

2010 UK COST SCIENTIFIC REPORT

COST Action TU 603

Buses with a high level of service:

Fundamental characteristics and recommendation for decision-making and research

10th, 11th and 13th May 2010 – Manchester / Kent / Cambridge



The sixth meeting of COST Action 603 “Buses with a high level of service: Fundamental characteristics and recommendation for decision-making and research” took place in the UK, visiting the cities of Manchester, Gravesend and Cambridge.

The programme for the 3 days was:

Day 1 – Manchester

1. Management Committee meeting
2. Presentation Leeds Guided Busway and ‘FTR’ Streetcar BRT vehicle
3. Presentation on Manchester schemes for Bus, Metrolink and Rail
4. Tour of Key Bus Priority Schemes in Manchester
5. Presentation on BRT UK

Day 2 – Gravesend

6. Presentation on Fastrack
7. Tour of Fastrack

Day 3 – Cambridge

8. Plenary Session for Working Group Presentations – WP2 (analysis phase)
9. Presentation on Cambridge Guided Busway
10. Tour of Cambridge Guided Busway

All presentation on BHLS UK presentations are on the web site, public part : <http://www.bhls.eu/-United-Kingdom.99->

All other presentations, MC or WG presentations, are on the private part

1. Management Committee meeting

The Management Committee approved the last minutes (meeting held in Hamburg).

Francois Rambaud and Jan Spousta outlined the current budget situation followed by a discussion on how to reduce future costs. This included the need to limit additional participation at the next plenary session, and a review of the locations for the next core group meetings.

A review on WP2 and WP3 method issues has been discussed.

The next plenary session was confirmed for the Netherlands on the 11th, 12th and 13th October 2010.

The final plenary session was decided in Switzerland on the 9th, 10th, 11th May 2011.

The minutes is available on the web site – private part

2. Presentation Leeds Guided Busway and 'FTR' Streetcar BRT Vehicle

First Group kindly arranged a visit from the 'FTR' Streetcar BRT vehicle from Leeds which has been in operation since 2007, high seat capacity, high comfort, full CCTV.



Brian Masson gave a presentation of the Yorkshire Guided Busways on behalf of First Group detailing the 3 corridors currently in operation:

- I. A61 Scott Hall Road, Leeds
- II. A64 East Leeds 'Elite' Corridor, Leeds
- III. A641 Manchester Road, Bradford

These 3 corridors provide over 7km of guided busway and are supplemented with a variety of on-road priority measures as part of the overall schemes. All schemes are delivering year-on-year increases in bus patronage.

3. Presentation on Manchester schemes for Bus, Metrolink and Rail

A warm welcome to Manchester was extended to all delegates. Greater Manchester was recognised as the most important economic region in the North of England with a population of 2.6 million. The public transport network consists of bus, metrolink and rail:

- I. Bus
 - the dominant public transport mode
 - 230 million trips per year
 - deregulated and complex market

- II. Metrolink
 - lack of integrated fares and ticketing
 - hugely popular with the travelling public
 - 20 million trips per year
 - £600 million expansion project underway to double the network
 - anticipated 5 million car trip reduction per year after opening
- III. Rail
 - experiencing a renaissance
 - 22 million trips per year
 - 50% demand increase since 2000
 - overcrowded

Since 2000 £88 million has been invested in Quality Bus Corridor infrastructure which has resulted in an additional 8 million trips per year, punctuality improvements, more reliable journey times, improved accessibility and improved waiting areas. Other benefits of this investment have been improved public realm and a 19% reduction in accidents.

Since 2000 bus operators have invested over £50 million to improve the frequency on core routes, enhance driver training, and provide low floor/low emission buses.

Current infrastructure investment proposal for Greater Manchester is the cross city package which is targeted at 3 of Manchester's busiest routes to enable cross city bus services to access employment, healthcare and education areas.

Finally with infrastructure funding becoming very tight, GMPTE is focusing on a highly targeted approach to invest where traffic problems are known and to work in partnership with operators and highways authorities to improve the customer experience.

