



Comhairle Cathrach na Gaillimhe  
Galway City Council



# Galway Cordon Survey Report 2024

Report on Inbound People Movements  
Galway City

## List of Abbreviations and Definitions

### JTC:

- Junction Turning Counts

### LGV:

- Light Goods Vehicle. LGV includes the following vehicle types: Van, Pick-Up, Car Delivery Vans, Minibus, Commercial Vehicles < 3.5 tonnes (single rear tyres)

### M/C:

- Motorcycle. M/C includes the following: Motorcycles, Motor Scooters, Mopeds, Three-wheel motorcycles

### NTA:

- National Transport Authority

### OGV1:

- Ordinary Goods Vehicle 1. OGV1 includes the following vehicle types: 2-Axles Rigid Truck, 3-Axles Rigid Truck and Commercial Vehicles > 3.5 Tonnes (single rear tyres)

### OGV2:

- Ordinary Goods Vehicle 2. OGV2 includes the following vehicle types: 4 or more Axles Rigid Truck, 3 Axle or more Articulated Truck, Vehicles in Category OGV1 towing trailer

### P/C

- Pedal Cycle

### PED

- Pedestrian

### PSV

- Public Service Vehicle, excluding private / non-scheduled service vehicle

### BUS

- Includes all public (PSV) / private, single / double deck, scheduled / non-scheduled service vehicles

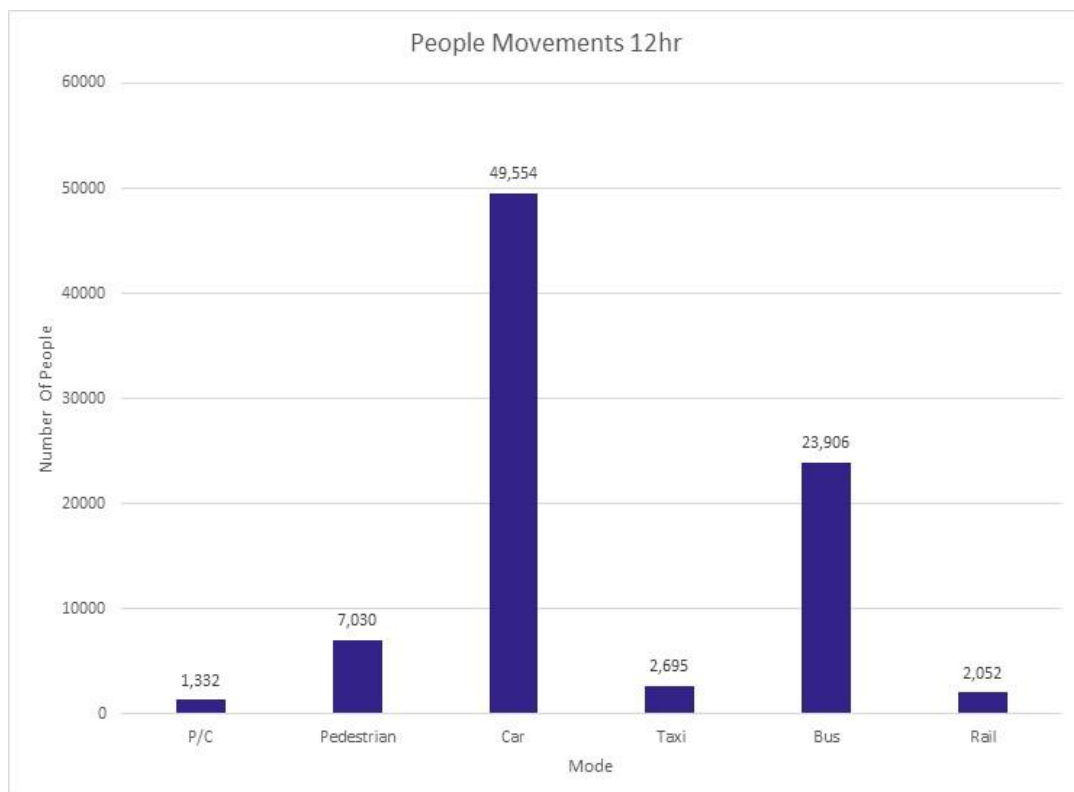
## Executive Summary

The Galway City Cordon is a cordon of traffic survey locations that encloses Galway City. Classified Junction Turning Counts and Pedestrian surveys were undertaken at 25 locations to determine the traffic flows crossing the Galway City Cordon inbound during the key traffic periods for a typical weekday, i.e. AM (07:00 - 10:00), Lunch Time (10:00 - 13:00), School Run (13:00 - 16:00), PM (16:00 - 19:00), Off-Peak (19:00 - 07:00) and 24hr (00:00 - 24:00).

Vehicle occupancy surveys were undertaken at 11 sites for Inner-City, 10 sites for Outer-City, and 4 sites for Bridge. Pedestrian and Cycle only surveys were also undertaken along the Inner-City Cordon and Bridge Screenlines at key pedestrian and cycle only routes i.e. parks and dedicated pedestrian and cycle corridors.

In addition to this, Bus Occupancy surveys were undertaken at 8 bus stops to determine the number, occupancy and frequency of bus services crossing the Inner-City Cordon, and 4 surveys crossing the Bridge Cordon. Passenger numbers from the Annual Rail Census (Iarnród Éireann) were also used to determine the passengers travelling inbound. Based on the analysis of the 2024 data, the key results are:

- In terms of overall people movements, 37,224 (43%) of a total of 86,596 people travelling inbound towards the city across the Inner-City Cordon between 07:00 and 19:00 used sustainable modes of travel.



*People Movements by Mode over a 12-hour Period Across the Inner-City Cordon*

- The total number of vehicles, pedestrians and cyclists that crossed the Inner-City Cordon inbound was 56,875 over 12 hours.

- For the Inner-City Cordon, the busiest time period for vehicles, pedestrians and cyclists travelling inbound towards the city was the AM Period with 16,395.
- Between the hours of 07:00 and 19:00 for the Inner-City Cordon, cars were recorded to have the highest modal split, with 57% of the total inbound people movements.
- In terms of vehicle occupancy the Inner-City Cordon recorded 83% of cars crossing inbound towards the City had single occupancy during the AM period (07:00 - 10:00) and 90% during the PM period (16:00 - 19:00) and 54% of taxis recorded single occupancy (i.e. driver-only) over the 12-hour survey period

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# 1 Introduction

The Galway City Cordon is two closed cordons and one closed screenline of traffic survey locations that encloses Galway City. This report presents the findings of traffic surveys along these, which were undertaken in November 2024 and captured the traffic movements crossing the Galway City Cordon inbound towards the city.

The structure of this report is set out as follows:

- **Chapter 2** provides a definition of the Galway City Cordon and sets out the methodology for the data collection;
- **Chapter 3** outlines:
  - The traffic flows crossing the Inner-City Cordon inbound by vehicle classification;
  - The occupancy of the vehicles crossing the Inner-City Cordon in terms of the number of occupants per vehicle. Each vehicle type has been analysed per peak time periods and for the duration of the survey period.
- **Chapter 4** outlines the total number of people movements crossing the Galway Inner-City Cordon inbound towards the city; and
- **Chapter 5** outlines the total number of people movements crossing the Bridge Screenline; and
- **Chapter 6** provides a summary of the key results.



## 2 Definition and Methodology

### 2.1 Data Sources

To establish the movement of people across the Galway City Cordon, a bespoke data collection exercise was carried out, comprising of the following surveys:

#### **Junction Turning Counts (JTC):**

- The JTC surveys were recorded in 15-minute intervals over a 24-hour period on the 28<sup>th</sup> of November 2024. They were undertaken using telescopically mounted video cameras and recorded Car, LGV, OGV1, OGV2, Motorcycle, Pedal Cycle, Tax and Bus Movements.

#### **Pedestrian and Cycle Only Surveys:**

- In addition to the pedestrian and cycle flow data obtained from the JTC surveys, the NTA also undertook additional pedestrian and cycle only surveys at links that are only accessible to pedestrians or cyclists. The surveys were recorded in 15-minute intervals over a 24-hour period at 4 additional sites on the day of the survey. The Pedestrian and Cycle Only surveys recorded the following classifications:
  - Adult Pedestrian;
  - Elderly Pedestrian;
  - Child Pedestrian < 5 years old;
  - Child Pedestrian < 16 years old; and
  - Mobility Impaired Pedestrian.

#### **Vehicle Occupancy Surveys**

- Vehicle Occupancy counts were also undertaken at survey points along the Galway City Cordons. Vehicle Occupancy counts were carried out by a manual enumerator between 07:00 and 19:00. All information was recorded in hourly intervals.

#### **Bus Occupancy Surveys**

- Bus Occupancy surveys were undertaken at 8 bus stops inside the Galway City Cordons on the day of the survey in order to record the number of people travelling inbound into the city via bus. Manual enumerators recorded both occupancy of the bus at the bus stop, and the number of passengers boarding and alighting. These surveys also recorded the number of public and private buses passing the bus stop and the type of bus.

#### **Heavy Rail Data:**

- Since 2012, Iarnród Éireann has undertaken a census of passengers boarding and alighting on all services passing through all stations on the national rail network on the 14<sup>th</sup> of November 2024. While this rail survey was not commissioned as part of

the multi-modal cordon surveys, results from the rail census were used to supplement the surveys and are considered representative.

**Additional Two Weekly Vehicle Counts/Speed Surveys:**

- Automatic Traffic Counts (ATCs) were carried out over a continuous two-week period (beginning on 19/11/2024) in order to gather longer term data on daily movements at key points on the radial routes leading into the cordon.

## 2.2 Definition of the Galway City Cordon

A map of the Galway Inner-City Cordon is presented in Figure 2-1. This Figure highlights the locations along the Cordon where JTC data has been collected on the movement of people into the city. Similarly, Figures 2-2 and Figure 2-3 show the Outer-City Cordon and Bridge Screenline, respectively, along with the sites where JTC surveys were conducted.

Each cordon has been chosen to ensure, as far as possible, that any traffic flow (including cyclists and pedestrians) entering the city must pass through one of the locations where the surveys have been undertaken.

The data, as presented in this report, refers to movements in one direction only (i.e. inbound towards the city) across the various cordon points.

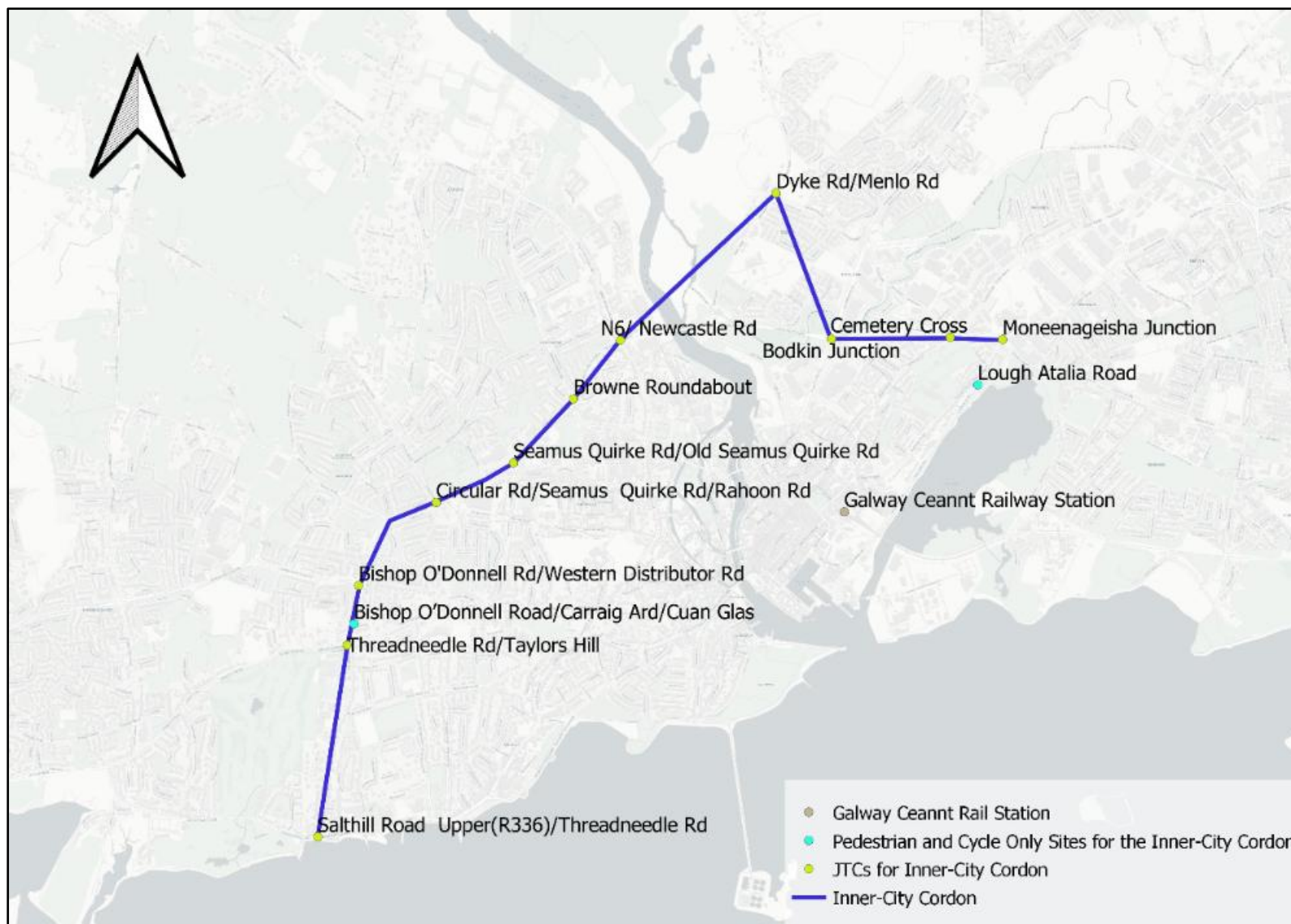


Figure 2-1:JTC and Pedestrian Sites on the Inner-City Cordon and Galway Ceannt Rail Station

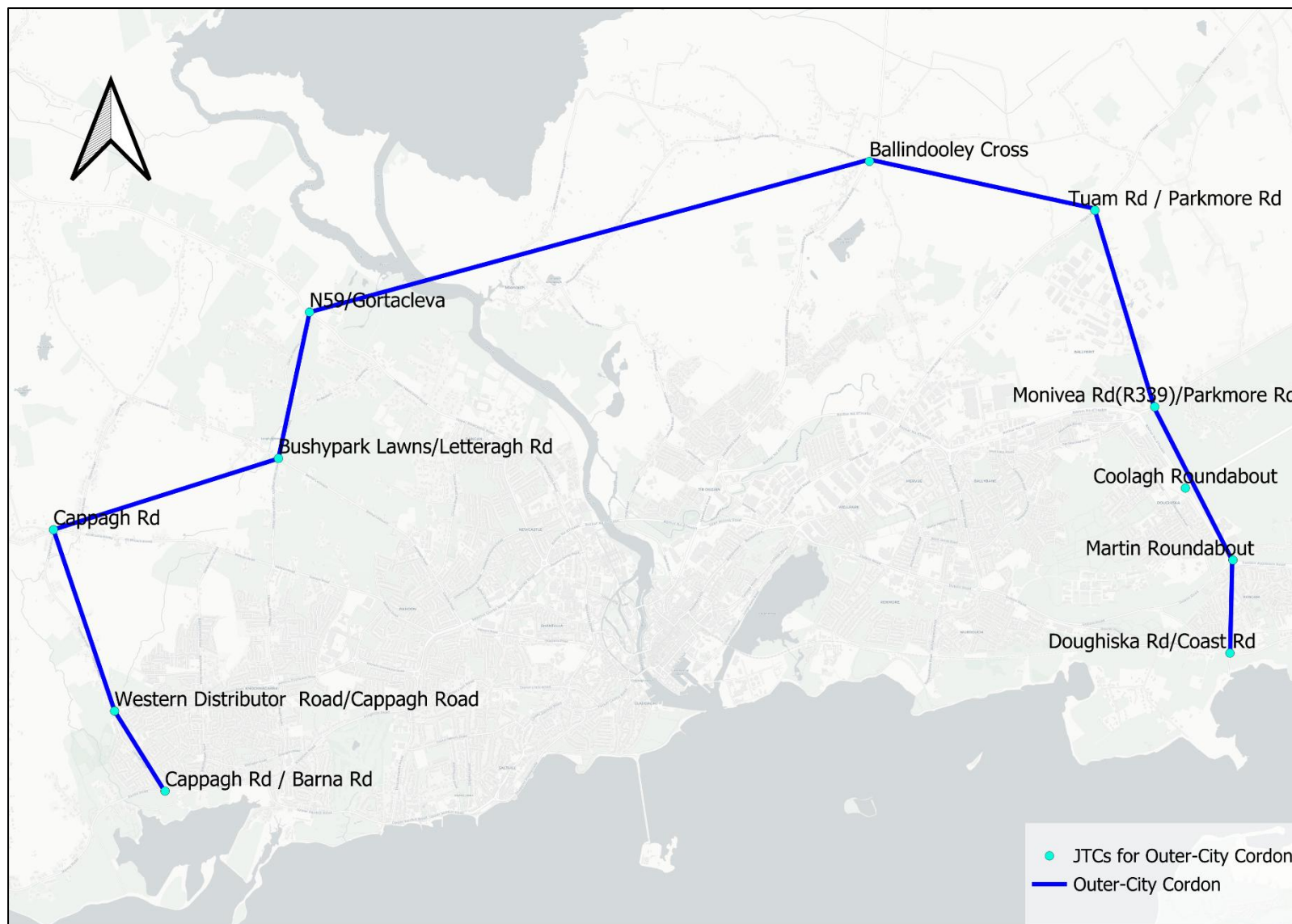


Figure 2-22: JTC and Pedestrian Sites on the Outer-City Cordon



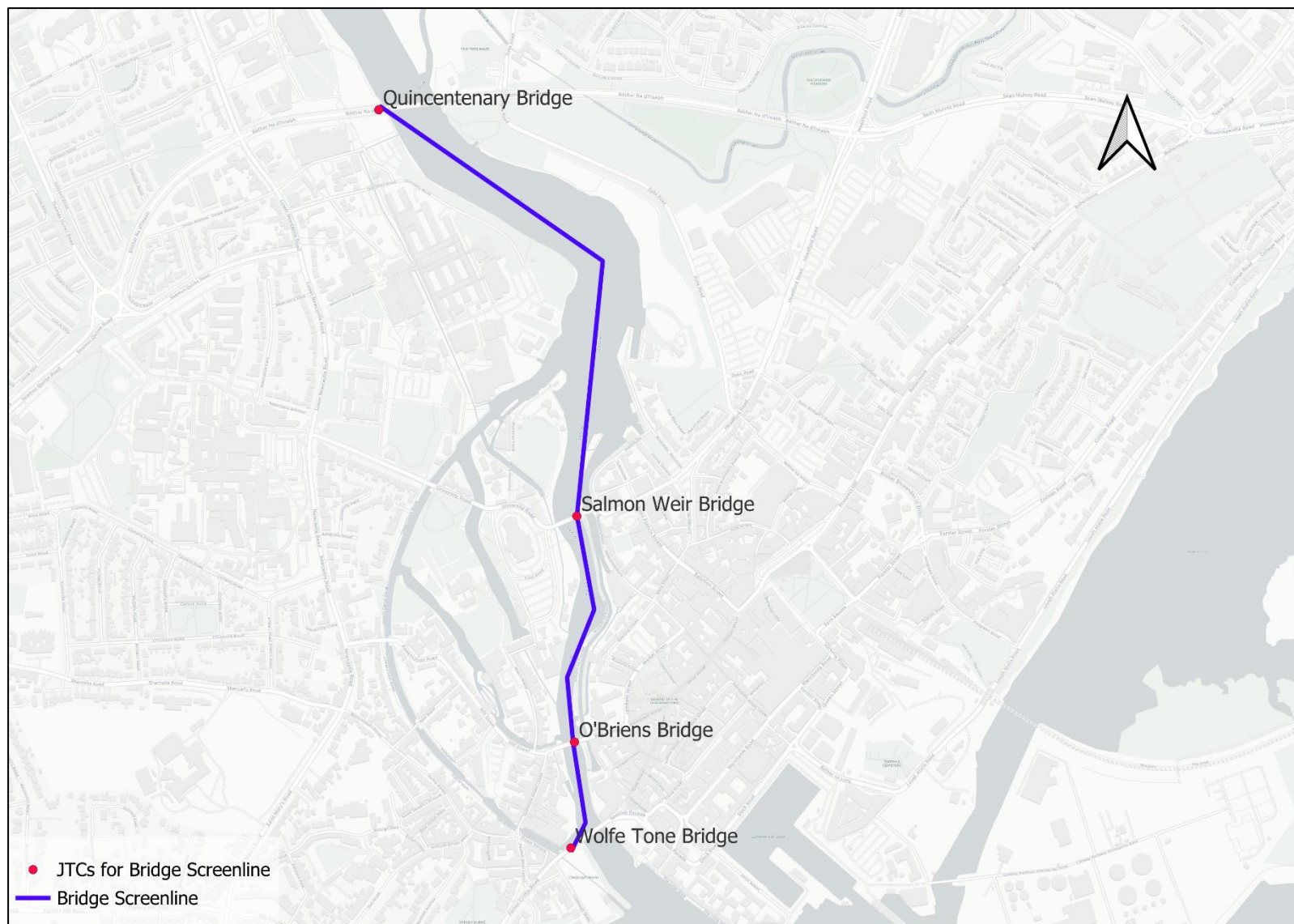


Figure 2-32: JTC and Pedestrian Sites on the Bridge Screenline

## 2.3 Time Periods Analysed

Surveys were recorded at either 15-minute or one-hour intervals, or, in the case of public transport services, when the bus or train was at a specific stop or station. Therefore, it is possible to understand trends throughout the day from the data. As such, the data was analysed for the following time periods:

- **AM:** 07:00 - 10:00
- **Lunch Time (LT):** 10:00 - 13:00
- **School Run (SR):** 13:00 - 16:00
- **PM:** 16:00 - 19:00
- **Off-Peak (OP):** 19:00 - 07:00
- **24hr:** 00:00 - 00:00

## 3 Galway Inner-City Cordon

### 3.1 Traffic Flow Surveys

#### 3.1.1 Overview

This section outlines the classified vehicle, pedestrian and cycle flows crossing the Galway Inner-City Cordon inbound, towards the city centre. This information was collected from the JTC traffic survey sites for car, LGV, OGV1, OGV2, motorcycle, pedal cycle, taxi and bus, as well as pedestrian survey sites. It should be noted that these surveys count the number of vehicles, cyclists and pedestrians crossing the cordon. However, the figures presented below do not include the number of people in each vehicle (vehicle occupancy). Therefore, these figures are not representative of the mode share. Total passenger flows and mode share are discussed in sections 4.4 and 4.5 of this report.

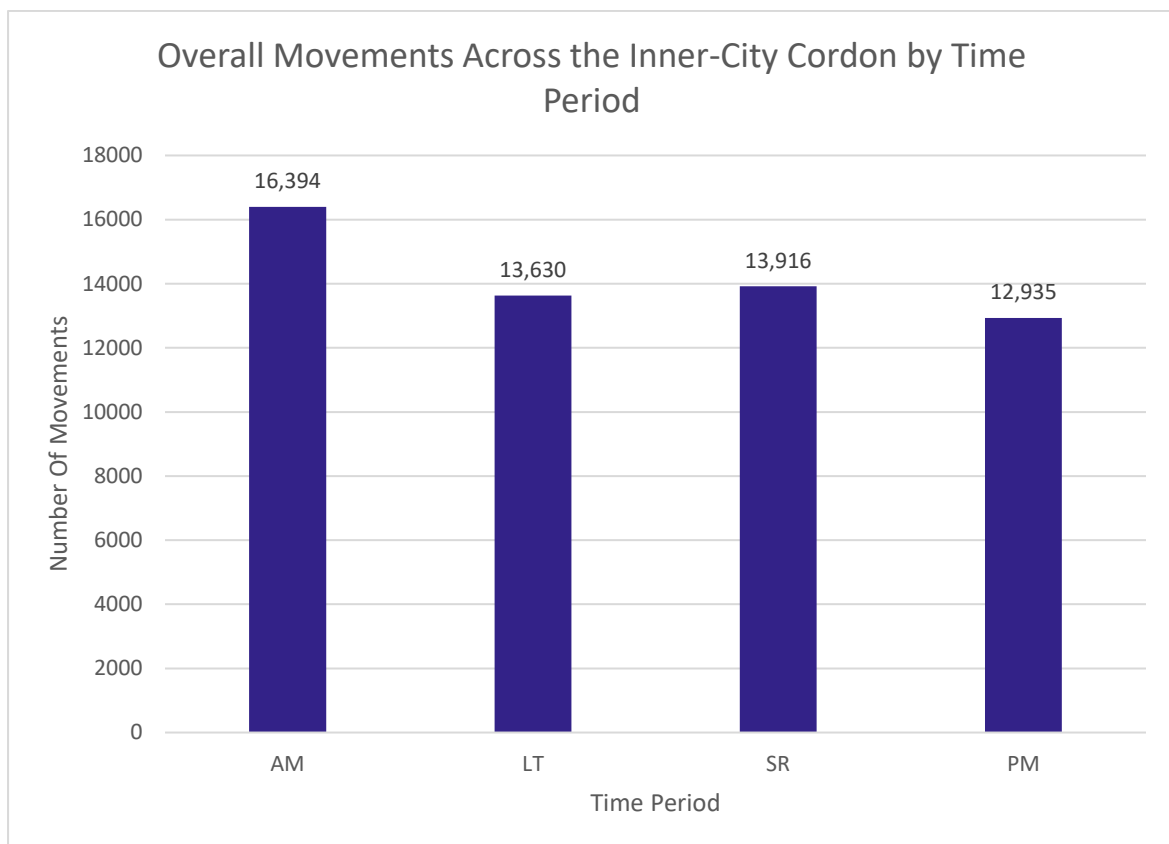
Table 3-1 presents the observed flows by vehicle classification crossing the Galway Inner-City Cordon inbound during the time periods recorded in the 2024 survey.

*Table 3-1: Movements Across the Galway Inner-City Cordon Inbound*

Vehicle Classifications	AM	LT	SR	PM	12hr
	07:00-10:00	10:00-13:00	13:00-16:00	16:00-19:00	07:00-19:00
Car	11,925	9,716	9,943	9,205	40,789
LGV	1,386	1,239	1,090	645	4,360
OGV1	211	216	119	76	622
OGV2	44	39	28	18	129
Motorcycle	18	24	28	25	95
Pedal Cycle	411	251	294	376	1,332
Taxi	483	456	476	389	1,804
Bus	195	179	189	151	714
Pedestrian	1,721	1,510	1,749	2,050	7,030
Total	16,394	13,630	13,916	12,935	56,875

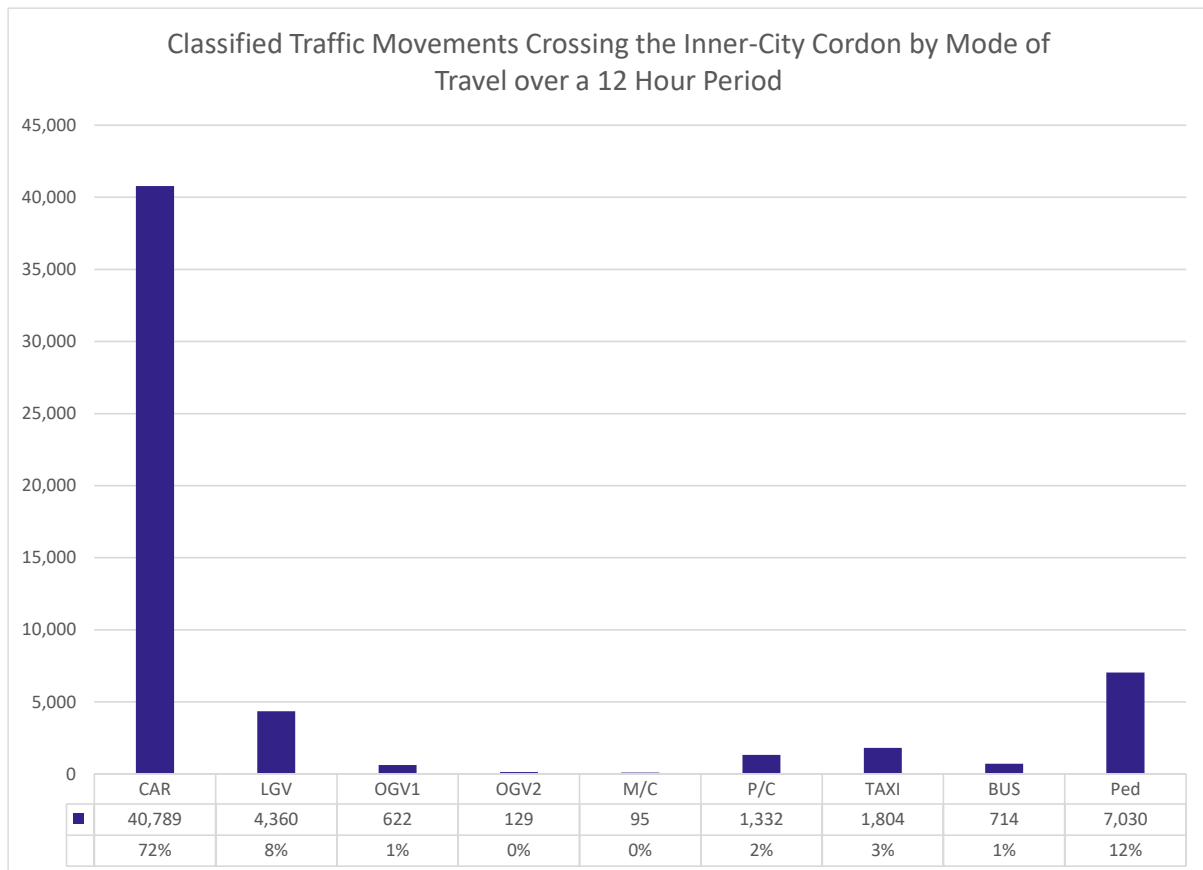


Figure 3-1 illustrates the overall flows for all vehicle types across the Galway Inner-City Cordon per key time period. It is evident that the AM time period has the highest volume of overall traffic movements, with a total of 16,394 travelling inbound.



*Figure 3-1: Total Movements across the Galway Inner-City Cordon Inbound by Time Period*

Figure 3-2 sets out the number of vehicles in each classification as recorded in the JTC surveys, as well as the number of pedestrians, over a 12-hour period (i.e. 07:00 - 19:00). This figure shows that car is the most common vehicle type, with 40,789 inbound movements in the 12-hour period, accounting for 72% of all crossings.



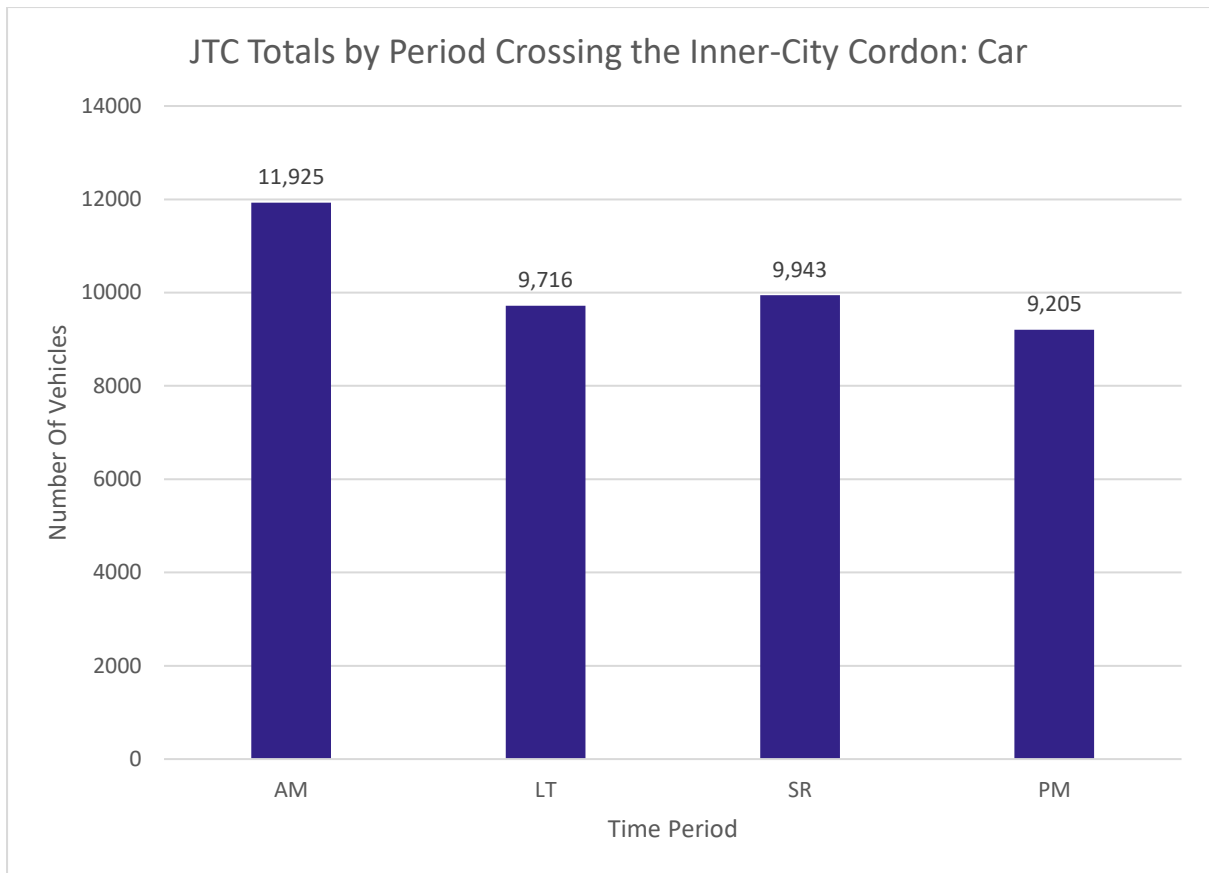
*Figure 3-2: Total Number and Percentage of Vehicles crossing the Galway Inner-City Cordon inbound by vehicle classification over a 12 hour period*

### 3.1.2 Vehicle Classified Traffic Flows

The following sections provide a more detailed overview of the JTC survey results by vehicle classification and survey sites. Each vehicle class is analysed in turn providing information on the volume of vehicles per time period and per survey site.

#### *Car*

Figure 3-3 below presents the total number of cars crossing the Galway Inner-City Cordon for each surveyed time period. Overall, it is evident that the AM time period has the highest volume of cars, with a total of 11,925 cars travelling inbound.



*Figure 3-3: Total Number of Car journeys per Time Period*

Figure 3-4 presents a further breakdown of the total number of cars, with reference to each site location. The busiest location for cars crossing the Galway Inner-City Cordon was the Moneenageisha Junction, with a total of 6,834 cars travelling inbound through this junction over a 12-hour period.

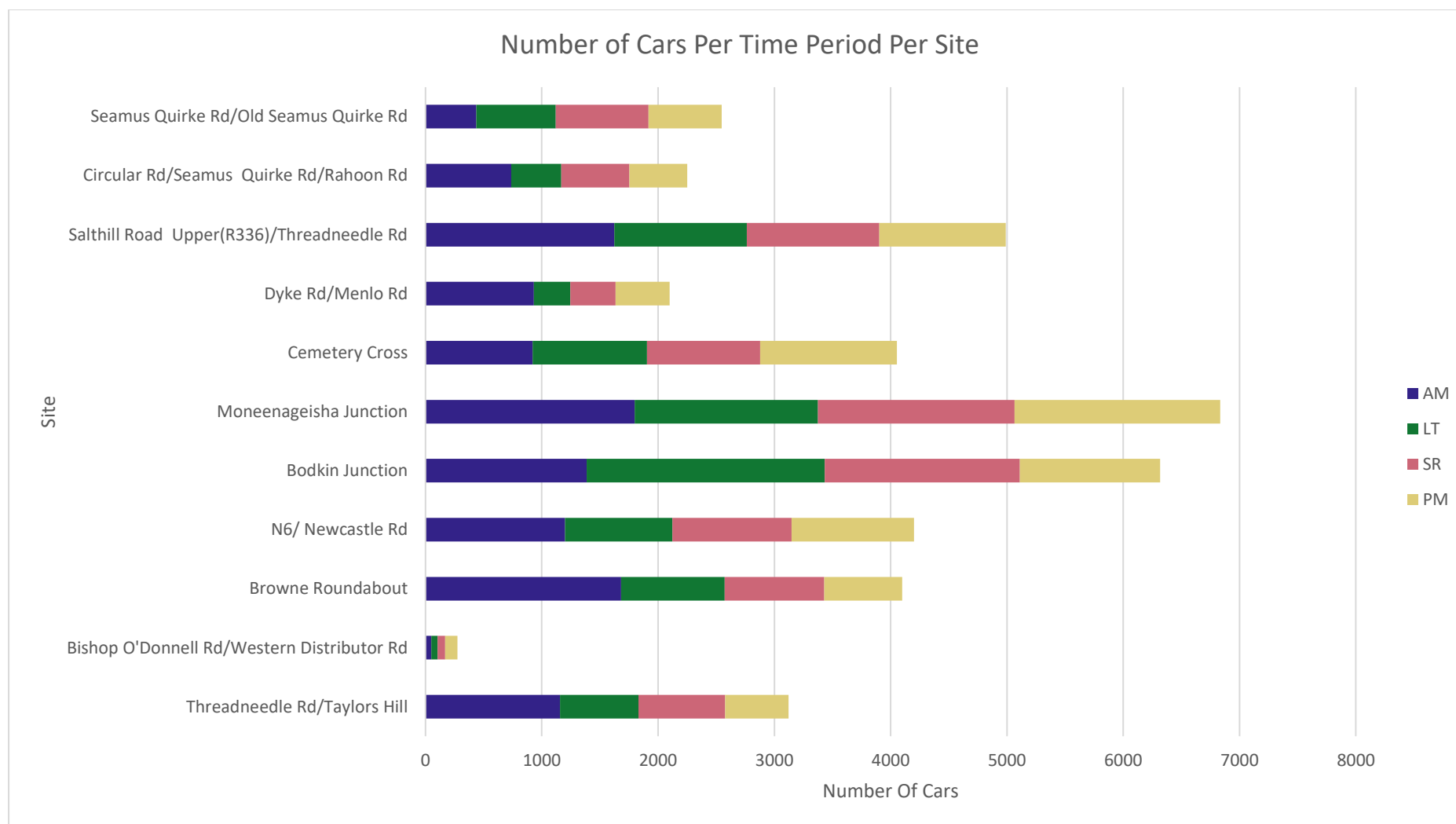


Figure 3-4: Number of Cars Crossing the Galway Inner-City Cordon Inbound at all Sites Per Time Period

### Light Goods Vehicle

Figure 3-5 below presents the total number of LGVs crossing the Galway Inner-City Cordon for each surveyed time period. Overall, it is evident that the AM time period has the highest volume of LGVs, with a total of 1,386 LGVs travelling inbound.

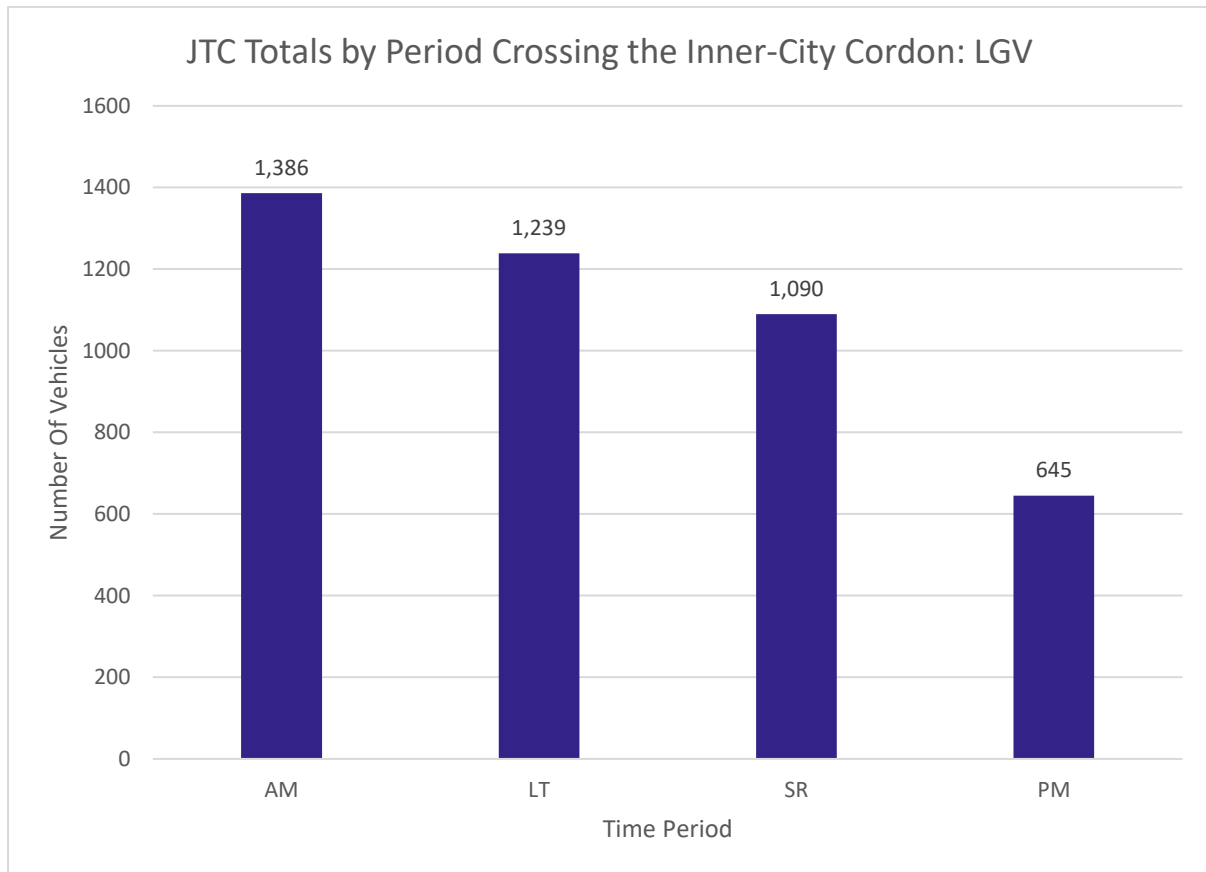


Figure 3-5: Total Number of LGV journeys per Time Period

Figure 3-6 presents a further breakdown of the total number of LGVs, with reference to each site location. The busiest location for LGVs crossing the Galway Inner-City Cordon was the Moneenageisha Junction, with a total of 805 LGVs travelling inbound through this junction over a 12-hour period.

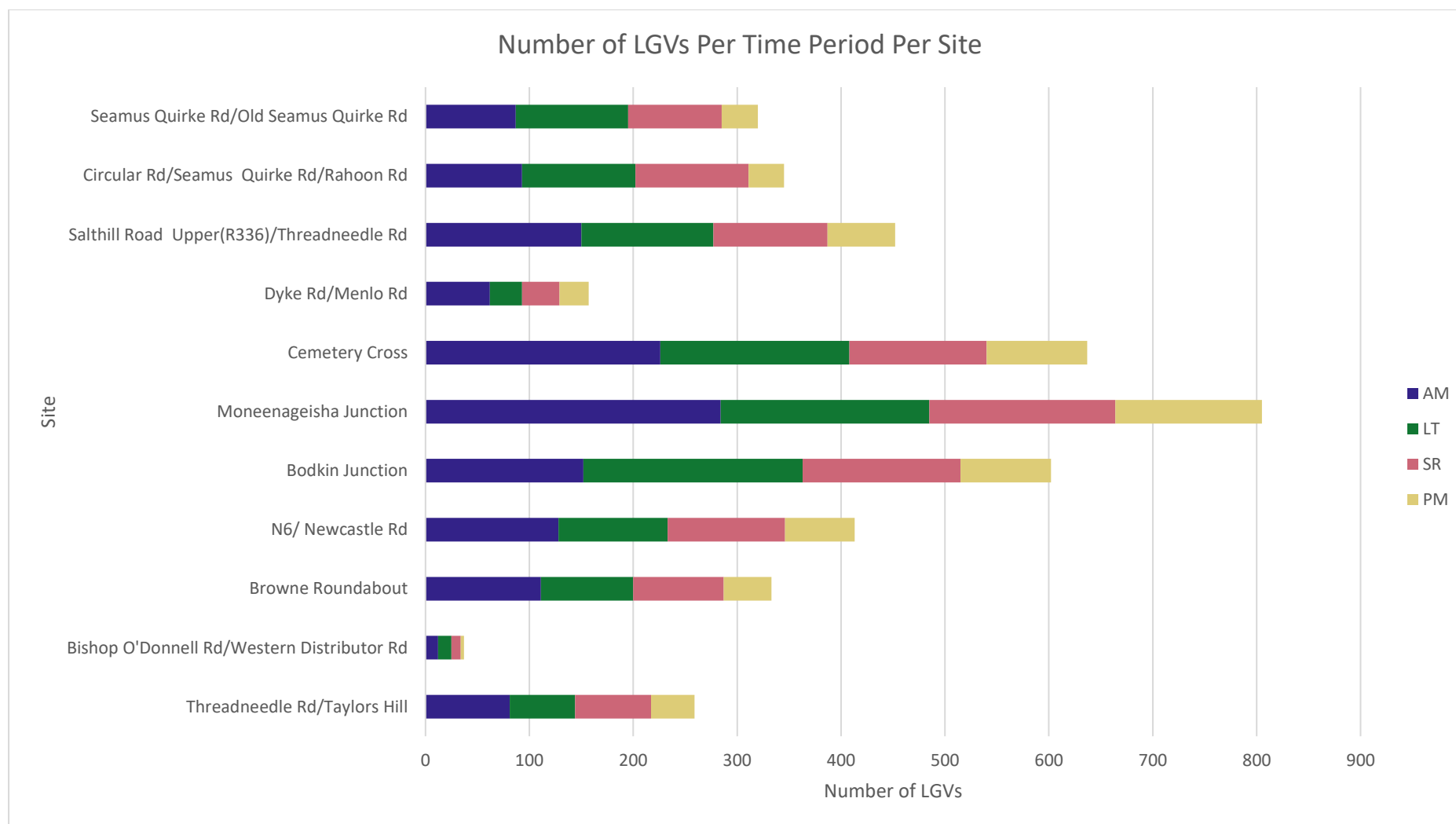


Figure 3-6: Number of LGVs Crossing the Galway Inner-City Cordon Inbound at all Sites Per Time Period

### Ordinary Goods Vehicle 1

Figure 3-7 below presents the total number of OGV1s crossing the Galway Inner-City Cordon for each surveyed time period. Overall, it is evident that the LT time period has the highest volume of OGV1s, with a total of 216 OGV1s travelling inbound.

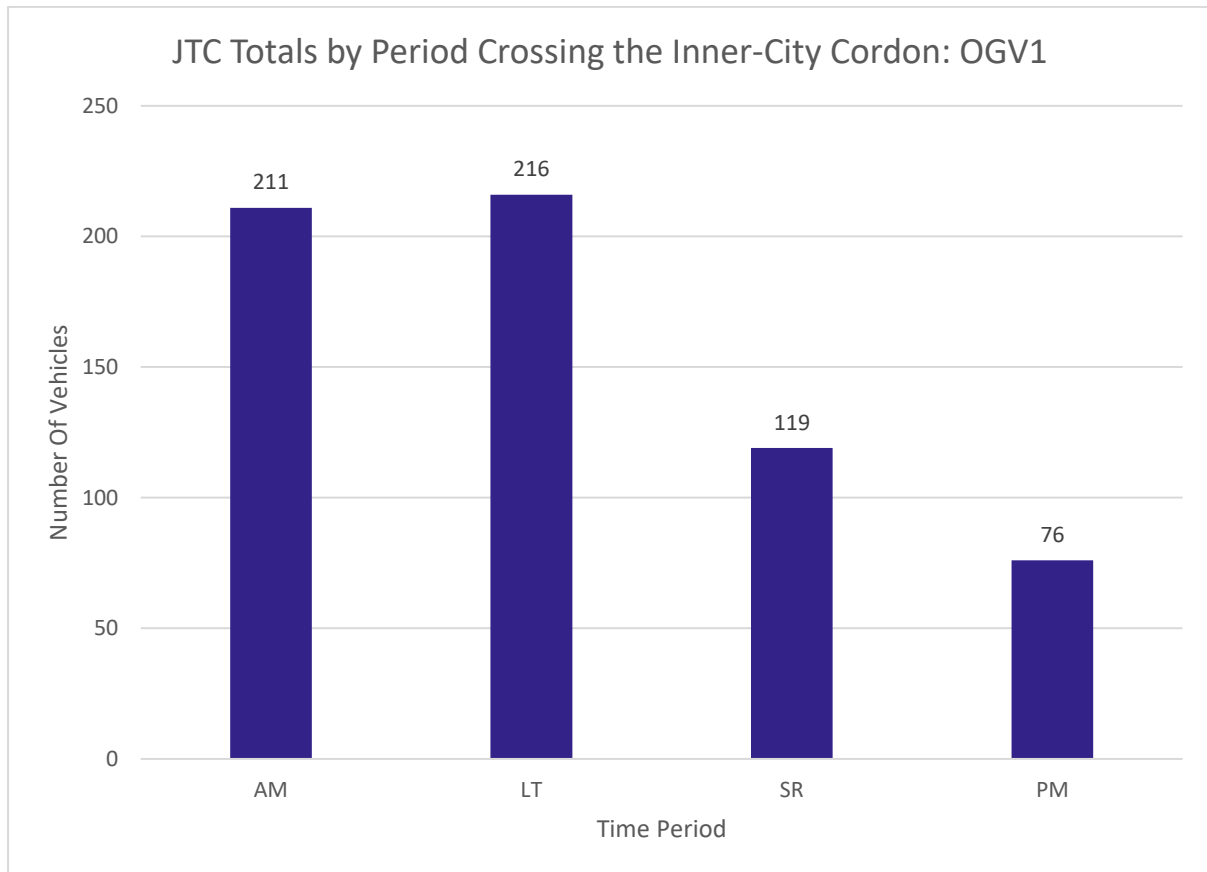


Figure 3-7: Total Number of OGV1 journeys per Time Period

Figure 3-8 presents a further breakdown of the total number of OGV1s, with reference to each site location. The busiest location for OGV1s crossing the Galway Inner-City Cordon was the Moneenageisha Junction, with a total of 139 OGV1s travelling inbound through this junction over a 12-hour period.

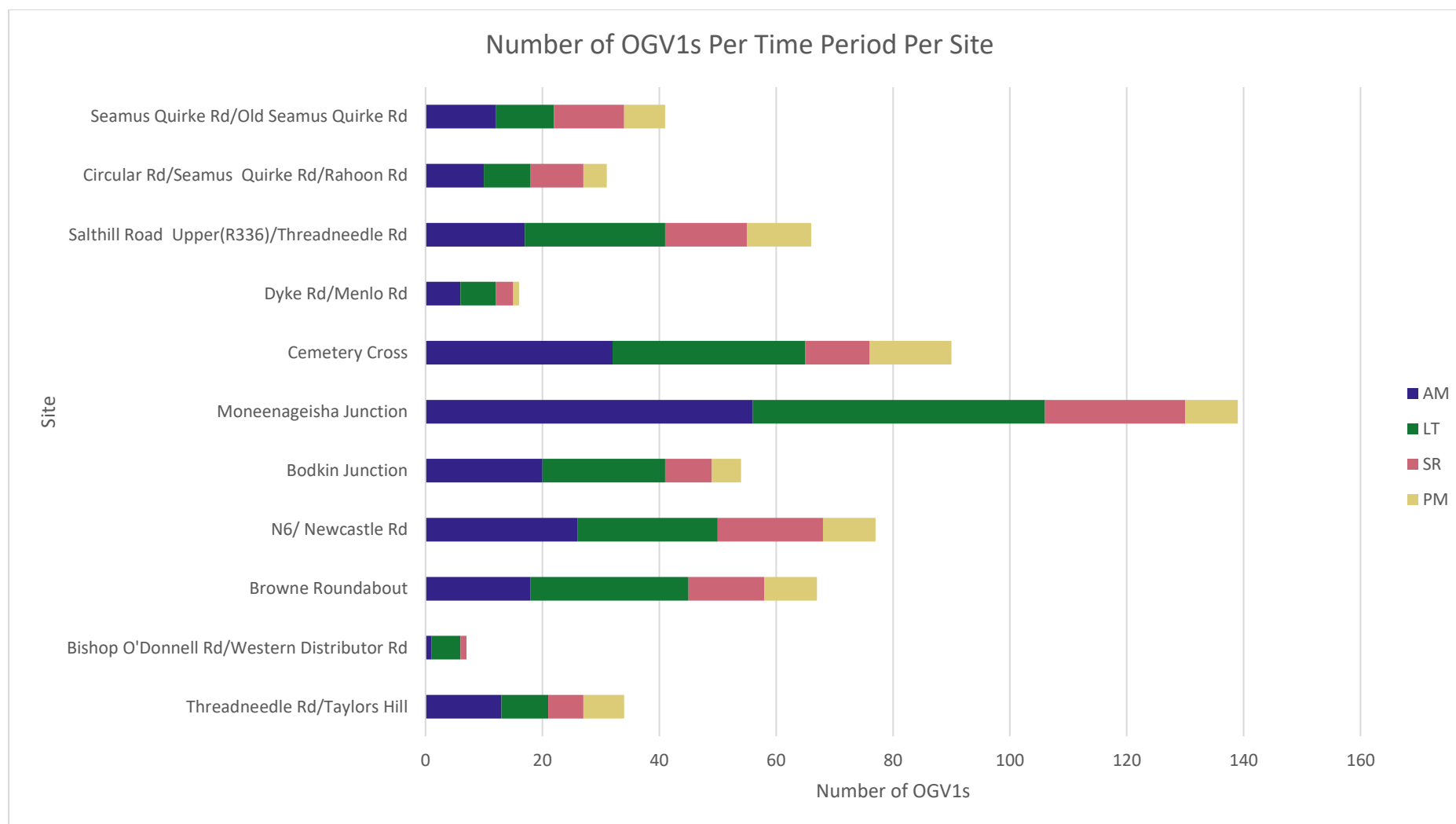


Figure 3-8: Number of OGV1s Crossing the Galway Inner-City Cordon Inbound at all Sites Per Time Period



### Ordinary Goods Vehicle 2

Figure 3-9 below presents the total number of OGV2s crossing the Galway Inner-City Cordon for each surveyed time period. Overall, it is evident that the AM time period has the highest volume of OGV2s, with a total of 44 OGV2s travelling inbound.

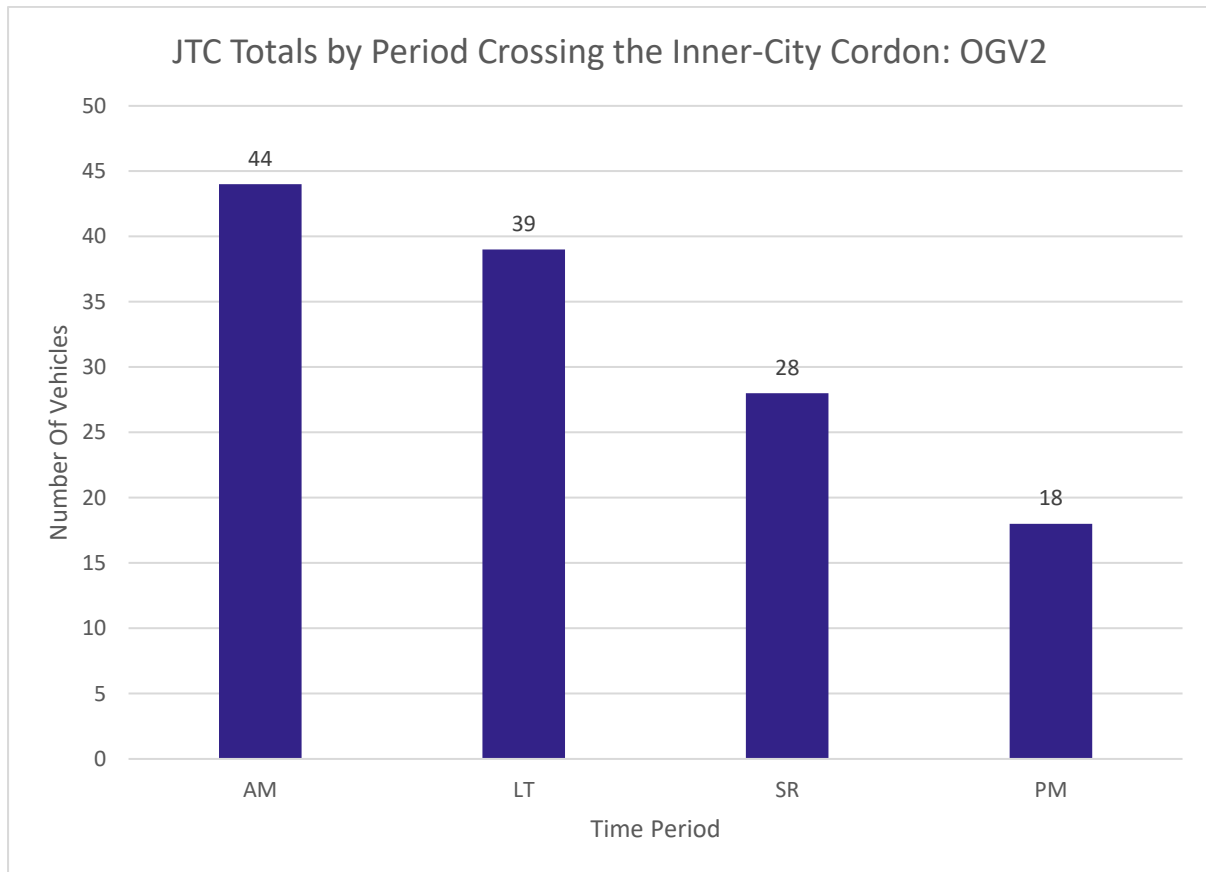


Figure 3-9: Total Number of OGV2 journeys per Time Period

Figure 3-10 presents a further breakdown of the total number of OGV2s, with reference to each site location. The busiest location for OGV2s crossing the Galway Inner-City Cordon was the Moneenageisha Junction, with a total of 70 OGV2s travelling inbound through this junction over a 12-hour period.

