

proposed services. More modern units - Pacers or Sprinters - are preferred.

To meet the timescale of the need to serve the new MoD development at South Filton in 1995, second-hand Pacers or Sprinters would have to be found from somewhere. The only likely source in the next two years is the North Leeds electrification, which will release about 20 two-car units. Some of these will be retained in West Yorkshire to cope with growth on the diesel-worked routes there; Regional Railways South Wales & West is hoping to receive eight units. Three new services are bidding for these: the STARS Bristol proposals discussed here, a Totnes-Liskeard local service and intensified suburban services around Exeter. 12 units are needed for all three schemes, so one will probably have to wait for the construction of new units.

Second-hand units would require major overhauls and refurbishing. In the base analyses of the STARS report, the capital cost of refurbishment was assessed at £500,000 per two-car unit - a generous estimate which for accountancy reasons includes some costs for keeping Heritage units going until the North Leeds electrification releases second-generation units.

For the longer term, the report urges the county council to investigate the possibilities of adding to the order for Class 157s (156 clones) which Strathclyde is planning to make, and even to look into the possibility of restarting manufacture of Pacers.

Attractive returns

The schemes generate a big surplus of fare revenue over operating costs. The increase in annual operating costs is put at £3.6million, consisting of station operating costs of £0.4million and train operating costs of £3.2million. The increase in annual fare income is estimated to be £7.2million in 1999, rising to £9.1million in 2015.

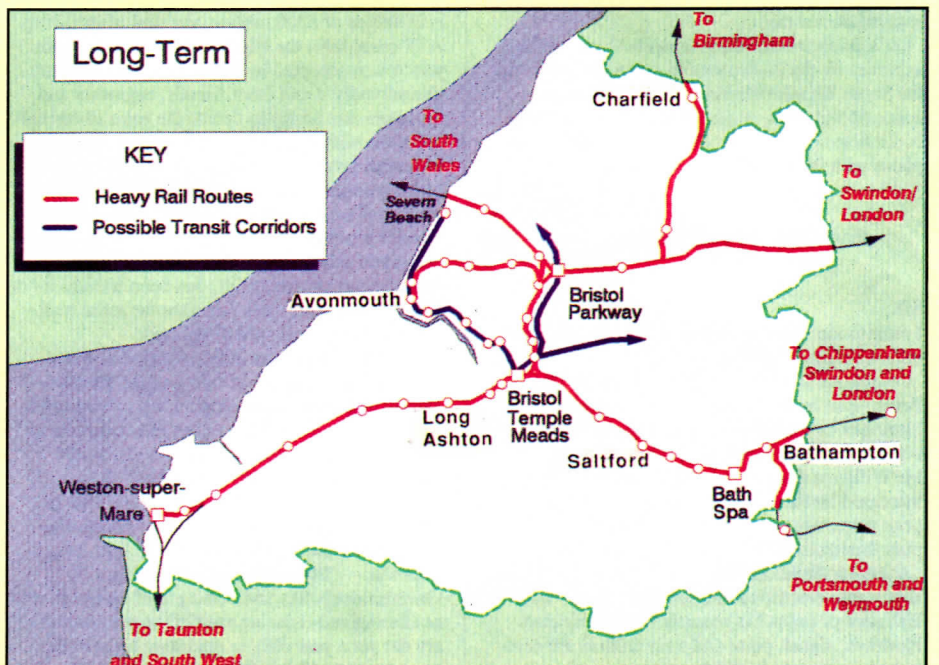
While the new services would run in the black, a modest sum is needed to kick-start the scheme: total capital investment of the first three phases is estimated to be about £15million. On a discounted cash flow basis, the net present value of the schemes is estimated to be £27million between 1994 and 2015. The net benefit to cost ratio is 1.63.

The improved services could help reduce traffic congestion. On the Chippenham-Bristol corridor, by the year 2015 as many as one in five rush-hour drivers might divert to rail; on other corridors the displacement would be less.

The Transmark calculations show these good results to be very robust: even if costs are increased by 50%, a positive benefit:cost ratio of about 1.1 is achieved. The report says the financial returns are sufficient to justify an approach to central government for a Section 56 grant to help meet the £15million start-up costs. Other possible sources of funds are the local authorities, British Rail, property developers and (for Filton South) the Ministry of Defence.



Construction work on the new Port of Bristol coal import terminal is much in evidence as a Class 153 single car runs through St Andrew's Road station with a Bristol-Severn Beach working on 13 March 1993. In the STARS proposals, this stretch of line would host a new service coming over the freight line from Filton South. *Brian Perryman*



Maps
Left: Phase One Development Strategy
Right: Total Long Term Strategy