7. Service Specification

Route: 376

Contract Reference: QC53402

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.

Terminus Points	Beckton Bus Station and East Ham, Newham Town
	Hall
Contract Basis	Incentivised
Commencement Date	17 th Spetember 2016
Vehicle Type	60 capacity, dual door, single deck, minimum 10.8m
	long
Current Maximum Approved	10.8 metres long and 2.44 metres wide
Dimensions	
New Vehicles Mandatory	Yes
Hybrid Price Required	Yes
Sponsored Route	No
Advertising Rights	Operator
Minimum Performance Standard	Departing on Time - No less than 82.00%
Extension Threshold	Departing on Time Threshold – 85.00%
Minimum Operated Mileage	No less than 98.00%
Standard	

The Date of Tender for this ITT is: No later than 12 Noon on Monday 2nd November 2015

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. 376.

Tenderers should note that there are no changes proposed as part of this Service Specification for Route No. 376.

Operators should provide the following prices:

- 1. Annual diesel price based on minimum 5 year contract.
- 2. Annual hybrid price based on minimum 5 year contract.
- 3. Annual hybrid price with upfront payment of capital difference between diesel and hybrid for 5 year contract.

3) SCHEDULE REQUIREMENTS & PINCHPOINTS

3.1) MONDAY TO FRIDAY SCHEDULE REQUIREMENTS & PINCHPOINTS

Beckton Bus Station to East Ham, East Ham, Newham Town Hall to Beckton										
Newham Town	Hall			Bus Station						
First departure	no later than C)605.		First departure	no later than 0	605.				
0600 - 0705	Every 20 minu	utes		0600 - 0705	Every 20 minu	utes				
0706 - 1905	Every 15 minu	utes		0706 - 1905	Every 15 minu	utes				
1906 - 2330	Every 20 minu	utes		1906 - 2330	Every 20 minutes					
Last departure	no earlier than	2325.		Last departure no earlier than 2325.						
Pinchpoints										
Upton Park,	0730 - 0900	15 minu	ites	Stansfeld	0740 - 0910	15 minutes				
Boleyn	1500 - 1630	15 minu	ites	Road, Fulmer	1510 - 1640	15 minutes				
				Road						

3.2) SATURDAY AND GOOD FRIDAY SCHEDULE REQUIREMENTS & PINCHPOINTS

Beckton Bus Station to East Ham, East Ham, Newham Town Hall to Beckton										
Newham Town Hall Bus Station										
First departure	no later than 0	605.								
0600 - 0845	Every 20 minu	utes	0600 - 0805	Every 20 minu	utes					
0846 - 1925	Every 15 minu	utes	0806 - 1925	Every 15 minu	utes					
1926 - 2330	Every 20 minu	utes	1926 - 2330	Every 20 minutes						
Last departure	no earlier than	2325.	Last departure	Last departure no earlier than 2325.						
Pinchpoints										
Upton Park,	0905 - 1105	15 minutes	Stansfeld	0900 - 1100	15 minutes					
Boleyn			Road, Fulmer							
			Road							

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

Beckton Bus Station to East Ham, East Ham, Newham Town Hall to Beckton											
Newham Town Hall Bus Station											
First departure no later than 0655.First departure no later than 0645.											
0650 - 2330	Every 30 minu	utes	0640 - 2330	Every 30 minu	utes						
Last departure	no earlier than	1 2325.	Last departure no earlier than 2325.								
Pinchpoints											
Upton Park,	1020 - 1220	30 minutes	Stansfeld	1005 - 1205	30 minutes						
Boleyn			Road, Fulmer								
			Road								

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

4) OPERATIONAL CONSIDERATIONS

- 4.1) Route No. 376 can suffer from unpredictable traffic delays in the East Ham and Upton Park areas.
- 4.2) Football matches at West Ham Football Club, in Upton Park can also cause traffic congestion in the Forest Gate/Barking Road area. This is expected to last until the new stadium at Queen Elizabeth Olympic Park is completed in August 2016.

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 376: Beckton Bus Station - East Ham, Newham Town Hall

Date of Structural Change: 17 September 2016.Date of Service Change: 17 September 2016.Reason for Issue: {To be specified}.

