

THE LMS SOCIETY TEACH IN.

OCTOBER 1972

SECTION 2 of SESSION ONE.

GOODS VEHICLES & FREIGHT MARSHALLING.

Summary Notes.

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All notes compiled from official statistics by Noel Coates,  
Ken Morgan and Don Rowland.

Wherever possible spaces for notes have been provided on the sheets.

WAGON STOCK OF THE CONSTITUENT COMPANIES.

| Company                          | Total          |
|----------------------------------|----------------|
| LNWR (including L&Y)             | 109 061        |
| Midland Railway                  | 107 617        |
| Caledonian Railway               | 51 536         |
| G&SWR                            | 19 252         |
| Furness Railway                  | 7 365          |
| North Staffs                     | 6 248          |
| Highland Railway                 | 2 718          |
| Maryport and Carlisle            | 1 404          |
| Cleator and Workington           | 248            |
| Stratford on Avon & Midland Jct. | 130            |
| Wirral Railway                   | 80             |
| Knott End Railway                | <u>52</u>      |
| Total                            | <u>305 711</u> |

Breakdown of Stock.

| Company   | Opens  | Covered | Mineral | Special | Cattle | Rail&Tim | Brakes | Others |
|-----------|--------|---------|---------|---------|--------|----------|--------|--------|
| LNW & LY  | 68 631 | 21 007  | 8 358   | 1 494   | 2 882  | 3 678    | 2 711  | 300    |
| Midland   | 67 277 | 12 384  | 22 955  | 491     | 1 228  | 1 899    | 1 383  |        |
| Caley     | 14 060 | 3 296   | 28 367  | 115     | 1 450  |          |        | 4 248  |
| G&SWR     | 3 293  | 1 371   | 12 222  | 40      | 648    |          |        | 1 678  |
| Highland  | 1 949  | 188     |         | 6       | 292    | 209      |        | 74     |
| Stratford | 89     | 18      |         |         | 6      | 8        | 9      |        |
| Wirral    | 72     | 3       |         |         |        | 2        | 3      |        |

Notes on Table.

The information comes from the Railway Year Book of 1923.

The actual categories of wagons are by no means similarly defined by each railway company. For instance it would be silly to assume that the Caley had no brake vans because there is no figure for that column, for some reason they chose to class them as other.

All other companies had their wagon stock given in total only and there is no breakdown available.

This, and the list above do not include service vehicles.

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Space for notes.

MIDLAND RAILWAY: WAGONS ORDERED 1893 - 1922.

|      |               |      |               |      |               |
|------|---------------|------|---------------|------|---------------|
| 1893 | 5 057         | 1903 | 3 105         | 1913 | 2 875         |
| 94   | 6 196         | 04   | 247           | 14   | 4 015         |
| 95   | 2 451         | 05   | 3 892         | 15   | 2 851         |
| 96   | 3 645         | 06   | 1 611         | 16   | 2 409         |
| 97   | 8 896         | 07   | 2 525         | 17   | 1 030         |
| 98   | 1 713         | 08   | 1 187         | 18   | 2 283         |
| 99   | 8 430         | 09   | 3 312         | 19   | 1 450         |
| 1900 | 2 677         | 1910 | 1 533         | 1920 | 6 254         |
| 01   | 5 305         | 11   | 3 846         | 21   | 2 655         |
| 02   | <u>2 773</u>  | 12   | <u>3 960</u>  | 22   | <u>2 607</u>  |
|      | <u>47 143</u> |      | <u>25 218</u> |      | <u>28 429</u> |

The average number of wagons built per year is :-

$$100\ 790 \div 30 = 3\ 359$$

1897 was the year in which the largest total of Midland wagons was ordered, whilst the small total of 247 for 1904 is inexplicable as neither surrounding year is a heavy commitment.

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THE LMS WAGON RENUMBERING SCHEME.

