Priorities for new stations on the Leeds-Harrogate-York railway
“Leeds Bradford Airport Parkway”

1. Background

The route, which provides a semi-orbital link between Leeds, Horsforth, Harrogate, Knaresborough and York, is a candidate and priority for electrification at 25kV during Control Period 6 (2019-2024). This has been justified on account of a robust business case having been demonstrated to Government to deal with existing frustrated demand and forecast growth along with efficiency of operation. Significant all-day additional capacity through a combination of longer and more frequent trains (15” interval proposed between Leeds and Harrogate) is planned. The studies were initiated and driven by the Harrogate Chamber of Trade and Commerce and funded by North Yorkshire County Council, Metro and York City Council.

The route passes within close proximity of a number of key venues which are not served effectively by rail. One of these is Leeds Bradford International Airport, where the railway is approximately 1.1 miles from the Airport’s passenger terminal. The Airport’s own car-park shuttle buses already operate within 0.5 miles of the route near to Bramhope Tunnel southern portal.

Accessibility to the Airport by public transport is poor, requiring slow and inconvenient bus journeys to and from Leeds, Harrogate and Bradford centres. Access therefore is both circuitous and time consuming from all parts of the wider Leeds City Region.

The existing station at Horsforth is the closest existing station to the Airport being approximately 2.6 miles by road from the passenger terminal. The station site is highly constrained with poor access by road vehicles. It is also significantly constrained in car parking terms because of the footprint of the site and design/capability of the adjoining road network. The car park is full before 0800 on weekdays, yet around 90% of train services have still to operate. This creates significant frustrated demand (i.e. where both existing and potential new users are unable to access the services and then use alternative means) from the surrounding areas of Cookridge, Bramhope, Yeadon and Pool, and thereby placing additional demand on the already saturated A660 and A65 road corridors.

DfT information of the use of regional airports by rail and indeed wider public transport suggests that the attractiveness of such links is quite limited except to incoming business travellers, who are the most likely users of public transport to reach the central districts of the adjoining cities.
This is particularly true of Leeds as the Regional major business hub, but also true of Harrogate, York and Bradford. Both Harrogate and York are also major tourist centres attracting significant numbers of incoming users. Improving access to Leeds Bradford Airport by public transport is a key objective of the Airport through its Surface Access Strategy.

2. Proposal

Taking the above challenges in to full consideration, it is proposed that a new station located approximately 1 mile north of Horsforth station is developed at the southern portal of Bramhope Tunnel.

This proposition primarily achieves significantly improved use of an existing physical asset (the Harrogate Line) which already runs within striking distance of the Airport. It is important to note that this would complement any other proposals that are under consideration and is in no way mutually exclusive because it uses both existing infrastructure and resources to enable a cost effective link in short timescales. Requiring a relatively small capital cost and with marginal subsequent operational expenditure costs, it importantly addresses the two key requirements outlined below with unparalleled value for the use of public funds.

The station would function as a joint Airport and Park and Ride facility achieving two key objectives:

(i) Providing frequent direct rail access to the Airport from Leeds, Harrogate and York centres, thereby serving both West and North Yorkshire effectively.

(ii) Provided much needed accessibility and car parking capacity for new rail users in the surrounding areas of Cookridge, Bramhope, Yeadon and Pool, thereby better enabling the rail route to fulfil a much more valuable role in the areas it serves.

It is proposed that the existing car park shuttle bus is extended by 0.5 miles to the new railway station to fully integrate accessibility between the station and the Airport terminal. All local services would call at the station. If rail-airport traffic were to become significant, the potential use of automated people-mover solutions (as used at Gatwick and Stansted Airports) could be explored.

This approach would enable a valuable and cost-efficient means of providing the Airport with a rail link whilst simultaneously and significantly improving accessibility to the rail route, thereby improving its overall economic viability and contribution to the Leeds City Region. It would also encourage significant modal shift from road to rail through improved accessibility for the areas of Cookridge, Bramhope, Yeadon and Pool, thereby relieving the heavily congested A660 and A65 road corridors.

In terms of improvements to public transport journeys to and from the Airport, previous analysis in 2011 showed that the provision of a station would enable reduced access times of over 15% (approx. 15 minutes) with the number of journey opportunities increasing by 200% on average from a selection of key locations within the wider Leeds City Region.
3. **Issues**

The proposed site will provide some civil engineering challenges, being located in a cutting. The Bramhope tunnel portal and adjoining retaining walls are Grade II listed and will require an architecturally sensitive approach in order to obtain the necessary consents.

There may be some conflict of interest between the Airport management and this proposal because of the Airport’s commercial interest in providing long-term car parking at the Airport for its users and Metro’s policy of free parking for rail users, though it is anticipated any potential areas of conflict can be resolved using available modern technology such as ANPR.

The provision of an additional stop for local trains on the rail route will require compensatory line-speed increases so as to maintain the existing end to end journey times which are both essential for services to operate robustly at least for the next 4-5 years and to maintain the commercial attractiveness of rail services.

4. **Next steps**

It is vital that a consensus is agreed between key stakeholders within the Leeds City Region to progress this approach. These include WYPTE/Metro, North Yorkshire County Council; Leeds City Council, Leeds City Region LEP and LBIA.

Subject to adequate consensus being reached, pre-feasibility and feasibility studies should be undertaken along with business case justification.

A bid could be made into the DfT New Station fund (probably CP6) for full or contributory funding.

5. **Fit with alternative Options**

This option is complimentary to other potential longer term options, e.g. tram and/or spur-end connection from the existing route near Horsforth to the Airport terminal. It is also achievable at significantly lower cost and shorter timescales, with the added benefits of integrating accessibility from both North and West Yorkshire simultaneously and without creating any substantial additional on-cost of operation, which would be a significant feature of any other option. It also addresses some key accessibility constraints to existing train services over the route around the north and west of Leeds.

**Paper & Chart prepared by Mark J Leving**

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**Appendix**

Chart illustrating potential frequency improvements to rail journey opportunities to LBIA from North & West Yorkshire with a 15” all-day frequency between Leeds and Harrogate.
Harrogate Metro - indicative improved weekday opportunities to travel (OTT) from Leeds City Region to LBIA new station - average 75% increase

- Current OTT (weekdays - May 2011)
- Indicative OTT (Harrogate Metro @ 15" interval)

Cities listed from top to bottom:
- Barnsley
- Bradford Jt (Bus) J2
- Castleford
- Dewsbury
- Halifax
- Harrogate
- Huddersfield
- Ilkley
- Keighley
- Leeds
- New Pudsey
- Northallerton
- Pontefract
- Ripon
- Scarborough
- Selby
- Settle
- Skipton
- Todmorden
- Wakefield Br
- Wetherby
- York