lowered for the Mytholmroyd to Bradford goods train because Luddendenfoot East had his signals on. The passenger train was running about its right time. I did not notice how Luddendenfoot East down outer home signal was. I received "Obstruction danger" signal from Luddendenfoot East.

John Henry Collins, goods guard, stationed at Low Moor, states: I have been in the service since 1874 and a goods guard for about 14 years. I came on duty at 5 p.m. at Low Moor on October 20th to work until about 4.30 a.m. the next morning. I had signed off duty the same day at 4.30 a.m. I was working the 7.55 p.m. Mytholmroyd to Bradford goods train and I left Mytholmroyd at 11.20 p.m. Up to that time we had been shunting in Mytholmroyd Yard. My train consisted of six empties, eight loaded goods waggons and a brake van. Before we left Mytholmroyd I instructed the driver I had about seven waggons off at Luddendenfoot and according to the usual practice the driver stopped so as to leave the waggons which were not going to be detached clear of the inlet to the sidings. When he had hooked off I gave him a light to draw down and he did so but as he was drawing down the signalman instructed him to set back and take his whole train off the down line and shunt for passenger train. After connecting up again I got into my van and took the brake off. As he passed the siding points I dropped off as I thought it was likely he was going to put us into the sidings, and I was preparing to set the hand points in the yard for the siding where my train usually goes, when I heard a noise and saw the passenger train approaching and it ran into my brake van. When I saw the passenger train approaching I ran towards it and gave a red light. I was in the

six-foot between the up and down main lines when I ran towards the passenger train, but I did not get very far. I had no conversation with the driver or fireman of the passenger train either before or after. I immediately went to the signalman at Luddendenfoot East and told him to block both lines. I then went forward to Cooper House siding to make sure that the lines were blocked in that direction, as the up line was blocked.

Noah Barraclough, driver, states: I have been in the service 24 years, and seven years a booked driver. On the day of the accident I signed off duty at 2.20 a.m. and signed on again at 6.25 p.m. expecting to finish about 5 a.m. I was working the 7.55 p.m. Mytholmroyd to Bradford goods train with a six-coupled goods engine and tender. We left Mytholmroyd at 11.25 and I was instructed to stop at Luddendenfoot to detach some waggons. I brought my train to a stand with the engine just behind the outer home signal for the east box. The guard gave me a signal to draw down but the signalman at east cabin called out to me to go back and fetch the brake van off and back inside. I set back and the guard coupled up, and I drew ahead again and stopped when I could see that the rear of the train was over the points for backing into the down sidings, but the signalman called out, "Go on, there is a passenger train behind you." So I put steam on, and on looking round I caught sight of the passenger train, and opened the regulator still wider to get out of the way, but the collision occurred at practically the same time. My train broke loose with 12 waggons on, but I brought my engine to a stand close to the down starting signal. My engine was not damaged at all, and I was not injured. The distant signal was at danger approaching Luddendenfoot.

Norman Holland, fireman, states: I have been in the service 11 years, and a booked fireman about three years. I signed off duty on the 20th instant at 2.45 a.m., and came on duty with driver Barraclough at 6.25 p.m. I heard the signalman at east cabin call out to the driver "Set back and bring your brake-van down, and back inside as there is a passenger train behind," and when we had done this the driver stopped clear of the points to the down sidings. The signalman then said "Come on, be sharp, I want you to back across." We had just got moving to back across when I saw the passenger train headlights about three yards away from the brake-van.

Thomas Jessop, guard, Low Moor, states: I have been in the service 36 years, and 30 years a guard. I signed on duty at 12.50 p.m. on October 20th to work No. 61 train and to finish at 12.30 a.m. I signed off duty the previous day at 12.30 a.m. I was returning home, passenger, by the 10.35 p.m. train Manchester to Bradford, and rode in the front van up to Luddendenfoot. I sat on the left side nearest the platform until we got to Mytholmroyd when I got up to place my time book and guard's workings in my satchel, and was just returning to my seat when the driver put on the vacuum very suddenly and the collision immediately took place. I instantly looked out and saw all the signals for the east box at danger. I got out of my van and went to see what we had struck. I then returned to my train and called out to the passengers, who were attempting to alight, to keep their seats. I saw relief porter Robinson, who was acting guard with the train, when I told