STREETS TRAVERSED

Towards East Ham, Newham Town Hall: Beckton Bus Station, Woolwich Manor Way, Horse Leaze, Newark Knok, Warwall, Covelees Wall, Horse Leaze, Woolwich Manor Way, Ferndale Street, Cyprus Place, Strait Road, Stansfeld Road, Tollgate Road, Newham Way, Prince Regent Lane, Glen Road, Boundary Lane, Boundary Road, Central Park Road, Barking Road, Green Street, Plashet Grove, High Street North, Ron Leighton Way, Barking Road, High Street South.

Towards Beckton Bus Station: Barking Road, High Street North, Plashet Grove, Green Street, Barking Road, Boundary Road, Boundary Lane, Glen Road, Prince Regent Lane, Newham Way, Tollgate Road, Stansfeld Road, Strait Road, Cyprus Place, Ferndale Street, Woolwich Manor Way, Horse Leaze, Newark Knok, Warwall, Covelees Wall, Horse Leaze, Woolwich Manor Way, Beckton Bus Station.

AUTHORISED STANDS, CURTAILMENT POINTS, & BLIND DESCRIPTIONS

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

BECKTON BUS STATION, SOUTH SIDE

Private stand for four buses on Routes 366 and 376 in 2 portions on south side of bus station on west side of Woolwich Manor Way.

1 - for two buses commencing at a point opposite stop B and extending 32 metres east.2 - for two buses commencing at a point opposite stop A as an overflow stand and extending 28 metres east.

Buses proceed from Beckton Bus Station direct to stand, departing to Beckton Bus Station. Set down in Beckton Bus Station, at stop A (BP5194 - Beckton Bus Station, Last Stop on LOR: BP5194 - Beckton Bus Station) and pick up in Beckton Bus Station, at stop B (BP5195 - Beckton Bus Station, First Stop on LOR: BP5195 - Beckton Bus Station).

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:	Beckton Station.

WINSOR PARK ESTATE, WARWALL (from EAST HAM, NEWHAM TOWN HALL)

Buses proceed from Woolwich Manor Way via Horse Leaze and Covelees Wall departing to Warwall. Set down in Woolwich Manor Way, at stop F (BP234 - Horse Leaze, Last Stop on LOR: BP234 - Horse Leaze) and pick up in Warwall (BP513 - Winsor Park Estate, First Stop on LOR: BP513 - Winsor Park Estate).

AVAILABILITY:At any time.OPERATING RESTRICTIONS:Turning Point Only - Buses must not standBLIND DISPLAY:Winsor Park.

CYPRUS, EAST HAM MANOR WAY (from EAST HAM, NEWHAM TOWN HALL)

Public stand for three buses on west side of East Ham Manor Way, located opposite party wall of 42/46 and extending 30 metres south.

Buses proceed from Strait Road via East Ham Manor Way to stand, departing via East Ham Manor Way, Woolwich Manor Way and East Ham Manor Way to Strait Road. Set down in Strait Road, at Stop S (FC18 - Strait Road / East Ham Manor Way, Last Stop on LOR: FC18 - Strait Road / East Ham Manor Way) and pick up in Strait Road, at Stop R (BP4855 - Strait Road / East Ham Manor Way, First Stop on LOR: BP4855 - Strait Road / East Ham Manor Way).

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:Cyprus.

NEWHAM GENERAL HOSPITAL (from Beckton Bus Station)

Private stand for 3 buses on north side of Glen Road in grounds of Newham General Hospital commencing 15 metres west of Cherry Tree Way and extending 39 metres west. Buses proceed from Private Road In Newham General Hospital Grounds via Glen Road to stand, departing via Glen Road, Boundary Lane and Glen Road to Private Road In Newham General Hospital Grounds. Set down in Glen Road, at stop HG (BP2368 -Newham University Hosp Main Reception and pick up in Glen Road, at stop HA (BP2364 -Newham University Hosp Main Reception.

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:	Newham Hospital.

UPTON PARK, CLAUGHTON ROAD

Public stand on west side of Claughton Road, commencing 14 metres south of the kerbline of Barking Road and extending 20 metres south.

From Beckton Bus Station.

