

## 7. Service Specification

Route: 291

Contract Reference: QC63104

This Service Specification forms section 7 of the ITT and should be read in conjunction with the ITT document, Version 1 dated 29 September 2011.

You are formally invited to tender for the provision of the bus service detailed below and in accordance with this Service Specification. Tenderers must ensure that a Compliant Tender is submitted and this will only be considered for evaluation if all parts of the Tender documents, as set out in section 11, have been received by the Corporation by the Date of Tender. The Tender must be fully completed in the required format, in accordance with the Instructions to Tenderers. A Compliant Tender must comply fully with the requirements of the Framework Agreement; adhere to the requirements of the Service Specification; and reflect the price of operating the Services with new vehicles.

<b>Route Number</b>	291
<b>Terminus Points</b>	Woolwich Common, Queen Elizabeth Hospital and Woodlands Estate, Garland Road Health Centre
<b>Contract Basis</b>	Incentivised
<b>Commencement Date</b>	8 <sup>th</sup> December 2018
<b>Vehicle Type - Option 1</b>	87 capacity, dual door, double deck vehicles, subject to a satisfactory route test
<b>Vehicle Type - Option 2</b>	60 capacity, dual door, single deck vehicles, minimum 10.8m long, subject to a satisfactory route test
<b>Current Maximum Approved Dimensions</b>	9.4 metres long and 2.4 metres wide
<b>New Vehicles Mandatory</b>	Yes
<b>Hybrid Price Required - Option 1</b>	Yes
<b>Hybrid Price Required - Option 2</b>	No
<b>Sponsored Route</b>	No
<b>Advertising Rights</b>	Operator
<b>Minimum Performance Standard (Options 1 &amp; 2)</b>	Average Excess Wait Time - No more than 0.90 minutes
<b>Extension Threshold (Options 1 &amp; 2)</b>	Average Excess Wait Time Threshold - 0.85 minutes
<b>Minimum Operated Mileage Standard</b>	No less than 98%

The Date of Tender for this ITT is: No later than 12 Noon on Monday 2<sup>nd</sup> July 2018.

*Tenderers should refer to section 3 of Part A for the Service Specification Explanatory Notes and Appendix B of section 5 for the Example Service Specification of the ITT document.*

## **SERVICE SPECIFICATION**

- 1) SERVICE SPEC - ROUTE SPECIFICATION INFORMATION
- 2) NOTES
- 3) SCHEDULE REQUIREMENTS & PINCHPOINTS
- 4) OPERATIONAL CONSIDERATIONS
- 5) ROUTE RECORD, CURRENT PERFORMANCE, QSI BY TIME OF DAY, IBUS MILEAGE & QSI POINTS

## 2) NOTES

### **Proposed Changes:**

At this time, no changes are proposed to the existing service for introduction prior to the commencement of the new Route Agreement for Route No. 291.

Tenderers should note that the following alterations (subject to consultation) are proposed as part of this Service Specification for introduction with the new Route Agreement:

Two vehicles options are specified as follows:

#### **Option 1**

- Conversion of Route No. 291 from 55 capacity, dual door, single deck vehicles to new 87 capacity, dual door, double deck vehicles is specified, subject to a satisfactory route test.

#### **Option 2**

- 60 capacity, dual door, single deck vehicles, minimum 10.8m long are specified, subject to a satisfactory route test.

### **OPTION 1**

**Operators should provide the following prices:**

1. Annual diesel-electric hybrid price - based on minimum 5 year contract.

**Tenderers are encouraged to offer alternative vehicle options in accordance with Part 9 of their tender, including but not limited to:**

1. New two door, single staircase vehicles inspired by the New Routemaster in respect of both their external and internal design, to the appropriate specification agreed between TfL and the manufacturers.
2. Vehicles that offer genuine increased capacity on two axles and are certified as such.
3. Modifications to reduce emissions and fuel consumption (including energy storage, engine stop/start, extended zero-emission range and/or energy efficient components)
4. Existing vehicles. Separate costs must be provided both excluding and including the cost of upgrading to Euro VI standards. The inclusive costs should be on a per bus per annum basis.

## 2) NOTES - continued

### OPTION 2

Operators should provide the following prices:

1. Annual diesel price - based on minimum 5 year contract.

Tenderers are encouraged to offer alternative vehicle options in accordance with Part 9 of their tender, including but not limited to:

1. Modifications to reduce emissions and fuel consumption (including energy storage, engine stop/start and/or energy efficient components).
2. Zero emission vehicles (e.g. electric or fuel cell).
3. Existing vehicles. Separate costs must be provided both excluding and including the cost of upgrading to Euro VI standards. The inclusive costs should be on a per bus per annum basis.

