

TRANSPORT FOR LONDON

AGENDA

BOARD MEETING

**TO BE HELD ON THURSDAY 29th APRIL 2004
IN THE CHAMBER, CITY HALL, THE QUEEN'S WALK, LONDON SE1 2AA
COMMENCING AT 3.00PM**

A meeting of the Board will be held to deal with the following business. The public are welcome to attend this meeting, which has disabled access.

Procedural business

- 1.1 Apologies for absence
- 1.2 Minutes of the previous meeting held on 24 March 2004
- 1.3 Matters arising, not covered elsewhere

Business Items

2. West London Tram
3. Prudential Borrowing

Other Items

4. Any Other Business

Transport for London

Minutes of a meeting of the Board
held on Wednesday 24 March 2004, commencing at 10.00 a.m.
in the Chamber, City Hall, the Queen's Walk, London, SE1 2AA

Present:

Board Members: Dave Wetzel (in the Chair)
David Begg
Stephen Glaister
Kirsten Hearn (for min Nos 96/03/04 – 106/03/04)
Oli Jackson
Susan Kramer
Paul Moore
Sir Gulam Noon
Murziline Parchment
David Quarmby
Tony West

In attendance:

Special Advisors: Bryan Heiser
Lynn Sloman

TfL Officers: Maggie Bellis
Barry Broe
Ian Brown
Michael Clark
Stephen Critchley
Isabel Dedring
Mary Hardy
Peter Hendy
Betty Morgan
Locksley Ryan
Fiona Smith
Valerie Todd
Tim O'Toole
Jay Walder

Secretary: Jacqui Gregory

The Board welcomed Sir Gulam Noon to his first meeting of the TfL Board; Sir Gulam Noon had been appointed as a Board Member with effect from 1 March 2004.

93/03/04 APOLOGIES FOR ABSENCE

Apologies for absence were received from Bob Crow, Sir Mike Hodgkinson, Robert Kiley and Ken Livingstone.

The Chair, on behalf of the Board, expressed his congratulations to the Mayor and his partner, Emma, on the birth of their baby daughter on Saturday, 20 March 2004.

94/03/04 MINUTES OF THE PREVIOUS MEETING HELD ON 11 FEBRUARY 2004

The minutes of the meeting held on 11 February 2004 were **agreed** and signed as a true record, subject to the following amendment: -

Minute No 87/02/04: Private Vehicle Hire Licensing – Final Regulations and Administrative Framework – paragraph 2 amended to read as follows: -

*“The Board noted that once a vehicle had successfully passed the licensing inspection, a paper licence would be issued to the vehicle owner and a licence disc would be affixed to the upper corner of the front windscreen on the passenger side and the rear windscreen **on the near-side**.....”*

95/03/04 MATTERS ARISING

Declaration of Interests

The Chair reminded Board Members of the requirement to declare any interests in the matters under discussion. No interests were declared.

Matters Arising

NOTED that all actions agreed at the last meeting had either been completed or were being progressed.

Matters Arising from the 3 December 2003 Meeting

NOTED that the actions relating to the Crossrail item arising from the December 2003 Board Meeting (min No 69/12/03 refers) and other progress on the Crossrail plan, had been put on hold pending the publication of the Montague Report.

96/03/04 COMMISSIONER'S REPORT

In response to questions raised by Board Members on the Commissioner's Report, the following issues were discussed: -

- Briefing on Industrial Relations – Maggie Bellis advised that a private briefing for Board Members would be held in the near future.
Post Meeting Note: The Briefing has been arranged for 11 May 2004 and the arrangements confirmed with Board Members.
- Trade Unions and Long-Term Settlement on Pay and Conditions – Tim O'Toole advised that two meetings had been held with the London Underground trades unions to discuss the long-term settlement on pay and conditions, when the trades unions had raised a number of issues which they wished to see in such a settlement. Further meeting dates with the trades unions had been scheduled, with a view to a settlement being reached which would bring greater stability to LUL's employee relations.
- Pip Hesketh – the Board noted that Pip Hesketh had resigned as Head of Equality and Inclusion. The Board asked that their thanks be conveyed to Pip for the huge amount of work she had undertaken in championing equality and inclusion across TfL during her tenure.
- Mercedes Bus Fires – Peter Hendy advised that since the fire which occurred on a Mercedes bus on 3 December 2003, there had been two further fires on these buses, one in February 2004 and one on 20 March 2004. Board Members noted that there were no casualties in any of the three incidents, with all passengers and staff having been evacuated safely. The first two fires had been thoroughly investigated and, after the third fire, the following actions had been agreed with Mercedes and the operators of the vehicles: -
 - nightly inspections to take place;
 - engine compartment fire suppression equipment to be fitted on all Mercedes buses (Peter Hendy indicated that, subject to technical trials being successfully completed, London Buses would require fire suppression to be fitted in the engine compartment of all buses in London in due course); and
 - an independent inquiry had been set up and the results of the inquiry would be made public.

Following the investigation into the third fire, Mercedes had asked London Buses' contracted operators to withdraw all Citaro model buses that morning so that they could replace componentry around the compressor. Where possible, services had been maintained by the provision of other buses on affected routes or parallel routes. It was expected that the buses would be returned to service, once the necessary work had been completed. The London Transport Users Committee and the Transport and General Workers Union had been fully informed. Peter Hendy said there was no evidence that any of

- the fires related to the articulated nature of the vehicles.
- Vigilance Campaign – the Board noted the action being taken on the Underground system with the police stepping up patrols as part of the continuing Government campaign against the threat of terrorism. Peter Hendy reported on steps being taken in Surface Transport.
 - East London Line – Ian Brown stated that recent reports in the press regarding delays to the East London Line Project had been misleading. The Mayor had met with the Minister for London and proposed that the phasing for the East London Line Project be examined in the context of the full business case for a Metro service running from Highbury to Croydon/Clapham Junction. Ian Brown advised that while there had been project delays previously caused by legal action, there had been no new delays to the scheme, with the target date for implementation still expected in the year 2010.
 - Jones Lang La Salle Report on JLE – The Chair drew attention to the Jones Lang La Salle report referred to in the Commissioner's Report which showed that as a result of the JLE, land values around two of the stations had increased by £2.8 billion.

The Commissioner's Report was **noted** by the Board.

97/03/04 PPP CONTRACT PERFORMANCE

Tim O'Toole reported on PPP contractual performance (including PPP Infrastructure Service Charges) and on the measures used to assess performance of the PPP contract. He highlighted the following, in particular:-

- In period 11 (covering the period from 4 January 2004 to 31 January 2004) there had been little change in the flows of funds from the Infrastructure Service Charge.
- Period 11 performance had been affected by snow and ice, resulting in a number of cancellations and service suspensions. Tube Lines had also experienced significant signalling problems on the Jubilee and Northern lines, although remedial action was being taken to address this.

The Board **noted** Tim O'Toole's report on PPP performance.

98/03/04 APPROVAL OF 2004/05 REVENUE AND CAPITAL BUDGETS

Jay Walder advised that TfL's budget for 2004/05 reflected amendments arising from TfL's 2003/04 results as forecast at period 9 (December 2003) and the finally agreed Mayor's 2004/05 budget. The TfL Finance Committee had considered the 2004/05 budget at its meeting on 11 March 2004 and recommended its approval to the TfL Board.

The Board noted that TfL's 2004/05 budget had been compiled by bringing together TfL's operational and capital plans to clearly distinguish between an operational budget, to support the delivery and running of transport services, and TfL's planned capital investment on transport infrastructure. Jay Walder advised that since the core Business Plan remained the same and there had not been any further indication of any likely settlement of SR 2004, it was not intended that the Business Plan be updated in March, as had been the case in previous years. Instead, an addendum to the plan was proposed to include the important areas of health, safety and environment and equality and inclusion. The Board: -

- **Noted** the contents of the report and, in particular, the following: -
 - Changes made to the budget since 29 October 2003.
 - The process being put in place to determine TfL's borrowing plan by April 2004.
 - The deliverables resulting from the budget.
 - The prudent approach being taken in 2004/05 in not committing expenditure with an impact in 2005/06 and beyond, pending the outcome of the Government's SR 2004.
 - The addendum to the Business Plan for health, safety and environment and equality and inclusion (attached at Annex 1 to the written report).
 - The proposals for the 2005/06 Business Planning Cycle.
- **Approved** the 2004/05 budget, subject to the following: -
 - A note being circulated to Board Members explaining the differences in DLR income for 2003/04 and 2004/05.
 - Consideration being given to a target being set for equality and inclusion which measured the success of initiatives by the number of actual disabled people who travelled on the transport network.
 - A review of the wording on page 79 of Annex 6 relating to the indicator of success for the door-to-door review.
 - Annex 6 being reviewed so as to ensure greater consistency between the modes in the way information on the impacts on equality and inclusion were presented in the future.
 - A note being circulated to Board Members, in due course, outlining whether the services and support provided to staff, as set out in the Health Plans section of Annex 1, had had any effect on sickness levels of TfL staff (the Board noted that this work was in hand and had yet to be completed).
 - Table 8 of Annex 1 being amended to reflect the correct percentage of underground stations with step-free access by 2011.
- **Agreed** that the Managing Director, Finance and Planning, be authorised to make any final amendments to the Business Plan.

- **Approved** the addendum to the Business Plan (attached at Annex 1 to the written report).
- **Noted** that a proposal under “Prudential Borrowing” would be submitted to the 29 April meeting of the TfL Board.

99/03/04 TREASURY MANAGEMENT POLICY STATEMENT AND TREASURY MANAGEMENT STRATEGY

The Board: -

- **noted** the written report;
- **approved** the amended Treasury Management Policy Statement;
- **approved** the Treasury Management Strategy and Prudential Indicators; and
- **agreed** that the Chief Finance Officer be authorised to review and amend, with the Head of Group Treasury, schedules supporting the Treasury Management Practices.

100/03/04 THAMES GATEWAY BRIDGE

Barry Broe reported on progress on the Thames Gateway Bridge Project and highlighted the following in particular: -

- The changes made to the scheme since the last TfL Board meeting report in November 2002, to take account of views expressed during public consultation and discussions with key stakeholders, as follows: -
 - higher peak time tolling provision;
 - segregation of public transport lanes;
 - wider bridge to accommodate the future possibility for trams or DLR;
 - 40 miles per hour speed limit;
 - traffic mitigation measures being agreed with Boroughs;
 - public transport bus routes being developed; and
 - improved pedestrian links and landscaping.
- Thames Gateway Bridge was widely supported by the public (85%), local businesses and the Boroughs.
- Capital and operating costs would be fully funded from tolling and Government PFI credit; Barry Broe advised that it was not proposed to set the tolling levels for the bridges at this time, these being subject to a decision at a future date.
- The project had a good business case (BCR5.1:1) and would make a significant contribution to regeneration.
- Thames Gateway Bridge was essential infrastructure for improving accessibility in East London.
- Considerable project development work had been completed on the design, Environment Impact Assessment, business case and funding.

Barry Broe advised that the Thames Gateway Bridge Project had been discussed at the March 2004 Surface Advisory Panel and Finance Committee meetings and issues raised at those meetings had been addressed in the report.

In response to an enquiry made by a Board Member, Barry Broe confirmed that the sentence in paragraph 4.23 of the written report which read 'The interim EIA recommended peak time tolls to mitigate traffic impacts' went further than the conclusions set out in paragraph 2.6 and section 5 of the interim EIA summary (Annex 1 of the written report) and in the circumstances agreed that this sentence should be deleted from the written report.

After a lengthy debate, the Board: -

- **noted** the contents of the report; and
- by a majority vote (7 Board Members voted in favour, 3 were against and there was one abstention) the following resolutions were passed by the Board: -
 - **approved** TfL obtaining powers for the Thames Gateway Bridge scheme, as described in figure 2.2 in Annex 1 of the written report ("the Thames Gateway Bridge")
 - **approved**, in principle: -
 - (a) the making of a special road scheme relating to Thames Gateway Bridge under Section 16 of the Highways Act 1980;
 - (b) the making of a bridge scheme or Order under Section 106 of the Highways Act 1980 for the construction of the Thames Gateway Bridge over the River Thames;
 - (c) the making of side road Orders relating to Thames Gateway Bridge under Sections 14 and 18 of the Highways Act 1980;
 - (d) the making of a Toll Order under Section 6 of the New Roads and Street Works Act 1991 in relation to the Thames Gateway Bridge;
 - (e) the making of a Compulsory Purchase Order in respect of the land requisite for Thames Gateway Bridge (such land should be substantially within the boundaries of the land edged red in figure 9 of the written report);
 - (f) the making of applications for planning permission under the Town & Country Planning Act 1990 in respect of the Thames Gateway Bridge;
 - (g) the making of such other schemes and orders and applications for any other powers, consents and approvals, as are required for the construction, maintenance, tolling and operation of the Thames Gateway Bridge;
 - **authorised** the Commissioner (or in his absence the Managing Director, Finance and Planning) or with the consent of the

Commissioner (or in his absence the Managing Director, Finance and Planning) General Counsel to do the following: -

- (1) make and amend the Special Road Scheme;
- (2) make and amend the Bridge Scheme or Order;
- (3) make and amend the side roads Orders;
- (4) make and amend the Toll Order;
- (5) make and amend the Compulsory Purchase Order, including the settling of the detailed boundaries of the land to be acquired (such land should be substantially within the boundaries of the land edged red in figure 9 of the written report);
- (6) do all things necessary to obtain confirmation of and then implement the Compulsory Purchase Order;
- (7) make the applications for planning permission;
- (8) make all other Schemes and Orders, and all other applications for any other powers, consents and approvals, required for the construction, maintenance, tolling and operation of the Thames Gateway Bridge; and
- (9) do all things necessary (including making agreements) to obtain confirmation of the special Road Scheme, Bridge Scheme or Order, Side Roads Orders and Toll Order and to obtain all other powers, consents and approvals, required to construct, maintain, toll and operate the Thames Gateway Bridge.

101/03/04 MOVING TO CIVIL ENFORCEMENT OF PARKING CONTROLS ON THE TLRN

A paper reviewing options for the more effective enforcement of parking controls on the Transport for London Road Network was introduced by Peter Hendy. The proposal was to enter into a Special Service Agreement with the Metropolitan Police Service for the Traffic Warden Service to enforce decriminalised parking, and to move from the current fixed penalty notice of £60 to a penalty charge notice set at the Penalty Band 'A' (currently £100).

The Board: -

- **agreed** to decriminalise parking on the TLRN and to the Secretary of State being asked to make a Commencement Order, with a view to introducing these changes in October 2004; and
- **approved** penalty band A to be applied to all contraventions on the TLRN.

102/03/04 AUDIT COMMITTEE REPORT

The Board **noted** the report on the proceedings of the Audit Committee Meeting held on 10 March 2004.

103/03/04 SAFETY, HEALTH AND ENVIRONMENT COMMITTEE REPORT

The Board: -

- **noted** the report on the proceedings of the Safety, Health and Environment Committee meetings held on 17 December 2003 and 11 March 2004; and
- **noted** the Chair of the Safety, Health and Environment Committee's proposal that further HSE briefings be held for Board Members after the Mayoral election, particularly for new Board Members.

104/03/04 FINANCE COMMITTEE REPORT

The Board **noted** the report on the matters discussed at the Finance Committee on 11 March 2004.

105/03/04 PILOTING THE ENFORCEMENT OF MOVING VEHICLE OFFENCES

The Board: -

- **noted** the proposal to pilot the London Local Authorities and Transport for London Act 2003 using cameras on the Transport for London Road Network and the communications campaign to inform the public; and
- **noted** that the Managing Director of Surface Transport would be taking such steps, as necessary, to implement the decriminalised regime outlined in the London Local Authorities and Transport for London Act 2003.

106/03/04 DOCUMENTS SEALED ON BEHALF OF TfL

The Board **noted** the documents sealed on behalf of TfL from 28 January 2004 to 10 March 2004.

There being no further items of business, the meeting closed at 12.32 hours.

Chair

TRANSPORT FOR LONDON

TfL BOARD PAPER

SUBJECT: West London Tram Project (WLT)

MEETING DATE: 29 April 2004

1. PURPOSE

Following a series of intermediate mode studies and project feasibility work, the Mayor decided in May 2002 that the West London Tram scheme should progress to the next stage of development. The TfL Board noted the project status in March 2003. Since that time significant progress has been made in developing the project. The purpose of this paper is to set out the strategic case for the tram, report on progress, provide an update on the business case and describe broadly the proposals for public consultation in the summer.

The project will go through further detailed refinement and development over the next nine months particularly as preparation is made for a Transport and Works Order Application. The information contained in this paper is current and reflects the work undertaken to date.

2. THE STRATEGIC CASE FOR WLT

2.1 Introduction

Following a number of planning studies into intermediate mode options for Outer London 1996, London Transport published a report titled *New Ideas for Public Transport in Outer London*. From original investigations of 45 areas and 9 case studies, a transit proposal from Uxbridge through to Shepherd's Bush was in the final four proposals recommended for further development. In May 2002, the Mayor gave the go-ahead to develop proposals for the West London Tram Scheme from Uxbridge to Shepherds Bush.

This paper aims to demonstrate that the tram proposal is the best means of addressing the long-term transport needs of the corridor. This includes the need:

- to meet the expected demand for extra public transport capacity in the most cost-effective manner;
- to provide enhanced quality and reliability of public transport services on the corridor;
- to achieve optimum modal shift from private to public transport; and
- to reduce social exclusion and aid economic regeneration.

TfL has developed a strategic framework for evaluating the role for light transit in key corridors in London. The framework involves using seven evaluation

criteria: capacity, reliability, modal efficiency, mode share, regeneration, deliverability and value for money. These criteria are addressed in turn in this paper to demonstrate the role for the WLT project.

2.2 The need to provide more capacity

London is the fastest growing city in Europe, facing an expected increase in its population of 800,000 by 2016. The West London sub-region is a high growth sector expected to accommodate around 45,000 additional homes and 86,000 new jobs by 2016 to cater for the projected 140,000-population increase in West London. This corresponds to a growth rate of 10% and 11% for population and jobs respectively. In the areas of Southall and Hayes, over 35,000 new jobs are expected with nearly 6000 new homes, many centred on the Southall Gasworks site.

Uxbridge Road connects several town centres and areas of very dense population in West London such as Shepherds Bush, Acton, Ealing, Hanwell, Southall and Uxbridge (see Annex I). It has been a key public transport corridor for over 100 years, and was previously served by a tramway between 1901 and 1938, after which trolley buses were provided until the early 1960's.

Buses dominate public transport in the West London corridor, as heavy rail and LUL lines do not run parallel to the Uxbridge Road. There is no parallel rail corridor that can act as an alternative to WLT for the majority of journeys in the corridor.

Along the Uxbridge Road there are connections to central London by rail and tube from Uxbridge, Southall, Ealing and Shepherd's Bush via separate lines but none providing attractive journey options along the corridor.

Recent census information (see Table 1 – National Statistics Office) shows that between 1991 and 2001 there has been a significant increase in population and car ownership along the corridor. Car ownership in the three affected Boroughs exceeded the outer London average of 7.1%. Employment also increased by 58,000 jobs during this period.

Table 1 – Changes in west London between 1991 and 2001 Census

Area	Resident Population (000s)			Car Ownership (000s)			People in Employment 1991-2001
	1991	2001	%change	1991	2001	%change	
London	6,678	7,172	7.4%	2225	2616	17.2%	+606,066
Hillingdon	232	243	4.8%	101	117	15.6%	+19,967
Ealing	279	301	8.0	93	113	21.9%	+26,207
Hammersmith and Fulham	148	165	11.8%	42	49	15.1%	+11,504

Source: — National Statistics Office

The result of the WLT modelling to date, predicts that both car ownership and public transport demands will continue to rise steeply in the corridor. For example, between 2001 and 2016, the number of public transport trips with destinations in West London in the morning peak is predicted to grow by 38%. Total travel to Central London from the WLT corridor is expected to grow by 17%.