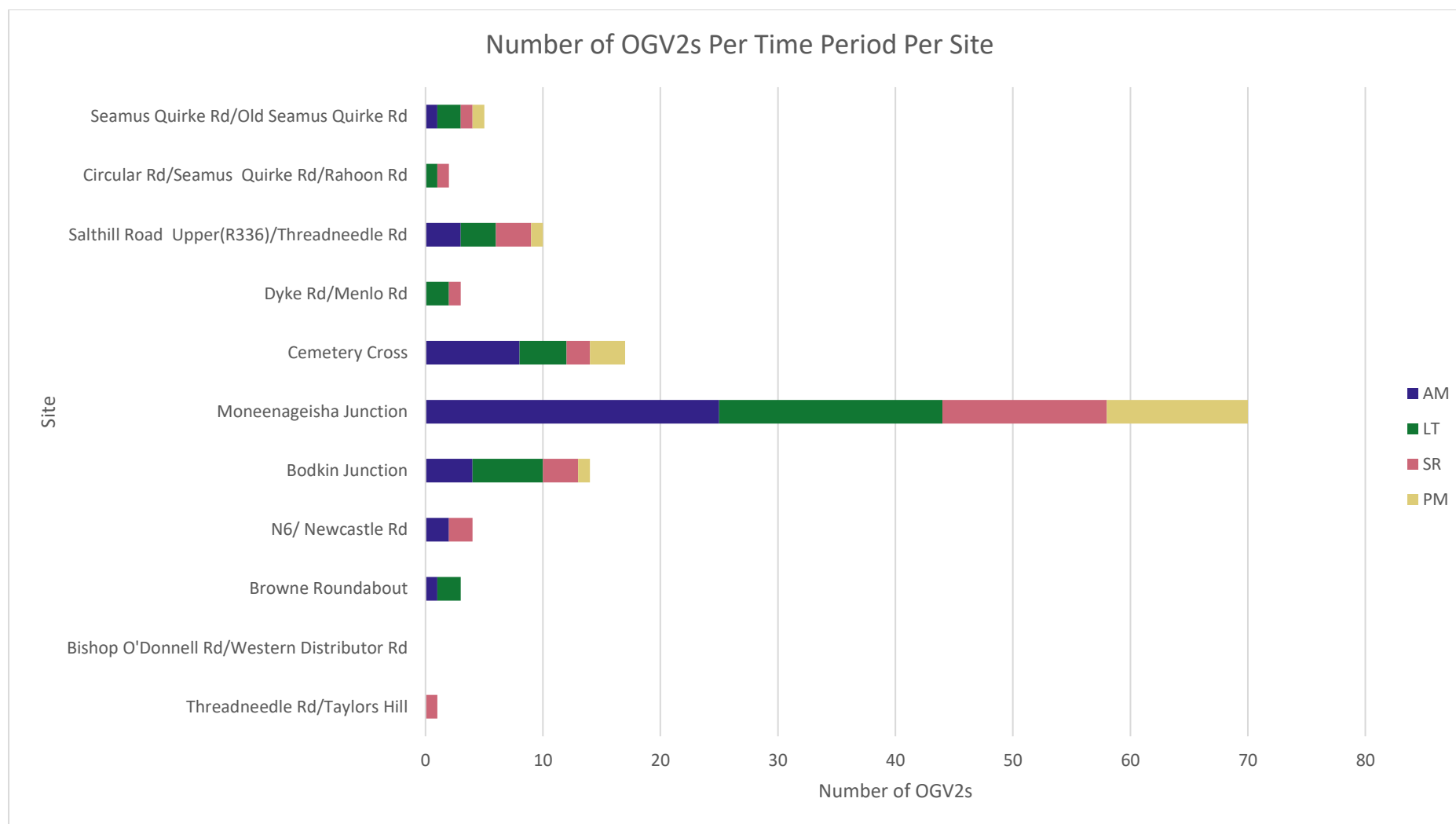


Figure 3-10: Number of OGV2s Crossing the Galway Inner-City Cordon Inbound at all Sites Per Time Period

### Motorcycle

Figure 3-11 below presents the total number of motorcycles crossing the Galway Inner-City Cordon for each surveyed time period. Overall, it is evident that the SR time period has the highest volume of motorcycles, with a total of 28 motorcycles travelling inbound.

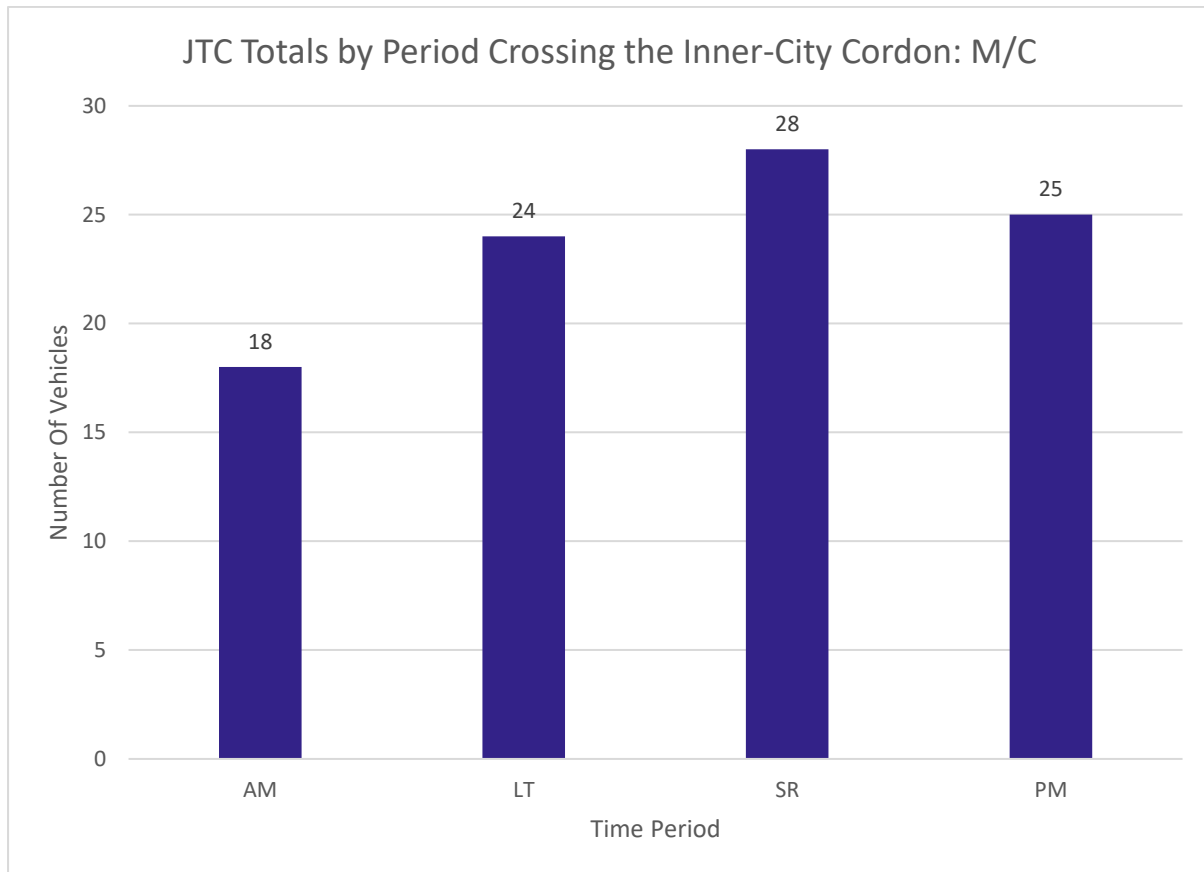


Figure 3-11: Total Number of Motorcycle journeys per Time Period

Figure 3-12 presents a further breakdown of the total number of motorcycles, with reference to each site location. The busiest location for motorcycles crossing the Galway Inner-City Cordon was the Moneenageisha Junction, with a total of 21 motorcycles travelling inbound through this junction over a 12-hour period.

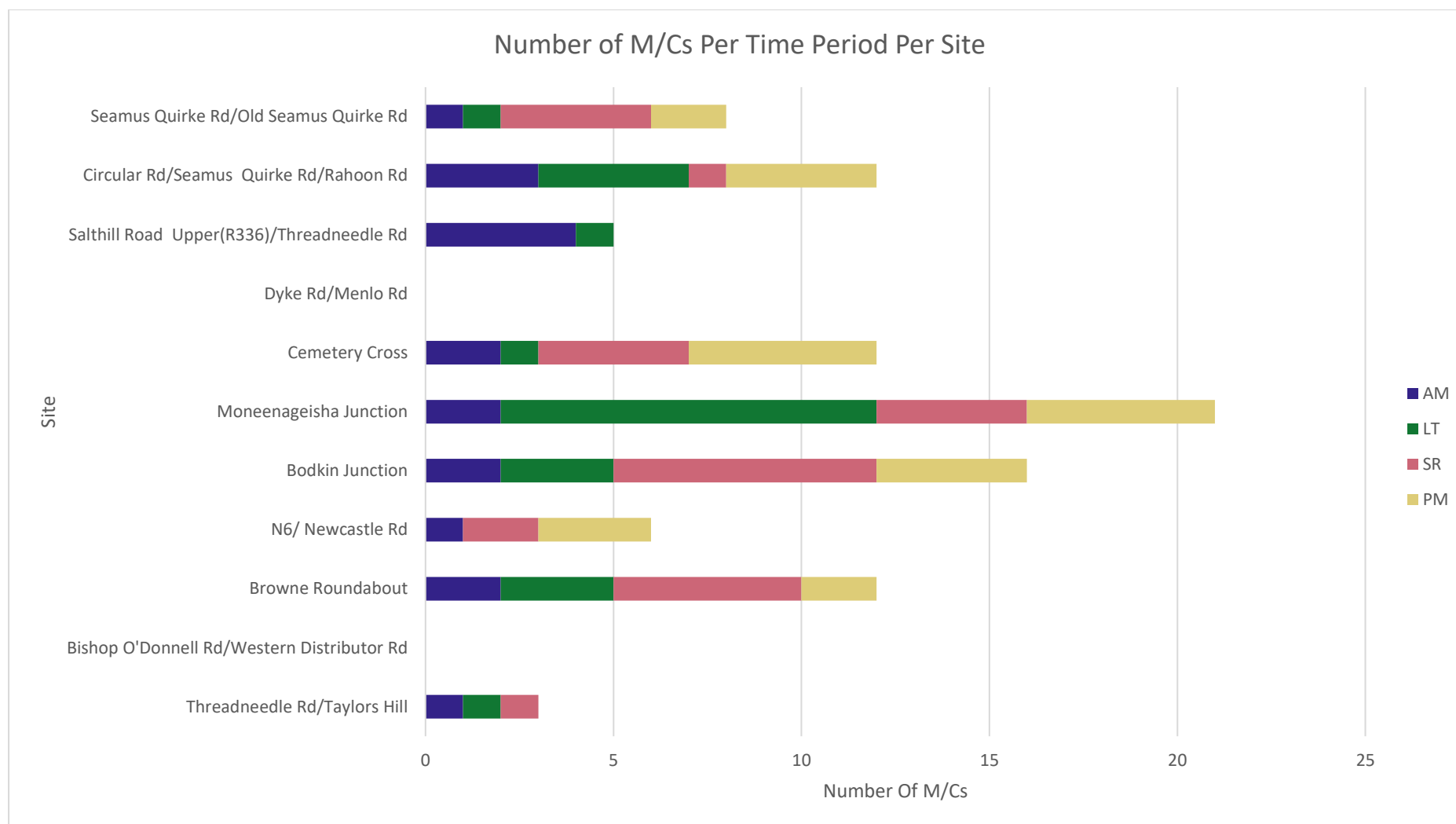


Figure 3-12: Number of Motorcycles Crossing the Galway Inner-City Cordon Inbound at all Sites Per Time Period

### Pedal Cycle

Figure 3-13 below presents the total number of pedal cycles crossing the Galway Inner-City Cordon for each surveyed time period. Overall, it is evident that the AM time period has the highest volume of pedal cycles, with a total of 411 pedal cycles travelling inbound.

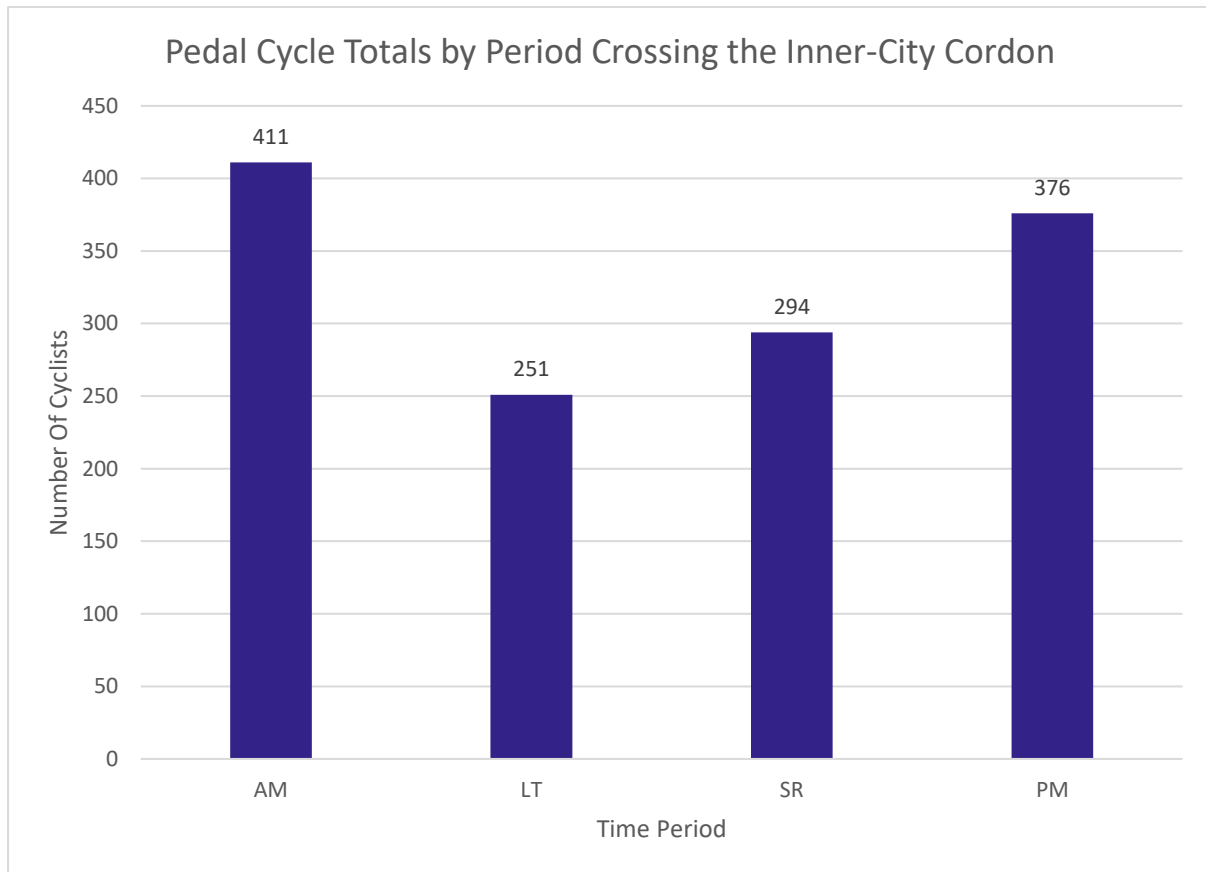


Figure 3-13: Total Number of Pedal Cycle journeys per Time Period

Figure 3-14 presents a further breakdown of the total number of pedal cycles, with reference to each site location. The busiest location for pedal cycles crossing the Galway Inner-City Cordon was the Browne Roundabout junction, with a total of 235 pedal cycles travelling inbound through this junction over a 12-hour period.

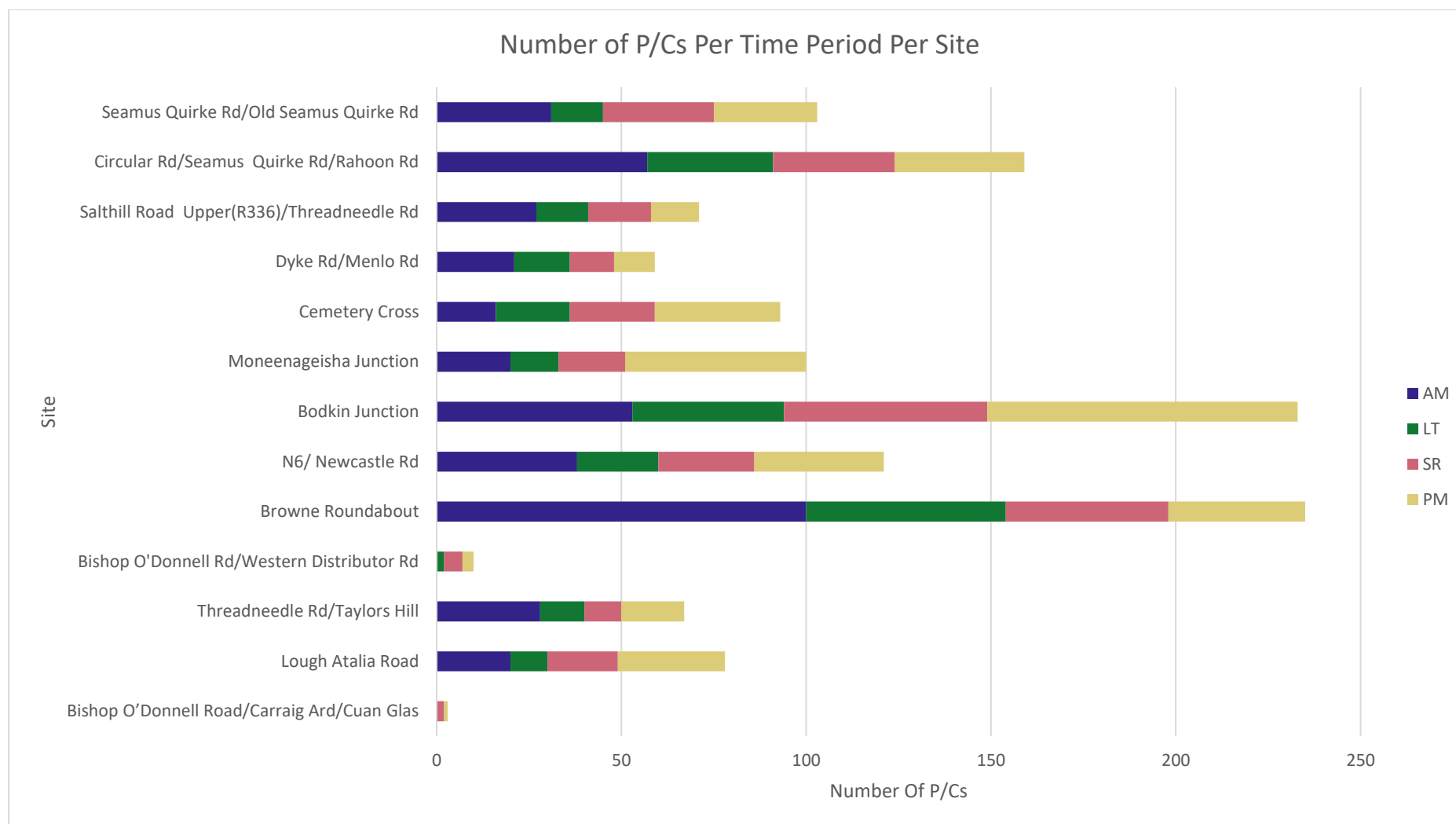


Figure 3-14: Number of Pedal Cycles Crossing the Galway Inner-City Cordon Inbound at all Sites Per Time Period

### Taxi

Figure 3-15 below presents the total number of taxis crossing the Galway Inner-City Cordon for each surveyed time period. Overall, it is evident that the AM time period has the highest volume of taxis, with a total of 483 taxis travelling inbound.

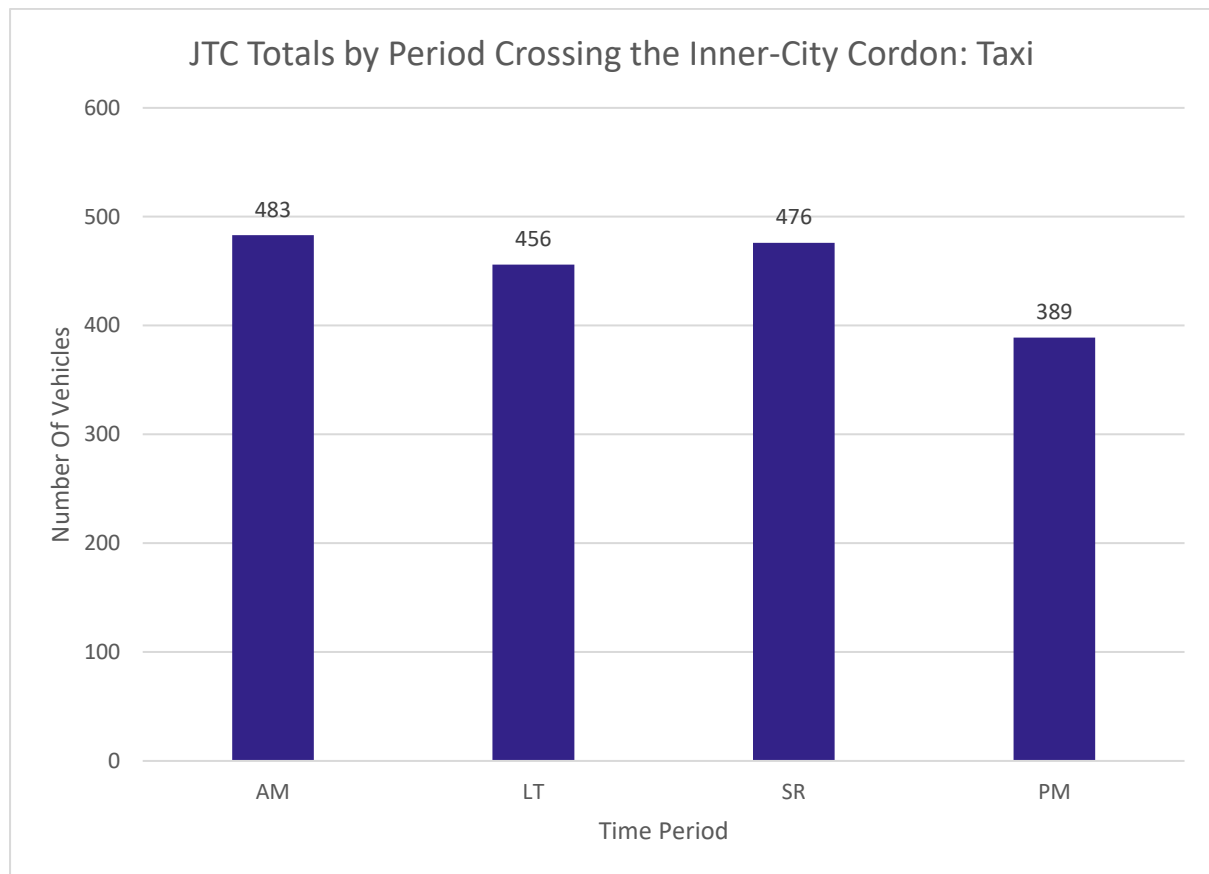


Figure 3-15: Total Number of Taxi journeys per Time Period

Figure 3-16 presents a further breakdown of the total number of taxis, with reference to each site location. The busiest location for taxis crossing the Galway Inner-City Cordon was the Moneenageisha Junction, with a total of 406 taxis travelling inbound through this junction over a 12-hour period.

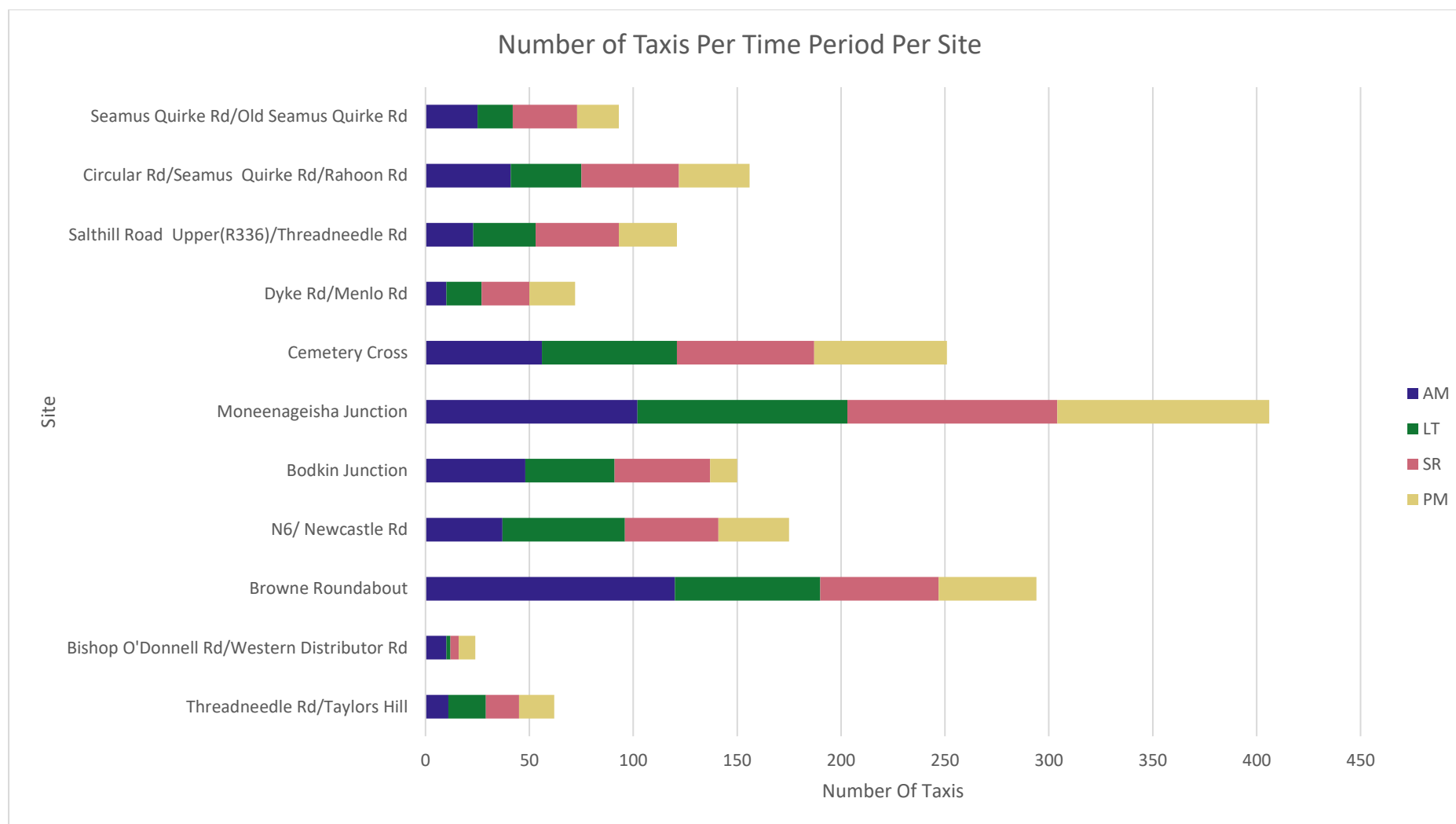


Figure 3-16: Number of Taxis Crossing the Galway Inner-City Cordon Inbound at all Sites Per Time Period



### Bus

Figure 3-17 below presents the total number of buses crossing the Galway Inner-City Cordon for each surveyed time period. Overall, it is evident that the AM time period has the highest volume of buses, with a total of 195 buses travelling inbound.

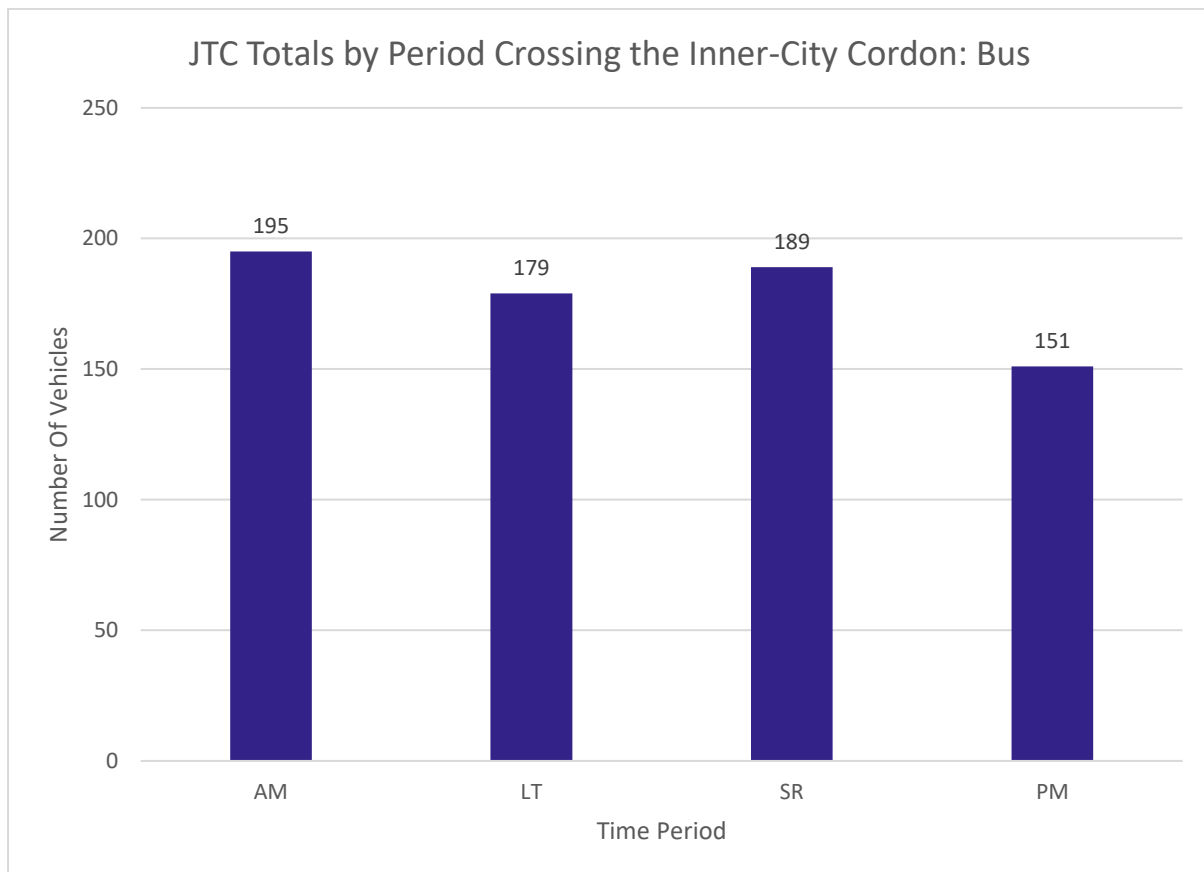


Figure 3-17: Total Number of Bus journeys per Time Period

Figure 3-18 presents a further breakdown of the total number of buses, with reference to each site location. The busiest location for buses crossing the Galway Inner-City Cordon was the Moneenageisha Junction, with a total of 247 buses travelling inbound through this junction over a 12-hour period.

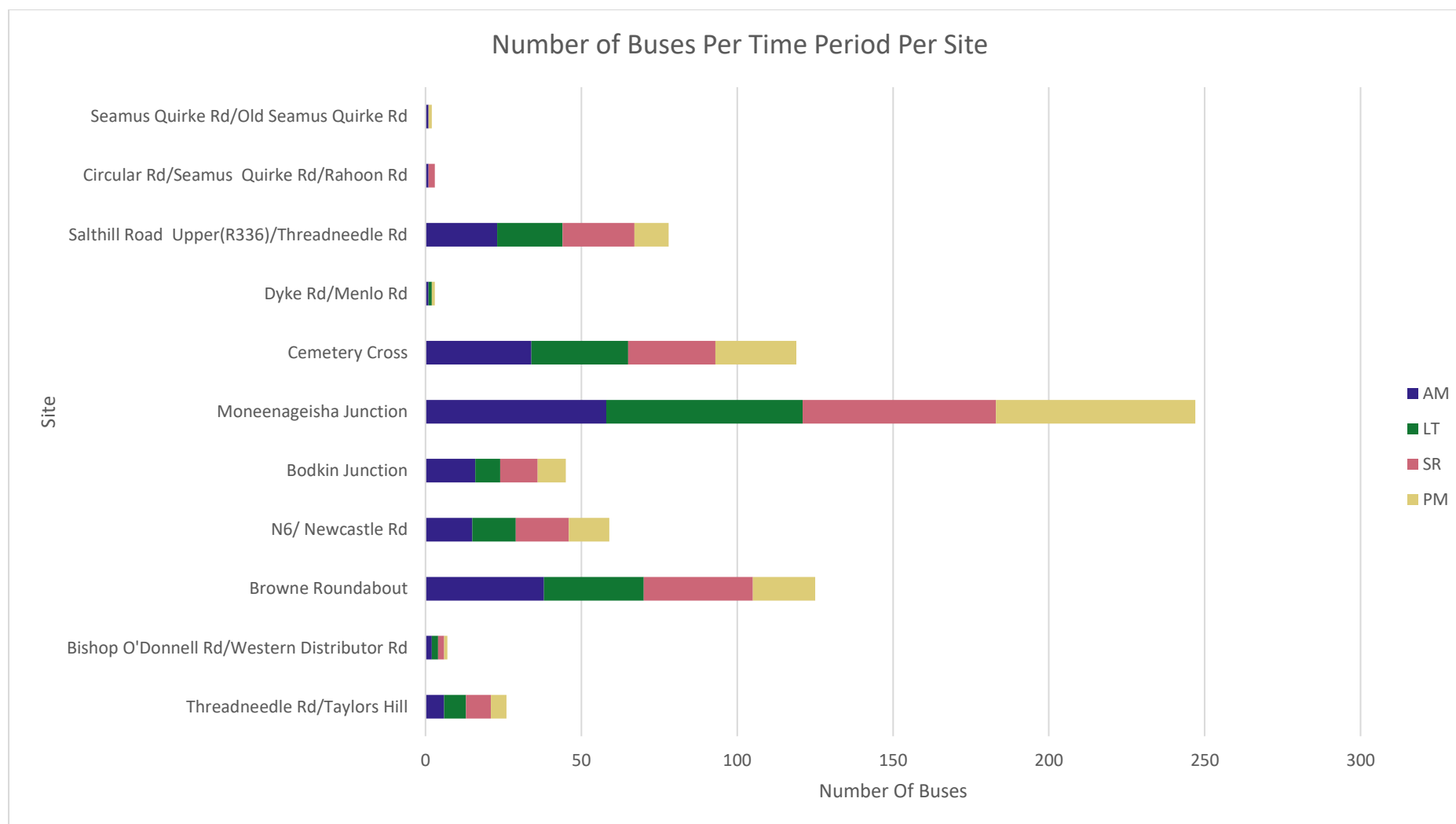
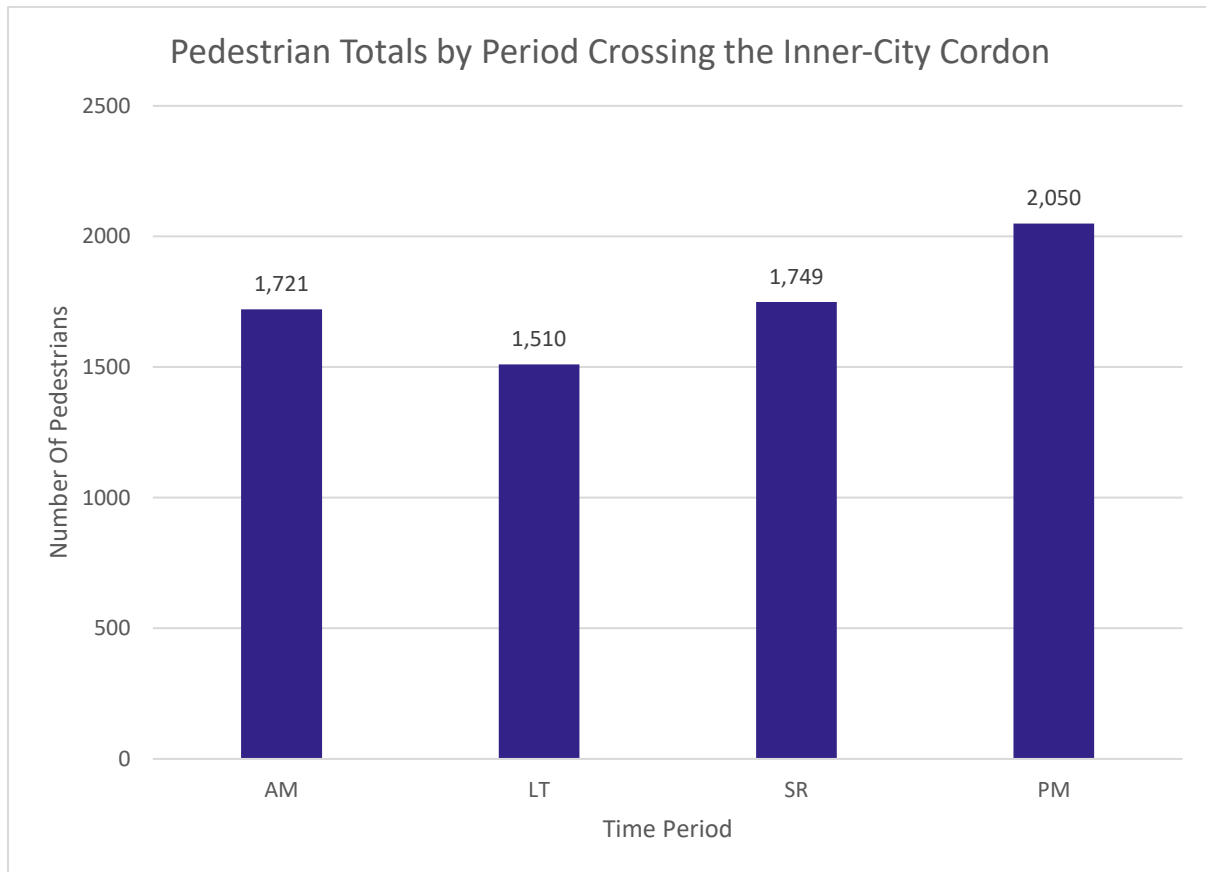


Figure 3-18: Number of Buses Crossing the Galway Inner-City Cordon Inbound at all Sites Per Time Period

### **Pedestrians**

Figure 3-19 presents the total number of pedestrian movements crossing the Galway Inner-City Cordon per surveyed time period. Overall, it is evident that the PM period has the highest volume of pedestrians, with a total of 2,050 pedestrians travelling inbound.



*Figure 3-19: Total Pedestrians per Time Period*

Figure 3-20 presents a further breakdown of the total number of pedestrian movements, with reference to each site location. The busiest location for pedestrians crossing the Galway Inner-City Cordon was the N6/Newcastle Rd, with a total of 1,493 pedestrians travelling inbound through this junction over a 12-hour period.

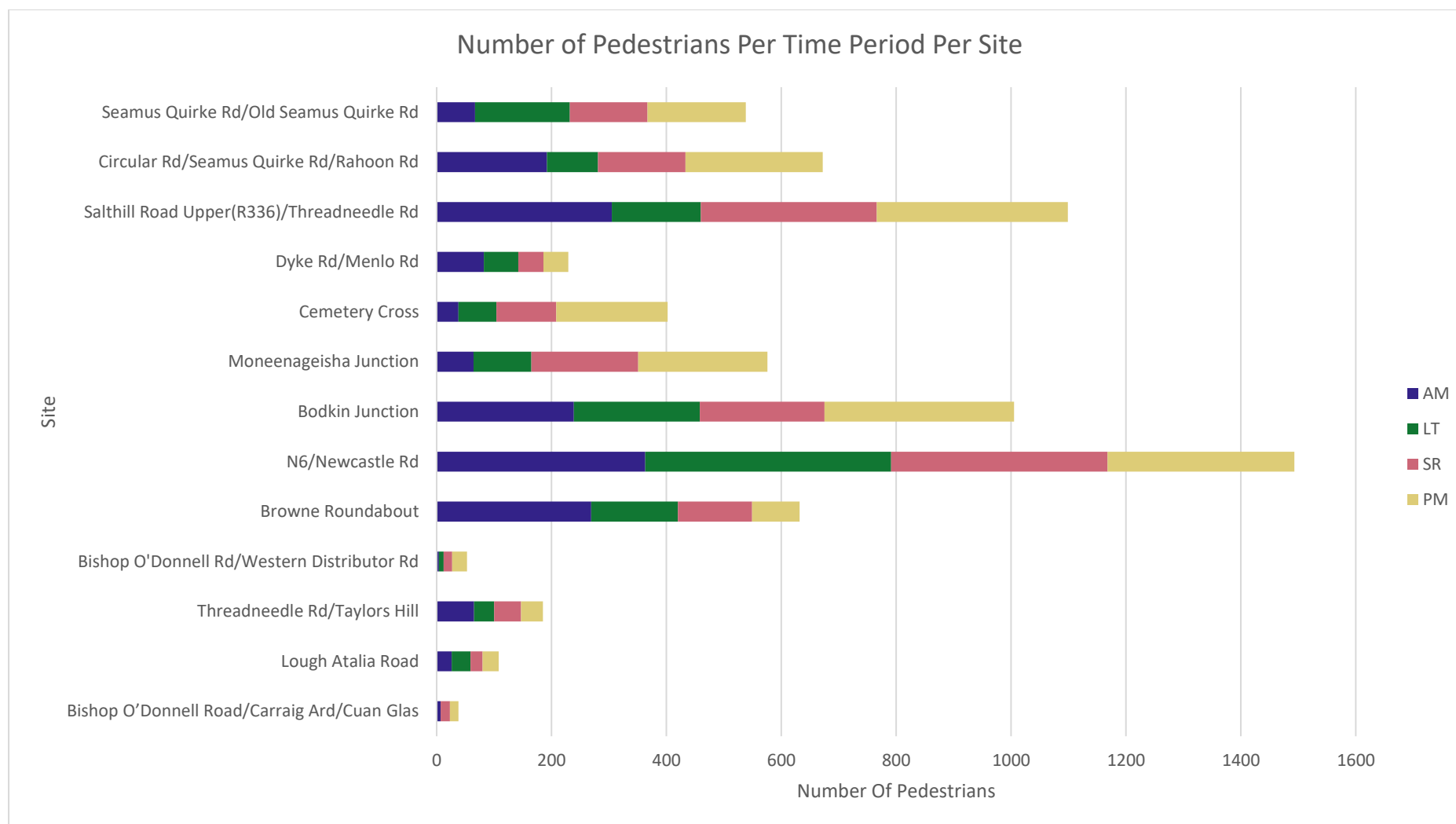


Figure 3-20: Total Pedestrians at all Sites per Time Period

## 3.2 Vehicle Occupancy Data

### 3.2.1 Car Occupancy

In order to obtain accurate data reflective of a neutral weekday, car occupancy surveys were recorded in hourly intervals, over a 12-hour period (i.e. 07:00-19:00) on the day of the survey.

Figure 3-21, Figure 3-22, Figure 3-23, Figure 3-24 and Figure 3-25 display the observed vehicle occupancy for cars crossing the Galway Inner-City Cordon inbound towards the city during the respective time periods. Please note these graphs display both the absolute values and the percentage occupancy for each time period.

During the 12-hour period (07:00 and 19:00) 79% of Cars crossing the Galway Inner-City Cordon had one occupant, 20% had two occupants and 1% had three occupants.

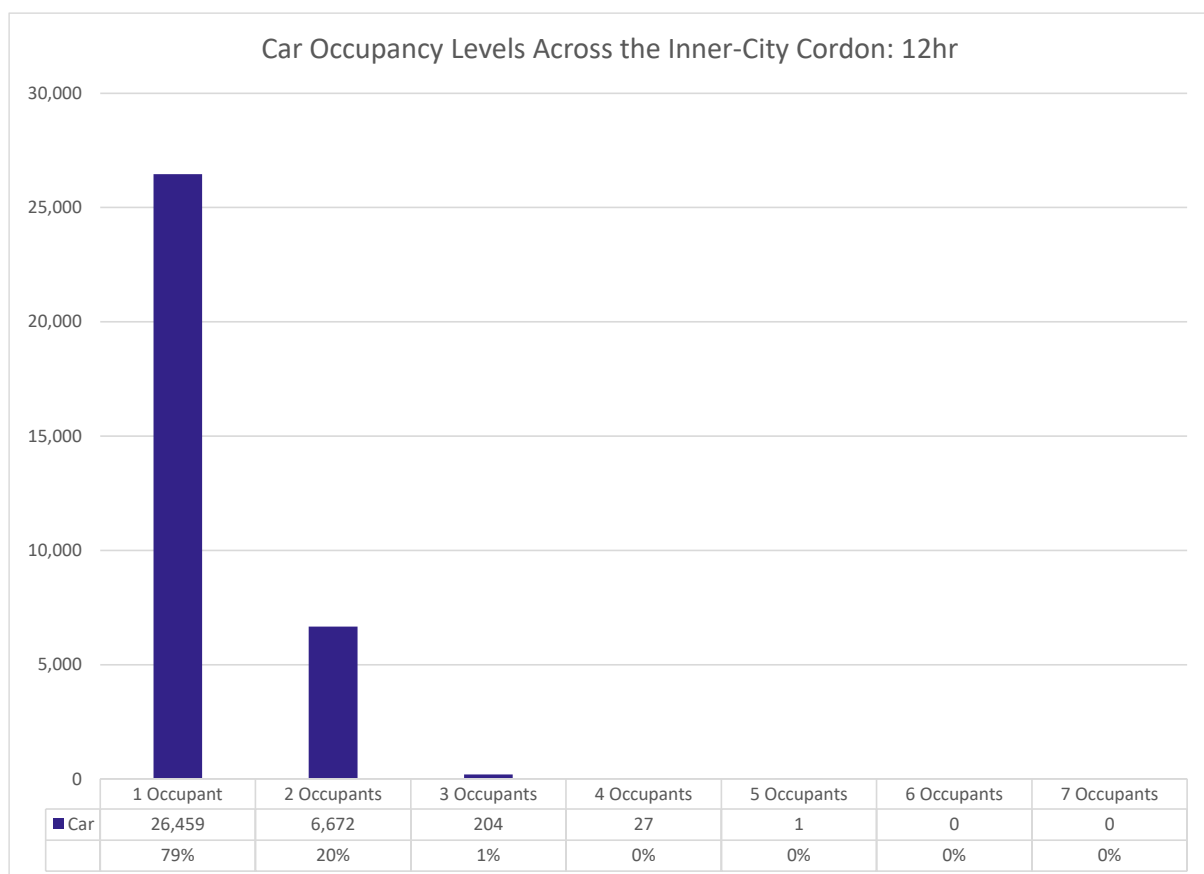


Figure 3-21: Car Occupancy: 12 Hour

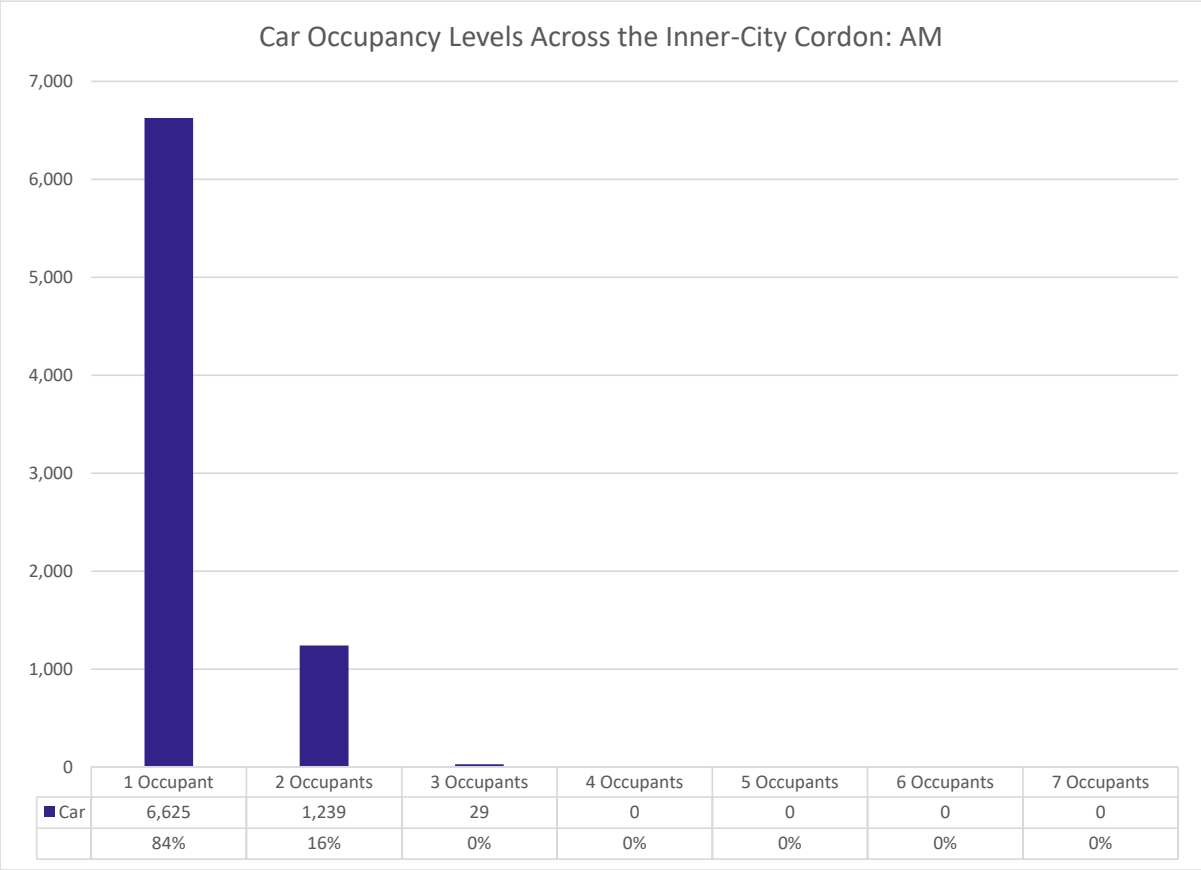


Figure 3-22:Car Occupancy: AM

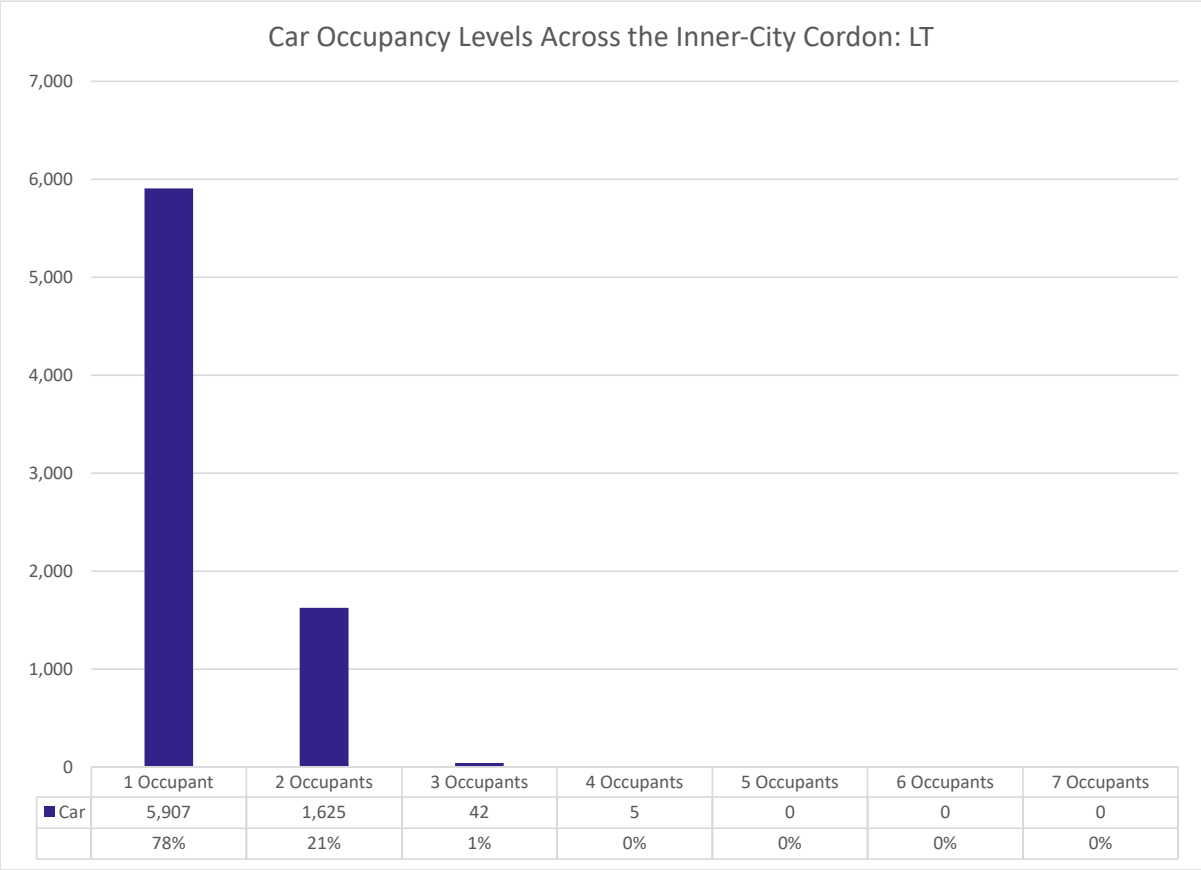


Figure 3-23:Car Occupancy: LT

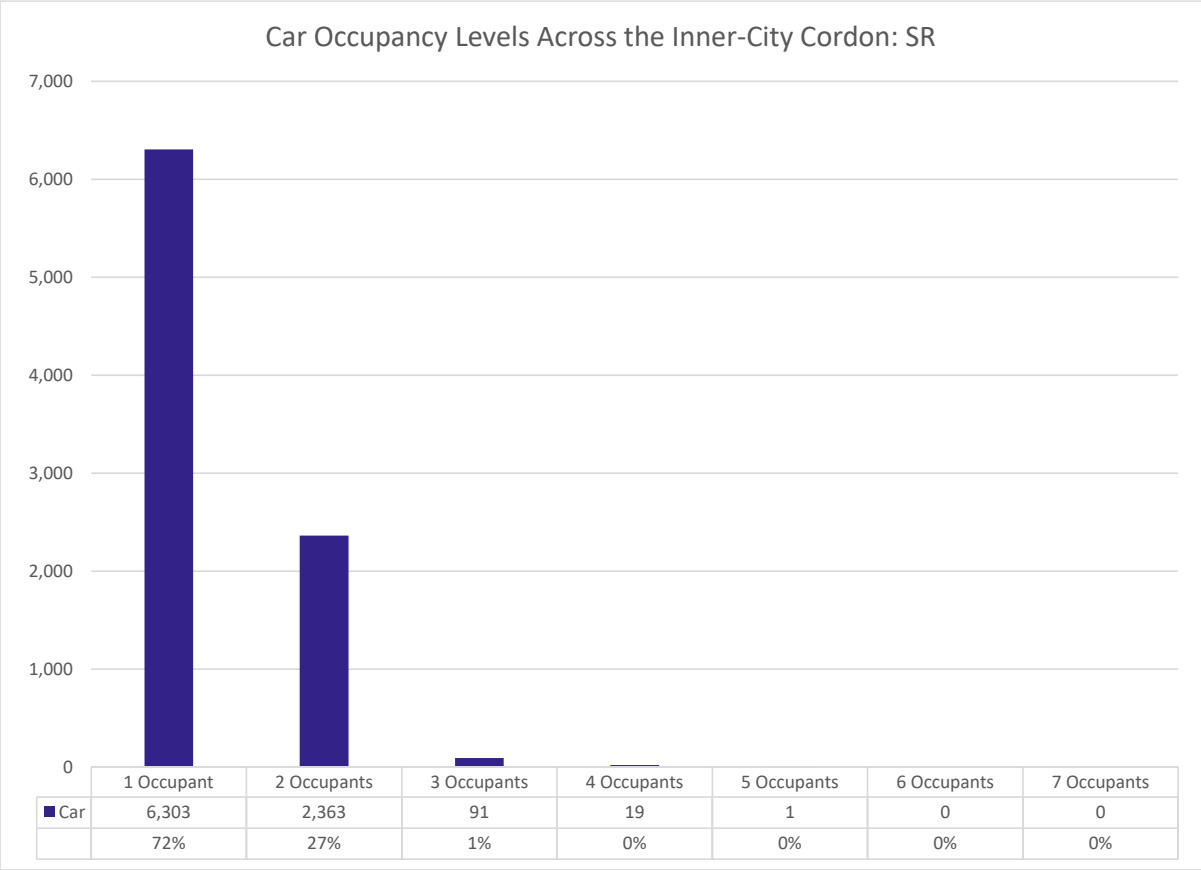
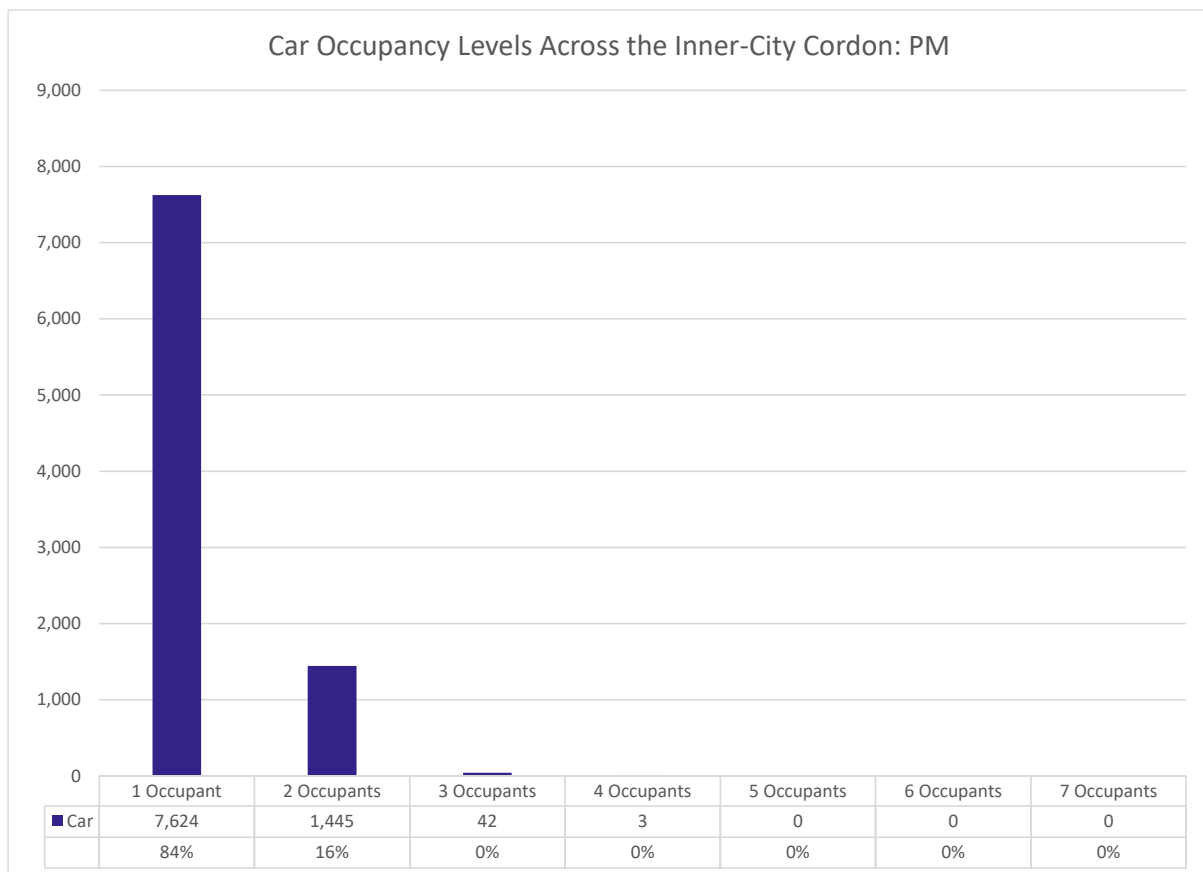


Figure 3-24:Car Occupancy: SR





*Figure 3-25: Car Occupancy: PM*

#### **Car Occupancy per site**

Figure 3-26, Figure 3-27, Figure 3-28, Figure 3-29 and Figure 3-30 display the vehicle occupancy for cars crossing the Galway Inner-City Cordon during the respective time periods, with further reference to each individual site location.

