

Willoughby City Council

Parking Study

Hampden Road and Herbert Street cycleway
(Chatswood to St Leonards)

May 2026



Question today *Imagine tomorrow* Create for the future

Parking Study Chatswood to St Leonards Cycleway

Willoughby City Council

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WSP acknowledges that every project we work on takes place on First Peoples lands.
We recognise Aboriginal and Torres Strait Islander Peoples as the first scientists and engineers and pay our respects to Elders past and present.



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Executive summary

A comprehensive parking study has been undertaken to support the proposed Hampden Road and Herbert Street active transport corridor between Artarmon and St Leonards. The study assessed existing parking supply, demand, and utilisation across the corridor and surrounding precincts to inform a balanced, evidence-based approach to managing potential impacts.

The active transport proposal will deliver a high-quality bi-directional cycleway, prioritised and improved pedestrian crossings, urban greening canopy, and enhanced public domain outcomes. It will create a safer, more accessible and attractive streetscape, reduce urban heat, and introduce a new pocket park, while strengthening connections between key destinations, public transport hubs (including rail, metro, and bus corridors), and major employment precincts. Importantly, the corridor forms part of the broader Eastern Harbour City Strategic Cycleway network, linking the strategic centres of Chatswood and St Leonards and supporting multimodal and/or a mode shift away from private vehicle use.

A detailed 7-day parking survey across four precincts (residential, industrial, and hospital areas) confirms that the study area currently provides 1,783 on-street parking spaces, with generally available spare capacity across the wider network, despite moderate to high occupancy in some peak locations.

The proposal will result in the removal of approximately 145 on-street parking spaces. However, analysis demonstrates that a substantial proportion of displaced demand can be accommodated within existing spare capacity, particularly outside peak periods.

To further mitigate impacts, a targeted package of measures is proposed:

- **Additional supply:** Conversion of suitable locations to angled parking will deliver approximately 53 new spaces, reducing the net loss to around 92 spaces.
- **Parking optimisation:** Adjustments to parking restrictions will improve turnover and better align supply with local land use needs, including expansion of residential parking schemes.
- **Demand management:** Education and behaviour change initiatives, in partnership with local businesses and institutions, will encourage greater uptake of walking, cycling, and public transport.

Targeted parking restriction changes will support efficient use of the network, including time-limited parking in residential areas, improved turnover in industrial areas, and retention of essential short-stay and service parking in the hospital precinct.

The study confirms that, following implementation of the proposal and mitigation measures, parking supply will continue to exceed observed peak demand across all precincts, ensuring ongoing functionality for residents, businesses, and key institutions.

Overall, the proposal represents a robust, evidence-led outcome that strikes a strong and appropriate balance between local parking needs and broader strategic priorities. Parking impacts are carefully managed and mitigated, ensuring continued support for residents, businesses, and key destinations.

At the same time, the project delivers substantial and enduring benefits—significantly enhancing safety, improving accessibility, elevating urban amenity, and expanding transport choice. It will support a meaningful shift away from private vehicle dependence and contribute to a more sustainable, people-focused transport network.

Importantly, the proposal establishes a critical strategic active transport corridor linking Chatswood and St Leonards, strengthening connections to major employment areas and public transport interchanges. It positions Willoughby City Council to proactively support growth, improve network efficiency, and deliver an integrated, future-ready transport system.

The total existing parking supply is shown in Figure 1.1.

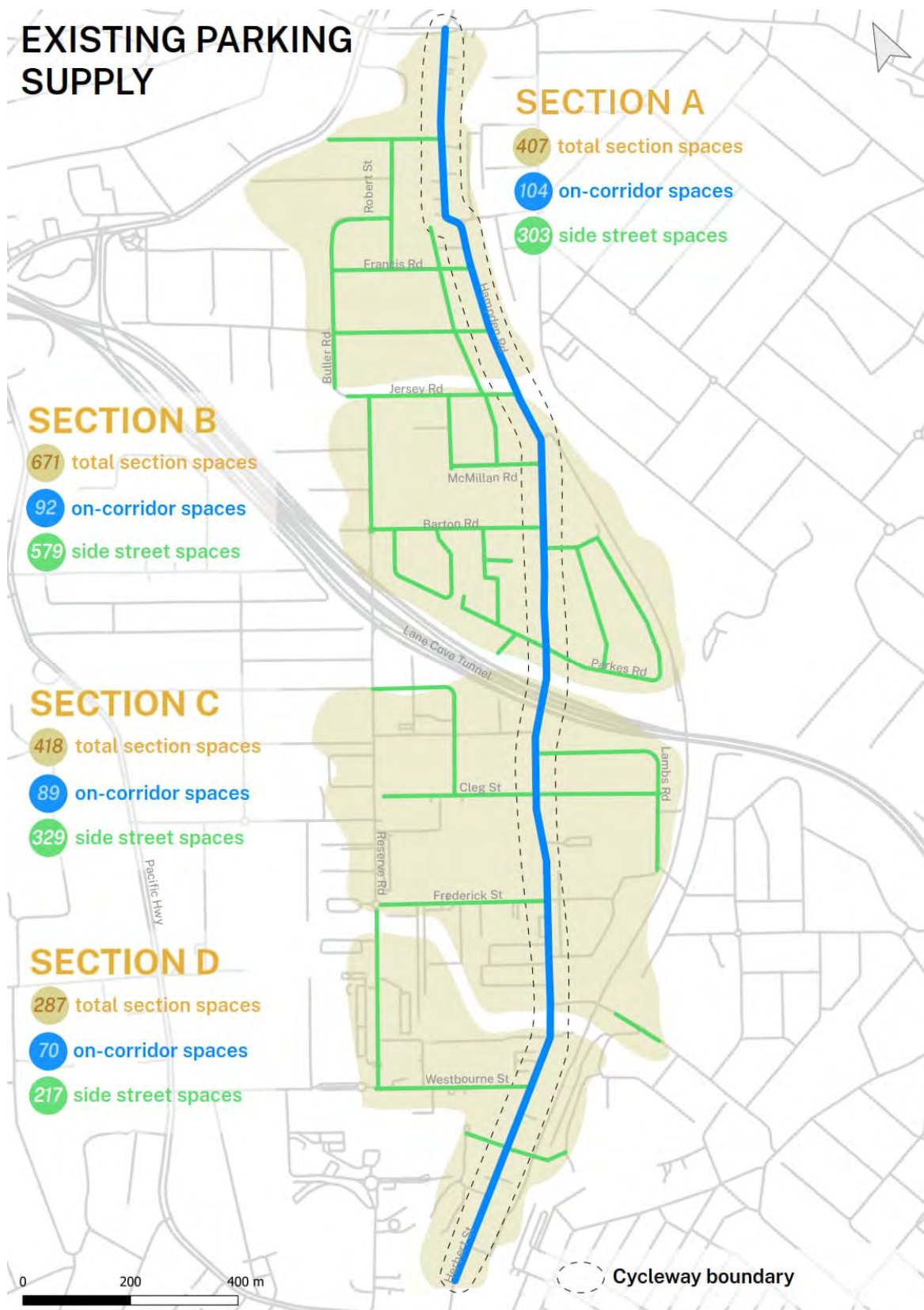


Figure 1.1 Existing parking supply

The impact to parking supply is shown in Figure 1.2.

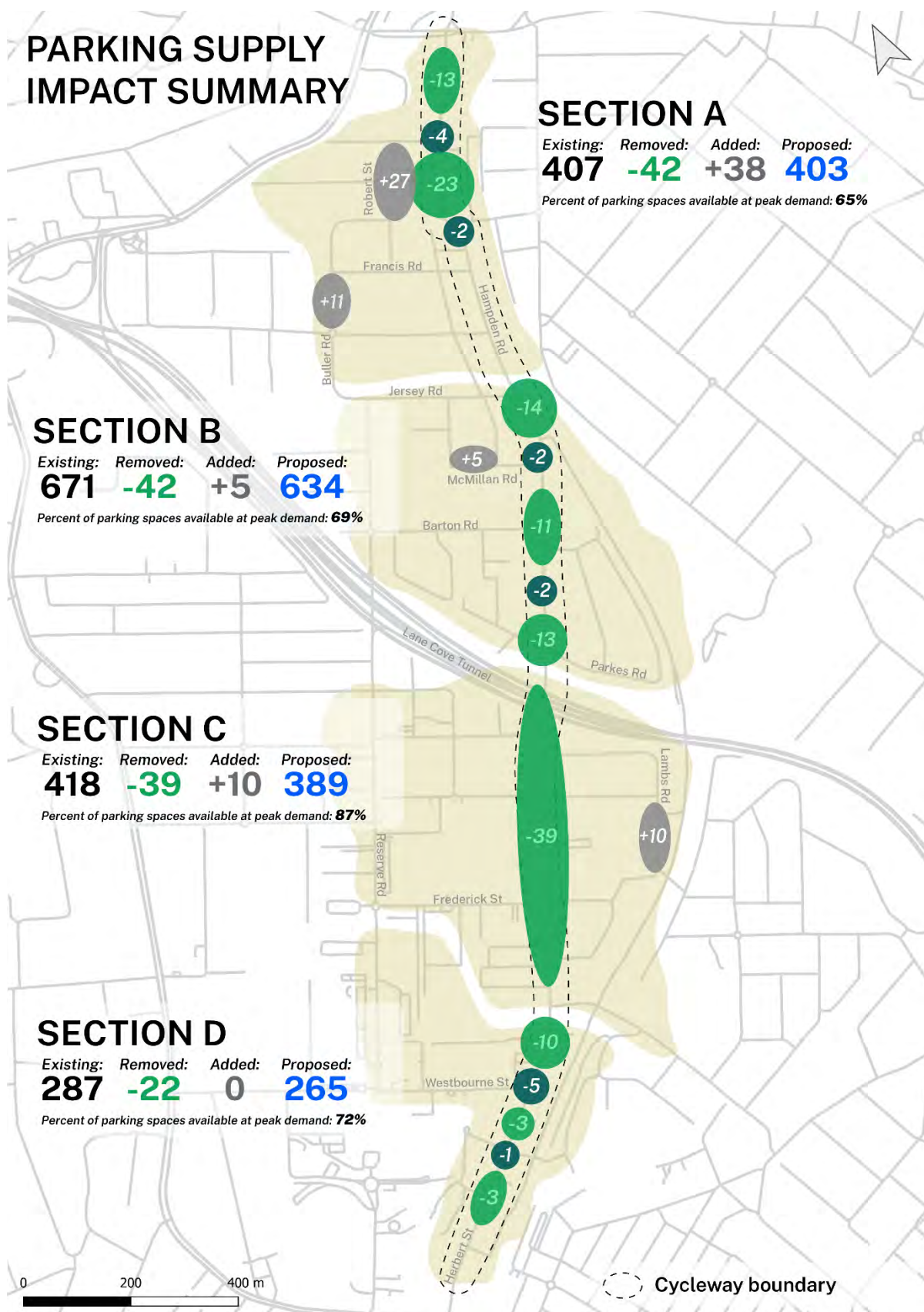


Figure 1.2 Summary of parking supply impact

Parking time restriction review

The Council's *Street Parking Strategy Framework*, states that parking controls should support the viable operation of the adjacent land-use activity and user needs by managing and prioritising access to street parking spaces for one particular group over another. The following changes to existing unrestricted on-street parking are recommended to achieve this goal:

- In Sections A and B, unrestricted parking is proposed to be replaced with 4-hour parking (Permit Holders Excepted). In Section A, this has been recommended on Broughton Road and Robert Street, essentially extending existing timed parking and supporting higher turnover near Hampden Road. In Section B, this has been recommended on Reserve Road and Barton Road, primarily supporting visitation to Thompson Park, also requiring an extension of existing timed parking. This approach is intended to encourage greater turnover for non-resident parking, while prioritising access to kerbside parking for residents and permit holders.
- In Section C, unrestricted parking is proposed to be converted to 4-hour parking Monday to Friday 7am – 5pm. This aims to improve parking turnover during busy weekdays, helping to manage high demand and support access to loading and servicing activities where required.
- In Section D, the primary focus is on maintaining appropriate parking arrangements near Royal North Shore Hospital essential to support the local businesses and operation of the hospital. This includes loading zones and short-stay parking, intended for patients, visitors and service vehicles.

Figure 1.3 provides an overview of the proposed changes to parking restrictions across the study area, with new restrictions proposed for a total of 99 on-street parking spaces across the study area.

Publicity, education and behavioural change

Key to supporting the success of a cycleway proposal is the implementation of strategic measures to support awareness and uptake. This study recommends the adoption of several strategic measures, including parking demand management approaches, updates to development controls, education and behaviour change programs for local businesses and schools, and general community promotion and educational programs.

These strategic measures are intended to support informed travel choices, particularly in Section C, where off-street parking is already available for employee use and alternative travel options (such as train services from St Leonards station) can be practical for some journeys to and from work. The program also aims to improve awareness of safe cycling practices and provide residents and employees with greater confidence to cycle locally with the infrastructure improvements from this project.

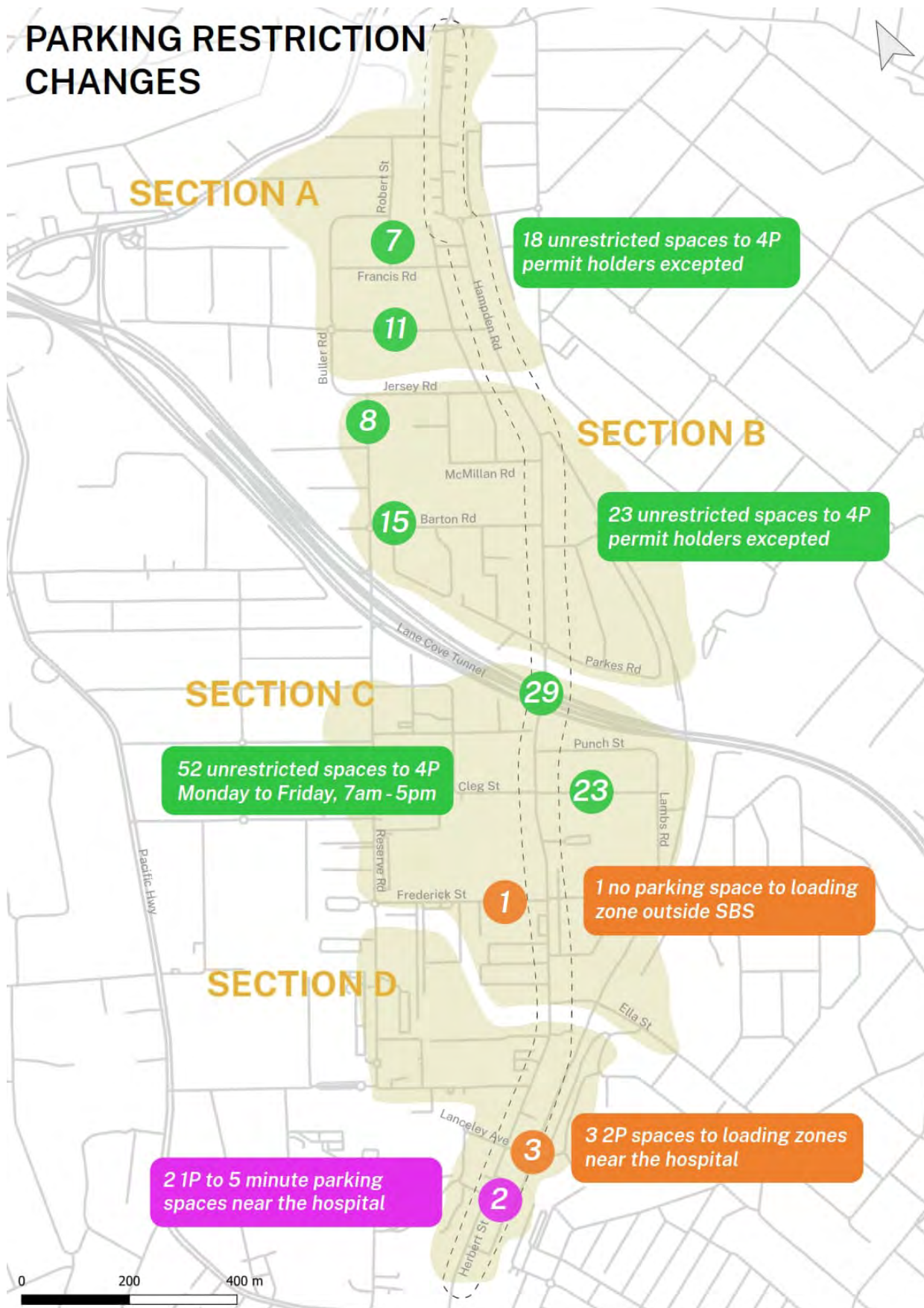


Figure 1.3 Summary of parking restriction changes

1 Introduction

1.1 Project background

Willoughby City Council (WCC) is delivering the Chatswood to St Leonards cycleway via Artarmon to provide a safe, separated cycling route that connects Chatswood, Artarmon town centre, and the St Leonards train station and hospital precinct.

This project directly supports the vision outlined in WCC's Cycling Strategy and Action Plan 2034, which states: “We want to have a connected and safe bicycle network consisting of integrated infrastructure enabling all users and all age groups to cycle...”

The cycleway will feature a fully separated bicycle path along Herbert Street and Hampden Road, linking key destinations such as transport interchanges, Royal North Shore Hospital, the Artarmon industrial area, St Leonards and Artarmon town centres, local schools, the future Sydney Metro dive site, and the Frank Channon Walk to Chatswood.

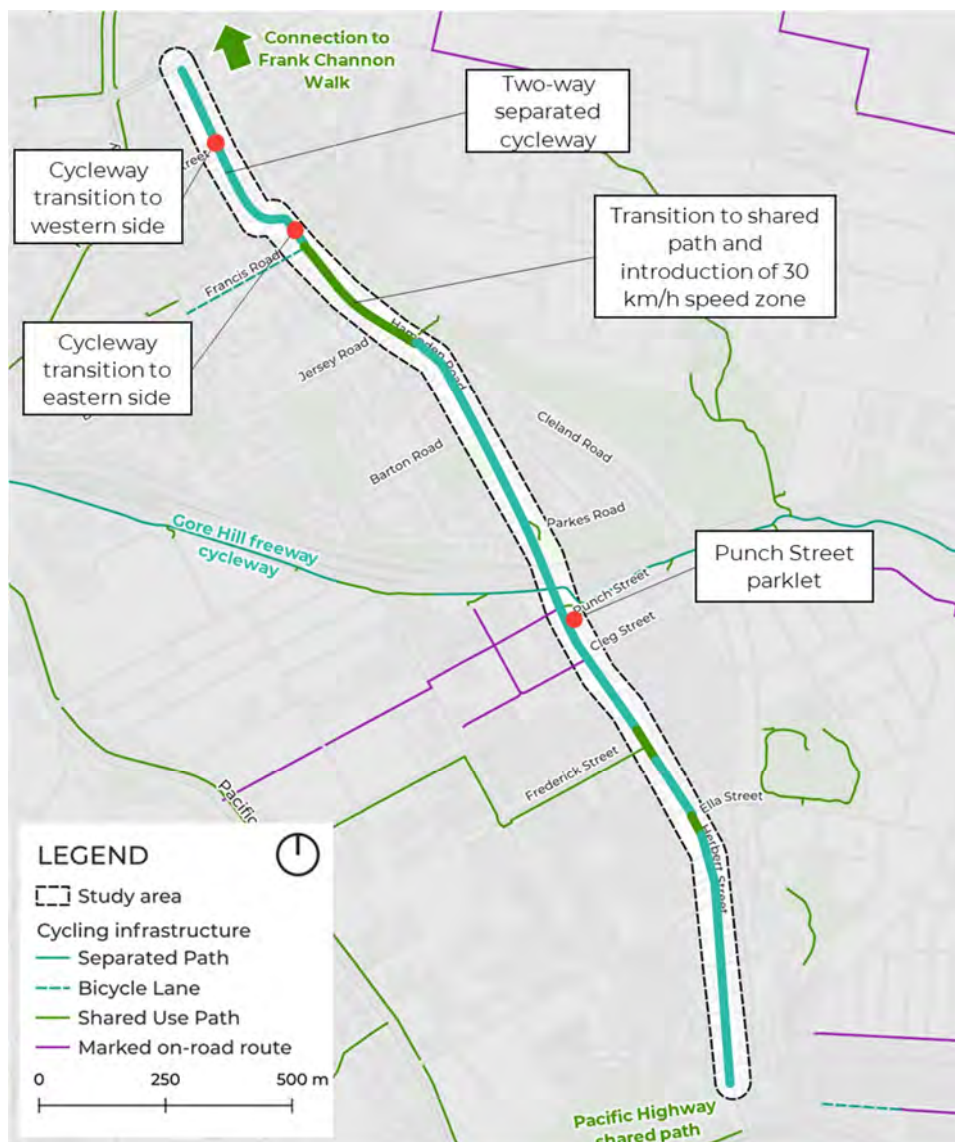


Figure 1.1 Proposed alignment of Chatswood to St Leonards cycleway

As part of the concept design process, it has been identified that parking removal along the corridor will be necessary to accommodate the proposal. The anticipated net loss is 145 parking spaces across the corridor. This reduction will impact residents, employees, and businesses that rely on kerbside parking for daily activities. It is important to note that this proposal would not remove parking spaces within Artarmon Town Centre, as the cycling facility will be transitioned to a shared path between Brand Street and Jersey Road, to tie into the recently completed upgrade of Artarmon Town Centre.

The purpose of this Parking Study is to assess the implications of this parking loss and identify strategies to minimise its impact on the community.

1.2 Purpose of this report

This report will provide an overview of current parking on and surrounding the cycleway corridor, understand the impact of the proposal to the on-street parking and to identify mitigation measures where required. This is based on parking survey data, on site observations and design which have been developed. Specifically, the study has the following objectives:

- Assess the current parking supply, restrictions, and occupancy along the corridor and surrounding streets.
- Understand how the parking spaces are being used in relation with the surrounding land uses.
- Summarise the proposed change in on-street parking supply due to the proposal and understand their impacts to support the surrounding land use, current transport system and the overall objectives of the proposal. These are to consider kerbside use hierarchy and current State and Council policies further detailed in this report.
- Provide potential mitigation measures in line with Council’s street parking strategy and other relevant policies relevant for the study area.
- For areas with higher impact levels, identify opportunities to minimise the impacts of the proposal which may include:
 - Offset the loss of kerbside parking by reconfiguring spaces within the corridor and nearby streets.
 - Implementation of parking restrictions that promote higher turnover and improve kerbside utilisation.
- Work collaboratively with Council for an outcome that will inform future community engagement regarding parking impacts as part of the Chatswood to St Leonards cycleway project.

2 Strategic Context

2.1 Overview

Several strategic documents previously prepared by WCC form the foundation of this Parking Study and guide its approach. These key documents (see Figure 2.1) outline WCC's transport and parking vision and objectives for the study area, while also providing frameworks and guidance for managing parking demand.

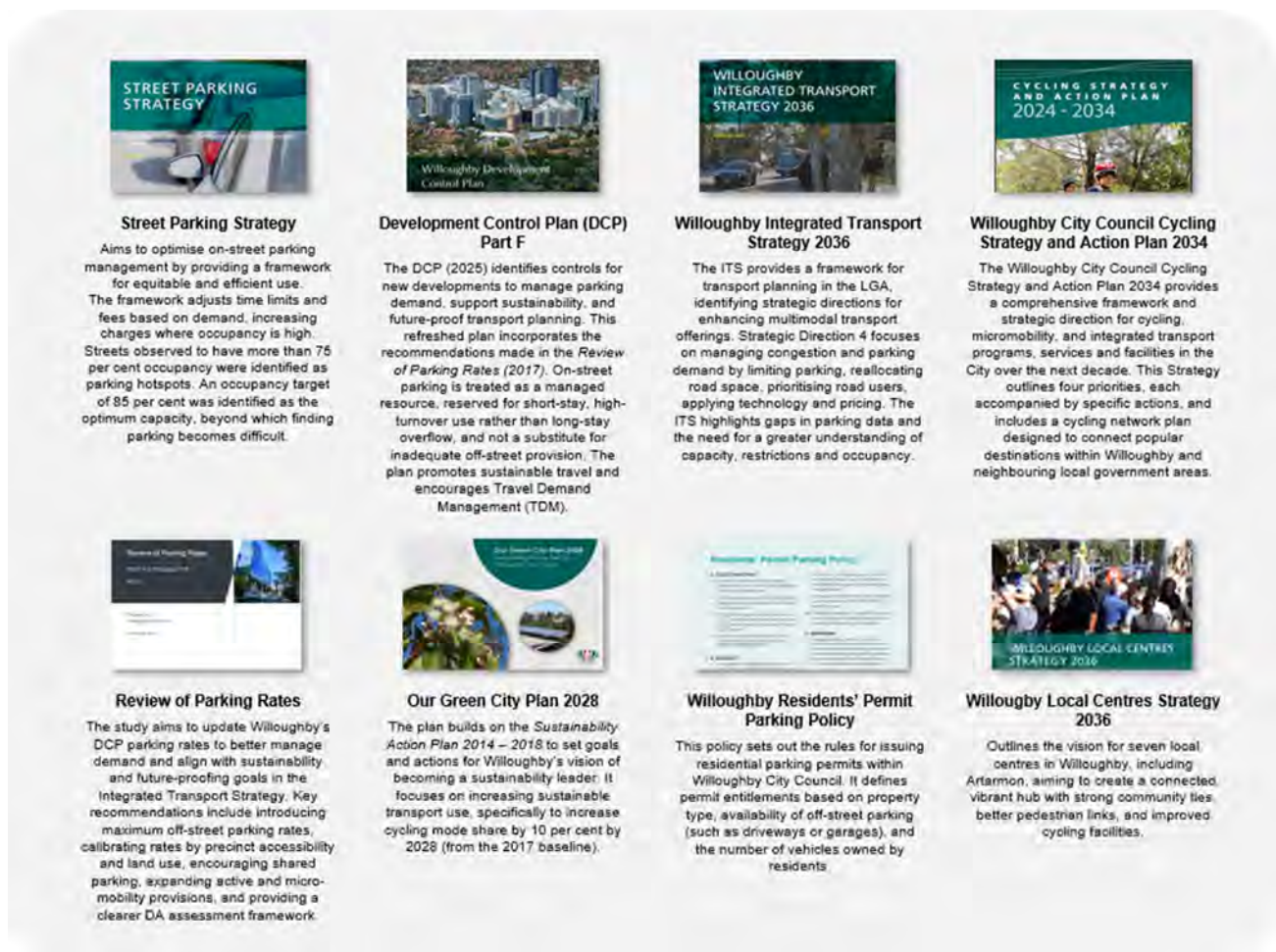


Figure 2.1 Willoughby City Council Strategic Guidance

2.2 Street parking strategy

The *Street Parking Strategy* (WCC, 2017) is a key document in providing this study with guidance in managing the impacts of the proposal and providing a framework for consistent and transparent decision-making to promote the efficient, fair and equitable use of available street parking.

The strategy seeks to optimise and increase turnover of available street space for parking, for the maximum benefit of all parking user groups. It is a strategy which is linked closely to the City Strategy 2013-2029, Sustainability Action Plan 2014-2018 and Local Environmental Plan 2013. The strategy provides six directions:

1 **Strategic direction 1:** adopt a framework of time and pricing restrictions

The strategy recognise that efficient street parking operates at between 45 and 85 per cent occupancy. It has developed a street parking framework around these statistics (refer to Figure 2.2) which aims to optimise on-street parking space for the benefit of all users.

Where parking occupancy exceeds 85 per cent (the ‘optimum capacity’) it recommends for a shorter time limits to be adopted for unrestricted or time-limited parking areas. For paid parking areas it is recommended that the parking fee increases by 10-20 per cent. And it is recommended that essentially the inverse occurs where parking occupancy is less than 45 per cent.

	UNRESTRICTED OR TIME-LIMITED PARKING AREAS	EXISTING PAY-PARKING AREAS
>90% SPACES OCCUPIED	Introduce shorter time limits (eg: from 2P to 1P) or parking fees	Increase parking fee by 20%
>85% SPACES OCCUPIED	Introduce shorter time limits or permit parking	Increase parking fee by 10%
45% - 85% SPACES OCCUPIED	Periodic monitoring	Periodic monitoring
<45% SPACES OCCUPIED	Increase time period for parking (eg: from 2P to 4P)	Reduce parking fee by 10%
<20% SPACES OCCUPIED	Remove all parking restrictions	Reduce parking fee by 20% or consider removing charges.

Figure 2.2 Proposed Street parking framework

This framework enables a transparent decision-making process in assessing the proposal’s impact to parking supply and occupancy affecting the study area.

2 **Strategic direction 2:** apply parking controls that support the land use context

Parking controls should support the viable operation of the adjacent land-use activity and user needs by managing and prioritising access to street parking spaces for one particular group over another. These considerations are listed in Table 2.1 and provide guidance on the type of restrictions that needs to be prioritised to minimise the impacts to parking supply as a result of the proposal.

Table 2.1 Considerations of parking needs and associated land uses

Land use	Considerations
Commercial and mixed-use areas	Turnover of 2-4 hours to allow patrons to access services and amenities. Unrestricted parking would invite long-term parking and prevent access for those that support local businesses throughout the day.
Residential areas	Parking controls in residential areas aim to balance the parking needs of residents with other users (visitors, workers, commuters). This can be balanced through the allocation of permits in a Residential Parking Scheme, which can work together with short-stay parking time limits to ensure that parking spaces turn over at a rate that provides residents an opportunity to park within a reasonable distance from their home.
Community facilities	Streets surrounding community facilities such as sports fields, local libraries and small parks should provide sufficient parking turnover.

- 3 **Strategic direction 3:** develop an integrated transport strategy to guide future transport planning and development and that accomplishes other organisational goals for a sustainable, integrated network which prioritises active transport.
- 4 **Strategic direction 4:** promote car share to reduce street parking demand and encourages more active lifestyles through reduce dependency on private cars.
- 5 **Strategic direction 5:** maximise available street and road space for parked cars. This aims to minimise the removal of parking for traffic efficiency which support the vibrancy and amenity of streets, especially in neighbourhood centres and larger commercial centres.
- 6 **Strategic direction 6:** promote alternative transport choice for non-essential car journeys. This includes trips by walking, cycling and public transport.

This strategic direction supports the proposal's objectives in allocating investment in street design that overcomes pedestrian barriers, streetscape improvements, bicycle network and infrastructure and bicycle end-of-trip facilities. Understanding that there may be compromises to on-street parking that comes with these prioritised investments.

2.3 Residential parking scheme

Willoughby City Council's policy on on-street residential parking scheme limits eligibility based on residency and vehicle arrangements: renters may obtain up to two permits, while property owners may receive up to three, subject to their off-street parking availability and car ownership.

Table 2.2 Strata title property (apartments and units)

Off-street parking condition	Number of permits
2 off-street parking	No permit
1 off-street parking and 2 cars	1 permit
1 off-street parking and 1 car	No permit
No off-street parking and 2 cars	2 permits

Source: *Residential parking permits (WCC, 2020)*

Units or townhouses that received development approval after 30 June 1998 and/or an occupation certificate after 30 June 1999 are not entitled to a residential parking permit.

Eligibility for houses and duplex in an RPS area is summarised in Table 2.3.

Table 2.3 Torrens title property (house and duplex)

Off-street parking condition	Number of permits
3 or more off-street parking	No permit
2 off-street parking and 3 cars	1 permit
2 off-street parking and 2 cars	No permit
1 off-street parking and 3 cars	2 permits
1 off-street parking and 2 cars	1 permit
No off-street parking and 3 cars	3 permits

Source: *Residential parking permits (WCC, 2020)*

No permits will be granted to residences with three or more off-street parking spaces.

Long and wide driveways that can accommodate 2 or more cars, similar to tandem parking spaces are considered as off-street parking spaces, subject to Council's assessment.

3 Study methodology

3.1.1 Study area

The extent of the proposal, extending approximately 2.5 kilometres from Mowbray Road, Artarmon to the Pacific Highway, St Leonards passes through residential, industrial and the hospital precincts.

The land use context influences parking needs, activities and usage patterns generated by the differing user groups, such as residents, workers, and hospital visitors. As such this study breaks the study area up into the following four distinct sections (refer to Figure 3.1):

- **Section A: North Artarmon Residential;** Hampden Road and connecting side streets, between Mowbray Road and Francis Road.
- **Section B: South Artarmon Residential;** Hampden Road and connecting side streets, between Jersey Road and Parkes Road.
- **Section C: Industrial Precinct;** Hampden Road along the Gore Hill Freeway overpass and Herbert Street and connecting side streets between Parkes Road and Ella Street.
- **Section D: Hospital Precinct;** Herbert Street and connecting side streets between Ella Street and the Pacific Highway.

The side streets surveyed as part of this study are typically within walking distance from Herbert Street and Hampden Road corridor and to the west of the rail corridor. The rail corridor is a barrier for access/walking to the residential streets on the eastern of the rail corridor, thus less desirable for a replacement parking to be considered for the proposal.

Public off-street parking was assessed at a high-level using Willoughby City Council survey data, on-site observations, and online resources. The objective of this analysis was to identify potential locations that could help offset the loss of on-corridor parking.

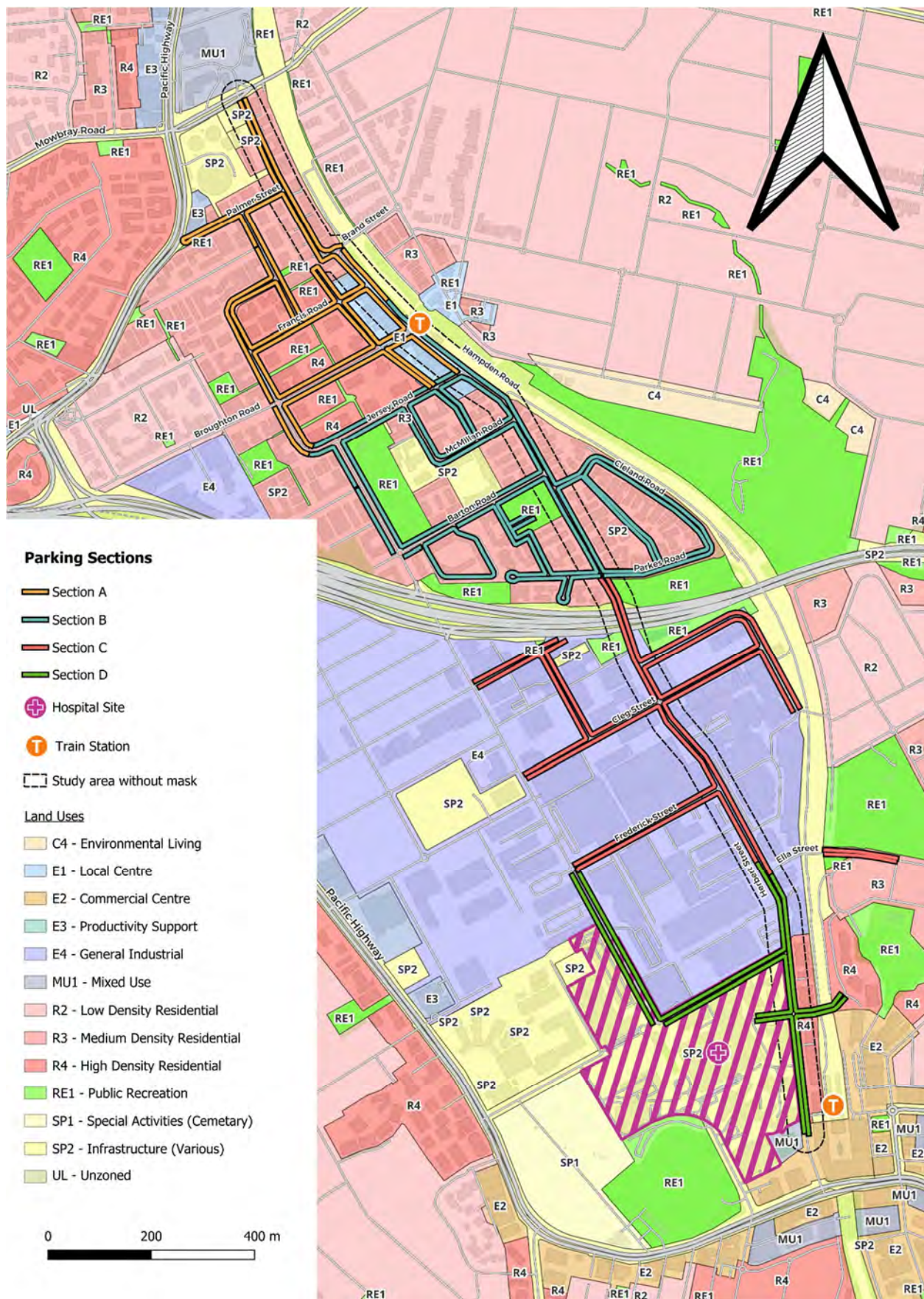


Figure 3.1 Parking study sections

3.1.2 *Parking restrictions*

Parking restrictions and respective locations have been recorded for the study based on the existing parking signs observed on-site. These were recorded in a Geospatial Information System (GIS) file to ensure accurate mapping of the existing conditions.

3.1.3 *Parking capacity*

Parking capacity of parallel kerbside parking has been estimated based on the maximum demand observed in the survey, which may result in tighter parking and thus greater observed capacity than design. Where this is unavailable due to lower demands, the capacity is calculated by assuming a 6.0 metres length typically required for a car to park.

3.1.4 *Parking demand surveys*

Parking demand surveys were undertaken along each of the sections identified in Figure 3.1, on Thursday 16th of October and Saturday 18th of October 2025. These were undertaken both on-corridor and on side streets connecting to the corridor.

The survey was conducted on a Thursday and Saturday as they would typically represent the busiest weekday and weekend period, with increased retail activities and daily commutes. These dates were also within a school term representing the typical traffic and parking demands and behaviours which occurs during a time without school holidays or disruptions to regular work and university schedules.

The survey captured the occupancy of the parking spaces for the full 24-hour periods on both dates, at every 30 minutes, to understand the changes of parking demand throughout the day. This helps to understand how the parking spaces are being used and influenced by the adjacent land uses.

Additional site visits were also undertaken to observe on-street parking activities and turnover at a high-level.

This study excludes surveys of multi-storey off-street parking facilities managed by landowners or car park management companies. Their location, capacity and occupancy levels (where available and provided by others) have been included in the consideration of this study.

As indicated in the figure, the southernmost section of the corridor, between Lanceley Avenue and the Pacific Highway, had surveys collected as part of the original project scope, for the week between Wednesday the 29th of May and Tuesday the 4th of June 2024. The parking occupancy data for this survey area was provided at 15-minute intervals, between 7:00 am – 7:00 pm. This data has been incorporated into the study, using the Thursday and Saturday data to align with the survey for the rest of the corridor.

3.1.5 *Street Parking Strategy framework*

Parking supply and demand assessments have been undertaken in line with the planning directions provided in *Street Parking Strategy* (Willoughby City Council, 2017) detailed in section 2.2.

This includes consideration of the ‘optimum capacity’ of 85 per cent, applying parking controls that support the land use context and consideration of rationalising parking spaces to support the objectives of the proposal in providing a high-quality separated active transport corridor which would connect residents with major transport interchanges, commercial, employment land use and health facilities.

4 Existing conditions

4.1 Overview

The corridor along Hampden Road and Herbert Street has a total capacity of 355 spaces. The northern section of the corridor and its side streets primarily comprise unrestricted and longer stay (> 3 hours) non-ticketed parking. The southern sections and side streets near Royal North Shore Hospital include shorter stay ticketed parking.

There are three bus zones along the corridor – two near Artarmon Station and one near St Leonards Station. In these areas, parking is generally short stay, ticketed and includes designated spaces for loading, Willoughby City Council vehicles, and Australia Post.

As depicted in Table 4.1, the maximum occupancy rate is observed for each section on Thursday and Saturday, at the following times:

- Section A: Thursday morning (10:30 – 11:30am) and Saturday evening (7:30 – 9pm)
- Section B: Thursday (12:30pm) and Saturday evening (6pm)
- Section C: Thursday morning (10am) and Saturday (4 – 6:30pm)
- Section D: Thursday afternoon (3:30pm) and Saturday (10 – 10:30am)

The results show that across all sections of the study area, peak parking demand remains within the existing on-street parking supply. The following section provides further detail on existing parking supply and occupancy, with a particular focus on the on-corridor areas where parking changes are proposed. The assessment breaks down the data based on essential, short-term and long-term parking restrictions as follows:

- **Essential:** Parking spaces that are essential to provide critical services to the surrounding land use. These include loading zones, parking for people with disabilities, mail zone and parking for council vehicles.
- **Short-term timed parking (≤ 1 hour)** typically used to allow higher turnover to support the retail and commercial activities
- **Medium-term timed parking (> 1 hour)** typically used to allow longer stay for visitors and servicing of the surrounding land use. This also include the 4-hour parking currently available within the residential area and within the residential parking scheme zone, which allows those with permits to overstay.
- **Unrestricted parking** provided for long-term parking by residents or commuters.