Highway traffic levels generally across West London are predicted to increase by 15% by 2016. However, detailed traffic modelling shows that many roads around the Uxbridge Road are likely to experience higher growth than this – many over 30%. Very little new road capacity is planned during this time. The magnitude of the travel growth and the high levels of car ownership demand a step-change increase in public transport capacity over the next 10 years. Traffic modelling has demonstrated that at certain junctions, the current road network is already over capacity and a good case exists to address these in advance of the tram.

Continued improvements to bus services are essential in the short to medium term to meet this growth. The local bus network consists of the 207 bus route running between Uxbridge and Shepherds Bush as a split service, with the 607 express service running the length of the corridor and other bus services joining and leaving the Uxbridge Road at various points.

Bus patronage on the 207 and 607 is estimated to grow from 23 million to 27 million/year between 2003 and 2011. Together with the remaining bus routes using the Uxbridge Road, patronage in 2011 could exceed 35 million compared with around 30 million today.

In peak periods, the current bus demand in the corridor is around 2,000 passengers per hour. This is predicted to rise to around 3,000 passengers per hour by 2011 in a no tram scenario. Annex II shows that the introduction of bendy-buses would allow this demand to be met. However, analysis to date indicates this is the practical and economic limit to what buses can effectively deliver.

The level of demand shown in Annex II will build up after the tram is opened in 2011 through a combination of growth in jobs and population, mode shift and latent demand. Public transport demand in the peak hour for a tram service would be around 5,500 passengers/hour at St Leonard's Road, Ealing. Patronage is further explained in Section 3.4.

Some additional capacity is planned on other modes including:

- Improvements to the capacity and journey times of the District and Central LUL lines under the PPP; and the
- Development of Crossrail and likely improvements in local rail services such as more trains per hour from Southall station.

The enhancement of LUL services and the possible introduction of Crossrail could well increase the demand for public transport services to rail/LUL interchanges, particularly at Ealing Broadway. From the Route Map

contained in Annex I it can be seen that the existing demand for public transport in the wider corridor is served by:

- Piccadilly Line – Uxbridge towards Central London – interfaces with Uxbridge Road at Ealing Common. Also serves North Acton.
- Metropolitan Line – Uxbridge to Central London via Harrow, Wembley and Baker Street – addresses demand north of Uxbridge Road.
- District Line – Ealing Broadway and Ealing Common to Central London via Acton and Hammersmith.
- Central Line – Ealing Broadway to Central London via South Ealing and Shepherds Bush.
- Great Western Main Line towards Paddington – serves Hayes, Southall, Ealing and Acton.
- North London Line – Acton Central towards Richmond and North Woolwich.

A 40m tram has a capacity of 300, which is more than double the capacity of a bendy-bus at 120. A tram facility along the Uxbridge Road can provide the capacity to move the projected initial patronage of 44m. The design proposals intend to ensure that a further 20 million passengers per year could be accommodated to support growth well beyond the projections in the London Plan.

2.3 The need for better reliability

The reliability of road-based public transport is a fundamental constraint to the quality of service. Uxbridge Road has nearly 300 side or feeder roads with three main intersections with the TfL road network. Road capacity in the corridor is severely constrained. In recent years some road space has been re-allocated to public transport through the London Bus Priority Network (LBPN) and London Bus Initiative (LBI). Additional bus lanes have been introduced and priority given at many junctions.

Route 207 is a flagship route and part of the London Bus Priority Network. The route covers 74 stops and takes approximately 101 minutes to cover the full 20km of Uxbridge Road. Route 607 covers the whole of the Uxbridge Road in just over 60 minutes and stops 20 times.

With the introduction of the priority measures under the first phase of LBI (LBI1), investment in bus priority along the route has protected the bus from the general decline in speed. However, LBI1 has not improved net journey time and reliability. Furthermore, average bus speed on the Uxbridge Road is projected to reduce from 13kph (8.1mph) on the 207 to 11kph (6.8mph) in 2011 - resulting in an end to end journey time of approximately 117 minutes.

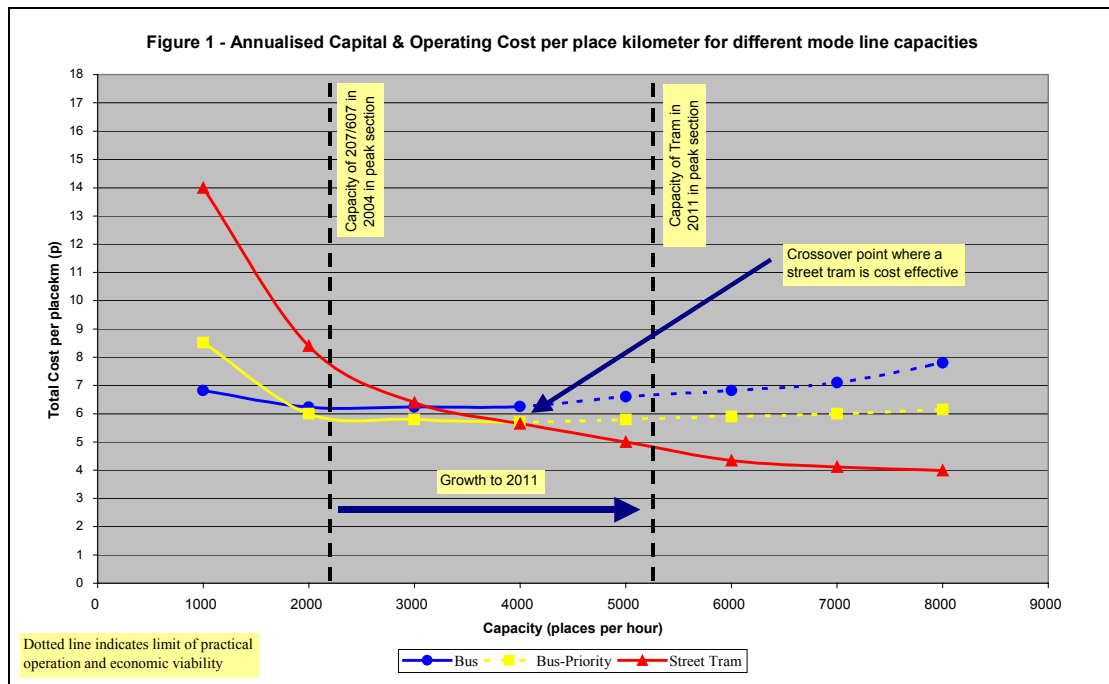
Without a step change in reliability and on-going protection of the existing reliability, passenger benefits from further increases in bus capacity will be offset by declining journey time and rising operating costs.

The tram proposal offers a number of key reliability advantages:

- **Junction capacity.** As passenger numbers increase and the buses provide more capacity less priority can be given at junctions. With fewer trams carrying greater numbers, priority for the tram will ensure more people move through the junction. The tram will therefore be more reliable. Other roads and bus routes could also benefit, as fewer trams would need priority. Some junctions such as the Lido Junction at Northfields Avenue cannot be given maximum priority now as the junction is already over capacity.
- **Boarding & Alighting Times.** Whilst new bus design can improve boarding and alighting times, trams are designed with more doors that are wider thus reducing boarding and alighting times. Trams also improve accessibility to the mobility impaired (motorised buggies made over 20,000 trips on Croydon Tramlink last year).
- **Acceptability of greater priority.** The community, business and borough councils have indicated that they are more willing to re-allocate road space and give this higher level of priority and segregation to a fixed track facility. Croydon Tramlink consistently exceeds its 98% target for kilometres operated and achieves below the 4.5% long gap target. These performance measurements represent one of the most reliable forms of public transport in London.
- **Continuous Priority.** LBI experience shows that for priority to be most effective it must be over the whole route or large parts of it and properly enforced. Currently less than 8 kilometres or 40% of the Uxbridge Road has dedicated bus lanes. The current WLT design proposes segregated running for over 70% of the route. This level of segregation ensures a higher level of reliability, particularly with enforcement.

2.4 The need to use the most efficient mode for the task

The third key issue is the need to minimise operating costs and subsidy required for public transport. The efficiency of different modes varies according to the capacity provided and the degree of segregation. Figure 1 shows the relationship between cost and capacity for bus, bus priority and tram modes. It has been derived using actual costs from systems in the UK and Europe.



The cost profile for each mode takes into account both the annual operating and maintenance costs, and the annualised capital and renewal costs. At capacity levels below 3,000-3,500 bus is generally the lowest cost mode. Beyond 4,000 passengers/hour, tram is the lowest cost mode.

Buses are limited by their relatively small unit size – one driver can transport about 120 passengers. In the case of tram, one driver can take about 300 passengers. The productivity of each mode is also a function of operating speed and reliability.

Figure 1 shows indicatively that in the case of the tram, at high passenger volumes, cost per place kilometre reduces.

There will be increasing pressure on costs and subsidy for bus services in the London including the western corridor due to:

- real increases in tender prices (frequent vehicle renewal i.e. buses require to be replaced and refurbished more than trams);
- impact of increasing congestion on reliability and operational efficiency; and
- the difficulty of achieving higher levels of bus priority.

Table 2 below compares the current 207/607 bus characteristics with the proposed tram solution in the busiest section of the West London tram corridor in morning peak eastbound in 2011.

Table 2 – Comparison of 207/607 (2003) with WLT (2011)

Mode	Journey Time (mins)	Stops	Capacity	Operating Cost per passenger km (pence)	Waiting Time (mins)		Excess Waiting Time	
					Scheduled (SWT)	Average (AWT)	Mins	AWT / SWT
207	101	74	1682	12.2	2.8	4.34	1.5	1.5
607	60	20	510	12.3	4.9	6.2	1.3	1.27
Tram	65	40	5120	7.3	2.0	2.5	0.5	1.25

Source: WLT Project Team

Table 2 shows that the tram can deliver:

- 40% saving in operating costs per passenger km;
- 35% improvement in journey time (compared to the 207) – this will increase to around 45% by 2011 given the predicted decline in traffic speed and congestion;
- 20% improvement in reliability (compared to the 207) – this will further improve to around 35% by 2011; and
- a doubling of capacity in the peak section in 2011.

2.5 The need to reduce car use and traffic growth

The level of car ownership in the area together with increasing employment, shopping and leisure opportunities dispersed across the area has caused increasing traffic congestion, declining reliability of public transport services and longer journey times for all users of the corridor.

The average vehicle speed in London is projected to decline by 15% between 2003 and 2011 from 20kph to 17kph. Many parts of the Uxbridge Road are forecast to experience traffic volume growth between 10% and 30% by 2011. A similar situation is also predicted on key roads in the corridor with some showing a 30% increase in traffic volume.

An attractive public transport service together with effective traffic management is needed to generate a higher mode shift from cars in the corridor. Trams have a proven track record in generating high mode shift. Modelling shows that WLT will shift between 4-8 million trips from cars. The scale of this mode shift is consistent with evidence from Croydon Tramlink.

2.6 The need to support regeneration

The first four criteria in sections 2.2 to 2.5 describe the underlying transport and economic case for the tram. While these four represent the primary objectives, the tram can also have benefits for economic development, social inclusion and the environment.

The London Plan identifies particular employment opportunity areas within the western corridor at Hayes, West Drayton and Southall, which all would have improved accessibility if the tram was built. The predicted new homes and jobs in key areas in the corridor are shown in Table 3.

Table 3 - Opportunity Areas within the WLT Corridor to 2016

Opportunity Area	Area (ha)	New Jobs	New Homes
Hayes, West Drayton, Southall	371	35,000	5,800
White City	30	11,000	1,200

Source: London Plan

Significant pockets of deprivation exist within the tram corridor, including Hayes, Southall, Hanwell, West Ealing, Acton and Shepherd's Bush. For example, the Dormers Wells ward in Southall is ranked in the top 8% of deprived wards nationally, and a further 10 wards along the alignment are in the top 20% deprived wards with a combined population of 120,000 (see Annex III).

Key development areas along the route include White City, Acton town centre, Ealing town centre, Hanwell, Southall (particularly the 70 hectare ex-Gasworks site), and Hayes. This is one of the largest brown field sites in West London. Throughout the corridor there is a plethora of smaller designated development areas including Acton, Ealing and West Ealing town centres.

Fixed light rail infrastructure systems across Europe and the UK have demonstrated that they can considerably add to regeneration through improved access to employment opportunities, education and retail locations coupled with inward investment from employers and businesses.

The London Borough of Ealing Unitary Development Plan (UDP) defines certain areas within the borough as community regeneration areas warranting priority in terms of investment. One of Ealing's key aims to achieve this is to upgrade transport corridors where established areas of economic activity are in need of regeneration and renewal to sustain their vital role and improve their economic competitiveness. Southall, Acton, Park Royal and Greenford Green are key nodal points where regeneration is planned.

A tram would have an impact in supporting regeneration because it would help meet the public transport demand and provide a greater degree of certainty for investors. The higher levels of accessibility and service quality should also attract new users.

Summary of objectives

The tram is considered to be the best mode for the longer term (i.e. post 2011) in this particular corridor to address the five needs described above. It will:

- produce the capacity to support growth
- deliver a highly segregated, reliable service
- reduce operating costs per passenger
- offer a highly attractive service to compete with car travel and generate high mode shift; and
- encourage necessary environmental improvements and regeneration.

These five objectives cover five of the seven criteria in TfL's evaluation framework. The other two – deliverability and value for money - will be covered in the following sections of this paper.

3. PROJECT DESCRIPTION

3.1 Design & services

The project design has been developed over the last 18 months and includes a 22 kilometre on-street tram facility that links Shepherd's Bush to Uxbridge with 40 stops approximately 500m apart (Croydon Tramlink's stops are in excess of 600m apart). The proposed tram is 40 metres in length and with a capacity of 300 can deliver an initial annual capacity of 44 million passengers with the capability to be increased to over 60 million to meet future demands.

The overall speed of the tram is 19kph with a proposed service pattern of 10 trams per hour between Uxbridge and Hayes (Ossie Garvin roundabout) increasing to 20 trams per hour between Hayes and Shepherd's Bush.

The tram stops will use platforms that provide level boarding, making it easy for people to get on and off. A detailed analysis of tram stop positioning and the relationship with local facilities and communities has been carried out. This will be made available during the public consultation. Of the 67 bus stops currently serving the corridor, it is proposed that 2 will be removed and not replaced, as usage is low. 13 will be removed and be replaced with 6 trams stops more evenly spaced resulting in an additional walk of between 50 and 150m for people using these. The remaining 52 will serve the other bus routes, which use the Uxbridge Road.

There will be 6 key interchanges between the tram and LUL/mainline stations at Uxbridge, Ealing Broadway, Ealing Common, Acton, Shepherd's Bush Hammersmith & City Line and the Shepherds Bush Central Line. Ealing Broadway is high on the list of priorities in TfLs interchange programme. Close attention is also being given in the design to the needs of cyclists, other bus services, pedestrians and taxis. Examples include the interchange at

Ealing Hospital, Shepherds Bush and the modifications proposed to Haven Green.

The current plan is for the depot to be sited within the Southall Gasworks development site. TfL is considering options to serve the development site, which is likely to include over 4000 new homes together with light industrial and retail buildings. If progressed, the spur would terminate at Southall Station to link with the Great Western Mainline.

The trams will replace the current 207/607 bus routes. The remaining 13 bus routes would continue to operate over short distances on the Uxbridge Road – especially north / south routes, feeding the tram at various locations such as Uxbridge, Hayes By-Pass, Southall Broadway, Ealing Broadway, Acton Town Hall, and Shepherd's Bush.

3.2 Degree of segregation

To meet the project objectives the tram has been designed to achieve a high level of segregation from other traffic. The design work to date has been focussed on achieving the best balance between maximising segregation and minimising traffic impacts. Achieving the necessary tram priority requires:

- some reallocation of road space to accommodate the tram;
- some localised road closures;
- some traffic being redistributed to the motorway network;
- giving the tram priority at junctions;
- better management of traffic within the corridor; and
- enforcement of loading and access restrictions.

The current design proposal which will be considered as part of public consultation has evolved since May 2002 when the significant segregation proposed for the tram produced an unacceptable displacement of vehicle traffic onto the existing road network. The May 2002 design required 18 closures along the Uxbridge Road.

The 2003 design proposals, which formed the basis of the status report to the TfL Board in March 2003, reduced the number of closures and involved more sharing of road space by the tram and cars. This design made significant changes but still had 4 full (closed in both directions) and 4 part (one direction) closures. Local people expressed concerns about this design on the grounds that any closure could displace traffic into side and residential streets.

Since February 2003 significant work has been undertaken to address the pinch-points in the town centres of Acton, Hanwell, Southall, West Ealing and Ealing. Local Consultation Groups (LCG's) established in Ealing Borough, have raised 43 options, which have all been evaluated against set criteria. Of the 43 options raised, 18 have been designed in outline and evaluated using the DfT Transport Advisory Guidelines. A further 4 depot options are also being evaluated together with 5 options to access the current proposed depot

site. Options have also been analysed in Hammersmith and Fulham (Shepherds Bush) and Hillingdon (Hayes).

The engineering work carried out to review these options has resulted in good stakeholder engagement and positive feedback from the LCG's. Draft options reports were sent to each of the five LCGs in March 2004. Options were discussed in detail at the last round of LCG meetings and representatives have been asked to send in detailed comments about the views of their group or association. The finalised report will be made available on the TfL website in preparation for the summer public consultation.

This work has now resulted in a design, which will be used as the basis for public consultation in summer 2004. Pre-consultation information in respect of the proposals will be made available shortly.

Table 4 shows the primary changes between 2003 and 2004 as a result of the above process.

Table 4 – Design Profile Change

	2003 Reference Design	2004 Proposed Design
Number of Closures	4 Closures and 4 part closures	3 Closures and 2 part closures
Segregated including accessible*	93% (19.4km)	70% (14.6km)
Shared	7% (1.5km)	30% (6.3km)
Capital Costs (excluding optimism bias) (Q4 2002 base)	£425m	£463m
Overall journey time	65 mins	65mins
No of stops	45	40
Demand	50m	44m

**Accessible – vehicles can access to pass major constraints (included within fully segregated figure) – 2003: 33% (6.9km) and 2004: 7% (1.5km)*

The design has changed the amount of tram segregation and reduced the amount of accessible lanes. The biggest change has been the amount of sharing. Typical cross-sections showing the different levels of tram priority are shown in Annex IV.

3.3 Headline project outcomes

The scheme delivers the following overall benefits:

- A doubling of capacity in the peak section in 2011 resulting in reduced crowding and higher public transport use
- Travel times reduced with average speeds improving by 35%

- 35% improvement in reliability by 2011
- Reduced noise pollution and improved air quality
- Public transport accessibility improved - over 300,000 extra people will be within 30 minutes of a local centres, thus supporting regeneration and job growth
- Fully accessible services

3.4 Patronage

Bus routes 207 and 607 are among the most heavily used in London, guaranteeing a base level of ridership of 27 million passengers per annum in 2011, for the tram. In addition, there will be transfers from other bus routes, and from car, rail and tube. Growth of trips in the area driven by increases in population and jobs will further boost demand.

Modelling indicates a range of patronage for the WLT between 44 million to 58 million. Given the general experience in the UK of estimating patronage on light rail schemes, a conservative approach has been taken and the lower estimate used as the projected patronage of the tram.

