

Parking Stress Assessment – London Borough of Southwark



Denmark Hill and Canada Water

Area 1 – Denmark Hill

2 Area 1 – Denmark Hill

2.1 Area characteristics

The identified residential area within Denmark Hill (see Figure 1) is of particular importance due to its location between the London Overground Denmark Hill Station and the National Rail Herne Hill Station. These stations are likely to act as parking trip generators and contribute to a higher parking demand, in comparison to other roads in the area.

On-street parking capacity within the highlighted area was calculated as approximately 1955 vehicles. Designated parking bays account for approximately 3% (marked bays with capacity for 54 vehicles) of the overall capacity.

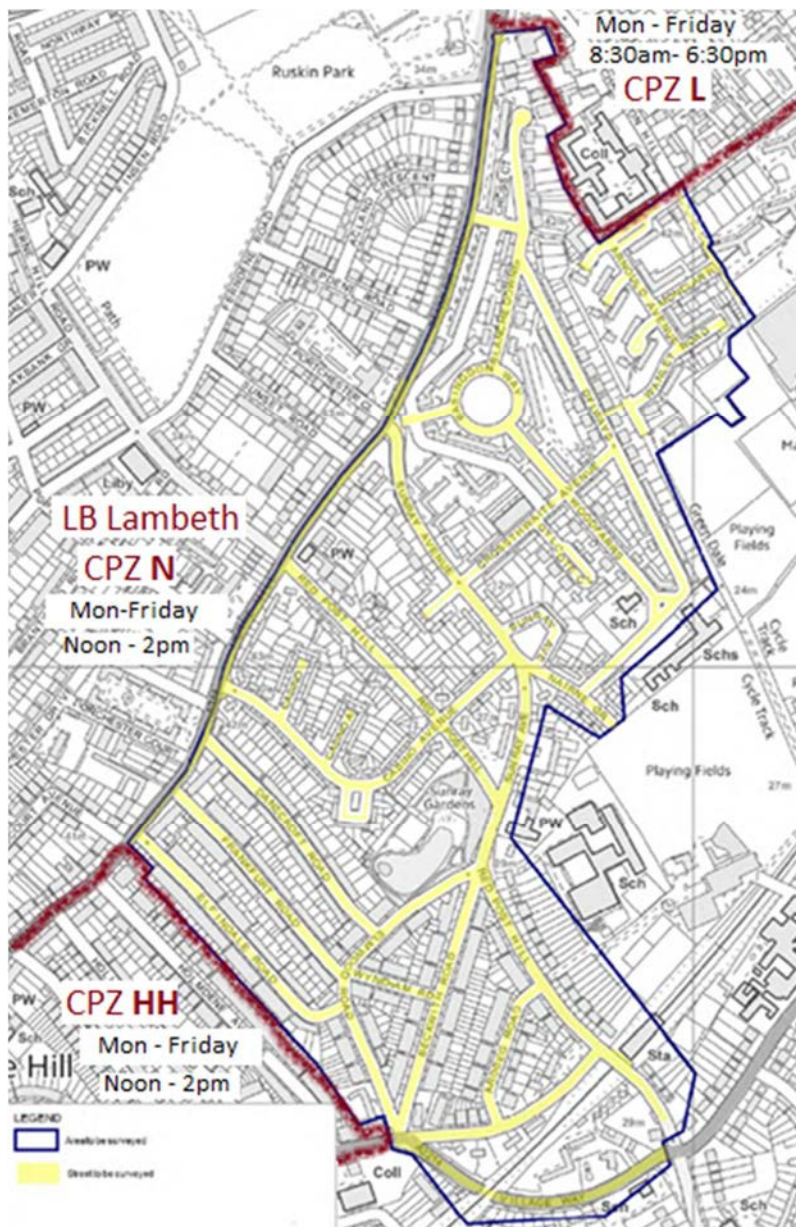


Figure 1: Geographic extents of the Denmark Hill survey area.

2.2 Weekday results – Thursday, 15th January 2015

The average weekday occupancy of the area was 71%, ranging from 26% to 107% (Table 6 and Figure 2). Over half of the streets in this area were highly or very highly stressed and several exceed the on-street parking capacity (are over 100% stressed).

The overall demand for parking spaces per beat ranged from 1157 to 1521 (see Appendix). The greatest number of parked vehicles were observed between 9am – 2pm and the lowest before 7am and after 7pm.

Halfmoon Lane, Blannedowne, Beckwith Road, Elfindale Road and Basingdon Way have the highest demand per beat (Table 3) throughout the day with parking stress levels greater than 90% and demand in excess of supply for several survey beats. Ardbeg Road, Arnould Avenue, Frankfurt Road, Monclar Street and Wyneham Road show high parking demand during daytime hours.

For Blannedowne, Basingdon Way and Arnould Street in the northern part of the survey area, these results could be attributed to the close proximity of the London Overground Denmark Hill Station. The proximity of Herne Hill National Rail Station is potentially the cause of the elevated parking stress levels for the streets at the south of the Denmark Hill area.