Table 4.1 Existing parking supply and occupancy

Section	Existing supply (spaces)	Thursday maximum occupancy rate	Saturday maximum occupancy rate
A: North Artarmon Residential (Hampden Road)	407	64%	64%
B: South Artarmon Residential (Hampden Road)	671	63%	65%
C: Industrial Precinct (Hampden Road / Herbert Street)	418	81%	32%
D: Hospital Precinct (Herbert Street)	287	66%	62%

4.2 Section A: North Artarmon Residential

Section A is predominantly residential, while also interfacing with the Artarmon town centre and train station (refer to Figure 4.1). The town centre includes cafes, restaurants and shops, which generate demand for higher-turnover parking to support commercial activity. In contrast, the remainder of the section primarily serves residential properties, where longer-stay parking is required to meet the needs of residents and permit holders.

Section A provides a total of 407 on-street parking spaces (refer to Table 4.3). On the corridor specifically, a total of 104 on-street parking spaces are provided, most of which are unrestricted. Near Artarmon Town Centre and station, parking is primarily limited to 30-minute or one-hour parking, which supports higher turnover for retail and commercial uses near the station. Restricted parking (e.g. 4-hour parking) typically allows permit holders to park all day.

In the surrounding road network (side streets) a total of 303 on-street parking spaces are provided in Section A. Unrestricted parking remains the most common, followed by 2-hour and 4-hour parking spaces. No ticketed parking spaces are evident in Section A.

Table 4.2 Section A existing capacity and composition

Restriction	Capacity			
	On-corridor		Side Streets	
	No. of spaces	Percentage of total	No. of spaces	Percentage of total
Unrestricted	62	60%	150	50%
4-hour parking	12	12%	59	19%
2-hour parking	0	0%	68	22%
1-hour parking	4	4%	10	3%
30-minute parking	19	18%	7	2%
Disabled parking	4	4%	2	1%
Loading zone	3	3%	0	0%
Other essential ¹	0	0%	7	2%
Sub totals	104		303	
Section A total	407			

¹ 'Other' includes parking for Motorbike, EV, Car Share, Bus, Mail Zones, Authorised vehicle and council parking, 5-minute parking (for school PUDO) and Truck zones (available for parking during certain times of the day).

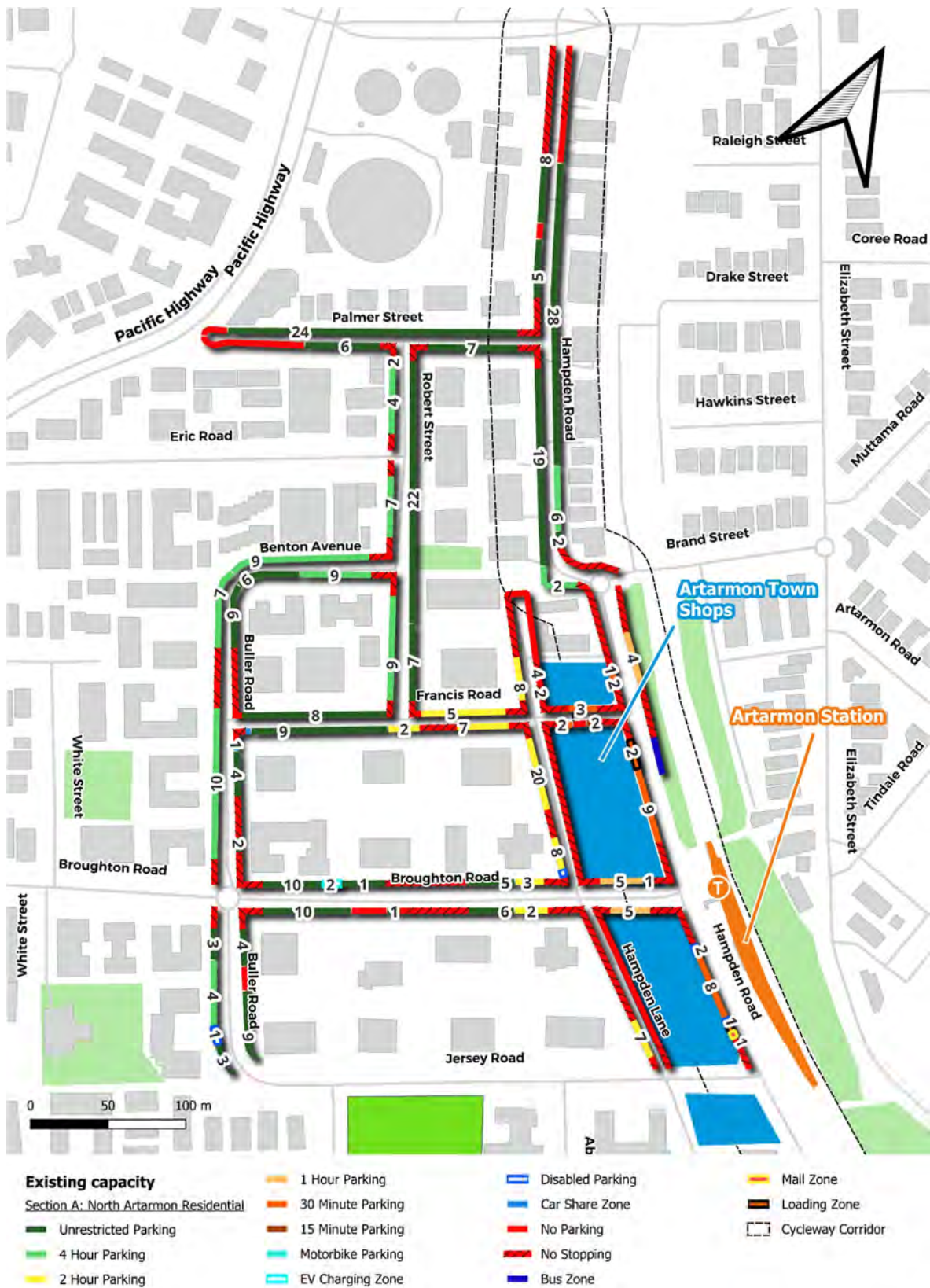


Figure 4.1 Section A existing capacity

4.2.1 Section occupancy

As discussed, in Section A the peak demand for on-street parking occurs on Thursday morning (10:30 – 11:30am) and Saturday evening (7:30 – 9pm), reaching a peak of 64 per cent. Figure 4.2 and Figure 4.3 depict the parking demand observed during the peaks on Thursday and Saturday. As shown, some parking spaces experience high demand (over 80 per cent), while others remain lightly used.

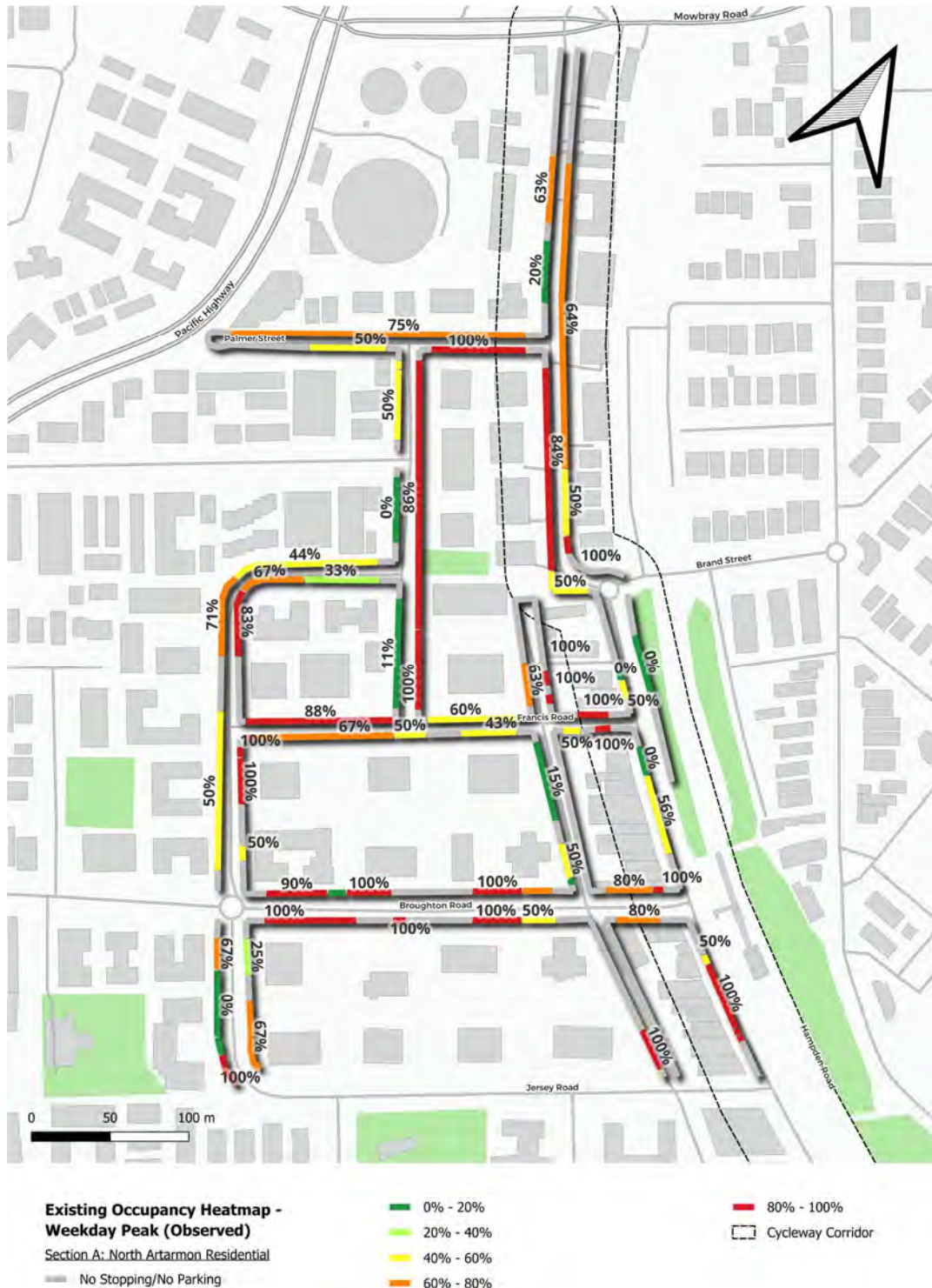


Figure 4.2 Thursday peak parking demand (observed at 11:00am)

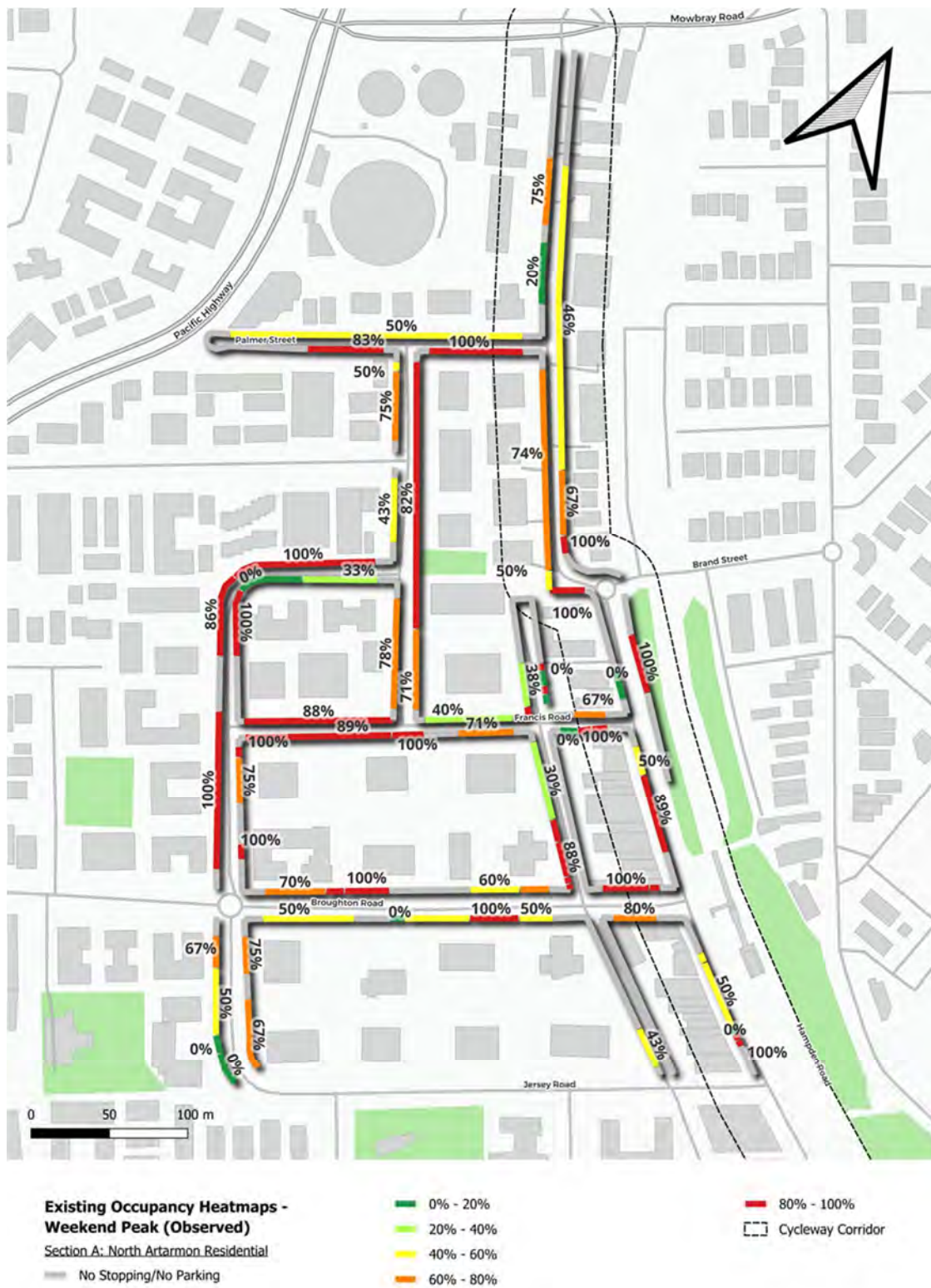


Figure 4.3 Saturday peak parking demand (observed at 8:00pm)

4.2.2 On-corridor occupancy

On Thursday (see Figure 4.2), on-corridor parking demand does not reach supply at any point throughout the day, with peak occupancy reaching 63 per cent (65 spaces occupied). Outside of these peaks, parking demand fluctuates between 39 – 57 per cent.

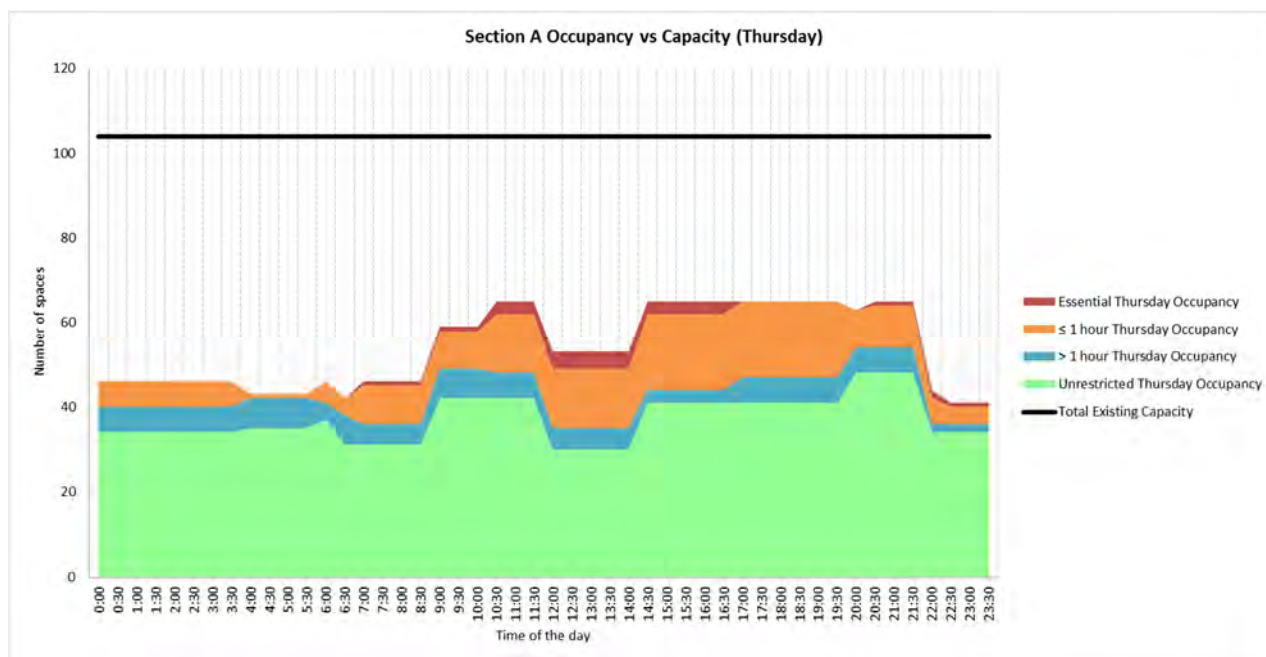


Figure 4.4 Section A Thursday existing occupancy vs capacity (on-corridor)

On Saturday (see Figure 4.3), on-corridor parking demand is generally a little lower, reaching a peak of 61 per cent (63 spaces occupied). This occurs later in the day, between 7:30 – 9:00 pm, with the morning remaining at a consistent rate of 38 – 39 per cent, before increasing throughout the day.

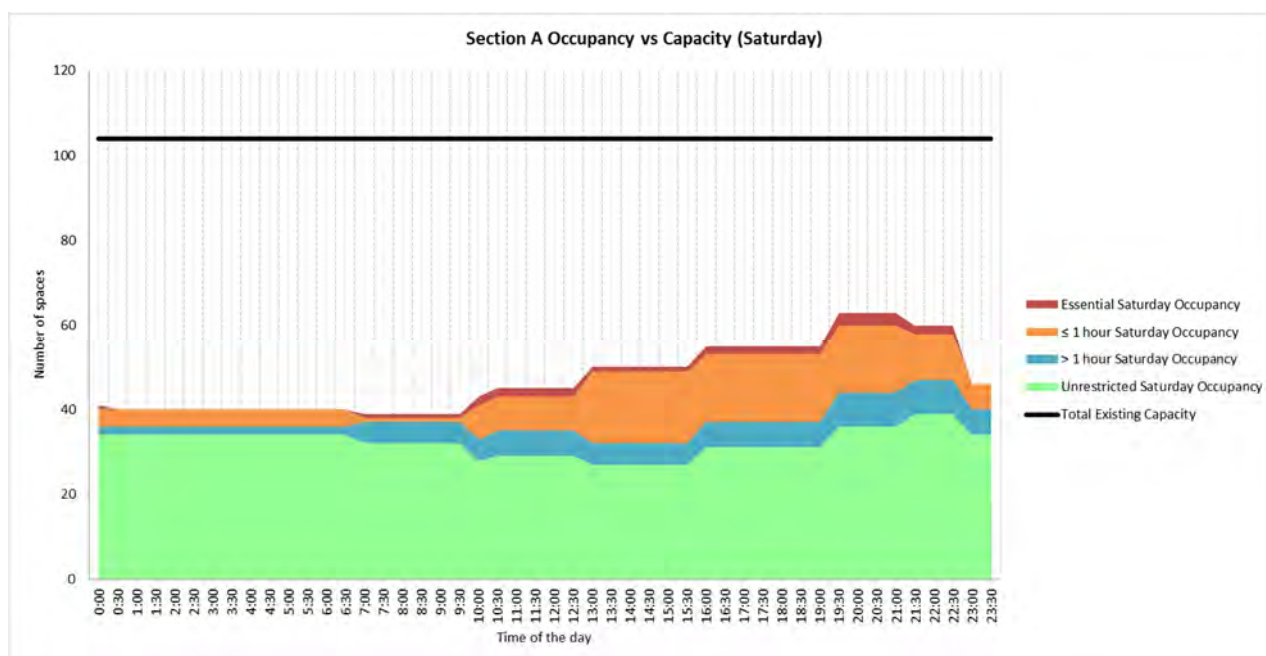


Figure 4.5 Section A Saturday existing occupancy vs capacity (on-corridor)

Looking more closely, the following summarises on-corridor parking occupancy in Section A across all restriction types. For unrestricted and timed parking, demand has been assessed against the 45 and 85 per cent occupancy thresholds, consistent with the benchmarks outlined in the Willoughby City Council *Street Parking Framework* (note essential parking is not measured against these thresholds as all essential parking must be retained). As depicted, on-corridor parking in Section A does not exceed the 85 per cent occupancy threshold at any time throughout the day:

- **Unrestricted:** Most common and most used parking type in Section A, reaching a peak occupancy of 77 per cent on Thursday evening. Occupancy remains between the 45 and 85 per cent occupancy threshold throughout the day on Thursday and Saturday.
- **Timed parking (> 1 hour):** In Section A this is 4-hour parking, reaching a peak occupancy of 67 per cent on Saturday between 7:00 – 10:00 pm. Occupancy fluctuates from above to below 45 per cent occupancy across both Thursday and Saturday.
- **Timed parking ≤ 1 hour:** In Section A this is both 1-hour and 30-minute parking. It reaches its peak of 78 per cent on Thursday between 2:00 – 7:00 pm. Occupancy is similar on a Saturday. At no point does it reach or exceed capacity or hit even 85 per cent occupancy.
- **Essential parking spaces:** In Section A this consists of disabled parking and loading zones. This reached 57 per cent occupancy on Thursday at 11:30 am – 1:30 pm.

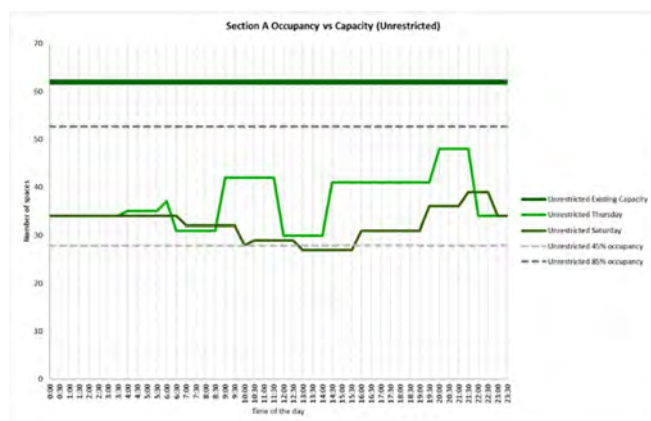


Figure 4.6 Section A unrestricted parking

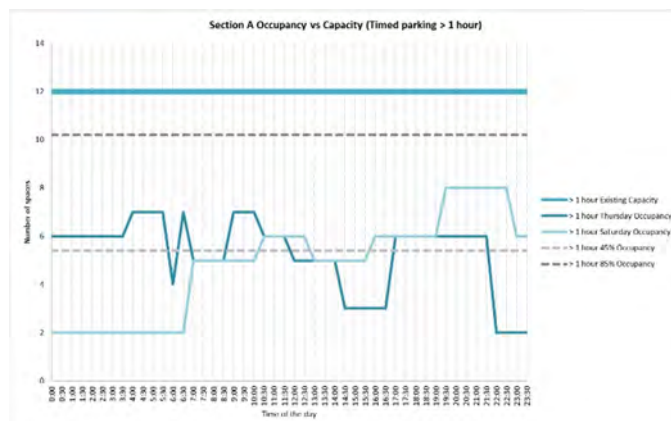


Figure 4.7 Section A timed parking > 1 hour

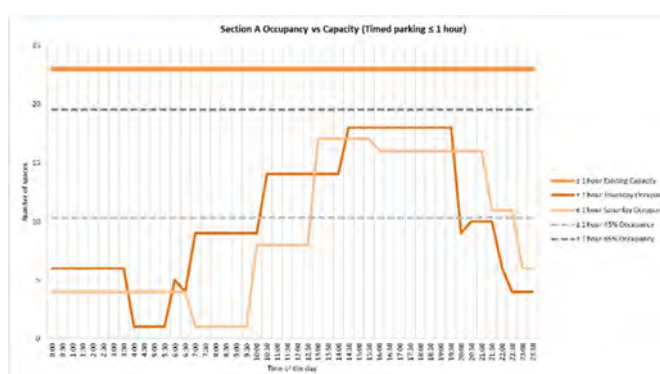


Figure 4.8 Section A timed parking ≤ 1 hour

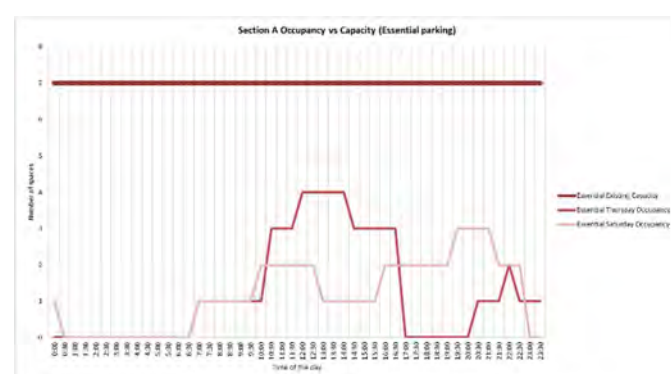


Figure 4.9 Section A essential parking

4.3 Section B: South Artarmon Residential

Section B is predominantly residential, with the exception of Artarmon Public School and Thomson Park, which are located just off the corridor to the west. The section also includes on-corridor parking near Artarmon Station, which supports kiss-and-ride activity and higher parking turnover within the Artarmon town centre (refer to Figure 4.10).

Section B provides a total of 671 on-street parking spaces (refer to Table 4.3). On the corridor specifically, a total of 92 on-street parking spaces are provided, most of which are also unrestricted. Kerbside use in this section also includes a Bus Zone at Kiss and Ride at Artarmon Station.

Within the surrounding road network (side streets), a total of 579 on-street parking spaces are provided in Section B. Unrestricted parking is the most prevalent, followed by 4-hour parking spaces (generally excepting permit holders). Consistent with Section A, no parking spaces within the Section B study area are ticketed.

Table 4.3 Section B parking capacity and composition

Restriction	Capacity			
	On-corridor		Side Streets	
	No. of spaces	Percentage of total	No. of spaces	Percentage of total
Unrestricted	68	74%	377	65%
4-hour parking	10	11%	122	21%
2-hour parking	0	0%	4	1%
1-hour parking	6	7%	0	0%
30-minute parking	4	4%	2	0%
15-minute parking	0	0%	2	0%
Disabled parking	1	1%	10	2%
Other essential ²	1	1%	36	6%
No Parking for some of the day	2	2%	26	4%
Sub total	92		579	
Grand total	671			

² 'Other' includes parking for Motorbike, EV, Car Share, Bus, Mail Zones, Authorised vehicle and council parking, 5-minute parking (for school PUDO) and Truck zones (available for parking during certain times of the day).

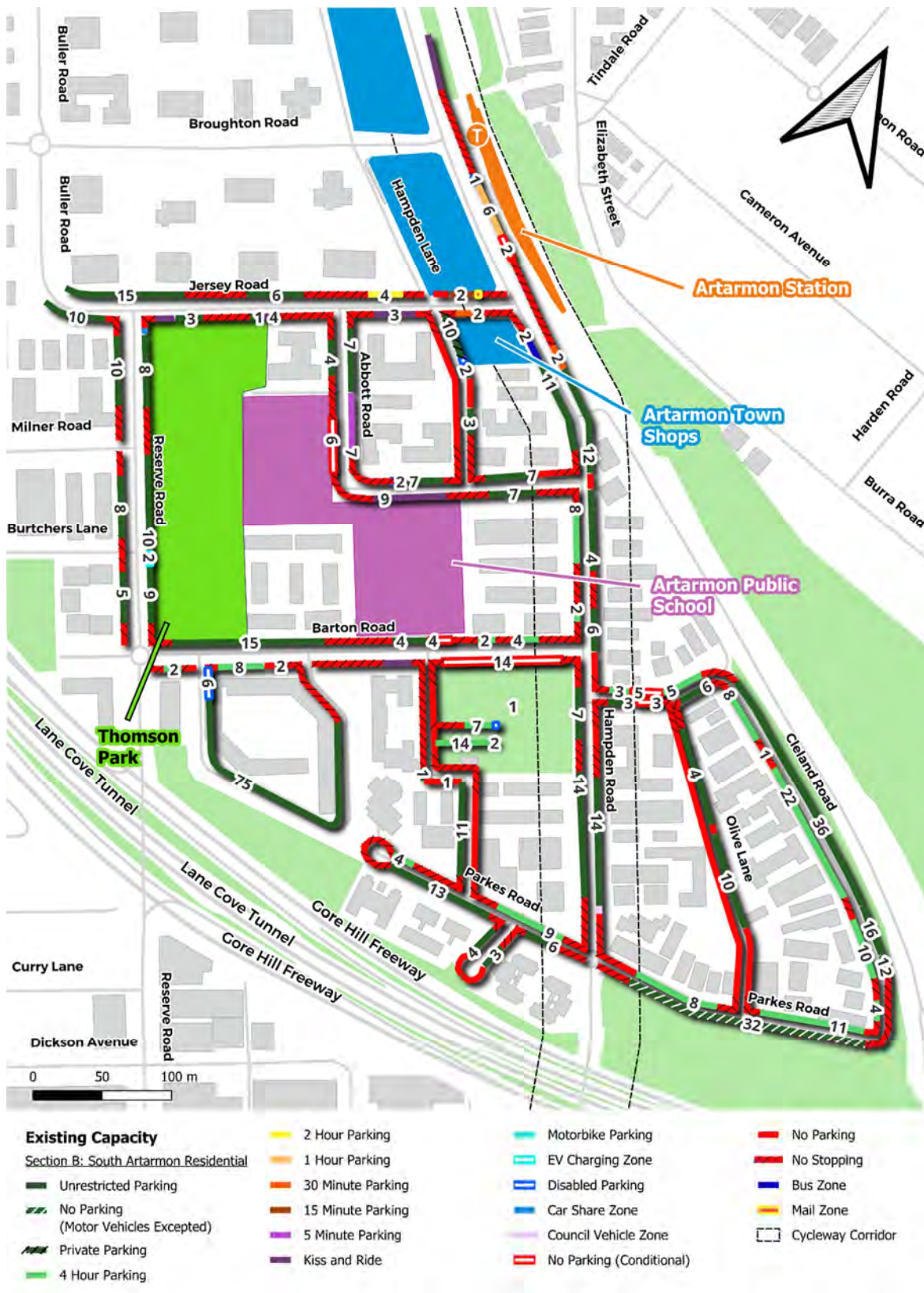


Figure 4.10 Section B existing capacity

4.3.1 Section occupancy

As discussed, in Section B the peak demand for on-street parking occurs on Thursday midday at 12:30 pm and Saturday evening at 6pm, reaching a peak of 63 per cent and 65 per cent respectively. Figure 4.11 and Figure 4.12 depict the parking demand observed during the peaks on Thursday and Saturday. As shown, on Thursday parking demand is higher on and around the corridor and near Thomson Park.

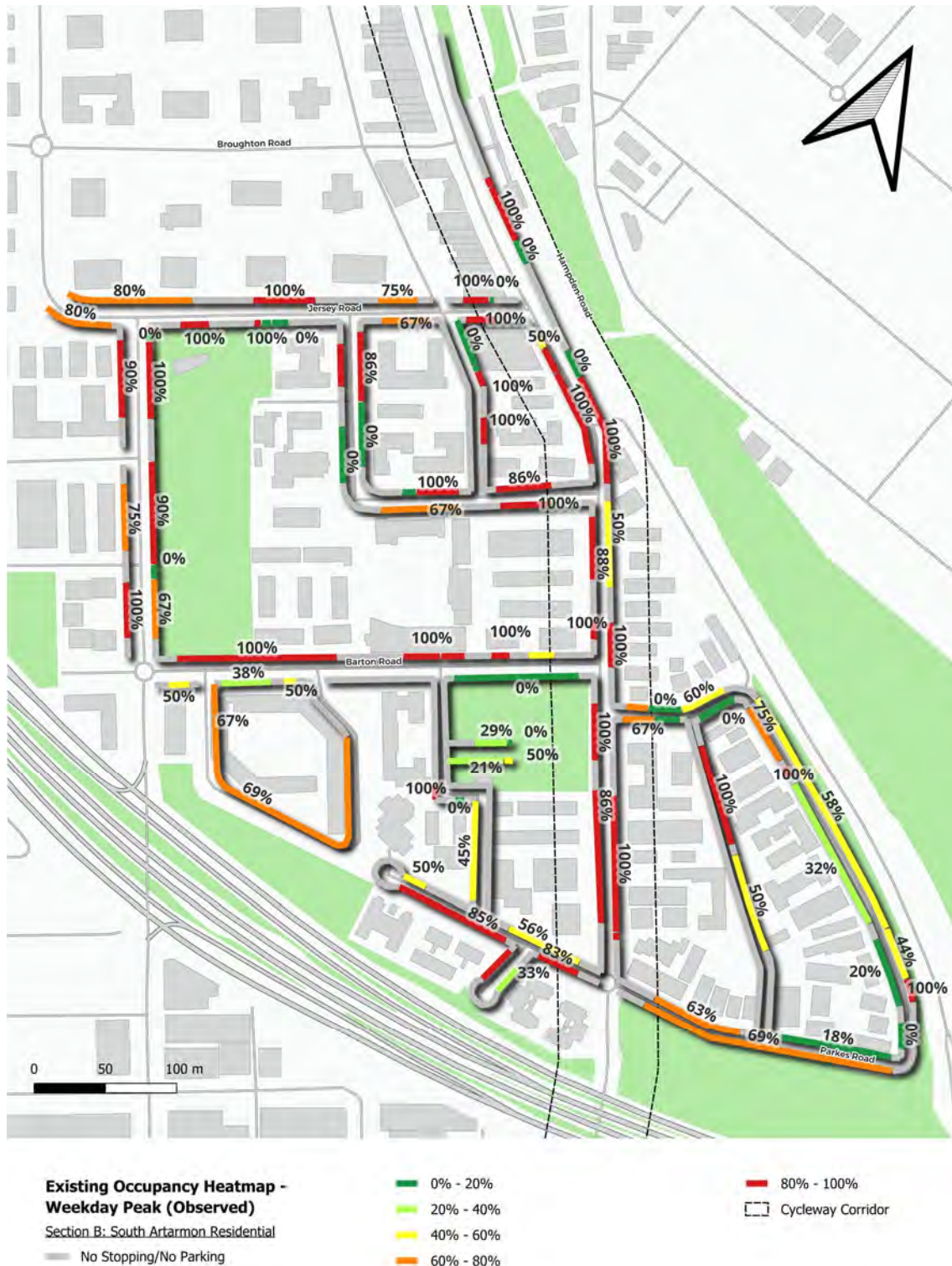


Figure 4.11 Thursday peak parking demand (observed at 12:30pm)

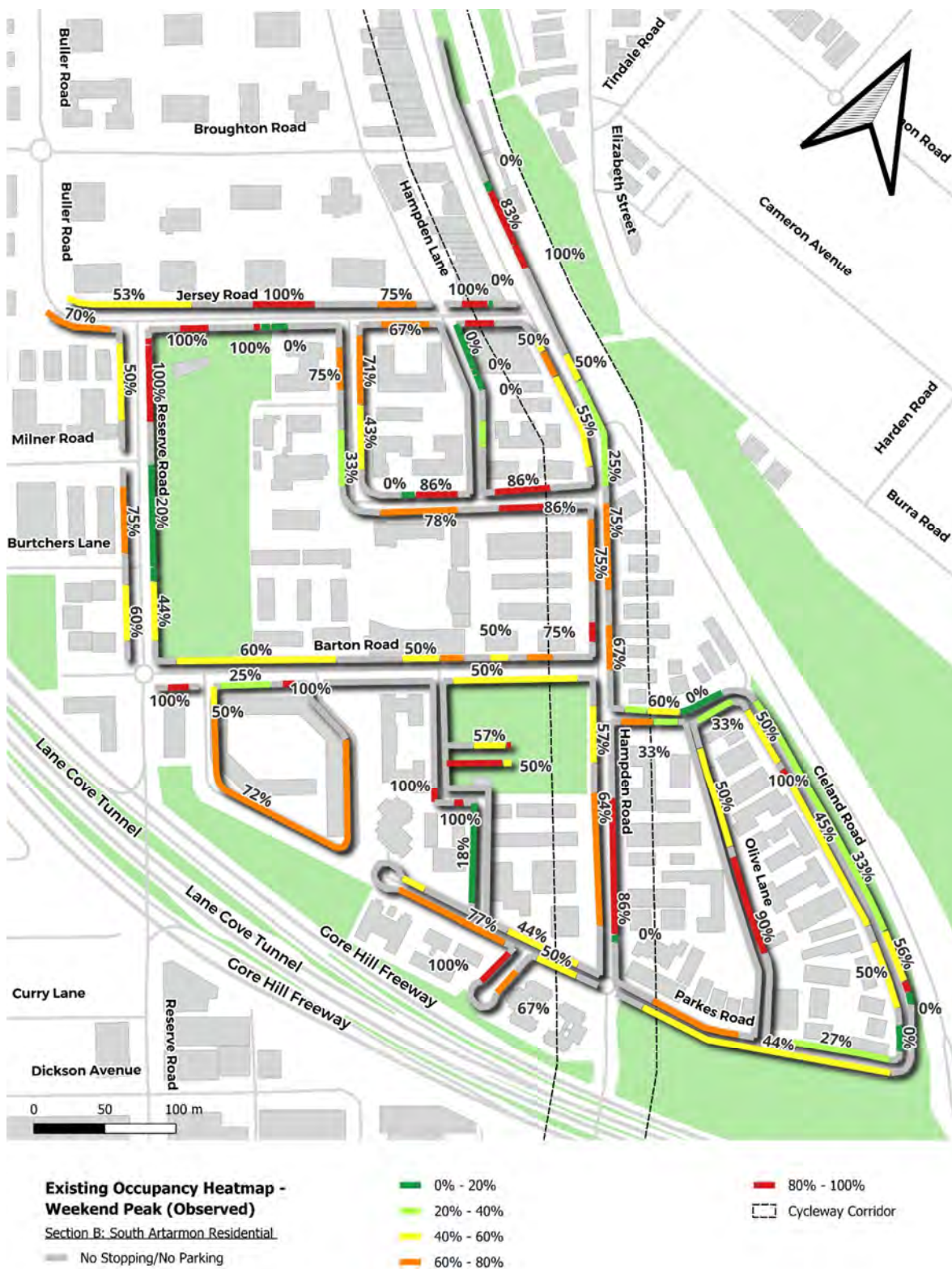


Figure 4.12 Saturday peak parking demand (observed at 6pm)

4.3.2 On-corridor occupancy

As depicted (see Figure 4.13), overall, on-street parking supply in Section B is not reached on Thursday. Specifically, the average occupancy recorded is 66 per cent (61 spaces occupied) and peak occupancy is 89 per cent (82 spaces occupied). Peak parking demand on the corridor was observed in the middle of the day between 12 – 2pm.

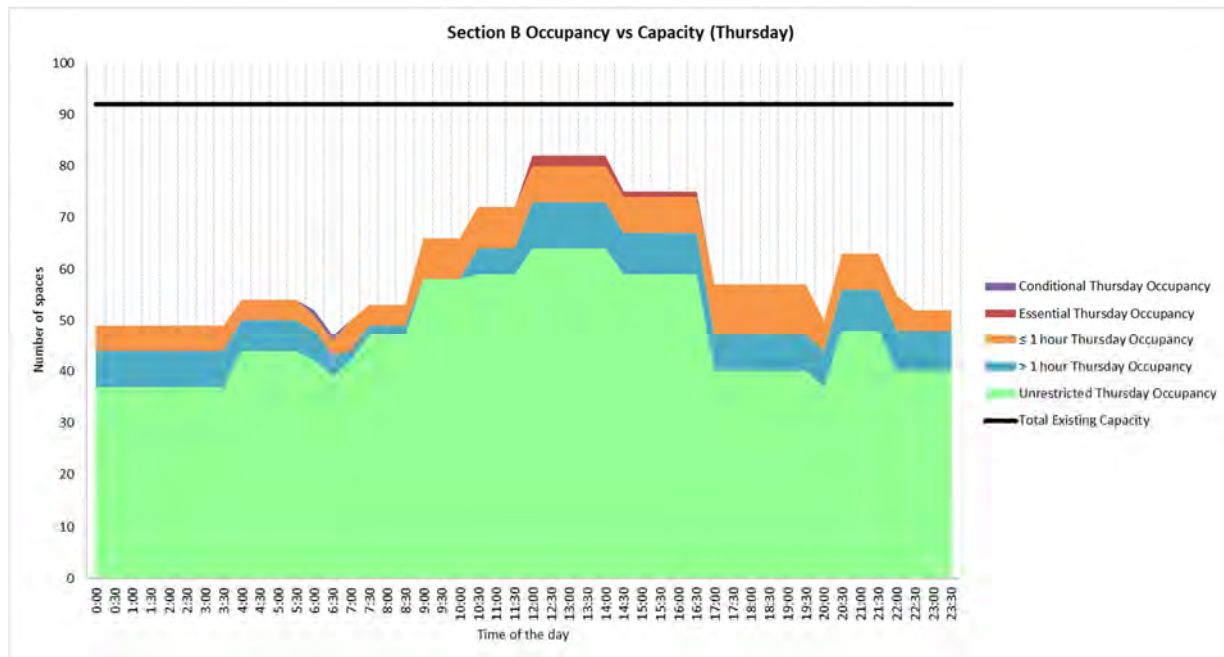


Figure 4.13 Section B Thursday existing occupancy vs capacity

On Saturday (see Figure 4.12), parking demand is consistent across the day, experiencing an average occupancy rate of 58 per cent (53 spaces occupied) and peak occupancy of 65 per cent (60 spaces occupied). On Saturday peak parking demand is observed later in the day, between 1:30 – 3:30pm.

