



## LEEDS TRAM 602 - 1953 TO 2006 AND BEYOND

### INTRODUCTION

Was it by design or accident that this advanced but first generation tram was relegated to mainly museum duties? How different in USA where pre and post-war trams have been refurbished and put back to work on what the Americans call HERITAGE lines. Our nearest equivalent could well have been Leeds with a modified version of 602 could have almost matched the more expensive light rail vehicles when on typical urban duties. The pity is that the Supertram scheme seemed to be "dogged" with a "sacrificial" approach. It is difficult to understand why the time-delaying questions by DfT were allowed to scupper the Supertram plans when we now know the scheme was well within the cost-benefit ratios demanded by the Government. The withdrawing of Government funding on cost grounds was somewhat dramatic because nearly £50 m of development money was coolly written off with little explanation to the local taxpayers. This begged the question as to why Alistair Darling changed his mind when his civil servants had earlier in the year told him that Supertram was good value for money (1).

### LOCAL TRADE AT RISK

Because traffic conditions in our cities, Leeds in particular, are reaching grid-lock levels, and the threat of a congestion charge being "just around the corner" with no suitable alternative in place, it would have tested the average motorists loyalty, just pay-up or drive to another town. Local trade is a prime reason for operating a heritage type free-ride tram service in USA and recent reports suggest that the idea is spreading.

### BACK TO THE FUTURE

Leeds, half a century ago, had a tramway system that could boast many miles of segregated track and advanced rolling stock to match. Those with long memories will recall that first generation equipment on urban duties almost equalled the performance of light rail. This interesting point becomes relevant when compared with data currently coming out of Portland (Oregon) where both light rail and a tramway system work almost side by side but with different operating parameters. In the urban area, high speed is not possible, and only when on segregated tracks does the higher performance justify a significantly improved first cost.

### AT THE NATIONAL TRAMWAY MUSEUM GOOD PERFORANCES ARE POSSIBLE

The mere fact that our tramway museums not only exist but thrive could be proof in itself that first generation tramway technology in urban conditions (but updated by about 50 years) is more than adequate for the likely demands to be expected from it. Park and Ride could be the perfect example to prove this very point.

The four Supertram routes originally proposed for Leeds had a park and ride site at each terminal. Dropping the Supertram project demonstrates that the DfT seems to regard congestion charging as the cheaper option. A subtle leader in a transport journal (2) summed it up perfectly : "perhaps they (DfT) could recruit at least one person who knows something about trams".

### A DISLIKE FOR INTEGRATED TRANSIT SYSTEMS

What seems fairly obvious though is a departmental dislike for an integrated transit system using trunk tram routes coordinated with feeder bus services. This practice is almost universal on the Continent and it would be a simple matter to visit such places as Bremen, Freiburg, Karlsruhe and Kassel and to observe buses meeting trams at easy interchange points and, most important, their practice of a single fare covering the complete journey.

A deep study of the European method of integrating trams and buses helps to justify the judging of efficiency and subsequent awarding of an appropriate quality mark, usually ten out of ten. By comparison, a typical quality mark for a busy bus service in UK could be as low as five. (See Appendix "A" for our justification for such a low mark).

**LEEDS TRAM 602 - 1953 TO 2006 AND BEYOND****APPENDIX "A"**THE BENEFITS LOST WITH A BUS-ONLY URBAN SYSTEM

Light rail or Supertram systems include many benefits not apparently quantified in a bus/tram comparison. Those quoted below have been monitored for many years in Europe but because they do not appear to have been reviewed when the basic costs of LRT against BRT are undertaken by DfT and they continue to operate as a bus route. One very obvious factor though is the continual downgrading of bus services because no one seems able to stop passengers voting with their feet.

**LOADING:** Passengers waiting for a tram know exactly where the entrances will be. Because of the relatively small capacity of a bus, many on different routes have no option but to share a single bus stop making it difficult for passengers when three or four arrive at the same time. This affects the passenger loading times because as new arrivals scramble to locate their correct bus, it tends to swamp the drivers ability to clear the queue, much to the anguish of seated passengers. Further delays are not uncommon because some passengers retain the common habit of standing close to the single entrance.

**LEFT AT STOPS:** Leapfrogging by drivers is a fairly common occurrence because hand signals by passengers cannot be seen when another bus occupies the stop. This cannot happen with tram services.

**STOP LOCATIONS:** With so few bus services entering the CBD in Europe, it is comparatively easy for busy tram routes to actually share a tram loading platform. A distinct advantage because a bus passenger often has to walk a fair distance for a bus connection. This inconvenience is probably a prime reason for a motorist remaining a motorist.