Additional information regarding the elevated parking stress rates in these streets can be drawn from the survey data recording the actual location of the observed vehicles (see Appendix). A number of vehicles were noted as parked on sections of the road where existing restrictions, such as double and single yellow lines, dropped kerbs, bus stops and H-bars, were in place. Vehicles parked on double yellow lines and in front of dropped kerbs each accounted for 2% of the total number of parked vehicles for the weekday survey. This is undoubtedly reflected in the parking stress levels.

For the rest of the survey area, the highest parking occupancy percentages per beat per street were observed between 7am – 5pm and were classified as low to medium stress levels.

Table 2: Parking type based on parking activity (Denmark Hill - weekday).

PARKING TYPE	Vehicles
COMMUTER	517
LONG STAY	335
RESIDENT	1206
SHORT STAY	1075
Grand Total	3133

A total of 3133 vehicles were observed parking during the weekday survey period (Table 2). The majority of parked vehicles were classified as residents, with residents' vehicles equating to approximately 38% (1206 vehicles) of the overall occupancy. Short stay parking was the second most common parking activity, accounting for 34% (1075 vehicles) of all parked vehicles. Parking associated with commuters and long stay parking accounted for 17% and 11%, respectively.

For parking type per street (Figure 3 and Table 6), the percentage of non-resident parking varied significantly from 43% to 88%, with Elfindale Road, Elmwood Road, Beckwith Road and Casino Avenue showing more than 70% non-resident parking activity throughout the survey period with a greater number of vehicles parked for a

short period of time. These numbers could be attributed to the displacement of parking demand from existing CPZ's that surround the southern part of the Denmark Hill area, namely CPZ HH and CPZ N. The latter is enforced by the London Borough of Lambeth and is operating during weekdays between 12 – 2pm. On average, 60% of the observed vehicles per street in the Denmark Hill area belonged to non-residents. However, for the daytime survey beats, the average non-resident parking activity accounted for 43%.

The surveyed section of Herne Hill located directly at the south end of Denmark Hill showed parking demand in excess of supply. However, an average of only 2 vehicles were observed during each hourly beat, so these results are not deemed significant in terms of available parking capacity and percentage occupancy.