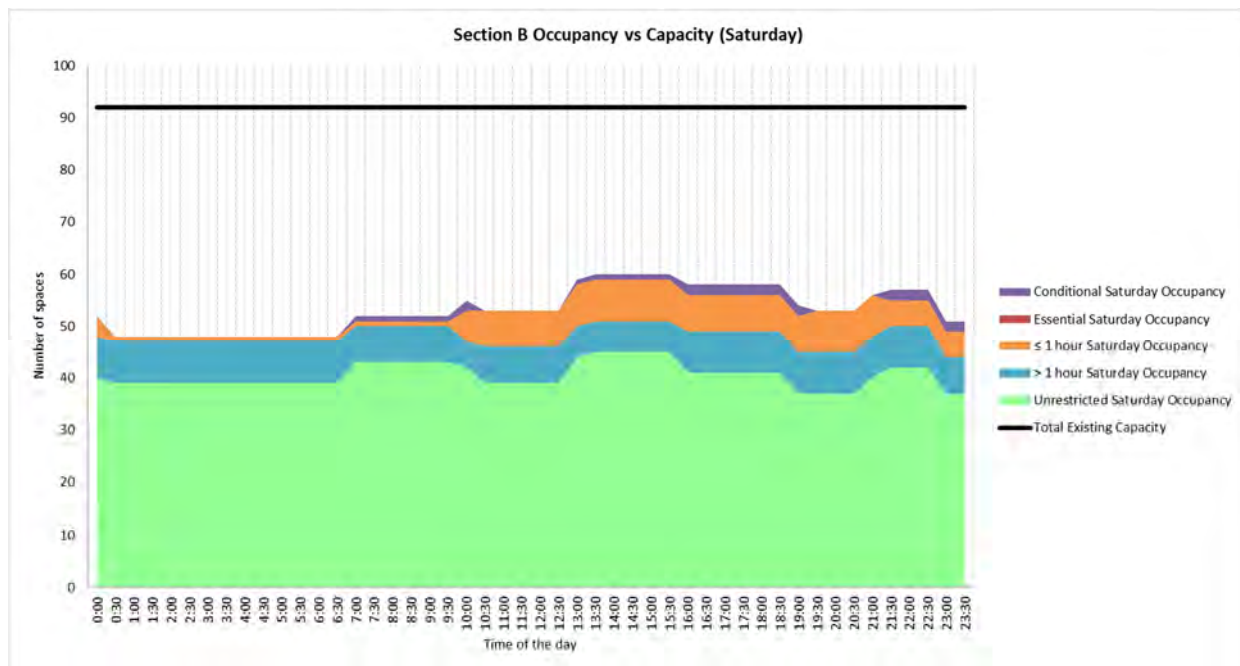


Figure 4.14 Section B Saturday existing occupancy vs capacity

Looking more closely, the following summarises on-corridor parking occupancy in Section B across all restriction types. For unrestricted and timed parking, demand has been assessed against the 45 and 85 per cent occupancy thresholds,

consistent with the benchmarks outlined in the Willoughby City Council *Street Parking Framework* (note essential parking is not measured against these thresholds as all essential parking must be retained). As depicted, on-corridor parking in Section B exceeds the 85 per cent occupancy threshold for unrestricted and timed > 1 hour parking:

- **Unrestricted:** Most common and most used parking type in Section B, however demand does not reach existing supply at any point throughout the day. Exceeds 85 per cent capacity only briefly on Thursdays. Peak observed on Thursday from 12 – 2pm. Otherwise, unrestricted occupancy remains between 45 – 85 per cent of capacity.
- **Timed parking (> 1 hour):** In Section B this is 4-hour parking. Peak occupancy is on Thursday between 12:00 – 2:00 pm, exceeding 85 per cent. Outside of these hours, occupancy remains within 45 – 85 per cent range on Thursdays and Saturdays. Parking never meets existing capacity.
- **Timed parking ≤ 1 hour:** In Section B this is both 1-hour and 30-minute parking. 85 per cent capacity threshold is almost reached on Thursday between 5 – 8 pm. At other times, parking demand remains within the 45 – 85 per cent thresholds, with demand dropping below the 45 per cent threshold in the morning on both Thursday and Saturday.
- **Essential parking spaces** (disabled parking and WCC parking): This reaches the existing capacity only during Thursday’s peak between 12:00 – 2:00 pm. Otherwise, for most of the day these spaces are not used. On Saturday, these parking spaces are not occupied at all.

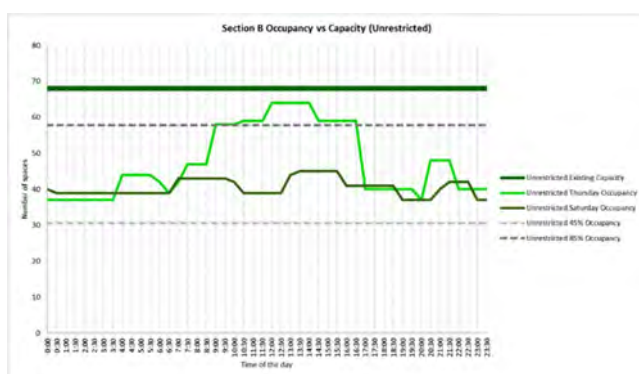


Figure 4.15 Section B unrestricted parking

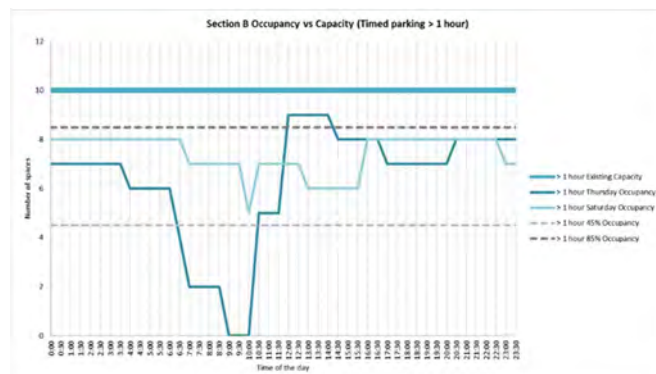


Figure 4.16 Section B timed parking > 1 hour

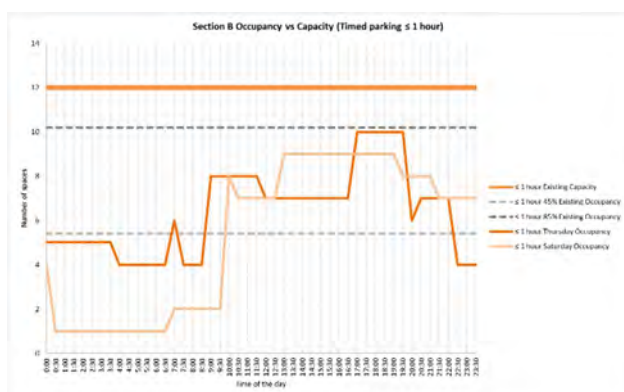


Figure 4.17 Section B timed parking ≤ 1 hour



Figure 4.18 Section B essential parking

4.4 Section C: Industrial Precinct

Section C includes a distinct change in land use, transitioning to an industrial precinct just south of the Gore Hill Freeway overpass. Industrial sites and businesses front Herbert Street across this section, including the SBS office building, the Artarmon Business Court, St Leonards Corporate Centre and Herbert Street Technopark (refer to Figure 4.20).

Section C provides a total of 418 on-street parking spaces (refer to Table 4.4). On the corridor specifically, a total of 89 on-street parking spaces are provided, most of which are unrestricted. This section includes ticketed parking spaces on the corridor primarily, reflecting the transition in land use from residential to commercial and industrial areas. In the surrounding road network (side streets) a total of 329 on-street parking spaces are provided in Section C.

Table 4.4 Section C existing capacity and composition

Restriction	Capacity			
	On-corridor		Side Streets	
	No. of spaces	Percentage of total	No. of spaces	Percentage of total
Unrestricted	59	66%	239	73%
3-hour parking	0	0%	14	4%
Disabled parking	0	0%	1	0%
Loading zone	1	1%	3	1%
Ticketed (2-hour)	29	33%	27	8%
Other essential ³	0	0%	10	3%
No Parking for some of the day	0	0%	35	11%
Sub total	89		329	
Grand total	418			

³ 'Other' includes parking for Motorbike, EV, Car Share, Bus, Mail Zones, Authorised vehicle and council parking, 5-minute parking (for school PUDO) and Truck zones (available for parking during certain times of the day).

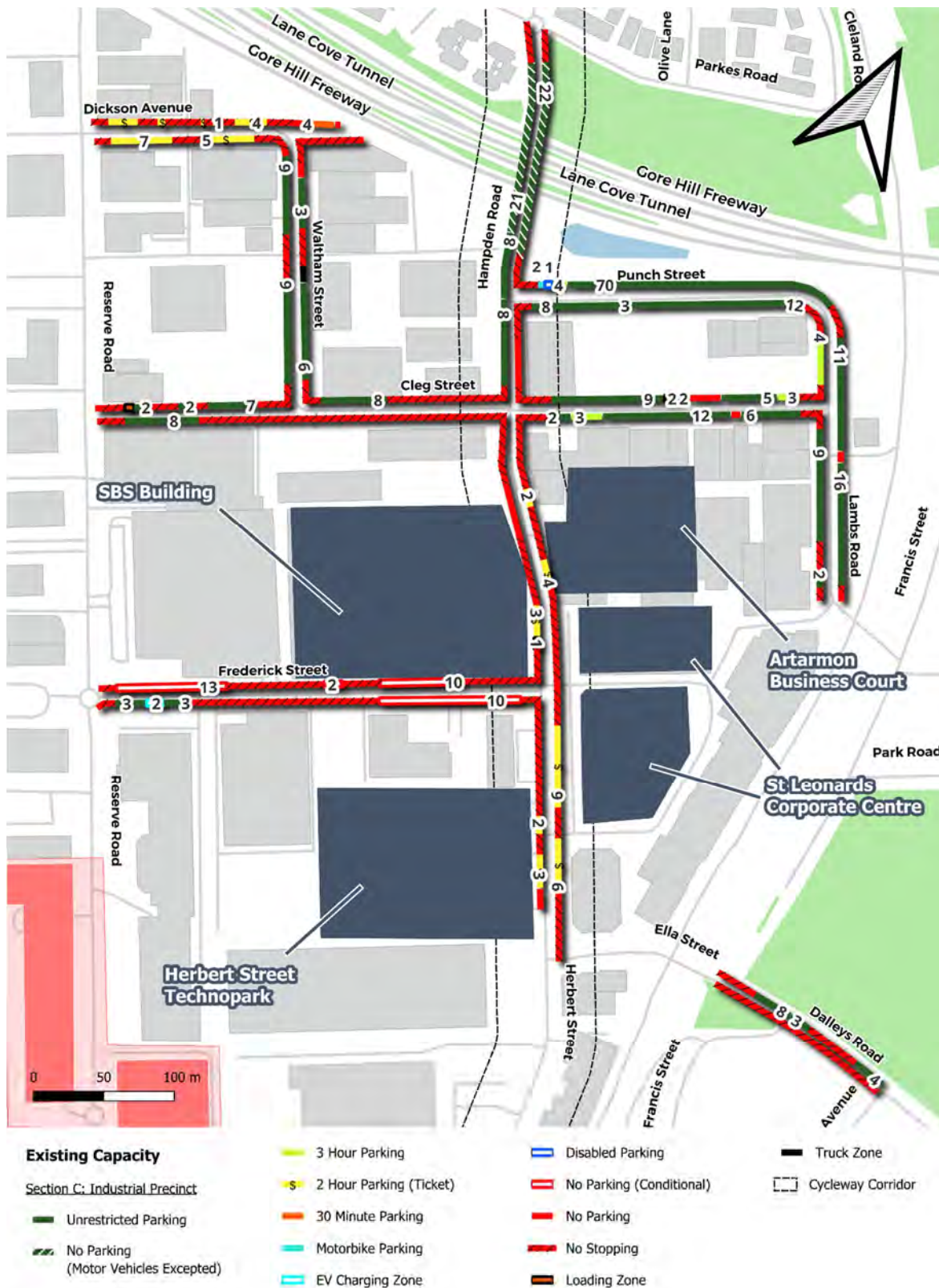


Figure 4.19 Section C existing capacity

4.4.1 Section occupancy

As discussed, in Section C the peak demand for on-street parking occurs on Thursday morning at 10am and Saturday evening (4 – 6:30pm), reaching a peak of 81 per cent and 32 per cent respectively. Figure 4.20 and Figure 4.21 depict the parking demand observed during the peaks on Thursday and Saturday. Thursday parking demand is significantly higher than the parking demand observed on Saturday, reflecting the primary on-street parking use by workers of the industrial precinct.

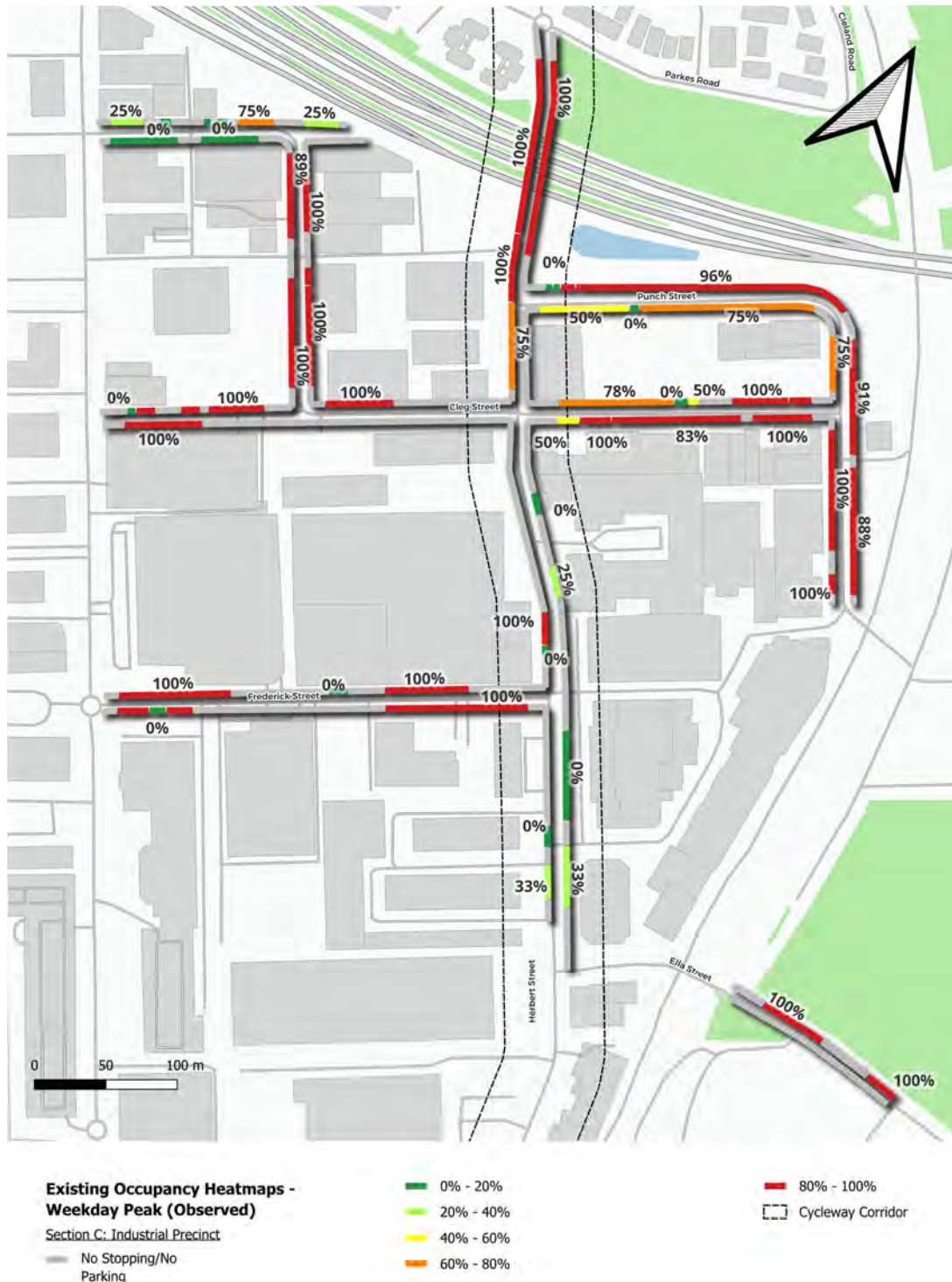


Figure 4.20 Thursday peak parking demand (observed at 10am)

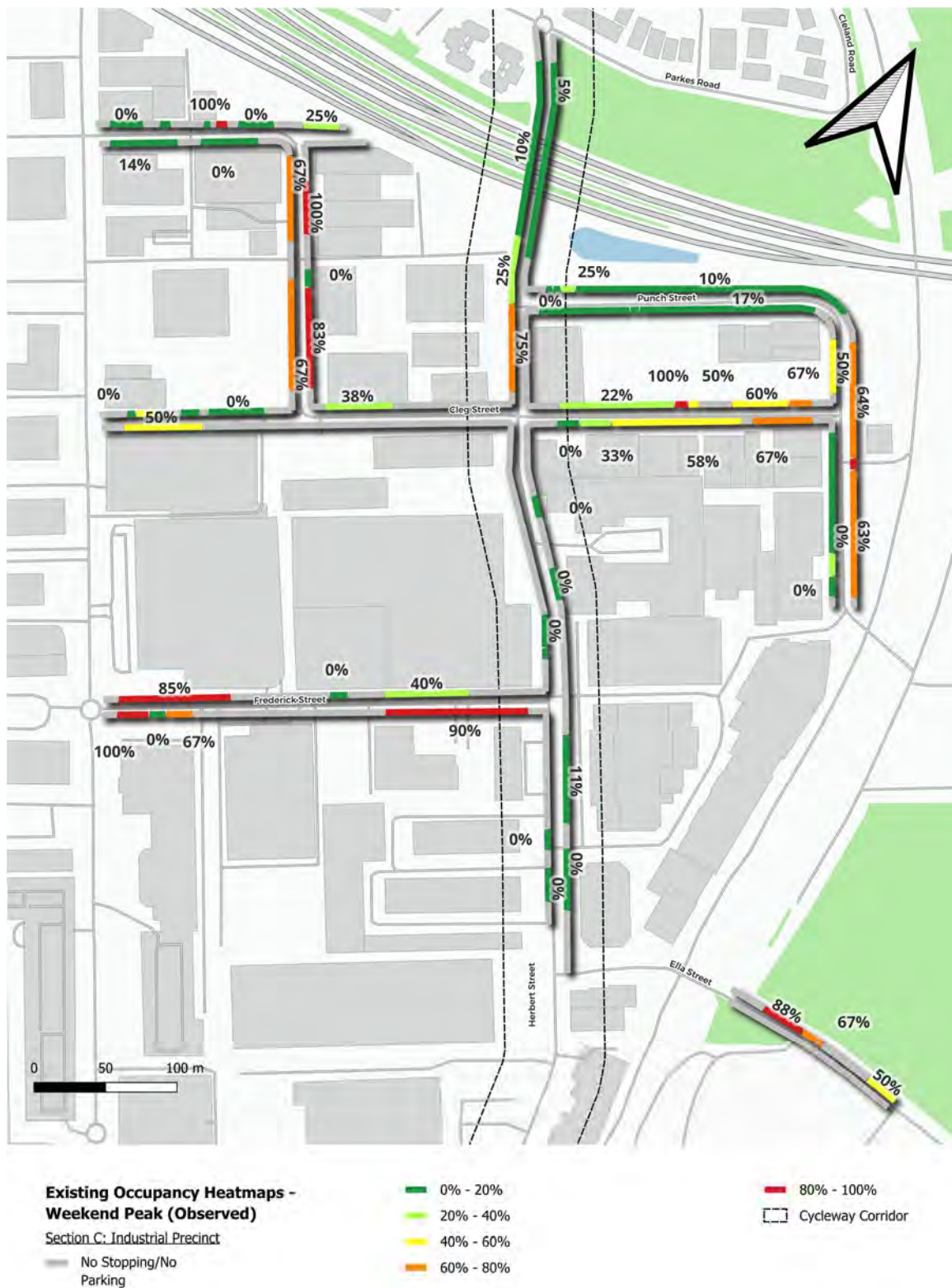


Figure 4.21 Saturday peak parking demand (observed at 5pm)

4.4.2 On-corridor occupancy

As depicted (see Figure 4.21), overall, on-street parking capacity is not reached or exceeded on Thursday. The peak parking demand is 72 per cent (64 spaces occupied), which is observed at 10:00 am and during the midday between 12:00 – 1:30 pm.

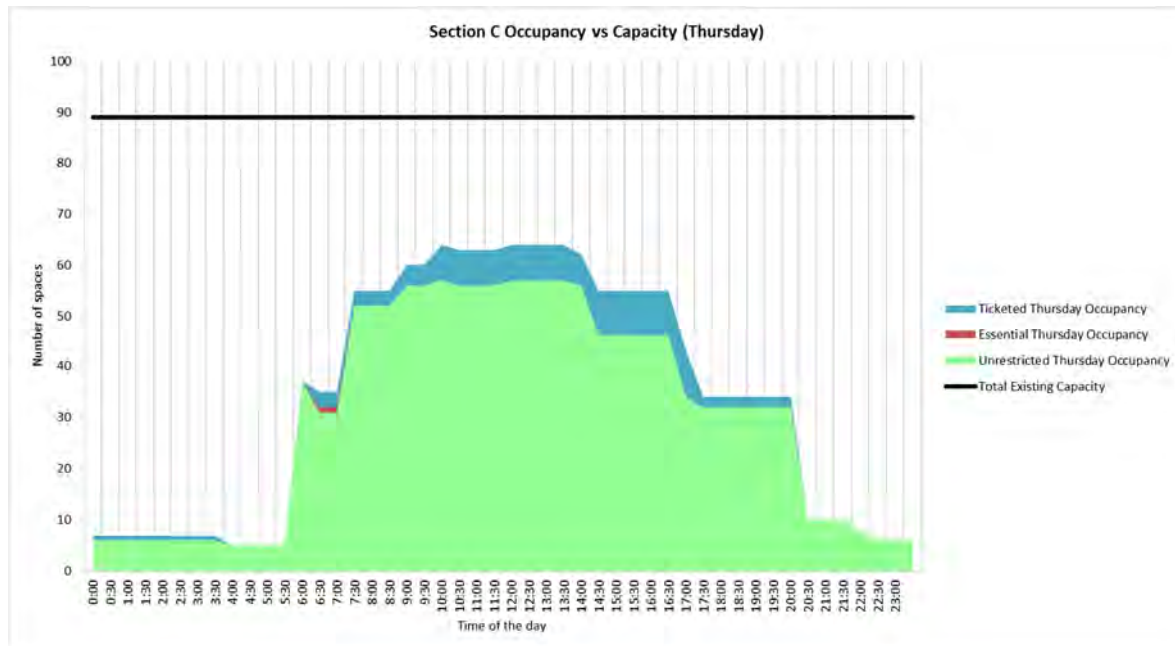


Figure 4.22 Section C Thursday existing occupancy vs capacity

On Saturday (see Figure 4.22), parking occupancy is substantially lower throughout the day, reflecting the absence of commuter parking during this period. Average weekend occupancy in this section is 8 per cent (7 spaces occupied), with a peak of 13 per cent (12 spaces occupied).

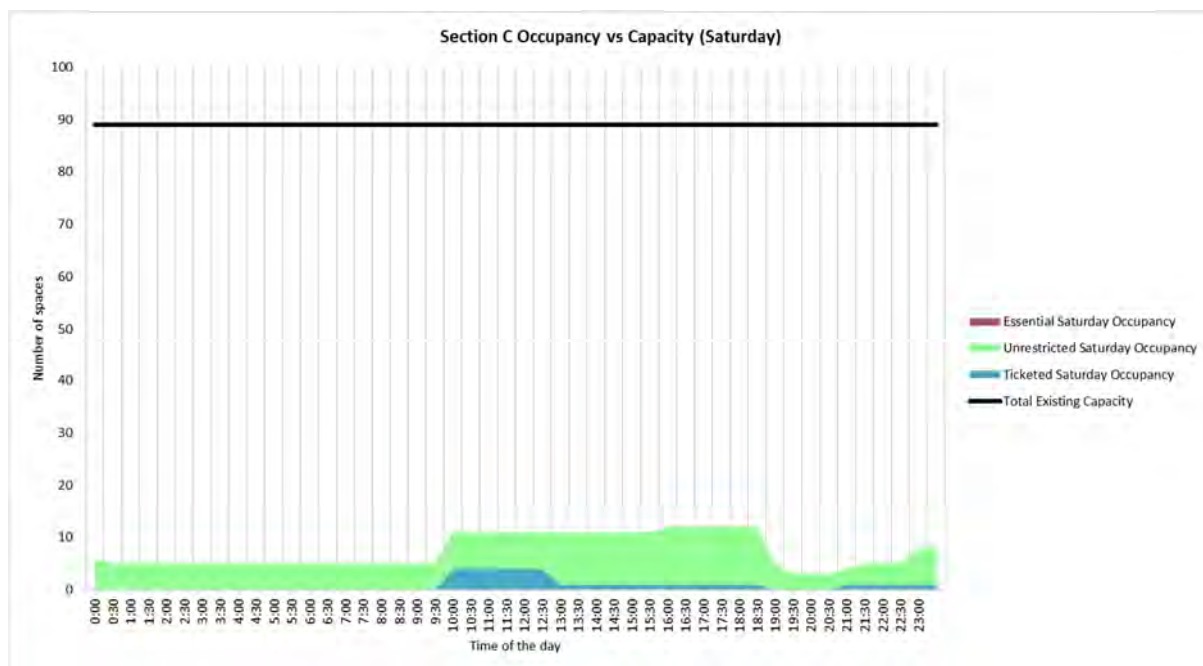


Figure 4.23 Section C Saturday existing occupancy vs capacity

Looking more closely, the following summarises on-corridor parking occupancy in Section C across all restriction types. For unrestricted and timed parking, demand has been assessed against the 45 and 85 per cent occupancy thresholds,

consistent with the benchmarks outlined in the Willoughby City Council *Street Parking Framework* (note essential parking is not measured against these thresholds as all essential parking must be retained). As depicted, on-corridor parking in Section C almost reaches existing capacity on Thursday for unrestricted parking and reaches capacity for essential parking:

- **Unrestricted:** Most common and most used parking type in Section C. Peaks on Thursday at 97 per cent occupancy around 10am and again between 12 – 1:30pm. Outside these hours, and on Saturdays, occupancy remains at 19 per cent or less.
- **Timed parking (2 hour):** This remains relatively underutilised on both Thursdays and Saturdays, hitting a peak occupancy of just 31% on Thursday between 2:30 – 5pm.
- **Essential parking spaces** (loading zones, disabled parking etc.): There is a single loading zone that was only used once, on Thursday between 6:30 – 7am.



Figure 4.24 Section C unrestricted parking

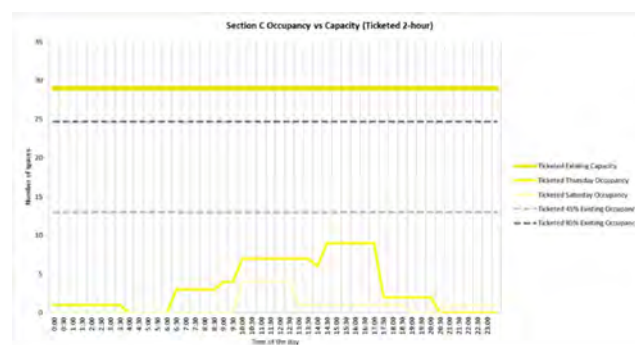


Figure 4.25 Section B ticketed parking (2 hours)

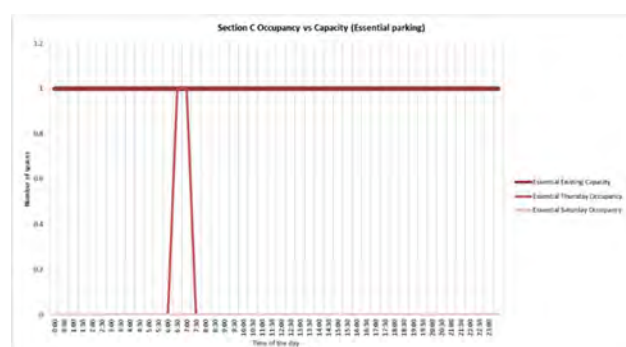


Figure 4.26 Section C essential parking

4.5 Section D: Hospital Precinct

Section D includes several key destinations, most notably Royal North Shore Hospital and St Leonards Station. Parking provision in this area, particularly for the hospital, plays an important role in ensuring patients, visitors and staff can access these essential services. Reflecting this higher level of activity, parking restrictions in Section D predominantly comprise short-stay and ticketed parking spaces (refer to Figure 4.27).

Section D provides a total of 287 on-street parking spaces (refer to Table 4.5). On the corridor specifically, a total of 70 on-street parking spaces are provided, most of which are ticketed. All ticketed parking is time-restricted to encourage higher turnover and support the area's demand for short-term parking. In addition to ticketed spaces, there is a relatively higher concentration of specialised uses such as council parking, mail zones, hospital pick-up and drop-off areas, bus zones and other restricted parking areas.

In the surrounding road network (side street) a total of 217 on-street parking spaces are provided in Section D. These side streets exhibit similar conditions to the corridor, with a greater proportion of ticketed parking, fewer unrestricted spaces and an increased number of disabled parking bays near hospital entrances.

As outlined in the approach to this study, on-street parking data from 2024 has been used in the southern part of section D. This data therefore does not reflect any on-street parking changes that have occurred with the opening of the City & Southwest metro (Chatswood to Sydenham).

Table 4.5 Section D capacity and restrictions and composition

Restriction	Capacity			
	On-corridor		Side Streets	
	No. of spaces	Percentage of total	No. of spaces	Percentage of total
Unrestricted	0	0%	5	2%
5-minute parking	2	3%	0	0%
Disabled parking	0	0%	10	5%
Loading zone	2	3%	0	0%
Ticketed	58	83%	191	88%
Other essential ⁴	8	11%	11	5%
Sub total	70		217	
Grand total	287			

⁴ 'Other' includes parking for Motorbike, EV, Car Share, Bus, Mail Zones, Authorised vehicle and council parking, 5-minute parking (for school PUDO) and Truck zones (available for parking during certain times of the day).

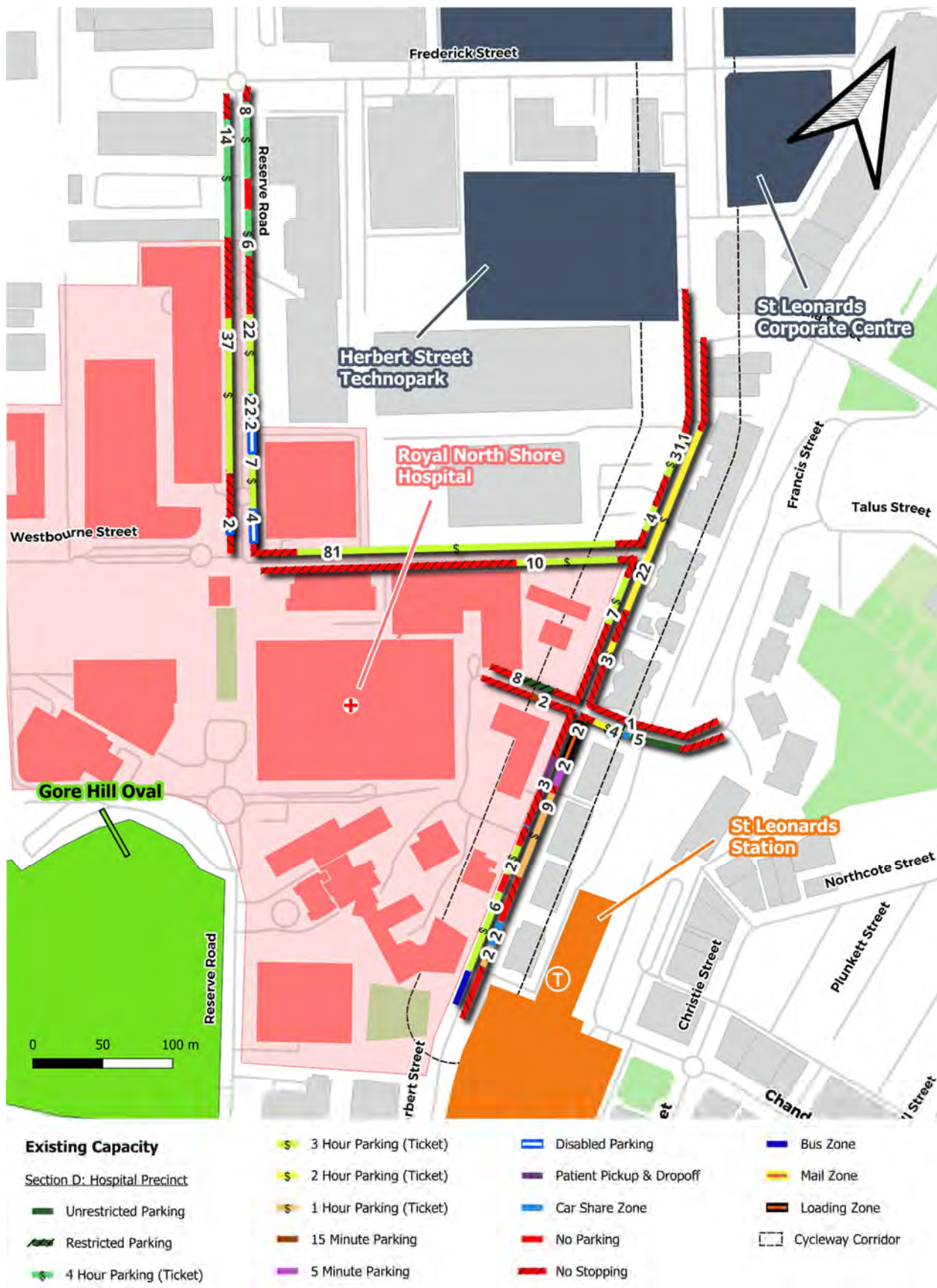


Figure 4.27 Section D existing capacity

4.5.1 Section occupancy

As discussed, in Section D the peak demand for on-street parking occurs on Thursday afternoon at 3:30pm and Saturday morning (10-10:30am), reaching a peak of 66 per cent and 62 per cent respectively. Figure 4.20 and Figure 4.21 depict the parking demand observed during the peaks on Thursday and Saturday. The figures indicate that parking activity near St Leonards station is greatest on Thursday, whilst demand near the hospital is consistent across the weekday and weekend.

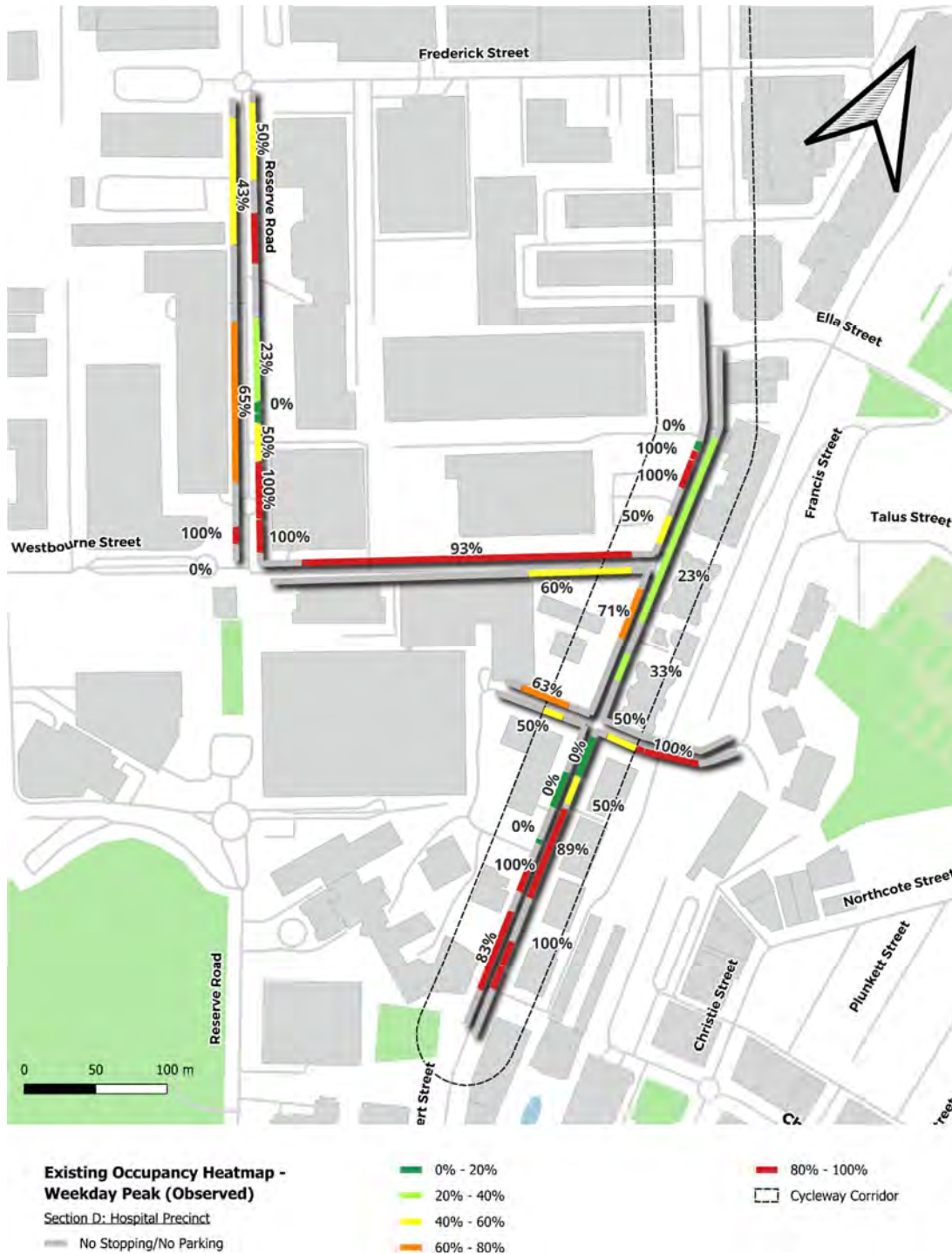


Figure 4.28 Thursday peak parking demand (observed at 3:30pm)

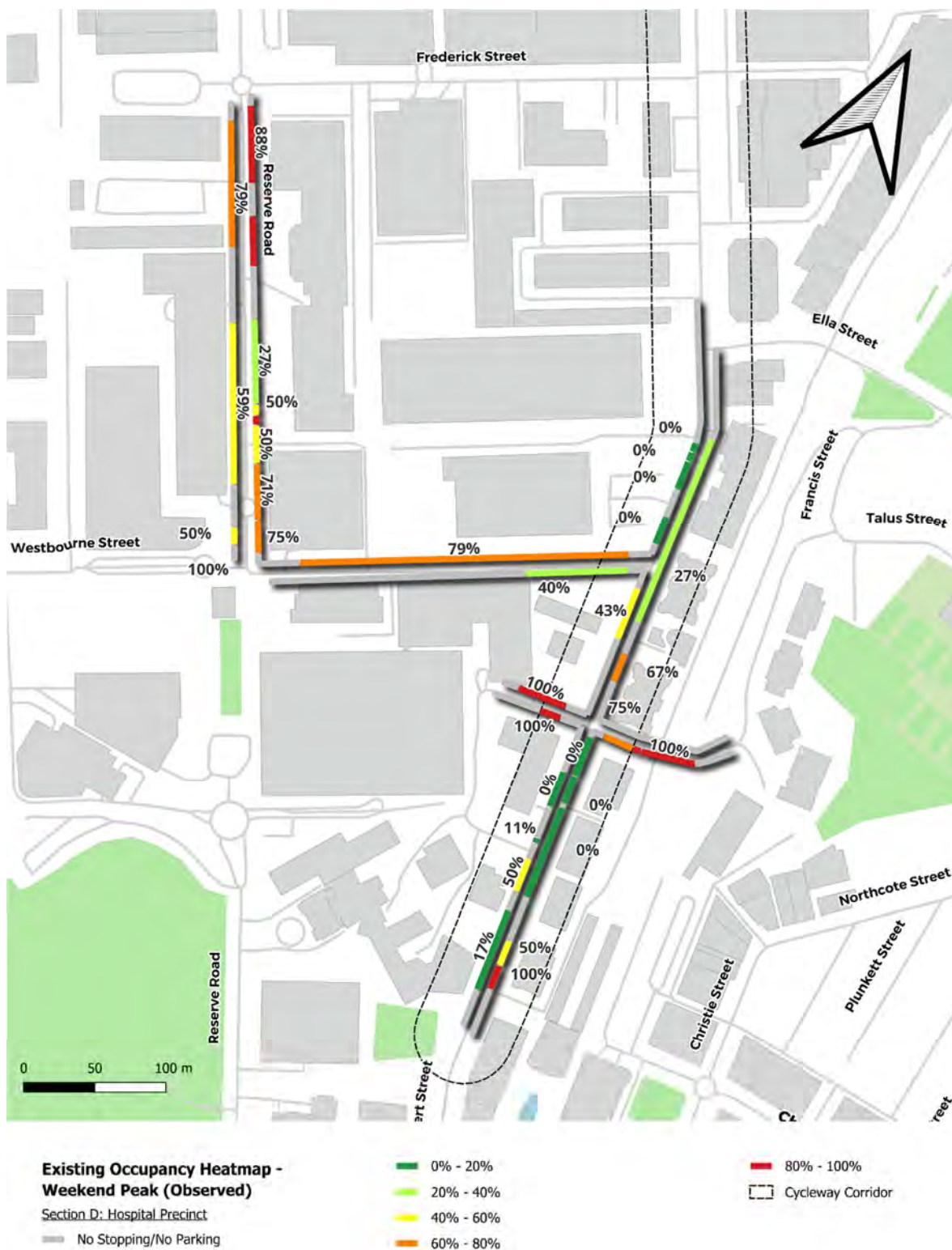


Figure 4.29 Saturday peak parking demand (observed at 10am)

4.5.2 On-corridor occupancy

As depicted (see Figure 4.29), overall, on-street parking capacity is not reached on Thursday. The peak observed parking demand is 64 per cent (45 spaces occupied), observed on Thursday at midday at 12:30pm. Whilst the average parking demand is approximately 46 per cent (32 spaces occupied).

