

# Reopening the South Sub

Getting passenger trains back on the Edinburgh South Suburban Railway

## 1. INTRODUCTION

The Edinburgh South Suburban Railway ('South Sub', 'The Sub' or 'ESSR') was closed to passenger services in 1962. Since then the residents of Gorgie, Craiglockhart, Morningside, Blackford Hill, Newington and Duddingston/Craigmillar have had to rely on buses for local public transport, while Portobello has had no rail access since 1964.

The line itself has remained open, providing a strategic bypass for freight trains that avoids Waverley and Haymarket. Still mostly double-track, and resigalled in the 1970s, there is plenty of spare capacity for additional trains. Campaigners have long argued that passenger services should be reinstated as a vital component of an efficient and sustainable transport system for Edinburgh.

Despite a range of studies backing the case for re-opening, and with an estimated cost of as little as £15m,<sup>1</sup> the Scottish Executive has so far refused to support the project. This lack of enthusiasm is both disappointing and puzzling, given the modest capital cost involved and the significant benefits and value-for-money which the scheme would provide.

A re-opened South Sub would transform cross-city links, create a fast alternative to the car for journeys to the city centre, and provide a vital feeder to Waverley Station and the planned new train/tram/bus interchange at Haymarket.

## 2. RECENT HISTORY

In 1993, concerned over rising traffic congestion and its impact on bus services, Lothian Regional Council commissioned consultants to study the feasibility of re-opening the South Sub to passenger traffic. In subsequent years there has been a series of consultants' reports, but as yet nothing has been achieved on the ground.

In the most recent feasibility study (2004), Atkins

Transport Planning concluded that reopening to Niddrie via Haymarket – as proposed by E-Rail (see below) – was "in the short-term, the most feasible option".<sup>2</sup> Linking Waverley and Haymarket to Gorgie, Morningside, Cameron Toll and Niddrie would cost £15m. A half-hourly service would attract 7,075 passengers per day, providing an annual revenue of around £1.4m and a Benefit-Cost Ratio (BCR) of +1.64.

The Scottish transport minister Tavish Scott has not ruled out funding the South Sub, but has asked that another report be drawn up by The City of Edinburgh Council in order to provide a full business case; this will assess quantifiable benefits such as employment and faster journey times, as well as less readily



**The site of the now-closed Newington Station: the South Sub can carry passenger trains but the stations have been taken away.<sup>3</sup>**

quantified social and environmental benefits.

The latest development came in February 2007, when the private consortium E-Rail announced that £8.5m had been pledged by land owners along the route.<sup>4</sup> This was in recognition of the forecast that properties and land close to the stations on the line are expected to increase in value by around 10% if the line re-opens. It is understood the finance would come from The University of Edinburgh, and the Cameron Toll and Fort Kinnaird shopping centres, amongst others. E-Rail has indicated that it will work with The City of Edinburgh Council in the development of a new business case to persuade the Executive to fund the balance of investment.

### 3. STILL A FEW SCEPTICS

While there has long been cross-party support for the re-opening of the South Sub, together with business backing and public consensus, there are still a few sceptics. Given that the capital cost is so modest - £15m versus £600m (and rising) for the Edinburgh Airport Rail Link, for example - critics of the scheme tend to home in on two issues:

#### 3.1 Not enough capacity between Waverley and Haymarket?

The last passenger services in 1962 ran in a circle linking Southside stations with Waverley

