

SEOR & Killarney to area 4' 8"

1/2" added to gauge not to wheels to prevent  
the flanges wearing against the inside edges  
of the rails - assisted by the concave shape of  
the wheel treads and the inclination of the rails

L&MR 3' spacing 1 1/2" rolling surface

15' length 35 lb/yards (Wrayst Iron)

1.3 miles (with them on mosses or culchabun  
on wooden sleepers 9' x 6" x 5')

Oak then larch. # replaced by stone blocks

Stone blocks various 18" to 24" square  
<sup>1833</sup> diagonally conc of mtrc

12" deep 2 rows 6" deep 1 1/2" diameter

Oak plugs - iron spikes

Squares of felt soaked in pitch to  
counter irregularities.

6 to 12" deep broken sleepers.

Stones incline to chairs.

Wooden keys for inter. chairs

Larger chair for joints, steel key at joints  
↳ recess into which lugs on rails fit

No expansion gaps - G.S. stone sleepers  
elsewhere best.

Only 1" of rail visible. no tie bars.

Ballast and with sand or small coal

On curves outside rail was raised

4' 8 1/2" "Super"

"Fragments of broken rail litter the track!"

Sinking of sleepers and sleepers

11/1833 5016 parallels and fine ballast

Then 6016 then 7516 (main line)

↓ several have 5' intervals

Stone sleepers replaced from 1837 "Kegans" <sup>1837</sup>

Compound oak keys - then 5' 2" intervals!

Points like S & OR

movable tongue - tapered, loosely pivoted  
inserted in iron plate secured by wedges  
or crossing plate ~~and~~ (chained)  
flange support weight of train as they  
pass over slightly clear of movable  
section of rail.

45' crossover

also pairs of removable rail!

partly of wood - hammer & iron pin  
(1836) (DoT dislikes)

1839 Fox's points (with <sup>fall</sup> ~~fall~~ tail)

9' cast iron plates fixed on blocks  
on sleepers with keys between rails  
on iron plate (1846) iron rod between

Joseph Locke's experiments on crossovers 8/33

600,000 tons 18 months, cost 10g per month.

1840 = 20g per month.

Wooden keys experiments 5/36 1/2 mile then all.

114 p.w. men (2 overseers £2.10.0 per week)

29 foremen (1 mile each) 3/6 each

all but 7 of rails delivered 2/8 each

Compte de Pambour

The Chevalier de Pambour

A Practique Méthode au Socométre Eugène

1836 (NB dit he deal with inclines?)

Overton - Buffer stops.

Molton Heaths?



65lb 70lb.



8'6" - NW I?

1918 BS 95lb ✓  
48lb chain 1

Connection

1879 Steel rail.

\* Carb from "curves"

\* Inclined rails? <sup>1 in 40 for 20'</sup>

\* Transition?

87lb → 46 3/4 lb chain.

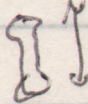
Redridge = sleepers. 1884

1898 granite: 4 wheels  
heptagon.



Waney.

HAM  
KACL



2 1/2

5 1/8 Meldon - wheels?

82lb = 40lb chain ✓

90lb = 45lb ch. 14 3/4 x 7 1/8 ✓

90BS = 48lb ch / 50lb ✓

50lb chain? 95 lb.

High bolt. ~~BSK~~  
chain BS X.

Hamworthy Quay?

Poole Tramway

100lb BS extra head.

(Turned / lever arm  
arm)

Look at Stock Book; <sup>7</sup>calculator.

L10-7 acc-group.

66  $\frac{58}{3768}$   
330  
468  
468

SR Szonyi 1914-1927  
Elsen (SE) 1927  
N.A.M. Robinson. — 51

FW  
Brady, Eyr

FB 109 Working (come before War...)

Scrubby Scaevola

Exhibit In Counts 1913.

Crown - North. Boultin

# Argentine Gruba P.C. → Important.  
(became BH) also Timber

Reichsfant-Norwood L.S.C.

Rails - S. Wales

Steno Kith Hill - Meldon.

Eastern part Ballant Creeches

Wallon - Thomson Ballant - Oatlands.

Norman

Steno?

LSW  
CSG

$3\frac{1}{2} \times 3\frac{1}{4}$  PROJ  
Steno Steep

Low WASE NEVER WORKING  
Part

1939 CT to Albany → L. West. Division  
by 1939: DE Easton.



LBSCR New & South Division Bay  
(Consider N.)