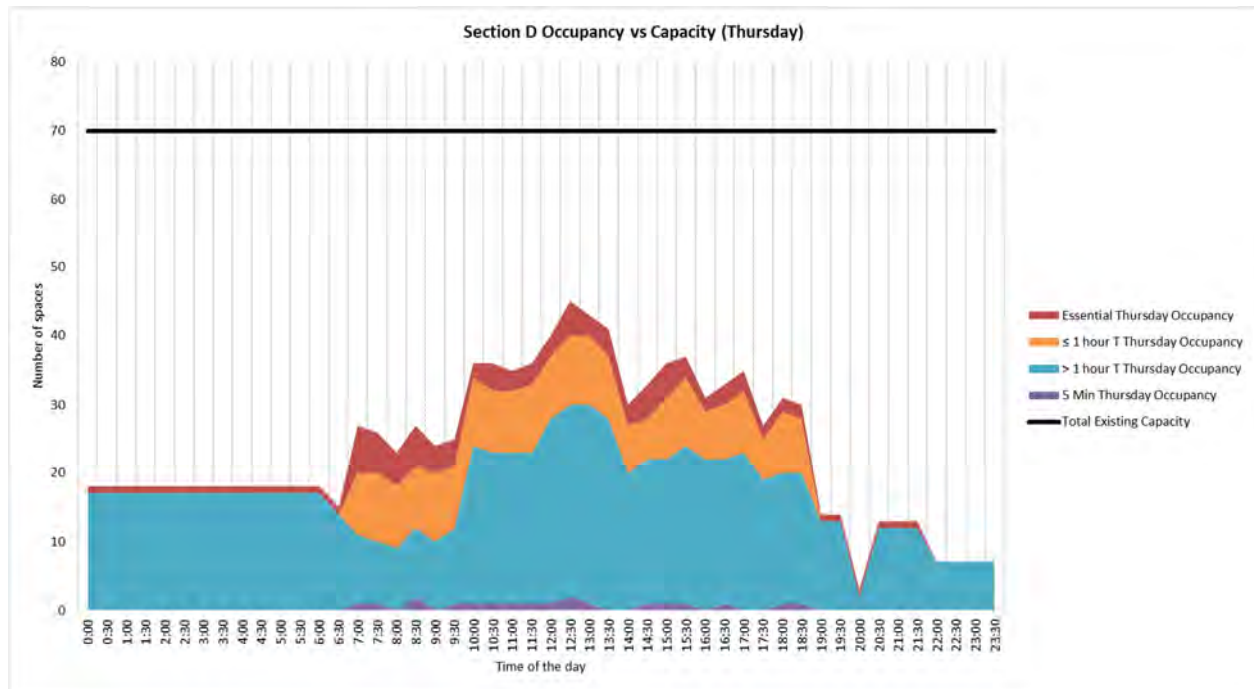


Figure 4.30 Section D Thursday existing occupancy vs capacity

On Saturday (see Figure 4.30), occupancy follows a similar trend to Thursday, with the average weekend parking occupancy at 39 per cent (27 spaces occupied) and peak occupancy at 51 per cent (36 spaces occupied).

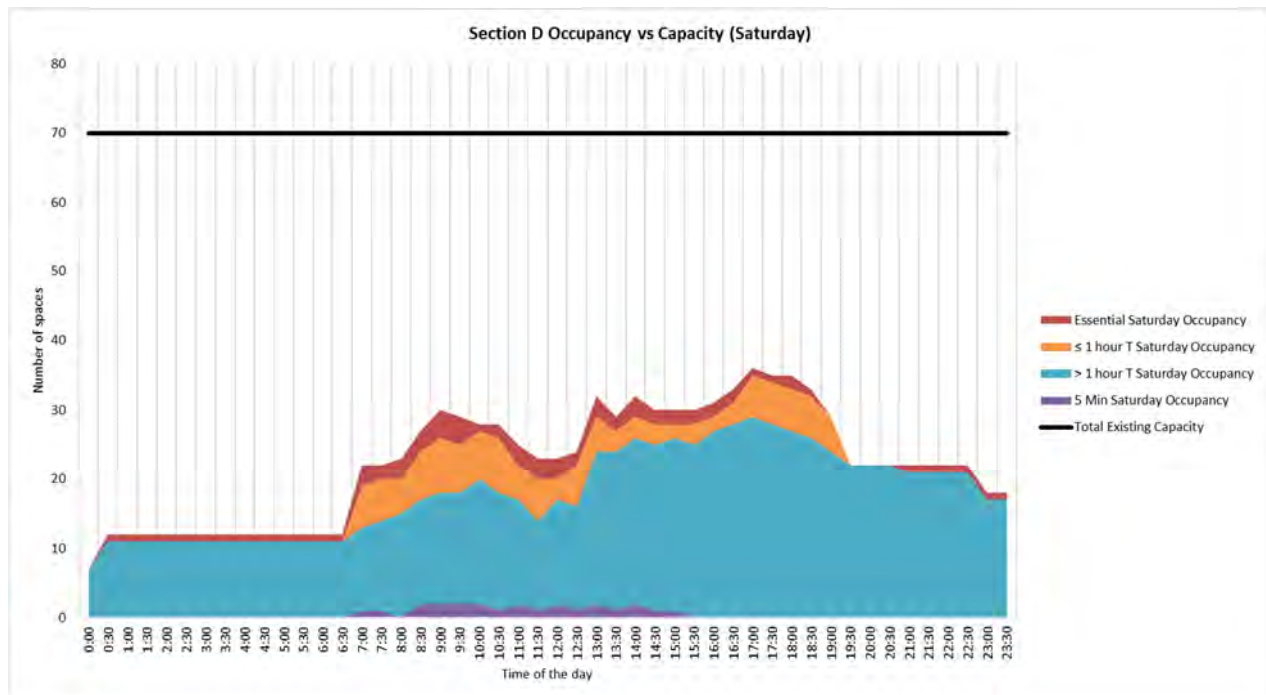


Figure 4.31 Section D Saturday existing occupancy vs capacity

Looking more closely, the following summarises on-corridor parking occupancy in Section D across all restriction types. For unrestricted and timed parking, demand has been assessed against the 45 and 85 per cent occupancy thresholds, consistent with the benchmarks outlined in the Willoughby City Council *Street Parking Framework* (note essential parking is not measured against these thresholds as all essential parking must be retained). As depicted, on-corridor parking in Section D reaches capacity for 5-minute parking only:

- **Ticketed parking (> 1 hour):** In Section D this consists of 2-hour and 3-hour spaces. Utilisation remains generally below 45% occupancy on both Thursday and Saturday. Thursday peaks at 62 per cent at 1:30pm, while Saturday also peaks at 62 per cent at 5pm.
- **Ticketed parking (1 hour):** This peaks at 91% on Thursday between 7:30 – 4pm, and 73 per cent on Saturday between 9 – 10:30am. Parking is mostly empty outside these hours.
- **Non-ticketed parking:** In Section D this consists of 5-minute spaces. This consistently hits 100 per cent between 8:30 – 1pm on Thursday, and 8:30 – 2pm on Saturday. Parking is mostly empty outside these hours.
- **Essential parking spaces** (loading zones and disabled parking): Parking demand does not reach existing capacity at any point throughout the day.

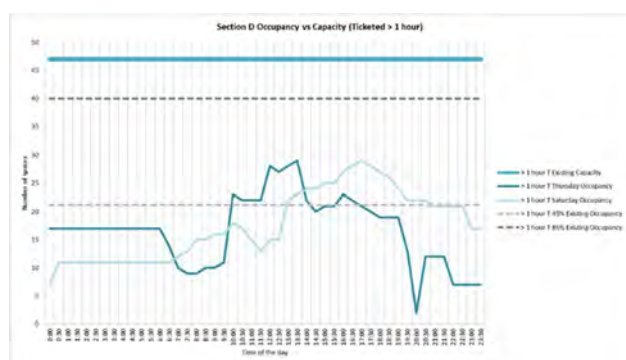


Figure 4.32 Section B timed parking > 1 hour

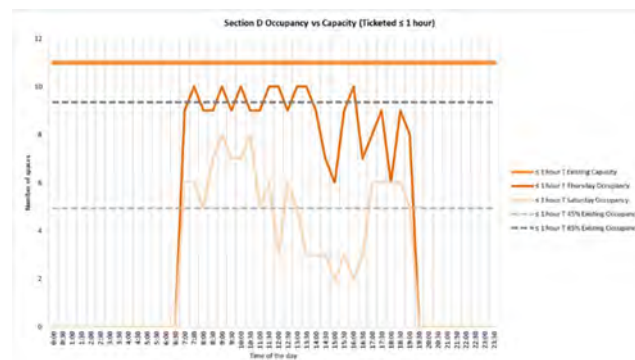


Figure 4.33 Section D timed parking ≤ 1 hour

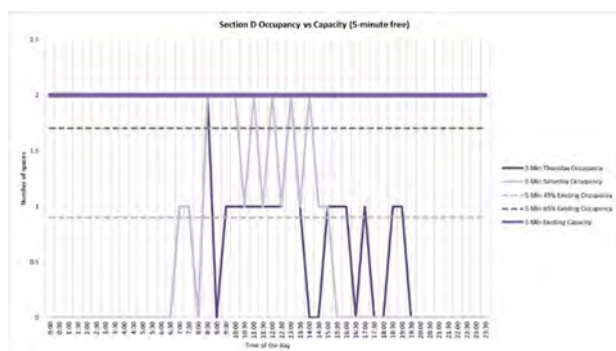


Figure 4.34 Section D 5-minute parking



Figure 4.35 Section D essential parking

4.6 Off-Street parking

As outlined in the approach, the off-street parking analysis was conducted at a high level and focused solely on publicly available off-street parking. This excludes parking reserved for retail customers and employees of local businesses. Data for this assessment was limited, with the following sources used:

- **Council parking data** for the Chandos Street Park & Ride
- **On-site observations** from a site visit on Tuesday, 2 December between 12:00 pm and 2:30 pm
- **Online resources** such as Parkopedia to determine capacity and restrictions where other data was unavailable

Public off-street parking is concentrated in Section D, with only a single bay available in Sections C and A. Most off-street parking is time-restricted and ticketed, particularly in Section D near the hospital precinct. Observations indicate high occupancy levels, with an estimated average of approximately 80 per cent.

Table 4.6 Off-street parking observations

ID	Name	Capacity	Restriction	Section	Occupancy (%)	Source
1	Gore Hill Oval	36	2P Mon - Fri, 6 am - 6 pm	D	56%	Observations
2	Gore Hill Oval Upper carpark	151	Ticketed after 3 hours	D	98%	Observations
3	Hospital parking	16	3P contactless payment	D	100%	Observations
4	Chandos Street Park and ride	60	Ticketed	D	115%	Data provided by WCC
5	Talus Street Reserve	35	4-hour parking	D	77%	Observations
6	Naremburn Park carpark	48	Unrestricted	C	94%	Observations
7	Artarmon carpark	60	30 All day and 30 3P	B	98%	Observations
8	Hospital P2 carpark	448	Ticketed	D	65%	Observed occupancy,
9	Hospital P1 carpark	1717	Ticket - time duration up to a week	D	97%	Observations
10	Wilson parking Christie Street	83	Ticketed	D	23%	Observations
11	The Forum	156	Ticketed	D	Unknown	Observations
	Total	3237			80% (estimate)	

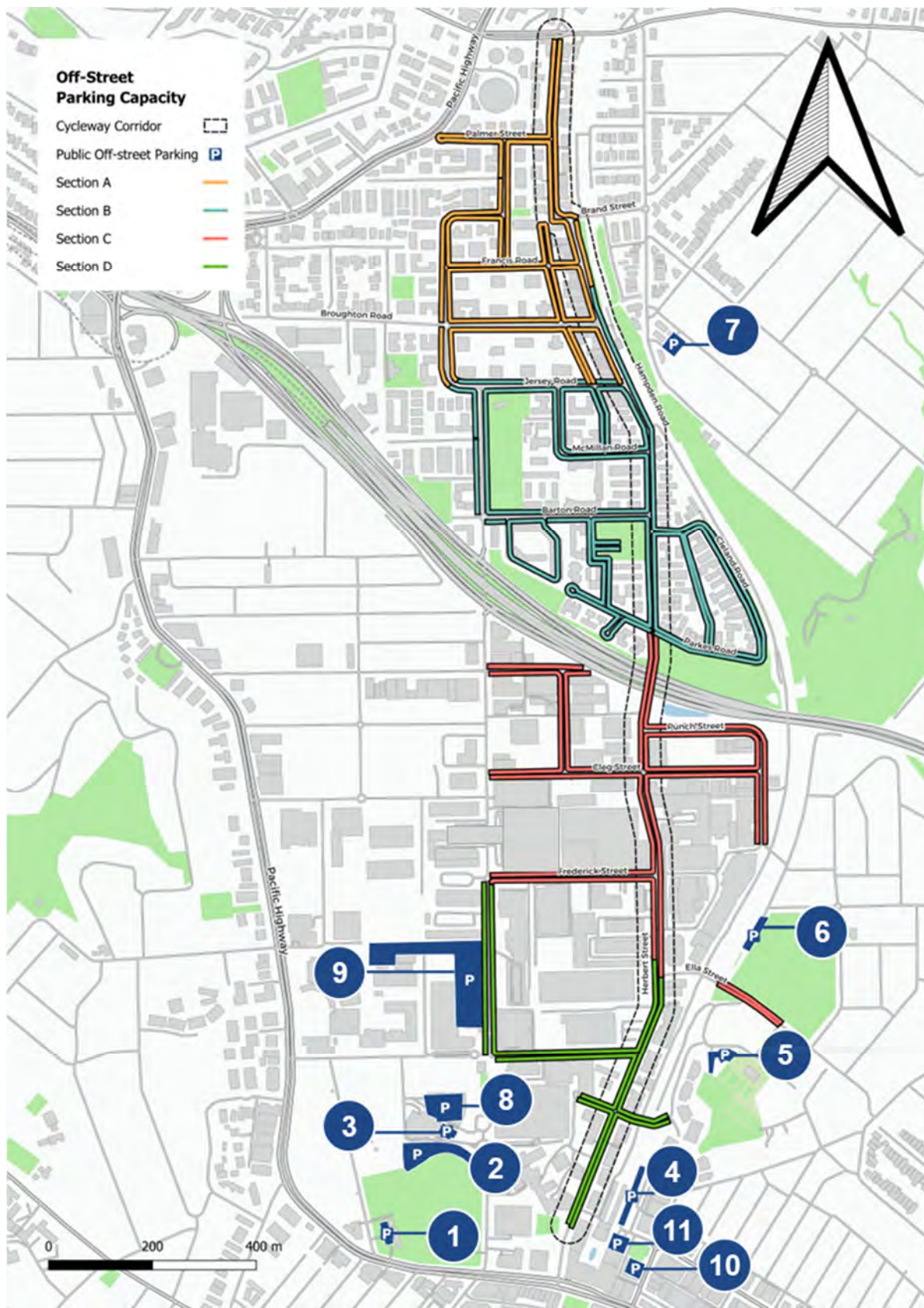


Figure 4.36 Off-street parking

Off-street carpark ID's from Table 4.6 indicated in the map

5 Proposal impacts

5.1 Overview

The proposed Chatswood to St Leonards cycleway would reduce the on-street parking capacity of Hampen Road and Herbert Street by 145 spaces. As depicted in Table 5.1, the future reduction in capacity would result in on-corridor parking demand exceeding capacity on Thursday in Sections A, B and C and Saturday in Section B. A more detailed analysis of future demand and capacity, taking into account parking restrictions, will be provided for each section in the following discussion.

Table 5.1 Future on-corridor capacity

Section	Existing on-corridor parking spaces	Future on-corridor parking spaces	Change in on-corridor parking spaces
A	104	62	-42
B	92	50	-42
C	89	50	-39
D	70	48	-22
Total	355	210	-145

5.2 Section A

With the introduction of the cycleway, Section A's on-street (on-corridor) parking capacity is projected to decrease by 42 spaces, leaving a total of 62 spaces. As depicted in Table 5.2, this reduction in on-street parking occupancy would impact unrestricted and 4-hour parking specifically.

Table 5.2 Section A future on-corridor capacity

Restriction	Existing on-corridor parking spaces	Future on-corridor parking spaces	Difference
Unrestricted	62	26	-36
4-hour parking	12	6	-6
1-hour parking	4	4	0
30-minute parking	19	19	0
Disabled parking	4	4	0
Loading zone	3	3	0
Total	104	62	-42

As depicted in Figure 5.1 and Figure 5.2, there is not enough on-corridor supply alone to offset the anticipated loss of parking due to the proposal. The most impacted restrictions include:

- **Unrestricted parking:** On both Thursday and Saturday, future capacity falls below occupancy for the entire day, with the largest shortfall of 22 spaces occurring on Thursday between 7:30 – 9:00pm (refer to A1.1).

- **Timed parking > 1 hour:** on both Thursday and Sunday, future capacity falls below occupancy at regular points throughout the day, with the largest shortfall of two spaces occurring on Saturday between 7:00 – 10:00pm (refer to A1.2).

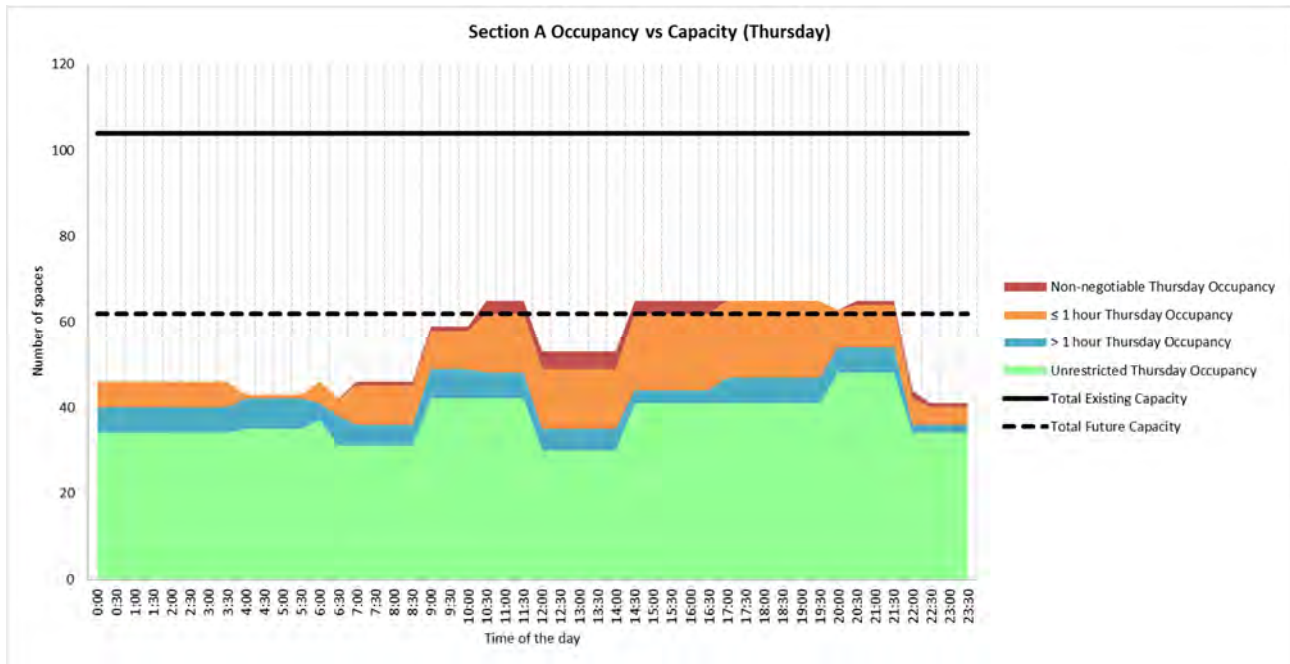


Figure 5.1 Section A Thursday: on-corridor occupancy vs future capacity

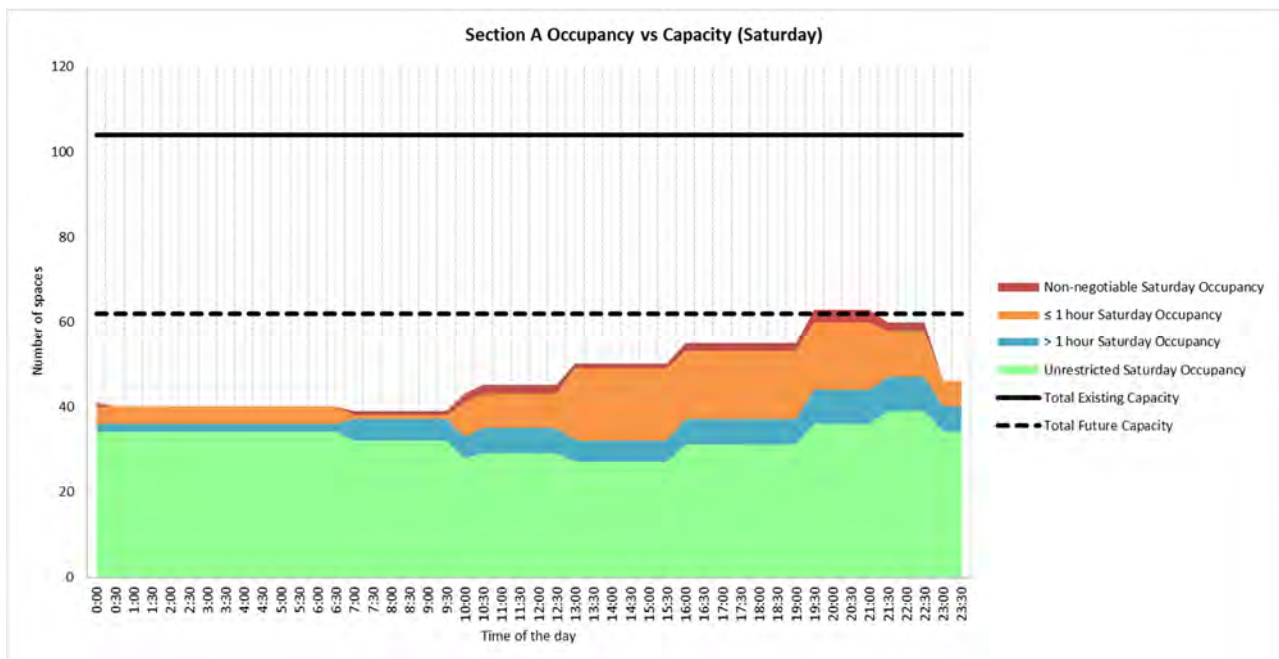


Figure 5.2 Section A Saturday: on-corridor occupancy vs future capacity

5.3 Section B

With the introduction of the cycleway, Section B's on-street (on-corridor) parking capacity is projected to decrease by 42 spaces, leaving a total of 50 spaces. As shown (refer to Table 5.3), this reduction in spaces would impact unrestricted and 30-minute parking specifically.

Table 5.3 Section B future on-corridor capacity

Restriction	Existing on-corridor capacity	Future on-corridor capacity	Difference
Unrestricted	68	28	-40
4-hour parking	10	10	0
1-hour parking	6	6	0
30-minute parking	4	2	-2
Disabled parking	1	1	0
Other	1	1	0
No parking conditional	2	2	0
Total	92	50	-42

As depicted in Figure 5.3 and Figure 5.4, there isn't enough supply on-corridor to offset the anticipated loss of parking due to the proposal. This shortfall has a larger impact during weekday day-time. The most impacted restrictions include:

- **Unrestricted parking:** On both Thursday and Saturday, future capacity remains below occupancy throughout the day, with the largest shortfall of 36 spaces, occurring during the peak period (refer to A1.1).
- **Timed parking ≤ 1 -hour:** During Thursday's peak period (5:00–7:30 pm), occupancy exceeds future capacity, creating a shortfall of two spaces (refer to A2.3).

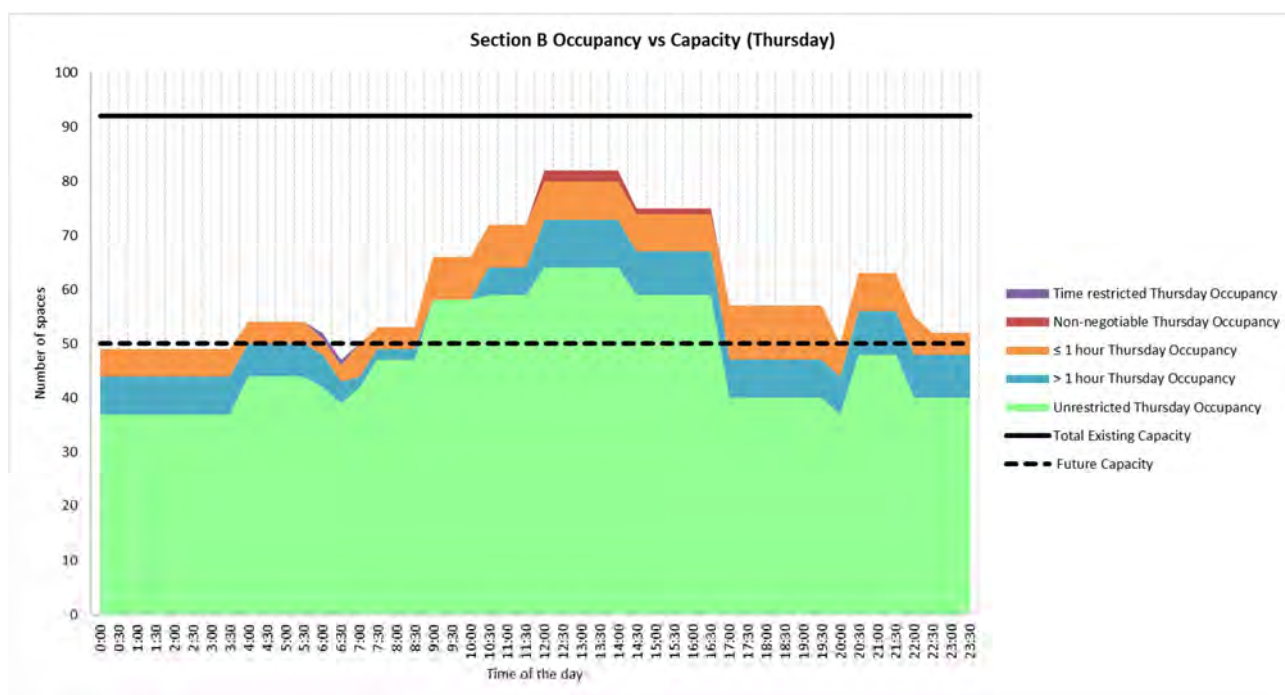


Figure 5.3 Section B on-corridor Thursday occupancy vs future parking capacity

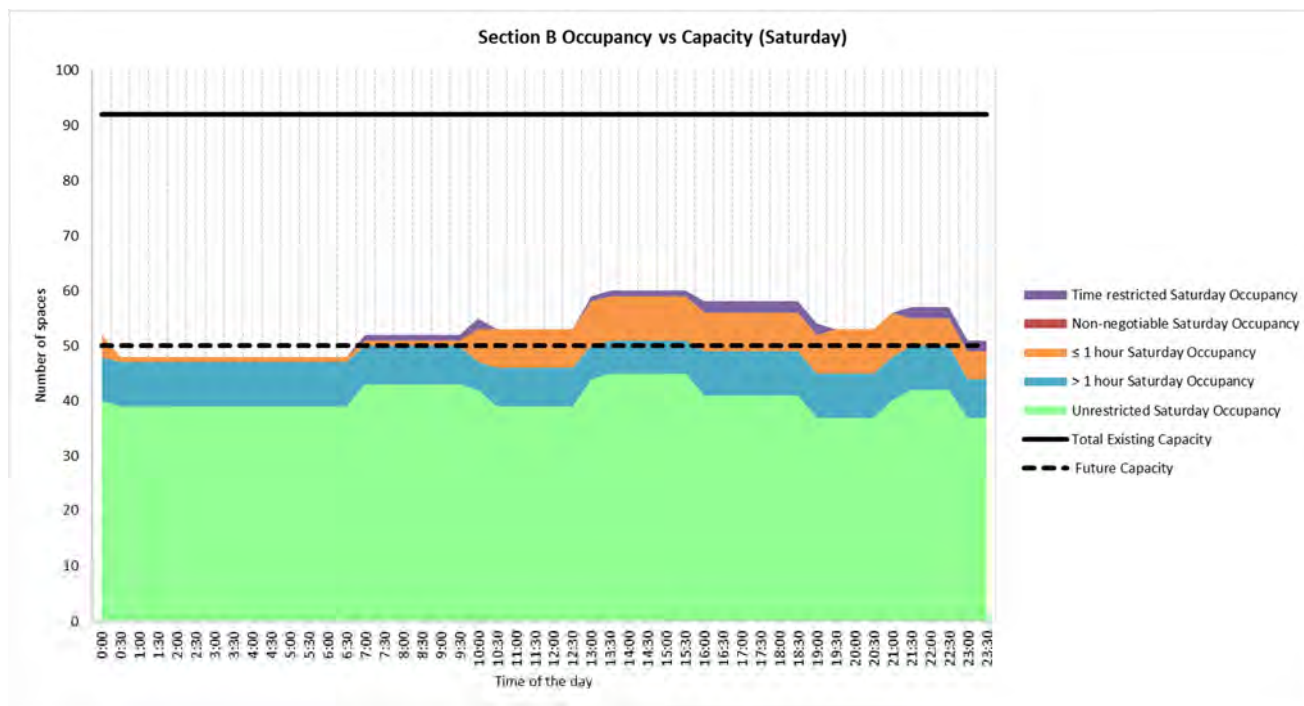


Figure 5.4 Section B on-corridor Saturday occupancy vs future parking capacity

5.4 Section C

With the introduction of the cycleway, Section C's on-street (on-corridor) parking capacity is projected to decrease by 39 spaces, leaving a total of 50 spaces. As shown (refer to Table 5.4), this reduction in spaces would impact unrestricted and ticketed parking spaces as well as a loading zone. Note as discussed, this loading zone space is an essential space, meaning it cannot be removed or needs to be offset by a new space within proximity.

Table 5.4 Section C future on-corridor capacity

Restriction	Existing on-corridor capacity	Future on-corridor capacity	Difference
Unrestricted	59	37	-22
Loading zone	1	0	-1
Ticketed (2-hour)	29	13	-16
Total	89	50	-39

As depicted in Figure 5.5 and Figure 5.6, there isn't enough supply on-corridor to offset the anticipated loss of parking due to the proposal on the weekday only. The most impacted restrictions include:

- **Unrestricted parking:** On Thursday alone, future capacity falls below occupancy between 7:30 am – 4:30 pm, with the largest shortfall of 20 spaces at 10:00 am and between 12:00 – 1:30 pm (refer to A3.1).
- **Essential parking:** On Thursday occupancy exceeds future capacity between 6:30 – 7:00 am, with a shortfall of 1 space (refer to A3.3). As discussed, this space should be offset by another nearby parking option, such as the adjacent ticketed space. It is important to note that even with the removal of an additional ticketed space, ticketed parking occupancy will still remain below future capacity.

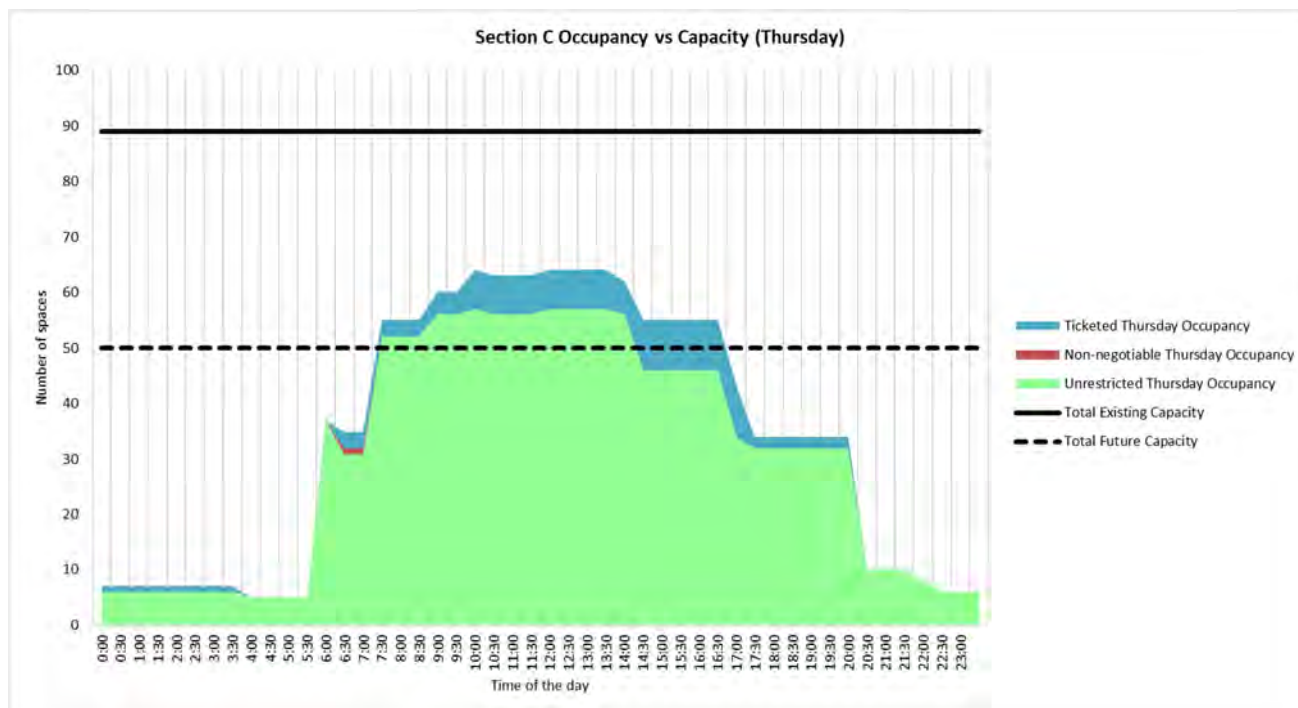


Figure 5.5 Section C on-corridor Thursday occupancy vs future parking capacity

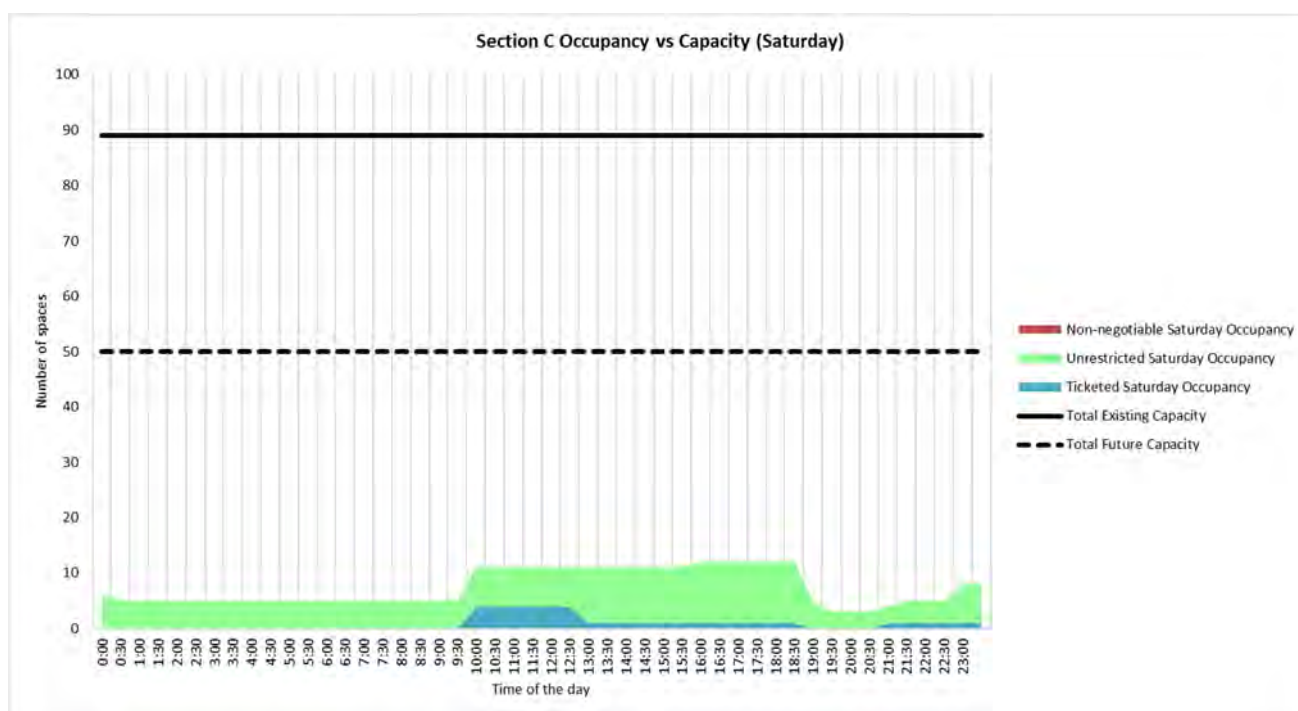


Figure 5.6 Section C on-corridor Saturday occupancy vs future parking capacity

5.5 Section D

With the introduction of the cycleway, Section D's on-street (on-corridor) parking capacity is projected to decrease by 22 spaces, leaving a total of 48 spaces. As shown (refer to Table 5.5), this reduction in spaces would impact 5-minute parking, the loading zone, ticketed 3-hour parking (increase), ticketed 2-hour parking and ticketed 1-hour parking. Note this loading zone space is essential to service nearby businesses, meaning a suitable replacement will need to be considered in the mitigation.

Table 5.5 Section D future on-corridor capacity

Restriction	Existing on-corridor capacity	Future on-corridor capacity	Difference
5-minute parking	2	0	-2
Loading zone (essential)	2	1	-1
3-hour (ticket)	22	31	9
2-hour (ticket)	25	0	-25
1-hour (ticket)	11	8	-3
Other (essential)	8	8	0
Total	70	48	-22

As depicted in Figure 5.7 and Figure 5.8, there is sufficient on-corridor supply to offset the anticipated loss of parking resulting from the proposal. However, certain specific restrictions do not have adequate supply to compensate for this loss. Incorporating these restrictions into the remaining section capacity may need to be considered. Specifically, existing occupancy exceeds future capacity for the following restrictions and time periods:

- **5-minute parking:** Occupancy exceeds future capacity consistently across the day between 7:00 am – 7:00 pm on Thursday and 7:00 am – 3:00 pm on Saturday, with a maximum shortfall of two spaces (refer to A4.3).
- **Ticketed ≤ 1 hour:** Occupancy reaches or exceeds future capacity consistently on Thursday between 7:00 am – 7:00 pm, with a maximum shortfall of two spaces (refer to A4.2).

