Public Spaces Overview

Public open space is essential for residents and workers while new spaces are needed to ensure future growth is sustainable and balanced. Analysis of existing conditions in the Study Area has identified insufficient tree canopy, a lack of local and neighbourhood open spaces and urban heat island effects that diminish the amenity of the future Precinct as it grows.

The Study Area is close to numerous parks, sports facilities and gardens including the Royal Botanic Gardens, 'The Tan' running track and Albert Park Sporting Precinct. However, within the Study Area itself, there are few local and neighbourhood public open spaces. Apart from Eastern Reserve on Park Street, the few pockets of public open space that exist are either privately managed (Skinner's Adventure Playground) or located in areas of high traffic and noise (Dorcas Street Reserve fronting Kings Way). These local parks are fenced and do not meet all the amenity needs of residents and workers or provide places to relax or engage with other people or nature.

Recently, the area between Southbank and Dorcas Street has seen consistent population growth and several large developments bringing employment opportunities and greater vitality to the area. This trend is expected to continue at an annual rate higher than 2% bringing more people to live, work and shop in the area. While this is a positive prediction, new and improved open spaces are needed to meet the needs of the area's growing population.

South Melbourne features very wide streets with broad pedestrian areas. With most buildings lacking front setbacks and open areas, the streetscape environment plays an important role in delivering the pedestrian amenity, tree canopy and day to day social environment that public open space generally provides.

In the retail areas around South Melbourne Market and Clarendon Street, the streetscape has an abundance of places for people to meet and relax in a safe, well-serviced space. However, as South Melbourne's employment areas grow, the streetscape will need to evolve in a way that meets public open space needs. This could possibly be in consolidated locations, within the road reserve or in amenity pockets scattered throughout the Study Area north of Dorcas Street.





The small local parks facing Kings Way showing trees under stress

Public Open Space

The shortfall in public open space is identified in the City of Port Phillip's Draft Public Open Space Strategy which identifies areas where avenue style planting is encouraged.

Commercial precincts north of Dorcas Street lack public open space. As future mixed use opportunities are realised, growing population will increase demand for quality open space.

Although surrounded by significant state and regional parks and public open spaces, South Melbourne's provisions are all small, local and neighbourhood scale. The total area of local, small local and neighbourhood open spaces is a little over 1Ha with only 1300m² north of Dorcas Street fronting Kings Way and the M1 Freeway.



Within higher density housing and employment clusters, small parks and gardens play a key

role in the health and wellbeing of the population. Some of these spaces are fenced and could be enhanced with new facilities, more ecological planting, WSUD systems and appropriate landscaping.

The amenity of small local parks fronting Dorcas Street and Kings Way is compromised by their locations on busy roads. The trees display signs of stress and limited amenity. A consolidated park area designed to meet the diverse needs of people living and working in the area would benefit an increasing density built environment.



Eastern Reserve - the only local park within the Study Area



Sunlight access in public spaces

DDO8 has a range of mandatory sunlight controls outlined in the sub-precinct extracts (below). The controls are primarily to limit overshadowing in the established and emerging activity areas. Other places include protections of residential areas where large scale building may have off-site amenity impacts.

Some areas protected by the controls contain awning canopies while others are overshadowed in part by high rise developments in the City of Melbourne.

The controls vary for different precincts and refer to different times of the day. They generally reference the winter solstice as the date to which sun studies should be mapped however, 8.5 and 8.2 have no referenced date.

The streets surrounding the South Melbourne Market are also protected under sub precinct 8.6 controls. Cecil Street development on the east side of Cecil Street cannot impact the adjacent footpath although impacts on both these subprecincts could be the result of development contained within 8.2 on the north side of York Street



Mandatory Sunlight Controls under DDO8

DDO8.1

New built form must not diminish sunlight access to the western footpaths (up to the property line) between 10am and 12pm 21 June and to the eastern footpaths (up to the property line) between 2pm and 4pm 21 June.

DDO8.2

New built form on the northern side of York Street must not diminish sunlight access to the southern footpath (up to 6 metres from the property frontage) between 11am and 2pm 21 June. New built form on the east side of Cecil Street must not diminish sunlight access to the east and west footpaths of Cecil Street adjacent to the South Melbourne Market.

DDO8.3

New built form must not diminish sunlight access of footpaths up to the property line:

On the western side, between 10am and 12pm 21 June. On the eastern side, between 2pm and 4pm 21 June.

