

MSL 257
1950-250/2

R. Stephenson's Letter to Mr. Brewin, 13th Feb. 1822.

To Mr. Brewin

Halesowen

Killingworth Colliery, February 13
1822

Sir,

The following are the velocities at which my Father recommends his Locomotive Engines to move with 12 Loaded Waggon each containing 3 Tons. The weight of the Waggon may be from 20 to 25 Cwt. each.

When Level at from 4 to 8 Miles per Hour

„	1/16	Ascent per yd. do.	3½	to	6	Miles per Hour
„	2/16	do.	3	to	5	do.
„	3/16	do.	3	to	4	do.
„	4/16	do.	2½	to	3	do.
„	1/16	Descent per yd. at from	5	to	9	Miles per Hour
„	2/16	do.	6	to	10	do.
„	3/16	do.	6	to	10	do.
„	4/16	do.	6	to	10	do.

I would not recommend the Engines to travel on a Line that ascends more than the above when there is a Load both Ways. But if the load was always passing one Way and on a descending Line the Engine might return with the empty Waggon up an Ascent of ½ an inch or in a short Distance from 5/8 to 6/8 per yd.

The above is within the limits at which my father's Engine will work, but it is his Wish they might be stated below their Powers. I dare say the Statement he gave Mr. William James will be higher than this, but they are capable of performing whatever he has stated.

If your Railway should be constructed agreeable to the present Act one horse may travel with from 2½ to 3 Tons, if the New Line be adopted one Horse will travel with from 4 to 4½ Tons.

My Father would advise you to lay your Rails of such a Strength that may suite either Horses or Engines, it would not add much to the first Cost, and will ultimately be a benefit were Engines never to be used.

I am Sir yours respectfully

Robt. Stephenson

P.S. After shewing the above to my father he advised me to say, he did not recommend his Engines to move on a Railway that ascended with the Load more than 3/16 per yard, so that they may Work with their Load in any kind of weather excepting when the Roads are blocked up with Snow. I may add I don't recollect our Engines being stoped with Snow this some Years.

R.S.