



FLORA TERRACE LOCAL CENTRE

PARKING AND URBAN DESIGN STUDY

SEPTEMBER 2017

 **City of Stirling**
City of Choice

Flora Terrace Local Centre Parking and Urban Design Study
September 2017

contact

HAMES SHARLEY

Level 2, 50 Subiaco Square
Subiaco, 6008 Western Australia
T +61 8 9381 0236
F +61 8 9382 4224
Ref: 43682
www.hamessharley.com.au

Revision Letter	Date	Reason for Issue	Issued By
A	23/06/2017	First Draft	SOS
B	13/07/2017	Revised Final Draft	SOS
C	05/09/2017	Final Copy	SOS

DISCLAIMER

The information contained in this report has been prepared with care by our company, or it has been supplied to us by apparently reliable sources. In either case, we have no reason to doubt its completeness or accuracy. However, neither this company nor its employees guarantee the information, nor does it or is it intended to form part of any contract. Accordingly, all interested parties should make their own inquiries to verify the information, as well as any additional or supporting information supplied, and it is the responsibility of interested parties to satisfy themselves in all respects.

This report is for the use only of the party to whom it is addressed and Hames Sharley disclaims responsibility to any third party acting upon or using the whole or part of its contents.

This document has been prepared for the use of the City of Stirling only. Copyright © 2017 by Hames Sharley Western Australia Pty Ltd. No part of this document shall be reproduced in any form without written permission of Hames Sharley.

contents

EXECUTIVE SUMMARY

1.0	INTRODUCTION	1
2.0	PLANNING CONTEXT	11
3.0	SITE ANALYSIS	17
4.0	OPPORTUNITIES AND CHALLENGES	33
5.0	CONCEPT OPTIONS	41
6.0	CAR PARKING SUMMARY	55
7.0	IMPLEMENTATION	63

APPENDIX A - VISION WORKSHOP SUMMARY REPORT

APPENDIX B - DESIGN WORKSHOP SUMMARY REPORT

APPENDIX C - FLORA TERRACE PARKING STUDY

Executive Summary

THE PROBLEM

The Flora Terrace Local Centre is a successful and diverse precinct, comprising a mix of residential, commercial and retail land uses, in addition to a number of popular cafes and restaurants. However it is not a typical “main street”, as the urban fabric is broken by buildings setback from the street edge, creating a poor pedestrian environment, lack of space for alfresco, limited shade and insufficient car parking. As the centre continues to redevelop and intensify, there is a need for the City to address these issues.

The Flora Terrace Local Centre Parking and Urban Design Study was therefore commenced in August 2016 in order to investigate and respond to the following issues:

- + Identify urban design issues and opportunities within the centre;
- + Prepare Concept Plan/s for the future of the Centre;
- + Identify the current parking supply;
- + Determine future development yields of the centre under the current scheme;
- + Identify future parking needs based on ultimate development yields; and
- + Determine, if necessary, additional costs and funding to implement upgrades.



THE PROCESS

Following the necessary background analysis by the City and its consultants, a series of community workshops were undertaken in order to ensure the insights of the community directly informed the Study. The process involved three community engagement sessions, as follows:

- + A Vision Workshop, held in December 2016, provided the first opportunity for members of the community to hear of the analysis done to date and enabled discussion on the key issues and opportunities for the precinct.
- + A Design Workshop, held in February 2017, provided an opportunity to ‘drill down’ to specific details, and enabled consideration of concept plans which presented options for responding to the parking and urban design issues in the centre.
- + An Open Day, held in April 2017, enabled interested members of the community to walk around and view a series of concept plans that had been refined following the Design Workshop.

The result of this collaborative process is an understanding of what the community value about their ‘place’ and what type of place they wish to live, work and visit. This has directly contributed to the options recommended in this Parking and Urban Design Study.



THE SOLUTION

The process undertaken as part of this Parking and Urban Design Study has provided the City with a better understanding of the impact historical and newer developments have had on the functionality of the centre. The Study recommends the consideration of two options to respond to the identified issues and facilitate the creation of a “main street”, as follows:

Option 1 – Short Term Upgrades:

Option 1 presents a series of simple measures that could be implemented within one to two years. These measures include the provision of additional on-street car parking, as well as the introduction of timed parking restrictions throughout the precinct to enable existing car parking to be used in a more efficient manner. Other measures recommended include trees and shade cover, improved pedestrian connections, and a reduction in the speed limit along this section of Flora Terrace.

Option 2 – Long Term Redevelopment:

Without redevelopment of existing shops that are setback from the street, it will not be possible to create a “main street” that enables wider paths, more space for alfresco and additional public parking. Option 2 responds to these impediments by identifying an opportunity for the long term redevelopment of a number of key land holdings in the centre. The joint redevelopment of the City’s community centre lot in conjunction with the adjoining private lots could provide a mixed use development which provides a substantial injection of public car parking into the precinct along with a new community centre, commercial tenancies, and residential apartments. The redevelopment of all lots on the eastern side of Flora Terrace, between Malcolm and Castle Streets, would also enable the creation of a true “main street” environment which would improve pedestrian access by providing a public plaza and arcade linking Flora Terrace to Apex Park, as well as wider footpaths for alfresco and narrower carriageways to further reduce speed.

To assess the viability of this option, a feasibility study would be required to determine whether the provision of an acceptable level of public car parking aligns with the community’s expectations with respect to the scale of buildings within the precinct.

WHERE TO FROM HERE

This report is intended to be presented to Council for their consideration. Following a decision from Council, officers can move on to implementing the recommendations of this Study (subject to Council endorsement).

Option 1 (Short Term Upgrades) would be capable of implementation within one to two years (subject to Council funding). The feasibility report associated with Option 2 (Long Term Redevelopment) would also be able to be progressed within one year (subject to Council funding). However, any further recommendations to Council arising out of the feasibility study would be the subject of further consideration from Council. Implementation of Option 2 would therefore only occur in the medium to long term (5 – 10 years).



LICO

LET THE AROMA
LIFT YOUR
Spirits

INTRODUCTION 1.0

INTRODUCTION

1.0 Introduction

BACKGROUND

Flora Terrace is a local centre in the City of Stirling, servicing the Trigg, North Beach and Watermans Bay areas. Recent developments within and surrounding Flora Terrace have raised concerns among the local community in regards to the impact on the area. The City of Stirling engaged Hames Sharley to lead a Parking and Urban Design Review.

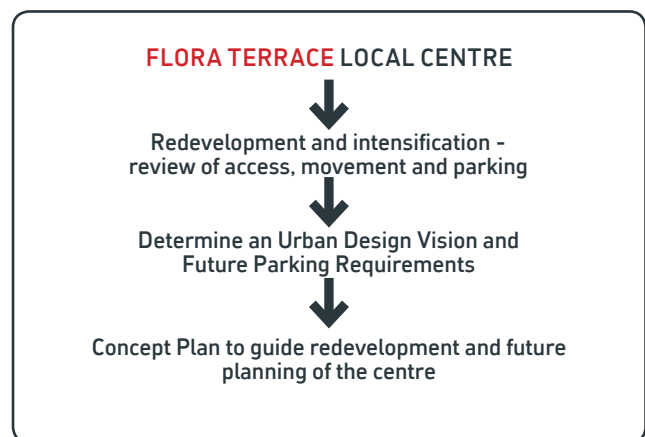
This report sets out the findings of the review and parking options presented to the local community for feedback which informed the final preferred options. The options developed include a short term (low cost) upgrade (Option 1) as well as the long-term redevelopment (Option 2). Supported by a Parking Study undertaken by OPUS Transport Planning (Appendix C), key findings from site observations and a review of concept options presented have aligned to deliver the preferred parking arrangements. In addition, it provides advice with respect to supporting transport infrastructure and issues, for instance with respect to pedestrian, cycle, public transport and vehicle access and movement in the area.

PURPOSE

The Flora Terrace Local Centre has developed into an active and diverse centre comprised of residential, commercial and entertainment land uses. The popularity and success of the centre has resulted in a need to review its parking capacity as continued redevelopment and intensification occurs.

In 2016 the City of Stirling undertook a parking study for all neighbourhood and local centres in the city, however, it was determined that additional information was required for Flora Terrace. The objectives of the subject Study were therefore to:

- + **Determine future development yields of the centre** - under the current scheme;
- + **Identify the current parking supply** - both public and private;
- + **Identify future parking needs** - based on ultimate development yields;
- + **Prepare Concept Plan for the redevelopment of the Centre** - identifying future parking infrastructure requirements; and
- + Determine, if necessary, **additional costs and funding** to implement new parking infrastructure.



A collaborative effort between the project team and the relevant stakeholders including local businesses, local residents, elected members and relevant City of Stirling Business Units was integral to achieve the following:

- + Establish a preferred development 'Vision' for Flora Terrace;
- + Engage the Community to develop the Vision, gather project support and help deliver project goals and objectives;
- + Community to develop a Vision for their local centre;
- + Develop a Concept Plan to guide future development and management of parking, traffic and pedestrian movements; and
- + Identify possible changes to the City's planning scheme.



Images: Flora Terrace Local Centre

SITE CONTEXT

The study area under consideration is centred upon Flora Terrace between Malcolm Street and Lawley Street in North Beach.

Flora Terrace is classed as a Local Distributor road in the City's Functional Road Hierarchy (as well as the Main Roads WA Road Information Mapping System) with a 50km/h speed limit. It serves the intended purpose of moving traffic within the local area and connecting access roads such as Castle Street and Lawley Street to higher order Distributor roads such as West Coast Drive (via Malcolm Street).

Flora Terrace itself is a single carriageway road with a width typically in the order of 8.1-8.2m for the through movement of vehicles (with indented parking also provided on either side of the road between Castle Street and Lawley Street). It should be noted that such a road width (without any parking) is generally considered to be relatively wide. This can result in potentially encouraging higher operating speeds due

to driver perception of the openness of the road/street, particularly with the set-back buildings on the eastern side of the road to the south of Castle Street. A wide road also increases the exposure to risk for any pedestrian crossing the road, given the extended length of time they need to be in the carriageway. The road width however does provide additional space for cyclists and motor vehicles to co-exist.

As illustrated in the photos taken of Flora Terrace in 1998,

Flora Terrace has undergone a major transformation in the past 15 years. As the centre continues to intensify and attract people to its thriving cafe strip, the impacts of increased traffic movement and parking capacity needs careful consideration to ensure the centre is maintained as an attractive, engaging and accessible place for the local community to continue to enjoy.



Flora Terrace, east



Flora Terrace, west





Figure 1: Flora Terrace Current Land Use Zoning

PROCESS

Embedding a clear vision and set of aspirations is key to developing a shared long term strategic approach to the future development of the Flora Terrace Local Centre. This process began with the review of key issues and opportunities following the site and context analysis undertaken by the project team in October 2016. Working with the City, key stakeholders and the local community, initial findings were assessed to develop a set of aspirations which informed the development of a shared vision for the centre at the Community Vision Workshop held in December 2016.

Strategies aligned to the community vision and aspirations supported the development of concept options for further review and consideration by the community at a Design Workshop in February 2017. Feedback gained through this process enabled the refinement of concept plans, arriving at preferred outcomes to guide the future development and management of parking, traffic and pedestrian movement within the Flora Terrace Local Centre.



COMMUNITY ENGAGEMENT

Two workshops were held with the community in December 2016 (Vision Workshop) and February 2017 (Design Workshop).

The Vision Workshop sought the community's input on the issues and opportunities within the precinct, allowing the identification of place making themes and community aspirations. The outputs of the Vision Workshop informed the development of concept plans and strategic directions for the future development of the centre. This process involved the review of key challenges and opportunities under the place lens topics of activity, movement and character to ensure a holistic and integrated view of Flora Terrace place design - 'stitching the urban fabric' of the centre with the wider area.

The following tables summarises key Themes and Place Initiatives¹ arrived at by the community to guide the future vision for Flora Terrace.

The Design Workshop enabled the community to collectively assess options presented by the project team, providing the opportunity to refine preferred options forming concept plans for short term upgrades and long term redevelopment².

Themes



Uniqueness

- + Location
- + Flora terrace unique cafés and restaurants
- + Soul
- + Beach Atmosphere
- + Dog friendly
- + Multi generational friendly
- + Good mix of built product
- + Local Community destination



Landscaping

- + Pedestrian dominance/ safety
- + Universal access
- + Nature play
- + Historical context acknowledgement
- + Inviting streetscape
- + Alfresco dining and landscaping
- + Colourful
- + Coastal



Village atmosphere

- + Relaxed
- + Informal
- + Diverse
- + Small & specialised
- + Warm, welcoming
- + Unique
- + Fun/Exciting
- + Inclusive
- + Cheerful
- + Approachable
- + Friendly

¹ p.12, Flora Terrace Local Centre Parking & Urban Design Study - Vision Workshop Summary Report, City of Stirling, December 2016

² p.8-13, Flora Terrace Local Centre Parking & Urban Design Study - Design Workshop Summary Report, City of Stirling, February 2017

Place Initiatives

A place...

