steer davies gleave

Church Street Trial Closure - Impact

Report
January 2017 |

London Borough of Hounslow

Our ref: 22900801

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1 Church Street Trial Closure

Introduction

1.1 Steer Davies Gleave has been working with the London Borough of Hounslow (LBH) to analyse the impact of the trial closure of Church Street in Isleworth on the local traffic network.

1.2 The closure was implemented in December 2015, with planters in the existing carriageway used to close the road for motorised traffic, whilst allowing pedestrians and cyclists to continue to use the route. This is shown in Figure 1.1 below.

Figure 1.1: Church Street Closure

Monitoring Timeline

1.3 Initial monitoring of the closure has taken place, with automated traffic counts (ATC) taking place initially in November 2014 (pre-closure) and January 2016 (post-closure) on North Street.

1.4 Bus journey times for the routes 267 and H38 have also been compared pre (November 2015) and post (February 2016) closure around Isleworth.

1.5 This data was analysed and assessed in the '*Church Street Trial Closure – Impact Analysis Note January 2016*' issued to LBH in February 2016.

1.6 Further ATC surveys on Park Road, South Street, Twickenham Road and Church Street took place in May 2016, and were analysed alongside new bus journey time data (for the 267, H38 and additional route 235) for that month and other counts on Church Street and Syon Park in the report '*Church St Trial Closure – Impact Analysis Report – August 2016*', issued to LBH in August 2016.

1.7 This report analyses additional data collected in November 2016 for all existing datasets, plus an additional bus – the H28.

2 Traffic Analysis

Traffic Surveys

2.1 Following on from the previous counts in January/February 2016 and May 2016, further ATCs were undertaken in November 2016, focusing on five locations surrounding the closure on Church Street (ATC A) as shown in Figure 2.1.

2.2 Manual Classified Count's (MCC) took place at the entry to Syon Park to show the level of traffic accessing the site from the North / via Park Road during the closure period, whilst a video survey was undertaken at the closure point on Church Street, to count how many pedestrians and cyclists used the access.

2.3 The full list of sites are shown in Figure 2.1 below:

Figure 2.1: Isleworth Survey Locations

Overview of Change in Network Flows

2.4 An overall view of how traffic flows have changed between November 2014 (pre-closure) and November 2016 (post-closure) is shown in Figure 2.2 and Figure 2.3 below.

Figure 2.2: Isleworth AM Peak Weekday Flow Comparison – November 2014 to November 2016

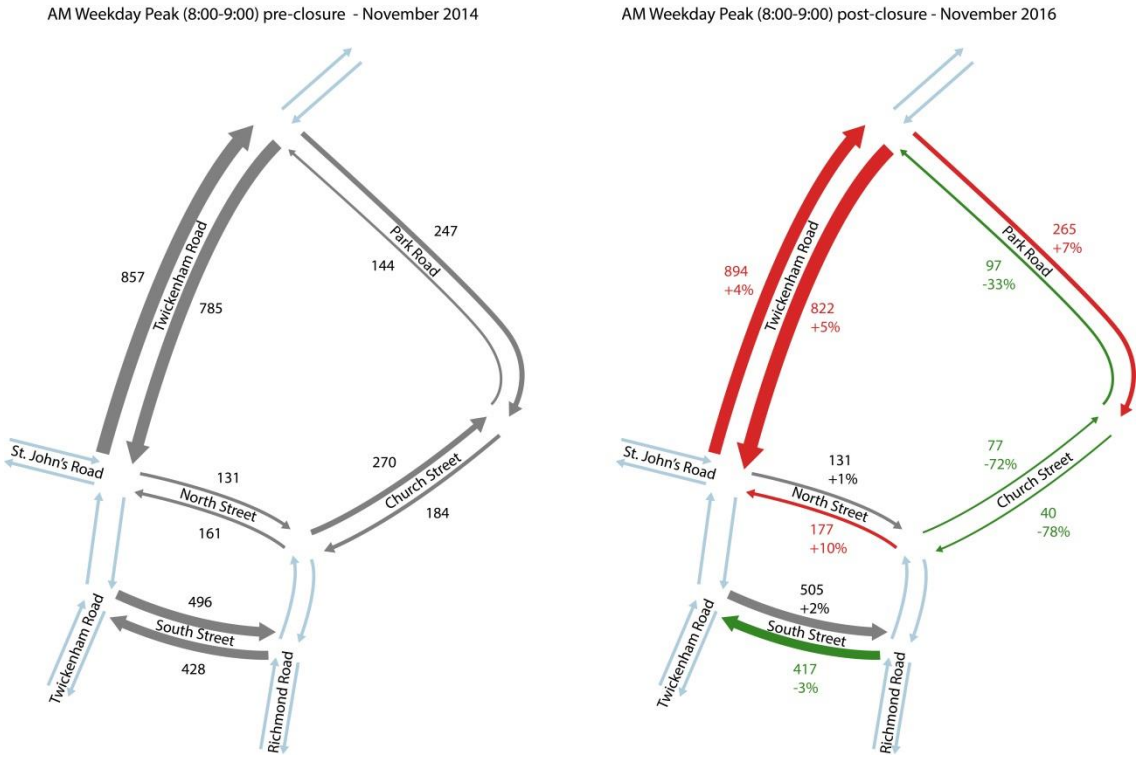
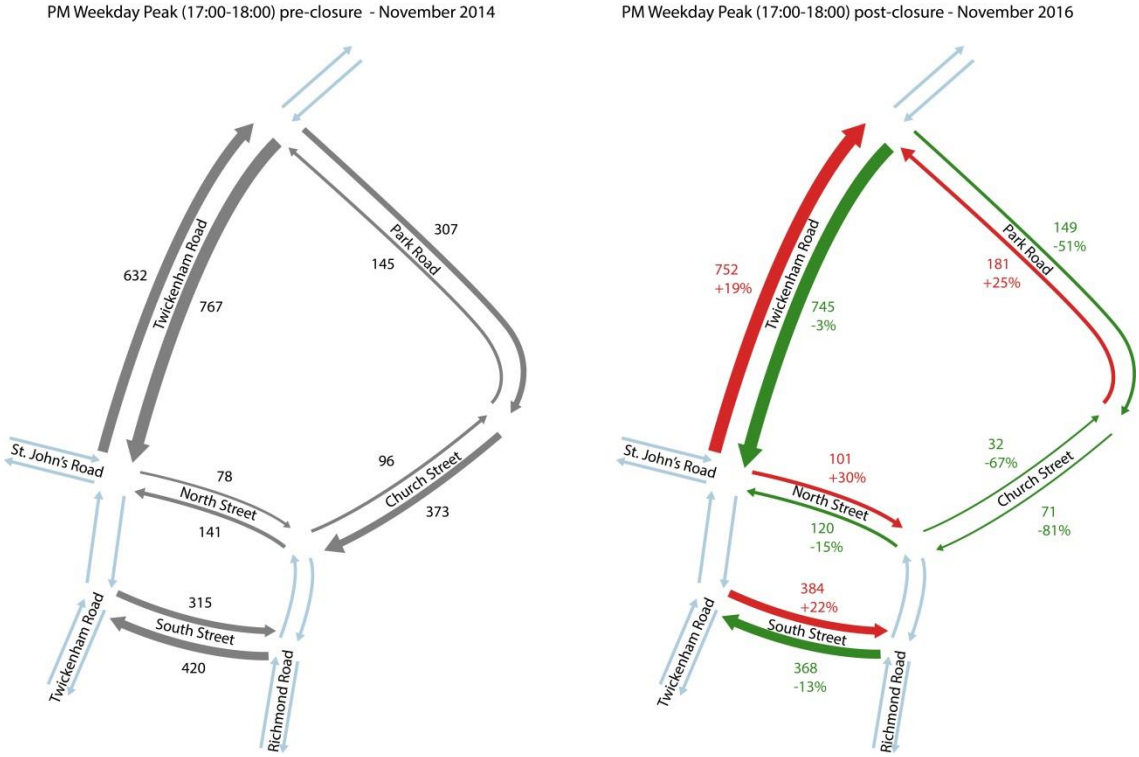


Figure 2.3: Isleworth PM Peak Weekday Flow Comparison – November 2014 to November2016



ATC Site A – Church Street

2.5 The first ATC site is on Church Street, just north of the closure and the London Apprentice public house.

2.6 As shown in Table 2.1 and Figure 2.4 / 2.5 below, the ATC shows a significant decrease in traffic using Church Street on weekdays between November 2014 (pre-closure) and November 2016 (with closure), most noticeable in the AM peak in the northbound direction, where trips reduce from 270 at 08:00-09:00 to 77 – which can most likely be attributed to local residents travelling to work.

Table 2.1: Church Street Weekday Flow Comparison

	AM Weekday Peak Flows								PM Weekday Peak Flows							
	Northbound				Southbound				Northbound				Southbound			
	2014	2016	+/-	%	2014	2016	+/-	%	2014	2016	+/-	%	2014	2016	+/-	%
Peak Hour	08:00	08:00			08:00	07:00			17:00	17:00			17:00	17:00		
Flow	270	77	-193	-72%	184	40	-144	-78%	96	32	-64	-67%	373	71	-302	-81%

Figure 2.4: Church Street ATC Comparison – Weekday Northbound

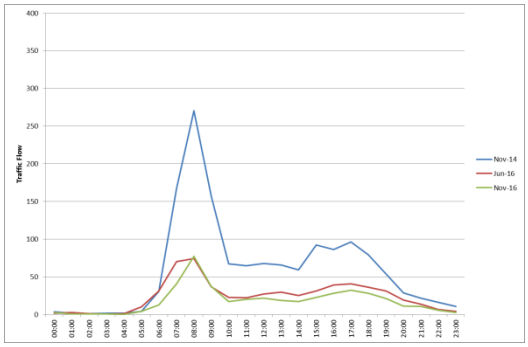
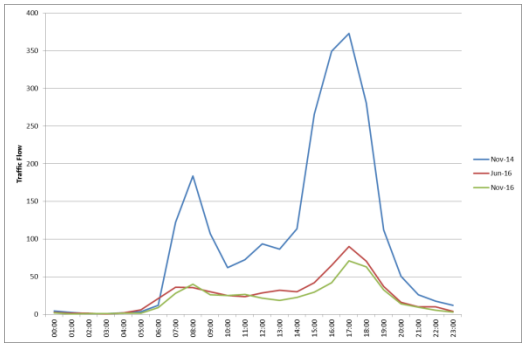


Figure 2.5: Church Street ATC Comparison – Weekday Southbound



2.7 In the southbound direction, there is a major reduction in traffic in both peak periods, with the AM peak of 08:00-09:00 reducing from 184 vehicles to just 40 and the PM peak of 17:00-18:00 reducing from 373 vehicles to 71 in November 2016.

