

PROJECT CENTRE

February 2018

DOCUMENT CONTROL

DOCUMENT CONTROL

This document needs to be read in conjunction with the relevant drawings

Report Reference	Issue	Description	Originator	Checked	Authorised
1000004151- Southfields Underground Station - Design Strategy	01	Design Strategy	Stefano Scarano 05/02/18	Joao Toscano 05/02/18	Sam Neal 05/02/18

CONTACT

Sam Neal Associate Director - Public Realm sam.neal@projectcentre.co.uk +44 (0)20 7430 6939

Project Centre Unit 2 Holford Yard London WC1X 9HD 0330 0080 855

CONTENTS

1.0	EXECUTIVE SUMMARY	4		
20	HISTORY	5	21.0 ACCESSIBILITY	70
2.0		3	22.0 WAYFINDING	73
3.0		/	23.0 LIGHTING	77
4.0	ROAD SAFETY ISSUES	8	24.0 SOFT LANDSCAPE	82
5.0	ANALYSIS OF TRAFFIC SPEED AND VOLUME	11	25.0 DRAINAGE	88
6.0	MANUAL CLASSIFIED COUNTS	12	26.0 UTILITIES AND SERVICE COVER ASSESSMENT	90
7.0	CROSSING MOVEMENT	18		03
8.0	FOOTWAY MOVEMENT	20		90
9.0	VEHICULAR TRACKING	22	28.0 HEALTHY STREETS INDICATORS	94
10.0	PARKING REVIEW	23	29.0 COSTESTIMATE	96
11.0	EXISTING PARKING AREA	24	30.0 CONCLUSIONS AND RECOMMENDATIONS	98
12.0	PARKING ANALYSIS	25	APPENDIX 1 - TRAFFIC SURVEY ANALYSIS	100
13.0	DESIGN INSPIRATION	30	APPENDIX 2 - LIGHTING CONCEPT REPORT	136
14 0		31	APPENDIX 3 - HEALTHY STREETS ASSESSMENT	171
15.0		22	APPENDIX 4 - CLOS ASSESSMENT	184
10.0		32		
16.0		35		
17.0	DESIGN PRINCIPLES	38		
18.0	HARD LANDSCAPE	48		
19.0	STREET FURNITURE	58		
20.0	SAFETY ELEMENTS	64		

UNDERGROUND	STATION -	Design	Strategy
-------------	-----------	--------	----------

1.0 EXECUTIVE SUMMARY

Project Centre has been appointed to provide a design proposal for Southfields that will aim to create a new 'village style' town centre that would provide a pleasant and well designed public realm for the resident population. This proposal will focus on creating a sense of place for the local community as well as ensure that the area feels safe and calm i.e. the design will be in line with current best practice where pedestrians and cyclists are prioritized.

The proposals will also aim at creating a 'welcoming feel' to the area with clear legibility of routes and an uncluttered environment.

Background

The London Borough of Wandsworth (LBW) is located within thirteen square miles of the southwest quadrant of London. It is centred on six main town centres (Balham, Clapham Junction and Battersea, Putney, Tooting, Wandsworth Town, Nine Elms) and has a rapidly growing population of 307,000 residents[1].

Southfields is a residential area with an active centre based around Replingham Road and Wimbledon Park Road and Southfields Underground station. During Wimbledon Tennis season it is the main station serving the tennis championships. It is characterised by a number of independent shops and businesses as well as 3 small supermarkets – Tesco, Sainsbury's and Marks & Spencer. It also serves a large number of commuters heading to/from the station and local bus stops.

Southfields Underground station, recorded 6.28 million people entering and exiting the station in 2016[2] yet conditions for walking, cycling and access to public transport could be better.

Current arrangements to manage increased pedestrian and public transport activity around event days for Wimbledon Championships (in excess of 24,000 people daily), existing interaction of transport modes and limited green infrastructure in the area present exciting opportunities for improvement.

Vision

Our vision is to deliver a transformational change to Southfields Underground Station and adjacent streets. Our proposals will be grounded in best-practice streetscape design, traffic calming principles and sound implementation experience.

Outcomes

The anticipated outcomes are:

- A well designed area which meets the residents needs for a better public realm
- An improved experience for pedestrians and cyclists
- A better transport interchange for public transport users
- Positive interaction with all transport modes
- Supporting local shops by improving public realm
- An enhanced visitor experience, particularly around event days

By tackling congestion and improving access to active modes of transport an indirect contribution to cross-cutting council priorities can be made, such as improving air quality and reducing social isolation by creating opportunities to meet others as well as conduct optional and social activities in public space.



Figure 1. Illustrative plan

4

2.0 HISTORY

Southfields lies in the midst of Wimbledon, Putney and Wandsworth, undisturbed and unknown to the rest of London. It is rediscovered briefly every year for a fortnight in June by spectators passing through Southfields station on their way to the **All England Lawn Tennis and Croquet Club.** The name derives from the old manorial system, in which it was known as South Fields of the Manor of Dunsford, and dates back to at least the year 1247. Yet, compared to the surrounding areas, Southfields was a late developer.