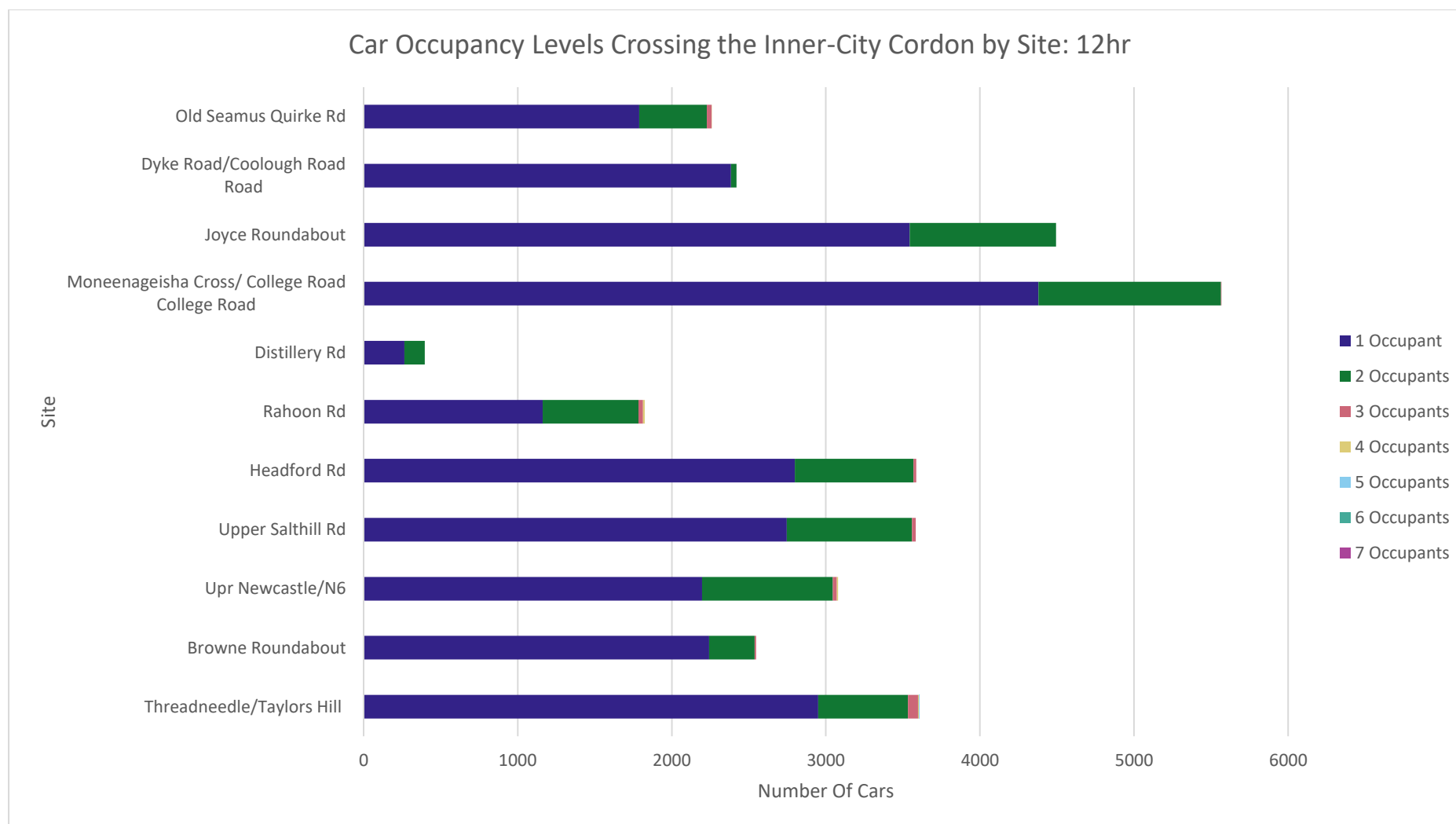


Figure 3-26: Car Occupancy per Site: 12 Hour

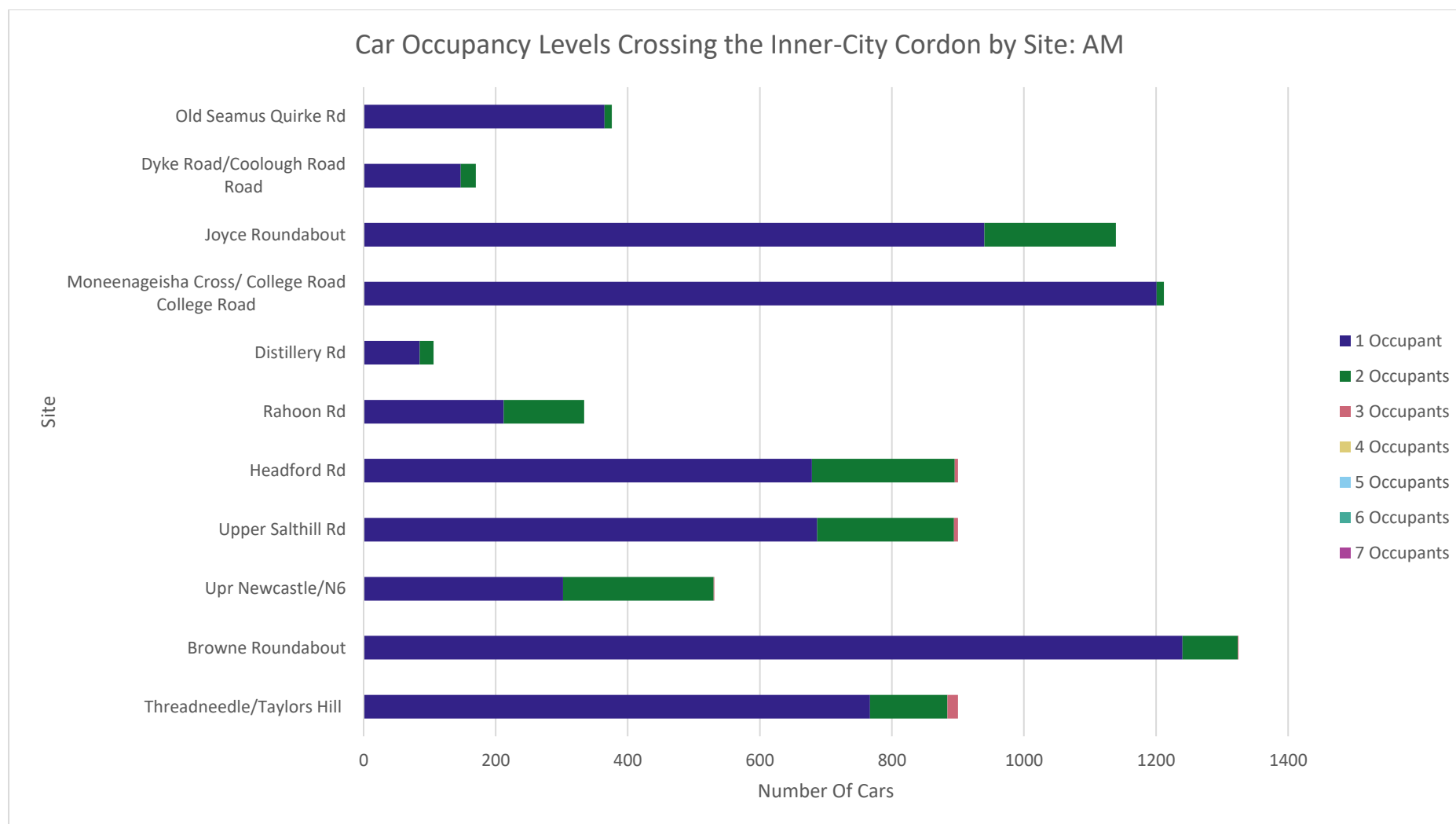


Figure 3-27: Car Occupancy per Site: AM

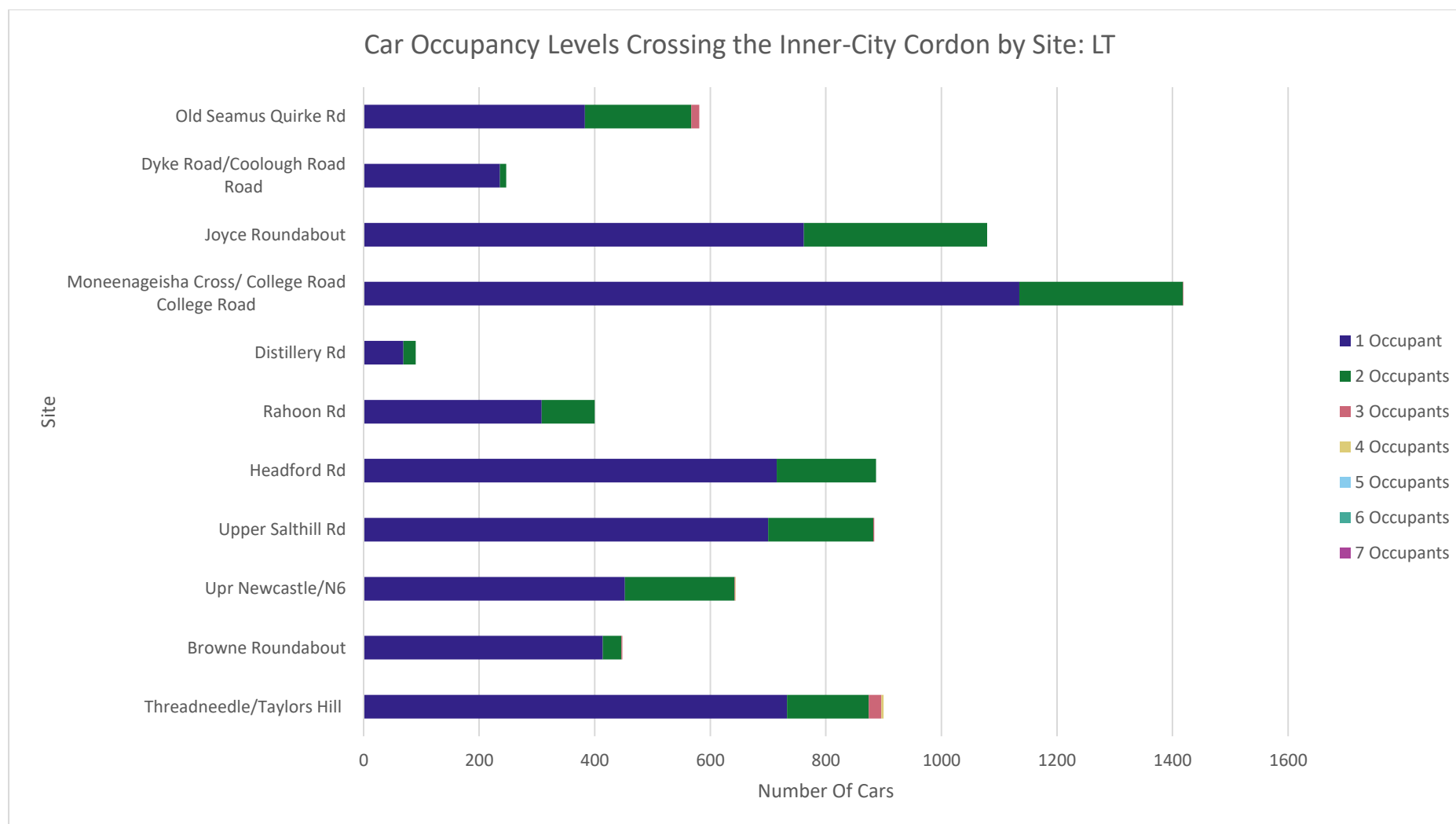


Figure 3-28: Car Occupancy per Site: LT

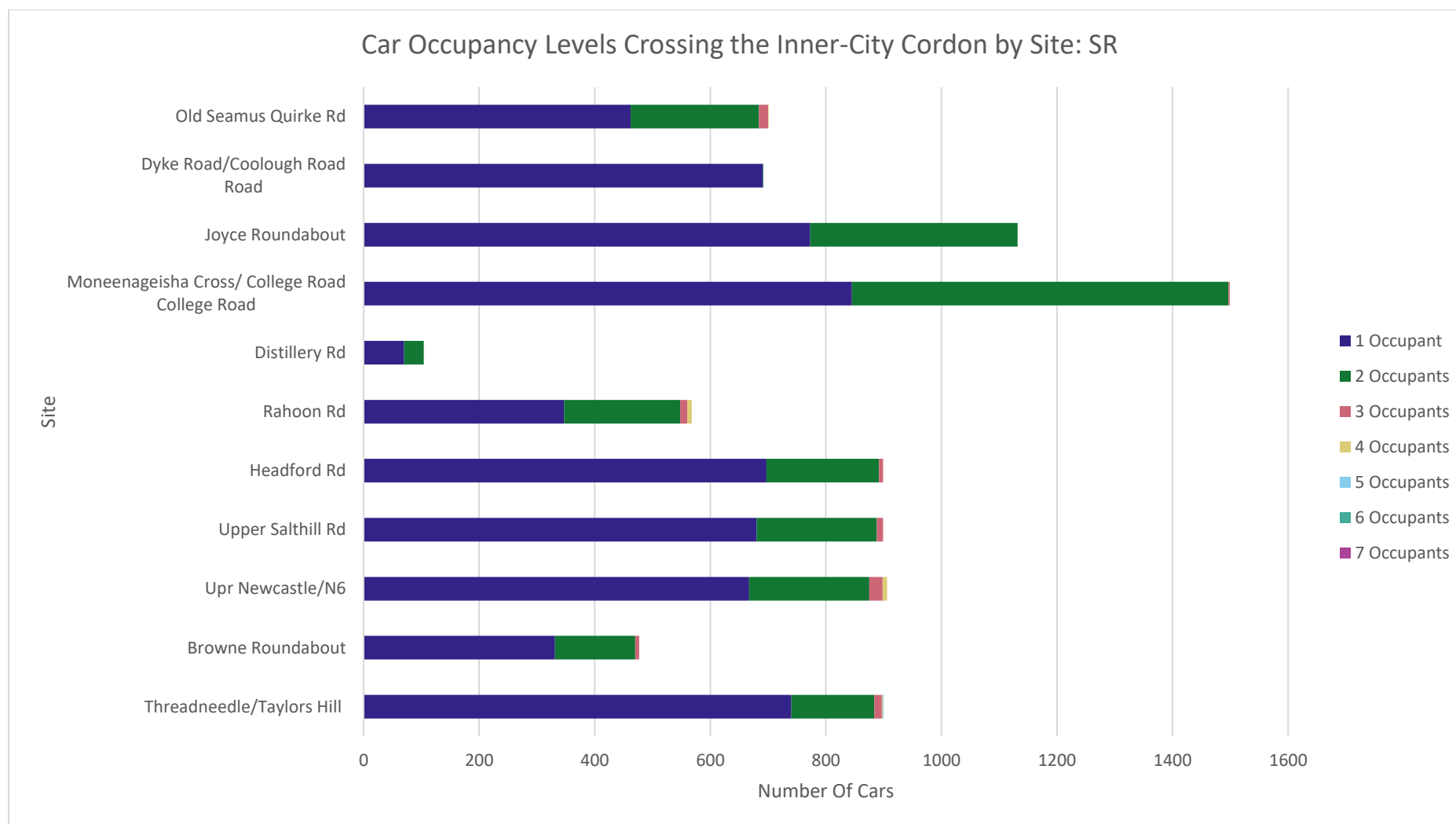


Figure 3-29: Car Occupancy per Site: SR

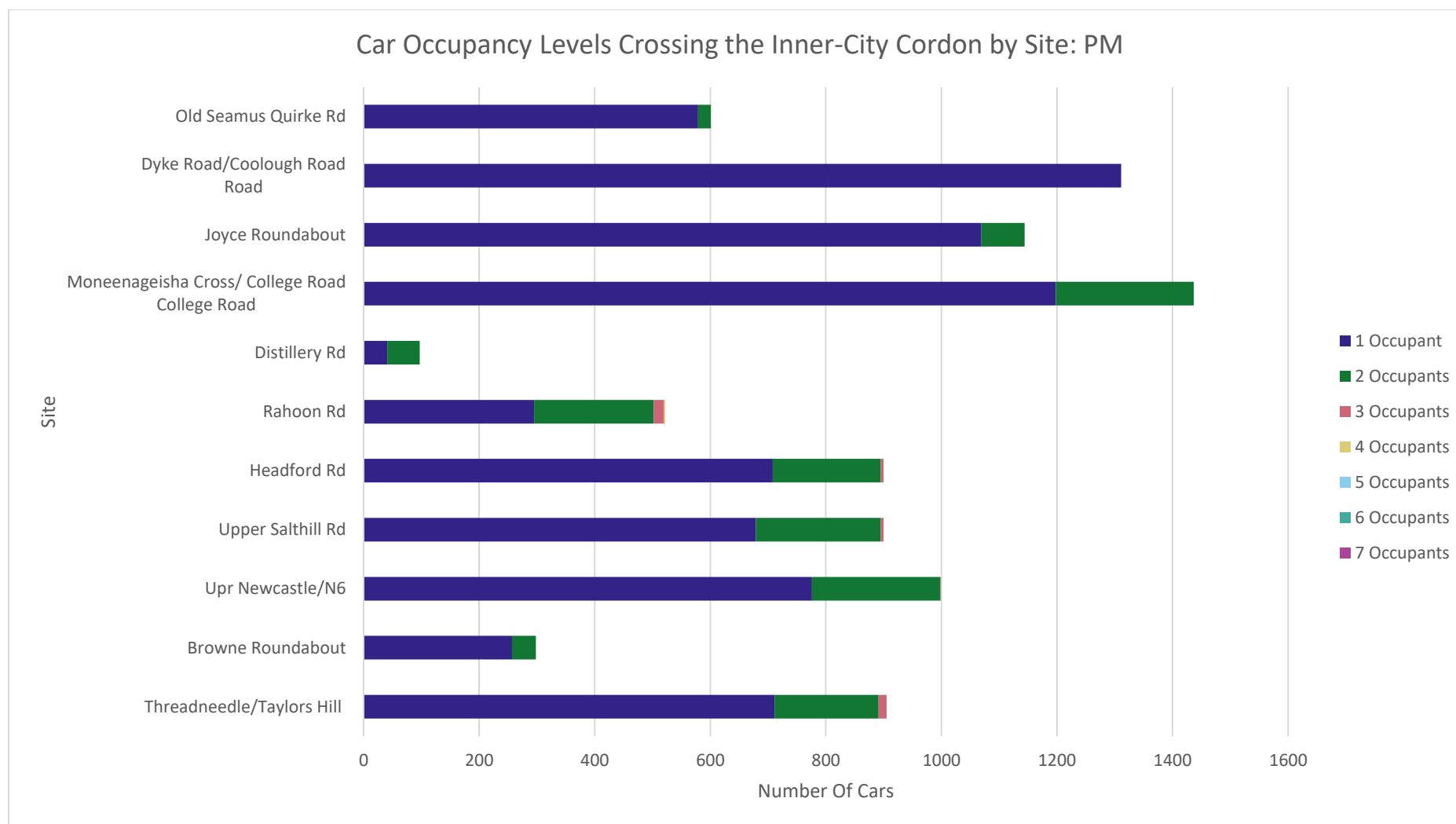


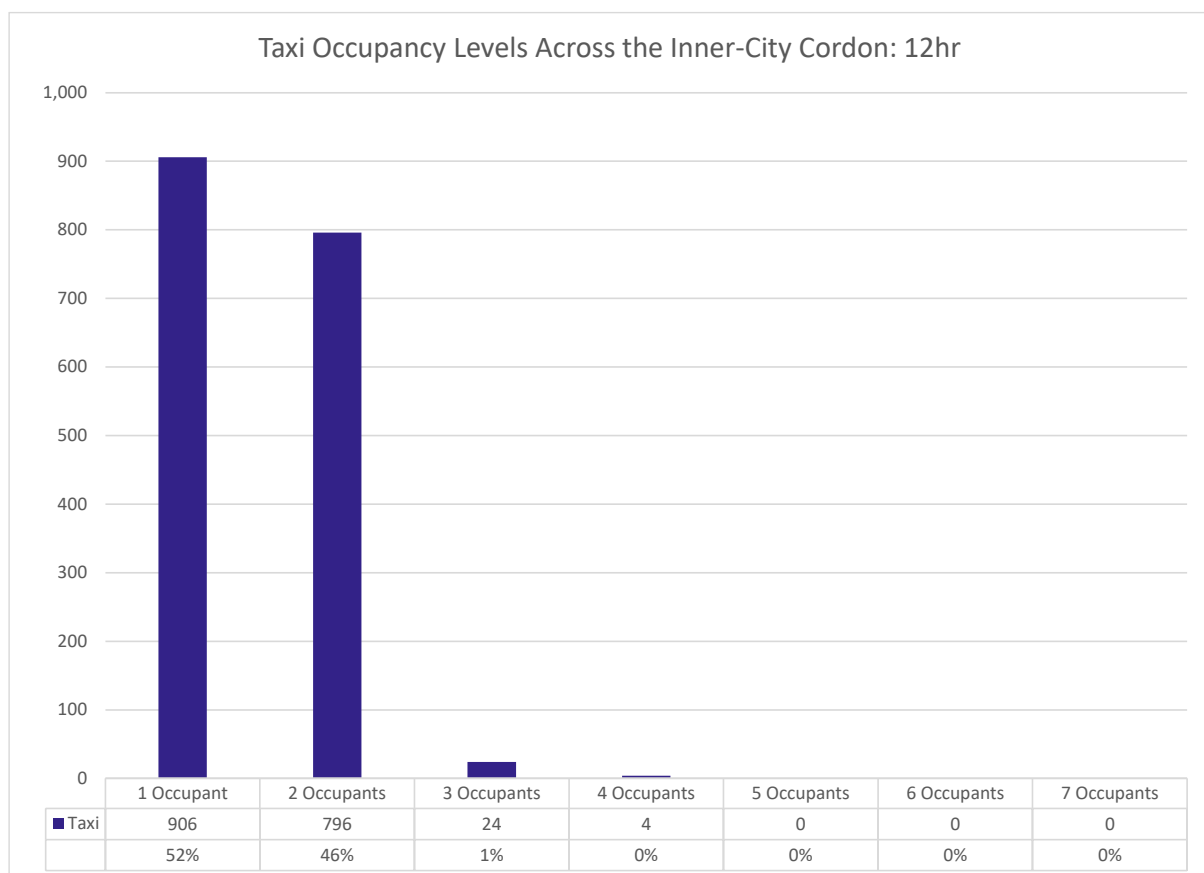
Figure 3-30: Car Occupancy per Site: PM

### 3.2.2 Taxi Occupancy

In order to obtain accurate data reflective of a neutral weekday, taxi occupancy surveys were recorded in hourly intervals, over a 12-hour period (i.e. 07:00-19:00) on the day of the survey.

Figure 3-31, Figure 3-32, Figure 3-33, Figure 3-34 and Figure 3-35 display the observed vehicle occupancy for taxis crossing the Galway Inner-City Cordon inbound towards the city during the respective time periods. Please note these graphs display both the absolute values and the percentage occupancy for each time-period.

During the 12-hour period (07:00 and 19:00) 52% of Taxis crossing the Galway Inner-City Cordon had one occupant, 46% had two occupants and 1% had three occupants.



*Figure 3-31: Taxi Occupancy: 12 Hour*

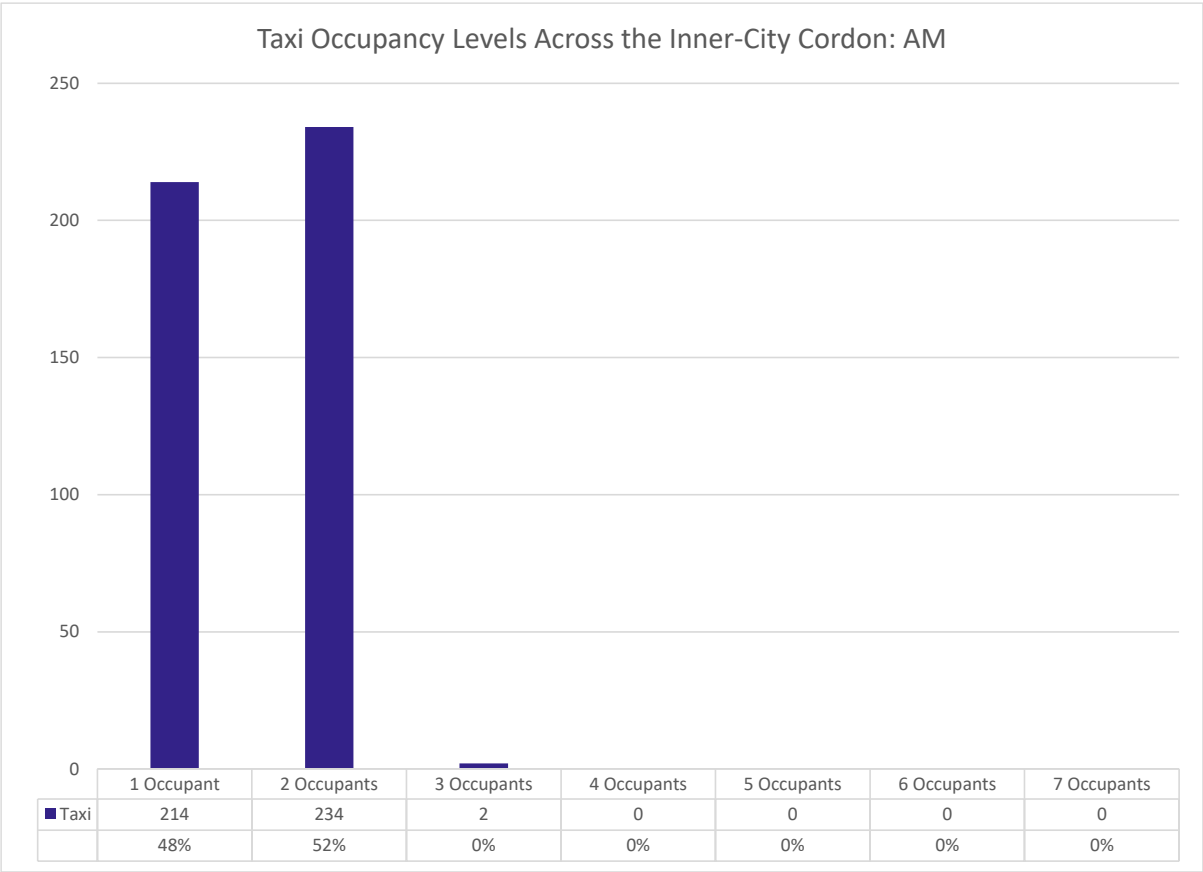


Figure 3-32: Taxi Occupancy: AM



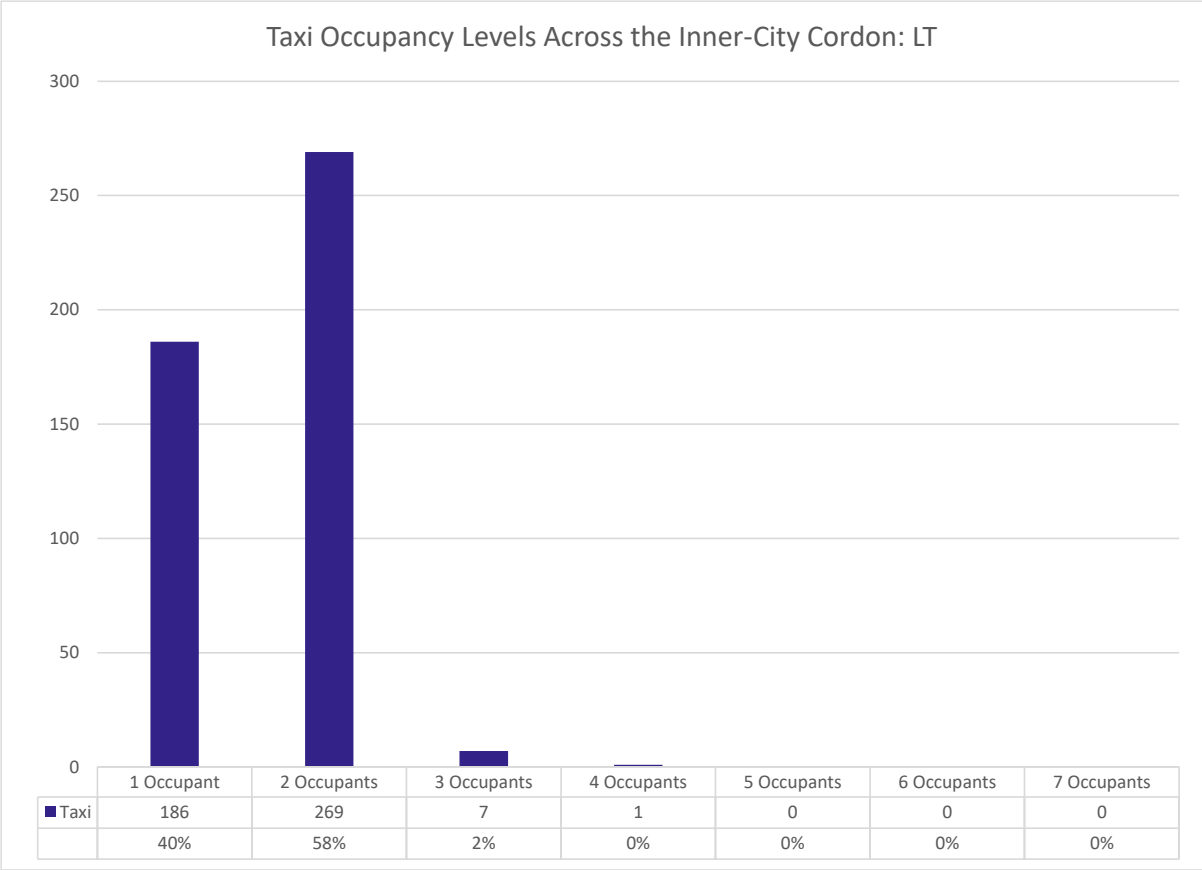
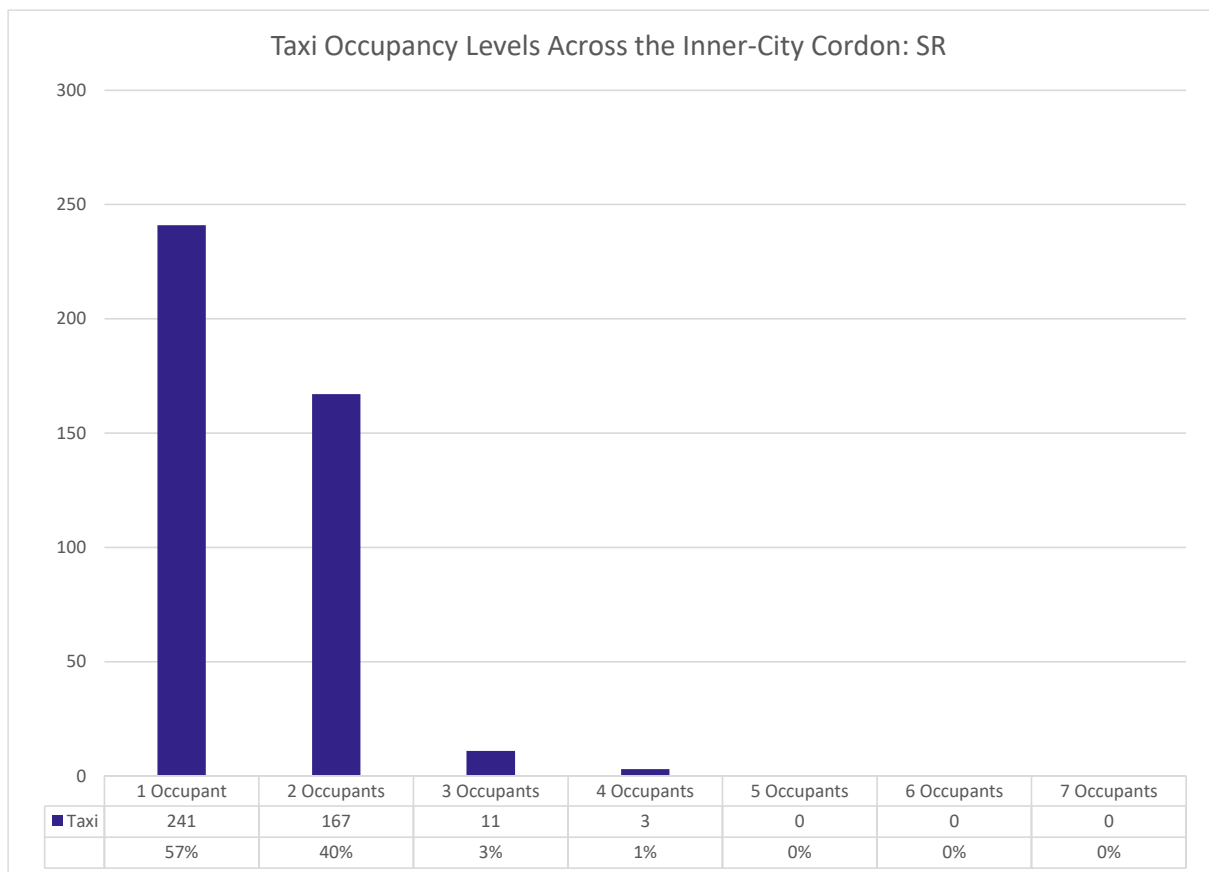


Figure 3-33: Taxi Occupancy: LT



*Figure 3-34: Taxi Occupancy: SR*

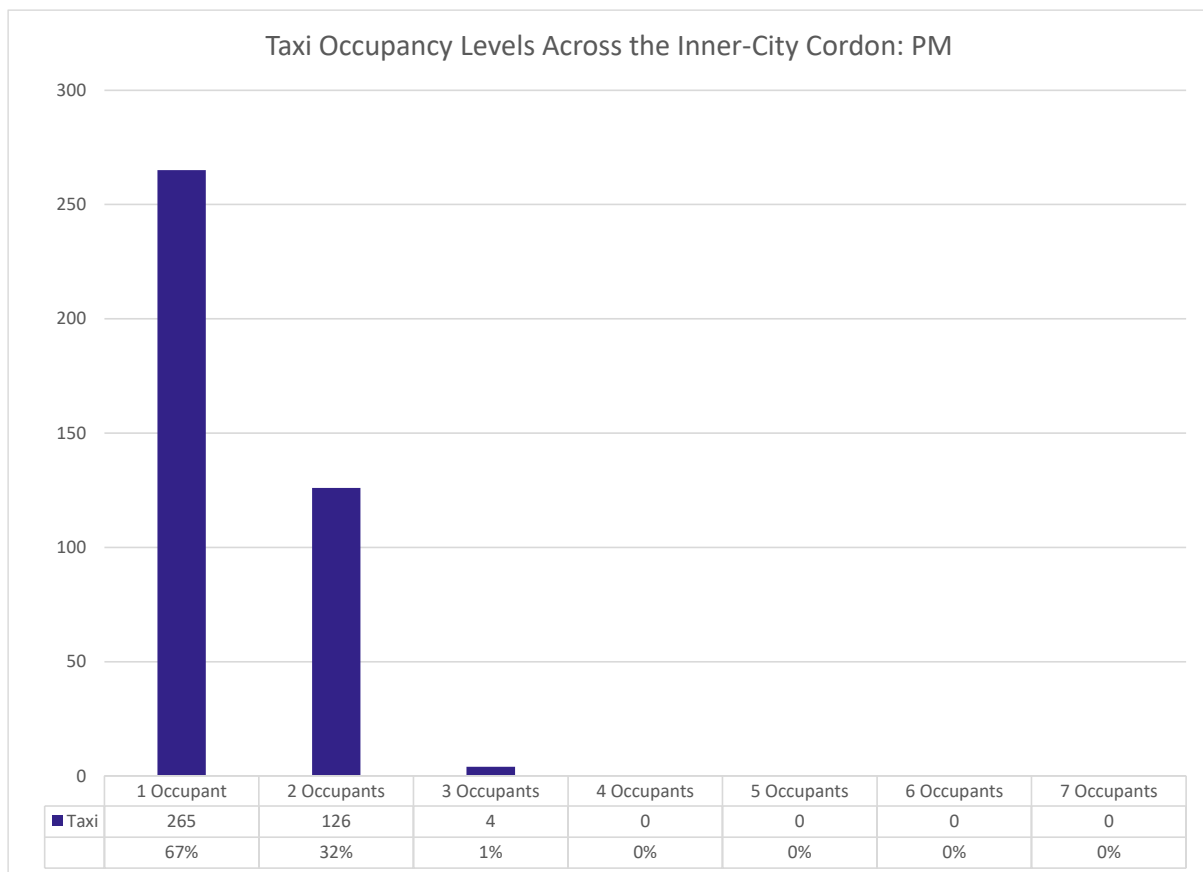


Figure 3-35: Taxi Occupancy: PM

#### **Taxi Occupancy per site**

Figure 3-36, Figure 3-37, Figure 3-38, Figure 3-39 and Figure 3-40 display the vehicle occupancy for taxis crossing the Galway Inner-City Cordon during the respective time periods, with further reference to each individual site location.

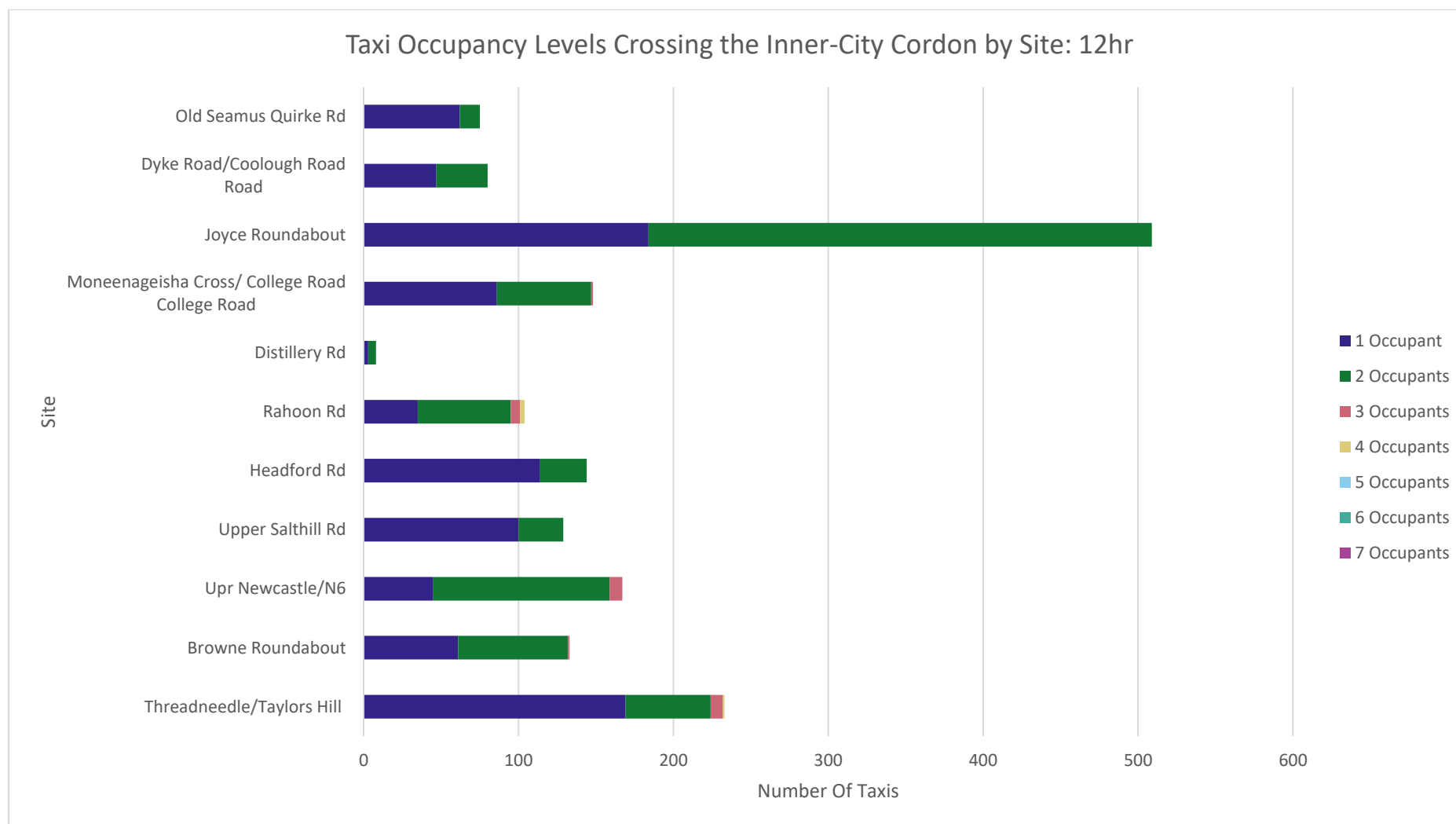


Figure 3-36: Taxi Occupancy per Site: 12 Hour

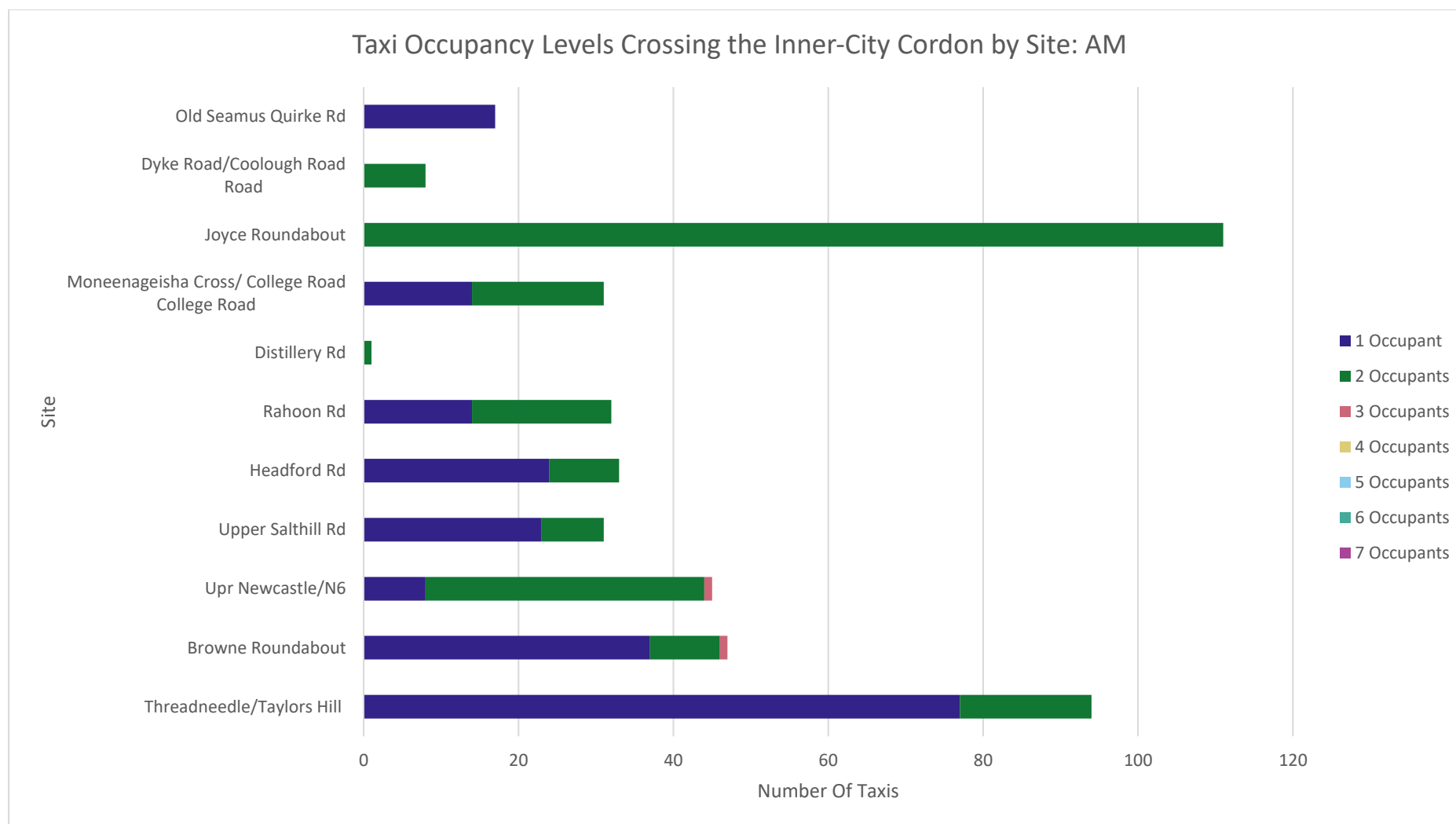


Figure 3-37: Taxi Occupancy per Site: AM

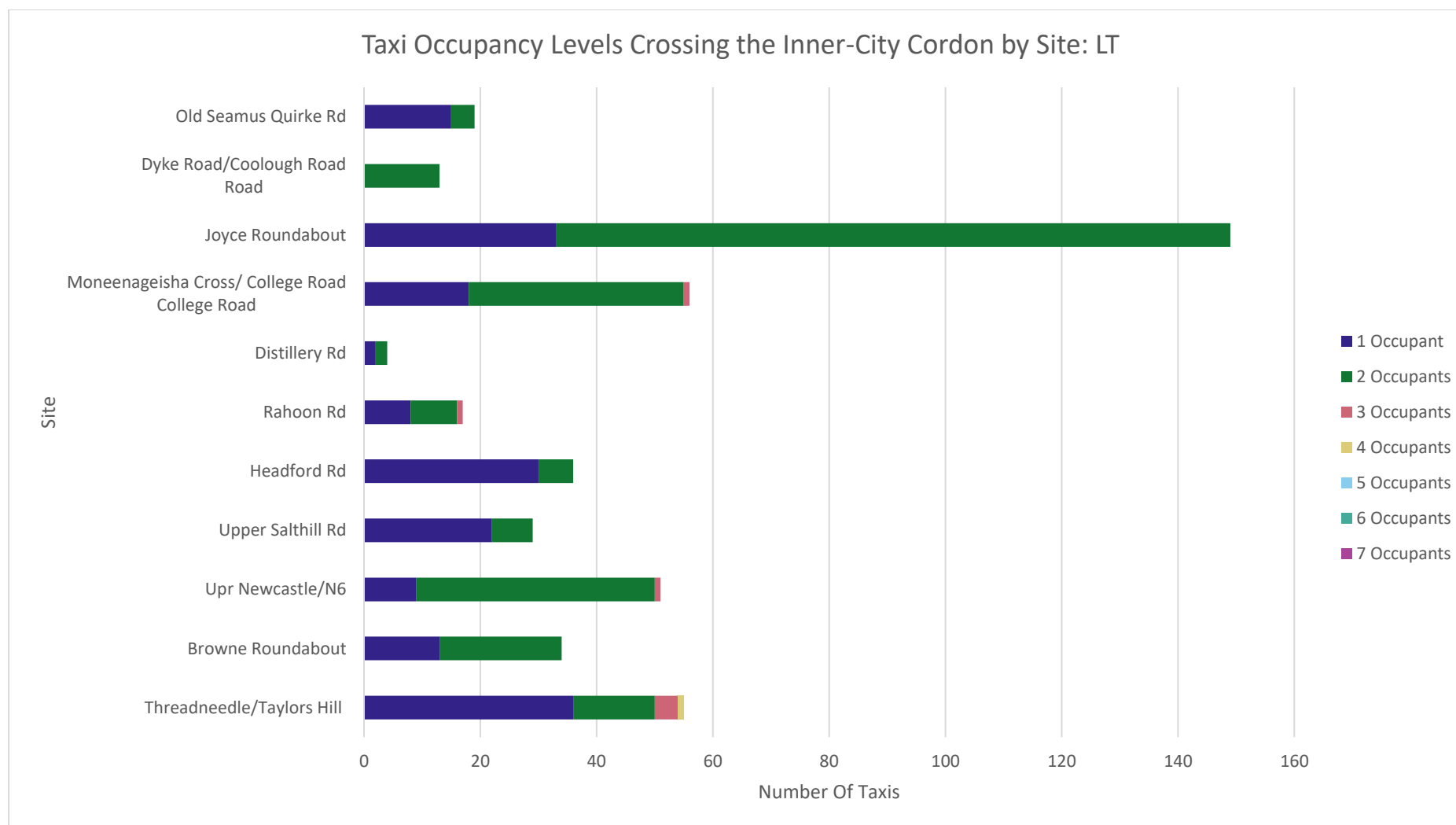


Figure 3-38: Taxi Occupancy per Site: LT

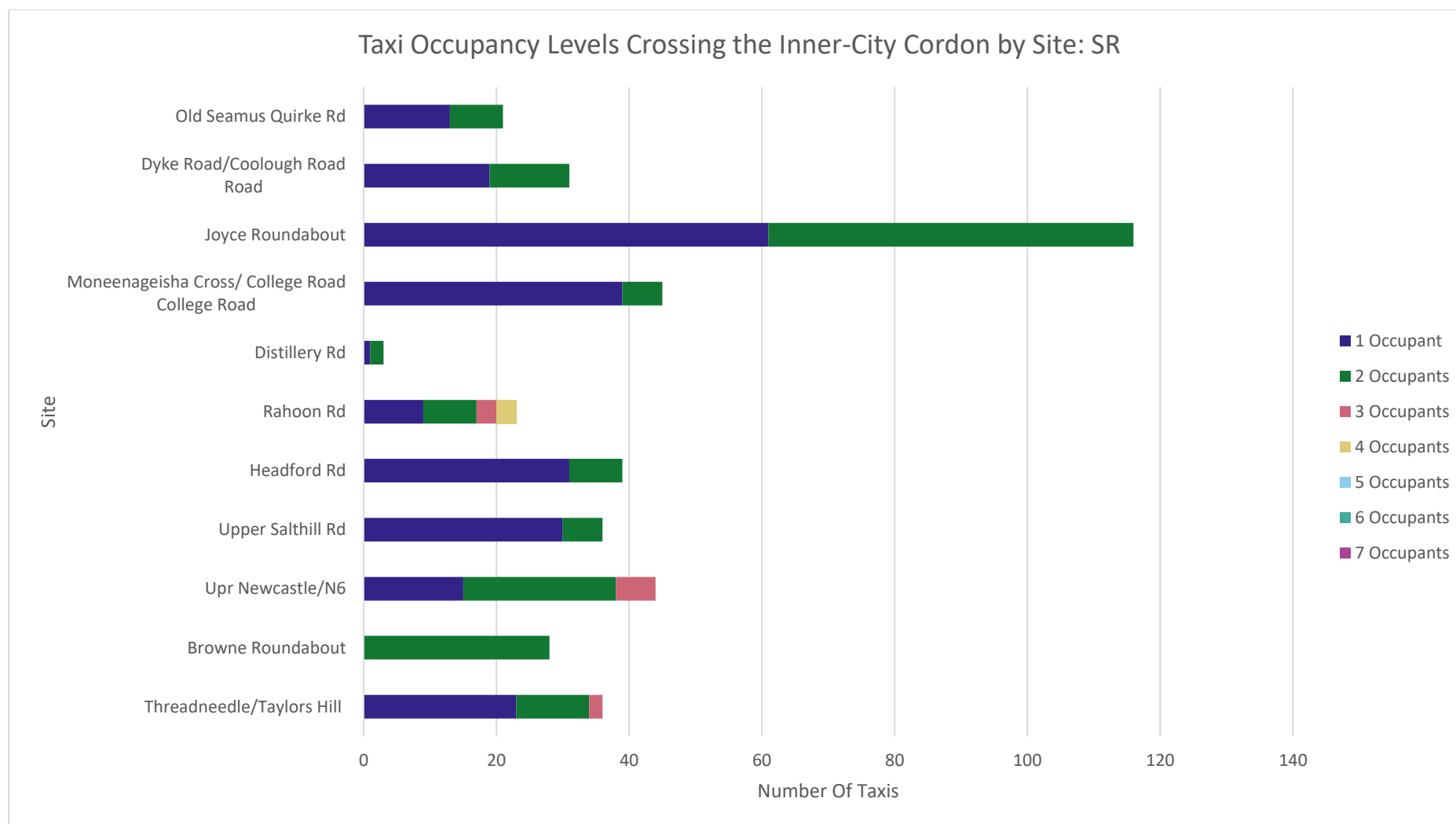


Figure 3-39: Taxi Occupancy per Site: SR

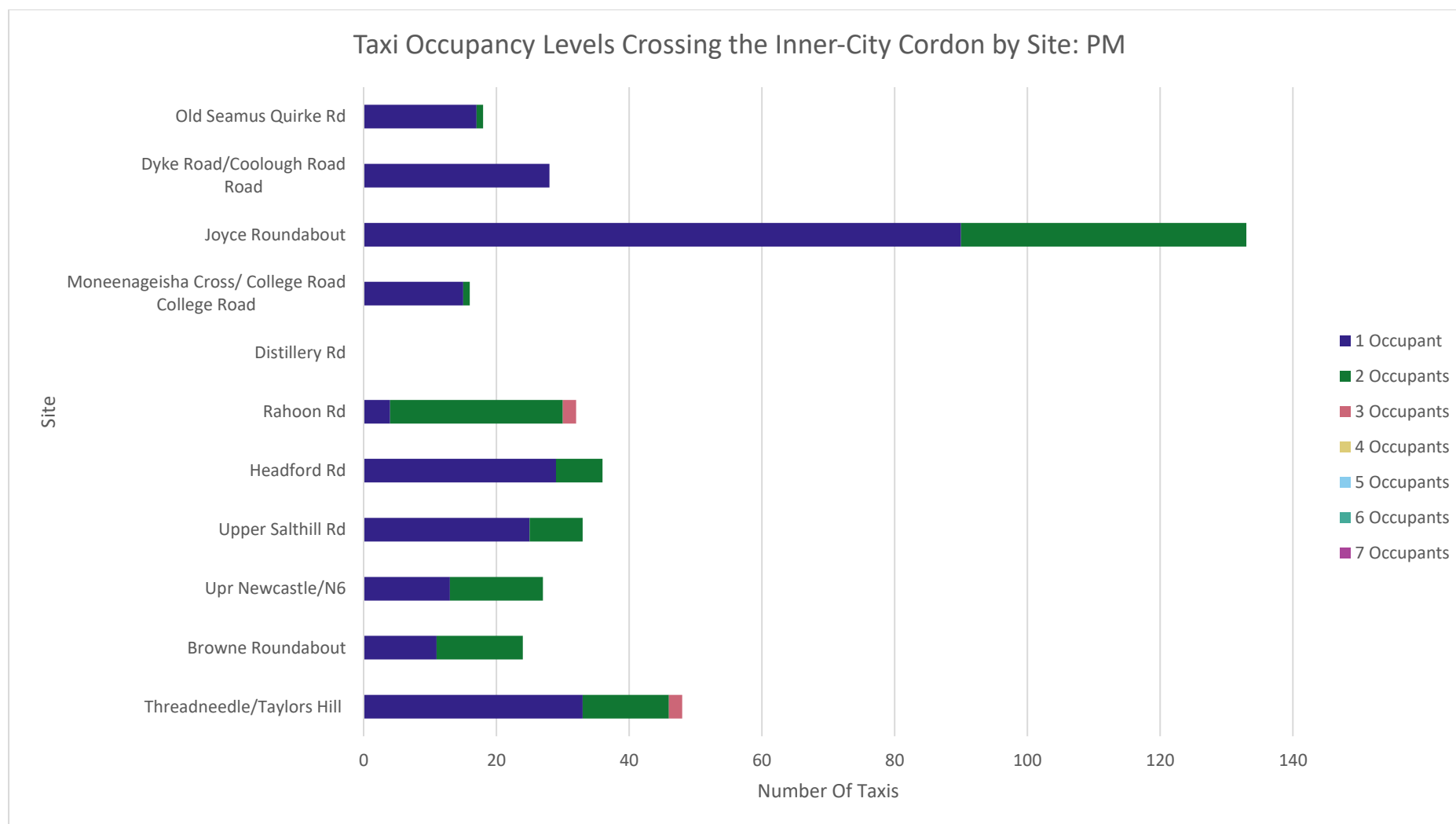


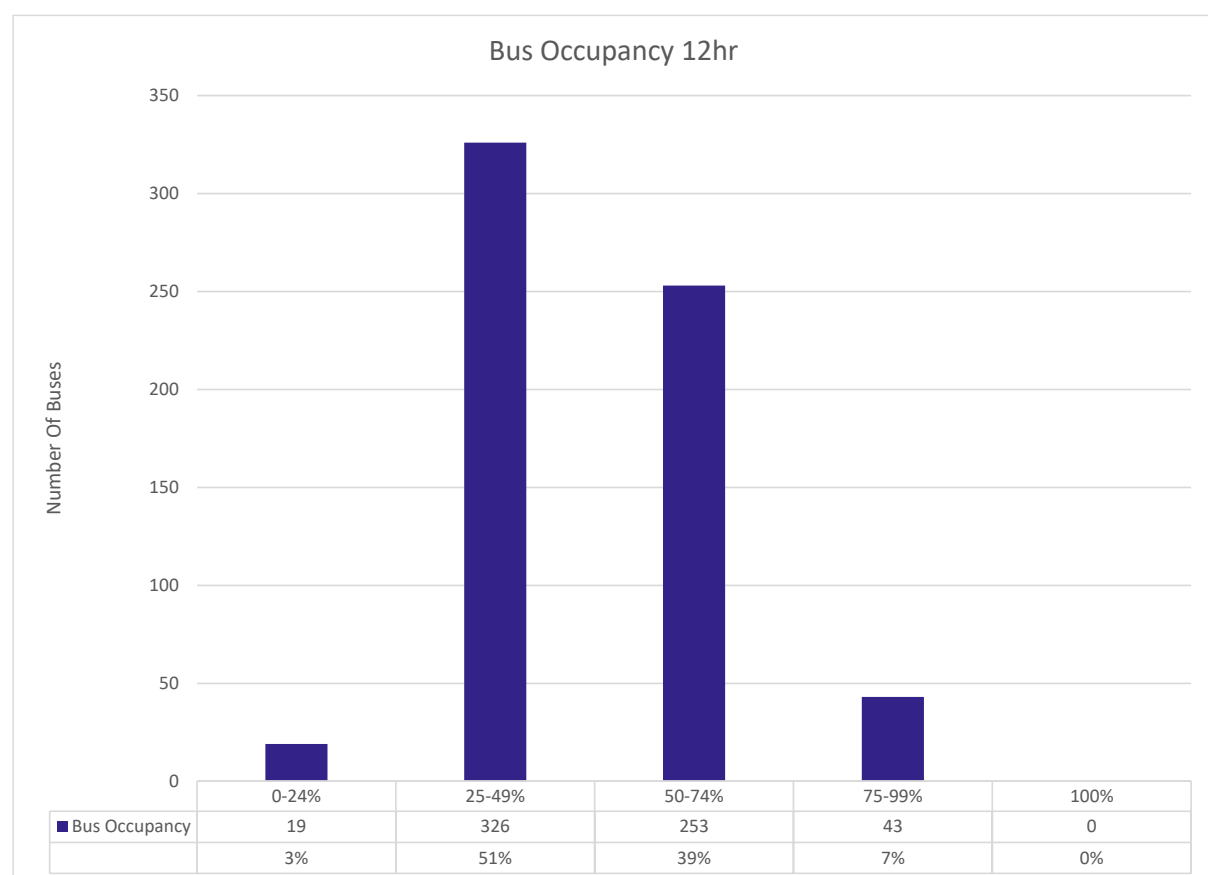
Figure 3-40: Taxi Occupancy per Site: PM



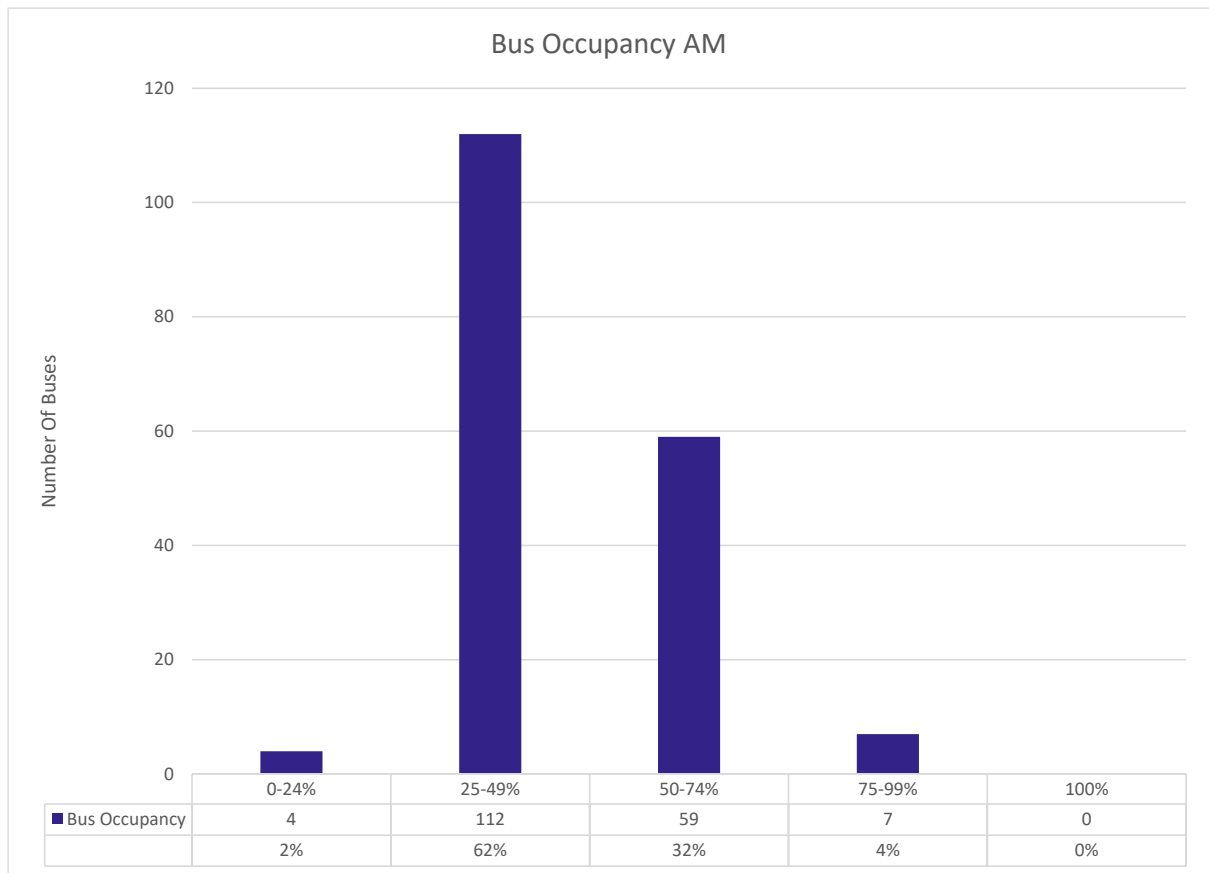
### 3.2.3 Bus Occupancy

Bus occupancy information was obtained from 8 bus stop survey locations, recorded at hourly intervals over a 12-hour period (i.e. 07:00 - 19:00) on the day of the survey.