Div. i/c Dist !! Crispin. Brighton.

SR = South Division  
Northern to Lower Bay. "Brighton Dam"

SECR Ashford → Baiton Dam,  
became "Ashford Dam"  
"Portsmouth Dam"

LOW by Brighton.

Material REA 1925 Standard

SR <sup>Road by E.</sup> Midland Ray Initiative

SW = Numbered

SECR 12' <sup>Initiative</sup> "length"

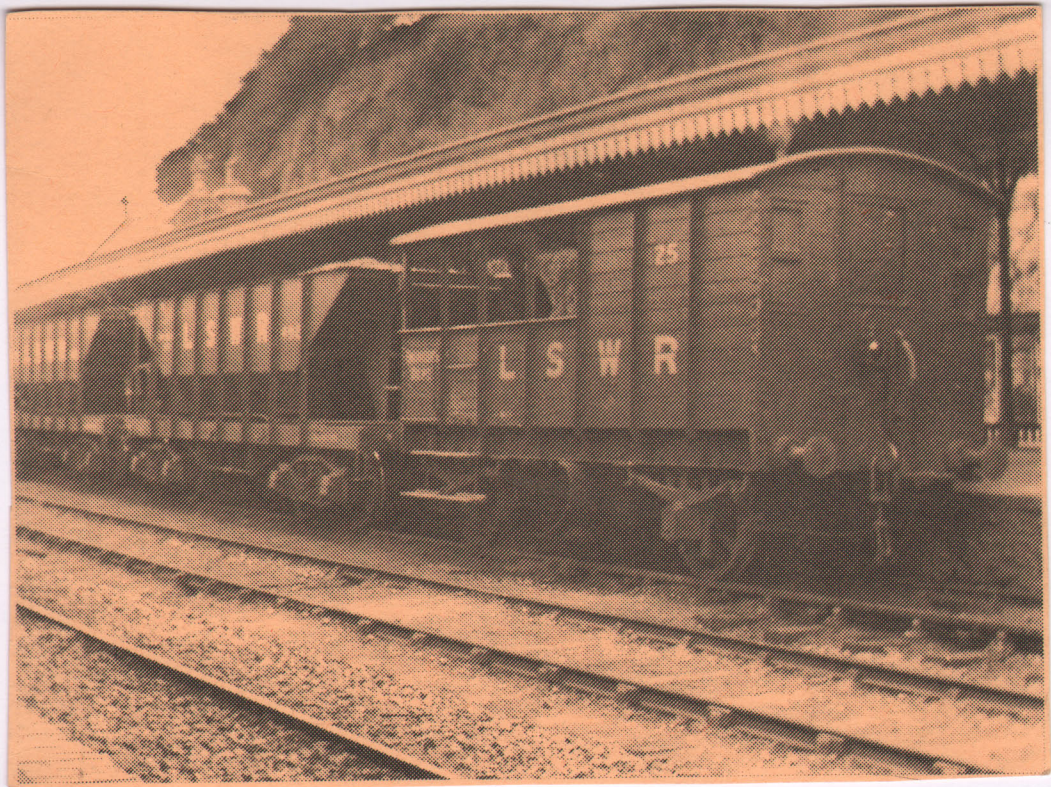
1923 → Common chairs except GWR

45 SW & SE

96 LBSCR <sup>like</sup> 95

1937-60' - Boruif's Bricks

For  
the  
project  
participate  
to  
1939



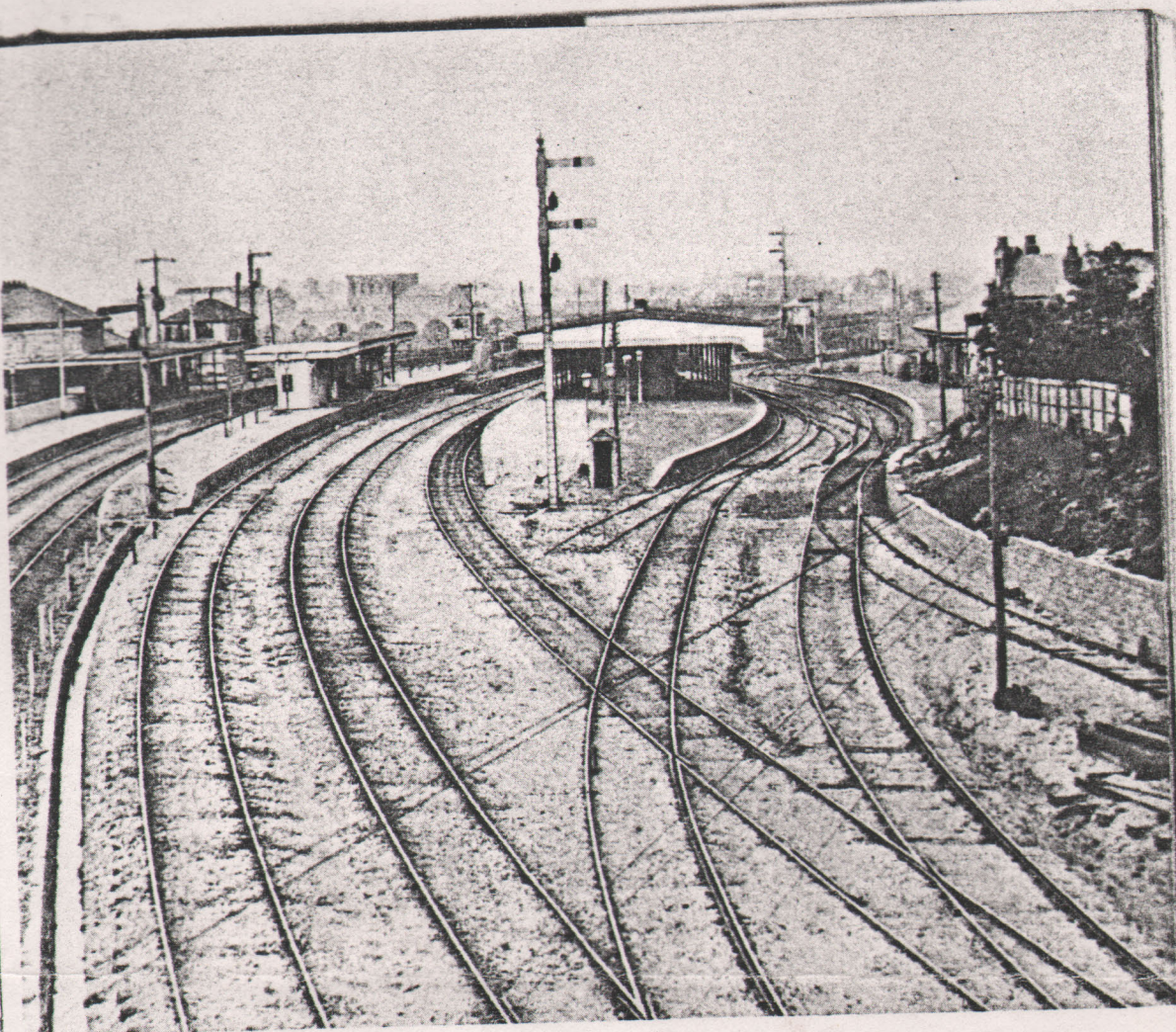
27. Once an important product of Faversham, gunpowder was often carried by special trains in all-steel vans. Ex-LCDR class M2 no. 643 is seen sometime before withdrawal in 1914,

having been "cleaned" in the then manner leaving tallow swirls. Com are to be seen at some of the rail e (Faversham Society coll.)









4 *above left* Sir John Hawkshaw's train shed at Charing Cross soon after the station was opened. A flaw in the welding of the roof led to its collapse forty-two years later, on 5 December 1905.

5 *below left* The Great Hall at Cannon Street: built by Hawkshaw for the SER and opened in 1866; damaged by bombing, 10/11 May 1941; demolished 1963.