Buses proceed from Boundary Road via Claughton Road to stand, departing via Claughton Road, Barking Road and Central Park Road to Boundary Road. Set down in Boundary Road, at stop P (33996 - Wilson Road, Last Stop on LOR: 33996 - Wilson Road) and pick up in Boundary Road (BP2361 - Benson Avenue, First Stop on LOR: BP2361 - Benson Avenue).

From East Ham, Newham Town Hall.

Buses proceed from Green Street via Central Park Road, Boundary Road and Claughton Road to stand, departing via Claughton Road and Barking Road to Green Street. Set down in Green Street, at stop F (633 - Upton Park / Boleyn, Last Stop on LOR: 633 - Upton Park / Boleyn) and pick up in Green Street, at stop G (9064 - Upton Park / Boleyn, First Stop on LOR: 9064 - Upton Park / Boleyn).

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:	Upton Park, Boleyn.

UPTON PARK, STUKELEY ROAD (from Beckton Bus Station)

Public stand for one bus on the east side of Stukeley Road, commencing 5 metres north of the southern building line of No.155 Plashet Road extending10 metres north. Buses proceed from Green Street via Neville Road and Stukeley Road to stand, departing via Stukeley Road and Plashet Road to Green Street. Set down in Green Street, at Stop D (9056 - Plashet Road, Last Stop on LOR: 9056 - Plashet Road) and pick up in Green Street, at Stop B (7059 - Upton Park Station <>, First Stop on LOR: 7059 - Upton Park Station <>).

EAST HAM, WORDSWORTH AVENUE (from Beckton Bus Station)

Public stand for two buses on south side of Wordsworth Avenue, commencing 63 metres west of the kerbline of High Street North and extending 25 metres East. Buses proceed from Plashet Grove via High Street North and Wordsworth Avenue to stand, departing via Wordsworth Avenue and Woodhouse Grove to Plashet Grove. Set down in Plashet Grove, at stop E (9065 - Plashet School, Last Stop on LOR: 9065 - Plashet School) and pick up in Plashet Grove, M (11126 - Shrewsbury Road, First Stop on LOR: 11126 - Shrewsbury Road).

At any time.
Unscheduled curtailments only
No meal relief vehicles to stand at any time.
No ferry vehicles to park on stand at any time.
East Ham, Plashet Grove.

EAST HAM, NEWHAM TOWN HALL

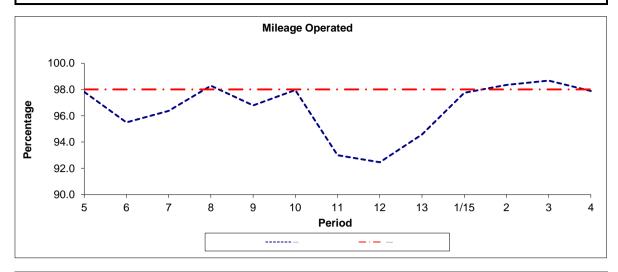
Public stand for four buses on west side of Wellington Road, commencing at lamp standard No 3 and extending 47 metres south.

Buses proceed from High Street South via Nelson Street and Wellington Road to stand, departing via Wellington Road to Barking Road. Set down in High Street South, at Stop V (2891 - Newham Town Hall, Last Stop on LOR: 2891 - Newham Town Hall) and pick up in Barking Road, at Stop W (696 - Newham Town Hall, First Stop on LOR: 696 - Newham Town Hall).

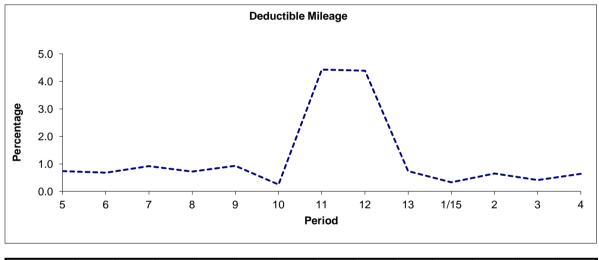
AVAILABILITY:	At any time.
OPERATING RESTRICTIONS:	No more than 2 buses on Route 376 should be scheduled to stand at any one time.
MEAL RELIEFS:	No meal relief vehicles to stand at any time.
FERRY VEHICLES:	No ferry vehicles to park on stand at any time.
BLIND DISPLAY:	East Ham, Newham Town Hall.
OTHER INFORMATION:	No toilet facilities available.