- Low scale built form - mix of 2-3 storeys
- Mix of materials reflecting coastal theme
- Articulation of form - enabling coastal views



A place...

- Create clearly defined pedestrian connections
- Continuous footpaths
- Defined town square providing for public seating and amenities
- Reinforce connections through to APEX park and the adjacent street network



A place...

- New street trees
- Green urban canopy
- Integrating shade structures
- Protection from elements



A place...

- Providing spaces and places for the community to meet, celebrate and connect
- An integrated community centre, town square, local plaza



PLACE REVIEW

Underpinned by place based principles, the review process for assessing the urban design qualities of Flora Terrace considered all aspects of activity, movement and character, forming part of an integrated framework for delivery of a successful centre. This also enabled a better understanding of both the physical and cultural setting unique to Flora Terrace.

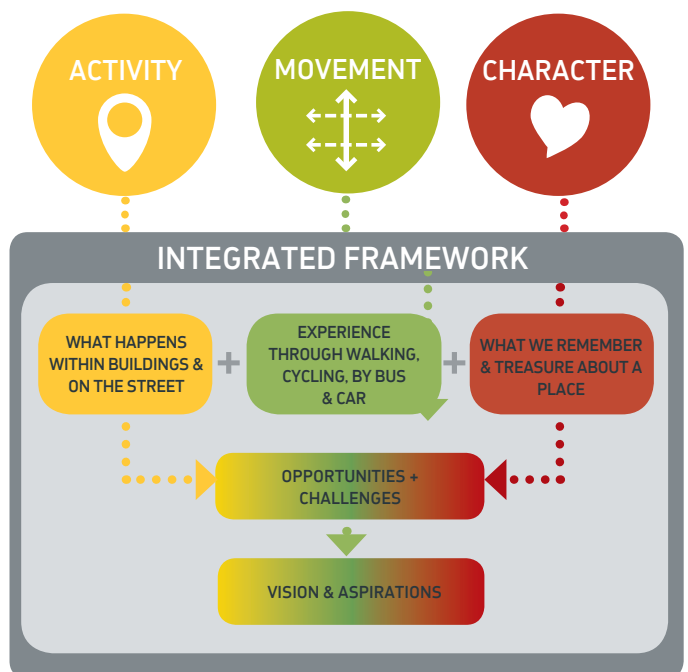
Activity - Activity refers to both what is happening within the buildings (uses) as well as what is happening 'in the street' (activation). Choreography of these two aspects of activity through consideration of place activation initiatives is essential to nurturing a successful place, building capacity and ownership in the local community and attracting investment into the town centre. The vision for Flora Terrace is to encourage uses that are authentic and will be embedded into the local community.

Movement - A place is experienced through human journeys: what we see, hear and feel while on foot, cycling or driving. Journeys in Flora Terrace will be defined by clear desire-lines between destinations and activities. The most critical journeys to pay attention to are those on foot. These journeys should be choreographed to be direct, safe and interesting for all users. The arrival experience of all users across all modes and parking requirements are also essential for Flora Terrace to become an integrated, legible and connected place.

Character - Place character is about the combined quality and interplay of buildings and the spaces between them. It is about what people remember and treasure about a place. The future place character of Flora Terrace will be

realised through the form and quality of the buildings, the landscape, the streetscape and the attention to details such as lighting and artwork. Working with the local community to articulate and engage in place activation initiatives will build greater capacity and ownership of the centre.

A review of place qualities outlined below provided the starting point for assessing key issues and opportunities within the centre in order to identify key strategies and appropriate responses to drive the long term success of the centre.



ACTIVITY

- + Mix of uses- retail, food and beverage, offices and residential
- + Shops that open on to the street- 'signs of life'- fully tenanted
- + Day and night time uses
- + Double sided centre

MOVEMENT

- + Serve the local area and local community
- + Management of parking to ensure it supports the long term viability of the centre
- + Provides for people passing by (walking, cycling, driving)
- + Accessible by all modes of transport - bus stops, parking and bike racks
- + An environment where the pedestrian has priority

CHARACTER

- + Safe, comfortable and well maintained street
- + Attractive and inviting buildings with reference to the local (coastal) character
- + Quality landscaping, materials and integration of public art - creating a 'distinctive' sense of place
- + Buildings that are of an appropriate scale and height that respond to the locality



PLANNING CONTEXT 2.0

PLANNING CONTEXT

2.0 Planning Context

CURRENT ZONING

This section outlines the current land use zoning that has guided the development of Flora Terrace to-date. As illustrated in Figure 2, the Local Centre is predominantly focused on the eastern size of Flora Terrace. New residential development on the western

side, as well as stepped terrain in the north limits the any redevelopment opportunities for Flora Terrace to become a truly double sided main street environment.



Figure 2: Flora Terrace Current Land Use Zoning

Local Planning Scheme No.3 Zones:

- Special Control Area (Coastal Height Limit)
- Local Centre
- Business
- Civic
- Residential
- Project area boundary

PROPOSED ZONING CHANGES

Through the process of developing options and a review of existing land use patterns, consideration of new land use zones have been proposed where there is opportunity to enable future development to be integrated within the centre.

The rationale for these proposed zoning changes is discussed further in section 5.0 (Concept Options) of this report.



Figure 3: Flora Terrace Proposed Zoning Changes

- Proposed Local Planning Scheme No.3 Zones:
- ▭ Special Control Area (Coastal Height Limit)
 - ▭ Local Centre
 - ▭ Residential
 - ▭ Civic
 - ▭ Project area boundary (revised)

LAND OWNERSHIP

In total, there are 71 land owners within the centre³. Those land holdings under freehold ownership, as illustrated below, present greater potential for future redevelopment to occur - specifically in the south-eastern section of the study area.

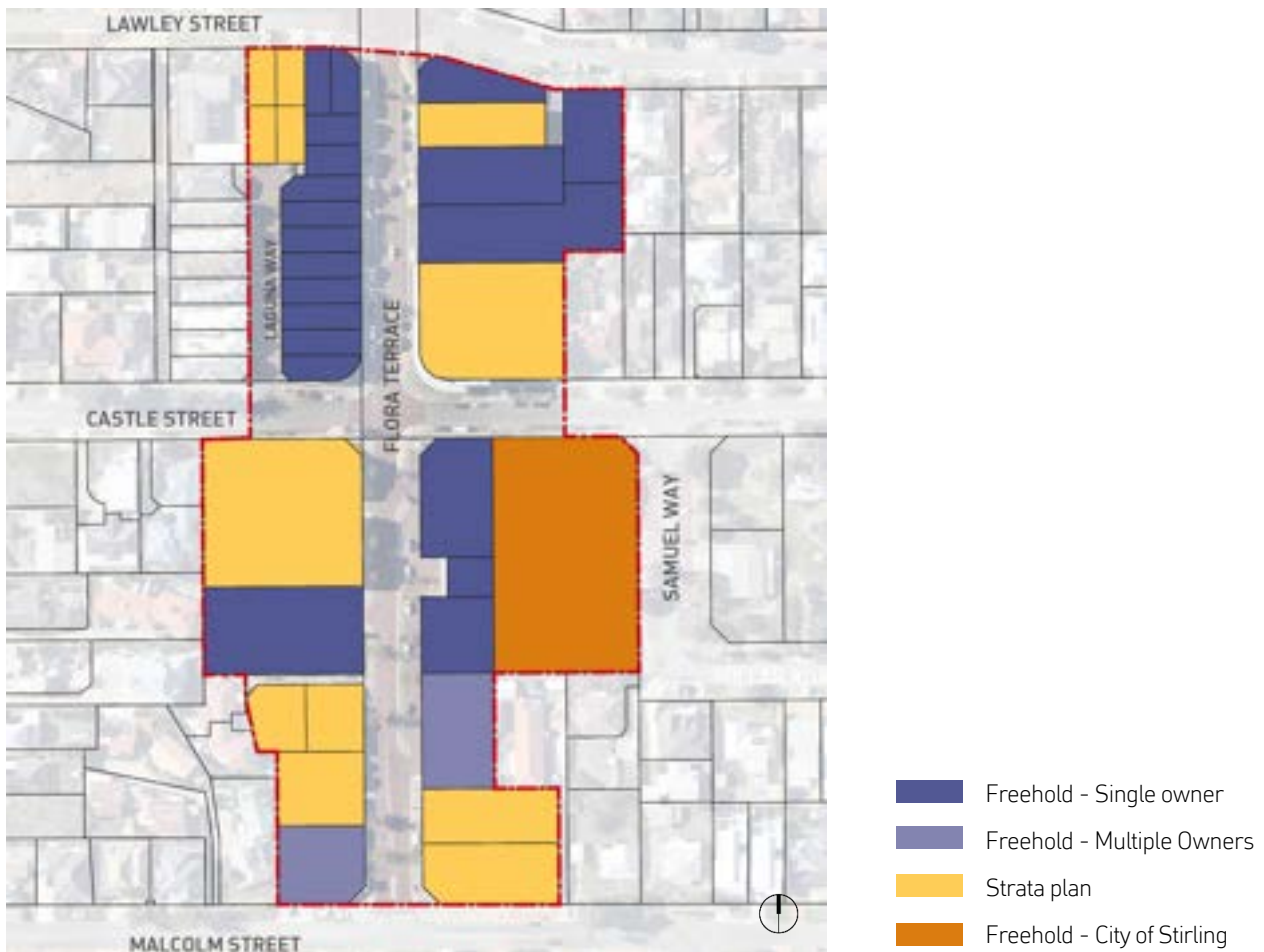


Figure 4: Land Ownership Map

³ This information was current at October 2016

REDEVELOPMENT POTENTIAL

In conjunction with the land ownership plan, it is possible to identify those lots with the most redevelopment potential, being the retail offering focused on the eastern side of Flora Terrace⁴. To the rear of this strip of retail, approximately 4,000m² is under freehold ownership by the City of Stirling, potentially representing an opportunity for the future redevelopment of the centre to be considered in an integrated way.



Figure 5: Redevelopment Potential

⁴ The redevelopment potential is based on current zoning only.



SITE ANALYSIS 3.0

SITE ANALYSIS

3.0 Site Analysis

EXISTING LAND-USE

Review of existing land uses highlights key pockets of activity, predominantly focused within the southern and eastern sides of Flora Terrace. By day some activity spills out onto the street, while at night activity is more internally focused.

WESTERN SIDE



Mix of uses, Flora Terrace



Residential frontages, Flora Terrace



Night time activity Flora Terrace

EASTERN SIDE



Cafe Tropica, outside dining



Mix of uses Flora Terrace

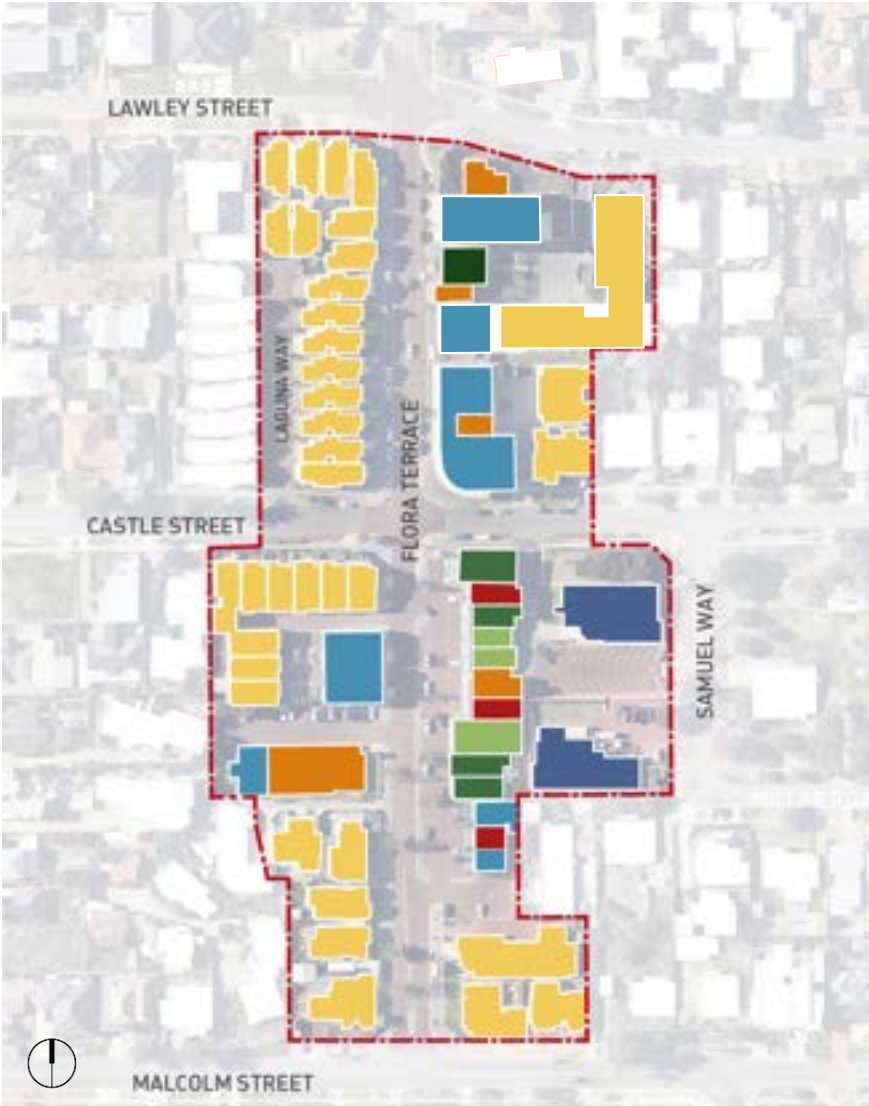


Night time activity Flora Terrace



Mix of Land-uses

- + Clustering of activities predominately on the eastern side of Flora Terrace
- + Limited mix of day and night time activity
- + Lacking a direct relationship to Flora Terrace, specifically south of Castle Street



