

TRANSPORT FOR LONDON

MEMORANDUM TO THE BUS SERVICES MEETING

SUBMITTED BY: FERGUS M^CGHEE

SUBJECT: CENTRAL AREA CAPACITY REVIEW – ISLINGTON HIGH STREET ROUTES

DATE: 6 JANUARY 2016

BACKGROUND

1. Bus demand in central London has been falling in the past couple of years and there is now excess capacity on a number of routes. This is partly due to improved rail services on a number of lines and partly due to decreasing bus speeds in the central area. In addition a number of routes have had additional resource and/or widened headways introduced on a temporary basis in order to overcome the effects of road works.
2. This paper is one of a series that will be brought to the Meeting. It should be noted that any frequencies quoted are what was scheduled prior to any mitigation, unless it specifically says current frequencies. It has both:
 - Reviewed current supply and demand on the corridors into central London and recommends changes in frequencies where appropriate to deal with the excess capacity
 - Reviewed current run times, where it is known major road works are complete, and recommends changes to the level of resource required to run some services.
3. This paper deals with services on Islington High Street, Angel in north east London. This can be split into 2 sub corridors - services to/from Upper Street and Essex Road.
4. The recommendations remove all temporary measures that are currently in place on this corridor and alter frequencies to provide sufficient capacity for the current demand. Night buses have not been reviewed. This work will happen early in 2017.

REVIEW

5. A total of 9 routes currently serve Islington High Street; routes 4, 19, 30, 38, 43, 56, 73, 341 and 476. The 4, 19, 30 and 43 serve Upper Street and the 38, 56, 73, 341 and 476 serve Essex Road. Some long parallels of note exist on routes 73 and 476 between Stoke Newington and Euston and on routes 19 and 38 between Islington Green and Hyde Park Corner.
6. BSM 479 approved the restructuring of routes 73 and 390, which includes reducing frequency on the 73 from 18 to 12 bph with 3 additional peak flow journeys. Route 73

would no longer terminate at Victoria, instead finishing at Oxford Circus. Consultation for this scheme is currently open and the results will be reported to a future BSM in the spring of 2017. BSM 458 approved the reduction in peak frequency of route 38 from 20 to 18 bph on Monday to Friday daytimes. This was introduced on 12 November 2016.

7. The table below shows which routes have widened headways and which have extra resource. It also identifies the current layover available with the exiting resource, based on actual run times from Period 6 and what layover would remain if some or all of the mitigation was removed.

Route	Additional PVR	Widened Headway	Cost	Current layover	PM layover with reduced mitigation
4	0	1 mins	£0	25	15
19	0	0.5 mins	£0	24	20
30	0	0	£0	17	17
38	0	0	£0	27	27
43	0	0	£0	29	29
56	0	0	£0	28	28
73	2	1 mins	£327,000	31	21
341	0	0.5/1 mins	£0	33	33
476	0	0	£0	16	16
Total	2	N/a	£327,000	N/a	N/a

Table 1 – current temporary measures on the Islington High Street corridor

8. Route 4 has been widened by a minute on Monday to Saturday daytimes from 6 bph due to the impacts of the Archway project works. The permanent Archway gyratory removal scheme is forecast to increase journey times on route 4 by up to 30 seconds in the AM peak and around 2 minutes in the PM peak. The current cycle times for the widened schedule is 190 minutes, up from 173 minutes prior to the Archway works. Removing the widening once the Archway scheme works are finished would see cycle times reduce to around 175 minutes in the PM peak. This is therefore appropriate once the Archway works are finished and will have no additional cost.
9. Route 19 has been widened up to 1.25 minutes Monday to Saturday daytimes.
10. Route 30 achieved 1.7 and 1.6 minutes EWT in the past 2 quarters against a minimum standard of 1.4 minutes and requires additional run time. It does not currently have mitigation in its schedules.
11. Route 73 has been widened by a minute on Monday to Fridays and 2 additional PVR were introduced. These schedules will operate until the introduction of the 73/390 scheme in September 2017.
12. Route 341 has been widened by 0.5 mins in the AM peak and a minute in the PM peak from 6 bph. The route is to be retendered as part of tranche 586 and it is expected that

operators will bid with additional resource during weekday afternoons and evenings and on Saturday shopping hours. This was approved at BSM 483. The new contract is due to start on 14 October 2017 and tender award is due in February 2017. Therefore the current widening can be removed at this point at no cost.