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%

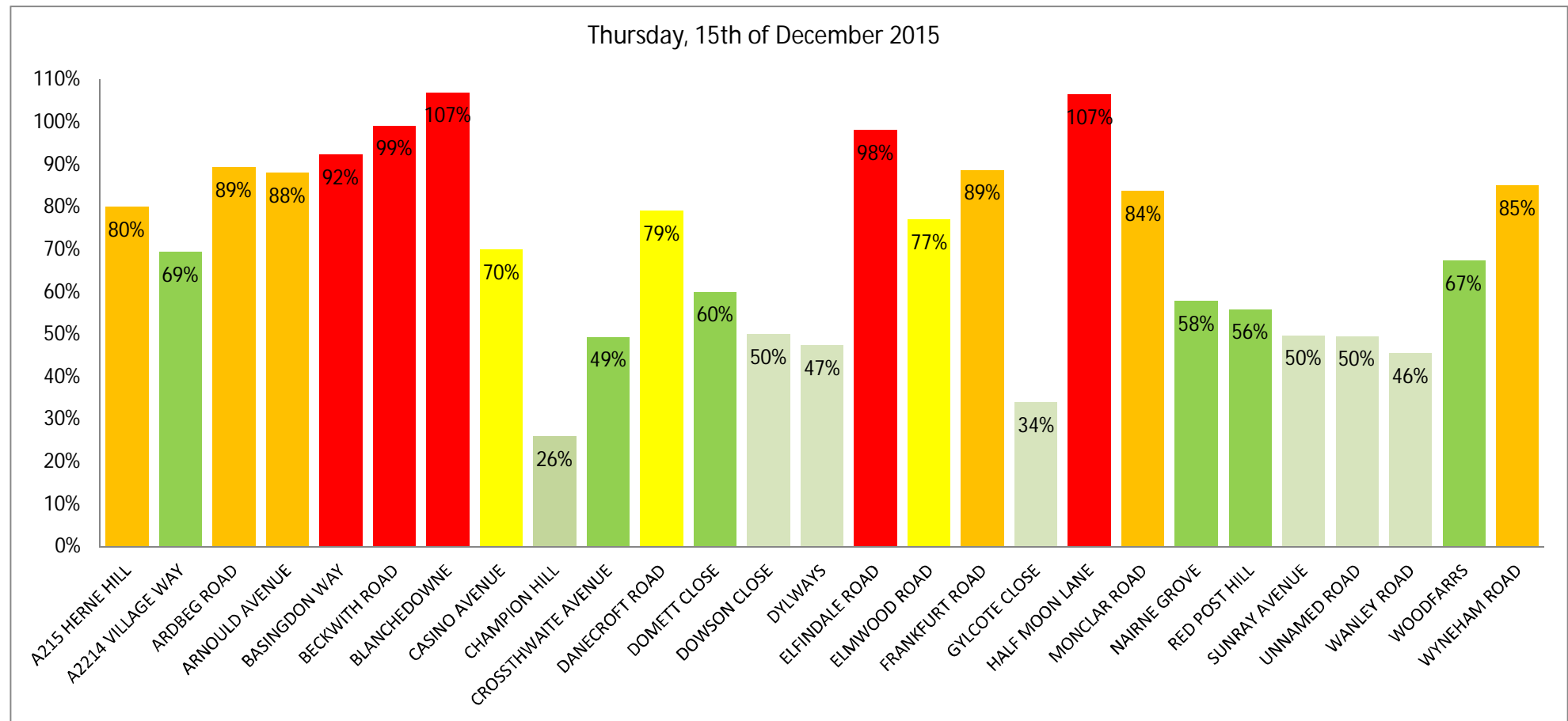


Figure 2: Average parking occupancy per street (Denmark Hill - weekday).

Table 3: Average parking occupancy per beat per street (Denmark Hill - weekday).

Thursday, 15th January 2015																	
STREET NAME	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	% Average	Capacity (No. of vehicles)
A215 DENMARK HILL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
A215 HERNE HILL	133%	33%	67%	133%	133%	133%	100%	100%	100%	0%	0%	0%	0%	200%	67%	80%	3
A2214 VILLAGE WAY	13%	19%	75%	81%	94%	92%	86%	86%	87%	94%	87%	73%	56%	46%	54%	69%	63
ARDBEG ROAD	78%	84%	92%	90%	88%	90%	90%	96%	96%	90%	90%	100%	84%	84%	84%	89%	51
ARNOULD AVENUE	95%	105%	100%	95%	95%	95%	95%	95%	85%	65%	85%	75%	75%	80%	80%	88%	20
BASINGDON WAY	87%	89%	97%	99%	100%	100%	99%	100%	101%	100%	99%	89%	80%	75%	72%	92%	87
BECKWITH ROAD	101%	103%	99%	101%	102%	102%	104%	100%	98%	93%	100%	101%	96%	94%	94%	99%	94
BLANCHDOWNNE	90%	107%	111%	115%	115%	113%	116%	113%	115%	111%	111%	110%	97%	93%	87%	107%	61
CASINO AVENUE	63%	66%	69%	73%	76%	80%	80%	77%	73%	71%	71%	70%	64%	58%	59%	70%	184
CHAMPION HILL	28%	31%	28%	28%	28%	28%	31%	31%	25%	22%	31%	25%	17%	19%	19%	26%	36
CROSTHWAITE AVENUE	36%	39%	48%	58%	64%	63%	59%	59%	59%	53%	55%	41%	38%	38%	31%	49%	64
DANECROFT ROAD	85%	81%	81%	82%	81%	81%	82%	80%	82%	81%	81%	80%	72%	69%	69%	79%	108
DOMETT CLOSE	67%	60%	60%	67%	67%	67%	80%	80%	60%	47%	47%	40%	47%	53%	60%	60%	15
DOWSON CLOSE	50%	55%	59%	55%	55%	55%	59%	59%	50%	50%	41%	41%	36%	41%	45%	50%	22
DYLWAYS	44%	45%	49%	51%	52%	50%	50%	50%	47%	47%	42%	48%	47%	44%	44%	47%	139
ELFINDALE ROAD	98%	99%	104%	104%	102%	105%	103%	103%	102%	96%	85%	88%	94%	94%	96%	98%	113
ELMWOOD ROAD	67%	71%	79%	82%	82%	80%	83%	85%	86%	77%	79%	76%	73%	68%	69%	77%	128
FRANKFURT ROAD	87%	94%	93%	91%	90%	90%	91%	91%	90%	87%	94%	87%	79%	82%	82%	89%	101
GYLCOTE CLOSE	35%	35%	37%	41%	41%	33%	29%	29%	29%	29%	29%	25%	37%	37%	39%	34%	51
HALF MOON LANE	54%	90%	110%	117%	122%	122%	122%	120%	112%	110%	120%	124%	107%	76%	93%	107%	41
MONCLAR ROAD	94%	100%	94%	94%	81%	81%	94%	100%	81%	75%	69%	69%	75%	75%	75%	84%	16
NAIRNE GROVE	33%	40%	69%	84%	72%	74%	71%	69%	72%	69%	57%	48%	36%	36%	36%	58%	58
RED POST HILL	37%	40%	49%	63%	67%	69%	71%	67%	68%	62%	68%	56%	49%	32%	44%	56%	117
SUNRAY AVENUE	31%	41%	54%	59%	59%	60%	58%	59%	57%	56%	56%	46%	40%	35%	37%	50%	189
UNNAMED ROAD	43%	52%	57%	57%	57%	57%	57%	62%	48%	52%	48%	43%	33%	33%	43%	50%	21
WANLEY ROAD	46%	42%	46%	48%	50%	50%	48%	48%	52%	40%	40%	40%	44%	42%	44%	46%	52
WOODFARRS	71%	70%	72%	76%	66%	73%	71%	69%	73%	76%	70%	61%	52%	55%	53%	67%	83
WYNEHAM ROAD	89%	92%	92%	95%	97%	95%	92%	92%	89%	84%	92%	87%	95%	82%	3%	85%	38