2.8 At the weekend, traffic flows were significantly lower pre-closure than during the week, peaking at 88 in the northbound direction (13:00-14:00) and 148 southbound (12:00-13:00) in 2014.

2.9 With the closure in place, this has reduced significantly to an average peak of 31 vehicles (with a later peak at 16:00-17:00) northbound and 34 (between 13:00-14:00) southbound.

Table 2.2: Church Street Weekend Flow Comparison

	Weekend Peak Flows							
	Northbound				Southbound			
	2014	2016	+/-	%	2014	2016	+/-	%
Peak Hour	13:00	16:00			12:00	13:00		
Flow	88	31	-57	-65%	148	31	-117	-79%

Figure 2.6: Church Street ATC Comparison – Weekend Northbound

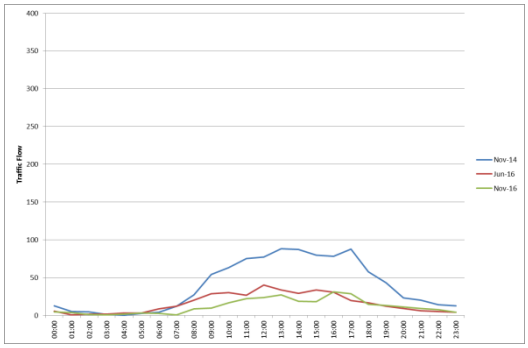
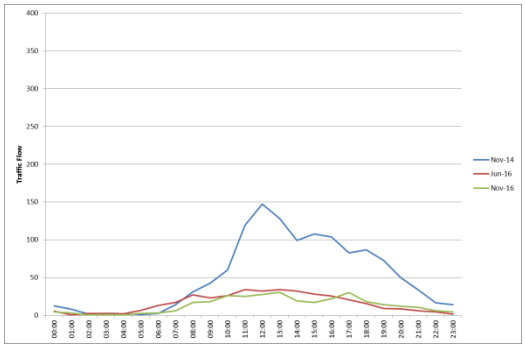


Figure 2.7: Church Street ATC Comparison – Weekend Southbound



2.10 This suggests a clear decrease in the number of vehicles using Church Street as a 'rat-running' route during the peak hours, whilst the area does retain a small number of trips for local access for residents and the public house.

Additional Pedestrian and Cycle Analysis

2.11 In addition to the ATC surveys, further video surveys were undertaken for pedestrian and cycle movements along Church Street to see the impact this has had for these user classes since the closure was implemented.

2.12 These surveys were undertaken on the 20th and 21st October 2015, pre-closure; on the 17th and 18th May 2016; and on the 15th and 16th November 2016. Numbers for the days have been averaged and shown as an average daily total in the tables below.

2.13 As shown in Table 2.3, pedestrian numbers using Church Street increased by 45% in May 2016, and slightly less in November 2016 at 39%. Both post-closure months show an average of over 300 additional pedestrians per day using Church Street.

Table 2.3: Church Street Pedestrian Comparison 2015-2016

October 2015	May 2016			Nov 2016		
Count	Count	Difference	% Change	Count	Difference	% Change
859	1245	+387	45%	1191	+333	39%

2.14 As shown in Table 2.4, the number of cyclists using Church Street has also been observed to have increased since the closure was put in place, with a significant 47% increase observed in May 2016, and by 19% in November 2016.

Table 2.4: Church Street Cycle Comparison 2015-2016

October 2015	May 2016			Nov 2016		
Count	Count	Difference	% Change	Count	Difference	% Change
504	740	+236	47%	601	+97	19%

2.15 It should be noted that whilst this shows a significant increase in both pedestrian and cycle usage, some of this increase in May 2016 might be attributed to the likely different climate and subsequent attractiveness of walking or cycling between October and May. The October 2015 to November 2016 figures may therefore prove to be a more comparative statistic.

ATC Site B – Park Road

2.16 The second ATC was located at the north end of Park Road – adjacent to the cemetery and north of the entrances to both Syon Park and West Middlesex University Hospital.

2.17 Park Road connects to the currently closed Church Street to the South, and therefore the reduction in through routes attributed to the closure (as previously mentioned) will have some knock on effect to those using Park Road.

2.18 As Figure 2.8 shows, the northbound traffic generally shows a similar pattern in November 2016 to that of 2014, with a lower peak in traffic in the AM peak period.

2.19 There is an increase in traffic heading northbound in the PM peak, with the peak shifting slightly from 16:00-17:00 to 17:00-18:00.

Table 2.5: Park Road Weekday Flow Comparison

	AM Weekday Peak Flows								PM Weekday Peak Flows							
	Northbound				Southbound				Northbound				Southbound			
	2014	2016	+/-	%	2014	2016	+/-	%	2014	2016	+/-	%	2014	2016	+/-	%
Peak Hour	08:00	08:00			08:00	08:00			16:00	17:00			17:00	17:00		
Flow	144	112	-32	-22%	247	265	+18	7%	145	181	+36	25%	307	149	-158	-51%

Figure 2.8: Park Road ATC Comparison – Weekday Northbound

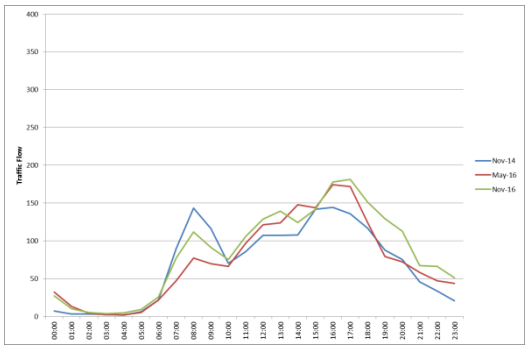
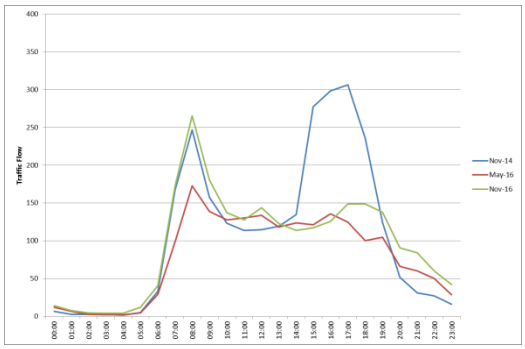


Figure 2.9: Park Road ATC Comparison – Weekday Southbound



2.20 The southbound traffic shown in Figure 2.9 shows a very similar level of traffic in the AM peak, with a small 7% increase in traffic in 2016. Traffic roughly halves in the PM peak, with a notable reduction of traffic in excess of 150 vehicles per hour from 17:00-18:00.

2.21 At the weekend, traffic flows in both directions follow a similar profile in November 2016 as pre-closure in 2014, with an increase in traffic particularly notable in the evening. It is unclear what this rise in traffic is attributed to, as the traffic volumes are much greater than both pre-closure in 2014 and the May 2016 count with the closure in place, and is therefore unlikely to be directly attributed to the Church Street closure.

Table 2.6: Park Road Weekend Flow Comparison

	Weekend Peak Flows							
	Northbound				Southbound			
	2014	2016	+/-	%	2014	2016	+/-	%
Peak Hour	16:00	18:00			13:00	17:00		
Flow	187	281	+94	+50%	219	356	+137	+63%

Figure 2.10: Park Road ATC Comparison – Weekend Northbound

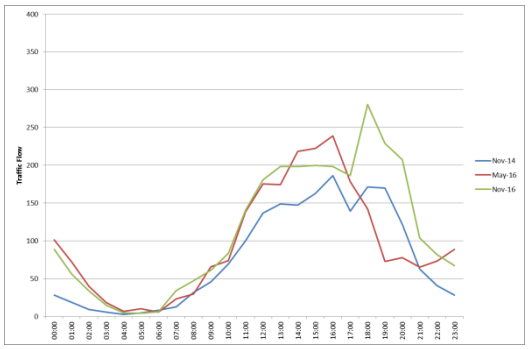
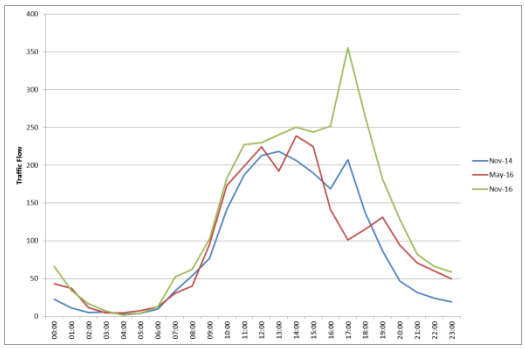


Figure 2.11: Park Road ATC Comparison – Weekend Southbound



2.22 Traffic flows remain relatively consistent in both directions until this large evening peak.

2.23 It should be noted that whilst the 2016 data excludes any traffic which previously may have used Church Street and Park Road as a rat run route to avoid Isleworth town centre, it will include seasonal visitors to Syon Park, or those there for special events.

ATC Site C - North Street

2.24 The third ATC site on North Street was located on the northern side of North Street, outside Silverleaves Park.

2.25 In addition to the normal surveyed periods, an additional survey was undertaken in January 2016, and we therefore have 4 sets of data to compare for North Street:

- November 2014 (pre-closure);
- January 2016 (2 months into closure);
- May 2016 (6 months into closure); and
- November 2016 (1 year into closure)

2.26 Analysing the Weekday eastbound traffic in Figure 2.12, traffic flows on North Street retain a similar flow profile to pre-closure in the morning peak; however, these are slightly higher in the afternoon than in 2014, where there is a more defined PM peak - potentially related to trips from the schools, which may have previously used Church Street as a route.

2.27 Figure 2.13 again shows a similar profile in the westbound direction; with a small increase in traffic from November 2014 to 2016 in the AM peak, and small decrease in the PM peak.