## 3) SCHEDULE REQUIREMENTS & PINCHPOINTS

### 3.1) MONDAY TO FRIDAY SCHEDULE REQUIREMENTS & PINCHPOINTS

Woolwich Common, Queen Elizabeth Hospital to Woodlands Estate, Garland Road Health Centre			Woodlands Estate, Garland Road Health Centre to Woolwich Common, Queen Elizabeth Hospital		
First departure no later than 0500.			First departure no later than 0515.		
0455 - 0615	Every 15 minutes		0510 - 0630	Every 15 minutes	
0615 - 0640	Every 12 minutes		0631 - 0655	Every 12 minutes	
0641 - 1840	Every 10 minutes		0656 - 1855	Every 10 minutes	
1841 - 1915	Every 12 minutes		1856 - 1930	Every 12 minutes	
1916 - 0015	Every 15 minutes		1931 - 0030	Every 15 minutes	
Last departure no earlier than 0010.			Last departure no earlier than 0025.		
Pinchpoints					
Woolwich, Thomas Street	0705 - 0905	10 minutes	Plumstead Common, Ship	0700 - 0900	10 minutes
	1500 - 1630	10 minutes		1505 - 1635	10 minutes

### 3) SCHEDULE REQUIREMENTS & PINCHPOINTS - continued

#### 3.2) SATURDAY AND GOOD FRIDAY SCHEDULE REQUIREMENTS & PINCHPOINTS

Woolwich Common, Queen Elizabeth Hospital to Woodlands Estate, Garland Road Health Centre			Woodlands Estate, Garland Road Health Centre to Woolwich Common, Queen Elizabeth Hospital		
First departure no later than 0500.			First departure no later than 0515.		
0455 - 0700	Every 20 minutes		0510 - 0715	Every 20 minutes	
0701 - 0815	Every 15 minutes		0716 - 0830	Every 15 minutes	
0816 - 0840	Every 12 minutes		0831 - 0855	Every 12 minutes	
0841 - 1810	Every 10 minutes		0856 - 1825	Every 10 minutes	
1811 - 1845	Every 12 minutes		1826 - 1900	Every 12 minutes	
1846 - 0015	Every 15 minutes		1901 - 0030	Every 15 minutes	
Last departure no earlier than 0010.			Last departure no earlier than 0025.		
Pinchpoints					
Woolwich, Thomas Street	0905 - 1105	10 minutes	Plumstead Common, Ship	0900 - 1100	10 minutes

#### 3.3) SUNDAY AND PUBLIC HOLIDAYS (EXCEPT GOOD FRIDAY AND CHRISTMAS DAY) SCHEDULE REQUIREMENTS & PINCHPOINTS

Woolwich Common, Queen Elizabeth Hospital to Woodlands Estate, Garland Road Health Centre			Woodlands Estate, Garland Road Health Centre to Woolwich Common, Queen Elizabeth Hospital		
First departure no later than 0600.			First departure no later than 0615.		
0555 - 0800	Every 30 minutes		0610 - 0815	Every 30 minutes	
0801 - 0840	Every 20 minutes		0816 - 0855	Every 20 minutes	
0841 - 0015	Every 15 minutes		0856 - 0030	Every 15 minutes	
Last departure no earlier than 0010.			Last departure no earlier than 0025.		
Pinchpoints					
Woolwich, Thomas Street	1000 - 1130	15 minutes	Plumstead Common, Ship	1000 - 1130	15 minutes

**Tenderers must identify the cost of the Boxing Day element of this service separately.**

#### **4) OPERATIONAL CONSIDERATIONS**

- 4.1) Route No. 291 can suffer from unpredictable traffic delays in the Woolwich area.
- 4.2) The Elizabeth line is expected to open in December 2018 and 3 separate services will operate from Paddington to Abbey Wood/Heathrow and from Liverpool Street to Shenfield. The full Elizabeth line service will operate from Reading and Heathrow to Shenfield and Abbey Wood and is expected to commence in late 2019. There is potential for a change in passenger demand once the line becomes fully operational. A review, post opening of the Elizabeth line, will be undertaken if required.

#### **5) ROUTE RECORD, CURRENT PERFORMANCE, QSI BY TIME OF DAY, IBUS MILEAGE & QSI POINTS**

- 5.1) ROUTE RECORD  
As per Busnet printout.
- 5.2) CURRENT PERFORMANCE  
As per current print out.
- 5.3) QSI BY TIME OF DAY  
As per current print out.
- 5.4) IBUS MILEAGE & QSI POINTS  
As per current print out.

## **LONDON BUSES - ROUTE DESCRIPTION**

### **ROUTE 291: Woolwich Common, Queen Elizabeth Hospital - Woodlands Estate**

**Date of Structural Change:** 8 December 2018.

**Date of Service Change:** 8 December 2018.

**Reason for Issue:** New Tender.

### **STREETS TRAVERSED**

**Towards Woodlands Estate:** Stadium Road, Repository Road, Artillery Place, John Wilson Street, Castile Road, Monk Street, Calderwood Street, Thomas Street, Woolwich New Road, Vincent Road, Burrage Road, Raglan Road, Waverley Road, Brewery Road, Griffin Road, Waverley Crescent, Plumstead Common Road, Garland Road.