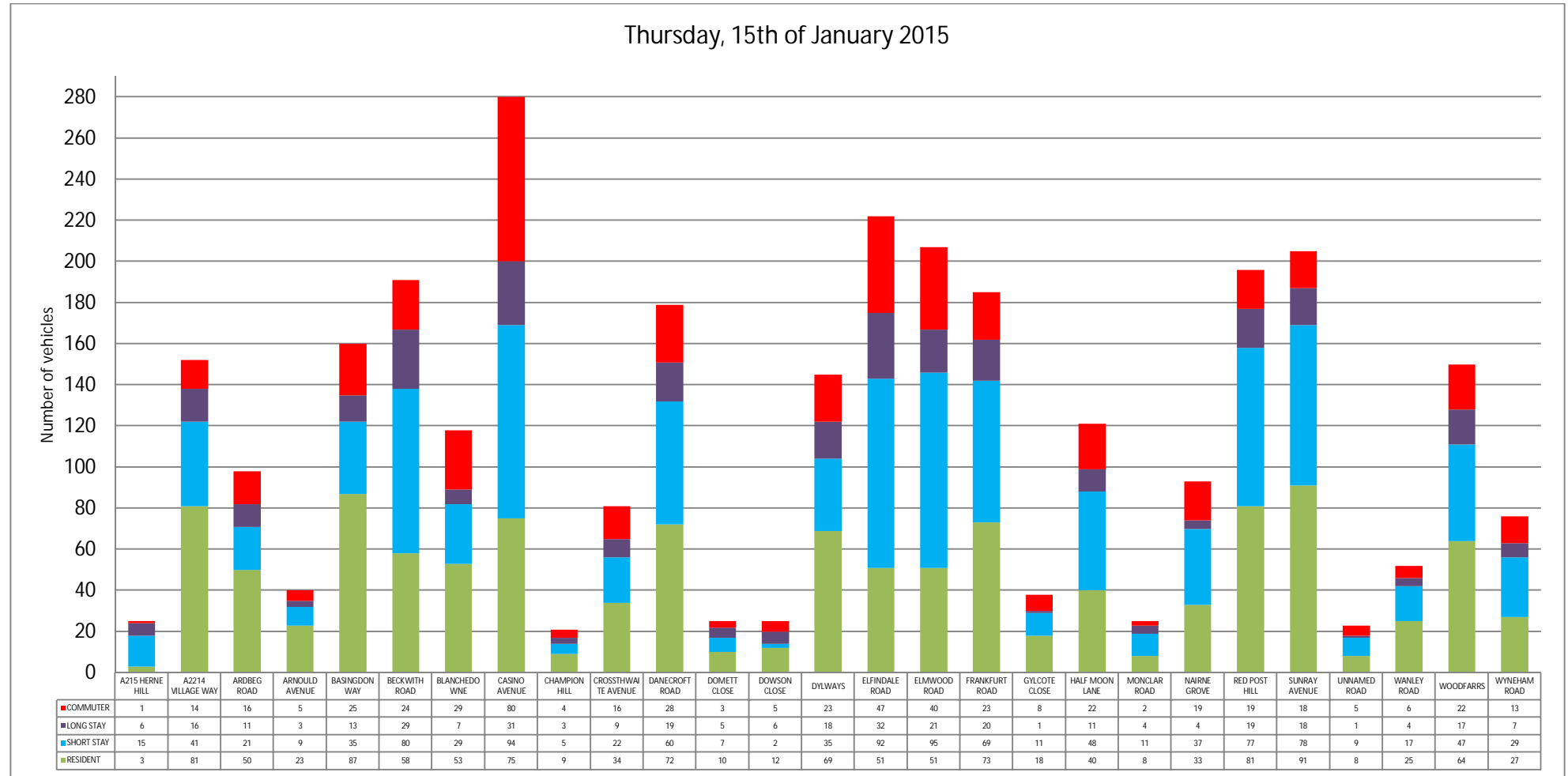


Figure 3: Parking by type of use (Denmark Hill - weekday).

2.3 Weekend results – Saturday, 24th January 2015

The weekend parking characteristics in the Denmark Hill area varied from those of the weekday survey. Overall, vehicle occupancy was lower during the weekend than during the week with an average parking stress level of 56% (Figure 4 and Table 6).

The majority of roads showed a low to medium parking stress level throughout the survey beats (Table 7). Arnould Avenue and Blanedowne, Elfindale Road, Monclar Road, Frankfurt Road, Beckwith Road and Ardbeg Road still showed the highest parking occupancy levels as during the week. Generally, the highest parking stress percentages were observed during daytime hours and specifically between 6am - 3pm, but no other decisive trend could be identified from the data. No streets exceeded the on-street parking capacity, with the exception of Blanedowne between 6pm – 9pm.

The overall demand for parking spaces per beat ranged from 947 to 1160 (see Appendix). The greatest numbers of parked cars was observed between 6am – 12pm. These numbers were significantly lower during the afternoon and evening survey beats.