- Residential
- Civic
- Health/ Wellness
- Retail
- Eat/Drink - Day only
- Eat/Drink - Day & Night
- Eat/Drink - Night only
- Commercial

Figure 6: Mix of Land Uses at Street Level

EXISTING STREET ACTIVATION

Within the centre, varying levels of street activation are achieved:

- + Active frontages - fully open to the street, integrating with the public realm
- + Semi-active frontages - windows overlooking the street providing passive surveillance
- + Inactive frontages - no overlooking of windows or frontages onto the street

WESTERN SIDE



Semi active frontages

EASTERN SIDE



Semi active frontages



Inactive frontages



Active frontages



Key Findings

- + Lot boundaries set back from street reducing main street activation
- + Limited space for alfresco dining
- + Car parking breaking up continuous building frontages
- + Single sided activity
- + Limited ability to promenade up and down the street



- Active Frontage
- Semi-Active Frontage
- Vacant Frontage
- Inactive Frontage
- Parking (street frontage)

Figure 7: Level of street activation



EXISTING PEDESTRIAN MOVEMENT

Whilst footpaths do exist within the study area, these provide varying levels of success in terms of providing safe refuge for pedestrians, space for public amenity and ease of connectivity between destinations⁵.

Of particular concern is the area south of Castle Street as depicted in the images below, where there is greater disconnect and narrowing of footpaths within the car park environment.

WESTERN SIDE



Restricted pedestrian connectivity, eastern edge Flora Tce



Limited space for added amenity, western footpath Flora Tce



Narrowing of footpath western edge Flora Tce south of Castle St

EASTERN SIDE



Narrowing of footpath eastern edge Flora Tce

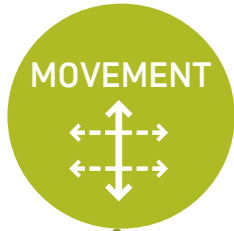


Greater width to footpath, eastern edge Flora Tce north



Footpath disconnect, western edge Flora Tce south of Castle St

⁵p.4, Flora Terrace Parking Study, OPUS, June 2017



Key Findings

- + Limited pedestrian crossovers - mid block and at intersections
- + Continuous footpath limited on eastern side of Flora Terrace
- + Limited space provided for public seating and amenities
- + Limited tree canopy coverage
- + Lacking connectivity through to adjacent streets



- 2-4m Path
- 1-1.5m Path
- Median strip/ Footpath

Figure 8: Quality of pedestrian pathways

EXISTING TRAFFIC MOVEMENT

Flora Terrace is a single carriageway road with a width typically in the order of 8.1–8.2m. Indented parking is also provided on both sides of Flora Terrace between Castle Street and Lawley Street.

Despite the 50km/h speed limit, the relatively generous road width (unimpeded by on-street parking), in conjunction with increased building setbacks on the eastern side of the road to the south of Castle Street potentially encourages higher operating speeds due to driver perception of the openness of the road/ street⁶.

This wide stretch of road also increases the exposure to risk for any pedestrian crossing the road given the extended length of time they need to be in the carriageway.

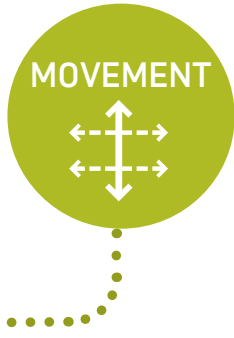


-1m footpath -12m car parking -1m median -8m road width -2m footpath

⁶p2. Flora Terrace Parking Study, OPUS, June 2017

Key Findings

- + Flora Terrace is classified as a Local Distributor with the purpose of moving traffic within the local area.
- + Traffic flows are approximately 2,000 vehicles per day
- + Recorded traffic speed north of Malcolm Street was generally 50km/h
- + Traffic speed north of Castle Street was generally 55km/h
- + Peak traffic flow are between 8am-9am and 5pm-6pm
- + Road reserve between property boundaries is 20m
- + Road width is 8m (two 4m wide traffic lanes)



Existing bus shelter north within pedestrian pathway

Figure 9: Local traffic corridors

EXISTING PARKING PROVISION

Table 1 outlines the total number of existing public and private parking bays within the centre. As illustrated in Figure 10, public parking accounts for approximately 99 bays within the immediate study area.

However, time restrictions currently only apply to ten of these bays, being those located on the eastern side of Flora Terrace between Castle Street and Lawley Street, which are subject to a one hour parking restriction⁷.

WESTERN SIDE



Private parking, Flora Terrace



2 x public parking bays, eastern edge Flora Terrace



1hr Restricted public parking, north of Castle St

EASTERN SIDE



Limited on-street public parking, south of Castle St

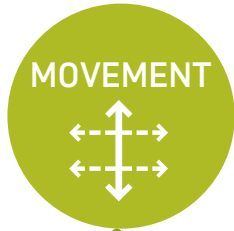


On street parking north of Castle St



Private parking, Flora Terrace

⁷ p.5. Flora Terrace Parking Study, OPUS, June 2017



Key Findings

- + 1 hr restricted parking applies to 10 bays on eastern side Flora Tce (north of Castle St)
- + No parking restrictions apply to the remaining 89 public car parking bays in the precinct
- + Differentiation between public and private parking within the centre is unclear
- + Restrictions applied to community centre parking
- + Disabled parking spaces on Samuel Way are readily available but underutilised
- + No public bicycle parking spaces
- + No motorcycle parking spaces
- + Limited service vehicle delivery space

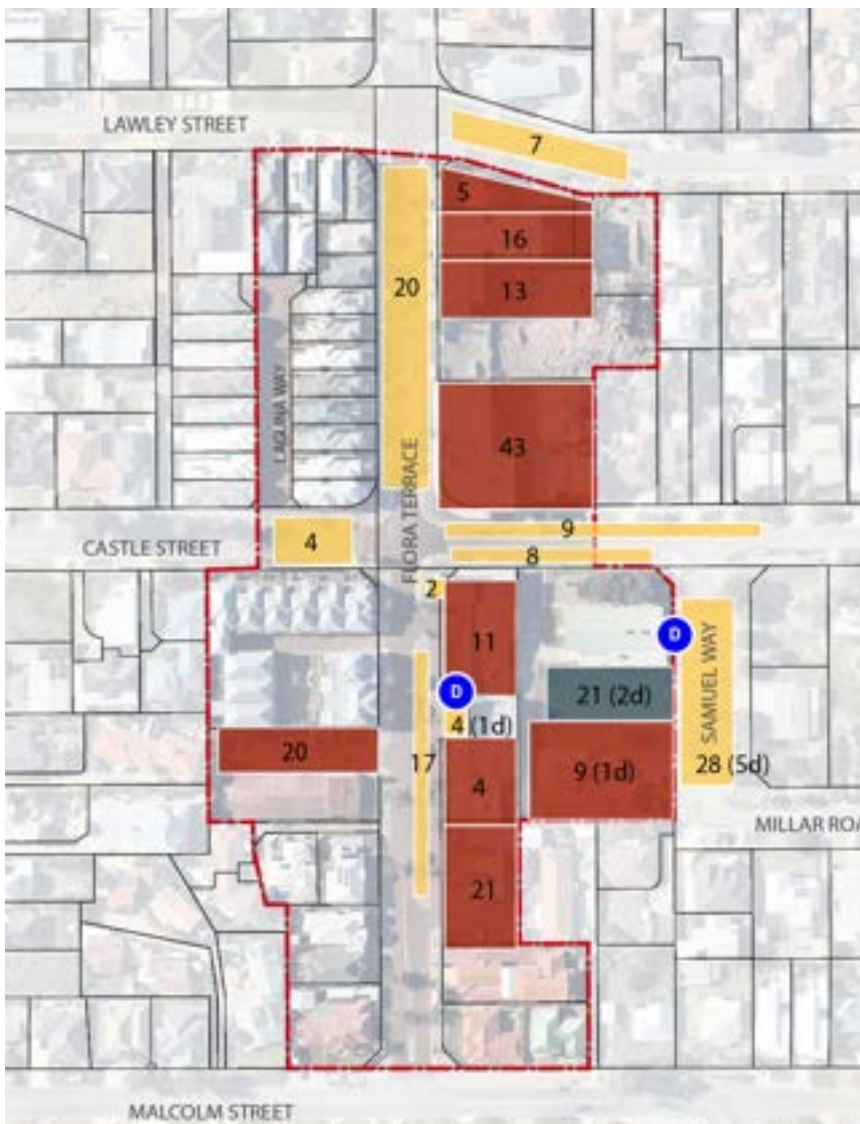


Figure 10: Number of public and private car parking bays

Table 1. Total Number Public and Private Bays

	Private	Public	Council	Disabled
Flora Terrace - North	77	38	0	0
Lot 20,21 - North (under construction)	57			
Flora Terrace - South	65	61	21	9
TOTAL	199	99	21	9

- Public Parking
- Private Parking
- Council Parking
- D Disabled Parking

EXISTING CHARACTER

The built form character of the centre is predominantly 2-3 storeys reflecting a local centre scale. North of Castle street, continuous building frontages edge the eastern side of Flora Terrace creating a greater sense of connectivity to the street. South of Castle St, buildings setback from Flora Terrace create a wider sense of scale to the street, weakening the Main Street quality.

Tree plantings within the centre add to the coastal theme and edge environment, specifically north of Castle Street where there is greater consistency of trees planting along the street edge, albeit in varying states of health.

