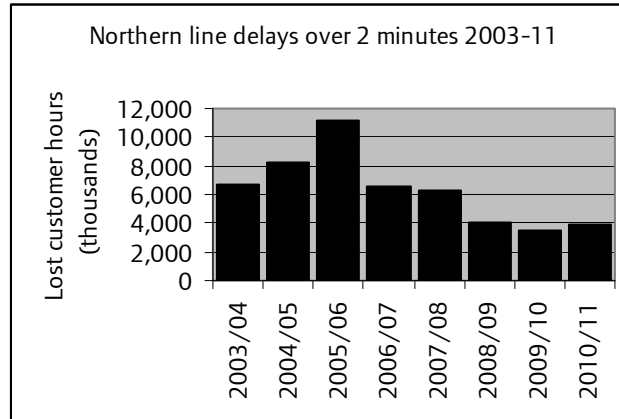


Northern line

The Northern line is the busiest and most complex on the network¹, with around 237 million passenger journeys in 2010/11.² The line covers 58 kilometres and serves 50 stations.³

The performance of the Northern line



- Delays on the Northern line reduced by 42 per cent between 2003/04 and 2010/11 from 6.7 million in 2003/04 to 3.9 million lost customer hours in 2010/11. This was the third largest decrease in delays out of the eleven lines
- Delays increased by 12 per cent between 2009/10 and 2010/11 from 3.5 million in 2009/10 to 3.9 million lost customer hours in 2010/11. This was the sixth largest increase.
- The average weighted total journey time in 2010/11 was five per cent lower than in 2003/04.⁴
- Since 2003/04 peak crowding has increased by an estimated 17 per cent from 156 to 183 peak passenger kilometres per train kilometres operated.
- The average customer satisfaction score in 2003/04 was 76/100. In 2010/11 this had increased to 81/100.

The upgrade of the Northern line - due for completion by 2014

- The date for completion of the Northern line upgrade has slipped. TfL now expects to complete this line upgrade two years later than originally planned under the PPP (January 2012).
- Under the PPP the Northern line upgrade was to be delivered in two parts:
 1. A new control centre and computerised signalling would be introduced by 2012 to deliver an increase in peak hour capacity of 20 per cent and cut journey times by 18 per cent; and
 2. Service patterns would be simplified and reorganised by 2018 to deliver a further increase in peak hour capacity of 21 per cent.⁵

¹ TfL Business Plan 2011/12-2014/15, p35

² TfL's written submission

³ <http://www.tfl.gov.uk/corporate/modesoftransport/londonunderground/keyfacts/13174.aspx>

⁴ The journey time statements in this document are based on data provided by TfL on weighted total journey times. Journey times are weighted to reflect a number of factors including overcrowding (i.e. a journey feels longer on a crowded train). Therefore, with an increase in demand it is feasible that actual journey time has not deteriorated but the weighted journey time has.

⁵ TfL, Business Plan 2009/10 – 2017/18, November 2008, p. 32

- When TfL acquired Tube Lines in June 2010, it decided to delay the Northern line upgrade. It has reported that it will now deliver part 1 of the Northern line upgrade by 2014. TfL has also reported that there will be a further scheme to increase capacity by simplifying service patterns. Preparatory works for this scheme is due to begin in 2016.⁶
- The Northern line upgrade will involve introducing new signalling technology similar to that introduced on the Jubilee line. Although there have been problems with the Jubilee line upgrade, TfL has reported that it decided not to retender the contract for the resignalling of the Northern line because of cost and time considerations.⁷ The Deputy Mayor for Transport reported that there should not be a repeat of the Jubilee line problems with the Northern line upgrade because these problems arose from how the signalling system was implemented rather than the system itself.⁸ TfL has reported on a different approach to the implementation of the signalling system on the Northern line including doing it in phases rather than all in one go.
- TfL has reported that its approach to the Northern line upgrade should result in less disruption for passengers. In June 2011, it announced a programme of closures for the Northern line upgrade starting in 2011 which is the equivalent of around 47 weekend closures.⁹ This compares to the 65 weekend closures and 16 months of early evening closures proposed by Tube Lines in February 2010.¹⁰
- Between 2003/04 and 2010/11 some improvements were made to the Northern line's assets in advance of full upgrade work to deliver new trains and signalling. These improvements included:
 - the replacement or major refurbishment of 34 escalators (55 per cent of the planned escalator works on this line);
 - the replacement or major refurbishment of four lifts (14 per cent of the planned lift works on this line);
 - the enhancement of 39 stations (100 per cent of the planned station enhancements for this line); and
 - the refurbishment or renewal of 62 kilometres of track (48 per cent of the planned track works for this line).¹¹

⁶ TfL Business Plan 2011/12-2014/15, p35

⁷ Transcript of 14 June 2011 meeting, p22

⁸ Transcript of 14 June 2011 meeting, p19

⁹ TfL press release 143, 13 June 2011

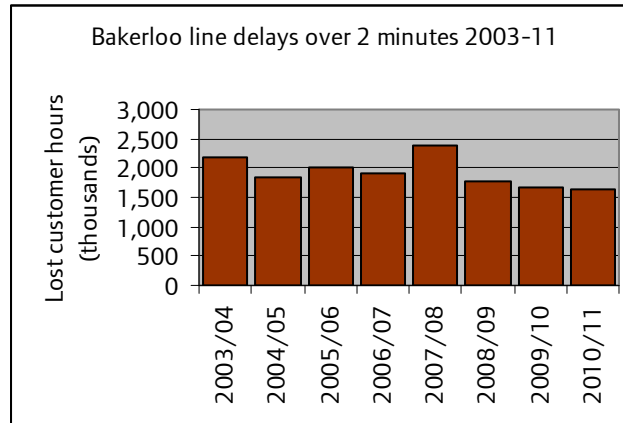
¹⁰ Tube Lines' letter to the Transport Committee, 8 February 2010