Ref 1/NGC/3

|              |  |
|--------------|--|
| Midland      | retained 1 to 129 000                                  |
| L&Y          | 130 000 added to existing numbers to 169 999           |
| G&SWR        | 170 000 added to existing numbers to 189 999           |
| North Staffs | 192 000 to 199 999*                                    |
| LNWR         | 200 000 added to existing numbers, to 278 999          |
| "            | 279 000 to 279 999 service vehicles                    |
| "            | 280 000 added to brake van numbers, to 281 999         |
| "            | 282 000 and upwards, service vehicles                  |
| Furness      | 285 000 to 291 999*                                    |
| Highland     | 292 000 to 299 999*                                    |
| Caledonian   | 300 000 added to existing numbers, to 352 999          |
| "            | 353 000 and upwards, goods brakes and service vehicles |

Notes.

\* Vehicles in these company groups were not numbered in the same sequence as when owned by the pre-grouping company.

It is thought that the vehicles of the other companies were slotted into the sequence 190 000 to 191 999, and were probably not re-numbered in sequence.

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LMS WAGONS ORDERED 1924 - 1947.

| Year         | Goods Brakes   | Open Goods    | Covered Goods | Mineral       | Sand       | Tube         | Long Plate   | Low Ballast  |
|--------------|----------------|---------------|---------------|---------------|------------|--------------|--------------|--------------|
| 1924         | 181            | 12 000        | 600           | 4 500         |            |              |              |              |
| 1925         | 458            | 12 400        | 2 022         | 3 350         |            | 250          |              |              |
| 1926         | 331            | 5 100         | 1 313         | 4 150         |            |              |              |              |
| 1927         | 300            | 10 000        | 1 690         | 2 500         |            |              | 187          |              |
| 1928         | 102            | 7 000         | 1 375         | 4 500         |            |              |              |              |
| 1929         | 200            | 7 650         | 2 250         |               |            |              |              |              |
| 1930         | 225            | 5 750*        | 2 700         | 2 000         |            |              | 400          |              |
| 1931         | 175            |               | 1 750         |               |            |              |              |              |
| 1932         | 9 <sup>+</sup> |               | 1 755         |               |            |              |              |              |
| 1933         | 200            | 100           | 1 550         |               |            | 100          | 250          |              |
| 1934         | 50             | 3 900         | 3 000         |               | 100        | 100          |              |              |
| 1935         | 90             | 1 700         | 4 000         | 2 500         |            | 100          |              |              |
| 1936         | 120            | 4 750         | 2 500         | 2 500         |            | 500          | 525          | 60           |
| 1937         | 160            | 6 637         | 250           | 2 000         |            |              | 250          | 500          |
| 1938         | 300            | 2 688         | 1 000         | 1 000         |            | 150          |              | 1 000        |
| 1939         | 1 <sup>+</sup> | 2 600         | 750           |               |            | 150          | 200          | 175          |
| 1940         | 394            | 300           | 2 435         | 550           |            |              | 100          | 175          |
| 1941         | 128            |               | 715           |               |            |              |              | 600          |
| 1942         | 225            | 250           | 3 990         |               |            | 100          | 300          | 250          |
| 1943         | 225            | 1 750         | 3 256         |               |            |              |              |              |
| 1944         | 250            | 775           | 2 040         | 1 500         |            |              | 400          | 100          |
| 1945         | 191            | 2 300         | 1 550         | 2 000         |            |              |              |              |
| 1946         | 150            | 1 750         | 500           | 2 000         |            |              | 100          | 200          |
| 1947         | 46             | 2 700         |               | 2 600         |            | 300          |              | 100          |
| <b>Total</b> | <b>4 511</b>   | <b>94 100</b> | <b>42 991</b> | <b>37 700</b> | <b>100</b> | <b>1 750</b> | <b>2 712</b> | <b>3 160</b> |

+ Plough Vans

\* Total number of high goods built 1923-30 is 61 900

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LMS SOCIETY TEACH IN.