PART B - PERFORMANCE STATISTICS

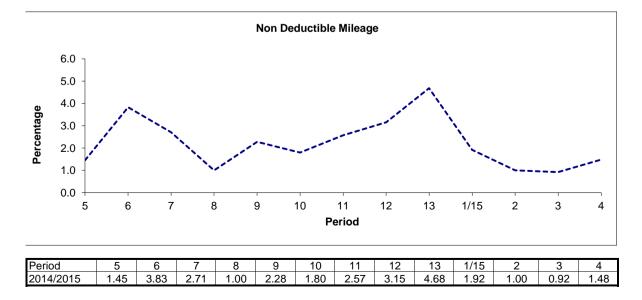
Route 376



Period	5	6	7	8	9	10	11	12	13	1/15	2	3	4
2014/2015	97.81	95.49	96.37	98.28	96.79	97.95	93.00	92.46	94.58	97.75	98.35	98.67	97.88
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

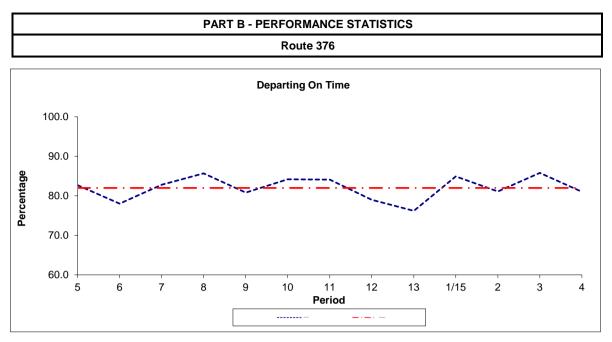


2014/2015 0.74 0.68 0.92 0.72 0.93 0.25 4.43 4.39 0.74 0.33 0.65 0.41 0.64	Period	5	6	7	8	9	10	11	12	13	1/15	2	3	4
	2014/2015	0/4	0.68	0.92	11/2	0.93	0.25	4.43	4.39			0.65	0.41	0.64

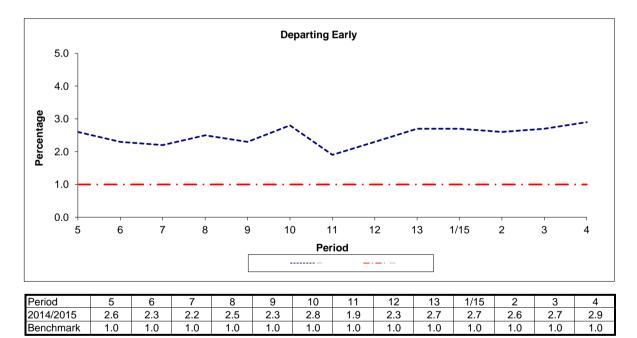


Note : Mileage is based on 4 weeks data

Deductible Mileage was adversely affected by industrial action in periods 11 and 12 14/15.



Period	5	6	7	8	9	10	11	12	13	1/15	2	3	4
2014/2015	82.7	78.0	82.8	85.7	80.8	84.2	84.1	79.0	76.2	84.9	81.1	85.8	81.0
Min Standard	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0



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

ROUTE 376 - FULL IBUS RESULTS BY TIME OF DAY QUARTER 2 14/15 TO QUARTER 1 15/16 (21/06/14 - 26/0615)

MONDAY - FRIDAY

						Non Arrival /		
		Observed	Observed	Linked Buses		Not Linked		
Time Range	Expected Buses	Buses	Buses (%)	(%)	On Time (%)	(%)	Early (%)	Late (%)
05:00 - 07:00	7,835.	7,729.	98.6	97.8	91.3	2.3	1.8	4.6
07:00 - 10:00	38,149.	36,848.	96.6	96.6	86.9	3.4	1.4	8.3
10:00 - 13:00	38,091.	37,851.	99.4	98.7	91.3	1.4	1.5	5.8
13:00 - 16:00	38,028.	37,164.	97.7	97.1	82.6	3.3	2.2	11.9
16:00 - 19:00	38,430.	36,521.	95.0	93.2	75.7	7.2	3.4	13.7
19:00 - 22:00	29,863.	28,634.	95.9	93.4	70.7	7.0	1.9	20.5
22:00 - 24:00	17,284.	17,273.	99.9	97.9	84.4	2.2	5.2	8.1
All Locations	207680	202,020.	97.3	96.2	82.1	4.3	2.3	11.3
Summary								