Table 2.7: North Street Weekday Flow Comparison

	AM Weekday Peak Flows								PM Weekday Peak Flows							
	Eastbound				Westbound				Eastbound				Westbound			
	2014	2016	+/-	%	2014	2016	+/-	%	2014	2016	+/-	%	2014	2016	+/-	%
Peak Hour	08:00	08:00			08:00	08:00			15:00	17:00			15:00	17:00		
Flow	131	131	0	0%	161	177	+16	+10%	78	101	+23	+30%	141	120	-21	-15%

Figure 2.12: North Street ATC Comparison – Weekday Eastbound

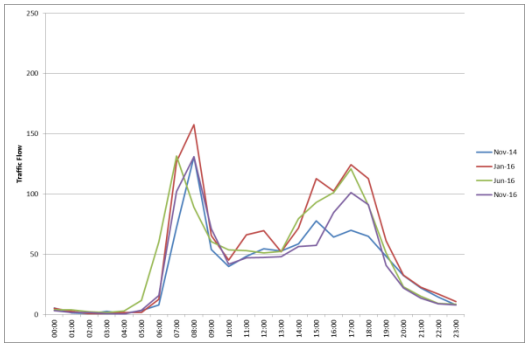
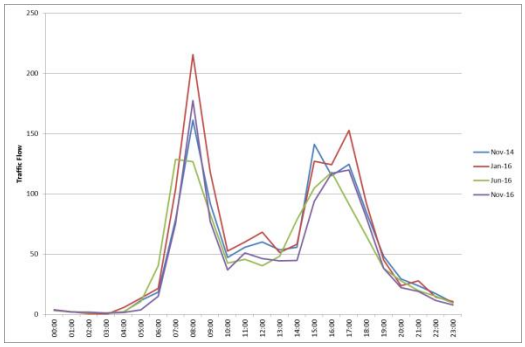


Figure 2.13: North Street ATC Comparison – Weekday Westbound



2.28 At the weekend, traffic flows on North Street have remained low and retain a similar profile in November 2016 to 2014, however are slightly lower at the peak time in both directions.

Table 2.8: North Street Weekend Flow Comparison

	Weekend Peak Flows							
	Eastbound				Westbound			
	2014	2016	+/-	%	2014	June 2016	+/-	%
Peak Hour	12:00	12:00			13:00	17:00		
Flow	67	58	-9	-13%	61	53	-8	-13%

Figure 2.14: North Street ATC Comparison – Weekend Eastbound

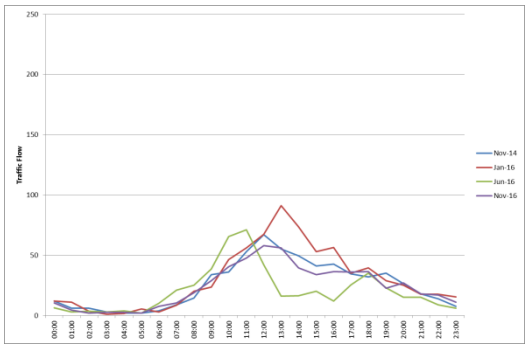
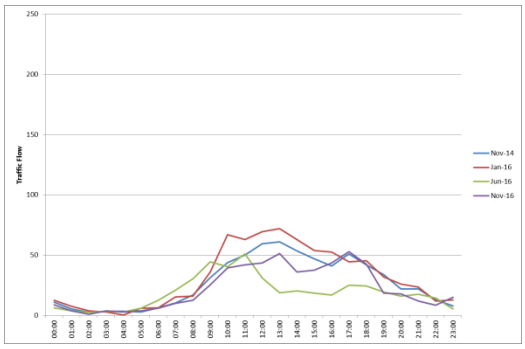


Figure 2.15: North Street ATC Comparison – Weekend Westbound



2.29 Overall, traffic flow profiles on North Street have remained fairly consistent over the busier week day period since the closure was implemented.

2.30 Weekend flows have slightly reduced over the course of an average day since the closure has been implemented, most noticeable in June 2016, where flows in the afternoon were lower in both directions than any other surveyed month pre or post closure.

ATC Site D - South Street

2.31 Traffic on South Street remains relatively consistent in 2016 as per pre-closure in 2014.

2.32 As shown in Figure 2.16, the weekday eastbound traffic remains very consistent in the AM period, however, there is a greater peak in the PM, where flows have increased from 315 trips in 2014 to 384 in 2016.

2.33 The westbound flows (Figure 2.17) show a small reduction in traffic in both peaks.

Table 2.9: South Street Weekday Flow Comparison

	AM Weekday Peak Flows								PM Weekday Peak Flows							
	Eastbound				Westbound				Eastbound				Westbound			
	2014	2016	+/-	%	2014	2016	+/-	%	2014	2016	+/-	%	2014	2016	+/-	%
Peak Hour	07:00	07:00			08:00	08:00			18:00	18:00			17:00	17:00		
Flow	496	505	+9	+2%	428	417	-11	-3%	315	384	+69	+22%	420	368	-53	-13%

Figure 2.16: South Street ATC Comparison – Weekday Eastbound

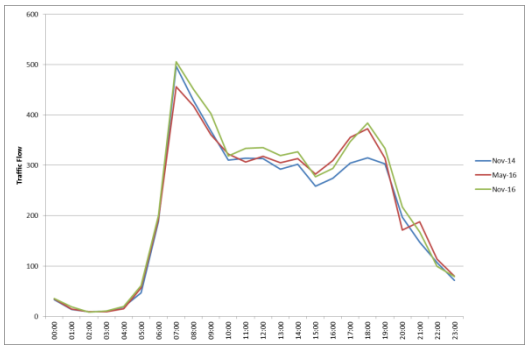
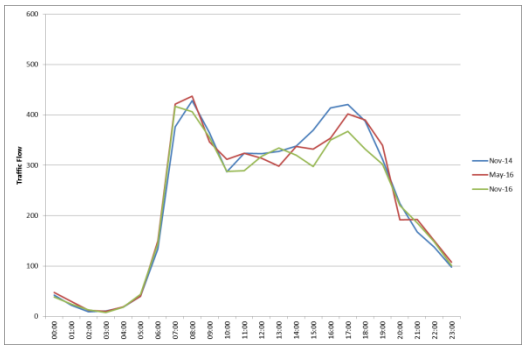


Figure 2.17: South Street ATC Comparison – Weekday Westbound



2.34 At the weekend, traffic flows show little change between 2014 and 2016, bar a fairly significant reduction in traffic outside of the peak in May 2016 between 14:00-15:00.

	Weekend Peak Flows							
	Eastbound				Westbound			
	2014	2016	+/-	%	2014	2016	+/-	%
Peak Hour	12:00	13:00			13:00	13:00		
Flow	388	424	+36	+9%	388	391	+4	+1%

Figure 2.18: South Street ATC Comparison – Weekend Eastbound

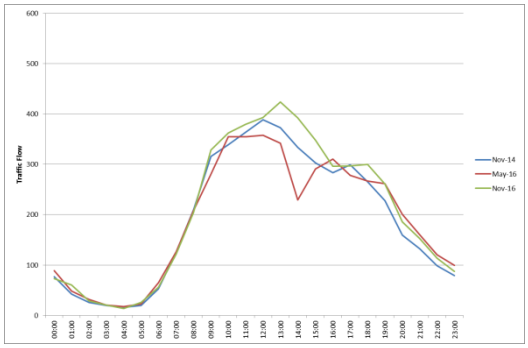
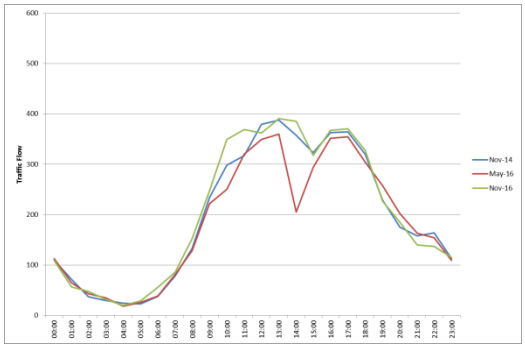


Figure 2.19: South Street ATC Comparison – Weekend Westbound



2.35 Analysis of South Street has proved inconclusive as to any major traffic flow differences as a result of the closure.

ATC Site E – Twickenham Road

2.36 Twickenham Road is an A road and is the main north-south route through Isleworth town centre.

2.37 As shown in Figure 2.20, traffic flow profiles during the week heading northbound have remained similar in off-peak periods, but have increased from 857 in 2014 to 894 trips in November 2016 in the AM peak and from 632 to 752, an increase of almost 20%, in the PM peak from 14:00-15:00.

2.38 In the southbound direction flows have increased by 5% post-closure in the AM peak, with Figure 2.21 showing an increase of 37 trips from 785 pre-closure to 822 in November 2016. Conversely, the PM peak shows a small reduction in traffic.

Table 2.10: Twickenham Road Weekday Flow Comparison

	AM Weekday Peak Flows								PM Weekday Peak Flows							
	Northbound				Southbound				Northbound				Southbound			
	2014	2016	+/-	%	2014	2016	+/-	%	2014	2016	+/-	%	2014	2016	+/-	%
Peak Hour	07:00	07:00			07:00	07:00			14:00	14:00			14:00	14:00		
Flow	857	894	+38	+4%	785	822	+37	+5%	632	752	+120	+19%	767	745	-22	-3%

Figure 2.20: Twickenham Rd ATC Comparison – Weekday NB

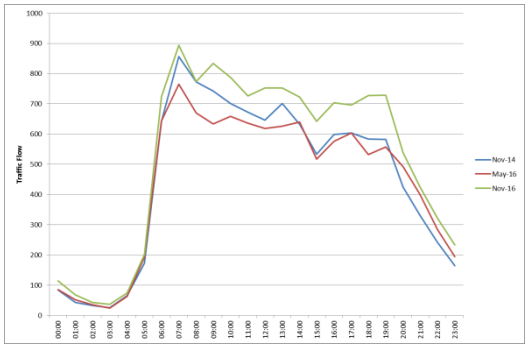
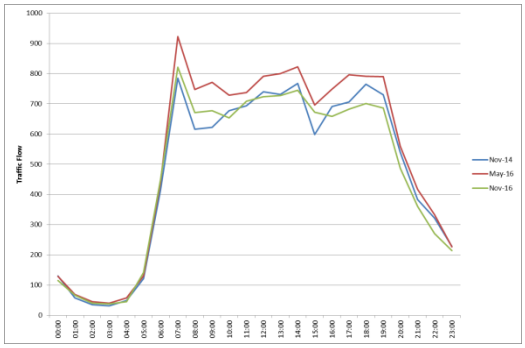


Figure 2.21: Twickenham Rd ATC Comparison – Weekday SB



2.39 The weekend shows a similar flow pattern to the average weekday counts, with the most notable change being an increase in traffic flow in the late afternoon travelling northbound, with a peak change from 777 at 17:00 in 2014 to 871 in 2016 – roughly 12% higher.

