
Bushy Park

Movement Trial Analysis

March 2022



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- Appendix F Detailed Vehicle Volume Analysis (September)
- Appendix G Accident Analysis Tables (On and Off-Park by Location)

1. Introduction

This document has been prepared by Stantec UK Ltd on behalf of The Royal Parks (TRP) to report the findings of the movement trial schemes implemented across five London Parks in August 2020. The study provides a summary of the results of various data collected pre and post implementation of the trial schemes, as well as conclusions drawn from the analysis.

The findings of each of the five parks have been analysed and reported separately across five documents. This report (ref: *RPMA-STN-BP-XX-R-TR-0001-P02*) focuses solely on Bushy Park.

1.1 TRP's Movement Strategy

TRP's Movement Strategy¹ was published in 2020 as a framework to help shape and inform the policies and decisions taken with regard to how park visitors can access, experience and move within the park. The Movement Principles in the Movement Strategy document set out TRP's Vision, as follows:

- *We will protect and conserve our parks' special qualities*
- *Our parks are for people*
- *We will encourage the use of more sustainable ways to access our parks*
- *Our park roads are not intended to be commuter through-routes for motor vehicles*
- *We will achieve more by delivering key projects through partnership and collaboration*
- *We will make evidence-based decisions*
- *We will be proactive in our approach to future transport challenges and opportunities*

In August 2020, TRP launched a series of traffic-related trials across five London parks to reduce the impact of cut-through traffic, improve the park visitor experience and open new spaces for park visitors to enjoy. The five parks included in the movement Trials are:

- Richmond Park;
- Bushy Park;
- St. James's Park;
- Hyde Park; and
- Greenwich Park.

The trials underwent consultation in November 2020. Bushy Park received 3,331 responses to the consultation survey, showing that 56% of respondents would be supportive of the scheme being made permanent.

The trials were initially planned to run until February 2021, however TRP decided to keep the measures in place for the remaining of 2021 with the aim to carry out monitoring and understand the impact of the schemes before determining whether they should be permanent.

The Bushy Park Trial involved restricting vehicle movements along the internal north-south corridor to reduce cut-through traffic and

¹ [TheRoyalParks_MovementStrategy.pdf](#)

enhance the park for visitors during the week and at the weekend.

1.2 Study Purpose

This study provides an analysis of a number of monitoring surveys carried out within Bushy Park and traffic data within the local road network. The purpose of this study is bifold:

- i. To understand any changes in the park's movement patterns since the trial was implemented; and
- ii. To understand the impacts of TRP's trial on traffic within the local and strategic road network outside Bushy Park since the trial was implemented.

Based on the above, the results of the study have been presented and discussed for TRP's consideration.

1.3 Assessment Methodology

Study Area

The extent of the study area has been based upon the Common Operational Road Network (CORN) map shown in **Figure 1.1**, which was prepared by TfL for an area within 500m and 1,000m of the park, and agreed between TRP with Local Authorities and TfL as part of the traffic study proposal. Key roads within the CORN map extent were subsequently identified as potential reassignment routes as a result of the trial scheme, these comprise the study area of the analysis presented in this report and are highlighted in **Appendix A**.

Data Sources

To understand the impact of the movement trial within Bushy Park, both on-park and off-park traffic data has been obtained from various sources including The London Borough of Richmond upon Thames (LBRuT) and Transport for London (TfL). The following data was obtained for the Bushy Park study:

Off-Park Traffic Data

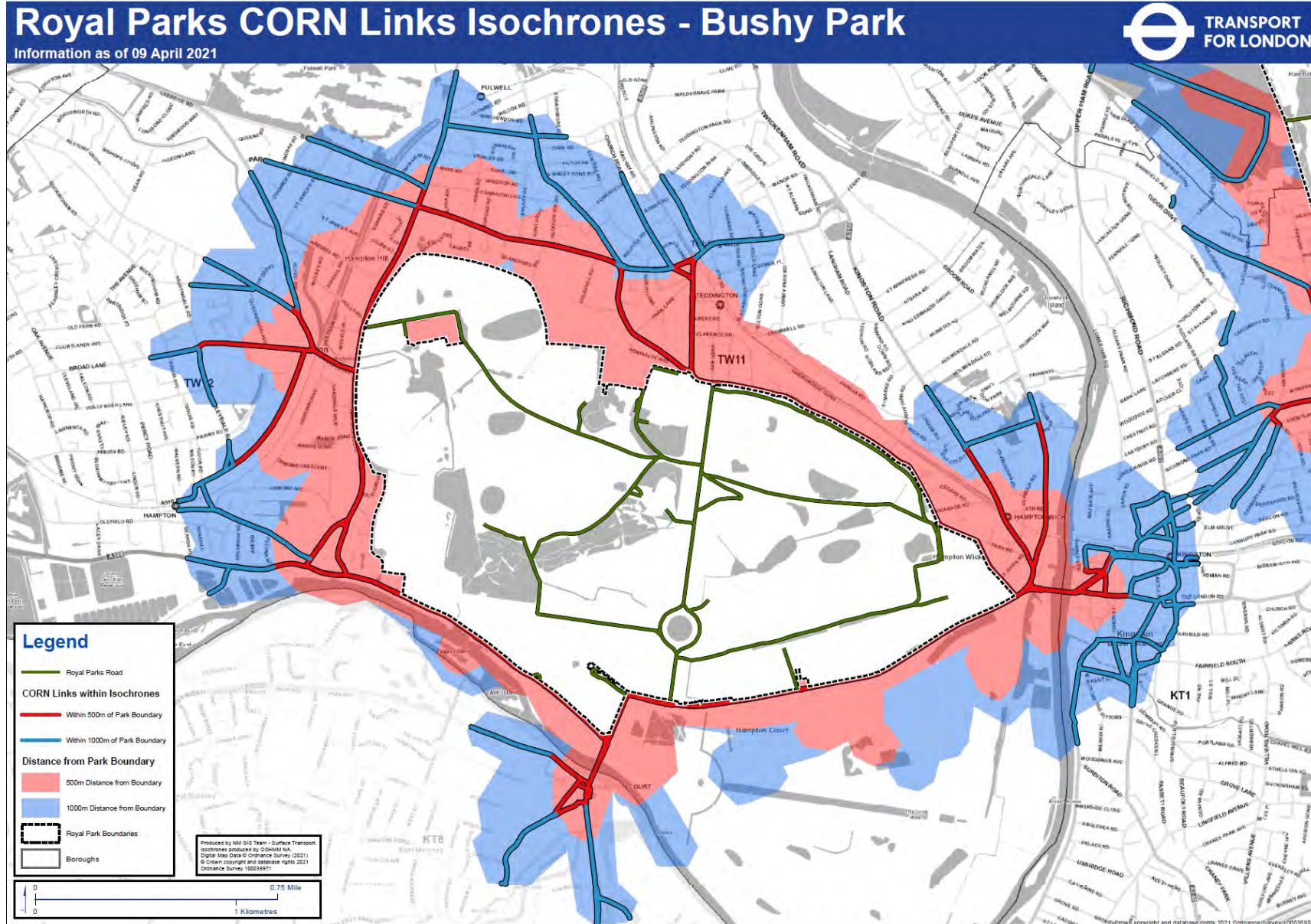
- Vehicle Journey Time data
- Bus Journey Time data
- Vehicle Volume data

On-Park Traffic Data

- Manual Classified Traffic Counts (MCTC) at the Park Road / Chestnut Avenue junction and the Hampton Court Road / Chestnut Avenue junction.

From the available traffic data, the impact of the movement Trial within the park has been assessed to understand changes in traffic flows, general traffic journey times along strategic routes and along key bus routes surrounding Bushy Park. Furthermore, the on-park traffic data has been used to understand the level of traffic at park following implementation of the trial.

Figure 1.1 Bushy Park CORN Map



1.4 COVID-19 Impact & General Traffic Trends

In response to COVID-19 pandemic national lockdown restrictions were introduced in late March 2020, which included closure of schools, non-essential shops, working-from-home regulation. As a result of this, traffic volumes dropped to levels not seen since the 1960s.

Passenger capacity on TfL London Buses was significantly reduced to promote social distancing. This significantly reduced capacity and may have encouraged more people to undertake single occupancy vehicle journeys.

After a period of relaxation and reintroduction of the above restrictions during the rest of 2020 and beginning of 2021, it wasn't until May 2021 when most restrictions associated with people's movement were lifted. Since then, TfL have reported that traffic in London is back to +/- 3% of pre-COVID levels, with the exception of central London where traffic is still significantly lower than it was before the pandemic.

On this basis the analysis undertaken in this report seeks to present the recorded traffic flows / journey times in 2020 but has not looked to use this assess the change pre and post-trial. All numerical and percentage change figures presented through this report are based upon change between 2018/2019 and 2021, with 2020 numbers just presented for context.

Recovery of the Highway Network (Text from TfL)

Following discussions with TfL with regard to the scope and methodology of this study, the following text was drafted by TfL on 18th March 2022 for incorporation in this report, with regard to general trends in the strategic road network:

“Prior to understanding the full shape of the London traffic recovery from the pandemic the Royal Parks chose May 2021 as the month to compare traffic changes relative to a pre-pandemic baseline of May 2019. This follows industry practice where May is accepted to be a “neutral” month for the purposes of understanding year-on-year changes in traffic patterns, meaning it is not unduly influenced by seasonal influences such as holiday periods and adverse weather patterns.

*The chart below [see **Figure 1.2**] shows the profile of the traffic flows on the roads TfL manages (TLRN) during the pandemic relative to a baseline of 2019/20. It illustrates the impact of the first 3 lockdowns, 1) 23 March 2020, 2) 5 November 2020, and 3) 5 January 2021, on overall traffic volumes. There was a large recovery in volumes through April 2021 as lockdown restrictions eased enabling the reopening of non-essential business and there was also a notable increase in volumes in mid-May when indoor hospitality re-opened, and at*

this point traffic volumes were still down relative to their 2019 baseline by 5.6%

However, although overall traffic volumes were still down the associated journey times were showing a slightly different trend due to changes in travel patterns by road users. At the point of return to the network in May 2021, traffic volumes were very much more concentrated in the inter-peak (10:00 to 16:00) and PM peak (16:00 to 19:00) [...].”

Journey Time Change TfL Case Study (Richmond Park and TLRN) (May 2021 – Baseline 2019)

TfL have provided an example of the change in journey times in May 2021 for the vicinity of the largest Royal Park (Richmond Park) for the A205 within Richmond Borough, which shows that journey times were 7% up relative to the pre-pandemic baseline [see **Figure 1.3**].

For comparison, **Figure 1.4** shows the same trend for all of the TLRN, weekdays, in both directions. which shows an elevated journey time relative to the baseline of 2019.

“On the TLRN, outside of May 2021, through to recent weeks, journey times stayed below the baseline, and this was what we would have

expected to see given the relative trends in traffic flow data. Given this insight of journey times in May 2021 showing elevation related the drop in traffic flows, as the network adjusted to the new reality of coming out of lockdown points to the choice of May 2021, not being as representative of movement outside of pandemic, between lockdowns. This could not have been foreseen. It means that the results in the report should be treated as over-inflating the observed impact of policies, than would otherwise have been the case. If it is possible a good point of comparison to test this assumption would be to revisit the data for May 2022, if that is possible.

Network patterns have changed again outside of the 4th lockdown for Omicron and we are beginning to see elements of normality return to the network, although recent changes arising from increased fuel price rises in March 2022, suggest that traffic flows remain suppressed at about 5% less than baseline, and it may take several months before we can fully determine what the new normal on the road network will become. There is some evidence that traffic flows and their associated journey times will remain below their pre-pandemic level in a time frame of the next year or so.”

Figure 1.2 – Profile of traffic flows

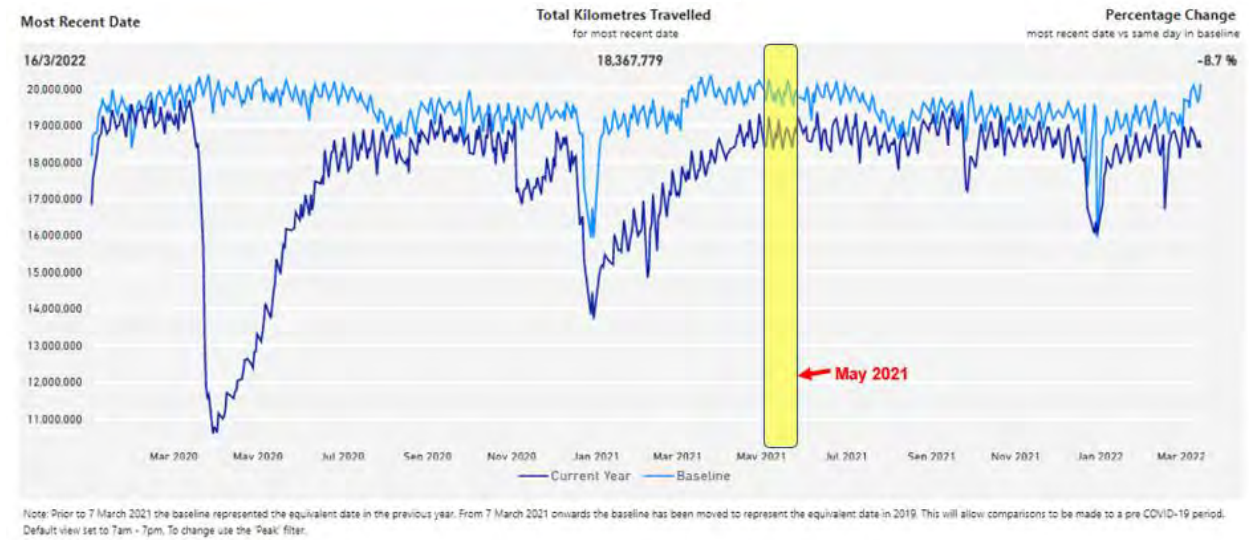


Figure 1.3 – A205 Journey Time Trends (May 2021 – Baseline 2019)



Figure 1.4 – TLRN Journey Time Trends (May 2021 – Baseline 2019)



London-wide Traffic Trends

The latest 'Travel in London Report (Report 14)²' which collates data for the period up to November 2021, summarises trends and development relating to travel and transport in London, including disruption caused by the COVID-19 pandemic from March 2020 and London's early recovery during the latter part of 2021. This report shows the following key trends:

- By November 2021 the demand for public transport overall was around 70 per cent of pre-pandemic levels, while traffic on London's major roads was typically 95 percent of pre-pandemic levels. This indicates there has been a car-based recovery in transport activity across London.
- Weekend travel has recovered more strongly than weekdays.
- Relative to average overall demand levels, the recovery of the weekday commuter peak is lagging. It is thought that this primarily reflects the persistence, as of late 2021, of flexible working arrangements put in place during the pandemic.

- Active travel mode shares were notably higher during the pandemic. However, this took place in the context of overall reductions to activity, meaning absolute trip making overall by these modes remained close to, or below, pre-pandemic levels through much of 2020.
- By spring of 2021 however, there have been signs that absolute volumes of cyclists have begun to increase in certain parts of London. **Table 1.1** shows that Outer London (of which Bushy Park is part of) has seen a 19.9% increase in cycling volumes relative to pre-pandemic levels.

Table 1.1: Year-on-year change in cycling volume (TfL)

Year	Central London	Inner London	Outer London
2020	-24%	+7.5%	+24.4%
2021 (from 2019)	-16.4%	+4.6%	+19.9%

² [travel-in-london-report-14.pdf \(tfl.gov.uk\)](https://tfl.gov.uk/what-its-new/articles/2021/11/18/Travel-in-London-report-14)

1.5 Summary of Stakeholder Engagement

Transport for London (TfL)

- Stantec contacted TfL on 15th November 2021 with regard to the scope and methodology of the study, requesting data and feedback
- An online meeting between Stantec and TfL was held on 15th November 2021 to agree on the format of data to be provided by TfL and methodology of the study.
- Further correspondence was exchanged with regard to the data request, and the full set of ATC/ vehicle journey/ bus journey time data was provided on 20th December 2021.
- No concerns were raised by TfL with regard to this trial, however some refinement of data previously provided by TfL was required, and an additional set of updated ATC/ vehicle journey/ bus journey time data was provided on Tuesday 1st March 2022.
- A further meeting took place on Monday 28th February 2022 to discuss and reach an agreement with regard to the methodology to analyse the revised set of data provided by TfL, presented in TRP's study.

London Borough of Richmond upon Thames (LBRuT)

- TRP engaged with the LA on the 28th May with regard to the monitoring of the trial. Further engagement with LBRuT and TfL took place following this first contact.
- Stantec contacted LBRuT on 25th November 2021 with regard to the scope and methodology of the study, requesting feedback on the proposed approach and data to undertake the analysis.
- Correspondence was exchanged with LBRuT transport officer with regard to the extent of the data request, and partial data was provided on 10th December 2021.
- Further discussions were held between LBRuT and Stantec, and the outstanding data was provided on 7th February 2022.
- A meeting between LBRuT/ TRP/ Stantec took place 15th February 2022 to discuss the initial findings of the study, and as an opportunity to raise concerns and questions by LBRuT.
- Concerns were raised regarding the implementation of this TRP's trial and other local schemes, such as the Park Road Traffic Management measures.

1.6 Report Structure

This report is set out in the following structure:

- **Section 2:** Bushy Park
- **Section 3:** Off-Park Data Analysis
- **Section 4:** On-Park Data Analysis
- **Section 5:** Accident Analysis
- **Section 6:** Summary of Findings

2. Bushy Park

2.1 Overview

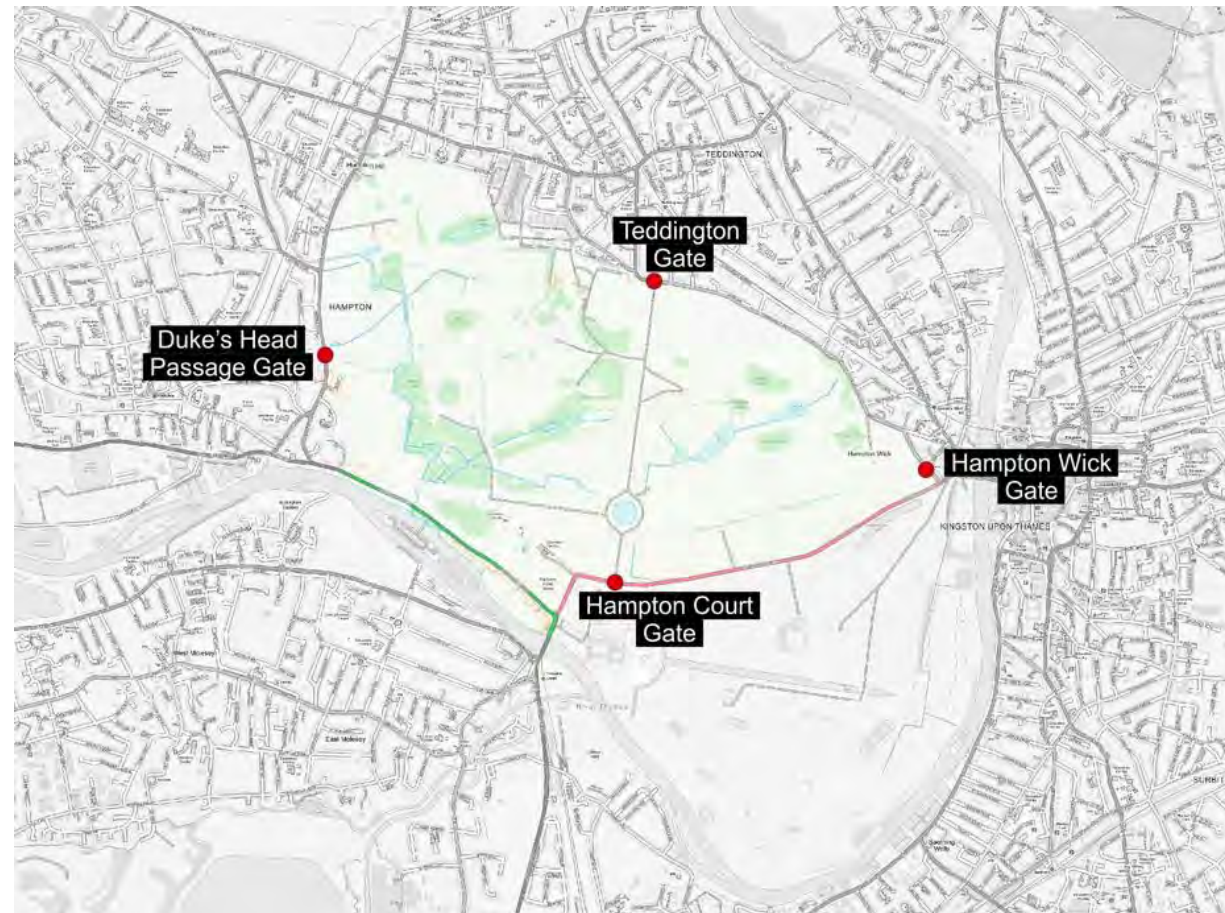
Bushy Park is situated within the London Borough of Richmond upon Thames. It is bounded by residential urban areas to the north, west and east, and the River Thames and Hampton Court Palace to the south. A plan showing the location of the park within its surrounding area and access gates is shown in **Figure 2.1**.