SATURDAY

		Observed	Observed	Linked Buses		Non Arrival / Not Linked		
Time Range	Expected Buses	Buses	Buses (%)	(%)	On Time (%)	(%)	Early (%)	Late (%)
05:00 - 07:00	1,650.	1,669.	101.2	99.2	94.2	0.8	4.6	0.4
07:00 - 10:00	6,994.	6,852.	98.0	99.0	93.9	1.0	3.1	2.1
10:00 - 13:00	8,135.	7,930.	97.5	96.8	84.1	3.2	2.4	10.3
13:00 - 16:00	8,048.	7,800.	96.9	95.6	79.0	4.5	2.6	13.9
16:00 - 19:00	7,935.	7,512.	94.7	93.2	75.6	7.5	2.8	14.0
19:00 - 22:00	6,481.	6,146.	94.8	91.9	65.9	9.1	1.9	23.1
22:00 - 24:00	3,660.	3,696.	101.0	98.2	83.3	2.0	4.8	10.0
All Locations Summary	42903	41,605.	97.0	95.7	80.1	4.8	2.7	12.4

SUNDAY AND BANK HOLIDAYS

		Observed	Observed	Linked Buses		Non Arrival / Not Linked		
Time Range	Expected Buses	Buses	Buses (%)	(%)	On Time (%)	(%)	Early (%)	Late (%)
05:00 - 07:00	261.	293.	112.3	99.2	98.4	1.0	0.0	0.7
07:00 - 10:00	4,646.	4,628.	99.6	99.5	95.8	0.3	1.1	2.8
10:00 - 13:00	4,744.	4,690.	98.9	99.4	89.8	0.8	3.2	6.3
13:00 - 16:00	4,569.	4,513.	98.8	97.2	78.3	2.9	2.5	16.3
16:00 - 19:00	4,733.	4,595.	97.1	96.2	79.8	4.1	3.4	12.6
19:00 - 22:00	4,714.	4,696.	99.6	96.7	81.0	3.5	1.4	14.2
22:00 - 24:00	3,058.	3,067.	100.3	99.0	89.3	1.0	5.9	3.9
All Locations Summary	26725	26,482.	99.1	98.0	84.1	2.4	2.7	10.8

ALL DAYS

		Observed	Observed	Linked Buses		Non Arrival / Not Linked		
Time Range	Expected Buses	Buses	Buses (%)	(%)	On Time (%)	(%)	Early (%)	Late (%)
05:00 - 07:00	9,746.	9,691.	99.4	98.1	92.0	2.0	2.0	4.0
07:00 - 10:00	49,789.	48,328.	97.1	97.2	87.9	3.0	1.6	7.5
10:00 - 13:00	50,970.	50,471.	99.0	98.5	89.9	1.6	1.8	6.6
13:00 - 16:00	50,645.	49,477.	97.7	96.9	81.6	3.4	2.3	12.7
16:00 - 19:00	51,098.	48,628.	95.2	93.5	76.1	6.9	3.4	13.6
19:00 - 22:00	41,058.	39,476.	96.1	93.5	71.2	6.9	1.8	20.1
22:00 - 24:00	24,002.	24,036.	100.1	98.1	84.9	2.0	5.3	7.8
All Locations	277308	270,107.	97.4	96.3	82.1	4.2	2.4	11.4
Summary								

