# CALLOWLAND (PPA NA), WATFORD
# PARKING TECHNICAL NOTE


SYSTRA

# CALLOWLAND (PPA NA), WATFORD

PARKING TECHNICAL NOTE

| IDENTIFICATION TABLE | |
|---|---|
| **Client/Project Owner** | Watford Borough Council |
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# 1. INTRODUCTION

## 1.1 General

1.1.1 SYSTRA Ltd (SYSTRA) has been commissioned by Watford Borough Council (the Client) to provide transport and highway consultancy services through the undertaking of an on-street parking survey within the Callowland area in Watford.

1.1.2 The Local Planning Authority is Watford Borough Council (WBC) and the Local Highway Authority is Hertfordshire County Council (HCC).

## 1.2 Project Overview

1.2.1 Callowland is a predominantly residential area located to the north of the retail and commercial centre of Watford and to the east of Watford North Rail Station. Parking in the area sits within the Permit Parking Area (PPA) 'NA'. The PPA is operational from 08:00 to 10:00 and 19:00 to 22:00, Monday to Saturday, including Bank Holidays.

1.2.2 PPA NA is bound by a residential area with unrestricted parking to the north (northwards from Gammons Lane), railway lines to the east and west, and by CPZ D, Penn Road and the retail park to the south.

1.2.3 To understand existing parking provision and current utilisation within the Callowland area, the Council has commissioned SYSTRA to undertake an on-street car parking occupancy survey to assess parking capacity and stress levels on streets within PPA NA, with the survey results intended to enable the Client to undertake a review of operational hours of PPA NA and understand potential suitable changes to hours of PPA operation.

## 1.3 Report Scope & Structure

1.3.1 This Parking Technical Note sets out the results of the on-street parking survey undertaken in September 2021 to ascertain current levels of on-street parking supply and demand within PPA NA. Following this introductory section, the remainder of this Parking Technical Note is structured as follows:

- **Section 2: Parking Survey Methodology** – sets out the methodology and spatial scope of the survey.
- **Section 3: Parking Survey Results** – provides a detailed overview of the results of the survey.

# 2. PARKING SURVEY METHODOLOGY

## 2.1 General

2.1.1 A parking beat survey was undertaken within PPA NA by an independent survey company, MHTC Ltd, on Saturday 4 September, Tuesday 7 September and Wednesday 8 September 2021. The survey was undertaken as a series of two-hour beats, with overnight survey beats taken between 05:00 and 07:00, and subsequent beats carried out at the following time periods:

- 08:00-10:00;
- 10:00-12:00;
- 12:00-14:00;
- 14:00-16:00;
- 16:00-18:00; and
- 20:00-22:00.

2.1.2 The timings of survey beats have been planned to ensure beats do not overlap with the start or end times of PPA restrictions; as such, a beat was not undertaken between 18:00 and 20:00.

2.1.3 The survey was undertaken during school term time, and at a time with no formal travel restrictions associated with the COVID-19 pandemic in place. The weather was warm and dry for the three survey days.

2.1.4 In order to provide an accurate picture of parking occupancy levels, the survey was undertaken on two neutral weekdays and one weekend day, avoiding school holidays and dates with a major event occurring locally that could impact upon the survey results. On-street parking restrictions were recorded and parking provision and utilisation segregated by street.

2.1.5 In order to establish percentage parking stress, the total length of acceptable parking areas was recorded alongside the number of parked cars on a street-by-street basis. For stretches of road where parking can be undertaken but individual bays are not marked out (hereafter referred to as 'unmarked bays'), an assumed vehicle length of 5.25m has been utilised to calculate the number of theoretical spaces available.

2.1.6 Locations which are considered unsuitable for parking, such as within five metres of approaches to junctions and corners or across vehicle crossovers and driveways, are not included within the parking capacity figures detailed below.

2.1.7 It is noted that the width of some streets within the survey area is too narrow to accommodate parking on both sides of the carriageway without encroaching onto the pavement. However, parking currently takes place on both sides of these roads, with vehicles parked partially on the footway (pavement parking).

2.1.8 For sections of road narrower than 6.7m, parking is not possible on both sides of the road without such encroachment; in these locations, the unmarked kerbside parking capacity is reduced by 50% if there is potential to park on both sides of the road. Capacity is not reduced if parking is not permitted on the other side of the road (for example due to the presence of double yellow lines).