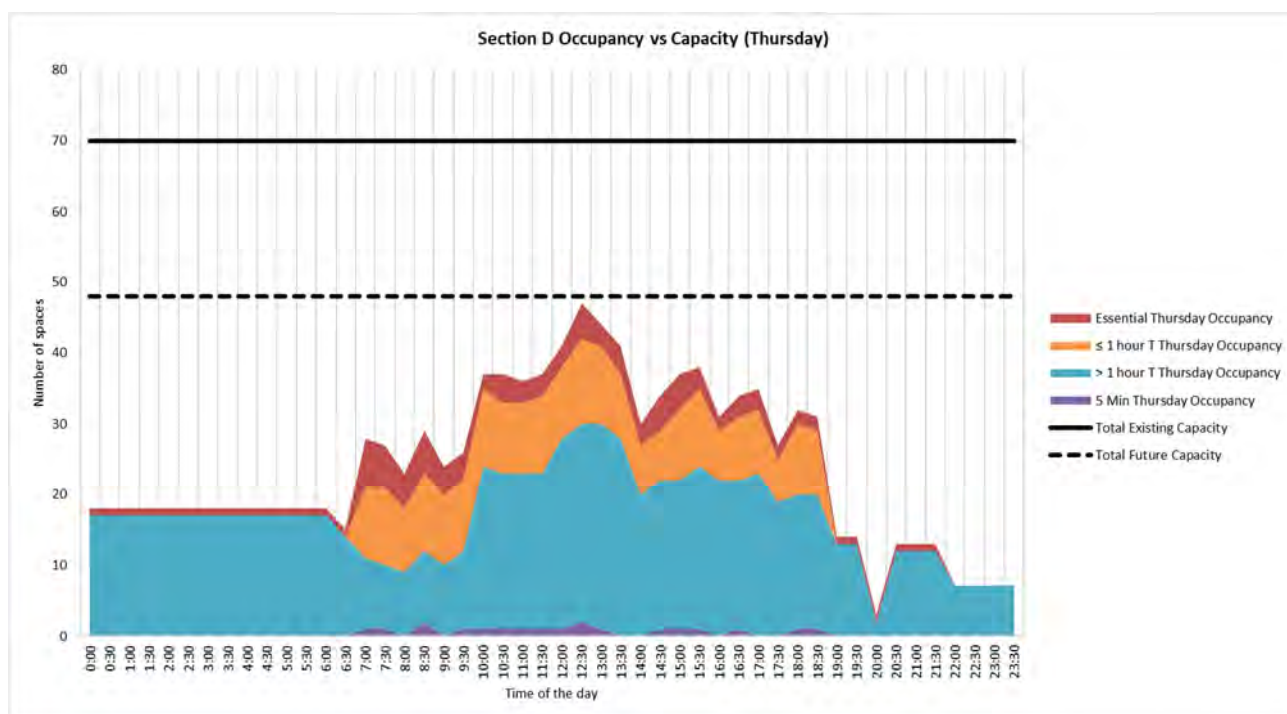


Figure 5.7 Section D on-corridor Thursday occupancy vs future parking capacity

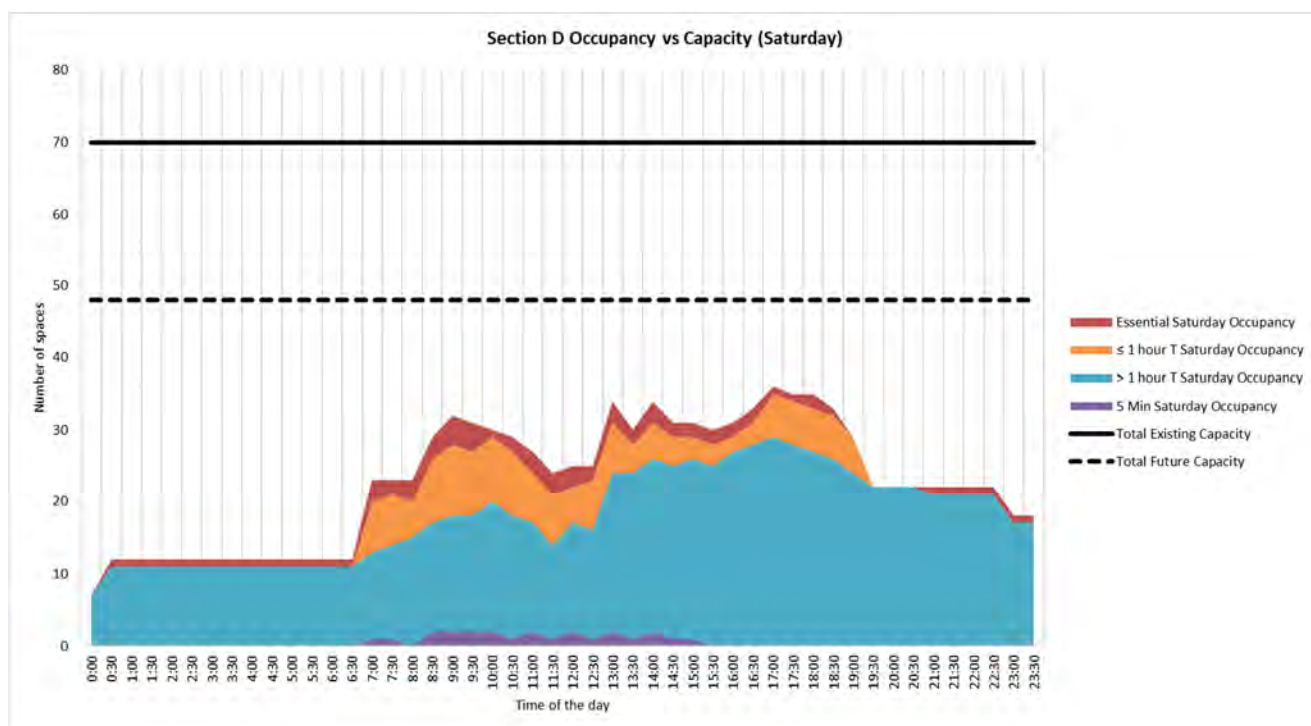


Figure 5.8 Section D on-corridor Saturday occupancy vs future parking capacity

6 Mitigation measures

6.1 Approach

The approach to identifying mitigation measures closely aligns with the Strategic Directions outlined in the *Street Parking Strategy* (WCC, 2017), which is discussed in more detail in Section 2.2. For this study, the following three-step methodology has been used to identify the measures that would mitigate the impacts of the proposed cycleway on on-street parking.



1. Existing offsets:

Identification of existing offsets that are (1) the same/similar restriction type and (2) within a 400-metre walking distance.



2. Parking control review:

Identification of updates to parking restrictions and controls, based on the *Proposed Street Parking Framework* (aligns with Strategic Directions 1 and 2).



3. On-street layout optimisation:

On-street parking design rearrangement to maximise space efficiency (aligns with Strategic Direction 5).

An outline of strategic measures to mitigate the impact of this proposal and support mode-shift in the Willoughby LGA have also been provided in Section 6.6. The resulting mitigation measures from the three steps and strategic considerations have been consolidated in Section 6.7, to support WCC's implementation of actions to support the proposal.

The mitigation measures developed primarily consider existing land-use conditions and current parking demand. However, consideration of future land-use change is important to ensure the long-term effectiveness of the proposal. Specifically, Section C has been identified for a change in zoning from industrial use to mixed use. This is in line with the State Government's goal of enabling more brownfield developments in accessible areas near public transport. A proposal is already with the NSW State Government for a large rezoning at 33-37 Herbert Street, between Ella Street and Westbourne Street. Future land-use changes such as these present opportunities to strengthen active transport outcomes along the corridor and potentially reduce on-street parking provision through development controls. While detailed information on these developments is limited at this stage, they have been considered at a strategic level in the development of the mitigation measures.

6.1.1 Street Parking Strategy framework

As described in Section 2.2, the Street Parking Strategy framework (WCC, 2017) identifies six strategic directions for providing a framework for consistent and transparent decision-making when it comes to parking management. Strategic direction 1 recommends the adoption of a framework (refer to Figure 6.1), which makes recommendations for shorter time limits where parking exceeds certain occupancy levels e.g. exceeds 85 per cent, the 'optimum capacity'. This framework has been embedded within the methodology for this project, to support the identification of new parking restrictions through a systematic and evidence-based approach.

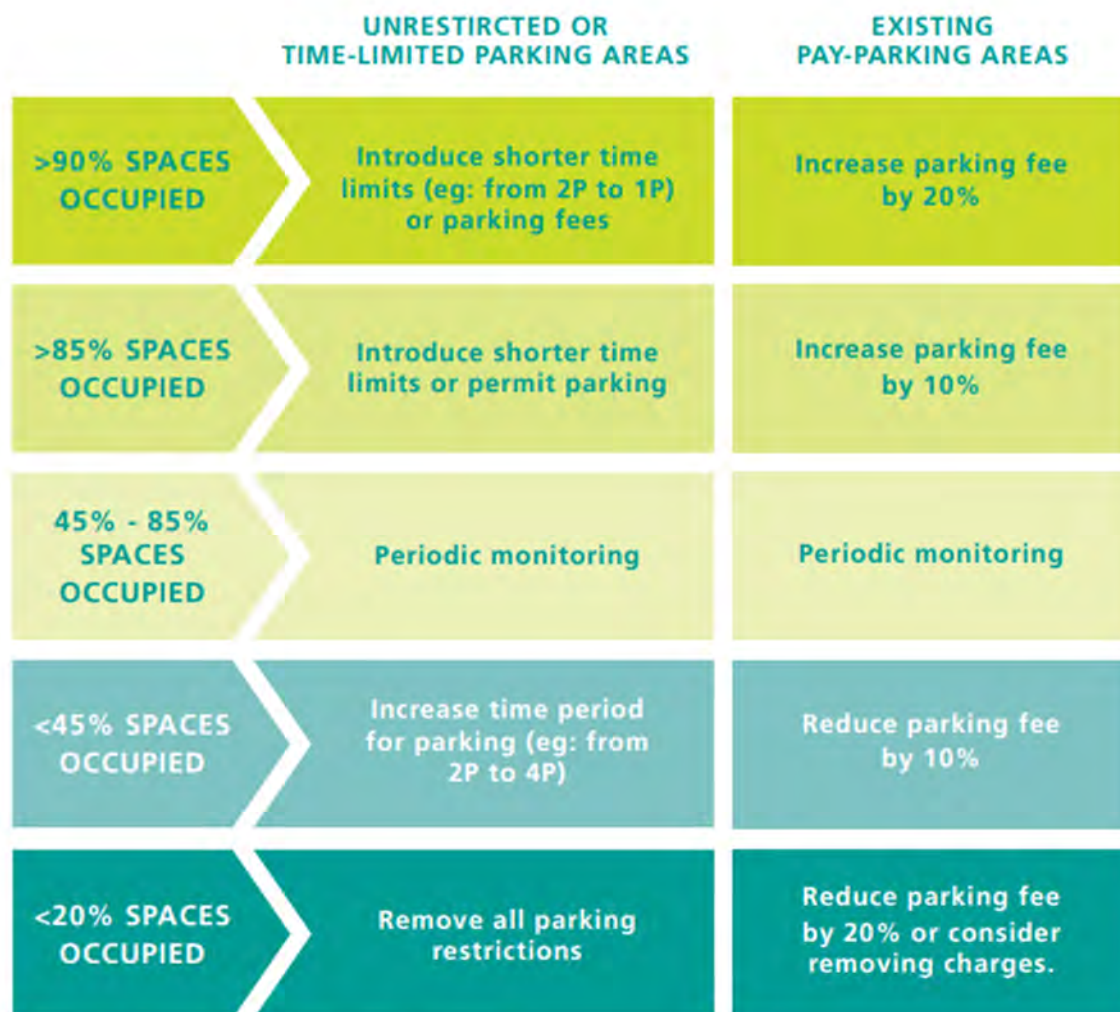


Figure 15 – Proposed Street parking framework

Figure 6.1 Proposed Street Parking Framework (WCC 2017)

6.2 Section A

The findings and measures for mitigating the impact of the proposal in Section A include:

- **Existing offsets:** There is enough capacity available on side streets during the peak parking periods, to effectively “offset” the parking loss from the proposal.
- **Parking control review:** A total of 18 parking spaces are recommended to be converted from Unrestricted to 4-hour parking (permit holders excepted), to manage parking demand and ensure residential and permit holder parking in this section is protected.
- **On-street layout optimisation:** A total of 38 additional spaces can be provided in Section A, on Buller Road and Robert Street. This effectively reduces the net loss of on-street parking spaces in Section A to four spaces.

6.2.1 Existing offsets

While the study recommends measures to improve kerbside efficiency and increase on-street parking supply, existing on-street parking offsets within the surrounding street network have also been identified to assess the ability of nearby streets to accommodate future parking demand. For each section, these offsets were assessed during peak on-corridor parking periods. This approach provides greater certainty about the proposal’s impacts at a more granular,

space-by-space level. Essential parking spaces (loading zones, PUDO etc) have not been included in this assessment, as like for like replacements will be identified as part of the parking control review.

In Section A, sufficient side-street parking has been identified within a 400-metre walking distance to offset the on-corridor parking spaces removed as part of the proposal, without the need to introduce new on-street parking. These spaces were assessed during the **on-corridor parking peaks** observed at 11am and 8pm on a weekday (refer to Appendix C for maps depicting indicative existing parking offsets). Table 6.1 identifies that there is sufficient existing on-street parking on the side streets in Section A to effectively ‘offset’ the parking loss from the proposal.

Table 6.1 Section A existing parking offsets

Time period	Restriction type	Maximum shortfall in on-corridor parking in the future (spaces)	Available parking in side streets* (spaces)
Weekday AM peak (11:00 am)	Unrestricted	- 24	27
	Timed (4P)	- 3	20
Weekday PM peak (8:00 pm)	Unrestricted	- 30	45
	Timed (4P)	-4	17

*This only includes on-street parking in side streets within approximately 400 metres of the corridor.

6.2.2 Parking control review

Across Sections A and B, a total of 74 spaces would be removed from the proposal (not accounting for the additional spaces being added as discussed in the following Section 6.2.3). The impact of this can be minimised through changes to parking controls. As depicted in Figure 6.2, unrestricted parking demand in Section A peaks at 15 spaces over the 85 per cent future capacity. In these instances, the WCC *Proposed Street Parking Framework* recommends adopting shorter time limits to improve parking turnover and manage parking demand. The proposed changes to parking restrictions are summarised in Table 6.2, recommending a total of 18 unrestricted parking spaces to be converted to timed parking (4P 8:30 am – 5:30 pm (Permit Holders Excepted)).

As per Figure 6.3, timed demand fluctuates above and below the 45 per cent future occupancy rate. It is recommended that monitoring of timed parking occurs and if occupancy drops further, consideration given to extending time limits in some locations.

Table 6.2 Section A proposed restriction changes

Location	Number of spaces	Current restriction	Proposed restriction	Justification
Broughton Road (northern and southern kerbs)	11 spaces	Unrestricted	4P 8:30 am – 5:30 pm (Permit Holders Excepted)	- Addresses the high future occupancy resulting from the proposal. - Natural extension from the 2-hour parking directly to the east.
Robert Street (eastern kerb)	7 spaces	Unrestricted	4P 8:30 am – 5:30 pm (Permit Holders Excepted)	- Addresses the high future occupancy resulting from the proposal. - Opposite existing 4-hour parking on the western kerb.

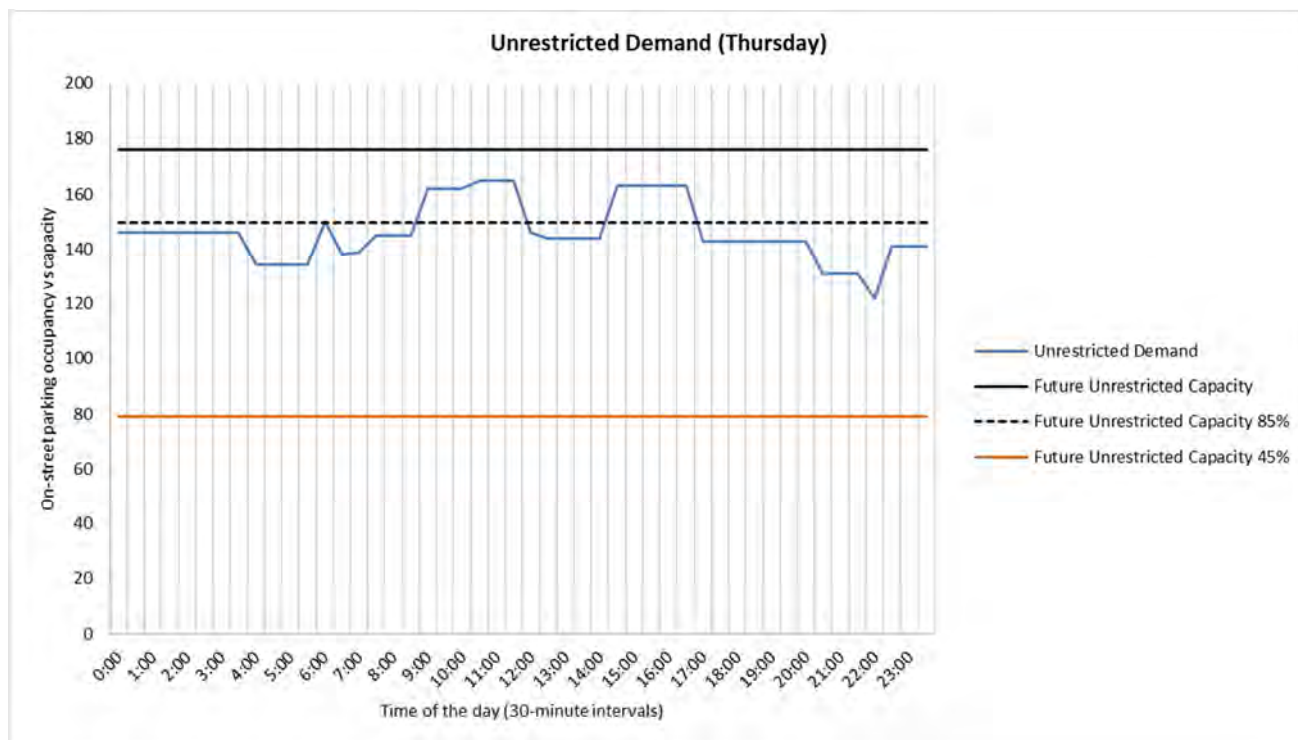


Figure 6.2 Unrestricted demand in Section A

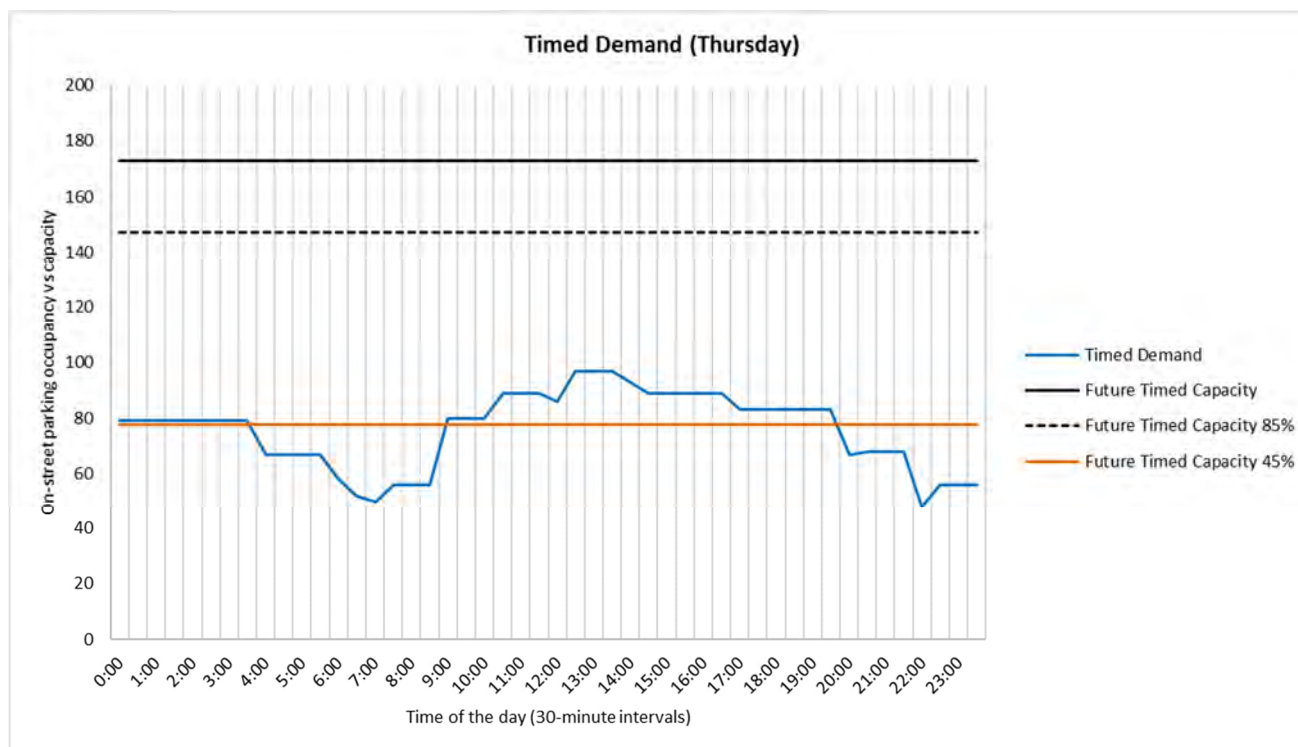


Figure 6.3 Timed demand in Section A

6.2.3 On-street layout optimisation

On-street parking redesign is proposed at two locations in Section A – Buller Road and Robert Street – resulting in a net increase of **38 on-street parking spaces**.

Buller Road

A suitable candidate for on-street parking re-design is Buller Road between Broughton Road and Francis Road (refer to Figure 6.4). This updated layout would convert four parallel parking spaces on the eastern kerb and three on the western kerb to 60-degree parking. These spaces have been designed for a one-way traffic circulation and low traffic volume (< 200 vph) on this part of the network. In addition, the on-street parking would be extended near Broughton Road to provide one additional parallel space on the eastern kerb. Overall, this updated layout would deliver a **net gain of 10 on-street parking spaces**, supporting residential parking demand in Section A and northern parts of Section B.

The revised parking layout is expected to have minimal impact on local residents. The primary change is the conversion of the roadway between Francis Road and Broughton Road from two-way to one-way operation. This section of roadway currently operates as exit-only onto the Broughton Road roundabout.

In addition to parking gain, the proposed arrangement would also provide the following benefits:

- Reduced pedestrian crossing distances across Buller Road.
- Traffic calming through angled parking and kerb build-outs, requiring vehicles to weave through the street and supporting lower vehicle speeds and improved safety for pedestrians and cyclists.
- Opportunities to integrate garden beds and streetscape improvements, through the remove of hardstand and linemarking.

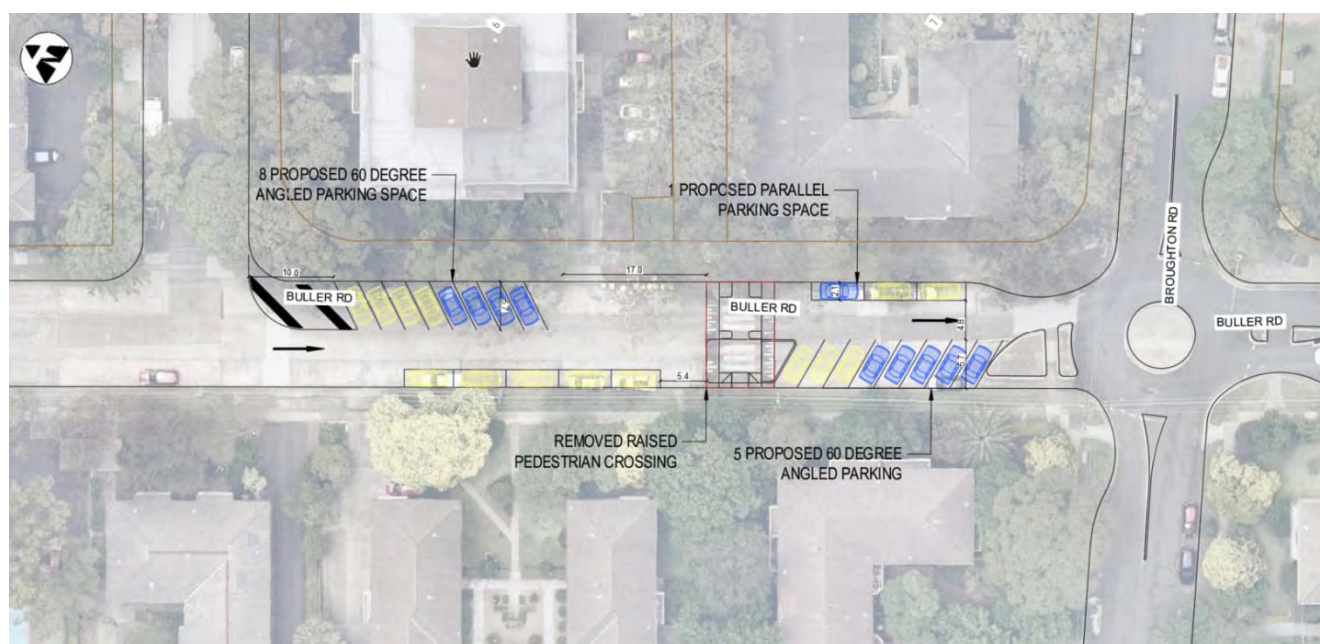


Figure 6.4 Proposed on-street parking arrangement on Buller Road

Note yellow cars represent existing spaces that are retained, whilst blue cars represent additional spaces achieved throughout the proposed rearrangement.

Robert Street

Another suitable candidate for on-street parking redesign is Robert Street between Palmer Street and Francis Road (refer to Figure 6.5). This updated layout would convert 51 parallel parking spaces on both sides of the road to 78, 90-degree parking spaces along the eastern kerbside only, to provide enough aisle width for manoeuvring. This will result in a **net gain of 27 on-street parking spaces**.

The eastern kerbside of Robert Street provides the largest increase in on-street parking spaces due to the limited number of driveways and intersecting roads compared to the western kerb. With the removal of parallel parking on the western kerb, 5.5 metre long 90-degree parking spaces would provide approximately 6.2 – 7.2 metres of travel lane width remaining, which is sufficient for a two-way road. It is also recommended that the raised threshold just north of Eric Road and refuges at Benton Avenue and Francis Road are removed. This is required to support the updated turning paths of service vehicles with the shift of travel lanes to the west.

In addition to parking gain, the proposed arrangement would also provide the following benefits:

- Traffic calming through angled parking and kerb build-outs, requiring vehicles to weave through the street and supporting lower vehicle speeds and improved safety for pedestrians and cyclists.
- Kerb build-outs at Palmer Street and Francis Road, reducing crossing widths for pedestrians and providing opportunities to integrate garden beds.



Figure 6.5 Proposed on-street parking arrangement on Robert Street

Note red cars represent existing spaces that are removed, whilst blue cars represent additional spaces achieved throughout the proposed rearrangement.

6.3 Section B

The findings and measures for mitigating the impact of the proposal in Section B include:

- **Existing offsets:** There is enough capacity available on side streets during the peak parking periods, to effectively “offset” the parking loss from the proposal.
- **Parking control review:** A total of 23 parking spaces are recommended to be converted from Unrestricted to 4-hour parking (permit holders excepted), to manage parking demand and ensure residential and permit holder parking in this section is protected.
- **On-street layout optimisation:** A total of 5 additional spaces can be provided in Section B, on McMillan Road. This effectively reduces the net loss of on-street parking spaces in Section B to 37 spaces.

6.3.1 Existing offsets

In Section B, sufficient side-street parking has been identified within a 400-metre walking distance to offset the on-corridor parking spaces removed as part of the proposal, without the need to introduce new on-street parking. These spaces were assessed during the **on-corridor parking peaks** observed at 12pm and 6pm on a weekday (refer to Appendix C for maps depicting indicative existing parking offsets). Table 6.3 identifies that there is sufficient existing on-street parking on the side streets in Section B to effectively ‘offset’ the parking loss from the proposal.

Table 6.3 Section B existing parking offsets

Time period	Restriction type	Maximum shortfall in on-corridor parking in the future (spaces)	Available parking in side streets* (spaces)
Weekday Midday peak (12:00 pm)	Unrestricted	-39	74
Weekday PM peak (6:00 pm)	Unrestricted	-25	109
	Timed (1/2P)	-2	9

*This only includes on-street parking in side streets within approximately 400 metres of the corridor.

6.3.2 Parking control review

Across Sections A and B, a total of 74 spaces would be removed from the proposal (not accounting for the additional spaces being added as discussed in the following Section 6.3.3). The impact of this can be minimised through changes to parking controls. As depicted in Figure 6.6, unrestricted parking demand in Section B peaks at 1 space below the 85 per cent demand, between 1:30 – 2:00pm. Since demand is extremely close to exceeding the 85 per cent demand, the WCC *Proposed Street Parking Framework* recommends adopting shorter time limits to improve parking turnover and manage parking demand. The proposed changes to parking restrictions are summarised in Table 6.4, recommending a total of 23 unrestricted parking spaces to be converted to timed parking (4P 8:30 am – 5:30 pm (Permit Holders Excepted)).

As per Figure 6.7, timed demand peaks at 50 spaces below the 85 per cent demand, just over 45 per cent occupancy. Ongoing monitoring of these spaces is recommended in the short term.

Table 6.4 Section B proposed restriction changes

Location	Number of spaces	Current restriction	Proposed restriction	Justification
Reserve Road	8 spaces	<i>Unrestricted</i>	<i>4P 8:30 am – 5:30 pm (Permit Holders Excepted)</i>	— Addresses the high future occupancy resulting from the proposal. — Proximity to Thompson Park and Artarmon Town Centre with higher turnover needs
Barton Road	15 spaces	<i>Unrestricted</i>	<i>4P 8:30 am – 5:30 pm (Permit Holders Excepted)</i>	— Addresses the high future occupancy resulting from the proposal. — Opposite existing 4-hour parking and also adjacent to Thompson Park

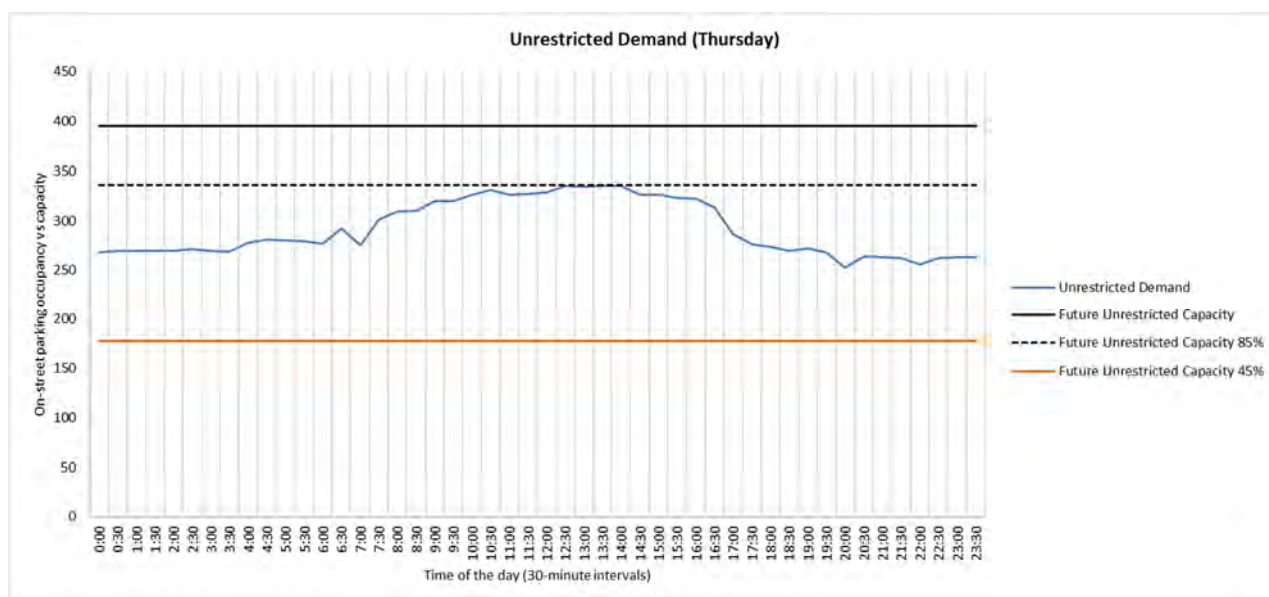


Figure 6.6 Unrestricted demand in Section B

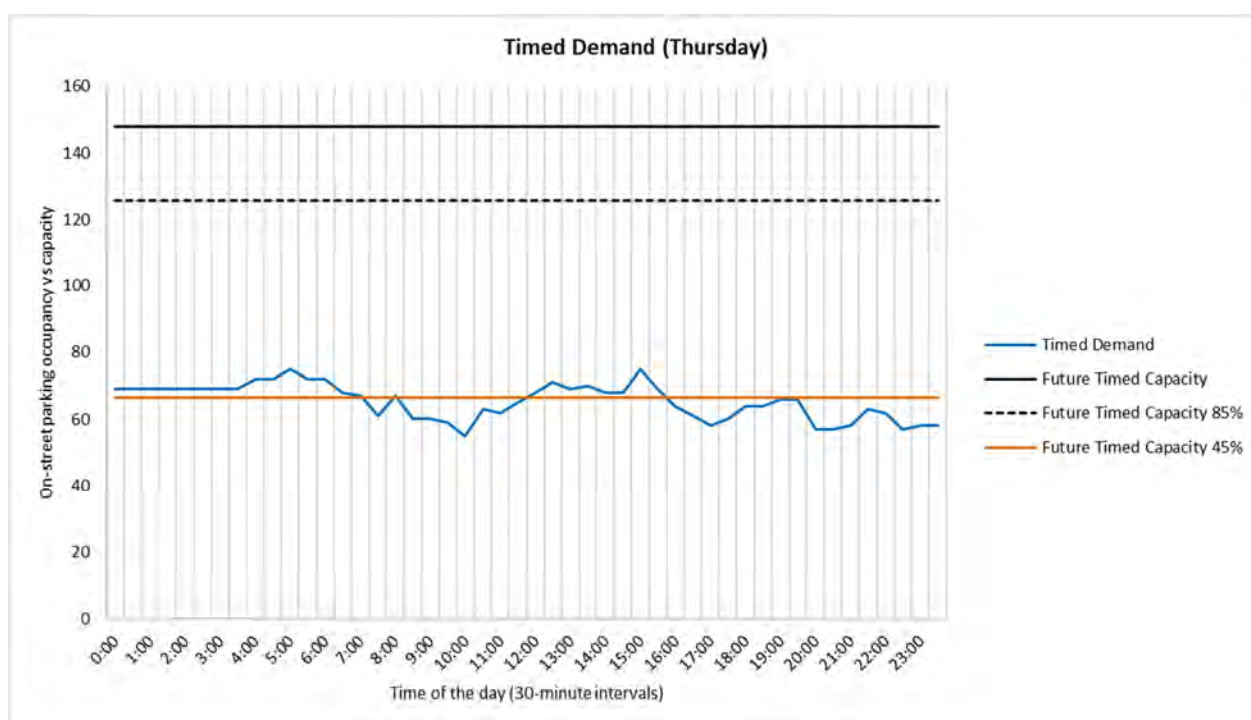


Figure 6.7 Timed demand in Section B

6.3.3 On-street layout optimisation

On-street parking reconfiguration is proposed at one location in Section B – McMillan Road – resulting in a net increase of **5 on-street parking spaces**. Whilst other locations were investigated, there is limited space available for converting on-street parking arrangements in Section B compared with Section A.

McMillan Road

A suitable candidate for on-street parking re-design is McMillan Road (refer to Figure 6.8). This updated layout would convert nine parallel parking spaces on the northern kerb to 14, 45-degree parking spaces. This is recommended for the

spaces west of Hampden Lane, as the steep gradient east of Hampden Lane would pose safety risks to this arrangement. This updated layout would deliver a **net gain of 5 on-street parking spaces**.

McMillan Road provides direct access for students attending the Artarmon Public School and road and footpath activity can be busy during school drop-off and pick-up periods. Angled parking arrangements can pose safety issues in environments such as this, with the possibility of interactions between reversing vehicles with pedestrians on the footpath. To minimise the risk, it is proposed that wheel stops are included with the angled parking spaces to ensure vehicles do not encroach into the verge and footpath area where children could be present.

In addition to parking gain, the proposed arrangement would also provide the following benefits:

- Traffic calming through angled parking and kerb build-outs, requiring vehicles to weave through the street and supporting lower vehicle speeds and improved safety for pedestrians and cyclists.
- Opportunities to integrate garden beds and streetscape improvements, through the remove of hardstand and linemarking.



Figure 6.8 Proposed on-street parking arrangement on McMillan Road

Note yellow cars represent existing spaces that are retained, whilst blue cars represent additional spaces achieved throughout the proposed rearrangement.

6.4 Section C

The findings and measures for mitigating the impact of the proposal in Section C include:

- **Existing offsets:** Future on-street parking supply falls short of existing parking demand by a maximum of one unrestricted parking space during the morning parking demand peak.
- **Parking control review:** A total of 52 parking spaces are recommended to be converted from Unrestricted to 4-hour parking Monday to Friday, 7am – 5pm, to manage parking demand in the area. A single space is also recommended to be converted to a loading zone to support essential parking in the area.
- **On-street layout optimisation:** A total of 10 additional spaces can be provided in Section C, on Lambs Road. This effectively reduces the net loss of on-street parking spaces in Section C to 29 spaces.

6.4.1 Existing offsets

In Section C, with the exception of the weekday morning peak, sufficient side-street parking has been identified within a 400-metre walking distance to offset the on-corridor parking spaces removed as part of the proposal, without the need to introduce new on-street parking. These spaces were assessed during the **on-corridor parking peaks** observed at 10am and 1:30pm on a weekday (refer to Appendix C for maps depicting indicative existing parking offsets). Table 6.3 identifies that only the morning peak experiences greater demand than future capacity by a total of one on-street parking space.

Table 6.5 Section C existing parking offsets

Time period	Restriction type	Maximum shortfall in on-corridor parking in the future (spaces)	Available parking in side streets* (spaces)
Weekday AM peak (10:00 AM)	Unrestricted	-22	21
	Ticket (2P)	-5	11
Weekday PM peak (1:30 pm)	Unrestricted	-22	29
	Ticket (2P)	-3	9

*This only includes on-street parking in side streets within approximately 400 metres of the corridor.

6.4.2 Parking control review

Across Sections C, a total of 39 spaces would be removed from the proposal (not accounting for the additional spaces being added as discussed in the following Section 6.4.3). The impact of this can be minimised through changes to parking controls.

As depicted in Figure 6.9, unrestricted parking demand in Section C reaches the future capacity of 276 spaces at 10am. In response, consideration should be given to introducing shorter time limits or parking fees to increase the turnover of available car parking spaces and provide short-term parking spaces that are more valuable to accommodate visitations to community facilities and local businesses, which aligns with the WCC *Proposed Street Parking Framework*. The proposed changes to parking restrictions are summarised in Table 6.6, recommending a total of 52 unrestricted parking spaces to be converted to timed parking (4P, 7am – 5pm).

The conversion of unrestricted parking to shorter-stay parking is also supported by the surrounding industrial land uses in Section C, where workers typically have greater flexibility and a stronger potential to shift to more sustainable transport modes. This is supported by weekend parking data (shown in Figure 6.10), which indicates that demand for unrestricted parking consistently remains below a 45 per cent occupancy rate. This low level of kerbside utilisation suggests minimal reliance on unrestricted parking by nearby residents and reinforces the opportunity to encourage mode shift among workers, using the measures outlined in Section 6.6.

It was noted in Section 5.4 that under the current proposal a loading zone space (Herbert Street western kerb, at SBS 14 Herbert Street) would need to be removed to support the cycleway on the eastern kerb. Given that the loading zone would provide servicing essential for nearby businesses, it is important that a replacement loading zone is provided at another location to support loading activities at SBS. From reviewing the surrounding street environment, a potential new location on Frederick Street adjacent to the bus stop has been identified and is recommended to be converted to a loading zone as identified in Table 6.6.

Table 6.6 Section C proposed restriction changes

Location	Number of spaces	Current restriction	Proposed restriction	Justification
Hampden Road Gore Hill Freeway overpass	29 spaces	<i>Unrestricted</i>	<i>4P 7am – 5pm</i>	- Addresses the high future occupancy resulting from the proposal. - Increases on-street parking efficiency and discourages people from leaving disused vehicles on the bridge for extended periods of time.
Cleg Street (east of Herbert Street)	23 spaces	<i>Unrestricted</i>	<i>4P 7am – 5pm</i>	- Addresses the high future occupancy resulting from the proposal. - Increases parking efficiency and retains kerbside for customers and visitors to local businesses.
Frederick Street	1 space	<i>No Parking 11am – 2pm Saturday and Sunday</i>	<i>Loading Zone</i>	Provides essential parking to support servicing activities at the SBS.