Table 4: Parking type based on parking activity (Denmark Hill - weekend).

PARKING TYPE	Vehicles
COMMUTER	203
LONG STAY	310
RESIDENT	1152
SHORT STAY	893
Grand Total	2558

A total of 2558 vehicles were observed parking during the Saturday survey period (Table 4). As with the survey undertaken on the weekday, the majority of parked vehicles belonged to residents, accounting for approximately 45% (1152 vehicles) of the overall occupancy. Short stay parking equated to 35% (893 vehicles). As expected on a weekend, commuter vehicles were less than half (8%) compared to those observed during the weekday survey. Long stay activity accounted for almost the same percentage (12%) for both the weekday and the weekend.

Although a higher number of vehicles belonging to residents were observed, the increase in visitor vehicles is reflected by the overall percentages of non-resident parking per street (Table 7 and Figure 5). For Village Way, Halfmoon Lane, Naire Grove, Redpost Hill and many more streets in the south of the outlined area, these values appeared significantly higher during the weekend survey period compared to the weekday. This could be attributed to their close proximity both to the local parks (Brockwell Park to the south and Greendale Playing Fields to the north) that are popular destinations at the weekend, and Herne Hill railway station.

In Beckwith Road, Casino Avenue, Elfindale Road and Elmwood Road the percentage of the non-resident vehicles were almost half of that observed during the weekday survey period. For the rest of the Denmark Hill area, non-resident parking activity did not vary notably between weekdays and weekend.

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%

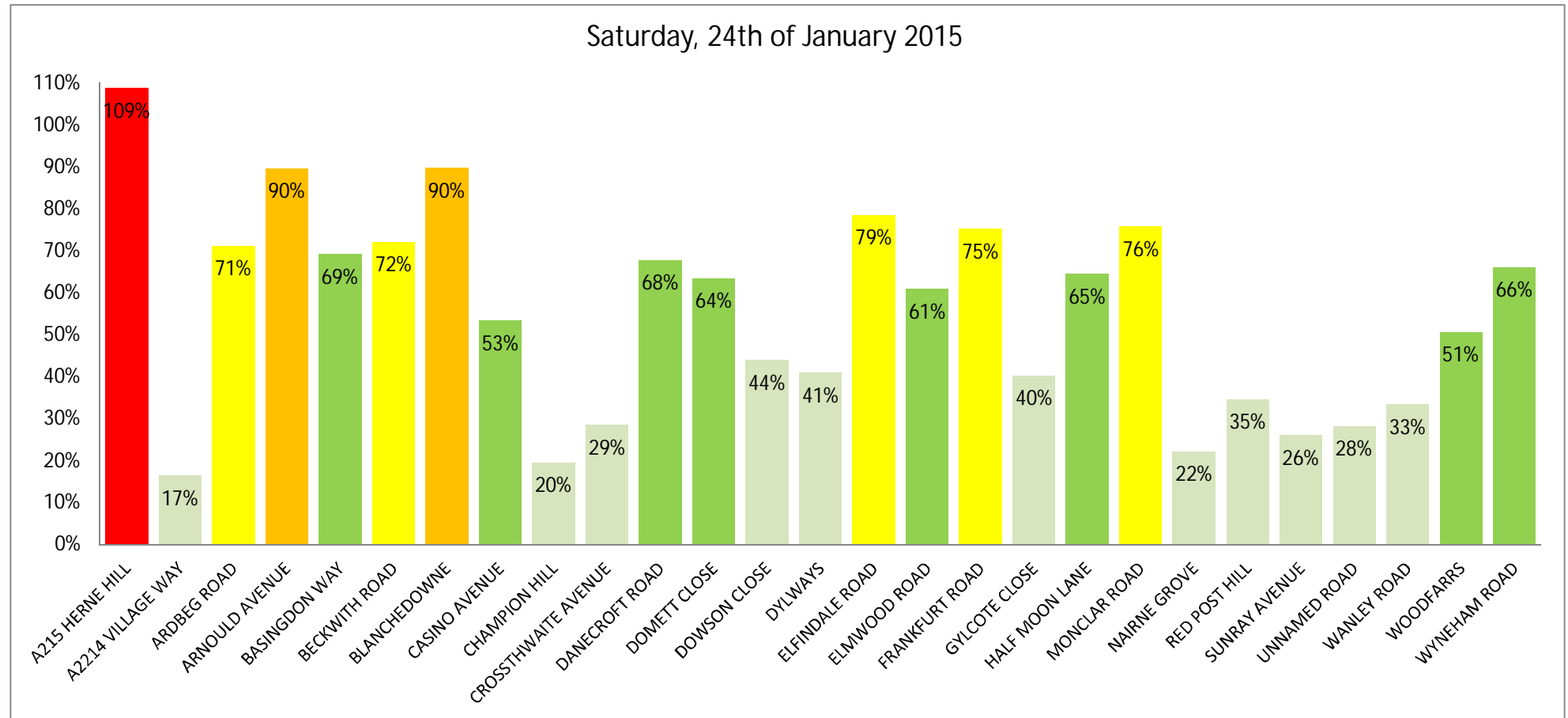


Figure 4: Average parking occupancy per street (Denmark Hill - weekend).