BUILT FORM CHARACTER



Building fronting Flora Terrace, north of Castle Street



Articulation of coastal form within southern section of Flora Terrace

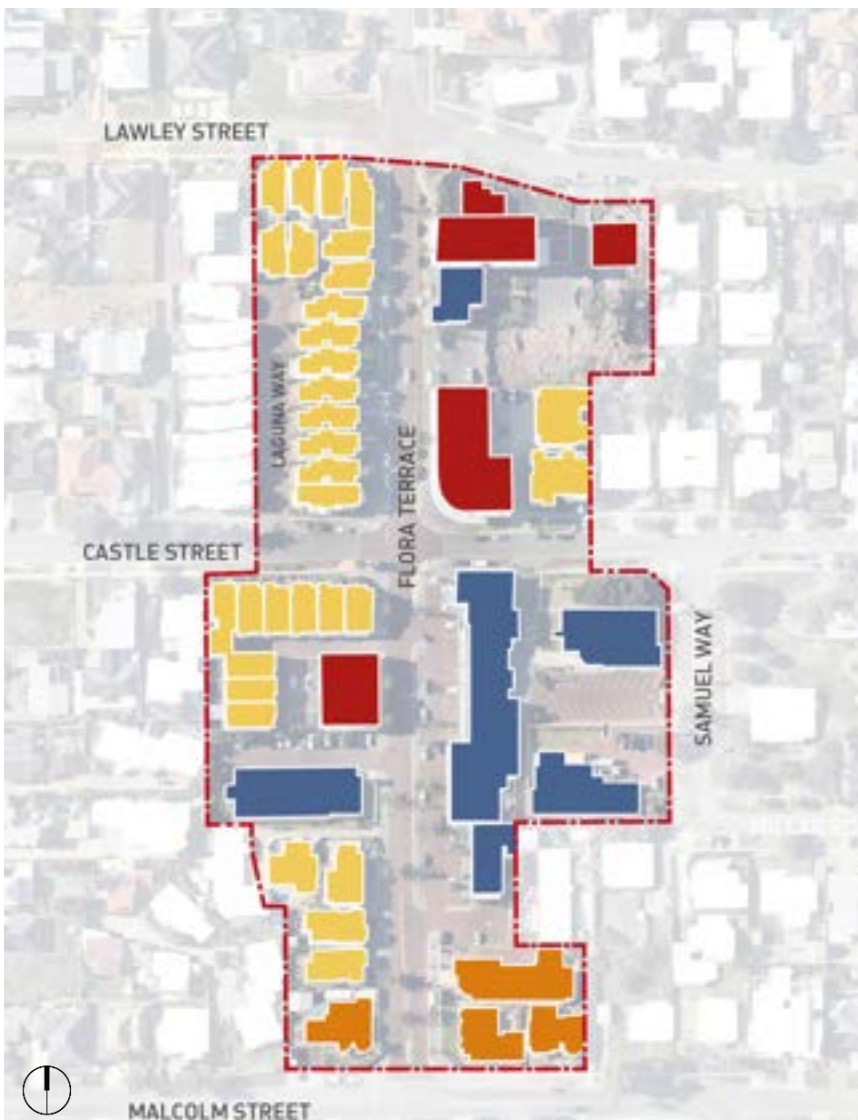


Buildings setback from Flora Terrace, south of Castle Street



Key Findings

- + General mix of height and scale
- + Buildings setback disconnecting the main street environment
- + Mix of materials within footpaths and building frontages - capturing coastal themes



- Two-storey Townhouse
- Single-storey Commercial/ Retail
- Residential
- Mixed Use- residential above

Figure 11: Building height and mix of uses

EXISTING ENVIRONMENT

Set within a coastal location, the centre is exposed to south-westerly winds, therefore protection from the elements on the eastern side of Flora Terrace needs strong consideration. Along the length of Flora Terrace, awnings provide a level of consistent cover above pedestrian pathways.

LOCAL ENVIRONMENT



Shading along eastern edge of Flora Terrace, north of Castle Street



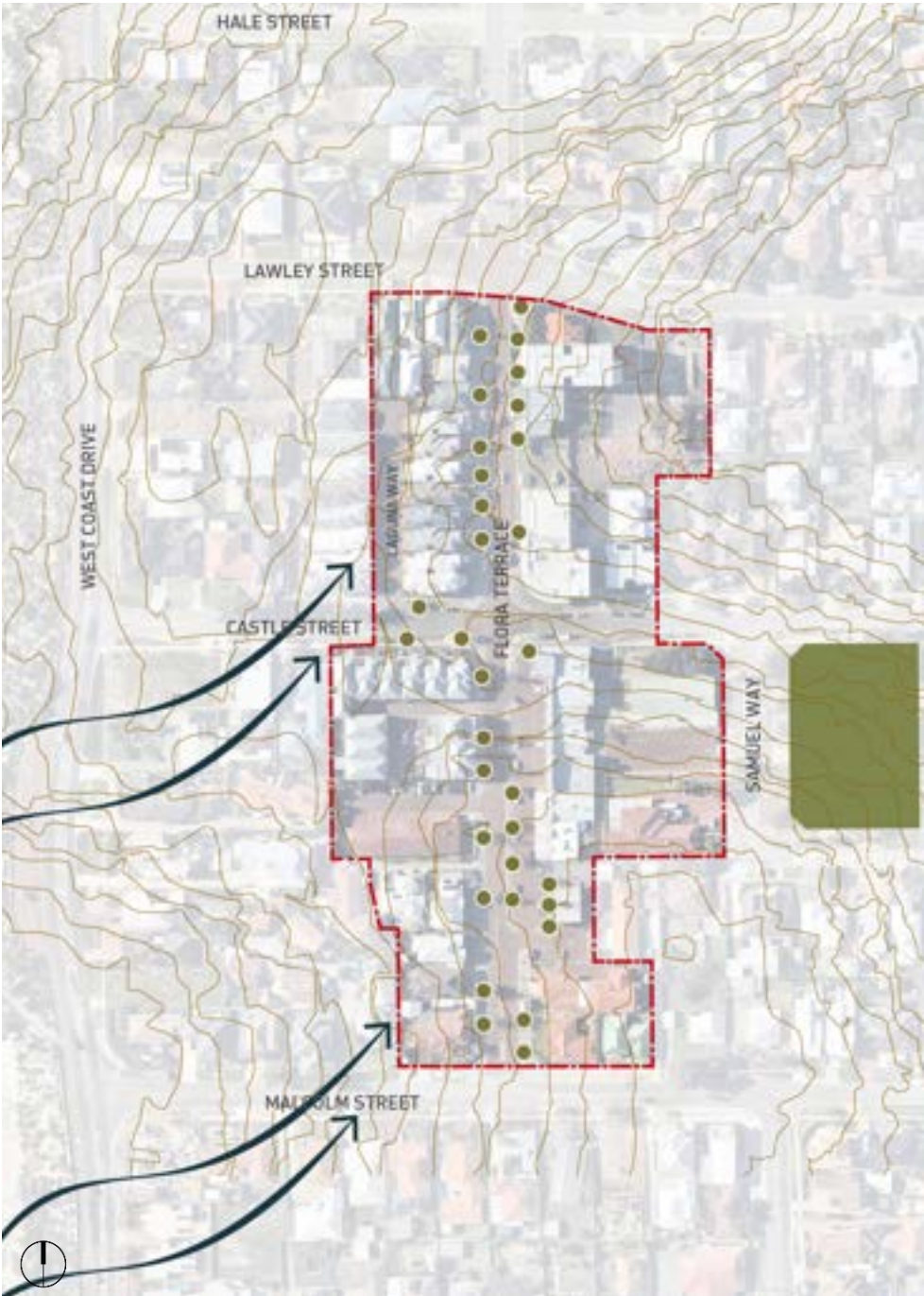
Awning structures south of Castle St



Undulating topography, Castle Street

Key Findings

- + Undulating topography and prevailing micro climate
- + Limited street trees providing a sense of the coastal character
- + Limited public seating or provision of shade



- Topography
- Existing Street Trees
- Dominant Wind
- Civic Space

Figure 12: Prevailing climate conditions



OPPORTUNITIES AND CHALLENGES 4.0

OPPORTUNITIES AND CHALLENGES

4.0 Opportunities and Challenges

ACTIVITY

Opportunities

- + Permeable pedestrian connections/laneways - linking activities
- + Bring buildings to the street edge to facilitate more space for alfresco and promenading
- + Possible public space on eastern side of flora terraces
- + Rezone lots to mixed use on western side

Challenges

- + Limited space for retail frontages to spill out onto the street
- + Unrestricted car parking dominating frontages
- + Setback of retail shops from the main street prioritising traffic movement
- + Better activation + managing parking supply and demand

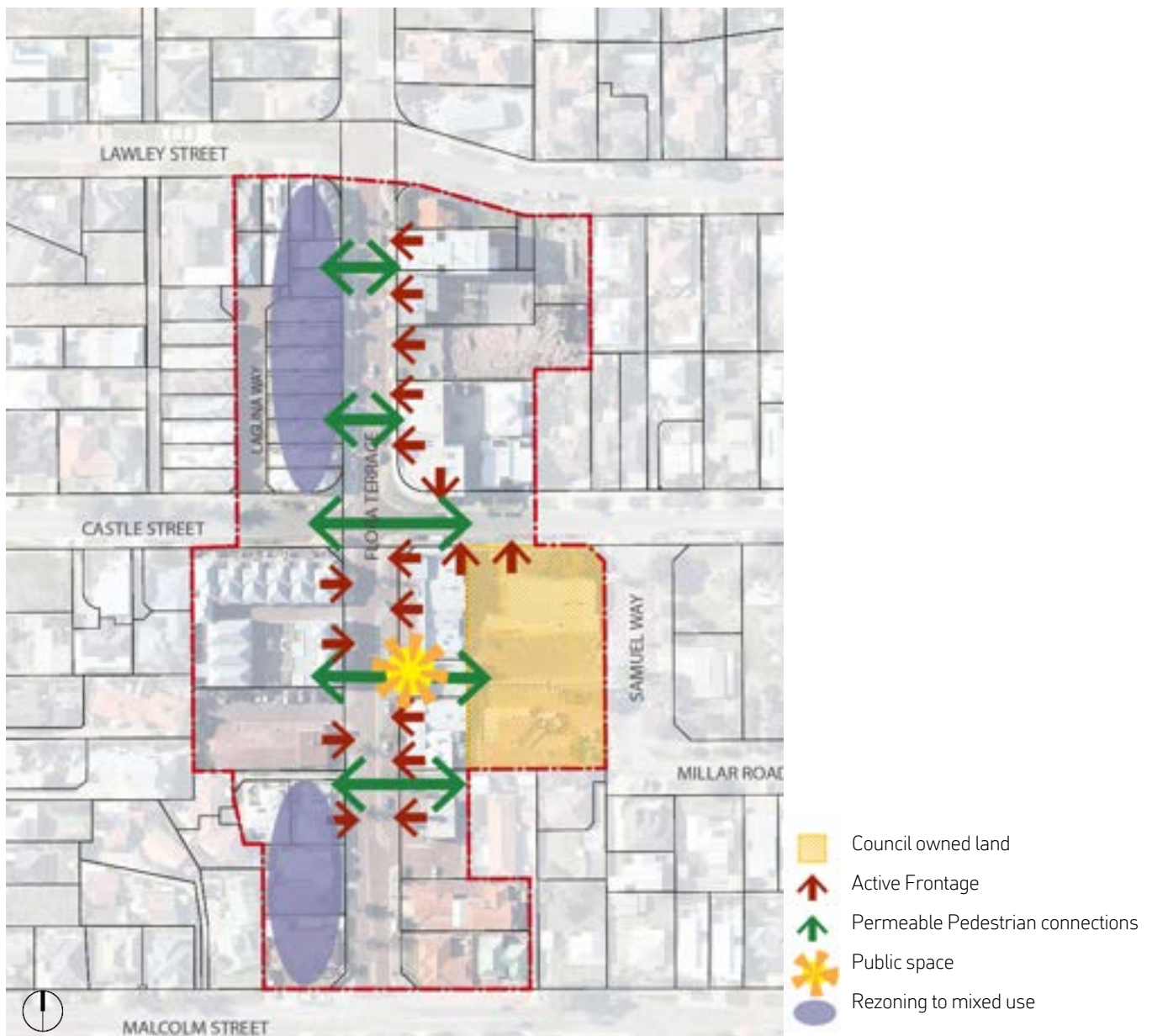


Figure 13: Activity -Key Opportunities

BENCHMARKING/ GOOD EXAMPLES OF ACTIVITY



Rockeby Road, Subiaco - double sided street



Out door dining - activating frontages



The Mezz, Mt Hawthorn - providing space for people to gather



Opportunities

- + Explore traffic calming measures in the short term
- + Long term possible reconfiguration of road at time of redevelopment with developer contributions
- + Improve walking and cycling attracting trips from West Coast Drive (with way finding signage)
- + Explore parking management within the centre
- + Explore opportunities for additional public parking
- + Long term possible redevelopment of private and public sites to provide public parking

Challenges

- + Traffic speeds within the centre
- + Accessibility and connectivity to other parking areas
- + Vehicle parking dominating frontages
- + Width of Flora Tce 'main street'
- + Maintaining adequate levels of parking
- + Implementation study recommendations i.e. funding