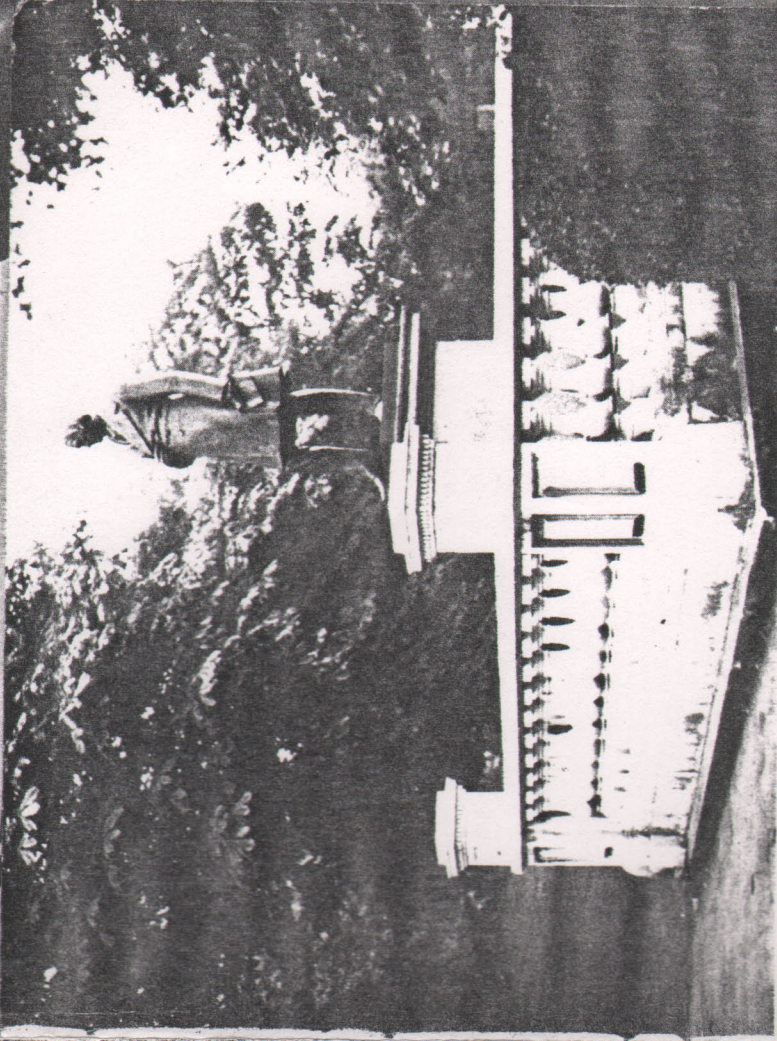
6 *above right* End of the broad gauge at Clapham Junction, between platforms 16 and 17, in the 1860s.

#### ENGINE SHEDS - GN AND CLC

asked for the returns and I had no intention of filling in forms merely to keep LMS clerks busy.

The rest of the LMS engines at Walton were for shunting; there were two or three L&Y 0-6-0 saddle tank engines that worked at Langton Dock, two miles away, and four L&Y 'pug' engines which shunted the Mersey Docks & Harbour Board lines. The pugs were of the 0-4-0 saddle tank type with outside cylinders, very small wheels, wooden blocks for buffers and a bell that tolled dismally all the time that the engine was in motion, to conform with the Board's bye-laws. All my L&Y types were given their major examinations at Bank Hall depot and on one occasion after sending a pug there I had a telephone call from the District Officer who received it, asking how it was that the valve gear had become so worn that he could see daylight between the eccentric sheaves and their straps! This was not difficult to explain as most of the dock lines were paved with setts laid level with the rail tops; sand usually lay thick on this paving and, due to the engine's low axles, the eccentrics worked continuously within about three inches of it, picking a good deal of it up. Oil and sand together, I patiently explained, tend to be abrasive.

The LMS company's organisation for sending engines to one of the main works for general repairs every few years was the great Shopping Bureau. The LNER's principle was to call the engines in when they had run the mileage that they were expected to cover between works repairs. At an LMS shed, however, the foreman had to decide initially when it was time for his engines to go to the works and to compile a comprehensive 'shopping proposal'. I used to write out these proposal forms, on which I could enter only information that was generally far too vague to provide the slightest guidance to anybody. 'Condition of valve gear - fair, condition of brake gear - worn, condition of tyres - getting hollow' and so on. The forms were then despatched to the Bureau, conveying this drivel, and a week or two later they would be returned, rubber stamped with 'repropose in 3 months time' or something similar. Many engines had to be reproposed two or three times before the works



Above: Joseph Locke's statue in Locke Park, Barnsley. *Below:* Cromford & High Peak Railway; stone sleepers of 1831 to be seen at Parsley Hay.