Ref 1/KM/1 Cont.

| Year   | Sleeper    | Loco<br>Coal | Single<br>Bolster | Double<br>Bolster | Deal       | Banana       | Gunpowder  | Ventilated<br>Meat |
|--------|------------|--------------|-------------------|-------------------|------------|--------------|------------|--------------------|
| 1924   |            |              |                   |                   |            |              | 10         |                    |
| 1925   |            |              |                   | 162               |            | 200          | 40         |                    |
| 1926   |            |              |                   | 38                |            | 350          |            |                    |
| 1927   |            |              |                   | 501               |            | 250          |            | 300                |
| 1928   |            |              |                   | 205               | 150        |              |            |                    |
| 1929   |            |              |                   | 206               |            | 100          | 25         |                    |
| 1930   |            |              |                   | 500               |            | 100          |            | 150                |
| 1931   |            |              |                   |                   |            |              |            | 50                 |
| 1932   |            |              |                   |                   |            |              |            |                    |
| 1933   |            |              |                   |                   | 50         |              | 20         |                    |
| 1934   |            |              |                   |                   |            |              |            |                    |
| 1935   |            |              |                   |                   |            |              |            |                    |
| 1936   | 20         | 550          | 500               | 600               |            |              | 20         |                    |
| 1937   | 14         | 440          |                   | 50                | 50         |              | 25         |                    |
| 1938   | 75         |              | 500               | 150               |            |              |            |                    |
| 1939   | 50         |              | 250               |                   |            |              | 20         |                    |
| 1940   |            | 254          | 162               |                   |            |              |            |                    |
| 1941   | 100        |              |                   |                   |            |              |            |                    |
| 1942   |            |              |                   | 200               |            |              |            |                    |
| 1943   |            |              |                   |                   |            |              | 20         |                    |
| 1944   | 100        |              |                   |                   |            |              | 20         |                    |
| 1945   |            | 150          |                   | 200               |            |              |            |                    |
| 1946   | 50         | 150          |                   | 150               |            | 100          |            |                    |
| 1947   | 50         | 50           |                   | 50                |            |              |            |                    |
| Totals | <u>459</u> | <u>1 594</u> | <u>1 412</u>      | <u>3 012</u>      | <u>250</u> | <u>1 100</u> | <u>190</u> | <u>500</u>         |

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LMS SOCIETY TEACH IN.

Ref 1/KM/1 Conc

| Year   | Refrig.    | Beer       | Cattle       | Tanks     | Hoppers      | Bogie<br>Bolsters | Annual<br>Total    |
|--------|------------|------------|--------------|-----------|--------------|-------------------|--------------------|
| 1924   | 100        |            | 670          |           | 200          |                   | 18 311             |
| 1925   | 50         |            | 908          |           | 50           |                   | 19 890             |
| 1926   | 250        |            | 433          | 2         |              |                   | 11 967             |
| 1927   | 50         |            | 784          | 3         |              |                   | 16 565             |
| 1928   |            |            | 750          | 5         | 45           |                   | 14 132             |
| 1929   | 200        | 100        | 295          | 9         | 430          | x                 | 13 465             |
| 1930   | 100        |            | 545          | 12        | 100          |                   | 12 582             |
| 1931   |            |            | 150          |           |              |                   | 2 125              |
| 1932   |            |            | 75           |           | 108          |                   | 1 947              |
| 1933   |            |            | 525          |           | 10           |                   | 2 805              |
| 1934   |            |            | 50           |           | 365          |                   | 7 565              |
| 1935   |            |            | 100          |           | 10           |                   | 8 500              |
| 1936   |            |            |              |           | 910          | 75                | 13 630             |
| 1937   |            |            |              |           | 175          |                   | 10 551             |
| 1938   |            |            |              | 1         | 500          |                   | 7 364 <sub>1</sub> |
| 1939   |            |            |              | 6         |              |                   | 4 202              |
| 1940   |            |            |              | 4         | 10           |                   | 4 384              |
| 1941   |            |            |              |           |              |                   | 1 543              |
| 1942   |            |            |              |           |              |                   | 5 315              |
| 1943   |            |            |              |           |              |                   | 5 251              |
| 1944   |            |            |              | 1         |              |                   | 5 186              |
| 1945   |            |            |              |           |              |                   | 6 391              |
| 1946   |            |            |              |           |              |                   | 5 150              |
| 1947   |            |            |              | 2         |              |                   | 5 898              |
| Totals | <u>750</u> | <u>100</u> | <u>5 285</u> | <u>45</u> | <u>2 893</u> | <u>75</u>         | <u>204 719</u>     |

The information on these pages was compiled from the LMS Lot Book. Some lots were shown as having been built over two years and in these cases the lot has been divided between the years concerned in the above list.