Table 2.11: Twickenham Road Weekend Flow Comparison

	Weekend Peak Flows							
	Northbound				Southbound			
	2014	2016	+/-	%	2014	2016	+/-	%
Peak Hour	17:00	17:00			13:00	13:00		
Flow	777	871	+94	+12%	743	732	-11	-1%

Figure 2.22: Twickenham Rd ATC Comparison – Weekend NB

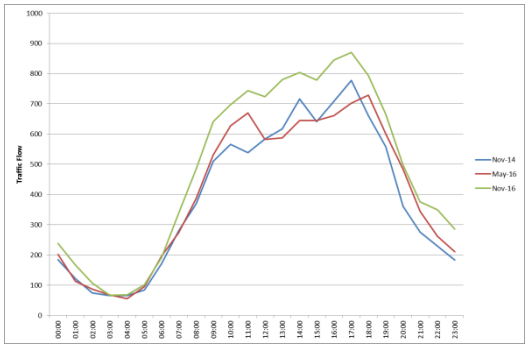
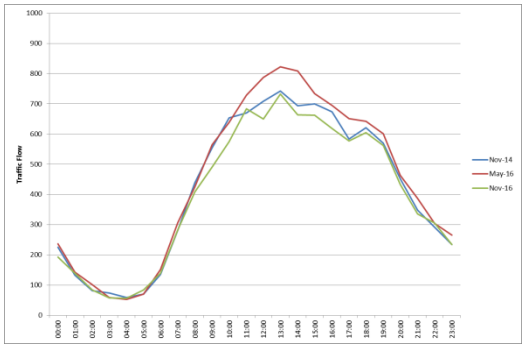


Figure 2.23: Twickenham Rd ATC Comparison – Weekend SB



2.40 Twickenham Road has seen some level of traffic increase post-closure – mainly noticeable in the northbound direction in November 2016 and the southbound direction in May 2016, with this change likely to be directly attributed to the Church Street closure, where in the AM peak flows reduced by 148 and PM peak reduced by 283. It can be assumed that some of these trips would have transferred to travel via Twickenham Road.

Bus Journey Times

2.41 As a further measure of the impact of the closure, analysis of bus journey times in and around Isleworth has been undertaken, with journey times analysed for:

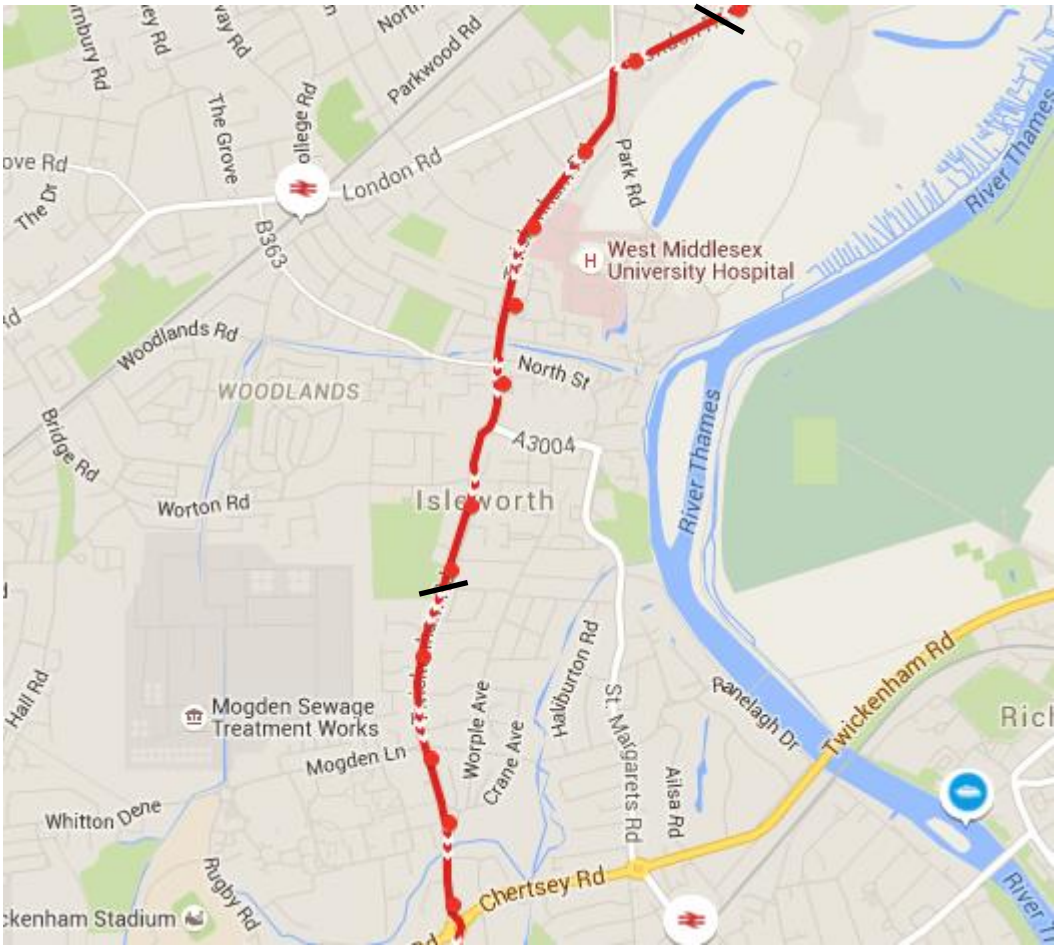
- November 2014 (matching early ATC surveys);
- November 2015 (just before the Church Street closure);
- February 2016 (to match first set of post-closure ATC surveys);
- May 2016 (to match latest set of ATC surveys); and
- November 2016 (to match last set of ATC surveys).

2.42 Bus journey times have been analysed on four routes around Isleworth – the 267, which travels north-south along Twickenham Road; the H37 which travels east - west through the study area; the 235 which travels east - west along the A315 London Road to the north of Isleworth town centre; and the H28 which travels to and from Syon Lane via London Road, Twickenham Road and Amhurst Gardens.

Bus Route 267

2.43 As shown in Figure 2.24 below, bus route 267 travels north – south through the study area along Twickenham Road.

Figure 2.24: Bus Route 267 (taken from www.tfl.gov.uk)



2.44 With a bus scheduled approximately every 10 minutes throughout the day (06:00-18:00), the 267 provides a key public transport link for Isleworth, connecting it with Twickenham and

Fulwell to the South and Brentford and into Hammersmith to the North / East. Data has been provided from Syon Lane / London Road in the North to Isleworth library in the South.

2.45 Table 2.12 and Table 2.13 below show the average total journey time through the network for the north and southbound routes respectively.

Table 2.12: Route 267 Northbound Journey Times (in seconds)

Period	Nov 2014	Nov 2015	Feb 2016	Jun 2016	Nov 2016	Nov 15 – Nov 16	% Change
0500-0700	298	293	239	245	293	0	0%
0700-1000	441	436	399	457	522	86	20%
1000-1300	369	384	393	386	356	-28	-7%
1300-1600	399	413	409	414	433	20	5%
1600-1900	433	437	456	441	467	30	7%
1900-2200	311	305	234	297	305	0	0%
2200-0000	253	259	148	248	257	-2	-1%
All	**384**	**386**	**389**	**393**	**398**	**12**	**3%**

Table 2.13: Route 267 Southbound Journey Times (in seconds)

Period	Nov 2014	Nov 2015	Feb 2016	Jun 2016	Nov 2016	Nov 15 – Nov 16	% Change
0500-0700	277	237	173	284	260	23	10%
0700-1000	426	459	462	489	488	29	6%
1000-1300	337	342	335	349	372	30	9%
1300-1600	455	486	465	475	493	7	1%
1600-1900	585	608	621	621	770	162	27%
1900-2200	271	276	274	275	310	34	12%
2200-0000	253	252	152	270	257	5	2%
All	**423**	**437**	**438**	**452**	**457**	**20**	**4%**

2.46 The average weighted daily journey times remain relatively consistent between November 2015 and November 2016, with a minor increase in journey time shown as time increases, as can be seen in Figure 2.25.

2.47 As shown in Figures 2.26 and 2.27, the average journey time profiles for the different directions of route 267 also remaining consistent between these periods.

2.48 As shown in the ATC surveys, northbound bus journey times along Twickenham Road remain consistent whilst traffic flows have shown only minor increases, bar an increase of 86 seconds (20%) in the AM peak from November 2015 to November 2016.

2.49 There is a notable increase in journey time in the PM peak in the southbound direction, where journey times have increased by 162 seconds from November 2015 to November 2016.