¹¹ TfL written submission

Bakerloo line

In 2010/11 there were around 104 million passenger journeys on the Bakerloo line.¹² It covers 23 kilometres and serves 25 stations.¹³

The performance of the Bakerloo line



- Delays on the Bakerloo line reduced by 25 per cent between 2003/04 and 2010/11 from 2.2 million in 2003/04 to 1.6 million lost customer hours in 2010/11. This was the seventh largest decrease in delays out of the eleven lines.
- Improvements have continued into 2010/11 where delays have reduced by 2 per cent on the previous year from 1.7 million to 1.6 million lost customer hours. This was the third best performance on delays since 2009/10.
- The average weighted total journey time in 2010/11 was 2 per cent lower than in 2003/04. .
- Since 2003/04 peak crowding has increased by an estimated seven per cent from 149 to 160 peak passenger kilometres per train kilometres operated.
- The average customer satisfaction score in 2003/04 was 80/100. In 2010/11 this had increased to 81/100.

The upgrade of the Bakerloo line – date for completion uncertain

- The date for completion of the Bakerloo line upgrade has slipped amidst uncertainty about future funding.
- Under the PPP the Bakerloo line upgrade was due to be completed by 2020 delivering a 57 per cent increase in peak hour capacity.¹⁴ In October 2010, the Government published a funding agreement with TfL until 2014/15 which did not include provision for the Bakerloo and Piccadilly line upgrades.¹⁵

¹² TfL's written submission

¹³ <http://www.tfl.gov.uk/corporate/modesoftransport/londonunderground/keyfacts/13174.aspx>

¹⁴ London Underground, LU. London's Upgrade, Autumn 2010, p2

¹⁵ Letter from Department of Transport to the Mayor, 20 October 2010

- Despite the lack of funding, TfL is working to deliver the Bakerloo line upgrade in future. It has reported that its acquisition of Tube Lines has created the opportunity for a joint approach to this and the Piccadilly line upgrade which should deliver substantial savings.¹⁶
- TfL is developing a common design for new trains on the Bakerloo and Piccadilly lines. These new trains will be more energy efficient and more space for passengers with walk-through carriages. A prototype for the new train is due to be delivered by 2015 and the first full fleet will be in place on one of these lines by 2020.¹⁷
- In the absence of a full line upgrade, TfL is planning some smaller-scale work on the Bakerloo line to enhance its performance. TfL intends to spend £114 million between now and 2018 on improvements on this line.¹⁸
- Between 2003/04 and 2010/11 some improvements were made to the Bakerloo line's assets in advance of full upgrade work to deliver new trains and signalling. These improvements included:
 - the replacement or major refurbishment of 23 escalators (62 per cent of the planned escalator works on this line);
 - the replacement or major refurbishment of four lifts (44 per cent of the planned lift works on this line);
 - the enhancement of four stations (40 per cent of the planned station enhancements for this line); and
 - the refurbishment or renewal of 9 kilometres of track (52 per cent of the planned track works for this line).¹⁹

¹⁶ TfL Business Plan 2011/12-2014/15, p35

¹⁷ TfL Business Plan 2011/12-2014/15, p35

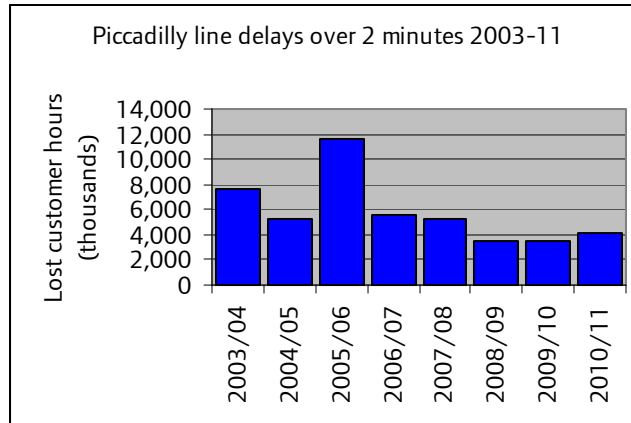
¹⁸ Transcript of 14 June 2011 meeting, p26

¹⁹ TfL written submission

Piccadilly line

In 2010/11 there were around 195 million passenger journeys on the Piccadilly line.²⁰ It covers 71 kilometres and serves 52 stations.²¹

The performance of the Piccadilly line



- Delays on the Piccadilly line reduced by 46 per cent between 2003/04 and 2010/11 from 7.6 million in 2003/04 to 4.1 million lost customer hours in 2010/11. This was the second best improvement out of the eleven lines
- Delays increased by 16 per cent between 2009/10 and 2010/11 from 3.5 million in 2009/10 to 4.1 million lost customer hours in 2010/11. This was the seventh largest increase out of eleven lines.
- The average weighted total journey time in 2010/11 was 2 per cent higher than in 2003/04.
- Since 2003/04 peak crowding has increased by an estimated 13 per cent from 157 to 178 peak passenger kilometres per train kilometres operated.
- The average customer satisfaction score in 2003/04 was 78/100. In 2010/11 this had increased to 80/100.