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THE DISTRIBUTION OF STOCK IN 1939.

If it is assumed that one wants a layout with stock in proportion to the prototype and then decides to have 10 locomotives, one should therefore have the following:-

|                              | <u>Actual</u> | <u>Layout</u> |
|------------------------------|---------------|---------------|
| Locomotives                  | 7 497         | 10            |
| Coaching Stock Passenger     | 17 347        | 23            |
| Coaching Stock Non-Passenger | 6 248         | 8             |
| Wagons                       | 287 598       | 384           |

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Ref 1/DPR/2

THE DISTRIBUTION OF COMPANY WAGON STOCK.

Even on a purely LMS based layout there will be wagons from all the other companies. If we assume that our 384 wagons are distributed in proportion to the stocks of the various companies, again as at 1939, the following can be deduced:-

|             | <u>Actual</u>  | <u>Percentage</u> | <u>Layout</u> |
|-------------|----------------|-------------------|---------------|
| GWR         | 83 028         | 12.5              | 48            |
| LNER        | 256 159        | 38.6              | 148           |
| LMSR        | 287 598        | 43.3              | 166           |
| SR          | 33 813         | 5.1               | 20            |
| Minor Lines | <u>3 461</u>   | <u>0.5</u>        | <u>2</u>      |
| Totals      | <u>664 059</u> | <u>100</u>        | <u>384</u>    |

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RAILWAY AND PRIVATELY OWNED WAGON STOCK.

The notes on the distribution of Company wagon stock gave no account of the privately owned vehicles. These must be considered and the following is found:-

|                                     | <u>Actual</u>    | <u>Layout</u> |
|-------------------------------------|------------------|---------------|
| Railway Owned Vehicles              | 664 059          | 384           |
| Privately Owned Vehicles - in pool  | 583 789          | 337*          |
| Privately Owned Vehicles - non pool | <u>21 310</u>    | <u>12*</u>    |
| Totals                              | <u>1 269 158</u> | <u>733</u>    |

\*This assumes that 43.3% would be found on the LMS, see Ref. 1/DP/2 Percentage column.

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THE AVERAGE FREIGHT TRAIN.

The average freight train consists of a locomotive, brake van and various wagons. Thus from Ref 1/DP/4 The Breakdown of Total Wagon Stocks:-

The number of wagons 733, less the number of brake vans 8 gives 725. Therefore the number of wagons per train is  $\frac{725}{8}$  equal to 90.62 wagons plus the brake van.

However, official statistics give the following:-

The average LMS Freight Train in 1938 had

|                         |              |
|-------------------------|--------------|
| Number of loaded wagons | 22.98        |
| Number of empty wagons  | <u>10.70</u> |
|                         | <u>33.68</u> |

Therefore even if all the brake vans are in traffic, which is most unlikely, we shall have  $8 \times (91.62 - 33.68) = 456$  out of our 733 wagons just standing in sidings.