**Towards Woolwich Common, Queen Elizabeth Hospital:** Garland Road, High Grove, Flaxton Road, Timbercroft Lane, Garland Road, Plumstead Common Road, Waverley Crescent, Griffin Road, Brewery Road, Waverley Road, Raglan Road, Burrage Road, Plumstead Road, Woolwich New Road, Thomas Street, Wellington Street, Artillery Place, Repository Road, Stadium Road, Bus Standing Area.

### **AUTHORISED STANDS, CURTAILMENT POINTS, & BLIND DESCRIPTIONS**

Please note that only stands, curtailment points, & blind descriptions as detailed in this contractual document may be used.

### **WOOLWICH COMMON, QUEEN ELIZABETH HOSPITAL**

Public stand for 7 buses in marked areas in Bus Parking Area on east side of Stadium Road opposite Ranken House.

Buses proceed from Bus Standing Area direct to stand, departing via Bus Standing Area to Stadium Road. Set down in Bus Standing Area, at Alighting Point (BP1300 - Queen Elizabeth Hospital / West Entrance, Last Stop on LOR: BP1300 - Queen Elizabeth Hospital / West Entrance) and pick up in Stadium Road, at Stop H3 (BP2729 - Queen Elizabeth Hospital / West Entrance, First Stop on LOR: BP2729 - Queen Elizabeth Hospital / West Entrance).

**AVAILABILITY:** At any time.

**OPERATING RESTRICTIONS:** No more than 1 bus on Route 291 should be scheduled to stand at any one time.

**MEAL RELIEFS:** No meal relief vehicles to stand at any time.

**FERRY VEHICLES:** No ferry vehicles to park on stand at any time.

**BLIND DISPLAY:** Queen Elizabeth Hospital.

## WOOLWICH, MONK STREET

Public stand for five buses in Monk Street in three parts:

1 - For two buses on the west side commencing 52 metres north of Castile Road and extending 25 metres south.

2 - For two buses on the west side commencing 42 metres north of Calderwood Street extending 25 metres south.

3 - For one bus on east side commencing 10 metres north of Calderwood Street extending 13.5 metres north.

### From Woodlands Estate.

Buses proceed from Woolwich New Road via Thomas Street, Calderwood Street and Monk Street to stand, departing via Monk Street, Bus Turning Circle and Monk Street to Calderwood Street. Set down in Woolwich New Road, at stop J (35483 - Woolwich Arsenal Station # [dlr], Last Stop on LOR: 35483 - Woolwich Arsenal Station # [dlr]) and pick up in Calderwood Street, at stop V (36810 - Calderwood Street, First Stop on LOR: 36810 - Calderwood Street).

### From Woolwich Common, Queen Elizabeth Hospital.

Buses proceed from Castile Road via Monk Street to stand, departing via Monk Street, Bus Turning Circle, Monk Street, Calderwood Street and Thomas Street to Wellington Street. Set down in Monk Street, at alighting point (37129 - , Last Stop on LOR: 18759 - Artillery Place / Frances Street) and pick up in Wellington Street, at stop S (12927 - The Woolwich Centre, First Stop on LOR: 12927 - The Woolwich Centre).

AVAILABILITY:	At any time.
OPERATING RESTRICTIONS:	Unscheduled curtailments only
MEAL RELIEFS:	No meal relief vehicles to stand at any time.
FERRY VEHICLES:	No ferry vehicles to park on stand at any time.
BLIND DISPLAY:	Woolwich.

## WOOLWICH, VINCENT ROAD (from Woolwich Common, Queen Elizabeth Hospital)

Buses proceed from Vincent Road via Burrage Road departing to Plumstead Road. Set down in Vincent Road, at stop G (35563 - Vincent Road / Woolwich Arsenal Station, Last Stop on LOR: 35563 - Vincent Road / Woolwich Arsenal Station) and pick up in Plumstead Road, at stop Z (BP4396 - Plumstead Road / Woolwich Public Market, First Stop on LOR: BP4396 - Plumstead Road / Woolwich Public Market).

AVAILABILITY:	At any time.
OPERATING RESTRICTIONS:	<b>Turning Point Only - Buses must not stand</b>
BLIND DISPLAY:	Woolwich.

### **WOOLWICH, BERESFORD STREET (from WOODLANDS ESTATE)**

Public stand for ten buses on south side of Beresford Street and Woolwich High Street in 3 parts:

1. For two buses commencing 25 metres south east of Macbean Street extending 31 metres south east.
2. For three buses as an overflow stand commencing 4 metres north west of lamp standard 06A0121 extending 36 metres south east.
3. For five buses as an overflow stand commencing 4 metres west of lamp standard 16AA1549 extending 61 metres east.