The upgrade of the Piccadilly line – date for completion uncertain

- The date for completion of the Piccadilly line upgrade has slipped amidst uncertainty about future funding.
- Under the PPP the Piccadilly line upgrade was due to be completed by 2014 delivering a 24 per cent increase in peak hour capacity.²² In October 2010, the Government published a funding agreement with TfL until 2014/15 which did not include provision for this and the Bakerloo line upgrades.²³

²⁰ TfL's written submission

²¹ <http://www.tfl.gov.uk/corporate/modesoftransport/londonunderground/keyfacts/13174.aspx>

²² London Underground, LU. London's Upgrade, Autumn 2010, p2

²³ Letter from Department of Transport to the Mayor, 20 October 2010

- Despite the lack of funding, TfL is working to deliver the Piccadilly line upgrade in future. It has reported that its acquisition of Tube Lines has created the opportunity for a joint approach to this and the Bakerloo line upgrade which should deliver substantial savings.²⁴
- TfL is now working on a common design for new trains on the Piccadilly and Bakerloo lines. These new trains will be more energy efficient and more capacious with walk-through carriages. A prototype for the new train is due to be delivered by 2015 and the first full fleet will be in place on one of these lines by 2020.²⁵
- In the absence of a full line upgrade, TfL is planning some smaller-scale work on the Piccadilly line to enhance its performance. It intends to spend £228 million between now and 2018 on improvements.²⁶ The signalling control system based at Earl's Court, which dates from the 1960s and is expensive to maintain, will be replaced. There should be a new control centre at Hammersmith by 2014.²⁷
- Between 2003/04 and 2010/11 some improvements were made to the Piccadilly line's assets in advance of full upgrade work to deliver new trains and signalling. These improvements included:
 - the replacement or major refurbishment of 24 escalators (53 per cent of the planned escalator works on this line);
 - the enhancement of 35 stations (100 per cent of the planned station enhancements for this line); and
 - the refurbishment or renewal of 39 kilometres of track (50 per cent of the planned track works for this line).²⁸
- No lifts on the Piccadilly line were replaced or refurbished during the last eight years. Between 2011/12 and 2020/21, 20 lifts are due to be replaced or refurbished on this line.

²⁴ TfL Business Plan 2011/12-2014/15, p35

²⁵ TfL Business Plan 2011/12-2014/15, p35

²⁶ Transcript of 14 June 2011 meeting, p26

²⁷ TfL Business Plan 2011/12-2014/15, p35

²⁸ TfL written submission

Victoria line

In 2010/11 there were 176 million passenger journeys on the Victoria line.²⁹ It covers 21 kilometres and serves 16 stations.³⁰

The performance of the Victoria line



- Delays on the Victoria line reduced by 30 per cent between 2003/04 and 2009/10 from 4.9 million to 3.4 million lost customer hours. Since then there has been an increase of 43 per cent, and in 2010/11 there were 4.9 million lost customer hours. The increase in 2010/11 reflects the impact of the upgrade. In a direct comparison of 2010/11 and 2003/04, the Victoria line has shown the least improvement of the eleven lines; all other lines saw fewer delays in 2010/11 than 2003/04..
- Delays increased by 43 per cent between 2009/10 and 2010/11 from 3.4 million in 2009/10 to 4.9 million lost customer hours in 2010/11. This was the second highest increase in delays since 2009/10.
- The average weighted total journey time in 2010/11 was two per cent higher than in 2003/04.
- Since 2003/04 peak crowding has increased by an estimated nine per cent from 239 to 261 peak passenger kilometres per train kilometres operated.
- The average customer satisfaction score in 2003/04 was 76/100. In 2010/11 this had increased to 79/100.

The upgrade of the Victoria line – due for completion by 2013

- The Victoria line upgrade is ongoing. It is due to be completed by 2013 in line with the original completion date under the PPP.
- In 2010/11 there were problems with the new trains introduced on the Victoria line which caused many delays. This disruption follows planned closures of the line in recent years to deliver the upgrade work. There have been over 90 weekend closures and many early evening closures.

²⁹ TfL's written submission

³⁰ <http://www.tfl.gov.uk/corporate/modesoftransport/londonunderground/keyfacts/13174.aspx>

- At the end of July 2011, TfL announced good progress with the Victoria line upgrade. The full fleet of new trains was now in service. The removal of the old signalling system had begun and the installation of the new system would follow.³¹
- TfL has reported that it has managed this line upgrade so well it is now ahead of schedule and could complete the upgrade six months earlier than originally planned.³²
- Once delivered in full, the Victoria line upgrade should deliver a 21 per cent increase in peak hour capacity and reduce journey times by 16 per cent.³³
- Between 2003/04 and 2010/11 some improvements were made to the Victoria line's assets alongside the upgrade work to deliver new trains and signalling. These improvements included:
 - the replacement or major refurbishment of 15 escalators (41 per cent of the planned escalator works on this line);
 - the replacement or major refurbishment of five lifts (56 per cent of the planned lift works on this line);
 - the enhancement of 3 stations (33 per cent of the planned station enhancements for this line); and
 - the refurbishment or renewal of 28 kilometres of track (66 per cent of the planned track works for this line).³⁴