Until much later in the nineteenth century, it was still mainly fields and today's roads, such as Wimbledon Park and Kimber, were just paths across them. Only after the arrival in 1889 of the **District and London & South Western Railway** on its way from Putney to Wimbledon did this area start to take off. The main housing developments at the time were 'Southfields Triangle' and 'The Grid', north and South respectively of Replingham road. Which runs eastwards down the hill from the station.

On the surface, little seems to have changed since then. There are a few redevelopments and new school buildings along Merton Road, once another path through fields but today the main thoroughfare along Southfields' eastern edge. Otherwise, the neatly laid-out rows of predominantly Edwardian terrace houses seem unchanged and undisturbed from a century ago.

Deep down, however, signs of change, still subtle and largely detectable only to long term residents, are appearing. By the station, the preponderance of estate agents and the rumoured arrival of upmarket chain stores confirm that the area has finally been spotted by young urban professional seeking affordable housing, quality village life and good communication with the centre of London.

Wimbledon and Southfields through time by Simon McNeill-Ritchie and Ron Elam, 2016



Southfields, 1856



Southfields, 1895





Wimbledon Park Road, 1960



2.1 HISTORY - Timeline



18th Century Wimbledon Park designed by Capability' Brown



1247

The area is known as the 'South Field of the manor Dunsford'. The area is mainly fields for farming





George Eliot lived in Southfields on Wimbledon Park Road

1889

Southfield Station opens as part of the District Railway from Putney Bridge to Wimbledon

1899





1890

Merton Road School (now called Riversdale School) was built, the first school in the area.





Wimbledon – The first championships

1903

Coronation Gardens were opened to commemorate the coronation of Edward VII

1903

Replingham Road and the 'Grid' housing area is practically finished. Developed by John Augustus Beaumont

1926

The Fazi Mosque was built. The first purpose-built Islamic place of worship in London.

1922

Wimbledon Championship moves to Church Street. First Tennis Grand Slam



1935-1945

Southfields is heavily affected by the Second World War and was subject to many raids during the



1973

Post-war housing development around Augustus Road and **Beaumont Road**

1994

Southfields becomes part of the London Underground



2020

Every Sunday, Replingham Road has a market and is traffic free from 8am till 4pm



1997

A new and the current Wimbledon No.1 court is open



2027

New Statue to commemorate 150th anniversary of Wimbledon Championship 'Rufus the Hawk' dedicated to all who help the championships run smoothly



3.0 EXISTING CHARACTER AREAS

Project Centre's design team has highlighted four key character areas within the project area: Southfields Underground Station/Junction, Replingham Road, Wimbledon Park Road and Augustus Road.

The main areas are: a) Southfields Underground Station/Junction, where people arrive into the area and b) Replingham Road, where people enjoy the area.

Southfields Underground Station/Junction is an important local thoroughfare for pedestrians, cyclists and vehicles.

Replingham Road has predominantly retail frontages and improvements to the public realm will help support local business.

Both Sections of **Wimbledon Park Road** are a mix of residential and commercial. Wimbledon Park Road (north) is a mix of retail and residential whilst Wimbledon Park Road (south) is predominately a mix of food & beverage and residential.

Augustus Road is a typical residential street.

These different character areas will help define a clear hierarchy of land uses and sense of place. The following is a list of recommendations and improvements.

Southfields Underground Station/Junction

- Sense of arrival
- Increased pedestrian comfort
- Strong safety measures
- Clear legibility
- Improved crossing movements
- Traffic calming measures
- Art opportunities

Replingham Road

- Increased pedestrian comfort
- Additional tree planting
- Side-street gateway treatment to enhance character change
- Improved crossing movements
- Traffic calming measures
- Improvement of ground floor access

Wimbledon Park Road

- Increased pedestrian comfort
- Additional tree planting
- Traffic calming measures

Augustus Road

- Traffic calming measures
- Repaving footway



Figure 2. Character area plan



ROAD SAFETY ISSUES 4.0

REPLINGHAM ROAD

ISSUE 01 - Lack of crossing facilities for pedestrians

- Pedestrians observed crossing along the extent of the retail area
- Pedestrians crossing from north to south obscured by parked cars (see Fig.3) •
- Pedestrians observed walking between queuing vehicles particularly just east • of junction with Elsenham Street (see Fig. 4 and Fig. 5)
- Three collisions in the 5 years to 31 December 2016 involved pedestrians crossing Replingham Road. One at the junction with Heythorp Street and two at the junction with Elsenham Street. All resulted in a slight injury

RECOMMENDATION:

Provide a Zebra crossing east of the junction with Heythorp Street

JUSTIFICATION:

- Pedestrians have been observed crossing throughout the extent of the scheme
- There are no formal or informal crossing facilities located east of the junction. Pedestrians are unlikely to walk to the junction to use formal crossing facilities, particularly when they are east of Elsenham Street
- Heythorp Street is halfway along the retail/café area. Pedestrians are likely to be more inclined to take a short diversion to cross at a safe location
- It is understood that requests have been received for a crossing further east. Whilst feasible, it is unlikely pedestrians will travel further east to use the crossing. It should be noted the pedestrian collisions occurred between Elsenham Street and Heythorp Street

ISSUE 02 - Poor visibility of pedestrians at junctions

• Parking bays are located in close proximity to the junctions restricting visibility of pedestrians crossing the road

RECOMMENDATION:

• Where feasible kerb build-outs, raised junctions or 'Copenhagen' crossings are proposed

JUSTIFICATION:

- Improves visibility of pedestrians
- Slows vehicles entering/exiting the junction •
- Prioritises pedestrians over motor vehicles •
- Discourages rat running along Elsenham Street •





Figure 3.