13. For all other routes it can be seen from the current layover column that the current level of resource is required to run the routes with their current frequencies. Therefore either frequencies have to be reduced or the extra resource retained.

Usage and Capacity

14. Usage on all routes serving Islington High Street has declined over the past 5 years by between 4% and 19%. The average decrease is around 12% on weekdays across 9 routes. The general trend has been level usage up until mid 2014 then a drop of around 6% to 7% each year. The total usage decrease across all routes has been around 30,000 trips per weekday, 29,000 on Saturdays and 15,000 on Sundays, which is a decrease of 13%, 15% and 11% respectively.
15. The largest drop has been on route 38 where usage has decreased by 19% per weekday, a decrease of 7,700 daily trips. The smallest decrease in usage was on route 56 where usage decreased by 4% per weekday, which is a decrease of 710 daily trips.
16. The year on year percentage usage changes are contained in the appendix.

Route	Time	SB	BPH Req	NB	BPH Req
4, 19, 30 & 43	AM	1,732	24.7	539	7.7
	Mid	750	10.7	1,369	19.6
	PM	689	9.8	1,914	27.3
38, 56, 73, 341 & 476	AM	3,676	52.5	660	9.4
	Mid	1,212	17.3	1,814	25.9
	PM	914	13.1	2,816	40.2
All	AM	5,408	77.3	1,199	17.1
	Mid	1,962	28.0	3,183	45.5
	PM	1,603	22.9	4,730	67.6

Table 2 – Angel Keypoint Summary

17. Angel has traditionally been the busiest point on this corridor for most routes. The keypoint at this location was last surveyed in October 2016.
18. A total of 53 bph are currently required on the Essex Road services to meet demand with 59 bph scheduled at this time, although this will fall to 56 bph if the route 73 proposals are introduced as planned in September 2017. Although there would still be 3 buses of spare capacity on the Essex Road corridor, the recent and proposed reduction in frequency will be 8 bph. It is not recommended that frequencies be reduced further at this stage.

19. A total of 25 bph are required on the Upper Street corridor to meet demand with 32 buses scheduled. Therefore some frequency reductions have been considered.

Route	Time	SB	BPH Req	NB	BPH Req
43, 263 & 271	AM	1,220	17.4	1,317	18.8
	Mid	731	10.4	814	11.6
	PM	614	8.8	685	9.8

Table 3 – Holloway Road Keypoint Summary

20. The Holloway Road corridor requires 19 bph across routes 43, 463 and 271. Route 43 provides the only direct connection between Holloway Road and Upper Street and requires 8 bph to meet demand across Highbury & Islington.

Route	Location	Dir.	Time	Arrive	BPH Req	Depart	BPH Req
4	Angel	SB	AM	378	5.4	422	6.0
4	Angel	NB	PM	334	4.8	369	5.3
19	Highbury Corner	SB	AM	598	8.5	550	7.9
19	Angel	NB	PM	495	7.1	545	7.8
30	Kings Cross	SB	AM	418	6.0	375	5.4
30	Angel	NB	PM	339	4.8	447	6.4
38	Angel	SB	AM	1,160	16.6	1,106	15.8
38	Hyde Park Corner	NB	AM	1,314	18.8	1,312	18.7
43	Holloway Road	SB	AM	809	11.6	832	11.9
43	Highgate	NB	PM	441	6.3	753	10.8
56	Hackney Downs	SB	AM	646	9.2	704	10.1
56	Hackney Downs	NB	PM	396	5.7	379	5.4
73	Angel	SB	AM	1,306	18.7	951	13.6
73	Hyde Park Corner	NB	AM	1,297	18.5	1,279	18.3
341	Angel	SB	AM	491	7.0	408	5.8
341	Angel	NB	PM	391	5.6	426	6.1
476	Newington Green	SB	AM	407	5.8	447	6.4
476	Angel	NB	PM	287	4.1	485	6.9

Table 4 – Busiest hour analysis by route

21. The busiest point on 7 of the 9 routes is Angel in at least one direction. Although usage on the majority of routes has significantly decreased the capacity required to meet demand during the peak hours is still very high, which implies the decrease in usage has occurred in off-peak hours.