2.2 Accessibility to Park

Bushy Park can be easily accessed by means of public transport services, including railway, and bus services.

Hampton Court Gate and Teddington Gate provide vehicular, pedestrian and cycle access to the park. The Duke's Head Passage Gate and Hampton Wick Gate provide pedestrian and cycle access only. Pedestrian gates are open 24 hours except during the deer cull in September and November. During these months, pedestrian gates open at 08:00 and close at dusk. Prior to the trail, the vehicle gates were open from 06:30 for most of the year, other than during the deer cull when they opened at 08:00. The vehicle gates close at 19:00 in the winter and at dusk (variable time) during British Summer Time (BST).

Figure 2.1: Bushy Park Site Location Plan



2.3 Bushy Park Movement Trial Scheme

The TRP introduced the following vehicle traffic restrictions at Bushy Park:

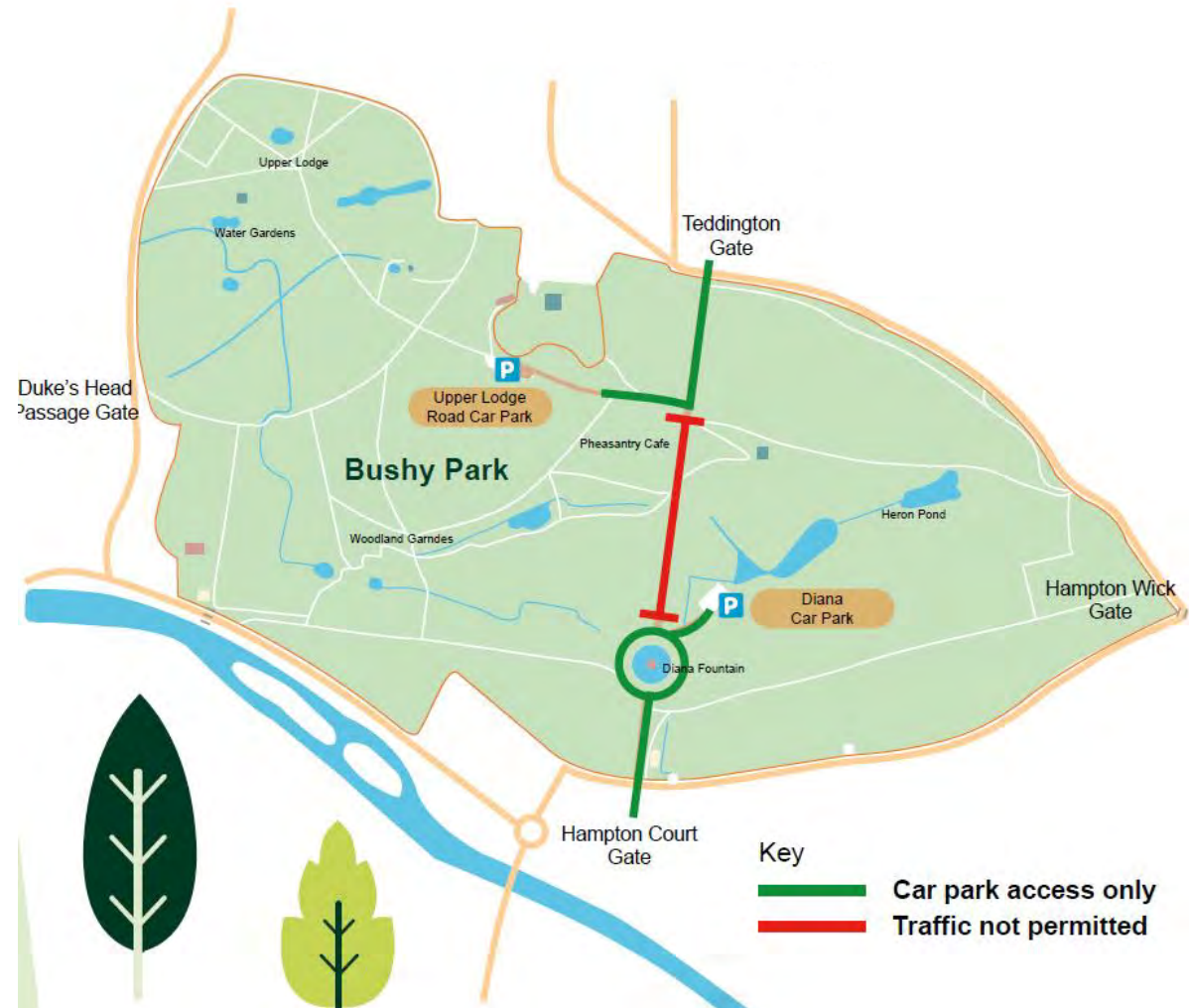
- The full-time removal of all through-traffic on Chestnut Avenue between Teddington Gate and Hampton Court Gate.

A plan showing the Bushy Park Trial Scheme is presented in **Figure 2.2** with further details of the Trial scheme outlined in the Royal Parks Movement Strategy document³.

The start date of the Trial was the 15th August 2020 and initially planned to be in place for 6-months however in February 2021 an extension to the trial was agreed as a result of the COVID-19 pandemic. On this basis the Trial scheme is still in place at the time of publishing this report.

TRP's intention is to make the restrictions of the Trial at Bushy Park a permanent feature subject to the findings and recommendations presented in this report. Changes to the scheme may be implemented based upon the conclusions presented.

Figure 2.2: Bushy Park Trial Scheme Plan



³ [MovementFactSheet_Bushy.pdf](#)
(royalparks.org.uk)

2.4 Other Local Schemes

In addition to the Bushy Park Trial scheme, other local schemes have been introduced in the area around the park, some of these have been subject to review as part of the Cabinet Report⁴ prepared by LBRuT in February 2021. This report concluded that further data analysis was required in order to provide recommendations.

Local schemes that may have had an impact on local traffic are illustrated in **Figure 2.3** and outlined below:

- Park Road Traffic Management:** traffic restrictions have been for some time in place along Park Road, to the west of the junction with the A313. It is understood that these have caused disruptions to local traffic, including increases in journey time along this section of the road.
- 20mph Borough-wide:** following consultation by LBRuT in 2018, a borough-wide 20mph speed limit scheme was passed by the Council's Cabinet in March 2019. These included all roads within LBRuT with the exception of TfL Red Routes, which were excluded from the scheme.

2.5 Summary of Local Schemes

It is expected that together with the trial scheme at Bushy Park, local schemes and the COVID-19 pandemic, may have impacted traffic in and around Bushy Park, as follows:

Table 2.1: Summary of Other Local Schemes

Scheme	Roads affected
Park Road Traffic Management	Park Road (west of A313 junction)
20mph borough wide	All roads – effects on journey times

⁴ [LONDON BOROUGH OF RICHMOND UPON THAMES](#)

Figure 2.3 – Other Local Schemes Plan



3. Off-Park Data Analysis

3.1 Overview

To assess the impact of the scheme on the surrounding road network to Bushy Park, off-park data was obtained from TfL and LBRuT which included the following data types:

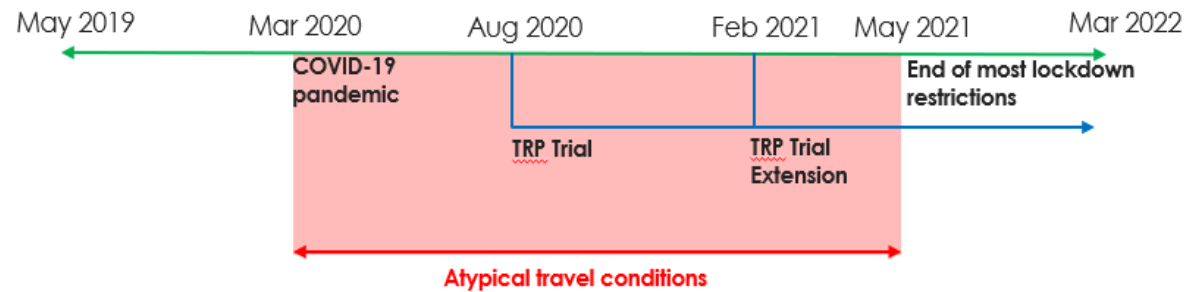
- Vehicle Journey Time data.
- Bus Journey Time data.
- Vehicle Volume data.

The analysis undertaken seeks to assess the change in journey time or volume at key highway links pre and post implementation of the Movement Trial within the park. It should be read in the context of the traffic environment (see Section 1.4) and other local schemes (see Section 2.4).

3.2 Methodology

The off-park data analysed in this report uses May 2019 as the ‘Pre-Trial Year’ and May 2021 as the ‘Post-Trial Year’.

Figure 3.1: Timeline of Travel Conditions



May has been selected as the assessment month as it generally considered to be a neutral month with respect to commuter traffic.

Furthermore, as shown in **Figure 3.1** due to the COVID-19 Pandemic, data between March 2020 and April 2021 could not be used due to atypical travel conditions associated with travel restrictions.

In May 2021, the UK Government announced the easing of most lockdown restrictions, therefore the operation of the road network is likely to more representative of pre-pandemic travel behaviour.

Analysis of August data has also been undertaken alongside May as August is one of the peak periods for visitors to the Royal Parks, however it should be noted that travel patterns may not be as representative of typical travel

conditions due to school summer holidays and associated lower levels of daily commuters. Where relevant, brief commentary of the August results have been provided within this report with supplementary detailed analysis provided in the appendices.

The analysis of the Weekday includes the data recorded for Tuesday, Wednesday and Thursday and excludes data for Monday and Friday, as Tuesday through Thursday are considered to be more representative of a ‘neutral’ weekday whereas Monday and Friday often exhibit different travel behaviour especially for AM and PM commuter traffic. This is in line with guidance prescribed by the Department for Transport on paragraphs 3.3.6 and 3.3.7 of TAG Unit M1.2⁵.

⁵ [TAG Unit M1.2 - Data Sources and Surveys \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/92422/tag-unit-m1-2-data-sources-and-surveys.pdf)

The Weekend analysis has been undertaken based on an average of a Saturday and Sunday.

For the Weekday data an AM, PM and Daily period have been assessed, and for the Weekend data an Inter Peak (IP) and Daily period have been considered.

Each time period covers the following hours:

- **AM:** 07:00-10:00 (3 hours)
- **IP:** 10:00-16:00 (6 hours)
- **PM:** 16:00-19:00 (3 hours)
- **Daily:** 07:00-19:00 (12 hours)

Analysis of the AM, IP and PM time periods are provided in the following formats:

Vehicle and Bus Journey time

1. Hourly average of the journey time provided in seconds per kilometre (secs/km).
2. Hourly average of the journey time provided in seconds across the whole route (secs/route).
3. Percentage change (%).

Vehicle Volume

1. Change in number of vehicles (no. of vehicles)
2. Percentage change (%).

The analysis of the vehicle and bus journey time data provides an hourly average across the total 12 hour time period for the Daily time period. For the vehicle volume data however, the Daily time period is rather a total traffic flow across the 12 hour period to give an understanding of the total number of vehicles throughout the day.

The percentage change between 2019 and 2021 recorded for each of the datasets has been assigned a classification of impact to highlight where changes have occurred. The following scale has been applied:

- Decrease – **Green**
- 0% to 15% – **Light Blue**
- 15% to 30% – **Medium Blue**
- Greater than 30% – **Dark Blue**

Within the report, comparison summary tables with the percentage change between the Pre and Post-Trial year is provided as well as summary of the key findings of the results.

Further analysis tables which include the recorded raw journey times (secs/km and secs/route), and vehicle flow (no. of vehicles) are provided the following appendices:

- **Appendix A:** *Reassignment Routes identified from CORN Map*
- **Appendix B:** *Detailed vehicle Journey Time Analysis (May)*
- **Appendix C:** *Detailed vehicle Journey Time Analysis (August)*
- **Appendix D:** *Detailed Bus Journey Time Analysis (May)*
- **Appendix E:** *Detailed Bus Journey Time Analysis (August)*
- **Appendix F:** *Detailed Vehicle Volume Analysis (September)*
- **Appendix G:** *Accident Data Tables*

Within the further analysis, data from 2020 is also provided (where available) for context but has not been used in the analysis due to significant changes in travel behaviours due to the COVID-19 Pandemic.

3.3 Vehicle Journey Time Data

Overview

The impact of the Bushy Park Movement Trial on journey times for general traffic surrounding the park has been assessed using vehicle journey time data obtained from TfL. It should be read in the context of the traffic environment (see Section 1.4) and other local schemes (see Section 2.4).

The vehicle journey time data is extracted from TfL's INRIX database; this combines an anonymous, real-time GPS probe data from over 60 different providers. This data is then assigned to TfL's Common Operational Road Network (CORN). This network comprises of small road links which usually run between intersections.

TfL have provided journey time data for their CORN for links within a 1km radius of the Bushy Park.

Methodology

Nine journey time routes have been identified from the available data, of which each route is made up of multiple links within the CORN.

These include five primary routes which cover the perimeter of the park, and four additional secondary routes which includes highway links that provide connection from park gates to the strategic road network.

A map illustrating the location of each of the nine vehicle journey time routes included in this assessment is shown in **Figure 3.2**.

For each of the nine routes assessed, the average vehicular journey time in seconds per kilometre (secs/km), seconds across the whole route (secs/route) and percentage change (%) has been calculated by direction and time period.

Analysis of the vehicle journey times for the month of May is presented within this section with the associated comparison tables and a summary of the findings. Detailed analysis tables including journey time data for the full length of each link, are presented in **Appendix B**.

A high level summary of the August results are provided within this section with the detailed comparison tables presented in **Appendix C**.

Figure 3.2: Vehicle Journey Time Routes Study Area

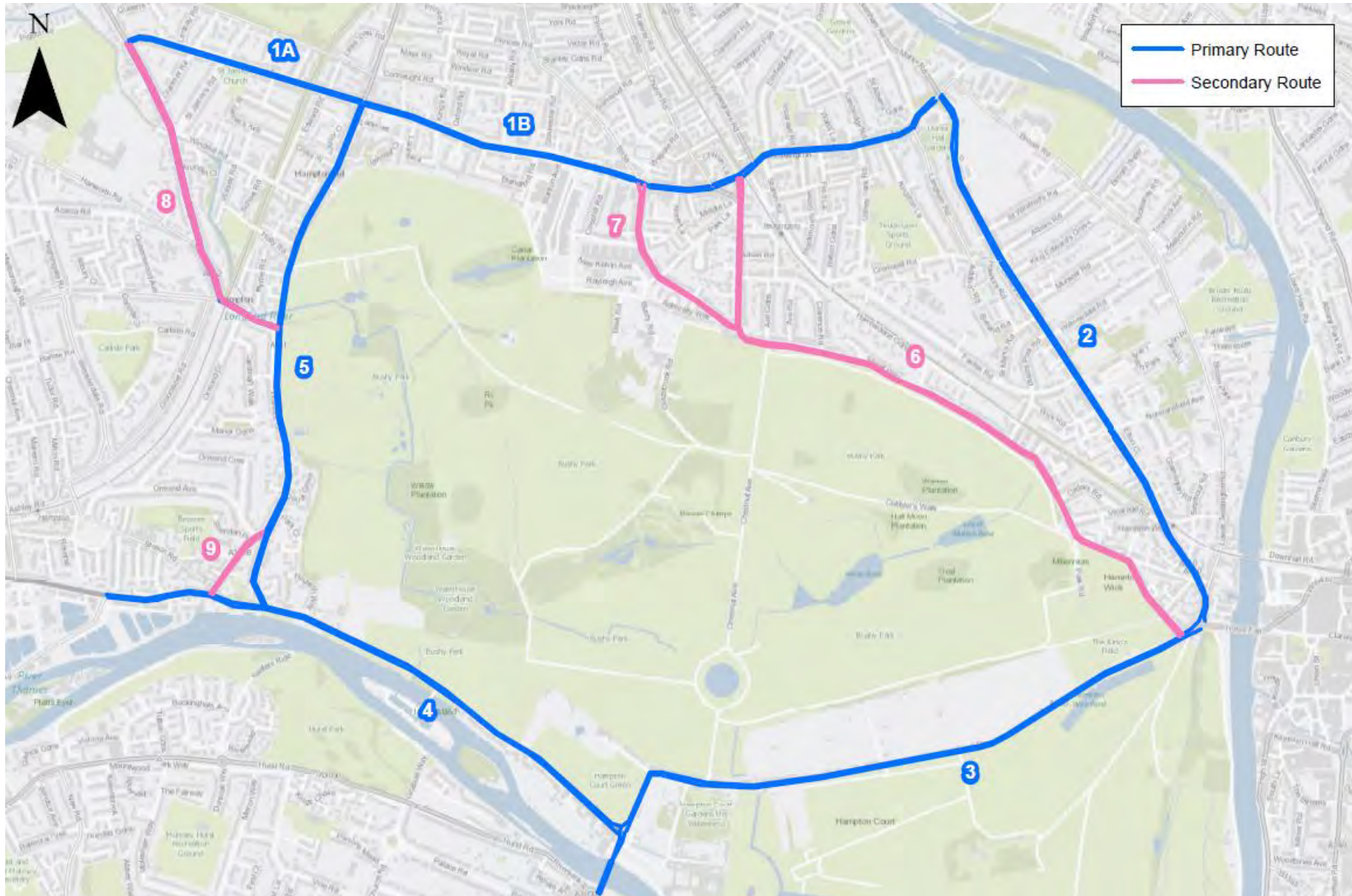


Table 3.1: Vehicle Journey Time 2019 to 2021 Comparison
Summary (May Weekday)

Vehicle Journey Time Summary - May Weekday (Average Hour)									
Journey Time Route No.	Location	Distance of Route (km)	Direction	Average Hour AM (07:00-10:00)		Average Hour PM (16:00-19:00)		Average Hour Daily (07:00-19:00)	
				2019 (secs/km)	Change to 2021 (%)	2019 (secs/km)	Change to 2021 (%)	2019 (secs/km)	Change to 2021 (%)
1A	Park Road (A312 to High Street)	0.9	EB	162	23%	134	-5%	136	10%
		0.9	WB	115	3%	133	-3%	120	1%
1B	Park Road (High Street to Kingstone Road)	2.3	EB	443	1%	424	2%	423	2%
		2.2	WB	385	1%	458	4%	412	2%
2	A310	2.2	NB	263	5%	278	2%	803	3%
		2.2	SB	306	9%	302	2%	886	5%
3	Hampton Court Road A308 (Kingston Bridge to A309/A3050)	2.6	EB	360	5%	300	15%	934	13%
		2.9	WB	239	0%	352	-4%	847	-2%
4	Hampton Court Road A308 (A309 to Lower Sunbury Road)	2.1	EB	390	37%	357	8%	999	25%
		2.1	WB	287	-1%	292	-1%	830	3%
5	Church Street/ A311/ A312	1.9	NB	281	10%	278	4%	844	5%
		1.9	SB	316	17%	357	8%	955	9%
6	A309/B358 Sandy Lane	2.6	NB	288	4%	295	3%	862	3%
		2.6	SB	336	11%	337	4%	975	7%
7	Queens Road	0.7	NB	116	1%	145	1%	371	1%
		0.7	SB	119	-2%	120	0%	344	-1%
8	High Street	1.2	NB	159	21%	177	0%	487	9%
		1.2	SB	160	14%	156	3%	467	7%
9	High Street A2	0.3	NB	43	-1%	41	-2%	123	0%
		0.3	SB	55	2%	57	-3%	156	0%

Summary of Results - May Weekday

Table 3.1 provides the May 2019 (pre-trial) to May 2021 (post-trial) vehicle journey time comparisons during the weekday. The table presents the recorded journey time of the route in 2019 (secs/km) and the percentage (%) change to 2021. A summary of the recorded results is provided below.