4. Tour of Key Bus Priority Schemes in Manchester

Stagecoach, one of Greater Manchester's largest bus operators, gave a tour of their 192 service along the A6 corridor between Manchester and Stockport, and came back along their 42 service running on Wilmslow Road/Oxford Road. These corridors, running between Manchester and East Didsbury, account for in excess of 40 million trips per year and formed part of the £88 million Quality Bus Corridor programme.

The tour included a visit of Owens Park in Fallowfield. This was a scheme developed in partnership with Manchester City Council to address the high passenger demand from the nearby Halls of Residence. Up to 6,000 passengers per day use the 14 bus services along this route which previously led to traffic congestion, queues of up to 9 buses at a time double and triple parked, conflict between buses and cyclists, and significant difficulties for pedestrians to cross. The scheme provided a dedicated bus facility, a signalised pedestrian crossing, a raised cycle lane, and a new highway layout making an easier and safer route for general traffic.



The tour also visited the Portwood roundabout busway which has eliminated buses having to queue to get around the M60 motorway roundabout with no less than 6 signalised arms. This scheme has provided an am peak journey time saving of over 60 seconds with no impact on motorists other than seeing buses cross in front of them as they wait at the signals!



Along the A6 corridor, sharing bus lane:



Finally with infrastructure funding becoming very tight, GMPTe is focusing on a highly targeted approach to invest where problems are known and work in partnership with operators and highways authorities to improve the customer experience.

5. Presentation on BRT UK

Brian Masson gave his second presentation of the day highlighting the issues discussed at the BRT UK Annual Conference in Cardiff. There was a variety of topics discussed ranging from the wider

economic benefits of BRT, the need for advanced public transport systems, branding and optical guidance systems.

6. Presentation on Fastrack

David George of the Kent Thameside Regeneration Partnership introduced the Fastrack transport concept developed through partnership between Kent County Council, Arriva, and the Kent Thameside partners. Kent Thameside has huge development potential, which will bring up 50,000 new jobs and 30,000 new homes over the next 20 to 30 years. The traffic impacts of this level of development were to be mitigated by a high quality, attractive public transport system. Fastrack is the new part of the public transport system in Kent Thameside that will make a real difference. Positioned in the hierarchy of public transport between the railway service and current bus services, Fastrack was designed to connect nearly all of the major existing and new developments in Dartford and Gravesham with core express routes on which only Fastrack services will be allowed to run.



Launched in 2006, Fastrack utilizes a variety of measures including dedicated traffic free sections of busway, bus priority on the non-segregated sections of highway, high quality bus stops and infrastructure, dedicated low emission vehicles, off bus ticketing, and investment in branding and marketing.

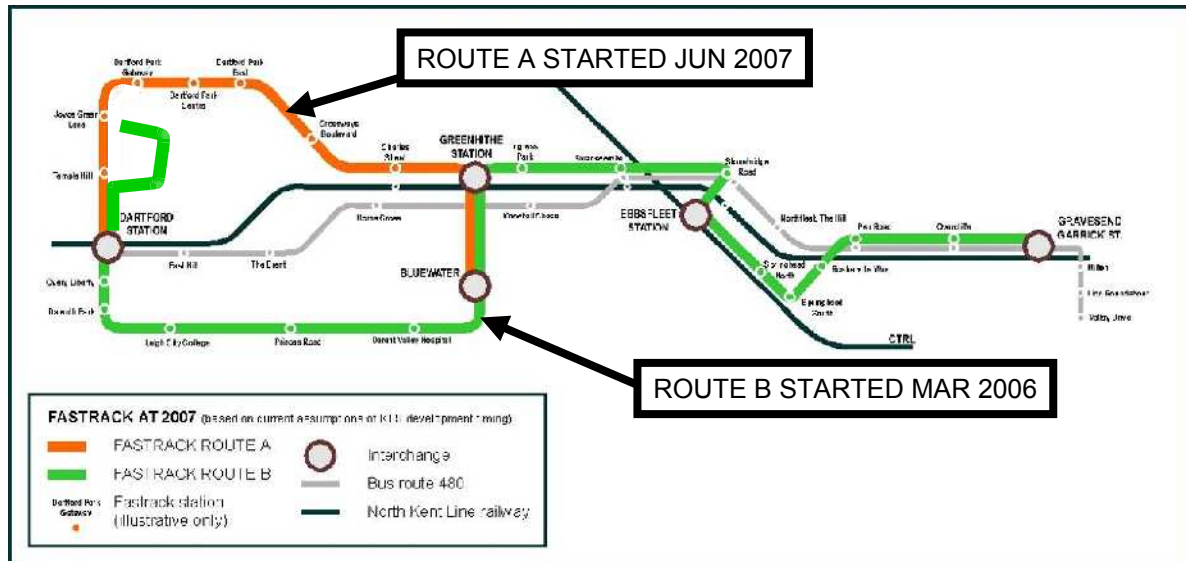
The Fastrack network is currently split into 2 routes:

- I. Route A consists of 10km (2.5km busway, 2km bus lanes, 5.5km on-street)

This section serves a 107Ha mixed use development site which proposes 1,500 new homes and 7,500 new jobs. The developer, Prologis, has entered a 17 year agreement to operate and fund this service which provides free travel to residents, free travel for employees, and introduction of RTI screens within every new home.

- II. Route B consists of 15km (5.5km busway, 4km bus lanes, 4.5km on-street)

This section links Dartford to Gravesend with local links to Bluewater and Ebbsfleet International Station. This operating contract was led by Kent County Council based on a commercial arrangement with vehicles funded by the Council. The contract included a number of performance targets with robust monitoring.



Kevin Hawkins, Regional Commercial Director for Arriva, gave an insight into the bus operators' view of Fastrack through the 2 different types of operating contract. Partnerships were the key to this relationship with local planning authorities clear about how the bus network is to develop and seek appropriate developer contributions to fund the infrastructure and operation. Arriva invested significant time in driver training with regular evening events held to build an enthusiastic and engaged driver workforce.



Ticketing used roadside ticket machines to aid in boarding times with the network split into zones to simplify the process. Arriva initially trialled their mobile ticketing on Fastrack which has subsequently been rolled out across the UK.

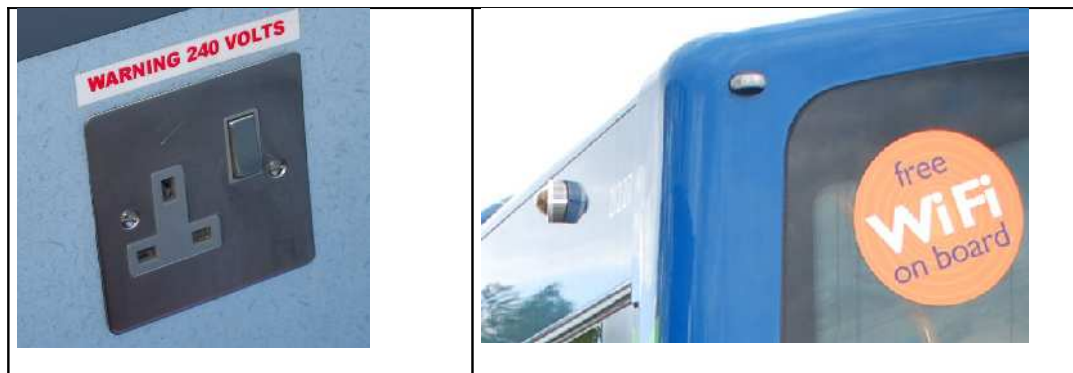
7. Tour of Fastrack

David George and Kevin Hawkins provided a tour of the Fastrack network. The tour included a visit to the Ebbsfleet Valley Development which through Fastrack provides easy access by High Speed 1 from Kent to London (London St Pancras 17mins).



The tour continued through The Bridge Development which is another mixed use development site that incorporates the Fastrack control centre which is used to monitor the buses together with all the bus stops. The tour continued through Dartford incorporating a visit to the Bluewater, Europe's largest retail and leisure facility.