Figure 2.25: Route 267 Average Daily Journey Time

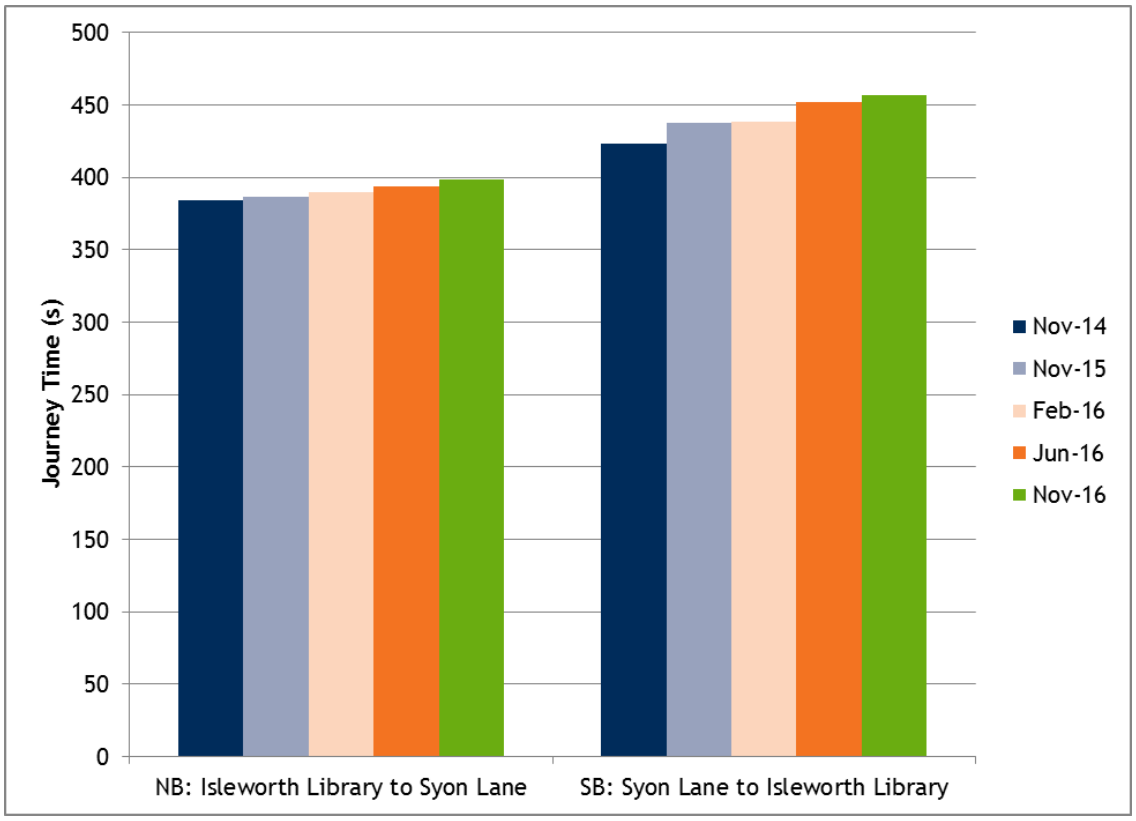


Figure 2.26: Route 267 Northbound Average Journey Time Profile

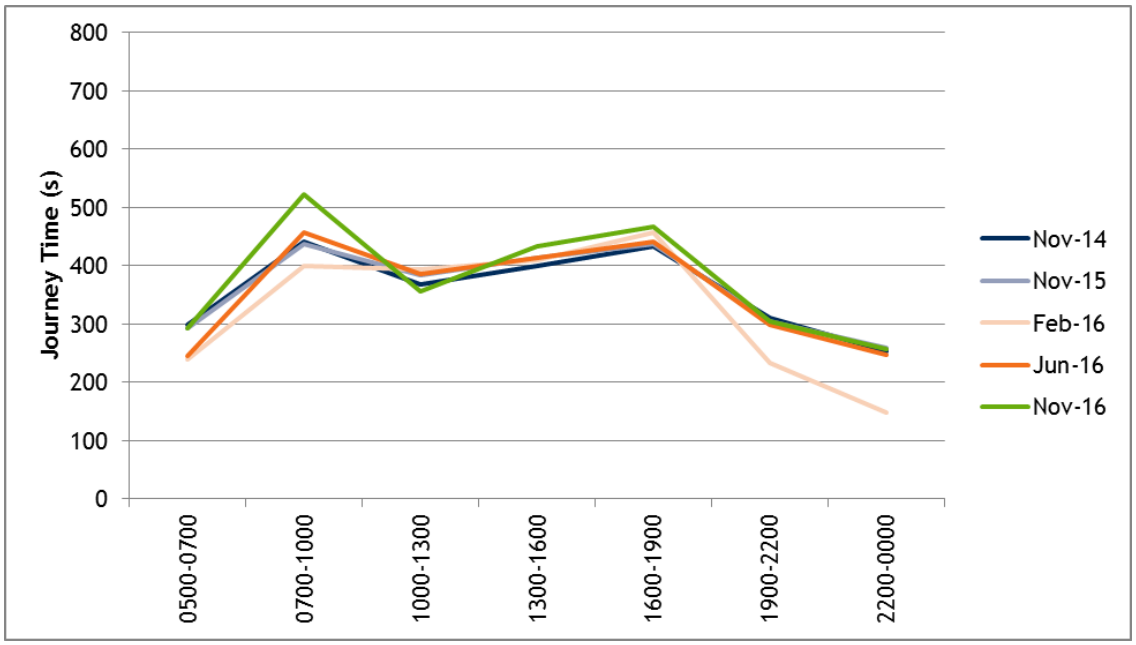
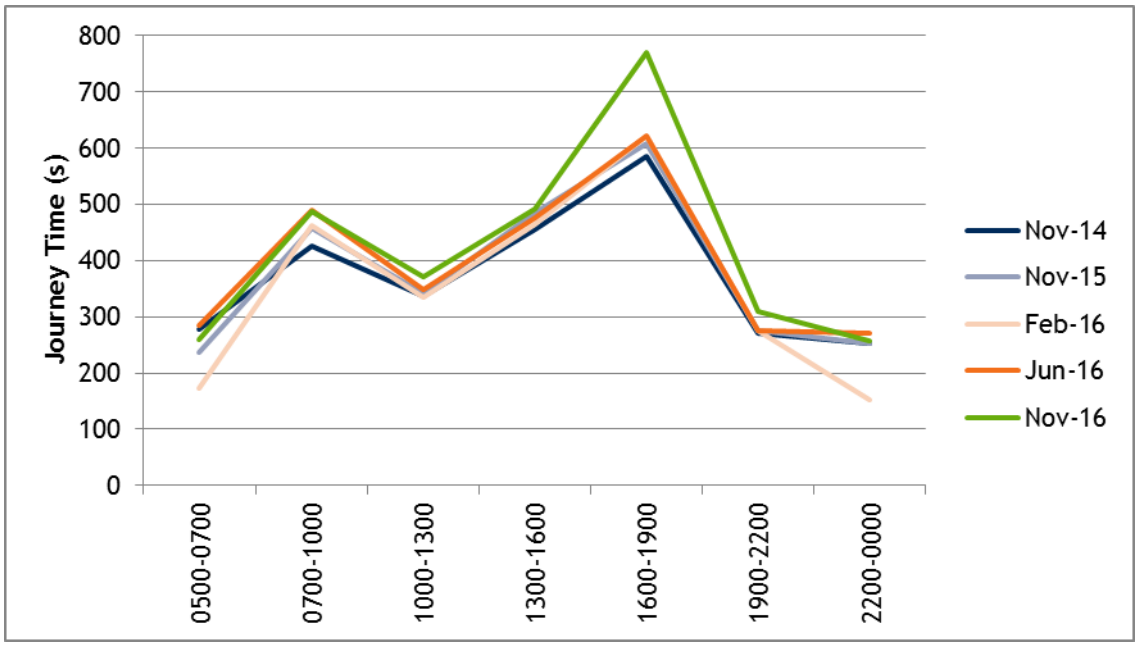


Figure 2.27: Route 267 Southbound Average Journey Time Profile

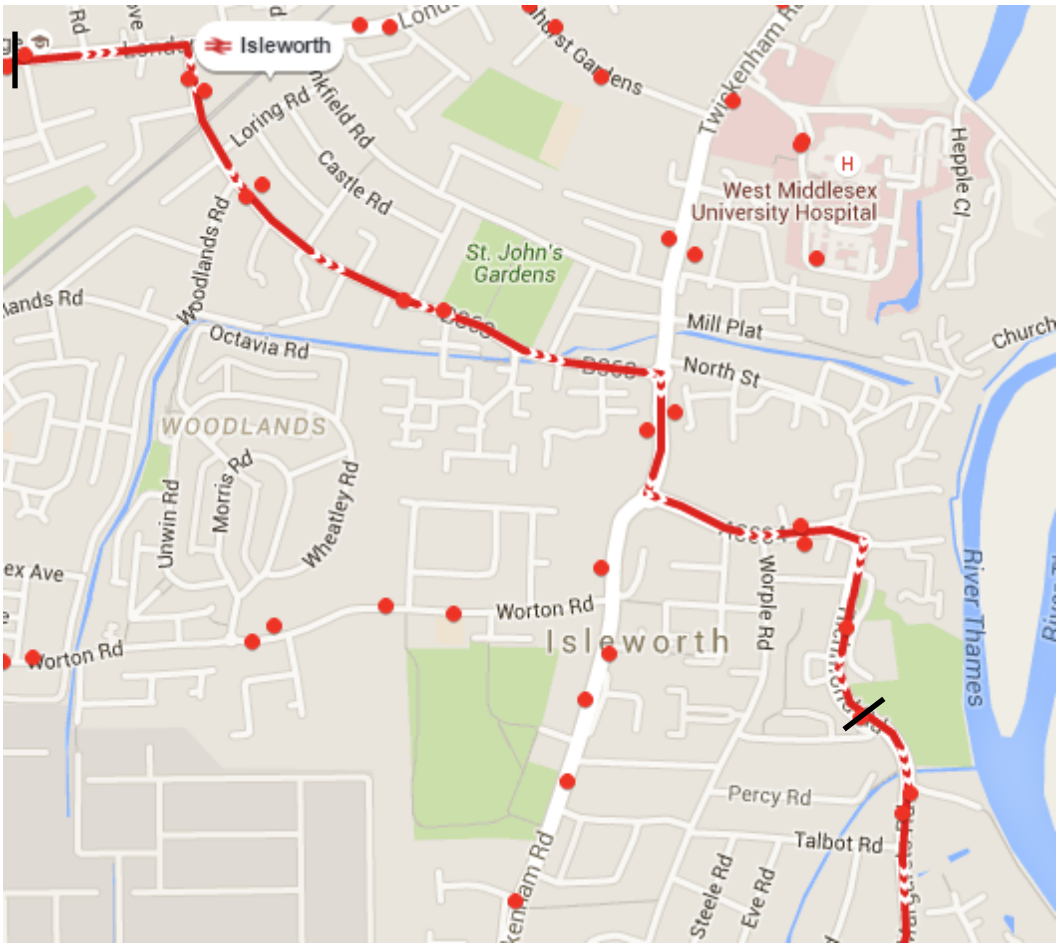


Bus Route H37

2.50 As shown in Figure 2.28 bus route H37 travels east - west through the study area from West Thames College to the North West of Isleworth, along St John's Road to Twickenham Road before travelling along South Street and heading south along Richmond Road towards the A316.

2.51 The route analysed runs from West Thames College in the North West to adjacent to Nazareth House in the South.

Figure 2.28: Bus Route H37 (taken from www.tfl.gov.uk)



2.52 With a bus scheduled every 4-8 minutes in the day time (07:00-19:00), the high frequency of buses and the connecting of Isleworth national rail station with the residential areas surrounding North Street and South Street in Isleworth, indicates that the H37 provides another key public transport link through the town. Table 2.14 and Table 2.15 show the average total journey time through the network for the east and westbound routes respectively.