Buses proceed from Plumstead Road via Beresford Street to stand, departing via Beresford Street, Woolwich High Street, John Wilson Street, Castile Road and Monk Street to Calderwood Street. Set down in Plumstead Road, at Stop Z (BP4396 - Plumstead Road / Woolwich Public Market, Last Stop on LOR: BP4396 - Plumstead Road / Woolwich Public Market) and pick up in Calderwood Street, at Stop V (36810 - Calderwood Street, First Stop on LOR: 36810 - Calderwood Street).

AVAILABILITY:	At any time.
OPERATING RESTRICTIONS:	Unscheduled curtailments only
MEAL RELIEFS:	No meal relief vehicles to stand at any time.
FERRY VEHICLES:	No ferry vehicles to park on stand at any time.
BLIND DISPLAY:	Woolwich.

### **PLUMSTEAD COMMON, WARWICK TERRACE (from Woolwich Common, Queen Elizabeth Hospital)**

Public stand for four buses on east side of Warwick Terrace, commencing 22 metres south of lamp standard 07P146 extending 44 metres north.

Buses proceed from Waverley Crescent via Warwick Terrace to stand, departing via Warwick Terrace to Plumstead Common Road. Set down in Waverley Crescent, at alighting point (27988 - Heavitree Road, Last Stop on LOR: 27988 - Heavitree Road) and pick up in Plumstead Common Road, at stop R (18741 - Plumstead Common Road / Warwick Terrace, First Stop on LOR: 18741 - Plumstead Common Road / Warwick Terrace).

AVAILABILITY:	At any time.
OPERATING RESTRICTIONS:	Unscheduled curtailments only
MEAL RELIEFS:	No meal relief vehicles to stand at any time.
FERRY VEHICLES:	No ferry vehicles to park on stand at any time.
BLIND DISPLAY:	Plumstead Common.

## **WOODLANDS ESTATE, GARLAND ROAD HEALTH CENTRE, HESITATION POINT**

Hesitation point only; Buses must only hesitate as long as necessary to change ticket machine, radio and blind displays.

Buses proceed from Garland Road direct to stand, departing to Garland Road. Set down in Garland Road, at Stop M (BP999 - Garland Road Clinic, Last Stop on LOR: BP999 - Garland Road Clinic) and pick up in Garland Road, at Stop M (BP999 - Garland Road Clinic, First Stop on LOR: BP999 - Garland Road Clinic).

AVAILABILITY: At any time.

OPERATING RESTRICTIONS: None.

MEAL RELIEFS: No meal relief vehicles to stand at any time.

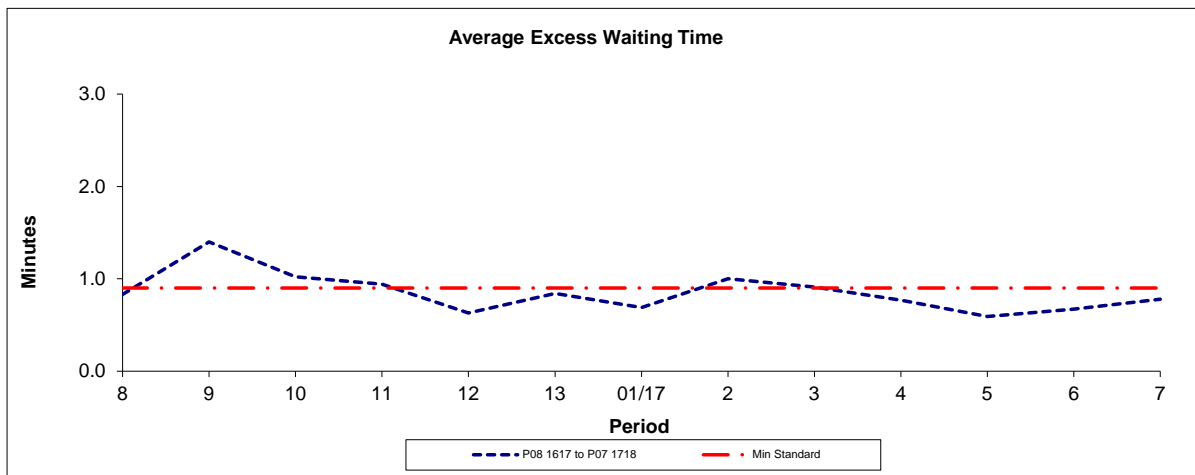
FERRY VEHICLES: No ferry vehicles to park on stand at any time.

BLIND DISPLAY: Woodlands Estate.