OPTIONS EVALUATED

22. The removal of widened schedules on route 4 is appropriate as run times are likely to improve at the end of the Archway works.

23. A scheme to widen peak headways on route 30 and add resource during off peak hours was tested. This is detailed below.
24. A scheme to reduce frequencies on route 43 has been evaluated and is worthwhile. This is detailed below.
25. The removal of widened schedules on route 341 is appropriate at the beginning of the new contract on 14 October 2017 as operators are expected to bid with additional resource.
26. A scheme to remove the peak journeys on route 476 is appropriate as they are no longer needed.
27. Given that the current cycle times are appropriate, it is proposed to keep the current level of resource and/or widening on all other routes. In the latter case the widening will be converted into reduced frequencies. As this pattern of service is currently operating there will be no change to revenue or passenger benefit.

PROPOSALS

28. It is proposed to:
 - Reduce the frequency of route 43 to 9 bph Monday to Friday peaks and remove the additional peak journeys. This is worthwhile at a disbenefit to net savings ratio of 0.7 to 1
 - Reduce the frequency of route 30 to 7 bph during weekday peaks and add 1 bus weekday and weekend shopping hours
 - Remove the additional journeys on route 476.
29. It is also proposed to:
 - Remove the widening on route 4 once the Archway works are finished in February 2017
 - Retain the current widening i.e. 7.5 bph Monday to Saturday daytimes on route 19
 - Retain the additional 2 PVR on route 73 and retain the widening until September 2017
 - Remove the widening on route 341 at the start of the new contract on 14 October 2017
30. Overall these proposals save £184,773 per annum compared to the current route costs, including mitigation.
31. The frequency reductions will be introduced on 6 May 2017.

RECOMMENDATION

32. The Meeting is asked to APPROVE the proposals above, effective from 6 May 2017.

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Fergus M^cGhee
Transport Planning Manager

SCHEME APPRAISAL SUMMARY

Route	Scheme	Cost £pa	Revenue £pa	Passenger Benefits £pa	Net Cost £pa	Benefit to Net Cost Ratio X:1	Mileage	PVR
19	Retain widening i.e. run 7.5 bph	£0	£0	£0	£0	N/a	0	0
30	Widen to 7 bph M-F peaks. Add extra 2 buses M-F interpeak, Sat and Sun shopping hours. Add 1 extra bus all evenings.	£153,386	£59,079	£239,527	£94,307	2.5	(17,705)	0
43	Reduce frequency from 10 to 9 bph Monday to Fridays	(£475,159)	(£71,436)	(£299,880)	(£403,723)	0.7	(34,899)	(4)
73	Retain additional 2 PVR retain widening	£0	£0	£0	£0	N/a	0	0
341	Remove widening i.e. run 6 bph	£0	£0	£0	£0	N/a	0	0
476	Remove additional peak journeys	(£190,000)	£0	£0	(£190,000)	N/a	(7,440)	(2)
TOTAL		(£511,773)	(£12,357)	(£60,353)	(£499,416)	0.1	(60,044)	(6)

Route 4 widening removed at end of Archway works

Route 341 widening removed at start of new contract on 14 October 2017

BUDGET CHANGE TABLE

	COST	Mileage	PVR
CURRENT MITIGATION	£327,000	0	2
CENTRAL AREA REVIEW SAVINGS	(£511,773)	(60,044)	-6
CHANGE TO NETWORK BUDGET	(£184,773)	(60,044)	-4

USAGE CHANGE

Route 4

	Year 1 to 2	Year 2 to 3	Year 3 to 4	Year 4 to 5	Year 1 to 5
M-F	3.58%	-0.77%	-7.04%	-9.91%	-13.92%
Sat	10.88%	1.39%	-8.27%	-8.21%	-5.34%
Sun	11.67%	1.69%	-6.65%	-5.34%	0.34%