him I was going to the east box signalman, and he must go to the west box to protect his train, and he did so. I went to the east box, and the signalman informed me that he had blocked the roads. I then returned to my train and looked after the passengers until arrangements were made to transfer them to a train at Cooper House. The passengers were conducted down the line, and I worked the special train forward to Bradford. There were about 15 passengers in the train, but no one complained to me of having sustained any injury. I was not injured myself. I should say we approached Luddendenfoot at 50 miles an hour, and were running 20 when we collided.

Vernon Robinson, relief porter, Low Moor, states: I have been in the service seven years, and a relief porter two years. I signed on duty on October 20th at 3.45 p.m. to work No. 69 train workings, to finish at 12.30 a.m. I signed off duty the previous day at 6.30 p.m. I was acting as guard in place of guard Noble, and was in charge of the 10.35 p.m. Manchester to Bradford. I did not see the signals approaching Luddendenfoot because I had been exceedingly busy with heavy parcel traffic all the way from Manchester, and I was just making out my road note when the collision occurred. I did not see Luddendenfoot West signal-box as we were passing it. I was standing up in the van when the collision occurred, and was thrown down. I got out of the van as quickly as I could and went along the train to see what was amiss, and I found that we had run into a goods train. I met the guard of the goods train and told him to go and protect the up road, and I went back along the train and requested the passengers to keep their seats. I went back to west box and protected my train by putting down three detonators. None of the passengers complained to me of injury, and they all got out. My train was composed as follows:—

Engine No. 1417.
Bogie third No. 2330.
" " van No. 2534.
" composite No. 829.
" third van No. 2761.

I had no conversation with the driver or fireman, and the signalman at west box did not say anything to me about the signals. As I was knocked down I heard the vacuum go on.

Stephen Bancroft, driver, states: I am 47 years of age, and have been in the service 27 years and a booked driver for the last 12 years. I signed off duty on the morning of the accident at 1.5 a.m. at Low Moor, and signed on again at 2.40 p.m. to work until about 1.5 a.m. I had worked an express train from Leeds to Liverpool, arriving at Liverpool at 7.10 p.m. I stood there, going to the enginemen's cabin, until leaving again with the 9.45 p.m. express to Manchester, and left Manchester at 10.35 p.m.

with a slow passenger train for Bradford. My engine, No. 1417, is a 10-wheeled express passenger train engine with four coupled wheels and the automatic vacuum brake working on all wheels of the engine and tender except the bogie wheels. I had 20 inches of vacuum and the brakes were in good order. We left Eastwood at 11.30 p.m., Sowerby Bridge being the next stop. I did not sight the distant signal for Luddendenfoot West box at all, but I noticed the home signals for west and east were on when I was about 100 yards from the former one. At that time we should be travelling between 60 and 65 miles an hour, which is our usual speed at that point. I immediately applied the vacuum brake to the full extent and the fireman opened the sanders. I reversed my engine between the west and east boxes as I saw we were not going to stop. I did not myself catch sight of the obstruction until about 20 yards off, on account of the curve. When we were about the east box outer home signal my fireman called out to me that there was someone showing a red light on his side, but at that time I could not do any more. It was a clear night, but the rails were greasy. I frankly admit that I was at fault, as when I missed the distant signal for west box I should have treated it as though it was at danger. I was not going fast when the collision occurred, and stopped in about 30 yards.