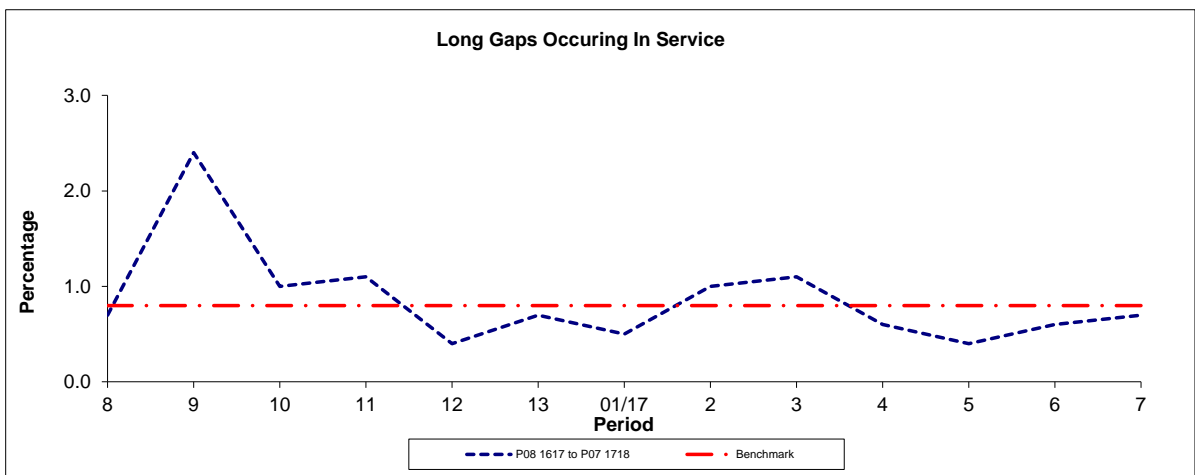
OTHER INFORMATION: HESITATION POINT ONLY - BUSES MUST NOT STAND. Buses pause on Flaxton Road (northbound) to change blinds and reset ticket machine.

## PART B - PERFORMANCE STATISTICS

### Route 291



Period	8	9	10	11	12	13	01/17	2	3	4	5	6	7
P08 1617 to P07 1718	0.83	1.40	1.02	0.94	0.63	0.84	0.69	1.00	0.91	0.77	0.59	0.67	0.78
Min Standard	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90

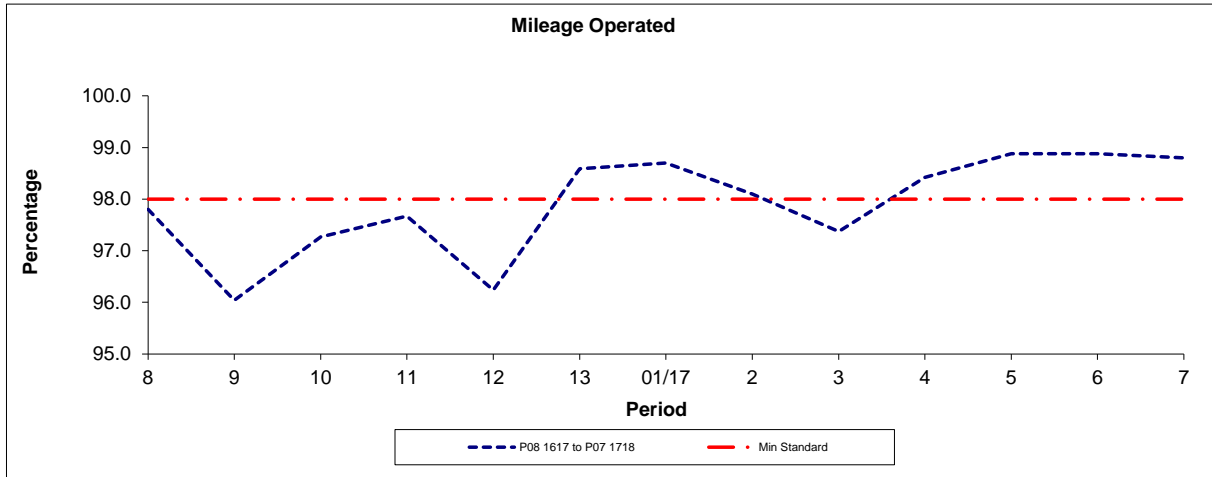


Period	8	9	10	11	12	13	01/17	2	3	4	5	6	7
P08 1617 to P07 1718	0.7	2.4	1.0	1.1	0.4	0.7	0.5	1.0	1.1	0.6	0.4	0.6	0.7
Benchmark	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8