Route 19

	Year 1 to 2	Year 2 to 3	Year 3 to 4	Year 4 to 5	Year 2 to 5
M-F	-0.05%	0.26%	-4.78%	-8.72%	-12.91%
Sat	-0.59%	-1.76%	-6.31%	-10.63%	-18.23%
Sun	3.13%	-3.27%	-5.98%	-5.76%	-11.61%

Route 30

	Year 1 to 2	Year 2 to 3	Year 3 to 4	Year 4 to 5	Year 1 to 5
M-F	1.61%	-1.85%	-2.04%	-11.25%	-13.30%
Sat	-3.52%	0.15%	-1.36%	-11.17%	-15.33%
Sun	0.13%	-1.40%	3.19%	-10.23%	-8.54%

Route 38

	Year 1 to 2	Year 2 to 3	Year 3 to 4	Year 4 to 5	Year 2 to 5
M-F	-4.40%	-0.22%	-5.27%	-8.99%	-18.58%
Sat	-3.06%	0.33%	-6.96%	-10.39%	-19.51%
Sun	-3.23%	0.10%	-5.74%	-9.19%	-17.66%

Route 43

	Year 1 to 2	Year 2 to 3	Year 3 to 4	Year 4 to 5	Year 1 to 5
M-F	1.30%	3.01%	-11.93%	-6.93%	-14.46%
Sat	2.90%	-2.10%	-13.59%	-4.76%	-17.08%
Sun	5.30%	-3.06%	-13.17%	-1.58%	-12.78%

Route 56

	Year 1 to 2	Year 2 to 3	Year 3 to 4	Year 4 to 5	Year 1 to 5
M-F	3.92%	-3.30%	-2.50%	-1.57%	-3.55%
Sat	-2.19%	-2.91%	2.38%	-4.42%	-7.08%
Sun	-0.63%	-1.24%	2.58%	-1.99%	-1.34%

Route 73

	Year 1 to 2	Year 2 to 3	Year 3 to 4	Year 4 to 5	Year 2 to 5
M-F	-	2.07%	-7.58%	-6.19%	-11.65%
Sat	-	-0.04%	-6.79%	-9.39%	-17.75%
Sun	-	1.64%	-7.56%	-6.76%	-13.26%

Route 341

	Year 1 to 2	Year 2 to 3	Year 3 to 4	Year 4 to 5	Year 1 to 5
M-F	0.01%	-0.29%	-4.25%	-5.82%	-10.07%
Sat	-0.72%	2.83%	-4.16%	-8.07%	-10.05%
Sun	1.06%	2.56%	-4.05%	-5.99%	-6.51%

Route 476

	Year 1 to 2	Year 2 to 3	Year 3 to 4	Year 4 to 5	Year 1 to 5
M-F	-0.55%	1.07%	-5.58%	-3.96%	-8.86%
Sat	-3.84%	0.31%	-2.82%	-8.94%	-14.63%
Sun	-3.54%	1.61%	-4.80%	-6.22%	-12.49%

PRESENT AND PROPOSED STRUCTURE SUMMARY

	AM Peak	Mid day	PM Peak	Eve	AM Peak	Mid day	PM Peak	Eve
<u>Route 4</u>								
<i>MF</i>								
Archway Station - Waterloo Station	6	6	6	3	6	6	6	3
<i>Sat</i>								
Archway Station - Waterloo Station	3/4	5	5	3	3/4	5	5	3
<i>Sun</i>								
Archway Station - Waterloo Station	3	5	5	3	3	5	5	3
<i>Toilets available at Archway</i>								
<u>Route 19</u>								
<i>MF</i>								
Finsbury Park, Station Place - Battersea Bridge, Elcho Street	8	8	8	8/6	7.5	7.5	7.5	7.5/6
Finsbury Park, Station Place to Battersea Bridge, Elcho Street	Jnys	-	-	-	-	-	-	-
<i>Sat</i>								
Finsbury Park, Station Place - Battersea Bridge, Elcho Street	5/6	8	8	6	5/6	7.5	7.5	6
<i>Sun</i>								
Finsbury Park, Station Place - Battersea Bridge, Elcho Street	4	6	6	6	4	6	6	6
<i>Toilets available at both termini</i>								
<u>Route 30</u>								
<i>MF</i>								
Hackney Wick, Chapman Road - Marble Arch, Tyburn Way	7.5	6	7.5	5	7	6	7	5
<i>Sat</i>								
Hackney Wick, Chapman Road - Marble Arch, Tyburn Way	4/5	6	6	5	4/5	6	6	5
<i>Sun</i>								
Hackney Wick, Chapman Road - Marble Arch, Tyburn Way	4/5	5	5	5	4/5	5	5	5
<i>Toilets available at both termini</i>								

