TOOLERN TOWN CENTRE

Urban Design Framework

Prepared by :
Growth Areas Authority

In consultation with:
Melton Shire Council

In conjunction with:
Doig Architecture
Tract Consultants
Charter Keck Cramer
GTA Consultants
Veitch Lister
ASR Research

Contents

SECTION I The Town Centre

SECTION II The Town Cent re Development Precincts

SECTION III Supporting Analysis

SECTION I

THE TOWN CENTRE

1.0 Introduction

The Toolern Town Centre is the future community heart for a population of up to 60,000 people in the growing urban area south-east of the Melton Township. Its development will occur over a number of decades with the Toolern Town Centre evolving from a local hub in its first decade to a regional centre in the long term. It will provide a range of regional and local employment, civic, retail, education, medical, residential, recreation and entertainment uses which will draw upon sustained investment from both the public and private sectors.

The Urban Design Framework (UDF) has been prepared following a detailed process of design, analysis, testing and consultation with State and local government, landowners, stakeholders and potential end users.

1.1 Purpose and Structure of UDF

The preparation of an Urban Design Framework for the Toolern Town Centre is a requirement of the Melton Planning Scheme (Schedule 3 to the Urban Growth Zone). The UDF has been prepared in partnership between the Growth Areas Authority and the Shire of Melton.

The UDF is structured in three sections:

SECTION 1: The Town Centre

- Vision and strategic objectives.
- The Town Centre Masterplan and development quadrants.

SECTION 2: The Development Precincts

- Detailed plans for precincts.
- Design objectives and preferred outcomes.
- Staging and delivery of the masterplan

SECTION 3: Supporting Analysis

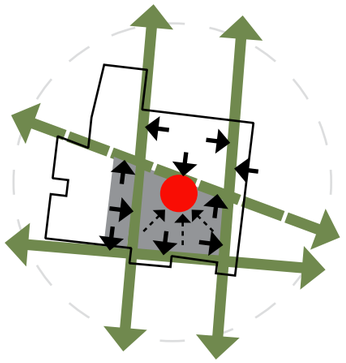
- Assesment of UDF against requirements of the PSP.
- Summary of background / technical work.

1.2 Vision & Strategic Principles

Twelve strategic principles are crucial to the implementation of the vision and primary objectives for Toolern. They underpin the masterplan and design principles of the UDF to ensure that the Toolern Town Centre is a great place.

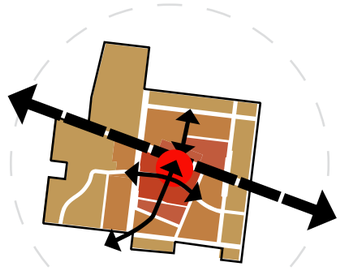
The primary objectives of the UDF are to:

1. Provide a town centre structure which facilitates immediate development and investment to attract services and development to encourage residential and commercial growth in Toolern.
2. Provide the framework for the delivery of a town centre with a strong sense of place and identity which promotes healthy lifestyle patterns and a high level of social interaction.
3. Identify the fundamental structural elements of the UDF which are critical in delivering the short, medium and long term visions for the town centre.
4. Identify the catalyst projects that inform and facilitate the staging of development.
5. Provide a land use and development framework to co-ordinate public and private investment in relation to development and staging.



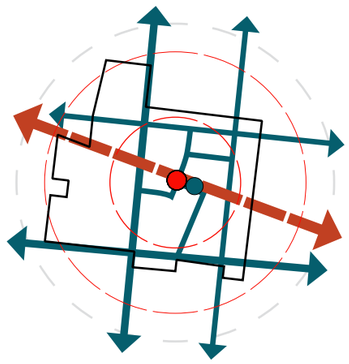
1 PLACEMAKING

An authentic town centre which responds to the local environment of the western plains of Melbourne and caters for the future residential community and visitors to Toolern.



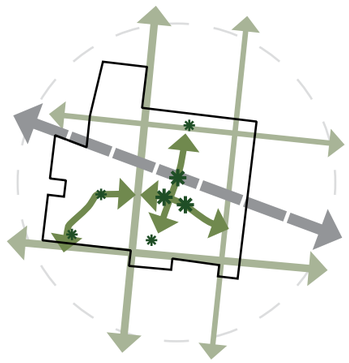
2 URBAN STRUCTURE

The 'heart' of the Toolern Town Centre, which is structured around a network of crafted public spaces and streets, closely integrates with the transit precinct which is the focal point of all movement and social networks.



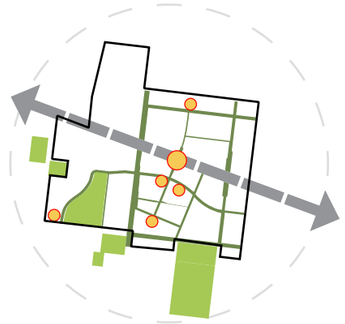
3 PUBLIC TRANSPORT

An efficient and accessible transport 'hub' at Toolern will stimulate activity in the public realm and retail areas, and provide rapid connections to Melbourne and the wider region.



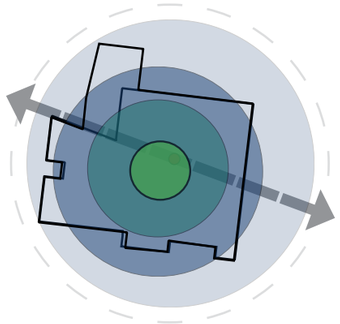
4 STREET DESIGN

Attractive streets designed to provide a comfortable pedestrian environment through the creation of shelter and protection as well as direct view lines and connections to the public squares, plazas and gathering points of Toolern.



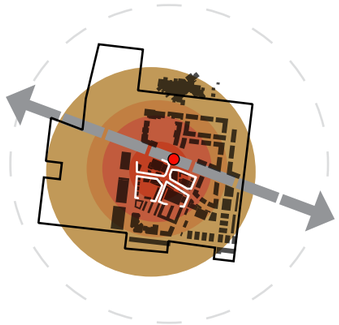
5 PUBLIC SPACES

A network of interesting, safe and enlivened public spaces and pedestrian environments that are designed to accommodate multiple uses and activities at all hours of the day. The streets and spaces are laid out as a complex 'string of pearls', signifying movement or places for congregation and social interaction.



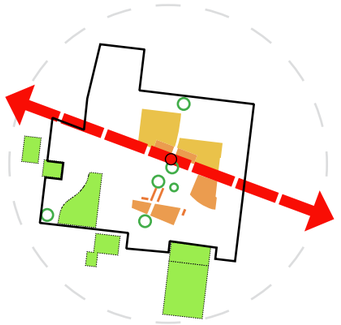
6 SUSTAINABILITY

Places to live, work, shop, and play that are adaptable, and flexible to enable Toolern to develop a 'sense of place' over time. The masterplan is flexible to allow Toolern to develop as a robust, resilient and sustainable Town Centre into the future.



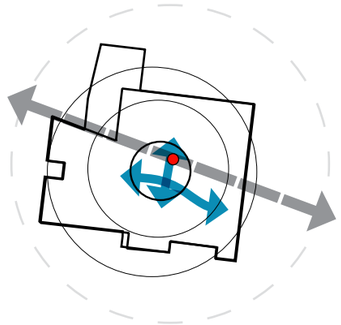
7 BUILT FORM

A network of interesting, safe and enlivened public spaces and pedestrian environments that are inclusive of all; multiple uses and activities can occur at all hours of the day. Built form which is delivered in a manner which strengthens a sense of enclosure and safety, a series of spaces providing variety in ambience, scale and function.



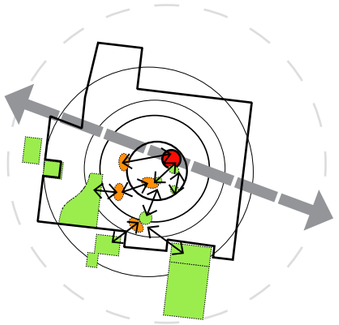
8 HIGH DENSITY HOUSING

Diverse housing types within the Town Centre which are compact and which benefit from access to transport networks, employment opportunities, a network of formal, passive and active open space areas as well as vibrant street life.



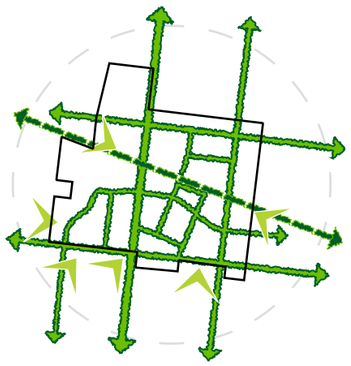
9 COMMERCIAL AND BUSINESS: REGIONAL, DISTRICT & LOCAL

The creation of facilities to attract and sustain prosperous, viable and complementary commercial and business uses within the Toolern Town Centre. These businesses will range in scale from small to medium enterprises which will provide services to the region, employment for local and regional residents, and ensure that Toolern becomes an authentic town and not a dormitory suburb.



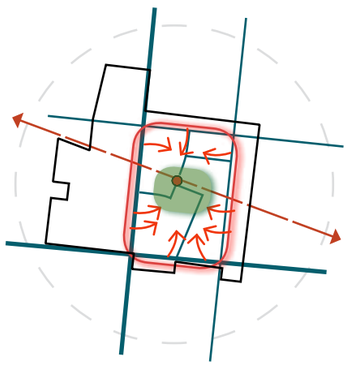
10 COMMUNITY FACILITIES

Major civic, cultural and community facilities which take pride of place in Toolern, creating great civic places and establishing a sense of identity for Toolern and its community.



11 LANDSCAPE & ECOLOGY

A landscape and ecological response embedded in all elements of the street and block pattern and development design within Toolern that reflects the open local topography of the western plains of Melbourne.



12 CAR PARKING

Car parking strategies and locations which support the function of the Toolern core as a people-based precinct. A 'ring road' approach in the core of the centre allows easy vehicular access to key areas of car parking, and prioritises the 'heart' of Toolern as a pedestrian priority zone in the long-term.

1.3 Context & Organising Elements

1.3.1 Metropolitan and Regional Context

The Toolern Town Centre sits centrally within the Toolern Precinct Structure Plan Area, which adjoins Melton Township to its south-east. Toolern forms part of the broader Western Growth Corridor of Melbourne (incorporating Melton Shire and the City of Wyndham), one of the fastest growing regions in the country.

The Toolern Town Centre is expected to develop as one of the highest order town centres servicing the Western Growth Corridor. Its locational advantage in servicing the corridor is likely to be strengthened with upgrades to the Melton rail line and the provision of a station in the town centre.

1.3.2 Growth Corridor Plan

The Western Growth Corridor Plan nominates the Toolern Town Centre as a Principal Town Centre in recognition of its strategic location and ability to provide accessible, high-order commercial and community services to a regional catchment. It is identified as the primary centre to service the Melton growth corridor (as well as regional locations to the west of Greater Melbourne).

Key elements of the Corridor Plan as it relates specifically to the Melton Corridor include:

- The development of a up to 183,000 households to accommodate up to 531,000 people
- Opportunities for up to 206,000 jobs across the region, with major new employment development as part of the extension of the Laverton North industrial precinct and on the Melton Highway, as well as potential commercial development at Hopkins Road.
- Opportunities for new rail stations at Toolern, Paynes Road and Caroline Springs, as part of a broader upgrade of the Melton Rail Line.
- The redesignation of land in the north-eastern part of the Toolern PSP from employment to residential, increasing the potential residential catchment for the Toolern Town Centre.

The Toolern Town Centre will complement other existing and planned town centres in Melton Township, including the Melton (High Street) Town Centre, Woodgrove, and the Melton South (Melton Railway Station) Local Town Centre, as well as planned Major Town Centres at Rockbank Station and Rockbank North.

1.3.3 Toolern PSP Context

The Toolern Precinct Structure Plan takes in approximately 2,400ha of land to the south and south-east of the existing Melton Township. The PSP approved in 2010 establishes a strategic framework for the development of a new community of up to 60,000 people and 20,000 jobs.

The Toolern Town Centre was nominated to sit centrally within Toolern to be co-located with a future rail station. It was planned to incorporate a broad range of higher-order uses, including:

- Retailing
- Civic and Community uses
- Education
- Recreation
- Government services (including legal and health)

The Town Centre was planned to be supported by a network of smaller neighbourhood centres throughout the Precinct, each servicing a more localised catchment with a more limited range of uses.

The Toolern Town Centre is generally focused on the intersection of Ferris Road and the Melton Rail Line and covers approximately 100Ha. It is anticipated that the centre will directly service both the residential catchment to the south, as well as the Toolern Employment precinct to the north.

Major gateways to the town centre will be created to the north through Ferris Road and Mount Cottrell Road, both of which are proposed to interchange with the Western Freeway and will therefore provide a good connection to the broader region.

The centre will be well connected to the established Melton Township to the west through Bridge Road and Abey Road, both of which cross the Toolern Creek. Bridge Road will likely provide the key access point to the Toolern Town Centre from Melton Township early in the life of the centre.

Ferris Road will function as the primary southern gateway to the Town Centre, supported by a network of connector streets. Ferris Road will be an important central axis through the town centre itself.

The structure set out in the Toolern PSP has established a series of key organising elements, upon which the development of the UDF has been based. These organising elements are illustrated on the following page and along with the strategic principles of the UDF (Section 2) have informed the design of the masterplan.

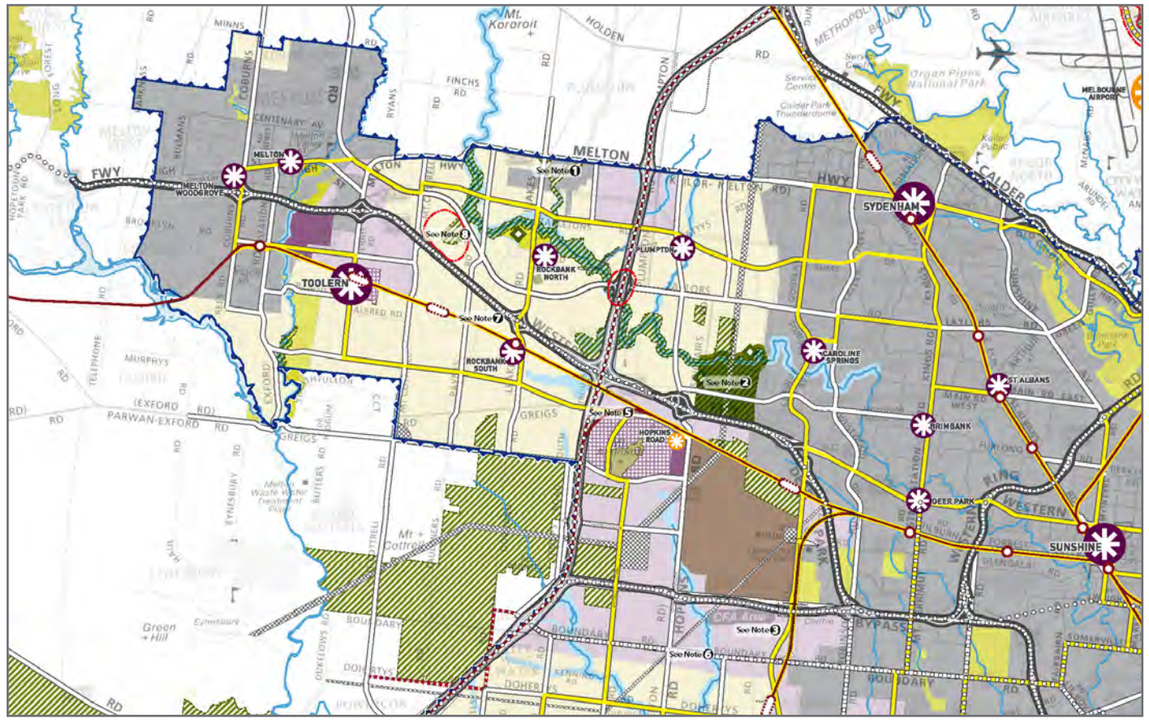


Figure 1 West Growth Corridor Plan

TRANSPORT

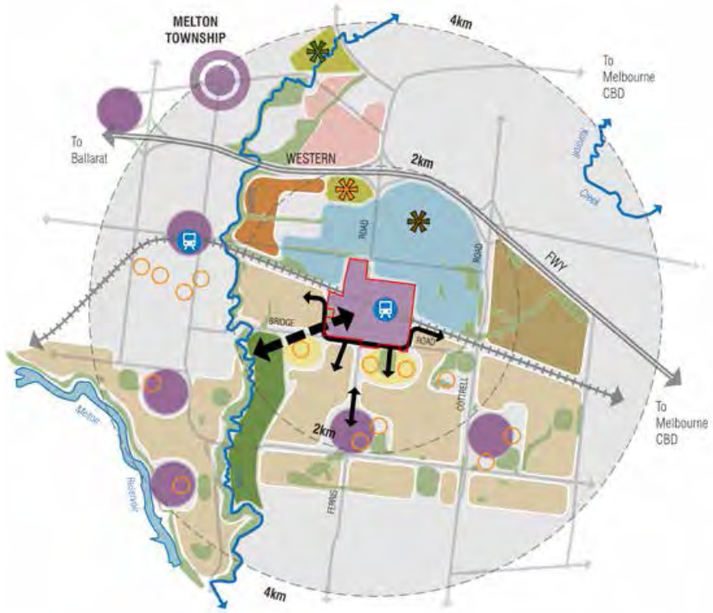
- TOOLERN TOWN CENTRE
- FREEWAY
- PRIMARY ARTERIAL ROAD
- SECONDARY ARTERIAL ROAD
- CONNECTOR ROAD
- RAILWAY CORRIDOR
- RAILWAY STATION (Existing & proposed)
- CREEK
- MELTON TOWNSHIP
- APPROXIMATE GROWTH FRONT

PEDESTRIAN & CYCLING

- TOOLERN TOWN CENTRE
- KEY RAIL CROSSING POINT
- KEY OFF ROAD LINK
- KEY OPEN SPACE NODE
- REGIONAL OPEN SPACE
- OPEN SPACE
- COMMUNITY HUB
- ACTIVITY CENTRE
- EDUCATION FACILITY
- RAILWAY LINE & CORRIDOR
- RAILWAY STATION
- CREEK
- MELTON TOWNSHIP

LAND USE

- TOOLERN TOWN CENTRE
- REGIONAL OPEN SPACE
- OPEN SPACE
- MELTON HARNESS RACING
- MELTON VALLEY GOLF CLUB
- ACTIVITY CENTRE (existing & proposed)
- COMMUNITY HUB
- EDUCATIONAL FACILITIES
- MAJOR EMPLOYMENT LAND
- MELTON RECYCLING CENTRE
- MIXED USE
- MELTON INDUSTRIAL PARK
- RESIDENTIAL
- RESIDENTIAL INVESTIGATION
- RAILWAY CORRIDOR
- RAILWAY STATION
- CREEK
- MELTON TOWNSHIP



PLACEMAKING

- TOOLERN TOWN CENTRE
- KEY ARRIVAL ROUTE
- LANDSCAPE CHARACTER ENTRY NODE
- COMMUNITY NODES
- KEY OPEN SPACE
- ACTIVITY CENTRE
- EDUCATION FACILITY
- POTENTIAL BARRIER
- EXISTING VIEW LINES
- OPEN SPACE
- RAILWAY CORRIDOR
- RAILWAY STATION
- CREEK
- MELTON TOWNSHIP

1.4 Issues & Opportunities

The following issues and opportunities have been identified for the Toolern Town Centre and considered in the development of the UDF:

TRANSPORT

Issues

- The railway line (running east-west) and Ferris Road (running north-south) as physical barriers to connectivity between the four quadrants of the Town Centre.
- Potential tension between vehicular transport and pedestrian movement and amenity in the heart of the Town Centre
- Landscape, amenity and access impacts associated with the future grade separation of Ferris Road and East Road.
- Uncertainty of the timing of the delivery of an interchange at Mt Cottrell Road and the Western Freeway and the grade separation at the railway.

Opportunities

- Grade separation options that improve amenity and access in the heart of the Town Centre, and improve north-south connectivity.
- The proposed train station at Toolern as a key destination, interchange point, and major access point to the Town Centre for a wide catchment.
- The role of Mount Cottrell Road (north & west of the Town Centre) as the highest order arterial, providing access to the Town Centre from the east as well as connection through the Toolern Precinct and the OMRR to the south.

PEDESTRIAN AND CYCLING

Issues

- Movement barriers created by the railway line and Ferris Road.
- Lack of a residential catchment adjacent to the northern part of the Town Centre to create energy and support destinations

Opportunities

- Strong off-road connections to Regional Open space & Regional Trail Network.
- Potential to establish high amenity public spaces at gateways to the town centre to connect to local trails.
- Rail trail connections to the east and west.
- Relatively flat landscape within the Town Centre and surrounding areas, and a well established grid road layout, to enhance active transport accessibility.

LAND USE

Issues

- Uncertainty regarding staging of development for employment land to the north of the Town Centre, and the need to strike a balance between employment uses in each area.
- Existing uses and uncertain time frames for the development for some areas in the north and north west of the Town Centre.

Opportunities

- Proposed adjoining schools and active open spaces generating activity and complimentary community infrastructure.
- Anticipated timing of development of adjacent residential areas provides catchment for the early delivery of the first stages of the Town Centre.
- Major population growth in the broader catchment and good accessibility to the Town Centre from this catchment in the town centre supports more intensive activity over time.
- Planned regional community infrastructure in the town centre to create an early sense of destination to the Town Centre and bring high quality architecture into the centre at key nodes.

PLACEMAKING

Issues

- Landform is large scale, relatively flat and with little complexity or contrast in its features.
- Climate and geology create potential amenity issues (i.e. high winds, dust etc).
- Existing low amenity environment along the Western Freeway.
- There are dry stone walls within the UDF which are important heritage features.

Opportunities

- Prioritise a response to climate including shade, shelter and visual ‘enclosure’ are attractive qualities.
- Ability to plan the whole town centre to include key public spaces, activity zones and ‘green’ links.
- Dry stone walls to be incorporated into the design of streets and spaces to contribute to sense of place and reflect heritage of the area.

2.0 Toolern Masterplan

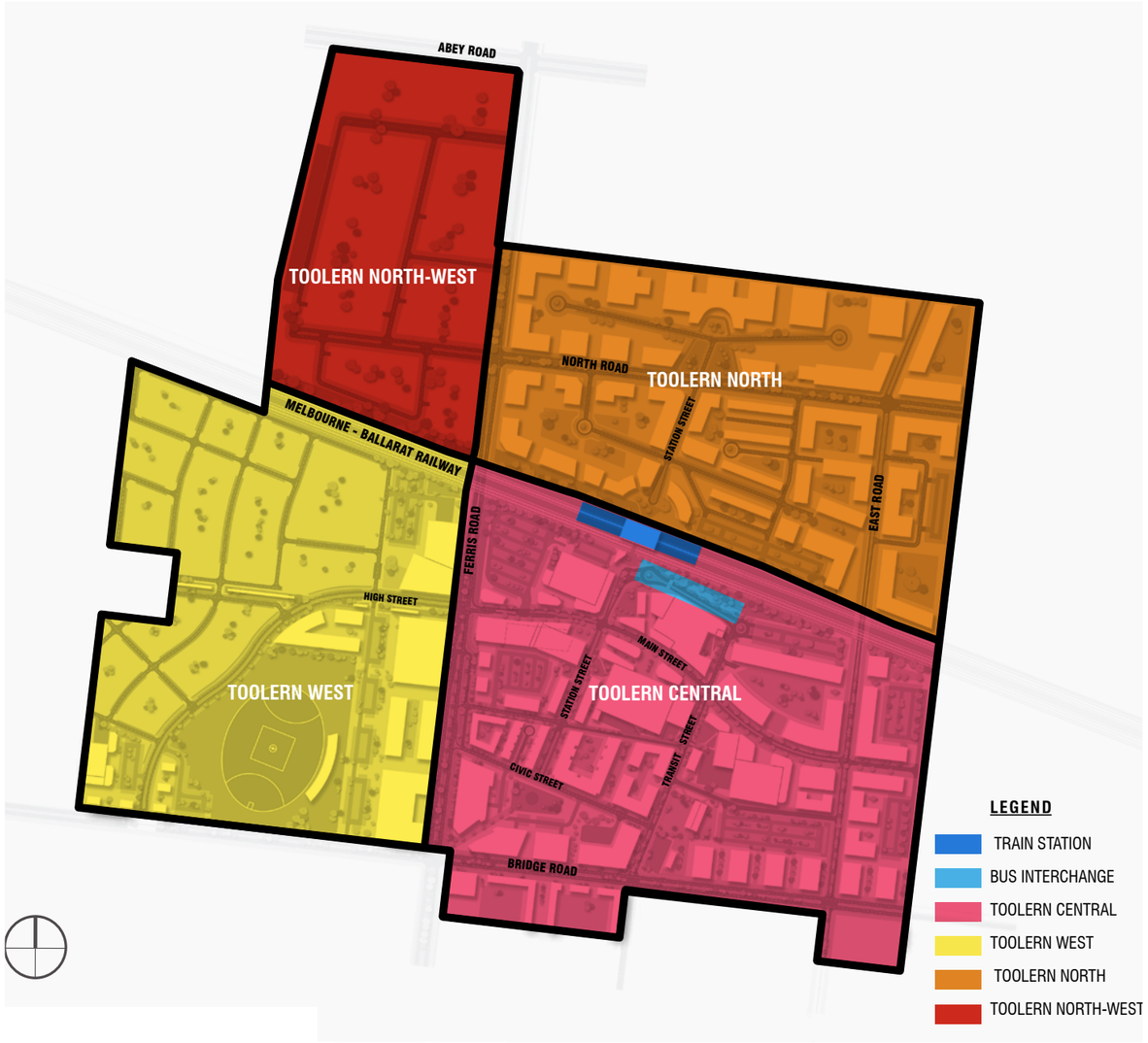


Figure 2 Toolern Quadrants

The Masterplan expresses the desired intent for the ultimate development of Toolern Town Centre

The Toolern Town Centre is located at the intersection of the Melbourne-Ballarat Railway Line & Ferris Road. These major axes cut the Toolern Town Centre into four Town Centre quadrants, each of which incorporate very different uses and urban functions. The size, role and character of these quadrants are determined by surrounding developments, exposure to rail and road axes, accessibility and availability for staged devlopment. The highest order function in the Town Centre has been located in the south east Quadrant (Toolern Central) for the following reaons:

- It contains the most effective position for the Railway Station and Transit Interchange which can then directly serve a quadrant each side of the railway line.
- It is not constrained by existing land uses and can be developed immediately and sequentially from the rail/ road intersection on Ferris Road generally in an eastward direction.
- It will ultimately have the greatest road and rail exposure and accessibility via Ferris, Bridge and East Roads.
- It has direct adjacency to the second and third largest quadrants, ensuring neither is "orphaned" from the overall Town Centre function.

The development quadrants are illustrated in Figure 2 and summarised briefly below:

Toolern Central is the principal shopping, civic, commercial, entertainment and transport hub or 'heart' of the Town Centre and is the primary destination for all such services for residents of Toolern.

Toolern West is the leisure, arts and residential precinct containing a mix of higher order and local community facilities.

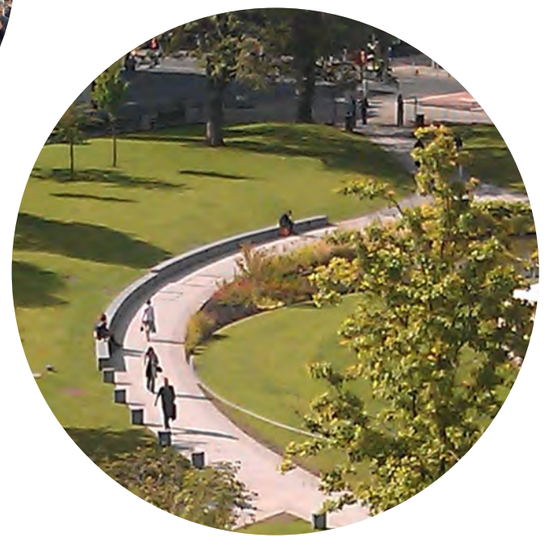
The **Toolern North** quadrant provides for the long term development of a range of higher order uses, provides convenience level retail associated with the future train station and sets aside land to create a large mixed use precinct including uses such as higher education and health.