Weekday AM

- Majority of routes recorded small increases in journey time with an average change of +8% across all routes with a range of between -2% to +37%.
- Three routes recorded minor reductions, with Queens Road SB [4] recording the largest reduction of -2%.
- Largest increases were recorded along the following routes:
 - A308 Hampton Court Road EB (between A309 and Lower Sunbury Road) [4] +68 sec/Km (+146 secs/route, +37%).
 - Park Road (A312 to High Street) EB [1A] +41 secs/km (+37 secs/route, +23%).
 - High Street NB [8] of +27 secs/km (+34 secs/route, +21%).

Weekday PM

- Majority of routes have recorded either small decreases or increases in journey times with an average change in journey time of +2% across all routes, and a range of between -5% to +15%.
- Largest decrease was recorded along Park Road EB [1A] of -8 secs/km (-7 secs/route, -5%).
- No significant increases recorded. Largest increase was recorded along A308 Hampton Court Road EB (between Kingston Bridge and A309/A3050) [3] of +18 secs/km (+46 secs/route, +15%).

Weekday Daily (Average Hour)

- Majority of routes recorded small increases in journey time with an average change of +5% across the nine routes over a daily period.
- Largest increase was recorded along A308 Hampton Court Road EB (between A309 and Lower Sunbury Road) [4] of +116 secs/km (+249 secs/km, +25%).
- All other recorded increases were between +1% and +13%.

Summary Statement

The majority of the links recorded small increases in vehicle journey time during the May weekday time periods. The AM time period recorded the largest changes between 2019 and 2021.

Vehicle journey times along the A308 Hampton Court Road (eastbound) increased by +68 sec/km (37%), which was the highest across the May weekday.

For an average hour (daily), a +8% increase in vehicle journey time is recorded over all routes.

Table 3.2: Vehicle Journey Time 2019 to 2021 Comparison
Summary (May Weekend)

Vehicle Journey Time Summary - May Weekend (Average Hour)											
Journey Time Route No.	Location	Distance of Route (km)	Direction	Saturday				Sunday			
				Average Hour IP (10:00-16:00)		Average Hour Daily (07:00-19:00)		Average Hour IP (10:00-16:00)		Average Hour Daily (07:00-19:00)	
				2019 (secs/km)	Change to 2021 (%)	2019 (secs/km)	Change to 2021 (%)	2019 (secs/km)	Change to 2021 (%)	2019 (secs/km)	Change to 2021 (%)
1A	Park Road (A312 to High Street)	0.9	EB	101	1%	104	5%	98	3%	99	5%
		0.9	WB	98	5%	100	2%	97	6%	96	3%
1B	Park Road (High Street to Kingstone Road)	2.3	EB	381	-1%	371	2%	355	1%	345	2%
		2.2	WB	357	2%	354	1%	349	-2%	331	0%
2	A310	2.2	NB	250	1%	242	2%	246	1%	237	0%
		2.2	SB	258	1%	265	3%	255	-2%	252	0%
3	Hampton Court Road A308 (Kingston Bridge to A309/A3050)	2.6	EB	273	7%	284	6%	271	8%	273	4%
		2.9	WB	262	1%	256	-2%	261	3%	245	0%
4	Hampton Court Road A308 (A309 to Lower Sunbury Road)	2.1	EB	230	9%	245	10%	235	9%	248	5%
		2.1	WB	226	9%	219	8%	233	9%	217	5%
5	Church Street/ A311/ A312	1.9	NB	250	3%	257	2%	244	3%	245	2%
		1.9	SB	259	2%	271	4%	260	-1%	255	1%
6	A309/B358 Sandy Lane	2.6	NB	279	3%	273	3%	281	2%	274	2%
		2.6	SB	296	3%	301	6%	301	2%	304	4%
7	Queens Road	0.7	NB	107	0%	102	1%	107	2%	98	-3%
		0.7	SB	99	0%	99	0%	99	2%	97	-6%
8	High Street	1.2	NB	133	-1%	132	0%	128	0%	125	1%
		1.2	SB	140	2%	140	1%	133	3%	132	2%
9	High Street A2	0.3	NB	38	-1%	38	-1%	42	0%	42	0%
		0.3	SB	45	-2%	43	1%	48	0%	47	1%

Summary of Results - May Weekend

Table 3.2 provides the May 2019 (pre-trial) to May 2021 (post-trial) vehicle journey time comparisons during the weekend. A summary of recorded results is provided below.

Saturday and Sunday IP

- Majority of routes recorded an increase in vehicle journey time with an average change of +2% over both a Saturday and Sunday during the inter peak.
- The recorded changes in vehicle journey times range between a decrease of -2% and increases of up to +9%.
- Largest increases were recorded on the A308 Hampton Court Road in both directions. In the EB direction [4], an increase of +10 secs/km (+22 secs/route, +9%) was recorded on a Saturday.

Saturday & Sunday Daily (Average Hour)

- Majority of routes recorded small increases in vehicle journey time with an average change of +3% and +1% on a Saturday and Sunday respectively. Over the two days, changes in journey time ranged between a decrease of -6% and increase of +10%.
- The largest decrease was recorded on Queens Road (SB) [7] on a Sunday with a -8 secs/km (-6 secs/routes, -6%)
- As with the Inter Peak, the largest increase in vehicle journey time was recorded on the A309 Hampton Court Road EB [4] with a +11 secs/km (+24 secs/route, +10%) increase on a Saturday.
- All other recorded increases were no greater than +8%.

Summary Statement

The majority of the vehicle journey time routes recorded small increases in vehicle journey times on both a Saturday and Sunday.

Across all routes and both days, the average increases in journey time was +3%, with the largest increase in the average daily hour recorded on the A308 Hampton Court Road in an eastbound direction, +10 secs/km (+10%).

Localised decreases in vehicle times were recorded along the High Street on a Saturday IP (-2% Southbound), and on Queens Road across the day (-6% southbound).

Summary of Results – August

A high-level summary of August 2019 (pre-trial) to August 2021 (post-trial) vehicle journey time comparisons for both the weekday and weekend is provided below.

Weekday

- The majority of routes assessment recorded small increase or small decreases in journey times across all three weekday time period (AM, PM & Daily).
- The average and range of changes in journey time for each time is as follows:
 - AM period recorded a marginal increase (+0.3%) and a change ranging between -8% and +6%.
 - PM recorded an average change of +1% and range between -7% to +5%.
 - Across a daily period, there was an average change of +1% and range between -4% to +5%.
- Largest decreases were recorded along the following routes:
 - A308 Hampton Court Road EB [4], -10 secs/km (-8%) in the AM period.

- A308 Hampton Court Road WB [3], -8 secs/km (-7%) in the PM period.
- The largest increases were recorded along the following routes:
 - Park Road WB [1A], +7 secs/km (+6%) in the AM period, and
 - Park Road EB [1A], +6 secs/km (+5%) in the PM period.

Saturday & Sunday

- The majority of assessed routes recorded small increases in journey time across both the inter and daily, and a Saturday and Sunday periods.
- The average change in journey time (expressed in secs/km) for each time periods is as follows:
 - Saturday IP and Daily: +1%
 - Sunday IP: +2%
 - Sunday Daily: +1%

- The largest decrease across the weekend was recorded on Queens Road [7] for the daily period on a Sunday.
 - Queens Road NB: -8 secs/km (-5%)
 - Queens Road SB: -5 secs/km (-4%)
- Largest increases across the weekend were recorded at the following routes:
 - A308 Hampton Court Road EB [3], +6 secs/km (+7%) during a Saturday IP period.
 - Park Road [1A], +4 secs/km (+4%) in both directions in the Saturday IP.
 - High Street NB [9], +9 secs/km (+7%) during the Sunday IP period.

Summary Statement

The August period general recorded small increases in vehicle journey times between 2019 and 2021, with a maximum increase of +6 secs/km (+7%) on the A308 Hampton Court Road during a Saturday IP period.

Across the day, the average change for the August days was +1%, and ranging between -5% and +5%.

3.4 Bus Journey Time Data

Overview

The impact of the Bushy Park Movement Trial on operational bus services surrounding the park has been assessed using bus journey time data obtained from TfL.

The results presented in the section should be read in the context of the traffic environment (see Section 1.4) and other local schemes (see Section 2.4).

The bus journey time data captures the 'travel time' and 'dwell time' of bus services from one bus stop to another along a specified bus route.

TfL provided data for bus services included on their CORN within 1km radius of Bushy Park.

Methodology

Seven bus services were identified with routes that are via the perimeter road network of the park. From these selected bus services, a defined section of the bus route has been analysed which is made up multiple 'bus stop to bus stop' links that are close by or adjacent to Bushy Park.

A map illustrating the location and length of the seven bus services used in this assessment is shown in **Figure 3.3**.

For this assessment, all bus journey time analysis undertaken accounts for travel time only and does not include the recorded dwell time. This decision was made as there are a number of external factors that can affect the dwell time of buses which are likely to be unrelated to the Bushy Park movement trial.

One of the primary considerations relating to this was bus patronage levels in 2021. Although lockdown restrictions were not in place in May/August 2021, due to the contagious nature of the virus, the levels of public transport usage recorded in 2021 are lower than pre-COVID times.

Therefore, the changes in bus patronage would directly affect the bus dwell time with potentially less people boarding/alighting and as such less time taken at each bus stop.

For each link, the average bus travel time in seconds per kilometre (secs/km) has been calculated for the section of each bus service shown in **Figure 3.3** by direction and for each time period.

Analysis of the bus journey times for the month of May is within this section with the associated comparison tables and a summary of the findings. Detailed analysis tables for the May assessment, including journey times for the full length of each bus route analysed, are presented in **Appendix D**.

A high-level summary of the August results are also provided within this section, with the detailed comparison tables presented in **Appendix E**.

Figure 3.3: Bushy Park Bus Services Study Area

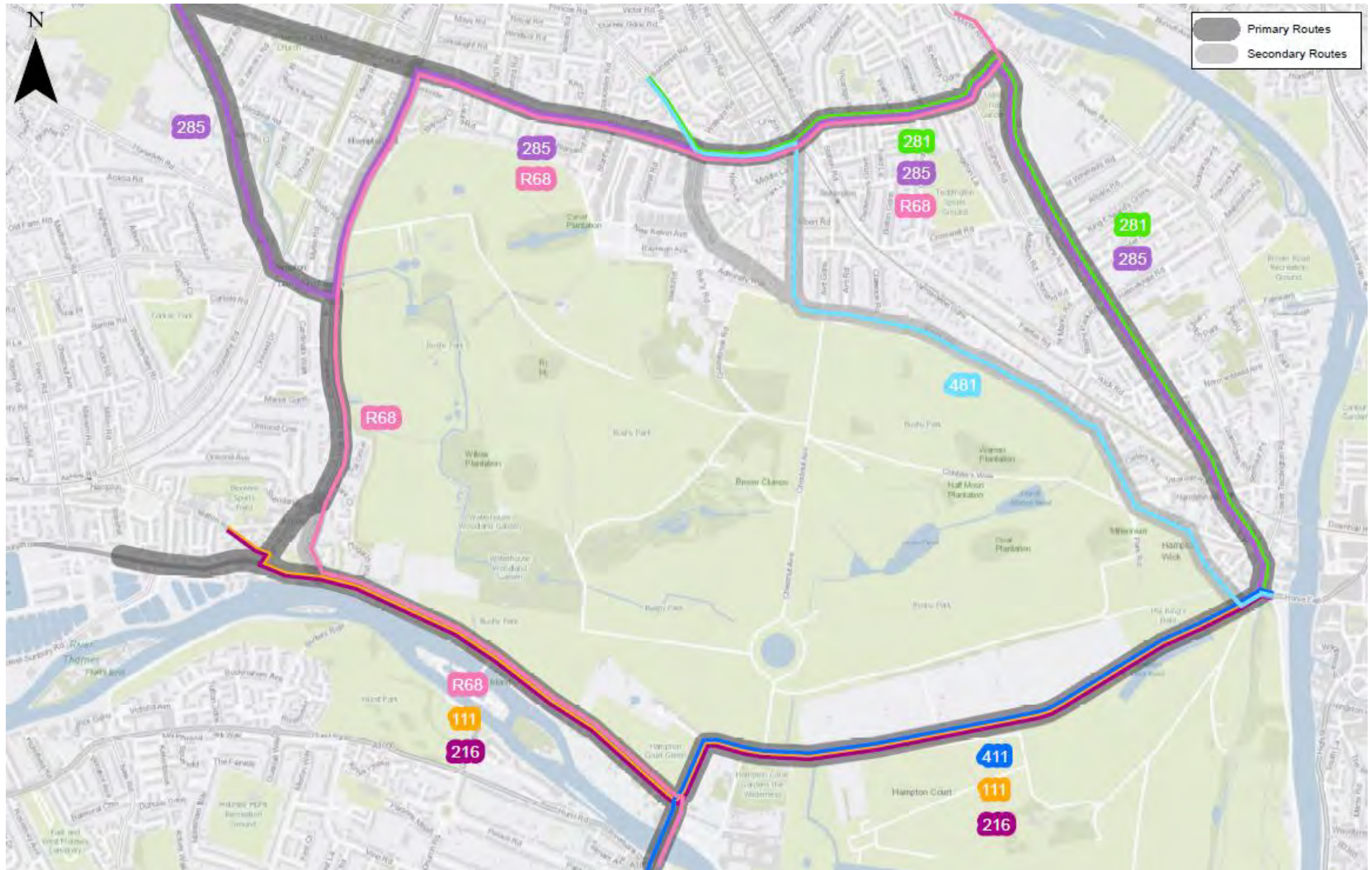


Table 3.3: Bus Journey Time 2019 to 2021 Comparison
Summary (May Weekday)

Bus Journey Time Summary - May Weekday (Average Hour)											Associated VJTR
Bus Service No.	Route Start	Route End	Distance of Route (km)	Direction	Average Hour AM (07:00-10:00)		Average Hour PM (16:00-19:00)		Average Hour Daily (07:00-19:00)		
					2019 (secs/km)	Change to 2021 (%)	2019 (secs/km)	Change to 2021 (%)	2019 (secs/km)	Change to 2021 (%)	
111	Station Rd (Hampton)	Kingston Bridge	4.2	EB	151	88%	146	62%	138	76%	3 & 4
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	128	28%	202	3%	152	17%	
216	Station Rd (Hampton)	Kingston Bridge	4.2	EB	161	82%	151	58%	143	72%	3 & 4
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	130	25%	207	2%	155	16%	
281	Kingston Bridge	Stanley Rd	3.3	NB	182	4%	206	-1%	194	2%	1B & 2
	Stanley Rd	Kingston Bridge	3.4	SB	202	7%	199	0%	198	4%	
285	Queens Rd	Kingston Bridge	6.7	EB	197	33%	191	11%	190	20%	1B, 4 & 5
	Kingston Bridge	Queens Rd	6.7	WB	183	13%	212	5%	192	12%	
411	Bridge Rd (Hampton Court)	Kingston Bridge	2.8	EB	174	14%	145	29%	148	21%	3
	Kingston Bridge	Bridge Rd (Hampton Court)	2.7	WB	118	5%	217	-12%	153	-3%	
481	Kingston Bridge	Stanley Rd	3.1	NB	167	1%	188	-2%	177	0%	1B & 6
	Stanley Rd	Kingston Bridge	3.1	SB	202	4%	189	5%	191	4%	
R68	Hampton Court Station	Hampton Court Station	6.0	NB	219	27%	224	13%	218	17%	1B, 4 & 5
	Teddington Lock	Teddington Lock	6.0	SB	218	27%	232	19%	217	22%	

Summary of Results - May Weekday

Summary **Table 3.3** provides the May 2019 (pre-trial) to May 2021 (post-trial) bus journey time comparisons during the weekday. The table presents the recorded journey time of the route for May 2019 (secs/km) and the percentage (%) change to 2021. A summary of the recorded results is provided below with detailed analysis in **Appendix D**.

Weekday AM

- In the May period all seven bus services recorded increases in journey times in the AM period, with an average change of +26% and ranging between +1% to +88%.
- The largest increases between 2019 and 2021 were recorded on the following services:
 - Bus Service **111** (EB): +132 secs/km (+555 secs/route, +88%)
 - Bus Service **216** (EB): +132 secs/km (+555 secs/route, +82%)
 - Bus Service **285** (EB): +65 secs/km (+433 secs/route, +33%)
- Bus Services 111 and 216 both extend along the southern perimeter of the park along the A308 Hampton Court Road.

Matching this to the vehicle journey time routes (Section 3.3), **Route 4** runs along Hampton Court Road and also recorded an increase in journey time in the eastbound direction for the same time period.

- Bus Service 285 covers large proportions of Bushy Parks perimeter roads, covering the eastern, northern and some of the western areas.

Weekday PM

- The majority of bus services recorded increases in journey times in the weekday PM period, with an average change of +14% and ranging between -12% to +62%.
- A small number of bus services recorded a decrease in bus journey time. The largest decrease was seen on Bus Route **411** WB, with a change of -27 secs/km (-12%).
- This bus services operates along the eastern part of the A308 Hampton Court Road, from Hampton Court Bridge to Kingston Bridge.

- The largest increases were recorded on the following:
 - Bus Service **111** (EB): +91 secs/km (+380 secs/route, +62%)
 - Bus Service **216** (EB): +87 secs/km (+366 secs/route, +58%)
 - Bus Service **411** (EB): +41 secs/km (+116 secs/route, +29%)
- All of these identified increases have occurred on bus services that operate a bus route along the southern perimeter of Bushy Park.

Weekday Daily (Average Hour)

- Across a daily period, 6 of the 7 services assessed recorded increases in journey times during the weekday, with an average change of +20% and ranging between -3% and +76% across all routes.
- Bus Service **411** recorded a small decrease in bus journey time in a westbound direction of -5 secs/km (-3%).
- For an average daily hour, the largest increases were recorded on the following:
 - Bus Service **111** (EB): +104 secs/km (+437 secs/route, +76%)
 - Bus Service **216** (EB): +103 secs/km (+434 secs/route, +72%)
- In addition to these increase, Services 285 (EB), 411 (EB) and R68 (SB), recorded changes in bus journey times of between +20-22%.

Summary Statement

For the May weekday review, the majority of bus services recorded increases in journey times across all three time periods (AM, PM, Daily).

Across the daily period, on average there has been an increase in bus journey times of +20% between May 2019 and 2021. In this period, the largest increase was recorded on bus service 111 which recorded an increase of +104 secs/km (+76%) in eastbound direction. This route operates a service along Hampton Court Road, south of Bushy Park.

The AM period recorded increases in journey time across all 7 bus services that were assessed. Services 111 and 216 were amongst the highest, recording increases in excess of +80%.

The main location for bus journey time reductions was on service no. 411 (westbound) in the PM period, with a reduction of -27 secs/km (-12%).