The forecast of 44 million passengers using the tram is broken down as follows:

Routes 207/607	27
Other bus routes	7
Rail/tube	2
Cars	4
New trips/growth	4
Total	44 million

Annex V shows geographical sources for transfers from public transport, highway (mode shift) and new trips. The highest demand comes from transfers and new trips from Southall eastwards from communities in close proximity to the tram. New trips are most significant in Acton. The least used section is Uxbridge eastwards towards the Hayes By-pass.

4. ENVIRONMENTAL IMPACT ASSESSMENT

The Environmental Impact Assessment (EIA) will cover all aspects of the built and natural environment from noise, air quality, ecology, heritage and townscape, to social and economic issues. Work in relation to the EIA has been progressing in parallel with the engineering design proposals. Comments on the Scoping Report have now been received from all three directly affectedly Boroughs and other statutory consultees, (English Nature, English Heritage, the Countryside Agency and the Environment Agency). Communication with all these bodies on environmental issues is continuing.

The design of the scheme has not yet advanced to a point where detailed analysis to assess impacts is possible across the full range of environmental issues. However, preliminary work has been done.

Work to date has focussed on:

- scoping the work;
- establishing baseline impacts in 2011 without the tram; and
- initial modelling of traffic impacts and pollution levels based on the current design.

A summary of the key findings of the EIA work to date is in Annex VI.

TfL will make the environmental study results available throughout the public consultation this summer. This will help inform authorities and local people to understand the impacts of the tram. A detailed EIA would then be prepared based on the final preferred scheme that is proposed for the Transport and Works Order application stage.

5. COST AND REVENUES

The business case has been assessed using the Department for Transport's, Transport Appraisal Guidelines (TAG).

5.1 Best Bus alternative

The project team has worked with London Buses to develop a feasible best bus alternative against which the project has been assessed. This alternative solution is based on the Intensified Bus Priority (IBP) principles.

A review of the route 207 has identified a number of bus priority schemes, which could reduce current bus journey time on the corridor and increase average bus speeds. The works that comprise this alternative include:

- Larger vehicles (18m articulated);
- Enforcement of bus lanes;
- Traffic management; and
- Junction priority.

Initial estimates from London Buses indicate that this alternative would cost approximately £14.5 million (£20.3 million with 40% risk premium as per Tram) in 2002 Q4 prices.

Work continues to further refine and quantify the best bus alternative in terms of capital, operating and renewal costs and the associated risk premiums.

Other segregated bus schemes such as fully segregated busway, guided bus, trolley bus have been rejected. A *fully segregated busway* would have a high capital cost in the region of £250 million and require extensive land take and property. This is unacceptable to the Boroughs in terms of reallocation of road space and traffic displacement. It would also not give the required capacity. A *trolley bus* has significant capital cost (70% of that of the tram) without the required increase in capacity. A *guided bus* is unlikely to be

accepted as suitable technology for this corridor. It is likely to carry a high degree of severance in the road (the guidance requires kerbs in the highway) and would not provide the capacity required.

5.2 Capital Costs

The base capital cost (without risk premium) of the project is estimated as £463 million at Q4 2002 base. The risk premium attached to the scheme has been calculated at 40% following an in-depth risk assessment.

Table 5 notes the primary cost changes reflecting the design to date.

Table 5 – Capital cost changes with current design

	Cost Estimate (£m Q4 2002 prices)
Central Estimate –2003	385
Contingency	40
Sub-total (2003 estimate)	425
Additional costs due to design changes	38
Subtotal	463
+ 40% risk premium	185
Total (current cost estimate)	648

Source: WLT Project Team

The avoided bus infrastructure costs are estimated to be a total of £14.5 million (£20.3 million including risk premium).

5.3 Capital Financing Costs

TfL are investigating various ways in which a tram scheme could be procured and financed based on a review of alternative financing structures for light rail projects throughout the UK and the desired procurement and risk mitigation strategy. Should the procurement and risk mitigation strategies change, an alternative financing strategy would need to be considered.

Table 6 below gives an indication of the typical annual payment requirements to meet the initial construction costs should these be capitalised and paid over time as part of a PFI-type structure.

In terms of the operation of the system and procurement of the rolling stock, various methods are being considered with comparisons being made to the light rail schemes that are running elsewhere in the UK. TfL will be developing these models over the next few months.

Table 6 – Financing Costs and Indicative Payments for debt only

	Total Capital Costs (£m)	Land & Utilities (£m)	Costs to be financed (£m)	Annual Payment (over 30 years)
Base Estimate	463	141	322	28.3
40% Uplift	648	197	451	39.6

Source: TfL Corporate Finance

The annual payments in Table 6 of £39.6 million (assuming a 40% risk premium) do not include initial up-front costs incurred prior to construction. TfL is considering other ways of financing this element of capital expenditure. Were these to be funded under a prudential borrowing scenario, the annual payments would increase by a further £15 million over the first 25 years.

5.4 Operating and Maintenance Costs

The operating and maintenance costs, in 2002 Q4 prices, for the scheme are estimated as £19.3 million per annum including a risk premium of 20% in line with HM Treasury guidance. This compares to the current £13.5 million annual cost to operate the (lower capacity) primary bus routes 207 & 607 that would be replaced by the tram.

5.5 Renewal Costs

The renewal and maintenance costs for the fixed infrastructure, and a major mid-life vehicle refurbishment, are estimated to be £69.1 million in 2002 Q4 prices including a 20% risk premium, i.e. a further £2m/year over the first 30 years.

5.6 Revenue

Modelling predicts gross revenue for WLT as £28 million per annum based upon the conservative estimate for annual patronage (44 million). The BCR calculation includes both the new trips generated by the tram and additional revenues of c.£7 million per annum accrued from increased patronage and changes in journey lengths on other TfL modes as a consequence of the introduction of the tram (as predicted by the model).

Table 7 summarises the estimated annualised cost of the tram and bus scenarios. The annualised cost of the tram is £47.9 million. This estimate of £47.9 million is based on supporting the initial demand of 44 million in addition to the capacity to grow in the future. The estimated bus subsidy to support the capacity of 27 million passengers in 2011 is £4.9 million.

Table 7 – Annualised costs of the tram and best bus scenario

(£m)	Tram scenario	Bus scenario (207 & 607)
Revenue	28.0	12.9 ¹
Financing costs	-39.6	-2.0
Financing of up-front costs	-15.0	0.0
Operating costs	-19.3	-15.8 ¹
Renewal costs	-2.0	0.0
Net surplus (i.e. subsidy required)	-47.9	-4.9

Source: WLT team

1 – Uplifted to 2011 estimates from 2004 numbers

5.7 Net Benefits

The project delivers passenger benefits of £609 million (discounted over 30 years), comprised of travel time savings, savings in waiting, interchange times, improvements in perceived comfort, improved reliability and reduced boarding penalties.

5.8 Benefit Cost Ratio

The economic case is based upon a discount rate of 3.5% over a period covering the construction and operation of the scheme (2007 – 2041). The benefit cost ratio of the project is 2.3 assuming the central cost estimate. Using the current project risk premium of 40%, the BCR is 1.5. Benefits accrued from renewal of the highway (e.g. deferred maintenance spending) are not included within this figure.

5.9 Project Development Costs

Provision in the Business Plan for development costs over the next three years is:

- 3.7 million 2004/05
- 4.6 million 2005/06
- 4.6 million 2006/07

To proceed rapidly with the project, approval will be needed to spend in excess of these funds. This will be considered in the context of the outcome of the public consultation, the Spending Review, a review of the priorities for Major Projects at that time.

6. PUBLIC COMMUNICATION AND CONSULTATION

It is essential for the success of application for powers under the Transport and Works Act 1992 that meaningful consultation occurs with affected parties during the detailed planning and environmental assessment work.

There has been broad communication and consultation with major stakeholders, local resident groups and other statutory and non-statutory bodies on the project. Local consultation groups (LCG) have also been established in Ealing borough with 6 rounds of meetings across the borough covering Hanwell, Acton, Southall, West Ealing and Ealing. Table 8 shows the LCG Programme.

Table 8 - Ealing Local Consultation Group Programme

Round	Date	Issues Discussed
1	March 2003	Why a tram is required, explanation of the scheme
2	April 2003	Modelling, Road closures and depot location
3	June 2003	Modelling, Tram stop locations and road closures
4	July 2003	Options for alignment in town centres, shared running and buses
5	Dec 2003	Optioneering, traffic modelling data
6	March 2004	Options report, preferred alignment and further traffic modelling data with tram

Source: TfL Public Affairs

This programme of over 30 local meetings in the last 12 months, supported by over 30 detailed information sheets, has provided participants with an early opportunity to engage in the detailed design of the project, and has influenced the design proposals. In particular, TfL has accepted in principle a greater degree of sharing in constrained areas.

Public consultation is planned to run from June to September 2004. Through this consultation people will be able to comment on the scheme and their comments will receive proper consideration and feedback.

A summary of the key issues raised by consultees in Round 6 of the Ealing Local Consultation Groups is given in Annex VII.

The Case for the Tram brochure was released at the end of March to all major stakeholders.

It is intended to release the following pre-consultation information:

- Route maps showing tram and highway alignment
- Traffic impacts with and without a tram
- Visualisations
- Information Sheets including an Environmental Summary
- Report on LCG process

7. APPLICATION FOR POWERS

The route for securing powers to build, maintain and operate the tram will be under the Transport and Works Act 1992. It is proposed that an application for powers be made jointly with one or more of the affected Boroughs (subject to obtaining agreement from the Boroughs). Croydon Tramlink provides a model for such an approach where London Borough of Croydon was a joint promoter with London Transport.

8. BOROUGHES

The London Borough of Hammersmith and Fulham have remained supporters of the scheme and welcomed the changes in design to remove the partial closure at the Shepherds Bush Market. They have been provided with detail on the design for the remodelling of the gyratory and the impacts of traffic to the road network feeding in to the Uxbridge Road.

The London Borough of Ealing has signed a Memorandum of Understanding to develop the project with the possibility of becoming a joint promoter to the Transport and Works Order. They have set aside additional resources to address local traffic management issues in the summer. They have also supported the local consultation process during the past year and are beginning to prepare a local economic evaluation report to determine the impact the tram would have on the corridor.

The London Borough of Hillingdon is a strong supporter for the scheme although officers have recently relayed their concerns about the impact of the Tram on the Borough. These include the loss of one carriageway of road space in each direction, the location/alignment of the proposed Tram route to the Southall Depot site and the need to serve Hayes.

The Royal Borough of Kensington and Chelsea has expressed support in principle for the scheme but need to understand the impacts on traffic.

The other peripheral Borough – Brent, Harrow and Hounslow – are not materially affected but TfL has planned a number of meetings with them. They are broadly supportive of the project through the West London Alliance. TfL is working with all the Boroughs to address a range of key issues and concerns.

9. PROGRAMME

The current programme is as follows.

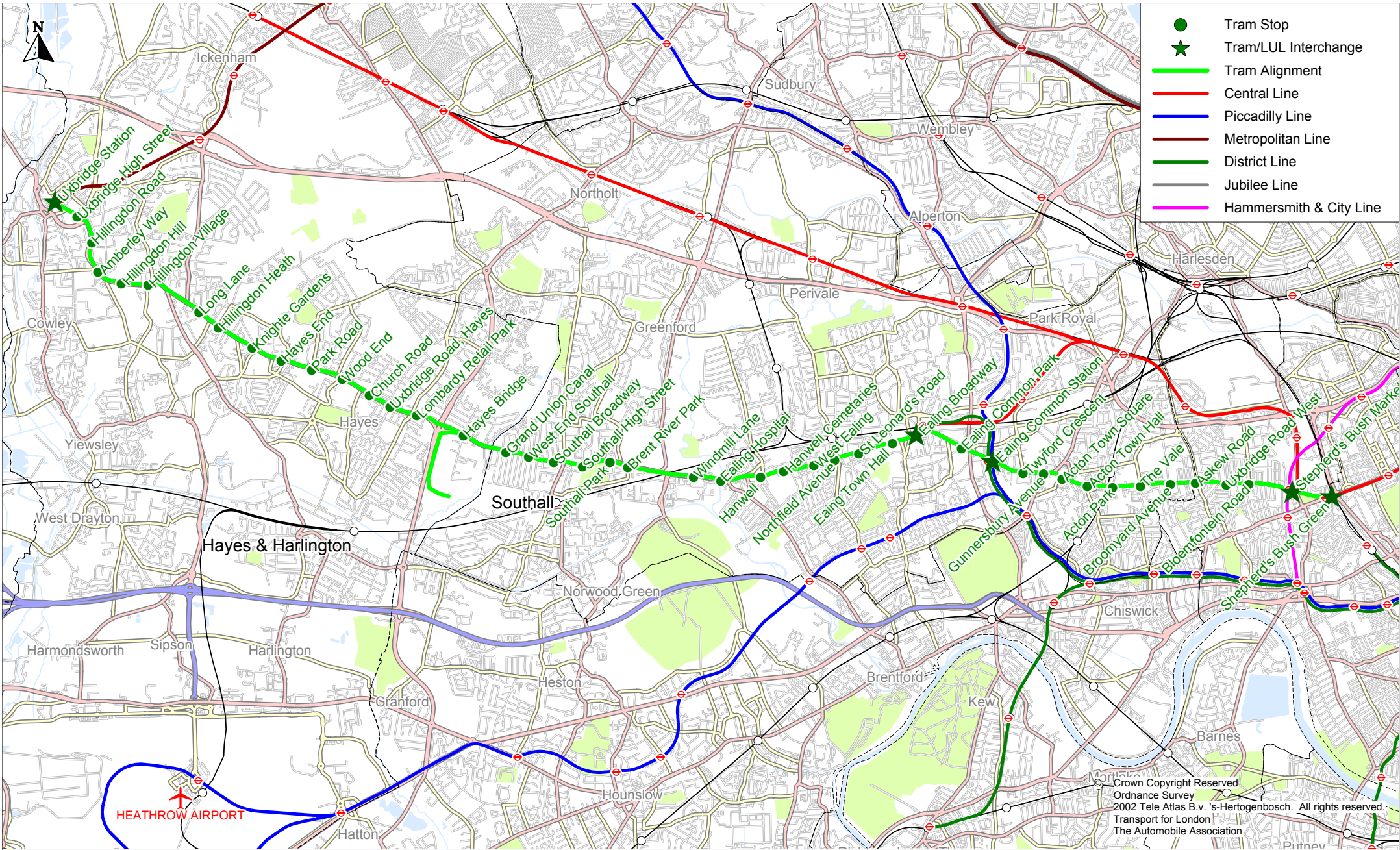
- Early May Release of pre-consultation information on scheme design
- June to September 2004 Public Consultation
- Winter 2004/05 TfL Board/Mayor Approval to deposit TWO
- Winter 2004/05 Deposit of TWO Application
- Late Autumn 2005 Public Inquiry
- Autumn 2006 Decision by Secretary of State
- Spring 2007 Start Construction
- Spring 2011 Tram Operational

10. RECOMMENDATION

The Board is asked to note the status of the project and that TfL will proceed with a public consultation commencing in June 2004.

ANNEXES

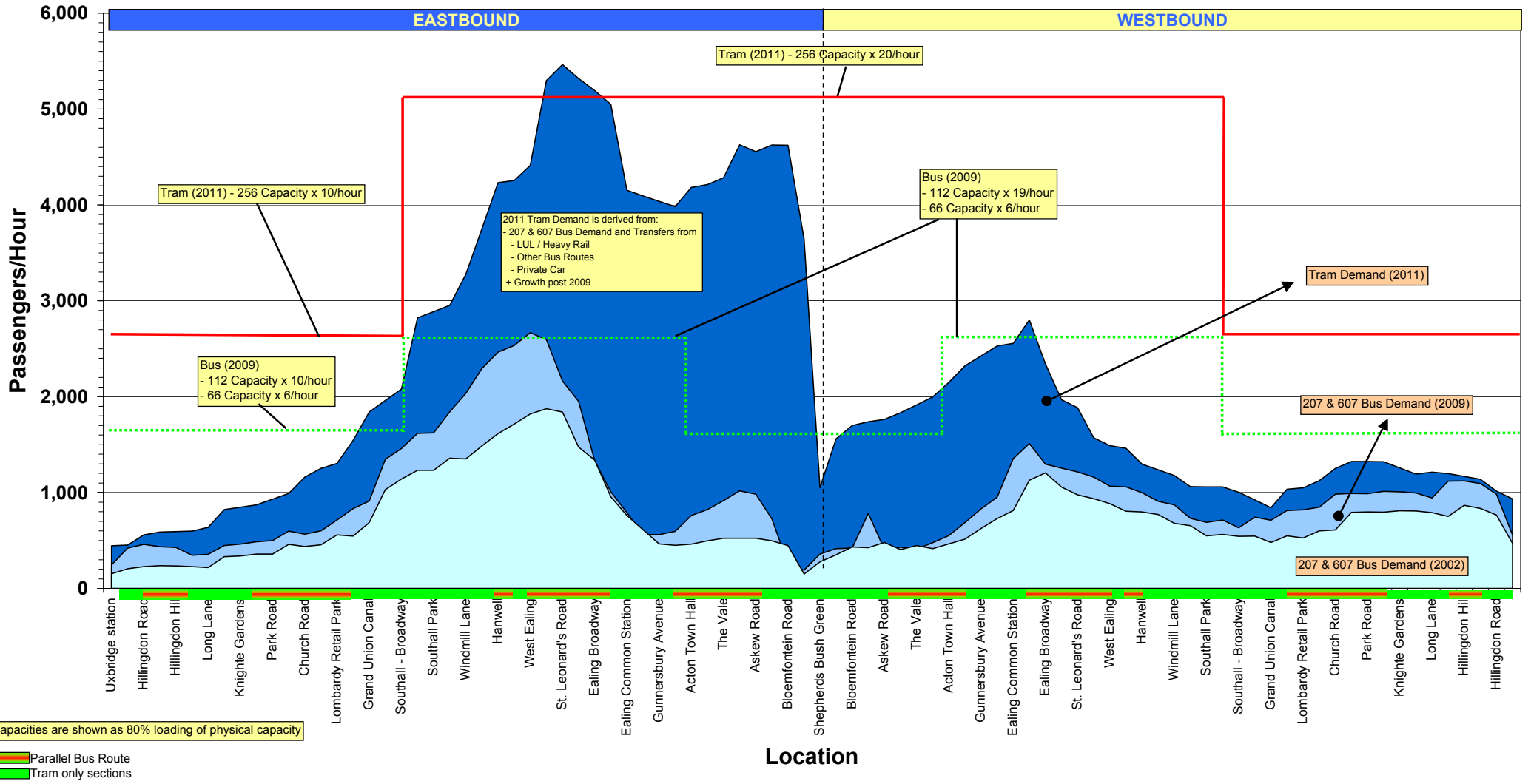
- I. Map of route
- II. Peak Hour Loading (AM Peak 0700 – 1000)
- III. Deprived Wards – deprivation index and population affected
- IV. Typical Cross sections
- V. Sources and Composition of Tram Patronage
- VI. Environmental status report
- VII. Summary of key issues raised in Local Consultation Groups Round 6



ANNEX I - WLT Map of Route



Peak Hour Loading (AM Peak 0700 - 1000)



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ANNEX III – DEPRIVED WARDS AND POPULATION

The following Wards are within the WLT corridor and are also in the top 20% deprived wards in England and Wales.