DDO8.5

To ensure that new built form does not diminish sunlight access to the footpaths of Coventry Street.

DDO8.5b

New buildings on the northern side of Coventry Street must maintain the midwinter sunlight access to the footpaths on the southern side of the street. The entire width of these footpaths must have sunlight access, up to the property frontages, between 11am and 2pm 21 June.

DDO8.6

Sunlight access to the streets surrounding the Market must be maintained.

DDO8.7c

New buildings on the northern side of Bank Street must maintain the midwinter sunlight access to the footpaths on the southern side of the street. The entire width of these footpaths must have sunlight access, up to the property frontages, between 11am and 2pm 21 June.

DDO8.8

New buildings on the northern side of Market and York streets must not diminish the midwinter sunlight. New buildings must not diminish sunlight access to nearby residential properties. Access to the footpaths of on the southern side of these streets. The entire width of these footpaths should have sunlight access, up to the property frontages, between 11am and 2pm on 21 June.

DDO8.9

New buildings must not diminish sunlight access to nearby residential properties.

Street Sections



	Street Section	Street Wall Ratio	Street Width	Speed Limit	Traffic (VpD)	Lanes (total+VpL)	Active Transport
1	Kings Way	1:4	44m	60 kmph	100,000	8 (12,500)	44%
2	Ferrars Street	1:6	30m	60 kmph	30,000	4 (7250)	34%
3	City Road	1:5	30m	60 kmph	25,000	4 (6250)	39%
4	Clarendon Street	1:3	30m	40 kmph	20,000	4 (5000)	41%
5	Cecil Street	1:3	28m	40 kmph	7000	2 (3500)	58%
6	Park Street	1:3	30m	60 kmph	6500	2 (3250)	41%
7	Market Street	1:3	30m	40 kmph	2000	2 (1000)	38%
8	Coventry Street	1:5	30m	40 kmph	1600	2 (800)	44%
9	Tope Street	1:2	20m	50 kmph	1300	2 (650)	39%
10	Moray Street	1:5	30m	40 kmph	1100	2 (550)	53%
(1)	Union Street	2:1 1:1	9.5m	40 kmph	1000	1 (1000) one way	30%
12	Ross Street	2:3	12m	40 kmph	500	2 (250)	43%
(13)	Bank Place	3:1 2:1	6m	40 kmph	300	1 (300) two way	17%

Street sections analysis indicates relatively broad streets with slower traffic and higher pedestrian amenity increasing towards the retail core. The building to street-wall ratio shows relatively low rise development (most streets 1:3 ratio). South Melbourne's wide streets and low-medium scale buildings ensure plentiful sunlight and daylight access to the streetscape.

The street sections illustrated on the following pages provide a variety of street widths, functions, adjacent land uses and structure. Each section outlines the immediate environment or street segment but not the entire street. Each section describes the indicative conditions as well as some notable variations to consider.

The descriptions outline the **structure**, **purpose**, **amenity and development** with the aim of understanding the issues, opportunities and constraints in different streets, roads and lanes.

The sections are numbered from the highest volume of traffic to the lowest and draw approximate street wall dimensions and ratio at the point of the section representative of the building scale framing the street. More detailed built form assessments of the street wall and building heights are provided in the 'development' chapter.



1. Kings Way (State Route 60)

11.6

Structure: Framing the eastern edge of the Study Area is Kings Way. With eight lane capacity, it hosts over 100,000 vehicles per day.

Purpose: Zoned as RDZ1, Kings Way funnels traffic on and off the M1 freeway providing freight connections to all parts of Victoria and vehicle traffic to Melbourne's CBD. Connections with commercial employment areas within the Study Area are strengthened by the State route connections as well as the tram Route 58 running along the median that interchanges with Route 1 at Eastern Road.

Amenity: Pedestrian amenity on Kings Way is compromised by high volumes of motorised traffic, noise and emissions. With only a few small trees at the southern extent, thermal comfort is reduced compounding the minimal attraction for street trading, cyclists and pedestrians to traverse or engage in the space.

Development: Kings Way land use within the Study Area is mostly mixed use allowing large scale developments, however only a few sites have been developed to their potential. The eastern interface has larger blocks and larger parcel sizes that have attracted more showroom style development utilising the high levels of exposure to traffic.