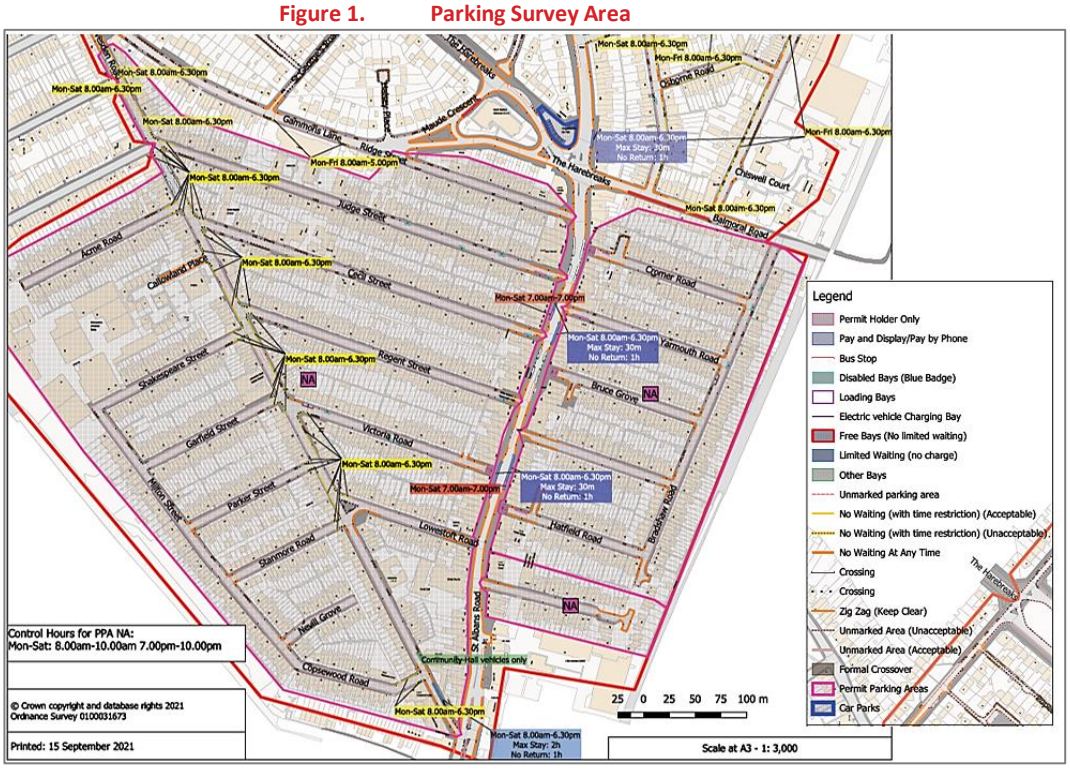
2.1.9 Similarly, where the width of the road is such that parking on either side would cause an obstruction (4.9m or narrower), this has been excluded from the parking capacity figures.

2.1.10 Any suspended parking bays (for example due to temporary roadworks or to accommodate a skip) have been removed from the parking supply when calculating the parking stress.

## 2.2 Survey Extent

2.2.1 The spatial scope of the parking survey is shown in Figure 1, alongside an overview of parking availability by type and street. A copy of the parking supply plan is contained at Appendix A for information.

**Figure 1. Parking Survey Area**




*MHTC, September 2021*

2.2.2 The survey incorporates the following streets:

- Acme Road;
- Bradshaw Road;
- Brixton Road;
- Bruce Grove;
- Cecil Street;
- Copsewood Road;
- Cromer Road;
- Garfield Street;
- Hatfield Road;
- Judge Street;
- Leavesden Road;
- Lowestoft Road;
- Milton Street;
- Nevill Grove;
- Parker Street;
- Regent Street;
- Ridge Street;
- Salisbury Road;
- Shakespeare Street;
- Stanmore Road;
- Victoria Road; and
- Yarmouth Road.

## 2.3 Parking Capacity

2.3.1 Table 1 provides an overview of parking capacity by street, split by parking type.

Table 1. Parking Capacity by Street

| STREET | RESIDENT PERMIT HOLDER (MARKED) | RESIDENT PERMIT HOLDER (UNMARKED) | 'OTHER' | SINGLE YELLOW LINE | TOTAL |
|---|---|---|---|---|---|
| Acme Road | 0 | 55 | 0 | 3 | 58 |
| Bradshaw Road | 0 | 83 | 5 | 0 | 88 |
| Brixton Road | 0 | 38 | 0 | 0 | 38 |
| Bruce Grove | 3 | 44 | 0 | 0 | 47 |
| Cecil Street | 0 | 98 | 1 | 1 | 100 |
| Copsewood Road | 0 | 75 | 0 | 4 | 79 |
| Cromer Road | 4 | 41 | 0 | 0 | 45 |
| Garfield Street | 0 | 47 | 0 | 0 | 47 |
| Hatfield Road | 5 | 35 | 0 | 0 | 40 |
| Judge Street | 2 | 122 | 4 | 4 | 132 |
| Leavesden Road | 0 | 92 | 8 | 59 | 159 |
| Lowestoft Road | 0 | 29 | 0 | 1 | 30 |
| Milton Street | 0 | 55 | 0 | 0 | 55 |
| Nevill Grove | 0 | 28 | 0 | 0 | 28 |
| Parker Street | 0 | 43 | 0 | 0 | 43 |
| Regent Street | 0 | 92 | 1 | 1 | 94 |
| Ridge Street | 0 | 49 | 0 | 0 | 49 |
| Salisbury Road | 0 | 39 | 0 | 0 | 39 |
| Shakespeare Street | 0 | 52 | 0 | 2 | 54 |
| Stanmore Road | 0 | 39 | 0 | 1 | 40 |

| STREET | RESIDENT PERMIT HOLDER (MARKED) | RESIDENT PERMIT HOLDER (UNMARKED) | 'OTHER' | SINGLE YELLOW LINE | TOTAL |
|---|---|---|---|---|---|
| Victoria Road | 3 | 51 | 5 | 1 | 60 |
| Yarmouth Road | 3 | 46 | 0 | 0 | 49 |
| Total | 20 | 1,253 | 24 | 77 | 1,374 |