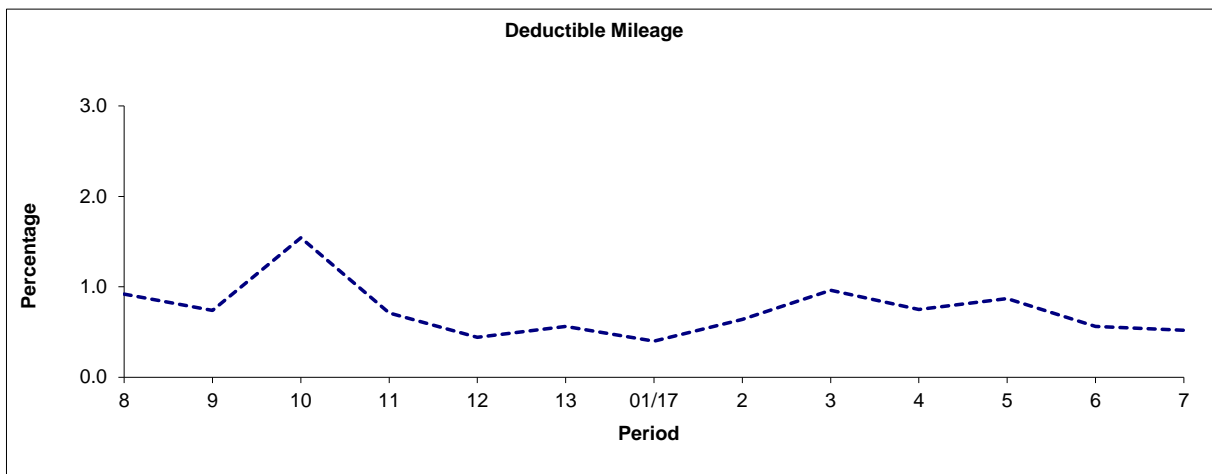
Note : Reliability is actual performance under full iBus (4 weeks data).  
Minimum Standards and Benchmarks are those applicable under the new contract.

## PART B - PERFORMANCE STATISTICS

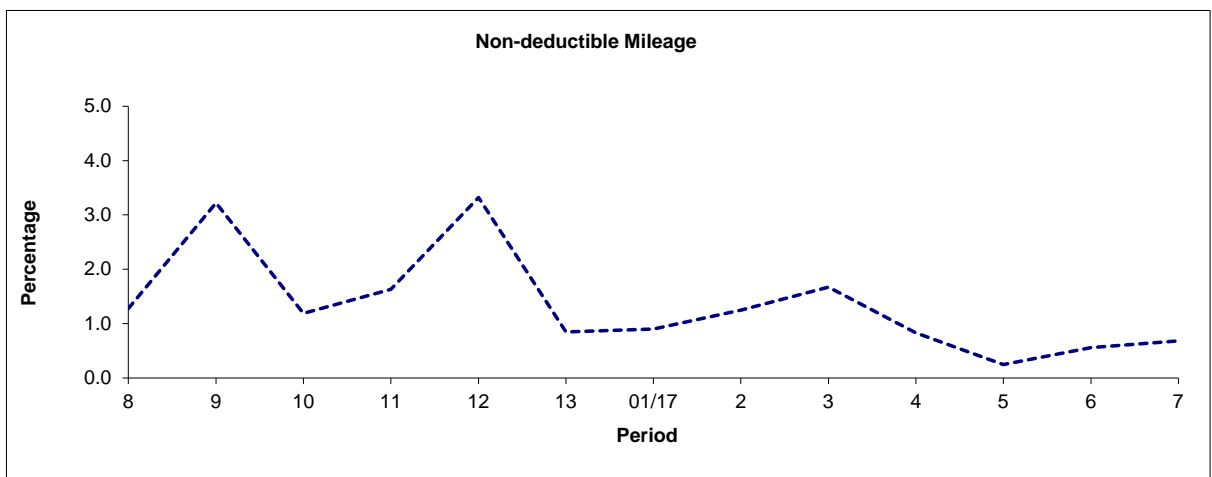
### Route 291



Period	8	9	10	11	12	13	01/17	2	3	4	5	6	7
P08 1617 to P07 1718	97.80	96.04	97.27	97.67	96.24	98.59	98.70	98.10	97.37	98.42	98.88	98.88	98.80
Min Standard	98.00	98.00	98.00	98.00	98.00	98.00	98.00	98.00	98.00	98.00	98.00	98.00	98.00



Period	8	9	10	11	12	13	01/17	2	3	4	5	6	7
P08 1617 to P07 1718	0.92	0.74	1.54	0.71	0.44	0.56	0.40	0.64	0.96	0.75	0.87	0.56	0.52



Period	8	9	10	11	12	13	01/17	2	3	4	5	6	7
P08 1617 to P07 1718	1.28	3.22	1.19	1.63	3.32	0.85	0.90	1.25	1.67	0.83	0.25	0.56	0.68

Note: Mileage is based on 4 weeks data

ROUTE 291 - FULL iBUS RESULTS BY TIME OF DAY  
QUARTER 3 16/17 TO QUARTER 2 17/18 (17/09/16 - 15/09/17)