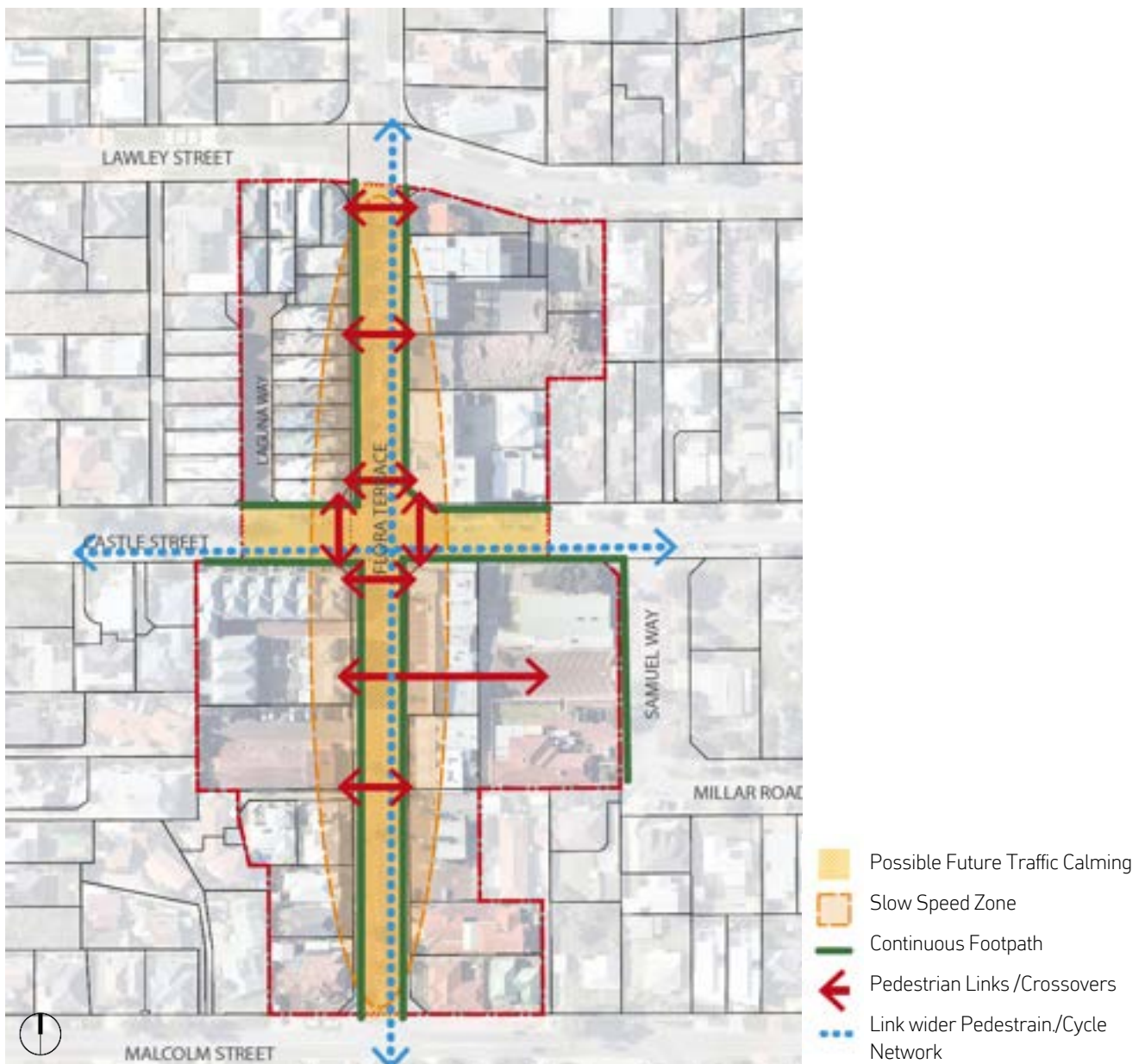


Figure 14: Movement -Key Opportunities

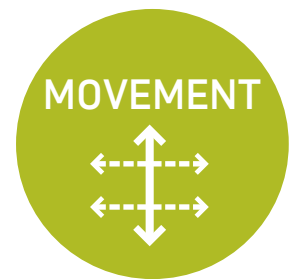
BENCHMARKING/ GOOD EXAMPLES OF MOVEMENT



Rockeby Road, Subiaco - Reduced road widths + on-street parking



The Mezz, Mt Hawthorn - integrating pedestrian ease of movement



CHARACTER

Opportunities

- + Create a unique landscaping to re-brand the precinct and create a distinct sense of place and identity
- + Create a distinctive architectural character within the centre reflecting the coastal themes
- + Create a central focus / public realm / gathering point for meeting and street activity

Challenges

- + Determining the suitable scale and height of buildings to ensure enough activity whilst not creating parking and traffic problems
- + Identifying how a human scale can be achieved given the existing movement constraints (i.e. street width)

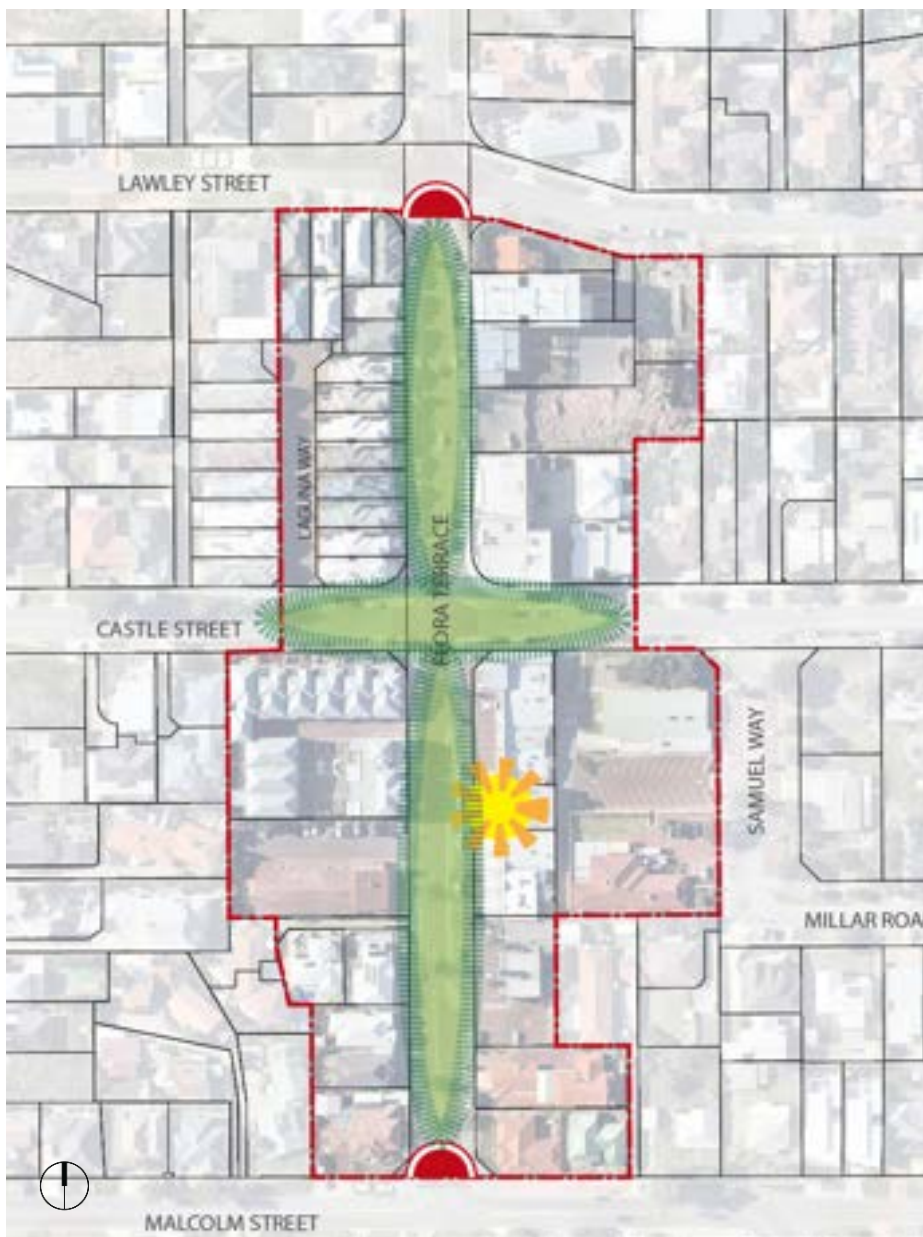


Figure 15: Character - Key Opportunities

- Entry statement
- Community Meeting Space
- Greenery within landscaping

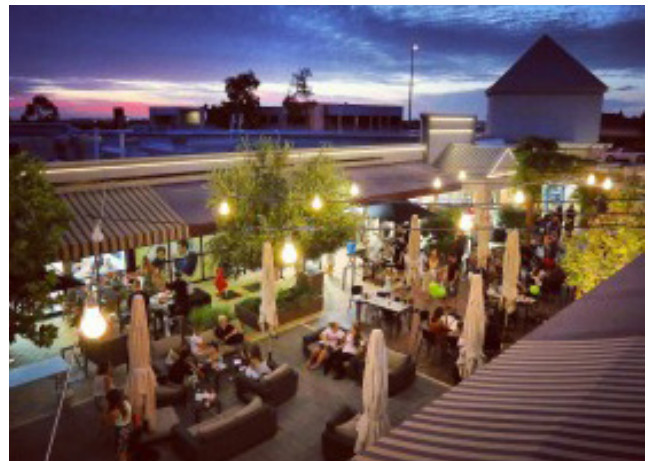
BENCHMARKING/ GOOD EXAMPLES OF CHARACTER



Angove Street, North Perth



Greenery + tree canopy



Community spaces, The Mezz, Mt Hawthorn



CONCEPT OPTIONS 5.0

CONCEPT OPTIONS

5.0 Concept Options

INTRODUCTION

The process undertaken as part of this Parking & Urban Design Study has provided the City with a better understanding of the impact historical and newer developments have had on the functionality of the centre. Concepts options were subsequently developed to address historic car parking shortfalls within the centre, and were reviewed with the community at an Open Day in April 2017.

The Study recommends the consideration of two options to respond to the identified issues and facilitate the creation of a "main street", as follows:

Option 1 – Short Term Upgrades:

Option 1 presents a series of simple measures that could be implemented within one to two years. These measures include the provision of additional on-street car parking, as well as the introduction of timed parking restrictions throughout the precinct to enable existing car parking to be used in a more efficient manner. Other measures recommended include trees and shade cover, improved pedestrian connections, and a reduction in the speed limit along this section of Flora Terrace.

Option 2 – Long Term Redevelopment:

Without redevelopment of existing shops that are setback from the street, it will not be possible to create a "main street" that enables wider paths, more space for alfresco and additional public parking. Option 2 responds to these impediments by identifying an opportunity for the long term redevelopment of a number of key land holdings in the centre. The joint redevelopment of the City's community centre lot in conjunction with the adjoining private lots could provide a mixed use development which provides a substantial injection of public car parking into the precinct along with a new community centre, commercial tenancies, and residential apartments. The redevelopment of all lots on the eastern side of Flora Terrace, between Malcolm and Castle Streets, would also enable the creation of a true "main street" environment which would improve pedestrian access by providing a public plaza and arcade linking Flora Terrace to Apex Park, as well as wider footpaths for alfresco and narrower carriageways to further reduce speed.

To assess the viability of this option, a feasibility study would be required to determine whether the provision of an acceptable level of public car parking aligns with the community's expectations with respect to the scale of buildings within the precinct.

⁸ p.15, Flora Terrace Parking Study, OPUS, June 2017

OPTION 1 – SHORT TERM UPGRADES

Option 1 - Short Term Upgrades identifies measures that can be readily achieved within 1 – 2 years, subject to Council funding.. To ensure these opportunities contribute to the viability of the centre as a whole, key strategies were articulated under activity, movement and character.

Activity

- Continuity of active frontages along Flora Tce - with removal of bus stop
- 2.4m added to footpath eastern side of Flora Tce
- Additional space for alfresco dining and landscaping

Movement:

North - Castle St to Lawley St:

- Removal of bus stop to provide 4 additional bays
- Reduced traffic speed to 40km
- Existing parking = 20
- Proposed parking = 24 (additional 4 parking bays)
- Parking managed (time restrictions)
- Road carriageway narrowed to 6m

South - Castle St to Malcolm St:

- Additional parking eastern side Flora Tce (11 bays)
- One-way internal accessway (south of Castle St)
- Continuous footpath along eastern edge (loss of 4 bays to internal accessway south of Castle St)
- Time managed on-street/off-street parking
- Existing parking = 75
- Proposed parking = 82
- New bike racks

Character:

- Additional tree planting
- Continuous pedestrian shelter / awnings
- Additional footpath width for seating, public art and landscaping