	AM Peak	Mid day	PM Peak	Eve	AM Peak	Mid day	PM Peak	Eve
<u>Route 38</u>								
<i>MF</i>								
Clapton, Kenninghall Road Roundabout - Victoria Bus Station	18	18	18	18/10	18	18	18	18/10
<i>Sat</i>								
Clapton, Kenninghall Road Roundabout - Victoria Bus Station	10	18	18	10	10	18	18	10
<i>Sun</i>								
Clapton, Kenninghall Road Roundabout - Victoria Bus Station	8	12	12	10	8	12	12	10
<i>Toilets available at both termini</i>								
<u>Route 43</u>								
<i>MF</i>								
Friern Barnet, Library to London Bridge Bus Station	10\$	9	10	6/5	-	-	-	-
London Bridge Bus Station to Friern Barnet, Library	10	9	10\$	6/5	-	-	-	-
Friern Barnet, Library - London Bridge Bus Station	-	-	-	-	9	9	9	6/5
<i>Sat</i>								
Friern Barnet, Library - London Bridge Bus Station	4/6	7.5	7.5	6/5	4/6	7.5	7.5	6/5
<i>Sun</i>								
Friern Barnet, Library - London Bridge Bus Station	3/5	5	5	5	3/5	5	5	5
<i>Toilets available at both termini</i>								
<u>Route 56</u>								
<i>MF</i>								
Whipps Cross Roundabout - St. Bartholomews Hospital	9	9	9	7.5	9	9	9	7.5
<i>Sat</i>								
Whipps Cross Roundabout - St. Bartholomews Hospital	6	9	9	7.5	6	9	9	7.5
<i>Sun</i>								
Whipps Cross Roundabout - St. Bartholomews Hospital	5	7.5	7.5	7.5	5	7.5	7.5	7.5
<i>Toilets available at both termini</i>								

	AM Peak	Mid day	PM Peak	Eve		AM Peak	Mid day	PM Peak	Eve
<u>Route 73</u>									
<i>MF</i>									
Oxford Circus, Holles Street to Stoke Newington Common, South Side	12	12	12	8		12	12	12	8
Stoke Newington Common, South Side to Oxford Circus, Holles Street	12/15	12	12	8		12/15	12	12	8
<i>Sat</i>									
Newington Common, South Side	10	12	12	8		10	12	12	8
<i>Sun</i>									
Oxford Circus, Holles Street - Stoke Newington Common, South Side	6/8	8	8	8		6/8	8	8	8

Toilets available Stoke Newington

Route 341

MF

Northumberland Park, Tesco - Waterloo, Addington Street	6	6	6	6/5		6	6	6	6/5
Northumberland Park, Tesco to Waterloo, Addington Street	JNY	-	-	-		JNY	-	-	-
<i>Sat</i>									
Northumberland Park, Tesco - Waterloo, Addington Street	4/5	6	6	5		4/5	6	6	5
<i>Sun</i>									
Northumberland Park, Tesco - Waterloo, Addington Street	3/4	5	5	5		3/4	5	5	5

Toilets available at both termini

Route 476

MF

Northumberland Park Station - Euston Station	7.5+	7.5	7.5	6/5		7.5	7.5	7.5	7.5
Northumberland Park Station - Euston Station	JNYS	-	-	-		-	-	-	-
Northumberland Park Station - Euston Station	-	-	JNYS/-	-		-	-	-	-
<i>Sat</i>									
Whipps Cross Roundabout - St. Bartholomews Hospital	4/5	7.5	7.5	6/5		4/5	7.5	7.5	6/5
<i>Sun</i>									
Whipps Cross Roundabout - St. Bartholomews Hospital	5	5	5	5		5	5	5	5

Toilets available at both termini