MONDAY - FRIDAY

Time Range	Expected Buses	Observed Buses	Observed Buses (%)	SWT (mins)	EWT (mins)	AWT (mins)	Probability of Waiting < 10 mins (%)	Probability of Waiting 10-20 mins (%)	Probability of Waiting 20-30 mins (%)	Probability of Waiting > 30 mins (%)	Long Gaps (%)	Maximum Gap (mins)
05:00 - 07:00	14,469	14,248	98.5	6.81	0.39	7.20	76.2	23.2	0.6	0.1	0.1	39
07:00 - 10:00	31,174	30,560	98.0	4.98	0.57	5.56	87.7	11.9	0.3	0.0	0.4	36
10:00 - 13:00	31,032	30,627	98.7	5.00	0.58	5.58	87.9	11.7	0.3	0.0	0.3	40
13:00 - 16:00	30,882	30,380	98.4	4.99	0.79	5.77	85.1	14.1	0.7	0.1	0.8	41
16:00 - 19:00	30,492	28,749	94.3	5.02	1.56	6.59	78.7	18.9	2.1	0.3	2.3	50
19:00 - 22:00	22,869	22,951	100.4	6.66	0.76	7.41	69.8	28.3	1.7	0.2	0.6	56
22:00 - 24:00	13,696	13,595	99.3	7.53	0.55	8.08	64.8	33.4	1.6	0.2	0.2	47
All Locations Summary	174,614	171,110	98.0	5.36	0.86	6.22	81.8	17.1	1.0	0.1	0.9	56

SATURDAY

Time Range	Expected Buses	Observed Buses	Observed Buses (%)	SWT (mins)	EWT (mins)	AWT (mins)	Probability of Waiting < 10 mins (%)	Probability of Waiting 10-20 mins (%)	Probability of Waiting 20-30 mins (%)	Probability of Waiting > 30 mins (%)	Long Gaps (%)	Maximum Gap (mins)
05:00 - 07:00	2,579	2,594	100.6	7.49	0.30	7.79	67.6	31.2	1.1	0.1	0.1	33
07:00 - 10:00	5,412	5,239	96.8	6.05	0.57	6.62	78.5	20.9	0.5	0.0	0.1	34
10:00 - 13:00	6,372	6,347	99.6	5.00	0.55	5.55	88.0	11.7	0.3	0.0	0.4	32
13:00 - 16:00	6,354	6,264	98.6	5.00	0.74	5.74	86.2	12.9	0.6	0.3	0.9	51
16:00 - 19:00	6,360	6,127	96.3	4.97	1.03	6.00	83.9	14.9	0.8	0.3	1.2	66
19:00 - 22:00	4,378	4,236	96.8	7.34	1.21	8.55	62.2	32.8	4.3	0.7	0.8	56
22:00 - 24:00	2,888	2,848	98.6	7.53	0.81	8.33	63.7	33.6	2.5	0.1	0.1	35
All Locations Summary	34,343	33,655	98.0	5.64	0.80	6.44	80.1	18.4	1.2	0.2	0.7	66

SUNDAY AND BANK HOLIDAYS

Time Range	Expected Buses	Observed Buses	Observed Buses (%)	SWT (mins)	EWT (mins)	AWT (mins)	Probability of Waiting < 10 mins (%)	Probability of Waiting 10-20 mins (%)	Probability of Waiting 20-30 mins (%)	Probability of Waiting > 30 mins (%)	Long Gaps (%)	Maximum Gap (mins)
05:00 - 07:00	764	787	103.0	14.71	0.02	14.73	44.1	24.3	27.2	4.4	2.7	37
07:00 - 10:00	3,574	3,465	97.0	10.73	0.39	11.12	53.2	36.1	9.8	1.0	0.0	61
10:00 - 13:00	4,687	4,605	98.3	7.51	0.73	8.25	64.2	33.1	2.3	0.5	0.5	46
13:00 - 16:00	4,750	4,620	97.3	7.45	0.88	8.34	63.7	33.2	2.6	0.5	0.4	55
16:00 - 19:00	4,764	4,678	98.2	7.39	0.85	8.24	64.5	31.8	3.5	0.2	0.2	38
19:00 - 22:00	4,654	4,602	98.9	7.49	1.26	8.75	62.4	32.7	4.3	0.6	0.6	45
22:00 - 24:00	3,112	3,089	99.3	7.53	0.58	8.11	64.9	33.6	1.4	0.2	0.2	38
All Locations Summary	26,305	25,846	98.3	7.92	0.81	8.73	62.4	33.0	4.1	0.5	0.4	61

