Integrated Public Transport

Submission to the Inquiry

1. Introduction

1.1   We apologise to the Committee for the brevity of this submission, written in haste after receiving short notice of both the existence of the Inquiry and the deadline for submissions.

1.2   Capital Traffic has substantial UK and international experience in all transportation modes and of the interfaces among them. For example, we have recently been reviewing access to rail stations for all modes for a major UK rail company.

Among our recommendations was that surface access strategies should be developed for major stations, and that they should work with LHAs and other stakeholders in improving access by all modes to small and medium size stations.

1.3   We deplore the previous lack of attention given to interchange and to coordination among timetabled modes. The usually poor design of the former adds substantially to journey time, while the fractured nature of transportation operations has proved inimical to the latter.

In this connection we note that the primary objective of railways in The Netherlands is not to increase the speed of train services, but to reduce access time to major stations.

1.4   We congratulate the Committee for the initiative represented by Inquiry, and hope that it will lead to meaningful change.

2. Interchange

2.1   The primary requirements for interchange among modes are that they are designed to be…

- user-friendly

- time-efficient

- space-efficient, and

- information-efficient.

2.2   User-friendliness has two aspects…

- engineering which relates to its functionality

- architectural design which relates to aesthetics and finesse.

However, it is important to note the objectives of the passenger and those of the station operator/owner, which may compete. Generally, the traveller seeks to reduce their total travel time, while the station operator and their tenants may seek to increase dwell time to encourage utilisation of the commercial offers (newsagents, coffee purveyors etc) in their stations.

To optimise these objectives requires sympathetic micro-engineering of all aspects of the passenger interface. This need not be a costly exercise, but once the major costs of station construction, say, have been paid for, there is often little left over for improving the passenger environment.

2.3   Time-efficient transfer requires smart ticketing, fully accessible facilities and otherwise smooth and uninterrupted passage throughout.

Transaction time (purchasing tickets, gateway inspection etc) should be minimised, and shortest possible dwell time facilitated.

2.4   Space-efficient transfer requires minimum walk distances between one mode and another. Often this can be effected by vertical separation of modes, and connected by lifts (preferably) and/or escalators, or by travelators.

An outstanding example of this is to be found at Stirling station on the Joondalup Line north of Perth Australia, where the metro (lower level) interchanges with local buses near the intersection of the Mitchell Freeway and Cedric Street, as shown below.

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Photograph Google 2012

Motorway junctions could be augmented to lend themselves to convenient two-level interchange between coach (and later, on-motorway light rail) and local bus, something not hitherto attempted in the UK however. By building an apron over the lower road, bus, taxi and K + R could readily be provided for.

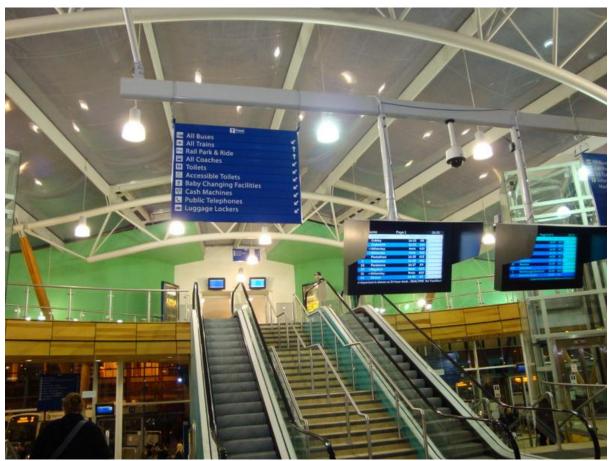2.5 Information-efficient transfer requires real-time bus information in rail stations (and *vice versa*).

Fixed information is also necessary – clear mapping of the locations of and routes to bus stops, and remote directional information to rail stations, for example.

Barnsley's otherwise excellent Transport Interchange demonstrates the problem for the traveller - bus information downstairs, rail information upstairs, and taxis some way down the street (Arthur Scargill complained).

2.6 Bus information is notoriously voluminous, and often opaque, incoherent and incomprehensible for irregular travellers (*ie*. the overwhelming majority of the population who do not use buses, and who represent their main potential market).

Improved information design (as previously proposed to the Welsh Government) would reduce the information required to use buses to a minimal data set.