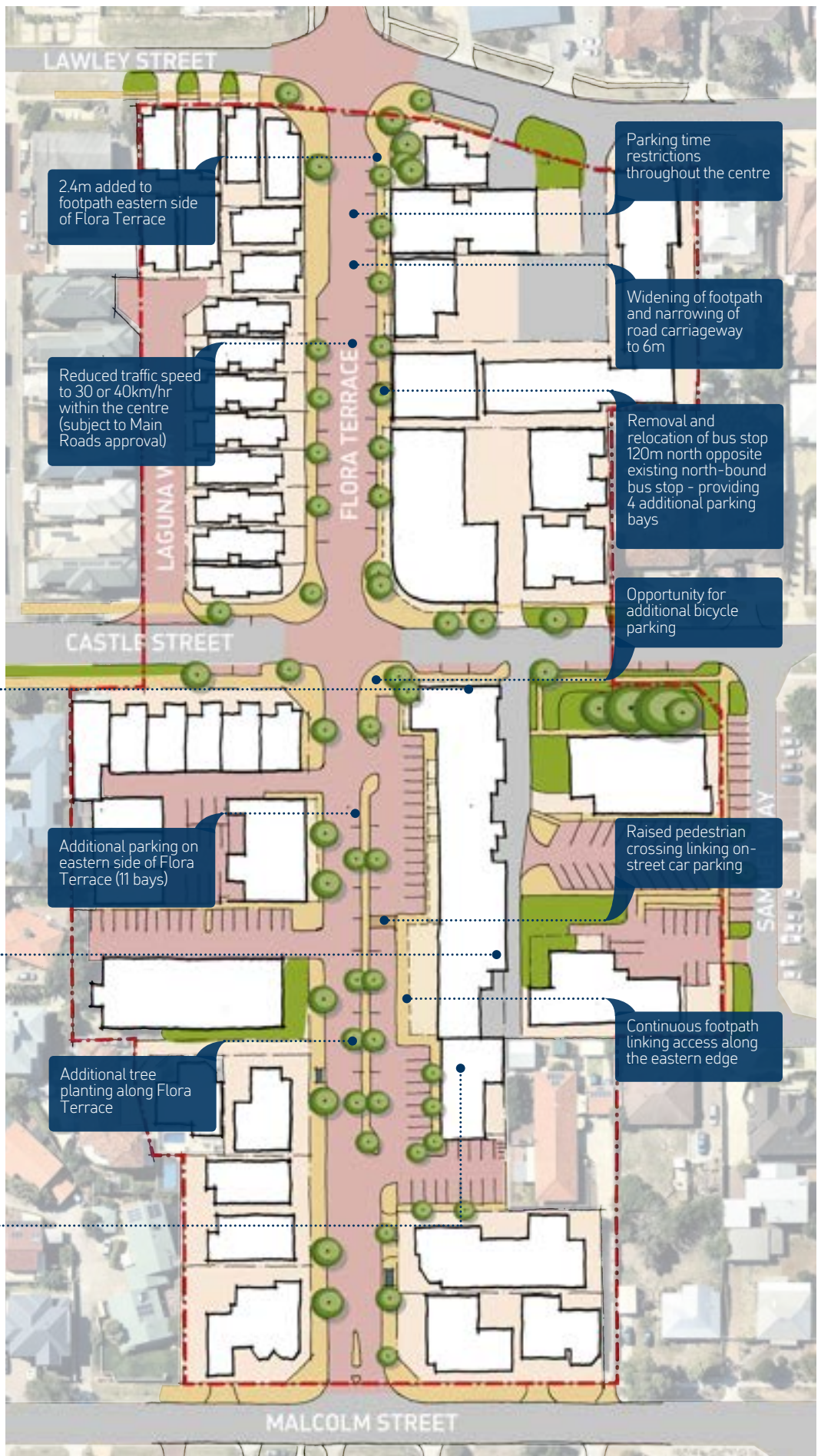


Figure 18: Option 1: Short Term Upgrades



OPTION 2 - LONG TERM REDEVELOPMENT

To address the historic shortfall of car parking within the centre, consideration of longer term redevelopment approach identify sites where there exists greater potential to integrate landholdings and balance car parking demands.

The viability of Option 2 Long Term Redevelopment will be determined as part of further investigations including feasibility studies, community consultation and Council consideration. Key strategies are addressed under activity, movement and character to ensure an integrated approach.

Activity

- Continuous footpath eastern side of Flora Tce
- Integrated redevelopment of lots - creating opportunity for covered public car parking and upper level retail and residential uses
- Creation of a Town Square
- Activated pedestrian lane through to Apex Park

Movement:

North - Castle St to Lawley St:

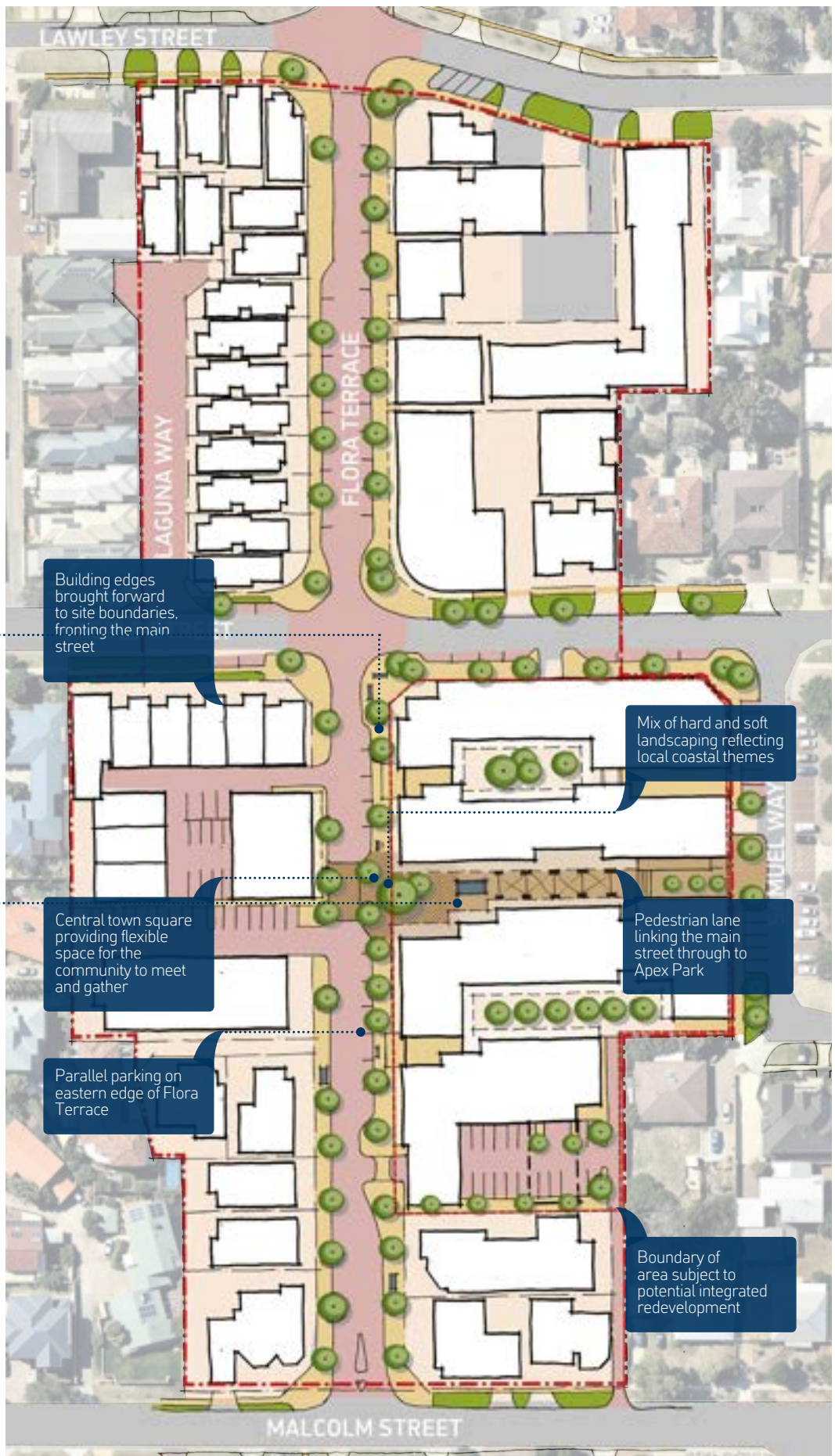
- Additional parking Lawley St = 9 bays
- Reduced traffic speed to 30km

South - Castle St to Malcolm St:

- Raised intersection Castle St and Flora Tce
- Parallel parking to Flora Tce
- Road carriageway narrowed to 6m
- Reduced traffic speed to 30km

Character:

- New tree planting
- New hard and soft landscaping
- Reflect coastal materials / built form
- New street furniture
- Possible development bonus required (e.g. height, plot ratio)



main street edge



linking spaces

Figure 19: Option 2: Long Term Redevelopment





green edges



legible wayfinding

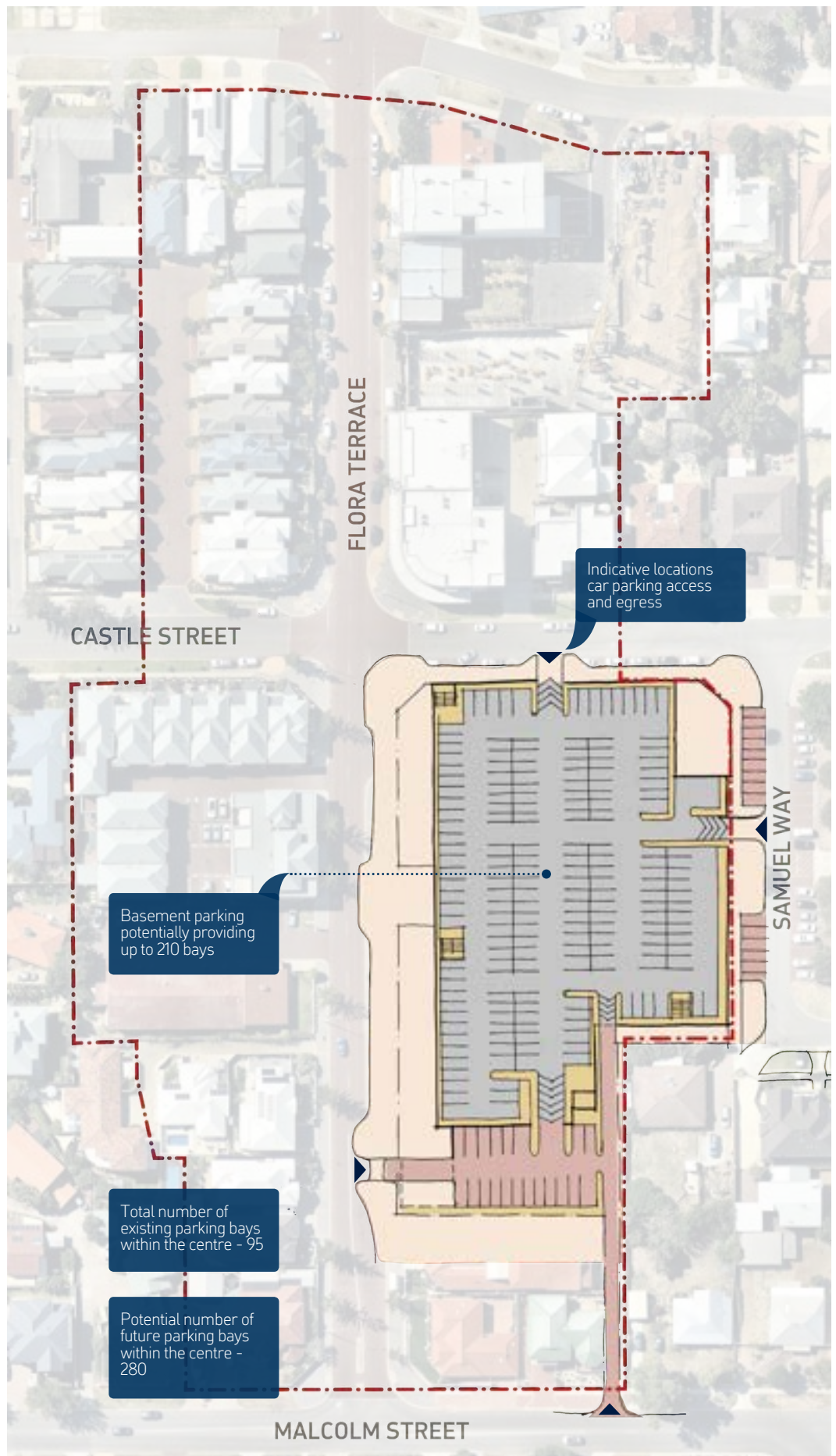


Figure 20: Option 2: Long Term Redevelopment - Basement Parking



Flora Terrace today offers a mix of shops and cafés, small restaurant and other local businesses. South of Castle Street, buildings have been setback from Flora Terrace to accommodate additional off-street car parking. As the centre has experienced greater success to its retail and cafe offering, so too has the demand for convenient access to car parking which currently compromises the pedestrian environment.

As part of the long term redevelopment, this approach brings building frontages to the edge Flora Terrace Main Street, creating a continuous edge and greater space for pedestrian amenity.



EXISTING MAIN STREET VIEW



POTENTIAL MAIN STREET REDEVELOPMENT

WHAT COULD HAPPEN HERE...

- + Built form defines the 'main street' edge.
- + Activation of ground floor frontages.
- + Narrowing of Flora Terrace to create a slow speed pedestrian environment.
- + Create a variety of attractive and protected spaces for the community to gather.



activated main street



flexible spaces





green links



location plan

Views through to
APEX park



Alfresco dining along
northern edge

POTENTIAL PEDESTRIAN LANEWAY

WHAT COULD HAPPEN HERE...