2.3.2 There is parking capacity for a total of 1,374 vehicles within the survey area, the vast majority of which (93%) comprises resident permit holder parking, either through individual bays or unmarked areas (i.e. bays are not individually marked out). Parking within these areas can be used by permit holders only during hours of operation of PPA NA.

2.3.3 As noted in Table 1, a limited volume of other / specialist parking bays are provided within the survey area. These are broken down as follows:

- **Disabled Parking**: x12 (3 Bradshaw Road, 1 Cecil Street, 4 Judge Street, 1 Regent Street, 3 Victoria Road);
- **Electric Vehicle Parking / Charging**: x4 (2 Bradshaw Road, 2 Victoria Road); and
- **Limited Waiting**: x7 (Leavesden Road).

2.3.4 Streets with the largest parking capacity are Leavesden Road (159 spaces) and Judge Street (132 spaces). Comparatively, Neville Grove (28 spaces) and Lowestoft Road (30 spaces) offer the fewest number of parking spaces.

2.3.5 It is noted that the survey area incorporates a parking capacity for a total of 77 vehicles on single yellow lines. The majority of such capacity (for 59 vehicles) is located on Leavesden Road. Parking is permitted on single yellow lines before 08:00 and after 18:30, Monday to Saturday.

2.3.6 Suspended parking to enable the storage of a skip within the carriageway was recorded on Bradshaw Road (Figure 2), Cecil Street (Figure 3) and Cromer Road (Figure 4) during the survey period.

Figure 2. Suspended Parking, Bradshaw Road


Figure 3. Suspended Parking, Cecil Street

Figure 4. Suspended Parking, Cromer Road

# 3. PARKING SURVEY RESULTS

## 3.1 General

3.1.1 As previously detailed, a parking beat survey was undertaken by an independent survey company, MHTC Ltd, on Saturday 4 September, Tuesday 7 September and Wednesday 8 September 2021, with beats undertaken between 05:00 and 22:00.

## 3.2 Parking Demand

3.2.1 The survey recorded parking capacity for a total of 1,374 vehicles within the survey area; this figure includes parking capacity located on single yellow lines. Given parking is not permitted on single yellow lines between 08:00 and 18:30 on the survey days, and PPA restrictions operational from 19:00, this provision (for 77 vehicles) has been removed from the parking capacity figures utilised below. This results in overall parking capacity for 1,294 vehicles across the survey area.

3.2.2 A summary of occupancy levels across the three survey days is set out in the following sections.

### Overnight

3.2.3 In order to record overnight resident parking, a beat was undertaken between the hours of 05:00 and 07:00, with an assumption made that all parking recorded in this period is associated with residents. Table 2 overleaf provides a summary of overnight parking stress levels recorded across the three survey days.

Table 2. Parking Demand by Street – Overnight (All Vehicles)

| STREET | CAPACITY | DAY 1 (SATURDAY) | | DAY 2 (TUESDAY) | | DAY 3 (WEDNESDAY) | |
|---|---|---|---|---|---|---|---|
| | | OCCUPIED | STRESS | OCCUPIED | STRESS | OCCUPIED | STRESS |
| Acme Road | 55 | 59 | 107% | 58 | 105% | 56 | 102% |
| Bradshaw Road | 88 | 79 | 90% | 84 | 95% | 87 | 99% |
| Brixton Road | 38 | 34 | 91% | 29 | 77% | 31 | 83% |
| Bruce Grove | 47 | 45 | 96% | 39 | 83% | 37 | 79% |
| Cecil Street | 99 | 104 | 105% | 96 | 97% | 101 | 102% |
| Copsewood Road | 75 | 67 | 89% | 69 | 92% | 60 | 80% |
| Cromer Road | 45 | 48 | 107% | 49 | 109% | 51 | 113% |
| Garfield Street | 47 | 50 | 106% | 48 | 102% | 50 | 106% |
| Hatfield Road | 40 | 45 | 113% | 40 | 100% | 40 | 100% |
| Judge Street | 128 | 134 | 105% | 125 | 98% | 126 | 98% |
| Leavesden Road | 100 | 110 | 110% | 100 | 100% | 92 | 92% |
| Lowestoft Road | 29 | 27 | 94% | 30 | 103% | 30 | 103% |
| Milton Street | 55 | 61 | 111% | 63 | 115% | 59 | 107% |
| Nevill Grove | 28 | 24 | 86% | 21 | 75% | 20 | 71% |