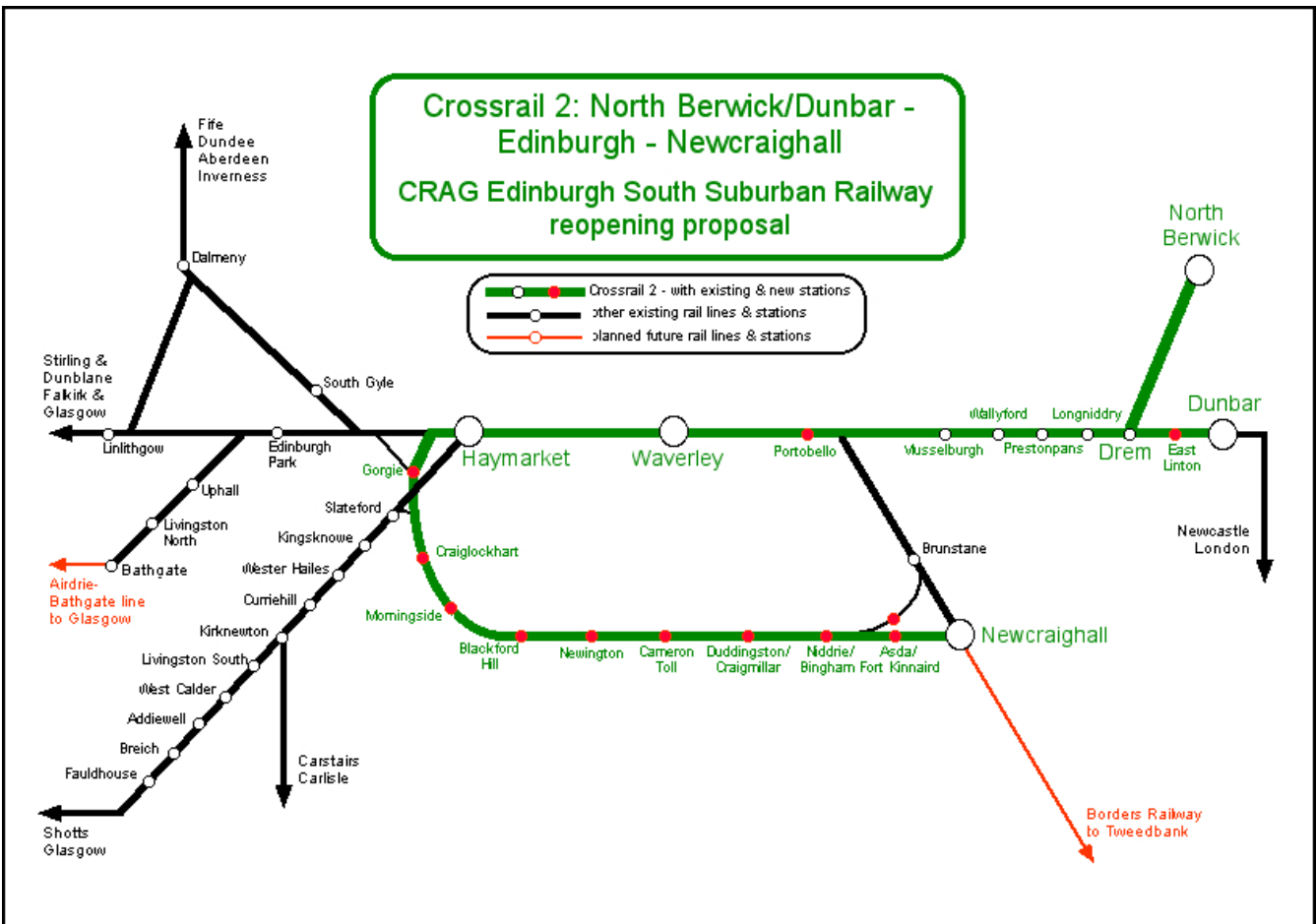
and Haymarket, and most of the different options mooted for re-opening (see Section 4 below) assume trains would traverse the busy section of line between Waverley and Haymarket.

Critics have suggested that capacity at Waverley station and through to Haymarket is not available. However, existing North Berwick to Edinburgh electric train services already run to and from Haymarket during the peak periods. These train paths could be utilised to also serve the South Sub, provided that diesel trains were used instead of electric, or if the South Sub was also electrified. Off-peak, there are already numerous train paths available.

The 'Phase 1' upgrade of Waverley Station currently underway will increase the capacity between Waverley and Haymarket from 24 trains per hour in each direction to 28 once the works are complete at the end of this year. Further works at Waverley could increase train capacity through to Haymarket to 32 trains per hour in each direction.

#### 3.2 Not enough capacity for passenger and freight trains on the Sub?

Given that the South Sub is an operational freight route, and that rail freight traffic is likely to grow in response to the impact of rising fuel costs and policies to tackle climate change, there are concerns that the route would have insufficient capacity to reliably handle rising



freight traffic, as well as a passenger service at least every half-hour in each direction.

In recent years, around 50 trains a day have passed over the South Sub in each 24 hour period Monday-to-Friday. This equates to an average of just over one train an hour in each direction over this modernised double-track route. Therefore, this leaves substantial spare capacity to handle a passenger service as well as increased freight traffic. Moreover, line capacity could be increased at modest cost with the addition of one or two extra signals.

In practice, the very heaviest eastbound cross-city freight trains already have to use the route via Haymarket and Waverley because of the steep gradient on the South Sub at Craiglockhart. Furthermore, when the Stirling-Alloa-Kinross railway re-opens to freight traffic later this year, some coal trains to Longannet which currently use the South Sub will be diverted away to the new railway, thereby releasing additional capacity on the South Sub.

#### 4. A RANGE OF OPTIONS

There are a number of different operational options for introducing a passenger service over the South Sub. All could serve reopened stations at Portobello, Gorgie, Craiglockhart, Morningside, Blackford Hill, Newington, Cameron Toll, Duddingston/Craigmillar and Niddrie, providing a new rail link to both Haymarket and Waverley. Some could also serve Fort Kinnaird / The Jewel (Asda), Brunstane and Newcraighall.

##### 4.1 Back to the future – the Suburban Circle

Historically, the South Sub had a predominantly circular passenger service, and this may be the ideal long-term option. It provides a full range of new rail journey opportunities plus an effective doubling of frequency at mid-point stations such as Newington, Cameron Toll and Duddingston/Craigmillar through the ability to catch both eastbound and westbound trains, with approximately the same journey times to the city centre.

Additional rolling stock would be required to resource this entirely new service. Through Portobello junction round to Niddrie West junction, double-tracking would be required to be reinstated – but this could piggyback in part on the doubling of Portobello junction and the line to Newcraighall. These two works have been recognised as necessary from a wider strategic perspective and have thus now been accepted as desirable investments by Network Rail in

their Scotland Route Utilisation Strategy published in March 2007.