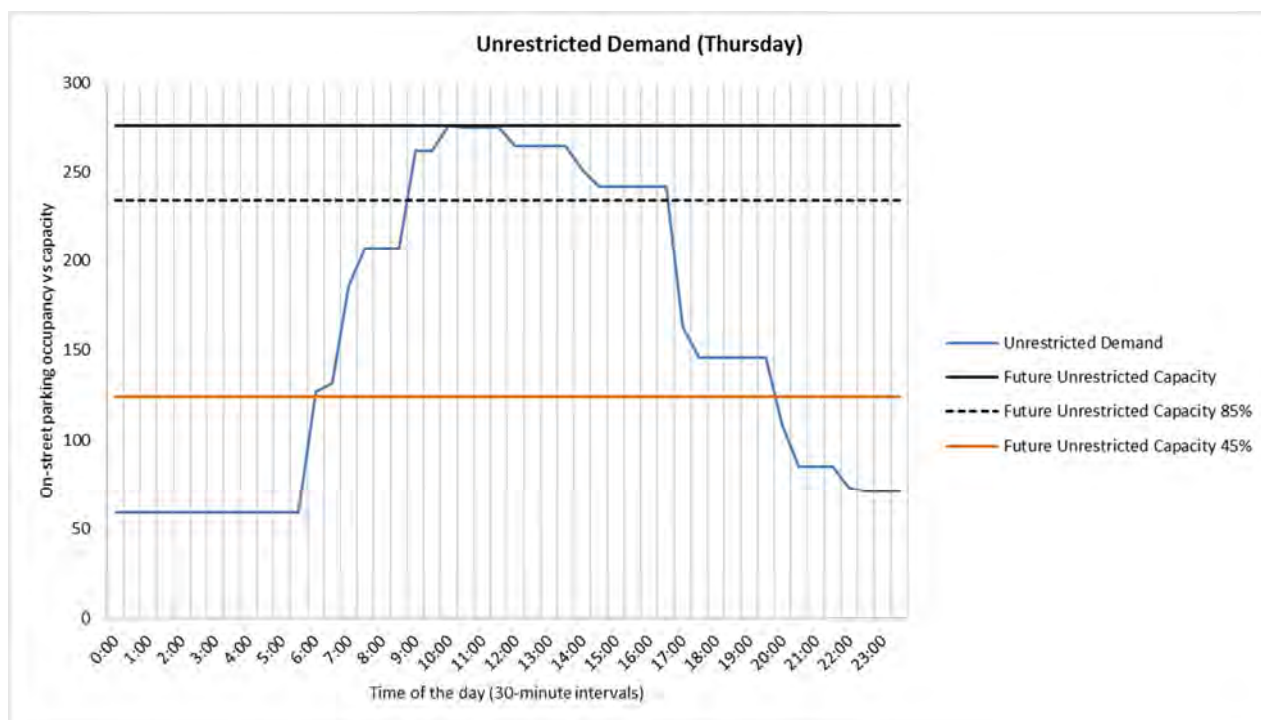


Figure 6.9 Unrestricted demand in Section C on Thursday

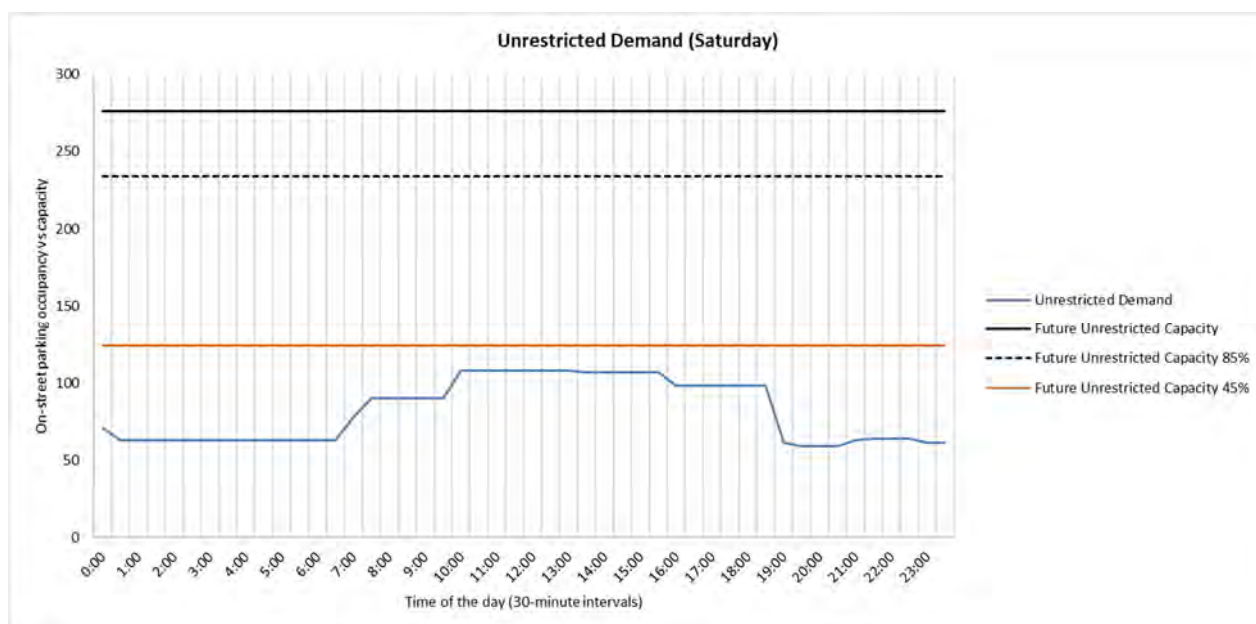


Figure 6.10 Unrestricted demand in Section C on Saturday

As per Figure 6.11, ticketed parking demand falls below the 45 per cent occupancy by a minimum of one space below during the afternoon peak period. In alignment with the *Proposed Street Parking Framework* (Figure 6.1), parking fees could be reduced by 10 per cent to support greater occupancy and alleviate pressure on other parts of the network. Any adjustment to parking fees would be subject to Council consideration and should be consistent with WCC policy.

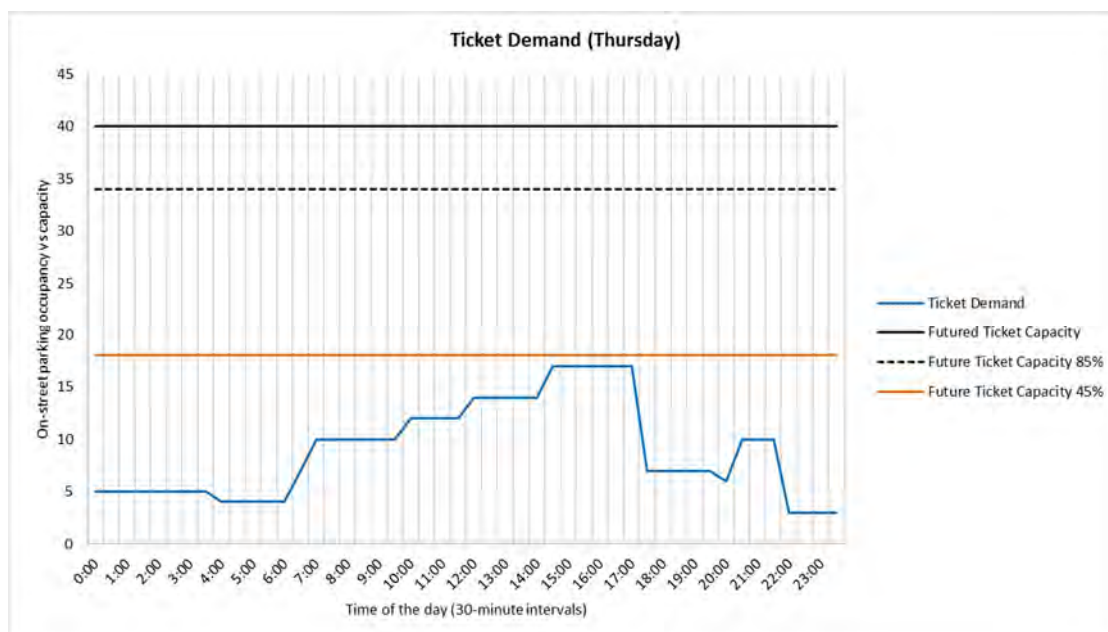


Figure 6.11 Ticketed demand in Section C

6.4.3 On-street layout optimisation

On-street parking reconfiguration is proposed at one location in Section C – Lambs Road – resulting in a net increase of **10 on-street parking spaces**.

Lambs Road

A suitable candidate for on-street parking re-design is Lambs Road (refer to Figure 6.12). This updated layout would convert 25 parallel parking spaces on the eastern and western kerbs to 35, 90-degree parking spaces on the eastern kerb

only. Parking on Lambs Road north of Cleg Street is not proposed to be reconfigured to angled parking, given the steeper grade through this section. This updated layout would deliver a **net gain of 10 on-street parking spaces**.

This layout has been designed in accordance with AS 2890.5 for roads with vehicle volumes < 200 veh/hour, where it is assumed that to enable manoeuvring, vehicles will be required to cross the centreline. Given the industrial precinct context, heavy vehicle turning movements have been considered in the design of this on-street parking. Specifically, this parking layout has been designed to support 8.8 metre service vehicle and 12.5 metre rigid trucks, as identified in Appendix D.

In addition to parking gain, the proposed arrangement would also provide the following benefits:

- Traffic calming through angled parking and kerb build-outs, requiring vehicles to weave through the street and supporting lower vehicle speeds and improved safety for pedestrians and cyclists.
- Opportunities to integrate garden beds and streetscape improvements, through the remove of hardstand and linemarking.



Source: SMM 2026

Figure 6.12 Potential revised arrangement for on-street parking on Lambs Road

6.5 Section D

The findings and measures for mitigating the impact of the proposal in Section D include:

- **Existing offsets:** There is enough capacity available on side streets during the peak parking periods, to effectively “offset” the parking loss from the proposal.
- **Parking control review:** A total of five parking spaces are recommended to be converted to support essential parking in the area.
- **On-street layout optimisation:** No changes to on-street parking layouts are proposed in Section D.

6.5.1 Existing offsets

In Section D, sufficient ticketed on-corridor and side-street parking has been identified within a 400-metre walking distance to offset the on-corridor parking spaces removed as part of the proposal, without the need to introduce new on-street parking. These spaces were assessed during the observed weekday on-corridor parking peaks at 12:30 pm and 4:00 pm (refer to Appendix C for maps showing indicative existing parking offsets).

The results, summarised in Table 6.3, indicate that while overall parking losses can be offset, there are no direct like-for-like offsets for the loss of 5-minute parking in this section. The loss of these spaces, along with the removal of loading zones, will instead be addressed through the recommended changes to parking controls outlined in Section 6.5.2.

Table 6.7 Section D existing parking offsets

Time period	Restriction type	Maximum shortfall in on-corridor parking in the future (spaces)	Available parking in side streets* (spaces)
Weekday Midday peak (12:30 pm)	Ticketed (1P & 2P)	-16	38
	Timed (P 5 min)	-1	0
Weekday PM peak (4:00 pm)	Ticketed (1P & 2P)	-8	26
	Timed (P 5 min)	-1	0

*This only includes on-street parking in side streets within approximately 400 metres of the corridor.

6.5.2 Parking control review

Section D currently contains only two timed (non-ticketed) parking spaces, both restricted to 5-minute stays. Observations indicate that both spaces were simultaneously occupied on only two occasions during the survey period. As part of the cycleway proposal, these spaces will be removed. The existing 5-minute restrictions are likely used to facilitate pick-up and drop-off activity associated with Royal North Shore Hospital. To maintain this level of access, there is an opportunity to convert the adjacent 1-hour ticketed parking spaces located immediately south of the existing 5-minute parking to shorter stay (free parking), potentially 5 to 15 minutes to support pick-up and drop-off at the hospital (refer to Table 6.8).

Just north of these spaces, two loading zone spaces would also be removed as part of the proposal. These spaces also likely support servicing activities at the Royal North Shore Hospital, as well as surrounding apartment buildings. It is recommended that three 2-hour parking spaces around the corner on Herbert Street are converted to Loading Zones to support these servicing activities (refer to Table 6.8).

As per Figure 6.14, peak ticketed parking demand remains approximately 30 spaces below the 85 per cent occupancy threshold, equating to overall occupancies of between 45 and 85 per cent. On this basis, no additional response is considered necessary beyond ongoing periodic monitoring, consistent with the *Proposed Street Parking Framework* (Figure 6.1).

Table 6.8 Section D proposed restriction changes

Location	Number of spaces	Current restriction	Proposed restriction	Justification
Herbert Street	2 spaces	1-hour (ticketed) 8.30am – 5pm Monday to Saturday	5P (minute)	— Retains kerbside for pick-up and drop-off activities outside the Royal North Shore Hospital.

Location	Number of spaces	Current restriction	Proposed restriction	Justification
Herbert Street	3 spaces	2-hour (ticket) 8am – 6pm Monday to Saturday	Loading Zone	— Retains kerbside for servicing activities outside the Royal North Shore Hospital and neighbouring apartment buildings.

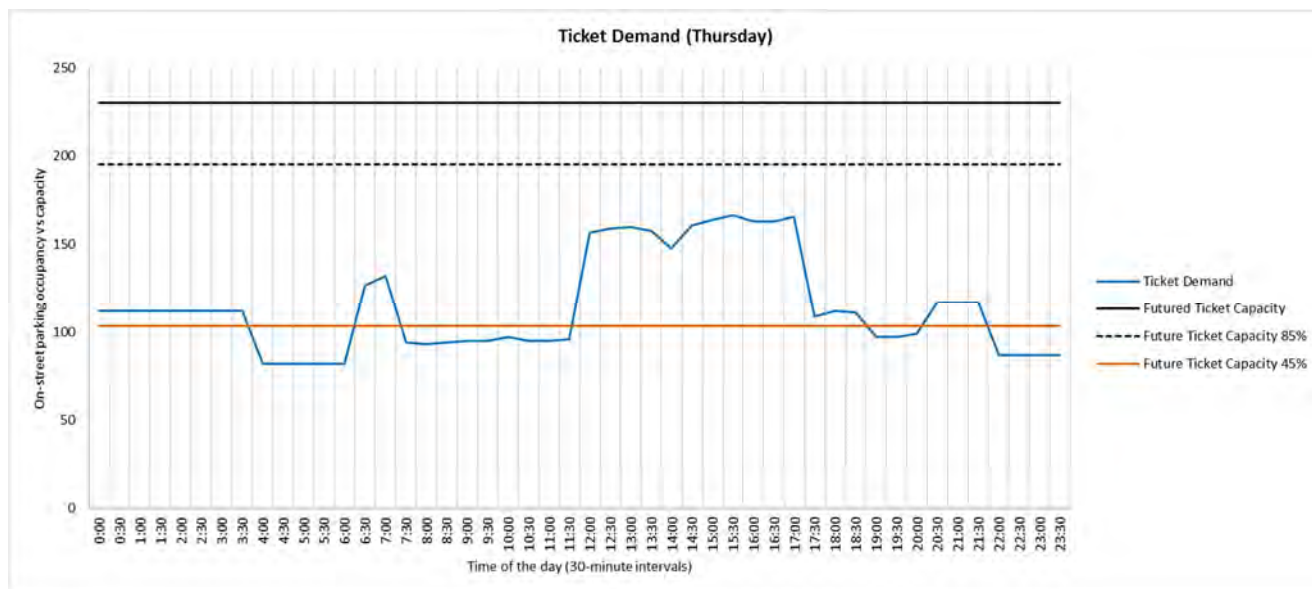


Figure 6.13 Ticket demand in Section D

6.5.3 On-street layout optimisation

No opportunities for on-street parking reconfiguration have been identified in Section D due to the constrained road environment. However, this area has a relatively high level of off-street parking, which is expected to continue meeting parking demand once the cycleway is operational. As outlined in Section 4.6, more than 2,700 off-street parking spaces are available within Section D (noting this is an estimate due to limited data), all located in close proximity to Royal North Shore Hospital, Herbert Street and St Leonards Station.

6.6 Strategic parking measures

There are a number of strategic and policy related initiatives that can be undertaken by Council through collaboration with local business and schools to reduce the reliance on private vehicle parking in the local area, as outlined in Table 6.7. The cycleway proposal itself would support a shift toward more sustainable travel modes, which over time would reduce reliance on on-street parking, particularly within the industrial section (Section C).

Table 6.9 Strategic measures to reduce parking demand

Theme	Strategic Measure	Purpose / Outcome	Primary Responsibility	Level of impact
Parking demand management	Ongoing monitoring of parking demand once the proposal is implemented	Identify changes to parking behaviour from the proposal and identify any opportunities to change parking restrictions to support. This would require the collection of additional data, including parking demand surveys post cycleway opening.	Council	High
	Consider applying demand-responsive time limits and pricing	Support the management of parking demand, improve turnover, and discourage long-stay commuter parking where capacity is constrained	Council	Medium
	Review the Residential Parking Scheme (refer to Section 2.3) where appropriate and eligibility criteria for a parking permit. Consider the implementation of Special Parking Zones in key locations.	Prioritise parking access for eligible residents in high-demand areas. Reduce the rate of under-used parked cars on-street by minimising access to permits.	Council	Medium
	Implement or continue cashless “Pay by Plate” parking	Improve operational efficiency, compliance, and user convenience	Council	Low
Development controls	Apply reduced or maximum parking rates in accessible locations, ensuring that these are implemented in time for the planned development in Section C and at the metro dive site on Mowbray Road	Prevent oversupply of parking and limit future car dependency in well-served areas	Council (via DCP / LEP)	High
	Enable low-parking or car-lite development outcomes	Reduce reliance on kerbside parking as redevelopment occurs	Council / Developers	High
	Require high-quality bicycle parking and end-of-trip facilities through development controls	Support mode shift by improving cycling amenities	Council / Developers	Medium

Theme	Strategic Measure	Purpose / Outcome	Primary Responsibility	Level of impact
Business and employment travel	Encourage and provide tools for businesses and major employers to produce Green Travel Plans, setting mode share targets so goals for modeshift can be defined	Reduce employee car commuting and associated parking demand	Council / Businesses	Medium
	Partner with businesses and strata bodies to retrofit bike parking	Improve access to secure bicycle parking for workers and residents	Council / Businesses / Strata	High
School travel	Partner with schools (e.g. Artarmon Public School) and programs such as Ride2School	Encourage walking, cycling and scooting to school and reduce local peak parking demand	Council / Schools / TfNSW	Medium
	Identify and promote safe walking and cycling routes to schools	Improve safety, confidence and uptake of active school travel	Council	Medium
Active transport promotion	Deliver ongoing cycling promotion and support programs particularly once the cycleway opens. Provide clear and legible wayfinding that helps cyclists navigate to key destinations and within the cycling network.	Convert new infrastructure into sustained mode shift. Support cyclists connect with other sections of the cycling network through branded wayfinding	Council	Medium
	Partner with local and regional cycling advocacy groups	Increase participation through community-led engagement and events	Council / Advocacy groups	Low
Communication and engagement	Use targeted communication and social media campaigns, particularly to support the opening of the cycleway	Raise awareness of active transport options and Council initiatives	Council	Medium
Shared mobility	Promote car-share as an alternative to second-car ownership	Reduce household parking demand and vehicle ownership Could have implications for updating the Residential Parking Scheme	Council / Car-share providers	Low
Monitoring and review	Monitor parking occupancy and adjust controls over time in line with the <i>Street Parking Strategy Framework</i> , so that changes to parking rates are consistent across the LGA	Ensure parking management remains responsive to changing demand	Council	Low

6.7 Mitigation measures

The mitigation measures proposed throughout Section 6 have been summarised in Table 6.8 below. The implementation pathway for each mitigation measure is outlined below:

- Short-term measures focus on operational changes, primarily adjustments to parking restrictions.
- Medium-term measures involve kerbside modifications to increase parking capacity within the study area.
- Long-term measures comprise broader strategic initiatives and ongoing monitoring, to be implemented once the proposal is operational (refer to Section 6.6 for the recommended timing of individual strategic measures).

Table 6.10 Summary of mitigation measures

#	Mitigation	Location	Description	Implications	Implementation pathway
1	<i>Unrestricted parking recommended to be converted to 4P 8:30 am – 5:30 pm (Permit Holders Excepted)</i>	Section A	Recommended at the following locations: — Conversion of 11 spaces on Broughton Road — Conversion of 7 spaces on Robert Street	Increases parking turnover for non-residents, which in turn increases parking availability for residential parking.	Short-term
2	Timed parking	Section A	Ongoing monitoring of timed parking occupancy in Section A as part of Willoughby City Council's parking demand management for the local area.	Indicates if timed parking restrictions need to be changed to improve kerbside efficiency e.g. time restrictions increased.	Short-term
3	Buller Road on-street parking layout optimisation	Section A	Conversion of parallel parking on Buller Road to 45-degree parking to incorporate an additional 11 on-street parking spaces.	Provides additional on-street parking supply, enhances space efficiency, improves active travel connections and traffic calming.	Medium-term
4	Robert Street on-street parking layout optimisation	Section A	Conversion of parallel parking on Robert Street to 90-degree parking to incorporate an additional 27 on-street parking spaces.	Provides additional on-street parking supply, enhances space efficiency, improves active travel connections and traffic calming.	Medium-term
5	<i>Unrestricted parking recommended to be converted to 4P 8:30 am</i>	Section B	Recommended at the following locations:	Increases parking turnover for non-residents, which in turn	Short-term

	– 5:30 pm (Permit Holders Excepted)		— Conversion of 8 spaces on Reserve Road — Conversion of 15 spaces on Barton Road	increases parking availability for residential parking.	
6	McMillan Road on-street parking layout optimisation	Section B	Conversion of parallel parking on McMillan Road to 45-degree parking to incorporate an additional five on-street parking spaces.	Provides additional on-street parking supply, enhances space efficiency, improves active travel connections and traffic calming. Impacts outside Artarmon Public School should be monitored.	Medium-term
7	Unrestricted parking recommended to be converted to 4P 7 am – 5 pm	Section C	Recommended at the following locations: — Conversion of 29 spaces on Hampden Road / Gorehill Freeway overpass — Conversion of 23 spaces on Cleg Street (east of Herbert Street)	Discourages long-stay parking by commuters and all-day workers while encouraging higher turnover, supported by the industrial land-use context where businesses provide off-street parking and there is strong potential for worker mode shift to sustainable transport.	Short-term
8	Essential parking retention (loading zone)	Section C	Conversion of the single parking space (<i>No Parking 11am – 2pm Saturday and Sunday</i>), on Frederick Street adjacent to the Bus Zone, to a single loading zone for SBS deliveries.	Supports essential loading and unloading activities for local businesses.	Short-term
9	Ticketed parking fee adjustment	Section C	Consideration could be given to reducing parking fees in Section C by 10 per cent.	Improves the efficiency / occupancy of ticketed parking spaces in Section C.	Long-term
10	Lambs Road on-street parking layout optimisation		Conversion of parallel parking on Lambs Road to 90-degree parking to incorporate an additional 10 on-street parking spaces.	Provides additional on-street parking supply, enhances space efficiency, improves active travel connections and traffic calming.	Medium-term
11	Maintaining 5-minute parking for the hospital	Section D	Conversion of two 1-hour ticketed parking spaces to 5-minute parking.	Supports pick-up and drop-off activities in the local area, likely for the Royal North Shore Hospital.	Short-term

12	Essential parking retention (loading zone)	Section D	Conversion of three 2-hour ticketed parking spaces to two loading zone spaces.	Supports servicing activities near the Royal North Shore Hospital and nearby apartment buildings.	Short-term
13	Periodic monitoring	Section D	Undertake periodic monitoring of ticketed parking supply and occupancy in Section D to ensure occupancy does not exceed future capacity.	Ensures that future changes to kerbside demand are managed appropriately.	Long-term
14	Strategic measures	General	Implementation of the Strategic Measures outlined in Section 6.6.	Supports a modeshift to sustainable modes and reduced on-street parking reliance in the study area where feasible.	Long-term

7 Conclusions and recommendations

The proposed Chatswood to St Leonards cycleway will inevitably result in changes to on-street activity along the corridor and within adjacent side streets. Analysis of on-street parking data indicates that whilst future **on-corridor** parking supply will be lower than existing demand, the **surrounding side street network has sufficient capacity** to accommodate this displacement through a combination of existing parking offsets and anticipated redistribution of demand across the study sections.

However, this will result in higher on-street parking occupancy rates across the corridor. In some locations demand is anticipated to meet or approach future capacity levels. This is more evident for:

- Unrestricted parking in Section A, where occupancy is forecast to exceed 90 per cent on the weekday peak, and
- Unrestricted parking in Section C, where demand is expected to reach future capacity on the weekday peak (noting that weekend occupancy would typically remain below 45 per cent).

To ensure parking conditions remain manageable and at or below 85 per cent (the occupancy target from the *WCC Street Parking Strategy Framework*, 2017), a range of mitigation measures have been recommended. These measures, outlined in Section 6.7, are intended to support effective management of higher occupancy levels and include the following key actions:

- **Targeted on-street parking rearrangements to create an additional 53 spaces**, reducing the net parking loss from 145 to 92 spaces. These changes are proposed on Buller Road and Robert Street (Section A), McMillan Road (Section B), and Lambs Road (Section C).
- **Adjustments to parking restrictions across 99 on-street spaces**, both on- and off-corridor, to improve the efficiency of kerbside use and manage demand. This includes increasing parking duration where occupancy is low and reducing duration where demand is high, to improve turnover and availability.
- **Retention and refinement of essential parking controls that support adjacent land uses**, including maintaining the existing loading zone at SBS and converting selected ticketed spaces near Royal North Shore Hospital to short-stay (5-minute) pick-up/drop-off parking and loading zones.
- **Broader strategic measures to reduce reliance on on-street parking**, such as parking demand management and development controls, programs to encourage cycling to work and school, and targeted behaviour-change and marketing initiatives.

Collectively, these measures will help mitigate the impacts of the cycleway proposal on on-street parking, support a gradual mode shift and ensure the efficient and equitable use of the kerbside as travel patterns evolve.

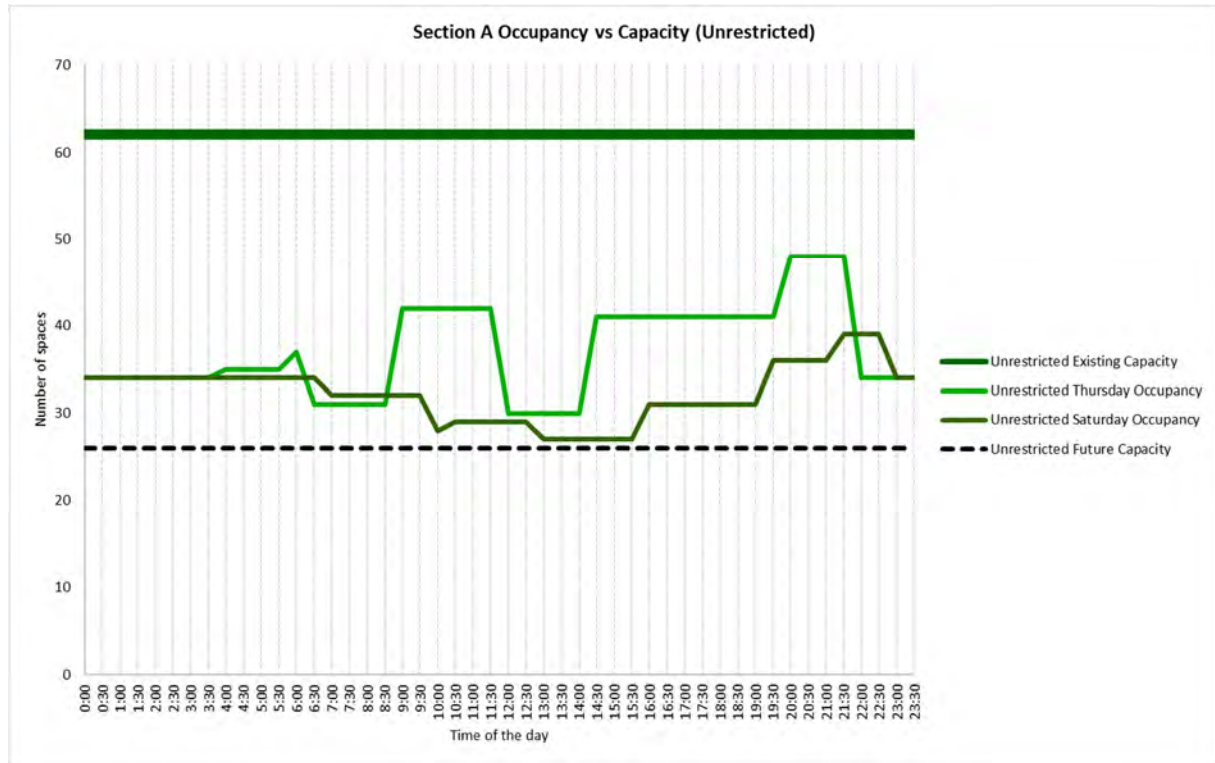
Appendix A

Occupancy vs future on-corridor capacity

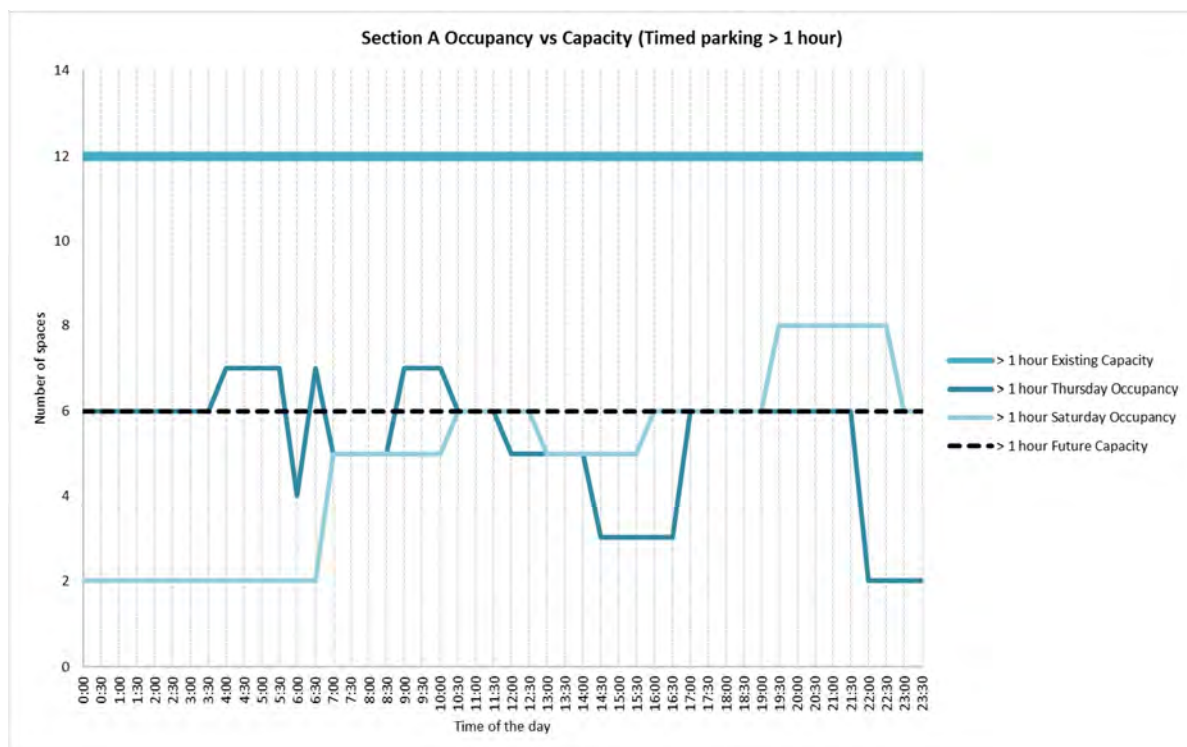


A1 Section A

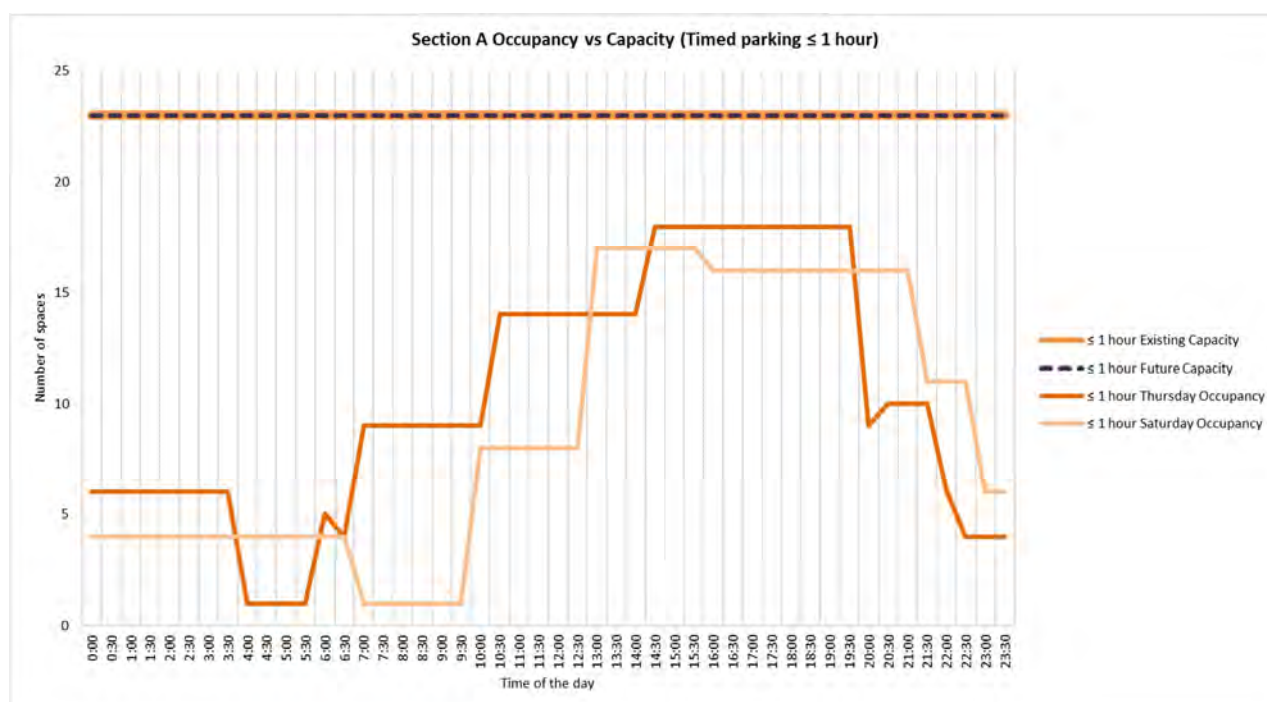
A1.1 Unrestricted (on corridor)



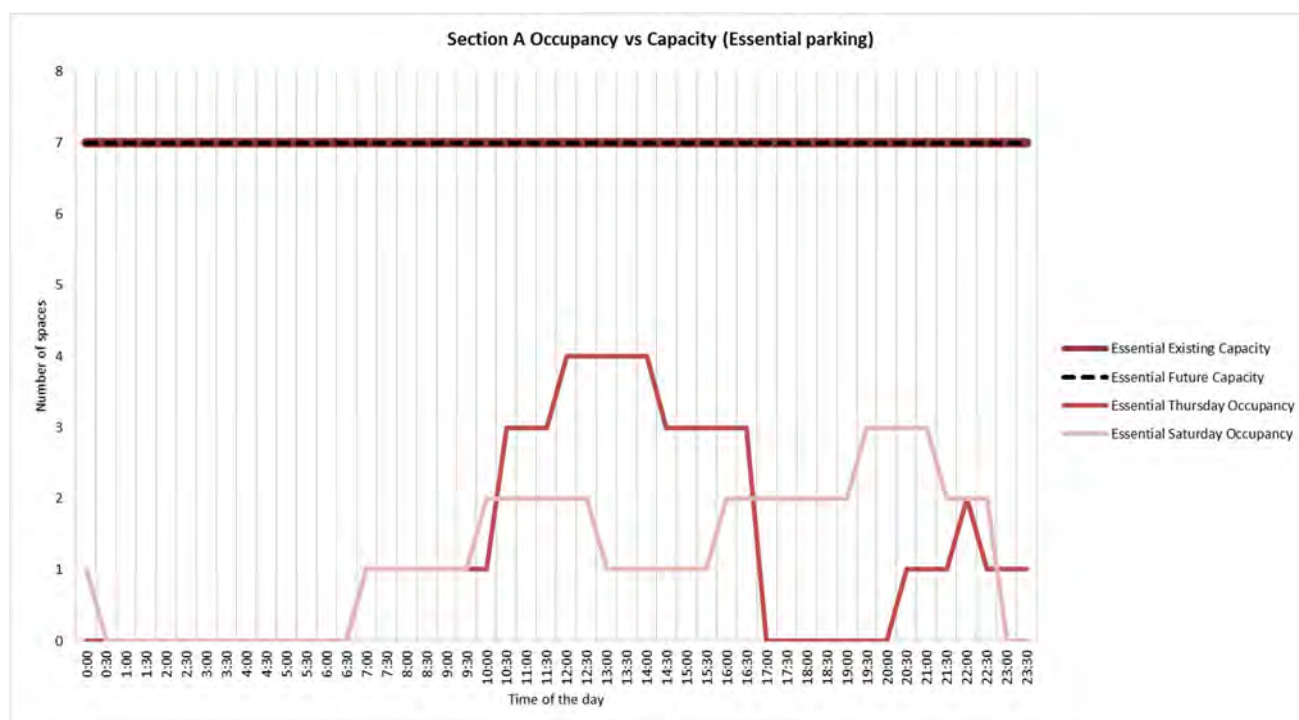
A1.2 Timed parking > 1 hour (on corridor)



A1.3 Timed parking ≤ 1 hour (on corridor)

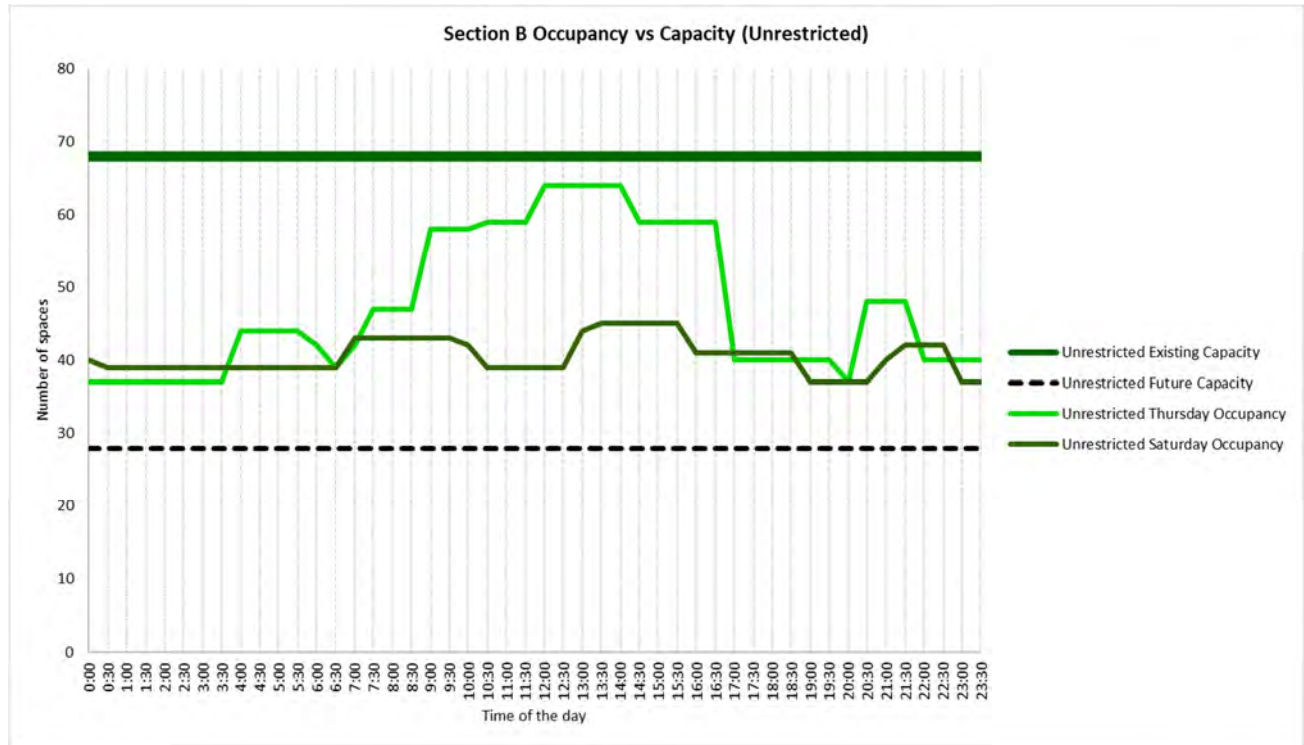


A1.4 Essential (on corridor)