| STREET | CAPACITY | DAY 1 (SATURDAY) | | DAY 2 (TUESDAY) | | DAY 3 (WEDNESDAY) | |
|---|---|---|---|---|---|---|---|
| | | OCCUPIED | STRESS | OCCUPIED | STRESS | OCCUPIED | STRESS |
| Parker Street | 43 | 45 | 105% | 35 | 81% | 34 | 79% |
| Regent Street | 93 | 92 | 99% | 91 | 98% | 84 | 90% |
| Ridge Street | 49 | 34 | 70% | 43 | 89% | 40 | 82% |
| Salisbury Road | 39 | 40 | 103% | 40 | 103% | 41 | 105% |
| Shakespeare Street | 52 | 50 | 96% | 46 | 88% | 48 | 92% |
| Stanmore Road | 39 | 37 | 95% | 35 | 90% | 29 | 74% |
| Victoria Road | 59 | 57 | 97% | 59 | 101% | 58 | 99% |
| Yarmouth Road | 49 | 51 | 104% | 47 | 96% | 48 | 98% |
| Total | 1,297 | 1,295 | 99.8% | 1,249 | 96.3% | 1,224 | 94.3% |

3.2.4 It can be seen that 1,295, 1,249 and 1,224 vehicles were recorded as parked overnight across the area on the respective survey dates, representing a parking stress level of between 94.3% (Wednesday survey) and 99.8% (Saturday survey).

3.2.5 When looking at parking demand on a street-by-street basis, Table 2 demonstrates that overnight parking stress is uniformly high across the survey area, with a minimum stress of 70% recorded on Ridge Street (Day 1, weekend survey day), and a maximum stress of 115% recorded on Milton Street (Day 2, first weekday survey).

3.2.6 Parking demand exceeds theoretical capacity on a number of roads. Such levels of parked vehicles compared to reported capacity can be attributed to vehicles parking on single yellow lines (as permitted during the overnight period), parking on both sides of the road, partially on the pavement, and parking on double yellow lines. Figures 5 to 7 show examples of such parking on Judge Street, Leavesden Road and Victoria Road respectively.

**Figure 5. Parking on Pavement & Double Yellow Lines, Judge Street**

*MHTC, September 2021*

Figure 6. Parking on Pavement & Double Yellow Lines, Leavesden Road

*MHTC, September 2021*

Figure 7. Parking on Pavement & Double Yellow Lines, Victoria Road

*MHTC, September 2021*

3.2.7 As previously detailed, the survey area includes parking capacity for 77 vehicles on single yellow lines, the majority of which (59 vehicles) is located on Leavesden Road. Parking is not permitted on single yellow lines between 08:00 and 18:30, Monday to Saturday. To enable consistent reporting across survey beats, this provision has been removed from the parking capacity figures utilised in the demand reporting, resulting in overall parking capacity for 1,294 vehicles across the survey area.

3.2.8 However, as parking is permitted on single yellow lines during the overnight beat, a sensitivity assessment is presented in Table 3 providing a summary of overnight parking stress levels recorded across the three survey days against a capacity that includes for acceptable parking on single yellow lines.

Table 3. Parking Demand by Street (including Single Yellow Lines) – Overnight (All Vehicles)

| STREET | CAPACITY | DAY 1 (SATURDAY) | | DAY 2 (TUESDAY) | | DAY 3 (WEDNESDAY) | |
|---|---|---|---|---|---|---|---|
| | | OCCUPIED | STRESS | OCCUPIED | STRESS | OCCUPIED | STRESS |
| Acme Road | 58 | 59 | 102% | 58 | 100% | 56 | 97% |
| Bradshaw Road | 88 | 79 | 90% | 84 | 95% | 87 | 99% |
| Brixton Road | 38 | 34 | 91% | 29 | 77% | 31 | 83% |
| Bruce Grove | 47 | 45 | 96% | 39 | 83% | 37 | 79% |
| Cecil Street | 100 | 104 | 104% | 96 | 96% | 101 | 101% |
| Copsewood Road | 79 | 67 | 85% | 69 | 87% | 60 | 76% |
| Cromer Road | 45 | 48 | 107% | 49 | 109% | 51 | 113% |
| Garfield Street | 47 | 50 | 106% | 48 | 102% | 50 | 106% |
| Hatfield Road | 40 | 45 | 113% | 40 | 100% | 40 | 100% |
| Judge Street | 132 | 134 | 102% | 125 | 95% | 126 | 95% |
| Leavesden Road | 159 | 110 | 69% | 100 | 63% | 92 | 58% |
| Lowestoft Road | 30 | 27 | 91% | 30 | 99% | 30 | 99% |
| Milton Street | 55 | 61 | 111% | 63 | 115% | 59 | 107% |