BOROUGH	WARD	DEPRIVATION RANKING (OUT OF 8414) ¹	POPULATION
Hillingdon	Botwell	1611	7,400
Ealing	Northcote	1073	12,700
	Mount Pleasant	1316	13,600
	Dormers Wells	634	15,200
	Heathfield	1204	13,600
	Glebe	1165	14,600
Hammersmith & Fulham	Wormholt	941	8,200
	Conningham	1016	11,800
	White City & Shepherd's Bush	339	10,200
	College Park & Old Oak	515	6,900
	Addison	1624	7,700
	TOTAL		

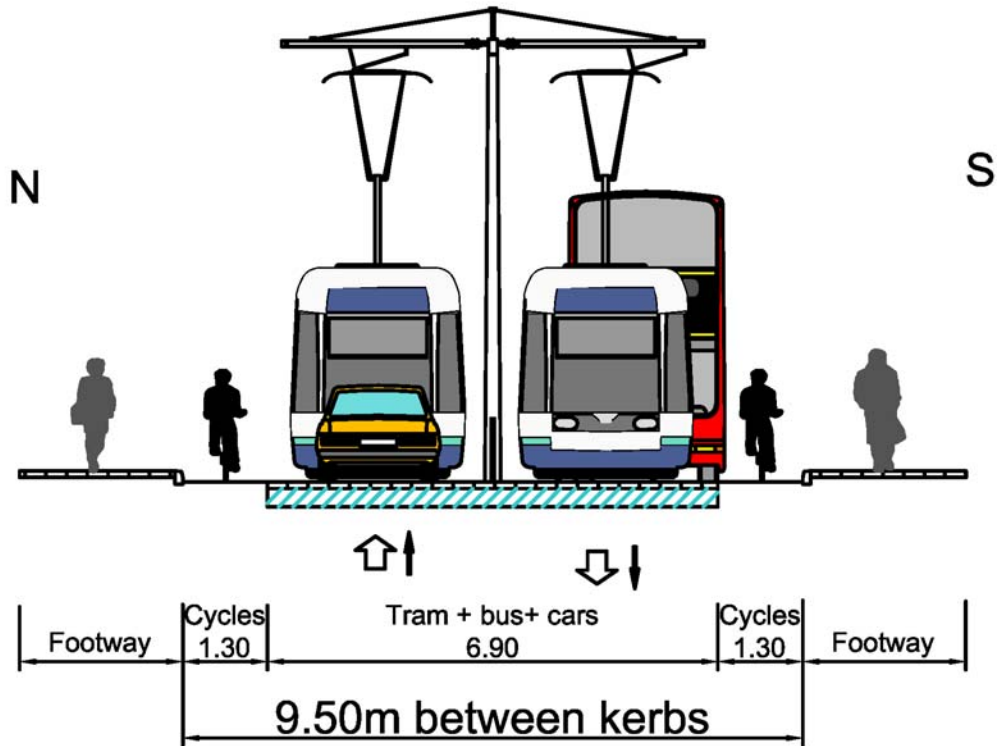
¹ Ranking determines level of deprivation with the low numbers dictating a higher level of deprivation, i.e. a rank of 1 would suggest the most deprived ward in the country

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ANNEX IV –ENGINEERING CROSS SECTIONS

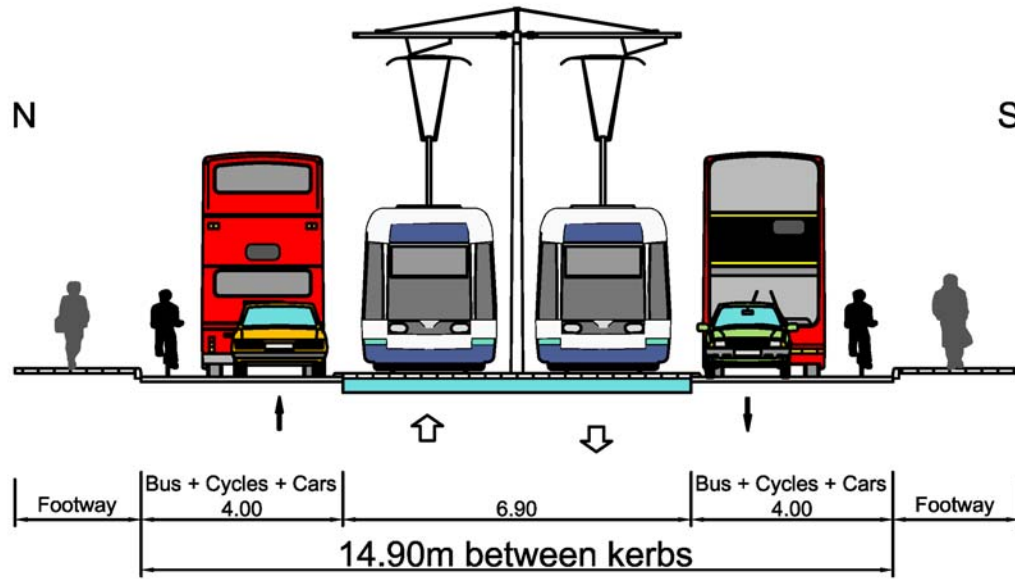
The following are typical cross-sections along the alignment that demonstrate the three types of integration between the Tram and vehicle traffic – shared, accessible and segregated.

Acton Town Centre - Shared Running in both directions

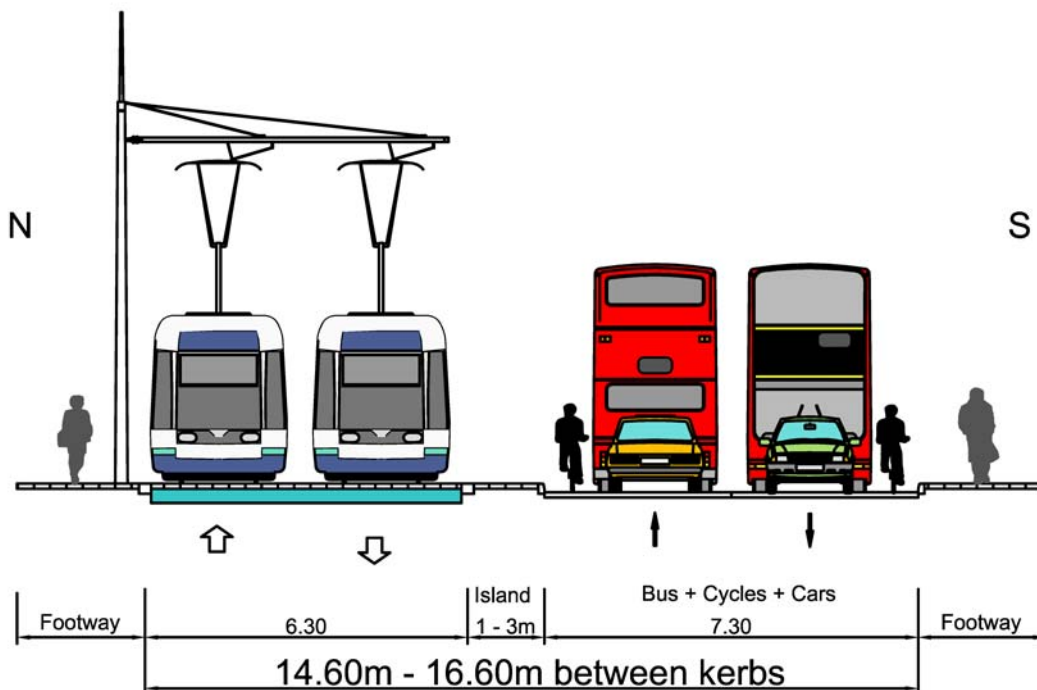


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Ealing Town Hall - Accessible in both directions



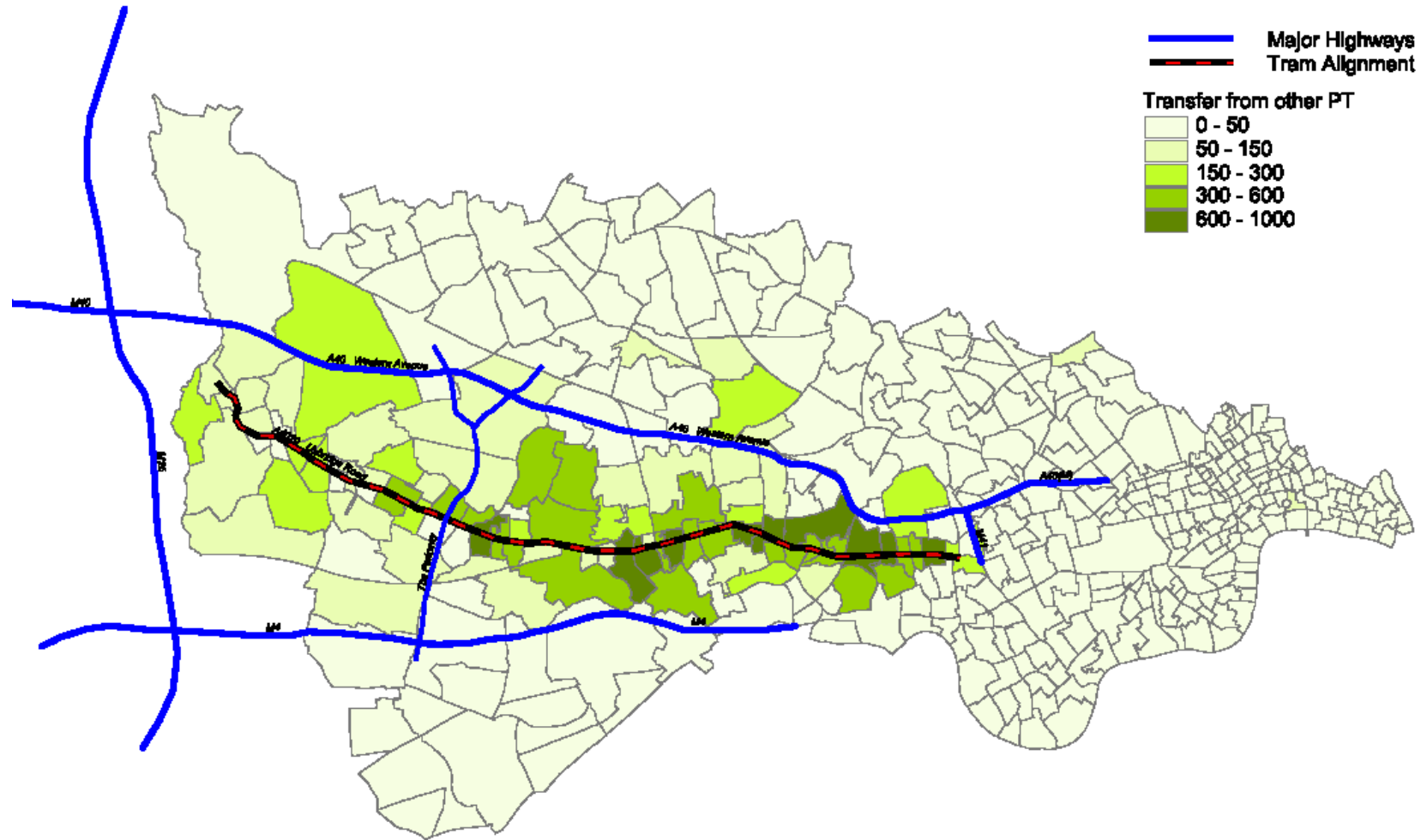
Brunel University (Uxbridge) - Segregated in both directions



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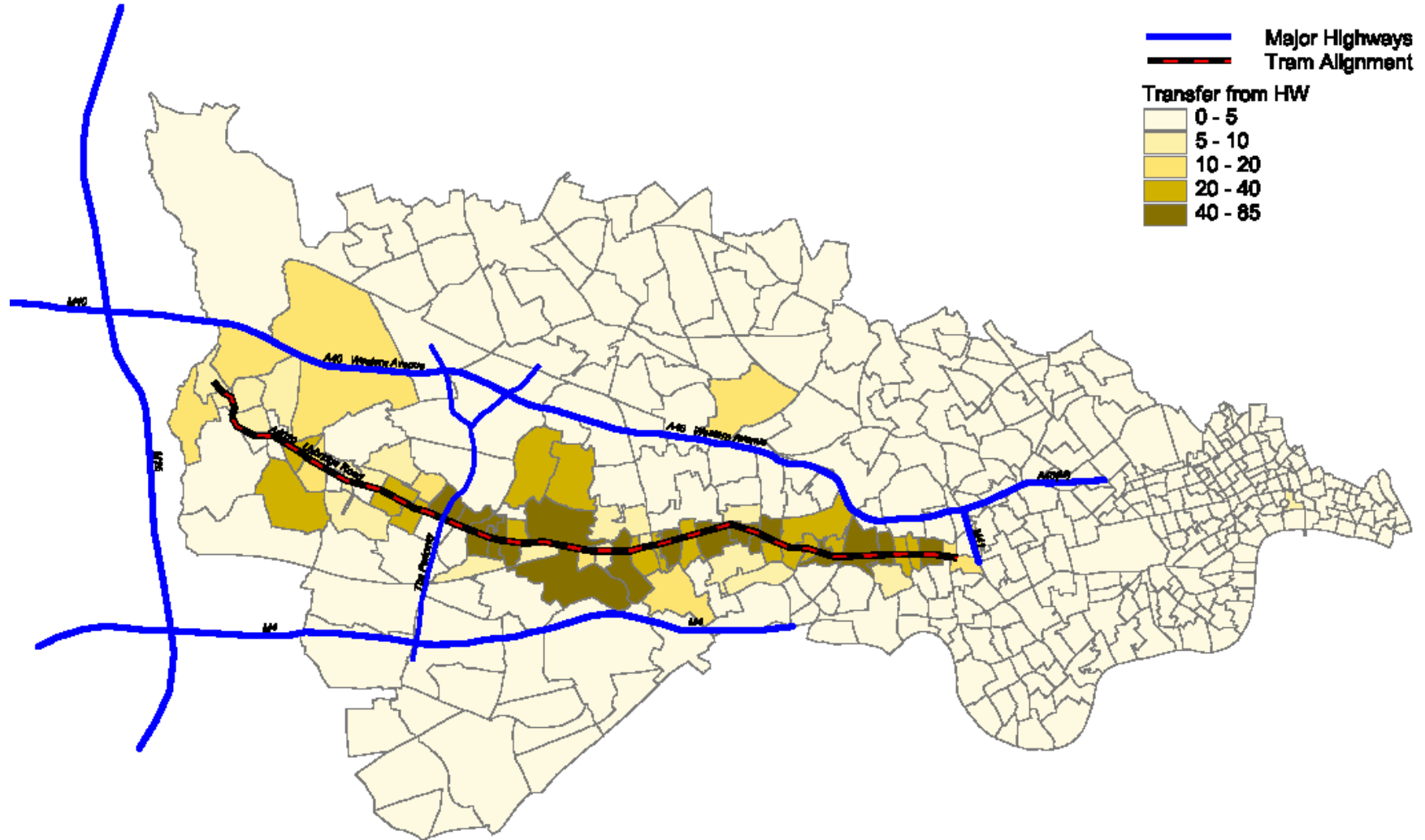
ANNEX V – SOURCES & COMPOSITION OF TRAM PATRONAGE

SOURCES OF PATRONAGE - TRANSFERS FROM PUBLIC TRANSPORT



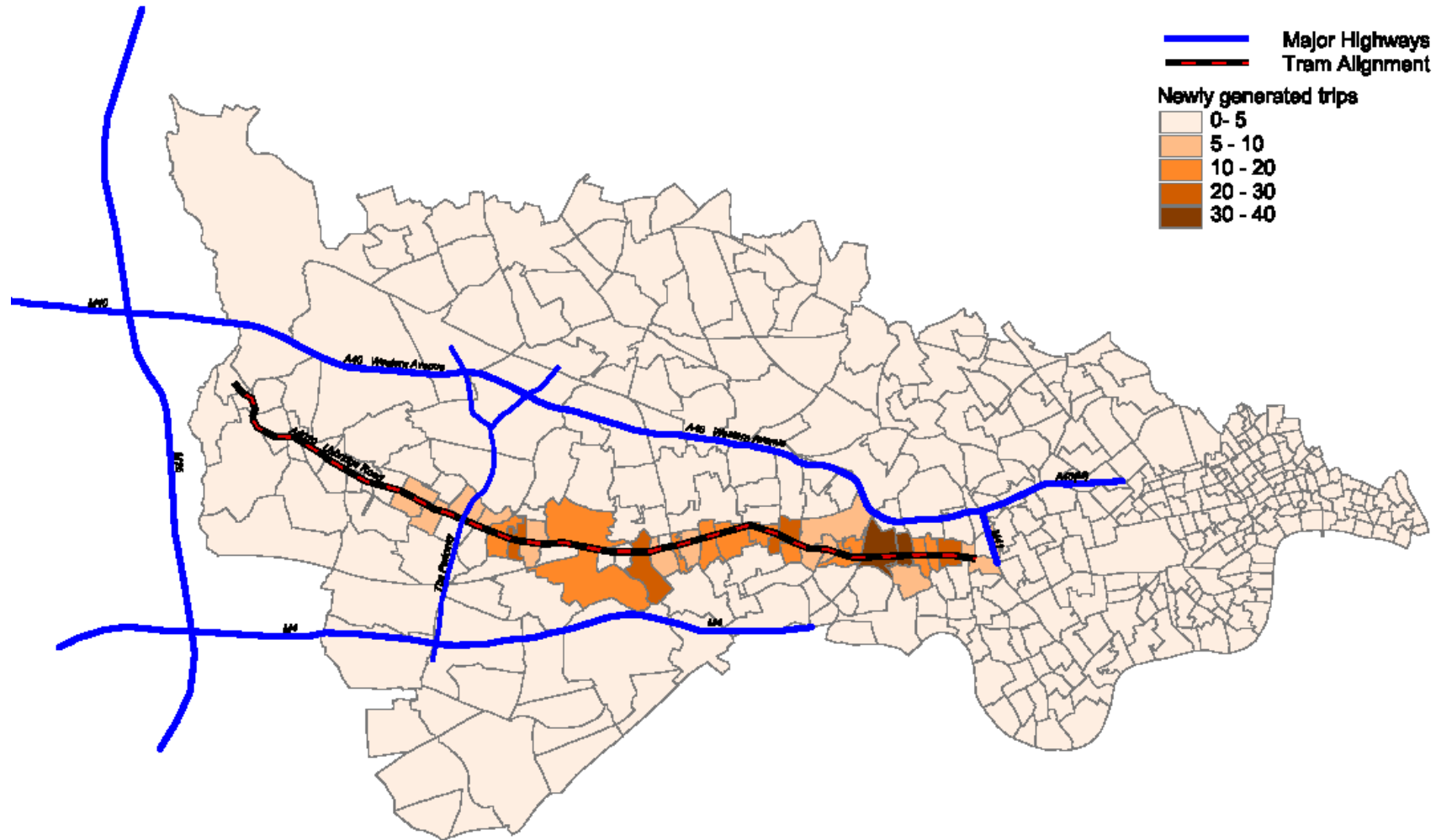
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TRANSFERS FROM HIGHWAY (CAR USERS)