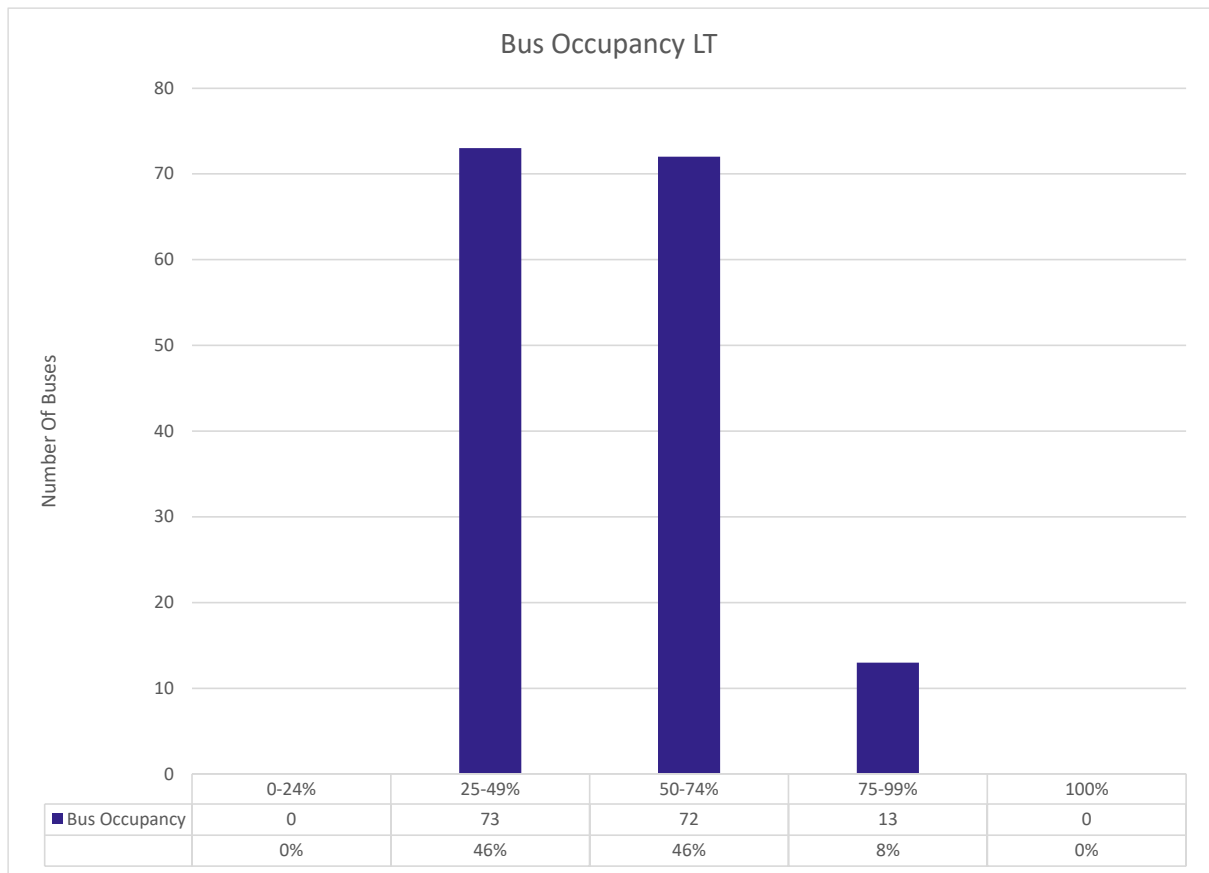
Figure 3-41, Figure 3-42, Figure 3-43, Figure 3-44 and Figure 3-45 display the recorded bus occupancies crossing the Galway Inner-City Cordon inbound towards the city during the respective time periods. The bus occupancies are displayed in terms of 5 different capacity bands (0-24%, 25-49%, 50-74%, 75-99% and 100%). Please note that these graphs display both the absolute values and the percentage occupancy for each time period. The figure below shows that, over the full 12-hour survey period, approximately 3% of buses were at less than 25% capacity, 51% were at between 25% and 49% capacity, 39% were at between 50% and 74% capacity, 7% were at between 75% and 99% capacity and < 1% were full.



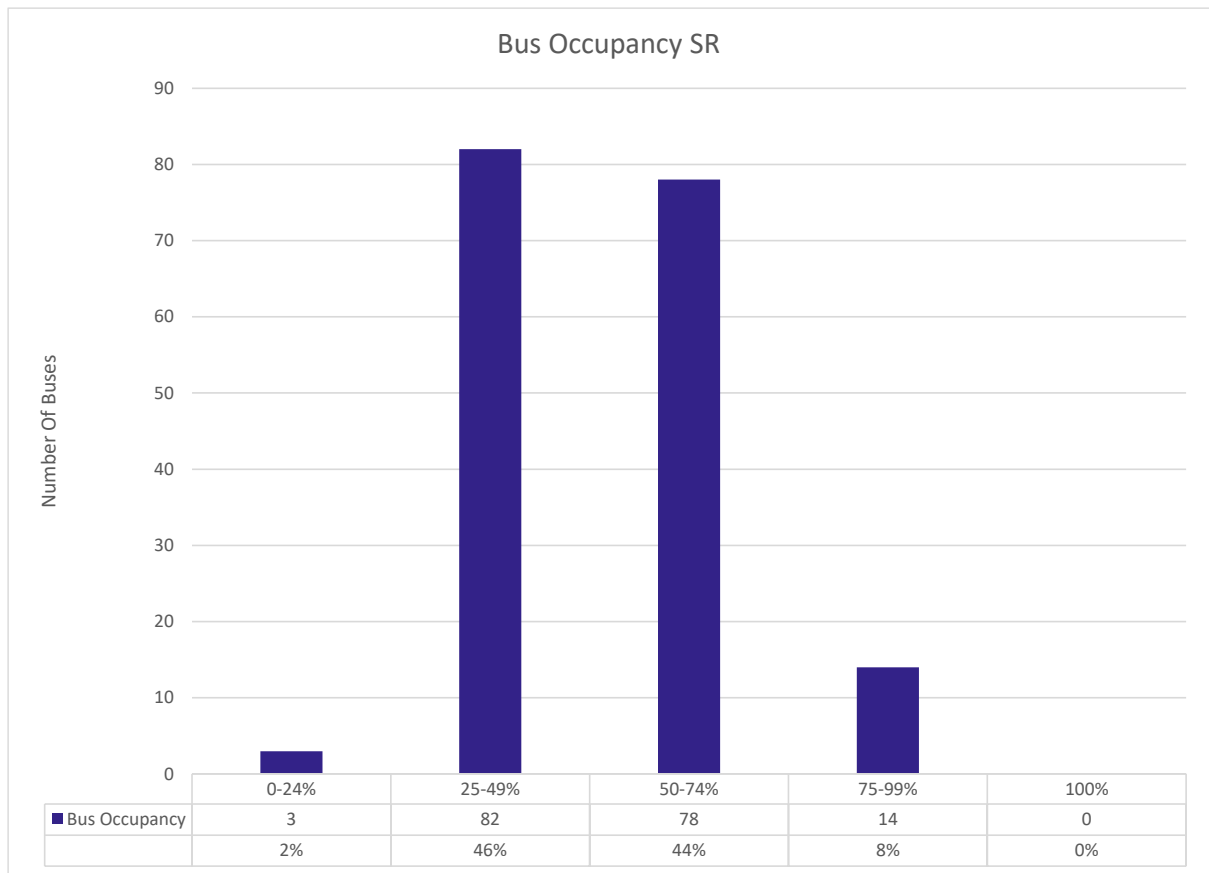
*Figure 3-41: Bus Occupancy: 12 Hour*



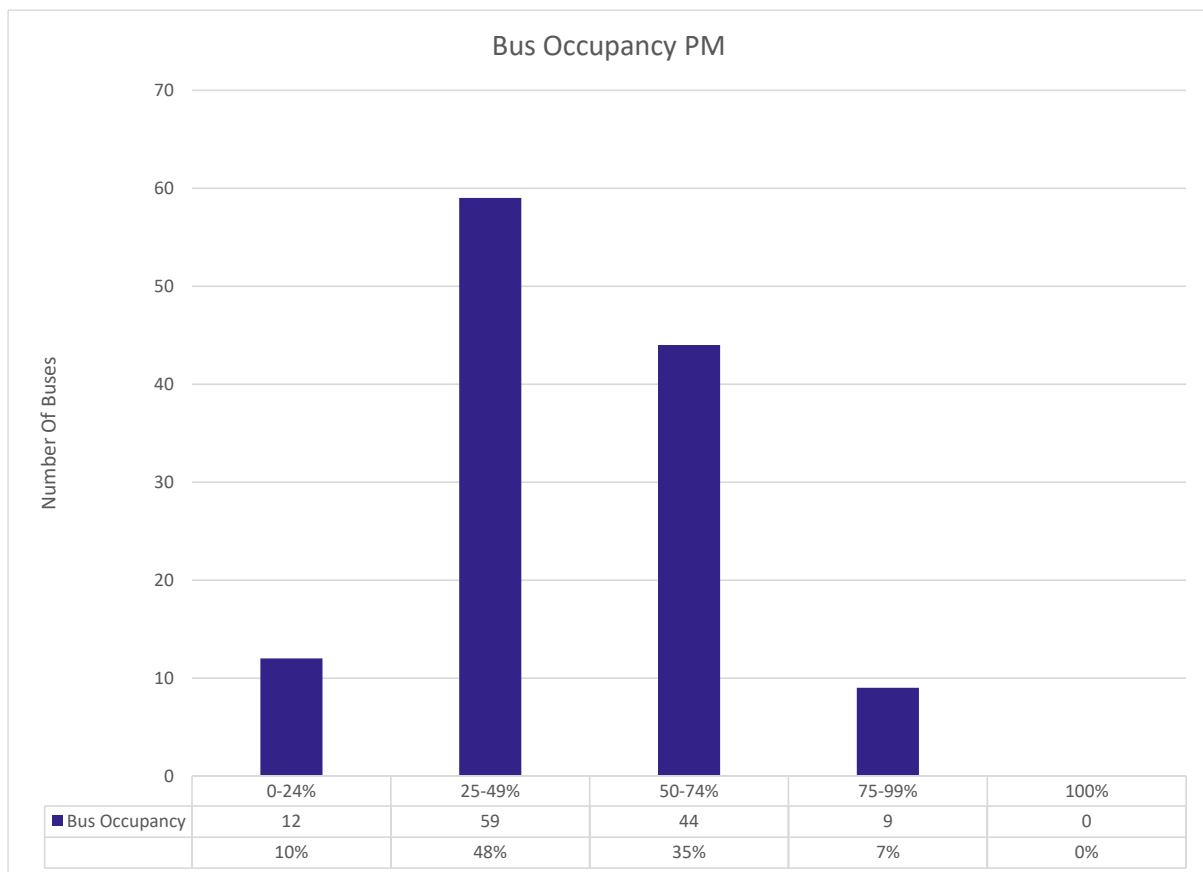
*Figure 3-42: Bus Occupancy: AM*



*Figure 3-43:Bus Occupancy: LT*



*Figure 3-44: Bus Occupancy: SR*



*Figure 3-45: Bus Occupancy: PM*

#### ***Bus Occupancy per Site***

Figure 3-46, Figure 3-47, Figure 3-48, Figure 3-49 and Figure 3-50 display the vehicle occupancy for buses crossing the Galway Inner-City Cordon during the respective time periods, with further reference to each individual bus stop location.

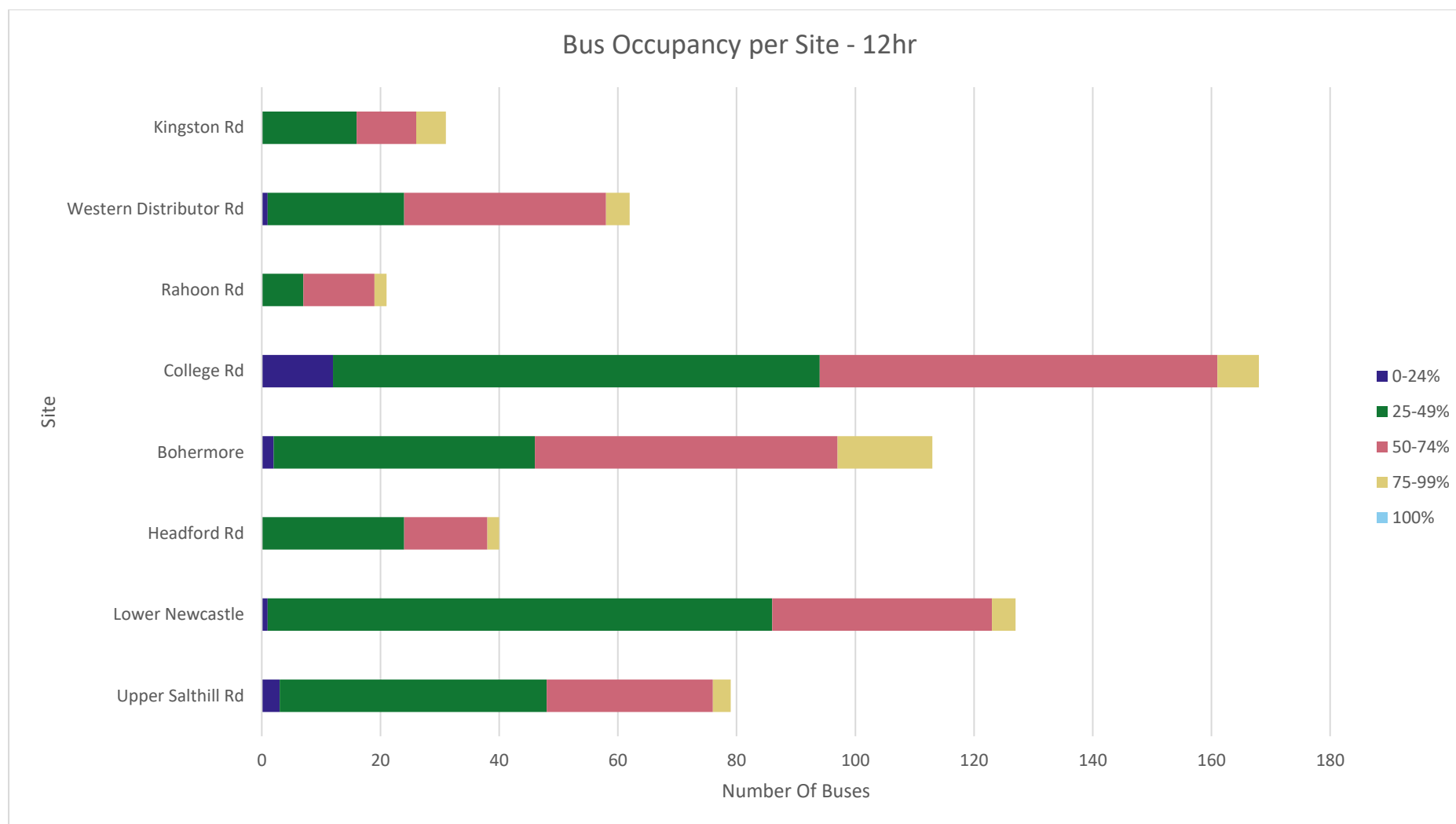


Figure 3-46: Bus Occupancy per Site: 12 Hour

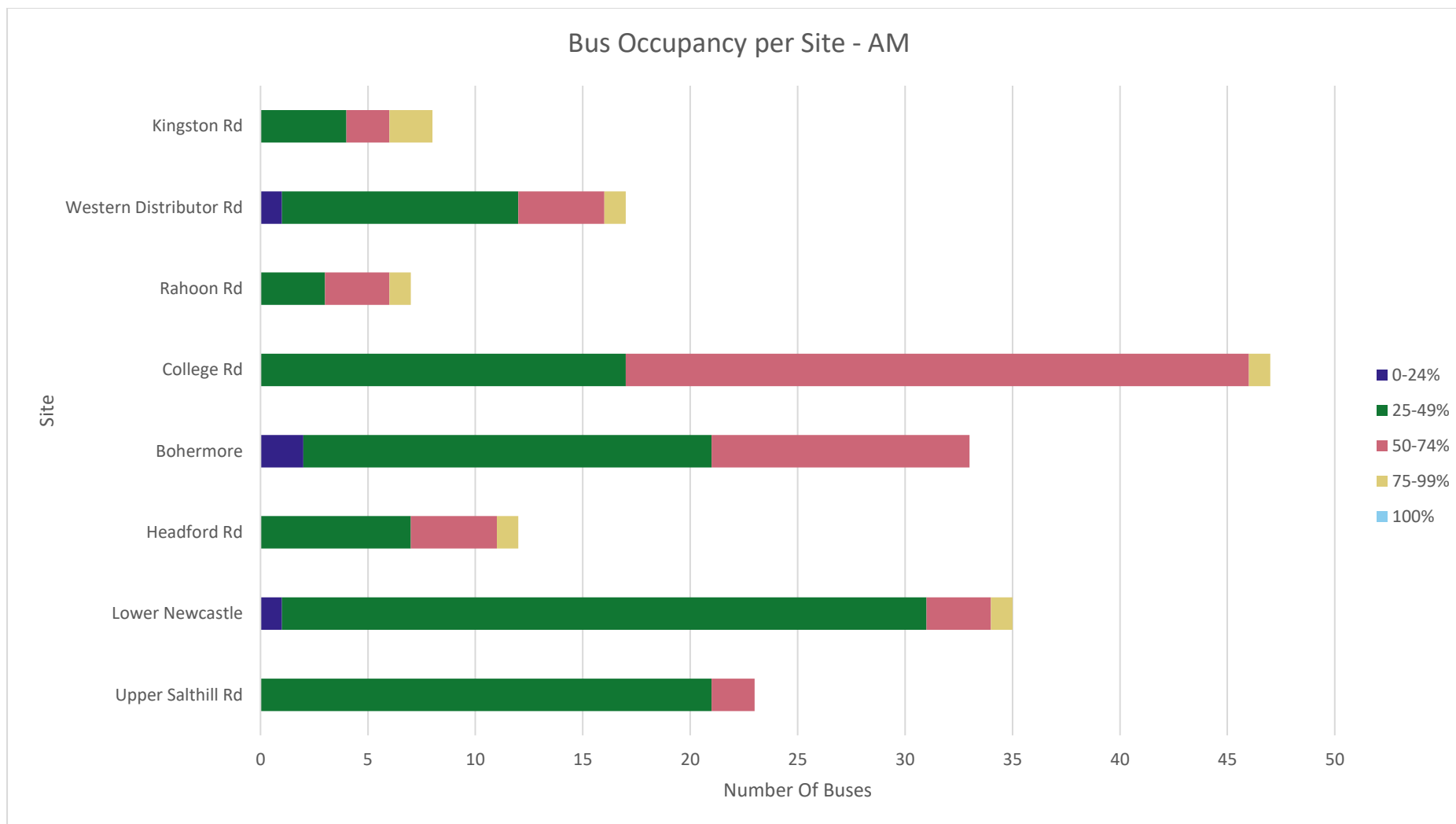


Figure 3-47: Bus Occupancy per Site: AM

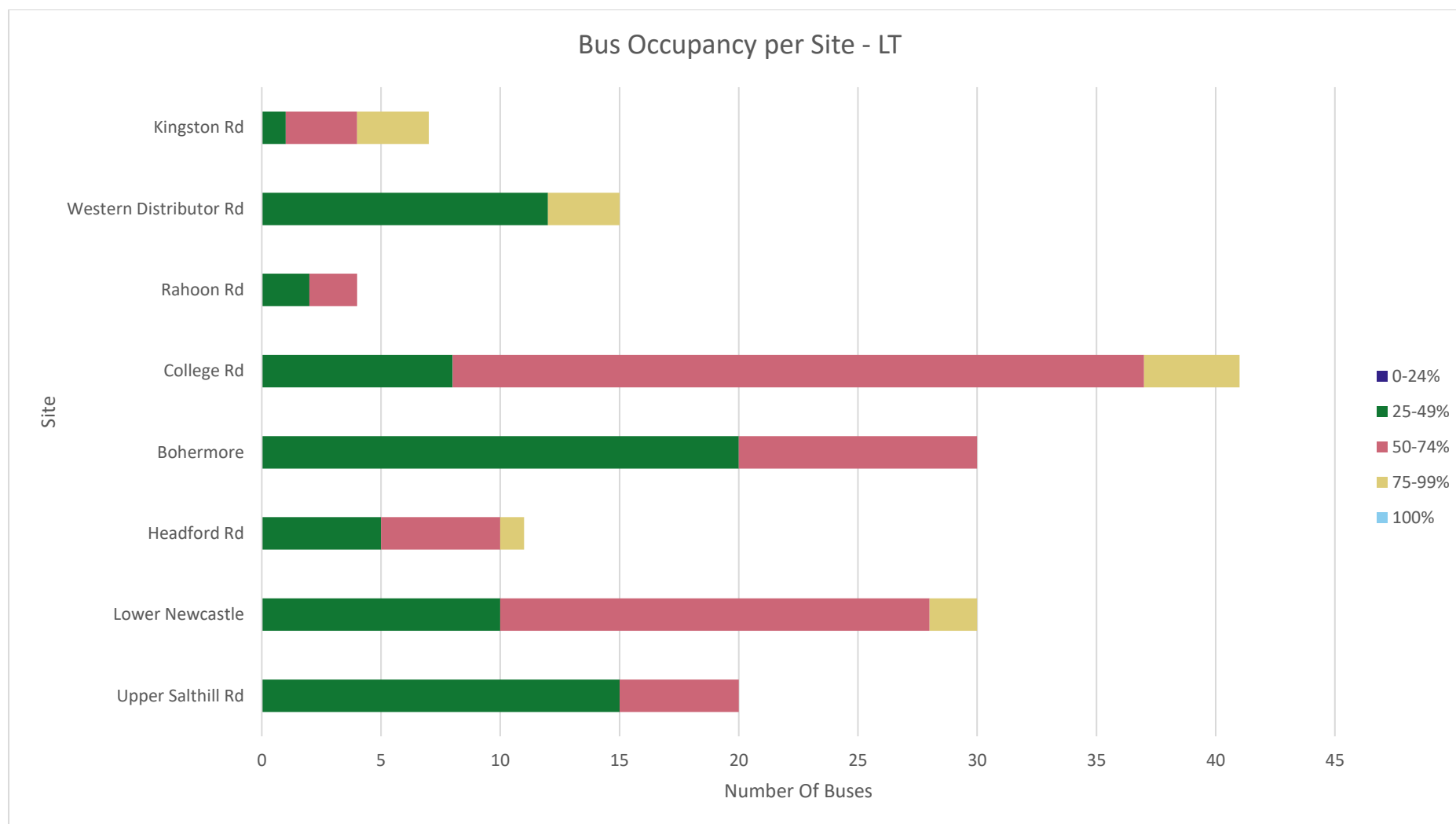


Figure 3-48: Bus Occupancy per Site: LT



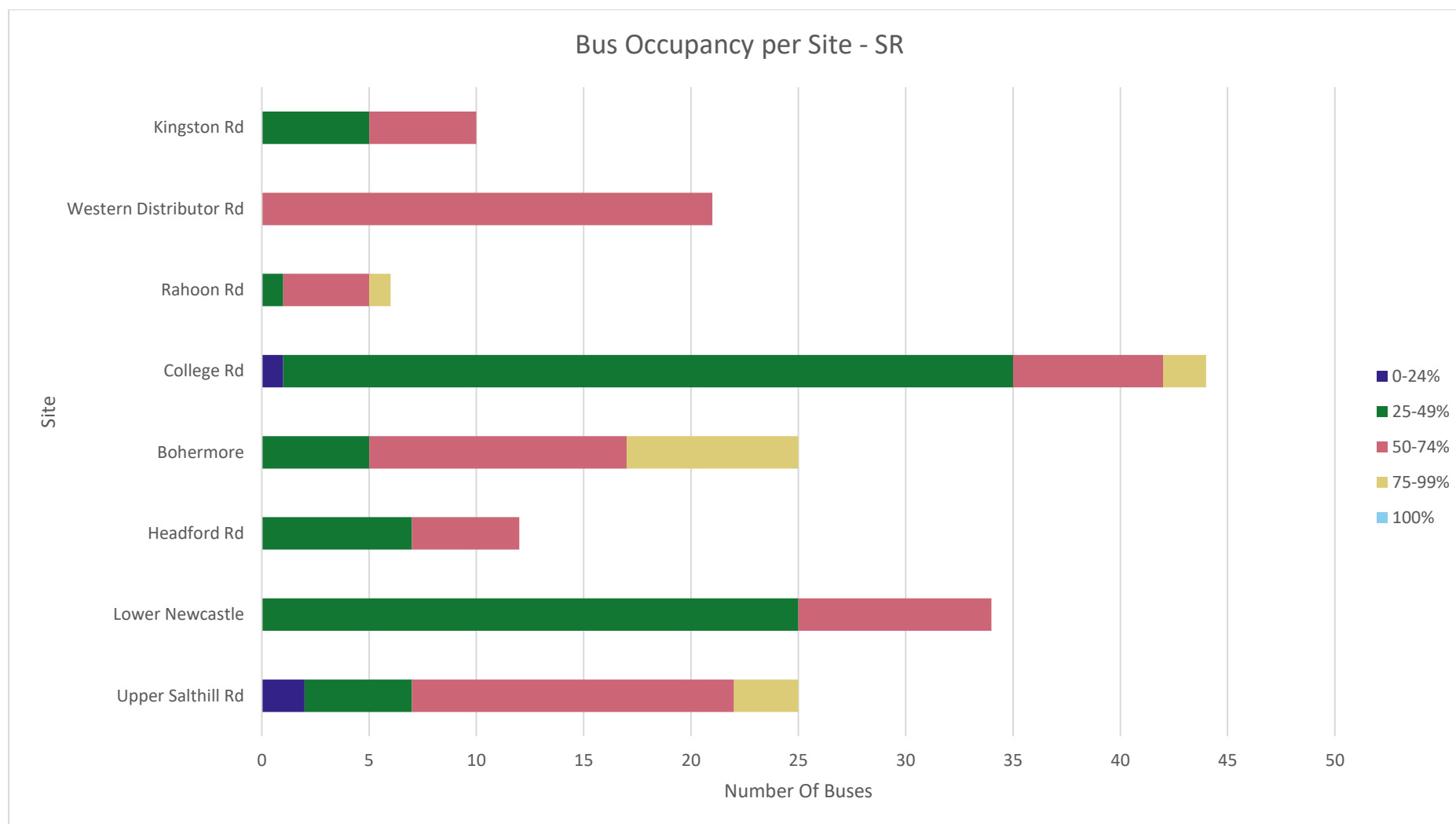


Figure 3-49: Bus Occupancy per Site: SR

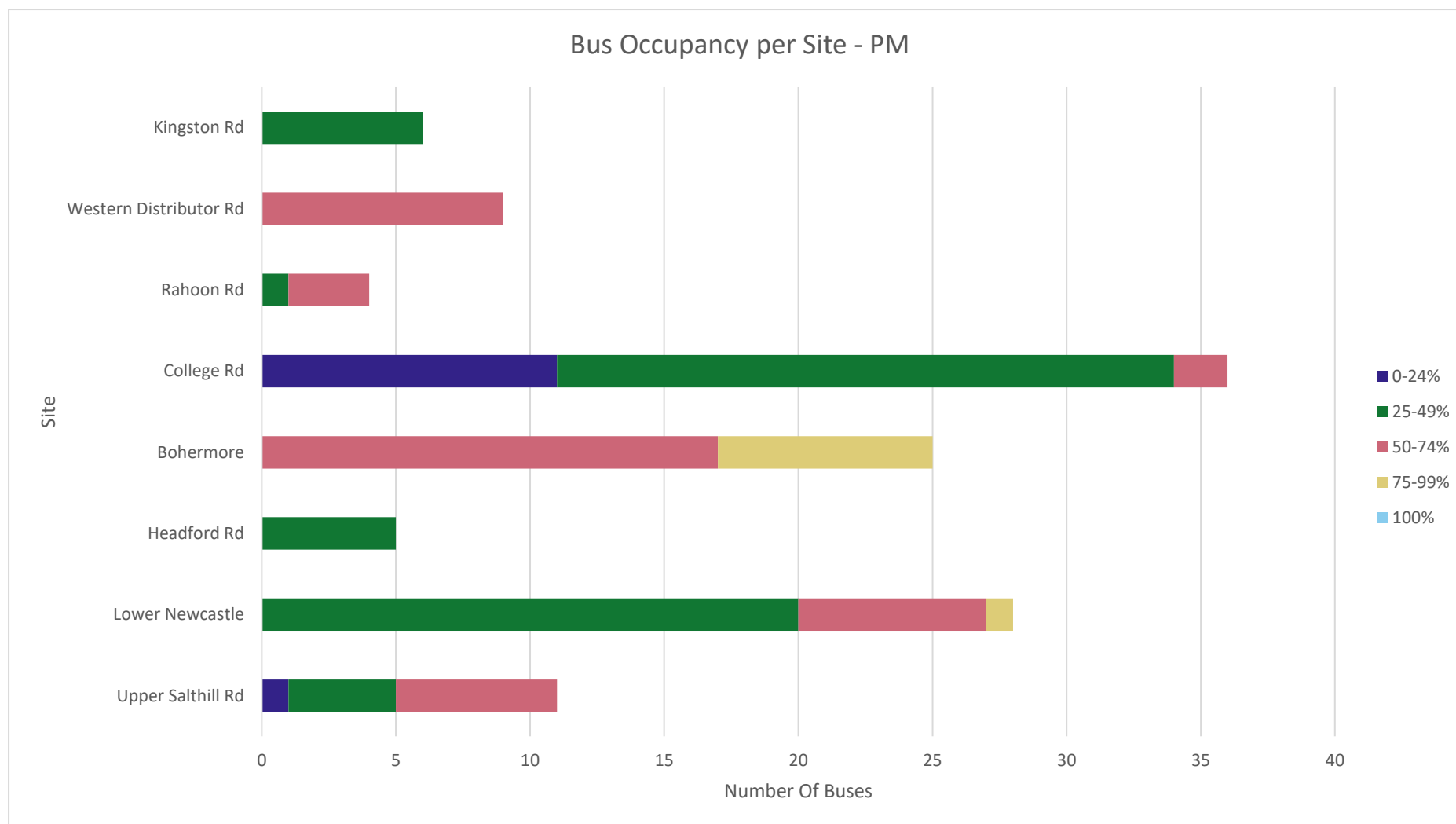


Figure 3-50: Bus Occupancy per Site: PM

## 4 People Movements

### 4.1 Methodology

Chapter 3 provided details on the number of vehicles, pedestrians and cyclists crossing the Galway Inner-City Cordon. In order to convert these to total person trips crossing the cordon, it is necessary to estimate the occupancy of each vehicle type. Further details on how this was done is outlined below.

- Road Passenger Movements were calculated in the following ways:
  - Car and taxi people movements were calculated by taking the number of vehicles in the JTC surveys for each vehicle classification and multiplying these by a site-specific occupancy factor that was calculated by dividing the number of passengers by the number of vehicles. Where no equivalent site was available, an average factor from all sites was used.
  - Total bus passenger movements were calculated by applying average bus occupancy factors to the number of buses observed in the bus occupancy surveys.
  - Cyclist and pedestrian people movements were taken directly from the JTC surveys.
- Rail Passenger Movements were calculated as follows:
  - Rail movements include passengers crossing the cordon inbound from the National Rail Census, which is a boarding and alighting survey conducted by Iarnród Éireann on a single day each year at every rail station throughout the country. The most recent survey was performed on the 14<sup>th</sup> of November 2024. While this is different to the dates of the other surveys, the Rail Census is considered representative of rail movements.

The resulting people movements by mode are discussed in the following sections of this Chapter.

### 4.2 Road Passenger Movements

Figure 4-1, Figure 4-2, Figure 4-3, Figure 4-4 and Figure 4-5 show the number of passenger trips for pedal cycle, pedestrian, car, taxi and bus crossing the Galway Inner-City Cordon over the 12-hour survey period and each individual survey period.

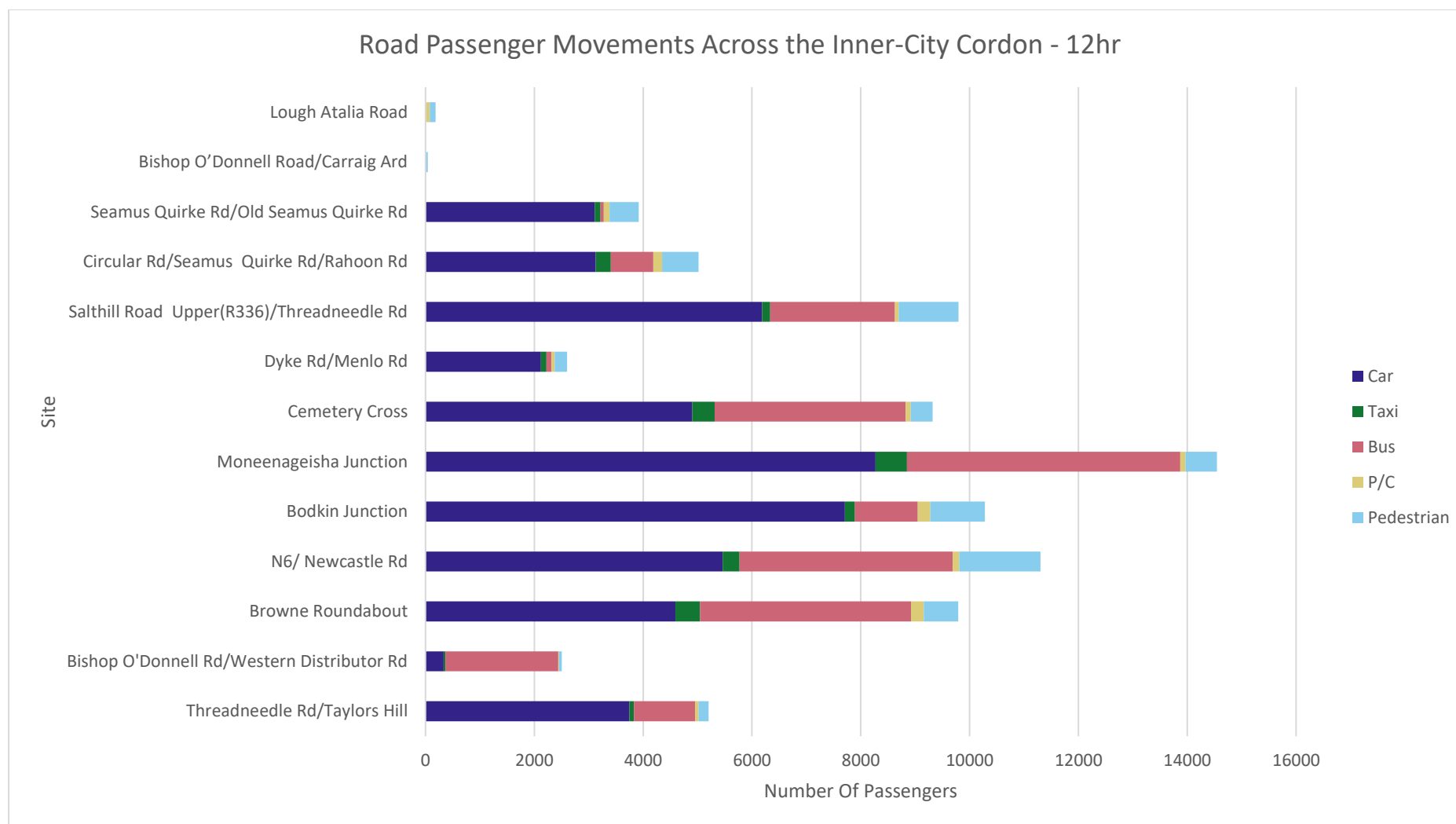


Figure 4-1: Road Passenger Movements per Mode per Site: 12 Hour

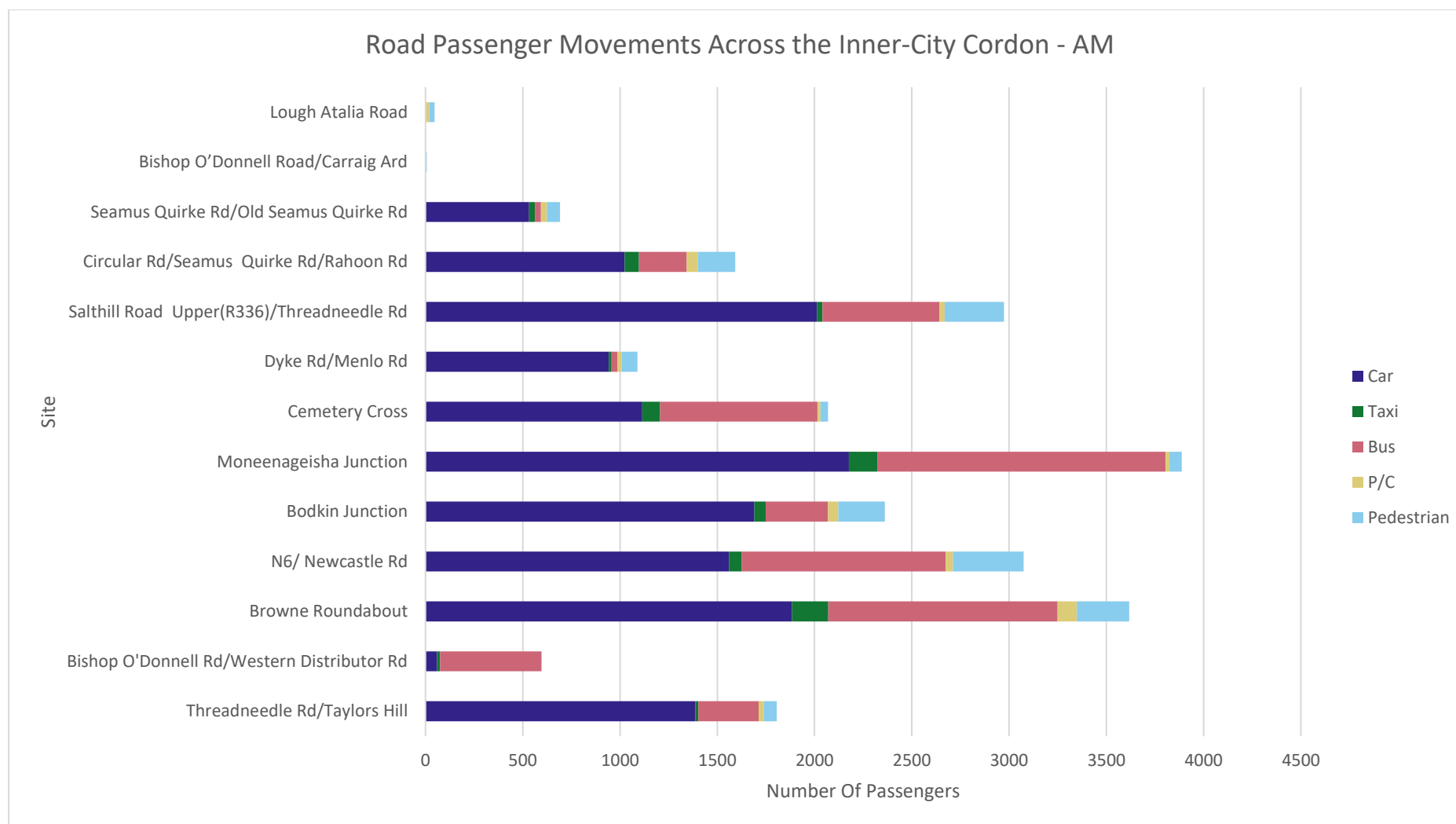


Figure 4-2: Road Passenger Movements per Mode per Site: AM

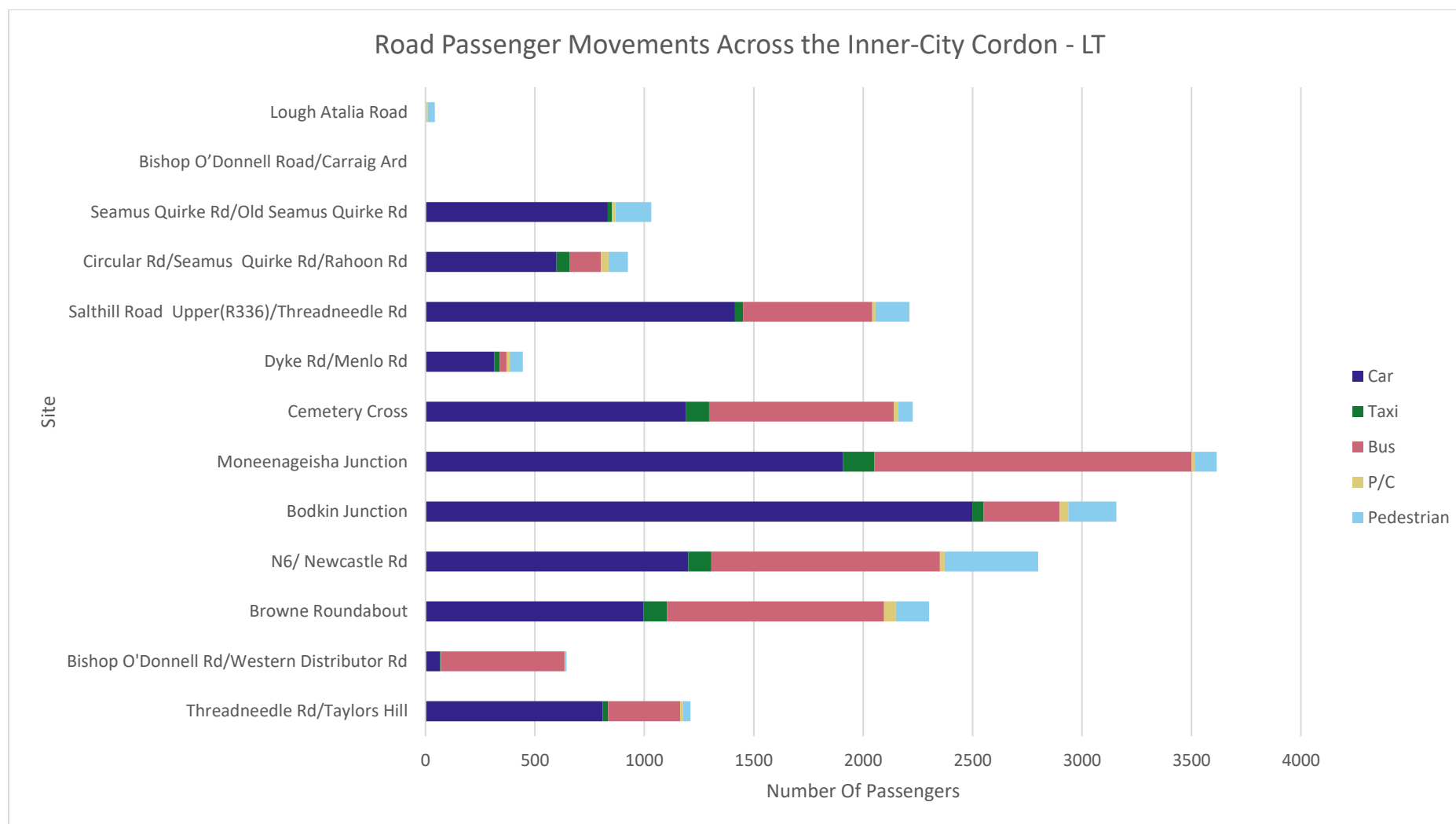


Figure 4-3: Road Passenger Movements per Mode per Site: LT

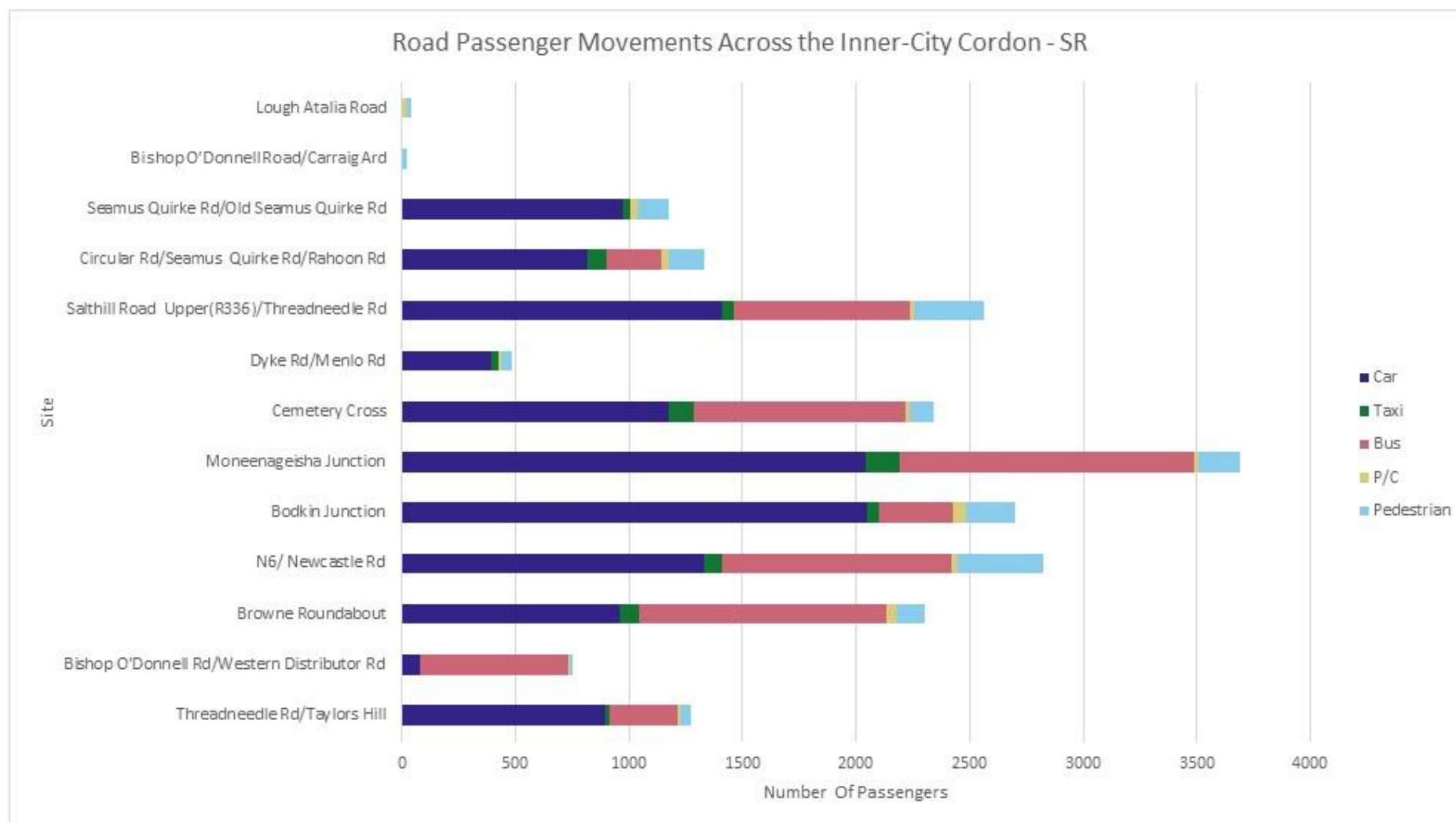


Figure 4-4: Road Passenger Movements per Mode per Site: SR

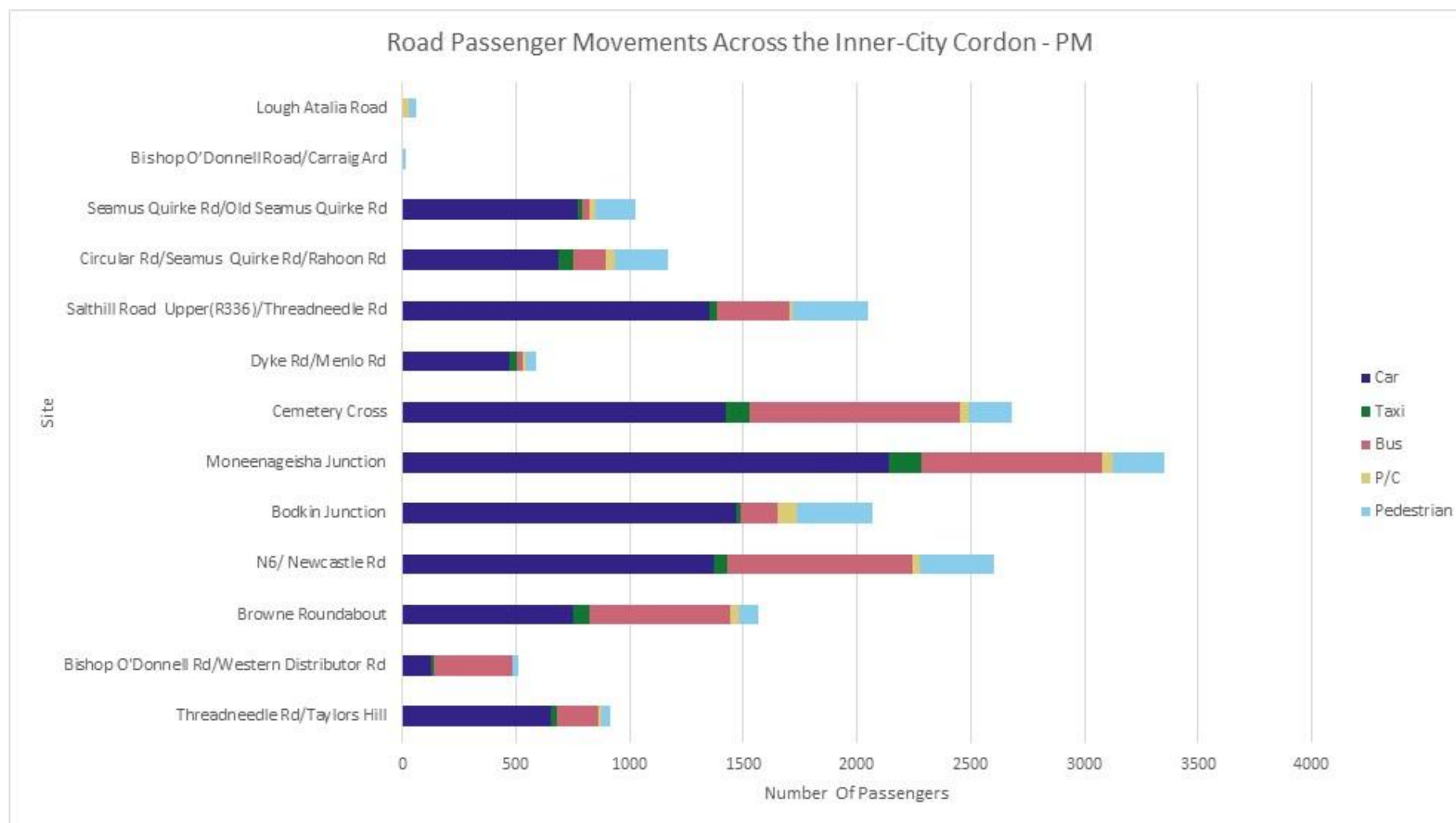


Figure 4-5: Road Passenger Movements per Mode per Site: PM



## 4.3 Rail Passenger Movements

### 4.3.1 Heavy Rail Passenger Movements

The National Rail Census is a survey carried out by Iarnród Éireann every year which records the boardings and alightings at every rail station in the country on a representative weekday in November. This report extracts the number alighting passengers at Galway Inner-City Cordon from that survey.

Galway Ceannt Station is served by trains on the Dublin Heuston - Galway line, trains on the Galway - Limerick line, as well as those originating from Waterford and Clonmel and transferring at Limerick Junction. It is served by 9 direct trains a day from Heuston, 4 trains a day from Galway and 2 trains a day from Limerick Junction.

Figure 4-6 shows, for each train that arrived that day in Galway, the number of passengers that alighted and the origin of that train. In total, 2,052 people crossed the Galway Train Station inbound over the 12-hour survey period.