| STREET | CAPACITY | DAY 1 (SATURDAY) | | DAY 2 (TUESDAY) | | DAY 3 (WEDNESDAY) | |
|---|---|---|---|---|---|---|---|
| | | OCCUPIED | STRESS | OCCUPIED | STRESS | OCCUPIED | STRESS |
| Nevill Grove | 28 | 24 | 86% | 21 | 75% | 20 | 71% |
| Parker Street | 43 | 45 | 105% | 35 | 81% | 34 | 79% |
| Regent Street | 94 | 92 | 98% | 91 | 97% | 84 | 89% |
| Ridge Street | 49 | 34 | 70% | 43 | 89% | 40 | 82% |
| Salisbury Road | 39 | 40 | 103% | 40 | 103% | 41 | 105% |
| Shakespeare Street | 54 | 50 | 93% | 46 | 85% | 48 | 89% |
| Stanmore Road | 40 | 37 | 93% | 35 | 88% | 29 | 73% |
| Victoria Road | 60 | 57 | 96% | 59 | 99% | 58 | 97% |
| Yarmouth Road | 49 | 51 | 104% | 47 | 96% | 48 | 98% |
| Total | 1374 | 1295 | 94.2% | 1249 | 90.9% | 1224 | 89.0% |

3.2.9 When taking into account the additional capacity for 77 vehicles on single yellow lines, Table 3 confirms an overnight parking stress level of 94.2%, 90.9% and 89.0% to 94.2% on the respective survey days. This represents a reduction in parking stress levels of approximately five percentage points.

3.2.10 The majority of single yellow line parking capacity (59 of 77) is located on Leavesden Road. Inclusion of these spaces in the overall parking capacity result in overnight stress levels of 64% (as an average across the three survey days).

3.2.11 However, parking demand still exceeds capacity on a number of streets where single yellow line parking is not possible, including Cromer Road (113% maximum occupancy), Garfield Street (106%) and Hatfield Road (113%).

**Daytime**

3.2.12 Six daytime parking beats were undertaken during the three survey days to record changes in parking demand across the daily period. Tables 4 to 6 set out parking stress levels recorded for each street during the daytime beats on the three respective survey days. As previously noted, beat timings were planned to ensure beats did not overlap with the start or end times of PPA restrictions.

Table 4. Parking Demand by Street, Saturday Survey

| STREET | 08:00-10:00 | 10:00-12:00 | 12:00-14:00 | 14:00-16:00 | 16:00-18:00 | 20:00-22:00 |
|---|---|---|---|---|---|---|
| Acme Road | 100% | 89% | 89% | 73% | 82% | 93% |
| Bradshaw Road | 89% | 85% | 78% | 75% | 78% | 89% |
| Brixton Road | 88% | 96% | 77% | 71% | 85% | 85% |
| Bruce Grove | 83% | 81% | 77% | 98% | 87% | 79% |
| Cecil Street | 97% | 98% | 98% | 88% | 102% | 101% |
| Copsewood Road | 83% | 83% | 92% | 81% | 87% | 99% |
| Cromer Road | 93% | 87% | 82% | 87% | 93% | 89% |
| Garfield Street | 102% | 96% | 89% | 91% | 111% | 106% |
| Hatfield Road | 98% | 93% | 100% | 103% | 103% | 98% |
| Judge Street | 98% | 80% | 75% | 77% | 77% | 84% |
| Leavesden Road | 81% | 73% | 82% | 80% | 82% | 98% |
| Lowestoft Road | 77% | 63% | 84% | 84% | 117% | 114% |
| Milton Street | 100% | 85% | 69% | 64% | 84% | 87% |
| Nevill Grove | 82% | 75% | 64% | 64% | 79% | 82% |
| Parker Street | 86% | 84% | 74% | 70% | 86% | 79% |
| Regent Street | 86% | 85% | 86% | 80% | 90% | 98% |
| Ridge Street | 70% | 68% | 72% | 66% | 56% | 62% |
| Salisbury Road | 85% | 85% | 82% | 87% | 97% | 92% |
| Shakespeare Street | 88% | 83% | 83% | 79% | 87% | 96% |
| Stanmore Road | 85% | 77% | 74% | 87% | 87% | 97% |
| Victoria Road | 89% | 84% | 88% | 93% | 98% | 102% |
| Yarmouth Road | 90% | 96% | 98% | 96% | 96% | 86% |
| Total | 89% | 84% | 83% | 81% | 88% | 92% |