Figure 5.

4.1 ROAD SAFETY ISSUES

ISSUE 03 - High number of left turn movements out of Elsenham Street

- A high number of vehicles were observed turning left out of Elsenham Street particularly during peak hours. This suggests that vehicles are rat-running to avoid traffic on the A218 Merton Road (see Figure 6)
- Left turn movements conflict with vehicles pulling around parking bays opposite the junction (see Figure 7)
- Local residents indicate that there are also high vehicle numbers turning right, however, observations suggest the left turn is dominant
- Parking opposite the junction is prohibited during AM peak hours from the start of the parking bays to the bend to improve traffic flows. However, it is permitted in the PM peak despite the same issues being prevalent

RECOMMENDATION:

• Prohibit parking opposite the junction at all times

DISCUSSION:

Concern regarding loss of parking

- Parking surveys have indicated that over 60% of vehicles on Replingham Road stop for 15 minutes or less in the Pay and Display bays. Under 9% stopped for 1 hour or more which exceeds the permitted time
- There are parking bays in the side roads which are Permit Holder only between the hours of 1:30 and 2:30pm. 50-60% of vehicles were recorded parking for 15 mins in the vicinity of the junctions

JUSTIFICATION:

- Improve traffic flow
- Improve road safety
- High turnover of vehicles indicates that the majority of motorist are not stopping for long periods to do shopping
- Conversion of a minimum of 3 bays in Heythorp Street and 2 bays in Clonmore Street to shared use permit holder/pay and display bays will formalise current activities and deter long term parking close to the junction during the day. The aim of this will be to accommodate displacement from Replingham Road
- There are generally spaces available in the Shared use bays east of Heythorp Street which will accommodate displacement from the western end of Replingham Road
- Overall use of the parking bays is high. Although surveys indicate that there are generally spaces in the shared use bays on Replingham Road and in the side roads

Whilst people may have to walk a little further, it is felt that the existing availability and the provision of dedicated short term parking in side roads near the junction will minimise the impact on businesses. The scheme aims to improve the environment for pedestrians (encouraging people to walk, cycle, use public transport rather than drive) and improve road safety whilst still maintaining a reasonable level of parking to cater for the high turnover of vehicles

ISSUE 04 - Loading/Unloading permitted on southern side during AM and PM peak periods

- There is a single yellow line on the southern side which restricts waiting between 7am and 7pm
- There are no loading restrictions which could encourage loading activities during peak hours. This could result in increased congestion due to difficulties in vehicles overtaking

RECOMMENDATION:

• Provide loading restriction during AM and PM peak periods

JUSTIFICATION:

- Improve traffic flow in peak periods
- Improve road safety







Figure 7.



4.2 ROAD SAFETY ISSUES

JUNCTION REPLINGHAM ROAD/WIMBLEDON PARK ROAD/AUGUSTUS ROAD

ISSUE 01 - Pedestrians walking on inside of guard railing

- For the majority of the day pedestrians generally used the crossings at the junction correctly
- During peak periods pedestrians, in particular children between 3pm and 4pm, were observed crossing diagonally, i.e. from outside the Underground Station directly to Replingham Road south side; from Wimbledon Park Road (north) west side to Replingham Road south side and vice versa. This resulted in them walking in the road and/or on the narrow kerb on inside of the guard railing

RECOMMENDATION:

• Removal of guard railing and replacement with other street furniture to guide pedestrians to designated crossing points

WIMBLEDON PARK ROAD (north)

ISSUES - Poor visibility of pedestrians at junctions

- Narrow footway east side
- Substandard width of central refuge (1.2m)
- Conflict between vehicles entering/exiting parking bays and cycle lane
- Conflict between doors opening and cyclists in cycle lane
- Pedestrians walking on outside of guard railing on central island

RECOMMENDATION:

- Remove central island
- Remove cycle lane
- Increase footway widths
- Narrow running lanes to 3.2m

JUSTIFICATION:

- Reduce crossing width and time for pedestrians
- Enables single crossing movement
- Increased footway widths
- Cyclists placed in dominate cycling position reducing conflict with parking bays and general parking



Figure 8.

5.0 ANALYSIS OF TRAFFIC SPEED AND VOLUME

Traffic speeds

- The overall 85th percentile speed can be defined as the speed at or below which 85% of all vehicles are observed to travel, under free-flowing conditions
- It can be seen from the table above that Sites 2 and 4 both recorded the highest 85th percentile speeds at 25mph, in a westbound direction. The site with the lowest recorded 85th percentile speed was Site 1 at 19.9mph in a southbound direction
- With the exception of westbound movements on Augustus Road on average over 50% of vehicles were recorded as travelling at less than 20mph. On average over all four sites 98% of vehicles were recorded travelling below 30mph. Westbound speeds on Replingham Road and Augustus Road were slightly higher than other routes and directions with over 3% recorded exceeding 30mph
- It is acknowledged there are a significant number of vehicles exceeding 20mph, however, this is in keeping with the level of traffic calming that has been provided.

