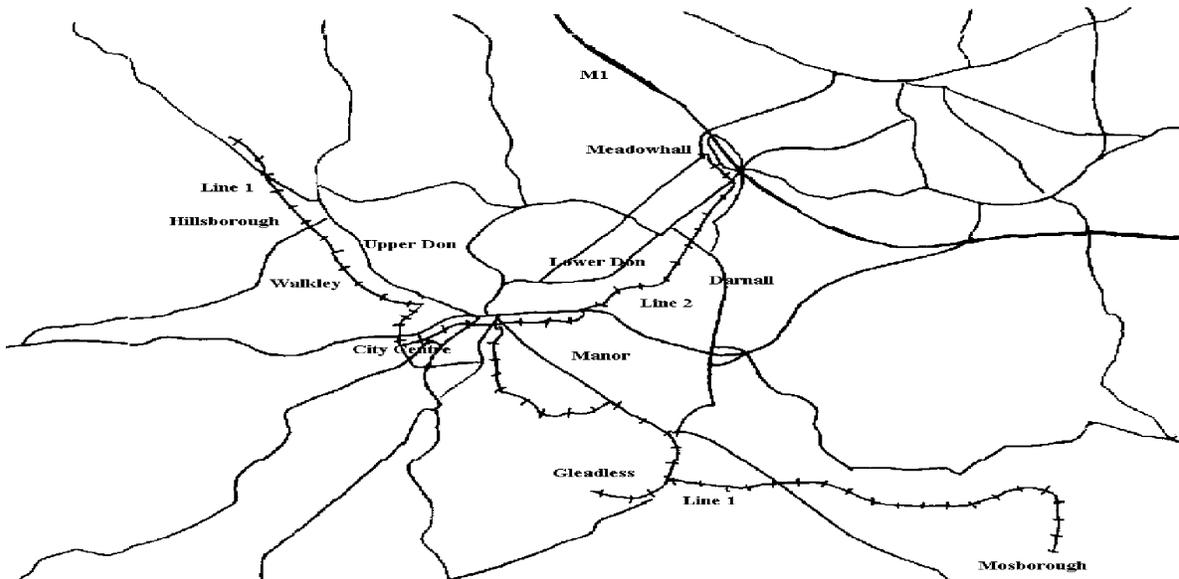


ANNEX F

CASE STUDY: SHEFFIELD SUPERTRAM



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1 INTRODUCTION

1.1 The project

1:01 The South Yorkshire Supertram (SYS) is a light rail system in Sheffield, England. It was opened in stages from March 1994 to October 1995.

1.2 Relationship to other projects

1:02 The SYS is the largest and most expensive component in a large amount of transport and communication investment in Sheffield over the period 1994-97 (see Table 1). In addition, numerous initiatives aimed more directly at economic regeneration have been pursued over the same period.

| Project | Cost | Completion | Features |
|-------------------------------|---------------|------------|---|
| South Yorkshire Supertram | £240 million | 1994/95 | 29 kilometres tram network, largely on-road, linking north, west, and south of city with centre |
| Don Valley link road | £33 million | 1996 | Road improvement to dual carriageway as key access to Lower Don regeneration |
| Mosborough link road | £27 million | 1994 | New road, links industrial and residential suburb to national network |
| Penistone arterial road | £18.5 million | 1995 | Upgrade to dual carriageway to serve industrial areas and city centre |
| Outer ring road | £16 million | 1996 | Upgrade of road to improve access to airport and industrial areas of lower Don valley |
| South Yorkshire cable network | £120 million | 1996- | Regional cable network offering telephone and cable television to homes and businesses |
| City airport | £13 million | 1997 | Airport for businesses and short-haul flights |

Table 1 Main transport and communications investment in Sheffield 1994-97

Source: Dabinett (1998) p176

1.3 Available studies

1:03 A major five-year monitoring exercise was commissioned by the then Department of Transport (now Department of Environment, Transport and the Regions) and the South Yorkshire Passenger Transport Executive (SYPTX) from the Centre for Regional Economic and Social Research at Sheffield Hallam University. The final report of this study (referred to below simply as CRESR) is currently in

draft, but the findings have already been extensively reported in published papers, including a summary by Dabinett et al (1999).