Table 3.4: Bus Journey Time 2019 to 2021 Comparison
Summary (May Weekend)

Bus Journey Time Summary - May Weekend (Average Hour)									
Bus Service No.	Route Start	Route End	Distance of Route (km)	Direction	Average Hour IP (10:00-16:00)		Average Hour Daily (07:00-19:00)		Associated VJTR
					2019 (secs/km)	Change to 2021 (%)	2019 (secs/km)	Change to 2021 (%)	
111	Station Rd (Hampton)	Kingston Bridge	4.2	EB	160	61%	141	39%	3 & 4
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	157	7%	137	8%	
216	Station Rd (Hampton)	Kingston Bridge	4.2	EB	162	62%	141	39%	3 & 4
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	160	6%	139	8%	
281	Kingston Bridge	Stanley Rd	3.3	NB	189	7%	175	2%	1B & 2
	Stanley Rd	Kingston Bridge	3.4	SB	207	20%	189	2%	
285	Queens Rd	Kingston Bridge	6.7	EB	187	23%	173	10%	1B, 4 & 5
	Kingston Bridge	Queens Rd	6.7	WB	174	15%	162	11%	
411	Bridge Rd (Hampton Court)	Kingston Bridge	2.8	EB	162	14%	145	1%	3
	Kingston Bridge	Bridge Rd (Hampton Court)	2.7	WB	193	-32%	166	-26%	
481	Kingston Bridge	Stanley Rd	3.1	NB	171	2%	161	1%	1B & 6
	Stanley Rd	Kingston Bridge	3.1	SB	202	19%	186	8%	
R68	Hampton Court Station	Hampton Court Station	6.0	NB	217	19%	188	8%	1B, 4 & 5
	Teddington Lock	Teddington Lock	6.0	SB	204	20%	196	8%	

Summary of Results - May Weekend

Summary **Table 3.4** provides the May 2019 (pre-trial) to May 2021 (post-trial) bus journey time comparisons for a May Weekend. The table presents the recorded journey time of the route for May 2019 (secs/km) and the percentage (%) change to 2021. A summary of the recorded results is provided below with detailed analysis in **Appendix D**.

Weekend

- The inter peak period (1000-1600) predominately recorded increases in bus journey times for an average hour, with an average change of +17% from 2019 to 2021, and changes ranging between -32% to +62%.
- The only decrease in bus journey times in the inter peak periods was recorded on services number **411** (westbound), with a reduction of -62 secs/km (-32%).
 - This bus journey route covers the eastern end of Hampton Court Road which has a corresponding vehicle journey time route of **Route 3** (See figure 3.2), which across a daily period also recorded a slight reduction in journey time (-2%).

- The largest increases between 2019 and 2021 on the Weekend were recorded on the following services:
 - Bus Service **111** (EB): +97 secs/km (+406 secs/route, +61%)
 - Bus Service **216** (EB): +100 secs/km (+421 secs/route, +62%)
- Half of the 14 assessed links (7 two-way routes) recorded increases in bus journey times of +20%.

Weekend Daily (Average Hour)

- Across a daily period, 6 of the 7 services assessed recorded increases in journey times during the weekend, with an average change of +9% and ranging between -26% and +39% across all routes.
- Bus Service **411** recorded a reasonable decrease in bus journey time of -44 secs/km (-26%) in a westbound direction along the A308 Hampton Court Road, with a marginal increase of +3 secs/km eastbound.
- For an average daily hour, the largest increases were recorded on the following:
 - Bus Service **111** (EB): +55 secs/km (+229 secs/route, +39%)

- Bus Service **216** (EB): +55 secs/km (+229 secs/route, +39%)
- The remaining bus services **281, 285, 481** and **R68**, recorded an average change in bus journey time of +6% between May 2019 and 2021, with differences ranging from +1% to +11%.

Summary Statement

The May weekend analysis for bus journey times recorded a general increase in journey times for the average IP and Daily assessments, with the majority of routes recording increases in journey times.

Bus Services 111 and 216 recorded the largest changes between 2019 and 2021, with changes of +61% and +62% respectively for an average IP hour in the eastbound direction. The services both operate along the Hampton Court Road, south of Bushy Park.

Bus service 411 (westbound) was the only route to record a decrease in journey time of -44 secs/km (-26%) for an average daily hour.

Services 285 and R68, which in combination operate services on all sides of the parks surrounding roads, recorded average hour increases of +11% and +8% across the day respectively.

Summary of Results – August

A high-level summary of August 2019 (pre-trial) to August 2021 (post-trial) bus journey time comparisons for both the weekday and weekend is provided below with detailed analysis in **Appendix E**.

Weekday

- The average (and range) hourly change in bus journey time between 2019 and 2021 is as follows for each time period:
 - AM period recorded small increases (+5%) with changes ranging between -3% and +11%.
 - The PM period returned a natural change between the two assessment years, but with changes ranging between -21% and +12%.
 - Across a daily period, the average hour bus journey times has increased by +3%, with changes between 2019 and 2021 ranging between -9% and +10%.
- Largest reduction in bus journey times was recorded along Bus Service **411** (westbound) during the PM period, where journey times reduced by -50secs/km (-21%).

- The most significant increase was recorded on Bus Service **285** in a westbound direction, with a +21secs/km (+12%) increases in bus journey times.
- All other recorded increases in bus journey time were no greater than +11%.

Weekend

- Overall, the weekend recorded minor changes between the 2019 and 2021 data with the changes in journey time across the 7 services reviewed averaging at +4% in the IP period.
- The largest decreases during the weekend were record at the following:
 - Bus service **411** (westbound), with a reduction of -9 secs/km (-6%), in the IP period.
 - Bus service **281** (northbound), with a reduction of -10 secs/km (-6%), for an average daily hour.
- In the IP time period, three bus services recorded increases in journey times of +11%, as follows:
 - Bus Service **111** (WB): +14 secs/km (+62 secs/route, +11%)

- Bus Service **216** (WB): +14 secs/km (+60 secs/route, +11%)
- Bus Service **285** (WB): +19 secs/km (+128, secs/route +11%)

Summary Statement

Overall, the August assessment recorded small increases in bus journey times between 2019 and 2021.

The largest differences between the two years were recorded during a Weekday PM, with changes in journey times ranging between -21% and +12%.

Bus Service 411 (westbound) recorded the largest reduction in journey time of -50 secs/km (-21%), and operates a service along Hampton Court Road, south of Bushy Park.

Bus Service 285 (NB/WB) recorded the largest increase in journey time of +21 secs/km (+12%) in the PM period. The 285 operates a service which extends along the northern and eastern sides of the park.

At the weekend, across the daily period the average change in bus journey times was recorded at just +1%, with any increases no greater than 9%.

3.5 Vehicle Volume Data

Introduction

The impact of the Bushy Park Movement Trial on the traffic flows on strategic highway links surrounding the park has been assessed by reviewing traffic counts (ATCs) from LBRuT. It should be read in the context of the traffic environment (see Section 1.4) and other local schemes (see Section 2.4).

There was no available vehicle volume data relevant to Bushy Park from TfL.

Seven ATC sites have been provided by LBRuT which cover the local road network around the park.

A map illustrating the location of traffic count analysis is shown in **Figure 3.4**.

Methodology

For the analysis of the ATCs the Pre-Trial data was recorded September 2018 (17th to 23rd), and the post-trial year data was recorded September 2021 (11th to 20th).

For AM, IP and PM time periods assessed, an average hourly vehicle flow by direction has been calculated and used to derive the percentage change. For the Daily period a total traffic flow across the 12-hour period has been presented and used to derive the percentage change.

The analysis of the changes in vehicle volume is provided within this section with the associated comparison tables and a summary of the findings. Detailed analysis tables are presented in **Appendix F**.

Figure 3.4: Bushy Park ATC Locations

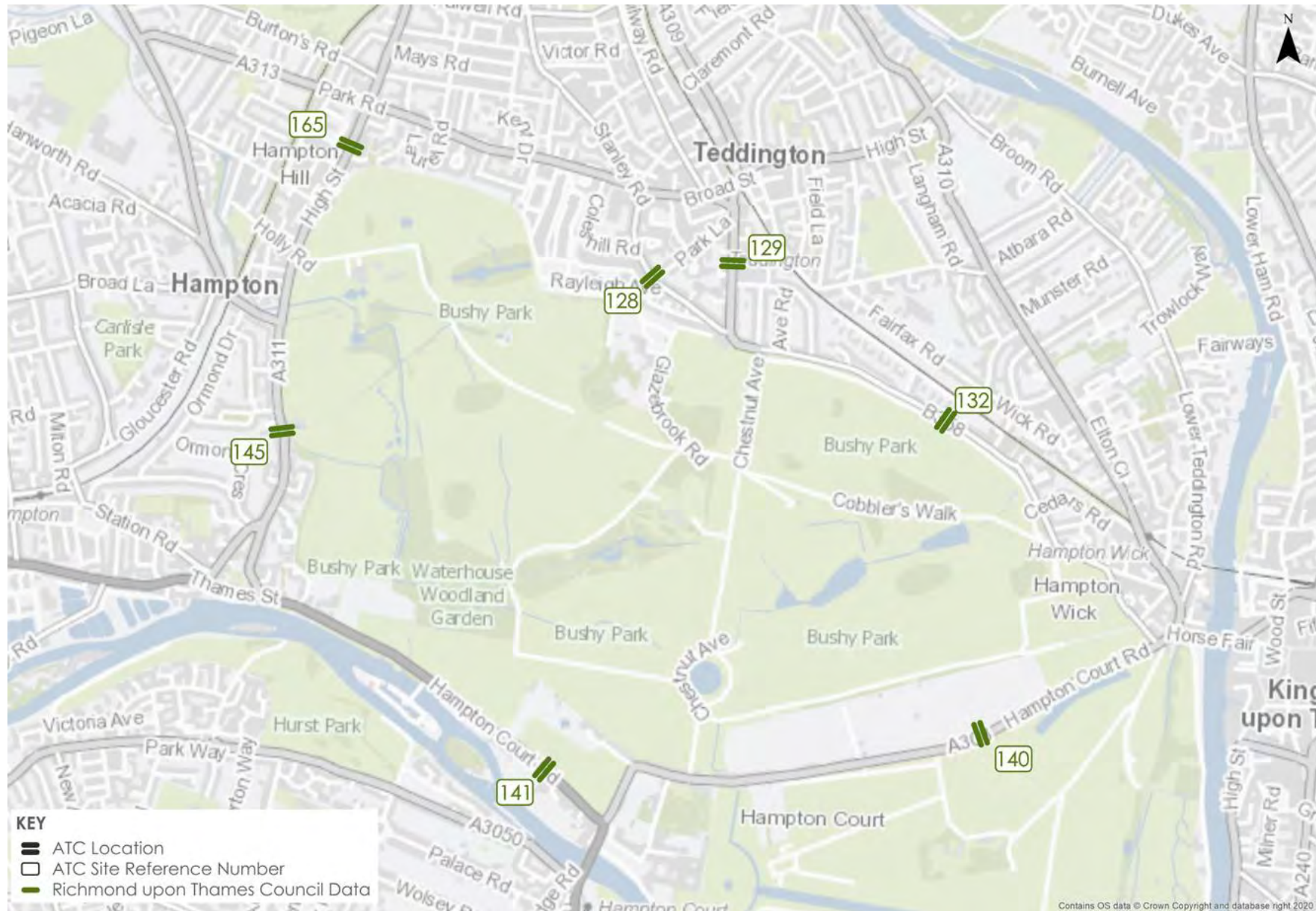


Table 3.5: Vehicle Volume 2018 to 2021 Comparison Summary
(September Weekday)

Vehicle Volume Summary - September Weekday (Average Hour)								
ATC Ref.	Location	Direction	Average Hour AM (07:00-10:00)		Average Hour PM (16:00-19:00)		Average Hour Daily (07:00-19:00)	
			2018 (Vehicles)	Change to 2021 (%)	2018 (Vehicles)	Change to 2021 (%)	2018 (Vehicles)	Change to 2021 (%)
165	High Street (N)	NB	404	2%	412	7%	4,814	2%
		SB	251	24%	489	1%	4,563	0%
145	High Street (S)	NEB	521	-21%	526	-2%	6,011	-13%
		SWB	470	-40%	551	-10%	6,034	-26%
141	Hampton Court Road (A308)	NB	1,210	-11%	1,226	-9%	13,365	-5%
		SB	1,035	5%	1,162	0%	13,236	-4%
140	Hampton Court Road	EB	754	-5%	600	14%	8,177	-1%
		WB	588	1%	723	16%	7,656	10%
132	Sandy Lane	NB	463	22%	461	5%	4,772	15%
		SB	490	11%	469	3%	5,338	0%
129	Park Road (A309)	NB	288	-11%	316	-29%	3,671	-28%
		SB	224	-5%	319	-28%	3,278	-23%
128	Queen's Road	NB	331	38%	467	-18%	4,332	2%
		SB	465	-15%	400	-2%	4,961	-17%

Summary of Results - September Weekday

The summary table provides the comparison in weekday traffic flows at each available survey location between September 2018 and September 2021. The results presented in **Table 3.5** show the recorded traffic flow at each location in 2018 (measured in number of vehicles) and the percentage change to 2021.

A summary of the results of the Vehicle Volume comparison for September are provided below, whilst detailed tables are presented in **Appendix F**.

Weekday AM

- The majority of links recorded a decrease in vehicle volume across time period. The level of change ranges from -40% to +38% with an average change of $\pm 0\%$ across all locations.
- The largest decrease in traffic flows were recorded on High Street (S) [145] of -189 vehicles (-40%) in the SWB direction and -189 vehicles (-21%) in the NEB direction.
- Increases were recorded at the following locations:
 - High Street (N) [165] SB recorded +60 vehicles (+24%).

- Sandy Lane [132] NB recorded +100 vehicles (+22%).
- Queen's Road [128] NB of +124 vehicles (+38%).

Weekday PM

- The majority of links recorded a decrease in vehicle volume across time period. The level of change ranges from -29% to +16% with an average change of -4% across all locations.
- The largest decreases were recorded on Park Road (A309) NB and SB [129] of -91 vehicles (-29%) and -88 vehicles (-28%) respectively.
- The only significant increase in traffic flow was recorded on Hampton Court Road [140] WB of +116 vehicles (+16%).

Weekday Daily (Average Hour)

- Majority of links recorded a decrease in vehicle volume across time period. The level of change ranges from -26% to +15% with an average change of -6% across all locations.
- The largest decreases in vehicle volume were recorded at the following locations:
 - Park Road (A309) [129] recorded +1042 vehicles (-28%) NB and -756 vehicles (-23%) in the SB.
 - High Street (S) [145] recorded -802 vehicles (-13%) NEB and -1,568 vehicles (-26%) SWB.
- The only significant increase was recorded on Sandy Lane NB [132] of +724 vehicles (+15%).

Summary Statement

The majority of the links recorded decreases or minor increases in vehicle volume during the weekday periods between September 2018 and September 2021.

Localised increases were recorded across a small number of links, predominantly in the AM time period. The results should be read in the context of other data received, such as journey time data which shows small increases in journey times.

Table 3.6: TfL Data Vehicle Volume 2018 to 2021 Comparison
Summary (September Weekend)

Vehicle Volume Summary - September Weekend (Average Hour)										
ATC Ref.	Location	Direction	Saturday				Sunday			
			Average Hour IP (10:00-16:00)		Daily (07:00-19:00)		Average Hour IP (10:00-16:00)		Daily (07:00-19:00)	
			2018 (Vehicles)	Change to 2021 (%)	2018 (Vehicles)	Change to 2021 (%)	2018 (Vehicles)	Change to 2021 (%)	2018 (Vehicles)	Change to 2021 (%)
165	High Street (N)	NB	381	22%	5,098	-2%	359	21%	3,546	24%
		SB	347	20%	4,701	-4%	325	16%	3,546	9%
145	High Street (S)	NEB	463	15%	6,003	1%	457	15%	4,897	13%
		SWB	456	10%	6,001	-1%	402	23%	4,433	21%
141	Hampton Court Road (A308)	NB	950	18%	13,121	-3%	912	15%	9,950	16%
		SB	952	21%	12,737	2%	923	21%	10,256	15%
140	Hampton Court Road	EB	650	4%	8,236	-4%	638	-3%	6,348	15%
		WB	573	27%	7,764	10%	513	28%	6,116	25%
132	Sandy Lane	NB	324	45%	4,812	1%	281	57%	3,342	29%
		SB	379	29%	5,362	-7%	344	33%	3,481	26%
129	Park Road (A309)	NB	268	-9%	3,641	-30%	239	1%	2,698	-17%
		SB	235	-5%	3,313	-26%	199	5%	2,110	2%
128	Queen's Road	NB	435	-7%	4,615	-11%	272	40%	3,302	11%
		SB	431	-6%	4,518	-9%	353	4%	3,557	0%

Summary of Results - September Weekend

Saturday IP

- The majority of links recorded increases in vehicle volume across the weekend time periods with an average increase of +13% across all locations with a range of between -9% and +45%.
- Increases in traffic volumes were recorded at the following locations:
 - High Street (N) NB and SB [165] recorded +84 vehicles (+22%) and +69 vehicles (+20%) respectively.
 - Hampton Court Road (A308) NB and SB [141] recorded +168 vehicles (18%) and +196 vehicles (+21%) respectively.
 - Hampton Court Road WB [140] recorded +156 vehicles (+27%).
 - Sandy Lane SB [132] recorded +111 vehicles (+29%)
 - Sandy Lane NB [132] of +146 vehicles (+45%).

It should be noted that, in spite of the increases in volumes recorded during the Saturday IP period, reductions or small increases in journey times were recorded during this period (see **Table 3.2**). Therefore, it is expected that increases in traffic during this period have had negligible effects on traffic congestion within the area around Bushy Park.

Saturday Daily (Average Hour)

- Majority of links recorded a decrease across the day with an average change in vehicle volume of -6%, ranging between -30% to +10%
- The largest decreases in vehicle volume were recorded on A309 Park Road [129] of -1,079 vehicles (-30%) in the NB and -871 vehicles (-26%) in the SB.
- No significant increases in vehicle volumes were recorded during this period.

Summary Statement

Saturday IP predominantly recorded increases in traffic volume (+13%). When comparing with the results of the journey time data, it can be concluded that the increase in traffic has had a negligible impact on journey times and congestion in the area.

An average reduction of -6% in traffic volume was recorded during the Saturday daily period.

Sunday IP

- The majority of links recorded Increases in vehicle volume An average increase of +20% was recorded across all locations with a range of between -3% and +57%.
- Increases were recorded at the following locations:
 - Sandy Lane [132] recorded +160 vehicles (+57%) in the NB and +112 vehicles (+33%) in the SB.
 - Queen's Road NB [128] recorded +110 vehicles (+40%).
 - High Street (N) NB and SB [165] recorded +75 vehicles (+21%) and +51 vehicles (+16%) respectively.
 - High Street (S) NB and SB [165] recorded +70 vehicles (+18%) and +93 vehicles (+15%) respectively.
 - Hampton Court Road (A308) SB [141] recorded +190 vehicles (+21%).
 - Hampton Court Road WB [140] recorded +145 vehicles (+28%).
- Only a single link recorded a decrease in vehicle volume. This was recorded on

Hampton Court Road EB [140] with a decrease of -16 vehicles (-3%).

Sunday Daily (Average Hour)

- The majority of links recorded Increases in vehicle volume. An average increase of +14% was recorded across all locations with a range of between -17% and +29%.
- The largest increases were recorded at Sandy Lane [132] of +981 vehicles (+29%) in the NB and +901 vehicles (+33%) in the SB.
- Only one link recorded a decrease in vehicle volume. This was recorded on A309 Park Road NB [129] with a decrease of -460 vehicles (-17%).

It should be noted that, in spite of the increases in volumes recorded during the Sunday IP and daily periods, reductions or small increases in journey times were recorded during this period (see **Table 3.2**). Therefore, it is expected that increases in traffic during this period have had negligible effects on traffic congestion within the area around Bushy Park.

Summary Statement

Sunday IP and daily predominantly recorded increases in traffic volume (+20% and +14% respectively). When comparing with the results of the journey time data, it can be concluded that the increase in traffic has had a negligible impact on journey times and congestion in the area.

4. On-Park Data Analysis

4.1 Overview

An assessment of the internal Bushy Park roads has been undertaken to understand the changes to traffic following the implementation of the movement trial. The data obtained is from third-party traffic specialist undertaken on behalf of Stantec and include the following:

- **Vehicle Volume data** – MCTCs at both northern and southern access gates.

4.2 MCTC Data

Introduction

To assess the vehicle volumes accessing the park and onto Chestnut Avenue, which forms the primary internal road through the park, the following Manual Classified Turning Count (MCTC) traffic surveys have been undertaken in November 2021:

- **Hampton Court Gate**
- **Teddington Gate**

Methodology

An assessment of the following days and time periods have been undertaken:

Weekday:

- AM: Hourly average from 07:00 to 10:00
- PM: Hourly average from 16:00 to 19:00
- Daily: Total from 07:00 to 19:00

Saturday:

- IP: Hourly average from 10:00 to 16:00
- Daily: Total from 07:00 to 19:00

Sunday:

- IP: Hourly average from 10:00 to 16:00
- Daily: Total from 07:00 to 19:00

No pre-trial data is available for the internal network at Bushy Park; therefore the 2021 survey data has been summarised only to provide a baseline summary of the existing traffic conditions at the two park gates during when no through-traffic is permitted between the Diana Fountain and Cobbler's Walk.