Toolern North West provides opportunities for larger format retail and light industrial uses to develop within the centre.

The role, structure, built form and movement of each of the quadrants is discussed in detail at Section 3.7.

Performing Arts, Aquatic & Indoor Sports Centre

Bus Interchange, Train Station & Transit Plaza



Market Square

Civic Green

Library, Council Office & Civic Piazza

Main Street

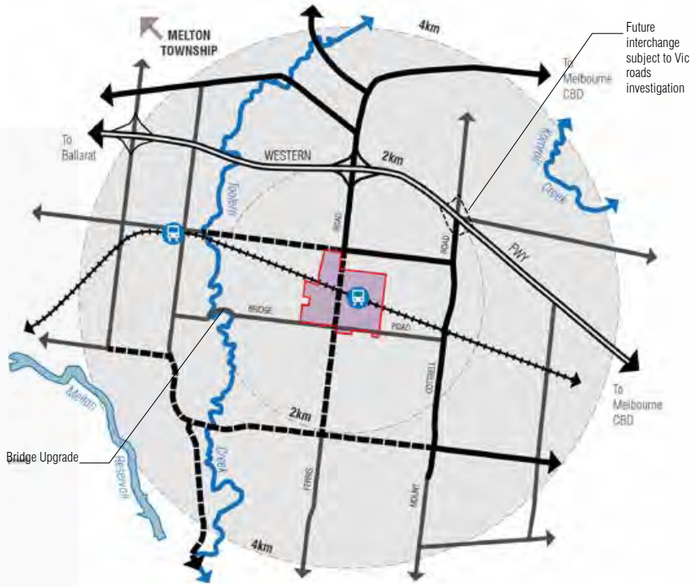
Figure 3 Toolern Illustrative Masterplan

2.1 Movement & Access

LEGEND

- TRAIN STATION
- BUS INTERCHANGE
- ARTERIAL
- CONNECTOR
- LOCAL STREET
- LOCAL STREET - BUS ACCESS ONLY
- SERVICE LANE / ROAD
- SIGNALISED INTERSECTION
- LEFT IN / LEFT OUT
- VEHICLE ENTRY POINTS
- SERVICE VEHICLE ACCESS

Figure 4 Vehicle Movement & Access



Legend

- TOOLERN TOWN CENTRE
- FREEWAY
- PRIMARY ARTERIAL ROAD
- SECONDARY ARTERIAL ROAD
- CONNECTOR ROAD
- RAILWAY CORRIDOR
- RAILWAY STATION (existing & proposed)
- CREEK

Figure 19_ Contextual Vehicle Movement (Existing & PSP Proposed)

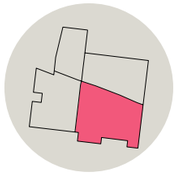
The Toolern Town Centre is located on the intersection of Bridge and Ferris Road, with the Melbourne - Ballarat rail line running diagonally (east west) through the Town Centre. Bridge Road provides east-west connections to Melton and the surrounding residential neighbourhoods whilst Ferris Road provides north-south connections to the Western Highway and the employment precinct to the north and residential land to the south. Movement patterns within the Town Centre provide an ordered structure for both pedestrian and vehicular routes. These movement patterns respond to the destinations and activities they serve within each quadrant.

There are 3 key elements of Movement and Access which are addressed.

Entry Points

- Movement Hierarchy
- Pedestrian Movement

These elements apply to the whole Town Centre but are dealt with on a quadrant basis given the differing roles and emphases of each quadrant.



TOOLERN CENTRAL

Movement patterns within Toolern Central will be driven by desire lines created by linking particular entry points with destinations of varying character and use. The intended layout of this quadrant identifies specific entry points for both vehicles and pedestrians/cyclists and locates major activities to generate and distribute movement throughout the centre.

The pattern of roads, streets, laneways and squares adopted has an inherent ability to allow for change. While the location and form of the sinuous Main Street is relatively fixed, the position and geometry of other roads may be altered in response to design issues or functional demand, without challenging the overall structure.

Entry Points

Toolern Central has one major entry point on each boundary. These are of a large scale, with those on the east, west and south having both a ceremonial and vehicular function (and will be signalised). These entrances will be identified and reinforced by the establishment of taller, dense built forms offering a clear signal of entry. This may be emphasised by a particular planting regimen of species, scale and pattern.

The entry on the north is intended as a pedestrian entry, being a wide underpass beneath the rail corridor, to create a strong visual and practical linkage to Toolern North. This will be reinforced with a planting regimen of particular species, scale and pattern which differs from those framing the major entries.

To "unlock" the value of land in the north east quadrant of Toolern Central, a grade separation of East Street at the rail corridor will be required. The creation of this connection will support high value uses and open the route from the Western Freeway to the east. The masterplan does not rely on the delivery of the grade separation to function but it would greatly improve access to the Town Centre and surrounding employment area.

The delivery of the East Road grade separation and East Road roadway will be dependant on the timing of development and access requirements of adjacent sites.

Movement Hierarchy

The masterplan provides a hierarchy of roads within Toolern Central which differ in their function and form, as follows:

All roads within the centre accommodate both pedestrians and vehicles, with differing emphasis. The emphasis will differ as follows:

- **Main Street west** (from Ferris Road to Station Street) is the prime entry from Ferris Road which will carry both private and service vehicles to service the first convenience function in Toolern Central. This road section will also carry buses heading for the Bus Interchange and delivery vehicles for the supermarkets and speciality shops. The road will have a tree lined median, and east-west pedestrian movement patterns on both sides.
- **Main Street central** (between Station Street and Transit Street) is the primary congregation/pedestrian space in the Town Centre. It will have limited access for delivery vehicles, no access for semi trailers or buses and a strongly pedestrian character. Heavy east-west pedestrian movements are accommodated with wide footpath zones, and multiple crossing points to encourage connectivity between the northern and southern sides of the street. No median planting and consistent parallel parking to both sides of the street will be provided.

  Main Street central will be the main pedestrian area within the Centre by a narrowing of the road, shortening the distance for pedestrians to travel, limiting car use, and slowing cars down. This is achieved by removing the median and creating a narrower cross-section as well as using a different pavement treatment.
- **Main Street east** (from Transit Street to East Road) is the prime entry from East Road, this will carry private vehicles and small delivery vehicles for speciality shops. The road will have a tree lined median, and relatively heavy east-west pedestrian movement patterns on both sides.
- **Station Street south** will provide for some bus movements, taxi stands and kiss-and-ride facilities in its northern section, but will generally be delivered as a strongly pedestrian environment. Through its southern arm, vehicle movements will be low, and the pedestrian character dominant.
- **Transit Street** is the primary entry route from the south and will carry buses, semi-trailers and private vehicles. A generous pavement, tree planted median and limited parallel parking will minimise traffic conflict. This road will give access to undercroft parking within the Discount Department Store and Entertainment Centre and accordingly will carry relatively high volumes of passenger cars.
- **The Service Road** minimises the conflict between larger commercial vehicles, private vehicles and pedestrians. It will be a one way street in its ultimate form from Station Street to Transit Street and two way from Ferris Road to Station Street to respond to the surrounding land uses. It will serve major uses both north and south of it's alignment. This provides for heavy vehicle movements to the civic function, Discount Department Stores and Mini Majors.
- **East Road** provides a direct entry to the Town Centre from the east. It will have a tree lined median and pedestrian paths on each side.
- **Ferris Road** is the main boulevard entrance with the Town Centre. It features 4 lanes of traffic separated by a large median to allow the significant tree planting to reinforce its role. Footpaths are provided on both sides to ensure connection between each precinct within the Town Centre. Service roads may be required to provide access to developments off Ferris Road dependant on land use and access requirements.
- **Bridge Road** plays an important role in providing east-west connection through Toolern and into the Town Centre. Bridge Road lines the southern boundary of Toolern Central and will have four lanes of traffic separated by a large median to allow the significant tree planting to reinforce its role.
- Various other connections from the surrounding major roads will be required for various reasons, including access to the Civic Precinct on the north east corner of the Bridge Road and Ferris Road intersection. These are likely to be left in-left out connections only.

Cross Sections for the roads above are provided on pages 19-21.

Pedestrian Movement Zones

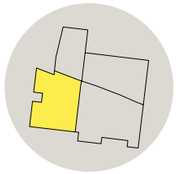
Pedestrian movement within Toolern Central will be primarily focused east-west along Main Street, and north-south on Station Street. In addition, laneway connections will form an important alternative to vehicular streets. These laneways have been created to link the heart of Main Street Central to the Transit Square and should be provided informally within the blocks containing the civic uses, convenience areas and the comparison shopping areas.

There is a likelihood of a series of movements around particular destination zones particularly in the section of Main Street which accommodates the comparison and entertainment destinations. These will create short trips and a series of connected clusters of movement within a street, rather than a consistent pattern and intensity. As a result, the access points from the primary car park zones have been distributed to ensure the greatest spread of pedestrian movement and street activity (Refer to Figure 4).

Cycle routes are to be provided by cycle paths to the Centre and by cycle lanes within streets in the centre. However, no cycle lane will be created within Main Street Central, where cyclists will be encouraged to dismount and walk through this section of the street. This will minimise conflict between parallel parking manoeuvres and cyclists, and cyclists and pedestrians.

MOVEMENT AND ACCESS

Figure 5 Primary Pedestrian and Cycling Movement



TOOLERN WEST

The intended layout of Toolern West quadrant identifies specific entry points for both vehicles and pedestrians/cyclists and locates major activities to generate movement throughout the development area.

Entry Points

Toolern West has two major entry points, at Ferris Road to the east and Bridge Road to the south. These two entries are the eastern and southern extremities of "High Street" which weaves through the quadrant and incorporates the oval and connects to Toolern Central. The Ferris Road entrance is celebrated by the creation of two hard and soft landscaped forecourts; one for the Performing Arts Centre and one for the Indoor Sports Centre. These buildings not only act as recognisable portals to the quadrant, but also alert visitors travelling on Ferris Road that they have entered the Town Centre. The forecourts will encourage entry for vehicular, pedestrian and cycle traffic to the quadrant from Ferris Road and from the activity within Toolern Central to the east.

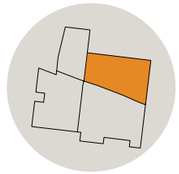
The second entry at Bridge Road, is the location for a small convenience centre. This intersection will be celebrated by the construction of small community and retail buildings on each side of High Street, and this conjunction of buildings will also present as portals for vehicular, pedestrian and cycle traffic.

To the western boundary of the quadrant, a number of smaller entries are provided which provide permeability between the higher density residential precinct within Toolern West and the more conventional residential subdivisions further west. A number of these incorporate landscape treatments and spaces to signal the existence of the boundary and transition function.

Movement Hierarchy and Pedestrian Zones

High Street will function as the dominant ordering corridor within the quadrant, connecting the public functions on the eastern and southern boundary to the higher density residential enclave in the north western precinct of the quadrant. This street will provide for both vehicular and pedestrian movement within the quadrant. Residential streets will be clearly pedestrian friendly to provide safe and pleasant walking environments from within the residential area to the convenience and sports/arts activity centres.

The potential need for future bus routes to extend west from Toolern West into the adjacent residential area will be cosidered as part of subdivision design (and local street cross sections will be planned accordingly).



TOOLERN NORTH

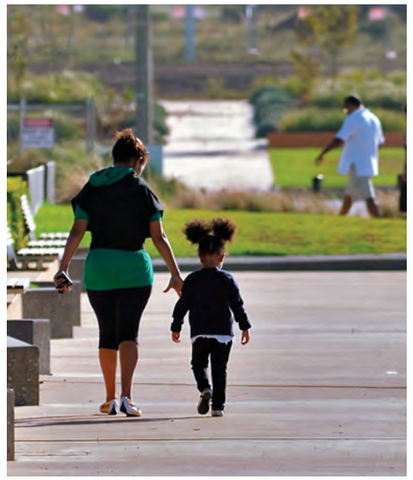
Entry Points

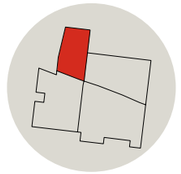
Toolern North has been provided with two major entry points at each end of the North Road corridor. The westernmost entry will be marked by the placement of signal buildings on the Ferris Road intersection. The easternmost entry will be similarly signified with larger built forms within the Health and Medical precinct and the mixed use sector to the south east. Both of these entry points are for vehicles and pedestrians but the eastern most entry is subject to the design and construction of a grade separated crossing at East Road and the railway line.

Movement Hierarchy and Pedestrian Zones

Movement on North Road will be predominantly vehicular in nature and when fully developed, will provide vehicular linkages to both the Western Highway to the north and the Town Centre to the south. Pedestrian movement patterns will be strongest within the north-south axis of Station Street which will carry low speed vehicular movements to the long term parking stations and service vehicles to the shops in Transit Plaza North. A network of pedestrian laneways will be provided within the higher density residential component of the eastern sector populated with small domestic parks which will enliven the walk from residential areas to Transit Plaza, or further to the activity within Toolern central quadrant.

Bus movements through this quadrant will be subject to further discussion at the subdivision stage.





TOOLERN NORTH WEST

Entry Points

Entry into the North West quadrant will be provided via Ferris or Abey Roads. The entrance location into this quadrant is governed by the requirements for the grade separation.

Movement Hierarchy and Pedestrian Zones

The function of this quadrant as bulky goods/ light industrial renders it a predominantly vehicle accessed quadrant. Key pedestrian areas will be provided as designated parks as part of the car park areas and along road frontages.

The green corridor on the southern edge of the quadrant is key to pedestrian and cyclist access, to the Train Station and core retail areas, for residents to the west.

Legend

- TOOLERN TOWN CENTRE
- KEY RAIL CROSSING POINT
- KEY OFF ROAD LINK
- KEY OPEN SPACE NODE
- REGIONAL OPEN SPACE
- OPEN SPACE
- COMMUNITY HUB
- ACTIVITY CENTRE
- EDUCATION FACILITY
- RAILWAY LINE & CORRIDOR
- RAILWAY STATION
- CREEK
- MELTON TOWNSHIP

Figure 6 Regional Connections (organising elements)