1



16

2. Ferrars Street

Structure: Ferrars Street sits on the western edge of the Study Area. It hosts four lanes of traffic and around 30,000 vehicles per day.

Purpose: Zoned as RDZ1, Ferrars Street funnels traffic from the coastal areas within the City of Port Phillip to Southbank. Running in parallel is the adjacent light rail service that links St Kilda, Middle Park, Albert Park and South Melbourne commercial area with South Bank and Central Melbourne.

Amenity: Pedestrian amenity on Ferrars Street is diminished by traffic, noise and emissions, however a good tree canopy, median planting and shrubs in kerb outstand areas softens the streetscape and improves the amenity.





Development: Recent mixed use developments have been approved along the narrow strip of land between the road reserve and rail reserve on the eastern edge. The western interface presents mostly low density residential development with valued heritage and neighbourhood character.



3. City Road

Structure: City Road is on the north west edge of the Study Area. It hosts four lanes of traffic and around 25,000 vehicles per day.

Purpose: Zoned as RDZ1, City Road provides connections to Melbourne's CBD from Port Melbourne, Garden City and coastal areas.

Amenity: Pedestrian amenity on City Road is diminished by traffic, noise and emissions. The overhead power lines on both sides of the street constrain street tree development and thermal comfort.

Development: City Road has a transitional gateway character that steps up from the low density housing areas to the south west of the Study Area, through a light industrial and employment precinct, and connects with Clarendon Street under the M1 freeway where the high density threshold of Southbank emerges as the gateway to the central city and South Melbourne.



4. Clarendon Street

Structure: Clarendon Street is both physically and metaphorically at the heart of South Melbourne. It hosts four lanes of traffic and around 20,000 vehicle movements per day as well as the Route 12 Tram.

Purpose: Zoned as RDZ1, Clarendon Street provides connections to Melbourne's CBD and Albert Park with a direct transition to Spencer Street and Southern Cross Station.

Amenity: Clarendon Street hosts heritage awnings over broad pavements with high levels of transparency and retail activation. The street trees are constrained by the awning and abundance of overhead power lines.

Development: Clarendon Street presents a largely in-tact colonial street wall with an abundance of two storey shop-top housing and larger developments set back from the street edge. Distinctly smaller in scale and density from Southbank, it provides a dispersed and open feel to the south as it approaches Albert Road and Albert Park Lake.

5. Cecil Street

Structure: Cecil Street hosts two lanes of traffic and around 7,000 vehicle movements per day. It also hosts Bus Route 236 and the City of Port Phillip Community Bus service.

Purpose: Cecil Street provides good north-south pedestrian and cycling connections between the South Melbourne Market, commercial precinct and residential areas to the south. It features the most active transport allocation of the Study Area at 58%.

Amenity: The median strip along Cecil Street provides an abundance of high quality street trees and high levels of thermal comfort. With a combination of low rise and heritage buildings, dappled light through an extensive tree canopy and relatively low volumes of motorised traffic, Cecil Street's pedestrian comfort and healthy design is highly desirable.

Development: South of Dorcas Street, Cecil Street provides numerous housing and tenure types with a variety of town houses and social housing forms. To the north of Dorcas Street are commercial type buildings and the South Melbourne Market. North of York Street are larger scale developments up to eight storeys high.





6. Park Street

Structure: Park Street is 30m wide and transects the Study Area east-west. It is the most southern main street in the Study Area and hosts two lanes of traffic and around 6,500 vehicles per day and the tram Route 1.

Purpose: Park Street provides mixed use, residential and commercial areas and a local park. The tram Route 1 connects to South Melbourne Beach and a planned extension will join Kings Way with Clarendon Street.

Amenity: Broad pedestrian areas create sense of space and low traffic volumes make Park Street an attractive and diverse thoroughfare. The street trees and canopy cover is somewhat constrained by power lines on both sides and tram lines in the median. Inconsistent retail functions lack the awnings and transparency of a high amenity area.

Development: The commercial developments in the mixed use areas present a three storey street wall in between more modest developments and residential frontages. More recent planning applications are emerging on the larger parcels on the south side, west of Clarendon Street.

7. Market Street

Structure: Market Street is the northern most main street running east-west from Kings Way to City Road. It features two lanes and only 2,000 vehicles per day however in the eastern section it runs one lane only.