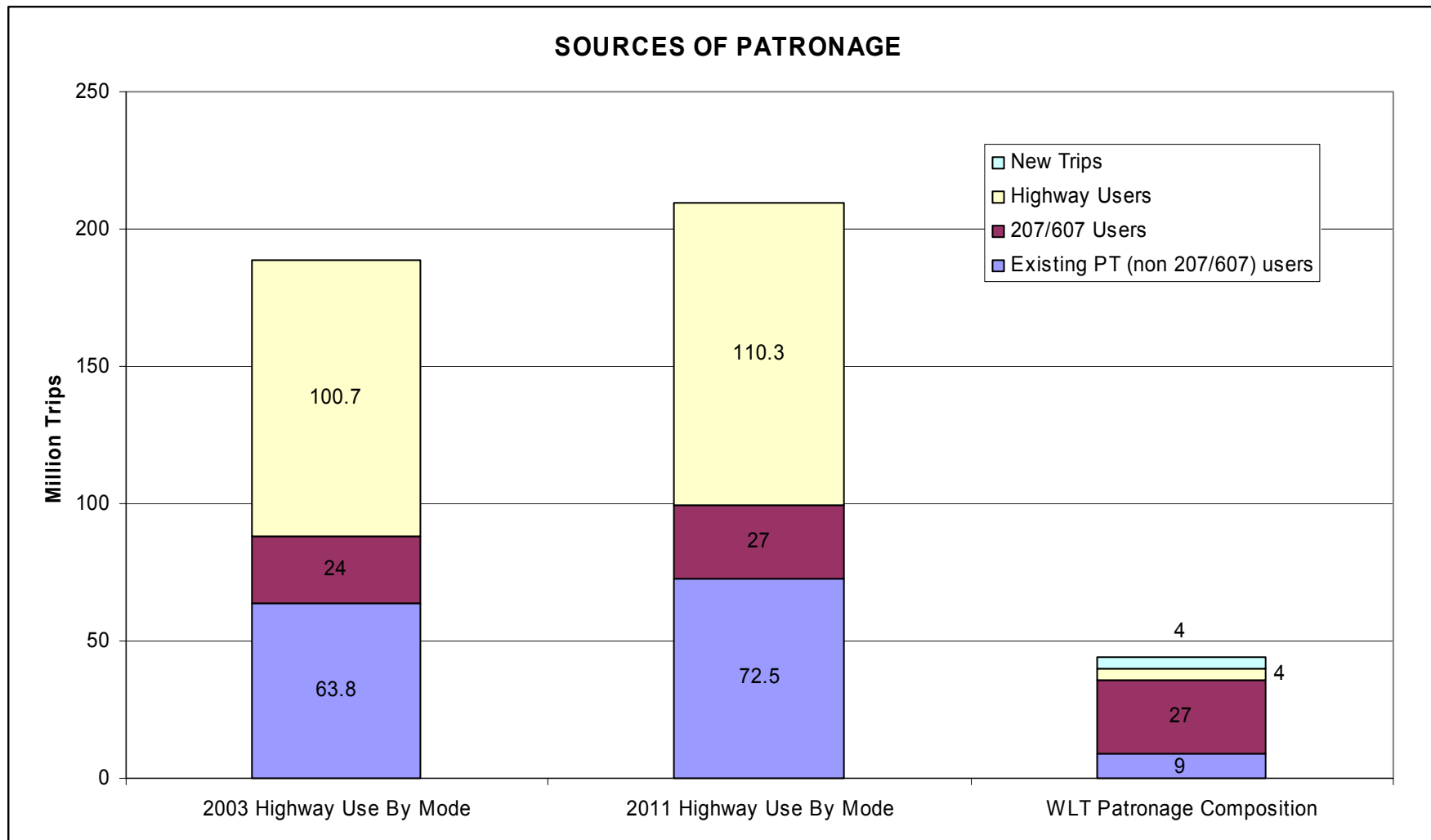
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NEWLY GENERATED TRIPS



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SOURCES OF PATRONAGE



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ANNEX VI – Environmental Status Report

Air pollution

Currently most of the route from Uxbridge to Shepherds Bush is designated as an Air Quality Management Area by all three local boroughs. Currently the levels of nitrous dioxide (NO₂) exceed the existing standards, contained in the UK Air Quality Objectives, at all locations where data was obtained along the proposed tram corridor.

Modelling has been undertaken to determine the future situation in 2011 (in a no tram scenario) based on the outputs from the traffic modelling. Initial analysis indicates that air pollution levels in 2011 (in a no tram scenario) are still likely to exceed UK Air Quality Objectives for both NO₂ and PM₁₀. This is despite predicted reductions resulting from lower background concentrations and improved vehicle emissions controls outweighing the impact of increased traffic flows.

Preliminary analysis shows that around 3200 dwellings immediately adjacent to Uxbridge Road together with a large number of industrial, retail and workplaces will benefit from an improvement in air quality as a result of the tram scheme. The introduction of the tram and the predicted shift of between 4-8m car trips to tram services will also contribute to reducing pollution in the area.

Noise Pollution

Noise monitoring has been undertaken at 18 sites along the route, and data has also been obtained from the relevant local authorities. The results of the monitoring show that existing daytime noise levels along the Uxbridge Road are high, with measurements ranging from 63 dB(A) to 76dB(A). To put this in context, 70db(A) and above is classified as 'annoying' equivalent to the noise from a vacuum cleaner in the home. The identification of potential changes in noise levels arising from the tram scheme will be linked to changes in road traffic flows along the tram corridor, and in surrounding streets. Work is planned to determine changes in noise levels arising from traffic displacement.

Townscape

Specialist consultants have carried out a full analysis of the existing townscape character along the corridor. This analysis addresses key elements such as building frontages, protected structures, the pedestrian environment, designated areas and ancillary features such as street furniture. The results of this analysis will be used to influence the emerging design of key elements of the scheme as well as providing the baseline for the assessment of the townscape impact of the final proposals. The views and concerns of conservation officers from the London Boroughs and of English Heritage are built into the analysis.

TRANSPORT FOR LONDON – WEST LONDON TRAM

ANNEX VI – Environmental Status Report

Tree Loss

A detailed tree survey is being commissioned, and this will provide the necessary detailed information on all trees along the route potentially affected by the scheme. The results of the detailed survey will be fed into the design to ensure full consideration is given to reducing the impact of tree loss. The relevant environmental specialists will, as part of the EIA, also be identifying appropriate mitigation measures where tree loss cannot be avoided.

Control of Construction Impacts

A Construction Code is being developed, in conjunction with the local authorities, to ensure that the mechanisms are in place to reduce construction impacts to a practicable minimum. The Code will draw upon industry best practice and include specific mitigation measures for issues such as noise, dust, pollution control and traffic management to ensure they are adequately addressed during the construction phase.

Traffic

The likely traffic impacts that would result from the implementation of the tram and the transfer of car users have been the focus of much of the design and modelling work over the past year. Local consultation has addressed 43 alignment options to minimise traffic displacement. The result of this work has been to reduce the degree of tram segregation, thus allowing more traffic to use the constrained areas.

The design to be released for public consultation contains three full closures and two part closures. The project team is developing several options to manage traffic including remodelling the Shepherd Bush Gyrotory and a variety of changes around the pinch-points such as alleviating eastbound traffic around Haven Green in Ealing.

A number of surveys have been carried out and modifications are being incorporated into the design to address loading and access. Particular attention is being given to Shepherds Bush Market, Acton, The Mall in Ealing and Southall.

Detailed traffic plots are available to show traffic levels in 2003, traffic levels without a tram scheme in 2011 and traffic levels with a tram scheme in 2011. Traffic impacts in 2011 without a tram are significant not only on the Uxbridge Road but key feeder routes throughout Hillingdon, Ealing and Acton, many roads experiencing up to 30% more traffic. The net impacts of the tram need to be assessed against this 2011 scenario. Traffic management strategies are being developed to manage the marginal impacts of the tram scheme.

The overall design process has allowed the maximum amount of traffic on the Uxbridge Road balanced against the performance of the tram. Some traffic

TRANSPORT FOR LONDON – WEST LONDON TRAM

ANNEX VI – Environmental Status Report

will be redistributed throughout the wider road network. Some traffic will be removed as people transfer to the tram. Some will be discouraged from using the road and will find other ways or times to make their journey. The overall objective is to improve the quality of transport generally. Where traffic is displaced, local design solutions will be developed with the Boroughs and the local community.

TRANSPORT FOR LONDON – WEST LONDON TRAM

Annex VII - Summary of key issues raised in Local Consultation Groups Round 6

Acton

Members of this group have two major concerns: the regeneration of the town centre and traffic displacement onto residential streets. There is a strong feeling that Acton is being left behind compared to the adjacent shopping centres of Ealing and Shepherd's Bush, and that Acton might not get the best deal from the tram scheme. There is also strong concern about displacement of traffic, particularly north-south traffic, should the High Street be closed to through traffic.

Accordingly, this has led to a general favouring of options which keep both traffic and tram on the High Street, with demolition used where necessary to create the space. Demolition is seen as a good opportunity for the regeneration of the town centre.

Ealing

In Ealing, the concern of consultees centres on the displacement of traffic by the tram onto residential roads. This is already felt to be a problem, and one which would be significantly worsened by the introduction of the tram. Other issues on which there is a strength of feeling are environmental effects of displaced traffic or of new diversion roads, particularly on Haven Green, and integration of the tram with Ealing Broadway station.

Opinions on favoured options are mixed though, again, selective demolition is widely seen as a means to accommodate the traffic through the pinch-point on the Broadway.

West Ealing

West Ealing is also perceived to be suffering in economic terms from the success of Ealing town centre to the east. Consultees have strong concerns that, without a strong regeneration plan, the tram would accelerate the decline of the town centre by improving accessibility to Ealing. This fear is strengthened by the view that the option to close the Uxbridge Road to through traffic at this point would reduce passing trade for the shops in the centre. The effect of displaced traffic is also concern, particularly on the potential diversion routes and at the "lido junction" where Northfield Avenue meets the Uxbridge Road, which is already heavily congested.

Hanwell

Traffic management dominates the concerns of Hanwell consultees. Of particular interest is the effect the tram would have on north-south movements of traffic, both through the town centre, and at the Iron Bridge junction, and what levels of this traffic might be diverted onto other roads. The location of tram and bus stops is an important issue here, as is maintaining and improving access to Ealing Hospital.

Again, selective demolition has been considered by consultees a potential solution to maintaining effective movements of traffic and tram and regenerating the town centre.

Southall

Consultees in Southall have raised a range of issues in relation to the introduction of the tram. An over-riding concern is that the range of proposed transport and property developments (the tram, Crossrail, the gas works development, the new link road) in the area are co-ordinated in a strategic manner. The provision of car parking in the area is also a concern.

Consultees have raised concerns about the effect of trams on businesses in the area, both in the construction phase and the impact on street trading of any reduction in pavement widths.

TRANSPORT FOR LONDON

TfL BOARD

SUBJECT: PRUDENTIAL BORROWING

MEETING DATE: 29 APRIL 2004

1. SUMMARY

- 1.1 This paper sets out to inform the Board about the new powers available to TfL to finance capital investment under the prudential borrowing regime and seeks the Board's approval of a plan for using those powers.

Prudential borrowing regime

- 1.2 Up until April 2004, TfL has been subject to a financial regime which severely restricted its ability to enter into any financing arrangements other than off-balance sheet PFI/PPP projects. This means that much capital expenditure competes with other pressures for constrained funding and can lead to deferral of capital investment.
- 1.3 The prudential borrowing regime which is effective from April 2004 gives authorities such as TfL the opportunity to make their own decisions about capital financing. Borrowing will allow TfL to implement projects within the Capital Plan that may otherwise have been delayed because of immediate funding constraints. The regime provides indicators which authorities must use to determine whether their proposed borrowing is prudent and against which they must monitor their borrowing. The Mayor has set a limit for TfL that would allow for direct borrowing of £400m in 2004/05.

TfL's proposed borrowing plan

- 1.4 It is proposed that TfL uses the flexibility to borrow up to the £400m limit. However, the extent of borrowing commitments TfL enters into will depend on the progress with the projects identified as being suitable for borrowing. No significant borrowing commitments are proposed to be made before the outcome of the Government's Spending Review is known. But we are seeking approval now in order to set in train the key pieces of work required to deliver the borrowing plan, and to set indicators consistent with the limit that has been set by the Mayor. There is scope for continued borrowing in subsequent years of the Business Plan but, again, that will depend on the outcome of the Spending Review. It should be noted that the ultimate implementation of a borrowing plan across several years will require the organisation to take a longer-term view of its obligations.

2. THE PRUDENTIAL BORROWING REGIME

2.1 TfL's existing borrowing powers

- 2.1.1 Under S111 of the GLA Act 1999, TfL, along with the GLA and its other functional bodies, is subject to the financial regime for local authorities. Up to the end of March 2004, this included the Capital Finance Regulations made under the Local Government and Housing Act 1989. Broadly speaking, this meant that the only financing arrangements TfL could enter into without specific approval from central Government were PFI/PPP projects which were not recognised on its balance sheet (that is, a project where the concessionaire raised the finance and our auditors confirmed that the majority of the risks attached to that finance rested with the concessionaire).
- 2.1.2 Under this regime, to enter into an on-balance sheet PFI/PPP project or any direct borrowing, TfL needed to provide "credit cover" in the first year of a project equal to the total value of the financing arrangement. This could either be done from TfL's own resources or by a "credit approval" from central Government. The former meant creating a cash reserve for the borrowing (which makes the borrowing pointless); obtaining the latter could in practice be as difficult as obtaining the cash from Government.
- 2.1.3 This was seen with the project to extend the DLR to City Airport. Prior to the transfer of DLR to TfL, the project had been assumed to be an off-balance sheet project. However, our auditors took the view that because the revenue risk was being borne by TfL, the project should be recognised on TfL's balance sheet. Completion of the contract was delayed whilst a credit approval was obtained despite all parts of Government being strongly in favour of the project.

2.2 Why is borrowing important?

- 2.2.1 TfL has very high expenditure on capital assets with long useful lives as set out in the 2004/05 Capital Plan. Transport assets will often have useful lives of thirty years or more. If investment in these assets is paid for out of cash upfront, that will create a high peak in the cash requirement in the year (or years) that the asset is built followed by a much lower requirement for the maintenance of the asset through its useful life. The cash requirement for capital expenditure is one of the components in the funding gap in TfL's Business Plan from 2005/06 onwards. Using financing helps smooth the profile of that cash requirement across the useful life of the asset, although it does of course incur additional interest costs.
- 2.2.2 This will enable better allocation of capital and revenue spending in the planning process. Considering the whole life cost of assets over their useful life allows us to make better use of our resources. When budgets are constrained, the peaks of cash requirement for capital investment can mean that the investment is delayed. This has happened historically with London Underground's investment as with other investment in transport in the UK.

- 2.2.3 This issue is common to industries with high capital expenditure and, in particular, transport organisations in other cities in Europe and the US. For example, Paris and New York face similar challenges to London in providing transport infrastructure. Unlike London, they have been able to make use of financing in the context of multi-year funding frameworks for their capital investment, and they have therefore been better able to respond to their transport challenges and maintain consistent levels of capital funding.
- 2.2.4 New York Metropolitan Transport Authority has effectively rebuilt and re-equipped over 700 miles of subway lines, installed a modern bus fleet, restored nearly 600 miles of commuter rail network, and maintained 9 major bridges and tunnels through five-year agreements. A combination of grant funding and bonds was used to finance the capital investment.
- 2.2.5 Paris has achieved a steady investment in system maintenance and renewals, while adding the RER routes to its underground network. While its framework is somewhat different to New York's, it too has long-term agreements on capital support, and its transport organisations support investment through the issuance of debt.
- 2.2.6 A financial regime which in effect allows only the use of the off-balance PFI/PPP projects imposes considerable constraints on TfL's ability to use financing:
- There are high fixed costs of establishing such projects which do not depend on the size of the project. That means they are unlikely to be cost-effective for small projects (for example, the Greenwich Waterfront Transit and East London Transit projects).
 - There may be contractual interfaces with existing projects which make it difficult to allocate the risks efficiently under a new PFI/PPP project. For example, the project to introduce three-car trains on the DLR between Lewisham and Bank. This is a six-year project totalling £150m and involves extending platforms, modifying the signal system, and buying extra rolling stock. Such a project would be unduly complex to structure as a PFI given the interfaces with the other DLR PFIs and the operating franchise.
 - It may not represent value for money to transfer risk to a third party to ensure the project is off-balance sheet. For example, the history of light rail projects in the UK (including Croydon Tramlink) has made investors and lenders to these projects nervous of taking revenue risk and it is likely to be better value for money for TfL to retain this risk as part of its overall portfolio of revenues.

2.3 The Prudential Code

- 2.3.1 The Local Government Act 2003, which came into effect on 1 April 2004, replaces the Capital Finance Regulations with a new prudential borrowing regime. This removes the requirement for credit cover for on-balance sheet obligations and direct borrowing. Instead, local authorities will have the ability and the responsibility to determine for themselves what borrowing it is

appropriate for them to enter into (subject to any capping as discussed below).

2.3.2 There are two key principles of the new regime:

- (1) borrowing is for capital purposes only (ie, long-term borrowing cannot be used to fund operations); and
- (2) the level of borrowing is prudent.

Essentially, therefore, the Board must satisfy itself that any borrowing is used to fund capital expenditure and that TfL can afford to repay the debt it incurs.

2.3.3 The legislation does not set out what constitutes affordable borrowing: it only requires that a limit be set for affordable borrowing (in TfL's case this is set by the Mayor). However, the Chartered Institute of Public Finance Accountants (CIPFA) have developed a Prudential Code which enshrines the principles of the prudential borrowing regime. Local authorities must have regard to this Code in developing their prudential borrowing plans. As part of their overall auditing responsibilities, TfL's auditors will review TfL's compliance with this Code. The Code includes the affordable limit (referred to in the Code as the authorised limit) set out in the Act, as well as a range of other indicators that need to be set and regularly monitored.

2.3.4 The authorised borrowing limit is the total amount of external debt that can be outstanding at any one time, both direct borrowing and obligations under on-balance sheet projects (which, for TfL, include the London Underground PPP and the DLR City Airport project). It is intended to be an absolute ceiling that must not be exceeded during the period for which it applies. In TfL's case, this limit is set by the Mayor and he must consult TfL and the GLA before doing so. The Mayor can vary the limit during the year, again after consultation.

2.3.5 The Prudential Code also includes a range of indicators that enable the monitoring of capital financing over time. It is a requirement of the Code that performance against the indicators is monitored and any breach reported. The indicators are set as part of the Treasury Management Strategy approved by the Board and the quarterly Treasury Management Report presented to the Finance Committee (which reports to the Board) will report on performance, to ensure ongoing scrutiny of the indicators. These indicators can be revised by the Board if necessary during the year.

2.3.6 In discussing a prudential borrowing plan in section 3 below, we set out the indicators under that plan. We also set out wider tests of affordability that have been assessed as part of the development of the plan.

2.3.7 Central Government has reserve powers to enable it to impose a cap if the total level of local government borrowing reaches levels that are damaging to the national economy, or if a particular authority is believed to be borrowing more than it can afford. However, though the Government retains these

reserve powers, the clear objective of the new regime is to enable local authorities to make their own decisions about appropriate use of financing.

2.4 TfL's current position

- 2.4.1 The Government consulted local authorities on their borrowing plans for 2004/05 and have determined that they do not need to cap that borrowing. In making this decision the Government took into account the potential of capital expenditure suitable for borrowing, summarised in Table 3.1 below. Accordingly, the Mayor has now confirmed a limit for 2004/05 that would allow for direct borrowing of £400m.
- 2.4.2 We have previously presented to the Finance Committee an analysis of the prudential indicators both if no direct borrowing were undertaken in 2004/05 and if the maximum amount of £400m was undertaken. Given that the borrowing limit had not been set at that point, the indicators formally adopted by the Board in March were those which were based on no direct borrowing. However, in future years we anticipate fully integrating the prudential borrowing plan into the Business Planning process, so that the borrowing plan is approved by the Board at the same time as the Budget before the start of the financial year. Thus, in future years, the ability to finance capital investment and thus assess its whole life cost spread over its useful life will be part of the process of selecting and prioritising projects for the Business Plan. Clearly the cost of using finance needs to be included in project appraisal.
- 2.4.3 The introduction of the prudential borrowing regime provides TfL with increased flexibility, but it does not in itself address more fundamental issues with our funding framework. Our formal funding agreements with Government are still relatively short-term compared to comparable cities abroad, and, in the new regime, capping decisions on borrowing are formally made only on an annual basis. We continue to pursue the goal of a formal longer-term funding framework to enable greater predictability and stability. Indeed, the opportunity that prudential borrowing provides to improve our capital and revenue planning may provide a useful spur. However, this paper is focused on making use of prudential borrowing within the existing funding framework.