Although it is not possible to quantify the net change in flows pre/post trial implementation, it is expected that traffic levels recorded as part of

the 2021 surveys are significantly lower than those using the park roads prior to the trial implementation, as a result of the trial implementation

Summary of Results

Figures 4.1 to 4.4 provide a summary of the 2021 traffic flows at Hampton Court Gate and Teddington Gate for the Weekday, Saturday, and Sunday data respectively.

In summary the following headline volumes were recorded from the November 2021 surveys:

- 1,059 inbound vehicle trips during the weekday (12hrs)
- 1,409 and 2,091 inbound vehicle trips during the Saturday and Sunday daily periods respectively.
- Across the weekdays and weekend Hampton Court Gate recorded 60% of inbound movements across the day.
- For the daily period (7-19), Thursdays recorded the highest volume of flows on the network outside the park. Two-way volumes were approximately 10% and 22% lower on a Saturday and Sunday respectively.

Figure 4.1: Bushy Park Access Gates Vehicle Volume (2021 Weekday)

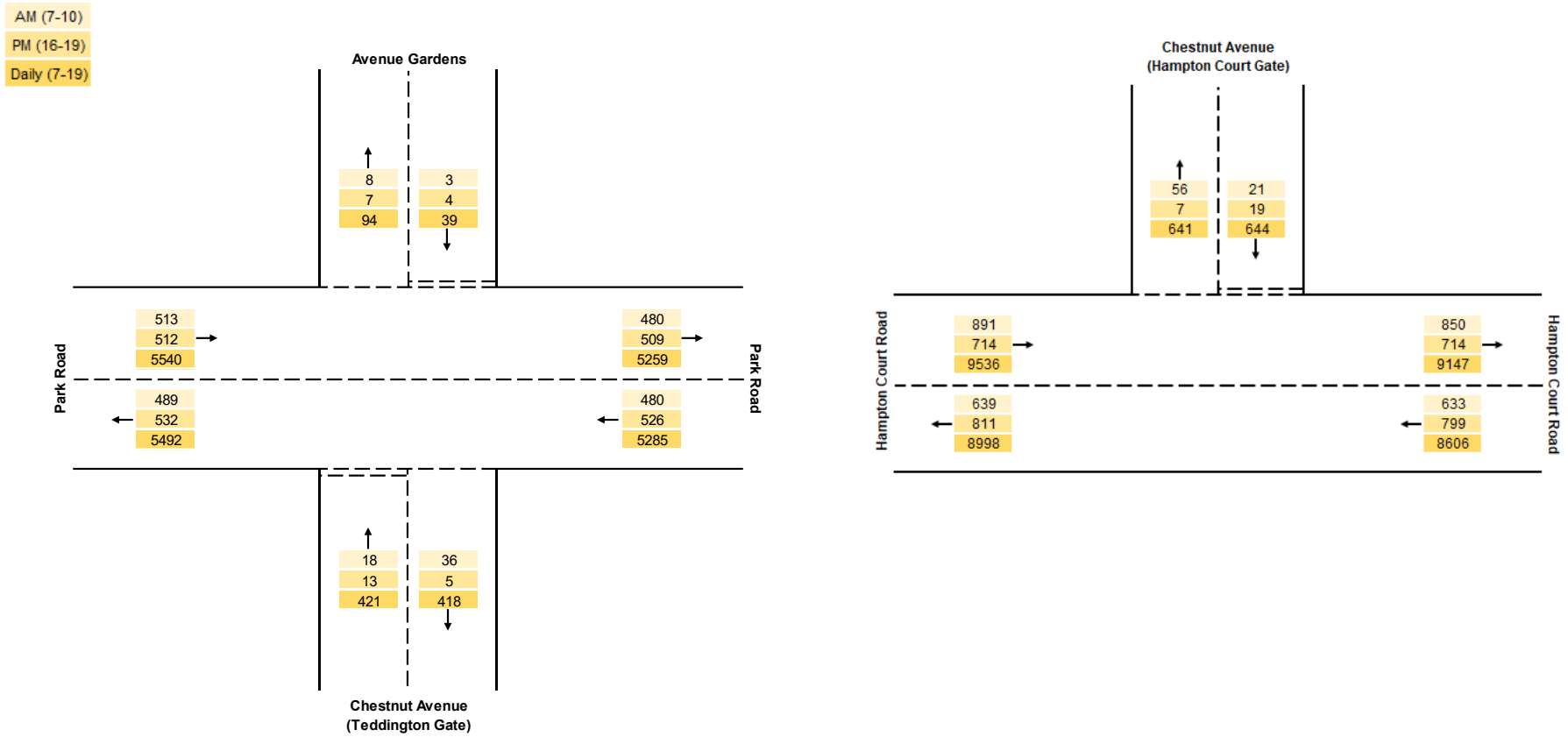


Figure 4.2: Bushy Park Access Gates Vehicle Volumes (2021 Saturday)

IP (10-16)
Daily (7-19)

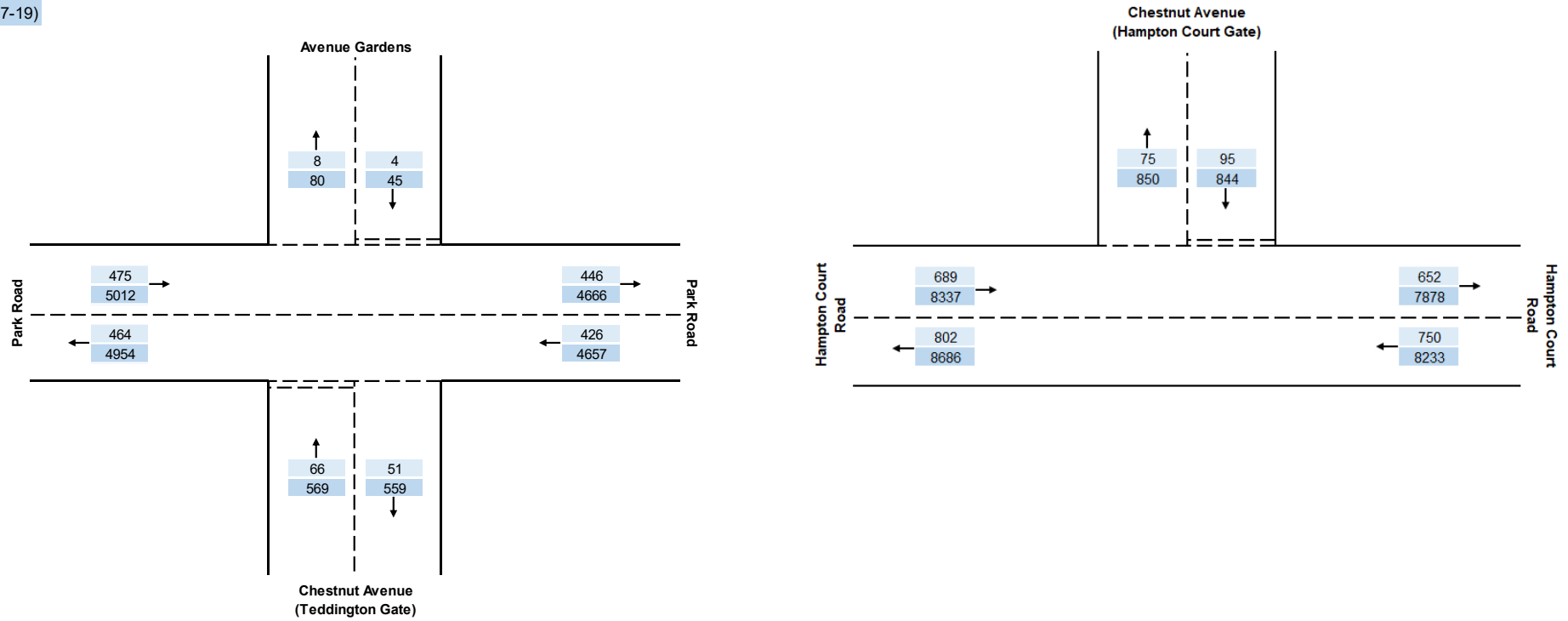


Figure 4.3: Bushy Park Access Gates Vehicle Volumes (2021 Sunday)

IP (10-16)
Daily (7-19)

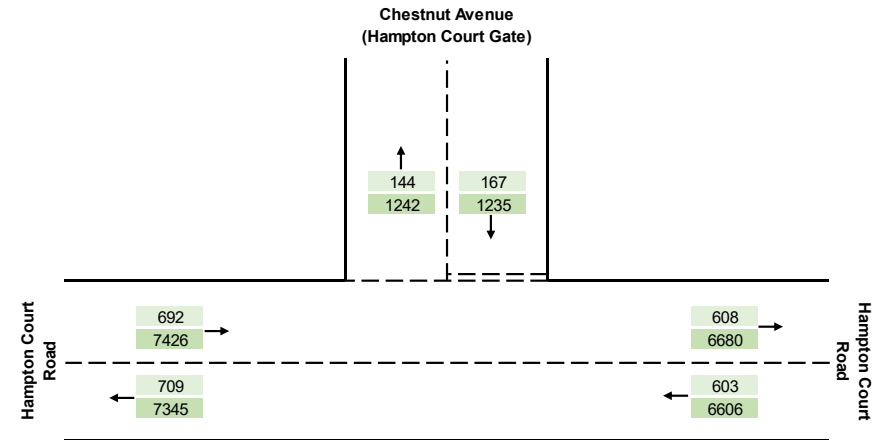
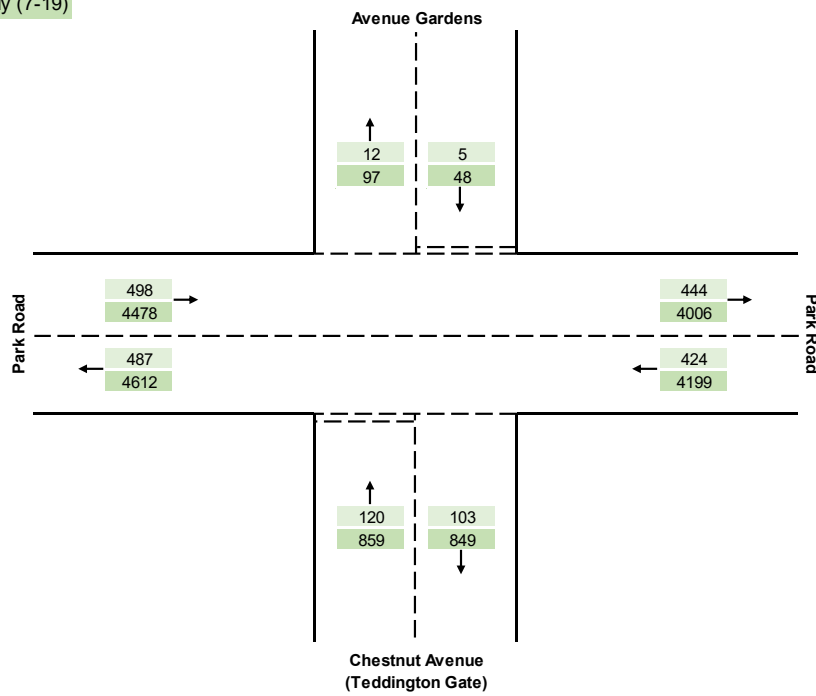
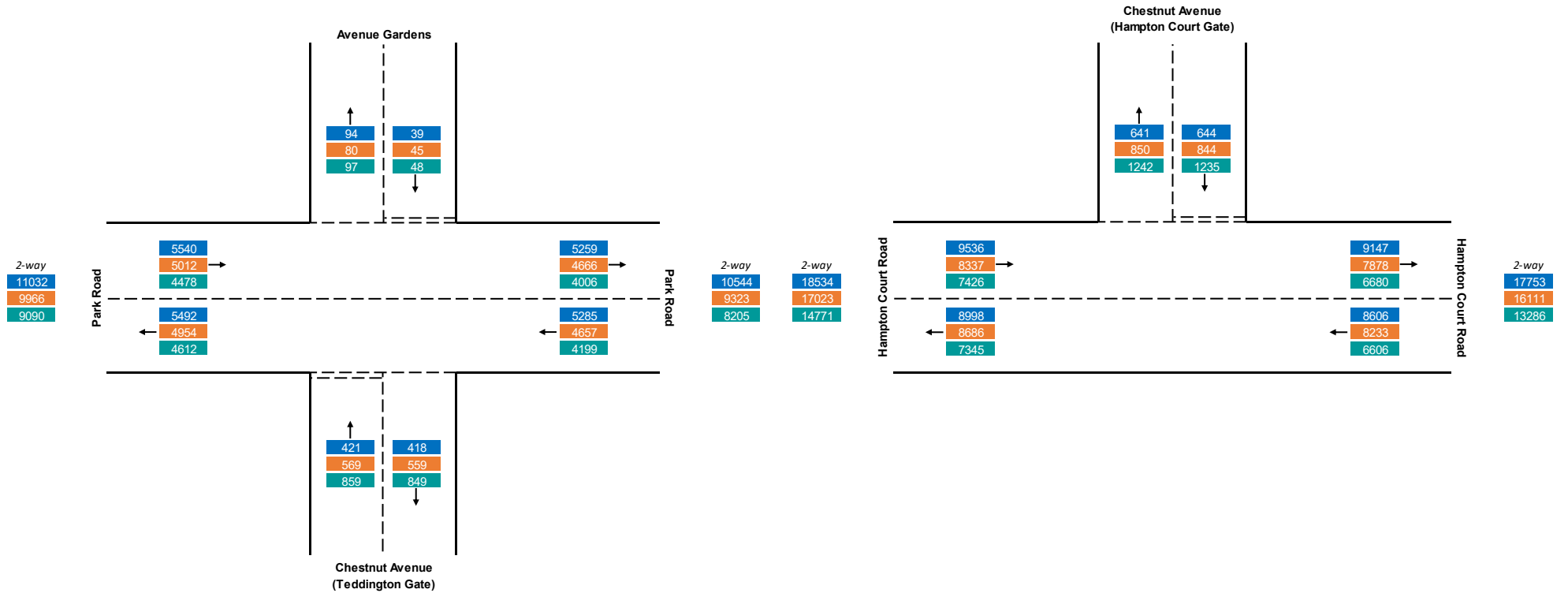


Figure 4.4: Bushy Park Access Gates Vehicle Volumes (2021 Daily Summary)

Daily (7-19) Flows
 Thursday
 Saturday
 Sunday



5. Accident Analysis

This section summarises the results of the accident analysis carried out at key locations at and around Bushy Park, for the most recent 3-year period of available data (2018, 2019, and 2020). Accident data has been extracted from the Crashmap website. The database is informed by the Department for Transport and the statistics relate only to personal injury accidents on public roads that are reported to the police, and subsequently recorded, using the STATS19 accident reporting form.

The accidents are classed into three categories: slight, serious, and fatal a definition of which is provided below:

- **Slight Injury:** Injuries of a minor nature, such as sprains, bruises or cuts not judged to be severe, or slight shock requiring only roadside attention (medical treatment is not a prerequisite for an injury to be defined as slight):
- **Serious Injury:** Injuries for which a person is detained in hospital, as an in-patient, or any of the following injuries, whether or not a person is detained in hospital; fractures, concussion, internal injuries, severe cuts and lacerations, several general shock requiring medical treatment and injuries

which result in death 30 days after the accident. The serious category therefore covers a very broad range of injuries; and

- **Fatal Injury:** Injuries which cause death either immediately or any time up to 30 days after the accident.

The extent of the accident study area is presented in **Figure 5.1** overleaf, whilst the total number of accidents recorded throughout the 3-year period have been summarised in **Table 5.1** and split into user type. A detailed summary of the collisions recorded within Bushy Park and outside the park is presented in **Appendix G**.

Table 5.1 – Summary of Accidents 2018 - 2020

	Severity	2018	2020	Difference
All Modes	Slight	14	20	+6
	Serious	3	0	-3
Total		17	20	+3
Vulnerable Road Users (Pedestrians, Cyclists, Motorcyclists)	Slight	8	14	+6
	Serious	2	0	-2
Total		10	14	+4

Key Findings

As can be seen below, there has been slight increases in the overall number of collisions between 2018 and 2020 at the key locations in and around Bushy Park.

The overall increases are a result of increases to the number of collisions recorded as be of a 'Slight' severity at both on and off park junctions. However, between 2018 and 2020 the number of serious collisions has reduced with no serious severity collisions recorded in 2020 compared to the 3 in 2018.

This high level review of collision indicates that while the number of actual collisions may have increased, the severity of collisions has reduced, which may be because of the measures introduced to increase safety of all users, including the Movement Strategy implemented by TRP.

Figure 5.1 – Accident Analysis Study Area



6. Summary of Findings

This section provides a summary of the key findings of this study. Results from the analysis of TfL's August data has been excluded from this summary but are provided in the Appendices.

6.1 Off-Park Data

Vehicle Journey Time Data

- During the weekday periods the majority of the links have recorded an increase in journey times between May 2019 and May 2021.
- During the weekend periods, journey times have been relatively consistent between May 2019 and May 2021 with all links in all periods recording either a 'Minor Increase' or decrease in journey times.

Bus Journey Time Data

- During the weekday time periods the majority of bus journey times have increased between May 2019 and May 2021. The largest increases in journey time were recorded along Hampton Court Road on bus services 111 EB and 216 EB, in all three weekday time periods

- Localised reductions in bus journey time were recorded in the PM period, with a maximum reduction of -12% on bus service 411 (westbound).
- Similar to the weekday summary, during the weekend there was a general increase in journey times across the IP and Daily assessment periods. The largest increases were recorded on bus services along the southern and eastern corridors of Bushy Park.
- Bus Services 111 and 216, which operate along the Hampton Court Road south of Bushy Park, recorded the largest changes between 2019 and 2021.
- Over a daily period, only service 411 (westbound) resulted in a reduction in bus journey times.

Vehicle Volume Data

- The majority of the links recorded decreases or minor increases in vehicle volume during the weekday periods between September 2018 and September 2021.
- With the exception of the Saturday daily period, all weekend periods (Saturday IP, Sunday IP and Sunday daily) recorded increases in traffic predominantly. In spite of

these increases, journey time data for the same periods show reductions or small increases. Therefore, it is concluded that increases in traffic volumes during the weekend periods have had a negligible impact on traffic congestion and journey times in the area around Bushy Park.

- For the daily period (7-19), the Thursday survey period recorded the highest volume of flows on the network outside the park. Two-way volumes were approximately 10% and 22% lower on a Saturday and Sunday respectively

6.2 On-Park Data

MCTC

No pre-trial data is available for the internal roads at Bushy Park, therefore the 2021 survey data has been presented to give an understanding of the internal flows using Chestnut Avenue when no through-traffic is permitted between the Diana Fountain and Cobbler's Walk. Volumes recorded as part of the 2021 MCTCs are:

- 1,059 inbound vehicle trips during the weekday (12hrs)
- 1,409 and 2,091 inbound vehicle trips during the Saturday and Sunday daily periods respectively.