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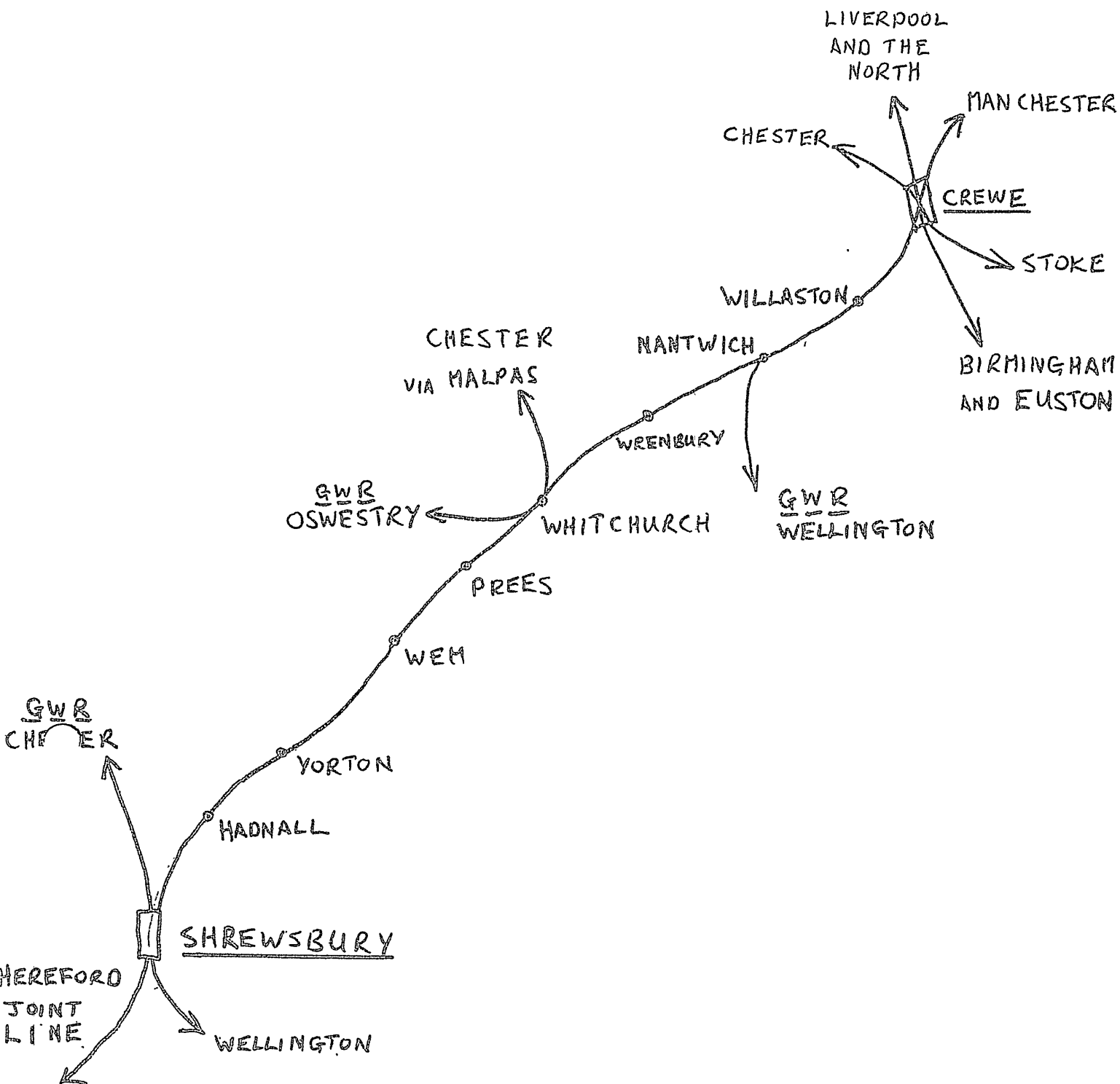
THE BREAKDOWN OF TOTAL WAGON STOCKS.

The 733 wagons on the layout can be broken down into different types as follows:-