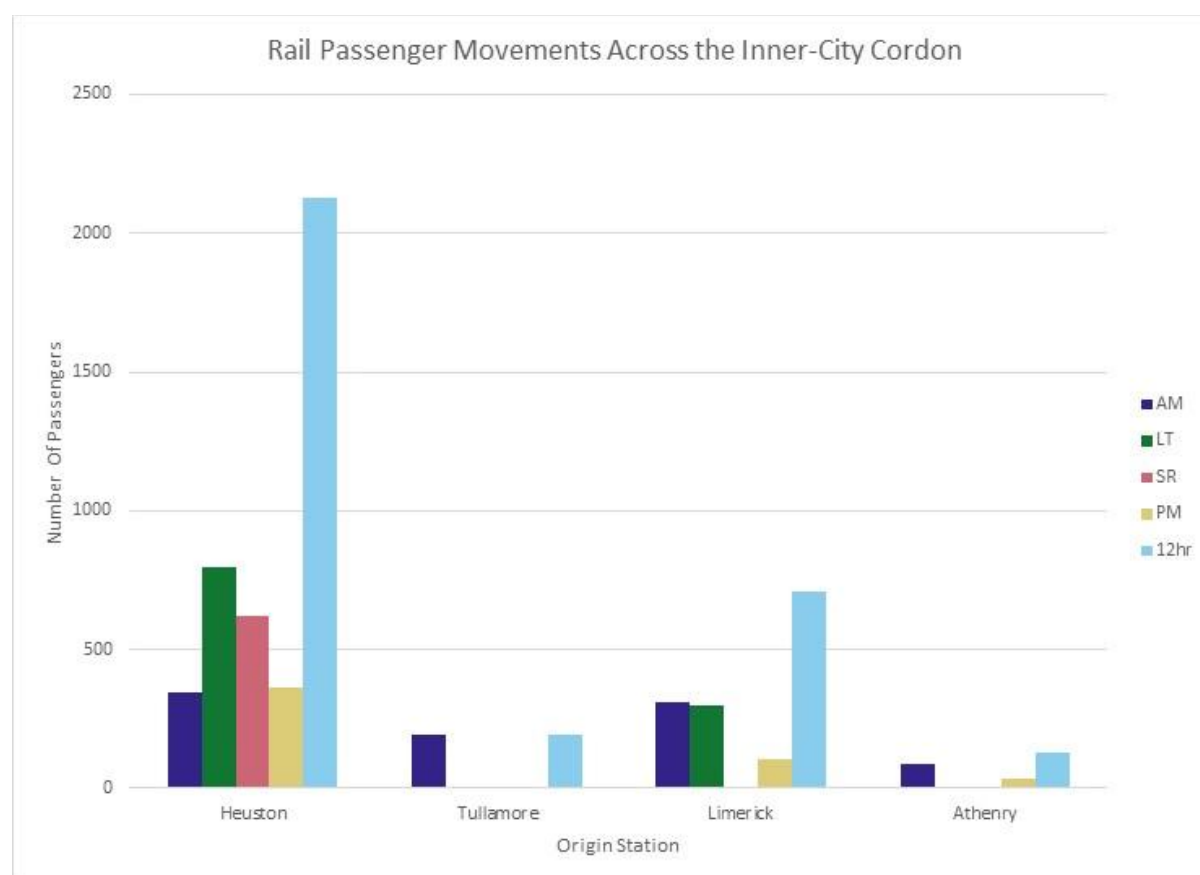
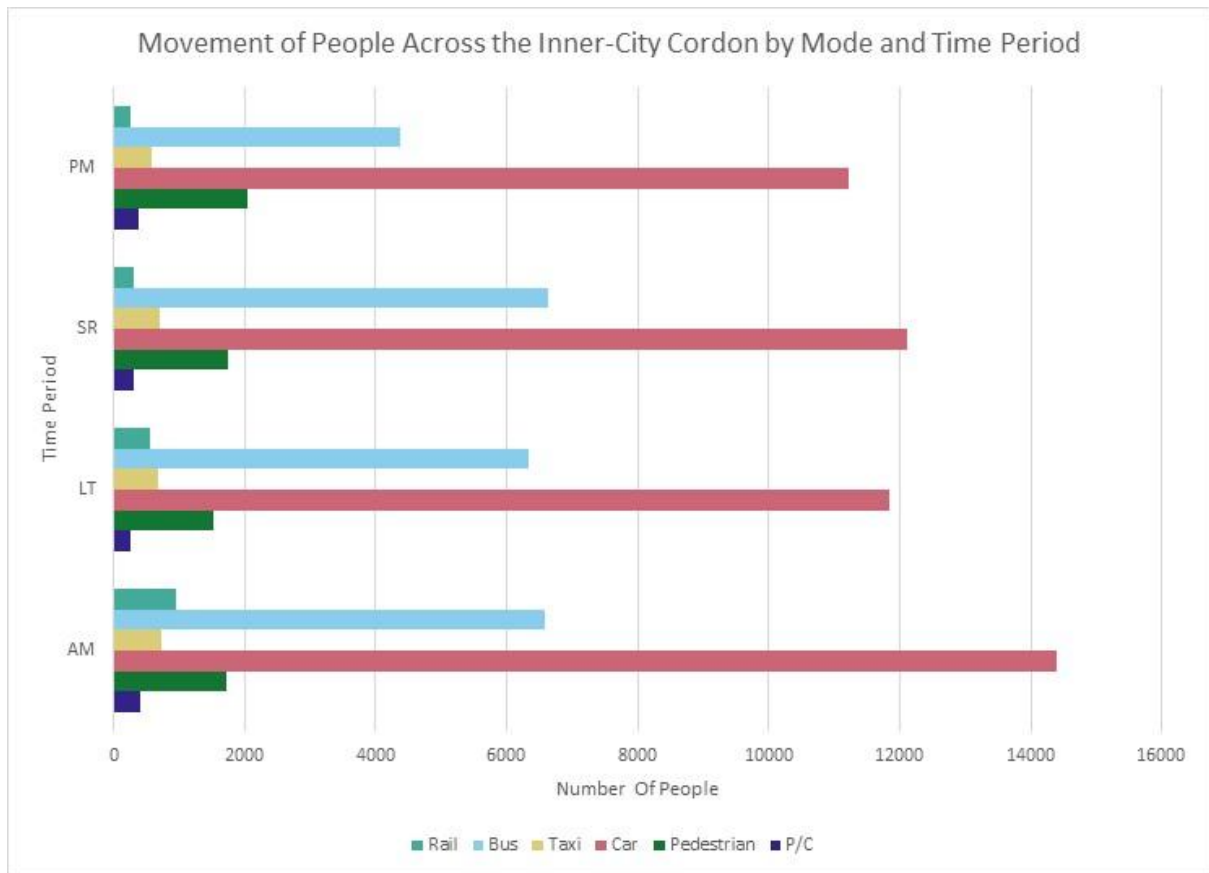


Figure 4-6: Heavy Rail Services - Passengers Inbound

## 4.4 Total Passenger Movements

Figure 4-7 and Figure 4-8 display the total number of passengers crossing the Galway Inner-City Cordon by pedal cycle, pedestrian, car, taxi, bus and rail for each time period.



*Figure 4-7: Car, Cycle, Taxi, Pedestrian and Rail Trips Inbound Across the Galway Inner-City Cordon During Each Time Period*

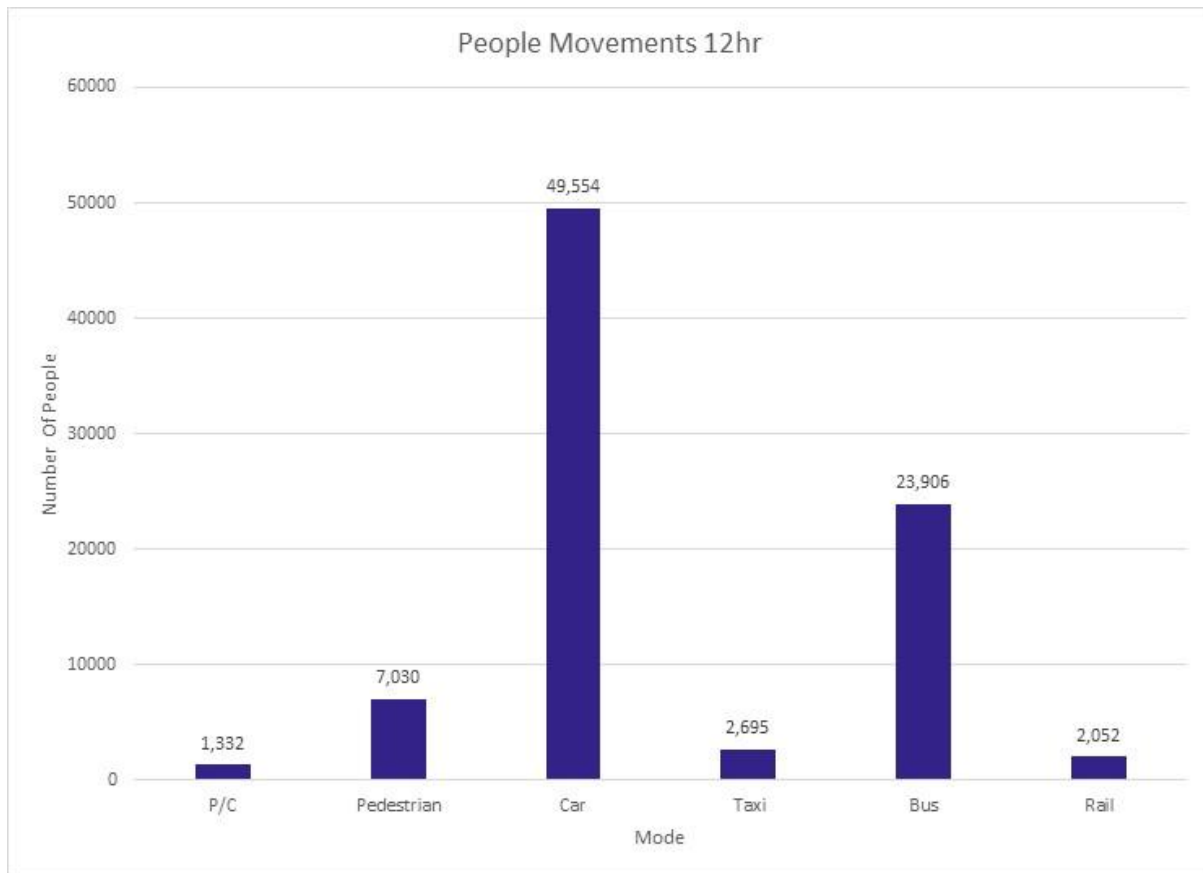


Figure 4-8: Trips Inbound across the Galway Inner-City Cordon: 12 Hour

## 4.5 Modal Split

Table 4-1 shows the number of sustainable and vehicular modes crossing the Galway Inner-City Cordon during the 12hr period.

Mode	Trips	% Trips
P/C	1,332	2%
Pedestrian	7,030	8%
Car	49,554	57%
Taxi	2,695	3%
Bus	23,906	28%
Rail	2,052	2%
<b>Total</b>	<b>86,569</b>	<b>100%</b>

Table 4-1: Number of Journeys Across the Galway Inner-City Cordon by Mode

As can be seen from Figure 4-9, the mode with the highest share over a 12-hr period is Car with 57%.

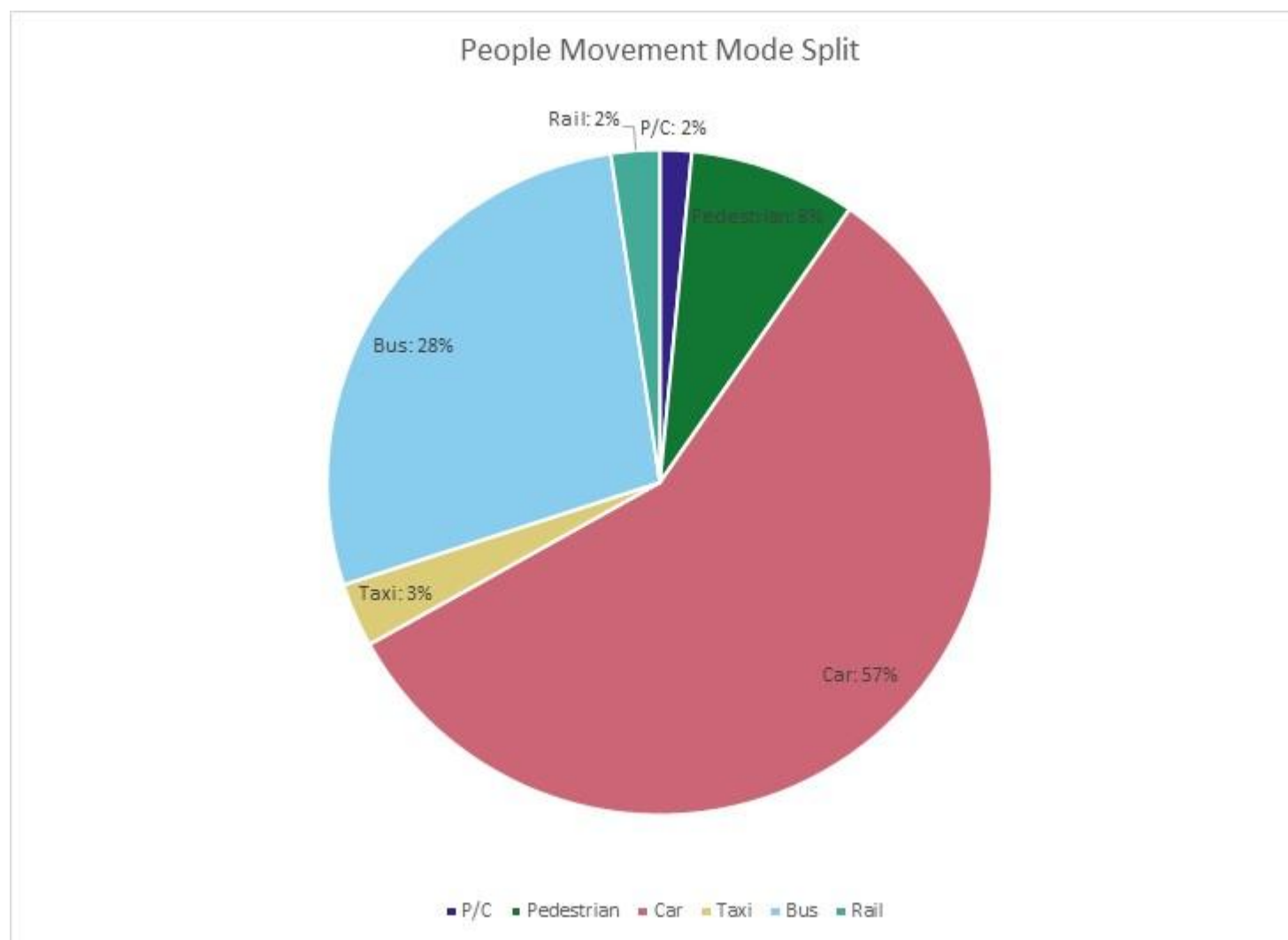


Figure 4-9: Mode share of people crossing the Galway Inner-City Cordon by Sustainable and Vehicular Modes

## 4.6 Trend Analysis

As the surveys used for this report have been repeated in a consistent manner every year since 2023, a historical trend analysis of people movements for 2023 and 2024 can be performed. Tables 4-2 and 4-3 show the number of people crossing the Galway Inner City Cordon inbound by mode and year over the 12-hour time period.

This analysis shows that people movements across all modes increased by 4,782, or 6%, between 2023 and 2024. The number of people crossing the cordon by car increased by 3% and those crossing by public transport (Rail or Bus) increased by 4,872 or +23%.

*Table 4-2 Historical Trend Analysis for the Galway Inner-City Cordon – 12 Hours*

<b>Mode</b>	<b>2023 Trips</b>	<b>2024 Trips</b>	<b>% Difference between 2023 and 2024</b>
P/C	1,415	1,332	-6%
Pedestrian	8,965	7,030	-22%
Car	48,073	49,554	3%
Taxi	2,248	2,695	20%
Bus	19,157	23,906	25%
Rail	1,929	2,052	6%
<b>Total</b>	<b>81,787</b>	<b>86,569</b>	<b>6%</b>

*Table 4-3 Mode Share for inbound person trips by Year - 12-Hours*

<b>Mode</b>	<b>2023 Mode Share</b>	<b>2024 Mode Share</b>
P/C	2%	2%
Pedestrian	11%	8%
Car	59%	57%
Taxi	3%	3%
Bus	23%	28%
Rail	2%	2%

## 5 Galway Bridge Screenline

### 5.1 Vehicle Classified Traffic Flows

#### 5.1.1 Overview

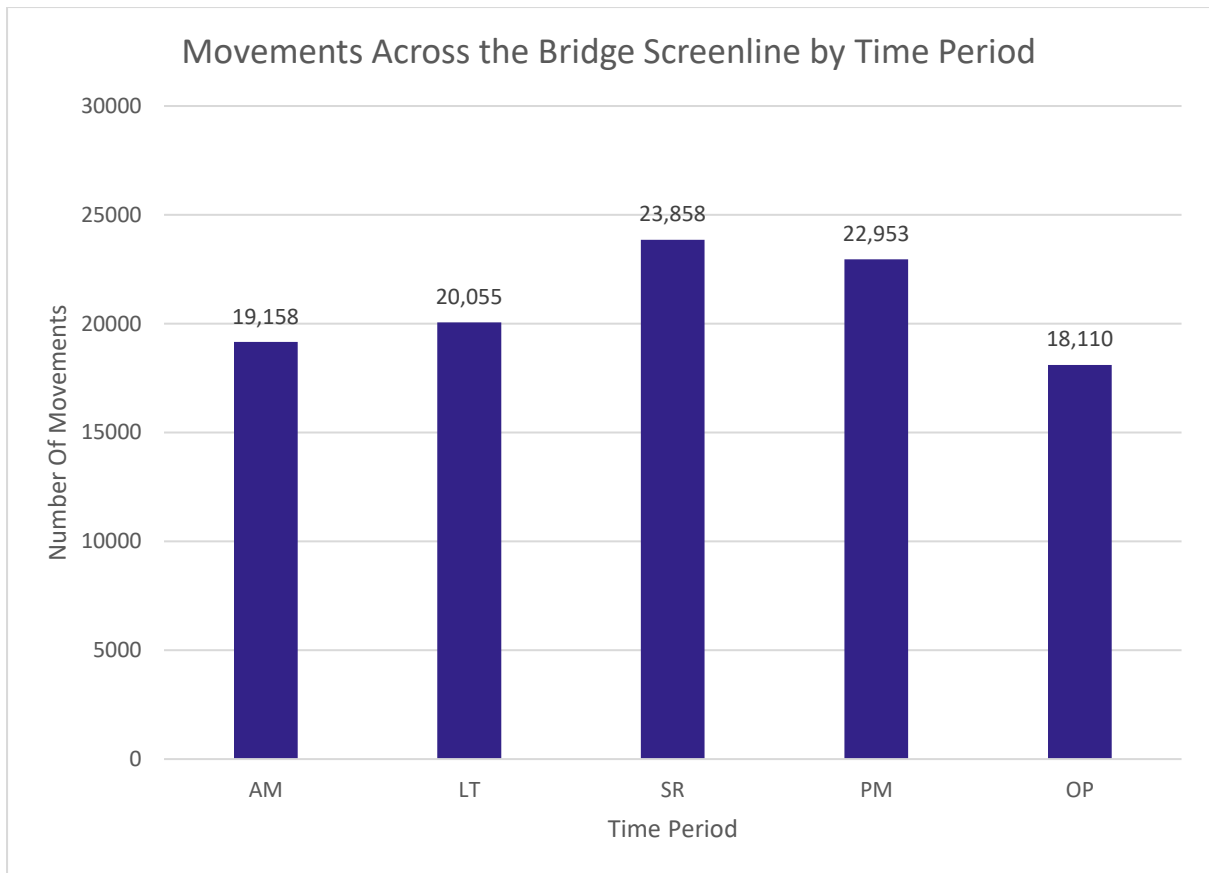
There are four bridges that span the River Corrib, which runs through the centre of Galway City. As a result, east-west movements crossing the bridges are important to understanding traffic, cycling and pedestrian flow around the city. To understand these, Galway City Council commissioned surveys to capture these movements crossing each of the four bridges. Figure 2-3 shows the locations where these surveys were undertaken

Table 5-1 below shows a historical comparison of 12 hour (07:00 – 19:00) two-way traffic and active travel movements across the bridges between 2019 and 2024 on an average mid-weekday. The results illustrated for 2019 and 2020 are the results of one day JTC surveys which have been carried out on a neutral day (Tuesday, Wednesday or Thursday) of the respective year. The results for 2021, 2022, 2023 and 2024 are the average of JTC surveys conducted on three consecutive neutral days (Tuesday, Wednesday and Thursday) for each respective year. Note that, the figures presented below do not include the number of people in each vehicle (vehicle occupancy). Therefore, these figures are not representative of the mode share.

*Table 5-1: Historical Trends of Movements Across the Galway Bridge Screenline (07:00-19:00)*

Vehicle Classification	2019	2020	2021	2022	2023	2024
Car	59,780	43,004	52,421	53,202	53,386	51,430
LGV	6,148	6,356	6,512	6,781	6,412	5,979
Motorcycle	158	148	152	147	147	105
OGV1	1,307	1,292	1,294	1,236	1,203	1,198
OGV2	387	454	461	389	352	356
Pedal Cycle	2,583	1,893	2,346	1,876	2,009	1,873
Bus	719	535	736	681	669	662
Pedestrian	15,584	13,864	26,180	28,724	25,667	24,421
Total	86,666	67,546	90,102	93,036	89,845	86,024

Figure 5-5-1 illustrates the total flows for all vehicle types across the Galway Bridge Screenline per time period analysed. It is evident that the School Run (13:00-16:00) time period has the highest volume of overall traffic movements, with a total of 23,858 river crossings.



*Figure 5-5-1: Total Movements across the Galway Bridge Screenline Inbound by Time Period*

## 5.2 Total Person Movements

Figure 5-2, below, shows the total people movements over the 12-hour survey period across each bridge in Galway in 2024. Person Movements were calculated using the same methodology was used as with the Galway Inner-City Cordon, outlined in section 4.5 above.

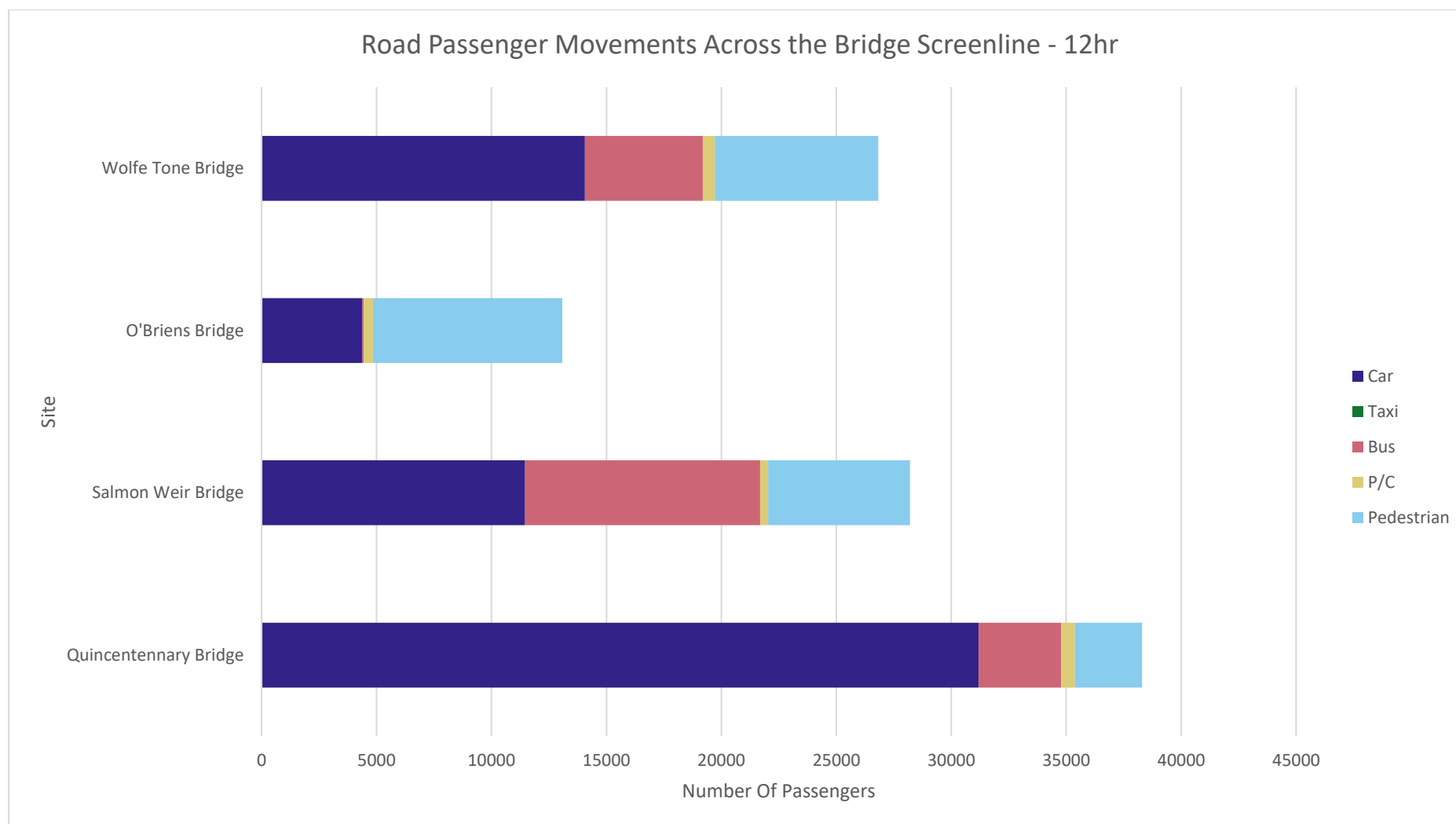


Figure 5-2: Road Passenger Movements per Mode per Site: 12 Hour



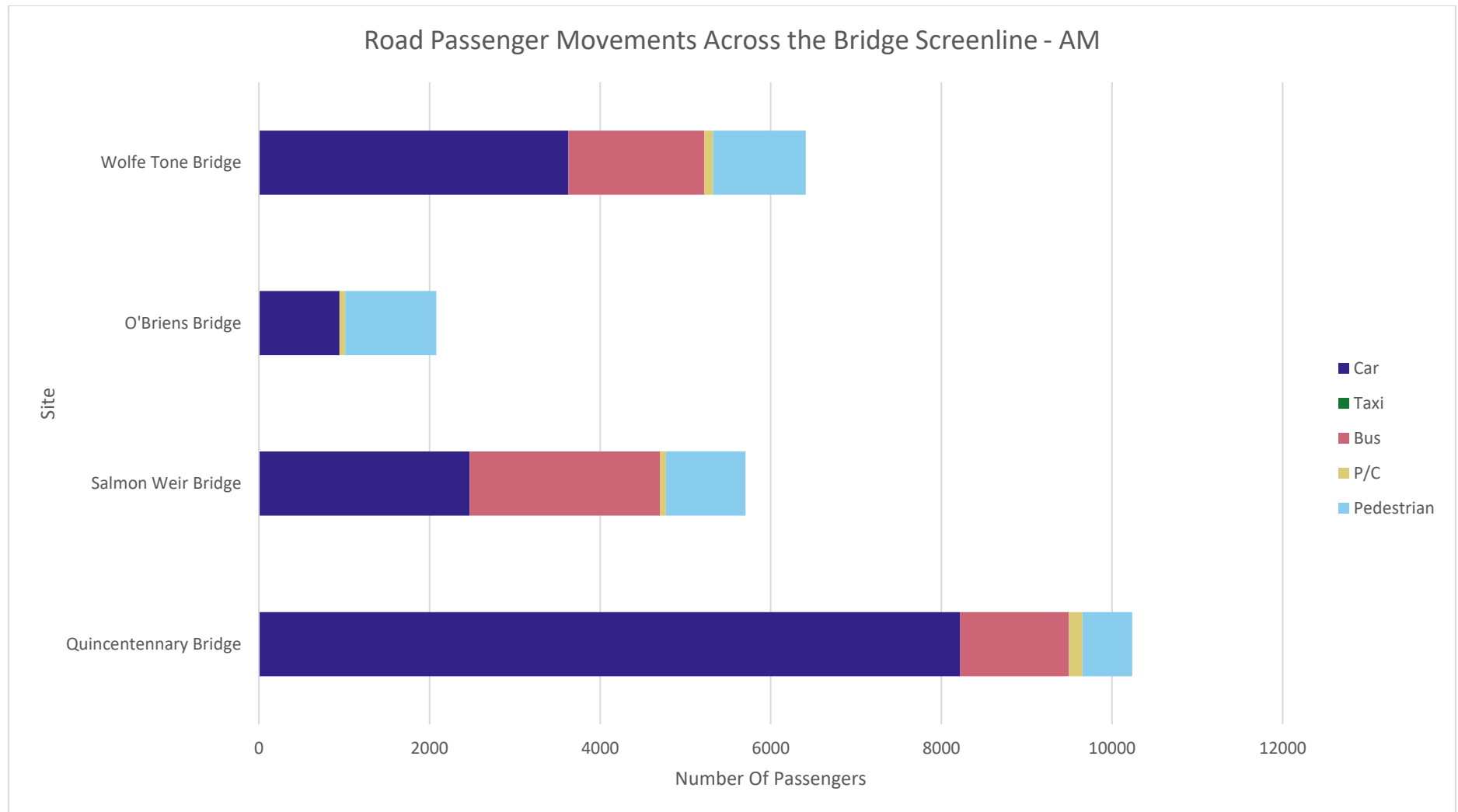


Figure 5-3: Road Passenger Movements per Mode per Site: AM

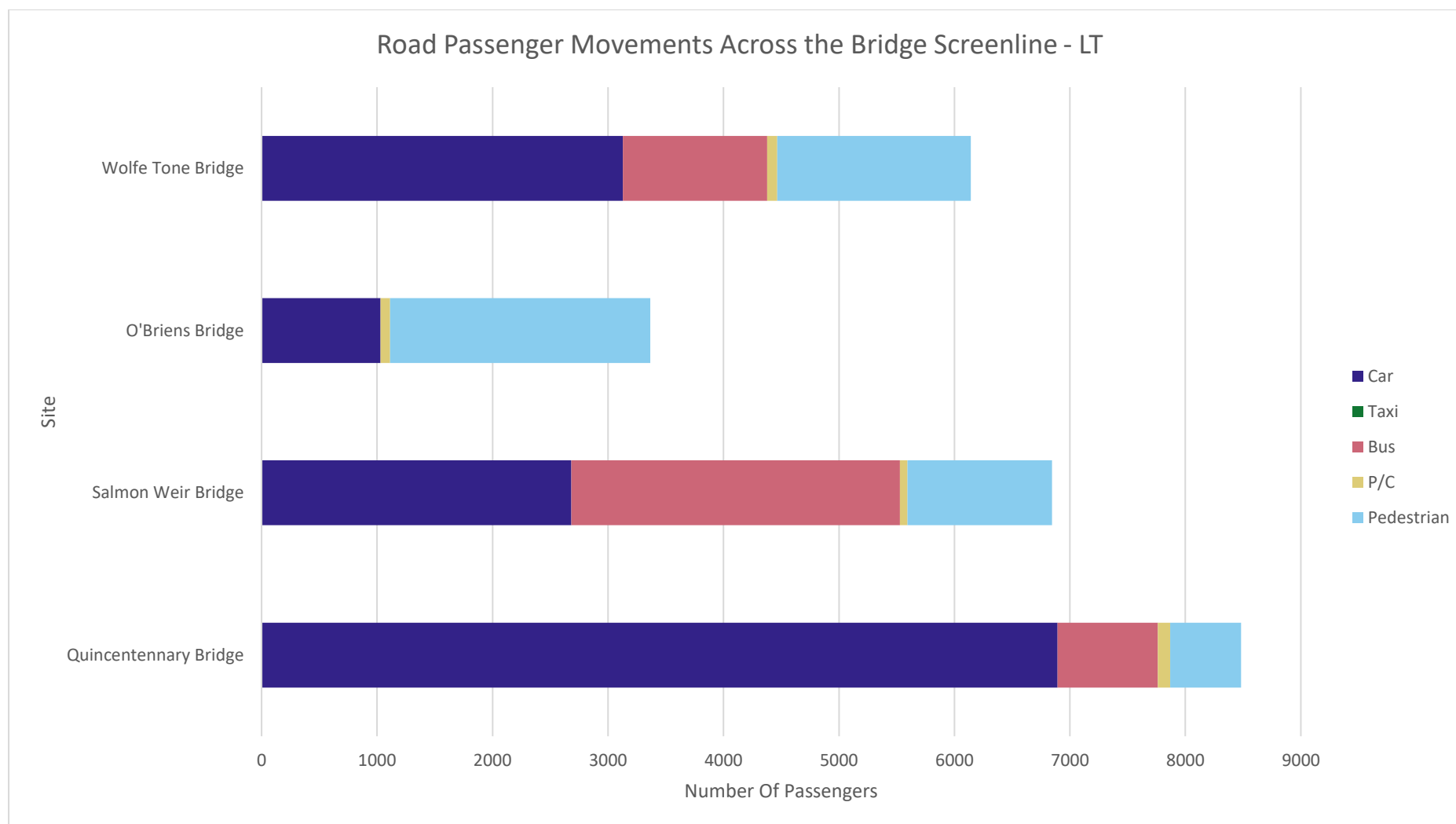


Figure 5-4: Road Passenger Movements per Mode per Site: LT

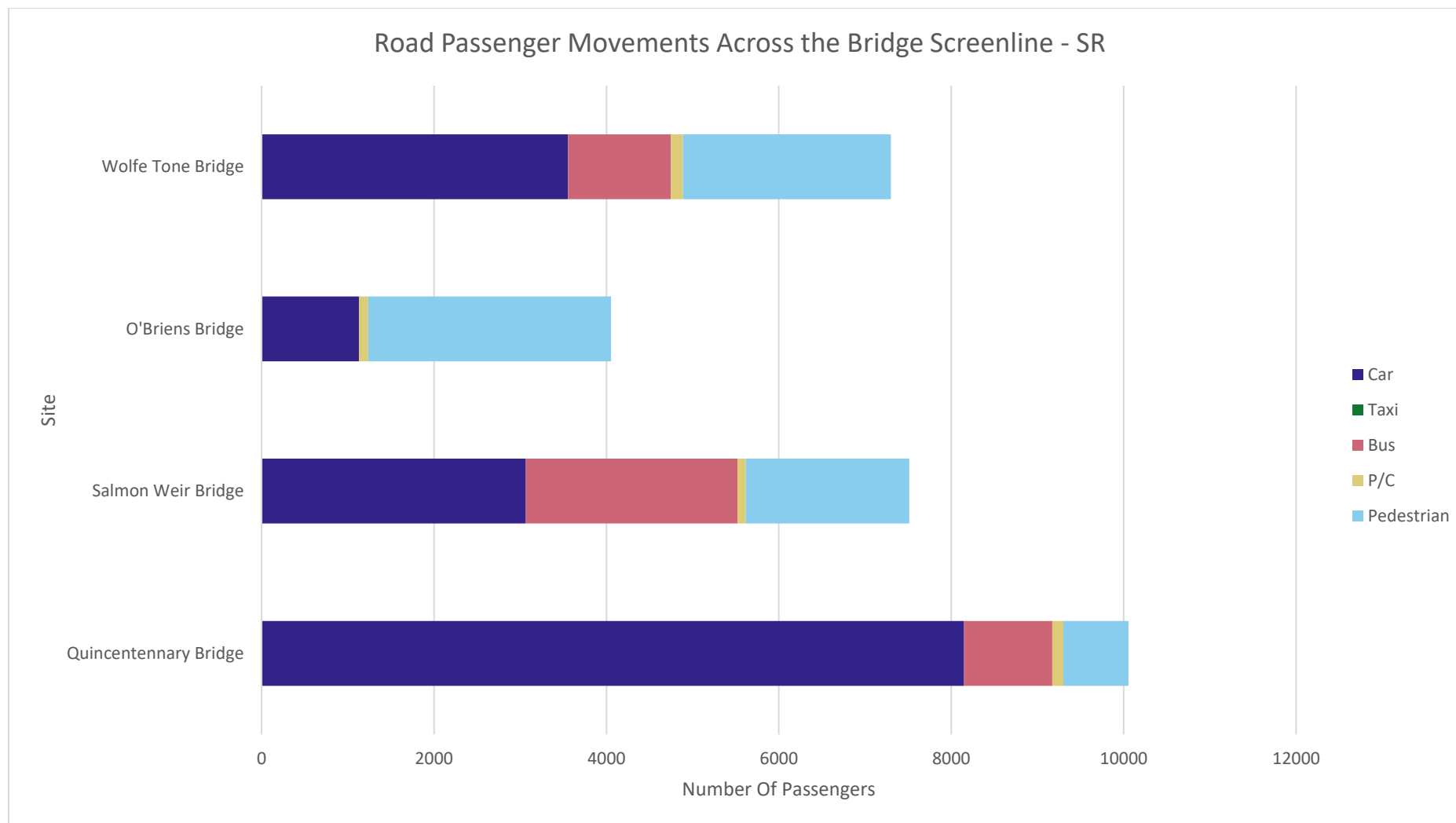


Figure 5-5: Road Passenger Movements per Mode per Site: SR

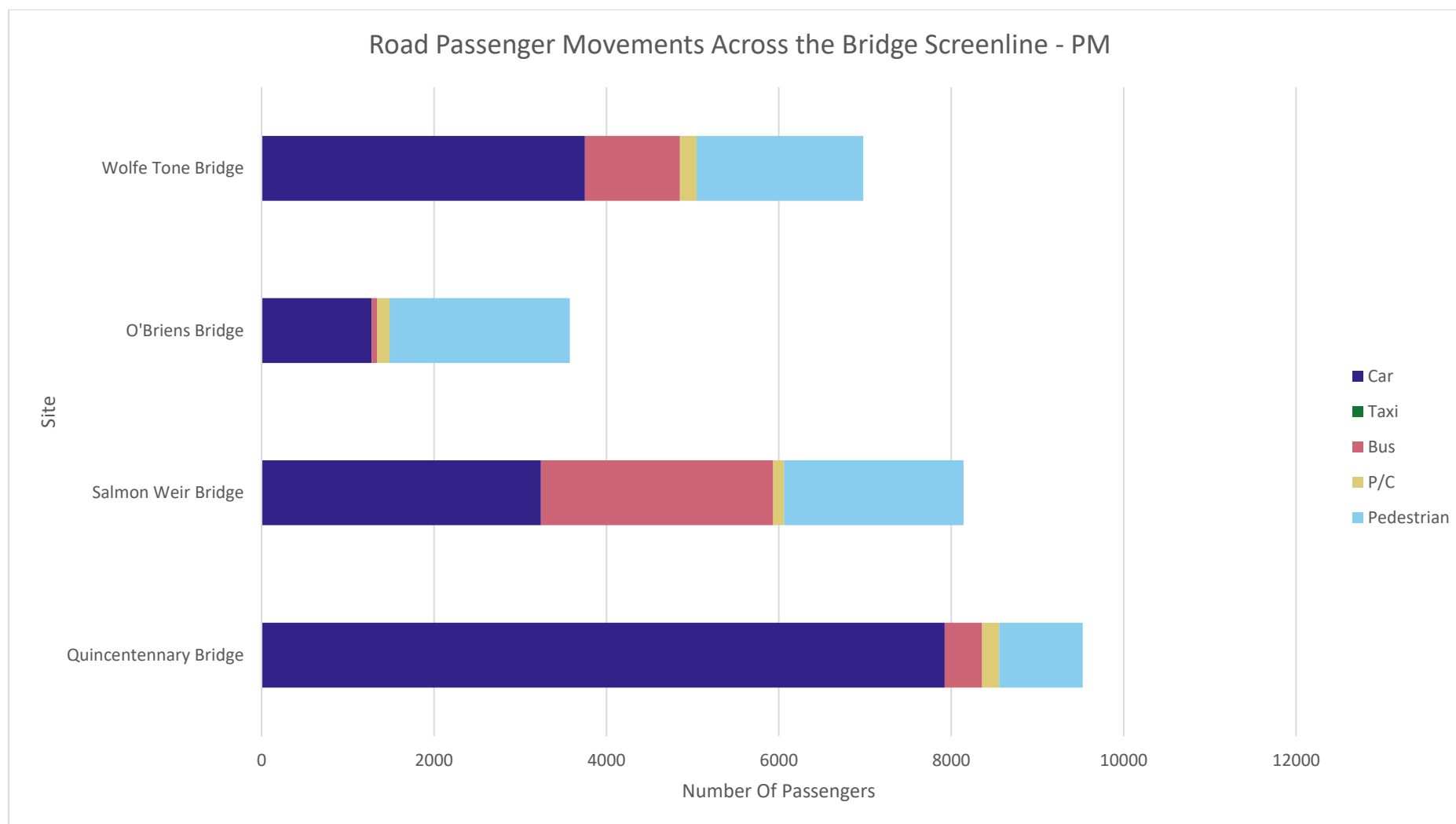
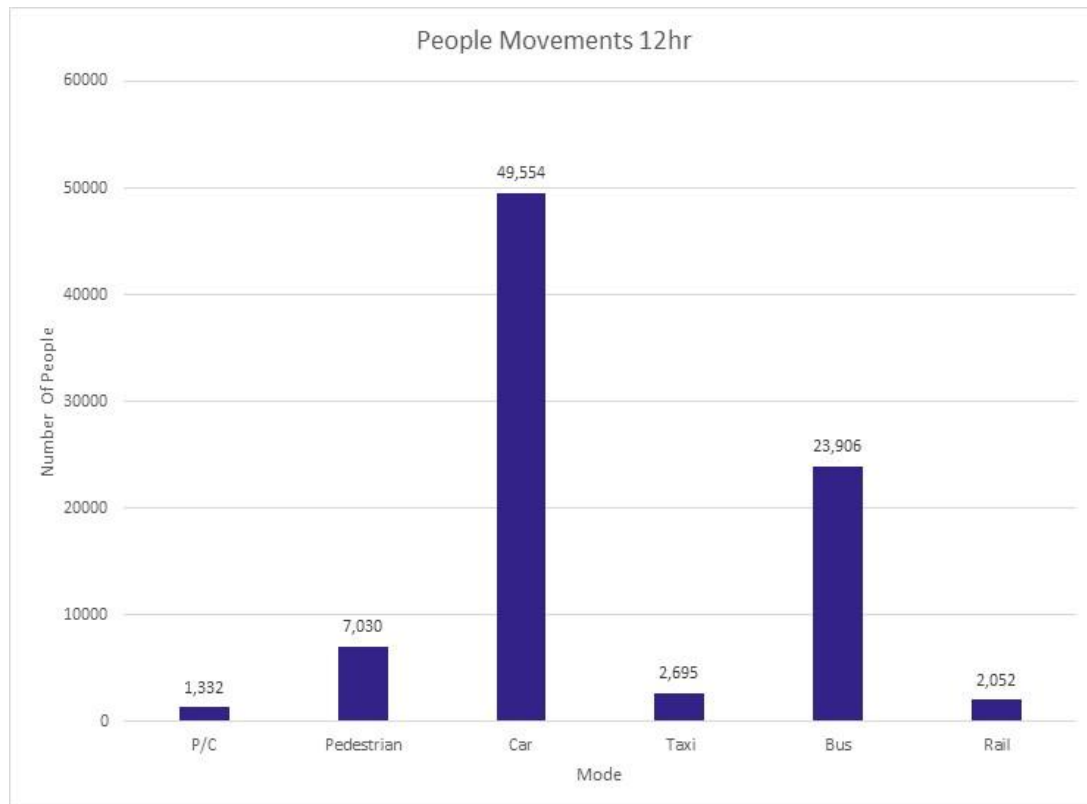


Figure 5-6: Road Passenger Movements per Mode per Site: PM

## 6 Summary

Based on the analysis of the 2024 survey data, this report demonstrates the following:

- In terms of overall people movements, 37,224 (43%) of a total of 86,596 people travelling inbound towards the city across the Inner-City Cordon between 07:00 and 19:00 used sustainable modes of travel.



*People Movements by Mode over a 12-hour Period Across the Inner-City Cordon*

- The total number of vehicles, pedestrians and cyclists that crossed the Inner-City Cordon inbound was 56,875 over 12 hours.
- For the Inner-City Cordon, the busiest time period for vehicles, pedestrians and cyclists travelling inbound towards the city was the AM Period with 16,395.
- Between the hours of 07:00 and 19:00 for the Inner-City Cordon, cars were recorded to have the highest modal split, with 57% of the total inbound people movements.
- In terms of vehicle occupancy the Inner-City Cordon recorded 83% of cars crossing inbound towards the City had single occupancy during the AM period (07:00 - 10:00) and 90% during the PM period (16:00 - 19:00) and 54% of taxis recorded single occupancy (i.e. driver-only) over the 12-hour survey period

# Appendix A – Galway City Outer City Cordon

## Traffic Flow Surveys

### Overview

This chapter outlines the classified traffic flows crossing the Galway Outer-City Cordon, shown in Figure A-0-1, inbound, towards the city centre. This information was collected from the JTC traffic survey sites for Car, LGV, OGV1, OGV2, Motorcycle, Pedal Cycle, Taxi and Bus, as well as pedestrian survey sites.

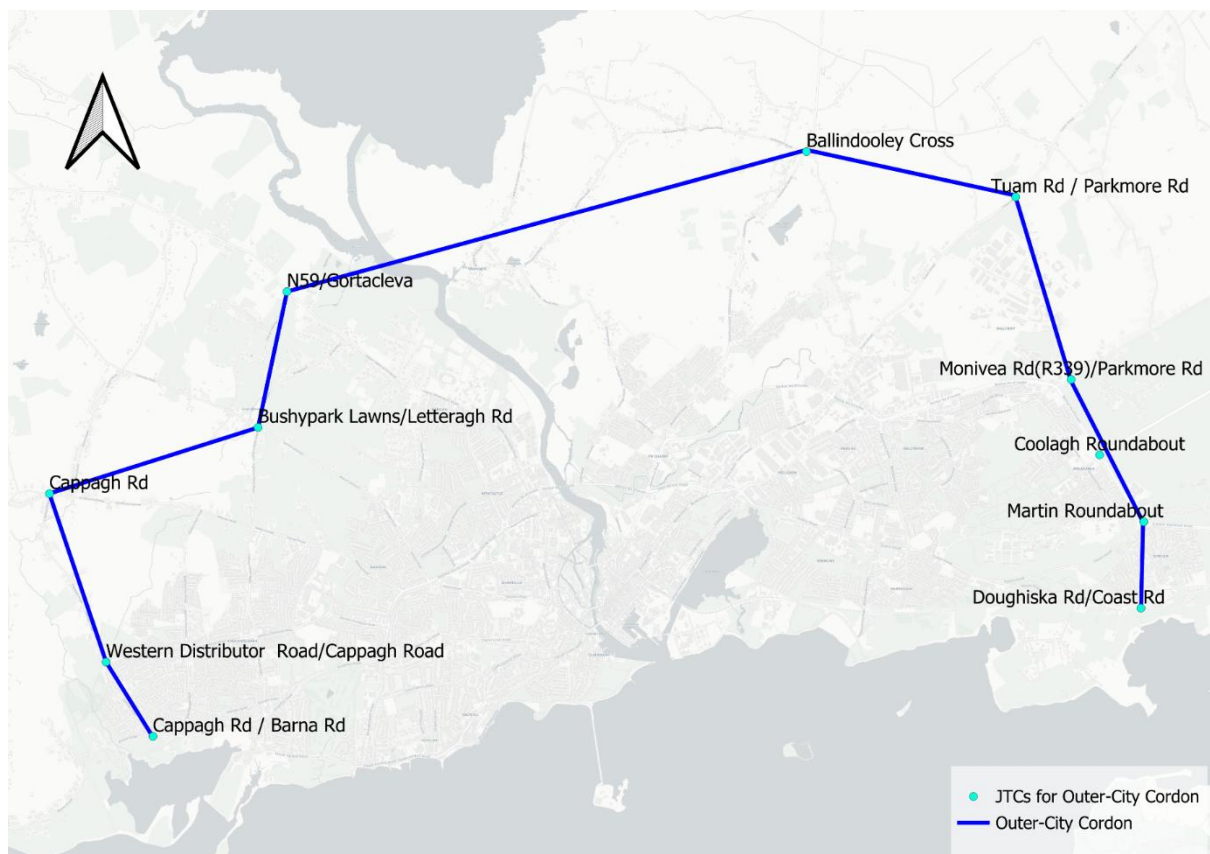
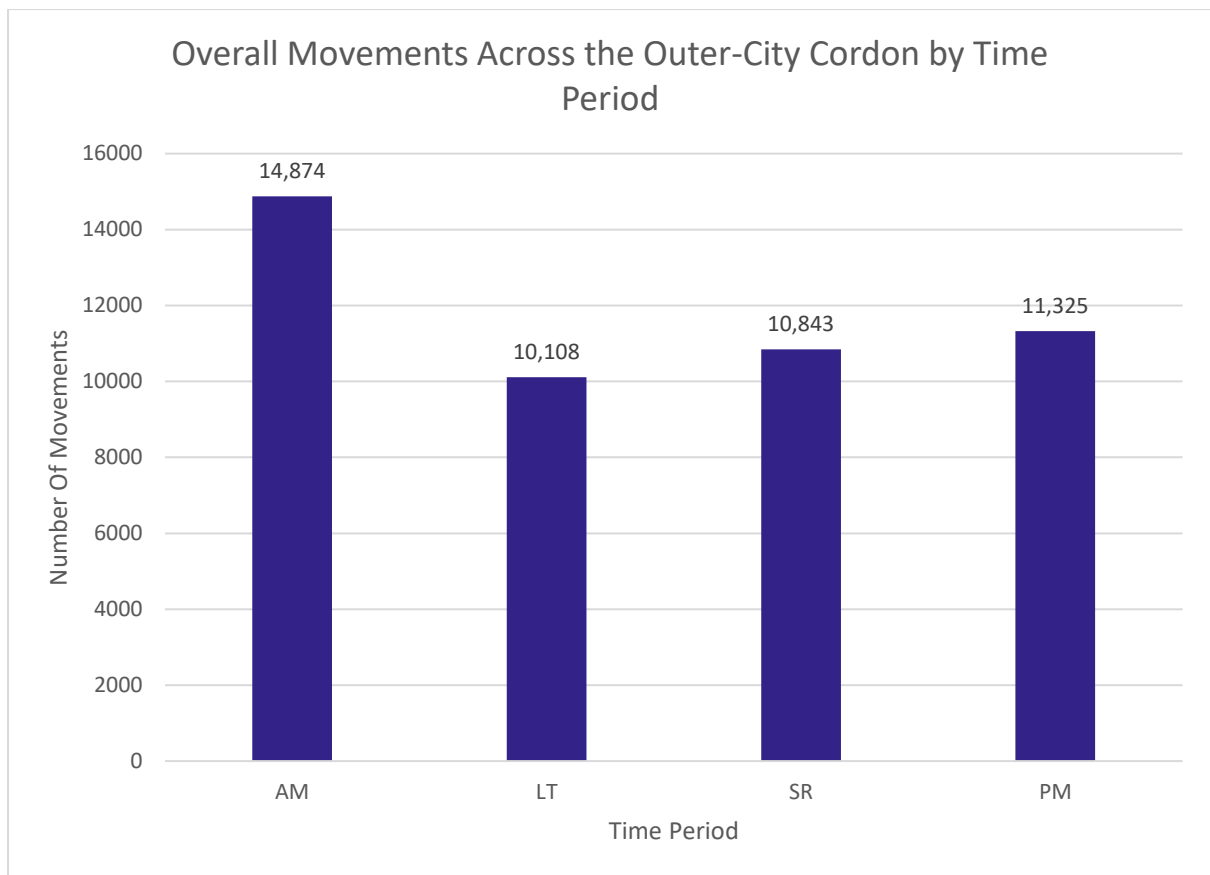


Figure A-0-1 Outer-City Cordon and the Survey Locations Along It

Table A-1 presents the total number of traffic flows crossing the Galway Outer-City Cordon inbound between 07:00-19:00 in the 2024 survey.

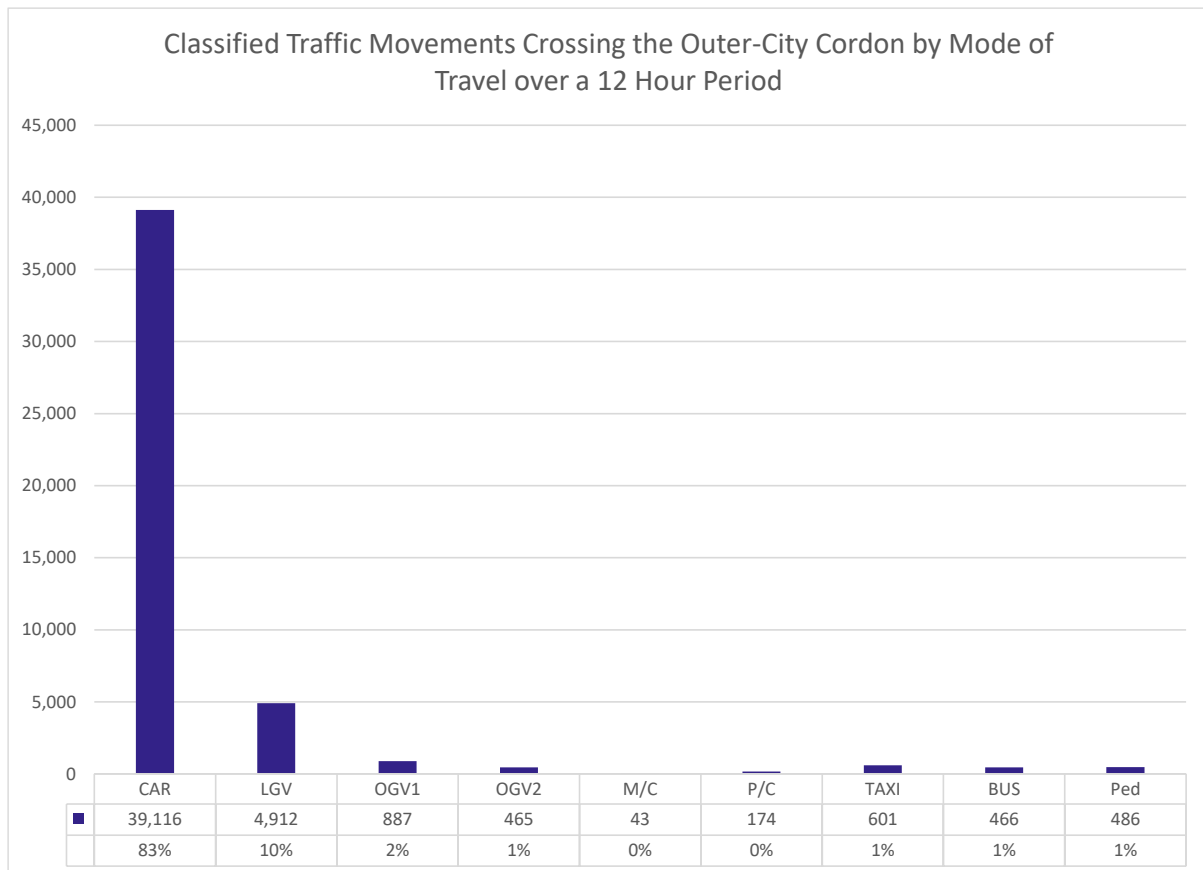
Vehicle Classifications	AM	LT	SR	PM	12hr
	07:00-10:00	10:00-13:00	13:00-16:00	16:00-19:00	07:00-19:00
Car	12,470	8,050	8,788	9,808	39,116
LGV	1,592	1,270	1,203	847	4,912
OGV1	241	283	230	133	887
OGV2	136	150	140	39	465
Motorcycle	13	7	17	6	43
Pedal Cycle	53	16	39	66	174
Taxi	160	144	158	139	601
Bus	135	111	124	96	466
Pedestrian	74	77	144	191	486
<b>Total</b>	<b>14,874</b>	<b>10,108</b>	<b>10,843</b>	<b>11,325</b>	<b>47,150</b>

A-2 illustrates the overall flows for all vehicle types across the Galway Outer-City Cordon per key time period. It is evident that the AM time period has the highest volume of overall traffic movements, with a total of 14,874 travelling inbound.



A-3 sets out the number of vehicles in each classification as recorded in the JTC surveys, as well as the number of pedestrians, over a 12-hour period (i.e. 07:00 - 19:00). This figure shows that car is the most common vehicle type, with 39,116 inbound movements in the 12-hour period, accounting for 83% of all crossings.



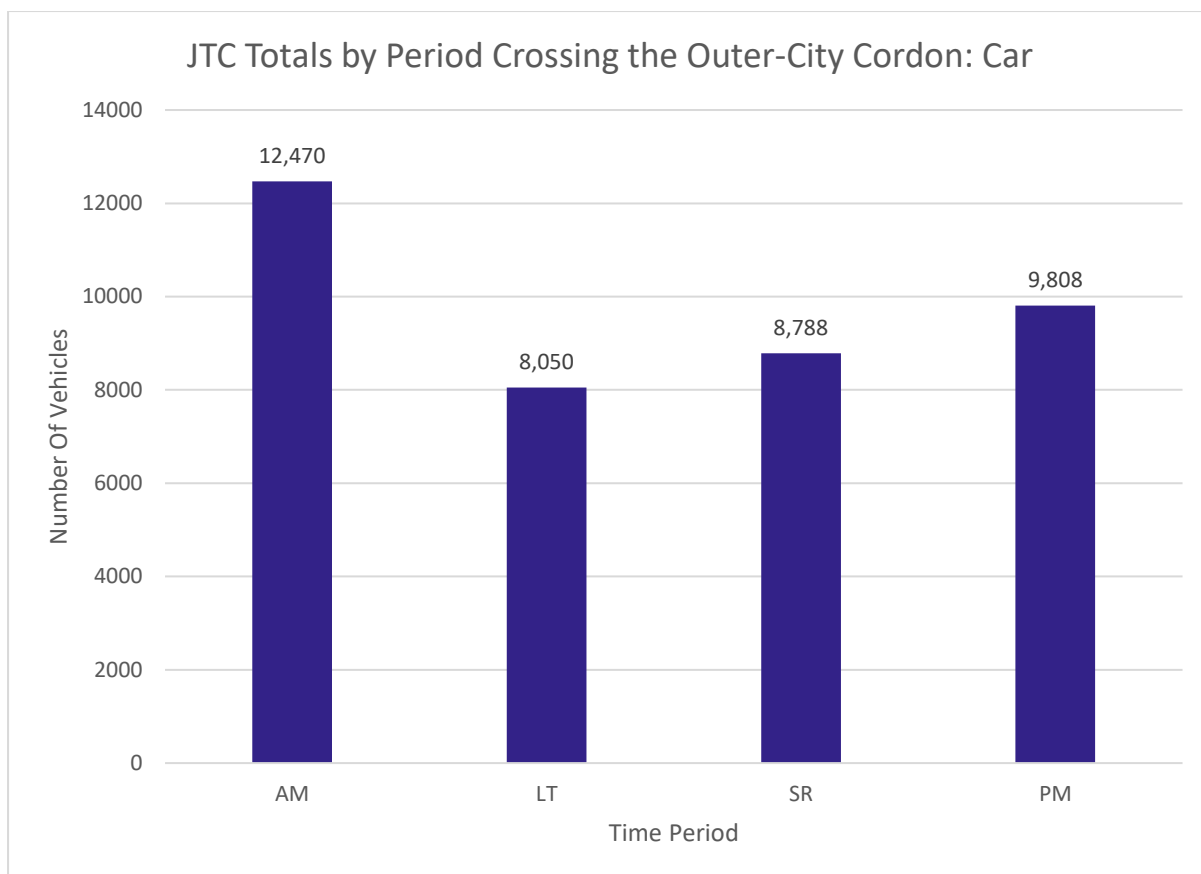


## Classified Traffic Flows

The following sections provide a more detailed overview of the JTC survey results by vehicle classification and survey sites. Each vehicle class is analysed in turn providing information on the volume of vehicles per time period and per survey site.