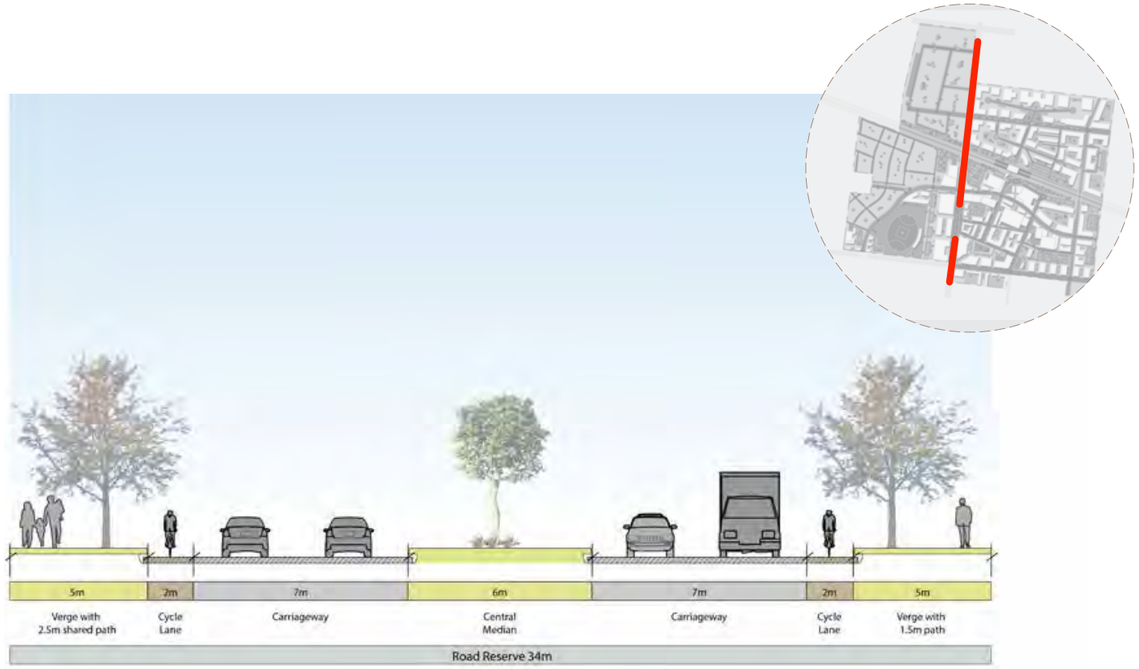


Figure 7 Ferris Road Street Cross Section 34m

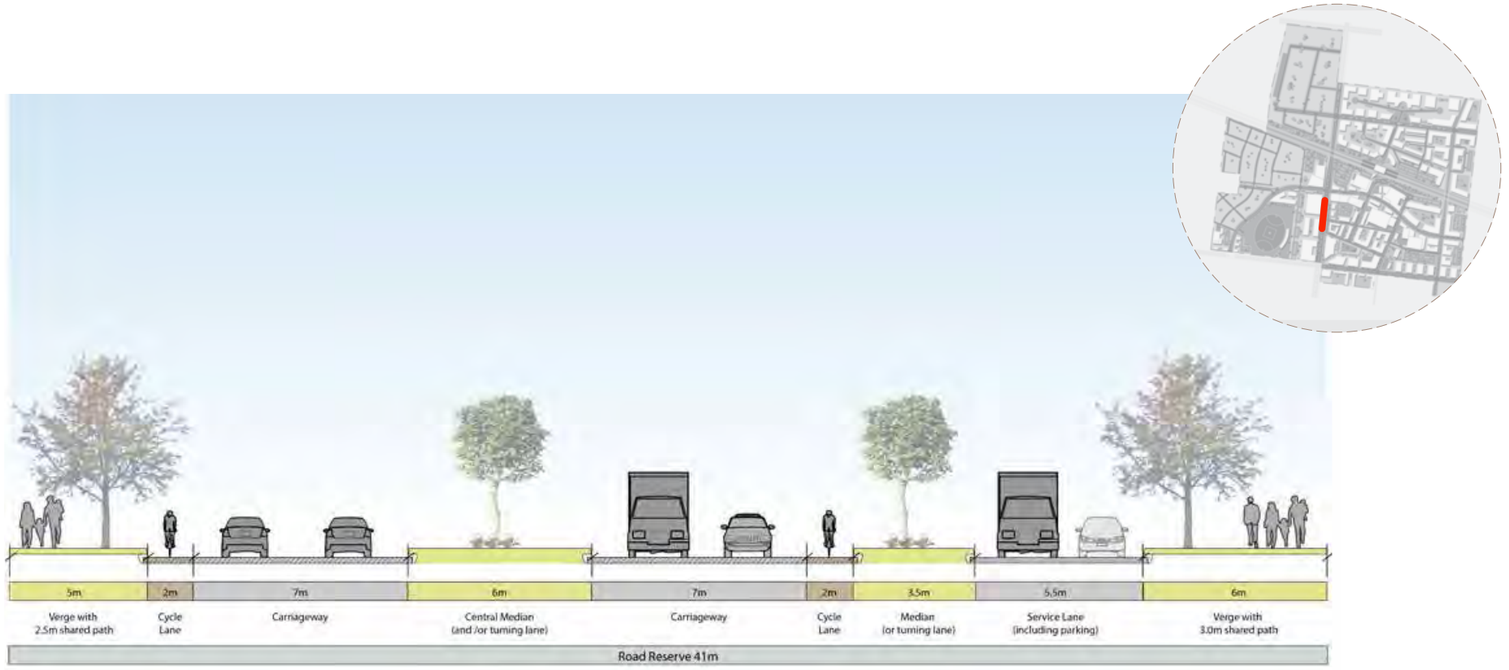


Figure 8 Ferris Road (with service lane) Cross Section 41m

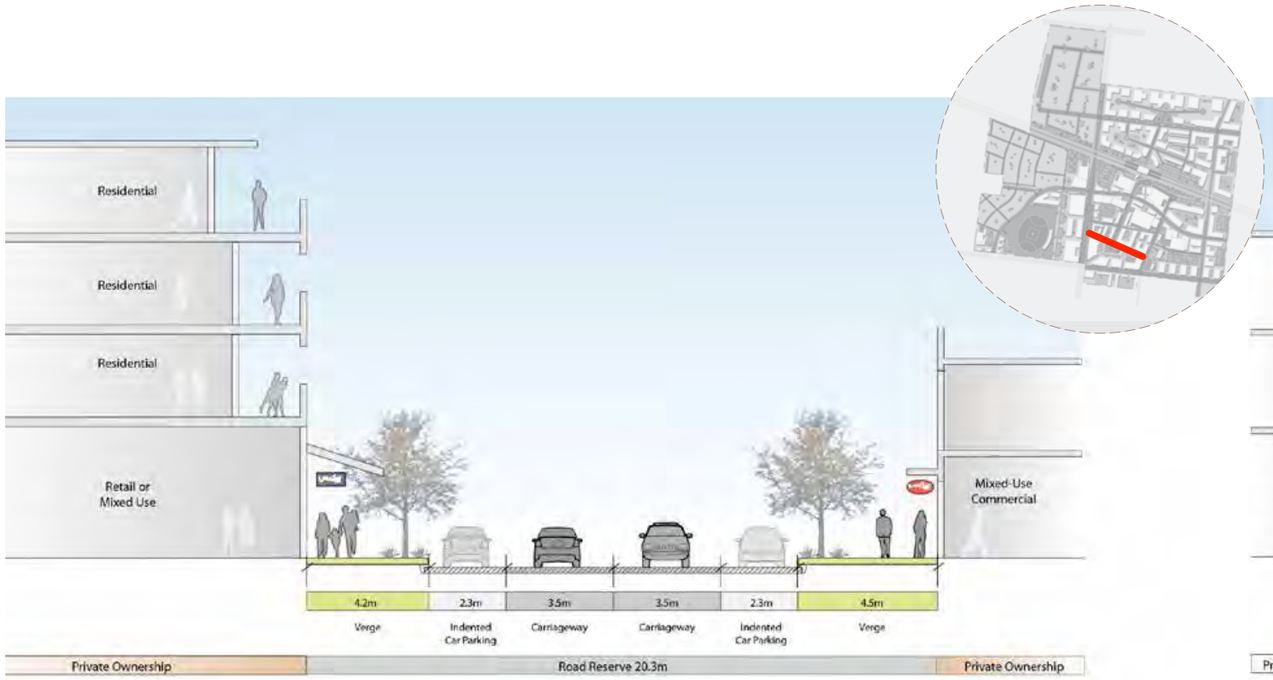


Figure 9 Civic Street Cross Section 20.3

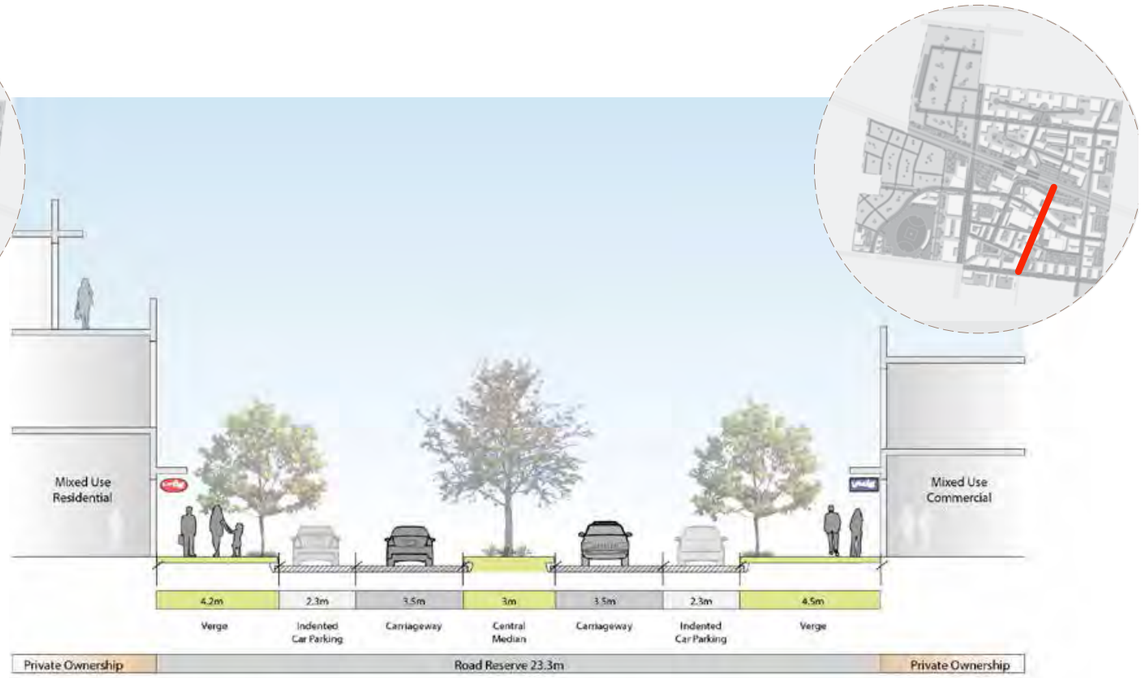


Figure 10 Transit Street Cross Section 23.3m

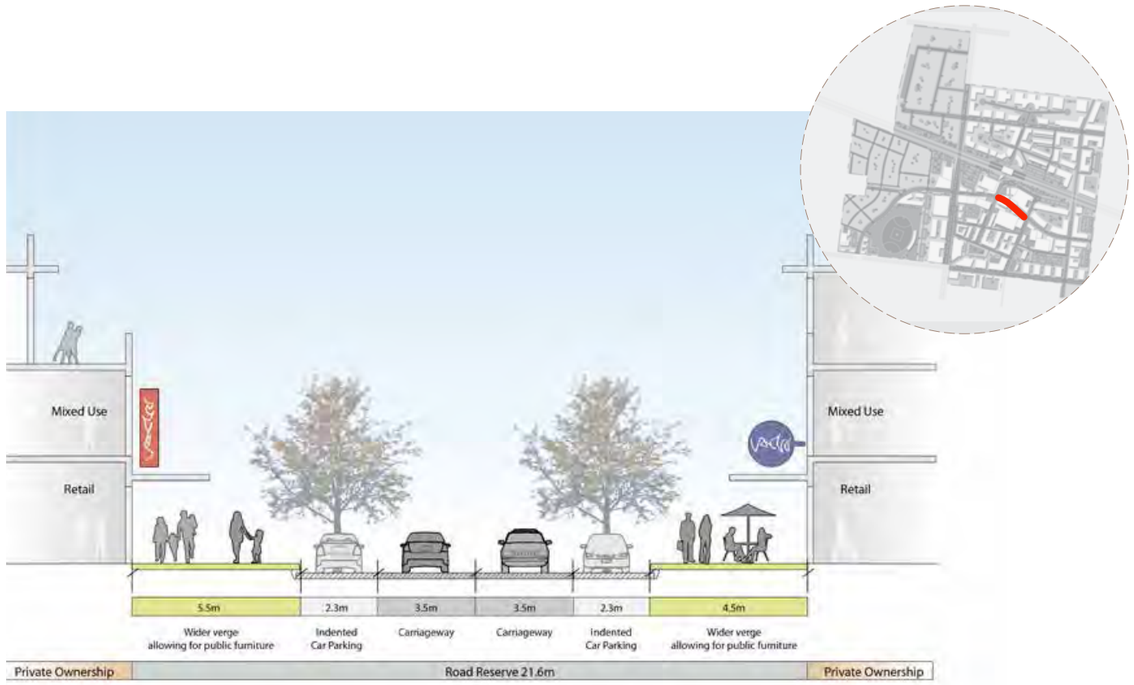


Figure 11 Main Street Central Cross Section 21.6m

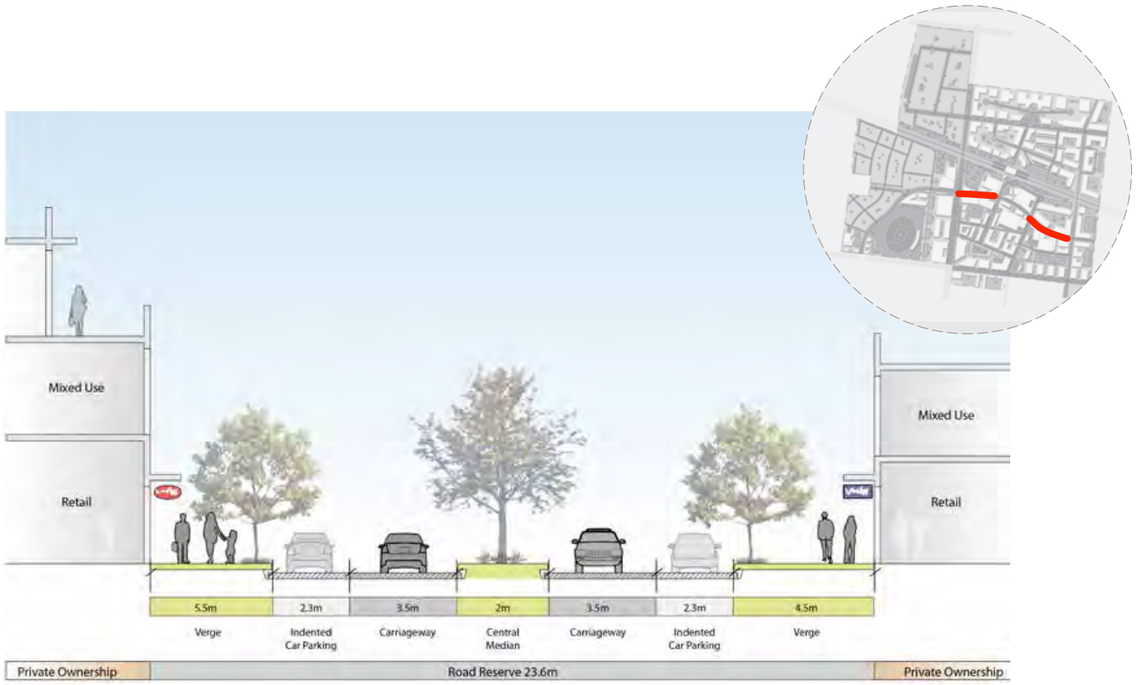


Figure 12 Main Street East and West Cross Section 23.6m

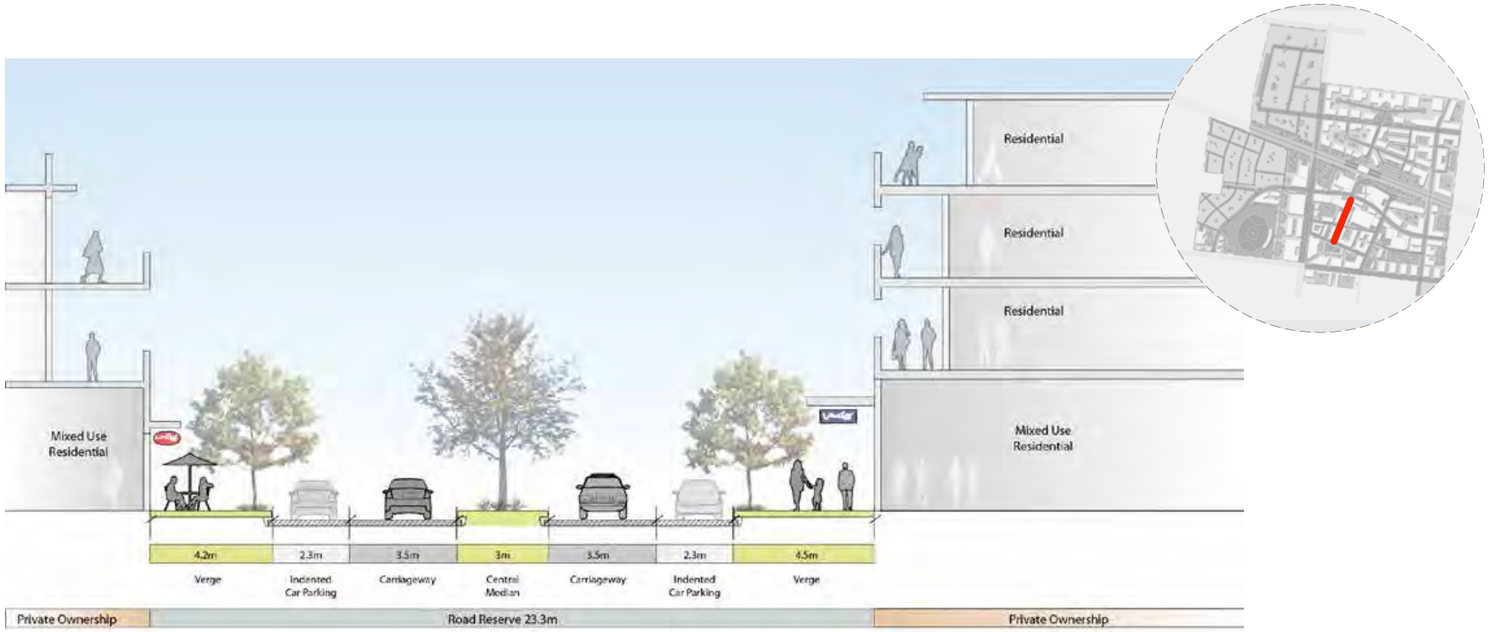


Figure 13 Station Street Cross Section 23.3m

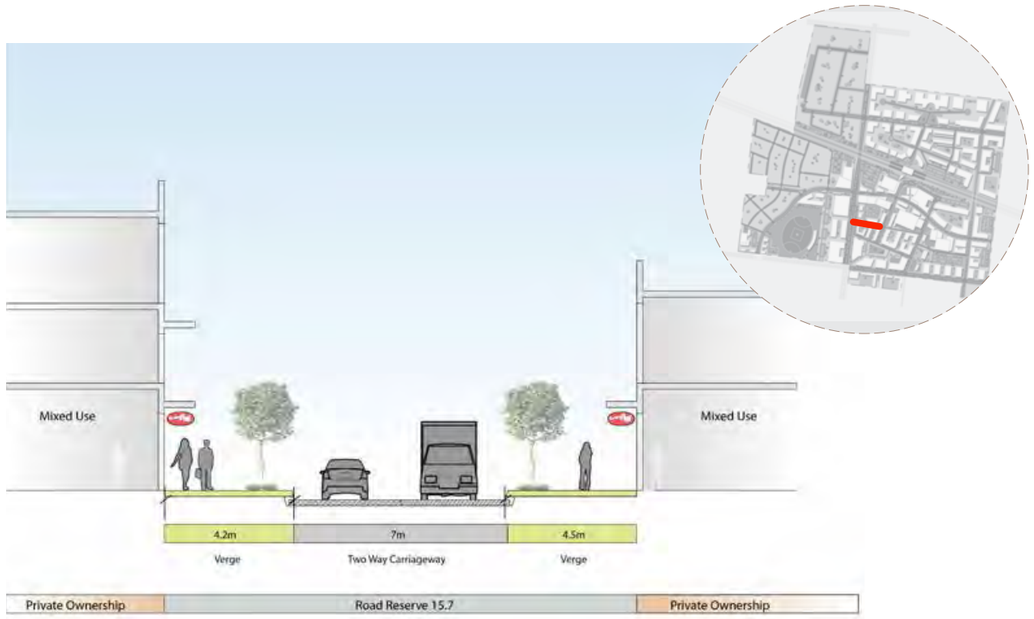


Figure 14 Service Lane (Ferris to Station Street) Cross Section 15.7m

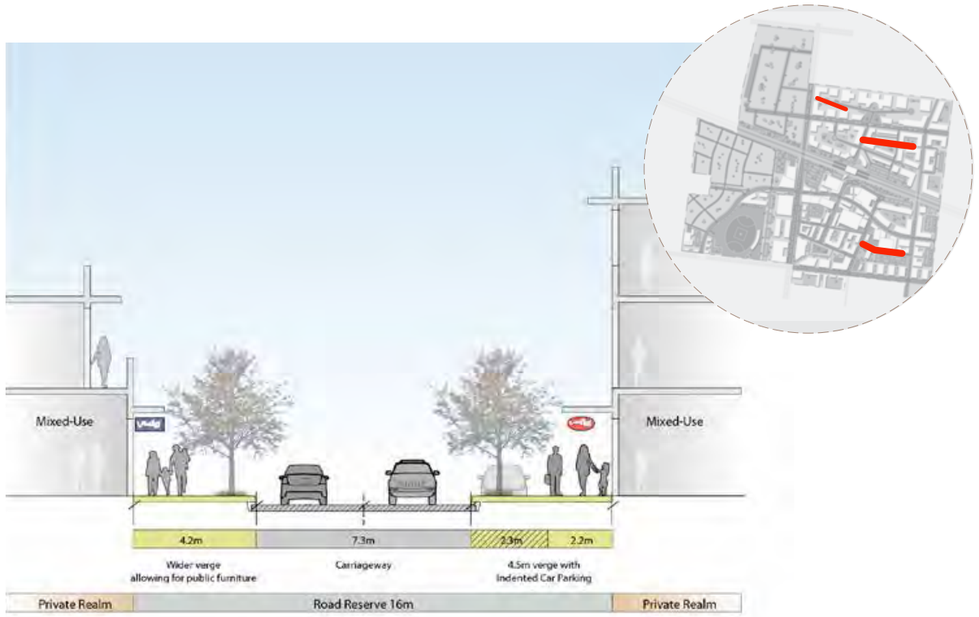


Figure 15 Secondary Access Street Cross Section 16m

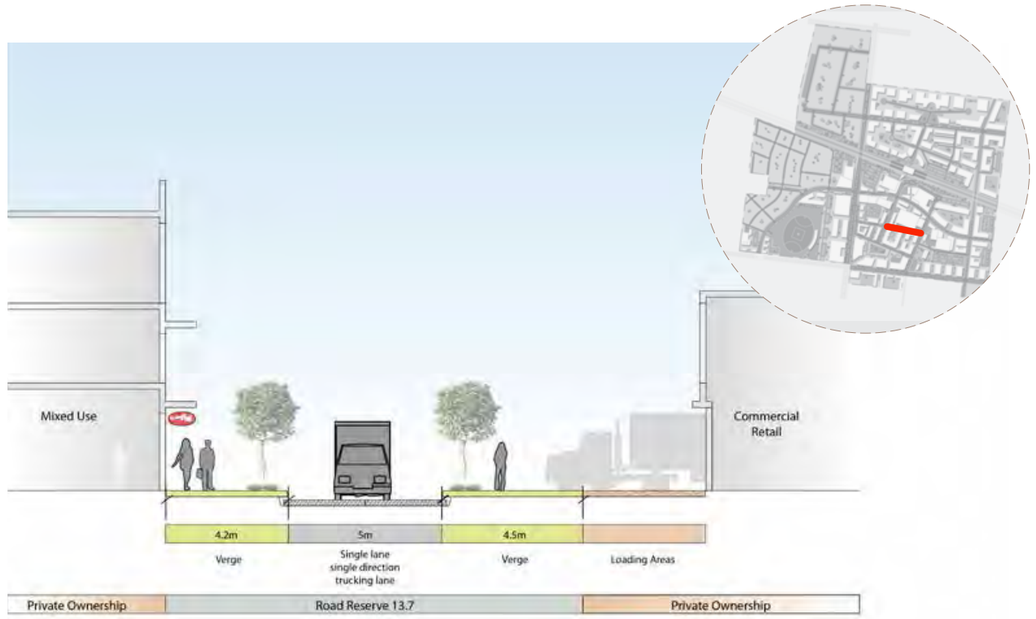
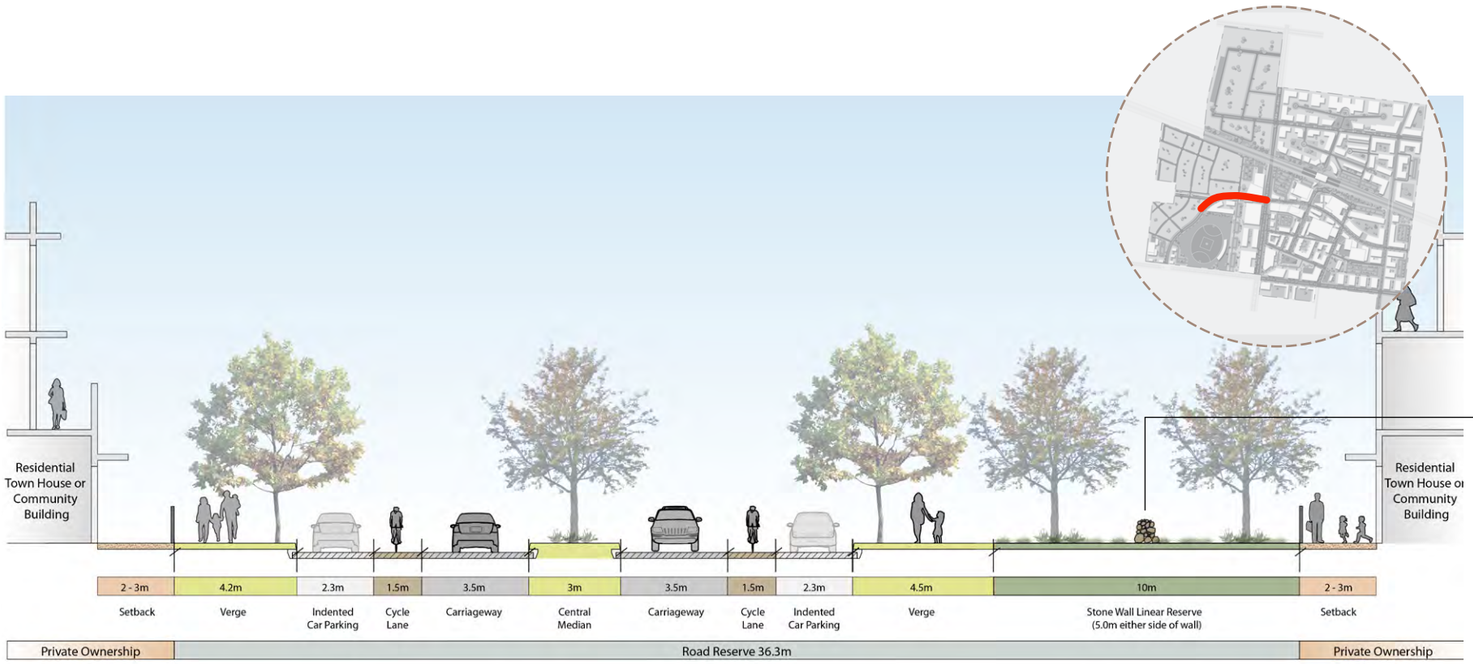


Figure 16 Service Lane (Station Street to Transit Street) Cross Section 13.7m



Further investigations to be undertaken by Melton Shire Council will determine the exact location of the dry stone walls

Figure 17 Hight Street Cross Section (Ferris Road to Town Oval) 30.3m

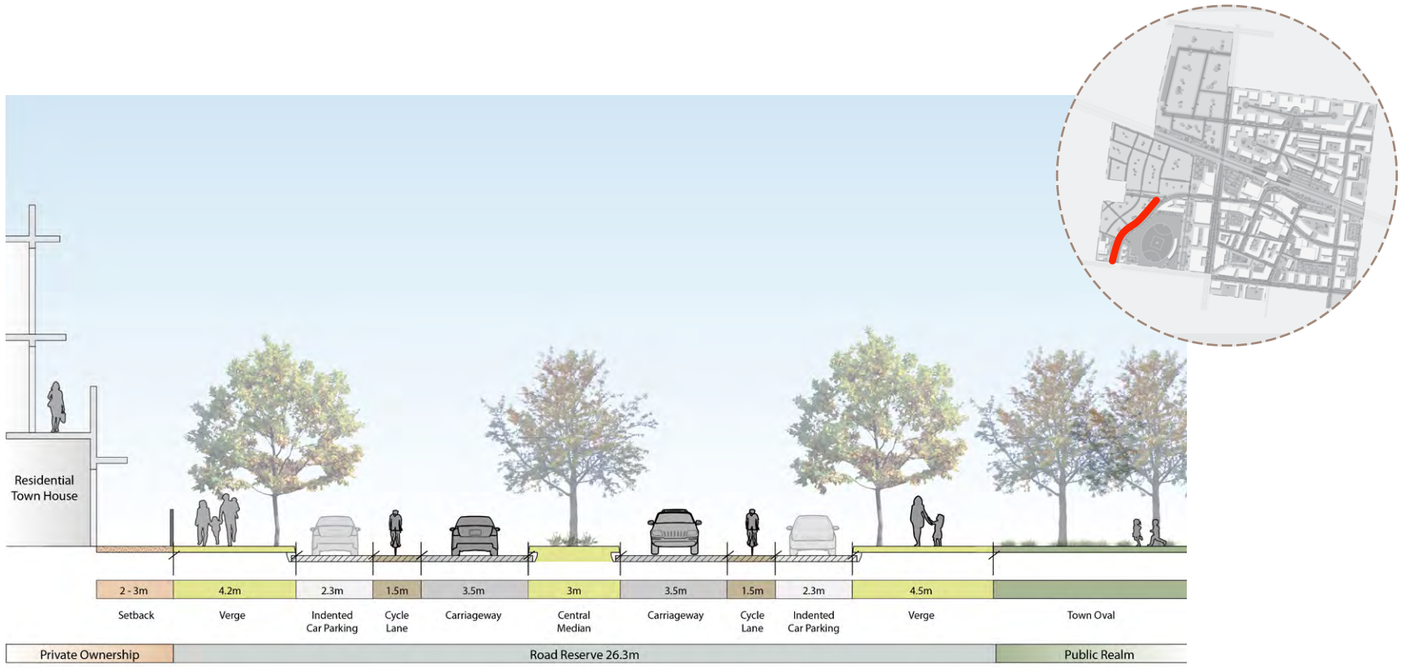


Figure 18 High Street Cross Section (Town Oval to Bridge Road) 26.3m

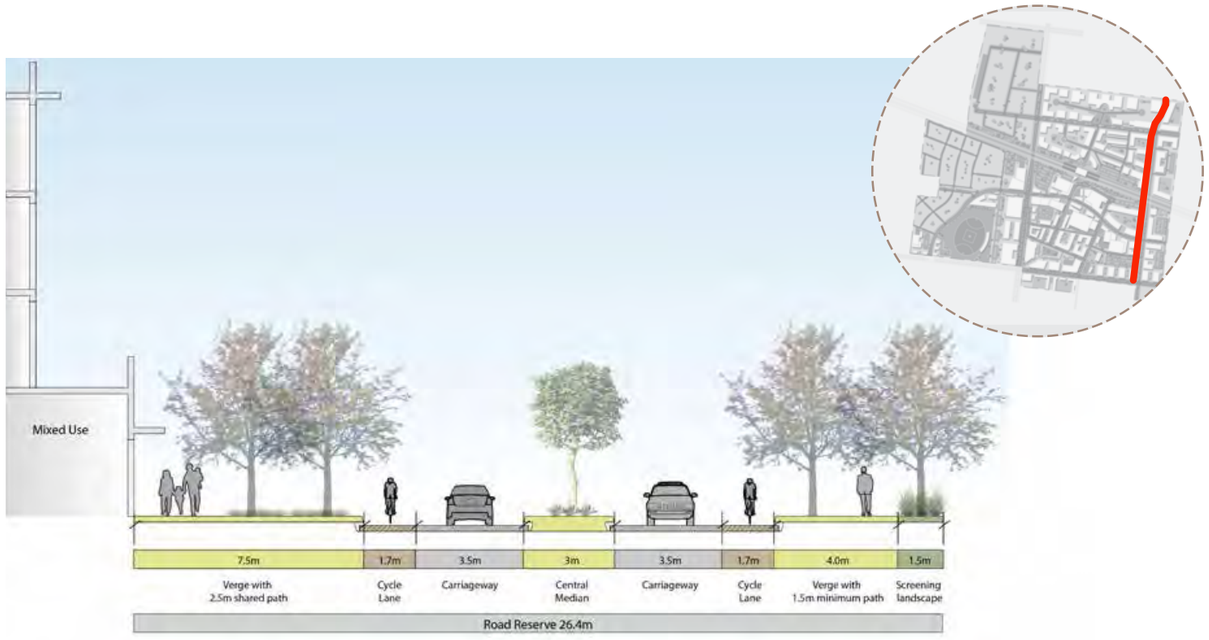


Figure 19 East Road Cross Section 26.4m

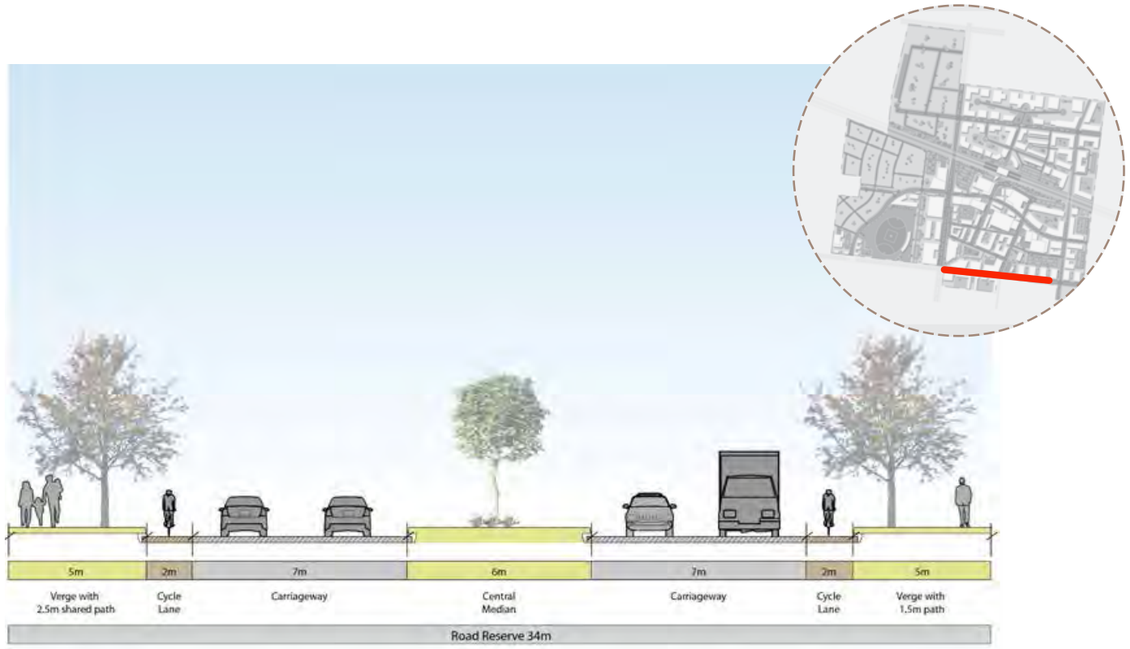


Figure 20 Bridge Road Cross Section 34m

2.2 Public Transport

LEGEND

- TRAIN STATION
- BUS INTERCHANGE
- 400M TRAIN STATION CATCHMENT
- SHARED USE COMMUTER CAR PARK (basement)
- COMMUTER CAR PARK (at grade)
- POTENTIAL BUS STOP - To be determined by DOT
- POTENTIAL MAJOR BUS ROUTE
- PROPOSED KISS & RIDE / TAXI BAYS
- GREEN CORRIDOR
- PUBLIC SPACE
- ADJOINING OPEN SPACE
- CYCLING MOVEMENT

Note: PTV will explore opportunites for additional interim commuter car parking south of the rail line, prior to construction of commuter car parking to the north.

Figure 21 Public Transport

The long term success of the Toolern Town Centre is the development of the Toolern Train Station, as the catalyst for attracting future public and private investment, new commercial and employment opportunities as well higher order education and health facilities in the long term. The public transport strategy for the Toolern Town Centre establishes a transport interchange at the core of the centre which provides for a staged delivery of services as the Town Centre grows including:

- Provision of a bus interchange and taxi zone in the short term. The bus interchange is located adjacent to the future station to assist in establishing travel patterns and behaviours.
- Early delivery of bus services to the site via Ferris Road for the first stages.
- Establishment of designated bus routes which provide more direct service to the train station in the medium to long term via Bridge Road and Transit Street.
- A dedicated 'kiss & ride' zone and commuter car parking.
- Pedestrian underpass and connections to integrate with the the Toolern Train Station.
- Staging of commuter car parking in line with the growth of the Town Centre to allow the core of the centre to be a people-based place in the fullness of time.

The key Public Transport elements within the Toolern Town Centre are:

Railway Station

The Railway Station will be located on the axis of Station Street. Ultimately, a public pedestrian underpass will connect Toolern North and Toolern Central quadrants. This wide public laneway underpass will be an extension of the Transit Plaza and will provide direct access to the Station facilities including the two platforms required for Metro or VLine functions. The underpass is intended to be lined with small shops, kiosks and public facilities. Access to the platforms will be via both ramps and lifts.

The surrounding streets and land uses have been located to activate streets and maximise sightlines to the train station.

Bus Interchange

The bus interchange is located directly adjacent to the rail corridor and Transit Plaza. The public concourse is positioned to the north of the bus station to ensure direct and safe pedestrian access between bus and train stations. Buses will gain access to the bus interchange from Bridge Road via Transit Street.

The bus interchange is laid out in a "dumbbell" formation with two way movement possible east-west for buses, with roundabouts at each end. This allows all buses to deliver or pick up passengers from the northern concourse irrespective of the inbound or outbound route required. The concourse will be covered by a high bay canopy to provide weather protection for passengers between the bus to train stations. Small kiosks, vending machines, part enclosed waiting booths and ticketing machines will be located beneath the canopy.

Taxi Rank, Kiss & Ride and Commuter Car parking

Within the Transit Plaza section of Station Street, sawtooth and parallel parking bays provide a convenient and highly visible location for taxi and kiss and ride functions.

Commuter parking will include canopy trees to provide shade and soften car park edges while retaining passive surveillance to the area.

See Figure 18

Train Station example

View From Train Station Looking Toward Urban Lane (Across Bus Interchange).

2.3 Public Realm

LEGEND

- TRAIN STATION
- BUS INTERCHANGE

SQUARES

- A TRANSIT PLAZA (South)
- B TRANSIT PLAZA (North)
- C CIVIC PIAZZA
- D VILLAGE HUB

GREEN PARKS / SQUARES

- E MARKET SQUARE
- F CIVIC GREEN
- G DISTRICT SPORTS
- H NORTHERN PLAZA

STREETSCAPES & LANEWAYS

- I MAIN STREET
- MAIN STREET ZONE (Approx 100m Wide)
- J STATION STREET
- K HIGH STREET
- URBAN LANE
- GREEN CORRIDOR

- SUPPORTING OPEN SPACE NETWORK (private ownership with public access)
- ADJOINING OPEN SPACE
- KEY PUBLIC ART OPPORTUNITY / CIVIC FEATURE
- STONE WALL RESERVE

NOTE: *Further investigations to be undertaken by Melton Shire Council will determine the exact location and significance of the dry stone walls*

Figure 22 Designated Public Squares and Green Parks

The public realm is a critical element within the Toolern Town Centre design and reinforces the framework for the location of retail, civic, commercial and transport uses. The design of the public realm is based on a series of principles intended to provide a safe, lively and interesting environment. The design principles for the public realm are closely related to movement, use and built form strategies to complement and emphasise the overall intent for the centre in its various quadrants. The design and performance objectives include:

- **Conservation** – design should incorporate existing features such as dry stone walls and remnant vegetation.
- **Function** – the design of public spaces should meet specific functional needs for particular locations or precincts including visual screening, regular public uses, special uses or events, sport and recreation or transport related uses.
- **Amenity** – the design of public spaces and landscape systems should provide a high standard of visual amenity and environmental protection within the Toolern Town Centre which will encourage pedestrian activity and use of public places.
- **Identity** – the design of public spaces and landscape systems should establish a place specific character and identity for the town centre as well as respond to their function within each precinct. Design features such as street tree systems, town entry features, view points and the individual design treatment of public spaces should be incorporated.
- **Environment** – the design of the town centre, public space network and landscape system should recognise and respond to the natural environment including delivery of water sensitive urban design systems and other environmentally sustainable design standards.
- **Quality** - The design of space, selection of materials, artefacts, furniture, and lighting should all be of a high visual and construction quality to ensure a long life and perceptions of a high quality place.