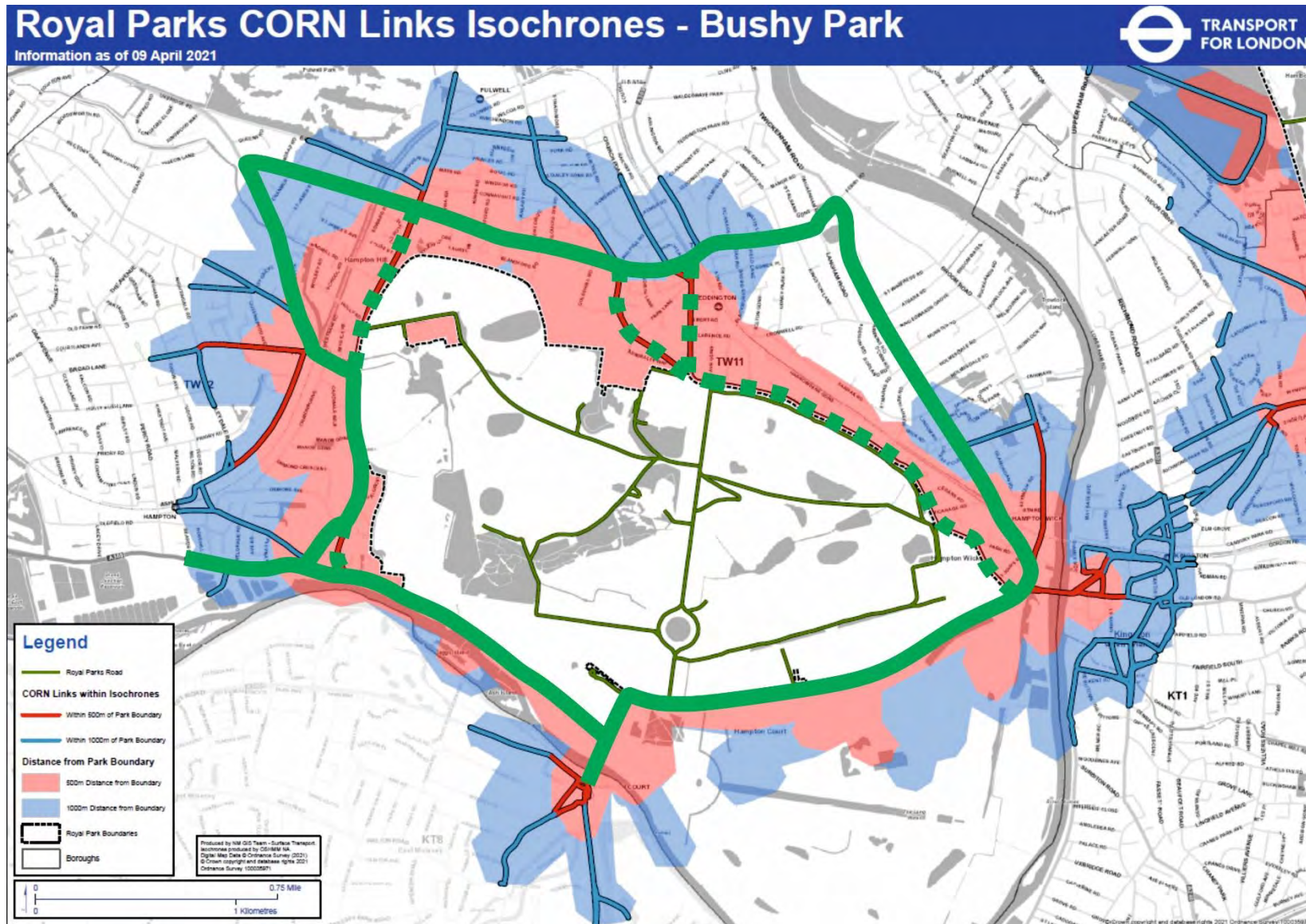
- Across the weekdays and weekend Hampton Court Gate recorded 60% of inbound movements across the day.
- For the total daily period (7-19), Thursdays recorded the highest volume of flows on the network outside the park. Two-way volumes were approximately 10% and 22% lower on a Saturday and Sunday respectively.

6.3 Alignment of the Trial with TRP's Movement Strategy

Although it is not possible to quantify the net change in traffic volumes as a result of the implementation of the Movement Strategy trial scheme at Bushy Park, it is expected that traffic levels recorded as part of the 2021 surveys are significantly lower than those using the park roads prior to the trial implementation. This aligns with the overall TRP's Movement Strategy and its principles to:

- We will protect and conserve our parks' special qualities
- Our parks are for people
- We will encourage the use of more sustainable ways to access our parks
- Our park roads are not intended to be commuter through-routes for motor vehicles
- We will achieve more by delivering key projects through partnership and collaboration
- We will make evidence-based decisions
- We will be proactive in our approach to future transport challenges and opportunities

Appendix A Bushy Park Reassignment Routes (from TfL's CORN Map)



Appendix B Detailed Vehicle Journey Time Analysis (May) (secs/km)

Journey Time Route No.	Location	Distance of Route (km)	Direction	Average Vehicle Journey Time - Weekday - May														
				Average Hour AM (07:00-10:00)					Average Hour PM (16:00-19:00)					Average Hour Daily (07:00-19:00)				
				2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)	2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 %Diff	2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 %Diff
1A	Park Road (A312 to High Street)	0.9	EB	180	152	222	+41	23%	149	135	142	-8	-5%	151	136	167	+15	10%
		0.9	WB	128	118	131	+3	3%	148	132	144	-4	-3%	134	124	135	+1	1%
1B	Park Road (High Street to Kingstone RoadO)	2.3	EB	197	156	199	+2	1%	188	191	193	+5	2%	188	172	191	+3	2%
		2.2	WB	171	157	173	+2	1%	204	191	212	+7	4%	184	172	188	+4	2%
2	A310	2.2	NB	120	114	125	+6	5%	126	122	129	+2	2%	365	351	375	+10	3%
		2.2	SB	140	127	153	+13	9%	138	133	141	+3	2%	405	384	427	+21	5%
3	Hampton Court Road A308 (Kingston Bridge to A309/A3050)	2.6	EB	137	110	144	+7	5%	114	109	132	+18	15%	355	321	400	+45	13%
		2.9	WB	81	75	81	+0	0%	119	108	115	-4	-4%	287	265	282	-5	-2%
4	Hampton Court Road A308 (A309 to Lower Sunbury Road)	2.1	EB	182	152	251	+68	37%	167	156	181	+14	8%	468	435	584	+116	25%
		2.1	WB	134	114	132	-1	-1%	136	130	135	-1	-1%	387	367	397	+10	3%
5	Church Street/ A311/ A312	1.9	NB	145	141	159	+14	10%	143	142	150	+6	4%	436	429	457	+21	5%
		1.9	SB	163	159	191	+28	17%	184	176	199	+15	8%	493	486	539	+46	9%
6	A309/B358 Sandy Lane	2.6	NB	110	107	114	+4	4%	112	113	115	+3	3%	327	328	338	+10	3%
		2.6	SB	128	122	142	+14	11%	128	127	133	+6	4%	370	365	395	+25	7%
7	Queens Road	0.7	NB	163	159	166	+2	1%	205	203	208	+3	1%	523	515	530	+7	1%
		0.7	SB	169	163	166	-4	-2%	170	169	170	-0	0%	489	479	483	-5	-1%
8	High Street	1.2	NB	128	123	155	+27	21%	143	135	143	+0	0%	391	376	425	+34	9%
		1.2	SB	129	127	147	+18	14%	126	123	130	+4	3%	375	369	402	+27	7%
9	High Street A2	0.3	NB	135	133	134	-1	-1%	127	125	125	-2	-2%	385	379	383	-2	0%
		0.3	SB	173	169	177	+3	2%	178	165	173	-5	-3%	491	473	491	-0	0%

Journey Time Route No.	Location	Distance of Route (km)	Direction	Average Vehicle Journey Time - Saturday - May									
				Average Hour IP (10:00-16:00)					Average Hour Daily (07:00-19:00)				
				2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)	2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)
1A	Park Road (A312 to High Street)	0.9	EB	112	113	113	+1	1%	116	114	121	+5	5%
		0.9	WB	109	111	115	+5	5%	112	111	114	+2	2%
1B	Park Road (High Street to Kingstone RoadO)	2.3	EB	169	159	168	-1	-1%	165	155	168	+3	2%
		2.2	WB	159	159	162	+3	2%	158	155	159	+1	1%
2	A310	2.2	NB	114	112	115	+1	1%	110	109	112	+2	2%
		2.2	SB	118	117	119	+1	1%	121	119	125	+4	3%
3	Hampton Court Road A308 (Kingston Bridge to A309/A3050)	2.6	EB	104	104	111	+7	7%	108	105	114	+6	6%
		2.9	WB	89	87	90	+1	1%	87	84	85	-1	-2%
4	Hampton Court Road A308 (A309 to Lower Sunbury Road)	2.1	EB	108	112	118	+10	9%	115	117	126	+11	10%
		2.1	WB	105	116	114	+9	9%	102	108	110	+8	8%
5	Church Street/ A311/ A312	1.9	NB	129	131	133	+3	3%	133	134	136	+3	2%
		1.9	SB	133	137	136	+3	2%	140	142	146	+6	4%
6	A309/B358 Sandy Lane	2.6	NB	106	110	109	+4	3%	104	107	107	+3	3%
		2.6	SB	112	115	116	+4	3%	114	116	121	+7	6%
7	Queens Road	0.7	NB	150	152	150	-0	0%	144	146	145	+1	1%
		0.7	SB	141	141	141	-0	0%	141	142	141	-0	0%
8	High Street	1.2	NB	107	107	105	-2	-1%	106	107	106	+0	0%
		1.2	SB	112	114	114	+2	2%	112	113	114	+2	1%
9	High Street A2	0.3	NB	118	117	117	-1	-1%	118	116	117	-1	-1%
		0.3	SB	140	138	137	-3	-2%	136	135	137	+1	1%

Journey Time Route No.	Location	Distance of Route (km)	Direction	Average Vehicle Journey Time - Sunday - May									
				Average Hour IP (10:00-16:00)					Average Hour Daily (07:00-19:00)				
				2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)	2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)
1A	Park Road (A312 to High Street)	0.9	EB	109	109	112	+3	3%	110	110	116	+6	5%
		0.9	WB	108	110	114	+6	6%	107	107	109	+3	3%
1B	Park Road (High Street to Kingstone RoadO)	2.3	EB	158	150	158	+1	1%	153	145	156	+3	2%
		2.2	WB	156	150	153	-3	-2%	148	145	147	-0	0%
2	A310	2.2	NB	112	111	113	+1	1%	108	107	108	+0	0%
		2.2	SB	117	114	115	-2	-2%	115	112	116	+1	0%
3	Hampton Court Road A308 (Kingston Bridge to A309/A3050)	2.6	EB	103	104	111	+8	8%	104	102	109	+5	4%
		2.9	WB	89	87	91	+2	3%	83	81	83	+0	0%
4	Hampton Court Road A308 (A309 to Lower Sunbury Road)	2.1	EB	110	118	120	+10	9%	116	115	121	+5	5%
		2.1	WB	108	113	118	+10	9%	101	104	107	+6	5%
5	Church Street/ A311/ A312	1.9	NB	126	128	130	+4	3%	126	127	129	+3	2%
		1.9	SB	134	134	134	-1	-1%	132	132	133	+1	1%
6	A309/B358 Sandy Lane	2.6	NB	107	110	109	+2	2%	104	106	106	+2	2%
		2.6	SB	114	117	117	+3	2%	115	116	120	+4	4%
7	Queens Road	0.7	NB	150	150	153	+2	2%	138	135	134	-4	-3%
		0.7	SB	141	142	143	+2	2%	138	130	130	-8	-6%
8	High Street	1.2	NB	102	105	102	-0	0%	100	101	101	+1	1%
		1.2	SB	107	113	110	+3	3%	106	110	109	+2	2%
9	High Street A2	0.3	NB	132	130	132	-0	0%	130	129	131	+0	0%
		0.3	SB	152	158	152	-0	0%	148	153	149	+1	1%

Detailed Vehicle Journey Time Analysis (May) (secs/route)

Journey Time Route No.	Location	Distance of Route (km)	Direction	Average Vehicle Journey Time - Weekday - May														
				Average Hour AM (07:00-10:00)					Average Hour PM (16:00-19:00)					Average Hour Daily (07:00-19:00)				
				2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 %Diff	2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 %Diff	2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 %Diff
1A	Park Road (A312 to High Street)	0.9	EB	162	136	199	+37	23%	134	122	127	-7	-5%	136	122	150	+14	10%
		0.9	WB	115	106	118	+3	3%	133	118	129	-3	-3%	120	112	121	+1	1%
1B	Park Road (High Street to Kingstone RoadO)	2.3	EB	443	352	448	+4	1%	424	429	434	+10	2%	423	387	430	+8	2%
		2.2	WB	385	352	388	+3	1%	458	429	475	+17	4%	412	387	421	+9	2%
2	A310	2.2	NB	263	250	275	+13	5%	278	268	282	+5	2%	803	771	824	+22	3%
		2.2	SB	306	277	333	+27	9%	302	291	309	+7	2%	886	839	933	+47	5%
3	Hampton Court Road A308 (Kingston Bridge to A309/A3050)	2.6	EB	360	289	378	+17	5%	300	285	347	+46	15%	934	843	1051	+117	13%
		2.9	WB	239	220	240	+1	0%	352	318	340	-13	-4%	847	781	832	-15	-2%
4	Hampton Court Road A308 (A309 to Lower Sunbury Road)	2.1	EB	390	324	535	+146	37%	357	333	388	+30	8%	999	930	1248	+249	25%
		2.1	WB	287	246	284	-3	-1%	292	280	291	-2	-1%	830	788	851	+21	3%
5	Church Street/ A311/ A312	1.9	NB	281	273	308	+27	10%	278	275	290	+12	4%	844	831	884	+40	5%
		1.9	SB	316	308	370	+54	17%	357	342	386	+28	8%	955	942	1044	+89	9%
6	A309/B358 Sandy Lane	2.6	NB	288	281	299	+11	4%	295	298	302	+8	3%	862	863	888	+27	3%
		2.6	SB	336	322	374	+37	11%	337	334	351	+15	4%	975	963	1040	+65	7%
7	Queens Road	0.7	NB	116	113	117	+2	1%	145	144	147	+2	1%	371	365	376	+5	1%
		0.7	SB	119	115	117	-2	-2%	120	119	120	-0	0%	344	337	340	-4	-1%
8	High Street	1.2	NB	159	153	193	+34	21%	177	168	177	+0	0%	487	467	529	+42	9%
		1.2	SB	160	157	182	+22	14%	156	154	162	+5	3%	467	459	500	+33	7%
9	High Street A2	0.3	NB	43	42	43	-0	-1%	41	40	40	-1	-2%	123	121	122	-0	0%
		0.3	SB	55	54	56	+1	2%	57	53	55	-1	-3%	156	151	156	-0	0%

Journey Time Route No.	Location	Distance of Route (km)	Direction	Average Vehicle Journey Time - Saturday - May									
				Average Hour IP (10:00-16:00)					Average Hour Daily (07:00-19:00)				
				2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 Difference (%)	2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 Difference (%)
1A	Park Road (A312 to High Street)	0.9	EB	101	102	102	+1	1%	104	102	109	+5	5%
		0.9	WB	98	100	103	+5	5%	100	100	102	+2	2%
1B	Park Road (High Street to Kingstone RoadO)	2.3	EB	381	358	379	-2	-1%	371	349	377	+7	2%
		2.2	WB	357	358	363	+6	2%	354	349	356	+2	1%
2	A310	2.2	NB	250	247	252	+3	1%	242	238	246	+4	2%
		2.2	SB	258	256	260	+2	1%	265	260	273	+8	3%
3	Hampton Court Road A308 (Kingston Bridge to A309/A3050)	2.6	EB	273	273	291	+18	7%	284	277	300	+16	6%
		2.9	WB	262	256	264	+2	1%	256	246	252	-4	-2%
4	Hampton Court Road A308 (A309 to Lower Sunbury Road)	2.1	EB	230	240	252	+22	9%	245	249	269	+24	10%
		2.1	WB	226	249	245	+19	9%	219	232	236	+17	8%
5	Church Street/ A311/ A312	1.9	NB	250	254	257	+7	3%	257	260	264	+6	2%
		1.9	SB	259	266	264	+6	2%	271	274	282	+11	4%
6	A309/B358 Sandy Lane	2.6	NB	279	289	288	+9	3%	273	281	281	+8	3%
		2.6	SB	296	302	305	+10	3%	301	306	320	+19	6%
7	Queens Road	0.7	NB	107	108	107	-0	0%	102	103	103	+1	1%
		0.7	SB	99	99	99	-0	0%	99	100	99	-0	0%
8	High Street	1.2	NB	133	134	131	-2	-1%	132	133	132	+0	0%
		1.2	SB	140	142	142	+2	2%	140	140	142	+2	1%
9	High Street A2	0.3	NB	38	37	37	-0	-1%	38	37	37	-0	-1%
		0.3	SB	45	44	44	-1	-2%	43	43	44	+0	1%

Journey Time Route No.	Location	Distance of Route (km)	Direction	Average Vehicle Journey Time - Sunday - May									
				Average Hour IP (10:00-16:00)					Average Hour Daily (07:00-19:00)				
				2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 Difference (%)	2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 Difference (%)
1A	Park Road (A312 to High Street)	0.9	EB	98	98	101	+2	3%	99	99	104	+5	5%
		0.9	WB	97	99	103	+6	6%	96	96	98	+3	3%
1B	Park Road (High Street to Kingstone RoadO)	2.3	EB	355	337	356	+2	1%	345	326	352	+6	2%
		2.2	WB	349	337	343	-7	-2%	331	326	330	-1	0%
2	A310	2.2	NB	246	243	248	+2	1%	237	234	238	+1	0%
		2.2	SB	255	250	251	-4	-2%	252	246	253	+1	0%
3	Hampton Court Road A308 (Kingston Bridge to A309/A3050)	2.6	EB	271	272	292	+21	8%	273	267	285	+12	4%
		2.9	WB	261	258	268	+7	3%	245	240	246	+1	0%
4	Hampton Court Road A308 (A309 to Lower Sunbury Road)	2.1	EB	235	253	256	+21	9%	248	247	260	+11	5%
		2.1	WB	233	243	254	+21	9%	217	224	229	+12	5%
5	Church Street/ A311/ A312	1.9	NB	244	248	252	+8	3%	245	247	251	+6	2%
		1.9	SB	260	260	259	-1	-1%	255	256	258	+2	1%
6	A309/B358 Sandy Lane	2.6	NB	281	290	286	+5	2%	274	280	278	+4	2%
		2.6	SB	301	307	308	+7	2%	304	305	315	+11	4%
7	Queens Road	0.7	NB	107	106	108	+2	2%	98	95	95	-3	-3%
		0.7	SB	99	100	101	+2	2%	97	91	91	-6	-6%
8	High Street	1.2	NB	128	130	127	-0	0%	125	126	126	+1	1%
		1.2	SB	133	141	137	+4	3%	132	137	135	+3	2%
9	High Street A2	0.3	NB	42	41	42	-0	0%	42	41	42	+0	0%
		0.3	SB	48	50	48	-0	0%	47	49	48	+0	1%

Appendix C Detailed Vehicle Journey Time Analysis (August) (secs/km)

Journey Time Route No.	Location	Distance of Route (km)	Direction	Average Vehicle Journey Time - Weekday - August														
				Average Hour AM (07:00-10:00)					Average Hour PM (16:00-19:00)					Average Hour Daily (07:00-19:00)				
				2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)	2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 %Diff	2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 %Diff
1A	Park Road (A312 to High Street)	0.9	EB	139	132	137	-2	-1%	124	126	130	+6	5%	124	123	126	+2	2%
		0.9	WB	109	112	116	+7	6%	117	116	120	+3	3%	116	119	122	+6	5%
1B	Park Road (High Street to Kingstone RoadO)	2.3	EB	172	146	168	-4	-2%	179	175	181	+2	1%	175	162	175	+1	0%
		2.2	WB	149	147	149	+0	0%	178	176	182	+4	2%	164	162	166	+2	1%
2	A310	2.2	NB	108	108	111	+3	3%	117	116	117	+0	0%	338	337	343	+5	1%
		2.2	SB	116	118	117	+2	2%	122	131	124	+2	1%	357	375	365	+8	2%
3	Hampton Court Road A308 (Kingston Bridge to A309/A3050)	2.6	EB	100	100	101	+1	1%	106	106	108	+3	3%	309	312	319	+10	3%
		2.9	WB	75	72	75	+0	1%	121	107	112	-8	-7%	282	263	274	-8	-3%
4	Hampton Court Road A308 (A309 to Lower Sunbury Road)	2.1	EB	130	112	119	-10	-8%	159	140	150	-8	-5%	407	366	392	-16	-4%
		2.1	WB	106	98	103	-3	-2%	116	115	120	+4	4%	344	319	338	-6	-2%
5	Church Street/ A311/ A312	1.9	NB	133	132	135	+3	2%	135	137	136	+1	1%	413	416	421	+8	2%
		1.9	SB	146	141	144	-2	-1%	176	171	174	-1	-1%	470	461	468	-1	0%
6	A309/B358 Sandy Lane	2.6	NB	104	104	105	+1	1%	107	108	110	+3	2%	314	316	321	+8	2%
		2.6	SB	114	116	117	+3	3%	116	120	120	+4	3%	341	351	351	+10	3%
7	Queens Road	0.7	NB	167	163	161	-5	-3%	236	236	230	-6	-3%	590	578	569	-20	-3%
		0.7	SB	151	150	151	-1	0%	161	160	158	-3	-2%	461	456	455	-6	-1%
8	High Street	1.2	NB	103	107	105	+2	2%	113	120	114	+1	1%	325	348	332	+6	2%
		1.2	SB	117	131	119	+2	2%	117	128	119	+2	2%	352	391	358	+6	2%
9	High Street A2	0.3	NB	130	131	134	+4	3%	122	122	122	+0	0%	371	372	375	+4	1%
		0.3	SB	161	160	161	+1	0%	159	158	161	+1	1%	460	460	461	+1	0%