Table 5: Average parking occupancy per beat per street (Denmark Hill - weekend).

Saturday, 24th January 2015																	
STREET NAME	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	% Average	Capacity (No. of vehicles)
A215 DENMARK HILL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
A215 HERNE HILL	67%	100%	100%	67%	133%	133%	167%	133%	100%	67%	133%	100%	100%	133%	100%	109%	3
A2214 VILLAGE WAY	8%	8%	13%	27%	38%	21%	14%	16%	16%	14%	11%	14%	16%	14%	17%	17%	63
ARDBEG ROAD	84%	88%	86%	92%	75%	65%	59%	63%	57%	59%	61%	67%	67%	67%	80%	71%	51
ARNOULD AVENUE	110%	105%	100%	90%	95%	70%	80%	90%	100%	85%	85%	70%	80%	90%	95%	90%	20
BASINGDON WAY	82%	84%	80%	77%	77%	78%	56%	57%	61%	61%	67%	66%	67%	64%	62%	69%	87
BECKWITH ROAD	89%	88%	87%	86%	84%	81%	73%	63%	60%	57%	55%	63%	65%	65%	66%	72%	94
BLANCHDOWNNE	90%	93%	90%	85%	87%	77%	70%	69%	77%	79%	77%	98%	107%	116%	131%	90%	61
CASINO AVENUE	61%	60%	57%	55%	54%	51%	49%	51%	48%	49%	51%	51%	54%	55%	56%	53%	184
CHAMPION HILL	22%	22%	22%	22%	19%	17%	22%	22%	19%	19%	17%	19%	14%	17%	19%	20%	36
CROSTHWAITE AVENUE	38%	34%	36%	41%	31%	31%	22%	20%	28%	25%	30%	27%	22%	20%	23%	29%	64
DANECROFT ROAD	81%	83%	83%	77%	64%	63%	64%	67%	69%	68%	68%	59%	56%	59%	58%	68%	108
DOMETT CLOSE	73%	73%	67%	60%	53%	60%	60%	60%	53%	67%	67%	67%	67%	67%	60%	64%	15
DOWSON CLOSE	59%	59%	59%	50%	50%	41%	41%	36%	45%	45%	45%	27%	32%	32%	36%	44%	22
DYLWAYS	49%	48%	47%	40%	40%	35%	37%	44%	38%	37%	37%	42%	40%	39%	42%	41%	139
ELFINDALE ROAD	93%	92%	85%	82%	82%	72%	71%	72%	73%	74%	82%	79%	74%	73%	75%	79%	113
ELMWOOD ROAD	73%	76%	75%	70%	70%	66%	63%	60%	54%	57%	49%	53%	48%	50%	49%	61%	128
FRANKFURT ROAD	82%	84%	80%	79%	81%	78%	78%	75%	76%	76%	66%	67%	69%	67%	68%	75%	101
GYLCOTE CLOSE	37%	41%	39%	47%	45%	45%	43%	43%	37%	35%	39%	39%	37%	37%	37%	40%	51
HALF MOON LANE	44%	46%	44%	68%	95%	95%	78%	76%	68%	83%	71%	56%	49%	46%	49%	65%	41
MONCLAR ROAD	94%	88%	94%	88%	81%	81%	81%	75%	63%	56%	50%	63%	69%	75%	81%	76%	16
NAIRNE GROVE	19%	21%	21%	24%	28%	22%	24%	33%	24%	26%	17%	19%	19%	19%	19%	22%	58
RED POST HILL	32%	30%	31%	40%	45%	40%	33%	33%	34%	32%	39%	36%	35%	32%	28%	35%	117
SUNRAY AVENUE	28%	29%	28%	26%	26%	27%	26%	27%	27%	25%	26%	25%	27%	23%	23%	26%	189
UNNAMED ROAD ¹	33%	33%	38%	33%	29%	24%	24%	24%	33%	24%	33%	29%	24%	19%	24%	28%	21
WANLEY ROAD	40%	42%	40%	35%	33%	31%	27%	37%	35%	31%	27%	29%	31%	35%	31%	33%	52
WOODFARRS	57%	57%	53%	53%	55%	51%	46%	47%	51%	51%	47%	47%	51%	51%	47%	51%	83
WYNEHAM ROAD	95%	92%	87%	87%	84%	61%	55%	50%	37%	61%	61%	63%	45%	61%	55%	66%	38

¹ Champion Hill spur route, perpendicular to Monclar Road.