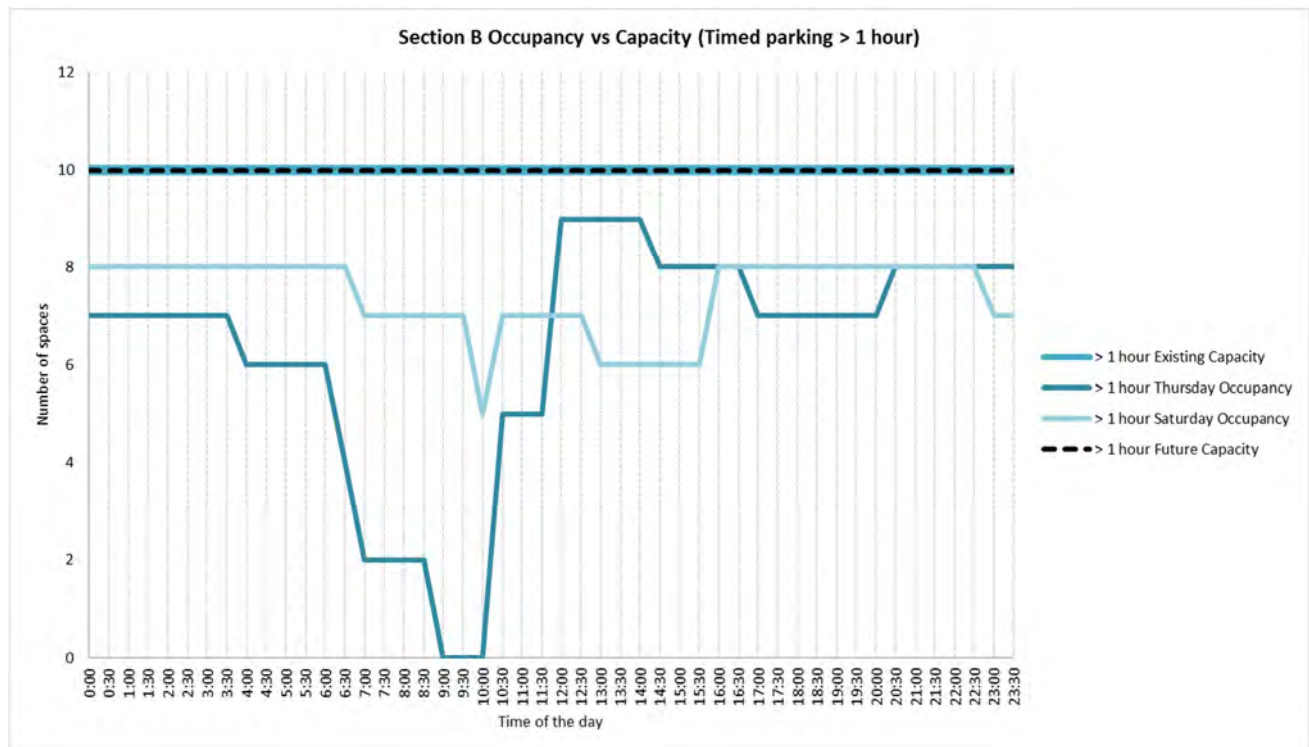


A2 Section B

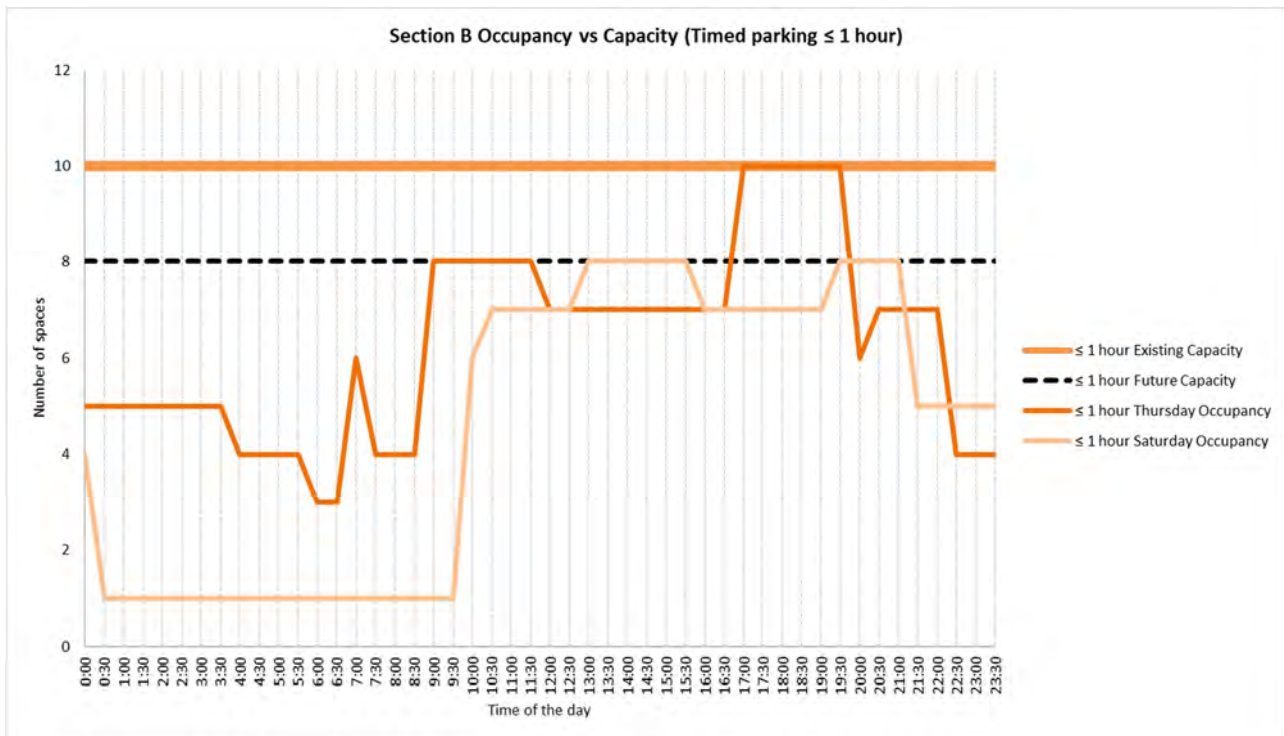
A2.1 Unrestricted (on corridor)



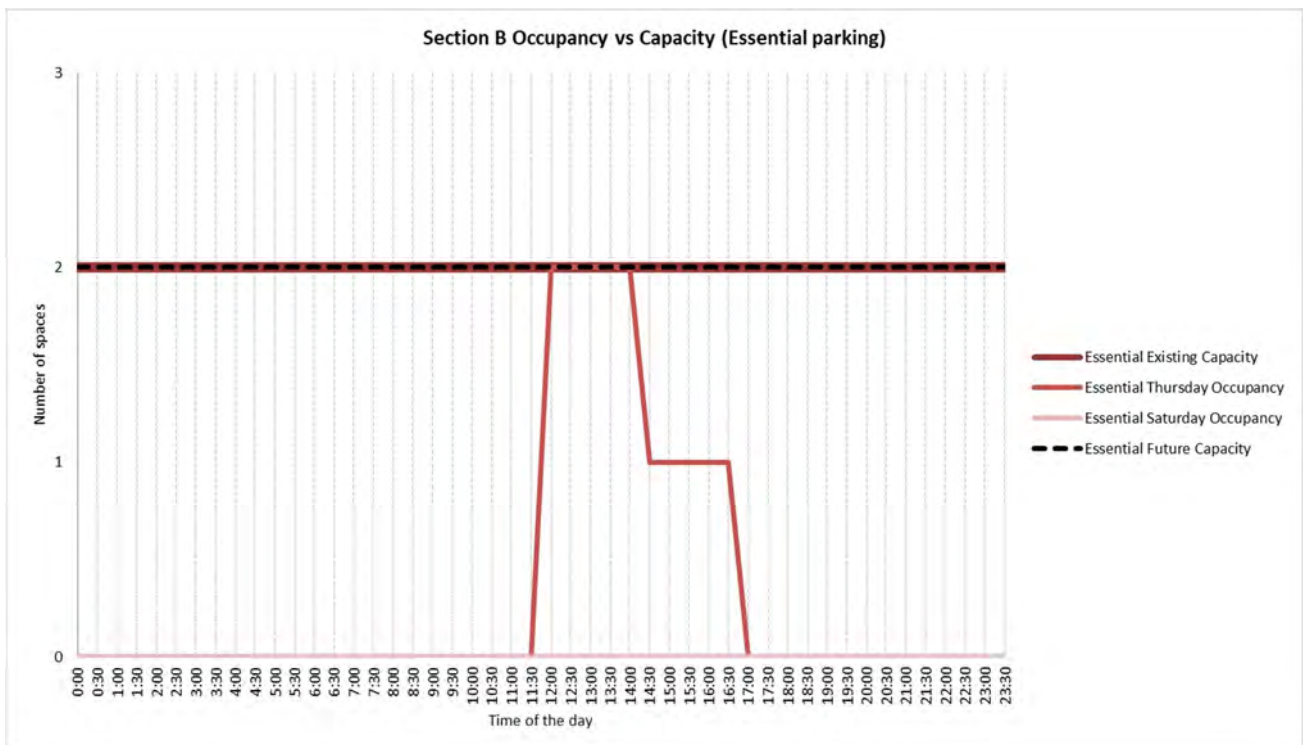
A2.2 Timed parking > 1 hour (on corridor)



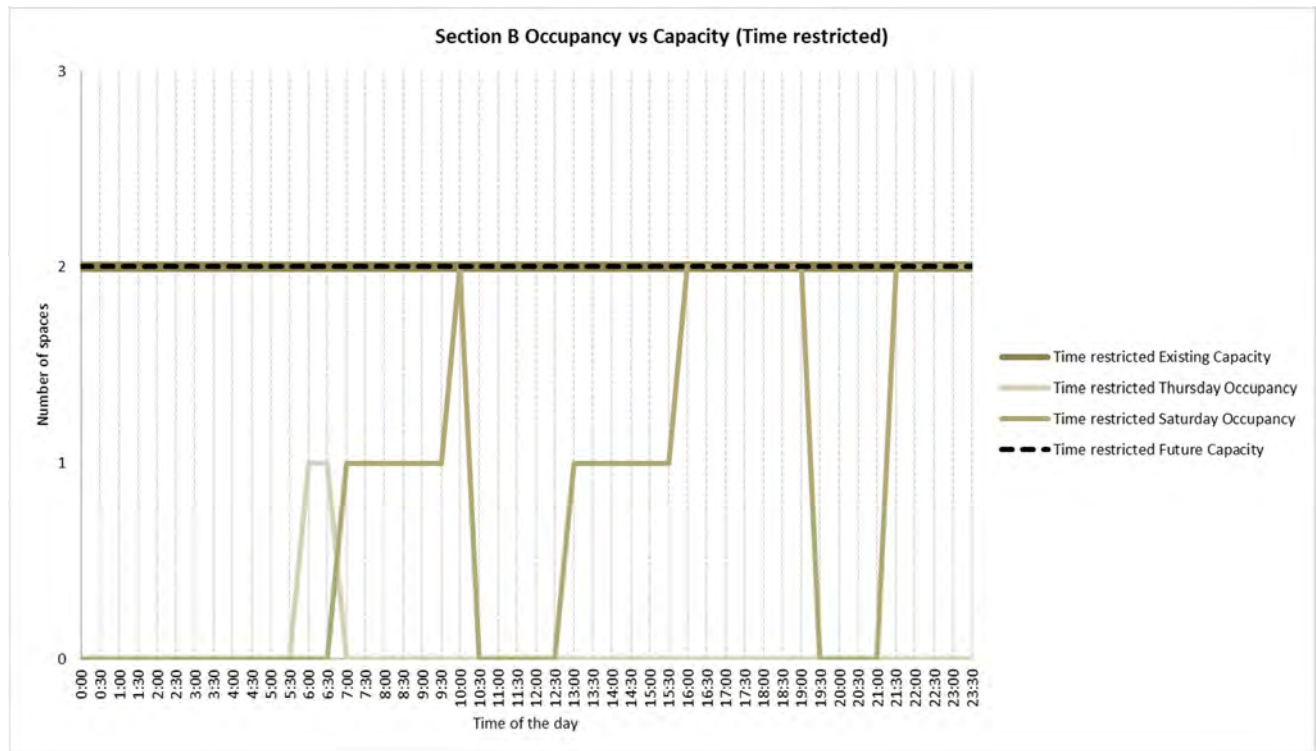
A2.3 Timed parking ≤ 1 hour (on corridor)



A2.4 Essential (on corridor)

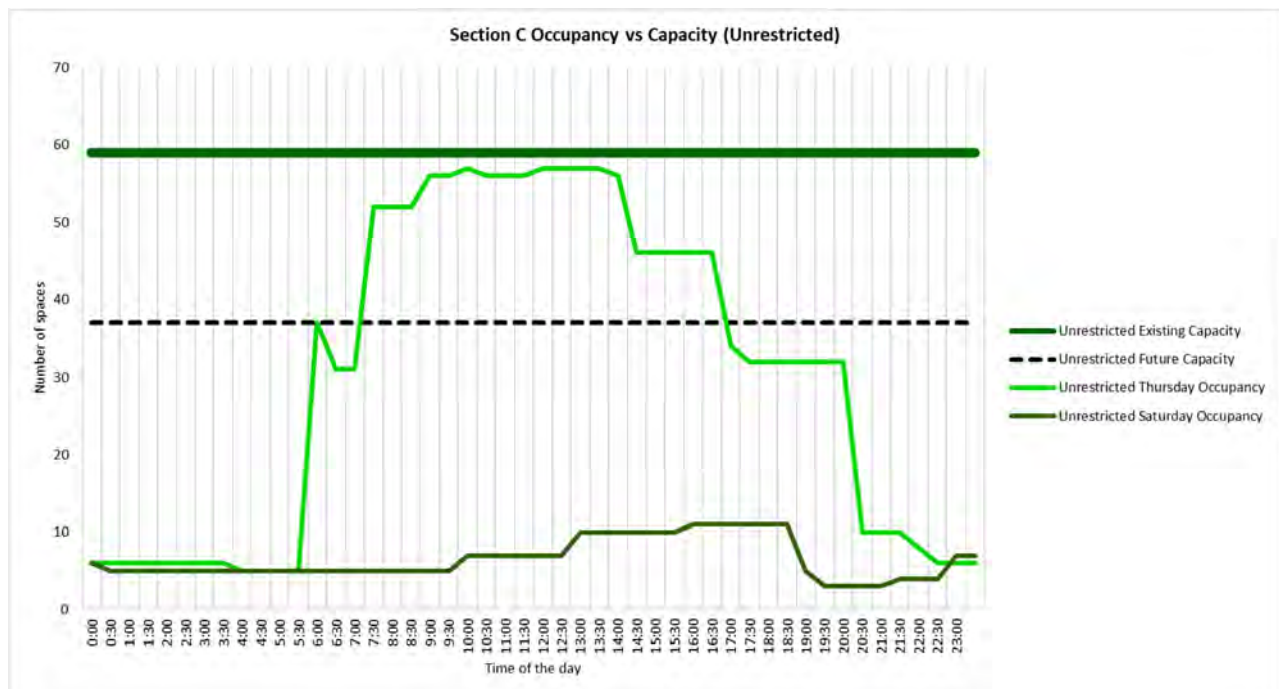


A2.5 Time restricted (on corridor)

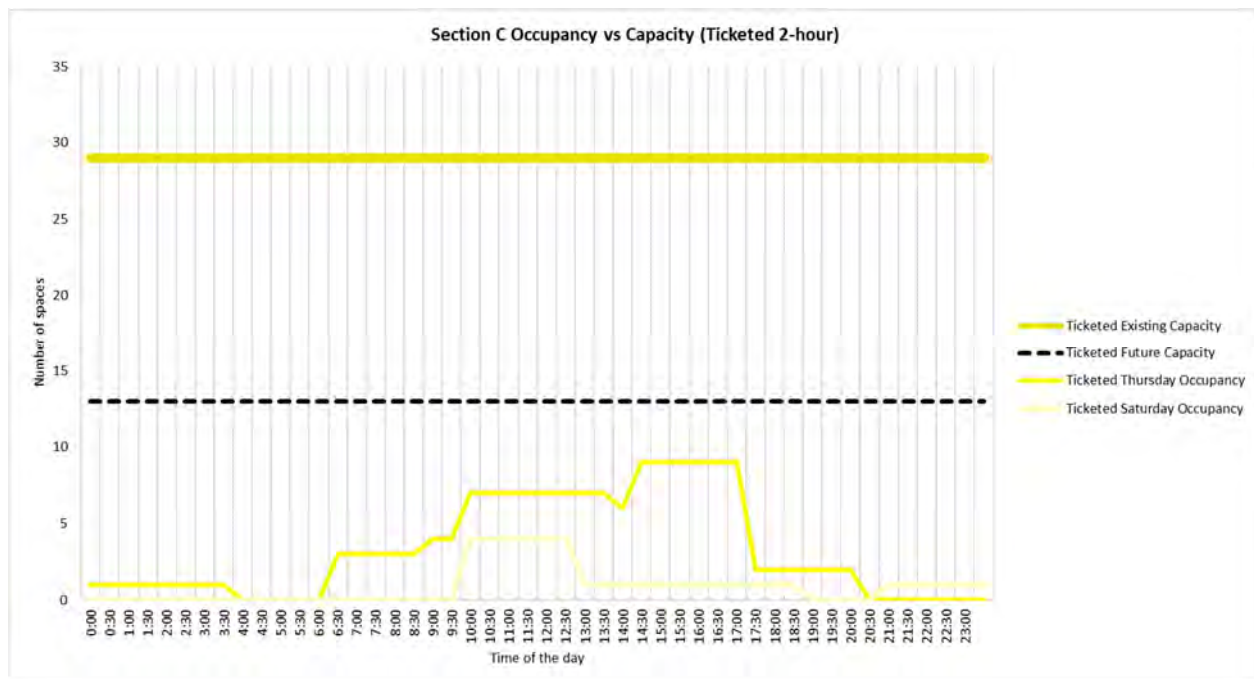


A3 Section C

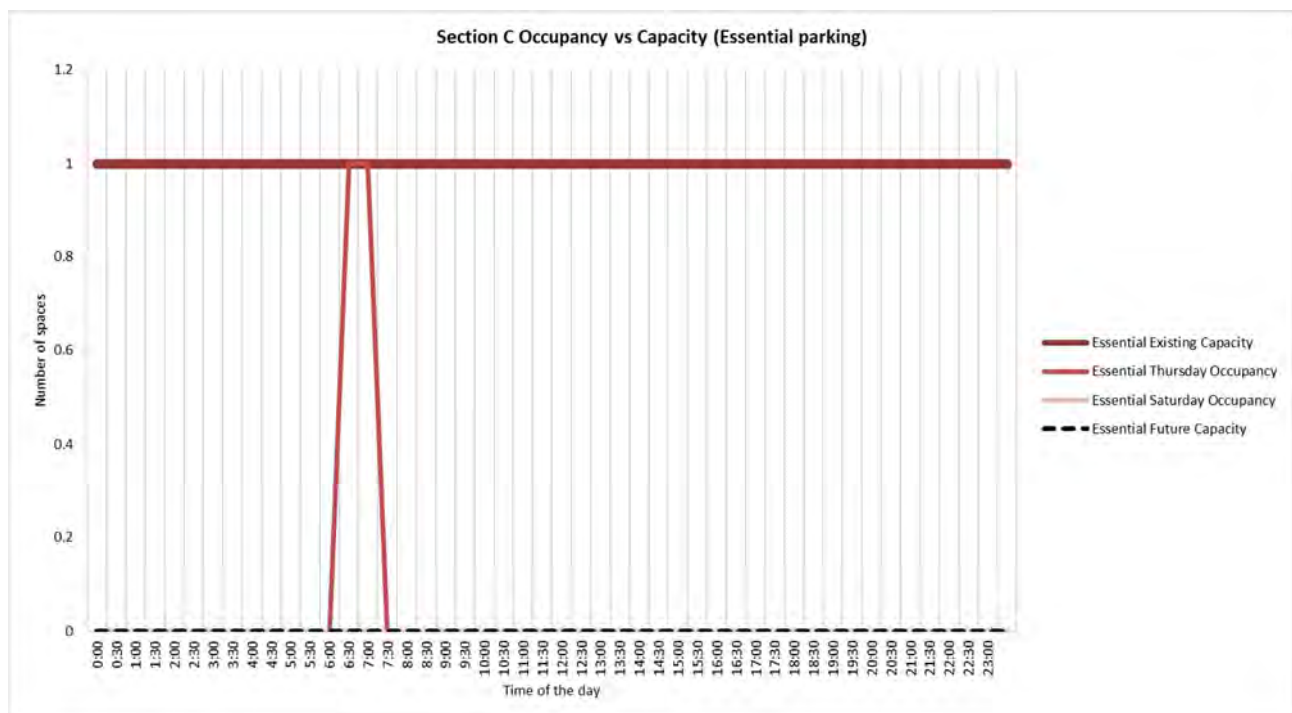
A3.1 Unrestricted (on corridor)



A3.2 Ticketed 2-hours (on corridor)

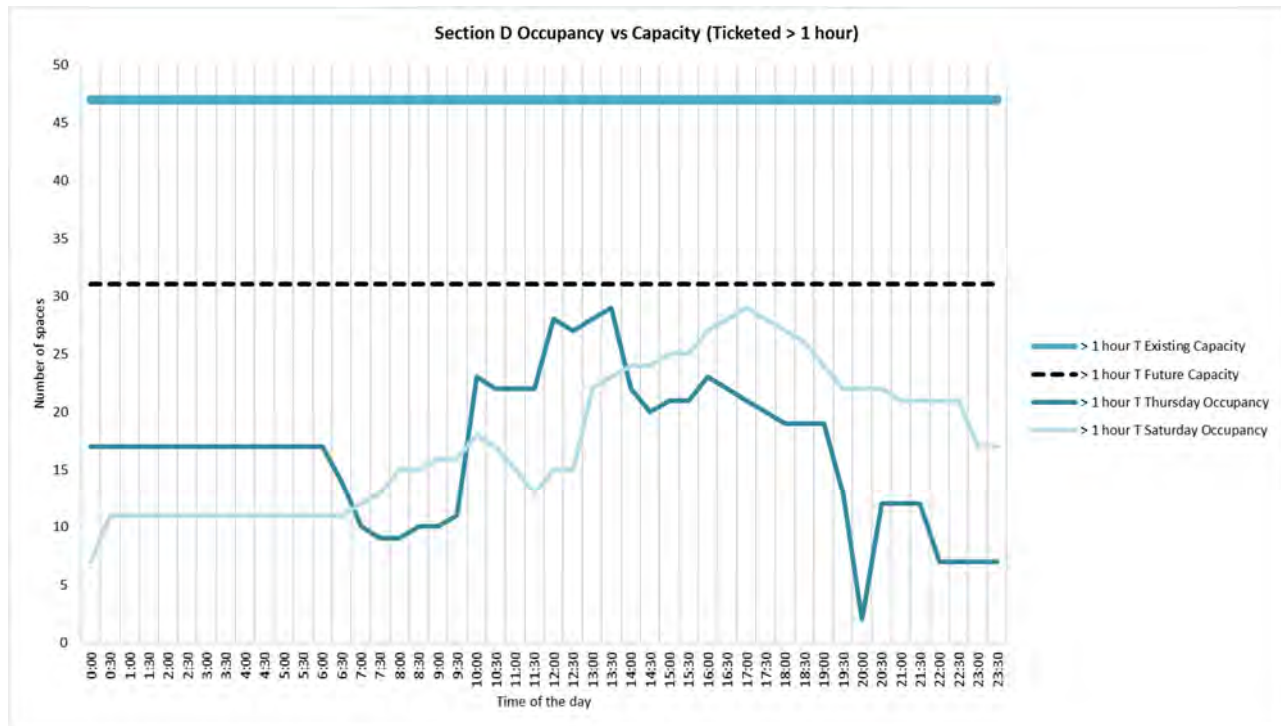


A3.3 Essential (on corridor)

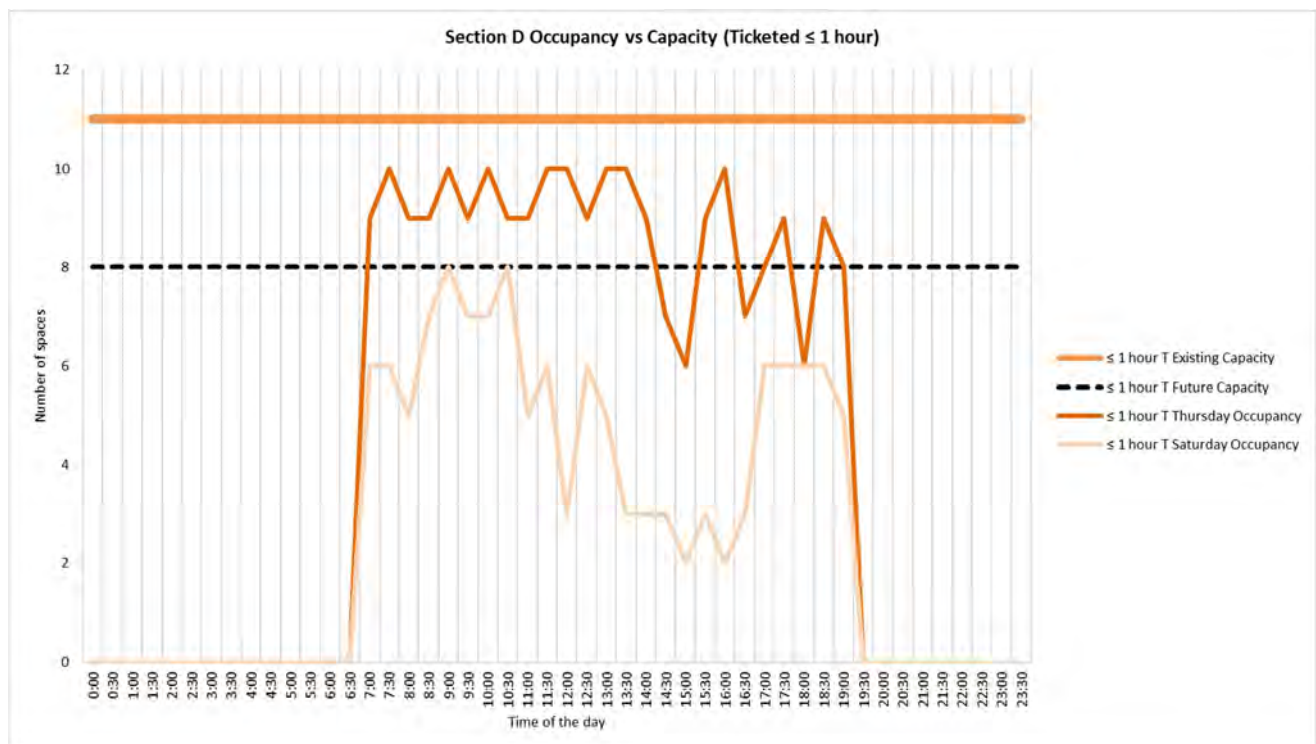


A4 Section D

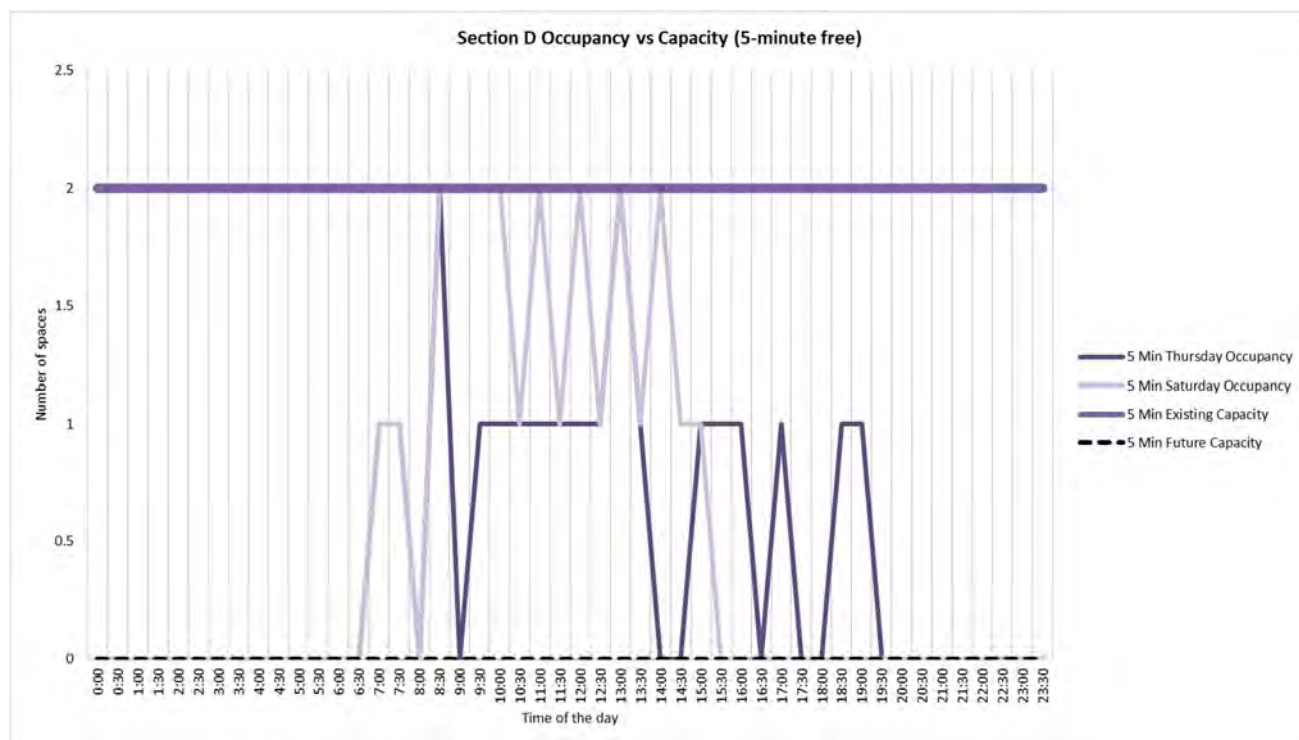
A4.1 Ticketed > 1 hour (on corridor)



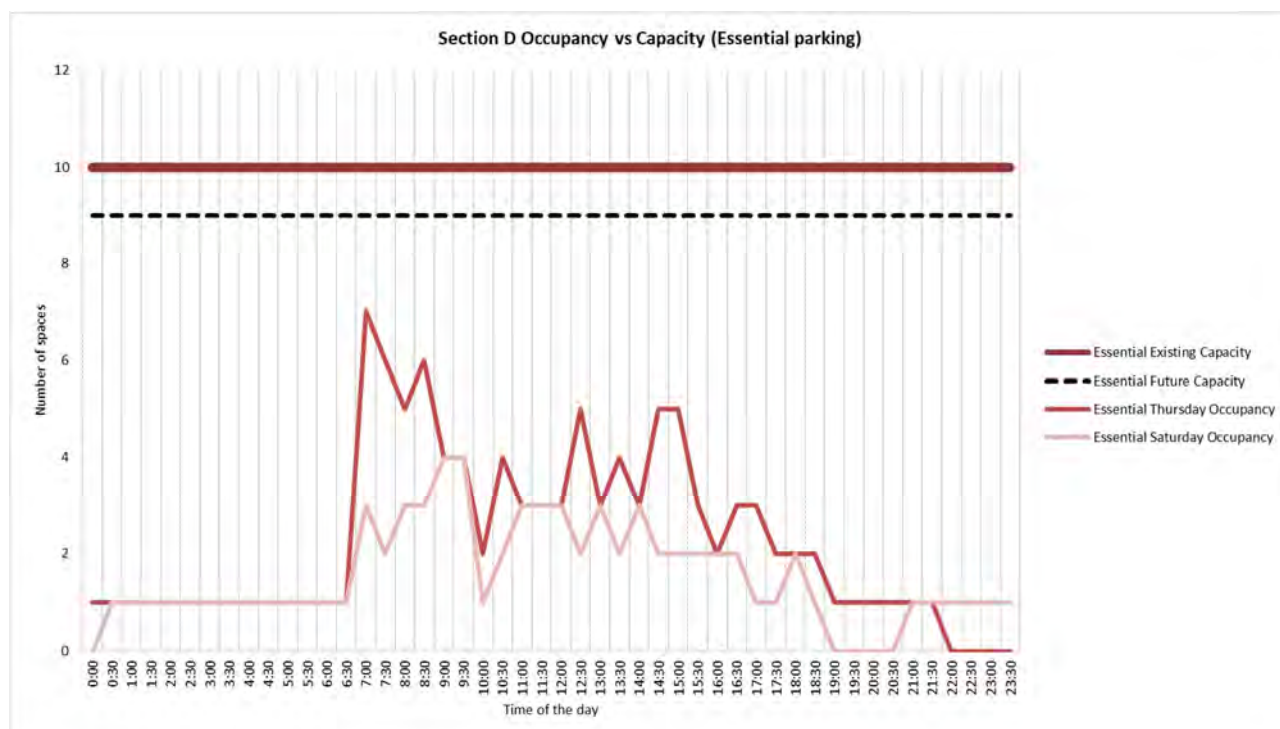
A4.2 Ticketed ≤ 1 hour (on corridor)



A4.3 5-minute (on corridor)



A4.4 Essential (on corridor)





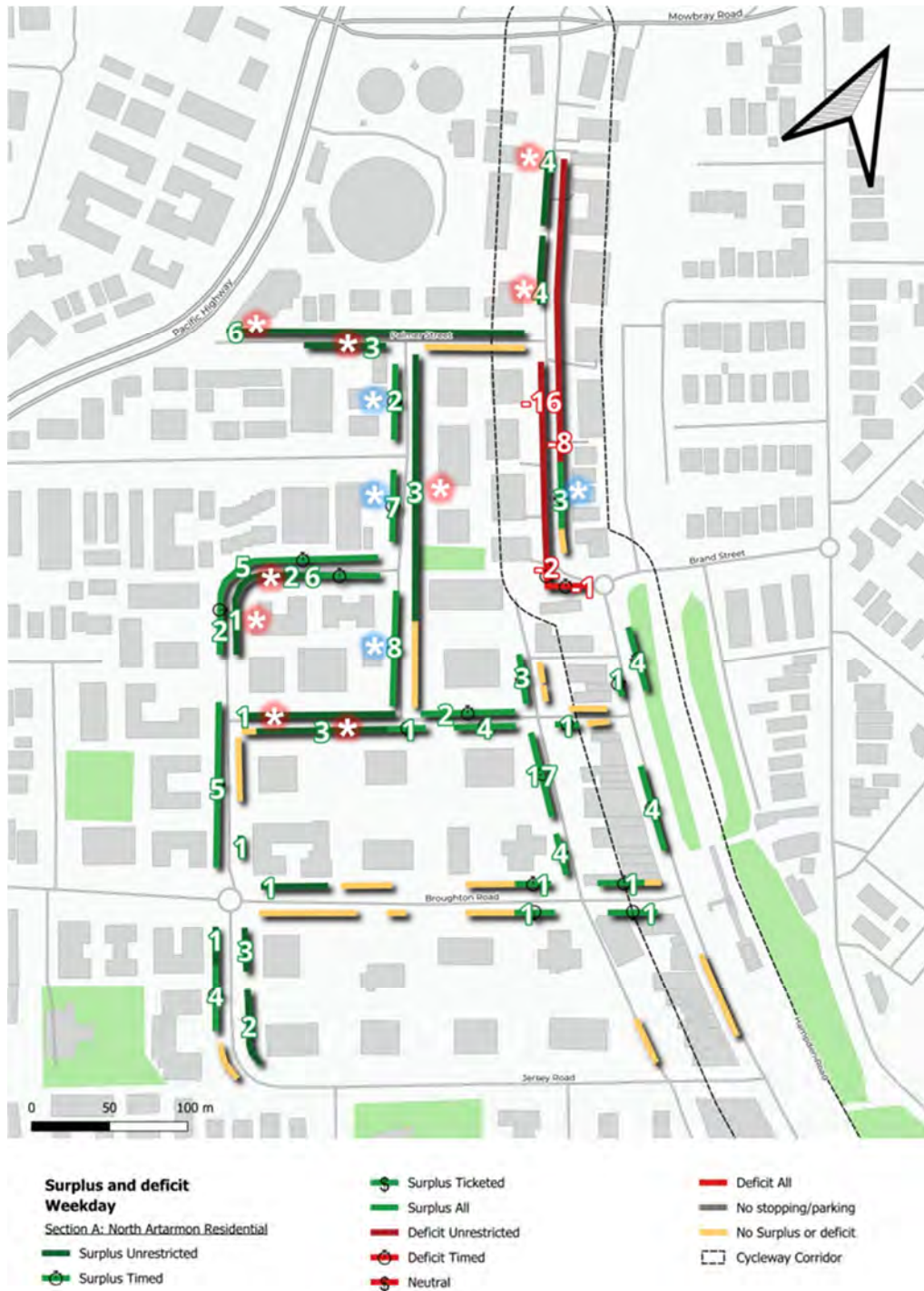
Appendix B

On-street parking
offsets



B1 Section A

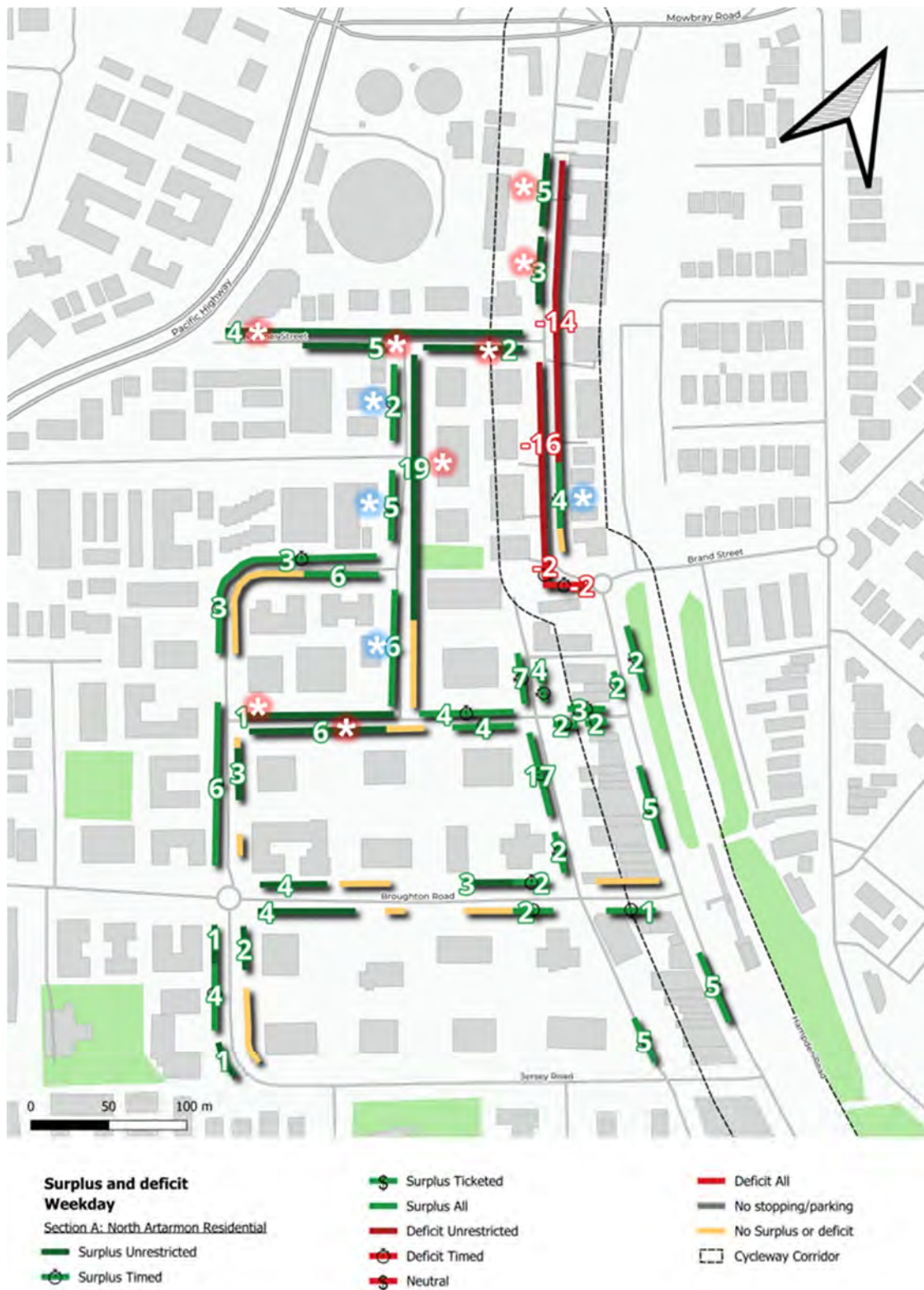
B1.1 Weekday AM peak (11:00 am)



*Indicates an existing on-street unrestricted parking offset to address the parking shortfall created by the proposal.

*Indicates an existing on-street timed parking offset to address the parking shortfall created by the proposal.