2 PURPOSE, CONTEXT, FUNDING AND TIMING

2.1 History and purpose

- 2.01 The development of the Supertram reflects both a long-standing emphasis on public transport in the policies and planning of South Yorkshire, and a more specific desire to use transport as a means of encouraging the economic regeneration of the area following the sharp contraction of the steel and related manufacturing industries since the mid 1970s.
- 2.02 Proposals for a segregated passenger transport system were put forward in 1976 as part of the findings of the Sheffield and Rotherham Land Use and Transportation Study (SRLUTS) (Haywood, 1999). Technical and legislative preparations proceeded throughout the 1980s. Legal powers to build the first two lines of the network were approved in 1988, and financial approval was granted by the Government in 1990.
- 2.03 Contracts for construction and equipment were placed in 1991, and the two lines (which were completed to budget) opened in stages from March 1994 to October 1995.
- 2.04 An important difference between the system as constructed and that originally envisaged in SRLUTS is that the actual tram operations are very much on-street and very little on segregated rights of way. Moreover, when the system opened, the trams did not enjoy the priority over other road traffic which was intended when the designs were finalised.
- 2.05 Another difference between original intentions and outcome is that SYS was envisaged as part of an integrated public transport system in which the bus and tram networks would be planned as a whole by SYPTTE. This idea was undone by the 1985 Transport Act, which deregulated bus operations and encouraged competition amongst bus operators, both amongst themselves and eventually against the trams.

2.2 Cost and funding

- 2.06 The cost of the system is given at £240 million. The majority of the funding came from central government, with small contributions from the private sector (related to the development of the regional shopping centre at Meadowhall) and from the European Regional Development Fund.

2.3 Post-completion changes

- 2.07 The original financial agreements were based upon the sale of the concession to operate Supertram. This was achieved at the end of 1997, with operation being taken over by Stagecoach (one of the UK's major bus operating companies). A

considerable number of improvements have been achieved since privatisation, including

- increased staffing levels and utilisation of the tram stock
- improvements in service quality and reliability.

3 TRANSPORT AND ACCESSIBILITY EFFECTS

3.1 Travel time and costs

3.01 The tram system was intended to offer significant advantages over bus in terms of travel time, frequency and reliability. The combination of on-street running with little or no priority to trams with the competitive response of the bus operators meant that these advantages were not realised when the system opened. Figures 1 and 2 (from Haywood, 1999) show the extent of this shortfall and the much greater level than expected of bus service provision.

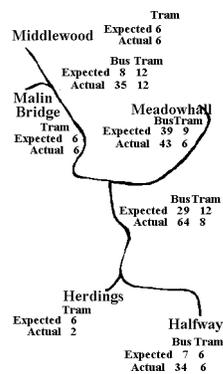


Figure 1
Frequencies
(PM peak – Vehicles/hr)

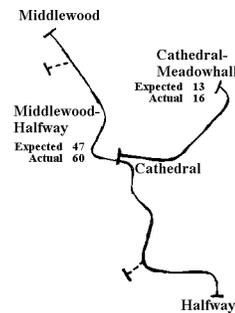


Figure 2
Average Journey Times
(minutes)

3.2 Patronage

3.02 Not surprisingly, the use of the system is lower than was originally forecast. Haywood (1999) quotes estimated figures for annual boardings of about 6.6M per year immediately after full opening, which increased to slightly under 8M per year after major fare reductions. These figures are around 30% of those forecast when the scheme was being planned. The latest available figure is 10.3M boardings in 1998.

3.03 Apart from the less attractive nature of the Supertram services and the competitive response from bus operators, other factors contributing to the shortfall in use

include land-use changes (both an unexpected decline in Sheffield city centre and the non-occurrence of expected developments elsewhere), and the absence of intended park-and-ride facilities.