3. THE PROPOSED BORROWING PLAN

3.1 Borrowing over the period of the Business Plan

3.1.1 Given that prudential borrowing can only be used to fund capital expenditure, the starting point of our analysis is the capital expenditure in the Business Plan. TfL's 2004/05 Budget and Business Plan distinguish between our Operational and Capital Plans. This approach, taken for the first time in the 2004/05 Business Plan, enables a clear separation to be made between activities to support the delivery and running of transport services on the one hand and capital investment on transport infrastructure on the other. The Capital Plan is thus the starting point for the prudential borrowing analysis.

3.1.2 Not all of the capital expenditure in the Business Plan is suitable for borrowing:

- some is already covered by existing PPP/PFI contracts;
- some is expenditure incurred before significant third-party approvals (such as parliamentary approvals and planning permissions) have been achieved;
- some is in respect of shorter-life assets, where there is likely to be little benefit from spreading the cost; and
- some is regular annual expenditure where again, there is little benefit from spreading the cost over several years.

3.1.3 Table 3.1 shows the levels of expenditure in the full Business Plan that represent potential applications of prudential borrowing.

Table 3.1: Financeable capex

£m	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Financeable capex	400	555	551	551	445	380

3.1.4 This table then can be seen as the maximum potential for prudential borrowing in this period based on the current Business Plan. A schedule in **Annex 1** sets out detail on each project for which prudential borrowing has the potential to be appropriate. It should be noted that this does not imply that borrowing would be arranged specifically for each project: the costs of doing so would be too high.

3.1.5 Many of the projects will also have associated operating expenditure (the costs of operating and maintaining the capital asset) and these costs are also set out in the schedule in Annex 1. Some also generate revenues, although given the nature of TfL's operations, very few will generate sufficient revenues to cover their operating and capital costs.

3.1.6 Clearly, spreading the cost of the capital expenditure over its useful life reduces the cash requirement in the early years of the Business Plan. Against this needs to be offset any operating costs and the debt service incurred from the borrowing. The build up of debt service costs means that by the end of the business plan period use of borrowing does not significantly

reduce the cash requirement. Also, prudential borrowing cannot address funding requirements arising from operating expenditure. Table 3.2 below sets out the cash effects of the maximum potential borrowing during the period of the Business Plan.

Table 3.2: Impact of full borrowing within full plan

£m	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Funding requirement without use of borrowing	0	(1020)	(985)	(960)	(962)	(1012)
Borrowing cashflows	400	555	551	551	445	380
Cumulative debt service ¹ cashflows	(20)	(95)	(144)	(191)	(228)	(259)

3.1.7 At this stage, when we do not yet know the outcome of the 2004 Spending Review, we are not seeking the Board's approval to borrowing for later years of the Business Plan.

3.2 The borrowing plan for 2004/05

3.2.1 The borrowing plan for 2004/05 takes as its starting point the £400m of suitable capital expenditure identified above. The Mayor has set an authorised limit for TfL borrowing that includes the potential for up to £400m of direct borrowing in 2004/05. We are now seeking approval for a borrowing plan that works within the £400m identified above.

3.2.2 The plan is to use borrowing for the £400m of capital expenditure identified in 3.1 above, and set out in detail in annex 1, provided that the project receives any remaining internal and/or external approvals to proceed. Not all the projects identified satisfy this condition: some still require internal TfL approvals; others require external approvals such as planning permissions. Approximately £100m of the identified £400m relates to expenditure that has not yet been approved. These projects will follow their normal approval process under the Standing Orders and it is proposed that the decision about how best to finance them is considered in parallel.

Flexibility of projects within the borrowing plan

3.2.3 Given that the progress of projects will vary during the year, it will be necessary to retain some flexibility about how projects are financed within the prudential borrowing plan. It is likely that some projects will not progress as quickly as currently anticipated: for example, some of the external approvals may take longer to achieve. This is recognised in the Business Plan through the inclusion of an amount for over-programming. We have not explicitly included an over-programming element in the borrowing plan but we will need to consider the plan against progress of the projects during the year.

¹ The debt service calculation assumes that the costs are spread over the useful asset lives of individual projects, and that the interest rate is 6%. For calculation purposes, the borrowing is assumed to take place at beginning of year in all years except 2004/05, where it is assumed to be mid-year. The debt service shown for a given year includes the debt service associated with borrowing engaged into in previous years.

- 3.2.4 In our analysis to date, we have assumed that we will borrow for capital expenditure in the year it is incurred. However, the capital expenditure associated with some projects extends over more than one financial year. Once we are clear that the project is proceeding, it may be appropriate to borrow for the full amount of the project to avoid the risk that we are not able to finance the expenditure in later years. This would be similar to the funding of a PFI/PPP project where all the funding is committed at the outset of the project. Such an approach is within the scope of the Prudential Code provided that we are always borrowing only for capital expenditure. Decisions on this would need to take into account existing borrowing limits, ability to borrow in future years, and considerations of value for money in relation to the reinvestment of debt proceeds.
- 3.2.5 We will also need to consider whether we need to revise the borrowing strategy once the outcome of the 2004 Spending Review is known. This will be considered in conjunction with any revisions to the Budget at that point. Financing will allow us to better allocate capital and revenue resources in any re-prioritisation required.

Approach to financing and treasury management

- 3.2.6 The prudential borrowing regime does not require any particular form of financing to be used; it concerns itself with the total obligations being entered into rather than the particular instrument. We would however need to be satisfied that TfL had the powers to use a particular instrument before entering into any agreement.
- 3.2.7 Some projects may be suited to a particular form of financing (leasing of new rolling stock for the DLR, for example). Most financing, however, is unlikely to be project specific. Financing would be incurred by TfL as a corporate entity rather than any of the subsidiary companies. The principal financing options are:
- (i) Borrowing from the Public Works Loans Board;
 - (ii) Borrowing from the European Investment Bank;
 - (iii) Borrowing from commercial banks;
 - (iv) Issuing bonds in the capital markets; and
 - (v) Leasing.

These different options are set out and discussed in **Annex 2**.

- 3.2.8 In developing a financing plan, we will need to take into account factors such as management of interest rate risk, and flexibility to amend the plan as circumstances require. No decision has been made at this stage as to the type of financing that will be used. The financing does not need to be raised in advance of the expenditure being committed so we can await the outcome of the Spending Review before committing to any general financing. We will come back to the Board before committing to any general financing.
- 3.2.9 We do not at this stage propose to make any changes to the Treasury Management Strategy approved by the Board in March, other than to

substitute revised prudential indicators that reflect the planned borrowing. Annex 2 also sets out more background on this point.

3.3 Risks of the proposed plan

3.3.1 The principal risks of the proposed borrowing plan are:

- (i) Affordability in future years;
- (ii) Borrowing being used by Government to substitute for Transport Grant;
- (iii) Deterioration of TfL's credit rating from incurring additional commitments;
- (iv) Government restricting access to borrowing in future years

(i) Affordability analysis

3.3.2 The principal risk of prudential borrowing is over-commitment of projects leading to affordability problems in later years as debt service obligations build up. Clearly, analysis of the affordability of any borrowing is dependent on assumptions about future income and expenditure. For the purposes of this analysis, and to be consistent with the Business Plan approved by the Board, we have assumed that expenditure follows the full Business Plan. To capture the potential borrowing, these indicators also assume the full potential use of borrowing in years after 2004/05. We have also used the income assumptions from the Business Plan and that the remaining funding shortfall is made up through additional grant. This analysis will need to be considered again alongside any revisions to the Budget once the outcome of the Spending Review is known.

3.3.3 The prudential indicators are designed to give information about the affordability of the plan. Details of the indicators are set out in **Annex 3**. These show that:

- As per a key specific requirement of the Prudential Code, the net borrowing for 2004/05 is less than the capital financing requirement at 31 March 2007. This is the Code's check that any borrowing is for capital purposes.
- The potential direct borrowing would represent a relatively small addition to the financing already committed in the London Underground PPP and on-balance sheet PFIs. These existing commitments account for over 80% of the authorised limit for external debt in the attached borrowing plan.

3.3.4 The other aspects of affordability are related to the uncertainty around future levels of Transport Grant and continued use of borrowing in future years and these are discussed further below.

(ii) Substitution of borrowing for grant

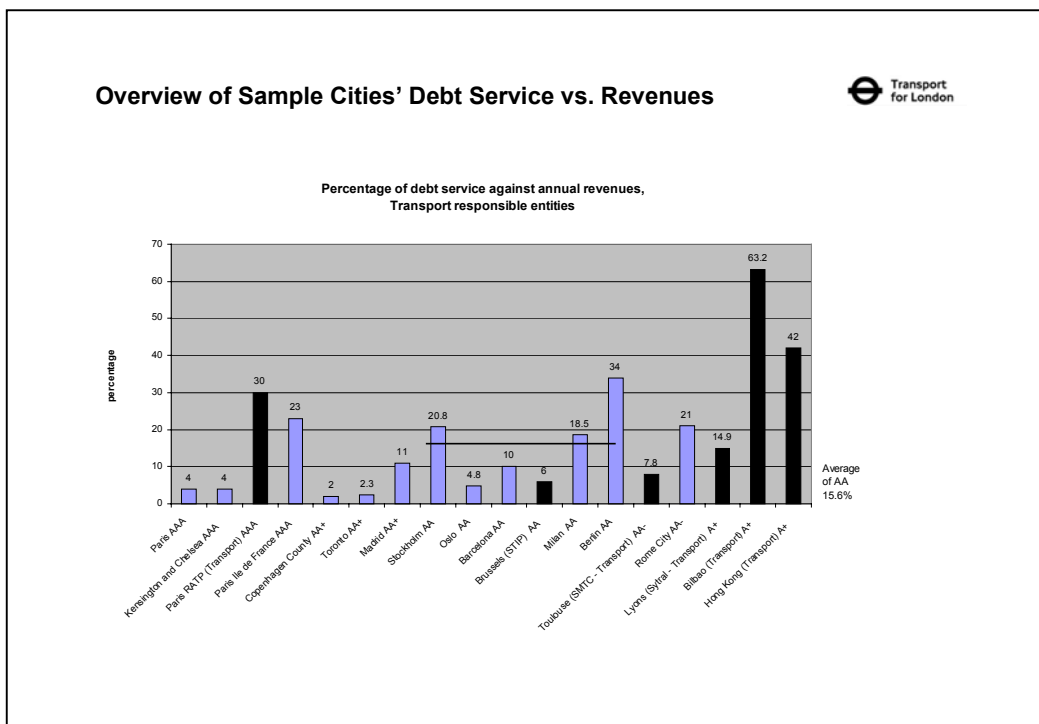
3.3.5 We have discussed our plans fully with Government including DfT and the Treasury and they understand our proposals. Borrowing does not provide new funding: by spreading the cost of capital investment, it reduces the funding requirements in early years but it also creates debt service obligations. Thus, it would create future difficulties if the Government were to use our ability to borrow as an opportunity to cut the Transport Grant.

3.3.6 We are seeking to mitigate this risk by working closely with Government as we develop our plans and also not entering into any significant financing commitments until the outcome of the current Spending Review is known.

(iii) Deterioration of credit rating

3.3.7 TfL has AA credit ratings from Standard & Poor's and Fitch. Clearly, engaging in debt has the potential to impact on these ratings. However, we wish to maintain these ratings and do not intend to enter into financing commitments that will prejudice them. Accordingly, we will work closely with the rating agencies as we develop any financing plans to ensure that our ratings are not downgraded. This independent scrutiny of our plans will provide a powerful check on the prudence of any borrowing we enter into, and constraint on over-commitment of projects.

3.3.8 The levels of direct borrowing envisaged during the period of the Business Plan are well within the standard for AA-rated transport entities. The chart below shows the debt service ratios for a number of European government entities responsible for transport. The average ratio for AA-rated agencies is 15.6% and, as set out in annex 3, the TfL ratio would fall well within that level.



(iv) Reliance on borrowing in future years

3.3.9 We have analysed what commitments are created in future years by undertaking borrowing of £400m in 2004/05.

3.3.10 There are two basic types of unfunded future commitment created by the potential 2004/05 borrowing:

- (a) the debt service on the £400m of 2004/05 borrowing; and
- (b) the unfunded commitments associated with continued delivery of projects which by the end of 2004/05 would have reached a point where they could not be put on hold.

3.3.11 The key point to note is that the additional obligations (including debt service) associated with delivery of these projects amounts to approximately £50m per year over the business plan period. While this is not insignificant, it is manageable within our overall budgeted expenditure of around £5bn per year. **Annex 4** sets out more details.

3.4 Wider opportunities of prudential borrowing

3.4.1 The work on prudential borrowing presented here focuses on opportunities to make use of financing for capital projects already within the Business Plan, but currently assumed to be funded on a cash basis. There are, however, other opportunities for using prudential borrowing to finance capital expenditure more efficiently.

3.4.2 First, there is the potential to use prudential borrowing as an alternative to other sources of financing. This might include:

- financing variations to PFI/PPP contracts where the financing arranged by the concessionaire is expensive and it may not be possible to achieve the degree of risk transfer as with the original project;
- financing of capital expenditure currently bundled within service contracts (eg the provision of new vehicles under bus contracts).

3.4.3 Secondly, projects not in the Business Plan may, with the possibilities provided for by prudential borrowing, be deliverable by TfL. For example, the extension of the East London Line could be financed under prudential borrowing, although undertaking a project on this scale would require an understanding with Government in relation to support of the obligations being undertaken.

3.4.4 These opportunities are discussed further in **Annex 5**.

4. RECOMMENDATIONS

- 4.1 The Board is asked to NOTE and APPROVE the contents of this report and in particular to APPROVE the revised prudential indicators set out in annex 3.

Annexes

Annex 1: Multi-year prudential borrowing schedule

Annex 2: Financing options and treasury management

Annex 3: Revised prudential indicators

Annex 4: Future commitments analysis

Annex 5: Wider opportunities for applying prudential borrowing

Annex 1: Potential Applications of Direct Borrowing within Full Plan

2004/05 Prices (£ millions)	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Capital Expenditure gross of 3rd party funding	1,301	1,725	1,633	1,494	1,371	1,338
<i>of which</i> Capital Plan expenditure (net of 3rd party funding)	1,181	1,595	1,511	1,457	1,344	1,329
<i>of which</i> Capital Expenditure appropriate for direct borrowing	400	555	551	551	445	381
Breakdown of Capital suited to direct borrowing						
Surface Transport						
London Buses	67	93	113	113	73	65
Street Management	136	205	140	124	104	86
Other	1	4	1	0	1	1
	204	302	254	237	177	152
London Underground	151	191	163	164	149	121
London Rail	3	3	4	2	0	0
Docklands Light Railway	33	53	113	106	67	10
Major Projects (currently in development)	3	4	10	34	52	97
Central Directorates	6	1	7	8	1	0
Total TfL	400	555	551	551	445	381

Potential Applications of Direct Borrowing within Full Plan

2004/05 Prices (£ thousands)				2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Surface Transport									
London Buses									
East London Transit & Greenwich Waterfront Transit	Full Plan	Construction of bus ways for phase 1 of the Greenwich Waterfront Transit and East London Transit Schemes	Total capital expenditure	600	6,600	31,000	26,300	2,000	500
			Capital funded through financing	600	6,600	31,000	26,300	2,000	500
			Remaining capital expenditure	0	0	0	0	0	0
			Net incremental opex	0	0	0	0	0	0
Technical Services	Baseline	Deliver AVL system comprising on-bus equipment, on street AVL beacons and garage workstations. Countdown passenger information systems on street and new radio communications	Total capital expenditure	11,970	22,000	19,050	21,530	13,530	10,530
AVL & Countdown and Radio Technology Rollout	Full Plan		Capital funded through financing	11,570	22,000	19,050	21,530	13,530	10,530
			Remaining capital expenditure *	400	0	0	0	0	0
			Net incremental opex	0	938	1,331	1,753	1,938	2,259
Ticket Technology & Prestige Roadside Ticket Machines	Baseline	Provision of Roadside Ticket Machines to support extension of 'Cashless' bus operation.	Total capital expenditure	1,330	1,850	0	0	0	0
			Capital funded through financing	1,330	1,850	0	0	0	0
			Remaining capital expenditure	0	0	0	0	0	0
			Net incremental opex	0	116	656	646	346	(1,211)
Bus Garages	Full Plan	New bus garages at Hanworth Road, West Ham and North Acton. Refurbishment of Walworth garage.	Total capital expenditure	7,050	250	750	2,000	1,000	0
			Capital funded through financing	7,050	250	750	2,000	1,000	0
			Remaining capital expenditure	0	0	0	0	0	0
			Net incremental opex	0	0	0	0	0	0
Bus Stations	Baseline	Modernisation and/or expansion of bus stations at Hammersmith, Finsbury Park, Golders Green, Ealing Broadway, West Croydon and Hounslow.	Total capital expenditure	3,610	7,275	7,025	8,750	5,200	3,000
	Full Plan		Capital funded through financing	3,610	7,275	7,025	8,750	5,200	3,000
			Remaining capital expenditure	0	0	0	0	0	0
			Net incremental opex	0	0	0	0	0	0
Transport Policing & Enforcement Directorate (TPED)	Baseline	Equipment to support the enforcement of parking restrictions and processing of penalty charge notices.	Total capital expenditure	2,586	5,122	5,122	5,122	1,789	1,789
	Full Plan		Capital funded through financing	2,586	3,336	3,336	3,336	0	0
			Remaining capital expenditure **	0	1,786	1,786	1,786	1,789	1,789
			Net incremental opex	0	(1,411)	(1,411)	(1,411)	(1,411)	(1,411)

* Funded through carryforward

** Not all capex appropriate for financing

Potential Applications of Direct Borrowing within Full Plan

2004/05 Prices (£ thousands)				2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Bus Priority	Full Plan	<i>Physical bus priority implementation (bus lanes, etc) on roads to achieve a 'step change' improvement in bus reliability and journey time and partially protect buses from increased traffic congestion.</i>	<i>Total capital expenditure</i>	40,700	52,120	51,680	51,210	51,170	51,140
			<i>Capital funded through financing</i>	40,700	52,120	51,680	51,210	51,170	51,140
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	(500)	(500)	(500)	(500)	(500)
Victoria Coach Station									
Contingency for leasehold purchase	Baseline	<i>Contingency for leasehold purchase of two sites whose existing leases expire in 2005. This would reduce the Coach station's lease costs.</i>	<i>Total capital expenditure</i>	0	3,000	0	0	0	0
			<i>Capital funded through financing</i>	0	3,000	0	0	0	0
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	(190)	(190)	(190)	(190)	(190)
London River Services									
Infrastructure	Full Plan	<i>Construction of pier at Wapping</i>	<i>Total capital expenditure</i>	500	1,000	1,000	0	500	500
			<i>Capital funded through financing</i>	500	1,000	1,000	0	500	500
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0
Congestion Charging - Western Extension									
Full Plan	Full Plan	<i>Western extension of Congestion Charging encompassing the western parts of Westminster and much of Kensington and Chelsea.</i>	<i>Total capital expenditure</i>	18,111	87,100	0	0	0	0
			<i>Capital funded through financing</i>	18,111	69,680	0	0	0	0
			<i>Remaining capital expenditure *</i>	0	17,420	0	0	0	0
			<i>Net opex</i>	22,290	0	10,900	(5,200)	(5,200)	(5,200)
Street Management									
Street Management Services									
Major Route Improvements	Baseline	<i>A23 Coulsdon Town Centre Improvement, A406 schemes and network improvement schemes at Purley Cross, Wandsworth and Catford.</i>	<i>Total capital expenditure</i>	18,800	18,800	16,000	35,000	28,700	26,500
	Full Plan		<i>Capital funded through financing</i>	18,800	18,800	16,000	35,000	28,700	26,500
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0
World Squares									
Parliament Square Redevelopment	Full Plan	<i>Improve pedestrian access into and around Parliament Square - part of the world Squares for All project.</i>	<i>Total capital expenditure</i>	0	5,300	16,100	0	0	0
			<i>Capital funded through financing</i>	0	5,300	16,100	0	0	0
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0