|  |                      |            |
|--|----------------------|------------|
| 1 Privately Owned.                         |                      |            |
| a In Government Pool                       | 8 Tons               | 16         |
|  | 10 Tons              | 158        |
|  | 12 & 13 Tons         | 156        |
|  | 14 & 16 Tons         | -          |
|  | 15 Tons              | 2          |
|  | 20 Tons              | <u>3</u>   |
|  |                      | <u>337</u> |
|  |                      | 337        |
| b Non Pool                                 |                      | 12         |
| 2 Railway Owned                            |                      |            |
| Open Goods Wagons                          | under 8 Tons         | -          |
|  | 8 Tons and under 10T | 16         |
|  | 10 Tons & under 12T  | 52         |
|  | 12 Tons              | 124        |
|  | Over 12T & under 20T | 2          |
|  | 20Tons and over      | <u>5</u>   |
|  |                      | <u>199</u> |
|  |                      | 199        |
| Covered Goods-                             | under 8 Tons         | =          |
|  | 8 Tons and under 10T | 9          |
|  | 10Tons & under 12T   | 18         |
|  | 12Tons               | 42         |
|  | More than 12 Tons    | <u>-</u>   |
|  |                      | <u>69</u>  |
|  |                      | 69         |
| Mineral Wagons                             | under 8 Tons         | -          |
|  | 8 Tons & under 10T   | 2          |
|  | 10Tons & under 12T   | 6          |
|  | 12 Tons              | 67         |
|  | more than 12 Tons    | <u>9</u>   |
|  |                      | <u>84</u>  |
|  |                      | 84         |
| Special wagons - ordinary                  |                      | 4          |
| Special wagons - bogie                     |                      | -          |
| Cattle Trucks                              |                      | 10         |
| Rail & Timber - ordinary                   |                      | 8          |
| Rail & Timber - Bogie                      |                      | 2          |
| Brake Vans                                 |                      | <u>8</u>   |
| (There should also be 19 service vehicles) |                      | <u>733</u> |

MAP OF THE CREWE-SHREWSBURY LINE.

This map should be read in conjunction with reference 1/DPR/7.



DETAILS OF TRAIN SERVICES AND FACILITIES: CREWE TO  
SHREWSBURY 1946.

Codes for boxes in table below:-

- A Number of Express Passenger trains handled<sup>2</sup>
- B Number of Stopping Passenger trains handled<sup>2</sup>
- C Length of Passenger Platform Faces<sup>4</sup>
- D Number of Through Goods trains handled<sup>2</sup>
- E Number of Pick-up Goods trains handled<sup>2</sup>
- F Wagon Capacity<sup>3</sup>

| Station    | A               | B               | C   | D               | E              | F               |
|------------|-----------------|-----------------|-----|-----------------|----------------|-----------------|
| Crewe      | 18 <sup>1</sup> | 27 <sup>1</sup> | 260 | 76 <sup>1</sup> | 1 <sup>1</sup> | 5 176           |
| Willaston  | -               | 19              | 12  | -               | 1              | 45              |
| Nantwich   | -               | 27              | 20  | -               | 1              | 165             |
| Wrenbury   | -               | 16              | 12  | -               | 1              | 83 <sup>6</sup> |
| Whitchurch | 7               | 31              | 40  | 3               | 3              | 354             |
| Prees      | -               | 15              | 12  | -               | 1              | 36 <sup>7</sup> |
| Wem        | 1               | 15              | 18  | -               | 1              | 110             |
| Yorton     | -               | 13              | 12  | -               | 1              | 23              |
| Hadnall    | -               | 13              | 12  | -               | 1              | 115             |
| Shrewsbury | 18 <sup>5</sup> | 16 <sup>5</sup> | 95  | 40 <sup>5</sup> | 1 <sup>5</sup> | 1 879           |

Notes:-

- 1 Shrewsbury (or Wellington) lines only
- 2 Basic Weekday Service
- 3 Additional sidings installed at Crewe, Prees Heath and Harlescott during World War II have not been taken into account
- 4 Approximate Coach Lengths
- 5 Crewe line only
- 6 Plus 10 at Poole's Siding
- 7 Plus 82 at Prees Heath
- 8 Excluding GWR (Cambrian) trains

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SUMMARY.

1. If you want to model the LMS correctly you need lots of wagons.
2. Your coaches will be LMS but your wagons will belong to all 4 grouping companies and private owners.
3. The proportion of wagons you roughly need is:-  
8 LMS ; 7 LNE ; 2 GWR ; 1 Southern
4. Most of the wagons will be open goods and mineral.
5. Many of them just sit in sidings.
6. So you will need lots of sidings.
7. Even when they are in trains they often get shunted.
8. So you will need loops and lay-bies.
9. 34 wagons is the average LMS Freight Train.
10. The present day freight train is not a LMS one.
11. Get building wagons.

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