The public spaces within the Town Centre are based on a hierarchy of spaces that integrate the Town Centre with the surrounding open space systems. The hierarchy is ordered around the transit 'hub' with the most compact and urban places located in the core areas, with public spaces outside of the core typically increasing in size with a softer, 'green' quality.

There are 4 key elements of the Public Realm within the Toolern Town Centre as follows:

1. Designated Public Squares / Piazzas

2. Designated Green Parks and Green Squares

3. Streetscapes and Laneways

4. Supporting open space network

1. DESIGNATED PUBLIC SQUARES

Four public squares have been identified within the Town Centre, which have different functions, as follows:

Transit Plaza (South) (A)

The train station, bus interchange and kiss & ride form an integrated transport hub focussed around a public plaza. The Plaza lies on the alignment of Station Street and forms an important part of the pedestrian and civic axis which terminates at its southern end at the Civic Green and at its northern end at the Health and Medical forecourt (Northern Plaza). The Transit Plaza will be a shallow bowl of space to provide a place to wait and meet. It will form an open and welcoming space with a direct connection to the Toolern North quadrant.

The plaza area includes comfortable, active, safe and weather protected waiting areas with ramped access and view lines to the train station, bus bays, and real-time travel information.

Transit Plaza (North) (B)

Transit Plaza (north) will have a similar role to the Transit Plaza (south) in the early stages of development. It may include a local bus stop and kiss and ride/ taxi areas. The Plaza will be surrounded by shop front uses or incorporate kiosk forms which accommodate active uses such as retail or food and beverage outlets.

Civic Piazza (C)

The 'civic piazza' will be a vibrant, attractive and lively place to be particularly during the day, and on weekends. The piazza is deliberately located in front of the public Library, adjacent to the Council Offices and framed by complementary ground floor uses such as cafes and shops. Its location adjacent to the Library/civic uses clearly brands the space as one of civic character. The piazza is also located on the most important intersection in the Town Centre at the crossing point of Station Street and Main Street.

The Civic Piazza will be a clear destination point within the Town Centre. Orientation elements such as landmark buildings, structures and the use of water within this space will assist visitors to the Town Centre in navigating their way to this central meeting place. Clues and cues within the streetscape and other public spaces within the Town Centre will direct people into this space as an important meeting place.

The Civic Piazza is located in a position which will facilitate early delivery of this space in conjunction with early retail and transport delivery. A level of flexibility is required to ensure that the design and amenity of this space grows as the surrounding development occurs.

Transit Plaza - Safe Waiting Areas.

Transit Plaza - Inclusive Spaces.

Civic Piazza - Elements Assist Wayfinding.

Civic Piazza - Landmark Buildings.

Figure 23 Kiss & Ride & Market Square Section

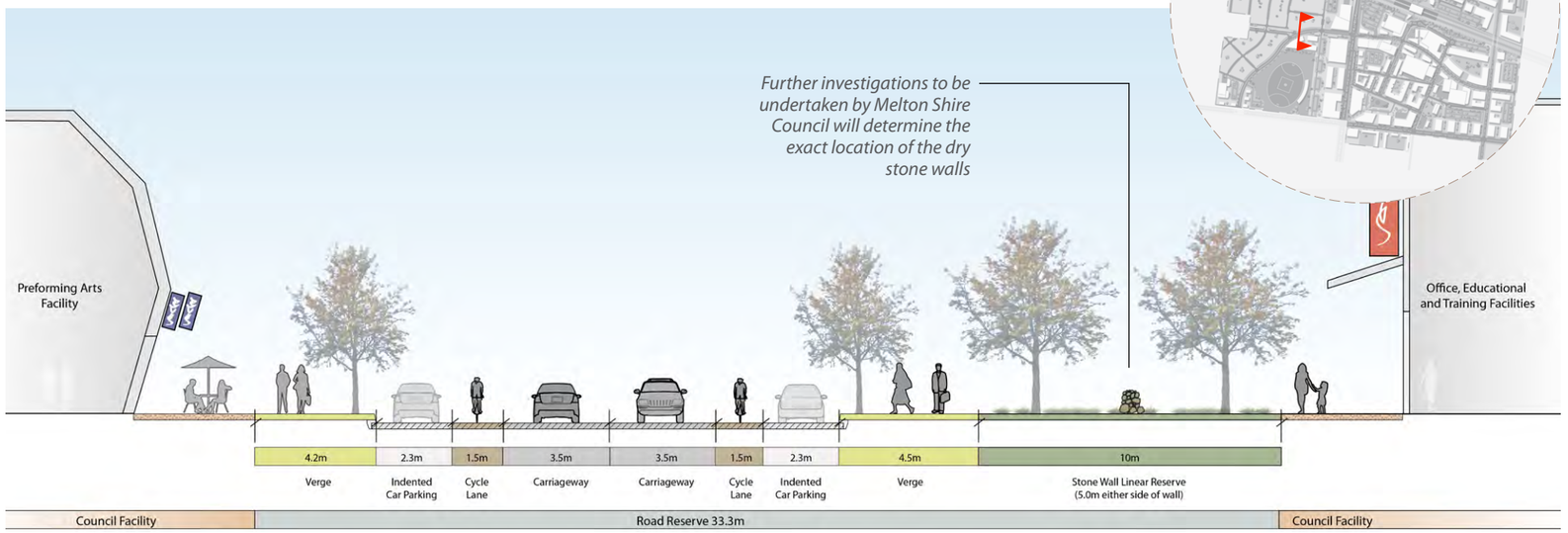


Figure 24 High Street Community Facilities Section 25m

Village Hub (D)

The Village Hub is an urban space in the heart of the Main Street supported by the energy and pedestrian foot traffic generated by the comparison retail destination including the DDS, Mini Majors and a wide range of specialty fashion, accessory and homeware shops.

The Village Hub is the key node in the central section of Main Street and is the logical position for a number of coffee shops and restaurants. In addition, the square will be suitable for farmers / community markets and street festivals. The Village Hub will be populated by both conventional shops and "pop up" kiosks to allow for constant change and adaption. It will be provided with power, water and sewer connections to ease this changing function.

An urban hardscaped space, the Village Hub will be planted out with appropraite exotic tree species and mass planting in contained planters. Lighting will be carried by catenary cables to increase flexibility in the use and layout of the space. The southern face of the space will be defined by a taller built form than elsewhere in the Centre, and will be populated by office and professional suites at upper levels to generate activity and interest and assist in the creation of passive surveillance.

Village Hub - Restaurants.

2. DESIGNATED GREEN PARKS AND GREEN SQUARES

The open space strategy for the Town Centre includes the creation of a network of open spaces within its heart. The designated Green Parks will be generally soft landscaped spaces and will offer relief from the activity of Main Street, and a place to have lunch, meet friends or simply enjoy a softer, shady, green environment as a contrast to the urban spaces and activities which abut them.

These Green Parks are a combination of public spaces (such as the Market Square and Civic Green) or smaller, privately owned spaces which provide visual access from the public realm and separate uses and street functions.

Four designated green parks have been provided within the Town Centre, which have different functions, as follows:

Market Square (E)

The Market Square lies on the eastern side of Station Street adjacent to Main Street and the Transit Plaza. It will have an area of approximately 1000sqm with a mixture of formal and informal landscape treatments depending on its interface. Its western edge will provide a 40m frontage to Station Street and will balance the hardscaped character of the Town Square on the south west corner of the Station Street and Main Street intersection. It's southern and eastern edges abut restaurant and coffee shop tenancies which will take advantage of the green environment it provides, while its northern edge interfaces with the Transit Plaza, offering arriving and departing travellers a welcome glimpse of a botanical garden.

The Market Square will be designed with a number of uses in mind and may be used as a meeting space, a dining space, a performance space, a market space, a people watching space, a waiting space and a destination space within the Toolern Town Centre. It will include spaces for public art, and or including water features.

Civic Green (F)

The Civic Green is a larger urban space within the Town Centre which provides a landscaped forecourt to the civic functions on the north east corner of the Bridge and Ferris Road intersection. The Civic Green also functions as the termination of the Station Street axis as well as providing a link to the Bridge and Ferris Road intersection. It is surrounded by built forms of substantial height on the south and south west and of lesser scale to the north to allow solar exposure. This space will include suitable locations for civic art and areas capable of catering for medium sized public events or markets.

The landscape will capture the sense of civic pride exhibited by the built form and uses in this precinct. Where necessary paved areas will link to the surrounding building entries and pedestrian path system. The landscape is largely based on soft green surfaces with trees providing most of the shade. Water elements are incorporated visually and in children's play area throughout the space. An urban botanic garden with lawns and flowering plants of both exotic and local indigenous provenance will complement the form of a formal urban and hardscaped space as it abuts the buildings to the south. This portion of the garden will be defined by a formal driveway giving access to car parking beneath the Justice buildings.

The Civic Green includes a key connection through to the park and linear open space to the south-west (residential community, Toolern Creek & Toolern Regional Park).

Sports Ovals (G)

An oval and associated infrastructure, indoor sports centre and public park facilities are located in Toolern West which include passive recreational uses in an integrated open space precinct. Areas of this precinct will be dedicated to formal sports activities including pavilions and change rooms, grandstands. Other areas will be less formalised and include children's playground facilities, shaded tree areas, seating and picnic facilities. There is potential for this area to also incorporate small water management and capture elements such as filtration swales and underground tanks.

Northern Plaza (H)

The Northern Plaza is located at the northern termination of the Station Street axes through the centre. It is the key public space in Toolern North and acts as a public node on North Road and Station Street for activity, seating, and passive recreation. It is fronted by activated uses within the health and medical precinct, and acts as a 'break-out' space for these and other allied tertiary uses in the Toolern North quadrant.

The Northern Plaza incorporates a dedicated green, shaded landscape space for sheltered seating, with surrounding paved areas for pedestrian movement. Tree planting highlights the direct view line south to the train station. This will also provide vehicular access to the internal network supporting the anticipated campus layout of the precinct (Toolern North).

Market Square - Informal landscape.

Market Square - Edges with restaurants.

Civic Green/Market Square - Events spaces.

Civic Green - Locations for civic art.

District Sports Ovals.

Northern Plaza -'Green' places to rest

PUBLIC REALM

Figure 25 Green Corridor & Bus Interchange section

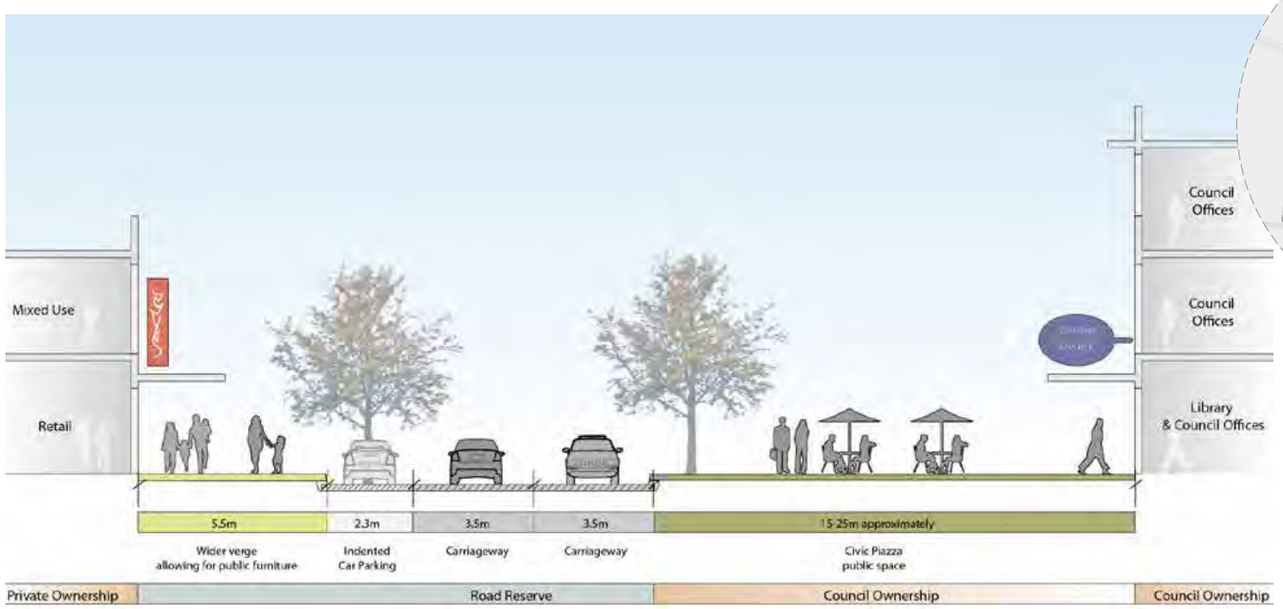


Figure 26 Main Street & Civic Piazza Section

Main Street

Main Street looking west

Figure 27 Masterplan - Priority Tree Lined Pedestrian Streets

3. STREETSCAPES AND LANEWAYS

The streets and public spaces of the Toolern Town Centre are at the very heart of what will make the Centre successful. The vision for the centre is a place of thriving and varied street-level activity, with all of the experiences of the Centre focussed on street-based retail and Main Street character. Internalised malls and retail hidden from view of the street has been minimised to ensure a mixture of activity, uses and experiences on all of the streets of the centre.

The core of Toolern Town Centre is a pedestrian priority zone, where people mingle safely with vehicles and bicycles at low speeds, and contiguous footpaths are well connected across Main Street, Station Street, and Civic Street as well as connecting into the public squares and parks.

Streets and laneways incorporate a number of different and varied uses for all ages and at all hours to ensure a diverse public realm experience. These will include shopping, seating spaces, public art, transit connections, gathering and meeting spaces, vehicle movements and parking amongst others. The local streets and lanes will support these uses with paved and covered (awning) footpath spaces, cafe dining areas, seating areas, low level landscaping and street tree verges, inset street car parking and street furniture areas. These will inform streets for Toolern which are urban in nature, reflect the character of Toolern and its vision, and are flexible enough to support a range of uses over time.

Main Street (I)

As the key shopping street of the town, Main Street will be generally lined by continuous glazed shop fronts and capped by continuous weather protection in the form of conventional street canopies. Signage and lighting to the shop fronts will enliven the street, with shops built to the footpath edge to provide a continuous active edge to the street.

The status of Main Street as the principal commercial and civic thoroughfare will be reinforced by its landscape and footpath design treatments. Tree planting will consist of a strong, consistent avenue of trees with highlight planting treatments at key locations, reinforcing the character of the place, the 'pedestrian scale' and the sense of enclosure and amenity that will characterise the Town Centre environment. View lines to the Market Square and Civic Piazza are emphasised by street tree planting.

Continuous footpaths on both sides of Main Street will integrate with raised pavement pedestrian crossings at key crossing points and at signalised intersections. Landscape treatments will enhance the whole of Main Street and help to define this street as the major civic and commercial focus of the Town Centre. Specific landscape treatments within the widened verge, will enhance the south side of Main Street as the dominant pedestrian environment with good solar access and protection from southerly winds.

Low level landscaping will be used as a site specific highlight within the Town Centre to visually identify key pedestrian settings and major pedestrian links. All planting will be selected to be robust and drought tolerant and where possible, be linked to water sensitive urban design systems that will capture and treat storm water runoff.

Street furniture will be compatible with Council standard designs and be used to support pedestrian, cyclist and retail functions within the Town Centre and transport interchange area. Key locations within Main Street will include art works or feature pieces of furniture which will personalise and support the function of key places.

Station Street (J)

Station Street will have a varied character between where offices and residential buildings dominate, to the more conventional shopping facades at the intersection with Main Street and the Transit Plaza. The southern section will have modest setbacks from the footpath alignment with landscaping (hard or soft), a mix of "closed" facades (for privacy if residential is the dominant use) and "open" facades (for office uses, a network of spaces which support these uses.

Tree lined streets emphasise pedestrian priority, providing shade and shelter for people moving around the centre reinforces the key pedestrian link to the linear park and future community to the south west.

Refer to Figure 13

High Street (K)

High Street is an important visual and functional element within the Toolern West quadrant. The road forms a boundary to the district sports oval and a major access way to the adjoining civic uses and the retail core east of Ferris Road. The design characteristics of High Street will be a feature of this precinct. The road will have a boulevard appearance with a curvilinear form and generous planted edges that blend with, and form part of, the sports reserve landscape. Cycle lanes will be included within the road reserve. The design will encourage a relaxed feel and a sense of arrival into the sports/civic areas and visually separate this area from the commercial area to the east.

Refer to Figures 17 and 18

Urban Laneways (L)

Urban laneways are secondary to the Main Street and offer an alternate experience in connecting various functions and destinations. These may vary from enclosed arcade shopping lanes such as within the supermarket sector opposite the Civic Piazza, to more open conventional lanes such as those connecting the Village Hub to the Transit Plaza (South) and the lanes parallel to Main Street within the DDS block. These may contain canopied facades, or higher level rain screen canopies across their width. They will be entirely pedestrian spaces and will provide dense and vibrant corridors of activity.

Green Corridor (M)

The green corridor running parallel with the railway line delivers cyclists/ pedestrians to the Toolern Town Centre and train station. It includes a pedestrian and cycle shared path and minor activity nodes / resting areas at key points, as well as the potential for storm water treatment areas.

The green corridor improves connections to the train station and the Town Centre and improves the impression of the rail reserve when arriving into the Town Centre by public transport. The green corridor will be delivered in stages as the development of the Town Centre progresses.

The dense vegetation provides a screen to the rail line to improve local amenity for incoming business and residential uses.

Any fencing provided between the green corridor and rail reserve will need to be of a scale and constructed of materials that are sympathetic to its context.

If the Green Corridor is constructed both east and west of Ferris Road prior to the construction of grade separation, an interim crossing of Ferris Road will need to be provided.

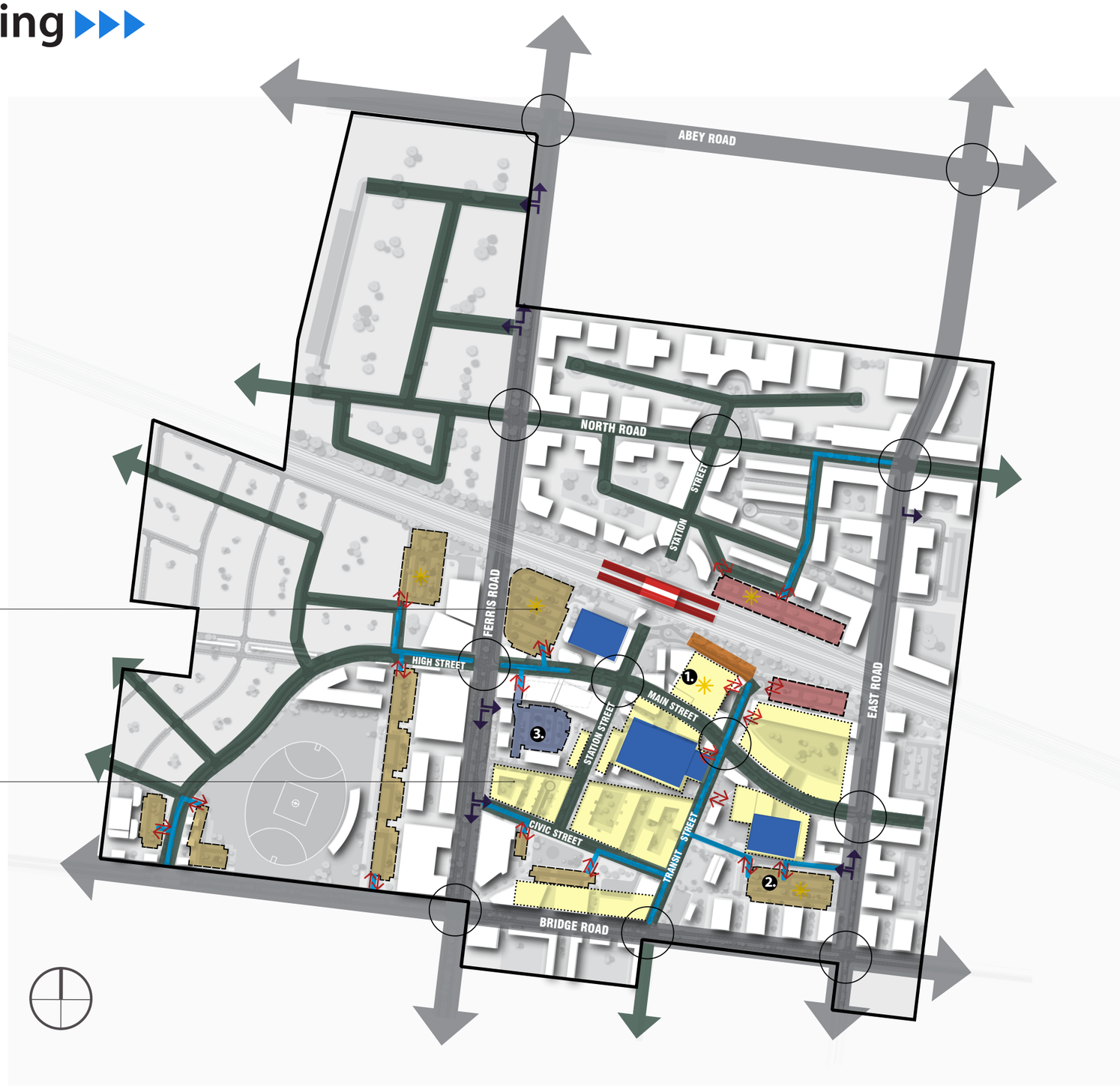
4. SUPPORTING OPEN SPACES

The open space strategy for the Toolern Town Centre is to introduce green relief to all the development quadrants and in particular to the heart of the Town Centre. This includes designated Public Squares / Piazzas, designated Green Parks / Green Squares, streetscapes and laneways, as well as a series of additional or 'supporting' open spaces along Main Street and the rail corridor.

The 'supporting' open spaces are small or medium sized and would be located away from the bustle of Main Street, but visible and easily accessible. These will be generally soft landscaped spaces and will offer relief from the activity of Main Street, and a place to have lunch, meet friends or simply enjoy a softer, shady, green environment as a contrast to the urban spaces and activities.

The 'supporting' open space networks are important spaces along Main Street to provide amenity for their particular use, terminate key view lines and provide relief within the Town Centre. These should be delivered as part of the development of the Town Centre but are likely to remain in private ownership.

2.4 Car Parking



LEGEND

- TRAIN STATION
- BUS INTERCHANGE
- HIGH ORDER RETAIL supermarket, DDS or mini major
- COMMUTER CAR PARK (at grade)
- AT GRADE CAR PARK
- DECKED CAR PARK
- BASEMENT CAR PARK
- OPPORTUNITY FOR FUTURE MULTI-LEVEL CAR PARK INTEGRATED WITH DEVELOPMENT
- ARTERIAL ROAD (no car parking)
- ON STREET PARKING
- PRIMARY VEHICLE MOVEMENT (Connections to car park from major road)
- CAR PARK VEHICLE ENTRY
- SIGNALISED INTERSECTION
- LEFT IN / LEFT OUT
- 400M TRAIN STATION CATCHMENT

INTEGRATED CAR PARKING STRATEGIES/ SHARED PROVISION

1. Basement / deck commuter car park (day time priority) shared with entertainment precinct (night time priority).
2. Provision for Bridge Road large format retail, potential overflow provision for adjoining supermarket and commuter car parking. Opportunities for future multi-level car park.
3. Opportunity for at-grade car-parks to be used for community events.

Figure 28 Car Parking

CAR PARKING

The Car Parking strategy for Toolern Town Centre has been embedded within the masterplan on a quadrant by quadrant basis in response to the differing demands of the uses and structure of each. Parking is provided as:

1. On Street Parking; parallel or angled.
2. Off Street Parking; At grade parking.
3. Basement, deck or undercroft parking.

The strategy has been developed to:

- Recognise the importance of the provision of sufficient and accessible car parking, particularly in the short term and initial stages of development, before the range of public transport uses within the Toolern Town Centre and the greater PSP area are in operation. In the first stages of development, car parking is provided in a standard format (at-grade), and is visible upon arrival at the centre.
- Allow for a range of car parking options including on street parking, off street parking behind commercial streets, at-grade, basement, multi level and undercroft car parks.
- Minimise the visual impact of necessary large scale parking provision, by sleeving these behind buildings or in visually inaccessible places, (eg using the screen generated by the grade separation of Ferris Road at the Rail corridor) or incorporating large carpark stations beneath or within buildings.
- Provide access to car parking areas from service streets and lanes to reduce congestion on Main Street. Three of the car parking areas can be directly accessed via Transit Street which connects Bridge Road with the transit zone.
- Maximise opportunities to share car parking at different times of the day noting that the peaks for commuter, retail and entertainment differ (ie basement car parking within the Entertainment complex will be vacant during daytime, so can be utilised for commuter parking at these times)
- Provide direct pedestrian access to public streets from car parking areas to generate foot traffic for retail uses and slow down traffic along the main thoroughfares. This strategy is crucial to ensure an even flow of pedestrians to the central part of Main Street from the basement carpark.
- Locate large commuter car parks on the periphery of the Toolern Central precinct so as to protect land close to the train station for high value uses such as entertainment, retail and commercial. Commuter car parks are located within 400-600m from the train station to enable commuter convenience.
- Identify options for deck parking in locations which would support multiple uses and sharing (ie Office Parks).
- Support the long term removal of at-grade car parking in order to utilise the sites for development as demand increases in the Town Centre.
- Enable consideration of provision of at grade parking in the early stages of development parcels (temporary only) providing that it does not compromise the function and amenity of the centre or future development at those sites. Council will require an agreement to be entered into before this strategy can be applied.
- Provides opportunities for additional interim commuter car parking within Toolern Central, prior to the establishment of the second commuter car park north of the rail line (in Toolern North).
- The Toolern UDF indentifies the preferred location for commuter car parking however Public Transport Victoria must purchase or lease the land required for the commuter car parking.

Figure 29 Toolern Core - Car Parking Quantities

Note: There may be opportunity for additional commuter car parking (temporary) in the early stages of the development centre. Carspaces & types may vary depending on final land use mix

CAR PARKING RATES (BY LAND USE)

Car parking within the Toolern Town Centre (and in particular within the Toolern Central quadrant) provides a mix of car parking options. The car parking locations and extent is based on providing a sharing of car parking as the town centre establishes to respond to the diversity of uses and differing car parking 'peaks'. Figure 29 indicates the approximate car parking provision for land uses within Toolern Central. It shows car parking numbers for decked, at-grade, basement, undercroft and on-street areas. The table below indicates the car parking rate applied to each land use type within the UDF. A land use budget for Toolern Central and discussion on parking rates applied within the Town Centre is provided in Section 3 of the UDF.