³¹ TfL press release 29 July 2011

³² TfL press release 29 July 2011

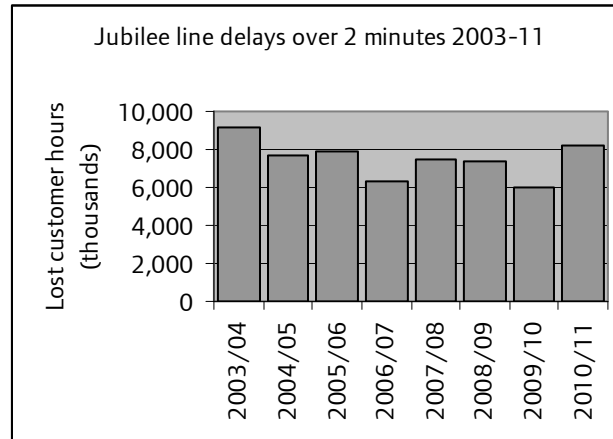
³³ TfL Business Plan 2011/12-2014/15, p35

³⁴ TfL written submission

Jubilee line

In 2010/11 there were around 185 million passenger journeys on the Jubilee line.³⁵ It covers 36 kilometres and serves 27 stations.³⁶

The performance of the Jubilee line



- Delays on the Jubilee line reduced by 10 per cent between 2003/04 and 2010/11 from 9.1 million in 2003/04 to 8.2 million lost customer hours in 2010/11. This represents the second worst level of improvement of the eleven lines over this period.
- Delays increased by 36 per cent between 2009/10 and 2010/11 from six million in 2009/10 to 8.2 million lost customer hours in 2010/11. This was the third highest increase in delays since 2009/10 across the network.
- The average weighted total journey time in 2010/11 was one per cent higher than in 2003/04.
- Since 2003/04 peak crowding has increased by an estimated 30 per cent from 213 to 278 peak passenger kilometres per train kilometres operated.
- The average customer satisfaction score in 2003/04 was 78/100. In 2010/11 this had increased to 79/100.

The upgrade of the Jubilee line – due for completion by 2011

- The Jubilee line upgrade has slipped but is now nearing completion. Once delivered it will be at least eighteen months later than the original planned completion date (December 2009).
- Under the PPP, some improvements to the Jubilee line were delivered. In 2006 a seventh carriage was added to all trains delivering 17 per cent more capacity. This extra capacity has since been absorbed by increased demand from growth around Canary Wharf.³⁷
- TfL reported that Tube Lines' failure to meet the original completion date for the Jubilee line upgrade was a significant driver for its purchase of the company. Since TfL took over the

³⁵ TfL's written submission

³⁶ <http://www.tfl.gov.uk/corporate/modesoftransport/londonunderground/keyfacts/13174.aspx>

³⁷ London Underground, LU. London's Upgrade, Autumn 2010, p3

Jubilee line upgrade in June 2010 it has progressed the replacement of the signalling and train control system allowing more trains to run on this line.³⁸

- In 2010/11 there were problems with the introduction of the new signalling on the Jubilee line which caused many delays. This disruption followed many months of planned closures to deliver the upgrade. In the last four years the Jubilee Line has been closed on more than 100 weekends.³⁹
- In July 2011 the Mayor reported that TfL was on track to increase the number of trains on the Jubilee line during peak hours from 24 to 27 from 31 July 2011 onwards. More changes are then expected to follow in 2012 which will increase the frequency of service and the number of trains in peak hours on this line to 32.⁴⁰
- Once delivered in full, the Jubilee line upgrade should deliver an increase in peak hour capacity of 33 per cent and reduce journey times by 22 per cent.⁴¹
- Between 2003/04 and 2010/11 some improvements were made to the Jubilee line's assets alongside the upgrade work to deliver new trains and signalling. These improvements included:
 - the replacement or major refurbishment of 36 escalators (46 per cent of the planned escalator works on this line);
 - the enhancement of 24 stations (100 per cent of the planned station enhancements for this line); and
 - the refurbishment or renewal of 21 kilometres of track (46 per cent of the planned track works for this line).⁴²
- No lifts on the Jubilee line were replaced or refurbished during the last eight years. Between 2011/12 and 2020/21, 39 lifts are due to be replaced or refurbished on this line.

³⁸ TfL Business Plan 2011/12-2014/15, p35

³⁹ BBC website, London Tube delays will decline as lines upgrades, 20 February 2011

⁴⁰ Mayor's response to question 2254 / 2011 from Valerie Shawcross AM , July 2011

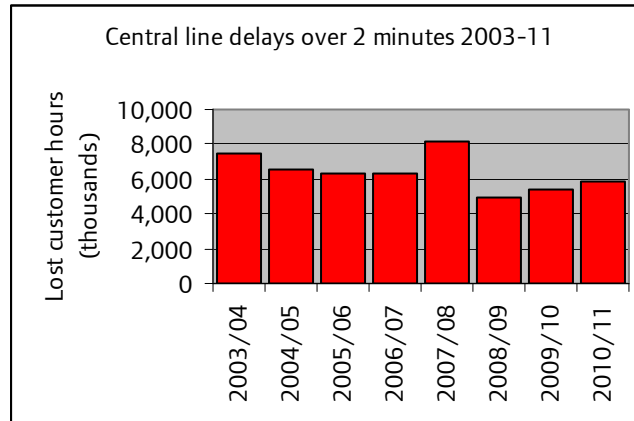
⁴¹ TfL Business Plan 2011/12-2014/15, p34