- + Create spaces to play, relax and reconnect as a community, providing experiences for all ages and abilities.
- + Accommodate flexible spaces for pop-up and permanent entertainment.
- + Reinforce the local character of a relaxed village environment.

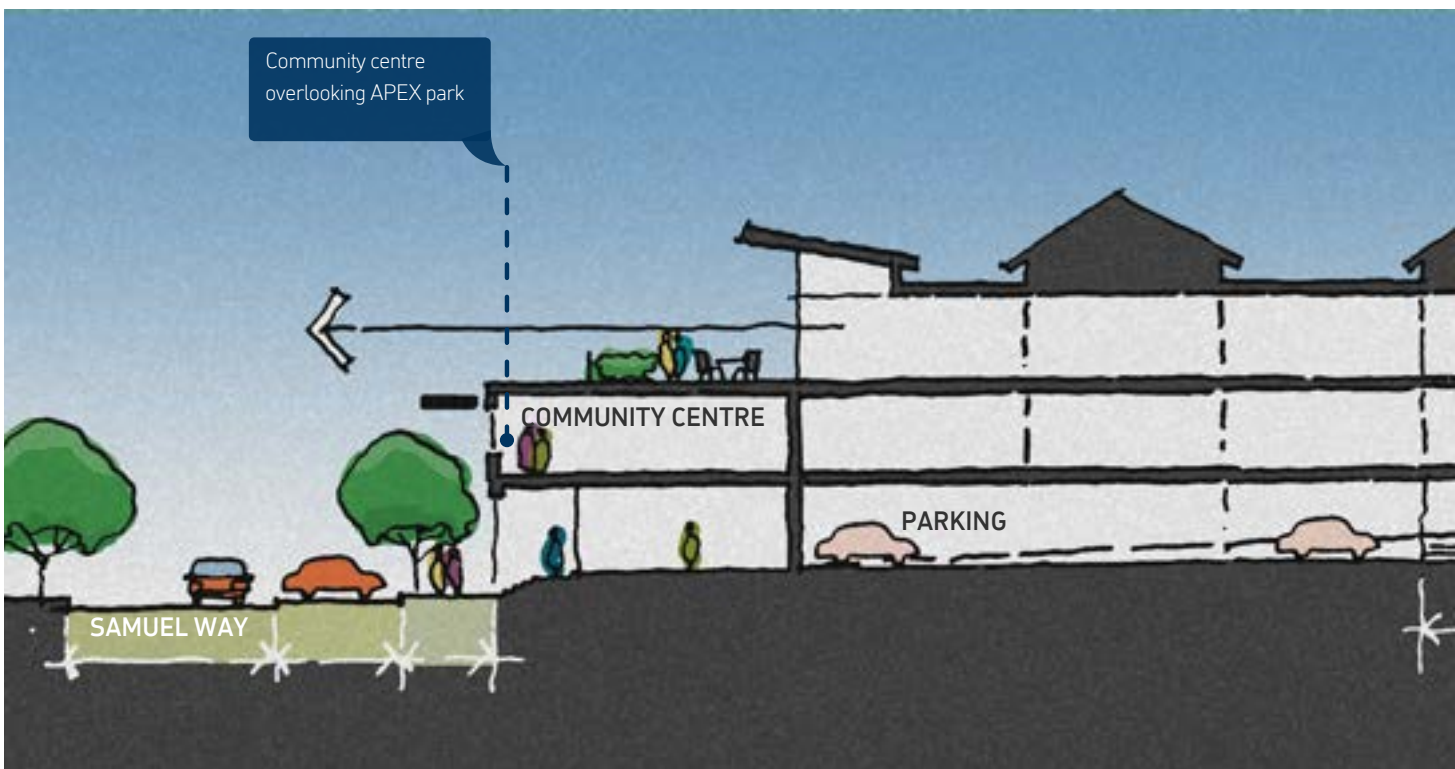


light and shade



variety of spaces

POTENTIAL EAST-WEST SECTION



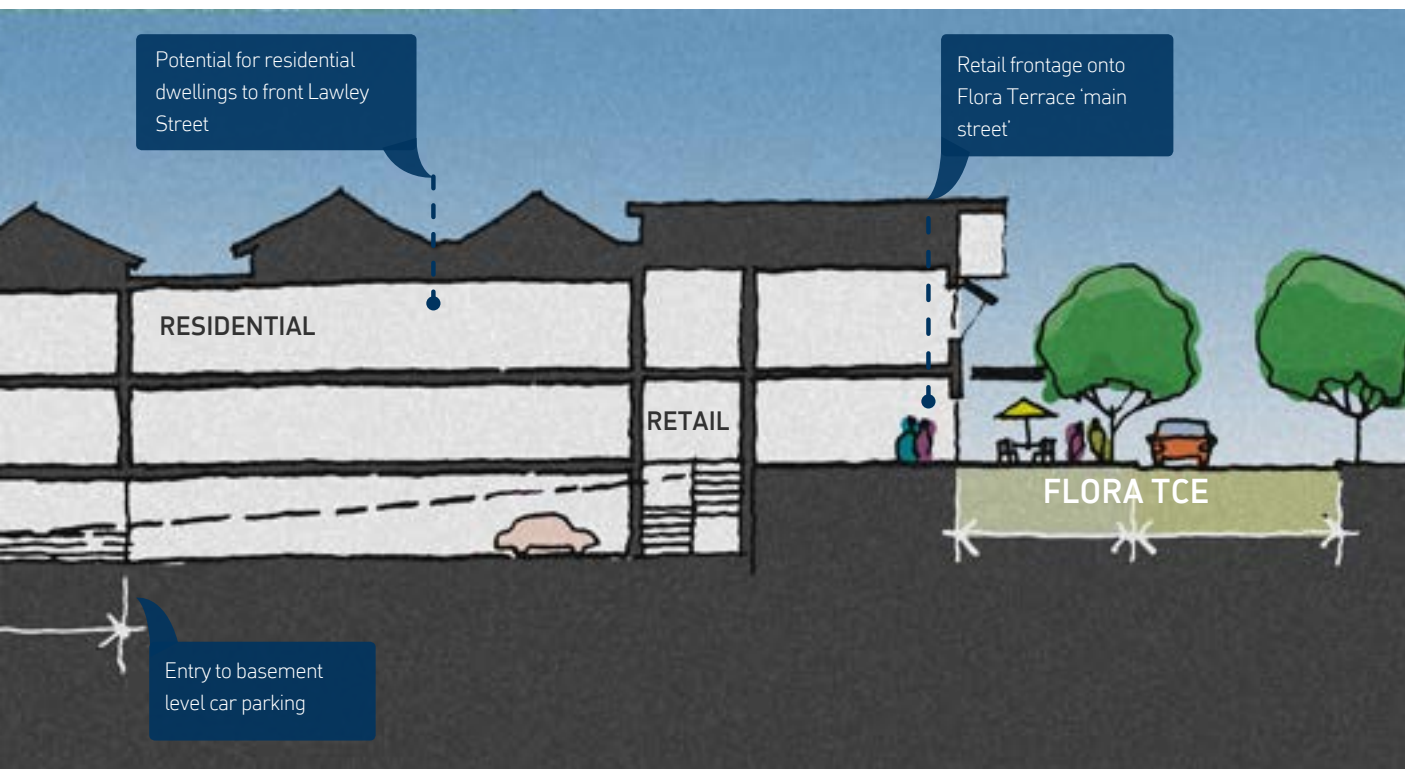
WHAT COULD HAPPEN HERE...

- + Articulation of the built form stepping down the street.
- + Integration of undercover car parking.
- + Integrate the community centre and civic facilities.
- + Maintain links to APEX park.

Building heights are indicative only and subject to further investigations as part of future feasibility studies.



location plan



articulation of form



green edges



CAR PARKING SUMMARY 6.0

CAR PARKING SUMMARY

6.0 Car Parking Summary

DEVELOPMENT YIELDS OF THE CENTRE - UNDER THE CURRENT SCHEME

Table 2, Summary of Existing Parking Yields outlines the current car parking requirements and shortfalls (where applicable) under the City’s planning scheme for all lots within the study area.

The most significant parking shortfalls are on those lots that were developed in the 1960’s and thus have nil or limited capacity to provide on site car parking.

While the current on site car parking shortfall totals 128 bays, this is supplemented by the availability of 99 public car parking bays within the study area road reserves⁹.

Assuming that the Option 1 (Short Term Upgrades) is adopted, this would result in an increase of 15 on-street parking bays. In this regard, if the total of 114 public car parking bays are available to supplement on-site car parking shortfalls, this shortfall is then reduced to 15 car parking bays.

Table 2 Summary Existing Parking Yields

ADDRESS	LAND USES	LPP6.7 PARKING REQUIREMENT	PARKING BAYS REQUIRED*	TOTAL PARKING REQUIRED**	TOTAL PARKING PROVIDED	SHORTFALL?
Lot 53, HN 109*** Flora Terrace (includes seven non-strata commercial tenancies)	Restaurant (Tropico) 260m ²	1 bay per 7m ² GFA	33.4	80.5 (81) bays	10 bays	69 bays
	Shop (HyperLuxe) 124m ²	1 bay per 12.5m ² GLA	8.9			
	Fast Food Outlet (currently fish & chips – soon to be juice bar?) 100m ²	1 bay per 7m ² GFA	12.9			
	Personal Services (Royal Drycleaners) 98m ²	1 bay per 12.5m ² GLA	7.1			
	Office (Sutton Realty) 80m ²	1 bay per 30m ² GFA	2.4			
	Personal Care Services (Azure Beauty & Spa) 110m ²	1 bay per 12.5m ² GLA	7.9			
	Shop (Sara Fox & Co) 110m ²	1 bay per 12.5m ² GLA	7.9			
Lot 6, HN 113 Flora Terrace (includes three non-strata commercial tenancies)	+ Restaurant (Lawleys) + Restaurant (Zephyr) + Restaurant (Pasta on the Terrace) (Total GFA 345m ²)	1 bay per 7m ² GFA	44.3	44 bays	4 bays	40 bays
Lot 2, HN 117 Flora Terrace (includes three non-strata commercial tenancies)	Personal Care Services (Becalmed Float)	1 bay per 12.5m ² GLA	7	19.5 (20) bays	20 bays	Nil – on site parking complies
	Shop (Archie & Evie)	1 bay per 12.5m ² GLA	4			
	Fast Food Outlet (96 Degrees on Flora)	1 bay per 7m ² GFA	8.5			

⁹ p. 15. Flora Terrace Parking Study, OPUS. June 2017

ADDRESS	LAND USES	LPP6.7 PARKING REQUIREMENT	PARKING BAYS REQUIRED*	TOTAL PARKING REQUIRED*	TOTAL PARKING PROVIDED	SHORTFALL?
Lot 12, HN 15 Malcolm S	Residential R20 807m ²	2 per dwelling		2	4	
Lot 13, Strata Lots 3 & 4, HN's 126 & 128 Flora Terrace	Residential R20 774m ²	2 per dwelling		8	8	
Lot 18, Strata Lots 1 & 2, HN 124 & 124A Flora Terrace	Residential R20 912m ²	2 per dwelling		6	6	
Lot 15, HN 118 Flora Terrace	Business (Medical Centre) 1,686m ²	10 per 2 consultants, 2 bays per additional		20	20	
Lot 300, HN 116 Flora Terrace (parent lot) – strata titled into:	Mixed use development total 2,819m ² GFA comprising:			36	36	
	3 commercial tenancies (1 x Office and 2 x consulting rooms):	1 bay per 30m ² GFA	8 - commercial 1 - disabled			
	9 grouped dwellings; and	2 per dwelling	21 - residential			
	3 multiple dwellings.	2 per dwelling	6 - residential			
Lots 109 – 126, HN's 2, 4, 6, 8, 10, 12, 14, 16, 18 & 20 Laguna Way, HN's 12, 14 & 16 Lawley Street, and HN's 96, 98 & 100 Flora Terrace	Residential R40 Range from 200m ² to 246m ²	2 per dwelling	32	32	32	
Lot 5, HN 93 Flora Terrace	Health Consulting 506m ²	10 per 2 consultants, 2 bays per additional	5	5	5	
Lot 6, Strata Lots 1 – 11, HN 95 (Shop) & Units 1 – 10/HN 95 (Apartments) Flora Terrace	Total area retail + apartments 675m ²	1 bay per 30m ² GFA 2 per dwelling	3 - commercial 10 - residential 3 - visitors	16	16	
Lot 241, HN 97 Flora Terrace	Restaurant (Clarkes) 1,012m ²	1 bay per 7m ² GFA	13	13	13	
Lot 21, HN 24 Lawley Street	Total area under construction 2,169m ²	2 per dwelling	42 residential 3 visitor bays	45	57	16 bays
Lot 20, HN 99 Flora Terrace	Office 140m ²	1 bay per 30m ² GFA	4 bays - Offices	4.5 (5)		
	Restaurant 158m ²	1 bay per 7m ² GFA	8 bays - Café	22.5 (23)		
Lot 70, Strata Lots 1 – 17, HN 1-13/103 Flora Terrace and 19A – D Castle Street	Mixed use total area 2,024m ²	2 per dwelling	24 - residential	24	43	3 bays
	(~650m ² commercial)	1 bay per 30m ² GFA	19 - commercial	21.6 (22)		
Lot 50, HN 20 Castle Street	Civic 4,094m ²		30	30	30	
Lot 81, Strata Lots 1 & 2, HN's 123 & 125 Flora Terrace	Local Centre 900m ²	2 per dwelling	4	4	4	
Lot 80, Strata Lots 1 & 2, HN's 17 & 19 Malcolm Street	Local Centre 980m ²	2 per dwelling	4	4	4	
TOTAL				440	312	128

*Includes 10% parking concession applicable under LPP6.7 due to Local Centre zoning.