BUILDING TYPE	RATE PER 100 SQM
SUPERMARKET	5 / 100
SPECIALTY RETAIL	3.5 / 100
RESTRICTED RETAIL	3.5 / 100
OFFICE	3 / 100
MIXED USE	3.5 / 100
ENTERTIANMENT	3.5 / 100
CIVIC	3.5 /100
RESIDENTIAL	1.2 /UNIT
	(INC VISITOR PARK)

Ferris Road Looking North

2.5 Local Sustainability

A compact form of residential development,and a range of housing options close to services including public transport

Maximise north facing roof spaces to facilitate energy production - use large roof expanses in retail core to capture and store solar energy for reuse throughout the centre

Use rain gardens to improve stormwater quality and provide attractive landscape features

Incorporate sediment basins, wetlands and ponds in park design; treating water for release into receiving waters at pre-development flows and providing attractive landscape features

LEGEND

- TRAIN STATION
- BUS INTERCHANGE
- PUBLIC SPACE
- 400M TRAIN STATION CATCHMENT
- **INDICATIVE** STORMWATER TREATMENT SYSTEM
  May include bio retention swales, basins or rain gardens in the streets and sediment basins, in public spaces

Note: Water Management initiatives within the Town Centre to respond to the objectives and approach outlined in the Toolern Integrated Water Management Strategy.

Figure 30 Local Sustainability

LOCAL SUSTAINABILITY

The Toolern Town Centre Master Plan aims to create an environmentally sustainable and liveable place that is consistent with the objectives and principles of the Green Star Communities Framework process. The Master Plan demonstrates a number of broader development principles, with other ecologically sustainable design opportunities to be developed through the detailed site planning and facility design process for site specific development.

The Master Plan design embodies a range of ESD based design and development principles, including:

Providing for **enhanced liveability** through:

- A compact form of residential development and a range of housing options that are close to services and public transport.
- Provision of a range of co-located, high quality and easily accessible services.
- Provision of a diverse and inclusive urban environment for all ages, abilities, cultures and socio-economic backgrounds, that enable communities to meet future challenges.
- Building capacity to adapt to changing community and individual needs and expectations.

Creating opportunities for **economic prosperity** through:

- Significant and diverse employment opportunities that meet the needs of local and regional communities.
- Attracting broad scale economic investment

Fostering **environmental responsibility** and sustainability through:

- Protecting, valuing and enhancing natural and cultural heritage assets.
- Minimising greenhouse emissions, in particular by providing sustainable transport opportunities and maximising their use.
- Promoting environmentally efficient systems for water management and reuse; energy efficiency and energy generation.

Promoting **design excellence** through:

- Integrated design which maximises the relationship between public and private infrastructure.
- Creating a coherent urban structure and connectivity between places and between transport, communication, social and physical infrastructure systems.
- Maintaining flexibility in the use of public spaces and creating opportunities to adapt the design of places to temporary uses or to long term changes in community needs.
- Creating desirable places that reinforce the sense of place, community identity and local character within design.
- Reinforcing connections with the local and regional landscape and environment.
- Encouraging a high quality, integrated and safe public realm that meets the needs of all user groups.
- Providing quality built form and landscapes that are responsive to climate and context.
- Locating higher density developments and intensive uses close to public transport and services.
- Encouraging accessibility, diversity and mixed use development to meet local needs.

The Toolern Town Centre Master Plan and Melton Shire Council through its planning and development approvals process also aim to achieve a range of specific design and performance objectives, including the elements listed below. Melton Shire Council encourages all development applicants to go beyond minimum compliance in all areas. The Toolern Town Centre Master Plan incorporates the following principles:

Energy consumption minimisation

- Orientating building forms predominately to the north to maximise environmental performance in terms of passive solar gain and energy consumption.
- Maximising the potential for north facing, large expanse roof spaces in the retail core to capture and store solar energy for reuse throughout the centre.
- Development of simple access patterns and parking locations that encourage public transport use, pedestrian and cycle based movement and minimal car use.
- Development of high amenity public spaces with northern orientation and protection from southerly and westerly winds, and a public space network that encourages street based outdoor uses, minimising internal shopping spaces and limiting the need for large areas that require heating and cooling.
- Investigate potential to include green roofs and walls to help treat stormwater on private title for future re-use.

Water management & re-use

- Development of best practice Water Sensitive Urban Design through the use of permeable paving, on-site storm water retention and treatment, bio retention treatment areas and the re-use of storm water for maintenance of public landscapes.
- Water treatment and re-use systems including opportunities for 'green roof' and 'green wall' treatment (in accordance with EPA requirements) where practical to provide additional water sources for irrigation of landscapes, cleaning and toilet flushing.
- Incorporation of sedimentation basins, wetlands and ponds into park design; treating water for release into receiving waters at pre-development flows and providing attractive landscape features.

Transport efficiency

- Provision of a new transport interchange at the heart of the Toolern Town Centre. This location allows for the majority of the commercial and civic centre to be within a 400m walking distance.
- Provision of after trip bicycle facilities in all developments to encourage the uptake of cycling as a form of transport.
- Bicycle parking facilities within the public realm to ensure that active transport is promoted and marketed as an integral element of the Toolern town centre experience.
- Encouraging public transport use by providing information in the common areas detailing the available public transport in the vicinity, the frequency of services, and the linkages to the other regional networks.

Social inclusion

- Provision of an extensive public open space and recreation network to meet a variety of community needs, seasonal and special event requirements.
- Provision of appropriate local and regional community facilities.
- Mixed use urban design model that integrates residential, community, commercial and transport based uses into the town centre.
- Provision of a network of urban spaces that are flexible and adaptable to different user groups and to changing requirements over time.

Ecological & cultural heritage values

- Retain features of cultural heritage significance such as drystone walls and areas of significant vegetation.
- Landscape treatments to respond to site specific climate and soil conditions.
- Provision of a landscape network that links to regional open space systems, including the Toolern Creek system.

Capture & Store Solar Energy for Reuse.

Water Recycling.

2.6 Development Quadrants

As outlined in Section I, the Toolern Town Centre has four district devlopment quadrants. The size, role and character of these quadrants are determined by surrounding developments, exposure to rail and road axes, accessibility and availability for staged devlopment.

The development quadrants are illustrated in Figure 31 and are referred to as:

- Toolern Central
- Toolern West
- Toolern North
- Toolern North West

The following section provides a summary of the role, urban structure, built form and movement for each of these quadrants will be discussed on the following pages.

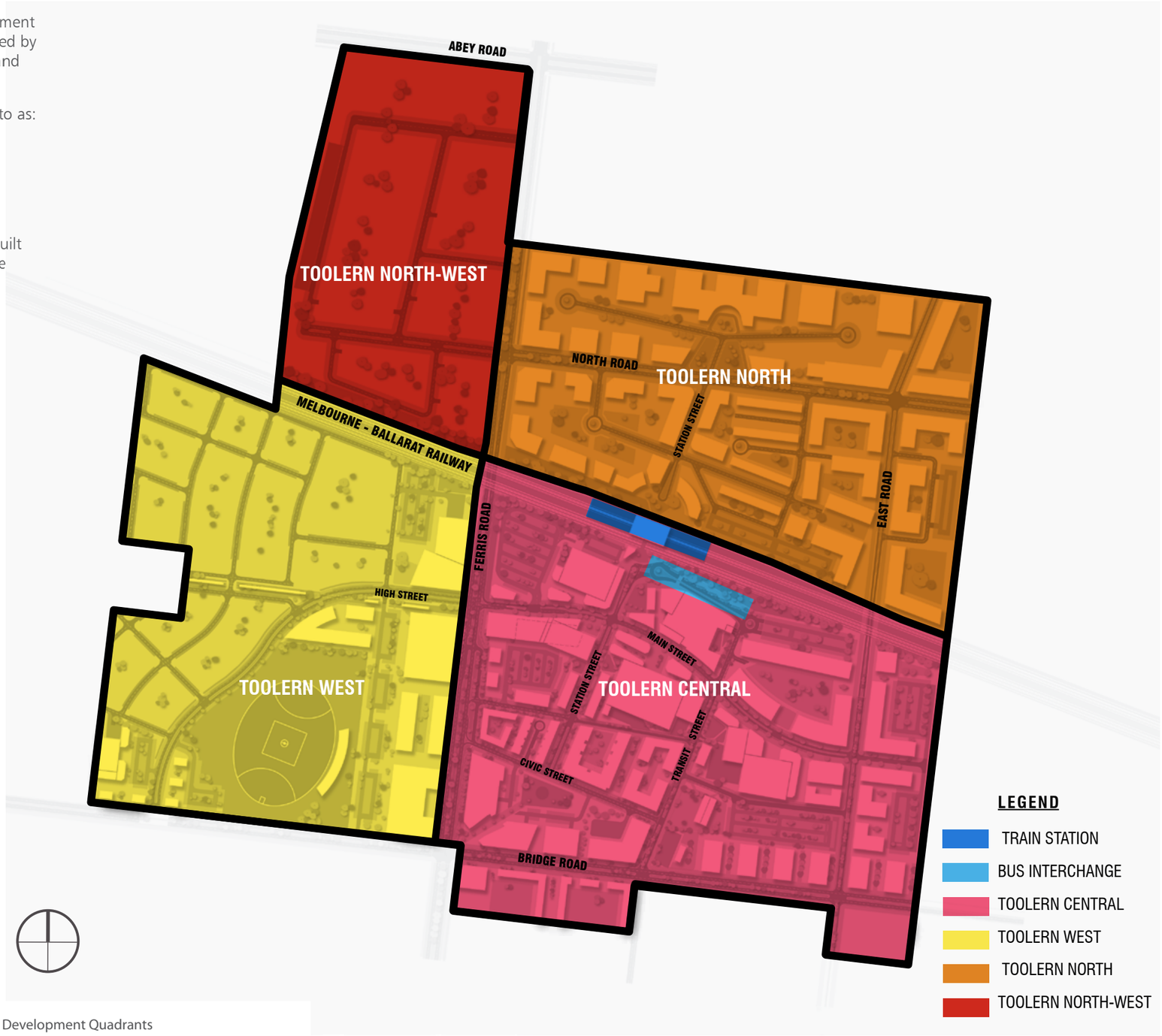
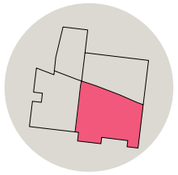


Figure 31 Development Quadrants



TOOLERN CENTRAL

Role

The role of the Toolern Central precinct is to:

- Focus the key shopping, civic, commercial, entertainment and transport destinations around the Toolern Train Station and a series of connected public spaces.
- Leverage off the activity generated by the train station and the bus interchange to provide a range of restaurant, entertainment and leisure uses which are active well beyond traditional business hours and which benefit from direct access to public transport.
- Leverage off the convenience and 'destination' provided by the Toolern Train Station by locating commercial zones and higher order government employment precincts (magistrates courts, police, health and emergency services) within walking distance to the Toolern Train station and major bus interchange.
- Meet the convenience and comparison shopping needs of the incoming residents of Toolern via the staged delivery of two supermarkets, a discount department store, mini-majors and speciality retailing with frontage and access from the Main Street.
- Deliver a mixed-use precinct which includes major civic buildings such as a library and civic uses as well a series of spaces which provide passive enjoyment as well as hosting community events such as farmers markets, community fairs and gatherings.
- Provide pockets of higher density residential development within proximity to the train station and along Main Street but in a location where a residential address to a lower order street can be delivered.

Structure and Urban Form

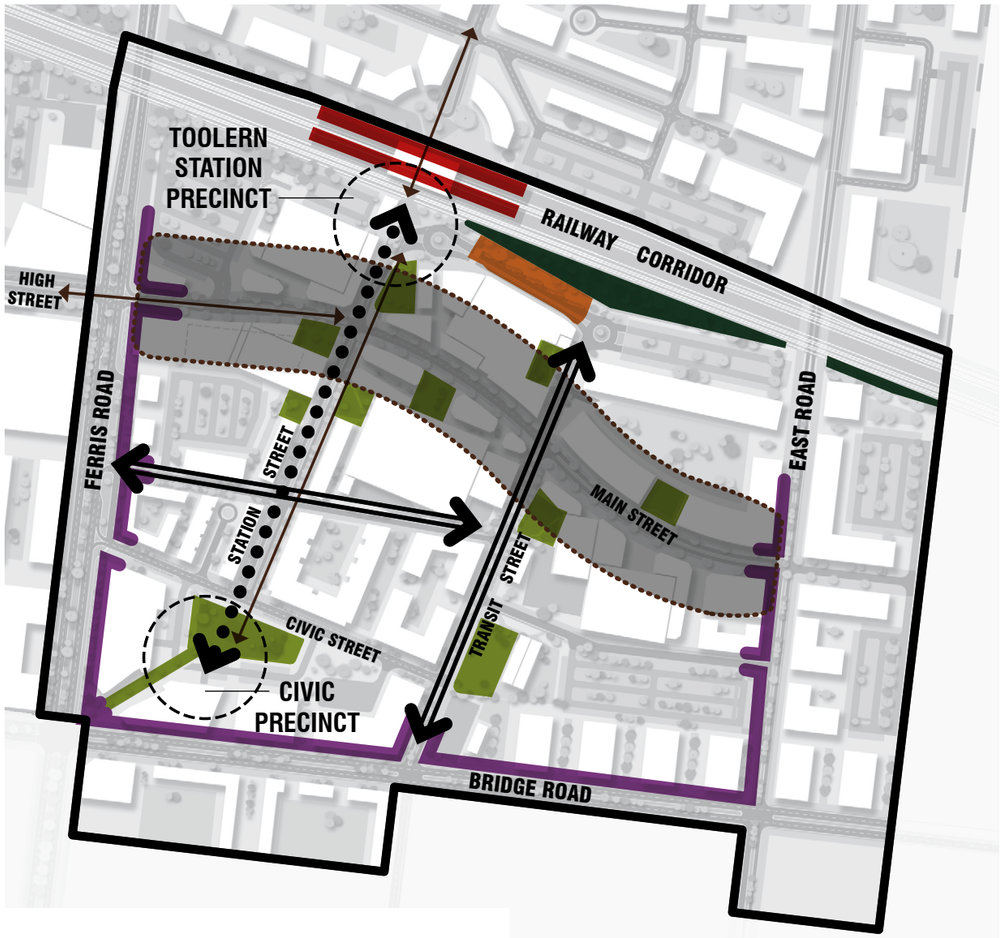
The structure of Toolern Central has been generated by the adoption of a number of strategies which reflect the likely growth pattern of a new town centre. These will create streets of subtly differing character and function, locate uses intelligently to create precincts of varied meaning and strongly support the even development of all parts of the Town Centre.

Strategies adopted include the:

- Establishment of a 'sinuous' east-west Main Street which ensures good solar penetration to the public realm and whose geometry invites exploration and intrigue along the Main Street zone. This street zone provides the slender retail depth required by speciality shops which activate the public realm and provides a logical position for each of the major destination retailers (supermarkets or discount department stores) which each support an appropriate scale of active retail frontages.
- Creation of a secondary street and block pattern whose geometry and orientation may be varied to suit particular development footprints without jeopardising the overall traffic and movement structure.
- Creation of a strong north-south visual and symbolic axis between the Toolern Station precinct and the civic precinct on the north eastern corner of the Ferris/Bridge Road intersection (Station Street). This route will be strongly pedestrian in use and character.
- Introduction of service or heavy traffic streets (service lane/transit street) to minimise conflict between passenger vehicles or pedestrians and heavy goods vehicles.
- Proposal for a north-south road (East Road) which can accommodate grade separated vehicular access from the Town Centre to and from the north.
- Introduction of a number of integrated urban parks, strategically located to be visible and easily accessible from the high energy environment of the Main Street, yet separated enough to offer a relaxing environment for a seat and lunch.
- Generation of a series of important view corridors which;
  - Link higher-order civic and community uses on Bridge Road with the local civic uses on Main Street and the transport hub in the heart of the precinct;
  - Generate a strong axial and visual link to and through the station precinct, tying the northern side of the railway line to the Town Centre precinct, echoing the north-south pedestrian movement patterns within the wider Town Centre area;
  - Create an extended east-west pedestrian corridor and viewline connecting the activity and vibrancy of Main Street to the areas within the south western precinct of civic facilities, sports and open spaces.
- Creation of a sense of enclosure along the Main Street through the establishment of substantial building height set to the street, and a series of public spaces which are integrated with the buildings to provide protection from the elements.
- Creation of clear building edges to the corners of intersections of Bridge Road, Ferris Road and East Road consistent with the role of these roads as the entrances to the 'heart' of the Town Centre. These hard edges will clearly identify and celebrate arrival at the Toolern Town Centre, provide a transition from the lower scaled characteristics of surrounding areas and will function as 'portals' to the Town centre proper.
- Encouragement of diverse built form character by virtue of the land uses within the centre including civic buildings, supermarkets, state delivered infrastructure and residential development. Broadly speaking, taller and more dominant forms will be located on the southern face of Main Street to formally identify from afar the active destination within Toolern Town Centre. This will also ensure good solar access to public spaces and footpath activity.
- Design the primary retail streets and the public places (Civic Piazza, Village Hub and the Market Square) to be 'inward looking' ,creating protected or shielded enclosures, in response to the climatic conditions of Toolern. The relationship between public spaces and built form is such that a strong frame is created around significant urban spaces.
- Intersecting pedestrian axes, north-south and east west along the Green Corridor (railway corridor) to deliver those travelling by foot or bicycle to the core of the centre and reinforce and establish an obvious 'heart' of the centre at Toolern Station and Market Square.

DEVELOPMENT QUADRANTS

TOOLERN CENTRAL - STRUCTURE & URBAN FORM

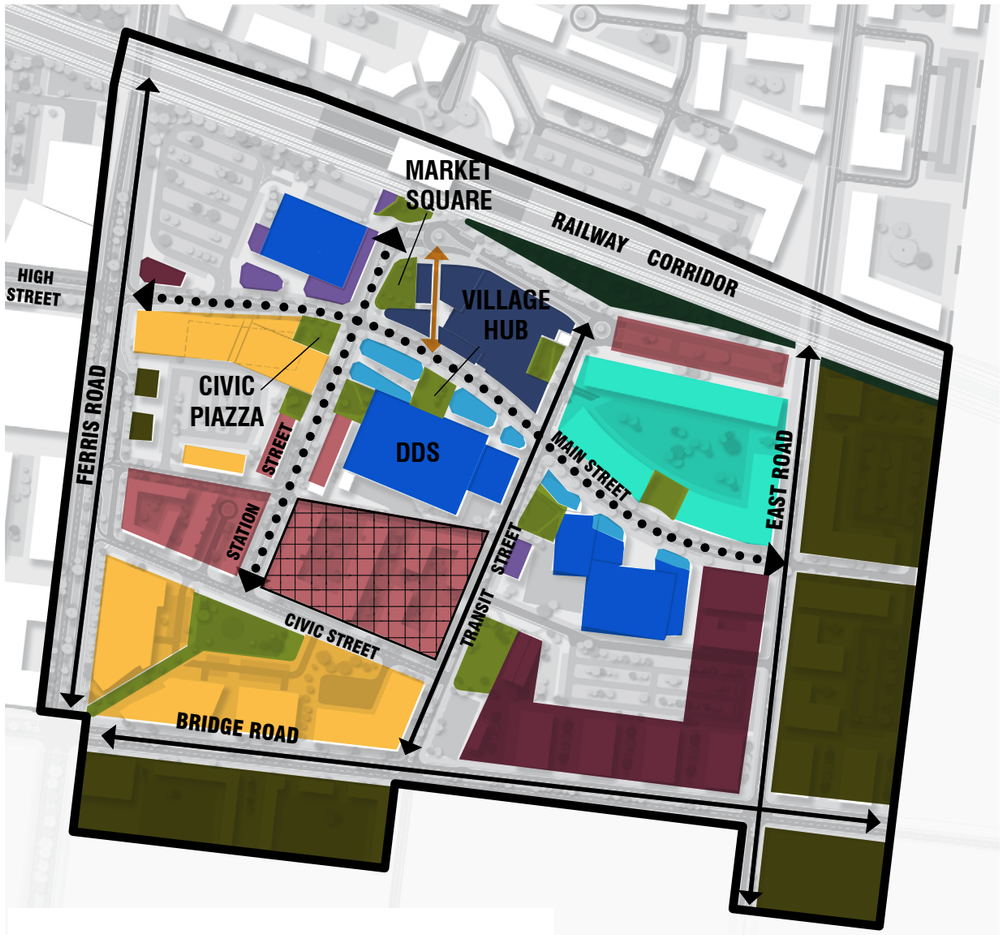


LEGEND

- TRAIN STATION
- BUS INTERCHANGE
- MAIN STREET ZONE (50m EITHER SIDE OF PRIMARY RETAIL STREET)
- VISUAL AND SYMBOLIC LINK (PEDESTRIAN)
- IMPORTANT VIEW CORRIDOR
- SERVICE & HEAVY TRAFFIC ROADS
- PUBLIC PLACES & URBAN PARKS
- GREEN CORRIDOR
- HARD BUILDING EDGES
  Includes breaks for pedestrian permeability and amenity

Figure 32 Toolern Central Structure & Urban Form

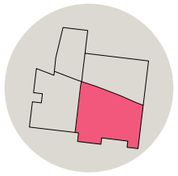
TOOLERN CENTRAL - USE, BUILT FORM AND MOVEMENT



LEGEND

- RETAIL ANCHOR - DDS, SUPERMARKET & MINI MAJOR
- SPECIALITY RETAIL - OFFICE OR RESIDENTIAL IN UPPER LEVELS
- SPECIALITY RETAIL - PROFESSIONAL SUITES AND OFFICES IN UPPER LEVELS
- OPEN AIR LANEWAY
- ENTERTAINMENT FOOD & LEISURE
- LIBRARY / CIVIC USES
- OFFICE OR ADDITIONAL RETAIL AND RESIDENTIAL IF DEMAND IS ILLUSTRATED
- MIXED USE
  SUPPORT USES, MAY INCLUDE: SERVICE RETAIL, STRATA OFFICE OR MEDIUM DENSITY RESIDENTIAL
- SHOWROOM / LARGE FORMAT RETAIL/ LEGAL AND EMERGENCY SERVICES
- MIXED USE_ RESIDENTIAL
- MAJOR PEDESTRIAN AXES
- MAJOR VEHICLE AXES
- PUBLIC PLACES & URBAN PARKS
- GREEN CORRIDOR
- MIXED USE - OFFICE OR RESIDENTIAL

Figure 33 Toolern Central Use, Built Form and Movement



TOOLERN CENTRAL

Use, Built Form and Movement

The structure of Toolern Central is a matrix of uses, built form and movement patterns, whose different attributes combine to reinforce the vision for Toolern. Major uses therefore define and generate the character of different precincts or streets within this development quadrant. This dialogue between public realm and built form ensures vitality, legibility and sense of place. Each of the larger public spaces should be reinforced by well-articulated building form to provide contrast and drama within the core of the centre.

The primary ordering device on the east-west axis is the curving, organic form of Main Street. This contains or connects many of the major commercial functions and uses within Toolern Central, noting:

- The highest order pedestrian street within Toolern Central is anchored by a discount department store on the southern side of the street. This attracts and supports a wide variety of speciality shops, mini-major, supermarkets, cafes and food and beverage outlets. This 'higher order' function is reinforced by the creation of the Village Hub, a generous space with northern aspect which is defined by higher buildings surrounding it containing professional suites and smaller offices at the upper levels.
- High-quality hardscape and a formal composition of street trees define this most important of commercial spaces within the Town Centre and contributes to its role as the most vibrant and active space in the Town Centre. This space is visually and practically linked to the train station and bus interchange via an open air urban laneway to the Transit Plaza.
- Land opposite the Village Hub is populated by different retail uses primarily those associated with entertainment, food/restaurant and leisure.
- Convenience retail is provided at the eastern and western ends of the curved Main Street in a manner which is easily accessible, visible and practical. At-grade parking is provided in a location off the Main Street to enable activity to be sustained on Main Street by the location of speciality shops.
- The masterplan identifies office uses with frontage to main street being naturally located in close proximity to the train station and with high exposure to East Road which has potential to connect to the Toolern North and to the Western Freeway (grade separated rail crossing would be required). This commercial use will provide for employment opportunities for Toolern and for the surrounding suburbs.

  This land adjacent to East Road (on the northern side of Main Street) is identified for office use. However, this are will be delivered later in the development cycle, and may be developed for a number of functions depending on demand at the time. In the event that more retail floorspace is required, this section of Main Street may equally contain additional high order retail functions such as a discount department store. In this case, the office function as included on the plan would naturally gravitate to the precinct south of Main Street, still affording the necessary exposure, accessibility, closeness to the station and amenity through the provision of internal green spaces.

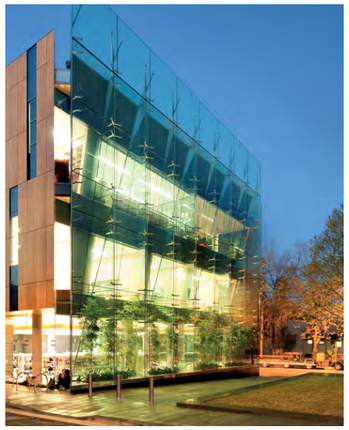
- To the eastern side of East Road and south of Bridge Road, a zone has been provided which is logical for the development of support functions for the Town Centre proper. Such functions which would thrive on substantial exposure and accessibility (and lower land cost than the town centre core) which could include service retail, strata office or medium density residential.

The primary ordering device on the north-south axis is Station Street which connects the civic and justice zones on the Ferris/Bridge intersection to the Station precinct, noting:

- The northernmost activity and use on Station Street is the Northern Plaza which serves as the termination of the axes in a key public space at the northern end of the Toolern Town Centre (within the Toolern North quadrant).
- Directly south of the railway line on Station Street is the Transit Square, a public facility incorporating both train and bus functions. These uses will be supported by taxi drop-off points and kiss and ride facilities as well as the retail and food and drink outlets which thrive on such destinational activity.
- The civic functions are given a prominent position on Civic Street at the termination of Station Street (south). This use provides an important civic presence in the Town Centre and a 'signal marker' from Ferris Road and Bridge Road to the portal or entry to the Town Centre itself.
- The civic function will include "shop front" facilities for either a civic use, or more conventional retail and café uses to provide an active edge to Main Street.
- In pride of place on Main Street, the Toolern Library fronts onto the Civic Piazza, a larger north facing urban square.
- The southernmost activity and use on the Station Street axis is the civic precinct which proposes a range of potential additional civic uses. These buildings both symbolically terminate the axis of the spine and are also given public exposure on the Ferris/Bridge Road intersection. The precinct will also contain a substantial public space - Civic Green, of a naturally landscaped character with urban pathways and areas.
- The relatively low traffic volumes within Station Street spine suggest that a number of uses may lie along its length, including higher density residential uses in the form of apartment buildings and townhouses, home/office units and smaller scale offices.
- The two major axes (Main Street and Station Street) are supplemented by a third axis running north south through the middle of the Town Centre (Transit Street). This road corridor is intended to provide higher volume traffic routes into the heart of the Town Centre and will be connected to a traffic light controlled intersection on Bridge Road. This axis also provides a direct bus route from the south to the bus/train station and the Transit Plaza. The masterplan for Toolern exploits the topography (natural fall of 7 metres from west to east) of the Town Centre in this location by positioning the DDS and Entertainment at Main Street level and creating easily accessible car parking beneath the floor plate of both uses, accessible from Transit Street.
- Opportunities have been identified for a future emergency services precinct (incorporating a magistrate's court, police station and allied uses) to the immediate west of the civic precinct on Bridge Road. These uses will have a direct relationship with the future civic uses, and their Bridge Road frontage provides the opportunity to develop landmark public buildings at the south-eastern gateway to the Town Centre. These uses will be developed alongside a range of retail uses (including showrooms and large format retailing).

Vitality, legibility & variety of place.