Transport for London - QSI Points and Live Mileage List

Route 376 Service change 20870 Date 8 October 2009

Date OSI Pointe a				
JSI POINTS a	re highlighte	OUT DIRECTION		
Fiming Point Code	Stop Number	Stop Name	Metres	Miles
BCKTBS S	BCKTBS S	Beckton Bus Station		
BCKTBS	BP5195	Beckton Bus Station	0	0.00
	37125	Beckton Station	276	0.17
	91521	Covelees Wall	371	0.23
WNPEWW	BP513	Winsor Park Estate	376	0.23
	BP093	Horse Leaze	503	0.31
	LE123	The Ferndale	505	0.31
CYPSSN	BP092	Cyprus Station	135	0.08
	BP4855	Strait Road	203	0.13
	FC19	Renfrew Close	154	0.10
	BP175	Beckton Park Station	323	0.20
	FC21	Stansfeld Road	331	0.21
	LE214	Strait Road	284	0.18
	FC24	Will Thorne Pavilion	315	0.20
STSFFR	FC26	Fulmer Road	291	0.18
	36817	Beckton School	384	0.24
	36816	Colman Road	294	0.18
	8113	Bennett Road	537	0.33
NEWGHP	BP2366 \	ham University Hospital / Main En	426	0.26
	BP2368	St Andrew's Wing	316	0.20
	BP2369	Brampton Manor School	287	0.18
	33995	New City Road	243	0.15
	33996	Wilson Road	306	0.19
	33944	Upton Park/ Boleyn	257	0.16
UPPKBN	9064	Upton Park / Boleyn	152	0.09
	9061	Tudor Road	289	0.18
UPPKSN	9058	Upton Park Station	144	0.09
	9056	Plashet Road	267	0.17
	9074	Washington Road	100	0.06
	9075	Walpole Road	162	0.10
	9071	Katherine Road	320	0.20
	9069	Shrewsbury Road	370	0.23
	9065	Plashet School	283	0.18
EHAMSN	2899	East Ham Station	127	0.08
	BP132	Bendish Road	237	0.15
	BP759	Pilgrims Way	330	0.21
	697	High Street North	342	0.21
EHAMTH	2891	Newham Town Hall	205	0.13
EHAMTH S	EHAMTH S	AST HAM, NEWHAM TOWN HAL	0	0.00
TOTA			10445	6.49
IUIA	L ROUTE MILL	EAGE - OUT DIRECTION		

metres

miles

		BACK DIRECTION		
Timing Point Code	Stop Number	Stop Name	Metres	Miles
EHAMTH S		AST HAM. NEWHAM TOWN HALL	WOLLOS	WIII05
EHAMTH	696	Newham Town Hall	0	0.00
	2892	Thorpe Road	247	0.00
	2896	Caulfield Road	247	0.13
	LE213	Bendish Road	192	0.12
EHAMSN	27642	East Ham Station	158	0.12
ENAIVION	9066	Plashet School	247	0.10
	11126	Shrewsbury Road	308	0.13
	9070	Katherine Road	133	0.08
	9070 9076	Whitfield Road	361	0.08
	9078 9077	Green Street	225	0.22
UPPKSN	7059	Upton Park Station	225	0.14
UPPKSN	9060	Queens Market	211 230	0.13
	633		230 401	0.14
UPPKBN		Upton Park / Boleyn		
	BP2361	Benson Avenue	173	0.11
	BP2362	Frinton Road	476	0.30
	BP2363	Brampton Manor School	326	0.20
	BP2364	St Andrews Wing	330	0.21
NEWGHP		wham University Hospital / Main En	229	0.14
	8110	Bennett Road	449	0.28
	36819	Colman Road	501	0.31
	36818	Beckton School	259	0.16
STSFFR	FC25	Fulmer Road	469	0.29
	FC23	Will Thorne Pavilion	404	0.25
	FC36	Strait Road	188	0.12
	FC22	Stansfeld Road	200	0.12
	BP174	Beckton Park Station	327	0.20
	FC20	Campion Close	251	0.16
	BP4854	Renfrew Close	176	0.11
	FC18	East Ham Manor Way	166	0.10
CYPSSN	LE124	Cyprus Station	228	0.14
	BP235	Woolwich Manor Way	329	0.20
	BP234	Horse Leaze	222	0.14
WNPEWW	BP513	Winsor Park Estate	282	0.18
	BP094	East Ham Manor Way	654	0.41
BCKTBS	BP5194	Beckton Bus Station	409	0.25
BCKTBS S	BCKTBS S	Beckton Bus Station	0	0.00

TOTAL ROUTE MILEAGE - BACK DIRECTION	10040	6.24
	metres	miles

TRANCHE 534