Table 5. Parking Demand by Street, Tuesday Survey

| STREET | 08:00-10:00 | 10:00-12:00 | 12:00-14:00 | 14:00-16:00 | 16:00-18:00 | 20:00-22:00 |
|---|---|---|---|---|---|---|
| Acme Road | 80% | 85% | 93% | 89% | 85% | 104% |
| Bradshaw Road | 74% | 69% | 64% | 68% | 78% | 83% |
| Brixton Road | 59% | 54% | 59% | 67% | 80% | 80% |
| Bruce Grove | 62% | 64% | 68% | 70% | 70% | 106% |
| Cecil Street | 74% | 81% | 81% | 85% | 80% | 105% |
| Copsewood Road | 65% | 67% | 72% | 72% | 79% | 87% |
| Cromer Road | 60% | 73% | 82% | 69% | 91% | 107% |
| Garfield Street | 81% | 83% | 79% | 81% | 83% | 100% |
| Hatfield Road | 73% | 80% | 93% | 100% | 103% | 65% |
| Judge Street | 75% | 59% | 60% | 60% | 66% | 86% |
| Leavesden Road | 59% | 62% | 72% | 66% | 71% | 108% |
| Lowestoft Road | 51% | 37% | 58% | 44% | 92% | 92% |
| Milton Street | 71% | 60% | 60% | 60% | 55% | 100% |
| Nevill Grove | 50% | 50% | 54% | 43% | 50% | 82% |
| Parker Street | 60% | 72% | 65% | 56% | 63% | 84% |
| Regent Street | 69% | 66% | 69% | 72% | 76% | 92% |
| Ridge Street | 58% | 60% | 61% | 43% | 72% | 67% |
| Salisbury Road | 77% | 77% | 77% | 77% | 77% | 80% |
| Shakespeare Street | 71% | 71% | 64% | 75% | 87% | 101% |
| Stanmore Road | 62% | 74% | 79% | 69% | 72% | 90% |
| Victoria Road | 62% | 71% | 80% | 80% | 82% | 95% |
| Yarmouth Road | 63% | 61% | 76% | 80% | 86% | 104% |
| Total | 68% | 68% | 71% | 70% | 77% | 91% |

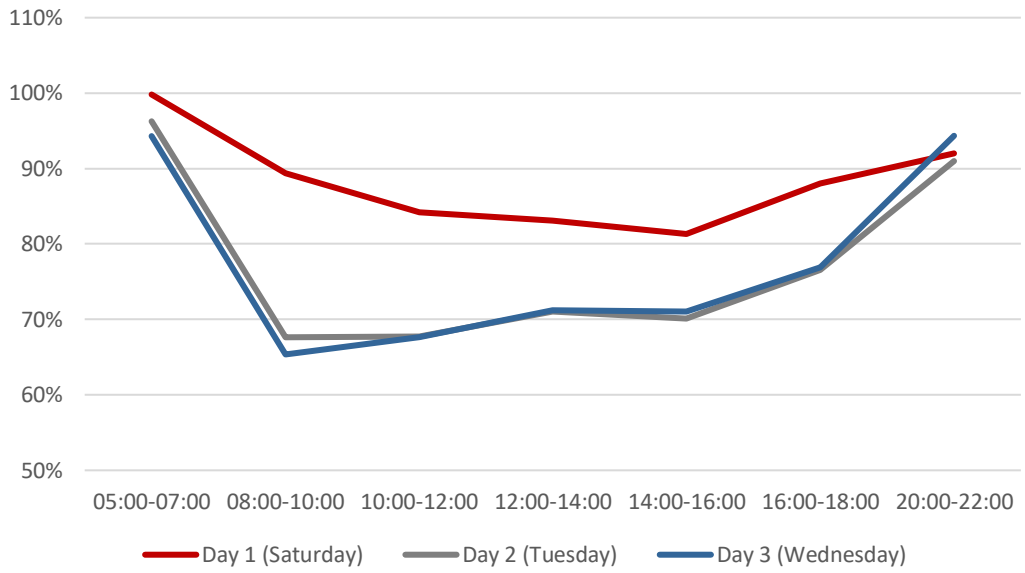
Table 6. Parking Demand by Street, Wednesday Survey

| STREET | 08:00-10:00 | 10:00-12:00 | 12:00-14:00 | 14:00-16:00 | 16:00-18:00 | 20:00-22:00 |
|---|---|---|---|---|---|---|
| Acme Road | 75% | 87% | 89% | 87% | 98% | 102% |
| Bradshaw Road | 68% | 68% | 65% | 59% | 69% | 98% |
| Brixton Road | 56% | 67% | 98% | 80% | 75% | 92% |
| Bruce Grove | 53% | 57% | 72% | 64% | 81% | 96% |
| Cecil Street | 72% | 82% | 80% | 88% | 87% | 101% |
| Copsewood Road | 60% | 61% | 77% | 73% | 76% | 88% |
| Cromer Road | 58% | 62% | 64% | 76% | 73% | 102% |
| Garfield Street | 83% | 74% | 70% | 77% | 87% | 102% |
| Hatfield Road | 74% | 71% | 81% | 84% | 86% | 108% |
| Judge Street | 63% | 56% | 58% | 66% | 65% | 76% |
| Leavesden Road | 63% | 65% | 75% | 73% | 66% | 102% |
| Lowestoft Road | 54% | 65% | 61% | 58% | 96% | 106% |
| Milton Street | 69% | 49% | 51% | 51% | 53% | 104% |
| Nevill Grove | 50% | 57% | 57% | 46% | 43% | 79% |
| Parker Street | 72% | 67% | 58% | 60% | 65% | 95% |
| Regent Street | 66% | 75% | 73% | 77% | 83% | 97% |
| Ridge Street | 64% | 60% | 57% | 62% | 73% | 65% |
| Salisbury Road | 77% | 79% | 79% | 72% | 90% | 92% |
| Shakespeare Street | 71% | 60% | 66% | 71% | 81% | 95% |
| Stanmore Road | 56% | 62% | 49% | 49% | 54% | 78% |
| Victoria Road | 61% | 75% | 88% | 81% | 103% | 102% |
| Yarmouth Road | 59% | 84% | 94% | 82% | 94% | 102% |
| Total | 65% | 68% | 71% | 71% | 77% | 94% |