Table 2.14: Route H37 Eastbound Journey Times (in seconds)

Period	Nov 2014	Nov 2015	Feb 2016	Jun 2016	Nov 2016	Nov 15 – Nov 16	% Change
0000-0500	251	207	199	352	281	74	36%
0500-0700	359	356	345	353	368	12	3%
0700-1000	549	540	541	533	592	52	10%
1000-1300	493	479	478	482	441	-38	-8%
1300-1600	511	508	492	501	492	-16	-3%
1600-1900	529	535	553	528	626	91	17%
1900-2200	389	385	375	374	371	-14	-4%
2200-0000	309	349	292	344	313	-36	-10%
All	**496**	**490**	**483**	**483**	**485**	**-5**	**-1%**

Table 2.15: Route H37 Westbound Journey Times (in seconds)

Period	Nov 2014	Nov 2015	Feb 2016	Jun 2016	Nov 2016	Nov 15 – Nov 16	% Change
0000-0500	354	315	247	325	327	12	4%
0500-0700	364	354	243	342	389	35	10%
0700-1000	495	494	489	493	545	51	10%
1000-1300	482	475	494	477	444	-31	-7%
1300-1600	485	503	494	484	504	1	0%
1600-1900	525	544	547	539	530	-14	-3%
1900-2200	421	424	415	413	413	-11	-3%
2200-0000	349	338	335	336	368	30	9%
All	**473**	**475**	**477**	**470**	**471**	**-4**	**-1%**

2.53 The tables show some changes in Eastbound average journey time between November 2015 and November 2016, where journey times have increased in both the AM and PM peaks, but decreased in the off peak periods between 1000-1600 and 1900-0000. This is illustrated in Figure 2.30.

2.54 In the Westbound direction, journey times are generally higher by approximately 10% in the morning (between 0500-1000), yet show small improvements for the rest of the day until 2200.

2.55 Overall, the average journey time for the H37 throughout the day has remained consistent.

Figure 2.29: Route H37 Average Daily Journey Time

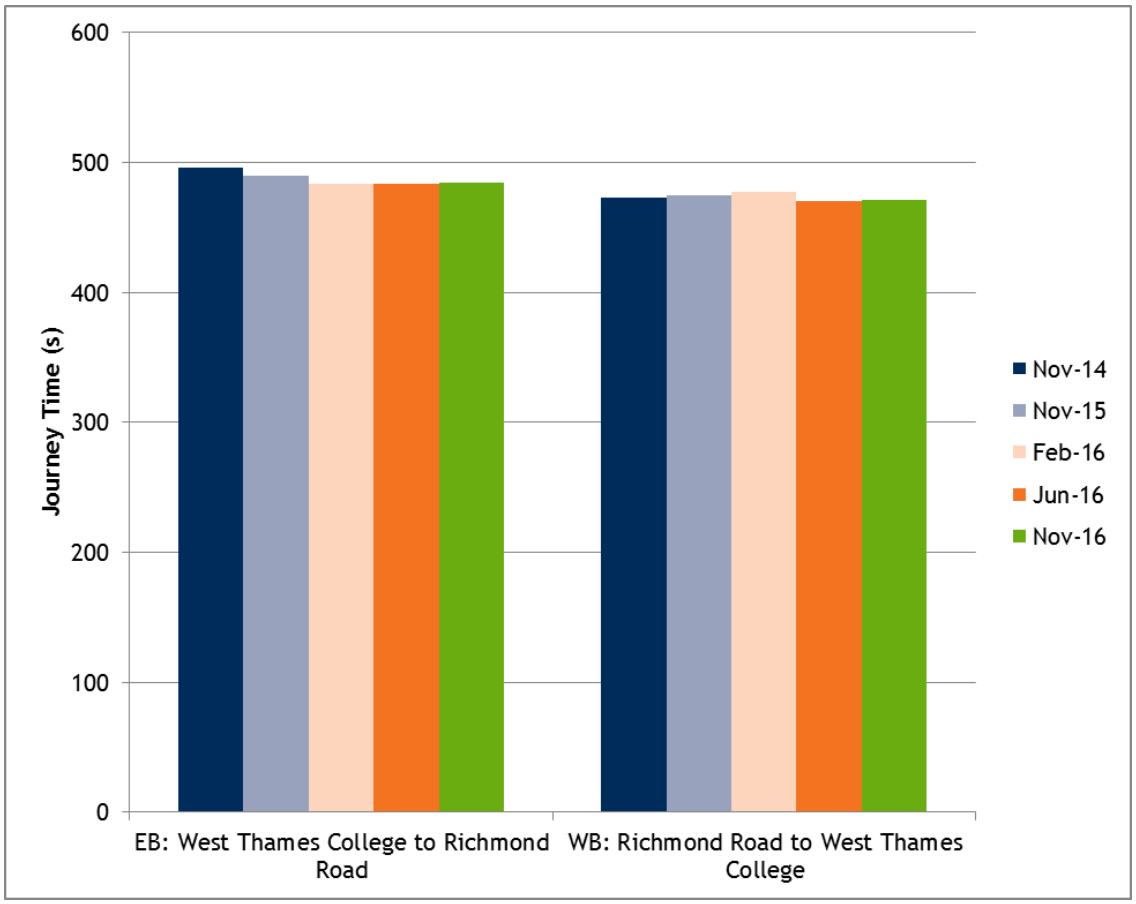


Figure 2.30: Route H37 Eastbound Average Journey Time Profile

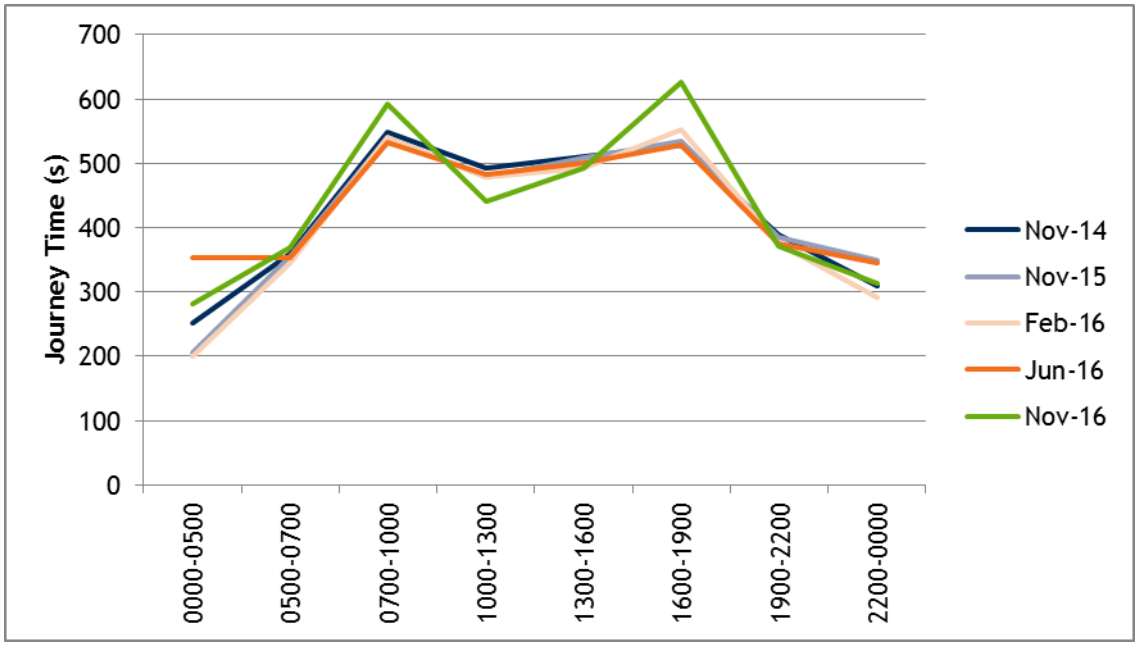
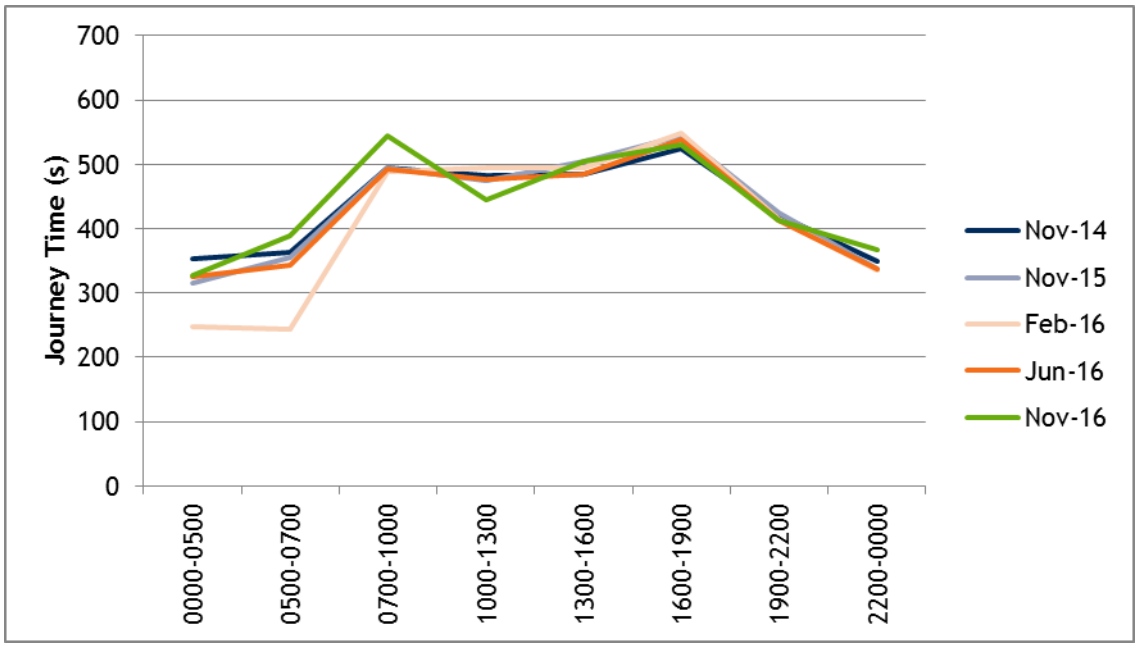