Purpose: Market Street has a diversity of Commercial 1 and 2 zoned land with a mix of residential, office and retail uses as well as some light industrial uses at either end.

Amenity: Pedestrian amenity is varied with good amenity in the retail areas due to the broad pavement and tree planting although, there are pedestrian vehicle conflicts due to vehicle crossovers creating excessive cross-fall and focus away from the active edge. The two lanes of angled parking create a hazard for cyclists, however numerous kerb outstands have been built to improve pedestrian safety and planting.

Development: Beyond the street wall sits some large scale developments up to eight storeys high east of Clarendon Street. The streetwall is generally between two and three storeys and more recent developments present a terraced form described as ziggurat form in response to planning controls to protect sunlight on the street.

8. Coventry Street

Structure: Coventry Street features two lanes for 1,600 vehicle movements per day including the access point to the upper level parking at the market. The median allows for two rows of street trees as the northern pavement is primarily used for trading.

Purpose: Provides a direct connection to the light rail and South Melbourne Market at its western extent and boutique retail west of Clarendon Street. It also creates a pedestrian linkage between tram stops on Kings Way and the employment precinct.

Amenity: Pedestrian amenity is generally high with low traffic volumes, good access to public transport and retail transparency although the overhead power lines on the north side of the street limit street tree development and thermal comfort.

Development: Coventry Street shows a consistent two storey colonial street wall in the western end with only modest developments above. A few larger developments emerge in the eastern employment area punctuated by the Mercedes tower on the corner with Kings Way.







9. Tope Street

Structure: Tope Street is one of the few 20m wide streets running north-south through the Commercial 2 employment precinct. It features two lanes and provides for 1,300 vehicle movements per day.

Purpose: Tope Street has a mix of offices, workshops, store rooms and logistics that are located close to Kings Way and connections to Greater Melbourne.

Amenity: With a few small trees, relatively narrow paving, a few contributory heritage buildings, no awnings or canopy cover, amenity is notably reduced (compared to other parts of South Melbourne).

Development: The commercial buildings present a mix of one, two and three storeys on larger parcels. The industrial character is pronounced with very few sites realising their development potential.







10. Moray Street

The north and south sections outline the change in Moray Street where the bike lane is protected in the northern section.

Structure: Moray Street is 30m wide running north-south through the Commercial 2 employment precinct all the way to Albert Road. It features two lanes at 40kmph and provides for 1,100 vehicle movements per day. It also features separated bicycle lanes including two roundabouts at Dorcas and Coventry streets.

Purpose: Identified as a preferred north-south bicycle route linking the planned ANZAC Station and Albert Park reserve, Moray Street creates a logical connection to Melbourne's central city. Cyclists can use Moray Street to avoid conflict with trams, parked cars and heavy traffic. This makes it a safer, more comfortable experience and encourages healthy and affordable lifestyles with 53% of the street allocated to active uses in the south and 56% in the northern area.

Amenity: With newly planted median trees alongside more established trees in the southern extent, Moray Street presents as a high amenity healthy street similar to Cecil Street in design and function. In the northern extent, the bike lanes are separated from parking and traffic although the median planting is not continued through to the employment area.

Development: Within the Study Area, Moray Street has commercial / employment buildings in the north with larger developments of up to eight storeys already planned and approved. To the southern end of Moray Street are low density town and terrace houses that continue at that scale to the southern extent at Albert Road.



11. Union Street

33

Structure: Union Street is a narrow laneway running north-south connecting the civic and retail precincts between Dorcas and Coventry streets. It features a single one-way lane and provides for around 1,000 vehicle movements per day. It features bluestone kerb and channel and very narrow footpaths (relative to South Melbourne).

Purpose: Predominantly used for parking access, waste management and a few loading parking bays, Union Street also provides greater permeability as a pedestrian link due to its lack of traffic and sense of enclosure. At the northern extent are some boutique retail stores in small tenancies that contribute to the precinct's diversity.

Amenity: Some street trees have been planted in the carriageway without protection from vehicles. Although it is a 40kmph zone, the trees soften the space and calm the traffic.

Development: The laneway is nearly always in shadow from the tall adjacent buildings. Most present a secondary frontage with services, crossovers and waste storage lining the street.