* Not all capex appropriate for financing

Potential Applications of Direct Borrowing within Full Plan

2004/05 Prices (£ thousands)				2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Major Safety Enhancements	Baseline	<i>Bridge replacements (A406 Hanger lane and A40 Western Avenue) and refurbishments/safety enhancements to the Blackwall, Rotherhithe, Fore Street Tunnels and Westminster Bridge.</i>	<i>Total capital expenditure</i>	33,712	47,300	40,300	17,500	9,600	10,300
			<i>Capital funded through financing</i>	33,712	47,300	40,300	17,500	9,600	10,300
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0
Capital Renewal on the TLRN	Baseline Full Plan	<i>Capital renewal constitutes investment to the TLRN to upgrade or renew its structure and function. This includes re-surfacing or re-construction of carriageways and footways.</i>	<i>Total capital expenditure</i>	41,200	57,900	57,900	57,900	50,500	48,100
			<i>Capital funded through financing</i>	24,149	33,192	35,383	35,383	30,494	25,653
			<i>Remaining capital expenditure *</i>	17,051	24,708	22,517	22,517	20,006	22,447
			<i>Net incremental opex</i>	0	0	0	0	0	0
Borough Principal Roads renewal	Baseline Full Plan	<i>Allocation of grant to the London Boroughs, to tackle the maintenance backlog and bring the roads up to a serviceable state of repair.</i>	<i>Total capital expenditure</i>	47,000	52,100	56,100	60,100	64,100	58,900
			<i>Capital funded through financing **</i>	22,524	20,019	24,233	27,395	28,489	19,633
			<i>Remaining capital expenditure *</i>	24,476	32,081	31,867	32,705	35,611	39,267
			<i>Net incremental opex</i>	0	0	0	0	0	0
Borough Roads - Bridge strengthening (to allow for 44 ton vehicles)	Baseline Full Plan	<i>To provide funding for the Borough structure strengthening programme to raise the loading capacity of structures to the new EC standard of 44 tons.</i>	<i>Total capital expenditure</i>	18,900	10,600	8,400	8,400	6,400	4,200
			<i>Capital funded through financing **</i>	18,900	10,600	8,400	8,400	6,400	4,200
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0

* Financing assumed to be used only for clearing renewal backlog

** Project payments to Boroughs for capital works listed in budget as revenue expenditure, but classified as capital within business plan, and permitted as direct borrowing.

Potential Applications of Direct Borrowing within Full Plan

2004/05 Prices (£ thousands)				2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
London Rail									
Fares Integration with the National Rail Network	Full Plan	<i>Extension of Smartcard availability to the National Rail Network.</i>	<i>Total capital expenditure</i>	2,800	3,200	3,550	1,900	0	0
			<i>Capital funded through financing</i> *	2,800	3,200	3,550	1,900	0	0
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	525	975	1,775	2,175	2,175
Docklands Light Railway									
Infrastructure	Baseline	<i>Ongoing maintenance to the DLR infrastructure for the continuing running of the passenger service, surveys, communications upgrade and minor franchise related projects.</i>	<i>Total capital expenditure</i>	3,053	1,541	4,647	3,249	1,652	1,852
			<i>Capital funded through financing</i>	3,053	1,541	4,647	3,249	1,652	1,852
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	0	50	0	0	50
3 car upgrade (Bank - Lewisham section)	Full Plan	<i>Key capacity enhancement project to allow the operation of longer (3-car) trains between Bank and Lewisham necessary to meet future demand projections. Includes purchasing of new vehicles and the acquisition of land.</i>	<i>Total capital expenditure</i>	5,800	10,360	57,711	53,312	19,162	3,399
			<i>Capital funded through financing</i>	5,800	10,360	57,711	53,312	19,162	3,399
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	(1,547)	(1,603)
New Rail cars	Baseline	<i>An additional 24 more of the same' vehicles and incorporating DDA disabled persons enhancements, increasing the existing fleet total of B92 vehicles from 70 to 94.</i>	<i>Total capital expenditure</i>	797	0	0	0	0	0
			<i>Capital funded through financing</i>	797	0	0	0	0	0
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0
Railcar refurbishment of existing fleet	Baseline	<i>Refurbishment of existing fleet of 94 vehicles to improve reliability, maintenance and include DDA - disabled persons enhancements.</i>	<i>Total capital expenditure</i>	10,341	6,362	0	0	0	0
			<i>Capital funded through financing</i>	10,341	6,362	0	0	0	0
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0
London City Airport extension	Baseline	<i>Extension of DLR to London City Airport including intermediate stations at West Silvertown, Pontoon Dock and King George V with passive provision for two other stations to be opened in line with development. To be let as 30 year DBFM concession.</i>	<i>Total capital expenditure</i>	3,729	5,669	2,847	1,298	983	784
			<i>Capital funded through financing</i>	3,729	5,669	2,847	1,298	983	784
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net opex</i>	0	3,606	10,955	10,319	9,490	8,780

* Project payments to SRA for capital works listed in budget as revenue expenditure, but classified as capital within the business plan and permitted as direct borrowing.

Potential Applications of Direct Borrowing within Full Plan

2004/05 Prices (£ thousands)			2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	
Woolwich / Arsenal extension	Full Plan	<i>Planning and contract work for the extension of the railway under the Thames from King George V to Woolwich Arsenal. Extension to be let as a concession.</i>	<i>Total capital expenditure</i>	8,170	8,194	9,292	1,736	996	0
			<i>Capital funded through financing</i>	8,170	8,194	9,292	1,736	996	0
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net opex</i>	0	0	0	0	9,123	5,401
Stratford Station upgrade (double track platform)	Baseline	<i>Provision for double track DLR platform at Stratford to replace existing original DLR single narrow platform which is extremely difficult to operate and requires crowd control on a daily basis.</i>	<i>Total capital expenditure</i>	500	9,434	8,165	0	0	0
			<i>Capital funded through financing</i>	500	9,434	8,165	0	0	0
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net opex</i>	0	237	(170)	(203)	(215)	(147)
Velocity (On-train security & diagnostic system)	Baseline	<i>To provide on-train CCTV and recording facilities for passenger security</i>	<i>Total capital expenditure</i>	800	0	0	0	0	0
			<i>Capital funded through financing</i>	800	0	0	0	0	0
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0
Stratford International	Full Plan	<i>Extension of DLR from Canning Town using existing North London Line alignment to Stratford Regional station (with 3 new intermediate stations) and new construction onwards to Stratford International Station.</i>	<i>Total capital expenditure</i>	500	11,265	29,469	27,319	8,710	755
			<i>Capital funded through financing</i>	0	11,265	29,469	27,319	8,710	755
			<i>Remaining capital expenditure *</i>	500	0	0	0	0	0
			<i>Net incremental opex</i>	0	0	0	997	906	(45)
Barking	Full Plan	<i>Design, planning and contract work for extension of DLR to Barking Reach development area and Dagenham Dock involving 4.5km of new railway and up to 5 new stations.</i>	<i>Total capital expenditure</i>	299	299	697	1,194	3,004	3,426
			<i>Capital funded through financing</i>	0	0	0	1,194	3,004	3,426
			<i>Remaining capital expenditure *</i>	299	299	697	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0
Double Tracking (North Route)	Full Plan	<i>Part of the existing section of double track between Bow Church and Stratford is proposed to be double tracked as part of CrossRail's proposals. This would leave a short section of track on the approaches to Stratford Station (about 2km) that would remain single track. This proposal is to double track this section resulting in the whole of the Stratford branch having double track.</i>	<i>Total capital expenditure</i>	0	0	579	18,345	32,521	0
			<i>Capital funded through financing</i>	0	0	579	18,345	32,521	0
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0

* Financing is not projected to be used for costs until TfL can reasonably anticipate that significant third-party approvals (and legislation, if required) would be likely for the project to move forward.

Potential Applications of Direct Borrowing within Full Plan

2004/05 Prices (£ thousands)				2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
TfL Centre									
Corporate Services									
Refurbishment of Buckingham Palace Road buildings	Baseline	<i>Refurbish Buckingham Palace Road buildings used by London Buses and Transport Policing</i>	<i>Total capital expenditure</i>	5,500	100	0	0	0	0
			<i>Capital funded through financing</i>	5,500	100	0	0	0	0
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0
Finance & Planning									
Light Transit Schemes									
Croydon Tramlink Extensions Development	Full Plan	<i>Extensions of Croydon Tramlink to serve new parts of South London (choice of which route options to take forward first is to be selected).</i>	<i>Total capital expenditure</i>	811	2,460	5,810	5,000	17,060	22,790
			<i>Capital funded through financing</i>	0	0	0	5,000	17,060	22,790
			<i>Remaining capital expenditure *</i>	811	2,460	5,810	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0
Interchanges									
	Baseline	<i>Interchange improvements at Finsbury Park, Victoria, West Hampstead and Stratford</i>	<i>Total capital expenditure</i>	3,118	7,693	5,273	3,508	9,415	24,599
	Full Plan		<i>Capital funded through financing</i>	1,377	3,300	1,575	3,508	9,415	24,599
			<i>Remaining capital expenditure *</i>	1,741	4,393	3,698	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0
East London Line Extension Integration									
East London Line Extension Integration facilities)	Full Plan	<i>Construction of multi-modal interchange (bus station, pedestrian, cyclist & taxi facilities) at Dalston. This complements the development of the extension to the East London Line being funded by the SRA.</i>	<i>Total capital expenditure</i>	1,950	710	2,730	3,242	3,030	0
			<i>Capital funded through financing</i>	1,950	710	2,730	3,242	3,030	0
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0
Major Road Schemes									
A206 Thames Road - Bexley	Full Plan	<i>Upgrade of 1.8km of A206 Thames Road from single to dual carriageway standard.</i>	<i>Total capital expenditure</i>	0	0	5,300	4,150	1,380	1,380
			<i>Capital funded through financing</i>	0	0	5,300	4,150	1,380	1,380
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0

* Financing is not projected to be used for costs until TfL can reasonably anticipate that significant third-party approvals (and legislation, if required) would be likely for the project to move forward.

Potential Applications of Direct Borrowing within Full Plan

2004/05 Prices (£ thousands)				2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
West London Transit	Full Plan	<i>This is a tram scheme that would run along Uxbridge Road from Uxbridge Town centre to Shepherd's Bush via the town centres of Acton, Ealing, Hanwell and Southall.</i>	<i>Total capital expenditure</i>	3,592	4,620	4,610	16,840	18,111	12,482
			<i>Capital funded through financing</i>	0	0	0	16,840	18,111	12,482
			<i>Remaining capital expenditure *</i>	3,592	4,620	4,610	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0
Thames Gateway Bridge	Full Plan	<i>Investigate, evaluate, prepare case, submit for Powers, procure and construct the Thames Gateway Bridge</i>	<i>Total capital expenditure</i>	3,658	3,686	2,561	1,639	2,781	36,132
			<i>Capital funded through financing</i>	0	0	0	1,639	2,781	36,132
			<i>Remaining capital expenditure *</i>	3,658	3,686	2,561	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0
London's Transport Museum									
Museum Services									
Museum Re-display	Full Plan	<i>Contribution towards the cost of a redisplay of the museum</i>	<i>Total capital expenditure</i>	110	1,320	7,304	7,631	530	0
			<i>Capital funded through financing</i>	110	1,320	7,304	7,631	530	0
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0

* Financing is not projected to be used for costs until TfL can reasonably anticipate that significant third-party approvals (and legislation, if required) would be likely for the project to move forward.

Potential Applications of Direct Borrowing within Full Plan

2004/05 Prices (£ thousands)				2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
London Underground Limited									
Heathrow Terminal 5 Extension and Station	Baseline	<i>LU contributions to extension of Piccadilly line to serve the planned Heathrow Airport Terminal 5 (project largely BAA funded).</i>	<i>Total capital expenditure</i>	0	35,500	31,078	4,644	0	0
			<i>Capital funded through financing</i>	0	4,400	3,700	4,600	0	0
			<i>Remaining capital expenditure *</i>	0	31,100	27,378	44	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0
White City Development	Baseline	<i>LU contribution to improved public transport to serve the site (scheme is largely Developer funded); the installation of Shepherd's Bush Mobility Impaired Person lift and creation of secondary means of escape.</i>	<i>Total capital expenditure</i>	3,000	6,000	5,000	0	0	0
			<i>Capital funded through financing</i>	3,000	6,000	5,000	0	0	0
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0
Wembley Park - Station redesign	Baseline	<i>Capacity and accessibility enhancements to Wembley Park station to be implemented in advance of opening of new National Stadium</i>	<i>Total capital expenditure</i>	6,000	24,000	0	0	0	0
			<i>Capital funded through financing ***</i>	5,600	7,132	0	0	0	0
			<i>Remaining capital expenditure **</i>	400	16,868	0	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0
Station Projects	Full Plan	<i>Station congestion relief and/or step free access at Camden Town, Tottenham Court Road, Bank and 14 other stations. Other congestion relief schemes.</i>	<i>Total capital expenditure</i>	49,587	74,165	93,385	96,534	91,825	83,138
			<i>Capital funded through financing</i>	41,043	74,165	90,940	79,874	91,825	83,138
			<i>Remaining capital expenditure</i>	8,544	0	2,445	16,660	0	0
			<i>Net incremental opex</i>	0	(723)	(723)	(753)	(803)	(901)
Safety and Security Initiatives	Baseline	<i>Development and implementation of safety systems and standards to ensure LU safety risk is As Low As Reasonably Practicable ("ALARP"). Measures include: implementation of train runback protection; fire precaution works; permanent speed restriction signage.</i>	<i>Total capital expenditure</i>	8,140	6,940	5,055	4,105	1,455	85
			<i>Capital funded through financing</i>	8,140	6,940	5,055	4,105	1,455	85
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net opex</i>	4,863	1,301	1,145	1,195	595	465
Power (UIP funded)	Baseline	<i>Enabling works</i>	<i>Total capital expenditure</i>	7,600	25,100	23,600	37,100	34,700	24,500
			<i>Capital funded through financing</i>	5,600	23,100	23,600	37,100	34,700	24,500
			<i>Remaining capital expenditure **</i>	2,000	2,000	0	0	0	0
			<i>Net opex</i>	1,140	982	3,321	6,630	7,043	8,080

* Substantial portion of specific 3rd party funding

** Funded through carryforward

*** Although appropriate for Direct Borrowing, this project depends in part on a separate funding agreement from Government

Potential Applications of Direct Borrowing within Full Plan

2004/05 Prices (£ thousands)				2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Connect (UIP funded)	Baseline	<i>Enabling works</i>	<i>Total capital expenditure</i>	27,700	21,800	21,200	23,700	8,800	10,600
			<i>Capital funded through financing</i>	4,700	15,800	21,200	23,700	8,800	10,600
			<i>Remaining capital expenditure *</i>	23,000	6,000	0	0	0	0
			<i>Net opex</i>	18,917	7,771	2,470	9,265	9,289	9,340
Revenue and Ticketing Initiatives	Baseline	<i>Continue to innovate around the Prestige project (eg look at feasibility of pocket sized Smartcard reading devices, for customers and staff). Development of Smartcard billing engine. Temporary removal of ticket line gates for Station refurbishments, modernisation, escalator replacements and accessibility projects.</i>	<i>Total capital expenditure</i>	3,610	3,950	2,310	3,210	3,610	2,710
			<i>Capital funded through financing</i>	3,610	3,950	2,310	3,210	3,610	2,710
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	(8,975)	(9,044)	(8,596)	(8,626)	(9,604)
Transition & Special Projects	Baseline	<i>Transition and Special Projects are selected projects that commenced prior to the start of the PPP which LUL requires Metronet and Tube Lines to complete. They include some congestion relief and modernisation works at selected stations, safety improvements to trains and a programme of improvement works to the Jubilee line.</i>	<i>Total capital expenditure</i>	31,000	13,700	11,500	11,500	8,600	0
			<i>Capital funded through financing</i>	31,000	13,700	11,500	11,500	8,600	0
			<i>Remaining capital expenditure</i>	0	0	0	0	0	0
			<i>Net incremental opex</i>	0	0	0	0	0	0
Jubilee Line Works	Baseline	<i>This Activity comprises a series of works on the Jubilee Line. "7th Car" Adding a 7th Car to the Jubilee Line Fleet, "Tidal Flow" - additional trains in the direction of peak flow during the busiest hours only, "Operational Improvements" and the opening of the East Entrance of Canary Wharf Station.</i>	<i>Total capital expenditure</i>	55,900	50,800	(2,000)	(12,000)	3,000	4,000
			<i>Capital funded through financing **</i>	47,900	35,800	0	0	0	0
			<i>Remaining capital expenditure *</i>	8,000	15,000	(2,000)	(12,000)	3,000	4,000
			<i>Net incremental opex</i>	0	0	0	0	0	0

* Funded through carryforward

** Although appropriate for direct borrowing, this project currently depends on a separate funding agreement from Government

Financing Options And Treasury Management

The prudential borrowing regime enables TfL to enter into either into private finance arrangements which would be recognised on our own balance sheet or direct borrowing. The regime does not specify any particular form of financing to be used. TfL could use any financing instrument which is within its statutory powers. There may, however, be some restrictions in our powers against some financing instruments, for example interest rate hedging.

On-balance sheet private finance

As discussed in Section 2, the prudential borrowing regime removes the need for credit cover for on-balance sheet PFI/PPP projects. This should promote more effective determination of which party can best manage risks on projects and better value for money. However, on-balance sheet projects will still be calculated as part of our prudential indicators (as the London Underground PPP and DLR City Airport project already are) whereas off-balance sheet projects are not. If, in future years, Government caps the total amount of borrowing we are able to enter into, this could re-introduce some bias towards off-balance sheet projects. Provided that capping is not a constraint, prudential borrowing can provide us with an opportunity to assess whether best value for money is delivered through a privately financed concession or through a public sector procurement financed through our own borrowing.

The project to extend the DLR to Woolwich is expected to be an on-balance sheet PFI since its structure is broadly similar to the City Airport project. The balance sheet treatment of other projects will be determined as their risk assessment is developed.

Direct borrowing

Under the previous regime, direct borrowing for capital purposes by a local authority required credit cover in a similar manner to on-balance sheet PFI projects. Again, this requirement is removed by the prudential borrowing regime. This is replaced by a need to demonstrate prudence, sustainability and affordability.

Direct borrowing could be undertaken in a number of ways:

- (i) Borrowing from the Public Works Loans Board;
- (ii) Borrowing from the European Investment Bank;
- (iii) Borrowing from commercial banks;
- (iv) Issuing bonds in the capital markets; and
- (v) Leasing.