Figure 2.31: Route H37 Westbound Average Journey Time Profile

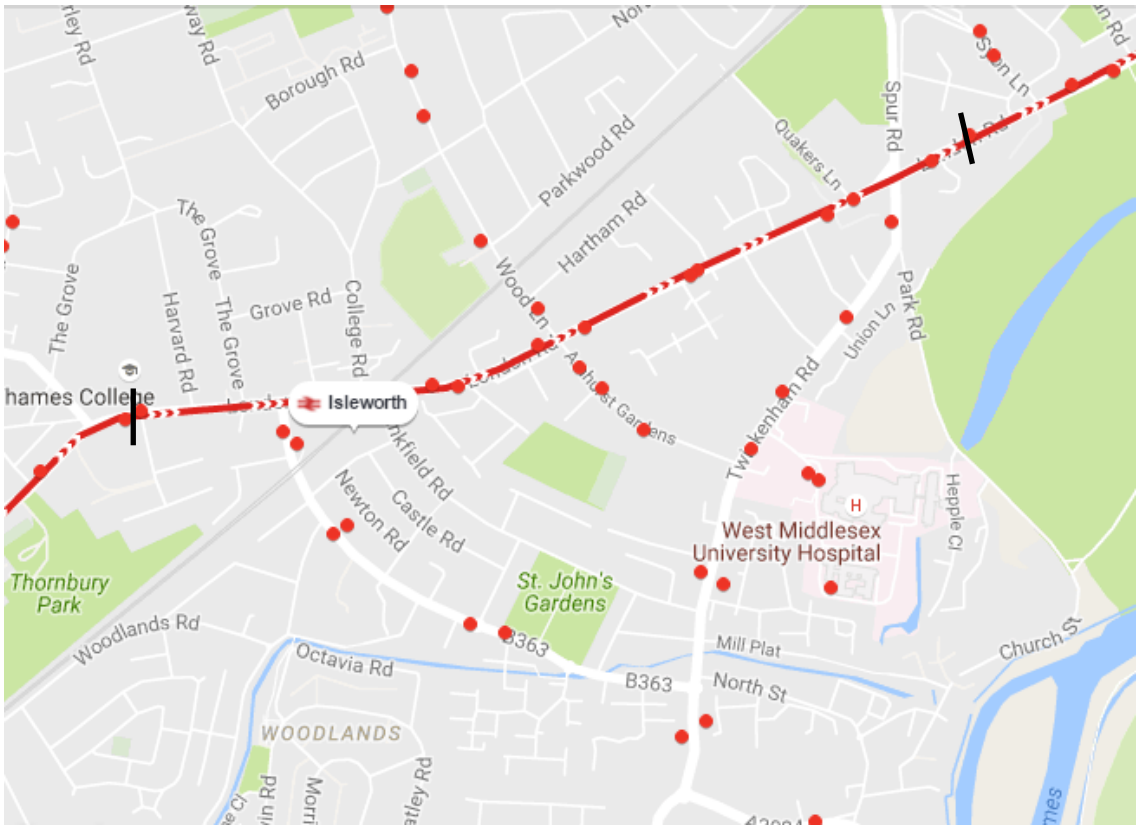


Bus Route 235

2.56 As shown in Figure 2.32 bus route 235 travels east - west along the A315 London Road to the north of Isleworth town centre.

2.57 The route analysed runs from West Thames College in the west to Busch Corner in the east.

Figure 2.32: Bus Route 235 (taken from www.tfl.gov.uk)



2.58 Route 235 has a bus scheduled every 6-8 minutes in the day time (08:00-19:00), and is a key bus route between Hounslow in the west and Brentford in the east, whilst also serving Isleworth national rail station. Table 2.16 and Table 2.17 show the average total journey time through the network for the east and westbound routes respectively.

Table 2.16: Route 235 Eastbound Journey Times (in seconds)

Period	Nov 2014	Nov 2015	Feb 2016	Jun 2016	Nov 2016	Nov 15 – Nov 16	% Change
0000-0500	104	168	90	158	169	1	0%
0500-0700	217	192	140	185	211	19	10%
0700-1000	297	307	314	311	310	3	1%
1000-1300	272	269	279	278	252	-17	-6%
1300-1600	280	280	281	280	284	4	1%
1600-1900	269	275	276	278	281	6	2%
1900-2200	226	219	222	222	222	3	1%
2200-0000	171	174	208	173	196	22	12%
All	**277**	**282**	**286**	**282**	**259**	**-23**	**-8%**

Table 2.17: Route 235 Westbound Journey Times (in seconds)

Period	Nov 2014	Nov 2015	Feb 2016	Jun 2016	Nov 2016	Nov 15 – Nov 16	% Change
0000-0500	103	43	59	91	182	139	324%
0500-0700	242	208	164	187	215	7	3%
0700-1000	296	278	281	276	295	17	6%
1000-1300	165	269	243	160	269	0	0%
1300-1600	327	324	329	311	298	-26	-8%
1600-1900	387	360	386	378	319	-41	-11%
1900-2200	213	201	204	221	236	35	18%
2200-0000	163	154	153	219	191	37	24%
All	**308**	**297**	**302**	**294**	**272**	**-25**	**-8%**

2.59 The tables show minimal changes in journey time from the pre-closure months of November 2015 to 2016, with a small decrease in average journey time by November 2016. Figure 2.33, Figure 2.34 and Figure 2.35 also show journey times remaining consistent through the analysed period.

2.60 It is notable that in November 2016, the westbound bus journey time has a more consistent profile throughout the day than in other months, with a slightly slower journey time during the morning peak, but 41 seconds quicker in the PM peak.

Figure 2.33: Route 235 Average Daily Journey Time

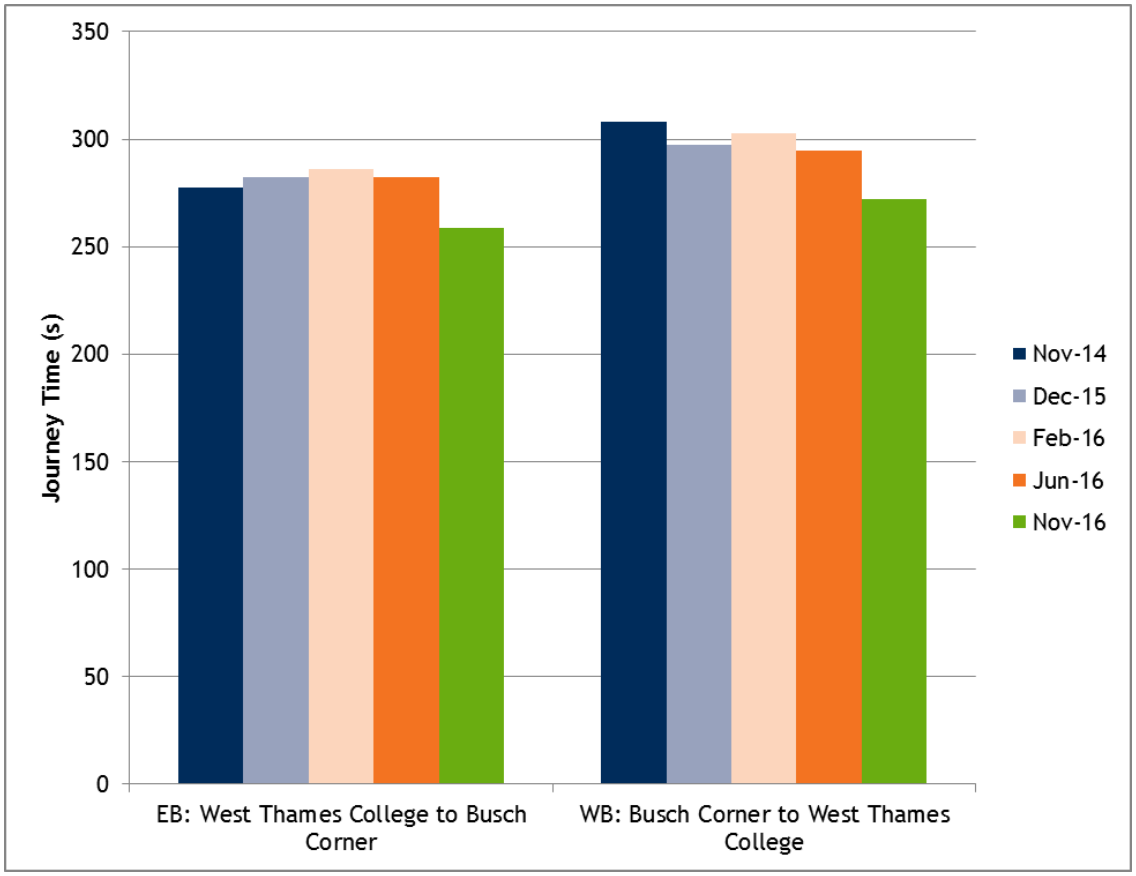


Figure 2.34: Route 235 Eastbound Average Journey Time Profile

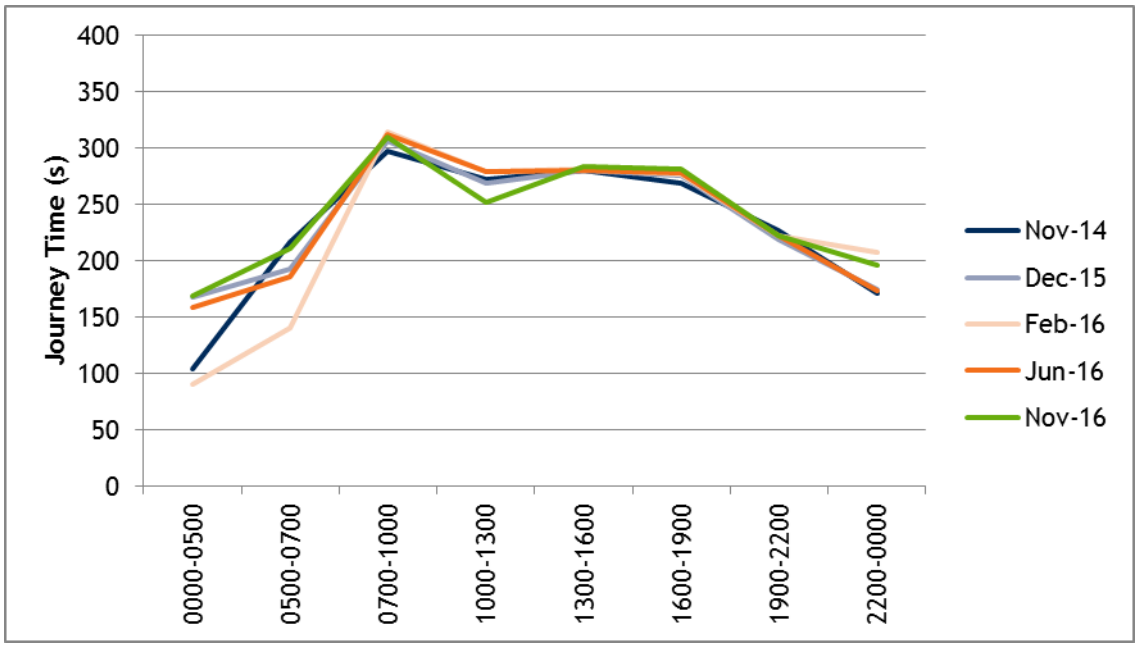


Figure 2.35: Route 235 Westbound Average Journey Time Profile

Bus Route H28

2.61 As shown in Figure 2.36 bus route H28 travels to and from Syon Lane via London Road, Twickenham Road and Amhurst Gardens.