Traffic Volumes

- On average, a total of 31,064 vehicles were recorded travelling through all four sites on the approached to the Wimbledon Park Road / Augustus Road / Replingham Road junction, which equates to approximately 1,294 vehicles per hour (two-way)
- On average, a total 1,692 two wheeled vehicles were observed on all four sites at the junction, this equates to approximately 71 two wheeled vehicles per hour (two-way)
- Augustus Road The highest average volumes were observed on Augustus Road throughout the day. Average hourly flows in the AM and IP peaks were 282 vehicles per hour for eastbound and 291 for westbound. The PM peak was notably higher with around 330 to 340 vehicles per hour in either direction
- Wimbledon Park Road (south) The surveys indicated that northbound movements on Wimbledon Park Road (S) are generally higher throughout the day. However, there is a notable increase in traffic flow in the PM peak for southbound movements. Two wheelers were notably tidal with an average of 27 per hour in the AM peak for northbound movements and 19 per hour in the PM peak for southbound movements
- Wimbledon Park Road (north) The surveys indicated that for northbound movements the hourly traffic flows were slightly lower that the southern arm; southbound movements were largely the same. As with the southern arm two-wheeler movements were recorded to be tidal
- Replingham Road The surveys indicated that the average hourly flow for all vehicle types was consistent throughout the day in both directions which increased slightly in the PM peak periods

SITE	LOCATION	DIRECTION OF FLOW		V	EHICLE SPEED	DS		TRAF (2 W
			85th%lie (mph)	< 20 mph	20-30 mph	> 40 mph	> 40 mph	24 hour
1	Wimbledon Park Road (S of Pirbright Rd)	NB	23.5	59.1%	39.5%	1.3%	0.1%	4047 (265)
1	Wimbledon Park Road (S of Pirbright Rd)	SB	19.9	85.4%	14.0%	0.4%	0.2%	2995 (195)
2	l Road (W of Clonmore St)	EB	23.7	60.0%	37.9%	2.0%	0.1%	3954 (205)
2	Replingham Road (W of Clon- more St)	WB	25.0	55.1%	41.4%	3.3%	0.2%	4029 (192)
3	Wimbledon Park Road (N of Gartmoor Grds Rd)	NB	21.7	75.5%	23.8%	0.6%	0.1%	3531 (179)
3	Wimbledon Park Road (N of Gartmoor Grds Rd)	SB	23.7	56.8%	41.6%	1.5%	0.1%	3081 (205)
4	Augustus Rd (W of Sutherland Gr)	EB	23.3	70.0%	31.1%	1.8%	0.1%	4646 (241)
4	Augustus Rd (W of Sutherland Gr)	WB	25.0	47.0%	49.9%	3.0%	0.2%	4781 (210)



6.0 MANUAL CLASSIFIED COUNTS - Weekday turning movements (AM peak 7AM-10AM)

	ALL VEHICLES	PEDAL CYCLISTS	MOTOR CYCLISTS	HGV	BUS
Wimbledon Park Road N					
Augustus Road	206	1	3	2	2
Replingham Road	136	8	2	5	0
Wimbledon Park Road S	318	4	11	6	25
Wimbledon Park Road S					
Augustus Road	168	2	4	1	14
Replingham Road	221	7	1	7	0
Wimbledon Park Road N	725	30	41	10	25
Augustus Road					
Wimbledon Park Rd S	84	2	2	1	14
Replingham Road	789	26	20	22	0
Wimbledon Park Road N	335	21	13	5	0
Replingham Road					
Augustus Road	891	47	12	21	0
Wimbledon Park Road S	158	2	1	3	0
Wimbledon Park Road N	83	10	4	1	0



6.1 MANUAL CLASSIFIED COUNTS - Weekday turning movements (Inter peak 12PM-2PM)

	ALL VEHICLES	PEDAL CYCLISTS	MOTOR CYCLISTS	HGV	BUS
Wimbledon Park Road N					
Augustus Road	61	1	5	1	0
Replingham Road	34	2	1	0	0
Wimbledon Park Road S	86	3	4	1	8
Wimbledon Park Road S					
Augustus Road	30	0	1	1	6
Replingham Road	56	0	2	1	0
Wimbledon Park Road N	91	1	5	1	8
Augustus Road					
Wimbledon Park Road S	24	0	1	1	4
Replingham Road	184	3	7	2	1
Wimbledon Park Road N	64	2	3	1	0
Replingham Road					
Augustus Road	224	2	5	4	1
Wimbledon Park Road S	67	1	1	0	1
Wimbledon Park Road N	34	1	2	1	0