⁴² TfL written submission

Central line

In 2010/11 there were around 238 million passenger journeys on the Central line.⁴³ It covers 74 kilometres and serves 49 stations.⁴⁴

The performance of the Central line



- Delays on the Central line reduced by 22 per cent between 2003/04 and 2010/11 from 7.5 million in 2003/04 to 5.9 million lost customer hours in 2010/11. This represents the eighth largest reduction out of the eleven lines.
- Delays increased by eight per cent between 2009/10 and 2010/11 from 5.4 million in 2009/10 to 5.9 million lost customer hours in 2010/11. This was the fifth highest increase in delays out of eleven lines.
- The average weighted total journey time in 2010/11 was one per cent lower than in 2003/04.
- Since 2003/04 peak crowding has increased by an estimated 18 per cent from 195 to 230 peak passenger kilometres per train kilometres operated.
- The average customer satisfaction score in 2003/04 was 75/100. In 2010/11 this had increased to 79/100.⁴⁵

The upgrade of the Central line

- The Central line was not due to be upgraded under the PPP as its trains and signalling were renewed in the 1990s. This led to some improvements in the line's reliability and capacity.
- TfL has included the Central line in its revised upgrade programme although there is no funding in place for this work. TfL has reported that it wants to replace the fleet of trains on the Central line with the new model of train now being developed for the Piccadilly and Bakerloo lines.⁴⁶
- In the absence of a full line upgrade, TfL intends to make some other improvements to the Central line. It has reported that it will spend £306 million in the period up until 2018 on improvements on this and the Waterloo & City lines.⁴⁷

⁴³ TfL's written submission

⁴⁴ <http://www.tfl.gov.uk/corporate/modesoftransport/londonunderground/keyfacts/13174.aspx>

⁴⁵ Customer satisfaction scores for the Central line include those for the Waterloo & City line

⁴⁶ TfL Business Plan 2011/12-2014/15, p34

⁴⁷ Transcript of Transport Committee meeting on 14 June 2011 meeting, p26

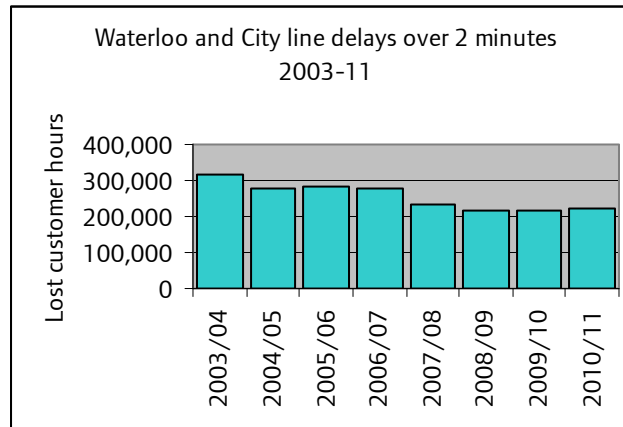
- Between 2003/04 and 2010/11 some improvements were made to the Central line's assets. These included:
 - the replacement or major refurbishment of 30 escalators (61 per cent of the planned escalator works for this line);
 - the replacement or major refurbishment of 7 lifts (47 per cent of the planned lift works on this line);
 - the enhancement of 28 stations (65 per cent of the planned station enhancements for this line); and
 - the refurbishment or renewal of 59 kilometres of track (56 per cent of the planned track works for this line).⁴⁸

⁴⁸ TfL written submission

Waterloo & City line

In 2010/11, there were around 13 million passenger journeys on the Waterloo & City line.⁴⁹ It covers 2 kilometres between Waterloo and Bank without any intermediate stations.⁵⁰

The performance of the Waterloo & City line



- Delays on the Waterloo and City line reduced by 31 per cent between 2003/04 and 2010/11 from 0.3 million in 2003/04 to 0.2 million lost customer hours in 2010/11. This ranked them fifth out of the eleven lines
- Delays increased by two per cent between 2009/10 and 2010/11 and stood at 0.2 million in 2010/11. This increase was the fourth best performance on delays across the network since 2009/10.
- The average weighted total journey time in 2010/11 was 7 per cent lower than in 2003/04.
- Since 2003/04 peak crowding has increased by an estimated 6 per cent from 164 to 174 peak passenger kilometres per train kilometres operated.
- Customer Satisfaction Survey data is not compiled for the Waterloo & City line, instead this is included within the Central line scores.

The upgrade of the Waterloo & City line – completed in 2006

- The Waterloo & City line is the only line which was fully upgraded under the PPP. In 2006 improvements were made to its track and signalling and new trains were introduced on this line.
- The Waterloo & City line upgrade delivered a 25 per cent increase in peak hour capacity and reduced journey times by around 12 per cent.⁵¹

⁴⁹ TfL's written submission

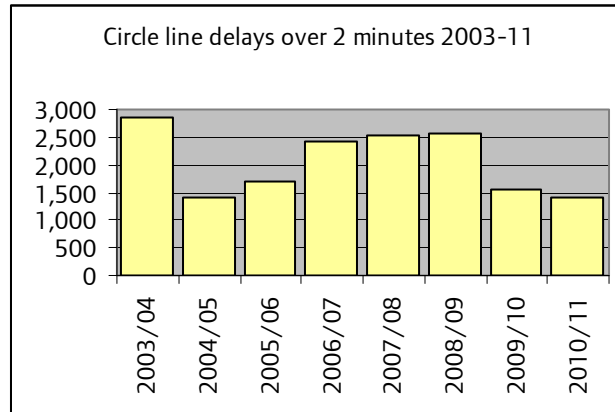
⁵⁰ <http://www.tfl.gov.uk/corporate/modesoftransport/londonunderground/keyfacts/13174.aspx>