B1.2 Weekday PM peak (8:00 pm)

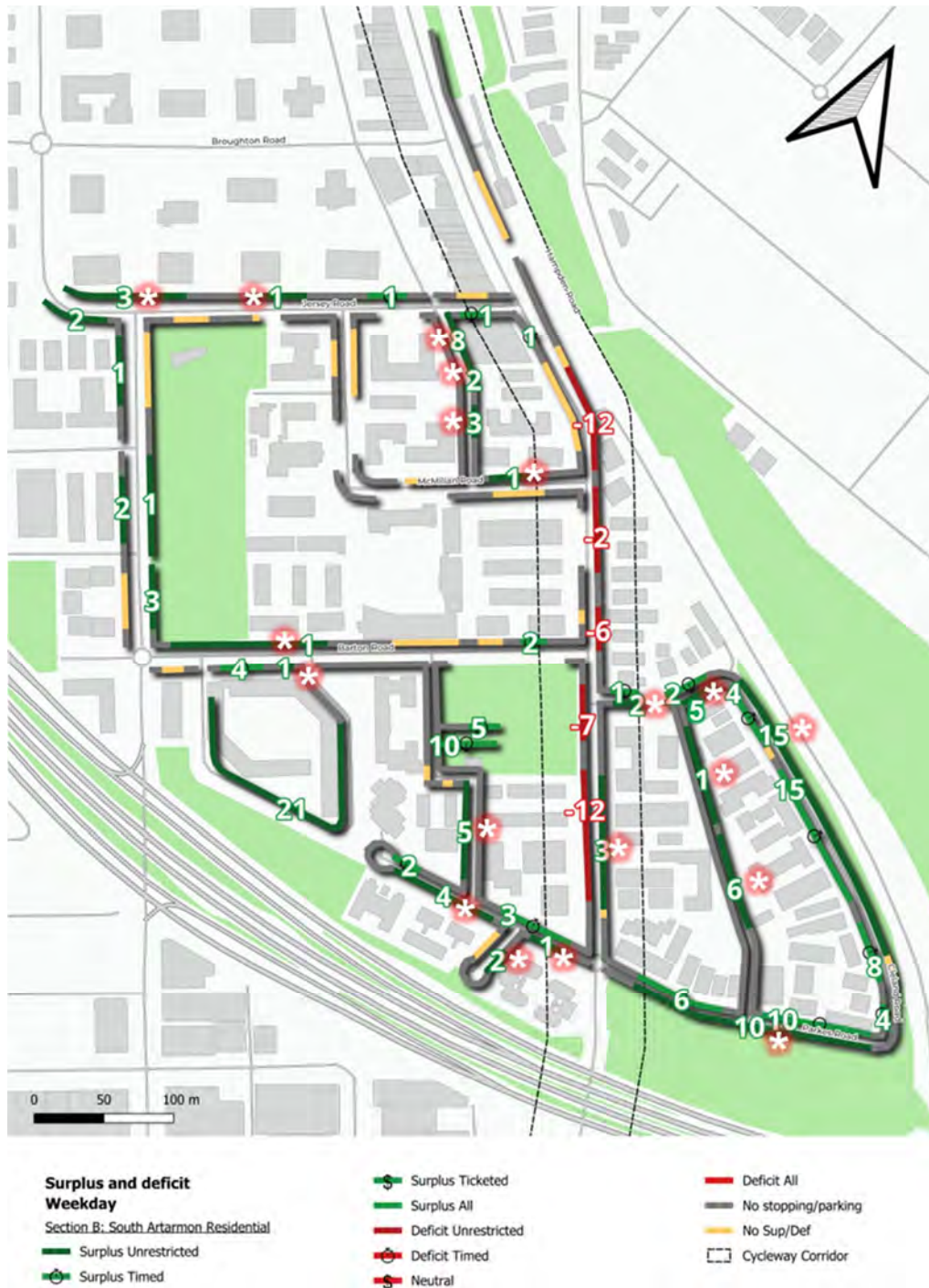


*Indicates an existing on-street unrestricted parking offset to address the parking shortfall created by the proposal.

*Indicates an existing on-street timed parking offset to address the parking shortfall created by the proposal.

B2 Section B

B2.1 Weekday AM / midday peak (12:00 pm)



*Indicates an existing on-street unrestricted parking offset to address the parking shortfall created by the proposal.

B2.2 Weekday PM peak (6:00 pm)

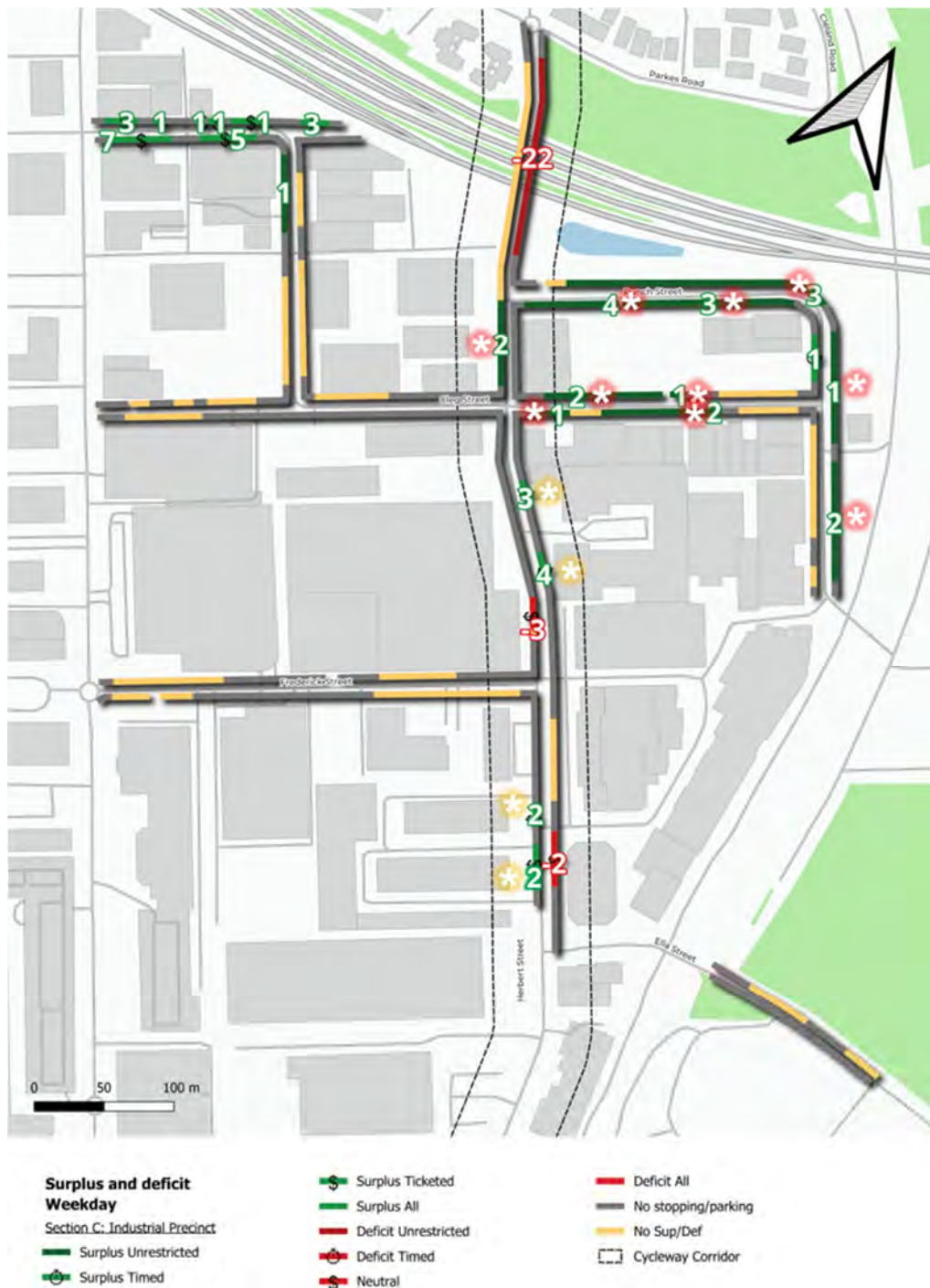


*Indicates an existing on-street unrestricted parking offset to address the parking shortfall created by the proposal.

*Indicates an existing on-street timed parking offset to address the parking shortfall created by the proposal.

B3 Section C

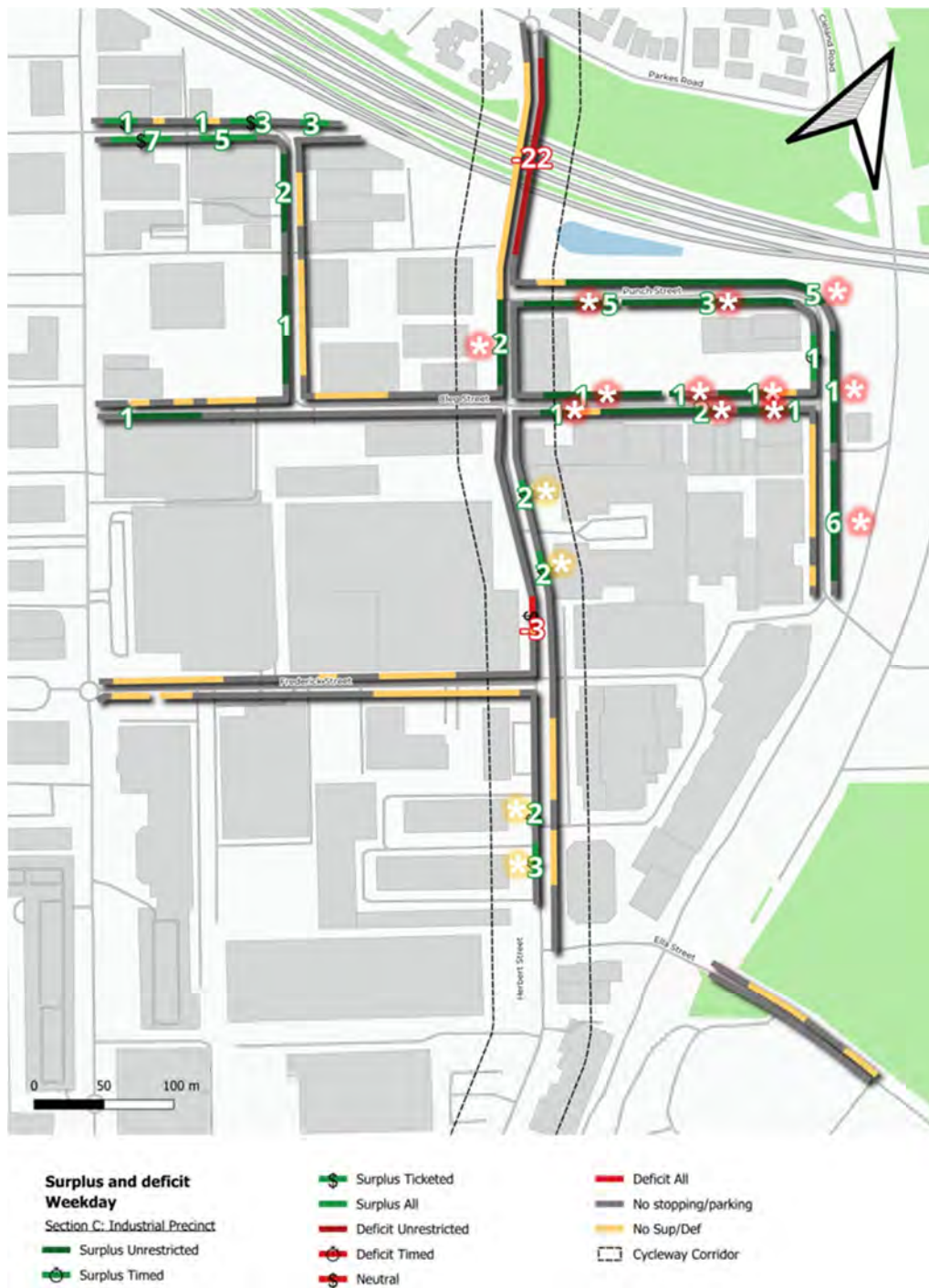
B3.1 Weekday AM / midday peak (10:00 am)



*Indicates an existing on-street unrestricted parking offset to address the parking shortfall created by the proposal.

*Indicates an existing on-street ticketed parking offset to address the parking shortfall created by the proposal.

B3.2 Weekday PM peak (1:30 pm)



*Indicates an existing on-street unrestricted parking offset to address the parking shortfall created by the proposal.

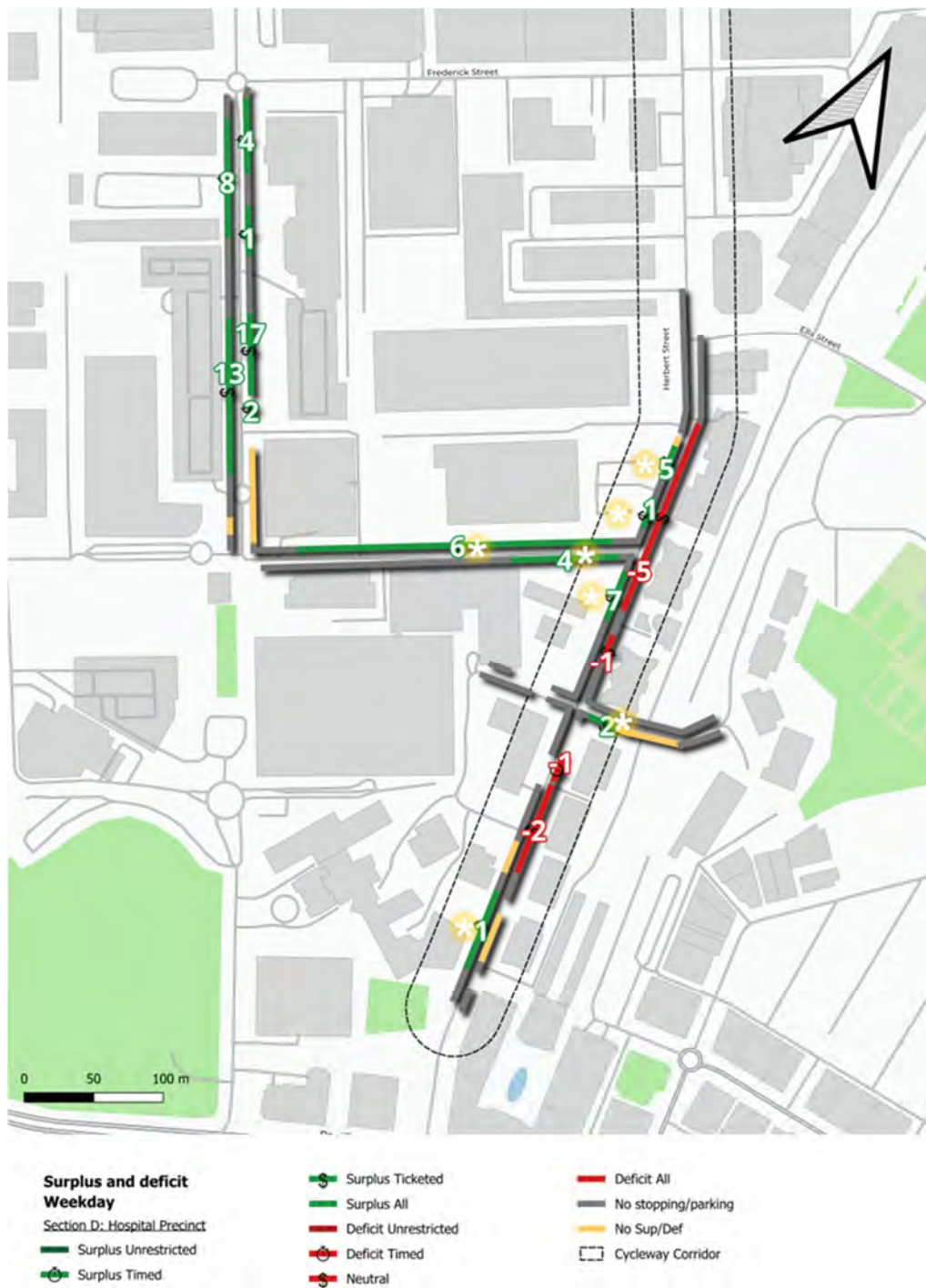
*Indicates an existing on-street ticketed parking offset to address the parking shortfall created by the proposal.

B4 Section D

B4.1 Weekday AM / midday peak (12:30 pm)



B4.2 Weekday PM peak (4:00 pm)



*Indicates an existing on-street ticketed parking offset to address the parking shortfall created by the proposal.

Appendix C

Survey data



[illegible]

18/02/2026

18/02/2026 2

[illegible]

[illegible]

[illegible]

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Appendix D

On-street parking redesigns





PLAN
SCALE 1:400

NOTE

- TURNING PATH ASSESSMENTS HAVE BEEN CONDUCTED AT 5-10 KM/H TRAVEL SPEED
- A CLEARANCE OF 0.5 METRES ARE INDICATIVELY SHOWN ON INDIVIDUAL SWEEP PATHS. WHILE FULL CLEARANCE IS DESIRABLE, IT DOES NOT NEED TO BE PROVIDED FOR LOCAL STREETS IN URBAN AREAS. REFER TO DESIGN VEHICLES AND TURNING PATH TEMPLATES GUIDE (AUSTRROADS, 2023)

LEGEND

- EXISTING CADASTRAL BOUNDARY
- EXISTING KERB
- NEW LINE MARKING
- REMOVED

PARKING SPACES

- EXISTING
- TO BE REMOVED
- PROPOSED

SWEPT PATH VEHICLE

BUS/RIGID TRUCK

Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6

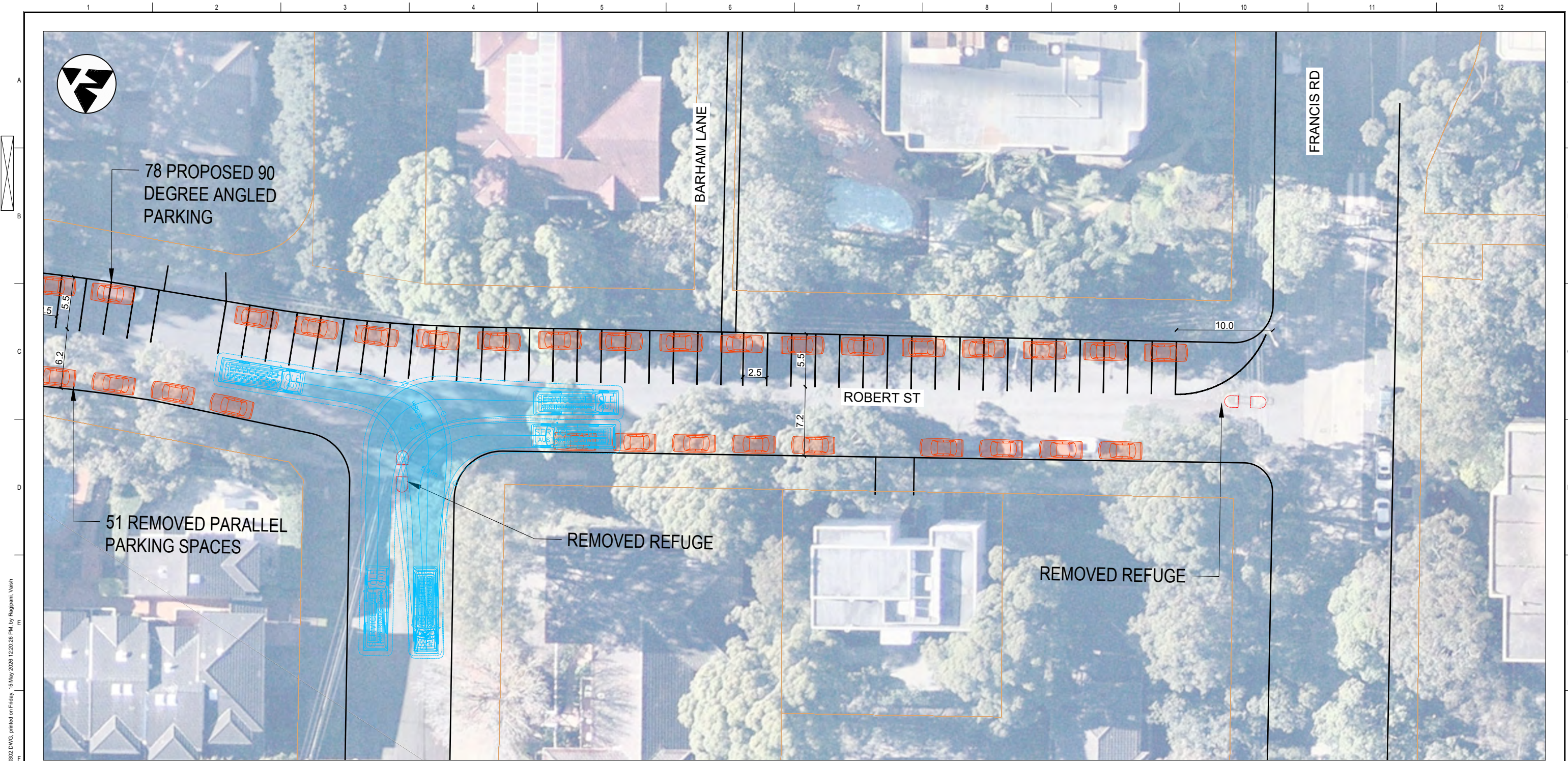
SERVICE VEHICLE

Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7

PASSENGER-CAR

Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.6

REFERENCE COORDINATION DRAWINGS				SCALES		A3 ORIGINAL		CLIENT:		DELIVERY PARTNERS:		PROJECT:		DRAWING STATUS:	
DESCRIPTION				DRAWING NO.		DO NOT SCALE THIS DRAWING		31 Victor Street		Woolacotts.		WILLOUGHBY CITY COUNCIL		PARKING STUDY - FOR COORDINATION	
SURVEY DATUM				HORIZONTAL DATUM		SIGNED:		CHATSWOOD NSW 2067		spackman mossop michael		ON-STREET PARKING REDESIGN		DESIGNED: ODY MURLIANTO	
VERTICAL DATUM:				DATE:		RREQ:		(02) 9777 1000		PROJECT No: PS209600		ROBERT STREET		CHECKED: ODY MURLIANTO	
				© WSP Australia Pty Ltd.		Level 27, 680 George Street, Sydney		email@willoughby.nsw.gov.au		DRAWN: VAISHNAVI RAGIPANI		SHEET 01		APPROVED: VINCE OLIVERI	
						GPO Box 5394, NSW 2001, Australia				DATE: 08.05.26					
						Tel: +61 2 9272 5100 Fax: +61 2 9272 5101									
						wsp.com									



PLAN

SCALE 1:400

PARKING SPACES

- EXISTING
- TO BE REMOVED
- PROPOSED

SWEPT PATH VEHICLE

BUS/RIGID TRUCK	SERVICE VEHICLE	PASSENGER-CAR
Width : 2.50 Track : 2.50 Lock to Lock Time : 6.0 Steering Angle : 36.6	Width : 2.50 Track : 2.50 Lock to Lock Time : 6.0 Steering Angle : 38.7	Width : 1.94 Track : 1.84 Lock to Lock Time : 6.0 Steering Angle : 33.6

NOTE

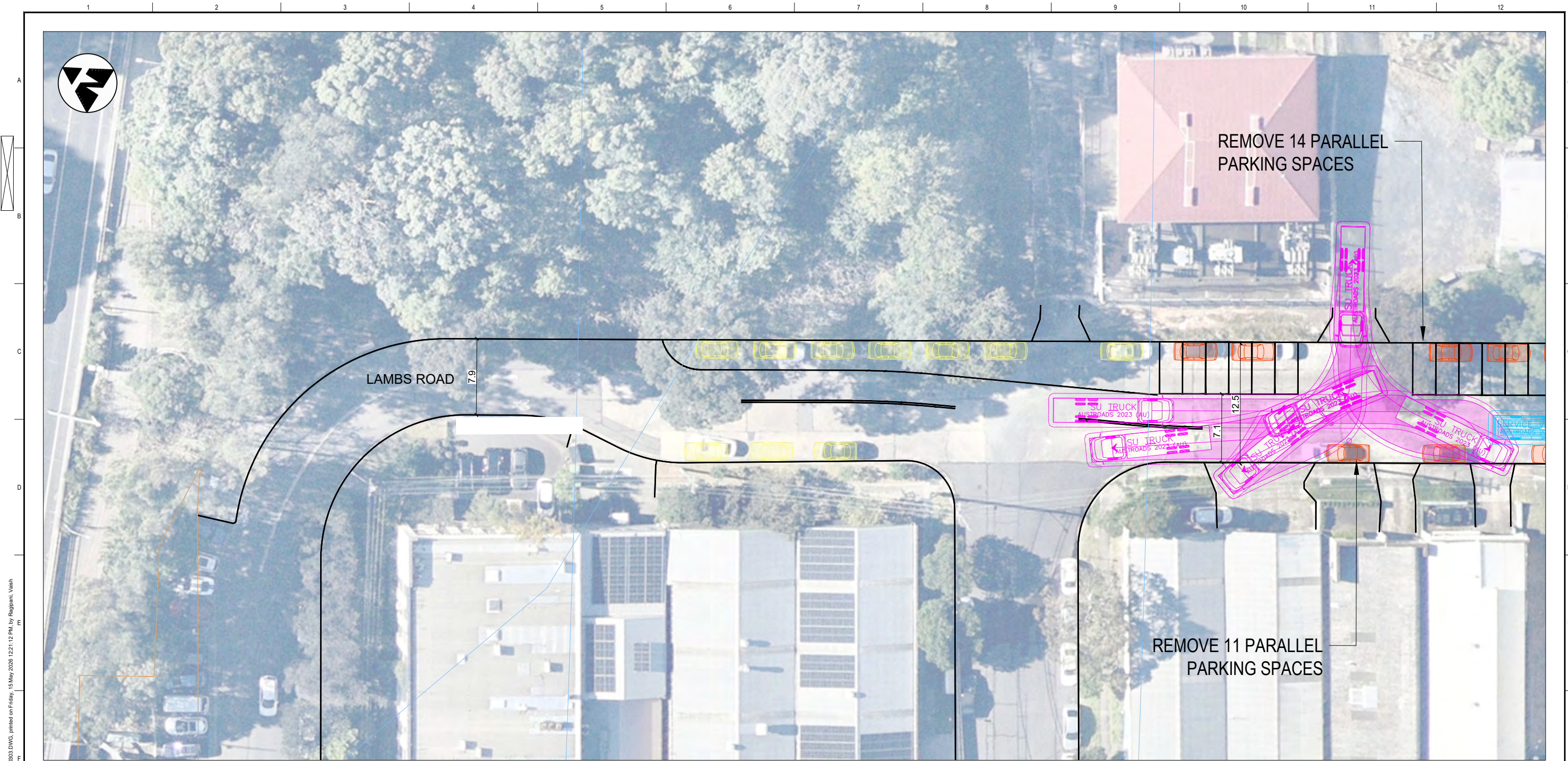
- TURNING PATH ASSESSMENTS HAVE BEEN CONDUCTED AT 5-10 KM/H TRAVEL SPEED
- A CLEARANCE OF 0.5 METRES ARE INDICATIVELY SHOWN ON INDIVIDUAL SWEEP PATHS. WHILE FULL CLEARANCE IS DESIRABLE, IT DOES NOT NEED TO BE PROVIDED FOR LOCAL STREETS IN URBAN AREAS. REFER TO DESIGN VEHICLES AND TURNING PATH TEMPLATES GUIDE (AUSTRROADS, 2023)

LEGEND

- EXISTING CADASTRAL BOUNDARY
- EXISTING KERB
- NEW LINE MARKING
- REMOVED

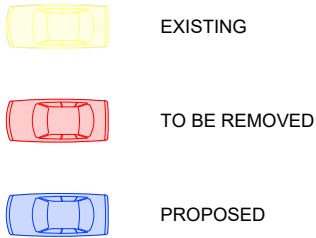
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A3 ORIGINAL DO NOT SCALE THIS DRAWING		 Level 27, 680 George Street, Sydney GPO Box 5394, NSW 2001, Australia Tel: +61 2 9272 5100 Fax: +61 2 9272 5101 wsp.com	CLIENT: 31 Victor Street Chatswood NSW 2067 (02) 9777 1000 email@willoughby.nsw.gov.au	DELIVERY PARTNERS: spackman mossop michaels	PROJECT: WILLOUGHBY CITY COUNCIL CHATSWOOD TO ST LEONARDS CYCLEWAY TITLE: HAMPDEN ROAD AND HERBERT STREET ON-STREET PARKING REDESIGN ROBERT STREET SHEET 02	DRAWING STATUS: PARKING STUDY - FOR COORDINATION DESIGNED: ODY MURLIANTO PROJECT No: PS209600 DRAWN: VAISHNAVI RAGIPANI CHECKED: ODY MURLIANTO DATE: 08.05.26 APPROVED: VINCE OLIVERI REV: 08.05.26 DRAWING No: PS209600-CAR-PARK-DR-0302A
REFERENCE COORDINATION DRAWINGS DESCRIPTION DRAWING NO. REV CHK SURVEY DATUM HORIZONTAL DATUM VERTICAL DATUM						

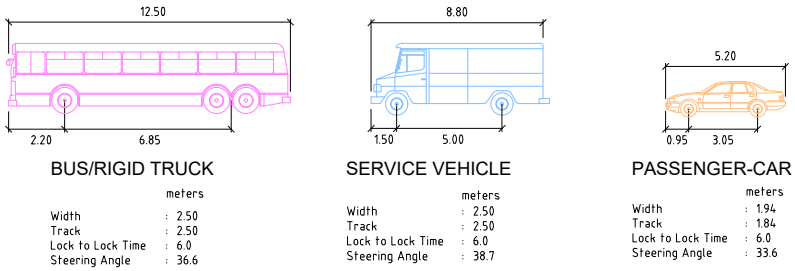


PLAN
SCALE 1:400

PARKING SPACES



SWEPT PATH VEHICLE



- NOTE**
- TURNING PATH ASSESSMENTS HAVE BEEN CONDUCTED AT 5-10 KM/H TRAVEL SPEED
 - A CLEARANCE OF 0.5 METRES ARE INDICATIVELY SHOWN ON INDIVIDUAL SWEEP PATHS. WHILE FULL CLEARANCE IS DESIRABLE, IT DOES NOT NEED TO BE PROVIDED FOR LOCAL STREETS IN URBAN AREAS. REFER TO DESIGN VEHICLES AND TURNING PATH TEMPLATES GUIDE (AUSTRROADS, 2023)

- LEGEND**
- EXISTING CADASTRAL BOUNDARY
 - EXISTING KERB
 - NEW LINE MARKING
 - REMOVED

REFERENCE COORDINATION DRAWINGS				SCALES		A3 ORIGINAL		CLIENT:		DELIVERY PARTNERS:		PROJECT:		DRAWING STATUS:	
DESCRIPTION				DRAWING NO.		DO NOT SCALE THIS DRAWING		WILLOUGHBY CITY COUNCIL		Woolacotts.		WILLOUGHBY CITY COUNCIL		PARKING STUDY - FOR COORDINATION	
SURVEY DATUM				HORIZONTAL DATUM		SIGNED:		31 Victor Street		spackman		TITLE:		DESIGNED:	
VERTICAL DATUM:				DATE:		APPROVED		Chatswood NSW 2067		mossop		HAMPDEN ROAD AND HERBERT STREET		CHECKED:	
				© WSP Australia Pty Ltd.		Level 27, 680 George Street, Sydney		(02) 9777 1000		michaels		ON-STREET PARKING REDESIGN		APPROVED:	
						GPO Box 5394, NSW 2001, Australia		email@willoughby.nsw.gov.au				LAMBS ROAD		DATE:	
						Tel: +61 2 9272 5100 Fax: +61 2 9272 5101						SHEET 03		08.05.26	
						wsp.com						PROJECT No:		DRAWN:	
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												DRAWING No:		REV:	
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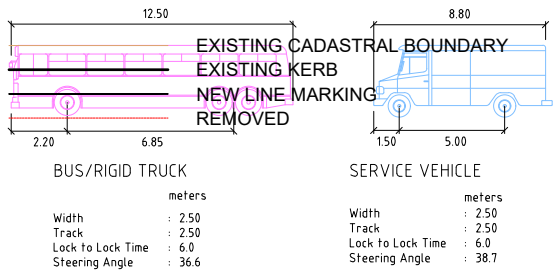


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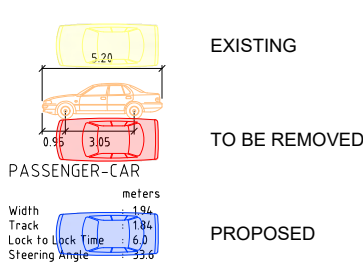
NOTE

- TURNING PATH ASSESSMENTS HAVE BEEN CONDUCTED AT 5-10 KM/H TRAVEL SPEED
- A CLEARANCE OF 0.5 METRES ARE INDICATIVELY SHOWN ON INDIVIDUAL SWEEP PATHS. WHILE FULL CLEARANCE IS DESIRABLE, IT DOES NOT NEED TO BE PROVIDED FOR LOCAL STREETS IN URBAN AREAS. REFER TO DESIGN VEHICLES AND TURNING PATH TEMPLATES GUIDE (AUSTRADS, 2023)

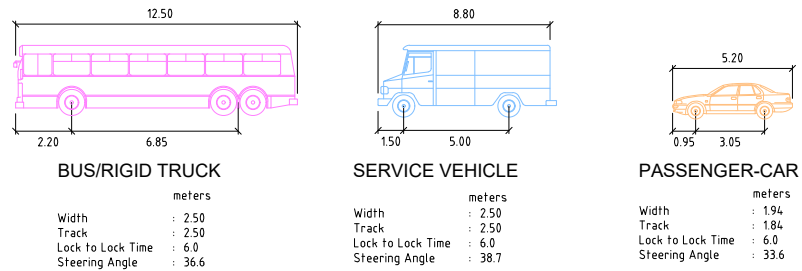
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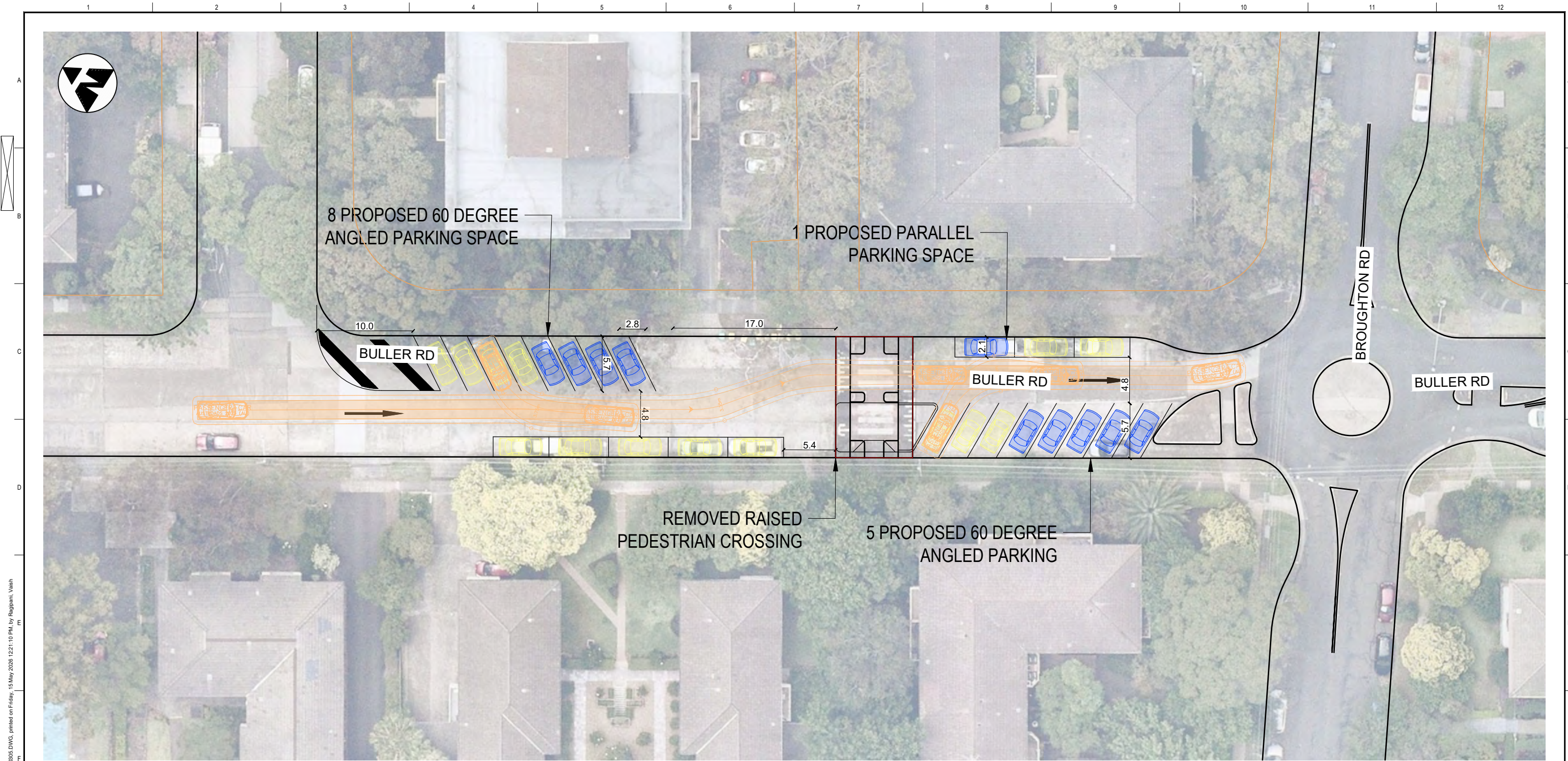
PLAN
SCALE 1:400
PARKING SPACES



SWEPT PATH VEHICLE



REFERENCE COORDINATION DRAWINGS				SCALES		A3 ORIGINAL		CLIENT:		DELIVERY PARTNERS:		PROJECT:		DRAWING STATUS:	
DESCRIPTION				DRAWING NO.		DO NOT SCALE THIS DRAWING		WILLOUGHBY CITY COUNCIL		Woolacotts.		CHATSWOOD TO ST LEONARDS CYCLEWAY		PARKING STUDY - FOR COORDINATION	
SURVEY DATUM				APPROVED		SIGNED:		31 Victor Street		spackman		HAMPDEN ROAD AND HERBERT STREET		DESIGNED:	
HORIZONTAL DATUM:				DATE:		RREQ:		Chatswood NSW 2067		mossop		ON-STREET PARKING REDESIGN		CHECKED:	
VERTICAL DATUM:				© WSP Australia Pty Ltd.				(02) 9777 1000		michaels		LAMBS ROAD		APPROVED:	
								email@willoughby.nsw.gov.au				SHEET 04		VINE OLIVERI	
														DATE:	
														08.05.26	
														REV:	
														PS209600-CAR-PARK-DR-0304A	



NOTE

1. TURNING PATH ASSESSMENTS HAVE BEEN CONDUCTED AT 5-10 KM/H TRAVEL SPEED
2. A CLEARANCE OF 0.5 METRES ARE INDICATIVELY SHOWN ON INDIVIDUAL SWEEP PATHS. WHILE FULL CLEARANCE IS DESIRABLE, IT DOES NOT NEED TO BE PROVIDED FOR LOCAL STREETS IN URBAN AREAS. REFER TO DESIGN VEHICLES AND TURNING PATH TEMPLATES GUIDE (AUSTRROADS, 2023)

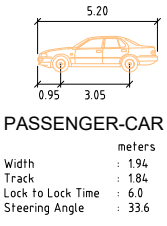
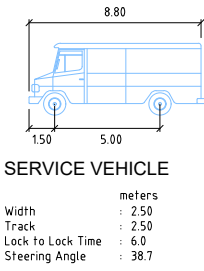
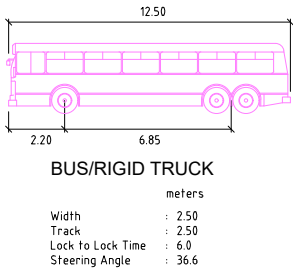
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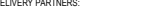
- EXISTING CADASTRAL BOUNDARY
- EXISTING KERB
- NEW LINE MARKING
- REMOVED

PLAN
SCALE 1:400
PARKING SPACES

- EXISTING
- TO BE REMOVED
- PROPOSED

SWEPT PATH VEHICLE



								REFERENCE COORDINATION DRAWINGS		SCALES		A3 ORIGINAL DO NOT SCALE THIS DRAWING		 Level 27, 680 George Street, Sydney GPO Box 5394, NSW 2001, Australia Tel: +61 2 9272 5100 Fax: +61 2 9272 5101 wsp.com		CLIENT:  31 Victor Street Chatswood NSW 2067 (02) 9777 1000 email@willoughby.nsw.gov.au		DELIVERY PARTNERS:  spackman mossop michael		PROJECT: WILLOUGHBY CITY COUNCIL CHATSWOOD TO ST LEONARDS CYCLEWAY		DRAWING STATUS: PARKING STUDY - FOR COORDINATION	
								DESCRIPTION		DRAWING NO.		REV				CHK		DESIGNED: ODY MURLIANTO		CHECKED: ODY MURLIANTO		APPROVED: VINCE OLIVERI	
																		PROJECT No: PS209600		DRAWN: VAISHNAVI RAGIPANI		DATE: 08.05.26	
A		08.05.26		V.R.		PARKING STUDY - FOR COORDINATION																	
REV		DATE		BY		DESCRIPTION		CHK		APPD													