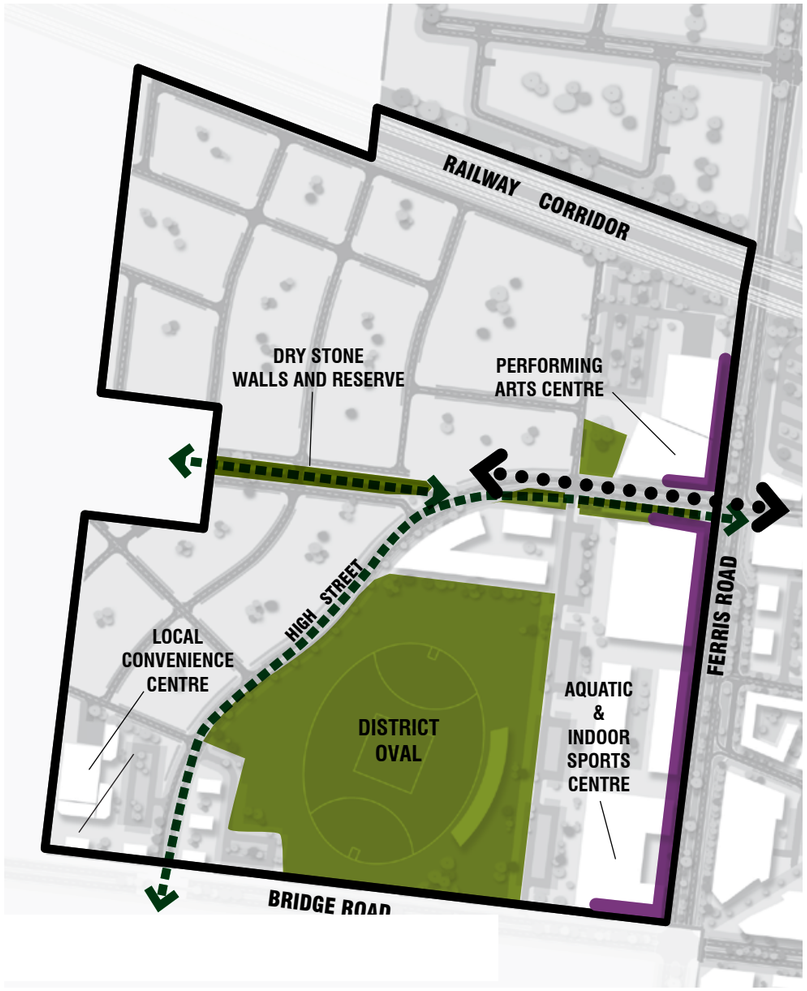
High quality urban spaces.



Toolern Library takes 'pride of place'.

DEVELOPMENT QUADRANTS

TOOLERN WEST - STRUCTURE & URBAN FORM



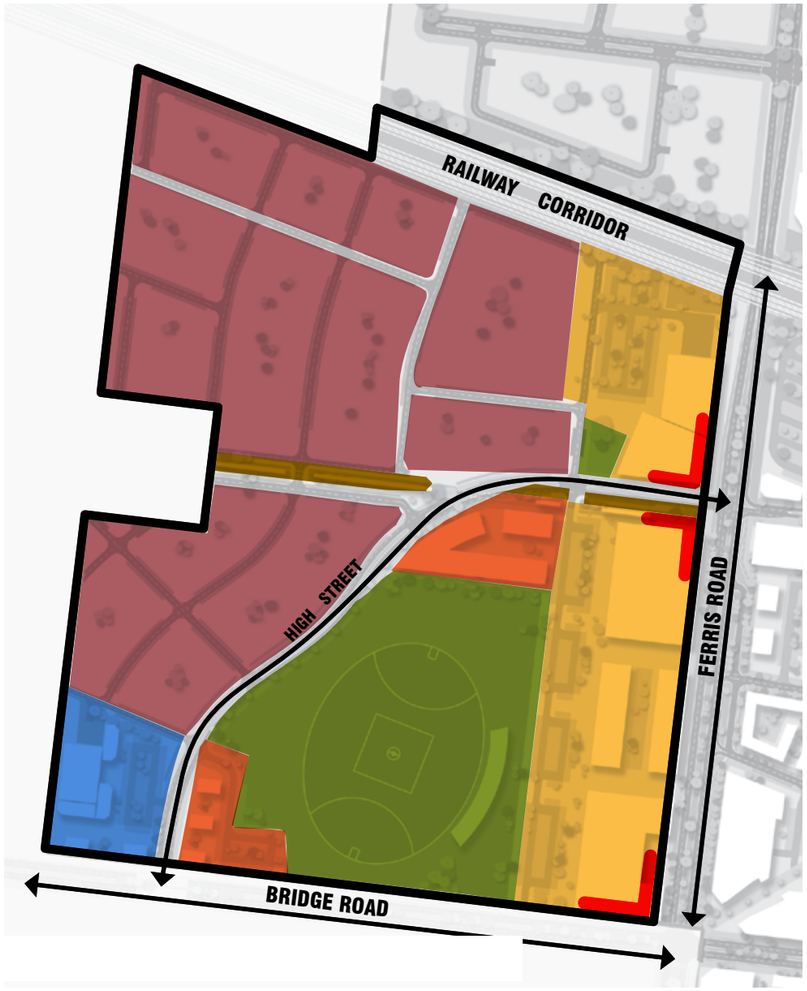
LEGEND

- VISUAL AND SYMBOLIC LINK (PEDESTRIAN)
- GREEN LINK
- PUBLIC PLACES & URBAN PARKS
- HARD BUILDING EDGES
  Includes breaks for pedestrian permeability and amenity

NOTE: *Further investigations to be undertaken by Melton Shire Council will determine the exact location and significance of the dry stone walls*

Figure 34 Toolern West Structure & Urban Form

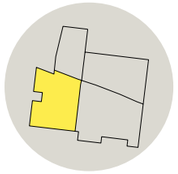
TOOLERN WEST - USE, BUILT FORM AND MOVEMENT



LEGEND

- LOCAL CONVENIENCE CENTRE
- PUBLIC PLACES & URBAN PARKS
- STONE WALL RESERVE
- COMMUNITY FACILITIES
- MEDIUM DENSITY RESIDENTIAL
- MAJOR VEHICLE AXES
- SYMBOLIC ADDRESS
- MIXED USE / ANCILLARY TO RECREATION / COMMUNITY FACILITIES

Figure 35 Toolern West Use, Built Form and Movement



TOOLERN WEST

Role

The role of the Toolern West quadrant is to:

- Cater for a range of higher-order community uses to complement the role of Toolern Central as the retail, business and transport hub.
- Create an arts and recreation precinct as an important destination within the Toolern Town Centre potentially including the provision of a Performing Arts Centre, an Aquatic and Indoor Sports Centre and a district oval. These uses will be significant generators of community activity.
- Provide a transition to the more conventional residential areas located to the west and south, with areas of medium/high density housing.
- Provide local amenity for a significant higher density residential neighbourhood as part of the Toolern Town Centre via the establishment of a series of green spaces and links (including a regional oval and the delivery of a local convenience hub) to take advantage of synergies with the district oval and associated uses.
- Deliver a range of residential densities which are integrated with the surrounding civic and local uses and take advantage of the proximity to the transport hub, retail and employment uses located within Toolern Central and Toolern North quadrants which are within walking distance.
- Provide early amenity to the area through the establishment of a local convenience centre to include a grocery store, cafes and services which do not compete with the role of Toolern Central as the retail destination.

Structure and Urban Form

The structure of Toolern West has been created to complement the urban structure within Toolern Central and as a function of the land use and building forms which are to be accommodated in the precinct. The strategies adopted include:

- The introduction of an east west road or 'high street' which provides direct connection into the Main Street and sets up a direct view into the Toolern Central precinct on the other side of Ferris Road.
- The creation of two major green links which:
  - Connect the Precinct with the future residential community and the Toolern Regional Park south of Bridge Road. The green link follows the district oval.
  - Connect the Precinct with Toolern Central east of Ferris Road. The green link incorporates 'trace memory' of previous functions represented by the dry stone walls.

The proposed urban form sees Toolern West developed in four discrete zones as follows:

- A series of buildings along the western interface of Ferris Road providing a hard edge and "city wall" to the development quadrant. These act to signify that Toolern West functions as part of the Town Centre and to create a higher order character of Ferris Road for the section between Bridge Road and the railway. Buildings in this area will have significant scale and architecture in recognition of their likely use (Aquatic Centre, Performing Arts, Indoor Sports) and their function in identifying the precinct.
- A major green open space, the District Oval, which provides a sports and leisure focus for this section of the precinct. Car parking which will support both the oval and the buildings on the Ferris Road frontage is partially screened by these functions and serves both east and west.
- A small convenience centre provides a focus of activity (early in the life of the centre), containing both retail and leisure functions located on the intersection of High Street and Bridge Road. This block of buildings provides an urban edge to the open space surrounding the oval itself.
- The north western portion of Toolern West is for higher density residential uses, within easy walking distance to Toolern Central and the Railway Station. These forms will be generally delivered in a terrace or townhouse format and may contain medium density apartment buildings.

Use, Built Form and Movement

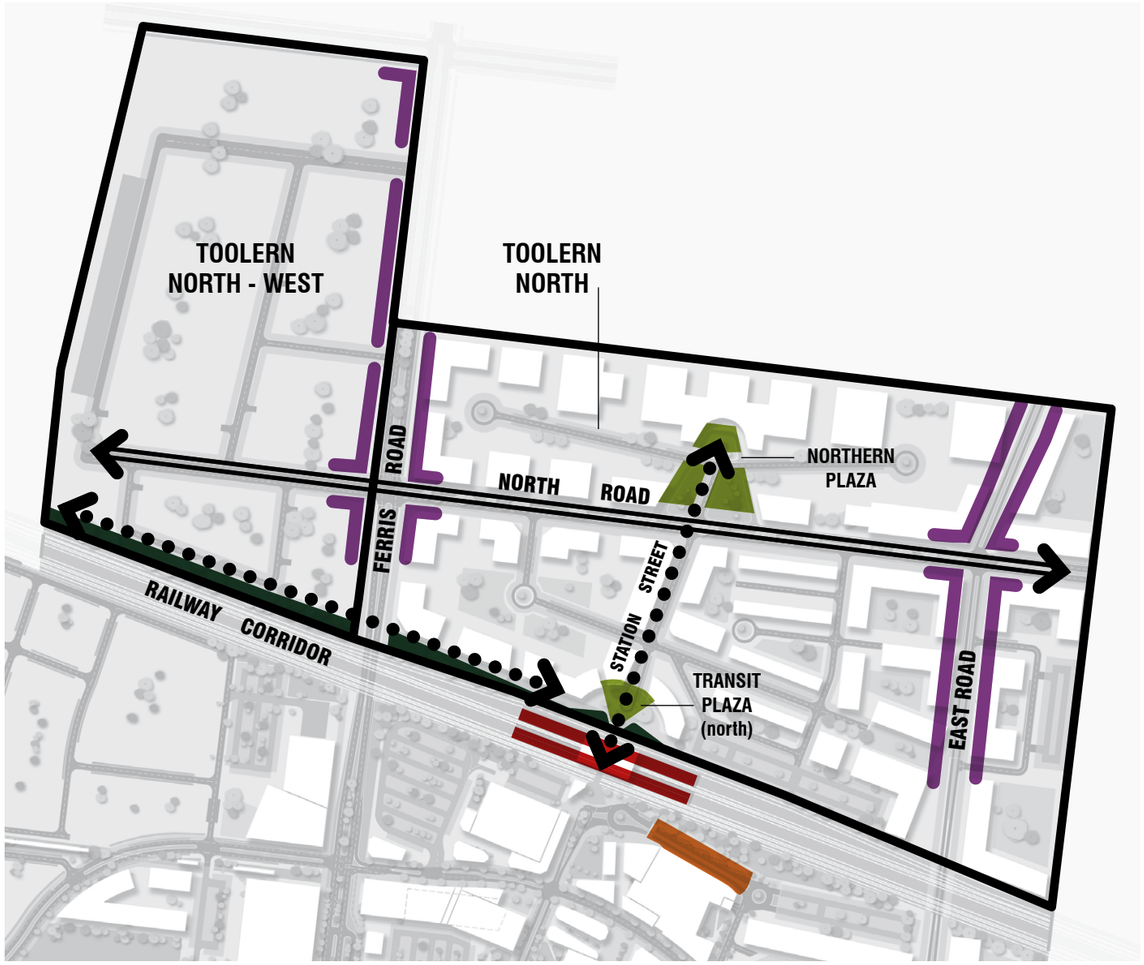
The structure of Toolern West is a matrix of uses, built form and movement patterns, whose different attributes combine to reinforce particular outcomes. Major uses therefore define and generate the character of different precincts or streets.

The primary ordering device through this precinct is High Street which loosely connects all the major public functions and buildings within Toolern West, noting:

- North of High Street, the buildings address the corner to enclose the entry space. The intended use is a Performing Arts Centre with the entrance marked by a formal landscaped forecourt visible from and accessible to the grade parking.
- The landscape entry/forecourt to incorporate the dry stone wall as a 'trace memory' of prior activity. Car parking will line in a band running north south, partly screened by the community buildings. One the south side of High St/Ferris Road the built form should address the important corner location.
- Land fronting Bridge and Ferris Road intersection will comprise the Indoor Sports and Aquatic Centre which will have a symbolic address to the intersection and an entry from the western carpark zone. This strategy directs the majority of pedestrian movements in a north-south route along the inner face of the buildings to offer the benefit of a clear desire and movement pattern from roads to car parks to clearly identifiable building entries.
- The sinuous form of Main Street continues through Toolern West, embracing and defining the boundaries of the oval and providing a connection to the more intense uses along Bridge Road, including the convenience centre.
- A significant area of land is set aside for medium and high density residential development in the north-west of the quadrant. This structure will present a finer grain road pattern distinct from the function of High Street and will exhibit the character of a discrete residential enclave.

DEVELOPMENT QUADRANTS

TOOLERN NORTH WEST AND NORTH - STRUCTURE & URBAN FORM

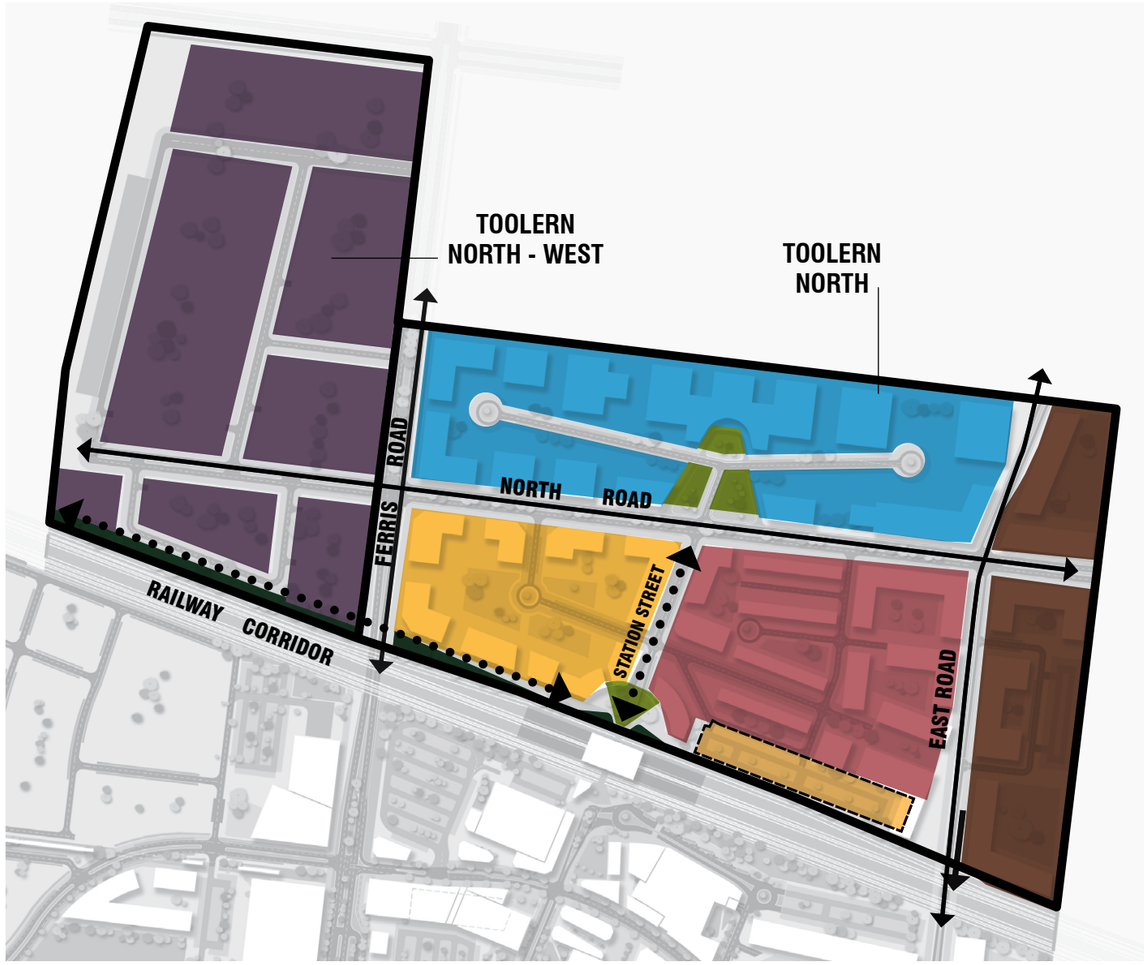


LEGEND

- TRAIN STATION
- BUS INTERCHANGE
- VISUAL AND SYMBOLIC LINK (PEDESTRIAN)
- SERVICE & HEAVY TRAFFIC ROADS
- PUBLIC PLACES & URBAN PARKS
- GREEN CORRIDOR
- HARD BUILDING EDGES
  Includes breaks for pedestrian permeability and amenity

Figure 36 Toolern North & North-West Structure & Urban Form

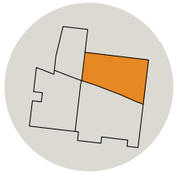
TOOLERN NORTH WEST AND NORTH - USE, BUILT FORM AND MOVEMENT



LEGEND

- LARGE FORMAT RETAIL (BULKY GOODS) & SMALL FORMAT LIGHT INDUSTRIAL
- MIXED USE / HIGH DENSITY RESIDENTIAL OR COMMERCIAL
- MIXED USE
  May include: service retail, strata office or medium density residential
- HIGHER EDUCATION & ALLIED USES
- HEALTH & MEDICAL FACILITIES
- COMMUTER CARPARK
- MAJOR PEDESTRIAN AXES
- MAJOR VEHICLE AXES
- PUBLIC PLACES & URBAN PARKS
- GREEN CORRIDOR

Figure 37 Toolern North-West and North- Use, Built Form and Movement



TOOLERN NORTH

Role

The role of the Toolern North quadrant is to:

- Provide for the long term development of major employment and higher order uses such as health/medical, higher education, commercial uses and high density residential offerings.
- Provide sites of sufficient scale and flexibility to accommodate the long term and changing demands placed on the Town Centre function.
- Provide a transition between the retail core south of the railway and the designated employment uses north of the town centre via the establishment of showrooms, higher order education, health facilities and commercial areas.
- Diminish the 'barrier' between the Toolern North Precinct and Toolern Central (created by the rail line) by:
  - Setting up a road network which connects into Ferris and East Roads as the key northern entrance points to the Town Centre. Both Ferris Road and East Road (potential) are identified within this UDF for future grade separation.
  - Creating an attractive pedestrian connection north of the railway - the Green Corridor - to facilitate use of the planned pedestrian over/ underpass across the rail.

Structure and Urban Form

The structure and urban form of Toolern North is defined by a series of major axes, noting:

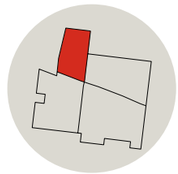
- A primary east-west road corridor (North Road) to respond to the demands of the activities which aggregate in this quadrant. North Road will provide the main vehicular and ceremonial entry to the quadrant in the short term and has the capacity to provide through connections to East Road.
- A primary north-south corridor (Station Street) carrying both vehicular and pedestrian traffic. This axis continues the alignment of the ceremonial link which commences at the Civic Precinct (within Toolern Central) and terminates at its northernmost extremity at the Northern Plaza. Secondary road and pedestrian systems will develop within the resulting subdivision of three "super lots".
- Pedestrian and cycling movements in an east-west direction through the centre are defined by the Green Corridor which runs along the railway line from Toolern North-West quadrant and crosses south at the railway station underpass.

Use, Built form and Movement

The structure of Toolern North is defined by the matrix of uses, built form and movement patterns. The types of uses envisaged in this quadrant will result in relatively large grain subdivision characteristic and larger, but fewer, public spaces. Notwithstanding, the major uses within the quadrant will still define and generate the character of different precincts or streets, noting:

- The westernmost parcel of land (bound by North Road, Ferris Road and Station Street north) is intended for higher education and allied uses. The attributes of this land, including early exposure to Ferris Road (to aid way finding and branding), proximity to the railway station and proximity to amenity within Toolern Central, lend it for a higher order function such as higher education.
- The easternmost parcel of land is intended to provide a mixed-use precinct which could include high density residential or businesses which could be generated or sustained by the health or tertiary education functions to north and west.
- The areas designated for Mixed Use / High Density will have a sub-divisional pattern of a smaller scale than those to the north and west, containing a grid pattern of public streets of differing character to reflect the intended use (office, laboratory, residential).
- Provision will be made for commuter parking associated with the Transit function within the southernmost portion of the sector along the rail corridor. This will be sleeved behind small scale food and drinks premises and shop activities. The subdivision pattern and built form would be of a smaller scale and fine grain as it approaches the Transit Square (north).

Toolern North - Health facility.



TOOLERN NORTH WEST

Role

The role of the Toolern North-West quadrant is to:

- Provide for a range of large format retail uses and small format, light industrial uses which have access from Ferris Road and Abey Road.
- Provide a transition from the residential and commercial uses south of the railway to the industrial/employment uses to the north.
- Create a commercial 'gateway' into the Toolern Town Centre as it is approached from the north.

Structure and Urban Form

The structure and urban form of Toolern North West will be defined by two primary zones including:

- A street corridor zone containing a mix of landscape, parking enclaves and smaller built forms.
- A built form zone containing large format, essentially single storey warehouse buildings of substantial scale, which establish a frontage and character to Ferris Road.

An internal road network will provide a discrete subdivision structure connecting all of the larger elements within the sector.

On the southern edge of the commercial zone, the Green Corridor is the key east-west axis allowing pedestrian and cyclists access from the west into the core of the Town Centre via a landscaped linear reserve and a footbridge over Ferris Road (grade separated)

Use, Movement and Built Form

The structure of Toolern North-West is that of a destinational precinct containing predominantly commercial premises, bulky goods and peripheral sales outlets. A "power centre" or masterplanned homemaker centre format will be encouraged to create large scale suites of compatible offerings with shared parking and a consistent suite of built forms, materials and functions, noting:

- The building forms will be of large scale and strong geometric structure to accommodate their uses.
- Within the structure of the large format buildings, smaller scaled food and beverage outlets may provide for local relief and human-scaled environments to contrast with the dominant pattern of buildings and spaces.
- Streets will be predominantly vehicle orientated save for the defined pedestrian pathway networks which will be restricted to those from carparks to buildings and along building faces and the green corridor at the southern edge of the quadrant.

SECTION II

TOWN CENTRE DEVELOPMENT PRECINCTS

3.0 Precinct Plans and Design Objectives

As outlined in Part 1, the Toolern Town Centre is divided into four quadrants with each having a different character and incorporating a diverse range of uses to ensure Toolern Town Centre is a great place. Within these quadrants, there are a number of development precincts that distinguish land-use, urban character, infrastructure provision and land ownership. This section outlines the detailed objectives and preferred outcomes for each individual precinct to implement the overall vision for the Town Centre.

The objectives and preferred outcomes are addressed in three elements, as follows

- Public Realm
- Built Form
- Access and Movement.

The design objectives and preferred outcomes are to be read in conjunction with the vision and description of development quadrants within Section I of this UDF.

Any application for development within the Town Centre must meet the relevant precinct objectives and respond to the preferred outcomes.

The development precincts, within each quadrant, are illustrated in Figure 38.

Toolern Central Quadrant

- 1A Toolern Core
- 1B Toolern Civic
- 1C Toolern Mixed Use
- 1D Toolern East

Toolern North Quadrant

- 3A Toolern North

Toolern West Quadrant

- 2A Bridge Road
- 2B Ferris Road - Civic & recreation
- 2C High Density Residential

Toolern North - West Quadrant

- 4A Toolern North - West

Detailed objectives and preferred outcomes are provided for land within the early stages of delivery, with a degree of flexibility embedded within the framework to allow designs and land use arrangements to adapt to changing needs.

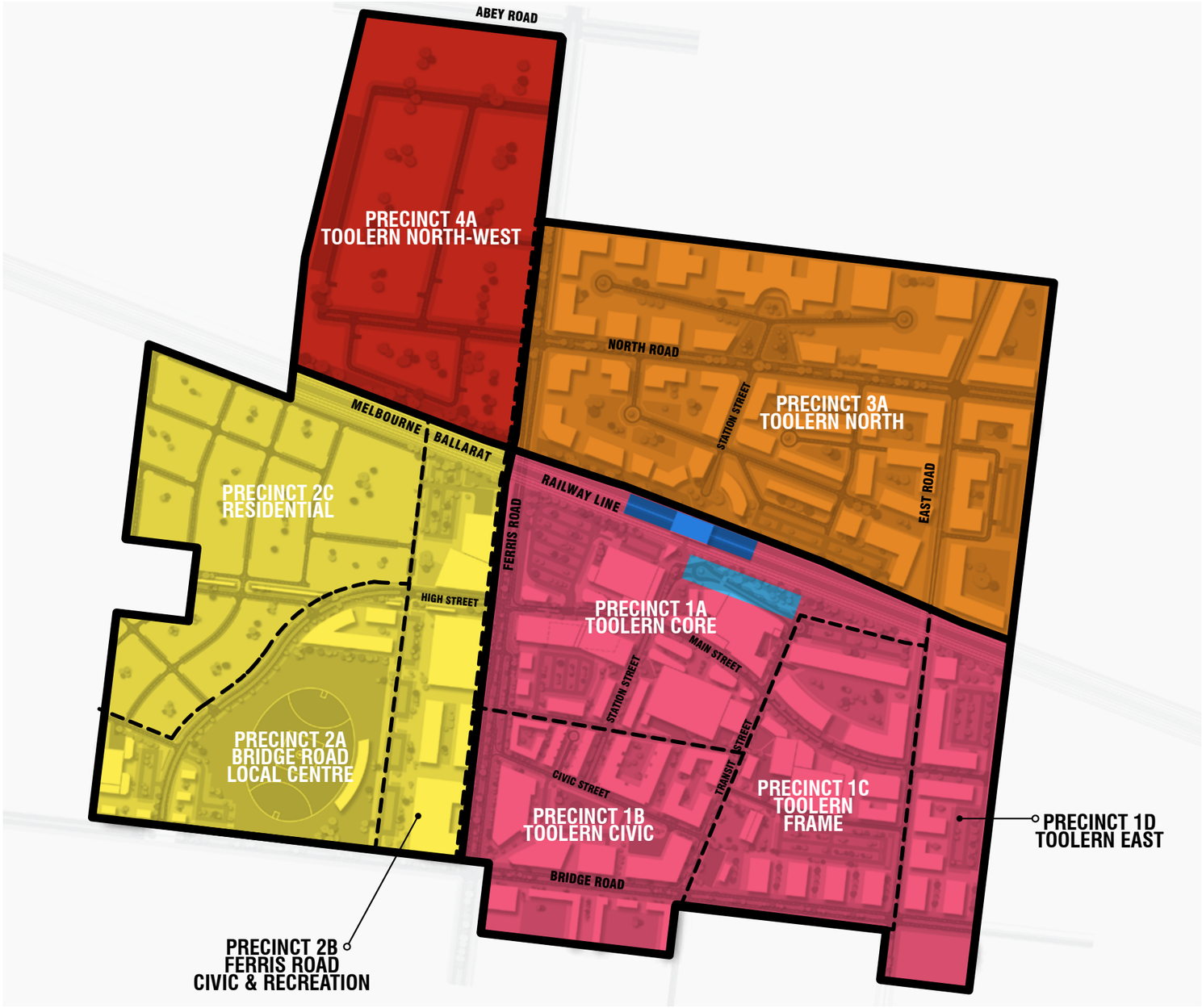


Figure 38_ Development Precincts

3.1 All Development Precincts

The tables below outline the key design objectives and preferred outcomes for the public realm, built form and access and circulation for all development precincts within the Toolern Town Centre. Any application for use or building and works within these precincts must meet the design objectives and, where possible, this should be in accordance with the preferred outcome.