Alfred Lee, fireman, states: I am 31 years of age, and have been in the service 13 years and a booked fireman six years. I was working with driver Bancroft the day before the accident, and signed on at the same time as my driver and to work the same hours. I did not see the distant signal for Luddendenfoot West, as I was busy with the injector. I saw the west home at danger and the distant for east box beneath it when 20 or 30 yards off, and I think my driver saw it the same time or a little before. I called out to him, "Whoa, blocks on"; he put the brake on at full. I next caught sight of the vehicles standing in the station. My driver reversed his engine when we were about ten yards away from the outer east home signal. I saw someone giving a red light on my side of the engine. I had applied the sanders when my driver put the vacuum brake on near to the west home signal. I am quite sure the brake was applied near to the west home signal as we had both seen this at danger. I did not look at the west signal-box as I passed. The rails were greasy through frequent slight showers. When we struck the brake van we should be travelling about five miles an hour. I think when the vacuum brake was put hard on the wheels skidded, as the speed did not seem to be sufficiently checked until we were near to east home. The brake had been working all right during the day and we had stopped at Eastwood, the last stopping place, in the usual manner.

Conclusion.

This collision was due to driver Bancroft of the passenger train passing signals at danger (as he himself admits), and running into the rear of the goods train which was about to be shunted to allow the passenger train to pass.

The goods train passed Luddendenfoot West box at 11.30 p.m., and as it had some waggons to put off at the goods yard, first came to a stand in a convenient position to do so, and the guard uncoupled the front part of the train which proceeded towards the east box.

As the passenger train was nearly due, the signalman at the east box determined to shunt the whole train clear of the down line to let the passenger train pass, so he instructed the driver to set back and couple up again so as to take the whole train down to the signal box, in order to cross it on to the up line.

Just after the goods train had been coupled up again, and was proceeding slowly towards the east box, the passenger train came up and ran into the rear of the goods train. The signalman at the west box not having received "out of section" for the goods train had not offered the passenger train to the east box, and had both down home and distant signals at danger.

Driver Bancroft of the passenger train admits that he missed the down distant signal for the west box, but thinking he would have a clear road as usual did not reduce speed, and states that he only noticed the outer home signal for the west box when about 100 yards from it, and seeing it at danger immediately put on the brakes as hard as possible, but as the wheels picked up and skidded owing to the rails being very greasy, in spite of the sanders being opened, he was unable to stop his train before colliding with the rear of the goods train, 591 yards beyond the down outer home signal for the west box, which was at danger, and 83 yards beyond the down home signal for the east box, which was also at danger.

The driver says that he was running about 65 miles an hour when he saw the outer home signal at danger, about 100 yards before reaching it, so it follows that he had nearly 700 yards in which to pull up, but the train was still moving probably 10 miles an hour when the collision occurred. It stopped in about 30 yards after the collision. When he found he had missed the down distant signal driver Bancroft should have immediately reduced speed and have been prepared to stop at the west box outer home signal if necessary. He could also have seen the outer home signal sooner had he crossed to the fireman's side of the engine (the line being on a curve), as he should have done if the fireman was not looking out, especially as he had not observed the distant signal.

Also, had he applied his brakes with more judgment probably the wheels would not have skidded and the train would have come to a stand before the collision occurred.

Bancroft is a man with a very good record. He had been on duty nine hours at the time of the collision, having been previously off duty for 13 hours and a half.

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

The Assistant Secretary,
Railway Department,
Board of Trade.

APPENDIX.

DAMAGE TO ROLLING STOCK.

Engine No. 1,417, working the 10.35 p.m. Manchester to Bradford.—Engine and bogie framings bent; buffer beam bent; vacuum pipes and lamp stands broken off; smoke box damaged; hand-rail and footstep on left hand side broken off; driving wheels slightly out of gauge.

CARRIAGES OF PASSENGER TRAIN.

Lancashire and Yorkshire Bogie Third, No. 2,330.—Gas fittings shaken. Lancashire and Yorkshire Bogie Composite, No. 829.—Gas fittings shaken.
Lancashire and Yorkshire Bogie Third Van, No. 2,524.—Gas fittings shaken. Lancashire and Yorkshire Bogie Third Van, No. 2,761.—Gas fittings shaken and one gas gauge glass cracked.

WAGGONS, &c., OF GOODS TRAIN.