### Car

Figure A-4 below presents the total number of cars crossing the Galway Outer-City Cordon for each surveyed time period. Overall, it is evident that the AM time period has the highest volume of cars, with a total of 12,470 cars travelling inbound.



*Figure A-4: Total Number of Car journeys per Time Period*

Figure A-5 presents a further breakdown of the total number of cars, with reference to each site location. The busiest location for cars crossing the Galway Outer-City Cordon was the Monivea Rd(R339)/Parkmore Rd junction, with a total of 6,914 cars travelling inbound through this junction over a 12-hour period.

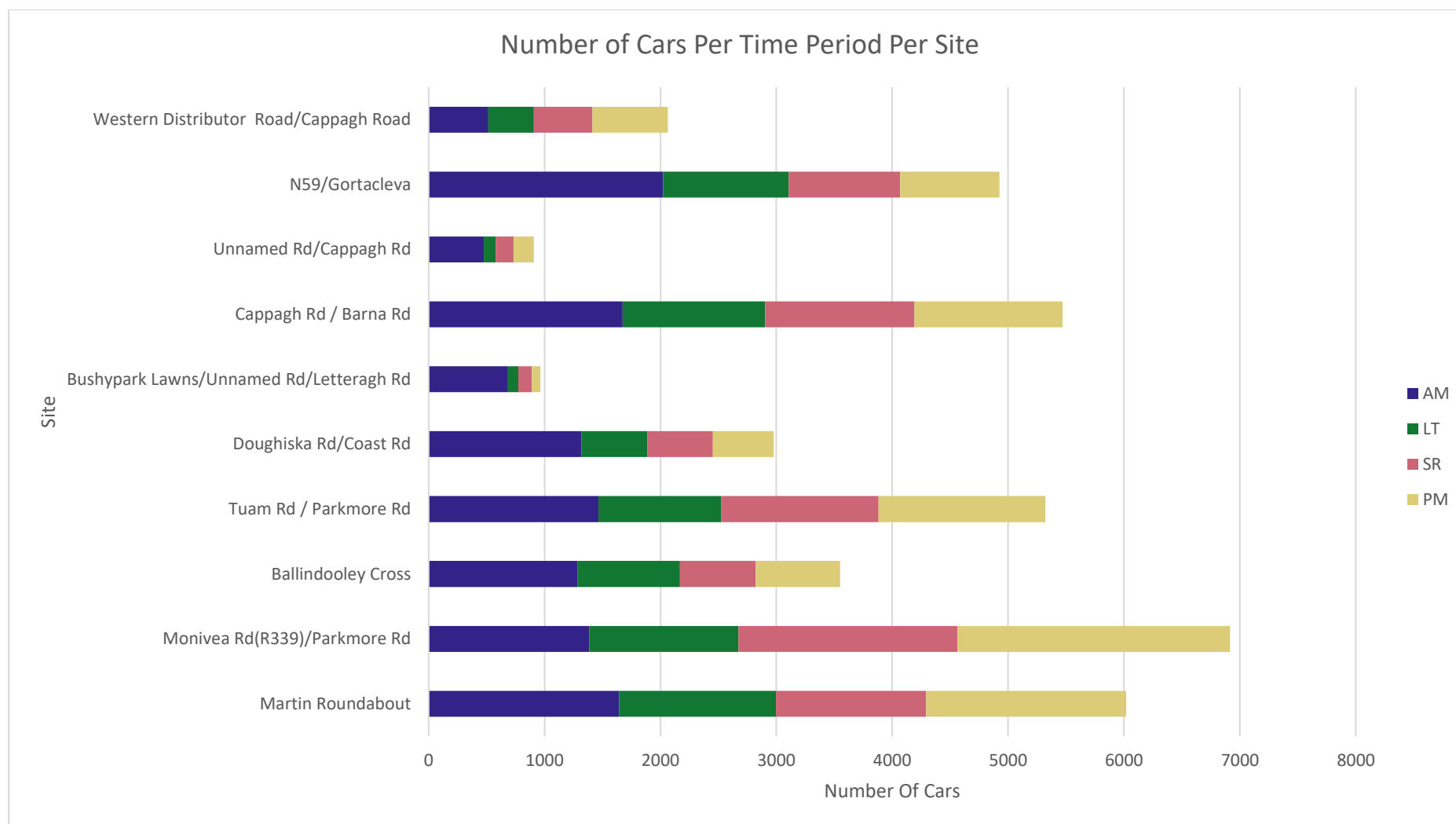


Figure A-5: Number of Cars Crossing the Galway Outer-City Cordon Inbound at all Sites Per Time Period

### Light Goods Vehicle

Figure A-6 below presents the total number of LGVs crossing the Galway Outer-City Cordon for each surveyed time period. Overall, it is evident that the AM time period has the highest volume of LGVs, with a total of 1,592 LGVs travelling inbound.

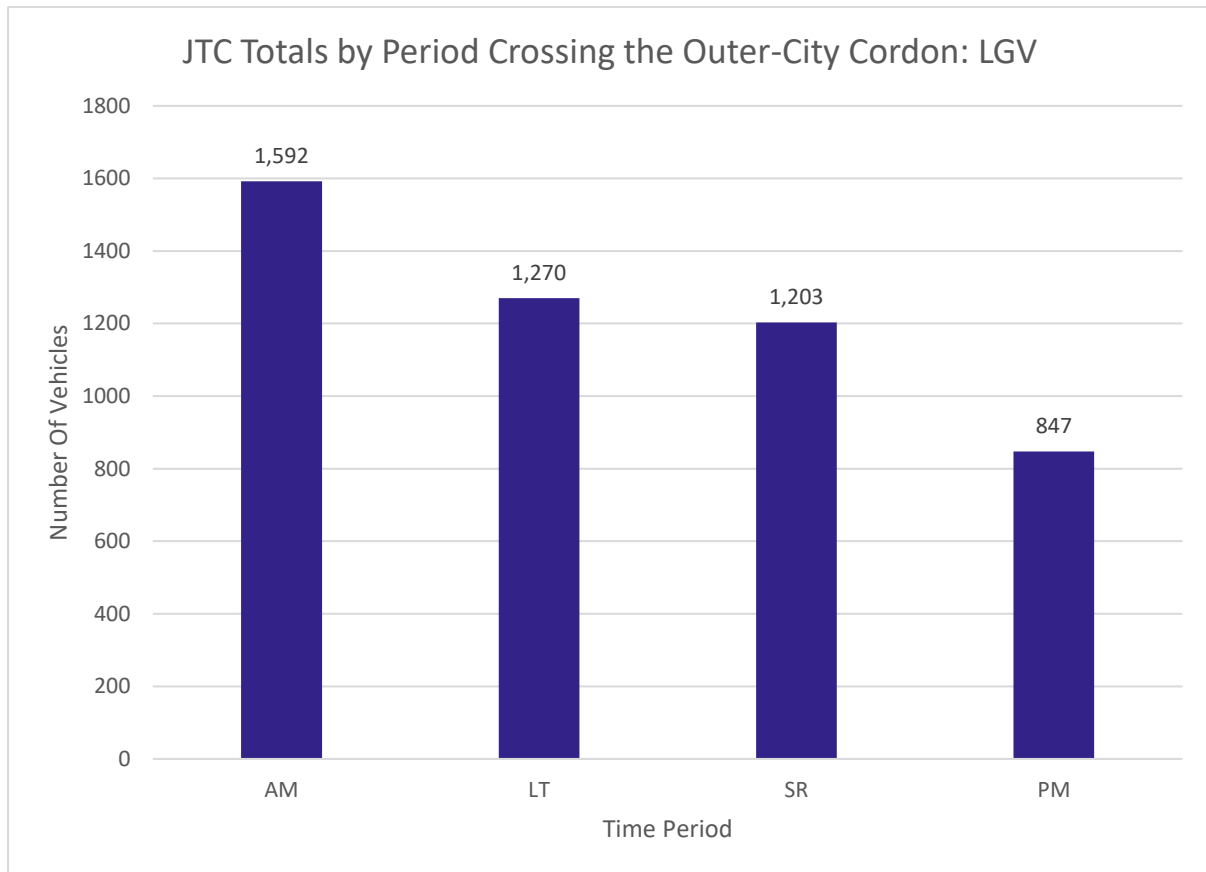


Figure A-6 :Total Number of LGV journeys per Time Period

A-7 presents a further breakdown of the total number of LGVs, with reference to each site location. The busiest location for LGVs crossing the Galway Outer-City Cordon was the Monivea Rd(R339)/Parkmore Rd junction, with a total of 974 LGVs travelling inbound through this junction over a 12-hour period.

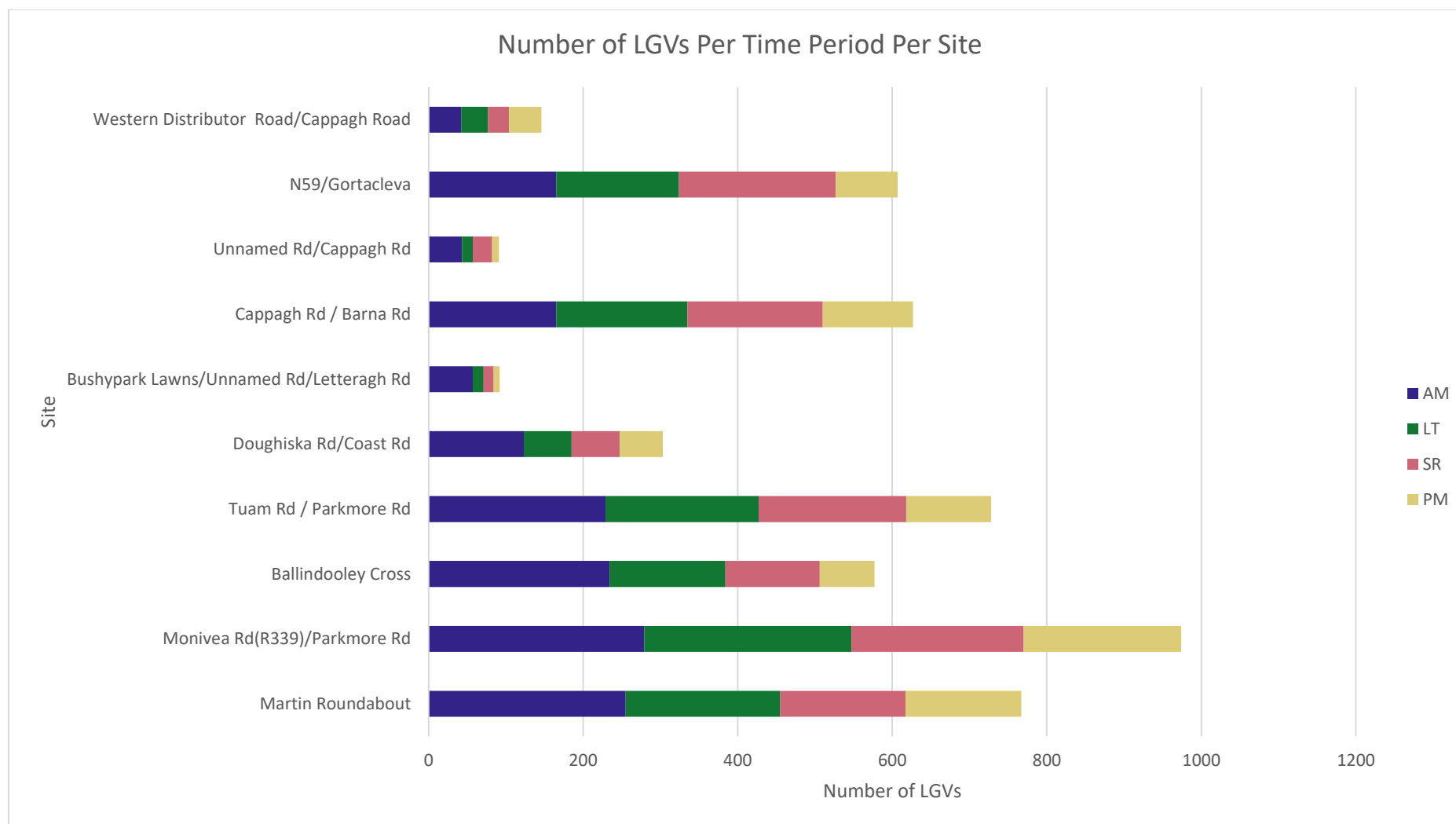


Figure A-7: Number of LGVs Crossing the Galway Outer-City Cordon Inbound at all Sites Per Time Period

### Ordinary Goods Vehicle 1

Figure A-8 below presents the total number of OGV1s crossing the Galway Outer-City Cordon for each surveyed time period. Overall, it is evident that the LT time period has the highest volume of OGV1s, with a total of 283 OGV1s travelling inbound.

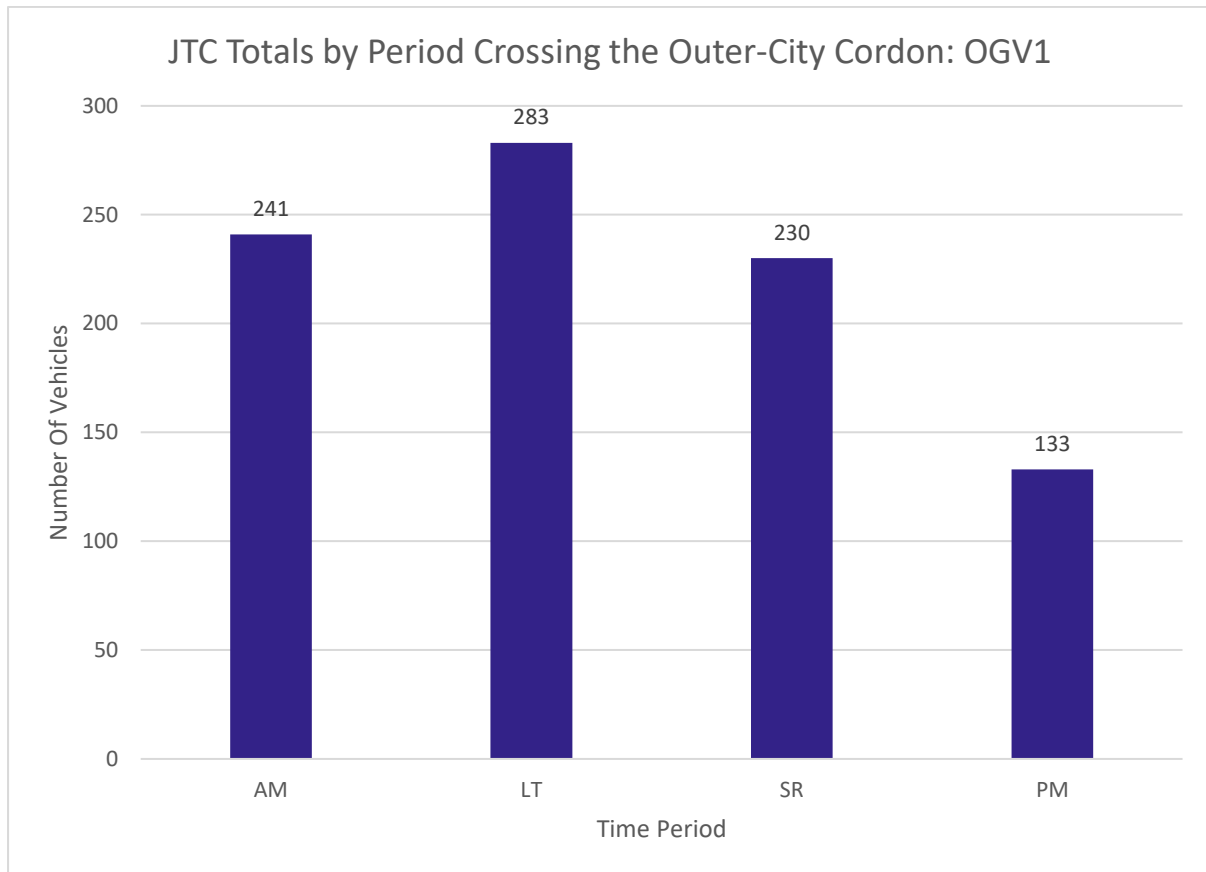


Figure A-8: Total Number of OGV1 journeys per Time Period

Figure A-9 presents a further breakdown of the total number of OGV1s, with reference to each site location. The busiest location for OGV1s crossing the Galway Outer-City Cordon was the Monivea Rd(R339)/Parkmore Rd junction, with a total of 175 OGV1s travelling inbound through this junction over a 12-hour period.

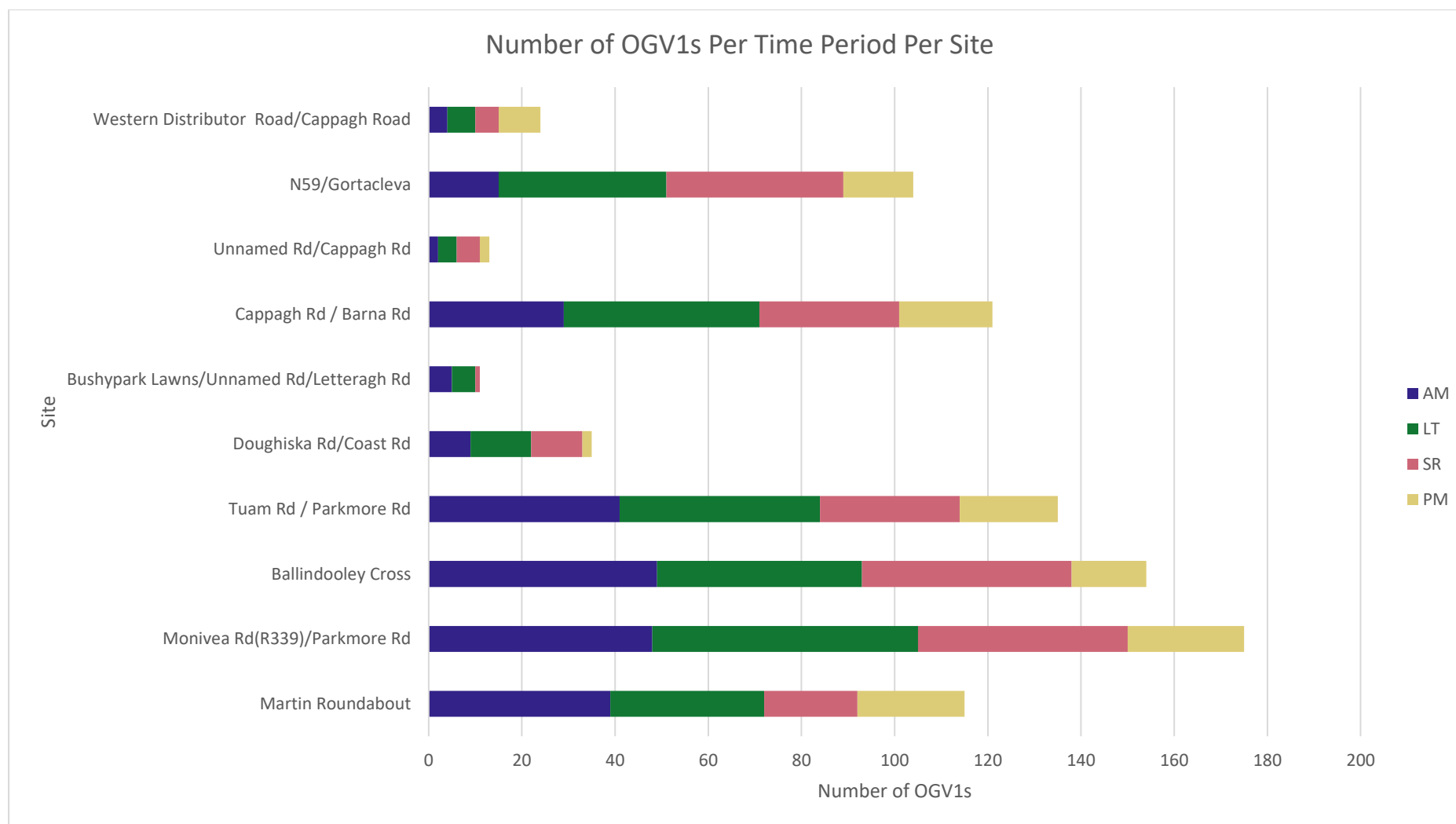


Figure A-9: Number of OGV1s Crossing the Galway Outer-City Cordon Inbound at all Sites Per Time Period

### Ordinary Goods Vehicle 2

Figure A-10 below presents the total number of OGV2s crossing the Galway Outer-City Cordon for each surveyed time period. Overall, it is evident that the LT time period has the highest volume of OGV2s, with a total of 150 OGV2s travelling inbound.

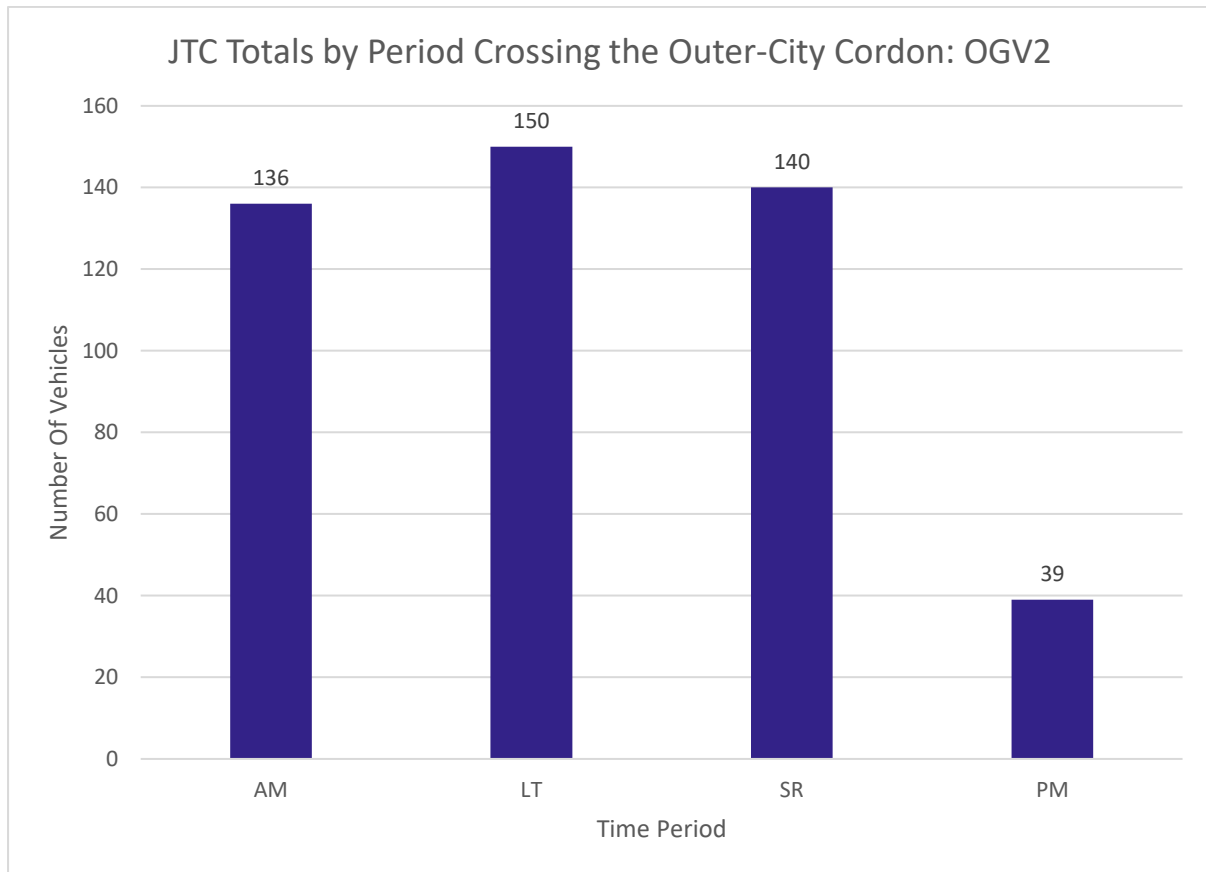


Figure A-10: Total Number of OGV2 journeys per Time Period

A-11 presents a further breakdown of the total number of OGV2s, with reference to each site location. The busiest location for OGV2s crossing the Galway Outer-City Cordon was the Monivea Rd(R339)/Parkmore Rd junction, with a total of 112 OGV2s travelling inbound through this junction over a 12-hour period.



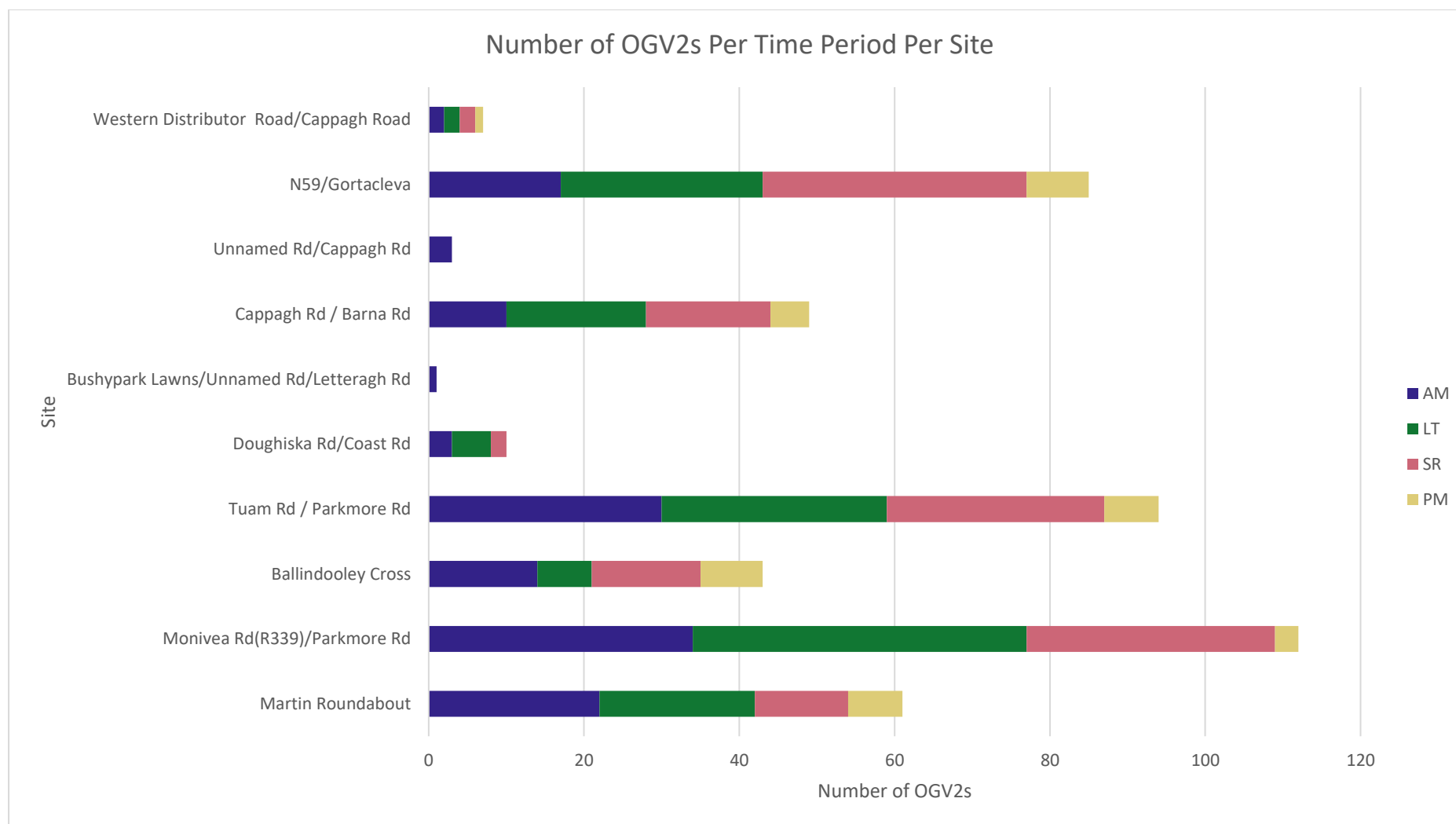


Figure A-11: Number of OGV2s Crossing the Galway Outer-City Cordon Inbound at all Sites Per Time Period

### Motorcycle

A-12 below presents the total number of motorcycles crossing the Galway Outer-City Cordon for each surveyed time period. Overall, it is evident that the SR time period has the highest volume of motorcycles, with a total of 17 motorcycles travelling inbound.

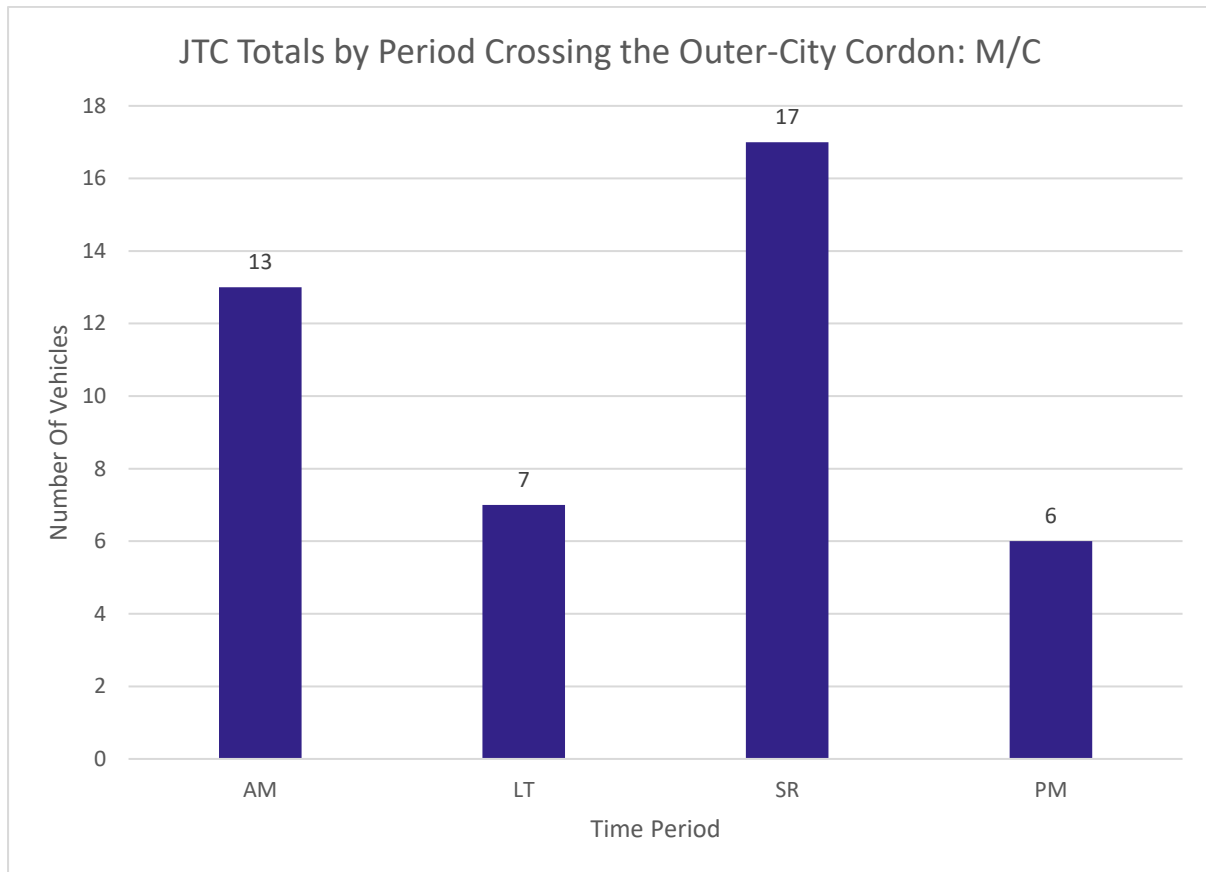


Figure A-12: Total Number of Motorcycle journeys per Time Period

Figure A-13 presents a further breakdown of the total number of motorcycles, with reference to each site location. The busiest location for motorcycles crossing the Galway Outer-City Cordon was the Monivea Rd(R339)/Parkmore Rd junction, with a total of 14 motorcycles travelling inbound through this junction over a 12-hour period.

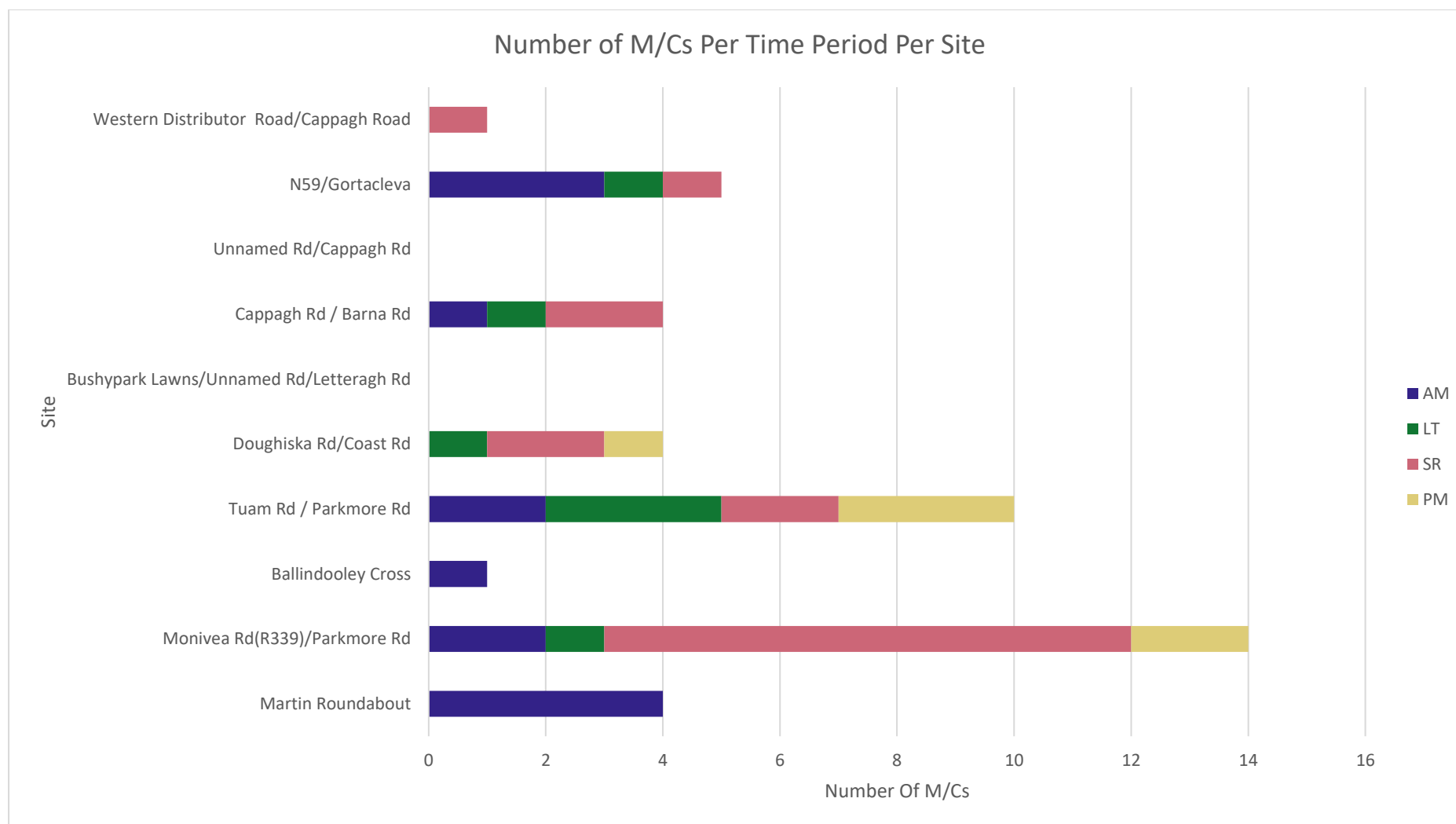


Figure A-13: Number of Motorcycles Crossing the Galway Outer-City Cordon Inbound at all Sites Per Time Period

### Pedal Cycle

Figure A-14 below presents the total number of pedal cycles crossing the Galway Outer-City Cordon for each surveyed time period. Overall, it is evident that the PM time period has the highest volume of pedal cycles, with a total of 66 pedal cycles travelling inbound.

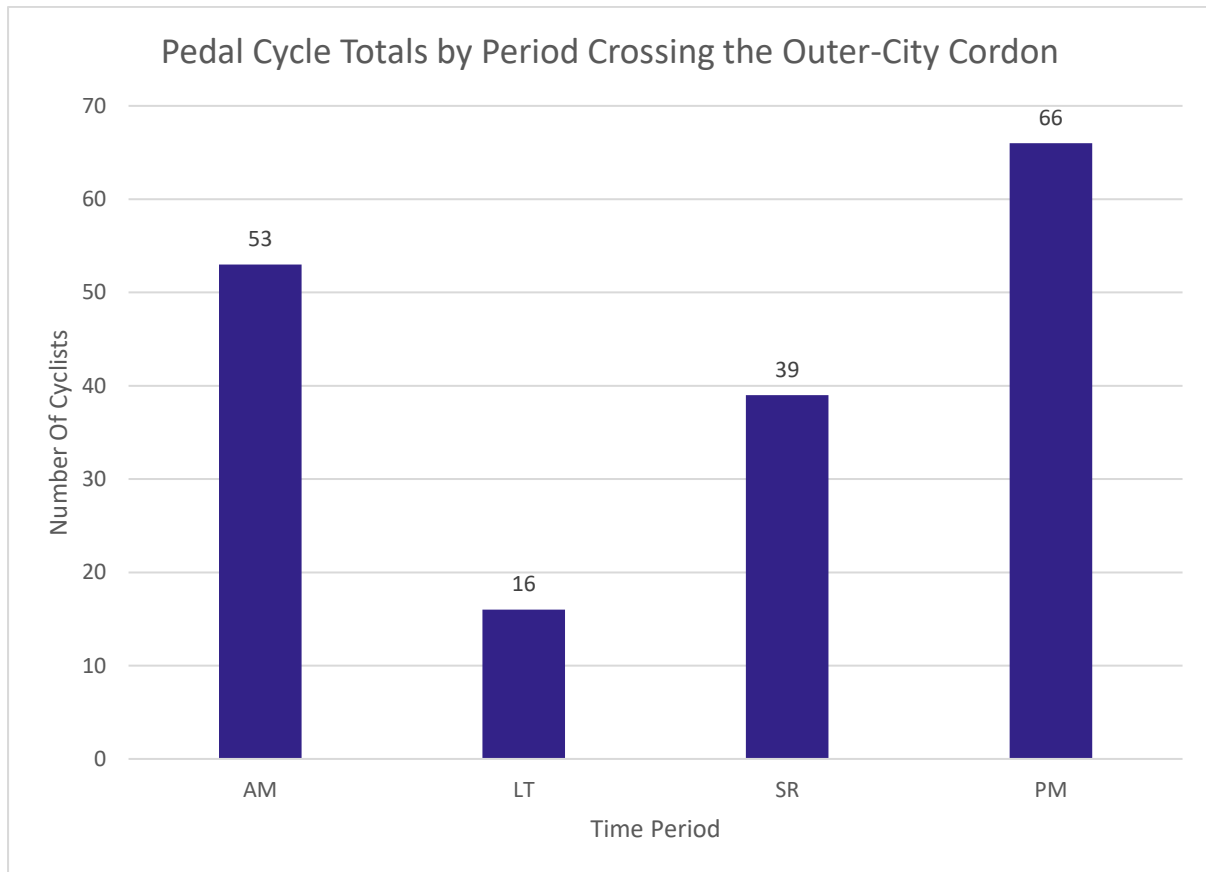


Figure A-14: Total Number of Pedal Cycle journeys per Time Period

Figure A-15 presents a further breakdown of the total number of pedal cycles, with reference to each site location. The busiest location for pedal cycles crossing the Galway Outer-City Cordon was the Monivea Rd(R339)/Parkmore Rd junction, with a total of 69 pedal cycles travelling inbound through this junction over a 12-hour period.

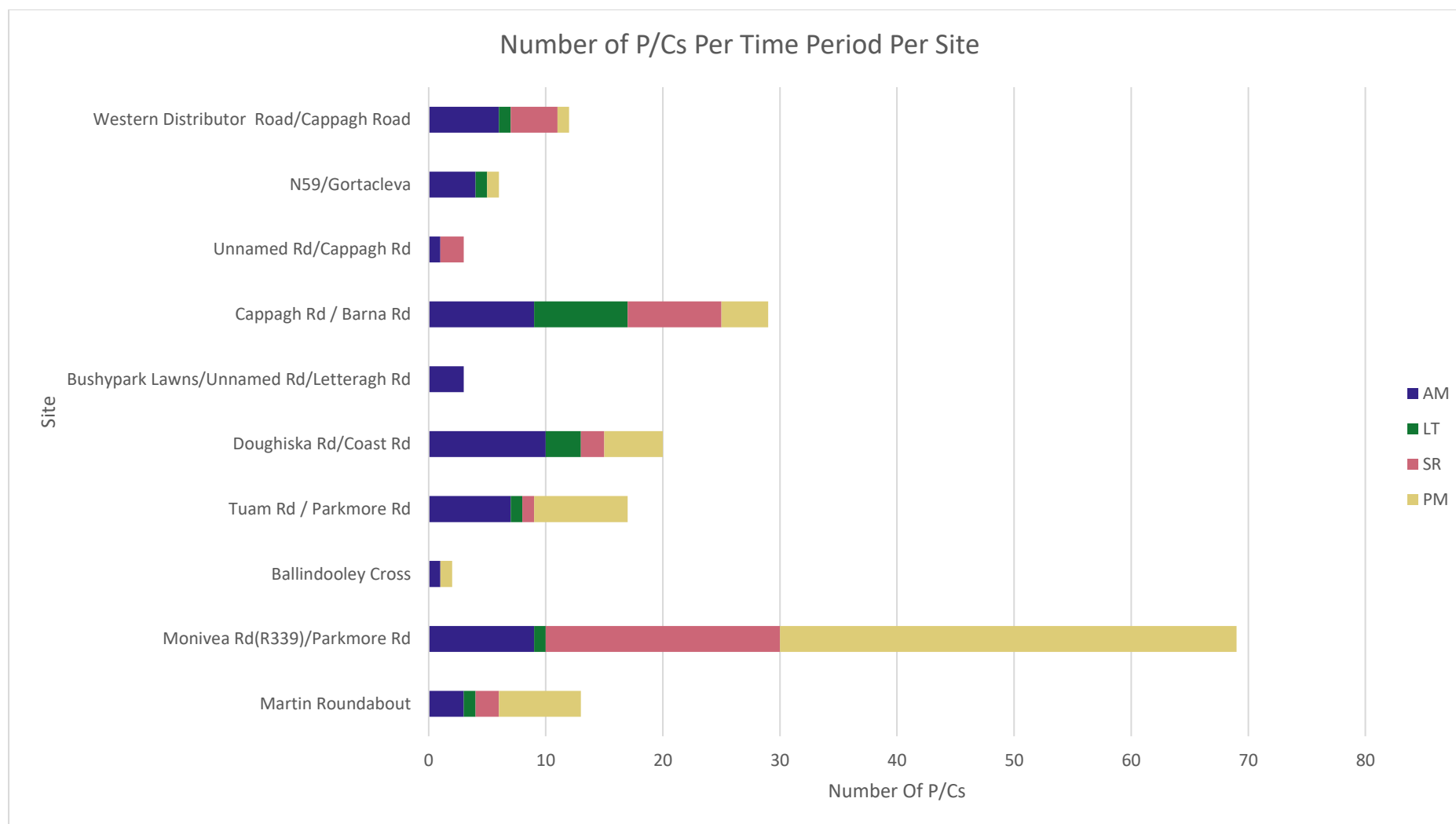


Figure A-15: Number of Pedal Cycles Crossing the Galway Outer-City Cordon Inbound at all Sites Per Time Period

### Taxi

A-16 below presents the total number of taxis crossing the Galway Outer-City Cordon for each surveyed time period. Overall, it is evident that the AM time period has the highest volume of taxis, with a total of 160 taxis travelling inbound.

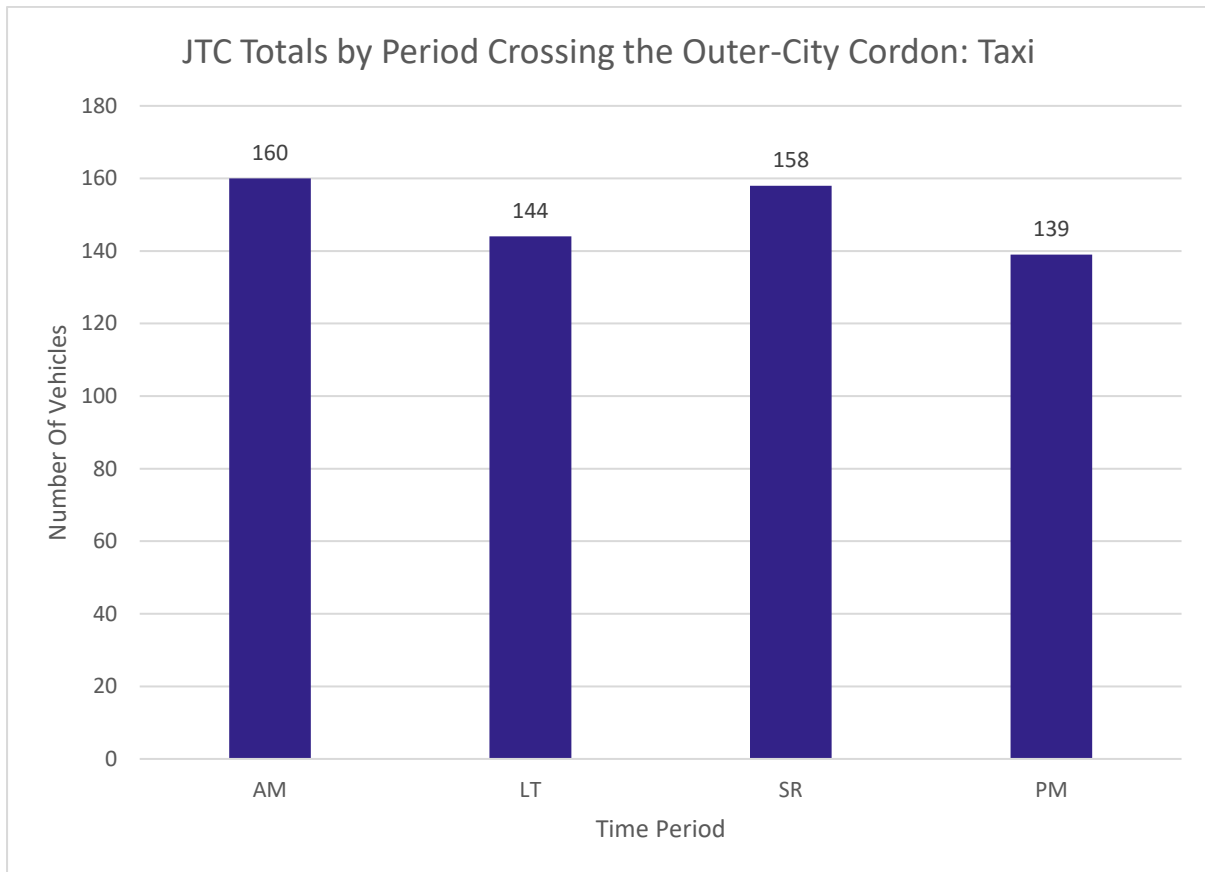


Figure A-16: Total Number of Taxi journeys per Time Period

Figure A-17 presents a further breakdown of the total number of taxis, with reference to each site location. The busiest location for taxis crossing the Galway Outer-City Cordon was the Monivea Rd(R339)/Parkmore Rd junction, with a total of 145 taxis travelling inbound through this junction over a 12-hour period.

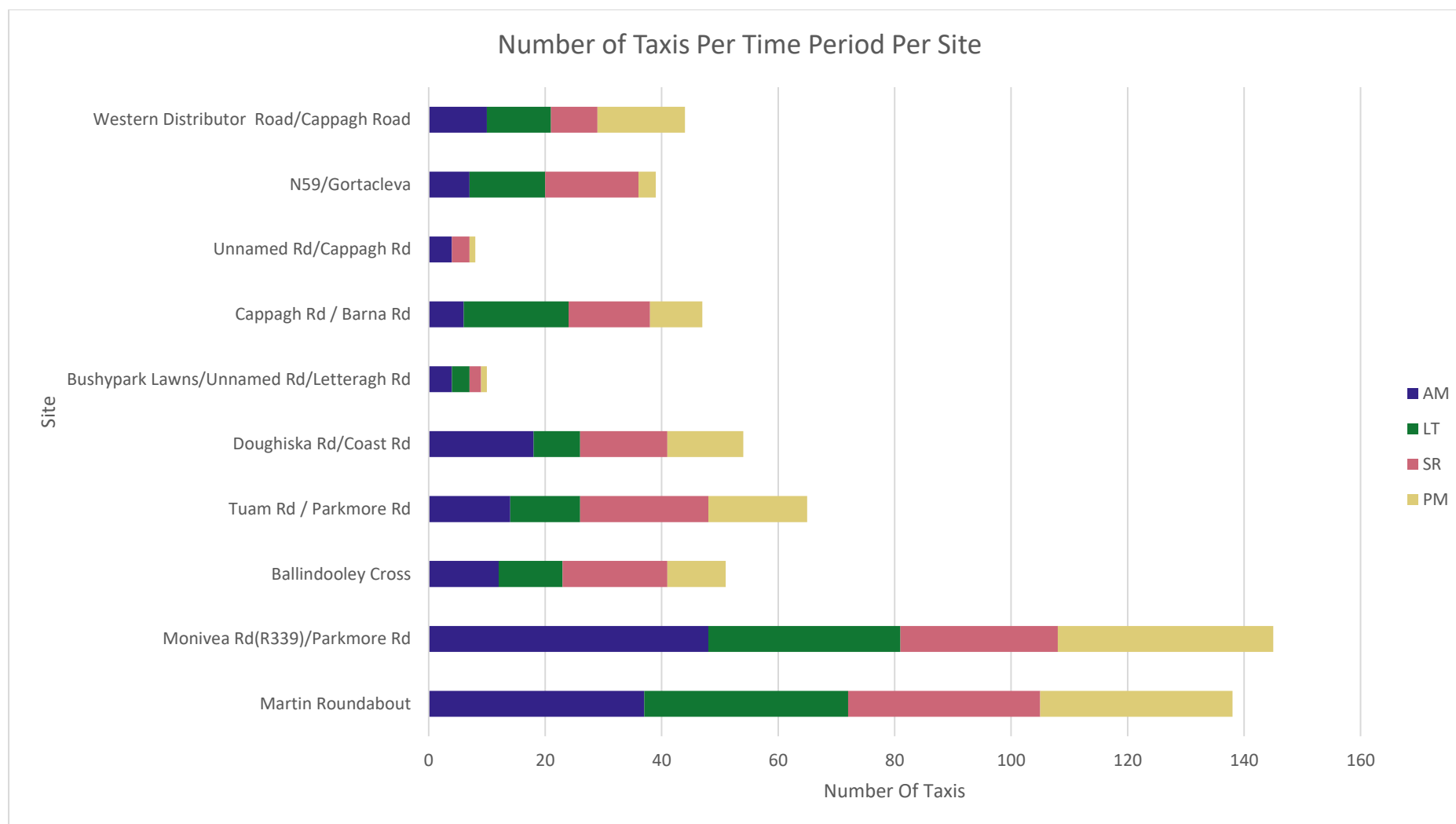


Figure A-17: Number of Taxis Crossing the Galway Outer-City Cordon Inbound at all Sites Per Time Period

## Bus

A-18 below presents the total number of buses crossing the Galway Outer-City Cordon for each surveyed time period. Overall, it is evident that the AM time period has the highest volume of buses, with a total of 135 buses travelling inbound.

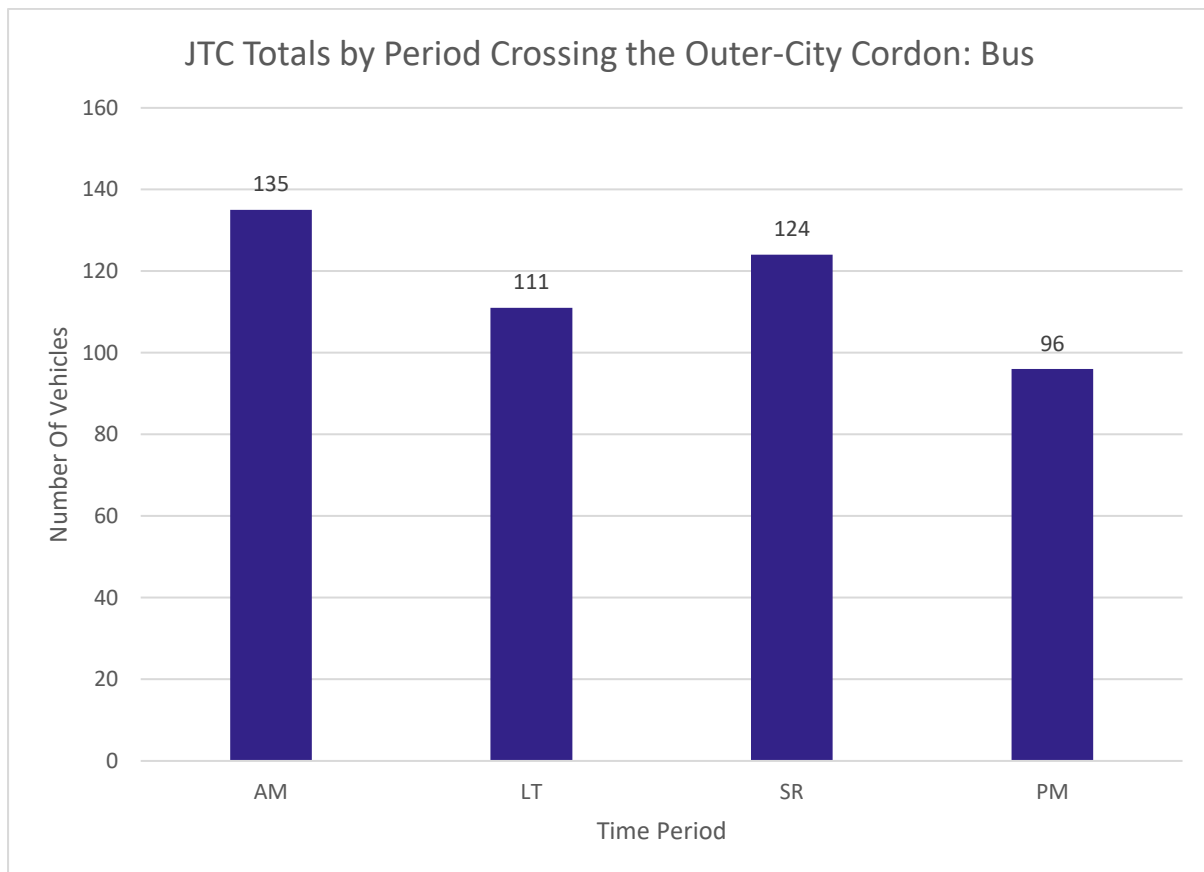


Figure A-18: Total Number of Bus journeys per Time Period

A-19 presents a further breakdown of the total number of buses, with reference to each site location. The busiest location for buses crossing the Galway Outer-City Cordon was the Monivea Rd(R339)/Parkmore Rd junction, with a total of 112 buses travelling inbound through this junction over a 12-hour period.