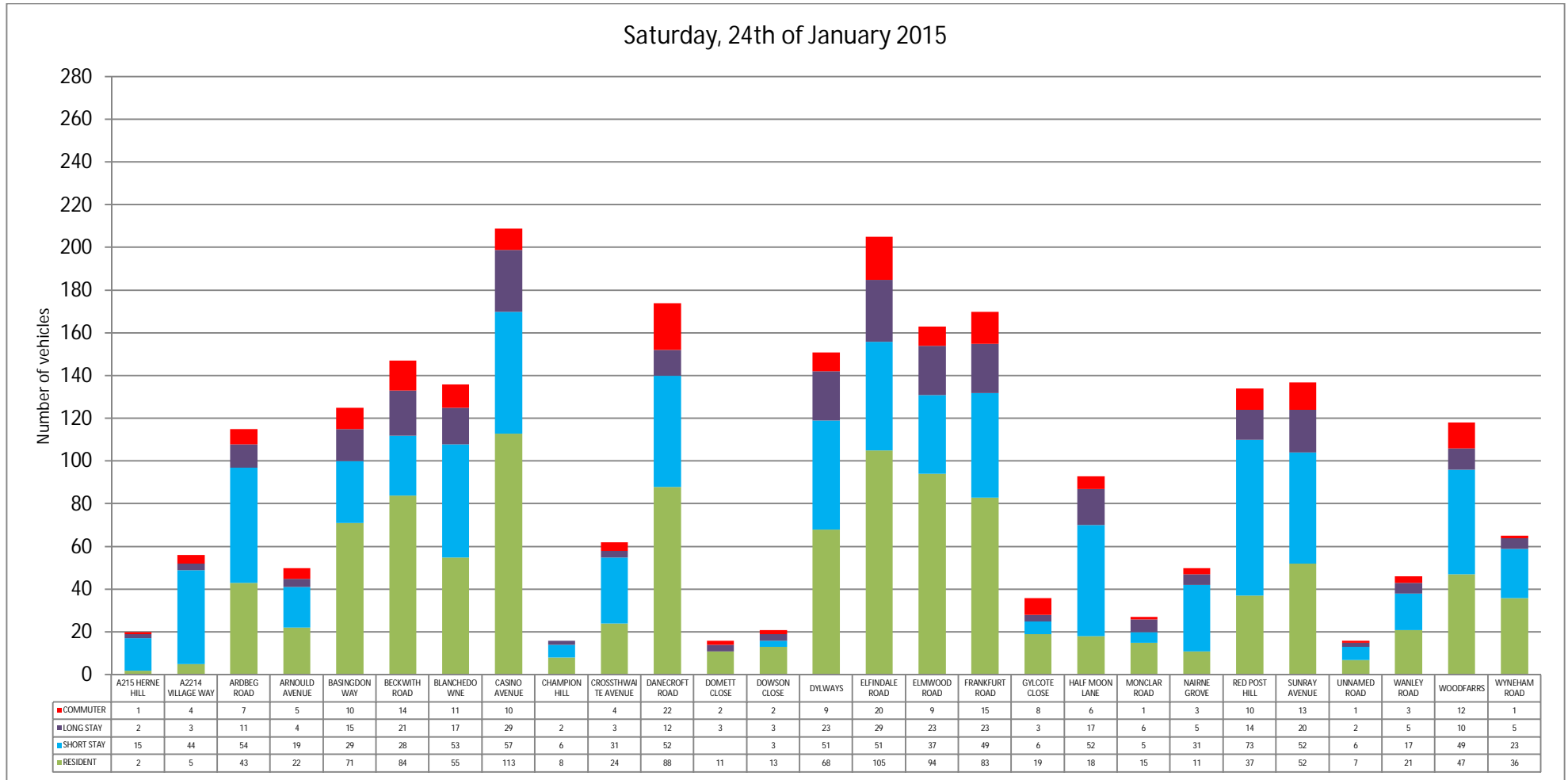


Figure 5: Parking by type of use (Denmark Hill - weekend).

2.4 Summary – Denmark Hill

More than half of the streets in the area were above 80% occupancy during the weekday (Thursday) survey i.e high to very high parking stress levels. It can be reasonably assumed that this trend is reflected in the remaining four days of the working week. A slight decrease in parking demand may be evident on Mondays and Fridays but generally parking throughout the week remains stable unless an unusual event is taking place in the area which may affect results.

Most of the streets adjoining the London Overground Denmark Hill station and National Rail Herne Hill station are also in close proximity of the existing Controlled Parking Zones and are heavily occupied by parked vehicles for the majority of the working day and during Saturday daytime beats. However, for the rest of the area the weekend surveys indicate a much lower occupancy. It would generally be expected that more residents would be parked outside their properties at weekend.

Despite the vehicle classification results indicating that the majority of parked vehicles belong to residents, the increase in vehicle occupancy during the week indicates that non-residents are parking in the area. There is a distinctly higher demand for parking on the roads located to the north and the south of the area, close to the aforementioned stations, which is likely to be a result of commuters parking around the stations or avoiding the operation times of the adjacent CPZ's.

Table 6: Street summary (Denmark Hill - weekday).