The accompanying images included in Section 6 assist in articulating the preferred outcome for the precincts.

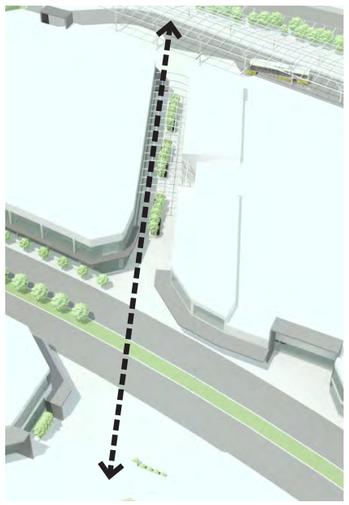
The design objectives and preferred outcomes in Section 6.1 apply to all the precincts within the Town Centre.

1. Public Realm Element	Public Realm Design Objectives	Applicable Area	Preferred Outcome
1.1 Public Spaces and Pedestrian Connections	To provide effective and enjoyable public spaces and places that fulfil a clear role and are designed and constructed to best meet this role. To provide shade and shelter in the public realm to shield users from the elements. To retain key view lines to and celebrates key public spaces and buildings, such as the Town Square, Train Station and the Library (Image D). All public spaces must be designed and developed in accordance with the role and character outlined in Section 1 of this UDF.	General	▪ Public spaces which provide shade, cover, enclosure and protection from the windy, hot and relatively flat expanses of the regional landscape. ▪ Streetscape and landscape treatments which assist in the creation of strong visual connections between key spaces and destinations. ▪ Public spaces which are typically north facing with built form along the southern boundary, giving protection from southerly winds and capturing the northern sun. ▪ Design which includes opportunity for innovative landscaping design which create enclosed and protected public spaces. ▪ Public spaces which relate to their surrounding uses and allow for active uses such as cafes to 'spill out' into the public realm.
1.2 Public Realm Character	To create an enjoyable public realm including public spaces, streetscape and landscape elements that reinforce the urban character of the centre. These spaces should encourage a range of activities and be accessible to all.	General	▪ Public spaces which work together to provide a mixture of 'hard' and 'soft' landscaped spaces with appropriate high quality-low-maintenance materials and finishes. ▪ Public spaces which are bounded by active, shopfront uses and have the capacity to physically engage with the spaces by means of openable glazed facades. ▪ Local spaces and places which can support local events and gatherings of varying sizes, such as markets, fairs, concerts and festivals. ▪ Shared spaces with multiple functions which are incorporated into the street network. ▪ Adaptable spaces which have a particular focus on catering for young people who are major users of the town centres' recreation and entertainment areas. ▪ Public art which is integrated into the streetscape (Image A). ▪ Surrounding built forms which respond to and reinforce the character and intended function of public spaces and streets

Visual interest in the public realm through the use of public art and other landscape features.

Ground level landscaping to soften 'hard' landscaped areas and provide a sense of enclosure.

Shared spaces with multiple functions that are accessible to all.



Protect and enhance key view lines.

DESIGN OUTCOMES AND PREFERRED OUTCOMES FOR THE TOOLERN TOWN CENTRE

1. Public Realm Element *(cont.)*	Public Realm Design Objectives	Applicable Area	Preferred Outcome
1.3 Street life	To focus pedestrian activity outdoors to the street, minimising internal mall spaces. To create a fine-grain network of public gathering spaces within the street-based activity to encourage informal meeting and interaction. To provide a variety and hierarchy of pedestrian pathways throughout the Town Centre connecting various destinations and desire lines.	General	▪ A fine grain retail frontage on all streets with concentrations of shops which form continuous active frontages with no setbacks from the street. ▪ Uses that generate high levels of vehicular use and/or have a large footprint located away from pedestrian priority streets/ zones, except were sleeved behind smaller retail at the street edge. ▪ A combination of wide verges and footpaths, indented car parking, street planting and a theme for landscape treatments which achieve a pedestrian friendly scale. ▪ Street furniture which promotes public gathering and passive surveillance.
1.4 Safety and Security	To provide local streets and spaces that are safe at all hours by ensuring there are clear sight lines and minimal blind corners and areas for ambush..	General	▪ Public areas which are well lit at night time and promote opportunities for casual surveillance by positioning active uses along the edge or within public spaces. ▪ Public areas which are highly visible and can be primarily accessed from either Main Street or Station Street as the two primary pedestrian streets. ▪ Ensure streets are designed to be active and provide passive surveillance throughout the day and evening. ▪ Open air laneways which can be active during the day and evening and can be secured during the night (if appropriate).
1.5 Landscaping	To create an urban landscape palette that reinforces the visual legibility and character of Toolern with mature avenue tree planting to provide a striking streetscape and lower level ground cover to identify key pedestrian settings and major pedestrian links.	General	▪ Tree planting which creates strong, consistent avenues with highlight planting treatments at key locations. ▪ Continuation of street tree alignment through public spaces. ▪ Ensure street furnitire has consistent design elements across all quadrants to ensure town centre character is identifiable. ▪ Robust and drought tolerant planting which is linked to water sensitive urban design systems that will capture and treat storm water runoff (where possible). ▪ Street furniture which is attractive, functional and compatible with Council standard designs, supporting pedestrian, cyclist and retail functions.

2. Built Form Element	Built Form Design Objectives	Applicable Area	Preferred Outcome
2.1 Building Activities	To ensure the relationship between the public realm and built form is reinforced and land uses selected achieve this. To activate upper levels via occupancy and building facades which enliven this interface.	General	▪ Uses which are predominantly public (retail, restaurant, entertainment) or shopfront in character at street level. At upper floors, uses which are residential or office/commercial in character.
2.2 Facades	To carefully compose facades within streetscapes in responding to conventions of base, middle and top and ensure that the materials, fenestration and texture reflects the uses they accommodate. To design facades to relate in form, height and material to those they abut, in order to create a unified streetscape.	General	▪ Facades which have a dominantly horizontal emphasis at street level, and a dominantly vertical emphasis for upper levels. ▪ Entries to major destinations, (ie Supermarkets, DDS, Mini Majors, Entertainment, Municipal Offices, Library) which are distinguished from standard adjacent shopfronts by fenestration details including graphics and signage, material, additional height, lighting. ▪ A rhythm of shopfronts which present a small grained scale, particularly on Main Street. ▪ Canopies which are enlivened by appropriate signage and graphics.
2.3 Roof Forms	To ensure the treatment of upper levels and silhouettes reinforce and provide a sense of enclosure.	General	▪ A mixture of roof forms which are symbolic or contain real activities (the latter is preferred) including a mix of parapet and traditional pitched roofs. ▪ Roofs above major shopping and entertainment functions which are considered as part of an elevated plane and a viable and occupiable semi-public place. The elevated ground plane may provide an appropriate setting for residential or office uses.
2.4 Colours, Materials and Finishes	To ensure facade treatments create a complimentary streetscape rather than overly competitive facades (ie: borrowing from a limited palette of materials) and generate variety and distinction by contrasting rhythms of solid to void, or different uses of similar materials.	General	▪ Glazed shopfronts at street level with steel, aluminium or timber framing. ▪ Predominantly masonry facades above street level which include mix of natural stone and timber cladding.

Tree planting which creates a strong, consistent avenue of trees with highlight planting treatments at key locations.

Public spaces bounded by active, shopfront uses to activate the street.

Robust and drought tolerant planting selection, linked to water sensitive urban design systems that will capture and treat storm water runoff.

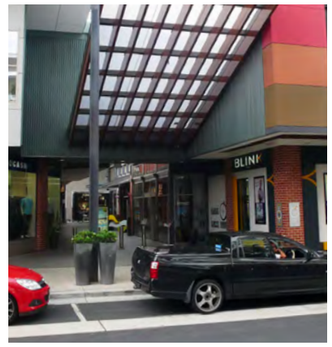
Ensure all public areas are well lit at night time, and are designed for all-hours use and activity.

A rhythm of shopfronts which present a small grained scale.

Shopfront uses which engage with and activate the public realm and the street.

2. Built Form Element	Built Form Design Objectives	Applicable Area	Preferred Outcome
2.5 Building Setbacks	To establish a strong, direct relationship and interaction between the Public Realm and the built form. To provide visual permeability at street level by providing (predominantly) glazed facades which present an open active frontage.	General	▪ Cohesive streetscapes which achieve a sense of enclosure appropriate to the character and width of the street through building setbacks. ▪ Building setbacks which respond to the function and use of the building eg. residential buildings may have a larger setback to create necessary privacy and office buildings which have minimal setbacks to engage with the street and strongly define the boundary between public and private realm. ▪ Upper floor forms which reinforce the geometry and alignment of the general street form as well as give a sense of enclosure and definition to the public realm appropriate to the scale of the street or public space.
2.6 Laneways	To provide a limited number of smaller shopping lanes, secondary to the street based retail activity, that offer an alternate experience to the Main Street environment. These will range from wider throughfares to more intimate, wholly pedestrian laneway routes which bisect the city blocks and provide a high degree of permeability and fine grain texture.	General	▪ Laneways which provide a degree of additional complexity to the built form within the precinct and create public pedestrian through routes within any public or commercial places such as the Office Park north of Main Street. ▪ Laneways which are occupied predominantly by shopfront facades at laneway level, with secondary uses at upper levels. Upper level activation will be provided to allow for passive surveillance. ▪ Laneways which are open air with some form of shade / shelter / roof cover (semi enclosure) which may contain canopied facades or higher level rain screen canopies across their width. In particular locations, arcades (enclosed spaces) may take the place of a traditional laneway format but with a greater emphasis on quality and detail of materials and function. ▪ Laneways which include discrete places for people to rest and interact and include points of interest which act as 'way-finding' markers.
2.7 Signage and Advertising	To incorporate signage into building design to include strong corporate, community or wayfinding graphics integrated with the built form.	Main Street, Station Street, Transit Street, all squares and public spaces.	▪ Shop signage which is integrated with the building's facade design/fenestration. ▪ Three dimensional signage which provides decorative elements above parapets which adds to the vitality of the facade design and composition. ▪ Limited pylon signs with the exception of locations on the periphery of the Centre, on main roads. ▪ Signage below the canopy which responds to the approach direction and sightline of the viewer, both parallel with and perpendicular to the shopfront and building facade.

Roof forms which are symbolic or contain real activities

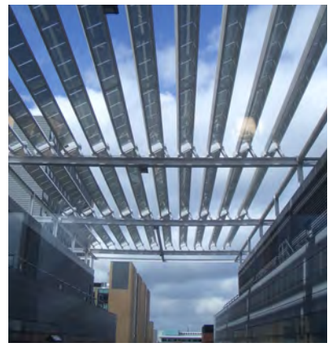


Entries to arcades or laneways celebrated by a modest increase in setback.

Glazed and visually permeable shopfronts at street level with steel, aluminium or timber framing.

Predominantly masonry facades above street level with a mix of natural stone and timber cladding.

Intimate, wholly pedestrian laneway routes which bisect the city blocks.



Open air and weather protection details to be integrated into laneways.

2. Built Form Element	Built Form Design Objectives	Applicable Area	Preferred Outcome
2.8 Energy Efficient Building Design	To design buildings and facades to respond to the energy challenges imposed by orientation or exposure, and recognise and celebrate these demands in form, material or fenestration.	General	▪ Sustainable and efficient land use which optimises multi-level development, including shop-top development and below ground and roof top parking areas. ▪ Significant north facing roof spaces which facilitate energy production; use large roof expanses in the retail core to capture and store solar energy for reuse throughout the centre. ▪ Designs which cater for seasonal change / seasonal building adaption. ▪ Adaptable designs which provide opportunity for future re-use, renovation or disassembly and recycling, including design for later construction of additional levels over speciality shop zones. ▪ Buildings design and orientation which make maximum use of daylight and solar energy for illumination and heating.
2.9 Water Management	To minimise stormwater run-off within the Toolern Town Centre and prioritise water capture, storage and re-use. To minimise consumption of potable water for landscaping.	General	▪ Water capture and storage solutions (including roofs and tanks). ▪ Sediment basins and ponds which are designed as part of car parks, which treat water for release into receiving waters at pre-development flows and providing attractive landscape features. ▪ Incorporation of grey water treatment and re-use systems (in accordance with EPA requirements) which provide additional water sources for irrigation of landscapes, cleaning and toilet flushing. ▪ Collection and re-use of stormwater for landscape irrigation, toilet flushing and cleaning. ▪ Incorporation of water sensitive urban design techniques to manage water before it is discharged from the site. ▪ Bioretention swales, basins or rain gardens which improve stormwater quality and provide attractive landscape features. ▪ Inclusion of Water Sensitive Urban Design techniques in at-grade car parks, between rows of car parking to treat stormwater before it is discharged from the site to passively irrigate vegetation and treat stormwater.

Design of building facades which respond to the energy challenges.

Signage below the canopy.

Facilitate energy production.

Water Sensitive Urban Design techniques in at-grade car parks, between rows of car parking to treat stormwater before it is discharged from the site and passively irrigate vegetation.

Built in water capture and storage including roofs and tanks.

3. Access & Circulation Element	Access & Circulation Design Objectives	Applicable Area	Preferred Outcome
3.1 Pedestrian and Cycle	To prioritise walking as the easiest and most efficient way of moving within the Town Centre. To provide walking and cycling as suitable transport alternatives in order to minimise the number of vehicle trips.	General	▪ Development which provides a sense of enclosure at footpath level (on Main Street, Station Street and Transit Street in particular), that gives the pedestrian protection from the sun, wind and rain. ▪ Well defined, attractive and safe pedestrian friendly footpath system with minimal road crossing points and clear sight lines to vehicle crossovers. ▪ Development which contributes to creating a legible and permeable pedestrian network. The network will be reinforced by strong visual and physical connections between the key nodes. ▪ Footpath widths which support the social life of the street and accommodate pedestrian traffic, wheelchairs, prams etc and minimise level changes and physical barriers. ▪ Footpath and road design which reinforce a "triangle" shaped pedestrian flow between the train station and Main Street (via the Urban Lane and Station Street) as the primary pedestrian route. ▪ Roads which are clearly designated for pedestrian / cyclist circulation or loading and servicing vehicles. Service Roads and Transit Street perform the major servicing routes. Where as Main Street and Station Street are the major pedestrian areas. ▪ Prioritise the pedestrian and cycle links from the adjoining communities in the south to the train station in Toolern Town Centre. ▪ Market the use of bicycles and walking by providing maps of the extensive network of on and off street networks and local amenities (shops, banks, etc), in the vicinity of the site.
3.2 Public Transport	To encourage public transport use and integrate it with the Town Centre. To ensure adequete signage and "way finding" measures are provided in the Town Centre to maximise patronage.	General	▪ A street layout which ensures public transport services are easy to deliver and efficient to use. ▪ High quality amenity waiting areas which are integrated with the transport plaza/bus interchange/train station.
3.3 Vehicles	To minimise the visual impact of loading bays and service areas when viewed from the surrounding streets and other key viewing areas.	General	▪ Loading which is located at the rear or side of the property, away from the primary street frontage. ▪ Loading which is integrated into the design of the building so that loading occurs internally. ▪ Consolidated entry and exit point for each site which minimises disruption to footpaths.
3.4 Road Cross Section	To ensure roads are developed in accordance with the role and cross-sections outlined in Section I of this UDF.	General	▪ A road network which caters for a range of vehicle, pedestrian and cycle movements.

Water sensitive urban design techniques.

Weather Protection in the streetscape.

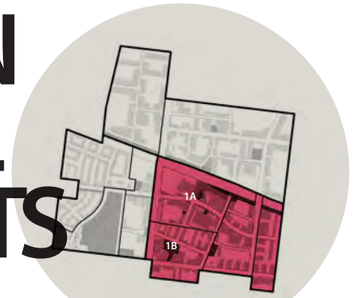
Footpath widths to support the social life of the street and accommodate expected pedestrian traffic.

High amenity waiting areas integrated with the transport plaza/bus interchange/train station.

Bicycle parking facilities in the public realm.

3.2 Toolern Central Precincts

TOOLERN CENTRAL PRECINCTS



OVERVIEW

The Toolern Central Quadrant contains four development precincts as follows:

- 1A Toolern Core
- 1B Toolern Civic
- 1C Toolern Mixed Use
- 1D Toolern East

These are discussed in the following section..

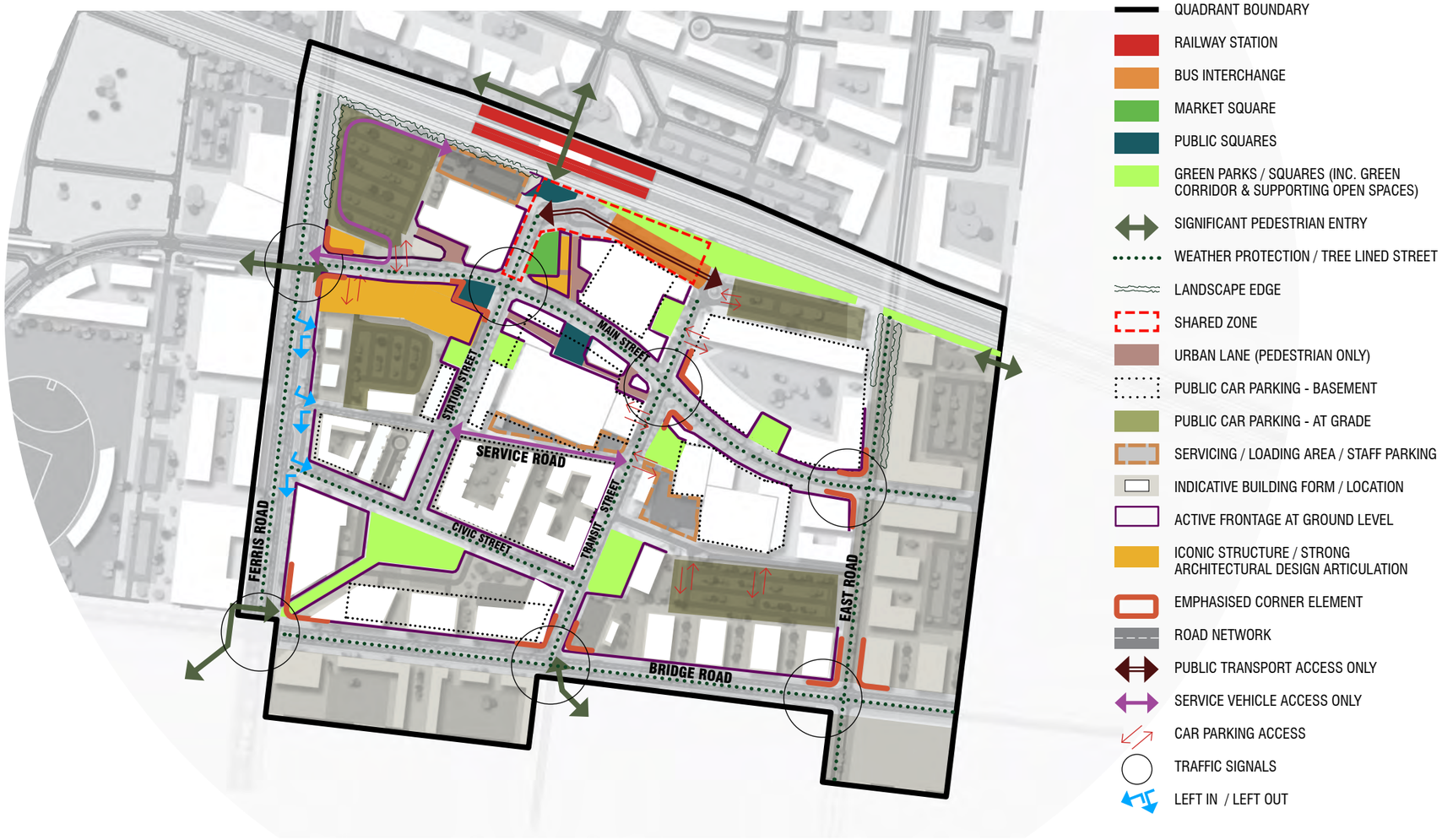
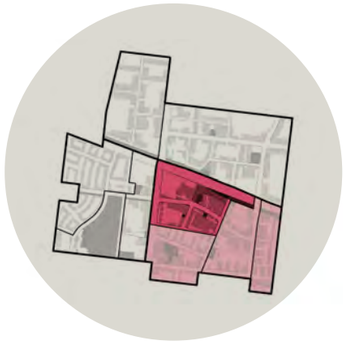


Figure 39_ Toolern Central

3.2.1 Precinct 1A - Toolern Core



OVERVIEW

Precinct 1A is the Toolern Core, containing a number of important retail, civic and transport functions. As one of the early stages of development within Toolern, these functions will set the standard for public realm and built form within the Town Centre.

ISSUES & OPPORTUNITIES

The following issues and opportunities have been identified within Precinct 1A:

- Opportunity of single land ownership.
- Opportunity to deliver a new bus interchange, integrated with the Toolern Train station.
- Issues relating to the staged delivery and upgrades to the Melton railway line.
- Issues and opportunities relating to the timing and delivery of the rail - road grade separation at Ferris Road (road under).
- Issues and opportunities in the delivery of the first stage of retail (supermarket and convenience) in a greenfield environment.
- Opportunities to establish a clear road and movement hierarchy for the precinct.
- Opportunities to establish a pedestrian-based core and 'Main Street' with associated retail, café and commercial uses.

KEY CATALYST SITES & PROJECTS

1. Toolern train station, bus interchange & transit plaza - A high quality public realm surrounding the station precinct.

2. Market Square - An engaging central meeting place and a clear destination point within the Town Centre.

3. Main Street - A pedestrian orientated shopping street.

4. Ferris Road upgrades, widening and grade-separation - Construction of Ferris Road to provide safe and convenient access to the Town Centre.

5. Toolern Library and Council offices - A major civic and commercial office presence in the core retail area.

6. Civic Piazza - The central civic public space at the intersection of Main Street and Station Street.

7. Green Corridor - A pedestrian and cycle link along the rail reserve.

8. Village Hub - A public space and forecourt entrance to major retail destination.

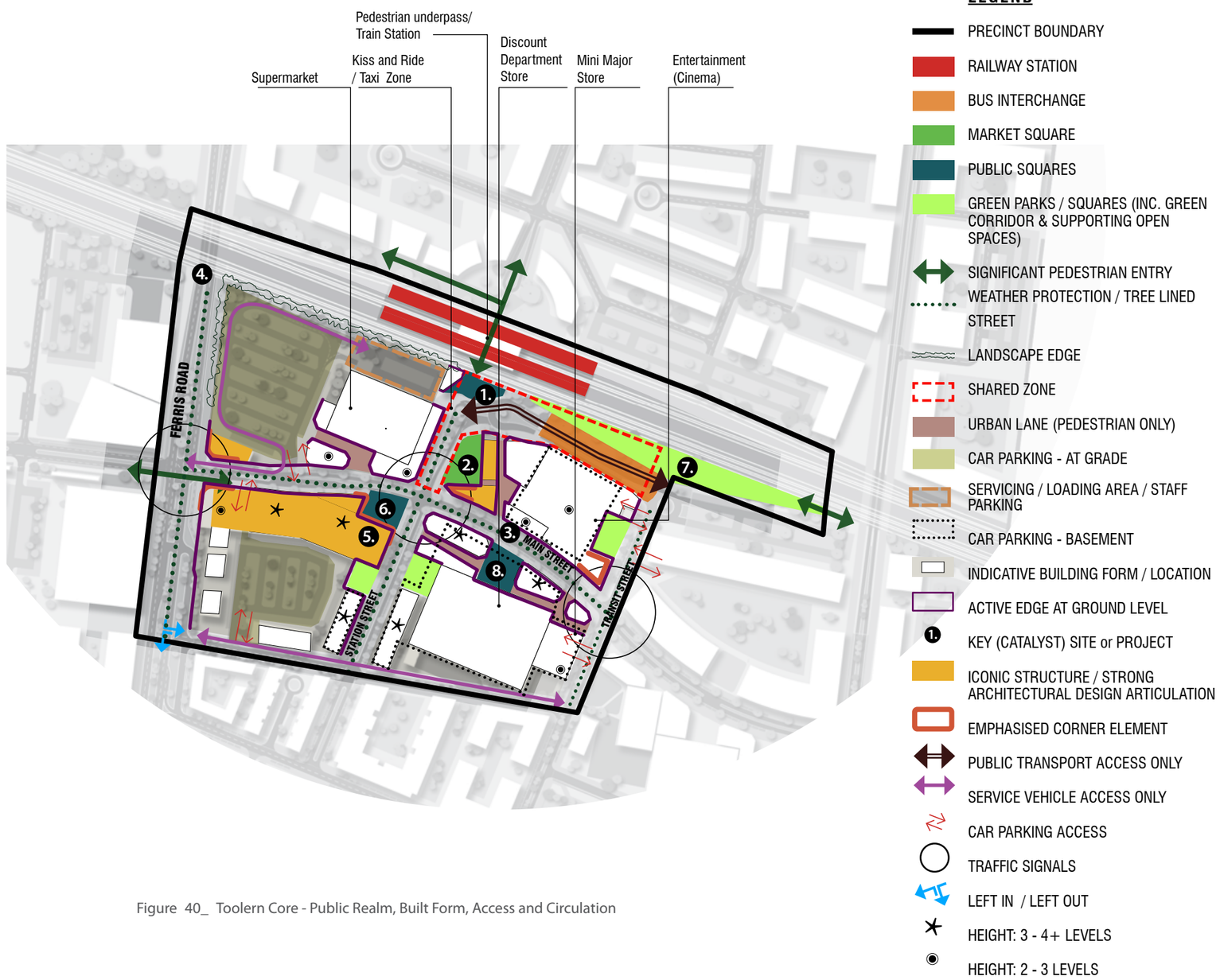


Figure 40_ Toolern Core - Public Realm, Built Form, Access and Circulation

PRECINCT 1A - TOOLERN CORE

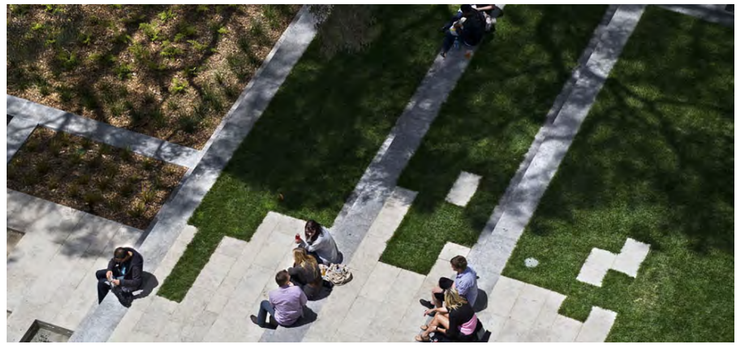
The tables below outline the key objectives and preferred outcomes for Precinct 1A. Any application for use or building and works in this Precinct must meet the objective and where possible, this should be in accordance with the preferred outcome.

The accompanying images included in Section 6 assist in articulating the preferred outcome for the precincts.