Lancashire and Yorkshire Goods Brake Van, No. 13,247.—Broken up. Lancashire and Yorkshire Low Goods, No. 21,458.—Two buffers bent.
Lancashire and Yorkshire Low Goods Waggon, No. 56.—One headstock, one end post, one end plank, one brake guard, one brake block, and one axle box front broken; one brake guard, one brake lever, one draw bar, four buffers, and one corner plate bent; and two end posts damaged. Lancashire and Yorkshire Fruit Waggon, No. 18,819.—One axle guard opened out; one axle-guard bent; one clip bolt broken.
Lancashire and Yorkshire Low Goods, No. 9,242.—One buffer head, one buffer casting, one axle box, and one bearing spring stop broken; three buffer rods and two axle guards bent; and two end muntins damaged. J. Whitehead's Waggon, No. 1.—Broken up.
Lancashire and Yorkshire Low Goods, No. 13,352.—One buffer head broken; one buffer and one axle guard bent. J. Whitehead's Waggon, No. 3.—Broken up.
Liversedge Coal Company's Waggon, No. 55.—One axle box, one buffer hoop, and one bearing spring shoe broken; two axle guards and one draw bar bent; one end post badly damaged; and wheel tyres bulged.
Mytholmroyd Industrial Society's Waggon, No. 2.—One headstock badly damaged; one headstock hoop, and one axle box broken; one buffer, two axle guards and one axle bent; one bearing spring shoe and two brass bearings displaced.

T. Greenwood's Waggon, No. 4.—Two end diagonal damaged; two buffers and four axle posts and one axle box slide broken; one end guards bent; wheel tyres cut; and brass bearings post, two sole bars, one longitudinal, and one displaced.

Printed copies of the above Report were sent to the Company on the 10th December.

LANCASHIRE AND YORKSHIRE RAILWAY.

Railway Department, Board of Trade,
8, Richmond Terrace, Whitehall, London, S.W.,
6th November, 1903.

SIR,

I HAVE the honour to report, for the information of the Board of Trade, in compliance with the Order of the 23rd October, the result of my inquiry into the causes of the double collision which occurred on the 22nd October between a passenger train and a light engine, and between two passenger trains, at Sowerby Bridge on the Lancashire and Yorkshire Railway.

In these cases the 7.10 p.m. express passenger train from Leeds to Liverpool came in contact with a light engine standing on the up main line at No. 1 signal-box, Sowerby Bridge, the result of which was that the two leading carriages were derailed foul of the down line, and immediately afterwards the 6.40 p.m. passenger train from Manchester to Bradford ran into the two derailed carriages.

One passenger of the Liverpool express was killed and 17 injured. The driver and fireman of the express were also seriously injured.

The light engine was a four-wheels-coupled tank engine with leading and trailing radial axles, with automatic vacuum brakes on the four coupled wheels, the blocks being also operated by hand.

The Liverpool express consisted of a ten-wheeled bogie passenger engine with six-wheeled tender fitted with the automatic vacuum brake on all wheels of the engine and tender with the exception of the wheels of the bogie, and of six bogie carriages in the order named, viz. :—

Bogie third van,
" composite,
" third van,
" third van,
" composite,
" third van,

with the automatic vacuum brake working on all the wheels.

The Bradford train consisted of an engine similar to the light engine described above and of the following vehicles in the order named, viz. :—

Bogie third van,
" composite,
" third class,
" third class,
" third van,
Parcel van with six wheels,
Two North-Eastern Company's horse boxes,
four wheels each,

fitted with the automatic vacuum brake on all the wheels with the exception of the centre pair of the parcel van and those of the rear horse box. All the brakes are stated to have been in good order.

The first collision occurred at 7.58 p.m. The night is said to have been slightly misty.

Details of damage to rolling stock and permanent way are given in the Appendix.

Description.

Past Sowerby Bridge No. 1 signal-box the up and down main lines run approximately east and west, the up line being on the south of the down line. The signal-box is immediately to the north of the down line.

Just opposite the signal-box are the trailing points in the up line leading out from the up sidings and warehouse, and about 30 yards further west are the trailing points in the up line of the cross-over road between the up and down lines. Twenty-three yards west of the cross-over points a tunnel commences which is 660 yards in length.

One hundred and twenty yards east of the signal-box are the up main line home