⁵¹ London Underground, LU. London's Upgrade, Autumn 2010, p3

Circle line

In 2010/11 there were around 62 million passenger journeys on the Circle line.⁵² It covers 27 kilometres and serves 35 stations.⁵³

The performance of the Circle line



- Delays on the Circle line reduced by 50 per cent between 2003/04 and 2010/11 from 2.9 million in 2003/04 to 1.4 million lost customer hours in 2010/11. This was the largest reduction in delays out of the eleven lines
- Improvements have continued into 2010/11 where delays reduced by 9 per cent on the previous year from 1.6 million to 1.4 million lost customer hours. This was the second best performance on delays since 2009/10.
- The average weighted total journey time in 2010/11 on the Circle & Hammersmith line was 6 per cent higher than in 2003/04..
- Peak crowding on the Circle & Hammersmith & City line grouping is unchanged since 2003/04 and in 2010/11 remained at 219 peak passenger kilometres per train kilometre operated.
- The average customer satisfaction score on the Circle & Hammersmith & City line grouping in 2003/04 was 73/100. In 2010/11 this had increased to 77/100.

The upgrade of the Circle line – due for completion by 2018

- The completion date for the Circle line upgrade has not changed since the end of the PPP.
- The Circle line is being upgraded alongside the other sub-surface lines (Hammersmith & City, District and Metropolitan). The sub-surface lines' upgrade is the largest and most complex part of the investment in the Tube network. It will involve the introduction of: 191 new trains; a new signalling system; a single-service control centre; power upgrades; and train depot improvements.⁵⁴
- In 2011, TfL awarded the contract for the resignalling of the sub-surface lines to Bombardier Transportation on the basis of no need for weekend closures. However, there will still be some weekend closures on parts of the lines to upgrade track and platforms.⁵⁵

⁵² TfL's written submission

⁵³ <http://www.tfl.gov.uk/corporate/modesoftransport/londonunderground/keyfacts/13174.aspx>

⁵⁴ TfL Business Plan 2011/12-2014/15, p35

⁵⁵ TfL press release 144, 14 June 2011

- In summer 2011, TfL used a four week block closure to complete track, drainage and power upgrade work between Edgware Road and High Street Kensington stations on the Circle and District lines. It reported that this approach rather than using weekend closures to complete the work had reduced the length of disruption to passengers and saved money.⁵⁶
- The introduction of new trains on the Circle and Hammersmith & City lines is due to start in 2012 and be completed by 2014. They will be one carriage longer than the current trains which will increase capacity by 17 per cent.⁵⁷
- Once delivered in full, the Circle and Hammersmith & City line upgrades should deliver a combined increase in peak hour capacity of 65 per cent.⁵⁸
- Between 2003/04 and 2010/11 some improvements were made to the Circle and Hammersmith & City lines' assets in advance of full upgrade work which delivers new trains and signalling. These improvements included:
 - the replacement or major refurbishment of 29 escalators (67 per cent of the planned escalator works on this line);
 - the replacement or major refurbishment of 10 lifts (67 per cent of the planned lift works on this line); and
 - the refurbishment or renewal of ten kilometres of track (31 per cent of the planned track works for this line).⁵⁹
- No stations on the Circle and Hammersmith & City lines were enhanced during the last eight years. Between 2011/12 and 2020/21, 13 stations are due to be enhanced on these lines.

⁵⁶ <http://www.tfl.gov.uk/corporate/projectsandschemes/18089.aspx>

⁵⁷ TfL Business Plan 2011/12-2014/15, p35

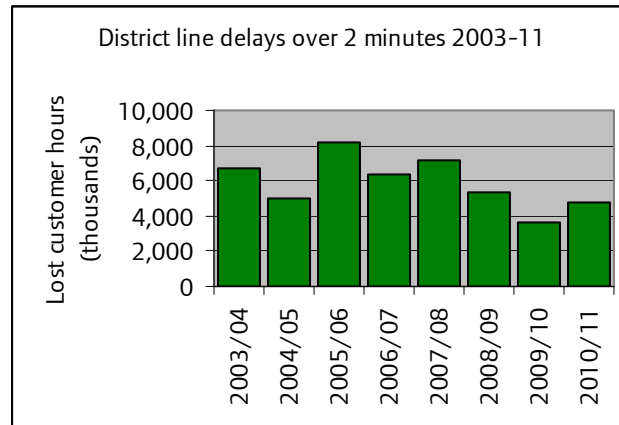
⁵⁸ TfL Business Plan 2011/12-2014/15, p34

⁵⁹ TfL written submission

District line

In 2010/11 there were around 195 million passenger journeys on the District line.⁶⁰ It covers 64 kilometres and serves 60 stations.⁶¹

The performance of the District line



- Delays on the District line reduced by 28 per cent between 2003/04 and 2010/11 from 6.7 million in 2003/04 to 4.8 million lost customer hours in 2010/11. This was the sixth largest decrease in delays out of the eleven lines
- Delays increased by 31 per cent between 2009/10 and 2010/11 from 3.7 million in 2009/10 to 4.8 million lost customer hours in 2010/11. This was the fourth highest increase in delays since 2009/10.
- The average weighted total journey time in 2010/11 on the District line was 8 per cent higher than in 2003/04.
- Since 2003/04 peak crowding has increased by an estimated 14 per cent from 177 to 202 peak passenger kilometres per train kilometres operated.
- The average customer satisfaction score in 2003/04 was 76/100. In 2010/11 this had increased to 79/100.