Plugs and free WIFI inside the bus:



8. Plenary Session for Working Group Presentations

This session was organised into 4 presentations from each of the Working Groups on Work Package 2 – Analysis phase ; the objective was a sharing and debate among the whole group of the analysis work made by each WG – All presentations are available into the web site – private part :

I. Working Group 1 – Infrastructure

Working Group 1 presented their matrix of the key infrastructure components drawing on the definitions agreed through WP1. Examples of the key components discussed included the running way and the construction. Each component was further split into different categories and analysed to give a rating system using performance indicators. Key information outstanding related to costs of the different components in order to derive BRT costs per Km. The table will be improved.

II. Working Group 2 – Rolling Stock

Working Group 2 presented their key areas of rolling stock, including vehicle types, fuels, and docking systems. Analysis in each of these areas has looked at energy consumption, effects of distance between stops and vehicle speeds, and the effectiveness of the rolling stock i.e. investment versus capacity. Work is continuing with manufacturers and operators on specific

issues including the relationship between capacity and door numbers, and the use of doors both sides of the vehicle as in Prague.
A big report has been set up showing all these analysis table and will be available.

III. Working Group 3 – Operating Issues

Working Group 3 presented their comparison between the different types of ITS and their role in a classification of all BHLS described, made into three group: full BHLS, BHLS lite, and improved bus routes. Full BHLS and BHLS lite are structuring and capacitive lines, rather well identified; BHLS lite present some weaknesses into the “system” approach, not totally complete or strong enough. Some controversial choices were presented.

For this classification, 20 key components were analysed included active vehicle management and dynamic passenger information systems, ticketing, bus priority, and enforcement. This information was also presented in a key component matrix (indispensable, important, fruitful, can be useful, no useful) using the BHLS classifications.

WG3 presented also a matrix on the main conflicting requirements observed on such BHLS projects, covered all wg issues.

All these tasks have the aim to be an help to define better what can be a “complete” system approach, obviously in relation with the different and limited context we have observed.

IV. Working Group 4 – Social , Economical issues and Networking

Working Group 4 presented their analysis of the implementation conditions, socio-economic assessment, and the position of BHLS within the public transport network. The implementation conditions covered planning, political influence, operation and regulation. The socio-economic assessment covered cost benefit analysis and the differing approaches between tramways and BHLS. The position of BHLS within the public transport network was reported purely in terms of BHLS rather than the BHLS classifications.

WG4 presented an other way to classify our state of the art, only by showing the different level of component chosen by each case. High doubts have been expressed on this classification by full BHLS, BHLS lite, Improved bus lines with stars; indicators are often “qualitative” and “subjective”, related to a context. On an other hand, every level of service chosen can have a fruitful use, according to the context and the objectives of the project. Such a classification could mean also that only “full bhls” is a good solution.

In Conclusion, a fruitful debate has been launched but could not be finalised. At the next meeting of the core group, will be set up a synthesis, with suggestion of key-points for going forward into this analysis.