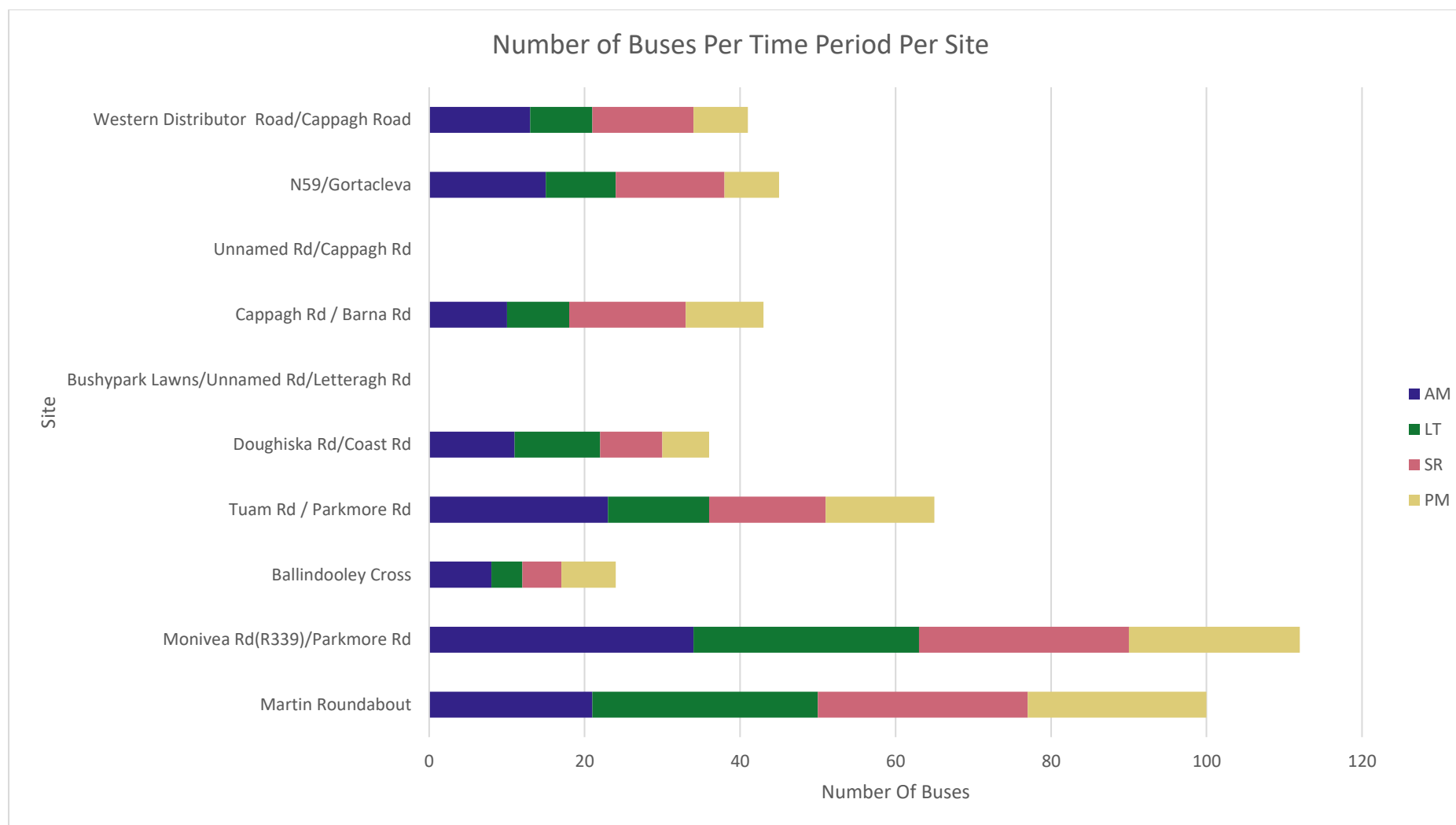
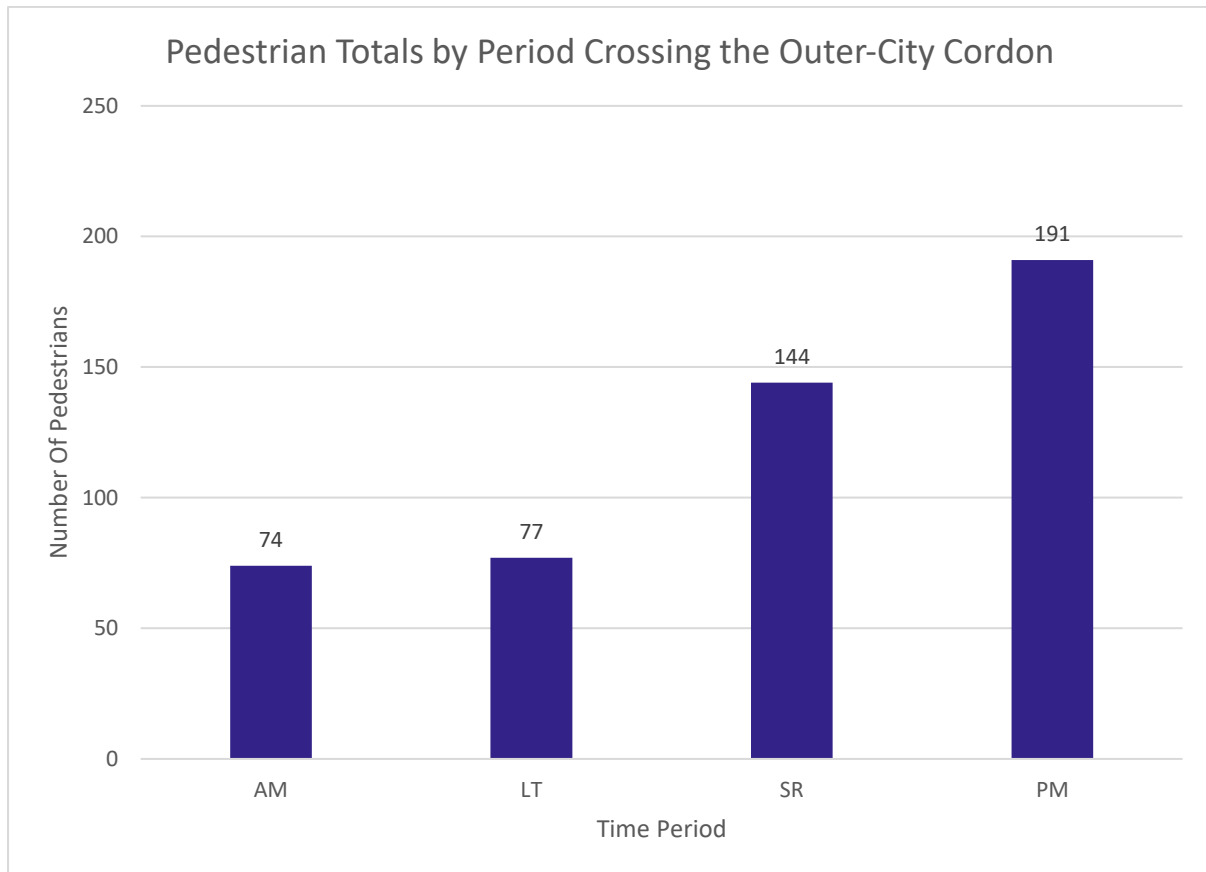


Figure A-19: Number of Buses Crossing the Galway Outer-City Cordon Inbound at all Sites Per Time Period

### **Pedestrians**

Figure A-20 presents the total number of pedestrian movements crossing the Galway Outer-City Cordon per surveyed time period. Overall, it is evident that the PM period has the highest volume of pedestrians, with a total of 191 pedestrians travelling inbound.



*Figure A-20: Total Pedestrians per Time Period*

Figure A-21 presents a further breakdown of the total number of pedestrian movements, with reference to each site location. The busiest location for pedestrians crossing the Galway Outer-City Cordon was the Monivea Rd(R339)/Parkmore Rd, with a total of 226 pedestrians travelling inbound through this junction over a 12-hour period.

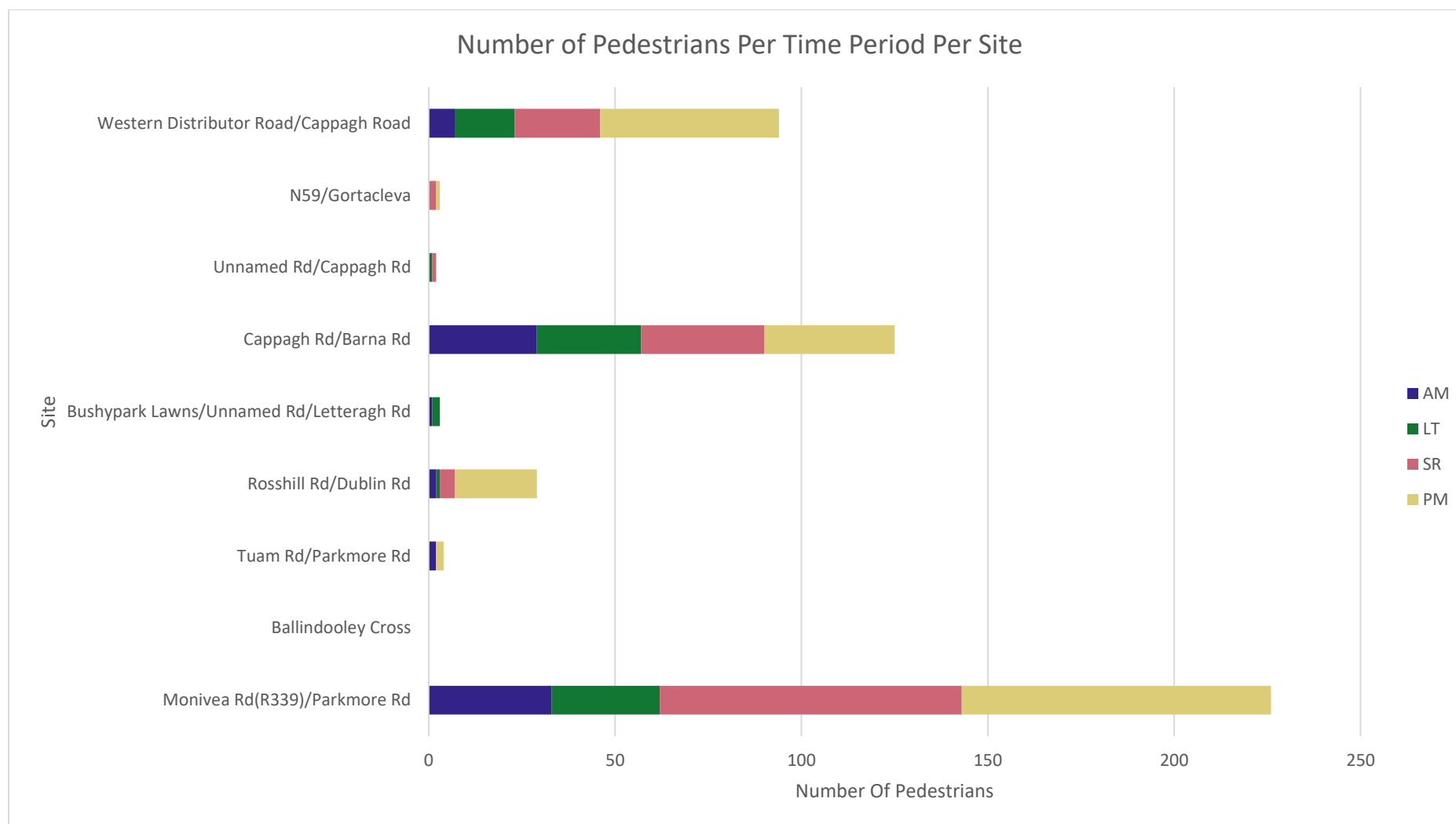


Figure A-21: Total Pedestrians at all Sites per Time Period

## Daily Movements Across the Galway Outer-City Cordon

ATCs recorded traffic flows at 15-minute intervals at 8 sites on the main radial routes into and around the city for a period of two weeks to understand daily two-way traffic movements. These surveys were primarily used to provide insight into the variation in demand across the week. The results from these surveys show that the day with the highest number of vehicles is Friday, as can be seen in Figure A-22.

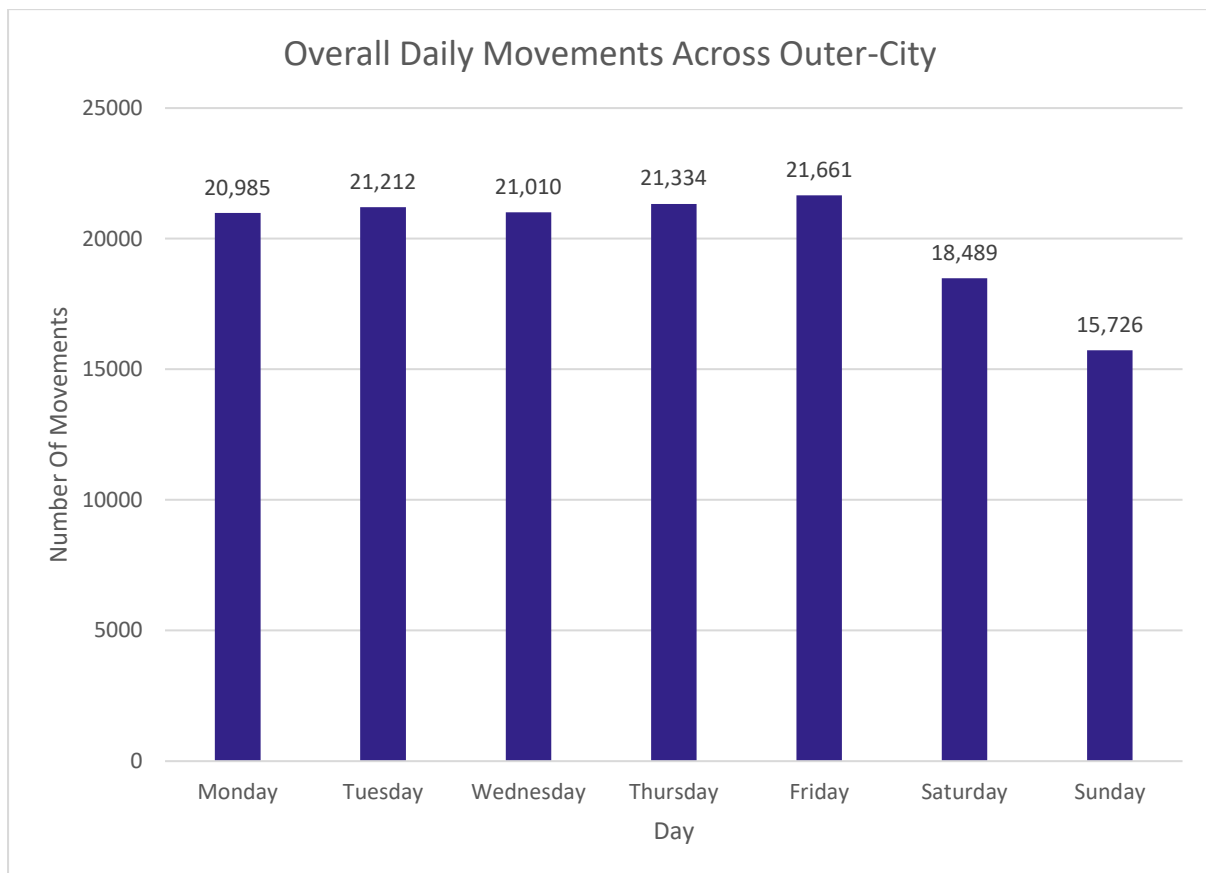


Figure A-22: Average Daily Traffic at ATC Sites

# Vehicle Occupancy Data

## Car Occupancy

In order to obtain accurate data reflective of a neutral weekday, car occupancy surveys were recorded in hourly intervals, over a 12-hour period (i.e. 07:00-19:00) on the day of the survey.

Figures A-23 to A-27 display the observed vehicle occupancy for cars crossing the Galway Outer-City Cordon inbound towards the city during the respective time periods. Please note these graphs display both the absolute values and the percentage occupancy for each time period.

During the 12-hour period (07:00 and 19:00) 81% of Cars crossing the Galway Outer-City Cordon had one occupant, 19% had two occupants and 0% had three occupants.

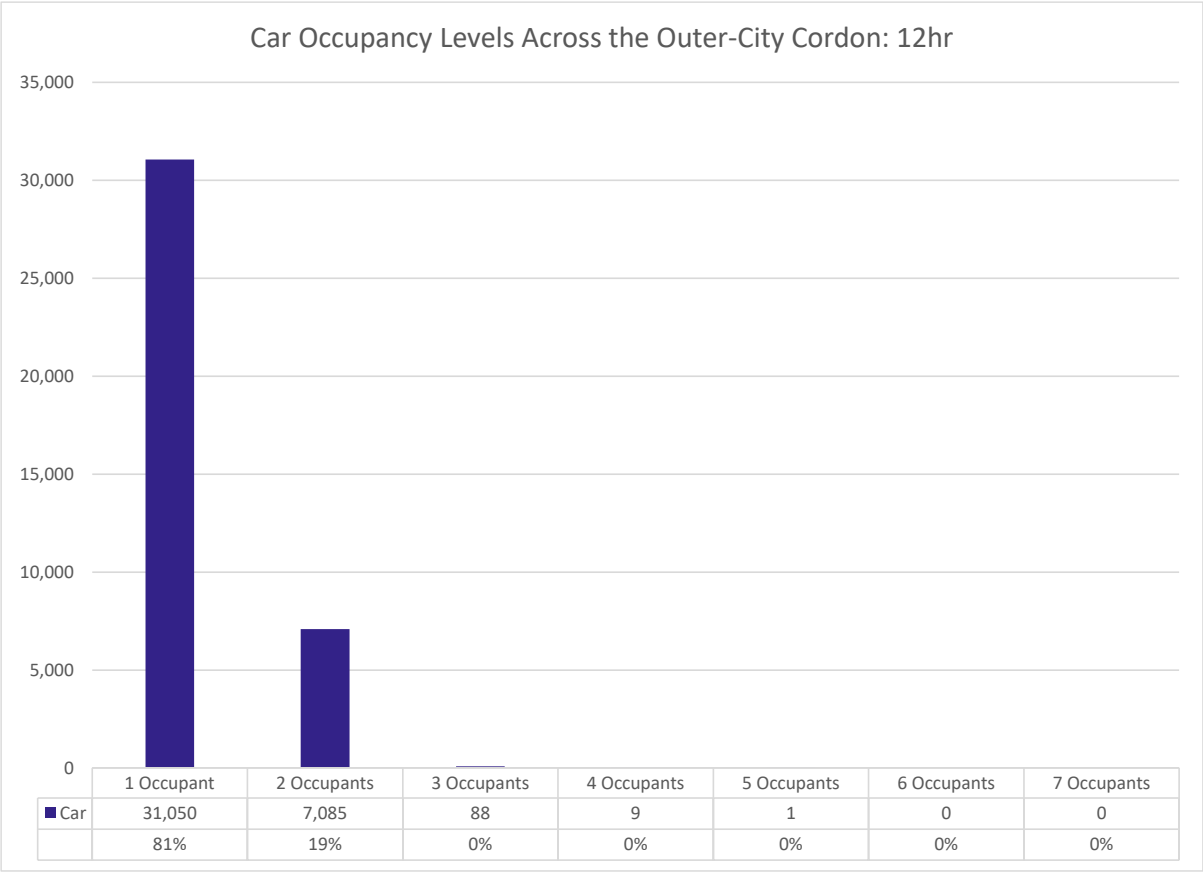


Figure A-23:Car Occupancy: 12 Hour

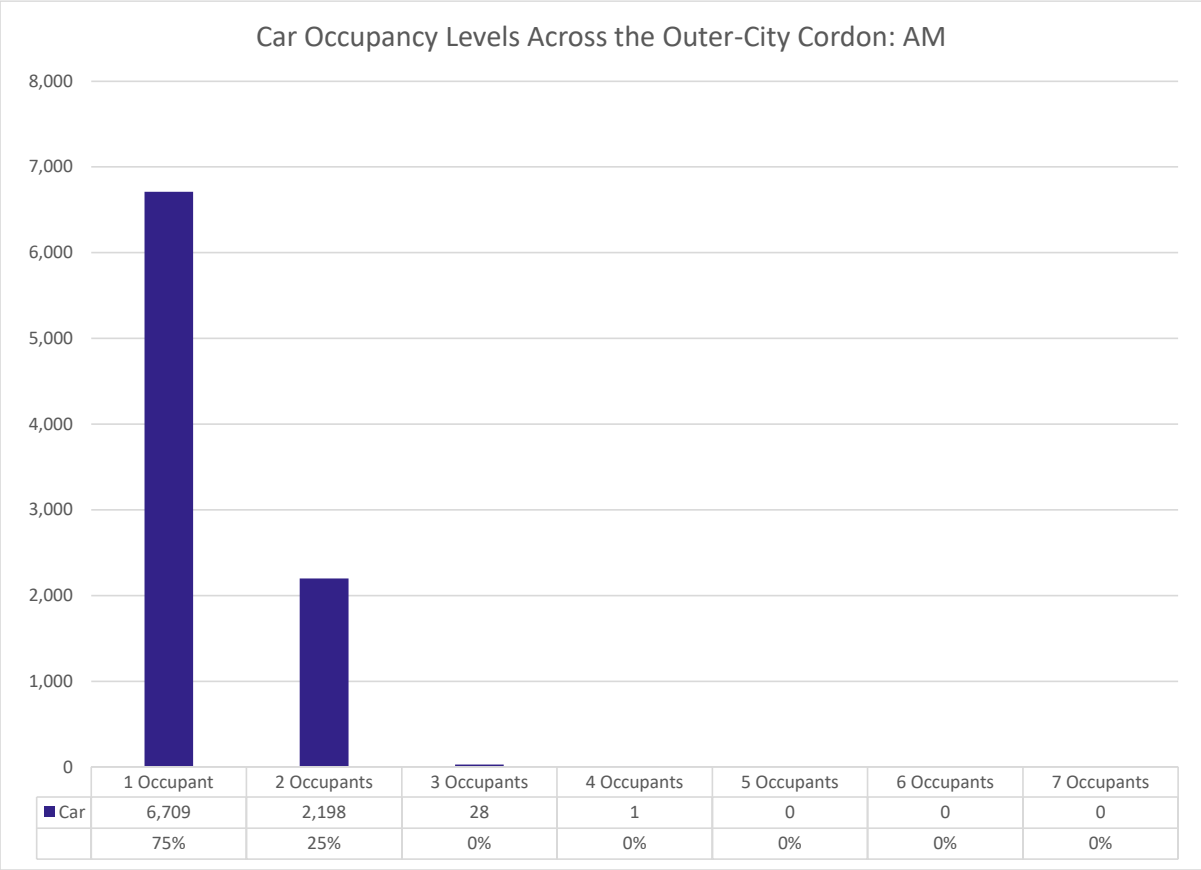


Figure A-24:Car Occupancy: AM

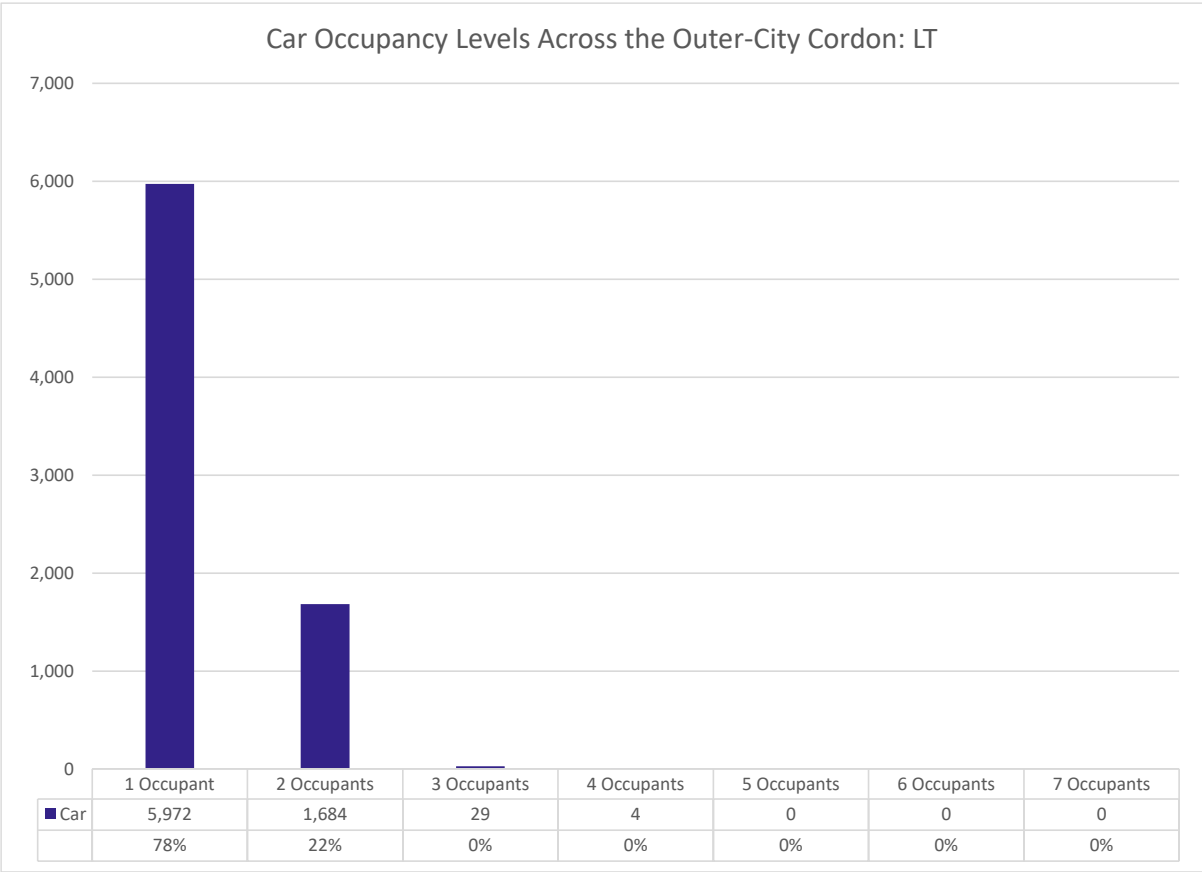
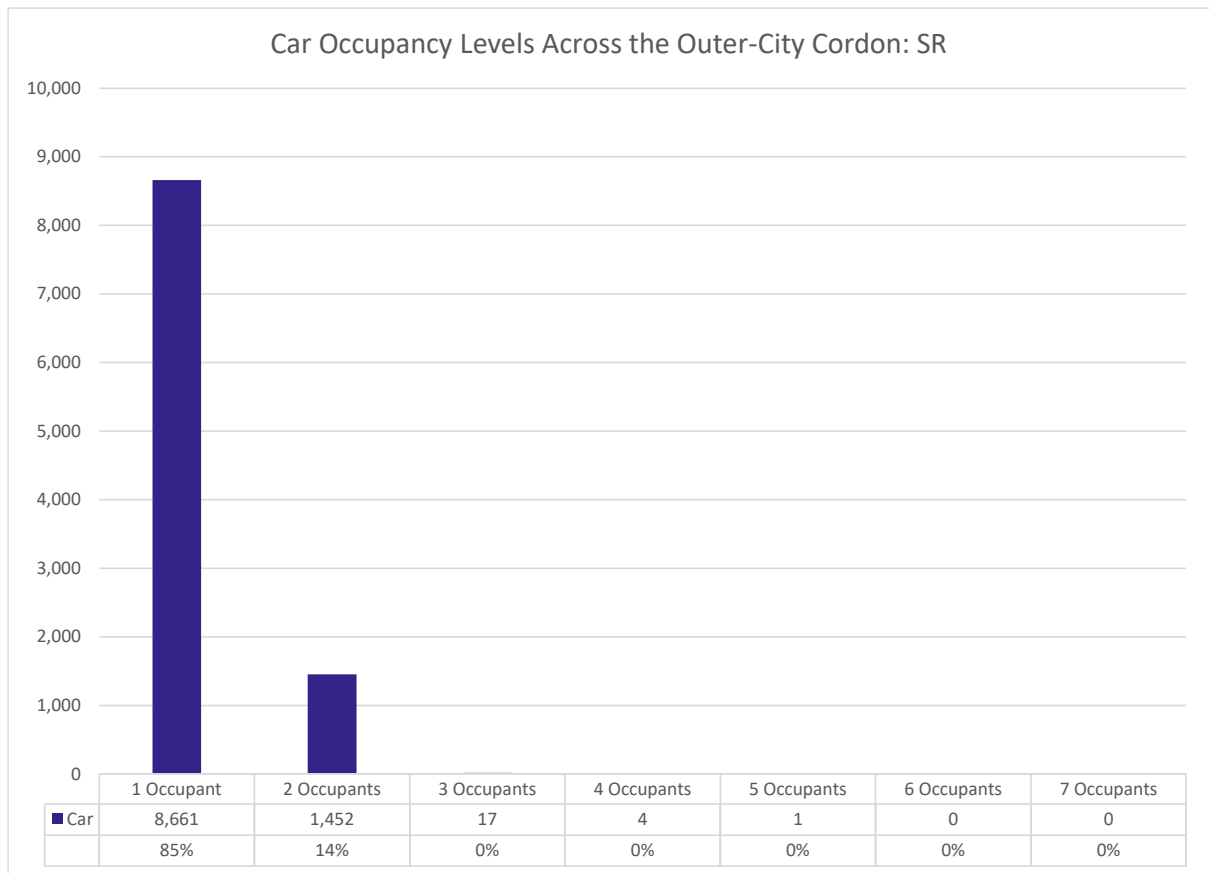


Figure A-25:Car Occupancy: LT



*Figure A-26: Car Occupancy: SR*



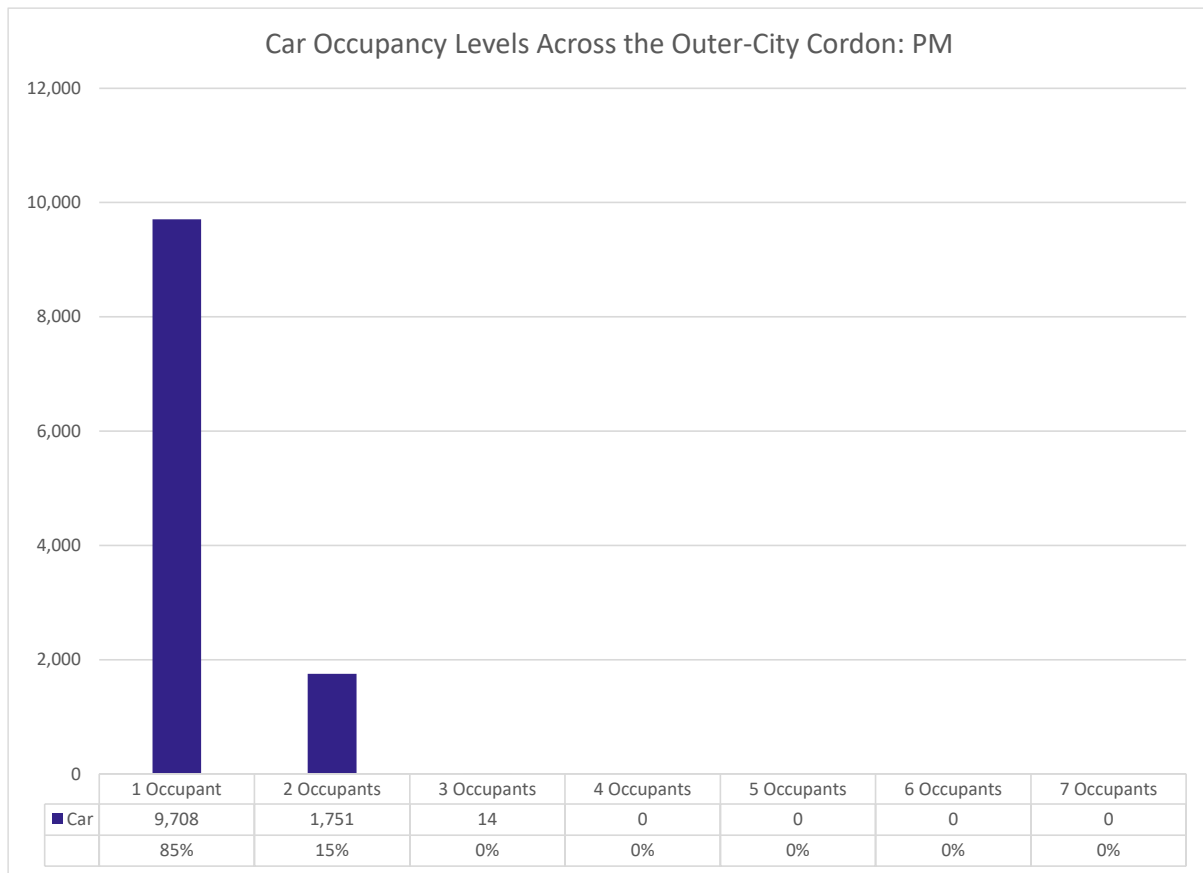


Figure A-27: Car Occupancy: PM

#### Car Occupancy per site

Figures A-28 to A-32 display the vehicle occupancy for cars crossing the Galway Outer-City Cordon during the respective time periods, with further reference to each individual site location.

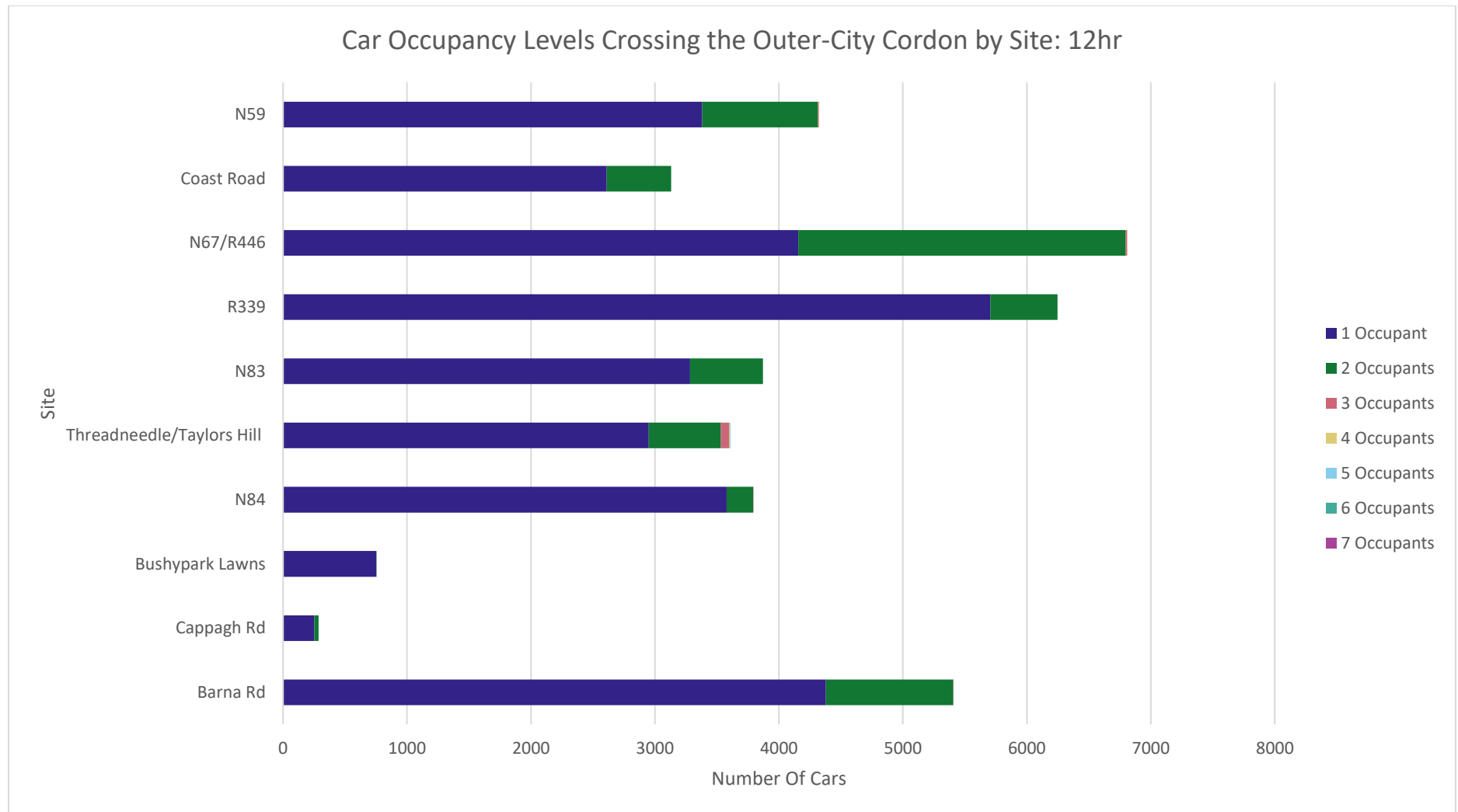


Figure A-28: Car Occupancy per Site: 12 Hour

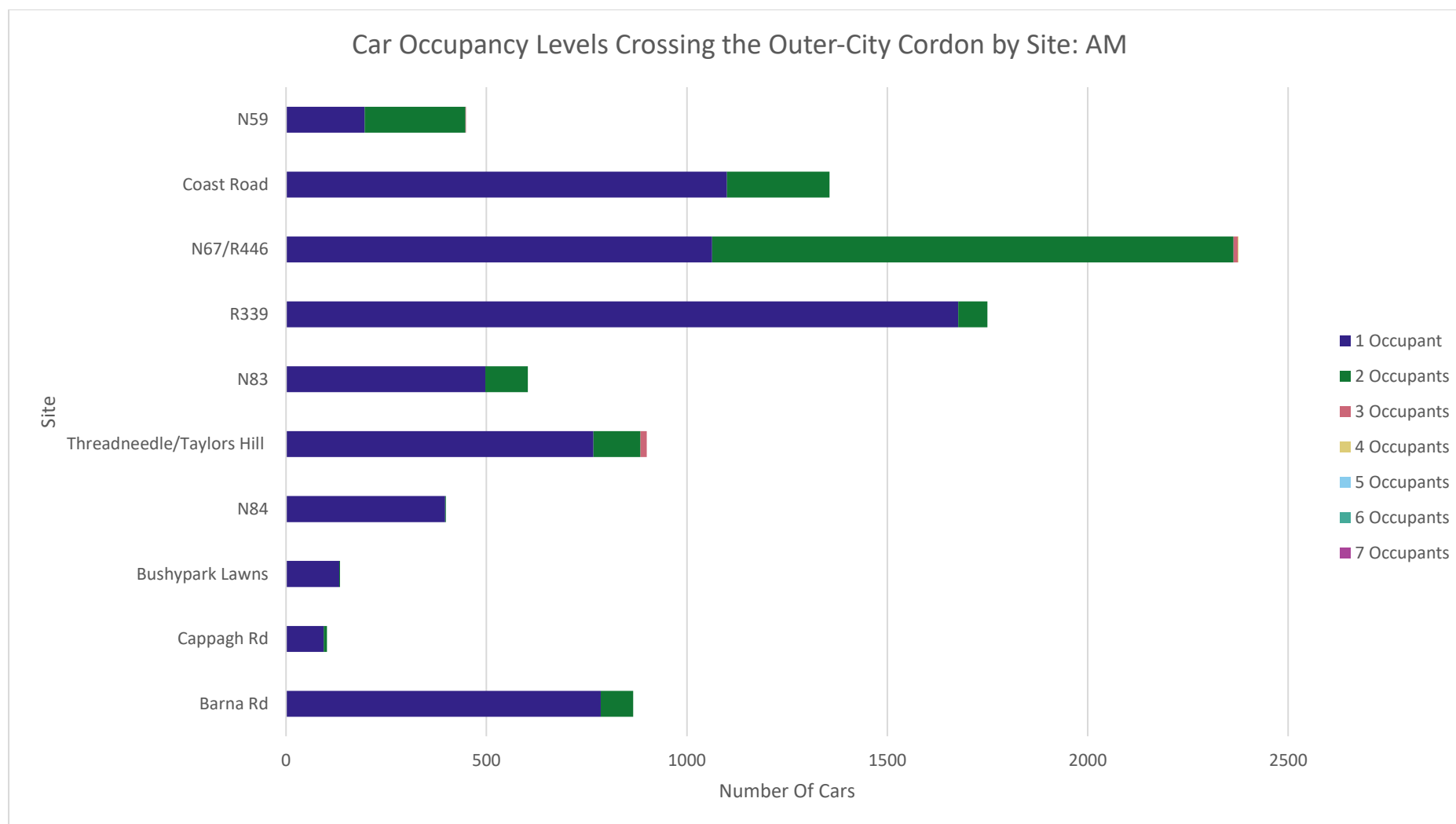


Figure A-29: Car Occupancy per Site: AM

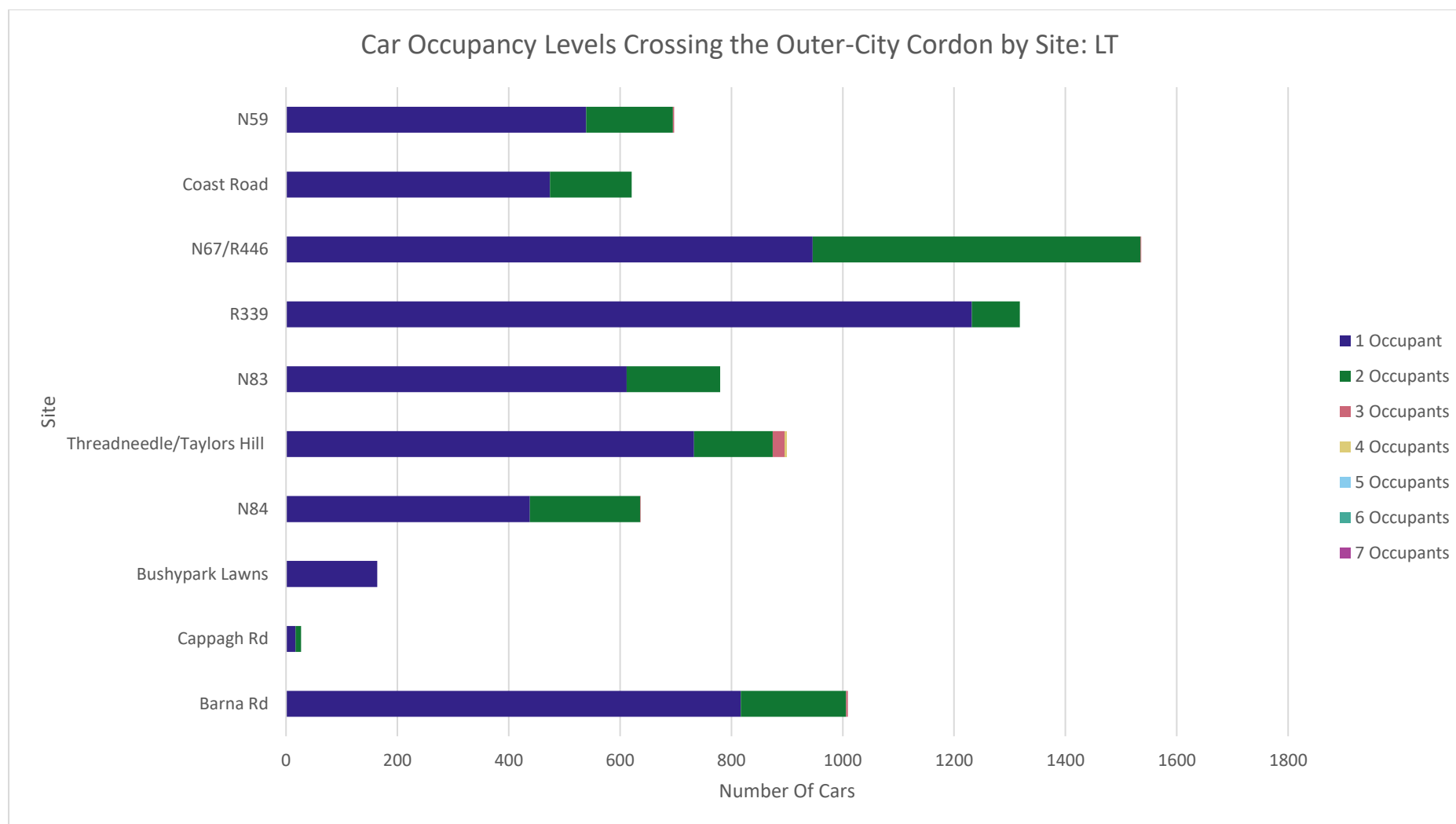


Figure A-30: Car Occupancy per Site: LT

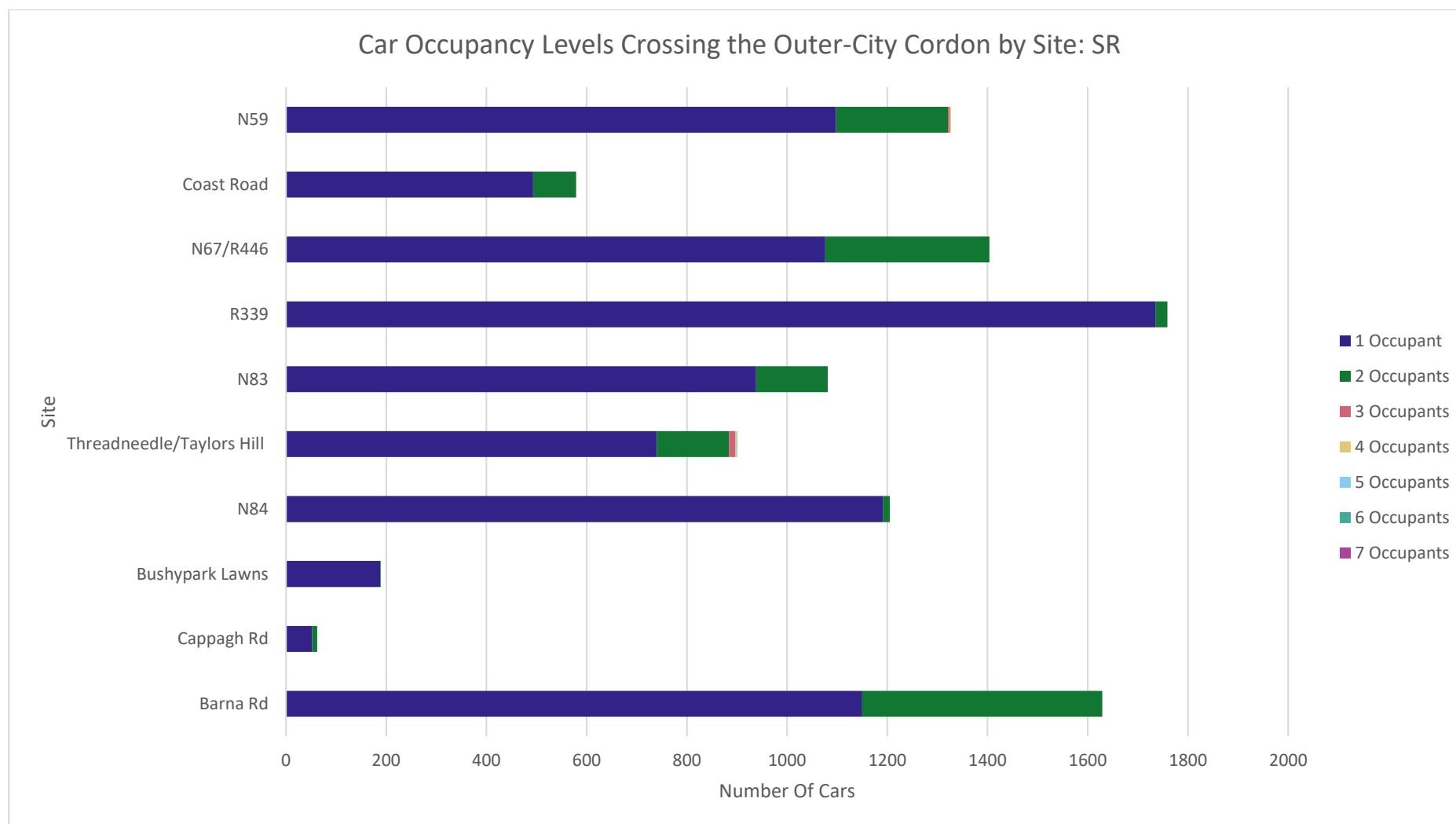


Figure A-31: Car Occupancy per Site: SR

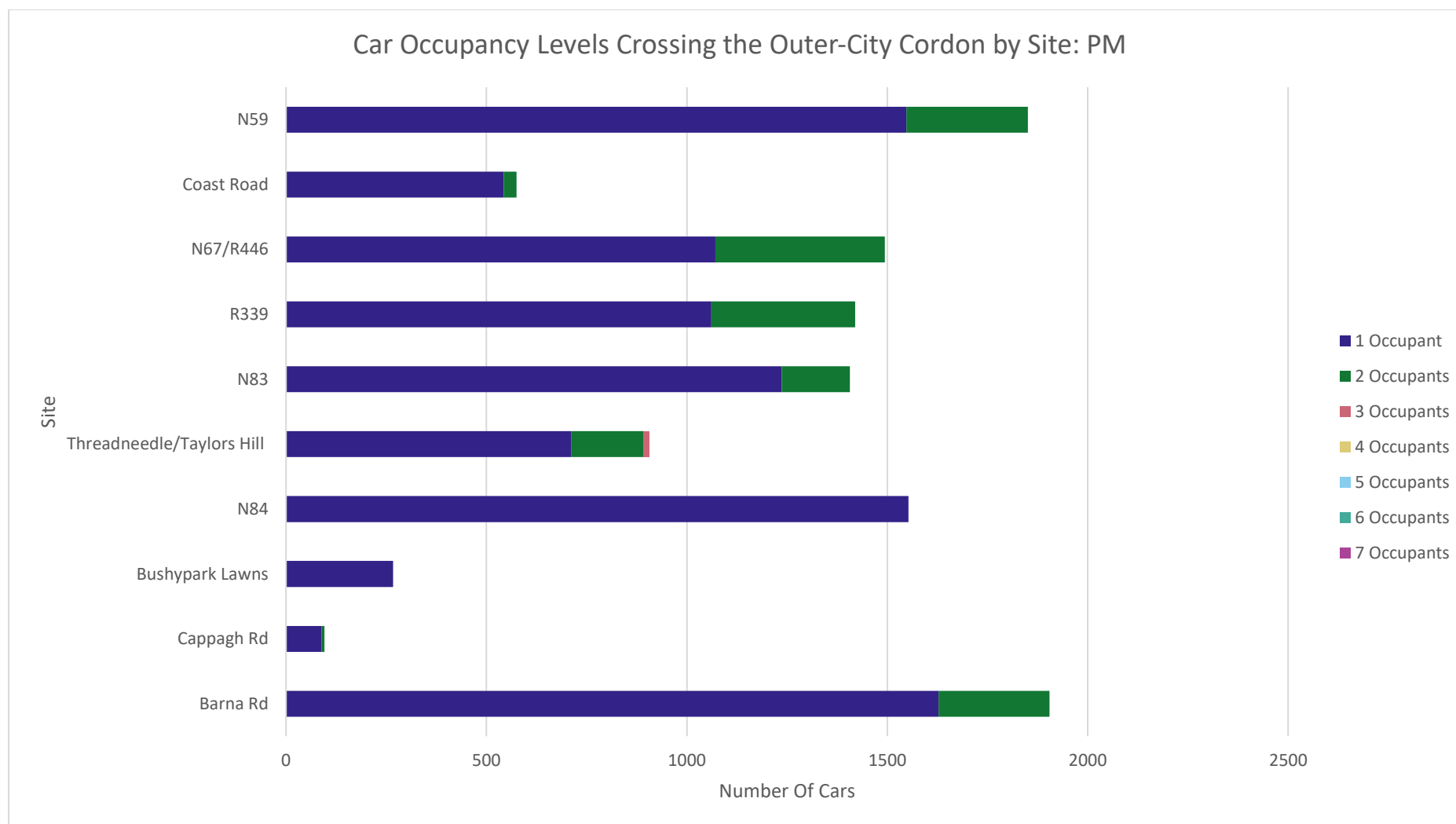


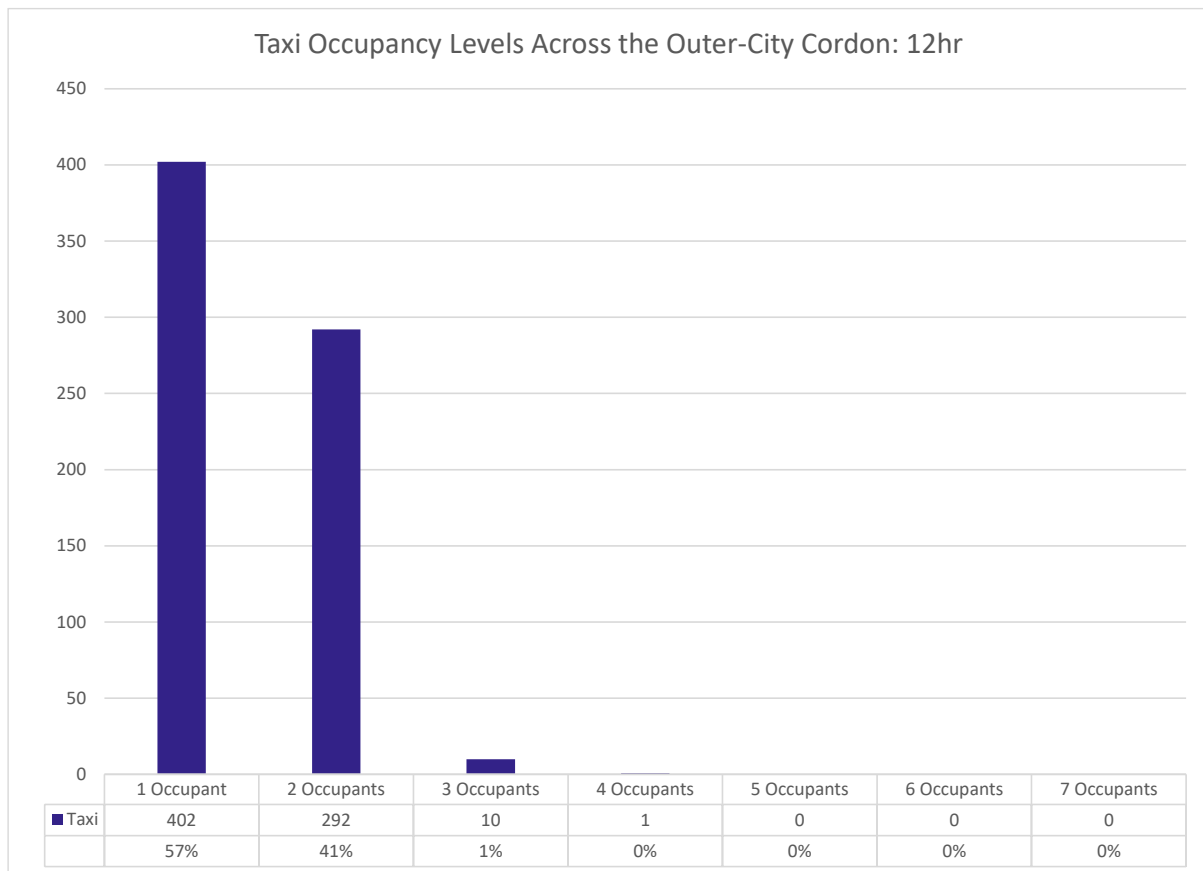
Figure A-32: Car Occupancy per Site: PM

## Taxi Occupancy

In order to obtain accurate data reflective of a neutral weekday, taxi occupancy surveys were recorded in hourly intervals, over a 12-hour period (i.e. 07:00-19:00) on the day of the survey.

Figures A-33 to A37 display the observed vehicle occupancy for taxis crossing the Galway Outer-City Cordon inbound towards the city during the respective time periods. Please note these graphs display both the absolute values and the percentage occupancy for each time period.

During the 12-hour period (07:00 and 19:00) 57% of Taxis crossing the Galway Outer-City Cordon had one occupant, 41% had two occupants and 1% had three occupants.