Active Transport 30 Pavement Carriageway 65

13. Bank Place

Structure: Bank Place is a narrow laneway running 100m north-south connecting Dorcas and Bank streets. It is the shortest street of the street section set but demonstrates the tallest street edge. It features a two-way lane but there is limited capacity for one vehicle to pass another. The lane provides for around 300 vehicle movements per day. It features bluestone surface and central channel. The narrow footpath is generally blocked with bins.

Purpose: Predominantly a 'back-of house' service corridor for retail fronting Clarendon Street, it provides waste management and Right of Way for businesses fronting Bank Street. Recent developments have included rear access and fire doors fronting the laneway.

Amenity: Other than the historic bluestone features, there is no amenity provisions in Bank Place and accessibility is limited.

Development: The laneway has the largest street wall ratio of the Study Area with 3:1 ratio in part with plans currently being considered at a similar scale. Large developments to the rear of Clarendon Street parcels have minimal off-site amenity impacts and help protect the streetscape character along the primary frontage.



12. Ross Street

23.3

21

Structure: Ross Street is a two-way, two lane, east-west street and provides for around 500 vehicle movements per day and one line of parallel parking. It is12m wide

Purpose: To the east, commercial and employment uses front the street with an irregular (one, two and three storey) streetwall and crossovers along both sides. Closer to the western extent at Clarendon Street, are some retail tenancies and offices.

Amenity: A consistent line of European Hornbeam trees line both sides of the street. The footpath has cross-fall issues due to the high volume of vehicle crossovers but still holds capacity for waste management, some garden beds and pedestrian movements.

Development: Planning provisions allow for large scale development, however the parcels are relatively small. The street is generally ill-defined with a diversity of streetwall heights, materials, scale, age, uses and building types.



Quality Assessment

Assessment of the quality of the Study Area's public spaces has identified perceptions of how different places feel. With COVID-19 restrictions in force, this assessment was conducted through empirical surveys from Google Street View.

Each location was surveyed by multiple Council officers from various departments and averaged out to reduce bias or single perceptions.

Each officer was required to assess each location with <u>12 Quality</u> <u>Criteria outlined by the Gehl</u> <u>Institute tool</u> for researching how public spaces are experienced by their users.

The criteria were structured around three main themes: Protection, Comfort, and Enjoyment (as outlined in the table, right). The officers rated each location from 1-5 and the results averaged, normalised and mapped to show the quality of different areas within the Study Area.

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	Protection	Protection against traffic and accidents. Do groups across age and ability experience traffic safety in the public space? Can one safely bike and walk without fear of being hit by a driver?	Protection against harm by others. Is the public space perceived to be safe both day and night? Are there people and activities at all hours of the day because the area has, for example, both residents and offices? Does the lighting provide safety at night as well as a good atmosphere?	Protection against unpleasant sensory experience. Are there noises, dust, smells, or other pollution? Does the public space function well when it's windy? Is there shelter from strong sun, rain, or minor flooding?	Protection			
	nfort	Options for mobility. Is this space accessible? Are there physical elements that might limit or enhance personal mobility in the forms of walking, using of a wheelchair, or pushing a stroller? Is it evident how to move through the space without having to take an illogical detour?	Options to stand and linger. Does the place have features you can stay and lean on, like a façade that invites one to spend time next to it, a bus stop, a bench, a tree, or a small ledge or niche?	Options for sitting. Are there good primary seating options such as benches or chairs? Or is there only secondary seating such as a stair, seat wall, or the edge of a fountain? Are there adequate non-commercial seating options so that sitting does not require spending money?	surger street commensations co			
	Con	Options for seeing. Are seating options placed so there are interesting things to look at?	Options for talking and listening/ hearing. Is it possible to have a conversation here? Is it evident that you have the option to sit together and have a conversation?	Options for play, exercise, and activities. Are there options to be active at multiple times of the day and year?	And States			
	Enjoyment	Scale. Is the public space and the building that surrounds it at a human scale? If people are at the edges of the space, can we still relate to them as people or are they lost in their surroundings?	Opportunities to enjoy the positive aspects of climate. Are local climatic aspects such as wind and sun taken into account? Are there varied conditions for spending time in public spaces at different times of year? With this in mind, where are the seating options placed? Are they located entirely in the shadows or the sun? And how are they oriented/ placed in relation to wind? Are they protected?	Experience of aesthetic qualities and positive sensory experiences. Is the public space beautiful? Is it evident that there is good design both in terms of how things are shaped, as well as their durability?				
					Enjoyment			

A ?