Photograph T N D Anderson 2008

2.7   At least passive provision should be made for future modes at interchanges.

Notably this includes light rail within any new major bus stations (*eg*. Cardiff), and allowing for the emergence of active travel modes. An example of the latter is at **Appendix 1**.

In this connection, Peter Headicar (Oxford Brookes University) in a presentation given in Cardiff on 13 November 2012, mentioned that park-and-ride (P + R) sites around Oxford have now become transport hubs for about one-third of their users.

This was not envisaged when the P + R sites were first constructed, but does exemplify how sophisticated people are becoming in their use of different travel modes. The writer has long argued that…

> *The least-cost and most efficient strategy for travellers is trip-specific modal choice.*
> *They would choose the mode which is best suited to the trip purpose.*
>   **Road Investment – the Futile Pathway to Nowhere** (*1996*)

3. Travel Modes

3.1   Interchanges and their approaches need to be designed for users of all access modes (to the extent and scale appropriate to each, subject to spatial and other constraints), including…

- pedestrians

- people in wheelchairs or people who are otherwise mobility-impaired

- cyclists

- users of powered two-wheelers (PTWs)

- taxi users

- kiss-and-ride (K + R) car users

- car drivers and/or passengers who may wish to park short- or long-term

- bus users

- light rail users.

3.2   For a number of reasons, primarily station size, provision for all modes may not be possible or appropriate at all rail stations. Nevertheless, all modes should be carefully considered at planning or later upgrade stages.

3.3   The key issues for each station access mode are…

- safety

- space allocation

- access routes

- facilities provision

- facilities location

- information provision

- information channels.

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4. Provisions for All Modes

4.1   The provision that ought to be at least considered for each mode is summarised below.

A clear rationale for non-provision at any station should be required as part of the standard-setting for station specification and design.

4.2   Pedestrians

About 80% of people will walk up to 400m to a bus stop and up to 1km to a rail station. Others will walk further.

Accessways should therefore be signed for pedestrians for a 1km radius around rail stations. There is a case for remotely signing some bus stops, especially where routes diverge.

Safety is a key issue in the choice of modes, for accessing stations as elsewhere. We have elsewhere argued that legal liability for collisions with pedestrians should rest with the vehicle user, cycle- or horse-rider in all cases. The onus of proof to the contrary should lie with the vehicle user.

Within stations, walkways should be marked. Consideration should be given to covering walkways, at least in high rainfall areas.

Pedestrian crossings (and walkways) within the station curtilage should offer the same legal protections as those on-street, extended as above. Outside stations and at bus stops, pedestrian crossings should lie along or close to pedestrian desire lines.

4.2   Mobility-Impaired Passengers

All access routes to and within stations should be step-free and wide enough for two passing wheelchairs (say, >1.5m). They should otherwise meet Universal Design standards.

Within stations, walkways from 'disabled' spaces should be marked.

4.3   Cyclists

While cyclists may share access routes with other vehicles, their safety is often prejudiced, especially where space is constrained.

We have elsewhere argued that the legal liability in any collisions should be automatically assigned to the vehicle user (consistent with European practice). Station owners may be able to insist on this if they own the land.

Generous space should be provided for cycles, and CCTV coverage provided. Secure lockers could be provided, though a premium should be anticipated.

Directional signing should lead from local cycleways and major roads.

4.4 PTW Users

Many users prefer to park their PTWs under cover, with a proportion providing their own. Consideration should be given to providing covered parking, though a premium should be anticipated.

4.5 Taxi Users

Larger stations should be provided with a taxi stand, access to which should be subject to appropriate fees. At smaller stations where such provision is not usually required, taxis could share the K + R space, though their dwell time – while passengers are paying – is generally significantly longer.

Waiting should not be permitted in K + R spaces.

4.6 K + R

K + R spaces should be provided for every station, and cater for both travel directions (*ie*. one of each side of an adjacent road)

They should be signed for 2 minute stopping.

4.7 Car Parking – Short-Term

It is a major convenience for travellers to collect their tickets in advance, or discuss their travel. However, this is increasingly being arranged by internet, and we expect that the demand for short-term parking will decline. A token fee should be used to test the market at each station.

4.8 Car Parking – Long-Term

All-day parking is very much in demand from commuters. To some extent, it reflects the inadequacy of station feeder modes, though places remote from the station will never be

well-catered for.

The provision of parking spaces is often a lucrative source of income for station operators and owners. It may also undermine local bus services to a limited extent.