Journey Time Route No.	Location	Distance of Route (km)	Direction	Average Vehicle Journey Time - Saturday - August									
				Average Hour IP (10:00-16:00)					Average Hour Daily (07:00-19:00)				
				2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)	2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)
1A	Park Road (A312 to High Street)	0.9	EB	112	115	116	+4	4%	110	112	112	+2	2%
		0.9	WB	107	109	110	+4	4%	110	113	114	+4	4%
1B	Park Road (High Street to Kingstone RoadO)	2.3	EB	170	156	170	-1	0%	166	153	166	+0	0%
		2.2	WB	156	156	156	-0	0%	153	153	153	+0	0%
2	A310	2.2	NB	111	108	107	-4	-4%	107	106	107	-0	0%
		2.2	SB	112	116	112	-0	0%	114	119	115	+1	1%
3	Hampton Court Road A308 (Kingston Bridge to A309/A3050)	2.6	EB	95	96	101	+6	7%	100	100	103	+3	3%
		2.9	WB	88	86	88	-0	0%	83	82	83	+0	0%
4	Hampton Court Road A308 (A309 to Lower Sunbury Road)	2.1	EB	106	105	109	+3	3%	110	107	111	+1	1%
		2.1	WB	99	99	99	-0	0%	97	98	99	+2	2%
5	Church Street/ A311/ A312	1.9	NB	122	126	125	+3	2%	126	129	128	+2	1%
		1.9	SB	132	133	133	+1	1%	135	135	136	+2	1%
6	A309/B358 Sandy Lane	2.6	NB	105	105	106	+1	1%	102	103	103	+1	1%
		2.6	SB	110	113	114	+4	4%	110	115	115	+4	4%
7	Queens Road	0.7	NB	167	169	169	+1	1%	156	155	155	-1	0%
		0.7	SB	136	137	136	+1	0%	140	139	139	-0	0%
8	High Street	1.2	NB	103	107	103	-1	-1%	100	104	101	+1	1%
		1.2	SB	110	120	111	+1	1%	112	120	112	+1	1%
9	High Street A2	0.3	NB	117	117	119	+2	2%	116	117	118	+2	2%
		0.3	SB	140	142	141	+0	0%	135	135	136	+0	0%

Journey Time Route No.	Location	Distance of Route (km)	Direction	Average Vehicle Journey Time - Sunday - August									
				Average Hour IP (10:00-16:00)					Average Hour Daily (07:00-19:00)				
				2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)	2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)
1A	Park Road (A312 to High Street)	0.9	EB	109	111	115	+6	5%	105	109	110	+4	4%
		0.9	WB	103	106	109	+6	6%	107	110	111	+4	4%
1B	Park Road (High Street to Kingstone RoadO)	2.3	EB	149	143	150	+1	1%	147	141	148	+1	1%
		2.2	WB	142	143	144	+2	2%	140	141	141	+1	1%
2	A310	2.2	NB	105	103	104	-1	-1%	102	101	101	-1	-1%
		2.2	SB	105	105	106	+2	1%	103	104	105	+1	1%
3	Hampton Court Road A308 (Kingston Bridge to A309/A3050)	2.6	EB	96	97	98	+3	3%	96	97	97	+2	2%
		2.9	WB	85	84	85	-0	0%	81	79	79	-1	-2%
4	Hampton Court Road A308 (A309 to Lower Sunbury Road)	2.1	EB	106	104	109	+3	3%	107	105	110	+3	2%
		2.1	WB	105	104	106	+1	1%	97	96	99	+2	2%
5	Church Street/ A311/ A312	1.9	NB	119	121	121	+2	2%	121	123	123	+2	2%
		1.9	SB	128	127	129	+1	1%	126	126	128	+2	2%
6	A309/B358 Sandy Lane	2.6	NB	101	105	107	+6	6%	99	101	102	+4	4%
		2.6	SB	105	109	110	+5	4%	105	110	110	+4	4%
7	Queens Road	0.7	NB	175	172	173	-3	-1%	154	145	145	-8	-5%
		0.7	SB	133	133	134	+1	1%	132	127	127	-5	-4%
8	High Street	1.2	NB	98	101	103	+4	4%	95	97	98	+3	3%
		1.2	SB	104	113	109	+4	4%	103	111	106	+3	3%
9	High Street A2	0.3	NB	131	132	140	+9	7%	130	130	134	+4	3%
		0.3	SB	145	147	146	+1	1%	144	144	146	+2	1%

Detailed Vehicle Journey Time Analysis (August) (secs/route)

Journey Time Route No.	Location	Distance of Route (km)	Direction	Average Vehicle Journey Time - Weekday - August														
				Average Hour AM (07:00-10:00)					Average Hour PM (16:00-19:00)					Average Hour Daily (07:00-19:00)				
				2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 %Diff	2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 %Diff	2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 %Diff
1A	Park Road (A312 to High Street)	0.9	EB	125	119	123	-2	-1%	112	113	117	+5	5%	111	111	113	+2	2%
		0.9	WB	98	101	104	+6	6%	105	105	108	+3	3%	104	107	109	+5	5%
1B	Park Road (High Street to Kingstone RoadO)	2.3	EB	386	330	378	-8	-2%	402	394	408	+6	1%	393	364	395	+2	0%
		2.2	WB	334	330	335	+1	0%	400	394	409	+8	2%	368	364	373	+5	1%
2	A310	2.2	NB	238	236	244	+6	3%	257	254	258	+1	0%	743	739	754	+11	1%
		2.2	SB	253	258	257	+4	2%	268	287	272	+4	1%	781	820	799	+18	2%
3	Hampton Court Road A308 (Kingston Bridge to A309/A3050)	2.6	EB	264	263	266	+2	1%	277	277	285	+8	3%	810	820	838	+27	3%
		2.9	WB	220	213	221	+1	1%	356	317	331	-25	-7%	833	775	809	-23	-3%
4	Hampton Court Road A308 (A309 to Lower Sunbury Road)	2.1	EB	277	240	255	-22	-8%	340	300	322	-18	-5%	871	782	837	-34	-4%
		2.1	WB	226	210	221	-6	-2%	249	246	258	+9	4%	739	685	726	-13	-2%
5	Church Street/ A311/ A312	1.9	NB	257	255	262	+5	2%	261	265	264	+2	1%	800	805	815	+15	2%
		1.9	SB	283	274	279	-4	-1%	341	331	338	-3	-1%	910	892	907	-3	0%
6	A309/B358 Sandy Lane	2.6	NB	273	273	277	+4	1%	282	284	289	+7	2%	825	832	846	+20	2%
		2.6	SB	300	306	308	+8	3%	305	315	315	+10	3%	898	925	925	+27	3%
7	Queens Road	0.7	NB	118	116	114	-4	-3%	167	167	163	-4	-3%	418	410	404	-14	-3%
		0.7	SB	107	106	106	-0	0%	113	112	111	-2	-2%	324	321	320	-4	-1%
8	High Street	1.2	NB	128	134	131	+2	2%	141	149	142	+1	1%	405	433	413	+8	2%
		1.2	SB	145	163	148	+2	2%	145	159	148	+2	2%	437	486	445	+7	2%
9	High Street A2	0.3	NB	42	42	43	+1	3%	39	39	39	+0	0%	118	119	120	+1	1%
		0.3	SB	51	51	51	+0	0%	51	50	51	+0	1%	147	147	147	+0	0%

Journey Time Route No.	Location	Distance of Route (km)	Direction	Average Vehicle Journey Time - Saturday - August									
				Average Hour IP (10:00-16:00)					Average Hour Daily (07:00-19:00)				
				2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 Difference (%)	2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 Difference (%)
1A	Park Road (A312 to High Street)	0.9	EB	100	103	104	+4	4%	99	100	101	+2	2%
		0.9	WB	96	98	99	+3	4%	99	102	103	+4	4%
1B	Park Road (High Street to Kingstone RoadO)	2.3	EB	383	351	382	-2	0%	375	344	375	+0	0%
		2.2	WB	350	351	350	-0	0%	343	344	344	+1	0%
2	A310	2.2	NB	243	238	234	-9	-4%	235	233	234	-0	0%
		2.2	SB	245	253	245	-0	0%	249	260	252	+3	1%
3	Hampton Court Road A308 (Kingston Bridge to A309/A3050)	2.6	EB	249	252	266	+17	7%	262	263	271	+9	3%
		2.9	WB	259	253	259	-1	0%	245	242	245	+1	0%
4	Hampton Court Road A308 (A309 to Lower Sunbury Road)	2.1	EB	227	225	234	+6	3%	235	228	237	+2	1%
		2.1	WB	213	213	212	-1	0%	209	210	214	+4	2%
5	Church Street/ A311/ A312	1.9	NB	237	245	243	+6	2%	245	251	248	+4	1%
		1.9	SB	256	257	258	+2	1%	261	261	264	+3	1%
6	A309/B358 Sandy Lane	2.6	NB	276	277	279	+3	1%	269	271	272	+3	1%
		2.6	SB	289	296	300	+11	4%	291	302	302	+11	4%
7	Queens Road	0.7	NB	119	120	120	+1	1%	111	110	110	-1	0%
		0.7	SB	96	96	96	+0	0%	98	98	98	-0	0%
8	High Street	1.2	NB	129	133	128	-1	-1%	124	130	125	+1	1%
		1.2	SB	137	149	138	+1	1%	139	149	140	+1	1%
9	High Street A2	0.3	NB	37	37	38	+1	2%	37	37	38	+1	2%
		0.3	SB	45	45	45	+0	0%	43	43	43	+0	0%

Journey Time Route No.	Location	Distance of Route (km)	Direction	Average Vehicle Journey Time - Sunday - August									
				Average Hour IP (10:00-16:00)					Average Hour Daily (07:00-19:00)				
				2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 Difference (%)	2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 Difference (%)
1A	Park Road (A312 to High Street)	0.9	EB	98	100	103	+5	5%	95	98	98	+4	4%
		0.9	WB	92	95	98	+6	6%	96	99	100	+4	4%
1B	Park Road (High Street to Kingstone RoadO	2.3	EB	336	321	338	+2	1%	331	317	333	+3	1%
		2.2	WB	318	321	323	+5	2%	315	317	317	+2	1%
2	A310	2.2	NB	230	227	228	-2	-1%	223	222	222	-1	-1%
		2.2	SB	229	230	233	+3	1%	226	228	229	+3	1%
3	Hampton Court Road A308 (Kingston Bridge to A309/A3050)	2.6	EB	251	254	259	+7	3%	251	255	256	+5	2%
		2.9	WB	251	247	250	-1	0%	238	233	234	-4	-2%
4	Hampton Court Road A308 (A309 to Low er Sunbury Road)	2.1	EB	226	221	233	+7	3%	229	225	234	+6	2%
		2.1	WB	226	223	228	+2	1%	208	207	212	+4	2%
5	Church Street/ A311/ A312	1.9	NB	230	234	235	+5	2%	233	238	238	+5	2%
		1.9	SB	247	246	249	+2	1%	244	244	248	+4	2%
6	A309/B358 Sandy Lane	2.6	NB	266	276	281	+16	6%	260	266	270	+10	4%
		2.6	SB	277	287	288	+12	4%	277	289	289	+12	4%
7	Queens Road	0.7	NB	124	122	122	-2	-1%	109	103	103	-6	-5%
		0.7	SB	94	94	95	+1	1%	93	89	89	-4	-4%
8	High Street	1.2	NB	123	126	128	+5	4%	118	121	122	+4	3%
		1.2	SB	130	141	135	+5	4%	128	138	132	+3	3%
9	High Street A2	0.3	NB	42	42	45	+3	7%	41	41	43	+1	3%
		0.3	SB	46	47	47	+0	1%	46	46	46	+1	1%

Appendix D Detailed Bus Journey Time Analysis (May) (secs/km)

Bus Service No.	Route Start	Route End	Distance of Route (km)	Direction	Average Bus Journey Time - May Weekday														
					Average Hour AM (07:00-10:00)					Average Hour PM (16:00-19:00)					Average Hour Daily (07:00-19:00)				
					2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)	2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)	2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)
111	Station Rd (Hampton)	Kingston Bridge	4.2	EB	151	123	283	+132	88%	146	131	237	+91	62%	138	130	242	+104	76%
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	128	113	163	+36	28%	202	164	208	+6	3%	152	141	178	+26	17%
216	Station Rd (Hampton)	Kingston Bridge	4.2	EB	161	123	293	+132	82%	151	127	238	+87	58%	143	131	246	+103	72%
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	130	111	163	+33	25%	207	168	211	+4	2%	155	143	180	+25	16%
281	Kingston Bridge	Stanley Rd	3.3	NB	182	139	189	+7	4%	206	165	204	-2	-1%	194	159	198	+4	2%
	Stanley Rd	Kingston Bridge	3.4	SB	202	137	216	+14	7%	199	158	200	+1	0%	198	155	206	+7	4%
285	Queens Rd	Kingston Bridge	6.7	EB	197	135	262	+65	33%	191	150	211	+21	11%	190	152	227	+37	20%
	Kingston Bridge	Queens Rd	6.7	WB	183	130	207	+23	13%	212	152	223	+11	5%	192	146	214	+22	12%
411	Bridge Rd (Hampton Court)	Kingston Bridge	2.8	EB	174	121	198	+24	14%	145	128	186	+41	29%	148	129	178	+30	21%
	Kingston Bridge	Bridge Rd (Hampton Court)	2.7	WB	118	105	125	+6	5%	217	116	190	-27	-12%	153	112	148	-5	-3%
481	Kingston Bridge	Stanley Rd	3.1	NB	167	157	169	+2	1%	188	162	184	-4	-2%	177	162	176	-1	0%
	Stanley Rd	Kingston Bridge	3.1	SB	202	160	210	+8	4%	189	170	198	+9	5%	191	169	198	+7	4%
R68	Hampton Court Station	Hampton Court Station	6.0	NB	219	159	277	+58	27%	224	201	254	+30	13%	218	190	256	+38	17%
	Teddington Lock	Teddington Lock	6.0	SB	218	173	277	+59	27%	232	195	276	+44	19%	217	189	266	+49	22%

Bus Service No.	Route Start	Route End	Distance of Route (km)	Direction	Average Bus Journey Time - May Weekend									
					Average Hour IP (10:00-16:00)					Average Hour Daily (07:00-19:00)				
					2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)	2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)
111	Station Rd (Hampton)	Kingston Bridge	4.2	EB	160	141	257	+97	61%	141	124	195	+55	39%
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	157	146	168	+11	7%	137	125	149	+12	8%
216	Station Rd (Hampton)	Kingston Bridge	4.2	EB	162	145	262	+100	62%	141	122	196	+55	39%
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	160	147	169	+10	6%	139	125	151	+12	8%
281	Kingston Bridge	Stanley Rd	3.3	NB	189	176	202	+13	7%	175	158	178	+3	2%
	Stanley Rd	Kingston Bridge	3.4	SB	207	167	248	+41	20%	189	151	192	+3	2%
285	Queens Rd	Kingston Bridge	6.7	EB	187	168	231	+44	23%	173	150	191	+18	10%
	Kingston Bridge	Queens Rd	6.7	WB	174	153	200	+25	15%	162	142	180	+17	11%
411	Bridge Rd (Hampton Court)	Kingston Bridge	2.8	EB	162	143	185	+23	14%	145	129	146	+1	1%
	Kingston Bridge	Bridge Rd (Hampton Court)	2.7	WB	193	135	131	-62	-32%	166	120	122	-44	-26%
481	Kingston Bridge	Stanley Rd	3.1	NB	171	163	174	+3	2%	161	158	163	+2	1%
	Stanley Rd	Kingston Bridge	3.1	SB	202	169	241	+39	19%	186	164	200	+15	8%
R68	Hampton Court Station	Hampton Court Station	6.0	NB	217	196	259	+42	19%	188	169	203	+16	8%
	Teddington Lock	Teddington Lock	6.0	SB	204	189	246	+42	20%	196	173	212	+16	8%

Detailed Bus Journey Time Analysis (May) (secs/route)

Bus Service No.	Route Start	Route End	Distance of Route (km)	Direction	Average Bus Journey Time - May Weekday														
					Average Hour AM (07:00-10:00)					Average Hour PM (16:00-19:00)					Average Hour Daily (07:00-19:00)				
					2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 Difference (%)	2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 Difference (%)	2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 Difference (%)
111	Station Rd (Hampton)	Kingston Bridge	4.2	EB	632	517	1188	+555	88%	612	549	992	+380	62%	579	544	1016	+437	76%
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	551	489	704	+154	28%	870	707	896	+26	3%	654	609	768	+114	17%
216	Station Rd (Hampton)	Kingston Bridge	4.2	EB	675	515	1230	+555	82%	634	533	1000	+366	58%	600	549	1033	+434	72%
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	562	478	703	+142	25%	892	725	911	+18	2%	669	616	777	+108	16%
281	Kingston Bridge	Stanley Rd	3.3	NB	610	466	634	+24	4%	690	552	683	-7	-1%	649	533	662	+13	2%
	Stanley Rd	Kingston Bridge	3.4	SB	690	468	737	+47	7%	680	538	682	+2	0%	676	529	702	+25	4%
285	Queens Rd	Kingston Bridge	6.7	EB	1322	906	1755	+433	33%	1277	1006	1416	+138	11%	1271	1015	1520	+249	20%
	Kingston Bridge	Queens Rd	6.7	WB	1227	873	1383	+156	13%	1419	1017	1494	+75	5%	1286	975	1434	+149	12%
411	Bridge Rd (Hampton Court)	Kingston Bridge	2.8	EB	489	339	556	+68	14%	406	359	522	+116	29%	414	361	499	+85	21%
	Kingston Bridge	Bridge Rd (Hampton Court)	2.7	WB	314	278	332	+17	5%	576	309	505	-71	-12%	405	296	393	-13	-3%
481	Kingston Bridge	Stanley Rd	3.1	NB	512	482	519	+8	1%	576	497	564	-12	-2%	542	496	540	-2	0%
	Stanley Rd	Kingston Bridge	3.1	SB	629	498	655	+25	4%	589	530	617	+28	5%	594	526	616	+22	4%
R68	Hampton Court Station	Hampton Court Station	6.0	NB	1315	956	1665	+350	27%	1348	1211	1529	+181	13%	1312	1142	1541	+229	17%
	Teddington Lock	Teddington Lock	6.0	SB	1310	1039	1667	+357	27%	1395	1173	1662	+267	19%	1304	1137	1597	+293	22%