Atkins found that a full circular half-hourly service on the South Sub (calling at Gorgie, Craiglockhart, Morningside, Blackford Hill, Newington, Cameron Toll, Craigmillar and Niddrie) would attract 10,675 passengers per day, and would have a BCR of +1.57.

A variant of this option could see the use of 'tram-trains' – as used in Karlsruhe, Germany, and a growing number of continental cities. These would run on the 'heavy rail' tracks of the South Sub but then come off the main line to run 'on street' along the new tram route from Haymarket along Princes Street, extended eastwards to Meadowbank where tram trains could re-join the heavy rail route.



**A First ScotRail passenger train at the site of the now-closed Morningside Station (June 2006)**

##### 4.2 Crossrail 2 – Newcraighall to North Berwick via Haymarket & Waverley

The Capital Rail Action Group (CRAG) has long suggested that, instead of a circular service, it would be easier in the short- to medium-term to run the existing North Berwick-Edinburgh trains through to Haymarket and then round the South Sub to Newcraighall (see map on previous page).<sup>5</sup> By doing this it would be possible to get a half-hourly peak-hour service on the South Sub using existing rolling stock.

The proposal would provide a link with the established Crossrail service and its Park+Ride facility at Newcraighall. It would also dovetail with the aspiration of East Lothian Council to secure a local service throughout the day to Dunbar. Thus the service proposed here would see trains running half-hourly from Newcraighall via Haymarket and Waverley to Drem, with alternate trains then running on to Dunbar and North Berwick.

This option would attract 7,725 passengers per day (not including Portobello). It would have a

capital cost of £18m and a BCR of +1.42.

For this option to be introduced, one of two rolling stock / infrastructure changes would have to be implemented, namely either:

- Using diesel trains instead of electric for services to North Berwick – a potentially cost-effective option in the short- to medium-term, but not ideal in the long-term
- Electrifying the South Sub – the ideal option, since it provides the cleanest and fastest local passenger service option, as well as a strategic alternative route for future long-haul container freight trains; it would also allow the diversion of inter-city passenger services to avoid engineering work such as the possible future further upgrades to Waverley station.

### 4.3 Crossrail 3 – the Newcraighall to Newcraighall 'terminal loop'

In the short- to medium-term, a further option may be to reconfigure the established Crossrail service from Newcraighall so that, beyond Haymarket, it would continue round the South Sub to return to Newcraighall instead of running to Bathgate, Dunblane or Fife.

While this would mean that Crossrail no longer provided a through link from the east side of Edinburgh to the Gyle, it would retain the key connection to Haymarket, a popular destination in its own right, and the location of a planned major train/tram/bus interchange.

This option might necessitate an additional platform and/or new signalling at Newcraighall, but would be able to utilise existing rolling stock.

## 5. BENEFITS AND COSTS

The business case requested by the Transport Minister will focus on the Benefit-Cost Ratios of options to reopen the South Sub. To summarise, the range of positive ratios forecast by the most recent study include:

- Crossrail 2: +1.42
- E-Rail proposal to Niddrie: +1.64
- Suburban Circle: +1.57.<sup>6</sup>

Given the large number of major road and rail schemes now being heavily promoted by the Scottish Executive – and the dubious environmental impact of some of them – it is amazing that such a modestly priced scheme has not been pursued more vigorously.

## 6. CONCLUSIONS

Re-opening the Edinburgh South Suburban Railway to passenger services is not a panacea for Edinburgh's transport problems. But, while there is no single infrastructure measure which can create a modern and sustainable transport system, the South Sub could play an important role in transforming public transport on the Southside of Edinburgh, as well as opening up new orbital and cross-city travel opportunities to displace the use of the car.

A passenger service on the South Sub would provide economic, social and environmental benefits at modest cost. It would involve modest public investment, and could be introduced in a timescale of just a few years.

As currently planned, the south west, south, south east and east of Edinburgh will get no direct benefit from the (albeit very welcome and much-needed) tram routes approved for the north and west of the city. The South Sub offers a 'quick win' and a low-cost way to allow another major wedge of the city to share the benefits of modern rail transportation.

## 7. REFERENCES

1 Atkins Transport Planning (2004) *Review and Options Analysis of Edinburgh South Suburban Railway – Final Report* - available at <<http://download.edinburgh.gov.uk/Transport/FinalReportESSR.pdf>>. 2 *ibid*. 3 Passenger trains are occasionally diverted around the South Sub. However, since December 2005, the South Sub has again been functioning as an operational passenger railway - albeit with no stations stops - as one Virgin service to Dundee and from Aberdeen

each day runs round the Sub rather than calling at Haymarket.

4 See <<http://www.e-rail.org.uk>> for further information.

5 Capital Rail Action Group (2003) *Crossrail 2 – CRAG's Edinburgh South Suburban Railway reopening proposal* – available at <<http://www.capitalrail.org.uk>>.

6 The Atkins report (section 7) presents BCRs with and without 'accident savings'. Without accident savings, the BCRs are, respectively, +1.27, +1.46 and +1.38.

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