The upgrade of the District line – due to be completed by 2018

- The completion date for the District line upgrade has not changed since the end of the PPP.
- The District line is being upgraded alongside the other sub-surface lines (Circle, Hammersmith & City and Metropolitan). The sub-surface lines' upgrade is the largest and most complex part of the investment in the Tube network. It will involve the introduction of: 191 new trains; a new signalling system; a single-service control centre; power upgrades; and train depot improvements.⁶²

⁶⁰ TfL's written submission

⁶¹ <http://www.tfl.gov.uk/corporate/modesoftransport/londonunderground/keyfacts/13174.aspx>

⁶² TfL Business Plan 2011/12-2014/15, p35

- In 2011, TfL awarded the contract for the resignalling of the sub-surface lines to Bombardier Transportation on the basis of no need for weekend closures. However, there will still be some weekend closures on parts of the lines to upgrade track and platforms.⁶³
- In summer 2011, TfL used a four week block closure to complete track, drainage and power upgrade work between Edgware Road and High Street Kensington stations on the District and Circle lines. It reported that this approach rather than using weekend closures to complete the work had reduced the length of disruption to passengers and saved money.⁶⁴
- The introduction of new trains on the District line is due to start in 2013 and be completed by 2016.⁶⁵ Under the PPP, the existing trains were refurbished in 2008.⁶⁶
- Once delivered in full, the District line upgrade should deliver an increase in peak hour capacity of 24 per cent.⁶⁷
- Between 2003/04 and 2010/11 some improvements were made to the District line's assets in advance of full upgrade work which delivers new trains and signalling. These improvements included:
 - the replacement or major refurbishment of eight escalators (57 per cent of the planned escalator works on this line);
 - the replacement or major refurbishment of ten lifts (50 per cent of the planned lift works on this line);
 - the enhancement of 17 stations (46 per cent of the planned station enhancements for this line); and
 - the refurbishment or renewal of 56 kilometres of track (49 per cent of the planned track works for this line).⁶⁸

⁶³ TfL press release 144, 14 June 2011

⁶⁴ <http://www.tfl.gov.uk/corporate/projectsandschemes/18089.aspx>

⁶⁵ TfL Business Plan 2011/12-2014/15, p35

⁶⁶ London Underground, LU. London's Upgrade, Autumn 2010, p10

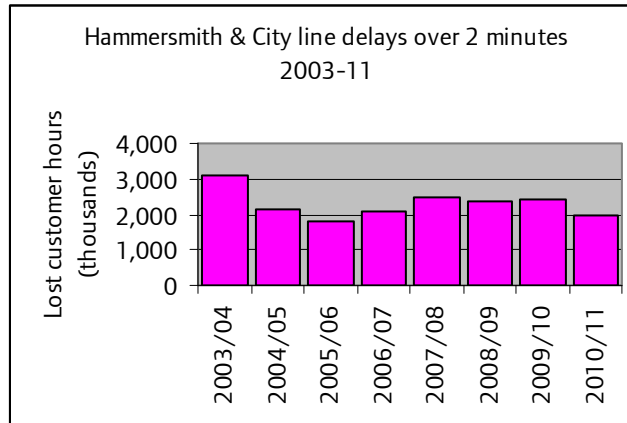
⁶⁷ TfL Business Plan 2011/12-2014/15, p34

⁶⁸ TfL written submission

Hammersmith & City line

In 2010/11 there were around 45 million passenger journeys on the Hammersmith & City line.⁶⁹ It covers 26 kilometres and serves 29 stations.⁷⁰

The performance of the Hammersmith & City line



- Delays on the Hammersmith & City line reduced by 36 per cent between 2003/04 and 2010/11 from 3.1 million in 2003/04 to 2 million lost customer hours in 2010/11. This was the fourth largest decrease in delays out of the eleven lines
- Improvements continued into 2010/11 where delays reduced by 19 per cent on the previous year from 2.4 million to 2 million lost customer hours. This was the best performance on delays since 2009/10 across the network.
- The average weighted total journey time in 2010/11 on the Circle & Hammersmith line was 6 per cent higher than in 2003/04.
- Peak crowding on the Circle & Hammersmith & City line grouping is unchanged since 2003/04 and in 2010/11 remained at 219 peak passenger kilometers per train kilometer operated.
- The average customer satisfaction score on the Circle & Hammersmith & City line grouping in 2003/04 was 73/100. In 2010/11 this had increased to 77/100.