3.2.13 The results demonstrates that the streets with the highest parking stress on average are Garfield Road and Hatfield Road (99% stress) on the weekend survey day, and Acme Road (89-90% stress) on both the weekday survey days.

3.2.14 The results of the survey are shown graphically in Figure 8, which details overall parking occupancy levels recorded across the survey area as a whole on the three days. It can be seen that during the weekday surveys, parking demand typically reduced during daytime hours which can be attributed to residents travelling to work. Such a reduction is not seen during the weekend survey with parking levels consistently higher across all time periods (with the exception of 20:00 to 22:00). This can be accounted to a reduction in commuting levels at the weekend.

**Figure 8. Recorded Daytime Parking Demand**




3.2.15 Average overall occupancy levels within the PPA do not drop below 65% at any point during the survey. A maximum of 449 available parking spaces were recorded, during the 08:00-10:00 beat on the Wednesday survey, equating to a 65% stress level.

3.2.16 Parking demand levels do not exceed overall theoretical capacity in any beats during the Tuesday or Wednesday surveys.

3.2.17 As previously detailed, a parking beat was undertaken between the hours of 05:00 and 07:00 to record overnight resident parking, with an assumption made that all parking recorded in this period is associated with residents. Recording of vehicle registration plates has allowed for analysis of parking by residents and non-residents during remaining beats, with vehicles not parked during the 05:00 to 07:00 beat assumed to be non-residents (e.g. parking for work purposes).

3.2.18 Figures 9 to 11 overleaf provide a breakdown of resident and non-resident parking demand across the respective survey days, with resident parking shown in grey and non-resident in purple. It can be seen that resident parking demand is highest during the overnight (05:00 to 07:00) and evening (20:00 to 22:00) beats, with reductions during daytime beats as residents travel to work. Such a reduction is less pronounced during the Saturday survey.

**Figure 9. Resident & Non-Resident Parking (Saturday Survey)**


**Figure 10. Resident & Non-Resident Parking (Tuesday Survey)**

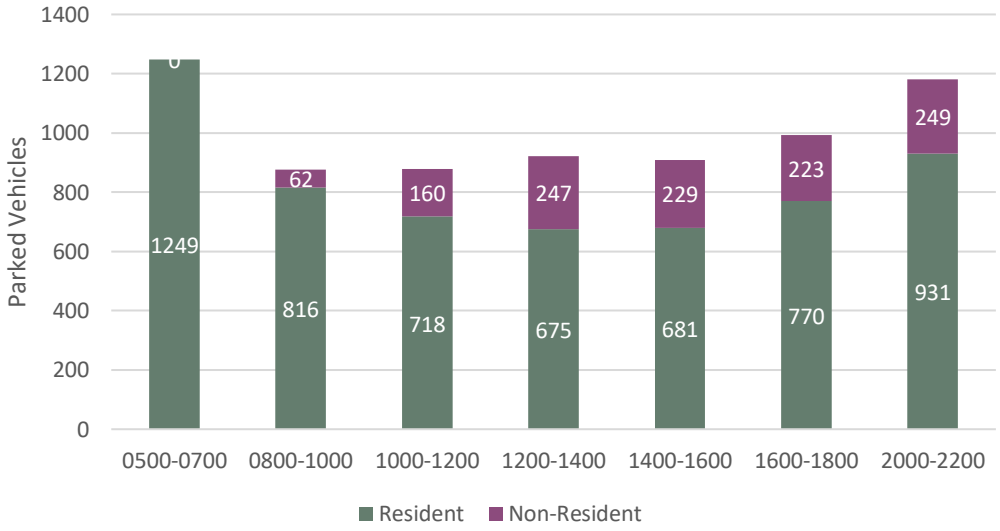
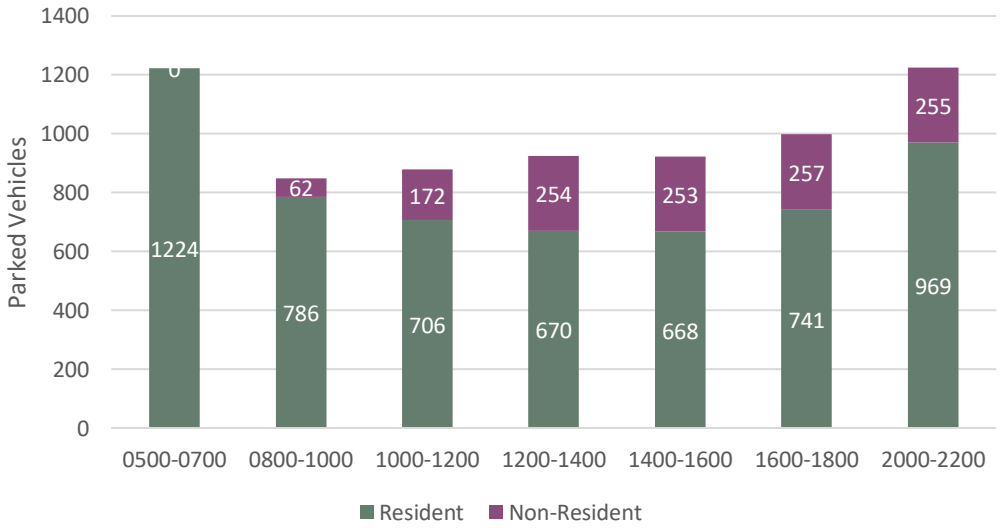