Bus Service No.	Route Start	Route End	Distance of Route (km)	Direction	Average Bus Journey Time - May Weekend									
					Average Hour IP (10:00-16:00)					Average Hour Daily (07:00-19:00)				
					2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 Difference (%)	2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 Difference (%)
111	Station Rd (Hampton)	Kingston Bridge	4.2	EB	671	593	1077	+406	61%	590	520	819	+229	39%
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	678	629	726	+48	7%	592	537	642	+50	8%
216	Station Rd (Hampton)	Kingston Bridge	4.2	EB	679	607	1100	+421	62%	592	512	821	+229	39%
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	688	633	729	+41	6%	599	540	650	+50	8%
281	Kingston Bridge	Stanley Rd	3.3	NB	633	589	677	+44	7%	585	528	595	+10	2%
	Stanley Rd	Kingston Bridge	3.4	SB	708	571	847	+139	20%	646	516	657	+11	2%
285	Queens Rd	Kingston Bridge	6.7	EB	1254	1122	1546	+291	23%	1160	1002	1281	+121	10%
	Kingston Bridge	Queens Rd	6.7	WB	1166	1023	1336	+170	15%	1087	952	1203	+116	11%
411	Bridge Rd (Hampton Court)	Kingston Bridge	2.8	EB	455	401	519	+64	14%	407	362	410	+3	1%
	Kingston Bridge	Bridge Rd (Hampton Court)	2.7	WB	513	359	348	-165	-32%	441	318	325	-116	-26%
481	Kingston Bridge	Stanley Rd	3.1	NB	525	500	534	+9	2%	494	485	499	+5	1%
	Stanley Rd	Kingston Bridge	3.1	SB	630	526	752	+122	19%	578	511	623	+45	8%
R68	Hampton Court Station	Hampton Court Station	6.0	NB	1305	1180	1559	+254	19%	1129	1015	1223	+94	8%
	Teddington Lock	Teddington Lock	6.0	SB	1228	1139	1478	+250	20%	1178	1043	1277	+99	8%

Appendix E Detailed Bus Journey Time Analysis (August) (secs/km)

Bus Service No.	Route Start	Route End	Distance of Route (km)	Direction	Average Bus Journey Time - August Weekday														
					Average Hour AM (07:00-10:00)					Average Hour PM (16:00-19:00)					Average Hour Daily (07:00-19:00)				
					2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)	2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)	2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)
111	Station Rd (Hampton)	Kingston Bridge	4.2	EB	119	131	124	+5	4%	139	137	141	+2	1%	127	135	131	+4	3%
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	107	110	110	+3	2%	183	131	162	-21	-11%	139	122	134	-5	-4%
216	Station Rd (Hampton)	Kingston Bridge	4.2	EB	124	131	133	+9	7%	142	153	149	+7	5%	128	141	136	+8	6%
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	110	112	116	+6	5%	191	134	168	-23	-12%	143	125	138	-4	-3%
281	Kingston Bridge	Stanley Rd	3.3	NB	172	169	174	+2	1%	199	182	190	-9	-4%	185	179	185	-0	0%
	Stanley Rd	Kingston Bridge	3.4	SB	173	175	178	+4	3%	185	227	190	+4	2%	181	202	186	+5	3%
285	Queens Rd	Kingston Bridge	6.7	EB	172	193	182	+10	6%	177	226	194	+17	10%	175	211	191	+16	9%
	Kingston Bridge	Queens Rd	6.7	WB	158	182	171	+13	8%	177	208	198	+21	12%	170	198	187	+17	10%
411	Bridge Rd (Hampton Court)	Kingston Bridge	2.8	EB	138	147	153	+15	11%	133	151	144	+11	8%	133	150	145	+12	9%
	Kingston Bridge	Bridge Rd (Hampton Court)	2.7	WB	111	113	118	+6	5%	233	132	184	-50	-21%	158	123	144	-14	-9%
481	Kingston Bridge	Stanley Rd	3.1	NB	164	170	162	-2	-1%	188	167	167	-22	-12%	174	171	164	-10	-6%
	Stanley Rd	Kingston Bridge	3.1	SB	178	188	173	-5	-3%	175	205	190	+14	8%	175	195	179	+4	2%
R68	Hampton Court Station	Hampton Court Station	6.0	NB	190	204	207	+17	9%	203	204	211	+8	4%	198	205	210	+13	6%
	Teddington Lock	Teddington Lock	6.0	SB	189	205	207	+18	9%	210	208	224	+14	7%	196	204	213	+17	9%

Bus Service No.	Route Start	Route End	Distance of Route (km)	Direction	Average Bus Journey Time - August Weekend									
					Average Hour IP (10:00-16:00)					Average Hour Daily (07:00-19:00)				
					2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)	2019 (secs/km)	2020 (secs/km)	2021 (secs/km)	Change (secs/km)	2019-2021 Difference (%)
111	Station Rd (Hampton)	Kingston Bridge	4.2	EB	136	161	144	+8	6%	124	128	128	+4	4%
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	126	135	141	+14	11%	117	119	126	+10	8%
216	Station Rd (Hampton)	Kingston Bridge	4.2	EB	137	164	146	+10	7%	122	128	126	+4	3%
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	128	137	142	+14	11%	117	121	126	+9	8%
281	Kingston Bridge	Stanley Rd	3.3	NB	190	180	184	-6	-3%	177	164	167	-10	-6%
	Stanley Rd	Kingston Bridge	3.4	SB	192	212	193	+1	1%	178	173	170	-8	-4%
285	Queens Rd	Kingston Bridge	6.7	EB	178	211	192	+14	8%	167	183	172	+6	3%
	Kingston Bridge	Queens Rd	6.7	WB	168	191	187	+19	11%	158	175	172	+14	9%
411	Bridge Rd (Hampton Court)	Kingston Bridge	2.8	EB	143	178	151	+8	6%	132	139	132	+1	0%
	Kingston Bridge	Bridge Rd (Hampton Court)	2.7	WB	139	152	130	-9	-6%	128	130	125	-3	-3%
481	Kingston Bridge	Stanley Rd	3.1	NB	166	167	160	-6	-3%	156	157	156	-0	0%
	Stanley Rd	Kingston Bridge	3.1	SB	183	210	191	+7	4%	170	179	176	+5	3%
R68	Hampton Court Station	Hampton Court Station	6.0	NB	202	194	197	-5	-2%	186	170	179	-7	-4%
	Teddington Lock	Teddington Lock	6.0	SB	202	191	207	+5	3%	186	172	177	-9	-5%

Detailed Bus Journey Time Analysis (August) (secs/route)

Bus Service No.	Route Start	Route End	Distance of Route (km)	Direction	Average Bus Journey Time - August Weekday														
					Average Hour AM (07:00-10:00)					Average Hour PM (16:00-19:00)					Average Hour Daily (07:00-19:00)				
					2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 Difference (%)	2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 Difference (%)	2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 Difference (%)
111	Station Rd (Hampton)	Kingston Bridge	4.2	EB	498	551	520	+21	4%	585	575	592	+7	1%	531	565	549	+18	3%
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	462	476	474	+11	2%	788	563	699	-89	-11%	599	526	577	-22	-4%
216	Station Rd (Hampton)	Kingston Bridge	4.2	EB	522	551	558	+36	7%	594	642	625	+31	5%	539	591	571	+32	6%
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	473	481	499	+26	5%	821	576	724	-97	-12%	616	539	597	-19	-3%
281	Kingston Bridge	Stanley Rd	3.3	NB	576	566	584	+8	1%	668	608	638	-30	-4%	621	600	619	-2	0%
	Stanley Rd	Kingston Bridge	3.4	SB	592	597	607	+15	3%	633	774	647	+15	2%	618	691	636	+18	3%
285	Queens Rd	Kingston Bridge	6.7	EB	1151	1289	1220	+69	6%	1182	1511	1297	+115	10%	1170	1415	1277	+107	9%
	Kingston Bridge	Queens Rd	6.7	WB	1055	1218	1143	+89	8%	1185	1393	1325	+140	12%	1136	1325	1251	+115	10%
411	Bridge Rd (Hampton Court)	Kingston Bridge	2.8	EB	387	412	430	+43	11%	373	423	403	+31	8%	374	419	407	+33	9%
	Kingston Bridge	Bridge Rd (Hampton Court)	2.7	WB	296	301	312	+16	5%	619	350	488	-131	-21%	420	327	384	-37	-9%
481	Kingston Bridge	Stanley Rd	3.1	NB	503	523	496	-7	-1%	578	513	511	-67	-12%	535	524	504	-31	-6%
	Stanley Rd	Kingston Bridge	3.1	SB	554	584	540	-15	-3%	545	640	590	+45	8%	546	607	558	+13	2%
R68	Hampton Court Station	Hampton Court Station	6.0	NB	1143	1225	1242	+99	9%	1221	1226	1270	+49	4%	1189	1230	1266	+76	6%
	Teddington Lock	Teddington Lock	6.0	SB	1138	1234	1244	+105	9%	1262	1249	1349	+87	7%	1179	1226	1281	+102	9%

Bus Service No.	Route Start	Route End	Distance of Route (km)	Direction	Average Bus Journey Time - August Weekend									
					Average Hour IP (10:00-16:00)					Average Hour Daily (07:00-19:00)				
					2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 Difference (%)	2019 (secs)	2020 (secs)	2021 (secs)	Change (secs)	2019-2021 Difference (%)
111	Station Rd (Hampton)	Kingston Bridge	4.2	EB	569	675	604	+35	6%	519	538	537	+19	4%
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	545	582	607	+62	11%	503	515	544	+41	8%
216	Station Rd (Hampton)	Kingston Bridge	4.2	EB	574	690	614	+40	7%	512	537	529	+17	3%
	Kingston Bridge	Station Rd (Hampton)	4.3	WB	550	591	611	+60	11%	505	523	544	+39	8%
281	Kingston Bridge	Stanley Rd	3.3	NB	637	604	617	-20	-3%	593	549	559	-34	-6%
	Stanley Rd	Kingston Bridge	3.4	SB	655	724	659	+4	1%	606	592	580	-26	-4%
285	Queens Rd	Kingston Bridge	6.7	EB	1190	1414	1285	+95	8%	1117	1223	1155	+38	3%
	Kingston Bridge	Queens Rd	6.7	WB	1124	1281	1252	+128	11%	1058	1174	1153	+95	9%
411	Bridge Rd (Hampton Court)	Kingston Bridge	2.8	EB	401	498	424	+23	6%	369	391	371	+2	0%
	Kingston Bridge	Bridge Rd (Hampton Court)	2.7	WB	368	403	345	-23	-6%	341	344	332	-9	-3%
481	Kingston Bridge	Stanley Rd	3.1	NB	509	512	491	-17	-3%	478	482	478	-0	0%
	Stanley Rd	Kingston Bridge	3.1	SB	571	653	593	+22	4%	530	558	547	+17	3%
R68	Hampton Court Station	Hampton Court Station	6.0	NB	1214	1170	1184	-30	-2%	1118	1023	1075	-43	-4%
	Teddington Lock	Teddington Lock	6.0	SB	1214	1147	1245	+31	3%	1118	1034	1061	-56	-5%

Appendix F Detailed Vehicle Volume Analysis (September)

Site	Location	Direction	Vehicle Volume Summary - September Weekday														
			Average Hour AM (07:00-10:00)					Average Hour PM (16:00-19:00)					Total Daily (07:00-19:00)				
			2018 (Vehicles)	2020 (Vehicles)	2021 (Vehicles)	Change 2018 to 2021 (Vehicles)	Change 2018 to 2021 (%)	2018 (Vehicles)	2020 (Vehicles)	2021 (Vehicles)	Change 2018 to 2021 (Vehicles)	Change 2018 to 2021 (%)	2018 (Vehicles)	2020 (Vehicles)	2021 (Vehicles)	Change 2018 to 2021 (Vehicles)	Change 2018 to 2021 (%)
Site 165	High Street (N)	NB	404	527	413	+9	2%	412	447	440	+28	7%	4,814	5,400	4,908	+95	2%
		SB	251	379	311	+60	24%	489	469	492	+3	1%	4,563	4,910	4,582	+19	0%
		2w ay	656	906	724	+68	10%	901	916	932	+31	3%	9,377	10,310	9,490	+113	1%
Site 145	High Street (S)	NEB	521	531	413	-108	-21%	526	531	514	-12	-2%	6,011	5,682	5,209	-802	-13%
		SWB	470	497	281	-189	-40%	551	582	497	-55	-10%	6,034	5,814	4,466	-1568	-26%
		2w ay	991	1,028	694	-297	-30%	1,077	1,113	1,010	-67	-6%	12,045	11,496	9,675	-2369	-20%
Site 141	Hampton Court Road (A308)	NB	1,210	1,199	1,080	-129	-11%	1,226	1,188	1,119	-107	-9%	13,365	12,847	12,703	-663	-5%
		SB	1,035	1,151	1,090	+55	5%	1,162	1,213	1,159	-2	0%	13,236	13,095	12,648	-588	-4%
		2w ay	2,244	2,350	2,170	-74	-3%	2,387	2,401	2,278	-110	-5%	26,601	25,942	25,350	-1251	-5%
Site 140	Hampton Court Road	EB	754	756	716	-38	-5%	600	668	687	+87	14%	8,177	8,300	8,066	-110	-1%
		WB	588	587	596	+8	1%	723	748	839	+116	16%	7,656	8,131	8,389	+733	10%
		2w ay	1,342	1,343	1,312	-31	-2%	1,323	1,415	1,526	+203	15%	15,833	16,431	16,455	+622	4%
Site 132	Sandy Lane	NB	463	474	562	+100	22%	461	444	482	+21	5%	4,772	4,876	5,496	+724	15%
		SB	490	416	543	+53	11%	469	409	485	+16	3%	5,338	4,434	5,319	-19	0%
		2w ay	953	891	1,105	+152	16%	930	853	967	+37	4%	10,110	9,310	10,815	+705	7%
Site 129	Park Road (A309)	NB	288	209	255	-33	-11%	316	210	225	-91	-29%	3,671	2,469	2,629	-1042	-28%
		SB	224	211	212	-12	-5%	319	252	231	-88	-28%	3,278	2,702	2,522	-756	-23%
		2w ay	511	420	467	-44	-9%	635	462	456	-179	-28%	6,949	5,171	5,152	-1798	-26%
Site 128	Queen's Road	NB	331	387	456	+124	38%	467	353	385	-82	-18%	4,332	3,848	4,417	+85	2%
		SB	465	310	393	-72	-15%	400	334	393	-7	-2%	4,961	3,484	4,101	-860	-17%
		2w ay	796	697	848	+52	7%	866	686	778	-89	-10%	9,293	7,332	8,518	-775	-8%

Site	Location	Direction	Vehicle Volume Summary - September Saturday									
			Average Hour IP (10:00-16:00)					Total Daily (07:00-19:00)				
			2018 (Vehicles)	2020 (Vehicles)	2021 (Vehicles)	Change 2018 to 2021 (Vehicles)	Change 2018 to 2021 (%)	2018 (Vehicles)	2020 (Vehicles)	2021 (Vehicles)	Change 2018 to 2021 (Vehicles)	Change 2018 to 2021 (%)
Site 165	High Street (N)	NB	381	525	465	+84	22%	5,098	5,434	5,000	-98	-2%
		SB	347	442	416	+69	20%	4,701	4,786	4,521	-181	-4%
		2w ay	728	967	881	+153	21%	9,799	10,219	9,521	-279	-3%
Site 145	High Street (S)	NEB	463	526	530	+68	15%	6,003	5,516	6,059	+56	1%
		SWB	456	509	502	+46	10%	6,001	5,494	5,955	-46	-1%
		2w ay	919	1,034	1,032	+114	12%	12,004	11,010	12,014	+10	0%
Site 141	Hampton Court Road (A308)	NB	950	1,110	1,117	+168	18%	13,121	12,031	12,757	-364	-3%
		SB	952	1,179	1,148	+196	21%	12,737	12,792	13,034	+297	2%
		2w ay	1,901	2,288	2,265	+364	19%	25,858	24,823	25,791	-68	0%
Site 140	Hampton Court Road	EB	650	692	675	+25	4%	8,236	7,964	7,918	-319	-4%
		WB	573	727	729	+156	27%	7,764	8,158	8,503	+739	10%
		2w ay	1,223	1,418	1,404	+181	15%	16,000	16,122	16,421	+421	3%
Site 132	Sandy Lane	NB	324	452	471	+146	45%	4,812	4,561	4,841	+29	1%
		SB	379	386	490	+111	29%	5,362	4,051	4,968	-394	-7%
		2w ay	704	838	961	+257	37%	10,174	8,611	9,809	-366	-4%
Site 129	Park Road (A309)	NB	268	251	245	-23	-9%	3,641	2,604	2,563	-1079	-30%
		SB	235	259	223	-12	-5%	3,313	2,720	2,443	-871	-26%
		2w ay	503	510	468	-35	-7%	6,954	5,324	5,005	-1949	-28%
Site 128	Queen's Road	NB	435	391	406	-30	-7%	4,615	3,845	4,117	-499	-11%
		SB	431	314	404	-27	-6%	4,518	3,339	4,101	-418	-9%
		2w ay	866	705	810	-57	-7%	9,133	7,185	8,217	-916	-10%

Site	Location	Direction	Vehicle Volume Summary - September Sunday									
			Average Hour IP (10:00-16:00)					Total Daily (07:00-19:00)				
			2018 (Vehicles)	2020 (Vehicles)	2021 (Vehicles)	Change 2018 to 2021 (Vehicles)	Change 2018 to 2021 (%)	2018 (Vehicles)	2020 (Vehicles)	2021 (Vehicles)	Change 2018 to 2021 (Vehicles)	Change 2018 to 2021 (%)
Site 165	High Street (N)	NB	359	476	434	+75	21%	3,546	4,723	4,400	+854	24%
		SB	325	402	377	+51	16%	3,546	4,142	3,862	+316	9%
		2w ay	684	878	810	+126	18%	7,092	8,864	8,262	+1170	16%
Site 145	High Street (S)	NEB	457	476	527	+70	15%	4,897	5,004	5,533	+636	13%
		SWB	402	437	495	+93	23%	4,433	4,934	5,359	+926	21%
		2w ay	859	913	1,023	+163	19%	9,330	9,938	10,892	+1562	17%
Site 141	Hampton Court Road (A308)	NB	912	1,067	1,049	+137	15%	9,950	11,108	11,587	+1637	16%
		SB	923	1,163	1,113	+190	21%	10,256	11,963	11,825	+1569	15%
		2w ay	1,835	2,230	2,162	+327	18%	20,206	23,071	23,412	+3206	16%
Site 140	Hampton Court Road	EB	638	705	622	-16	-3%	6,348	7,495	7,329	+981	15%
		WB	513	713	658	+145	28%	6,116	7,652	7,638	+1522	25%
		2w ay	1,151	1,418	1,280	+129	11%	12,464	15,147	14,966	+2502	20%
Site 132	Sandy Lane	NB	281	418	441	+160	57%	3,342	4,010	4,323	+981	29%
		SB	344	391	456	+112	33%	3,481	3,883	4,382	+901	26%
		2w ay	625	809	897	+272	44%	6,823	7,893	8,704	+1881	28%
Site 129	Park Road (A309)	NB	239	246	241	+2	1%	2,698	2,451	2,239	-460	-17%
		SB	199	256	208	+9	5%	2,110	2,596	2,151	+41	2%
		2w ay	439	502	450	+11	3%	4,808	5,047	4,390	-419	-9%
Site 128	Queen's Road	NB	272	370	381	+110	40%	3,302	3,294	3,664	+362	11%
		SB	353	317	369	+16	4%	3,557	3,116	3,569	+12	0%
		2w ay	625	686	750	+125	20%	6,859	6,410	7,233	+374	5%

Appendix G Accident Analysis Tables (On and Off-Park by Location)

Table G.1: Accident Severity by Location and Year (On-Park)

	Junction	Slight		Difference	Serious		Difference
		2018	2020		2018	2020	
All Modes	1	2	3	+1			0
	2			0			0
	9	6	9	+3	1		-1
<i>Total</i>		8	12	+4	1		-1
Vulnerable Road Users (pedestrians and cyclists)	1	2	3	+1			0
	2			0			0
	9	2	6	+4	1		-1
<i>Total</i>		4	9	+5	1	0	-1

Table G.2: Accident Severity by Location and Year (Off-Park)

	Junction	Slight		Difference	Serious		Difference
		2018	2020		2018	2020	
All Modes	3			0			0
	4		1	+1			0
	5	1		-1			0
	6	1		-1			0
	7	1	3	+2	1		-1
	8	3	4	+1	1		-1
	10			0			0
	11			0			0
Total		6	8	+2	2		-2
Vulnerable Road Users (pedestrians and cyclists)	3			0			0
	4		1	+1			0
	5			0			0
	6	1		-1			0
	7		1	+1	1		-1
	8	3	3	0			0
	10			0			0
	11			0			0
Total		4	5	+1	1	0	-1