ALL DAYS

Time Range	Expected Buses	Observed Buses	Observed Buses (%)	SWT (mins)	EWT (mins)	AWT (mins)	Probability of Waiting < 10 mins (%)	Probability of Waiting 10-20 mins (%)	Probability of Waiting 20-30 mins (%)	Probability of Waiting > 30 mins (%)	Long Gaps (%)	Maximum Gap (mins)
05:00 - 07:00	17,812	17,629	99.0	7.26	0.36	7.62	73.8	24.0	1.9	0.3	0.2	39
07:00 - 10:00	40,160	39,264	97.8	5.36	0.56	5.93	85.2	13.8	0.9	0.1	0.3	61
10:00 - 13:00	42,091	41,579	98.8	5.31	0.60	5.90	85.0	14.4	0.6	0.1	0.4	46
13:00 - 16:00	41,986	41,264	98.3	5.28	0.79	6.07	82.8	16.1	0.9	0.1	0.8	55
16:00 - 19:00	41,616	39,554	95.0	5.24	1.43	6.67	78.0	19.7	2.1	0.3	2.0	66
19:00 - 22:00	31,901	31,789	99.6	6.85	0.88	7.73	67.9	29.4	2.4	0.3	0.6	56
22:00 - 24:00	19,696	19,532	99.2	7.53	0.60	8.13	64.7	33.4	1.8	0.2	0.2	47
All Locations Summary	235,262	230,611	98.0	5.64	0.85	6.49	79.7	18.8	1.4	0.2	0.8	66

## Transport for London - QSI Points and Live Mileage List

Route 291  
 Service change 18506  
 Date 21 January 2010

Ref

QSI Points are highlighted

OUT DIRECTION				
Timing Point Code	Stop Number	Stop Name	Metres	Miles
WCOMHP S	WCOMHP S	WOOLWICH COMMON, QUEEN ELIZABETH HOSPITAL		
WCOMHP	BP2729	Queen Elizabeth Hospital / West Entrance	0	0.00
	BP2822	Repository Road / Artillery Place	1310	0.81
	18759	Artillery Place / Frances Street	108	0.07
	36810	Calderwood Street	859	0.53
WOOLTS	BP5479	Woolwich Arsenal Station	299	0.19
	35563	Vincent Road / Woolwich Arsenal Station	201	0.12
	18753	Burrage Road / Arthur Grove	340	0.21
	BP2588	Foxfield Primary School	345	0.21
	BP2589	Glyndon Community Centre	246	0.15
	BP2590	Richmond Gospel Hall	218	0.14
	27986	Griffin Road / Brewery Road	232	0.14
	27988	Heavitree Road	231	0.14
PLMCSH	18743	Plumstead Common Rd / Waverley Crescent	433	0.27
	20505	Plumstead Common Road / Erindale Terrace	318	0.20
WLSEGH	BP999	Garland Road Clinic	273	0.17
WLSEGH H	WLSEGH H	WOODLANDS ESTATE, GARLAND ROAD HEALTH CENTRE HESITATION POINT	0	0.00
TOTAL ROUTE MILEAGE - OUT DIRECTION			5413 metres	3.36 miles

# TRANCHE 631

ason for issue

Woolwich town centre scheme

BACK DIRECTION				
Timing Point Code	Stop Number	Stop Name	Metres	Miles
WLSEGH H	WLSEGH H	WOODLANDS ESTATE, GARLAND ROAD HEALTH CENTRE HESITATION POINT		
WLSEGH	BP999	Garland Road Clinic	0	0.00
	BP1000	Landstead Road	243	0.15
	BP1001	Warland Road	154	0.10
	BP1002	High Grove /Voce Road	173	0.11
WLSEFR	BP1003	Flaxton Road / Voce Road	307	0.19
	BP1004	Duncroft	257	0.16
	BP1005	Barden Street	184	0.11
WLSETL	BP1006	Timbercroft Lane / Pegwell Street	266	0.17
	18741	Plumstead Common Road / Warwick Terrace	402	0.25
PLMCSH	18742	Plumstead Common Road / Ennis Road	212	0.13
	18744	Plumstead Common / The Ship	125	0.08
	27987	Heavitree Road	152	0.09
	BP2585	Brewery Road	469	0.29
	BP2586	Glyndon Community Centre	302	0.19
	BP2587	Foxfield Primary School	357	0.22
	36822	Burrage Road	519	0.32
	BP4396	Plumstead Road / Woolwich Public Market	209	0.13
WOOLAS	35483	Woolwich Arsenal Station	280	0.17
	12927	Woolwich Town Hall	225	0.14
	18757	Artillery Place / John Wilson Street	361	0.22
	18758	Artillery Place / Frances Street	270	0.17
	BP2821	Repository Road / Artillery Place	191	0.12
WCOMHP	BP1300	Queen Elizabeth Hospital / West Entrance	1251	0.78
WCOMHP S	WCOMHP S	WOOLWICH COMMON, QUEEN ELIZABETH HOSPITAL	0	0.00
TOTAL ROUTE MILEAGE - BACK DIRECTION			6909 metres	4.29 miles