The feeder bus policy in Europe is a popular way of handling passengers on long journeys because the first tram to arrive at a city centre stop can usually be suitable for all passengers regardless of the actual feeder route required. At the transfer point the various bus routes are all waiting for passengers and move off immediately they are loaded.

**EXCESSIVE FARES:** The fare system is much fairer than in UK with just the one ticket often valid for all vehicle changes within two hours.

**TRAM AND PEDESTRIAN MIX:** People in Britain often think of a tram route as far more dangerous than a bus route. A visit to Europe will provide evidence that this is not so. The writer was very impressed in Bremen with 250 passenger trams safely negotiating a pedestrianised shopping mall which was quickly followed by tram tracks through a pedestrianised area in the tourist part of the city.

**INCLEMENT WEATHER :** People living on tram routes have the advantage of "all-weather" operation. A tram service in snow conditions can keep going when bus services have been forced to stop. A good example comes from Ottawa (Canada) where a part of the city's bus system comes to a standstill in snow conditions (3).

**JOURNEY TIME :** It is not unusual for buses on a busy route, a route that would justify a tram service, to struggle through traffic conditions to its outer terminus whilst a tram, if it had been a tram route, would successfully completed a return journey.

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**APPENDIX "B"**

USA and France have followed a different transit course to that taken by Britain (4) and San Diego (California), credited with the first application of light rail in USA, has been used as our base line.

**USA**

1. 1981.....San Diego.....(light rail)
2. 1982.....Seattle.....(heritage)
3. 1984.....Buffalo.....(light rail)
4. 1984.....Fort Collins.....(heritage)
5. 1984.....Lowell.....(heritage)
6. 1986.....Portland.....(first: light rail)
7. 1986.....Chisholm.....(heritage)
8. 1987.....Sacramento.....(light rail)
9. 1987.....San Jose.....(light rail)
10. 1988.....Galveston.....(heritage: diesel)
11. 1989.....Dallas.....(first : heritage)
12. 1990.....Los Angeles.....(light rail)
13. 1991.....Fort Smith.....(heritage)
14. 1992.....Baltimore.....(light rail)
15. 1993.....Memphis.....(heritage)
16. 1993.....Tucson.....(heritage)
17. 1993.....St Louis.....(light rail)
18. 1994.....Denver.....(light rail)
19. 1996.....Dallas.....(second: light rail)
20. 1999.....Salt Lake City .....(light rail)
21. 1999.....Astoria.....(heritage)
22. 2000.....Hudson Bergen.....(light rail)
23. 2000.....Kenosha.....(heritage)
24. 2001.....Portland.....(second streetcar)
25. 2001.....Issaquah.....(heritage)
26. 2002.....Grove.....LA (heritage)
27. 2002.....Tampa.....(heritage)
28. 2003.....Los Angeles.....(Second : Light Rail)
29. 2003.....San Pedro.....(heritage)
30. 2003.....Tacoma.....(Light Rail)
31. 2004.....Camden-Trenton.....(Light Rail: diesel)
32. 2004.....Houston.....(Light Rail)
33. 2004.....Minneapolis.....(Light Rail)
34. 2004.....Littlerock.....(Heritage)

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**FRANCE**

France started four years after the USA but soon established a very credible performance.

1. 1985.....Nantes
2. 1987.....Grenoble
3. 1992.....Paris T1
4. 1994.....Rouen
5. 1994.....Strasbourg
6. 1998.....Paris T2
7. 2000.....Lyon
8. 2000.....Montpelier
9. 2000.....Orleans
10. 2003.....Bordeaux
11. 2004.....Caen (rubber tyred)
12. 2006.....Clermont-Ferrand (Rubber tyred)
13. 2006.....Mulhouse
14. 2006.....Paris (T3)
15. 2006.....Valenciennes
16. 2007 (?).....Nice
17. 2007 (?).....Marseilles
18. 2008 (?).....Le Mans
19. 2009 (?).....Toulon
20. 2009 (?).....Toulouse
21. 2010 (?).....Angers
22. 2011 (?).....Mulhouse (Tram-Train)

**REFERENCES**

- 1) Paul Robinson - YORKSHIRE EVENING POST - page 7 - 4th April 2006
- 2) TODAY's RAILWAYS - page 5 - Platform Five Publishing Ltd -April 2006.
- 3) TRAMWAYS & URBAN TRANSIT - page 149 - April 2006.
- 4) TRAMWAYS & URBAN TRANSIT - pages 147 and 152 - April 2006.

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