*Figure A-33: Taxi Occupancy: 12 Hour*

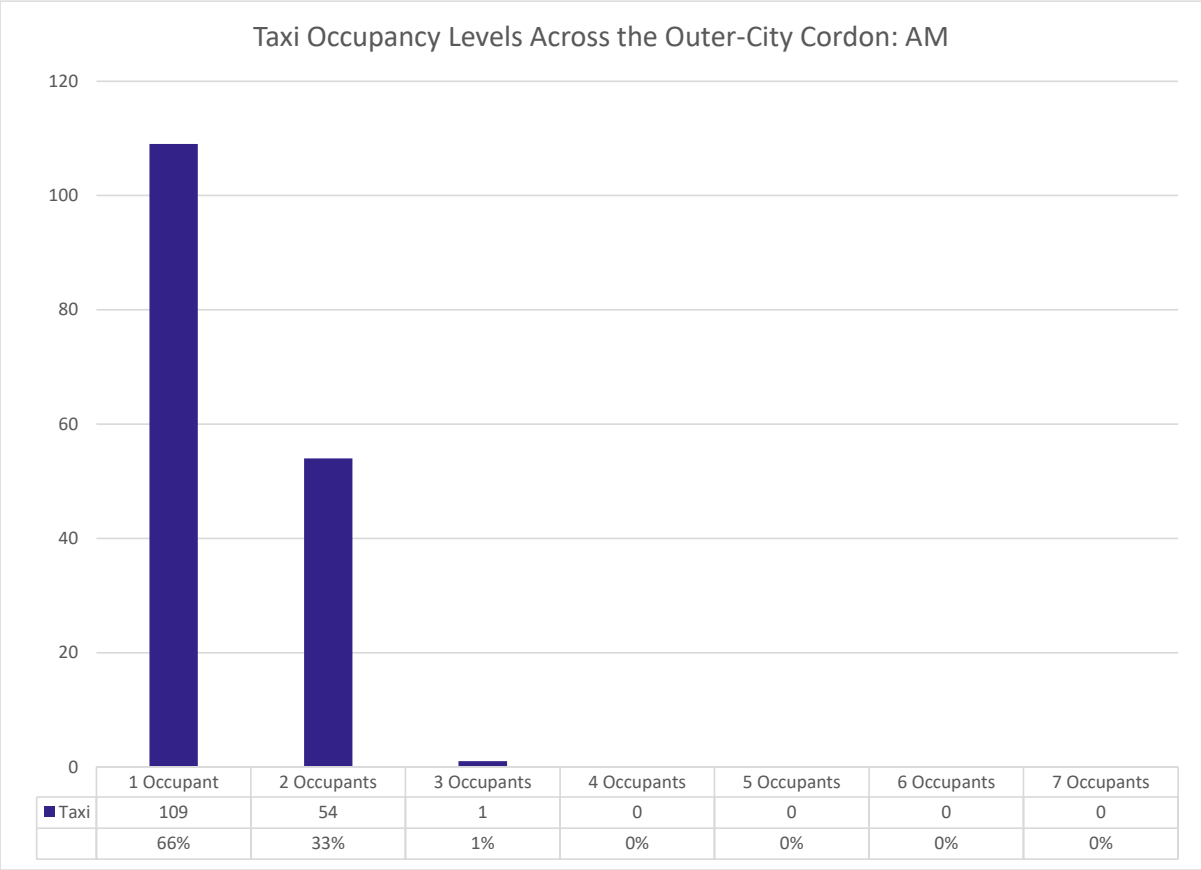
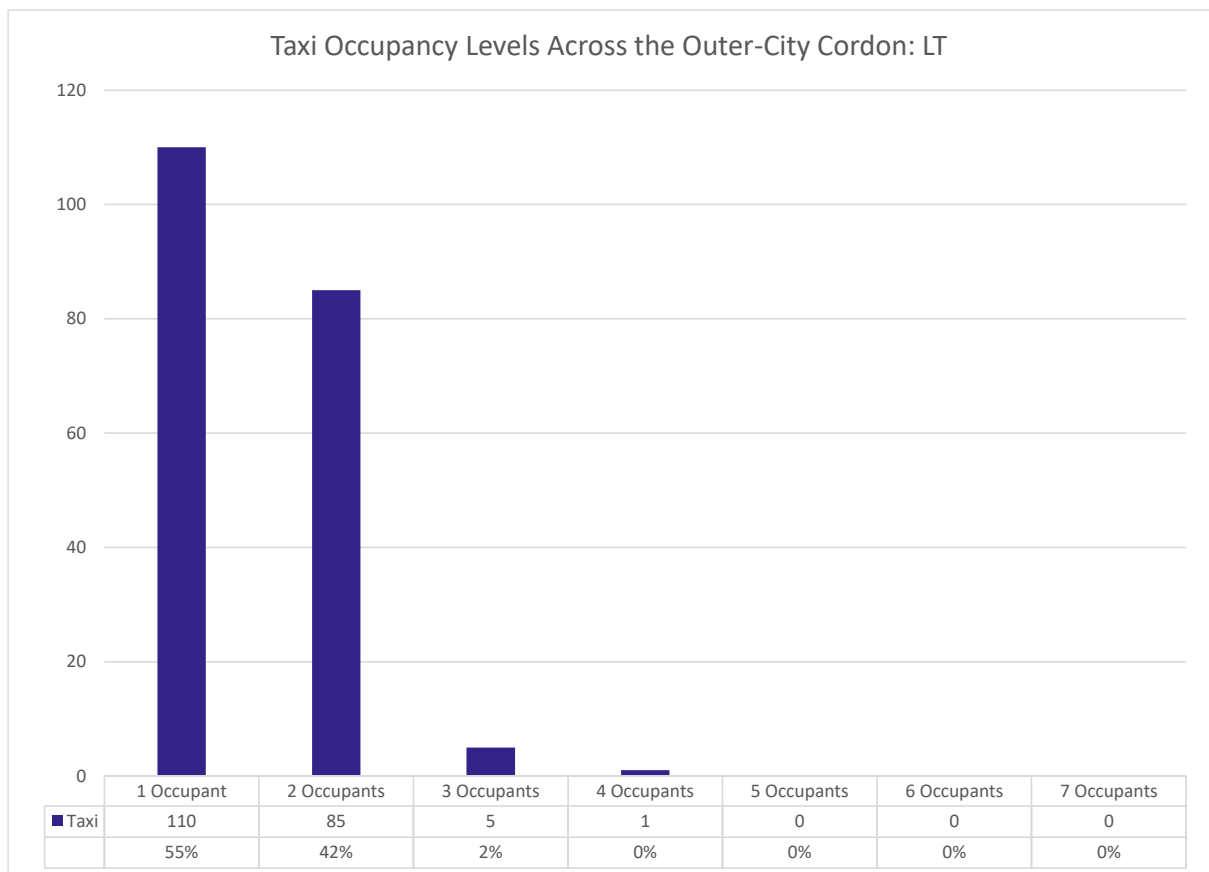
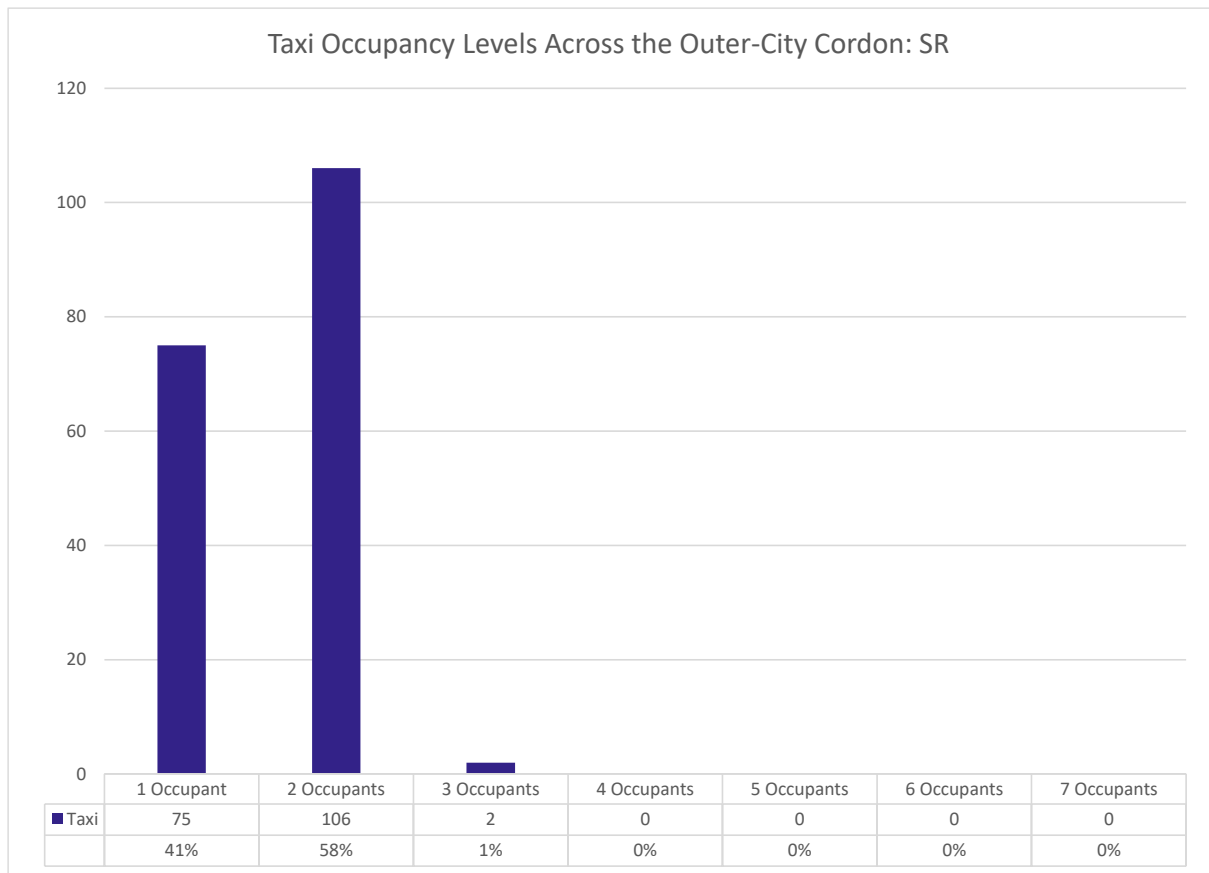


Figure A-34: Taxi Occupancy: AM





*Figure A-35: Taxi Occupancy: LT*



*Figure A-36: Taxi Occupancy: SR*

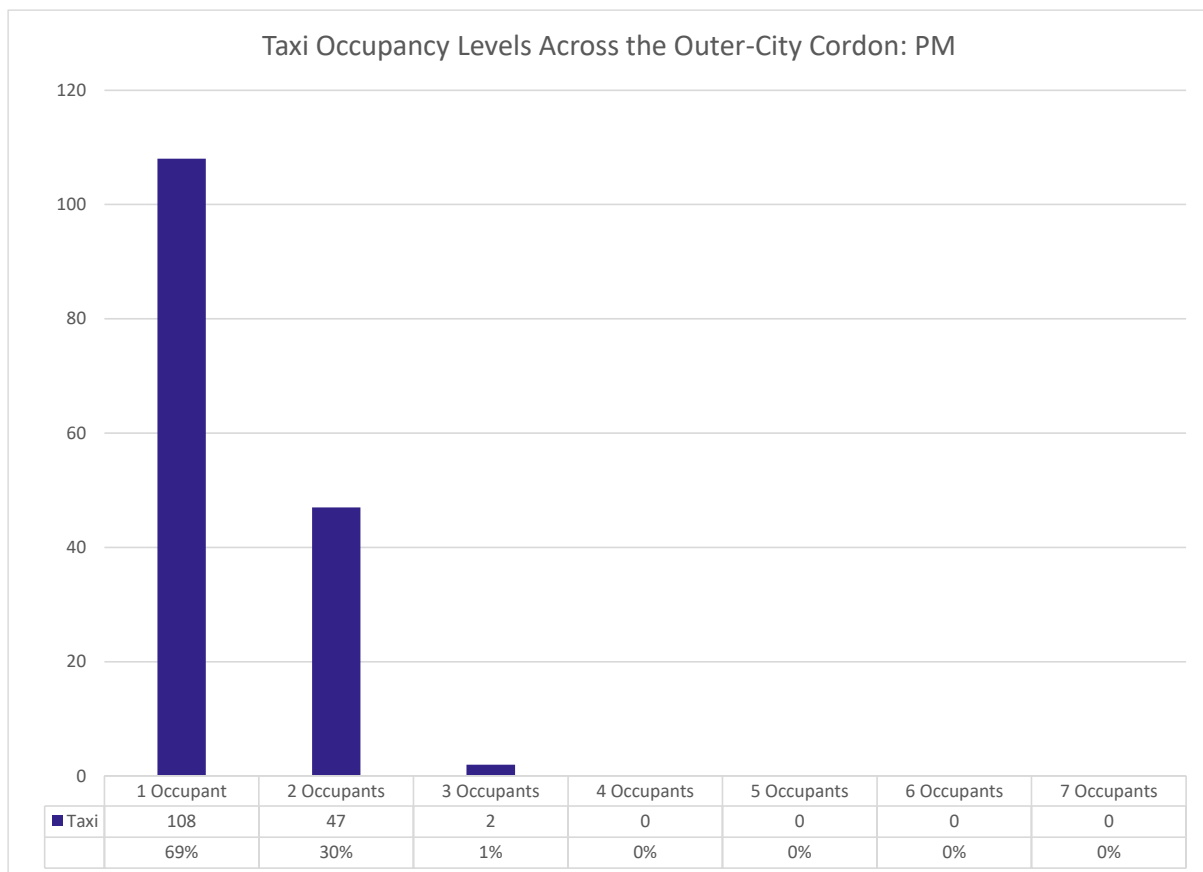


Figure A-37: Taxi Occupancy: PM

#### **Taxi Occupancy per site**

Figures A-38 to A-42 display the vehicle occupancy for taxis crossing the Galway Outer-City Cordon during the respective time periods, with further reference to each individual site location.

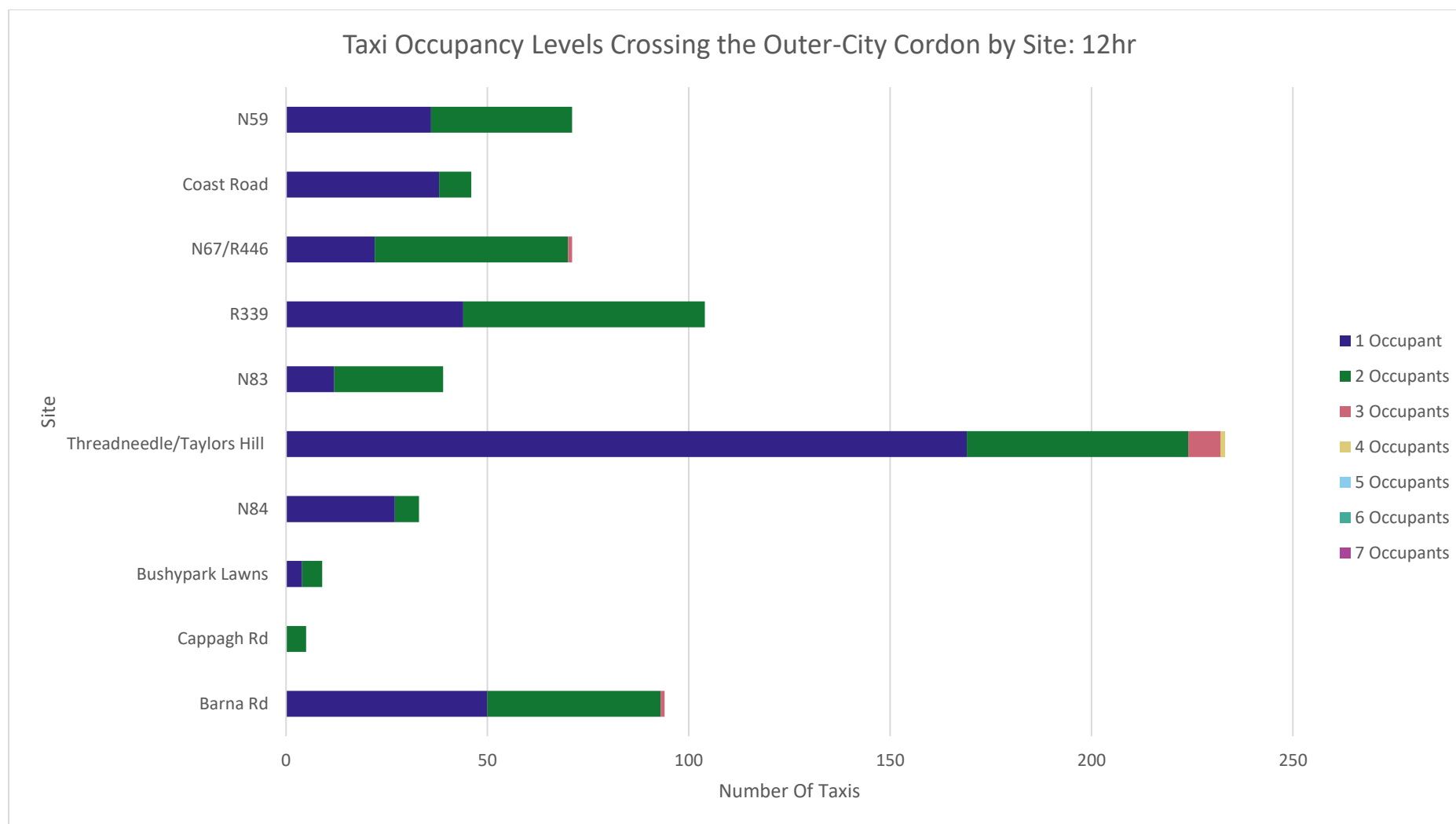


Figure A-38: Taxi Occupancy per Site: 12 Hour

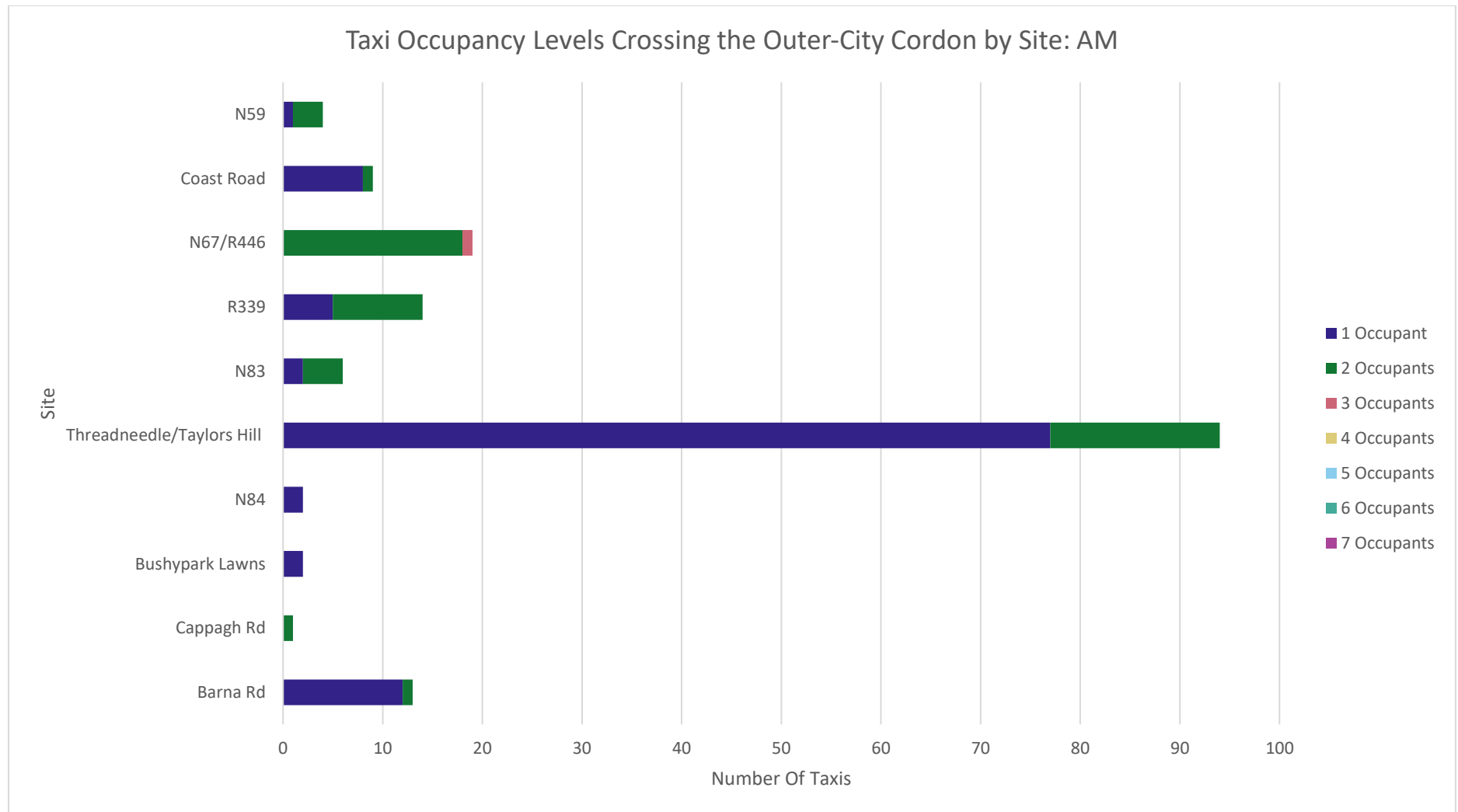


Figure A-39: Taxi Occupancy per Site: AM

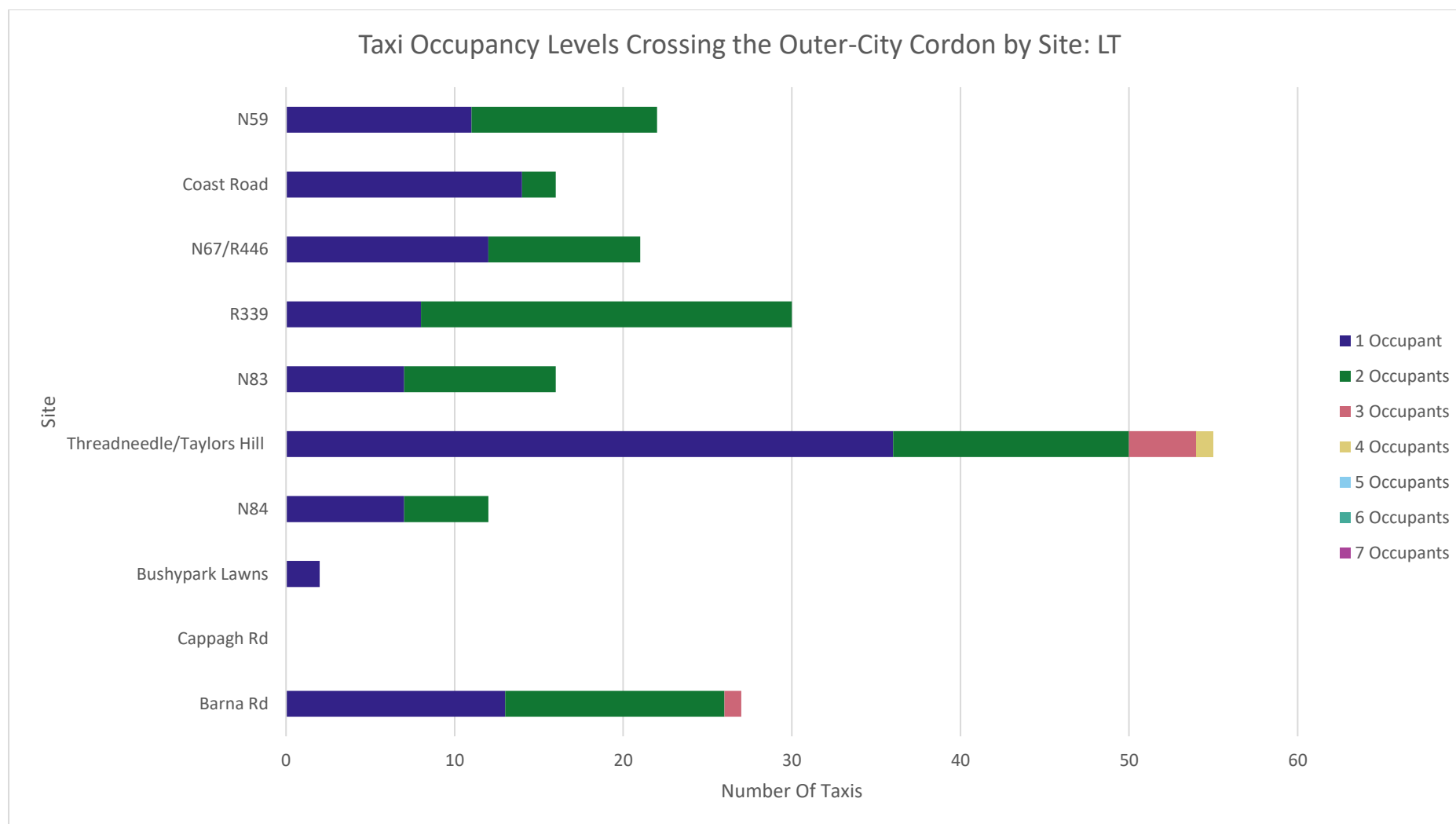


Figure A-40: Taxi Occupancy per Site: LT

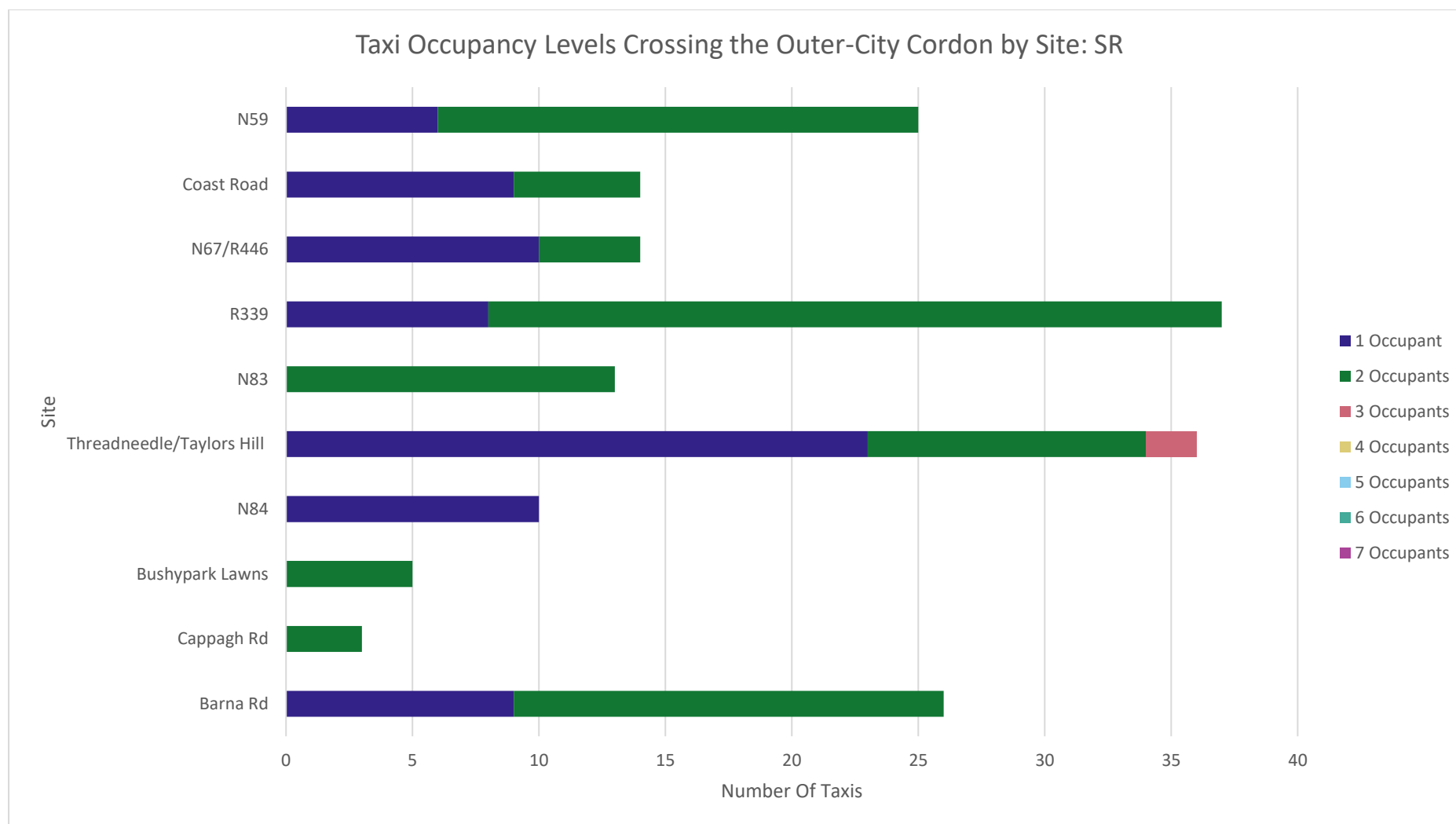


Figure A-41: Taxi Occupancy per Site: SR

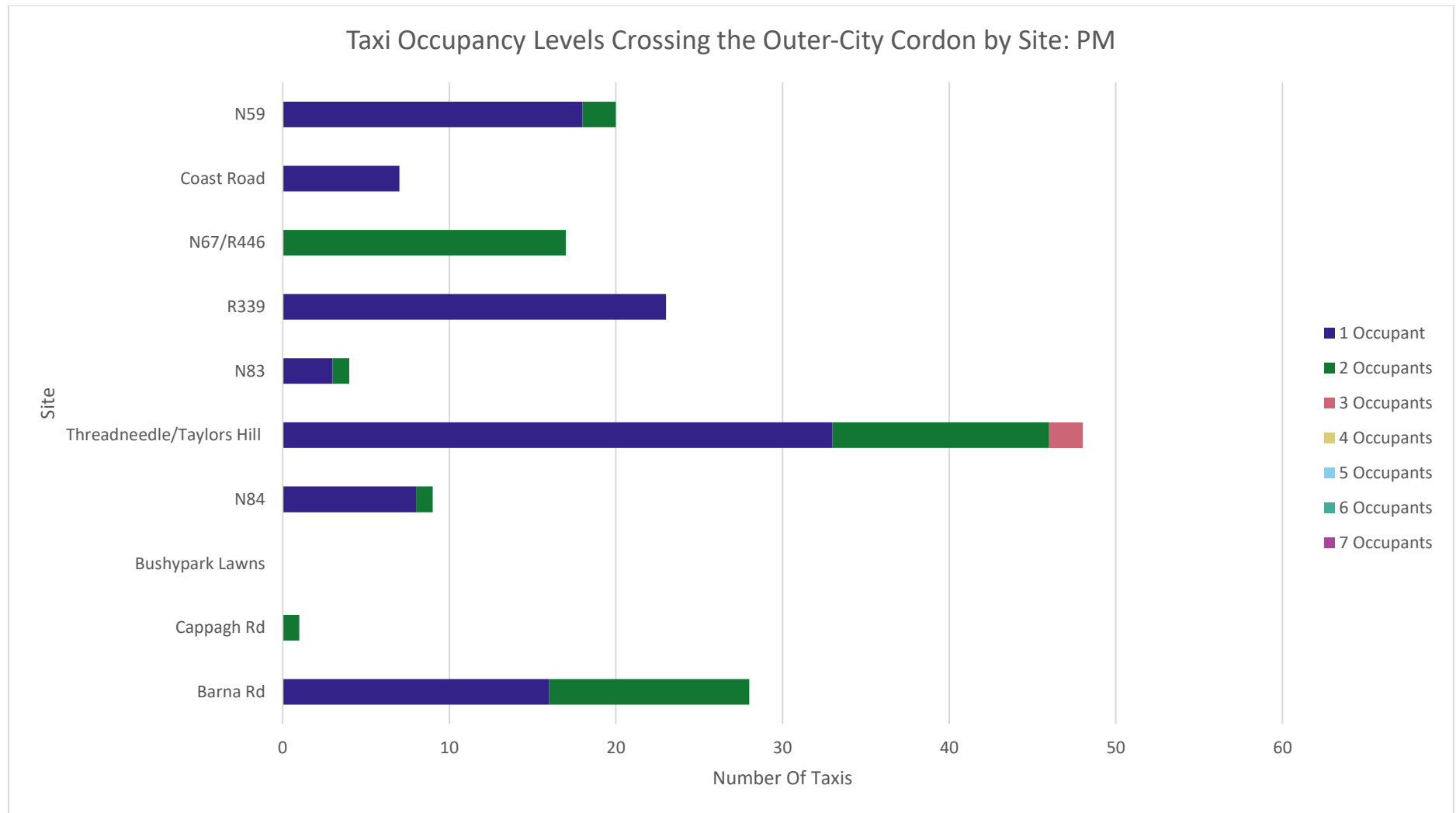


Figure A-42: Taxi Occupancy per Site: PM



# People Movements

## Methodology

The section above provided details on the number of vehicles, pedestrians and cyclists crossing the Galway Outer-City Cordon. In order to convert these to total person trips crossing the cordon, it is necessary to estimate the occupancy of each vehicle type. Further details on how this was done is outlined below.

- Road Passenger Movements were calculated in the following ways:
  - Car and taxi people movements were calculated by taking the number of vehicles in the JTC surveys for each vehicle classification and multiplying these by a site-specific occupancy factor that was calculated by dividing the number of passengers by the number of vehicles. Where no equivalent site was available, an average factor from all sites was used.
  - Cyclist and pedestrian people movements were taken directly from the JTC surveys.
- Rail Passenger Movements were calculated in the following ways:
  - Rail movements include passengers crossing the cordon inbound from the National Rail Census, which is a boarding and alighting survey conducted by Iarnród Éireann on a single day each year at every rail station throughout the country. The most recent survey was performed on the 14<sup>th</sup> of November 2024. While this is different to the dates of the other surveys, the Rail Census is considered representative of rail movements.

## 6.2 Road Passenger Movements

Figures A-43 to A-47 show the number of passenger trips for pedal cycle, pedestrian, car and taxi crossing the Galway Outer-City Cordon over the 12-hour survey period.

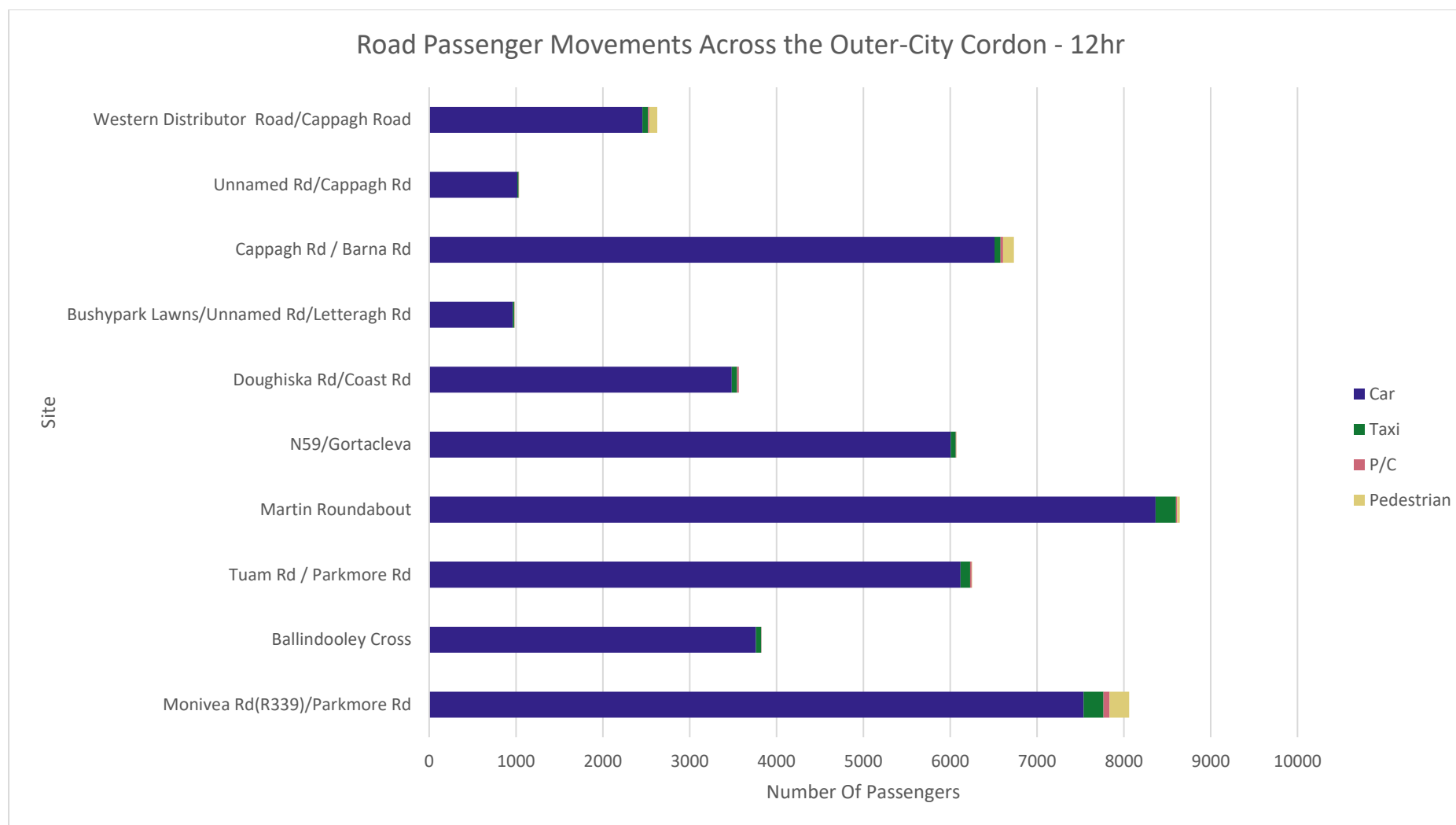


Figure A-43: Road Passenger Movements per Mode per Site: 12 Hour

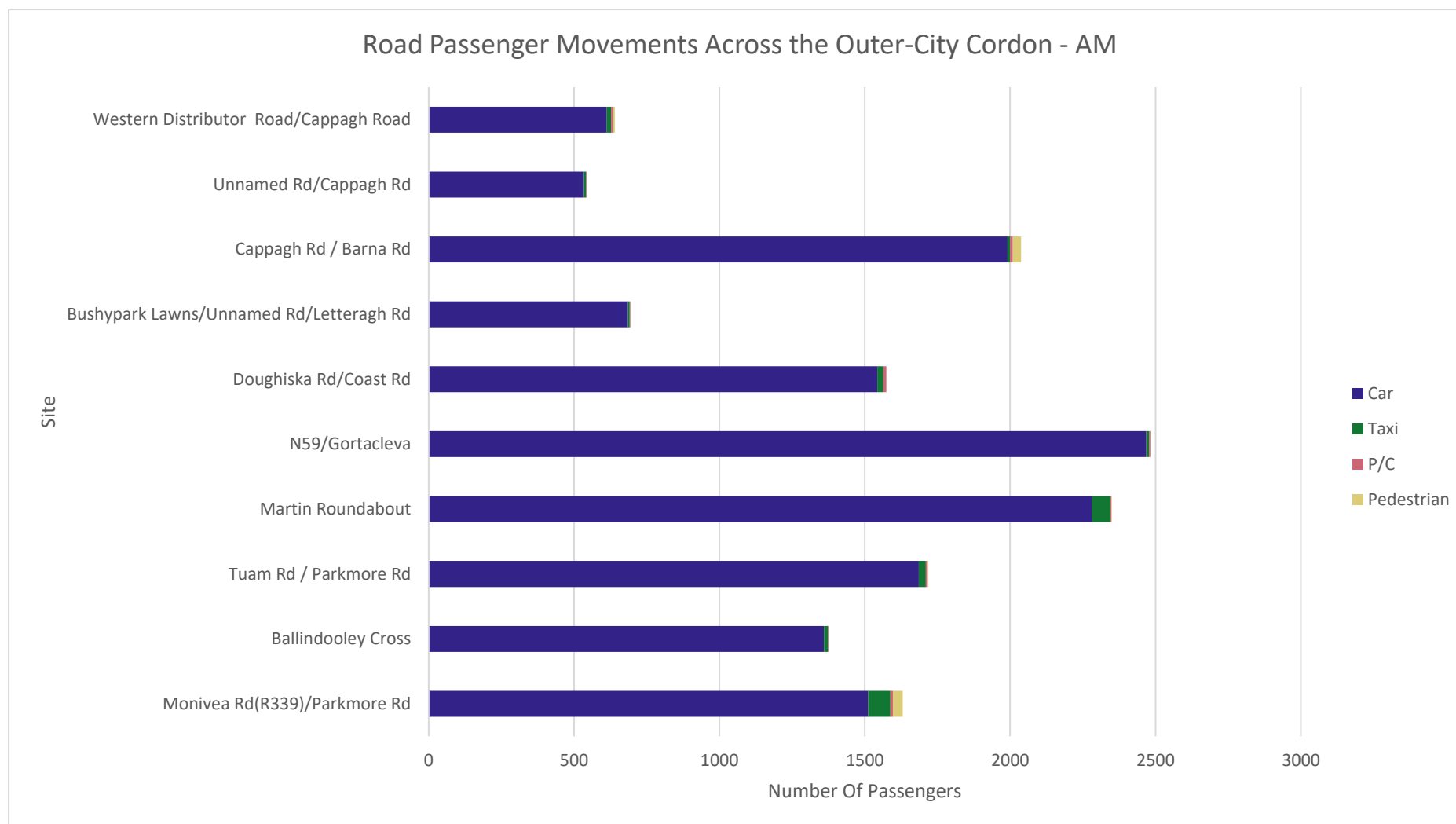


Figure A-44: Road Passenger Movements per Mode per Site: AM

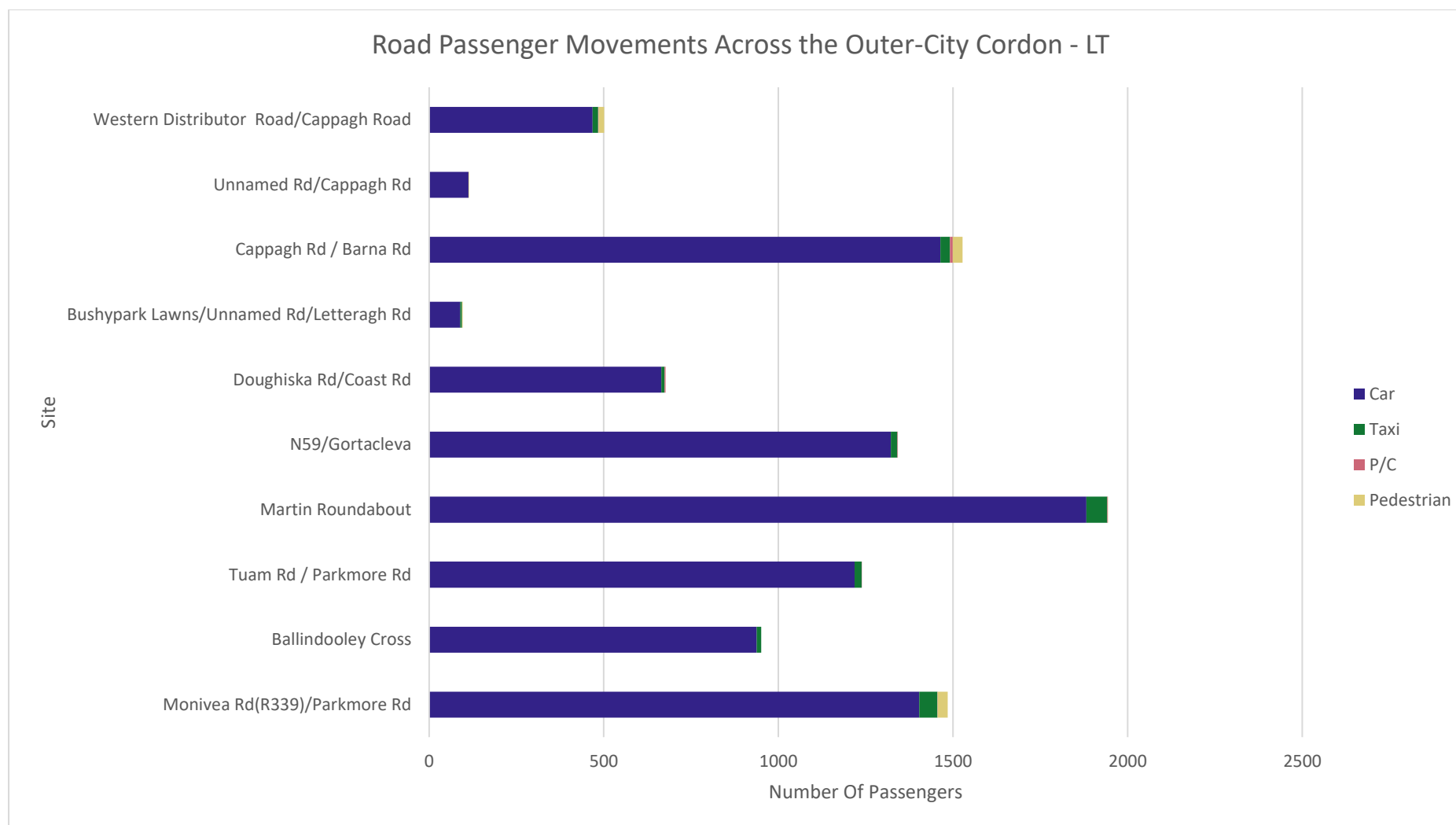


Figure A-45: Road Passenger Movements per Mode per Site: LT

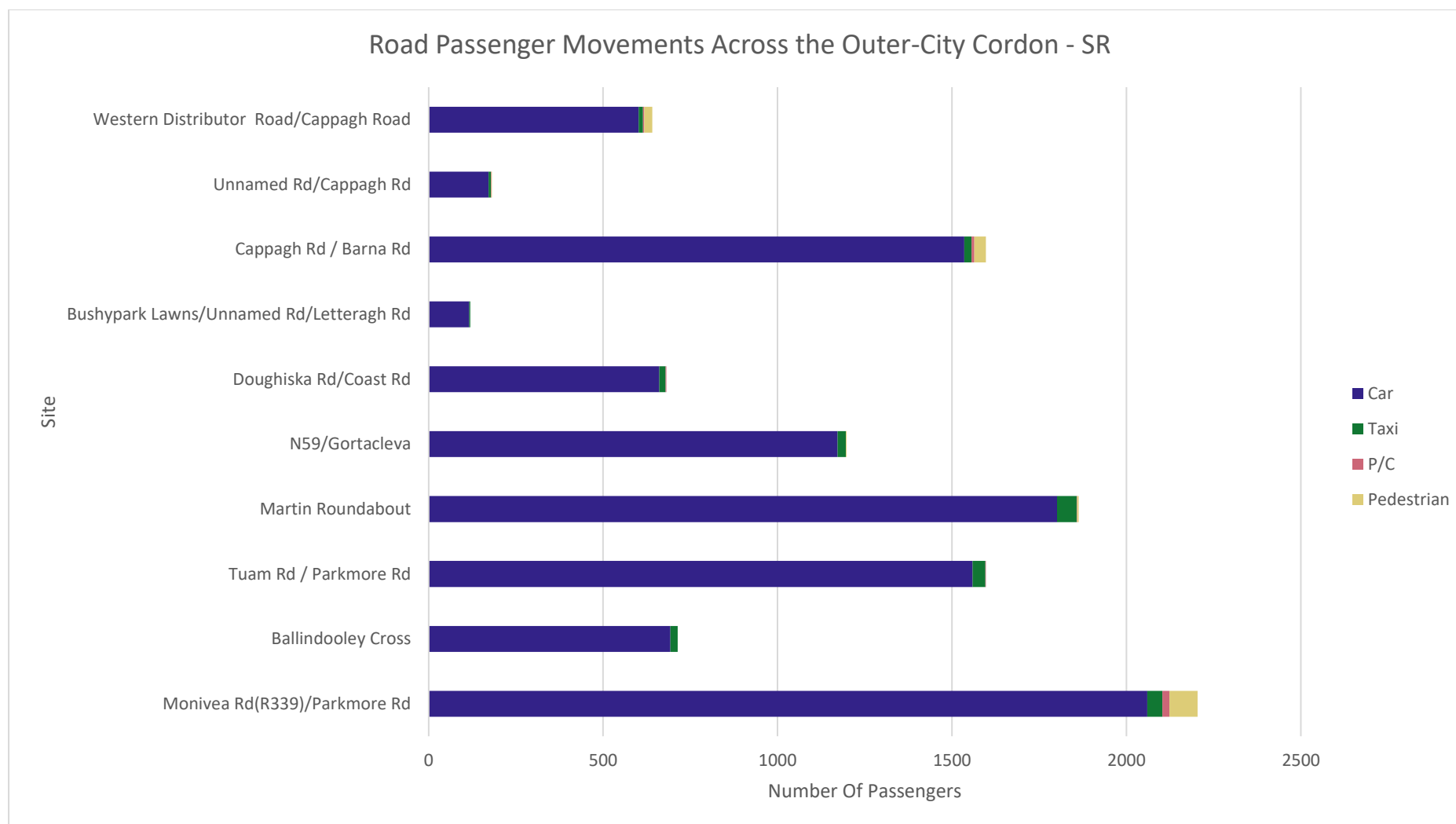


Figure A-46: Road Passenger Movements per Mode per Site: SR

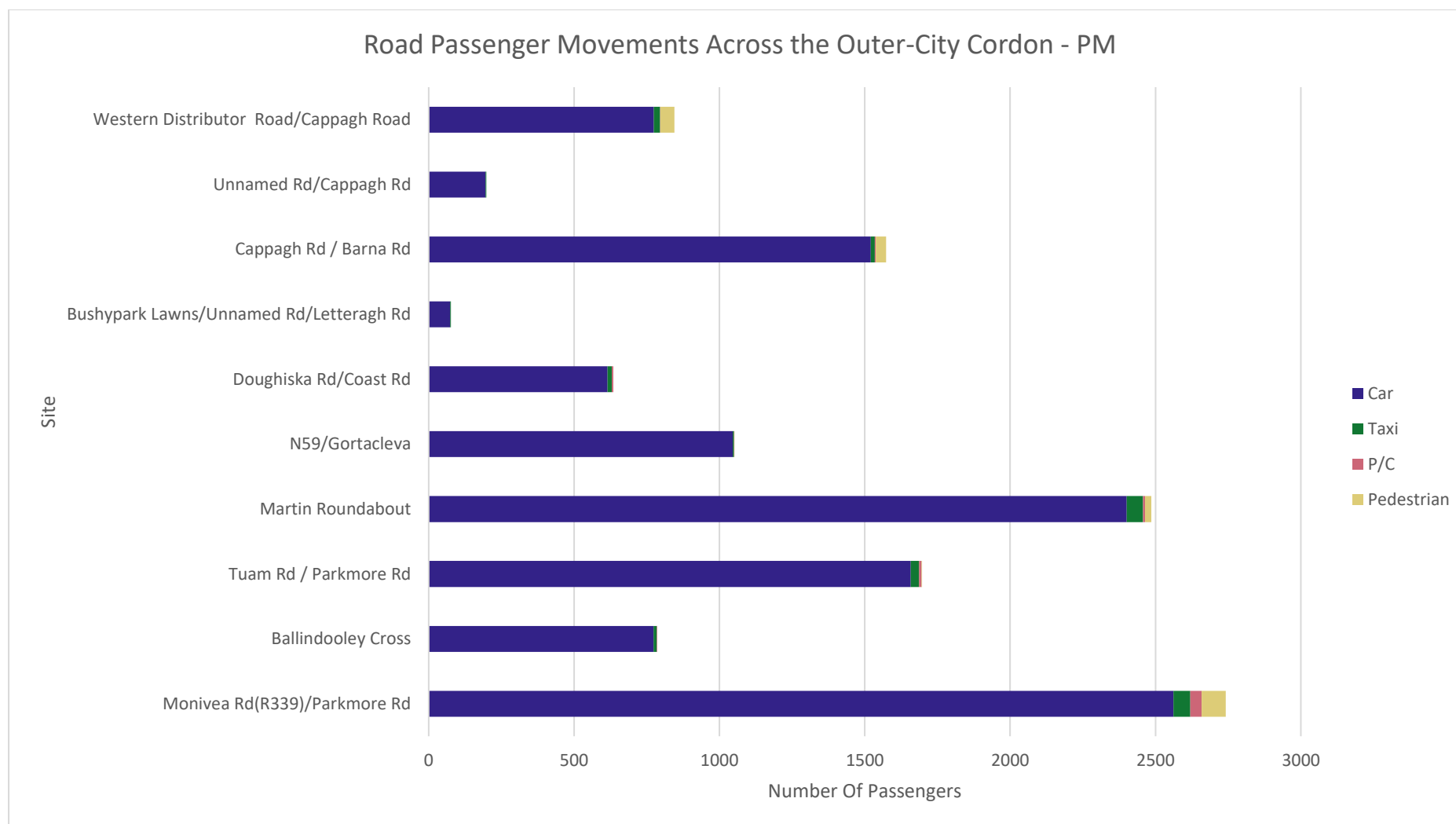


Figure A-47: Road Passenger Movements per Mode per Site: PM

## Rail Passenger Movements

### Heavy Rail Passenger Movements

The National Rail Census is a survey carried out by Iarnród Éireann every year which records the boardings and alightings at every rail station in the country. This report extracts the number alighting passengers at Galway Outer-City Cordon from that survey.

Galway Ceannt Station is served by trains on the Dublin Heuston - Galway line, trains on the Galway - Limerick line, as well as those originating from Waterford and Clonmel and transferring at Limerick Junction. It is served by 9 direct trains a day from Heuston, 4 trains a day from Galway and 2 trains a day from Limerick Junction.

Figure A-48 shows, for each train that arrived that day in Galway, the number of passengers that alighted as well as their origin station. In total, 2,052 people crossed the Galway Train Station inbound over the 12-hour survey period.

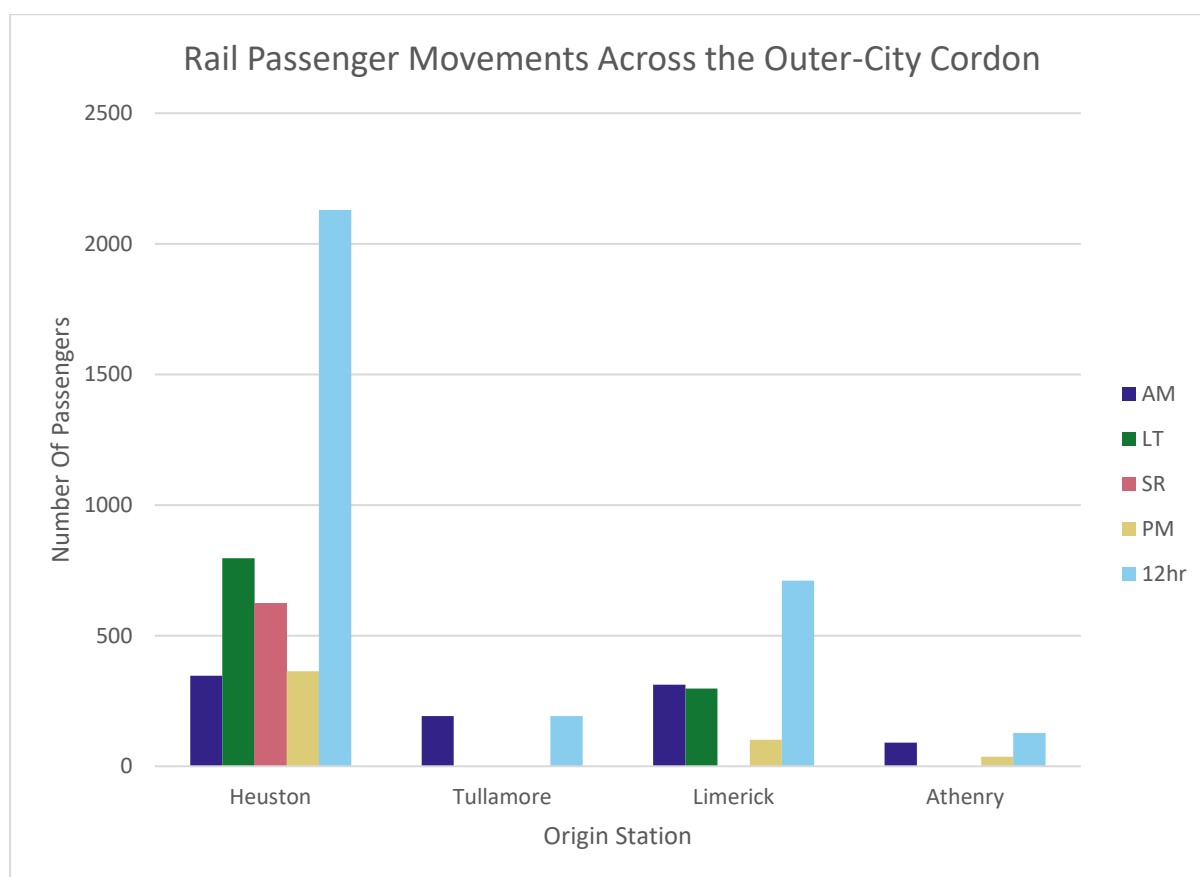


Figure A-48: Heavy Rail Services - Passengers Inbound

### 6.3 Total Passenger Movements

Figures A-49 and A-50 display the total number of passengers crossing the Galway Outer-City Cordon by pedal cycle, pedestrian, car, taxi and rail for each time period.

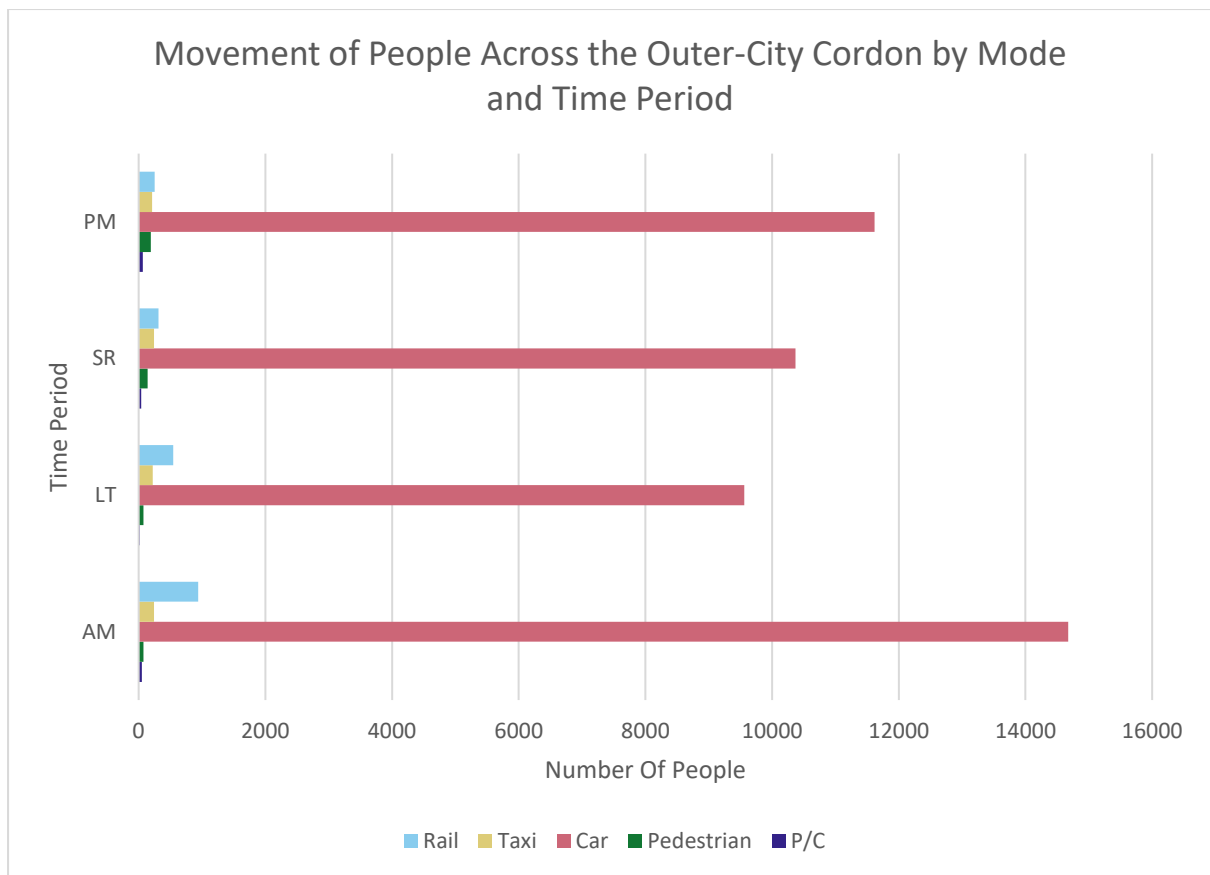


Figure A-49: Car, Cycle, Taxi, Pedestrian and Rail Trips Inbound Across the Galway Outer-City Cordon During Each Time Period



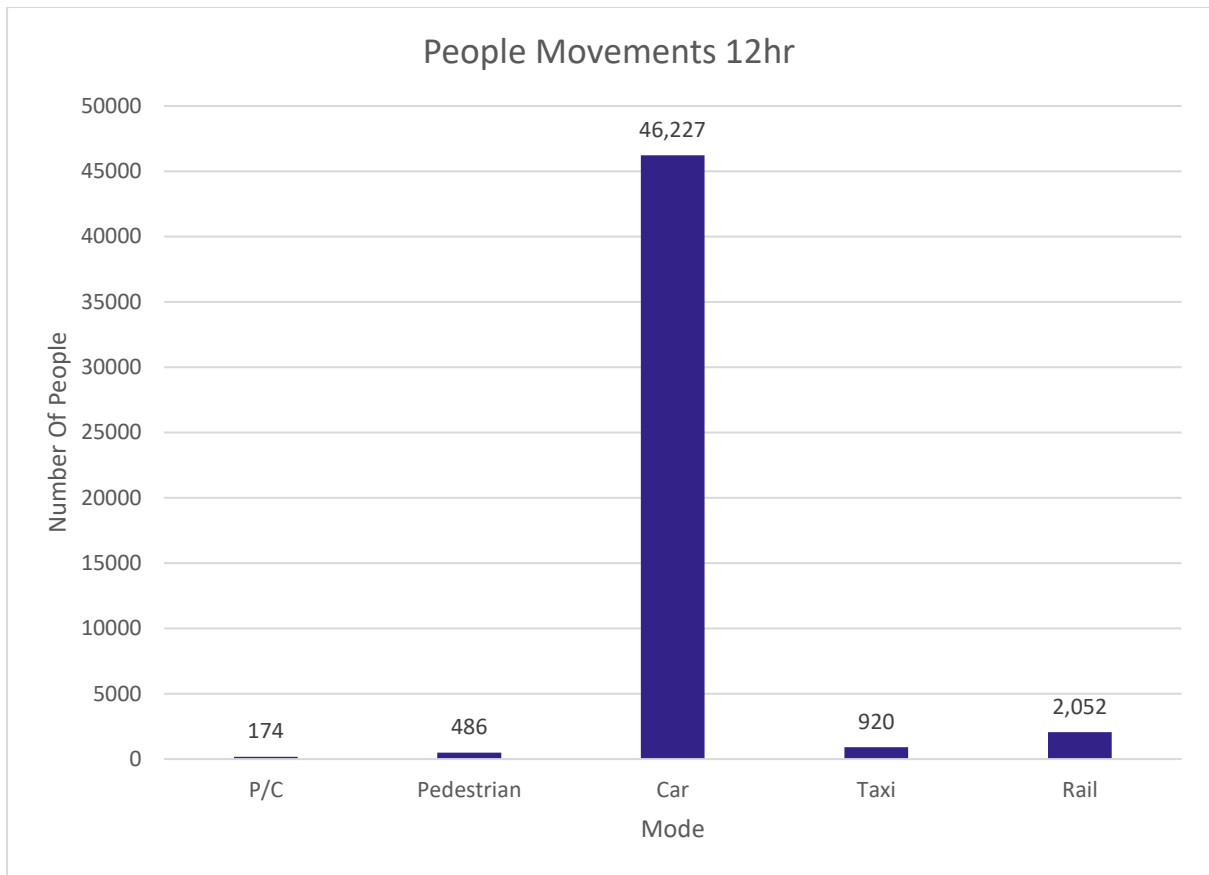


Figure A-50: Trips Inbound across the Galway Outer-City Cordon: 12 Hour