**For simplicity, all on site alfresco areas have been excluded from these parking calculations.

***HN refers to house numbers along Flora Terrace

FUTURE PARKING - OPTION 1: SHORT TERM UPGRADES

Implementation of Option 1, consisting of 'short-term' (low cost) upgrades is supported by a number of high level recommendations detailed below with respect to transport and parking in the area. This would result in an increase of 15 public car parking bays.

As outlined above, the study area currently has an onsite car parking shortfall of 128 bays. This figure is reduced to 15 parking bays, accounting for the remaining 114 on-street public parking bays within the immediate study area.

Given the limited capacity of the area to accommodate additional public car parking, there is no intermediate option that would address the remaining 15 car bay shortfall other than a longer term integrated redevelopment proposed for Option 2. This option however would be reliant on development of additional off-street parking as sites are redeveloped.

Strategic Actions

Option 1:

- + Relocation of southbound bus stop to the north of Castle street
- + Removal of bus shelter of southbound stop
- + Install/mark additional on-street car parking bays
- + Mark on all formal parking bays
- + Add parking adjacent to raised island separating Flora terrace from service land (removal of yellow no-parking line)-subject t PTA
- + Appropriate Kerb build-outs, lighting, signing and markings at the Flora Terrace and Castle Street intersection
- + Parking limits and durations modified to suit current parking practices
- + Review/adjust speed limits to suit new on-street parking and to support traffic calming in flora Terrace between Malcolm and Castle Street (Subject to Main roads WA)
- + Footpath enhancements and consideration of wheel stops to aid footpath clearance
- + Install cycle parking at appropriate locations
- + Consider motorcycle parking
- + Review signage and marking requirements
- + Removal of parking in service lane outside Lawley's cafe and installation of connecting footpath with raised platform

Infrastructure Costs

Indicative cost for developing the 'short-term' on-site parking recommendations, on the northern and southern section of Flora Terrace as determined by the City of Stirling is estimated to cost approximately \$150,000. However, this value would need to be confirmed pending detailed design¹⁰.

- + 2.4m added to footpath eastern side of Flora Terrace
- + Additional space for alfresco dining and landscaping
- + Consider correct installed disabled parking
- + Relocation of rubbish bin in footpath that blocks access for the mobility impaired

LEGEND

1. Parking time restrictions throughout the centre
2. Reduced traffic speed to 30 or 40km/hr within the centre (subject to Main Roads approval)
3. Removal and relocation of bus stop 120m north opposite existing north-bound bus stop - (4 additional parking bays)
4. Opportunity for additional bicycle parking
5. Additional parking on eastern side of Flora Terrace (11 bays)
6. Additional tree planting along Flora Terrace
7. Continuous footpath linking access along the eastern edge (loss of 4 parking bays)

¹⁰ p. 16, Flora Terrace Parking Study, OPUS, June 2017

OPTION 1 - SHORT TERM UPGRADES



Figure 21: Option 1: Short Term Upgrades



FUTURE PARKING - OPTION 2: LONG TERM REDEVELOPMENT

Option 2 Long Term Re-development aims to ensure an appropriate amount of parking is provided to address local needs, whilst also encouraging alternative active modes of transport, such as improved pedestrian links through the development to connect Flora Terrace to Apex Park and the provision of cycle parking.

To reinforce a pedestrian scale along Flora Terrace, this approach also brings a continuous building edge to the property boundary south of Castle Street and widens the footpath width along its eastern edge of Flora Terrace to provide greater amenity for pedestrian movement and activation of the centre.

As indicated in Table 4, indicatively, an additional 276 off-site car parking spaces could be required within a fully integrated redevelopment approach, if applied to the current car parking scheme requirements. Figure 33 illustrates with only one layer of basement car parking, this achieves approximately 203 car parking bays.

Table 4 Option 2 Indicative Parking Yields

LAND USE	GFA M ²	LPP6.7 PARKING REQUIREMENT	PARKING BAYS REQUIRED
Retail/Food	1,500	12.5	120
Community	1,564	30	52
TOTAL	3,064	42.5	172

Strategic Actions:

Option 2:

- + Integrated redevelopment of the southern most lots on the eastern side of Flora Terrace potentially providing for an additional 200 car parking bays
- + As a mixed use local centre, alternative modes of transport should be invested in
- + Improved pedestrian access (connecting Flora Terrace and Apex Park)
- + Widen footpath width of Flora Terrace between Castle and Lawley Street providing for greater activity on the Main Street and spaces connecting
- + Installation of traffic calming to reduce speed limit, enabling a more pedestrian friendly environment

Infrastructure Costs

Integration of basement level car parking within Option 2 long term redevelopment would cost of approximately \$23,000 per off-street parking bay, indicative of current market costs per bay, plus the land and development cost¹¹.

It is important to understand that the viability of this option is wholly dependant on a feasibility study being undertaken. This will form part of the next steps for implementation by the City.

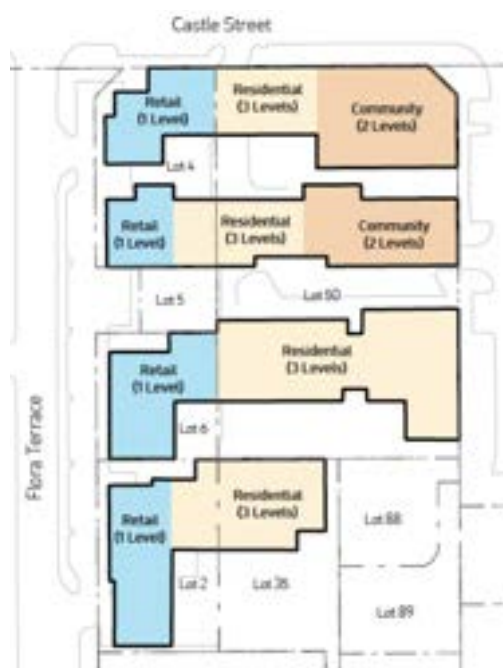


Figure 22: Indicative area distribution long term redevelopment

LEGEND

1. Building edges brought forward to site boundaries, fronting the main street
2. Central town square providing flexible space for the community to meet and gather
3. Pedestrian lane linking the main street through to Apex Park
4. Boundary of area subject to potential integrated redevelopment
5. Parallel parking on eastern edge of Flora Terrace

¹¹ p. 16, Flora Terrace Parking Study, OPUS, June 2017

OPTION 2 - LONG TERM REDEVELOPMENT



Figure 23: Option 2: Long Term Redevelopment



OPTION 2 - BASEMENT PARKING

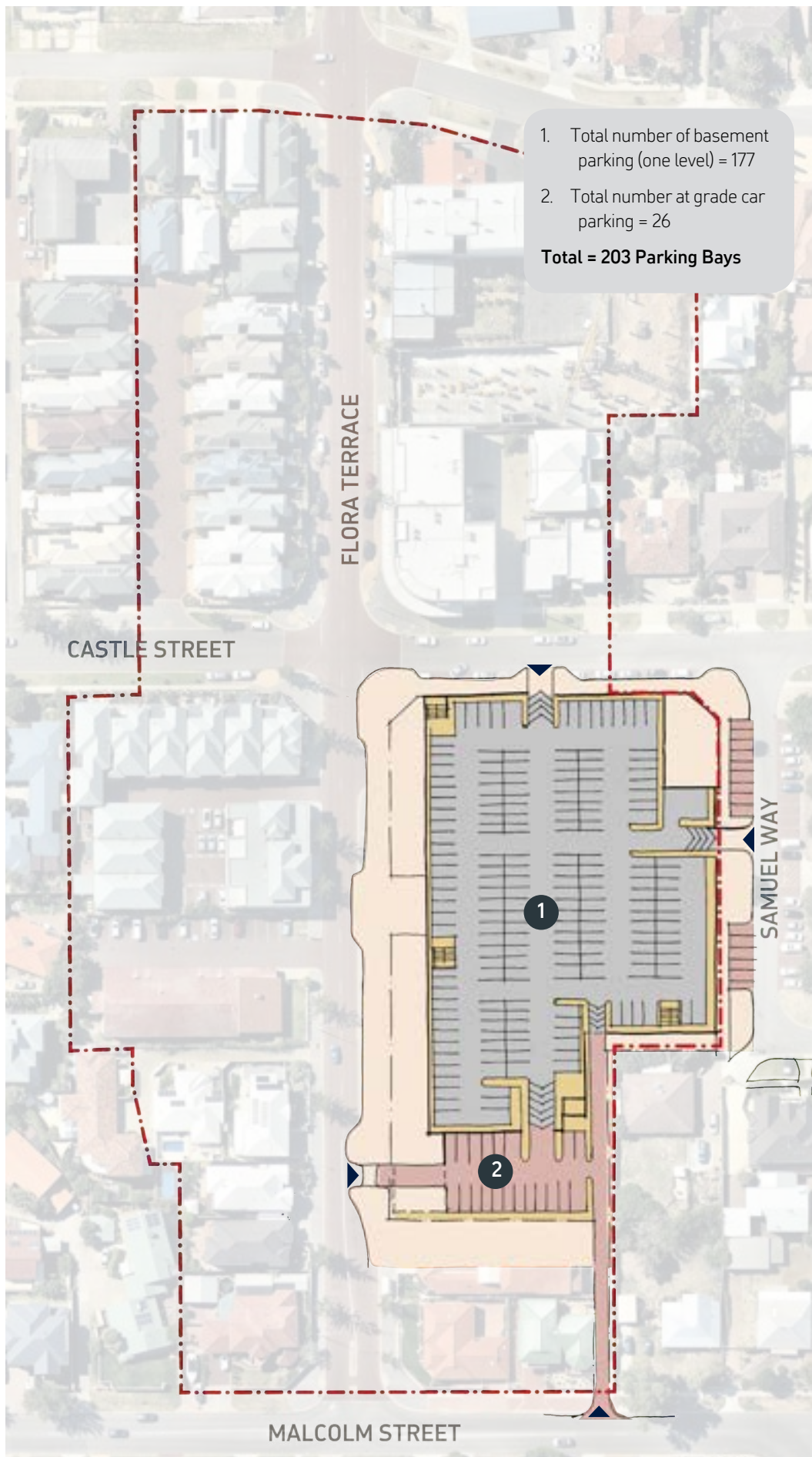


Figure 24: Option 2: Long Term Redevelopment - Basement Parking



Intentionally Left Blank



IMPLEMENTATION 7.0

IMPLEMENTATION

7.0 Implementation

WHERE TO FROM HERE

Community feedback received at the open day in April 2017, presenting revised concept plans for final review, has provided the basis for refinement of recommendations going forward. Figure 32 provides a summary of next steps for implementation.

As illustrated, it is anticipated that Option 1 Short Term Upgrades will be put forward to the Council in August 2017 seeking approval for funding to proceed with implementation of upgrades to provide for additional on-street car parking.

To understand the viability of Option 2 Long Term Redevelopment, the City is aiming to progress with a feasibility study mid 2018. Subject to Council approval and funding, the intent is to then report to Council on the findings of the feasibility study in order to guide future decision making as to the viable form and direction for redevelopment within the centre to take shape. Following the outcomes of the feasibility study it is anticipated that implementation of recommendations would only proceed beyond 2020.



Figure 25: Summary of Next Steps for Implementation

APPENDIX A

FLORA TERRACE VISION WORKSHOP SUMMARY REPORT

APPENDIX B

FLORA TERRACE DESIGN WORKSHOP SUMMARY REPORT

APPENDIX C

FLORA TERRACE PARKING STUDY

HAMES
SHARLEY