While parking is a poor use of space and often visually intrusive, demand arises largely from premium fare passengers traveling at peak times, in First Class etc.

Decked or multi-storey parking should be designed to meet stringent design standards (as with the parking building on the A4161/Dumfries Place, Cardiff). Ease of convertibility to other uses could also be considered as a future requirement.

Directional signing should be provided from nearby major roads.

4.9 Bus Users

Walk distances from stations to stops should be minimised, and high quality shelters provided at all stops. The latter should be provided with real-time passenger information, fixed maps and timetable information, lighting and seating.

Buses should be provided with preferential access and routes to stations audited for ease of travel.

4.10 Light Rail Users

Light rail is as yet the missing mode in urban areas of Wales. However, there are options available for the provision of privately-financed light rail (as previously advised to the Welsh Government) in South Wales, with operations possible within 3 years.

To a major degree, users have similar requirements to bus users, though simplified by the permanent nature of their routes.

Interchange between light rail and other modes will require careful consideration, but generally an amalgam of the above will suffice.

4.11 (Heavy) Rail Users

With generally longer waiting times, larger stations should be provided with well-maintained toilets, and enclosed waiting areas and platforms with information displays, lighting and comfortable seating. Most stations should support a refreshment booth. Standardisation of the train fleet would allow stopping points to be marked with no-standing markings.

5. Conclusions

5.1 The provision of bus stops has now become largely the responsibility of the LHAs. Many stops and stations are poorly maintained, with waste being allowed to collect. Much higher standards should be set.

5.2 While stations are generally owned/operated by the Train Operating Company, the local authority and the Welsh Government are significant stakeholders.

Stations will increasingly act as gateways to cities and towns, and it will be in the interest of the latter to enhance perceptions of them.

5.3 Other functions can be imagined for stations and their environs…

- multi-modal interchanges

- hot-desking offices and other commercial and retail purposes

- utilisation of air rights for parking or other purposes.

5.4 Management of stations, their approaches and their access modes ought to become the responsibility of local partnerships.

5.5 Needless to say, Capital Traffic remains willing to assist the Committee and/or the Welsh Government in respect of interchanges.

Appendix 1   Lôn Rhiannon/The Rhiannon Trail *

1.   Lôn Rhiannon is envisaged as a high-level (200m contour plus) quality-surfaced pathway, providing vistas over our beautiful lakes, valleys and coasts, and connecting North and South Wales.

It would be designed as wheelchair-accessible and step-free with user-friendly gradients to the extent possible throughout. It would be at least 90% off-road, and could occasionally be open to motorbikes and scooters.

2.   Given the unemployment besetting our young people, and remembering that Sustrans began its work by constructing cycleways using such resources, we propose the North - South cycle/walkway as a means to…

-       employ young people from local areas to design and construct it (surfacing may require commercial companies), probably over some years as financial resources permitted

-       interest those young people and their peers in getting up into the hills by bicycle

-       create a national legacy for Wales that would become a rite of passage for young people to cycle or walk and show them their country

-       create an active leisure and international tourist attraction matching the Wales Coastal Path (which should be made accessible to cycles in large sections)

-       provide an opportunity for landowners and businesses along and nearby to the route to develop services for walkers and cyclists (accommodation, food etc)

3.   The trail would intersect some major roads and rail routes. In such locations, interchange with trains, buses and cars should be facilitated, so the Trail could be traversed in sections, as endurance, weather and/or convenience permits.

Along the Trail, viewing and rest areas should be provided at key locations.

4.   The initial Trail would be a spine for a network linking to existing cycleways, and be extended east and west, preferably above 200m, wherever suitable terrain exists.

We do not have a specific route in mind. That would require a comprehensive survey and careful consideration of the alternatives.

*   *Reprinted from our* **Active Travel (Wales) Bill - Submission to the Consultation** (*2012*)

Appendix 2   Capital Traffic Management Limited

Capital Traffic provides highway design, traffic management, safety audit and transportation advice and services to Clients in the public and private sectors.

The present paper was prepared by T N D Anderson BSc BA MSC CFILT, Associate Director and Head of Transportation Planning.

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Wales Office

> 20 Wavell Close
> Llanishen
> Cardiff
> South Glamorgan CF14 5LQ
> Wales

> *Cel*   **07879 – 675 855**
> *Tel*   **0845 – 458 1042**

> *Em*   **neil.anderson@capitaltraffic.co.uk**

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