- 3.04 Latest indications are that patronage is continuing to rise, and that approximately one-quarter of users are estimated to be trips that otherwise would have used car.

4 ECONOMIC AND EMPLOYMENT IMPACTS

4.1 Direct impacts

- 4.01 The monitoring study has concentrated very largely on indirect impacts, but quotes other estimates of the direct employment generated in building and operating the system (CRESR, para 9.1).
- 4.02 The ex ante studies apparently estimated some 2400 person years of work in construction and in the manufacture of rolling stock and other equipment. Since the project was completed to budget it is likely that these estimates were fairly accurate, though it is not clear how much of this employment would have been generated in the Sheffield area.
- 4.03 It was apparently estimated in 1996 that
- the infrastructure company employed 15 full-time and 26 part-time staff, whilst
 - the operating company employed 157 full-time and 2 part-time staff.
- 4.04 No attempt was made to estimate employment in suppliers, sub-contractors etc.

4.2 Indirect effects

- 4.05 The monitoring study focused on the impact of SYS on urban regeneration in Sheffield, with specific reference to five inter-related dimensions of regeneration:
- the image of the city
 - property values
 - development and land use
 - business operations and location
 - employment
- 4.06 The methods used concentrated very much on “before” and “after” studies to measure the impact of SYS in each of these dimensions. The authors recognize (CRESR, para 2.5) that
- the time-scale of the study is relatively brief (note in particular that all the after surveys were carried out in 1995/96 (CRESR, Figure 2.2))

- the method makes it easier to identify relatively small, location-specific impacts rather than city-wide effects
 - it is very difficult to be confident about whether effects should be attributed to SYS.
- 4.07 The main conclusions under each of the five headings are as follows.
- 4.08 **Image.** Surveys of national development agents, local developers and visitors suggest that SYS has had a positive effect on the city’s image. The improvement was most marked among national development agents. Local agents were already positive about the role of SYS during the “before” survey, and remained so in the “after” survey. Amongst visitors, SYS is not generally a visitor attraction in itself, but is “an important constitute element” in the city’s visitor and tourism promotion programmes”.
- 4.09 **Property values.** The immediate effect of SYS was to cause a 7% **reduction** in values during the pre-opening period, which is attributed to concerns about the disruptive effect of constructing the on-street system. The “after” survey found that this negative effect had disappeared, and it is possible that further surveys would find a positive effect. No effect on commercial and industry property values was identified, though this may be due to depression of the market and the very small number of transactions taking place. Again it is thought that positive effects may emerge in future, particularly in the retail sector.
- 4.10 **Development and land-use.** Similarly, and unsurprisingly, no systematic influence on land-use and development could be identified. It should be noted in this respect that although SYS was intended to facilitate the redevelopment of the Lower Don Valley, the regeneration initiatives there (including preparatory works such as site decontamination) were more closely linked to road network improvements than to the tramway.
- 4.11 **Business operation and location.** The impact of SYS on businesses seemed, up to 1996, to be a largely negative one as a result of the disruption caused by construction of the system. The perception of this effect may have been exaggerated – it is possible that the construction was simply more obvious than other economic problems arising simultaneously. There is an expectation that positive effects will flow from reductions in road traffic congestion, from the development of sites which are now more accessible, and from improved labour mobility within the city.
- 4.12 **Employment.** There was little detectable effect of SYS in the labour market over the period surveyed, though it was apparent that a small minority was able to look for work in a wider area than before and that some of these people were succeeding in taking jobs they would not otherwise been able to fill.
- 4.13 It should be emphasised that although the CRESR study is still being finalised, all the “after” survey work supporting the above findings was carried out in 1995-96, and therefore represents only the very short-term effects of the SYS. They therefore correspond with the period when the system was proving particularly unsuccessful in achieving the intended improvements in public transport quality.

It would be very interesting to know whether the wider impacts have increased in the subsequent years, during which time the number of passengers has almost doubled.

5 REFERENCES

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