2.62 The route analysed runs from Braybourne Drive in the west to Osterley Tesco / Syon Lane in the east.

Figure 2.36: Bus Route H28 (taken from www.tfl.gov.uk)

2.63 Route H28 has three buses scheduled to run per hour in the day time (06:00-18:00), and serves Syon Lane train station, whilst also running close to West Middlesex University Hospital and Isleworth train station. Table 2.18 and Table 2.19 show the average total journey time through the network for the east and westbound routes respectively.

Table 2.18: Route H28 Eastbound Journey Times (in seconds)

Period	Nov 2014	Nov 2015	Feb 2016	Jun 2016	Nov 2016	Nov 15 – Nov 16	% Change
0500-0700	712	760	673	647	701	-59	-8%
0700-1000	910	817	781	836	810	-7	-1%
1000-1300	697	770	706	752	688	-82	-11%
1300-1600	758	801	799	813	771	-30	-4%
1600-1900	849	890	817	878	834	-56	-6%
1900-2200	652	680	640	640	597	-83	-12%
2200-0000	600	610	530	523	520	-90	-15%
All	**750**	**774**	**725**	**752**	**716**	**-58**	**-7%**

Table 2.19: Route H28 Westbound Journey Times (in seconds)

Period	Nov 2014	Nov 2015	Feb 2016	Jun 2016	Nov 2016	Nov 15 – Nov 16	% Change
0500-0700	628	569	571	587	589	20	4%
0700-1000	966	828	844	846	867	39	5%
1000-1300	787	731	731	723	765	34	5%
1300-1600	887	852	903	878	841	-11	-1%
1600-1900	1077	1044	1218	1134	1185	141	13%
1900-2200	711	708	673	689	632	-76	-11%
2200-0000	557	531	539	503	526	-5	-1%
All	**833**	**791**	**828**	**801**	**812**	**21**	**3%**

2.64 The tables show that journey times have fluctuated slightly over the months of the study period, however, Eastbound journey times show a decrease throughout each time period between November 2015 and November 2016.

2.65 Conversely, the Westbound direction shows several periods of journey time increases, particularly notable in the PM peak (1600-1900) where there is a journey time increase of 141 seconds (13%) from November 2015 to November 2016. It should be noted however that the November 2015 journey time is also over 30 seconds quicker than that in November 2014.

Figure 2.37: Route H28 Average Daily Journey Time

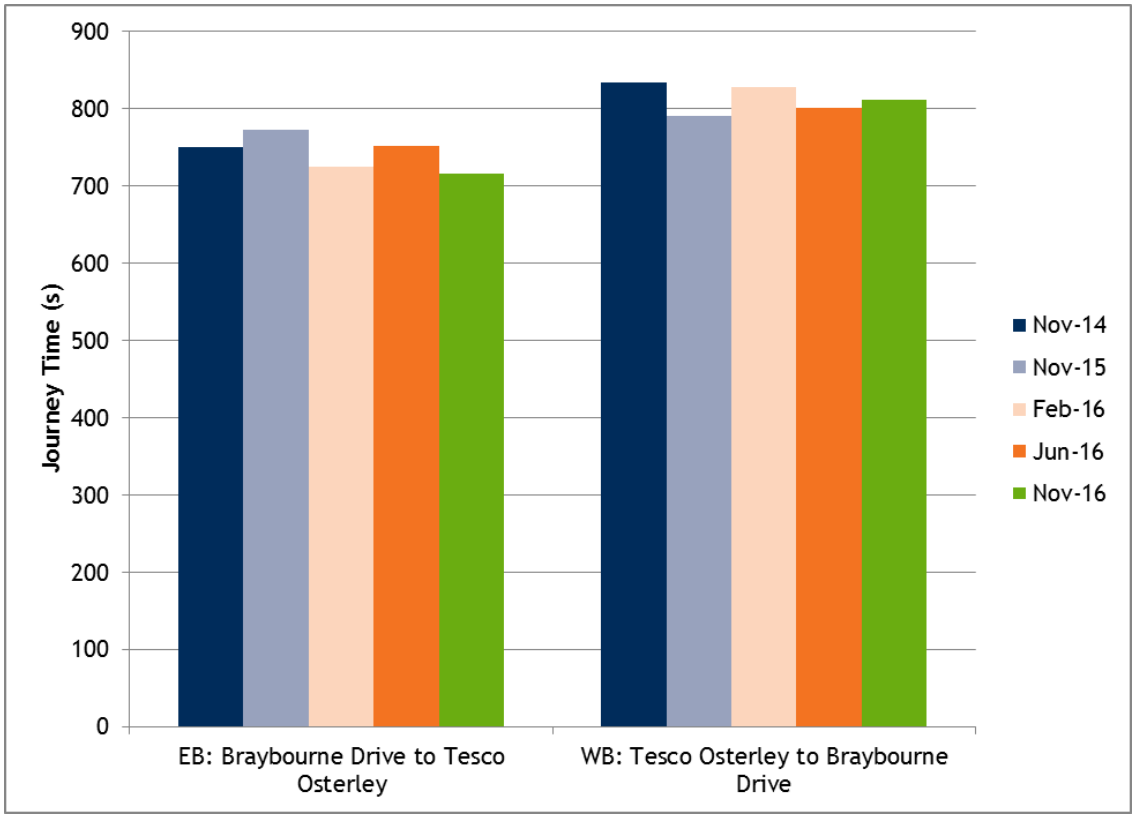


Figure 2.38: Route H28 Eastbound Average Journey Time Profile

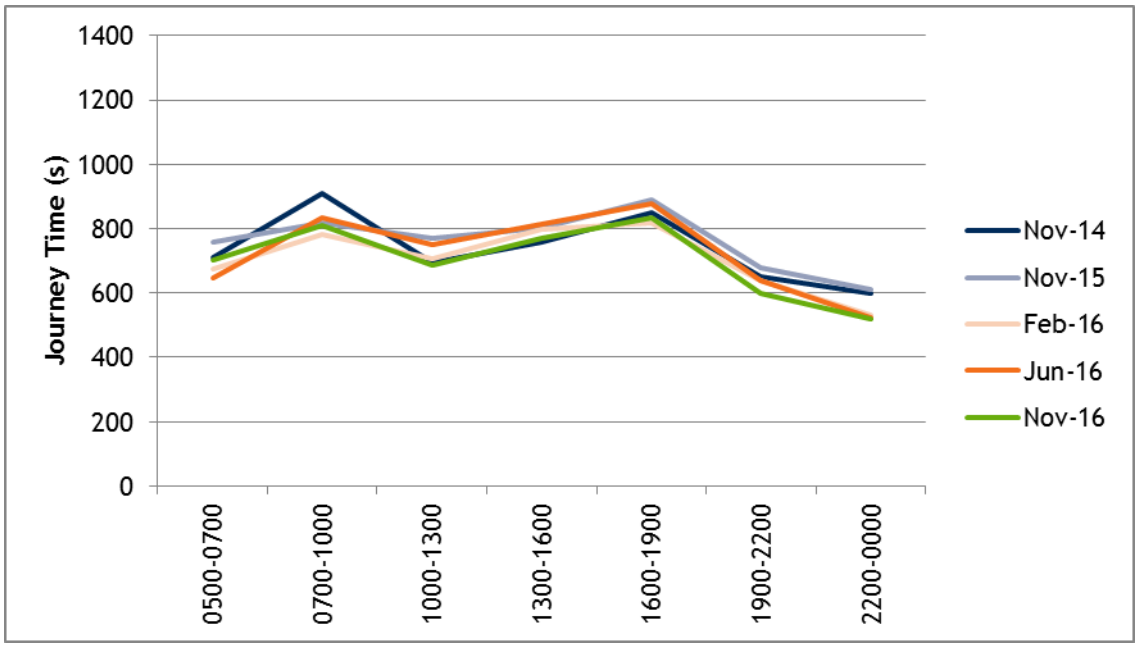


Figure 2.39: Route H28 Westbound Average Journey Time Profile

3 Conclusions

3.1 Analysis of traffic flows in the Isleworth area have shown a noticeable decrease in traffic on the now temporarily closed Church Street, with access for local residents and visitors to the London Apprentice pub and All Saints Church travelling via Park Road to the North.

3.2 Analysis has shown that the closure of the road to general traffic has seen the number of pedestrians and cyclists increase, with these numbers rising significantly between October 2015 and November 2016, with an additional 39% pedestrians and 19% cyclists observed.

3.3 Park Road has seen some changes to traffic, particularly at the weekend, when there is a large peak in the November 2016 evening peak southbound. All other flows remain relatively consistent over the study period.

3.4 Traffic flows on North Street were shown to have increased between 2014 and the first set of post-closure surveys in January 2016, however, since then flows have decreased and by November 2016 were fairly consistent with 2014 levels, with no change in the weekday eastbound AM peak flows, and a minor 10% increase in the westbound. In the PM peak flows increased by 30% heading eastbound (+23 vehicles) but fell by 21 vehicles in the westbound direction, resulting in a negligible net change in traffic on the road.

3.5 The closure of Church Street seems to have had little impact on South Street in the AM peak, where flows have remained very consistent pre- and post-closure. In the PM peak there is more fluctuation, with an increase of 22% traffic eastbound, and a reduction of 13% westbound. At the weekend a smaller 9% increase in traffic was observed eastbound, whilst westbound flows remained consistent.

3.6 Traffic on the main Twickenham Road has shown some increase post closure, particularly evident in the northbound direction, which increases by almost 20% in the PM peak.

3.7 This increase in traffic shows some effect on bus journey times in the area, with the journey time for bus route 267 showing increases in peak hour journey times between November 2015 to November 2016, with this increase most notable in the PM peak in the southbound direction with an increase in journey time of 162 seconds (27%). However, the overall average bus journey times on this route has shown only minor increases.

3.8 The H37 has shown some increases in bus journey time in the AM and PM peaks in the eastbound direction of 52 and 91 seconds respectively. However, journey times have decreased in the middle of the day to show the overall bus journey time to have mildly improved across the day. In the westbound direction, also shows an increase in journey time of 51 seconds in the AM peak, however, the PM peak shows a decrease of 14 seconds, and again there is a small improvement to the average daily bus journey time.

3.9 The analysis of bus routes 235 and H28 has shown some improvements to these bus journey times, aside from the westbound direction of the H28, which has a 141 second increase in journey time in the PM peak.

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