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)
A215 DENMARK HILL	-	-	-	-	-	-	-
A215 HERNE HILL	80%	200%	19:00	0%	08:00	88%	54%
A2214 VILLAGE WAY	69%	94%	10:00	13%	06:00	47%	25%
ARDBEG ROAD	89%	100%	17:00	78%	06:00	49%	35%
ARNOULD AVENUE	88%	105%	07:00	65%	15:00	43%	31%
BASINGDON WAY	92%	101%	14:00	72%	20:00	46%	33%
BECKWITH ROAD	99%	104%	12:00	93%	15:00	70%	48%
BLANCHDOWNNE	107%	116%	12:00	87%	20:00	55%	50%
CASINO AVENUE	70%	80%	11:00	58%	19:00	73%	67%
CHAMPION HILL	26%	31%	07:00	17%	18:00	57%	45%
CROSTHWAITE AVENUE	49%	64%	10:00	31%	20:00	58%	42%
DANECROFT ROAD	79%	85%	06:00	69%	20:00	60%	46%
DOMETT CLOSE	60%	80%	12:00	40%	17:00	60%	29%
DOWSON CLOSE	50%	59%	08:00	36%	18:00	52%	39%
DYLWAYS	47%	52%	10:00	42%	16:00	52%	36%
ELFINDALE ROAD	98%	105%	11:00	85%	16:00	77%	67%
ELMWOOD ROAD	77%	86%	14:00	67%	06:00	75%	60%
FRANKFURT ROAD	89%	94%	07:00	79%	18:00	61%	42%
GYLCOTE CLOSE	34%	41%	09:00	25%	17:00	53%	50%
HALF MOON LANE	107%	124%	17:00	54%	06:00	67%	50%
MONCLAR ROAD	84%	100%	07:00	69%	16:00	68%	28%
NAIRNE GROVE	58%	84%	09:00	33%	06:00	65%	49%
RED POST HILL	56%	71%	12:00	32%	19:00	59%	32%
SUNRAY AVENUE	50%	60%	11:00	31%	06:00	56%	31%
UNNAMED ROAD	50%	62%	12:00	33%	17:00	65%	53%
WANLEY ROAD	46%	52%	14:00	40%	15:00	52%	26%
WOODFARRS	67%	76%	10:00	52%	17:00	57%	37%
WYNEHAM ROAD	90%	97%	10:00	82%	18:00	64%	47%
ZONE AVERAGE	71%	86%	N/A	51%	N/A	60%	43%
ZONE MAX	107%	200%	N/A	93%	N/A	88%	67%
ZONE MIN	26%	31%	N/A	0%	N/A	43%	25%

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 7: Street summary (Denmark Hill - weekend).

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)
A215 DENMARK HILL	-	-	-	-	-	-	-
A215 HERNE HILL	109%	167%	12:00	67%	06:00	90%	89%
A2214 VILLAGE WAY	17%	38%	10:00	8%	06:00	91%	74%
ARDBEG ROAD	71%	92%	09:00	57%	14:00	63%	37%
ARNOULD AVENUE	90%	110%	06:00	70%	11:00	56%	31%
BASINGDON WAY	69%	84%	07:00	56%	12:00	43%	23%
BECKWITH ROAD	72%	89%	06:00	55%	16:00	43%	26%
BLANCHDOWNNE	90%	131%	20:00	69%	13:00	60%	26%
CASINO AVENUE	53%	61%	06:00	48%	14:00	46%	23%
CHAMPION HILL	20%	22%	06:00	14%	18:00	50%	20%
CROSTHWAITE AVENUE	29%	41%	09:00	20%	13:00	61%	34%
DANECROFT ROAD	68%	83%	07:00	56%	18:00	49%	32%
DOMETT CLOSE	64%	73%	06:00	53%	10:00	31%	22%
DOWSON CLOSE	44%	59%	06:00	27%	17:00	38%	26%
DYLWAYS	41%	49%	06:00	35%	11:00	55%	33%
ELFINDALE ROAD	79%	93%	06:00	71%	12:00	49%	29%
ELMWOOD ROAD	61%	76%	07:00	48%	18:00	42%	22%
FRANKFURT ROAD	75%	84%	07:00	66%	16:00	51%	29%
GYLCOTE CLOSE	40%	47%	09:00	35%	15:00	47%	42%
HALF MOON LANE	65%	95%	10:00	44%	06:00	81%	59%
MONCLAR ROAD	76%	94%	06:00	50%	16:00	44%	26%
NAIRNE GROVE	22%	33%	13:00	17%	16:00	78%	47%
RED POST HILL	35%	45%	10:00	28%	20:00	72%	48%
SUNRAY AVENUE	26%	29%	07:00	23%	19:00	62%	38%
UNNAMED ROAD	28%	38%	08:00	19%	19:00	56%	27%
WANLEY ROAD	33%	42%	07:00	27%	12:00	54%	29%
WOODFARRS	51%	57%	06:00	46%	12:00	60%	38%
WYNEHAM ROAD	66%	95%	06:00	37%	14:00	45%	20%
ZONE AVERAGE	55%	71%	N/A	43%	N/A	56%	35%
ZONE MAX	109%	167%	N/A	71%	N/A	91%	89%
ZONE MIN	17%	22%	N/A	8%	N/A	31%	20%

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%