

Railway Department, Board of Trade
Whitehall 12th September 1861.

Sir,

I have the honor to state for the information of the
Lords of the Committee of Privy Council for Trade that;
in obedience to your minute of the 7th Instant, I yesterday
inspected that portion of the Hereford Section of the
West-Midland Railway situated between Malvern
Wells and the junction with the Shrewsbury and Hereford
Railway at Shelwick near Hereford.

This portion of Railway, 17 miles and $66\frac{3}{4}$ Chains in length
is laid single throughout with sidings at the various Stations
at Colwall, Ledbury, Leominster Road, Stoke Edith and
Wilkinington, also at the junction at Shelwick, but the land has
been purchased and all the bridges have been completed for
a double Line (excepting the girders for under bridges) - The
Tunnels however have only been constructed for a single
Line. The gauge is $4\text{ft } 8\frac{1}{2}\text{in}$ and the space between Lines when
there are two is 6 feet.

The width of the line at formation level is 17 feet for the
single and 30 feet for the double Lines. The Rails are
double headed and weigh 70 lbs per linear yard in
lengths of 18 feet and they are fixed in cast iron chairs
which each weigh 20 lbs and are fastened down to

The Secretary of the Board of Trade

transverse sleepers of creosoted pine, 9 feet long, partly 10" x 5" and partly 9" x 4 1/2" by 2 twisted ^{iron} spikes in each chair. The rails are ~~they~~ secured on the inside ^{of the chairs} by wooden keys.

The sleepers are placed on an average about 3 feet apart.

The Ballast is partly of broken stone and partly of gravel and it is stated to be 15 inches deep below the under surface of the sleepers -

There are no Level Crossings of Public Roads on the Line.

There are 17 over and 17 Under Bridges, besides 5 Viaducts. The Bridges are constructed ~~entirely~~ of Brick or stone or with abutments of those materials and cast or wrought iron girders. The masonry and Brickwork is substantial, ~~and~~ well constructed and sufficiently strong - and the iron girders are sufficiently strong by calculation and exhibited moderate deflections, with the exception of one cast girder over a small opening of 12 feet, where the deflection was unusual. This girder is to be taken out, if no other sufficient cause for the deflection observed (1/4 inch) can be discovered - ~~and the~~ ^{of deflection observed materially diminished}

There is a ~~long~~ Viaduct of 372 yards in length ^{very well} constructed in Brick. This is an important work of considerable magnitude, and there are shorter

and flood-water ways
viaducts with brick or stone abutments and wrought- or cast-
iron girders - the greatest span is 40 feet - the girders
exhibited moderate deflections and they are sufficiently
strong by calculation. The transverse sleepers of one
of the under bridges is only of 6 inches scantling - the
weight is distributed by means of longitudinal
balks, but in my opinion a larger scantling
would have been desirable -

There are two Tunnels on the Line respectively of 1567,
and 1375 ^{years} - the first, the Malvern Tunnel is lined
throughout with Brick and stone, but the second the
Leobury Tunnel is not entirely lined throughout -
Both Tunnels are on ^{steep} inclines of 1 in 80, and with both
require to be worked under very careful regulations
The Line is in fair order, but ~~the~~ ^{the} ~~part~~ in places
the packing will require to be attended to. Temporary
buildings only are erected at the several Stations -
The mode of working the repeating signals when the
distant signals cannot be seen from the main signal
is to be changed, and may be completed in 24 hours.
If the Ballast Pit near Wittington Station is again to
be used, it should previously to the ~~the~~ connection being
again made be protected by a station and two distant
signals. The fencing round the Platforms is in some
cases unfinished.

I have not yet received the undertaking as to the mode of
working the Lini, but I understand it is to be done under the
Train staff and Ticket-system - The Electric Telegraph
has not yet been put-up, but I am told it is to be done
of the undertaking of the usual kind, I am of opinion
that their Lordships sanction for the opening of the
Worcester and Hereford Section of the West Midland
Railway between Malvern Wells and the Junction
at Shelwick may be given provided the Company will
undertake to ~~provide~~ ^{supply} Telegraph Instruments - at the
Stations on each side of the two Tunnels, to be devoted
entirely to the working of the Traffic through these Tunnels,
and other Telegraphic Instruments at the same places,
for ordinary communications - and to provide Station
and distant signals outwards from the ends of each
Tunnel so that the signaller, may in the event of
one signal failing to act have other means at hand of
arresting the progress of the Trains proceeding towards the Tunnels -
And until these facilities are provided that the Company
will engage to have only one ^{in steam} Engine, or two or more Coupled
together and forming part of one Train between Malvern Wells
and Shelwick Junction at one and the same time -

There is one other subject which I am obliged to refer.
The Junction ~~between~~ of the Newport, Abergavenny and Hereford
Section of the West Midland Railway, with the Newbury

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and Keupra Railway is distant about 1 mile from
the Company's Station at Barton and $\frac{3}{4}$ from Barrs'
Court Station - and the Company is in the daily
practice of shunting or ~~pushing~~ ^{pushing} trains
~~over~~ ^{from Barton Station to the Junction} this mile of Railway, and then drawing
them forward to Barrs Court Station - and again
of drawing them from Barrs Court Station to the
Junction and then pushing them back to Barton
Station - This is to avoid uncoupling the engine and
running round the train. The practice is most
objectionable and dangerous and was the cause
of a very serious accident to a Great Northern
train near The Leeds Station, ^{some years since} and in my
opinion ~~it should~~ ^{it should} be discontinued.

I have the honor to be, Sir,

Your most obedient servant.

W. Moffatt
Ch. W. King