400

800 m

Quality Assessment

The quality assessment results from each theme were combined and weighted evenly to produce the quality map (right). This shows the grading of quality areas based on all the criteria combined rated from 1-5 with 1 being poor performance and 5 being best performance.

The higher rated street segments include Cecil Street between Coventry and York streets outside the South Melbourne Market.



A second highly rated location is on Coventry Street near Clarendon Street.



This location has low traffic speeds, garden beds, good mix 🖊 of canopy trees, consolidated power lines, weather protection, heritage and human scale architecture, fine grain retail mix and good pedestrian amenities and seating.

This location has low traffic speeds,

scale architecture.



The third highly rated location is on Bank Street in the Civic core.



This location has low traffic speeds, garden beds, good mix of canopy trees, consolidated power lines, civic buildings including the Town Hall, Police Station and Library. Nearby is fine grain retail mix with good pedestrian amenities and seating.

The lowest rated areas include Kings Way, City Road and the top of Clarendon Street at the M1 overpass.



On Kings Way, there are eight lanes of traffic, poor access and pavement, no protection from traffic, no shelter or weather protection, high levels of noise and wind and framed by large-scale office, showrooms and highway retail. Even with a public park and recreation reserve, this area performs poorly for protection, comfort and enjoyment.

Pedestrian Amenity



Pedestrian amenity factors include safety, attractiveness, convenience, comfort, information and accessibility which are important to how people enjoy streets. South Melbourne has varied levels of pedestrian amenity with most located in the Commercial 1 zone.

People's perceptions of pedestrian amenity can be considered subjective. However, it can be measured by looking at elements such as street trees, lighting, seating, public transport facilities, traffic noise and speed, infrastructure, awnings, street trading activity, pavement, ornamentation, security and wayfinding. The map at right depicts some of these elements to identify areas of high amenity and areas that could be improved.

Within the Study Area, most buildings have zero setbacks. In the retail core, awnings provide weather protection and opportunities to facilitate street trading. These are low traffic speed areas located around key landmarks such as South Melbourne Market and public transport stops enhancing activation and vitality.

Fine grain frontages are concentrated in key retail areas contributing to high levels of pedestrian amenity. South Melbourne's exceptionally high walkability and 10 minute walkable Study Area provides numerous and diverse employment opportunities that add to the feeling of vitality and safety as well as visual interest for pedestrians.



The Commercial 1 Zone contains drinking fountains, promenade benches, rubbish bins, bike racks, signage, street trees and garden beds creating a buffer between pedestrians and traffic near intersections.

These elements contribute to the experience of place but these devices do not necessarily make a place feel safe. Crime Prevention Through Environmental Design (CPTED) can improve a pedestrian experience by reducing concealments, providing good pedestrian lighting, high levels of transparency through to shop windows and internal lighting and activation illuminating the street at night.



Crime Prevention Through Environmental Design (CPTED)

Commercial 1 Zone areas contain high levels of street furniture and convenience infrastructure. It features well defined awnings, transparent shopfronts, good street lighting coverage and splayed corners contributing to the high level of CPTED conditions and perceptions of safety. Splayed corners are common throughout South Melbourne main street intersections and improve sightlines, safety, wind impacts and accessibility.

Street lighting is generally focused on the carriageway with only a few 'watchman' lights focused in pedestrian spaces near hotels and taxi ranks. Many of the secondary frontages and narrow streets have minimal lighting with poor coverage. The Commercial 1 Zone has good transparency that provides some illumination and sense of safety however, areas outside the Commercial One area generally have poor street lighting and transparency. Many of the lights used in the Study Area are inefficient HP sodium, Mercury Vapor, Fluorescent and Metal Halide lamps. More efficient lamps are currently planned for replacement.

Pedestrian Vehicle Conflict

Vehicle crossovers are generally located on the narrow streets and Right of Way. This reduces pedestrian/vehicle conflicts and excessive cross-falls on key pedestrian routes. Redundant crossovers (not in use) remain in some areas and should be removed to improve accessibility and parking options.

Most of the Study Area's primary frontage faces Main Streets. Most have multiple frontages allowing options for vehicle access, substations and boosters to be located in secondary streets. Many of the Main Streets have low pedestrian/vehicle conflict with scope for improvement in the northern part of the Study Area and Commercial 2 employment areas.