**Figure 11. Resident & Non-Resident Parking (Wednesday Survey)**



## 3.3 Conclusion

3.3.1 Parking demand is currently high in the Callowland area, particularly during the overnight period when parking demand can be attributed to residents, and on the weekend day (Saturday).

3.3.2 Instances of vehicles parked on pavements in narrow streets and double yellow lines result in parking stress levels exceeding theoretical capacity during the overnight period on a number of streets. Weekday parking demand reduces during daytime hours as residents travel to work via car.

3.3.3 Parking demand reduces during daytime hours, particularly during the weekday surveys, as residents travel to work via car. However, recorded parking stress levels do not drop below 65% at any point across the area as a whole during the survey period.

3.3.4 It is noted that parking restrictions within PPA NA currently operate from 08:00 to 10:00 and 19:00 to 22:00, Monday to Saturday, including Bank Holidays. The results of the parking survey suggest that parking demand is highest during the overnight period and at the weekend, when parking can be predominantly attributed to residents. It is considered that there would be limited impact if the operational hours of the PPA were to be extended to include daytime hours, when parking demand is currently lower.

# APPENDIX A

## PARKING SUPPLY PLAN

# Callowland, Watford - Parking Supply

MHTC transport data collection

## Legend

- Permit Holder Only
- Pay and Display/Pay by Phone
- Bus Stop
- Disabled Bays (Blue Badge)
- Loading Bays
- Electric vehicle Charging Bay
- Free Bays (No limited waiting)
- Limited Waiting (no charge)
- Other Bays
- Unmarked parking area
- No Waiting (with time restriction) (Acceptable)
- No Waiting (with time restriction) (Unacceptable)
- No Waiting At Any Time
- Crossing
- Crossing
- Zig Zag (Keep Clear)
- Unmarked Area (Unacceptable)
- Unmarked Area (Acceptable)
- Formal Crossover
- Permit Parking Areas
- Car Parks

Mon-Sat 8.00am-6.30pm
Max Stay: 1h
No Return: 2h

Mon-Sat 8.00am-6.30pm

Mon-Sat 8.00am-6.30pm

No Stopping
Mon-Fri 8.00am-5.00pm

Mon-Sat 8.00am-6.30pm
Max Stay: 1h
No Return: 1h

Mon-Fri 9.00am-11.00am

Mon-Sat 8.00am-6.30pm

Mon-Fri 8.00am-6.30pm

Mon-Sat 8.00am-6.30pm

Mon-Sat 8.00am-6.30pm

Mon-Sat 8.00am-6.30pm

Mon-Fri 8.00am-5.00pm

Mon-Sat 8.00am-6.30pm

Mon-Sat 8.00am-6.30pm

Mon-Sat 8.00am-6.30pm

Mon-Sat 7.00am-7.00pm

Mon-Sat 8.00am-6.30pm
Max Stay: 30m
No Return: 1h

Mon-Sat 8.00am-6.30pm

Mon-Sat 8.00am-6.30pm

Mon-Sat 8.00am-6.30pm

Mon-Sat 8.00am-6.30pm
Max Stay: 30m
No Return: 1h

Mon-Sat 8.00am-6.30pm

Mon-Sat 8.00am-6.30pm
Max Stay: 2h
No Return: 1h

Community Hall vehicles only

NA

NA

NA

Control Hours for PPA NA:
Mon-Sat: 8.00am-10.00am 7.00pm-10.00pm



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25 0 25 50 75 100 m

Scale at A3 - 1: 3,000

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