6.2 MANUAL CLASSIFIED COUNTS - Weekday turning movements (PM peak 4PM-7PM)

	ALL VEHICLES	PEDAL CYCLISTS	MOTOR CYCLISTS	HGV	BUS
Wimbledon Park Road N					
Augustus Road	254	12	22	2	0
Replingham Road	148	12	3	1	0
Wimbledon Park Road S	541	31	34	1	23
Wimbledon Park Road S					
Augustus Road	115	2	4	1	15
Replingham Road	177	3	4	4	0
Wimbledon Park Road N	438	16	11	1	22
Augustus Road					
Wimbledon Park Road S	105	10	6	1	15
Replingham Road	882	34	33	7	0
Wimbledon Park Road N	275	3	15	0	0
Replingham Road					
Augustus Road	871	16	26	4	0
Wimbledon Park Road S	201	5	8	1	0
Wimbledon Park Road N	95	4	0	3	0

CONCLUSIONS:

- The dominant traffic flow for all vehicles is between Replingham Road and Augustus Road at all times of the day
- Northbound movements from Wimbledon Road (south) to Wimbledon Road (north) are also high in the AM peak
- Right turn movements from Augustus Road and Replingham Road are low as turning movements are difficult, which is likely to result in vehicles finding alternative routes
- The average hourly movements through the junction are similar in the AM and PM peaks. The dominant cycle movements were generated from Replingham Road and Augustus Road in the AM peak; and Augustus Road and Wimbledon Road (north) in the PM peak



6.3 MANUAL CLASSIFIED COUNTS - Weekend turning movements (AM peak 7AM-10AM)

	ALL VEHICLES	PEDAL CYCLISTS	MOTOR CYCLISTS	HGV	BUS
Wimbledon Park Road N					
Augustus Road	102	1	1	1	0
Replingham Road	86	0	1	2	0
Wimbledon Park Road S	198	1	3	5	18
Wimbledon Park Road S					
Augustus Road	73	0	0	0	13
Replingham Road	129	0	2	3	0
Wimbledon Park Road N	255	6	6	5	16
Augustus Road					
Wimbledon Park Road S	63	0	1	0	13
Replingham Road	428	10	6	10	0
Wimbledon Park Road N	165	2	5	3	0
Replingham Road					
Augustus Road	494	11	3	8	0
Wimbledon Park Road S	126	3	0	2	0
Wimbledon Park Road N	72	2	1	3	0





6.4 MANUAL CLASSIFIED COUNTS - Weekend turning movements (Inter peak 12PM-2PM)

	ALL VEHICLES	PEDAL CYCLISTS	MOTOR CYCLISTS	HGV	BUS
Wimbledon Park Road N					
Augustus Road	67	1	4	2	0
Replingham Road	56	1	1	0	0
Wimbledon Park Road S	119	2	4	0	7
Wimbledon Park Road S					
Augustus Road	50	1	1	0	5
Replingham Road	71	0	4	0	1
Wimbledon Park Road N	161	1	4	1	8
Augustus Road					
Wimbledon Park Road S	36	1	3	0	4
Replingham Road	250	8	7	1	0
Wimbledon Park Road N	87	1	4	1	0
Replingham Road					
Augustus Road	285	8	5	1	0
Wimbledon Park Road S	70	0	3	1	0
Wimbledon Park Road N	34	1	2	1	0



6.5 MANUAL CLASSIFIED COUNTS - Weekend turning movements (PM peak 4PM-7PM)

	ALL VEHICLES	PEDAL CYCLISTS	MOTOR CYCLISTS	HGV	BUS
Wimbledon Park Road N					
Augustus Road	165	2	9	1	0
Replingham Road	116	2	1	1	0
Wimbledon Park Road S	287	6	7	2	24
Wimbledon Park Road S					
Augustus Road	110	1	3	1	14
Replingham Road	167	0	8	1	0
Wimbledon Park Road N	321	8	9	2	23
Augustus Road					
Wimbledon Park Road S	86	0	4	0	15
Replingham Road	727	14	34	5	0
Wimbledon Park Road N	239	4	11	0	0
Replingham Road					
Augustus Road	645	4	24	5	1
Wimbledon Park Road S	136	1	11	0	0
Wimbledon Park Road N	76	0	2	0	0

CONCLUSIONS:

- Generally, the traffic flows followed the same patterns as identified during the weekday surveys. Morning flows were notably lower for all movements; however, the inter-peak periods either experienced similar or higher flows
- The PM peak movements between Replingham Road and Augustus Road were significantly higher than the AM peak and similar to those recorded on a weekday
- Cycle movements were significantly lower than on a weekday, suggesting that the majority of cycle movement in the area is associated with commuter travel
- A relatively high number of motorcyclists were observed travelling in both directions between Augustus Road and Replingham Road during the PM peak period compared to the weekday surveys and eastbound during the inter peak



7.0 CROSSING MOVEMENT - Average weekday pedestrian crossing flow (AM peak 7AM-10AM)

	Total	CHILD (<16)	ADULT (16-65)	ADULT (>65)
Wimbledon Park Road N				
Eastbound	173	8	165	0
Westbound	416	4	412	0
Wimbledon Park Road S				
Eastbound	78	9	68	1
Westbound	83	12	69	2
Augustus Road				
Northbound	344	91	252	1
Southbound	116	19	97	0
Replingham Road				
Northbound	195	40	155	0
Southbound	115	14	101	0
Diagonal Crossing				
Augustus Road	195	40	155	0
Wimbledon Park Road S	75	9	66	0



7.1 CROSSING MOVEMENT - Average weekday pedestrian crossing flow (PM peak 4PM-7PM)

	Total	CHILD (<16)	ADULT (16-65)	ADULT (>65)
Wimbledon Park Road N				
Eastbound	229	5	224	0
Westbound	160	6	154	0
Wimbledon Park Road S				
Eastbound	92	13	79	0
Westbound	91	4	87	0
Augustus Road				
Northbound	226	21	205	0
Southbound	270	31	239	0
Replingham Road				
Northbound	136	14	122	0
Southbound	222	25	197	0
Diagonal Crossing				
Northbound	70	7	63	0
Southbound	150	9	141	0

CONCLUSIONS:

- The surveys indicated that the dominate flows in the AM peaks were towards the Southfields Underground Station
- Whilst there was evidence of tidal flow in the PM with movements away from the Underground Station being higher than the opposing direction, they weren't as significant as the AM peak suggesting that return journeys are spread out during the day
- The northbound movement across Augustus Road was high both in the AM and PM peaks, whilst the southbound movement was significantly lower in the AM peak



8.0 FOOTWAY MOVEMENT - Average weekday pedestrian footpath flow (AM peak 7AM-10AM)

	total Flow	CHILD (<16)	ADULT (16-65)	ADULT (>65)		
Wimbledon Park Road N - West footpath						
Northbound	130	24	106	0		
Southbound	418	79	339	0		
Wimbledon Park Road N - East footpath						
Northbound	262	69	193	0		
Southbound	206	29	177	0		
Wimbledon Park Road S - West footpath						
Northbound	326	14	311	1		
Southbound	130	7	121	2		
Wimbledon Park Road S - East footpath						
Northbound	222	72	150	0		
Southbound	157	25	132	0		
Replingham Road - South footpath						
Eastbound	203	47	155	1		
Westbound	350	107	242	1		
Replingham Road - North footpath						
Eastbound	160	15	145	0		
Westbound	373	21	351	1		



8.1 FOOTWAY MOVEMENT - Average weekday pedestrian footpath flow (PM peak 4PM-7PM)

	total Flow	CHILD (<16)	ADULT (16-65)	ADULT (>65)		
Wimbledon Park Road N - West footpath						
Northbound	266	25	240	1		
Southbound	121	7	113	1		
Wimbledon Park Road N - East footpath						
Northbound	358	18	339	1		
Southbound	299	34	264	1		
Wimbledon Park Road S - West footpath						
Northbound	290	17	273	0		
Southbound	286	26	260	0		
Wimbledon Park Road S - East footpath						
Northbound	186	32	154	0		
Southbound	225	30	194	1		
Replingham Road - South footpath						
Eastbound	336	48	287	1		
Westbound	231	23	207	1		
Replingham Road - North footpath						
Eastbound	296	16	279	1		
Westbound	223	13	209	1		

CONCLUSIONS:

 Southbound pedestrian movements in the AM peak were notably higher on the west side of Wimbledon Park Road (north) than northbound. On the east side flows were similar in both directions, however, child pedestrian movements were notably higher northbound. This correlates to the high northbound crossing movements on Replingham Road but low crossing movements observed crossing Wimbledon Park Road (north)



9.0 VEHICULAR TRACKING

Tracking has been undertaken - based on Standard rigid bus and DB32 refuse vehicle - to determine which areas of the carriageway seem to be unnecessary.

From the information gathered, it was easily identifiable that in some locations the existing kerb could be re-aligned to gain more footway space and still guarantee safety and ease of movement for vehicles.

The width of Wimbledon Park Road (north) has been set up at 6.2m. 6.2m is the minimum width to enable bus movements whilst still enabling safe cycle movements on the carriageway.



-----Proposed kerb line

Vehicular tracking



10.0 PARKING REVIEW



The transport strategy for the area aims to create a pedestrian friendly atmosphere around Southfields Underground Station through minor changes to the transport and parking layout with minimal impact on the efficiency of its road network. These changes will bring substantial improvements to the 'look and feel' of the area as well as help create a sense of place.

The transport strategy will focus on retaining the existing bus stops and widening the footways. The majority of the existing parking is retained with the exception of areas within Replingham Road and Wimbledon Park Road (south) where parking would need to be removed to aide in reducing congestion and allow for street enhancements.

Minimal changes to loading bay have been proposed. The loading on Wimbledon Park (south) will be incorporated within the footway with additional space for pedestrians.



Figure 10. Parking Review



11.0 EXISTING PARKING AREA



Empty loading parking spaces in Replingham Road



Empty loading parking spaces in Replingham Road - curve



Empty loading bay in Wimbledon Park Road (south)



Furniture on build out on Wimbledon Park Road (north)



Empty parking space in Replingham Road



TESCO Loading bay in Heythorp Street

12.0 PARKING ANALYSIS - Occupancy in parking bays - Average weekday (7AM-7PM)

Replingham Rd. - north side ('No waiting at anytime' 7:-9:30am Monday to Friday / P&D 9:30am-4:30pm Monday to Friday – Max Stay 1 hour)

Bays surveyed: 9

7 – 9:30am between 67 and 100% despite prohibition of parking at these times.

9:30am – 4:30pm between 56 and 100% occupancy. Whilst periods of 100% occupancy, often 1-2 spaces available throughout the day.

4:30pm to 7pm - Nearly 100% occupied for the majority of the time. (Note this period is during peak hours and parking at this location results in increased congestion due to high traffic flows)

Overall 82% of vehicle stop for 15 minutes or less meaning there is a high turnover of vehicles.

Less than 6% stay between 15-30 minutes

Less than 4% stay over 1 hour.

Replingham Rd. - north side (P&D 9.30am - 4.30pm Monday to Friday) max 1 hour) -From bend to vehicle access

Bays surveyed: 6

7-9:30 am between 67 and 100% 1-2 spaces available for 50% of the time.

9:30am – 4:30pm between 50 and 100% occupancy. Whilst periods of 100% occupancy 1-2 spaces available for the majority of the period.

4:30pm to 7pm - between 67 and 100% 1-2 spaces available for 50% of the time.

Nearly 70% of vehicle stop for 15 minutes or less meaning there is a high turnover of vehicles

10% stay between 15-30 minutes

Nearly 9% stayed for over 1 hour despite the restrictions in place.

Replingham Rd. - north side (P&D 9:30am-4:30pm Monday to Friday) – Max Stay 1 hour

Bays surveyed: 10

 $7-9{:}30 \text{am}$ between 40 and 100% 2-3 spaces available for the majority of the period

9:30am – 4:30pm between 60 and 100% occupancy. Whilst periods of 100% occupancy 1-2 spaces available for the majority of the period with a maximum of 4 spaces available.

4:30pm to 7pm - between 60 and 100% occupancy. 100% occupancy for 50% of the time, outside these periods 1-3 spaces available.



Replingham Rd. - north side (Permit Holder/Pay & Display 9:30am-4:30pm Monday to Friday) – Max Stay 1 hour

Bays surveyed: 11

Throughout the survey period 45-65 % occupancy was recorded.

4-5 spaces available throughout the day.

The surveys indicated that east of Heythorp Street that 72% of vehicles stopped for 15 minutes or less

15% stay between 15-30 minutes. Less than 5% for over 1 hour.

CONCLUSIONS:

- Duration of stay is less than 15 minutes for the majority of users
- There is capacity to accommodate displacement of vehicles in the eastern section of Replingham Road as a result of the loss of parking bays





12.1 PARKING ANALYSIS - Occupancy in parking bays - Average weekday (7AM-7PM)

Wimbledon Park Rd. (south) - east side (P&D 9:30am-4:30pm Monday to Friday – Max Stay 1 hour)

Bays surveyed: 8

7 - 9:30am: Between 60 and 100% occupancy throughout the period.100% occupied for half the time. 2-3 bays available from the remainder of the time

9:30am – 4:30pm between 50-70% occupied for the majority of the period, resulting in between 2-4 spaces available

4:30pm to 7pm - between 50-70% occupied for the majority of the period, resulting in between 2-4 spaces available.

52% waited of vehicles parked for 15 minutes or less and 19% between 15minutes and 30 minutes.

20% of vehicles parked for over 1 hour which exceed the permitted waiting time.

Wimbledon Park Rd. (south) - east side (Loading bay in use throughout the day)

10 incidents of loading/unloading activities

On average 5 vehicles per hour short term parking / waiting

69% Average occupancy over day

Wimbledon Park Road (south) - west side DYLs

6 episodes of loading / unloading. 2 of which were 45mins-1hour

4 < 15 mins stay

17 incidents of dropping off/picking up waiting. 1 of which was recorded parked for 30 mins, rest < 10mins

Wimbledon Park Rd. (south) - east side (Permit Holder/P&D 9:30am-4:30pm Monday to Friday – Max Stay 4 hours)

Bays surveyed: 19

50-70% occupancy through the day resulting in 4-8 spaces available.

Wimbledon Park Rd. (south) - west side (Permit Holder/P&D 9:30am-4:30pm Monday to Friday)

Bays surveyed: 4 in vicinity of retail area

Throughout the day occupancy levels were low with no vehicles recorded parking for the majority of the day. Observations on other days saw the parking bays partially utilised, but generally there were spaces available.

15 shared use bays were surveys further south and identified approximately 50% occupancy throughout the day resulting in 6-8 bays available throughout the day.

Combining all the shared use bays 43% of vehicles parked for 15minutes or less and 11 % between 15 -30 minutes; 35% parked in excess of 1 hour.



CONCLUSIONS:

- A high percentage of vehicles stop for 15 minutes or less meaning turnover is high
- Generally there were spaces available throughout the day
- As a result of the above it is felt that a reduction in the number of bays should not adversely affect the businesses



12.2 PARKING ANALYSIS - Occupancy in parking bays - Average weekday (7AM-7PM)

Wimbledon Park Road (north) - east side (Pay & Display 9:30am-4:30pm Monday to Friday – Max Stay 1 hour)

Bays surveyed: 5

Up to midday the parking bays were 100% occupied for the majority of the time. From 1:30pm there were generally up to 2 spaces available.

40% of vehicles stopped for 15 minutes of less, 22% 15-30 minutes and 18% 30-60 minutes.

Wimbledon Park Road (north) - east side (Loading bay/DYL)

Low level of loading activity

50% < 5 mins stay

25-75% occupancy for the majority of the day

100% occupancy 3pm, 3:30pm, 6pm-7pm and for short periods randomly through day.

Wimbledon Park Road (north) - east side (disabled bay)

The disabled bay was occupied 100% of the time during the survey period. 60% of vehicles stopped for 15 minutes or less whilst 40% were recorded stopping fro one hour or more.

Wimbledon Park Rd. (north) - west side (Pay & Display 9:30am-4:30pm Monday to Friday) – Max Stay 1 hour

Bays surveyed: 3

100% for long periods throughout the day.

46% parked for 15 minutes or less; 7.7% between 15-30minutes and 23% 30-60 minutes indicating a high turnover of vehicles.

Wimbledon Park Road (north) - west side (taxi rank)

Bays surveyed: 3

For the majority of the survey period 1-2 taxis were recorded at any one time

94% of the taxis were recorded stopping for 15 minutes or less

Wimbledon Park Rd. (north) - west side (Permit Holder/P&D 9:30am-4:30pm Monday to Friday) – Max Stay 4 hours

Bays surveyed: 4

Throughout the day 75% of the bays were occupied with a single bay available.



CONCLUSIONS:

- Turnover of vehicles is high
- For the majority of the day there are spaces available for parking
- The current layout operates well and no reduction in parking bays is proposed
- The taxi rank is underutilised and consideration could be given to its removal or reduction in size



PROJECT CENTRE

12.3 PARKING ANALYSIS - Occupancy in parking bays - side street

Elsenham Street - Permit holder bays Monday to Friday 1:30pm to 2:30 pm and 2 x Disabled Bays

Bays surveyed: 6

The disabled bays were not fully utilised throughout the day, only on 3 occasions were both bays in use. This suggests that there is scope to remove one disabled bay.

3 permit holder bays were utilised 100% of the time

1-2 bays were available for the majority of the survey period.

40% of the vehicles surveys stopped for 15 minutes or less

Heythorp Street - Permit + Car club Bays

Bays surveyed: 15 x permit holder bays Monday to Friday 1:30pm to 2:30 pm and 2 x Car club bays

There was an average occupancy of 80% with between 2-4 spaces available throughout the day.

47% of vehicles stopped for 15 minutes or less

21% stopped between 15-60 minutes

Clonmore Street - Permit

Bays surveyed: 19 x permit holder bays Monday to Friday 1:30pm to 2:30 pm

There was an average occupancy of 50-60% throughout the day resulting in 7-8 spaces being available throughout the day.

59% of vehicles stopped for 15 minutes or less

CONCLUSIONS:

- The surveys suggest that 2-3 bays could be converted to shared use permit holder / pay and display bays / maximum stay 1 hour in Heythorp Street and Clonmore Street to accommodate displacement from Replingham Road
- Access to Elsenham Street is difficult, therefore, it is not recommended to provide additional pay and display bays
- The disabled bays in Elsenham Street are under utilised, therefore it is recommended to remove 1 bay









PROJECT CENTRE

10

15

12.4 BUS STOP ANALYSIS - Morning peak (7am to 10am)

A high level bus stop analysis was undertaken to assess potential improvements to this service with a particular focus on bus stop U

Bus routes

- **493** serves Wimbledon Park Road (south) and Augustus Road
- **39** serves Wimbledon Park Road, north and south •
- There are no bus routes on Replingham Road

Stop U on Wimbledon Park Road (south) serves routes 493 and 39 southbound

- Existing bus cage length 29m •
- Bus Clocks between 7am and 10am indicate that there are occasions where • two buses may be at the stop. However, observations indicate that this generally occurs as one bus leaves and another arrives
- Further surveys are recommended to ascertain how often multiple buses are in the stop

OPTION 1: Reduce Length of Bus Cage from 29m to 21m and retain stop in current location.

Advantages:

- Discourage abuse of bus stop by vehicles loading/unloading - Reduce congestion at junction

Disadvantages:

- Buses may have to wait on double yellow lines for short periods. (However, this is no worse than the current situation)

OPTION 2: Relocate point at which buses stop to end of bus cage

TfL guidance recommend a 9m exit taper where there are parking or loading bays in front of the bus stop. The current bus stop flag is located 9m from the end of the bus stop cage to provide the correct exit taper.

It is not possible to relocate the bus stop cage further forward without the loss of parking bays. The removal of 1 or 2 parking bays would enable the bus stop cage to be relocated further from the junction and retain its current length accommodating 2 buses when required.



7am to 8am

8am to 9am



Bus stop layout (Accessible Bus Stop Design Guidance, TfL, 2017)

WBC SOUTHFIELDS UNDERGROUND STATION - Design Strategy

Southfields Station (Stop U) - 9am to 10am