The upgrade of the Hammersmith & City line – due for completion by 2018

- The completion date for the Hammersmith & City line upgrade has not changed since the end of the PPP.
- The Hammersmith & City line is being upgraded alongside the other sub-surface lines (Circle, District and Metropolitan). The sub-surface lines' upgrade is the largest and most complex part of the investment in the Tube network. It will involve the introduction of: 191 new trains; a new signalling system; a single-service control centre; power upgrades; and train depot improvements.⁷¹

⁶⁹ TfL's written submission

⁷⁰ <http://www.tfl.gov.uk/corporate/modesoftransport/londonunderground/keyfacts/13174.aspx>

⁷¹ TfL Business Plan 2011/12-2014/15, p35

- In 2011, TfL awarded the contract for the resignalling of the sub-surface lines to Bombardier Transportation on the basis of no need for weekend closures. However, there will still be some weekend closures on parts of the lines to upgrade track and platforms.⁷²
- The introduction of new trains on the Circle and Hammersmith & City lines is due to start in 2012 and be completed by 2014. These trains will be one carriage longer than the current trains which will increase capacity by 17 per cent.⁷³
- Once delivered in full, the Circle and Hammersmith & City line upgrades should deliver a combined increase in peak hour capacity of 65 per cent.⁷⁴
- Between 2003/04 and 2010/11 some improvements were made to the Circle and Hammersmith & City lines' assets in advance of full upgrade work which delivers new trains and signalling. These improvements included:
 - the replacement or major refurbishment of 23 escalators (62 per cent of the planned escalator works on this line);
 - the replacement or major refurbishment of 10 lifts (67 per cent of the planned lift works on this line); and
 - the refurbishment or renewal of ten kilometres of track (31 per cent of the planned track works for this line).⁷⁵
- No stations on the Circle and Hammersmith & City lines were enhanced during the last eight years. Between 2011/12 and 2020/21, 13 stations are due to be enhanced on these lines.

⁷² TfL press release 144, 14 June 2011

⁷³ TfL Business Plan 2011/12-2014/15, p35

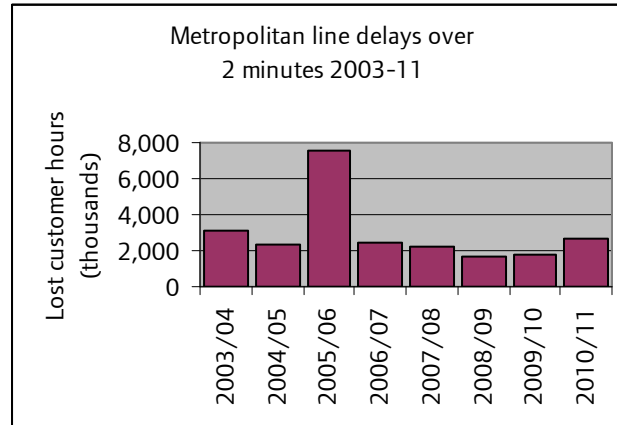
⁷⁴ TfL Business Plan 2011/12-2014/15, p34

⁷⁵ TfL written submission

Metropolitan line

In 2010/11 there were around 63 million passenger journeys on the Metropolitan line.⁷⁶ It covers 67 kilometres and serves 34 stations.⁷⁷

The performance of the Metropolitan line



- Delays on the Metropolitan line reduced by 14 per cent between 2003/04 and 2010/11 from 3.1 million in 2003/04 to 2.7 million lost customer hours in 2010/11. Eight of the other 11 lines saw larger decreases in delays over this period.
- But delays increased by 53 per cent between 2009/10 and 2010/11 from 1.8 million in 2009/10 to 2.7 million lost customer hours in 2010/11. This was the highest increase in delays of all eleven lines since 2009/10.
- The average weighted total journey time in 2010/11 on the Metropolitan line was the same as in 2003/04.
- Since 2003/04 peak crowding has increased by an estimated 15 per cent from 163 to 187 peak passenger kilometres per train kilometres operated.
- The average customer satisfaction score in 2003/04 was 73/100. In 2010/11 this had increased to 78/100.

The upgrade of the Metropolitan line – due for completion by 2018

- The date for completion of the Metropolitan line upgrade has slipped. TfL now expects to complete this line upgrade three years later than originally planned under the PPP. The Metropolitan line upgrade was due to be delivered by 2015 delivering an increase in peak hour capacity of 27 per cent.⁷⁸
- The Metropolitan line is being upgraded alongside the other sub-surface lines (Circle, District and Hammersmith & City). The sub-surface lines' upgrade is the largest and most complex part of the investment in the Tube network. It will involve the introduction of: 191 new trains; a new signalling system; a single-service control centre; power upgrades; and train depot improvements.⁷⁹

⁷⁶ TfL's written submission

⁷⁷ <http://www.tfl.gov.uk/corporate/modesoftransport/londonunderground/keyfacts/13174.aspx>

⁷⁸ TfL Business Plan 2011/12-2014/15, p34

⁷⁹ TfL Business Plan 2011/12-2014/15, p35

- In 2011, TfL awarded the contract for the resignalling of the sub-surface lines to Bombardier Transportation on the basis of no need for weekend closures. However, there will still be some weekend closures on parts of the lines to upgrade track and platforms.⁸⁰
- The introduction of new trains on the Metropolitan line started in 2010. The full fleet of new trains is expected to be in place by 2012.⁸¹
- Between 2003/04 and 2010/11 some improvements were made to the Metropolitan line's assets in advance of full upgrade work which delivers new trains and signalling. These improvements included:
 - the replacement or major refurbishment of two lifts (50 per cent of the planned lift works on this line);
 - the enhancement of 15 stations (52 per cent of the planned station enhancements for this line); and
 - the refurbishment or renewal of 33 kilometres of track (39 per cent of the planned track works for this line).⁸²
- No escalators on the Metropolitan line were replaced or refurbished during the last eight years. Between 2011/12 and 2020/21, three escalators are due to be replaced or refurbished on this line.

⁸⁰ TfL press release 144, 14 June 2011

⁸¹ TfL Business Plan 2011/12-2014/15, p35

⁸² TfL written submission