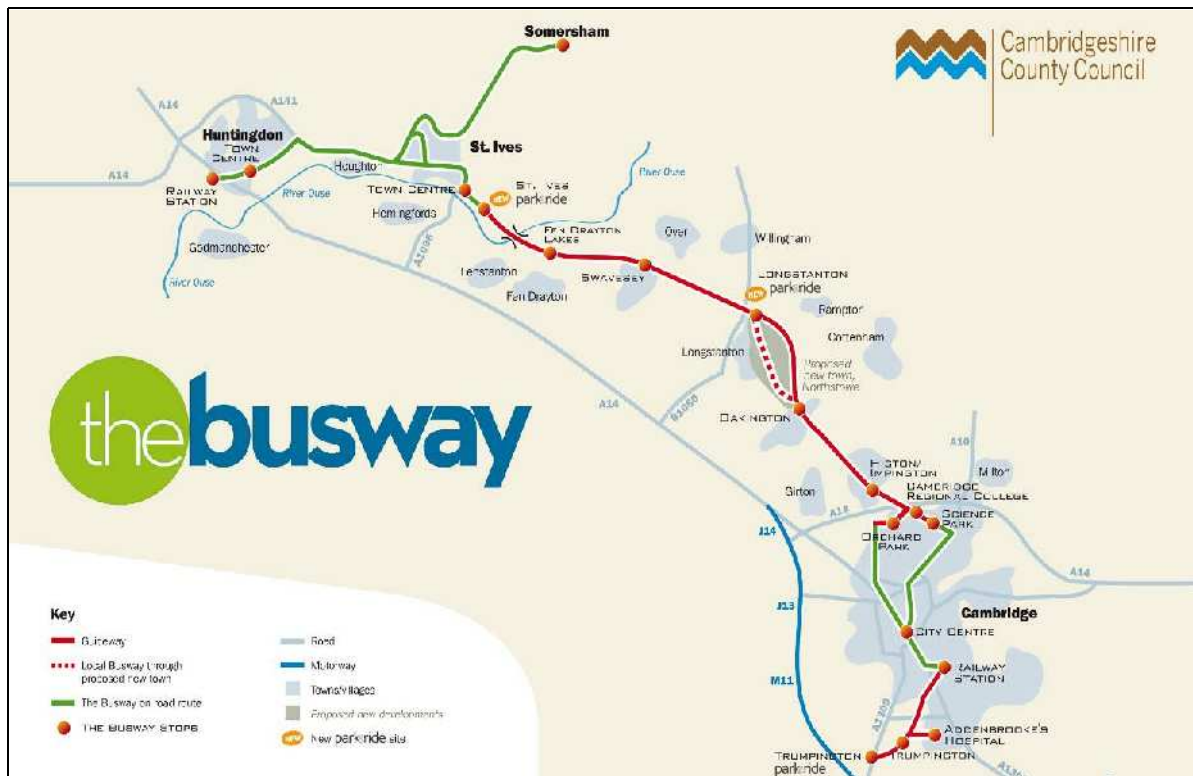
9. Presentation on Cambridge Guided Busway

Bob Menzies, Head of Delivery for Cambridgeshire County Council introduced the Cambridge Guided Busway project designed to connect the key centres of Cambridge, Huntingdon and St Ives. The choice to use a guided busway centred on the need for segregation, to aid enforcement, width restrictions, ride quality, drainage, and ecological issues.

The guided busway will total 25km in length as part of a 40km wider network incorporating on road busways. The total cost of the scheme is estimated at £116.2 million, with a target construction cost of £87 million. The funding is made up of £92.5 million of government funding from the Department for Transport with the remaining £23.7 million from developer funds.

The construction contract was originally intended for completion in January 2009. The intention at the time of letting the contract was to open both the northern (St Ives to Cambridge) and southern (Cambridge rail station to Addenbrooke's Hospital and the Trumpington Park and Ride site) sections at the same time. Since the contract was let, it has become increasingly clear that delays in scheme delivery have been building up and the contractor has been falling behind programme. Cambridgeshire County Council has been working with the contractor to try to speed up delivery in

the hope that at least part of the overall scheme could be made available for public use. Currently the expected date for completion is late 2010.



Two bus operators have already entered into the quality partnership agreement to operate on the busway. All costs and risks are borne by the operators including the purchase of the vehicles. Operators have entered into the partnership for a period of 5 years which includes the payment of an access charge to use the busway, the revenue from this charge will be directly targeted to maintenance of the busway.

10. Tour of Cambridge Guided Busway

Bob Menzies provided a tour of the guided busway and the passenger facilities.



The construction of the busway utilised pre-cast concrete beams (similar to the Essen construction) due to the superior ride quality achieved. The beams used varied in length between 10m and 15m with pad foundations.



The tour also visited St Ives Park and Ride facility at the northern extremity of the busway providing an opportunity to view the passenger facilities always with bicycle parking and dynamic information.

The impressive bicycle parking in front of the rail station of Cambridge:

