

Parking Stress Assessment – London Borough of Southwark



Denmark Hill and Canada Water

Area 2 - Canada Water

3 Area 2 – Canada Water

3.1 Area characteristics

The Canada Water survey area (see Figure 6) is not as spatially concentrated as the Denmark Hill one. It can be visually divided into three smaller sections all of which are within close proximity to several parking trip generators that could contribute to a higher parking demand. These are the London Overground Rotherhithe station (to the north), the National Rail and London Underground Canada Water station (in the centre) and the National Rail Surrey Quays station (to the south). There is a number of shopping malls and other company building in the area that generally already provide parking facilities for the users.

On-street parking capacity for the area was calculated as 926 vehicles. Designated parking bays account for approximately 6% (marked bays with capacity for 59 vehicles) of the overall capacity.

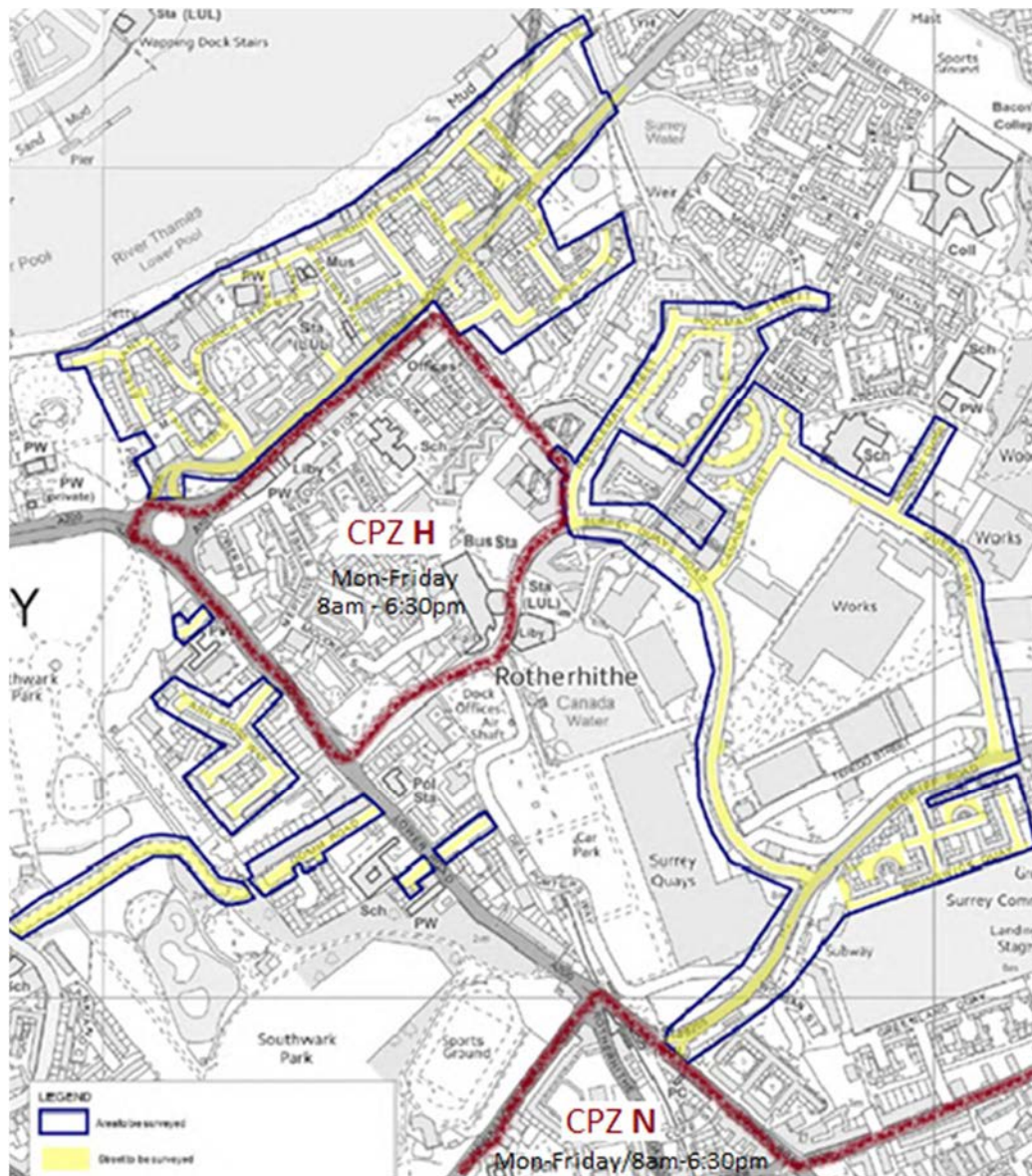


Figure 6: Geographic extents of the Canada Water survey area.

3.2 Weekday results – Wednesday, 14th January 2015

The average weekday parking occupancy for the area was 70%, ranging significantly from 1% to 280% (Table 12 and Figure 7). Over half of the streets were below medium stressed, with a limited number exceeding the on-street parking capacity. Namely, Canada Street, Elephant Lane, Hothfield Place and Kenning Street were stressed beyond capacity, with occupancy levels between 113% and 280%. Canon Beck Road and Quebec Way are both classified as very highly stressed with parking occupancy rates of 92% and 95%, respectively.

All these streets are in close vicinity of parking trip generators, such as the National Rail and London Overground stations and the existing CPZ's in the wider area. A high number of vehicles were found parked along existing parking restrictions (see Appendix). This provides an additional explanation for the very highly stressed and beyond capacity stressed streets. 11% (147 vehicles) of the surveyed vehicles were parked on double yellow lines and over 18% were violating existing restrictions. This issue is most evident for Canada Street, Elephant Lane and Quebec Way, where more than half of the surveyed vehicles were parked on double yellow lines.

As a general trend, the occupancy rates per street were higher for the period between 8am - 5pm and lower during the first survey beats of the weekday and after 6pm (Table 11). The overall demand for parking spaces per survey beat ranged from 440 to 621 vehicles (see Appendix). The greatest number of parked vehicles were observed between 9am – 4pm and the lowest before 7 am and after 6pm.

Table 8: Parking type based on parking activity (Canada Water - weekday).

PARKING TYPE	Vehicles
COMMUTER	207
LONG STAY	198
RESIDENT	401
SHORT STAY	532
Grand Total	1338

A total of 1338 vehicles were observed during the weekday survey period (Table 2). Approximately 40% of the overall occupancy was associated with short stay parking (532 vehicles). Resident parking was the second most common parking activity, accounting for 30% (401 vehicles) of all parked vehicles. Parking related to commuters and long stay parking accounted for 15% for each activity class.

As far as parking type per street is concerned (Table 12), 69% of the overall observed vehicles in the Canada Water area belonged to non-residents, whereas for the daytime survey beats (8am - 6pm), the average non-resident parking activity per street was 53%.

B205 Brunel Road, Hothfield Place, Orange Place, Quebec Way, Roberts Close and Needleman Street presented the highest percentages of parked vehicles belonging to non-residents throughout the survey period (Figure 8), ranging from 92-100%. Short stay parking activity was the highest for those streets, along with Catterick Road and B205 Redriff Road.

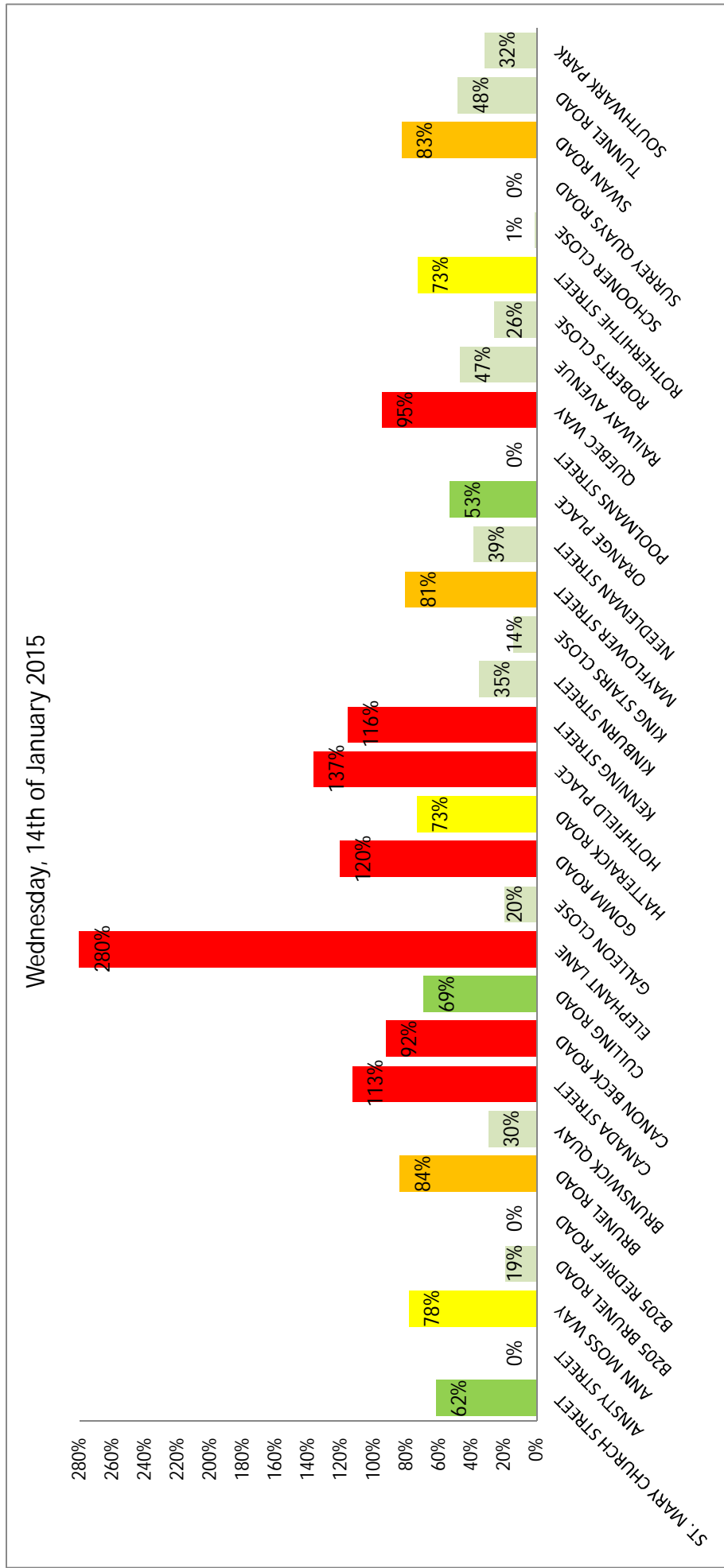
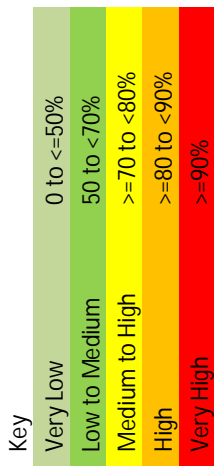


Figure 7: Average parking occupancy per street (Canada Water - weekday).

Table 9: Average parking occupancy per beat per street (Canada Water - weekday).

STREET NAME	Wednesday, 14th January 2015														Average	Capacity (No. Of Vehicles)	
	06:00 - 07:00	07:00 - 08:00	08:00 - 09:00	09:00 - 10:00	10:00 - 11:00	11:00 - 12:00	12:00 - 13:00	13:00 - 14:00	14:00 - 15:00	15:00 - 16:00	16:00 - 17:00	17:00 - 18:00	18:00 - 19:00	19:00 - 20:00			20:00 - 21:00
ST. MARY CHURCH STREET	44%	55%	60%	69%	69%	65%	65%	69%	62%	65%	56%	60%	60%	62%	64%	62%	55
AINSTY STREET	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
ANN MOSS WAY	74%	77%	77%	83%	86%	83%	83%	83%	83%	91%	83%	63%	69%	69%	71%	78%	35
B205 BRUNEL ROAD	16%	16%	14%	14%	21%	21%	22%	22%	24%	24%	21%	21%	16%	17%	16%	19%	63
B205 REDRIFF ROAD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
BRUNEL ROAD	58%	73%	73%	88%	92%	96%	96%	100%	100%	96%	96%	85%	77%	62%	65%	84%	26
BRUNSWICK QUAY	23%	25%	26%	28%	29%	28%	29%	29%	30%	32%	37%	36%	32%	32%	29%	30%	114
CANADA STREET	100%	108%	117%	129%	104%	121%	117%	104%	108%	133%	113%	129%	108%	104%	96%	113%	24
CANON BECK ROAD	95%	91%	95%	86%	93%	95%	93%	95%	86%	89%	93%	98%	98%	86%	89%	92%	44
CULLING ROAD	27%	82%	82%	91%	91%	91%	91%	100%	91%	100%	109%	45%	18%	9%	9%	69%	11
ELEPHANT LANE	257%	286%	286%	329%	300%	300%	271%	314%	314%	300%	286%	257%	229%	214%	257%	280%	7
GALLEON CLOSE	25%	19%	19%	19%	19%	19%	19%	19%	13%	19%	19%	19%	19%	25%	20%	20%	16
GOMM ROAD	118%	116%	111%	120%	125%	123%	127%	125%	120%	141%	125%	107%	114%	114%	120%	120%	44
HATTERAICK ROAD	100%	100%	100%	100%	100%	50%	0%	0%	50%	50%	50%	50%	100%	100%	150%	73%	2
HOTHFIELD PLACE	150%	183%	150%	133%	133%	133%	117%	117%	117%	100%	117%	133%	133%	133%	200%	137%	6
KENNING STREET	100%	100%	111%	111%	133%	122%	122%	122%	122%	122%	122%	111%	111%	111%	111%	116%	9
KINBURN STREET	30%	28%	28%	34%	36%	40%	34%	36%	40%	42%	36%	38%	38%	34%	34%	35%	53
KING STAIRS CLOSE	13%	13%	13%	25%	13%	13%	13%	25%	13%	13%	13%	13%	13%	13%	13%	14%	8
MAYFLOWER STREET	73%	69%	77%	92%	88%	73%	88%	85%	85%	88%	85%	92%	77%	69%	65%	81%	26
NEEDLEMAN STREET	20%	20%	20%	60%	40%	80%	40%	20%	40%	80%	40%	20%	20%	40%	40%	39%	5
ORANGE PLACE	56%	56%	56%	50%	44%	50%	50%	50%	69%	56%	56%	56%	50%	50%	50%	53%	16
POOLMANS STREET	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
QUEBEC WAY	15%	79%	110%	138%	138%	131%	141%	131%	126%	133%	82%	79%	54%	36%	26%	95%	39
RAILWAY AVENUE	45%	45%	45%	50%	50%	50%	50%	55%	50%	50%	45%	45%	45%	36%	41%	47%	22
ROBERTS CLOSE	5%	5%	9%	27%	36%	41%	41%	45%	36%	45%	32%	23%	23%	14%	9%	26%	22
ROTHERHITHE STREET	66%	68%	70%	76%	77%	78%	78%	77%	75%	67%	69%	72%	72%	73%	73%	73%	88
SCHOONER CLOSE	6%	6%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	16
SURREY QUAYS ROAD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
SWAN ROAD	67%	67%	83%	83%	83%	90%	87%	87%	87%	87%	93%	80%	80%	83%	83%	83%	30
TUNNEL ROAD	55%	55%	55%	55%	45%	59%	55%	50%	45%	41%	45%	45%	36%	36%	45%	48%	22
SOUTHWARK PARK	16%	16%	30%	48%	61%	59%	58%	50%	45%	37%	30%	8%	8%	8%	8%	32%	123

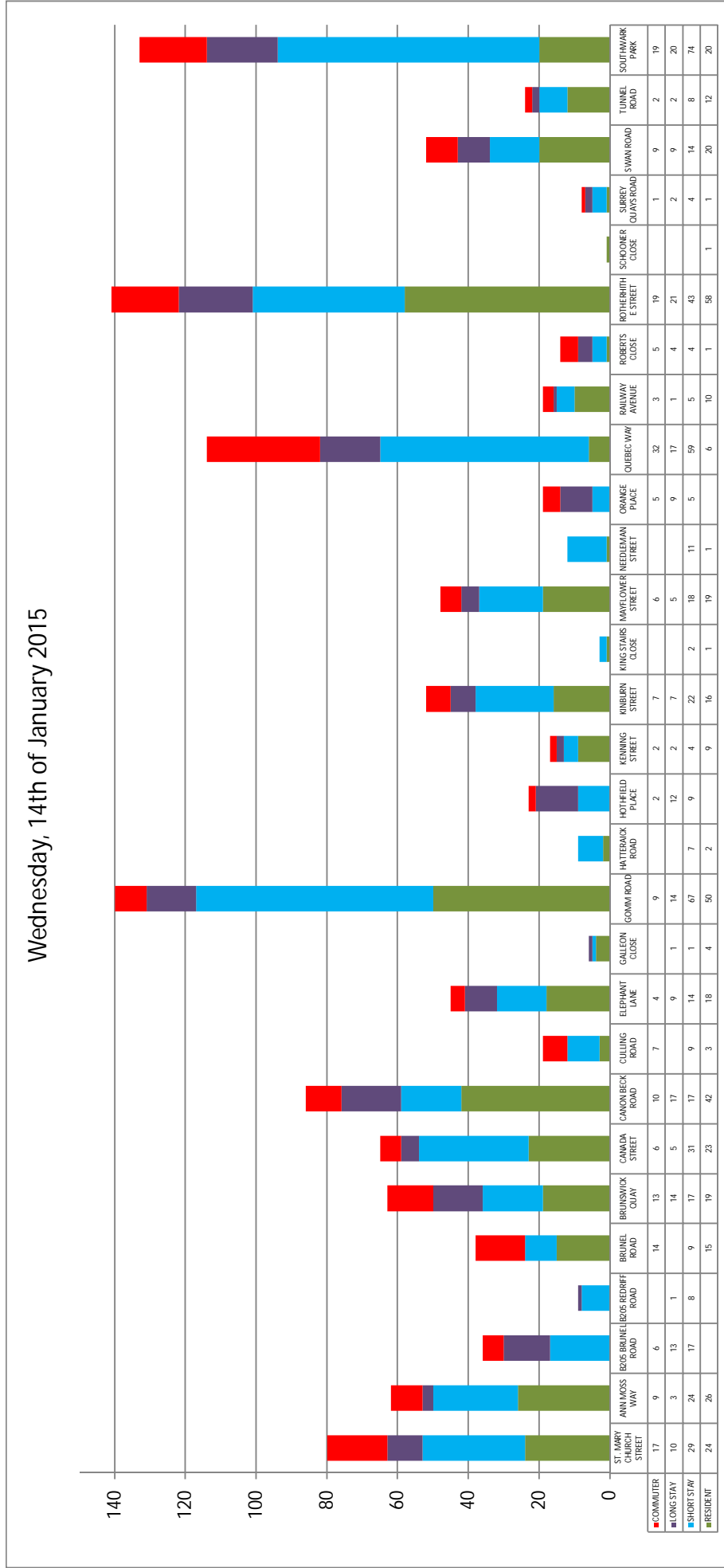


Figure 8: Parking by type of use (Canada Water - weekday).

3.3 Weekend results – Saturday, 17th January 2015

As expected, the weekend parking characteristics for the Canada Water area varied from the weekday ones. The average parking stress level was lower at 52% and, in general, vehicle occupancy was lower during the weekend than during the weekday survey (Figure 9 and Table 13).

The majority of streets showed a very low to low parking stress levels throughout the survey beats (Table 11). Elephant Lane, Hothfield Place, Catterick Road, Kenning Street, Canada Street and Canon Beck Road still showed the highest parking occupancy rates as during the week.

The fact that the above streets appeared stressed beyond capacity for several survey beats can be attributed to the same reasons as for the weekday survey. Indeed, a number of vehicles were observed parked along designated parking restrictions (see Appendix). Namely, 5% of the observed vehicles were parked on double yellow lines and a total of 13% were violating existing restrictions. This was prominent for Needleman Street and Quebec Way, where half of the surveyed vehicles were located within the double yellow line route.

The overall demand for parking spaces per beat ranged from 375 to 436 (see Appendix). The greatest number of parked vehicles was observed between 7am – 4pm. These numbers were lower during the afternoon and evening survey beats.

Table 10: Parking type based on parking activity (Canada Water - weekend).

PARKING TYPE	Vehicles
COMMUTER	83
LONG STAY	123
RESIDENT	399
SHORT STAY	502
Grand Total	1107

A total of 1107 vehicles were surveyed in the Canada Water area during Saturday, 17th January 2015 (Table 10). As with the weekday survey, short stay parking was the most common activity, equating to 45% (502 vehicles) of the overall occupancy, followed by parking associated with residents, which accounted for 36%. Long stay parking did not vary significantly between the weekday and weekend survey (11% - 123 vehicles). Finally, as expected on a weekend, the percentage of commuter vehicles over the sum of observed vehicles was almost half (8%) compared to that of the weekday survey.

The average ratio of non-resident vehicles over the total of observed vehicles (Table 13) did not vary significantly compared to the weekday survey (66%). Generally, the non-resident vehicle percentages per street appeared lower during the weekend, with Hothfield Place, Brunel Road and Quebec Way showing the greatest decrease in observed vehicles belonging to non-residents.

It is also worth mentioning that for A205 Brunel Road, Gomm Road and St. Mary Church Street, cars parked for a short period of time accounted for more than half of the overall number of observed vehicles (Figure 10).

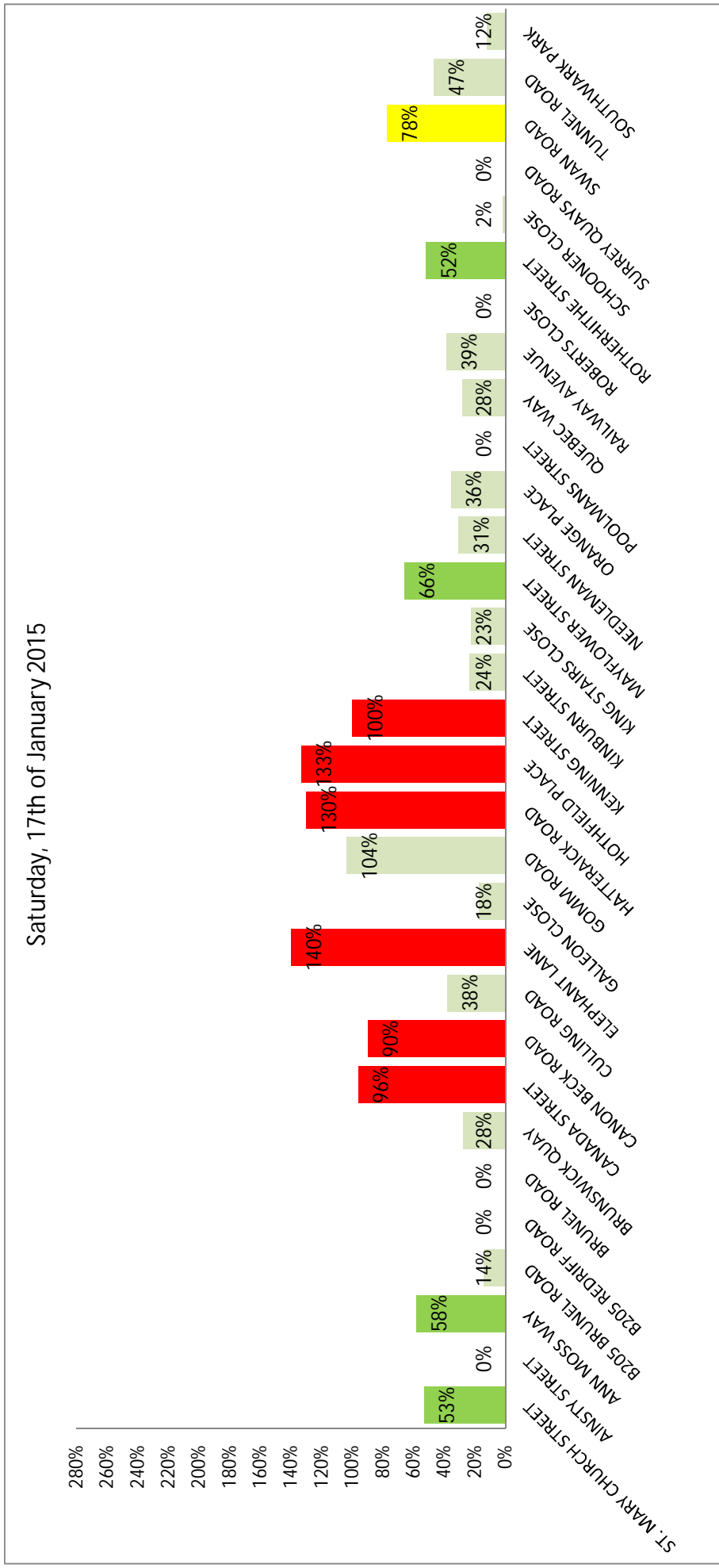
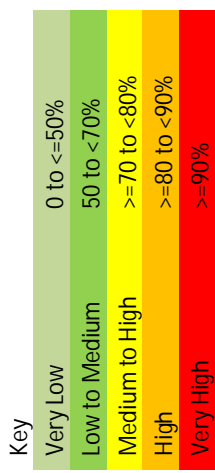


Figure 9: Average parking occupancy per street (Canada Water - weekend).

Table 11: Average parking occupancy per beat per street (Canada Water - weekend).

STREET NAME	Average parking occupancy (%) - 17th January 2015, Saturday														Average	Capacity	
	06:00 - 07:00	07:00 - 08:00	08:00 - 09:00	09:00 - 10:00	10:00 - 11:00	11:00 - 12:00	12:00 - 13:00	13:00 - 14:00	14:00 - 15:00	15:00 - 16:00	16:00 - 17:00	17:00 - 18:00	18:00 - 19:00	19:00 - 20:00			20:00 - 21:00
ST. MARY CHURCH STREET	53%	56%	60%	60%	56%	53%	49%	56%	58%	49%	53%	51%	53%	49%	44%	53%	55
AINSTY STREET	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
ANN MOSS WAY	54%	57%	54%	51%	66%	69%	66%	60%	51%	51%	54%	49%	57%	63%	71%	58%	35
B205 BRUNEL ROAD	14%	17%	16%	17%	13%	13%	14%	16%	16%	13%	10%	10%	14%	14%	16%	14%	63
B205 REDRIFF ROAD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
BRUNEL ROAD	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	26
BRUNSWICK QUAY	25%	30%	29%	28%	27%	26%	27%	27%	31%	31%	30%	26%	26%	25%	27%	28%	114
CANADA STREET	75%	88%	88%	96%	104%	96%	96%	108%	113%	100%	100%	100%	104%	92%	88%	96%	24
CANON BECK ROAD	100%	98%	98%	86%	82%	82%	80%	89%	84%	93%	98%	93%	91%	91%	86%	90%	44
CULLING ROAD	0%	27%	64%	100%	100%	100%	100%	82%	0%	0%	0%	0%	0%	0%	0%	38%	11
ELEPHANT LANE	171%	157%	171%	171%	157%	143%	114%	129%	129%	100%	143%	100%	143%	143%	129%	140%	7
GALLEON CLOSE	25%	25%	19%	19%	13%	13%	13%	13%	13%	13%	6%	19%	25%	25%	25%	18%	16
GOMM ROAD	109%	105%	109%	114%	130%	130%	105%	93%	98%	84%	91%	102%	105%	89%	93%	104%	44
HATTERAICK ROAD	100%	100%	100%	100%	100%	100%	50%	50%	100%	100%	50%	200%	250%	300%	250%	130%	2
HOTHFIELD PLACE	150%	150%	150%	117%	117%	100%	133%	133%	167%	167%	133%	83%	117%	150%	133%	133%	6
KENNING STREET	111%	111%	111%	100%	122%	111%	100%	100%	100%	111%	78%	100%	67%	89%	89%	100%	9
KINBURN STREET	28%	26%	28%	30%	28%	26%	23%	25%	23%	21%	19%	19%	21%	19%	21%	24%	53
KING STAIRS CLOSE	0%	25%	25%	25%	25%	13%	13%	13%	13%	13%	25%	38%	38%	38%	38%	23%	8
MAYFLOWER STREET	77%	69%	62%	77%	77%	65%	69%	62%	65%	65%	62%	54%	62%	62%	65%	66%	26
NEEDLEMAN STREET	20%	40%	20%	0%	20%	40%	60%	40%	40%	20%	40%	40%	40%	20%	20%	31%	5
ORANGE PLACE	19%	19%	25%	19%	13%	44%	38%	38%	63%	44%	44%	38%	44%	44%	50%	36%	16
POOLMANS STREET	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
QUEBEC WAY	23%	31%	33%	41%	38%	41%	44%	26%	26%	26%	23%	21%	15%	15%	18%	28%	39
RAILWAY AVENUE	41%	41%	41%	41%	36%	41%	36%	41%	36%	45%	41%	41%	32%	32%	36%	39%	22
ROBERTS CLOSE	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	22
ROTHERHITHE STREET	52%	52%	53%	49%	49%	45%	44%	52%	56%	56%	55%	51%	56%	55%	52%	52%	88
SCHOONER CLOSE	6%	0%	0%	6%	0%	0%	0%	0%	0%	0%	6%	6%	6%	0%	0%	2%	16
SURREY QUAYS ROAD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
SWAN ROAD	80%	77%	77%	83%	80%	83%	73%	73%	90%	83%	73%	83%	67%	70%	70%	78%	30
TUNNEL ROAD	45%	45%	50%	45%	41%	36%	36%	45%	59%	55%	50%	41%	50%	50%	55%	47%	22
SOUTHWARK PARK	11%	11%	14%	13%	21%	15%	15%	15%	12%	16%	15%	7%	7%	7%	7%	12%	123

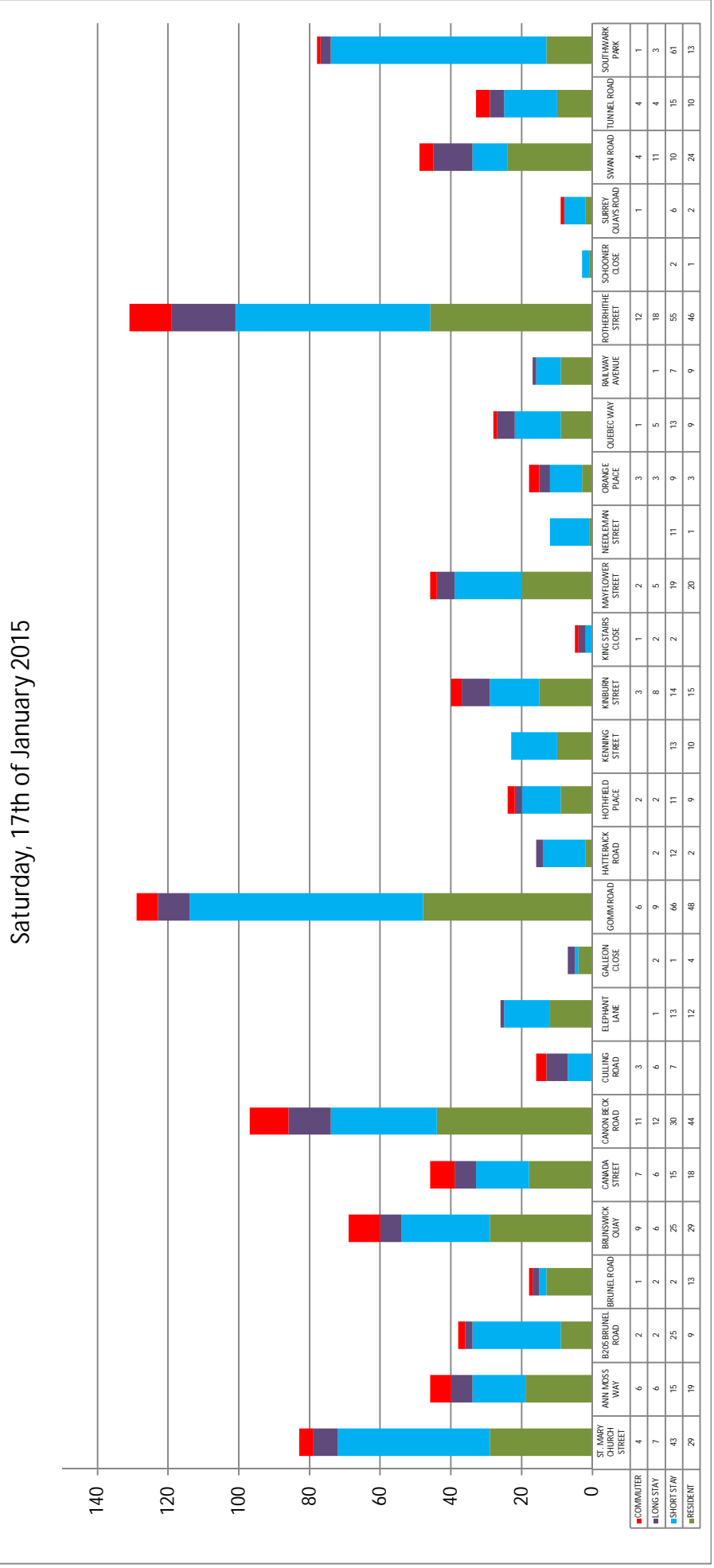


Figure 10: Parking by type of use (Canada Water - weekend).

3.4 Summary – Canada Water

Overall, both Denmark Hill and Canada Water presented the same parking characteristics regarding parking occupancy for the different survey days. The weekly parking stress level was 71% for both areas, followed by a decrease of approximately 20% for the Saturday survey period.

Over half of the surveyed streets were below medium stressed with a small number of roads, namely Canada Street, Elephant Lane, Hothfield Place, Kenning Street, Canon Beck Road and Quebec Way, that appeared very highly and beyond capacity stressed for several survey beats during both the weekday and weekend periods. The latter could be attributed to the adjacent parking trip generators, such as the existing Controlled Parking Zones and the National Rail and Overground stations within the area.

The survey also revealed that 18% and 13% of vehicles for the weekday and weekend survey, respectively, were found parked along existing parking restrictions. This issue was more prominent in the Canada Water area compared to Denmark Hill.

Undoubtedly, short stay parking was the most common activity for both the weekday and Saturday survey periods. Although the percentage of parking associated with residents was very high, less than one third of the observed cars belonged to residents regardless the survey day.

Table 12: Street summary (Canada Water - weekday).

Wednesday, 14 January 2015

STREET NAME	Average occupancy %	Maximum occupancy %	Time of first max occupancy	Minimum occupancy %	Time of first min occupancy	Average % non-resident (all survey period 06:00-21:00)	Average % non-resident (daytime 08:00-18:00)
ST. MARY CHURCH STREET	62%	69%	09:00	44%	06:00	70%	49%
AINSTY STREET	-	-	-	-	-	-	-
ANN MOSS WAY	78%	91%	15:00	63%	17:00	58%	34%
B205 BRUNEL ROAD	19%	24%	14:00	14%	08:00	100%	100%
B205 REDRIFF ROAD	-	-	17:00	-	07:00	100%	100%
BRUNEL ROAD	84%	100%	13:00	58%	06:00	61%	52%
BRUNSWICK QUAY	30%	37%	16:00	23%	06:00	70%	49%
CANADA STREET	113%	133%	15:00	96%	20:00	65%	32%
CANON BECK ROAD	92%	98%	17:00	86%	09:00	51%	34%
CULLING ROAD	69%	109%	16:00	9%	19:00	84%	79%
ELEPHANT LANE	280%	329%	09:00	214%	19:00	60%	39%
GALLEON CLOSE	20%	25%	06:00	13%	14:00	33%	10%
GOMM ROAD	120%	144%	15:00	107%	17:00	64%	34%
HATTERAICK ROAD	73%	150%	20:00	0%	12:00	78%	63%
HOTHFIELD PLACE	137%	200%	20:00	100%	15:00	100%	100%
KENNING STREET	116%	133%	10:00	100%	06:00	47%	21%
KINBURN STREET	35%	42%	15:00	28%	07:00	69%	45%
KING STAIRS CLOSE	14%	25%	09:00	13%	06:00	67%	10%
MAYFLOWER STREET	81%	92%	09:00	65%	20:00	60%	41%
NEEDLEMAN STREET	39%	80%	11:00	20%	06:00	92%	42%
ORANGE PLACE	53%	69%	14:00	44%	10:00	100%	100%
POOLMANS STREET	-	-	-	-	-	-	-
QUEBEC WAY	95%	141%	12:00	15%	06:00	95%	92%
RAILWAY AVENUE	47%	55%	13:00	36%	19:00	47%	29%
ROBERTS CLOSE	26%	45%	13:00	5%	06:00	93%	83%
ROTHERHITHE STREET	73%	78%	11:00	66%	06:00	59%	41%
SCHOONER CLOSE	1%	6%	06:00	0%	09:00	0%	0%
SURREY QUAYS ROAD	-	-	12:00	-	07:00	88%	100%
SWAN ROAD	83%	93%	16:00	67%	06:00	62%	42%
TUNNEL ROAD	48%	59%	11:00	36%	17:00	50%	32%
SOUTHWARD PARK	32%	61%	10:00	8%	17:00	66%	85%
ZONE AVERAGE	71%	92%	N/A	49%	N/A	69%	53%
ZONE MAX	280%	329%	N/A	214%	N/A	100%	100%
ZONE MIN	1%	6%	N/A	0%	N/A	0%	0%

Key

Very Low	0 to <=50%
Low to Medium	50 to <70%
Medium to High	>=70 to <80%
High	>=80 to <90%
Very High	>=90%

Table 13: Street summary (Canada Water - weekend).

Wednesday, 14 January 2015

STREET NAME	Average occupancy %	Maximum occupancy %	Time of first max occupancy	Minimum occupancy %	Time of first min occupancy	Average % non-resident (all survey period 06:00-21:00)	Average % non-resident (daytime 08:00-18:00)
ST. MARY CHURCH STREET	53%	60%	08:00	44%	20:00	65%	31%
AINSTY STREET	-	-	-	-	-	-	-
ANN MOSS WAY	58%	71%	20:00	49%	17:00	59%	30%
B205 BRUNEL ROAD	14%	17%	07:00	10%	16:00	76%	45%
B205 REDRIFF ROAD	-	-	13:00	-	06:00	-	-
BRUNEL ROAD	0%	0%	-	0%	-	28%	12%
BRUNSWICK QUAY	28%	31%	14:00	25%	19:00	58%	32%
CANADA STREET	96%	113%	14:00	75%	06:00	61%	39%
CANON BECK ROAD	90%	100%	06:00	80%	12:00	55%	32%
CULLING ROAD	38%	100%	09:00	0%	06:00	100%	100%
ELEPHANT LANE	140%	171%	06:00	100%	15:00	54%	14%
GALLEON CLOSE	18%	25%	06:00	6%	16:00	43%	7%
GOMM ROAD	104%	130%	10:00	84%	19:00	63%	36%
CATTERICK ROAD	130%	300%	19:00	50%	12:00	88%	50%
HOTHFIELD PLACE	133%	167%	14:00	83%	17:00	63%	34%
KENNING STREET	100%	122%	10:00	67%	18:00	57%	14%
KINBURN STREET	24%	30%	09:00	19%	16:00	63%	46%
KING STAIRS CLOSE	23%	38%	17:00	0%	06:00	100%	100%
MAYFLOWER STREET	66%	77%	06:00	54%	17:00	57%	30%
NEEDLEMAN STREET	31%	60%	12:00	0%	09:00	92%	89%
ORANGE PLACE	36%	63%	14:00	13%	10:00	83%	52%
POOLMANS STREET	-	-	-	-	-	-	-
QUEBEC WAY	28%	44%	12:00	15%	19:00	68%	36%
RAILWAY AVENUE	39%	45%	15:00	32%	18:00	47%	9%
ROBERTS CLOSE	0%	0%	-	0%	-	65%	-
ROTHERHITHE STREET	52%	56%	14:00	44%	12:00	-	41%
SCHOONER CLOSE	2%	6%	06:00	0%	07:00	67%	100%
SURREY QUAYS ROAD	-	-	09:00	-	19:00	78%	72%
SWAN ROAD	78%	90%	14:00	67%	18:00	51%	29%
TUNNEL ROAD	47%	59%	14:00	36%	11:00	70%	50%
SOUTHWARD PARK	12%	21%	10:00	7%	18:00	83%	48%
ZONE AVERAGE	51%	71%	N/A	33%	N/A	66%	44%
ZONE MAX	140%	300%	N/A	100%	N/A	100%	100%
ZONE MIN	0%	0%	N/A	0%	N/A	28%	7%

Key

Very Low 0 to <=50%

Low to Medium 50 to < 70%

Medium to High >=70 to <80%

High >=80 to <90%

Very High >=90%