The key features of each of these options are summarised in the table below.

Way forward

We will examine asset-specific forms of finance where these seem likely to offer better value for money than general borrowing. For example, we are considering lease financing for the procurement of new rolling stock on the DLR. The timing of this will clearly need to be co-ordinated with the procurement of the rolling stock.

As discussed in Section 2.2, the high transaction costs of project-specific financing solutions make these inappropriate for most of the projects likely to be covered by prudential borrowing. A general financing is likely to be more cost-effective.

The lowest interest rate is likely to be offered by the Public Works Loans Board, an agency of the Treasury. However, there may be advantages in having public debt issuance in establishing a profile as a borrower in the financial markets. The public scrutiny that comes with such debt issuance would also act as a further test of the prudence of the borrowing. One option which will require significant further work if it is to be pursued is a retail bond issue. There is currently no market for such bonds in the UK (unlike countries like the US and Australia) so it is difficult to determine what appetite there could be for this form of debt. In any case, the costs of issuing and distributing retail bonds are likely to be relatively high initially.

We need to do further work on the relative merits of the different options. Given that we do not intend to issue any significant debt before the outcome of the Spending Review is known, we will be able to work up a detailed proposal before returning to the Board.

Treasury Management

Under the borrowing scenario presented in this plan, our treasury management will have to take account of the need to manage cash balances and borrowings at the same time. It will also need to do so across several years of the plan.

The Treasury Management Policy Statement and Treasury Management Strategy adopted by the Board at the 24 March meeting concerned the management of the cash position and the instruments in which TfL could invest to optimise cash returns. We do not propose to make any changes to that strategy and the controls put in place by the Head of Group Treasury and the Chief Financial Officer at this point.

Any debt issuance will be managed by Corporate Finance team, working with relevant professional advisers. Strategies to mitigate financial risk through the scheduling of debt issuance and asset/liability management will be closely co-ordinated between Corporate Finance and Group Treasury. When we present a detailed proposal for debt issuance, we will also address that requires any changes to the currently approved Treasury Management Strategy.

ANNEX 2

	Public Works Loans Board	European Investment Bank	Commercial banks	Capital markets		Leasing
				Institutional	Retail	
Description	HM Treasury agency providing loans to local authorities	Publicly-owned bank providing finance for infrastructure	Banks providing loans on commercial terms as to companies	Bonds issue to institutional investors (eg pension funds and insurance companies)	Bonds issued to individual investors	Financing taking advantage of tax allowances to reduce cost of funds
Availability	Generally up to Prudential Code Authorised Limit	Typically no more than half of project cost	>£1 billion, depending on credit assessment	Unlimited, depending on credit rating	c.£100 million	Dependent on asset value
Time to raise debt	1 week	1 month	1 month	3-4 months	6-9 months	6-9 months
Maturity	Long term	Long term	Short term	Long term	Long term	Dependent on asset life
Upfront costs	None	0.25%	0.25%	0.50% + £100k	1.5% + £500k	0.25%
Typical interest rate ²	4.95%	5.10%	5.30%	5.20%	5.20% ³	5.10% ⁴
Variability of interest rate	Fixed or floating	Fixed or floating	Floating	Fixed or inflation-linked	Fixed	Floating
Drawdown	Over time	Over time	Over time	Upfront	Upfront	Over time
Flexible repayment	Yes	Yes	Yes	No	No	No
Project specific	No	Yes	No	No	No	Yes

² This table is intended to give a rough indication of the key aspects of different forms of finance. The absolute terms and relative pricing of the different options will depend on market conditions at the time.

³ There is currently no retail bond market in the UK. We have had differing views from banks on how such bonds could be issued and the interest rate required; some believe it will be similar to institutional bonds whilst others that it could be priced to compare with other savings products (around 3%).

⁴ Leasing pricing will depend on the particular assets being financed and the availability of capital allowances.

Revised Prudential Indicators

As explained in section 2.3, the CIPFA Prudential Code sets out a range of indicators that need to be set and regularly monitored. The prudential indicators approved by the Board in March assumed that there was no direct borrowing in 2004/05. The tables included below set out prudential indicators revised so as to be consistent with the borrowing plan set out in this document. This annex provides commentary on these indicators.

The Code divides the indicators into three categories:

- indicators for prudence and affordability
- indicators for capital expenditure and external debt
- indicators for treasury management.

Prudence and affordability

The first of the attached tables contains three indicators that are designed to monitor prudence and affordability. In addition to the ones presented here, the Prudential Code also contains an indicator focused on council tax. This is not appropriate for TfL's funding arrangements.

The prescribed financing cost ratio

To help monitor the affordability of borrowing plans, the Prudential Code includes a ratio of financing cost to net revenue. The idea is that performance against this ratio is monitored over time. The Code does not prescribe that these ratios stay within particular limits, and explicitly states that it is not the purpose of this ratio to assist with a benchmarking exercise.

The payments ratio (developed by TfL)

To assist with the setting of an appropriate level of borrowing, we have developed our own indicator (something the Code permits) that enables us to benchmark against other transport providers monitored by rating agencies. This is the second ratio in the prudence and affordability table. It examines the ratio of the payments due under financing arrangements to gross revenue. Rating agencies use this ratio in examining the indebtedness of public transport providers. The average direct borrowing ratio for AA rated transport providers in Europe is 15.8%. On the assumed borrowing scenario used in these indicators, TfL (which is AA rated) has a prospective direct borrowing ratio of 2.8%, well within the average.

The capital purpose test

Our prudential borrowing plan assumes that borrowing is used to fund capital expenditure incurred in that year. It is therefore evident that our planned borrowing is for capital purposes. The Code includes its own check that borrowing is for capital purposes: it demands that the net borrowing in any given year is less than the capital financing requirement over a period of three years. The attached indicators show total net borrowing (including long-term liabilities) of £1,370m at 31 March 2005, compared to the capital financing requirement accumulated by 31 March 2007 of £4,300m.

Capital expenditure and external debt

The second table contains indicators designed to monitor the levels of capital expenditure incurred, and the levels of external debt. The key indicators in this section in terms of monitoring the borrowing are the operational boundary and authorised limit, which have been set by the Mayor.

Operational boundary

The operational boundary, which is split between the external debt associated with long-term liabilities and that associated with direct borrowing, is intended to be a working limit representing the expected maximum of debt. Any persistent breach of this should result in remedial action. For direct borrowing, the operational boundary for 2004/05 is £400m.

Authorised limit

The authorised limit is an absolute ceiling which cannot be exceeded during the period, unless a new limit is sought. For direct borrowing the limit in the attached indicators is £450m (to include some element of headroom, in keeping with the Prudential Code).

The limits associated with the borrowing plan show that the direct borrowing would represent a relatively small addition to the financing already committed in the London Underground PPP and on-balance sheet PFIs. These existing commitments account for over 80% of the authorised limit for external debt in the attached borrowing plan. Standard and Poors, in confirming TfL's AA rating, has noted TfL's ability to work within the resources it receives from Government and from its own operating activities, as well as its flexibility to manage its future expenditure. Standard and Poors have factored these PPP/PFI obligations into our existing rating.

Treasury management

The third table sets out indicators for Treasury Management, in particular on interest rate exposure and maturity structure. As discussed in annex 3, we have not made decisions at this point about the specific approach to be taken to financing, and these indicators will need to be refined once such decisions have been made.

Prudential Indicators for Prudence and Affordability

Estimates of ratio of financing costs to net revenue stream

Financing Costs to Net Revenue

Comprising:

PPP finance leases

On-balance sheet PFIs

Direct borrowing and other financing*

Budget 2004-05	Plan 2005-06	Plan 2006-07
7.7%	12.3%	17.1%
4.0%	6.4%	9.0%
1.6%	1.3%	1.5%
2.1%	4.6%	6.6%

Estimates of ratio of payments to gross revenue stream (this Indicator is not required by the Prudential Code)

Payments due under PPP

Payments due under On-balance sheet PFIs

Payments due under direct borrowing

Budget 2004-05	Plan 2005-06	Plan 2006-07
23.6%	28.2%	25.6%
0.3%	0.2%	0.5%
0.9%	2.1%	2.8%

Net Borrowing and the Capital Financing Requirement**

Net Borrowing (including long term liabilities) at 31 March 2005

Capital Financing Requirement at 31 March 2007

£m
1,370
4,300

* The line titled 'Direct Borrowing and other financing' includes net depreciation charged to TfL's group revenue account.

** The Prudential Code requires that Net Borrowing at 31 March 2005 will not exceed the Capital Financing Requirement at 31 March 2007.

Prudential Indicators for Capital Expenditure and External Debt

Estimates of Capital Expenditure (Annual)

	Budget 2004-05	Plan 2005-06	Plan 2006-07
	£m	£m	£m
Acquired	808	876	702
PPP finance leases	899	922	927
On-balance sheet PFIs	0	0	166
Total	1,707	1,798	1,795

Estimates of Capital Financing Requirement (Cumulative)

	Budget 31 Mar 05	Plan 31 Mar 06	Plan 31 Mar 07
	£m	£m	£m
Capital Financing Requirement	1,400	2,800	4,300

The Capital Financing Requirement is the amount of capital expenditure yet to be financed by grant, asset sales proceeds or debt.

Operational Boundary

	Budget 2004-05	Plan 2005-06	Plan 2006-07
	£m	£m	£m
Borrowing	400	920	1,450
Long term liabilities	1,770	2,380	3,150
Total Operational Boundary for External Debt	2,170	3,300	4,600

The Operational Boundary is a calculation based upon the cash flows in the Budget and Plan. If breached, it is a warning that financial plans may require review and amendment.

Authorised Limit

	Budget 2004-05	Plan 2005-06	Plan 2006-07
	£m	£m	£m
Borrowing	450	1,000	1,500
Long term liabilities	2,100	2,700	3,500
Total Authorised Limit for External Debt	2,550	3,700	5,000

The authorised limit is the maximum amount that TfL may borrow legally.

Prudential Indicators for Treasury Management

Interest Rate Exposures

Principal outstanding on borrowing
Principal outstanding on investments

Budget	Plan	Plan
31 Mar 05	31 Mar 06	31 Mar 07
£m	£m	£m
(450)	(1,000)	(1,500)
900	450	350
450	(550)	(1,150)

Net Investments/(Borrowing)

Upper limit - fixed
Upper limit -variable

TBC	TBC	TBC
TBC	TBC	TBC

These percentages will be calculated once specific financings have been determined. To aid management of exposures, limits will also be determined separately for borrowing and investments.

If this indicator is broken it serves as a warning to management that the interest rate risk strategy is not being adhered to.

Maturity Structure of Borrowing

< 1year
1year to < 2 years
2 years to <5 years
5 years to <10 years
10 years and above

Budget	
31 Mar 05	
Upper	Lower
70%	0%
15%	0%
25%	5%
50%	15%
70%	20%

Actual amounts will depend on the projects financed and which ones have been converted into long-term obligations

Total Principal sum Invested for more than 364 days

Total Invested more than 364 days

Budget	Plan	Plan
31 Mar 05	31 Mar 06	31 Mar 07
£m	£m	£m
0	0	0

Future Commitments Analysis

To help test the affordability of borrowing up to the limit set by the Mayor in 2004/05, we have examined the future commitments that would be created through such borrowing.

Some of the £400m of borrowing proposed for 2004/05 relates to projects that are not within the baseline part of the plan. Any funding required to continue these projects after 2004/05 is not covered by indicative funding levels, and therefore spending in 2004/05 can create unfunded commitments for future years. Most of the expenditure in 2004/05 that relates to the £400m of potential borrowing does not create such commitments: some of the expenditure relates to broad programmes that can be switched off; some relates to projects that are finished by the end of the year; and some relates to projects that by the end of 2004/05 would not have reached a stage where they could not if necessary be put on hold. However, we have identified those future commitments that would be created if the full £400m of borrowing was used in the way set out in the borrowing plan.

The future commitments can be seen as falling into two types. First, there is the need for borrowing powers to be available if borrowing is to be used to finance the capital spend required in later years. Second, there are the budgetary impacts associated with unfinanced spend and debt service obligations.

Future borrowing needs

The table below sets out the committed capital spend in future years. This shows that borrowing could be used to finance this capital expenditure even if TfL's borrowing powers were significantly curtailed in later years. The maximum borrowing we would require in later years would be £55m. The main elements of this future capital spend would be

- Countdown and roll out of bus radio technology
- the DLR Woolwich-Arsenal extension, and DLR railcars.

Table 1: future capital commitments

£m	2005/06	2006/07	2007/08	2008/09	2009/10
Future capital commitments not in the baseline	55	52	48	24	13

Future budgetary impacts

The table below sets out the budgetary impact associated with these future commitments, on the assumption that borrowing is used to finance the capital element. These commitments include the debt service associated with 2004/05 and future borrowing, and any net operating expenditure impacts. The key net operating expenditures associated with the relevant projects are the payments to be made to the concessionaire on opening of the Woolwich Arsenal extension, additional operating expenditure to enable delivery of the technology roll outs in London buses, and delivery of the integration of Oyster with the rail network. Some revenue & ticketing initiatives within London

Underground which create future commitments will also deliver additional income.

Table 2: Total budgetary impact from unfunded commitments created in 2004/05

£m	2005/06	2006/07	2007/08	2008/09	2009/10
Debt service for 2004/05 borrowing	39	38	37	36	36
Debt service for future borrowing *	5	10	15	16	17
Total debt service	44	48	52	52	52
Other budgetary impacts (including operating expenditure and income)	(6)	(5)	(4)	(6)	1
Total budgetary impact	38	43	48	58	53

*: This assumes that borrowing is used to finance the capital spend identified in table 1.

The table shows that the budgetary requirement is at levels of approximately £50m per year over the business plan period. Though this is not insignificant, it would be manageable within TfL finances, even on the pessimistic scenario where borrowing is only available at the minimal levels described in table 1. If necessary, this ongoing requirement could be covered by appropriate allocation of the surplus created through borrowing within the baseline in 2004/05.

Wider Opportunities For Applying Prudential Borrowing

The increased flexibility offered by prudential borrowing offers the opportunity to consider how we use financing for capital expenditure that is already within the business plan and also whether there are projects which we could take forward which are not currently in our business plan.

Better use of financing

As discussed above, prudential borrowing offers us significant new flexibilities in how we finance our capital expenditure. We are no longer limited to a choice between off-balance PFI projects and funding from Transport Grant. That gives us the opportunity to examine carefully the risk allocation we are seeking to achieve in our capital procurement programme and whether it is likely to deliver value for money. Clearly, this flexibility will be limited if, in future years, Government caps the amount of borrowing we are able to enter into.

Privately financed projects

The major new projects in the Business Plan (for example, DLR extension to Woolwich, Thames Gateway Bridge and West London Trams) are all assumed to be privately financed through the award of a long-term concession. The cost of finance of a private concessionaire will be higher than it would be if TfL financed the works directly. This will only be value for money if the concessionaire is able to generate efficiencies against a publicly-procured solution which outweigh the additional cost of finance. These efficiencies can generally be expected to come from better management of design and construction, better assessment of the whole life cost of the asset and the greater incentive to reduce costs overall.

The involvement of private finance has generally been considered to be critical to better management of risks since, to ensure repayment of their loans, they impose significant controls on the actions of the concessionaire. However, there are some risks (for example, demand risk on tram projects) which the private sector is unlikely to price efficiently.

In considering whether the procurement option being considered is value for money, a public sector procurement using prudential borrowing offers a viable alternative. Before doing so, however, we would need certainty that we could guarantee funding for the whole period of the project.

Variations to PFI projects

One area where poor value for money has often been obtained in the past is making variations to existing PFI projects. PFI contractors often have an effective monopoly on carrying out the variations given the contractual complexities of bringing in third parties. This effective monopoly can mean that they are able to negotiate to take little risk on the variations required but still finance the works on the same terms as their original financing. Where there is a lack of risk transfer, it is likely to be better value for money to use prudential borrowing to finance the variation and pay the contractor directly.

There may be exceptions: such as where the variation is sufficiently large to enable a re-negotiation of the terms of the contract (such as the LUL Power project).

A further example is the restructuring of existing PFI projects. If a PFI project is likely to fail, it might be possible to use prudential borrowing to acquire and refinance the assets from the concessionaire.

Using finance to reduce cost of services

Where the cost of providing a service includes some embedded capital expenditure, there may be an opportunity using prudential borrowing to consider whether it would be better value for money for TfL to finance that capital expenditure directly. For example, contracts for bus services can require the operators to purchase new vehicles. There may be value in considering whether TfL should lease the vehicles itself and provide them to the operators provided that in doing so, we would not expose ourselves to risks associated with the residual life of the vehicles.

Using prudential borrowing for projects not in the business plan

There may be an opportunity to consider whether the new flexibility offered by prudential borrowing will enable us to take forward capital projects not currently in our Business Plan. On a small scale, this could simply be a case of substituting for projects which are in the Business Plan but which are not progressed. If the idea of a London Regional Rail Authority is pursued, there is potential for prudential borrowing to be applied to rail improvement projects if these were the responsibility of such an authority. If prudential borrowing is to be pursued for large capital projects, such as the extension to the East London Line or Thameslink 2000, there would need to be a funding agreement with Government to avoid creating further burdens on our Business Plan.

East London Line Extension [ELLX]

The ELLX project is to upgrade the existing line (currently operated by LUL) to take 16 trains per hour and extend the line both northwards and southwards. In the north, the line will extend to Highbury and Islington via Dalston, providing rail access to an area that has previously not had good rail services. In the south, the project will link the East London Line with Network Rail tracks in order to be able to operate trains to Crystal Palace, West Croydon and potentially to Clapham Junction. After completion of the works the East London Line will transfer to Network Rail for operation and maintenance.

ELLX is currently an SRA sponsored project. The only parts of the necessary work that lie in the TfL business plan are some of the related station interchange works. The SRA has not allocated funding for the project, and progress appears to be slow.

It may be that prudential borrowing offers the opportunity for TfL to take on delivery of the project. However, the sheer size of the project does raise some specific issues for this idea.

- Due to the scale of the project and the five year period between start of construction activity and commissioning, we will need to either raise debt upfront or have a clear guarantee from government that we will continue to have sufficient powers to borrow over that period. Raising debt upfront will be the more expensive option since there is a cost of committing the debt.
- Prudential borrowing addresses the problem of financing. There is still the remaining question of funding. Currently, there is no money for the ELLX in our business plan and we will need additional grant over an extended period to be able to repay our debt for this project.
- Prudential borrowing will be on balance sheet and Government will need to be comfortable with an on balance sheet solution for the project.

On the assumption that these issues can be addressed, the table below summarises the financial impact of using prudential borrowing for TfL to deliver the project:

	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Borrowing for ELLX Capex	30	60	200	350	400	60
Interest	2	5	17	38	62	66

The above table assumes TfL procures the project directly and funds £1.1billion of capex over 5 years, which will need to be serviced and repaid following 2010. It also assumes that fares revenue is equal to the O&M costs, so there are no other budgetary impacts to cover. In the absence of better information this is a reasonable assumption.

Alternative structures are currently being considered which could reduce the impact on TfL balance sheet. A phased development of the project with a “transfer” of completed sections to Network Rail could enable TfL’s borrowings to be recycled during construction reducing overall exposure. Alternatively, the Northern section of the project could be developed as an expanded LUL line under a DBFM style structure which would be off balance sheet for TfL until completion, when the full project cost would come on Balance Sheet.

Conclusion

These are all areas for further examination and do not constitute part of the plan which is being submitted for approval. They are, however, illustrative of the options we might be able to consider using the new powers.