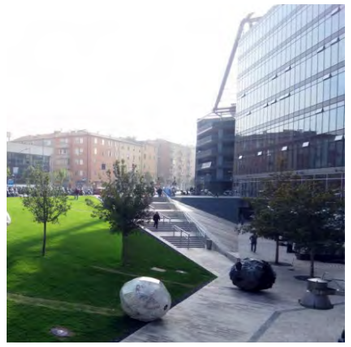
The following tables are to be read in conjunction with the vision in Section I of this UDF as well as the and design objectives and preferred outcomes for the Toolern Town Centres on Page 53-57.

The design objectives are intended to generate a dense urban character within the Toolern Core. Built Forms should reinforce the shape and function of the streets they define, and reinforce the drama and function of public spaces. Streets must present a coherent and relatively consistent streetscape in form and material.

1. Public Realm Element	Public Realm Design Objectives	Applicable Area	Preferred Outcome
1.1 Public Spaces and Pedestrian Connections	To create an engaging central meeting place (the Market Square) which has a passive function for the Toolern community and a clear destination point at the 'heart' of the Town Centre. To ensure the space is designed in accordance with the role and character outlined in Section 1 of this UDF.	Market Square Shown on Figure 22 in Section I.	▪ Landmark buildings, structures and water as key elements of the design and landscape treatment for the Market Square which signifies its importance in the hierarchy of public space. ▪ Street trees adjoining the Market Square which clearly define the edge of the space. ▪ Active and articulated facades adjacent to the Market Square which terminate view lines and frame the space and contribute to the aesthetic and provide a sense of enclosure. ▪ Public space networks which direct people into this space and highlight its importance. ▪ A series of smaller, more intimate 'spaces' with differing functions within the Market Square, using a common design element to link them.
	To create a highly urban environment within Village Hub that is integrated with the retail core and includes places to meet, rest and retreat. To ensure the space is designed in accordance with the role and character outlined in Section 1 of this UDF.	Village Hub Shown on Figure 22 in Section I.	▪ A Village Hub which acts as a forecourt to the major retail anchor and is also a public square in its own right. ▪ A series of cafes, restaurants and outdoor stalls which spill out into the village hub to 'stitch' the retail and public realm components together (Image D).



A number of 'spaces' with differing functions or uses within the Market Square, using a common design element to link them.



Urban Spaces.

Urban Spaces act as a forefront to major retail anchors.

Streetscape and other public space networks which direct people into the Market Square and highlight its importance.

1. Public Realm Element	Public Realm Design Objectives	Applicable Area	Preferred Outcome
1.2 Landscaping	To create a distinctive landscape experience along the green corridor for pedestrians and cyclists accessing the Town Centre and train station. To enhance the view and general impression of the Toolern Town Centre when viewed from the Toolern Train Station and Melton rail line.	Green Corridor.	▪ A shared pedestrian and cycle path along the rail corridor which directly links with the pedestrian rail underpass at the Toolern Train Station. ▪ Densely vegetated green corridor which filters views to the rail corridor and provides local amenity to attract business and residential uses to this area. ▪ A pedestrian/cycle corridor which includes minor activity nodes / resting areas at key points (particularly at the termination of viewlines). ▪ Any fencing of the rail reserve (particularly along the Green Corridor) should be visually unobtrusive. constructed of sensitive materials, and generally low profile (up to a height of 1.2m).
	To create an urban landscape palette that reinforces the visual legibility and character of Toolern. Mature avenue tree planting to provide a striking streetscape and lower level ground cover to identify key pedestrian settings and major pedestrian links. To provide different paving and landscape treatments along Main Street to signify its status as the principal commercial, civic and pedestrian thoroughfare. To provide continuous footpaths on both sides of Main Street which integrate with raised pavement pedestrian crossings at key points and at signalised intersections inluding Station Street, Transit Street & the Village Hub.	Main Street & Station Street Shown on Figure 22 in Section I.	▪ Tree lined streets which emphasise pedestrian priority streets, define the public realm, direct visitors to the key public spaces and emphasise view lines to the Market Square, Train Station and Civic Piazza/ Library. ▪ Landscape treatments within the widened verge which enhance the south side of Main Street as the dominant pedestrian environment. ▪ Inclusion of art works or feature pieces of furniture along Main Street which personalise and support the function of key places.
	To create a varied landscape character along Station Street which responds to the land uses including civic, residential, retail and transport uses.	Station Street Shown on Figure 22 in Section I.	▪ An urban landscape treatment along the northern section of Station Street which has a character and scale similar to Main Street. ▪ A series of small green squares along Station Street which provide a transition between land uses.

Public streets as priority pedestrian areas with low speed traffic.

Street furniture as an integral part of streetscape design.

Art works or feature furniture.

Tree lined streets to define the public realm.

PRECINCT 1A - TOOLERN CORE

2. Built Form Element	Built Form Design Objectives	Applicable Area	Preferred Outcome
2.1 Built Form	To ensure built form reinforces the legibility of Toolern Core from close and long range views. To encourage height along Main Street of a minimum of 2 storeys or equivalent (on the northern side of the street) and a minimum of 3 storeys or equivalent (on the southern side of the street). To allow for greater height along Station Street where appropriate recesses and setbacks above three storeys can be achieved. Minimum of 2 storeys to be achieved. Building height to respond to evolution of the Town Centre as identified in staging plans. To ensure built form adjacent to the Transit Plaza and bus interchange promotes the safe use of these spaces.	Main Street West and Central, Station Street, mid section of Transit Street. Shown on Figure 22 in Section I. Entertainment uses adjacent Transit Plaza.	▪ A conventional fine grained presentation at street level with large format buildings located behind. ▪ Varying building scales with greatest scale on Main Street (being of highest commercial order and community importance), and the least scale on Station Street (which is principally residential and pedestrian focused). ▪ Tallest built form within Precinct 1A along the south side of Main Street in the order of 3-4 levels. Moderate scale to the north of 2-3 storeys which allows solar penetration. ▪ Residential buildings along Station Street which have a continuous, terrace form, with clearly identified entry doors. ▪ Buildings at important intersections (such as Main Street/Station Street, Main Street/Transit Street or Main Street/Ferris Road) which are of sufficient scale and geometric presentation to clearly signal an entry portal to Main Street. ▪ Buildings on Main Street/Station Street intersection which have a sculptural form appropriate to the importance of this particular urban place. ▪ A Library/Civic Use and Civic Piazza which are integrated and a built form that reflects their use. ▪ Passive surveillance of Transit Plaza and the bus interchange are achieved through the incorporation of active frontages into building design.
2.2 Building Setbacks	To deliver buildings at street level which are built hard on the footpath edge, or the edge of any other public realm space such as squares or piazzas. To ensure that upper level facades align with the shopfronts below.	Main Street West and Central, Station Street from Main Street intersection to Transit Plaza. Northern section of Transit Street. Shown on Figure 22 in Section I.	▪ Cohesive streetscapes that are characterised by a consistent building setback relative to the street form and geometry. ▪ Immediate interaction between shopfront, building facades and the public realm (avoid colonnades or unnecessary courtyards). ▪ Upper floor forms which reinforce the geometry and alignment of the general street form. ▪ Entries to arcades or laneways or major destinations which are celebrated by a modest increase in setback to the street. ▪ Residential dwellings which present a modest, soft landscaped setback to Station Street in the order of 3-5 metres with verandahs and balconies projecting into the setback.
2.3 Weather Protection	To reinforce the urban frontage and create a unified presentation to the street through the integration of weather protection to encourage movement along streets in all weather conditions.	Main Street West and Central, Station Street from Main Street intersection to Transit Plaza. Shown on Figure 22 in Section I.	▪ Cantilevered canopies to all commercial shopfronts no more than 3.0m above footpath, but elevated further to signify an important entry to a specific destination. ▪ Laneways which are generally open air but may include weather protection by means of suspended sail forms capable of transmitting sunlight, and protecting from rain.
2.4 Laneways	To deliver a variety and hierarchy of pedestrian pathways throughout the Town Centre which connect various destinations and desire lines. These will range from major thoroughfares such as Main Street, to more intimate, wholly pedestrian laneway routes which bisect the city blocks and provide a high degree of permeability and fine grain texture.	General	▪ Laneways which provide a degree of additional complexity to the built form within the precinct and a cross section (of approximately 2:1 height to width ratio) to allow solar penetration into the laneways north of Main Street. (South of the Main Street this may be 4:1).

Open air Laneways which include weather protection.

Upper levels facades align with the shopfronts below, .

Conventional fine grained presentation at street level with large format forms (coarse built form) located behind.

Entries to major destinations distinguished from adjacent shopfronts.

Buildings at the intersection of Main Street and Ferris Road of sufficient scale and geometric presentation to clearly signal an entry portal to Main Street (civic building).

Buildings at important corners or intersections such as Main Street/Station Street or Main Street/Transit Street) celebrate their location and function through their siting and architecture.

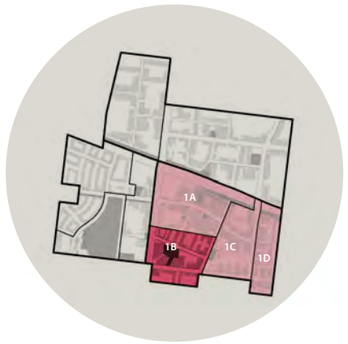
3. Access & Circulation Element	Access & Circulation Design Objectives	Applicable Area	Preferred Outcome
3.1 Transport Infractucture	To ensure the design of the Transit Square and Bus Interchange achieves the role and character outlined in Section I of this UDF and in the public realm section above.	Transit Square and Bus Interchange Shown on Figure 22 in Section I.	▪ A strong geometric canopy shape which gives the Transit Square and bus interchange a grand scale and character. ▪ A design and layout which celebrates and manages the activities associated with mass transit functions. ▪ A concourse which is enlivened by the placement of kiosks either manned or automatic as well as comfortable seating areas, planting and trees. ▪ A Transit square constructed from high quality cladding of natural materials capable of repeated cleaning and heavy foot traffic.
	To create a quality transit interchange for all vehicle and pedestrians that fosters activity.	General	▪ A bus interchange that incorporates a two way system to accommodate buses only. ▪ Drop off/kiss and ride areas which are integrated with the street design allowing primary use of the space for drop off/pick at peak times and general use for the remainder of the day/night to ensure this land is properly utilised.
	To minimise the dividing effect of railway corridors on the Town Centre.	General	▪ A cycle and pedestrian network which improves connectivity around railway corridors through the provision of paths along the rail corridor, in the green corridor and paths to both sides of the rail corridor.
3.2 Vehicles	To provide safe, convenient access for all vehicles to and from the Town Core. To ensure truck movements are in accordance with the service vehicle access at or via the dedicated one way service vehicle access lane. No large delivery trucks are to travel on Station Street or Main Street central.	General	▪ Dedicated service lanes within Toolern Core to separate heavy and customer vehicles. ▪ A service lane on the southern edge of Toolern Core which provides direct access off Ferris Road for service vehicle access to development south of Main Street. ▪ Vehicle and service access which is limited to service lanes, away from the core retail and pedestrian streets.
3.3 Road Cross Section	To ensure roads are developed in accordance with the role and cross-sections outlined in Section I of this UDF.	General	▪ A road network which caters for a range of vehicle, pedestrian and cycle movements.

Semi enclosed urban lanes, secondary to the street based retail activity.

Convenient and prominent transport interchange.

A strong geometric canopy shape which gives the Transit Square and bus interchange space, a defined character and identity.

3.2.2 Precinct 1B - Toolern Civic



OVERVIEW

Precinct 1B is Toolern Civic which is located on the southern edge of the town centre, at the intersection of Ferris Road and Bridge Road. Its role is to integrate a number of primary civic uses as well as residential/ commercial uses consistent with the regional role of the Town Centre. One of the primary objectives for the precinct is to establish a sense of arrival for pedestrians and vehicles travelling from the south and south-west to the Town Centre.

KEY CATALYST SITES & PROJECTS

1. Ferris Road upgrade and widening.
2. Bridge Road extension to the east.
3. Delivery of Civic Green.
4. Delivery of a 'green' entry to the Town Centre.

ISSUES & OPPORTUNITIES

- Opportunities for 'placemaking' within the design of the Civic Green.
- The delivery of the co-located civic uses will be dependant on funding availability.
- Issues relating to the delivery and timing of the Bridge Road extension (to the east).

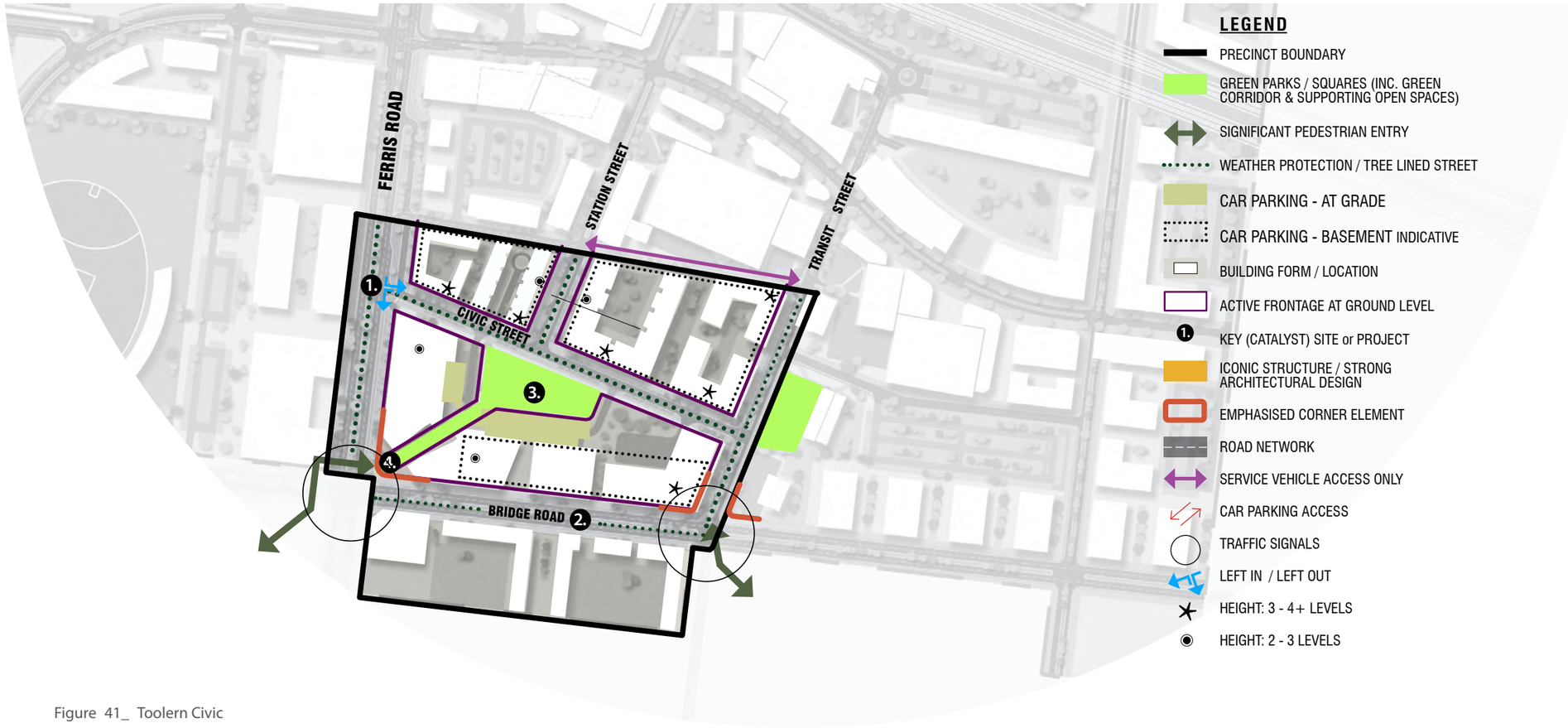


Figure 41_ Toolern Civic

The tables below outline the key objectives and preferred outcomes for Precinct 1B. Any application for use or building and works in this Precinct must meet the objective and where possible, this should be in accordance with the preferred outcome.

The accompanying images included in Section 6 assist in articulating the preferred outcome for the precincts.

The following tables are to be read in conjunction with the vision in Section I of this UDF as well as the and design objectives and preferred outcomes for the Toolern Town Centres on Page 53-57.

The design objectives are intended to generate a dense urban character within the Toolern Core. Built Forms should reinforce the shape and function of the streets they define, and reinforce the drama and function of public spaces. Streets must present a coherent and relatively consistent streetscape in form and material.

1. Public Realm Element	Public Realm Design Objectives	Applicable Area	Preferred Outcome
1.1 Public Spaces and Pedestrian Connections	To provide effective and enjoyable public spaces and places that have a clear role in the Toolern Civic Precinct and are designed and constructed to best meet this role. To ensure public spaces integrate into the wider street and public realm.	General	▪ Development which retains and celebrates key view lines to the main public spaces (the Civic Green). ▪ Public spaces which reflect the scale and use of surrounding development.
	To ensure the Civic Green is designed and delivered in accordance with the role and character outlined in Section 1 of this UDF. To create an integrated forecourt and landscaped public space (the Civic Green) which is framed and activated by the civic and community buildings on Ferris Road and Bridge Road.	Civic Green Shown on Figure 22 in Section I.	▪ A Civic Green which functions as the visual and physical termination of the Station Street axis. ▪ Surrounding buildings which display substantial height on the south and south west to enclose the space and a lesser height to the north to allow solar exposure. ▪ A design which provides suitable locations for civic art and areas capable of catering for medium sized public events or markets. ▪ A landscape character which differs from that in the Toolern core, captures a sense of civic pride and is largely based on soft green surfaces with trees providing most of the shade.
1.2 Landscaping	To encourage an urban landscape for Station Street that reinforces the visual legibility and character of Toolern with mature avenue tree plantings and lower level ground cover.	Station Street Shown on Figure 50.	▪ Tree planting which emphasises pedestrian priority, providing shade and shelter for people. It should also reinforce the key pedestrian link to the linear park and future community to the south west. ▪ Tree Planting which defines the edge of the Civic Green (on Civic Street).
	To create a landscaped entry into the Toolern Town Centre on the intersection of Ferris Road and Bridge Road, that provides easy pedestrian and cycling access into the Civic Green and Station Street. This connection is to link with the recreation and residential areas south-west of the Town Centre.	Ferris and Bridge Road intersection Shown on Figure 4 in Section I.	▪ Incorporation of landmark buildings, structures and features in the landscape which identify the importance of the corner of Ferris Road and Bridge Road. ▪ Promote the use of active and articulated facades to terminate view lines and contributing to the dynamics of the space by providing a sense of enclosure. ▪ Built form which creates a sense of enclosure and creates strong vistas terminated by appropriate built form of landscape treatments.

Focus activity in the public realm of the streets and spaces - Station Street, Civic Street and the Civic Green.

Soft green surfaces or with trees providing most of the shade at Civic Green.

Key view lines retained and celebrated to main public space node being the Civic Green and surrounding buildings.

2. Built Form Element	Built Form Design Objective	Applicable Area	Preferred Outcome
2.1 Built Form and Building Setbacks	To carefully compose facades within streetscapes in response to conventions of base, middle and top and ensure that the materials, fenestration and texture reflects the uses they accommodate. To design facades to relate in form, height and material to those they abut, in order to create a unified streetscape.	Station Street from Civic Street to Service Road, Civic Street, Transit Street from Bridge Road to Service Road. Shown on Figure 41.	▪ Built form within the precint which reflects the civic uses of the buildings. ▪ Entries to major civic buildings, (ie Courts, Police) which are distinguished from adjacent facades by decorative fenestration details; graphics and signage, noble material, additional height, lighting. ▪ A fine grain subdivision in the precinct with the exception of civic buildings which present a grander scale and detail.
	To ensure that built form reinforces the legibility of Toolern Civic from close and long range views. To encourage height north of Civic Street (between 3-6 storeys) but ensure the Civic Green retains sun penetration. To create a highly urban environment along Station Street with a mixture of commercial and residential uses above.	Station Street from Civic Street to Service Road, Civic Street, Transit Street from Bridge Road to Service Road. Shown on Figure 41.	▪ Conventional fine grained presentation at street level with large format forms located above and behind this streetscape shield or sleeve. ▪ A civic precinct which includes dominant built forms with large scale elements and presentation. Office or other commercial buildings north of Civic Street between 3-6 storeys in height. Residential buildings along Station Street to have a continuous, terrace form, with clearly identified entry doors. Minimum building heights of 2-3 storeys in this location or taller forms with greater built form setbacks above 3 storeys. ▪ Buildings at the intersection of Bridge Road and Transit Street which are of sufficient scale and geometric presentation to clearly signal an entry to Main Street. ▪ Residential dwellings which presents a modest, soft landscaped setback to Station Street in the order of 3-5metres with verandahs and balconies projecting into this setback. ▪ Design of the precinct which present the Civic buildings as "pavilions in the park" with substantial setbacks and a garden setting.
2.2 Weather Protection	To provide all street facades north of Civic Street with continuous weather protection to the public realm and encourage movement along streets in all weather conditions.	Station Street from Civic Street to Service Road, Civic Street, Transit Street from Bridge Road to Service Road. Shown on Figure 41.	▪ Cantilevered canopies which are provided to all commercial shopfronts no more than 3.0m above footpath, but elevated further to signify an important entry to a specific destination.

3. Access & Circulation Element	Access & Circulation Design Objectives	Applicable Area	Preferred Outcome
3.1 Vehicles	To provide safe, convenient access for all vehicles to and from Toolern Civic. To ensure truck movements are in accordance with the service vehicle access in Figure 41.	Service Lane Shown on Figure 41.	▪ Dedicated service lane on the northern edge of Toolern Civic which provides direct service access off Ferris Road for development south of Main Street.
3.2 Road Cross Section	To ensure roads are developed in accordance with the role and cross-sections outlined in Section I of this UDF.	General	▪ Road network which caters for a range of vehicle, pedestrian and cycle movements.

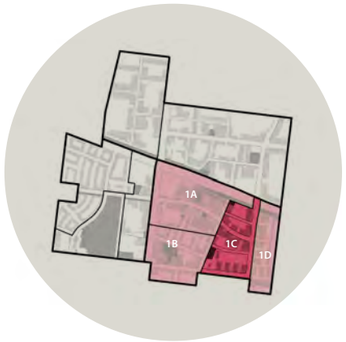
Entries to major buildings distinguished from adjacent facades.

Upper level uses and occupancy on Station Street.

Civic buildings presented as "pavilions in the park" with substantial setbacks and a garden setting.

Facades relate in form, height and material to those they abut, in order to create a unified streetscape.

3.2.3 Precinct 1C - Toolern Mixed Use



OVERVIEW

Precinct 1C is the Toolern Mixed Use Precinct. It provides an extension and continuation of Main Street as the east-west axis, lined by retail activity. The precinct has interface with East Road, which is the secondary north-south road connecting residential areas in the south with the Town Centre.

KEY CATALYST SITES & PROJECTS

1. Green Corridor link between East Road and the transit interchange
2. Main Street extension and pedestrian/ shopping environment
3. At-grade commuter carparking
4. East Road grade separation

ISSUES & OPPORTUNITIES

- Issue of the timing of delivery of grade separation at East Road to unlock value of the development land.
- Opportunity for at-grade commuter car parking in the short term with opportunities for multi level parking on the long term.
- Opportunity for additional entrance point into Town Centre via signalled intersections at Transit Street/ Bridge Road and East Road/ Main Street.

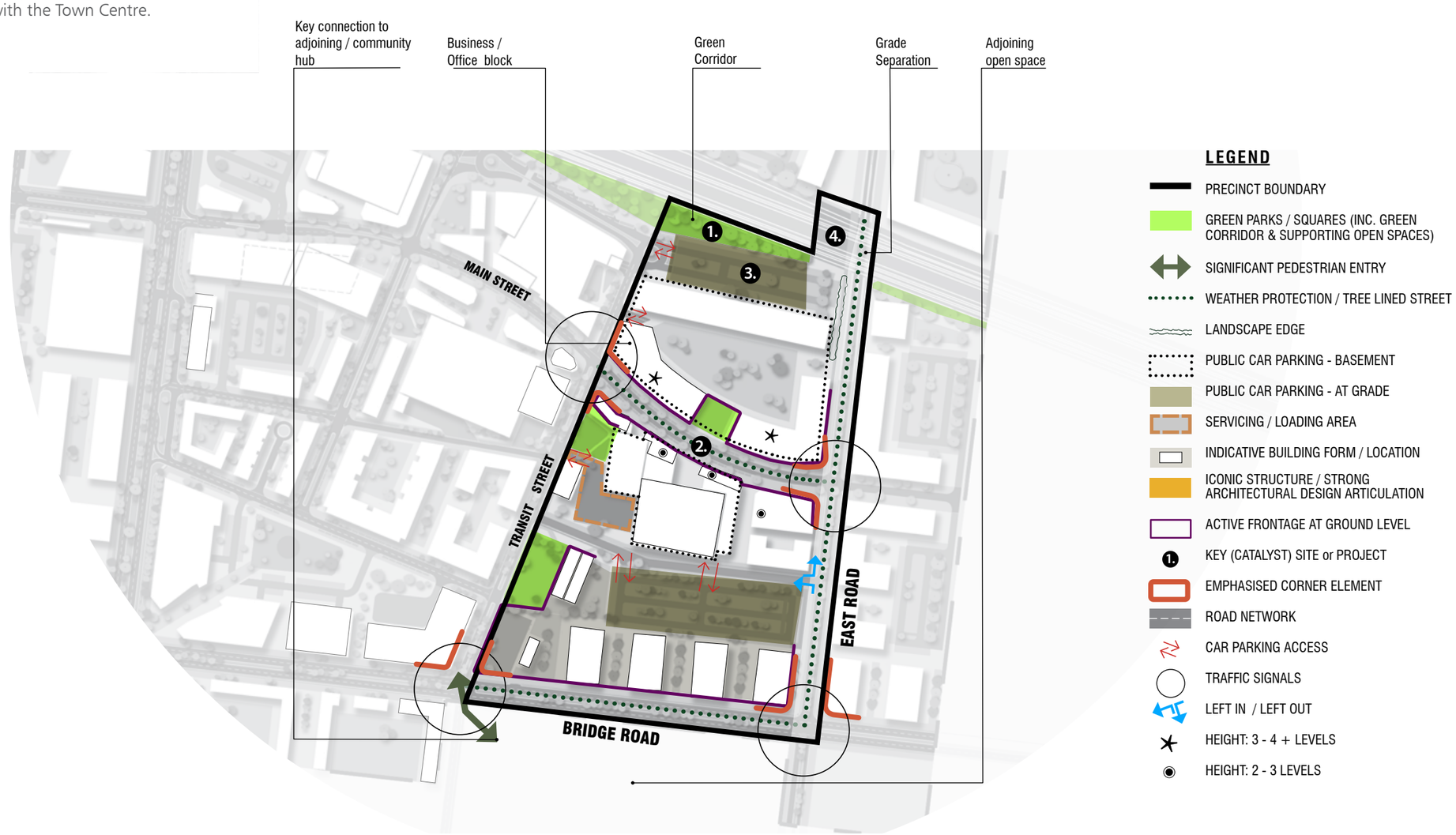


Figure 42_ Toolern Frame

PRECINCT 1C - TOOLERN MIXED USE

The tables below outline the key objectives and preferred outcomes for Precinct 1C. Any application for use or building and works in this Precinct must meet the objective and where possible, this should be in accordance with the preferred outcome.

The accompanying images included in Section 6 assist in articulating the preferred outcome for the precincts.

The following tables are to be read in conjunction with the vision in Section I of this UDF as well as the and design objectives and preferred outcomes for the Toolern Town Centres on Page 53-57.

The design objectives are intended to generate a denser urban character within the Toolern Core. Built Forms should reinforce the shape and function of the streets they define, and reinforce the drama and function of public spaces. Streets must present a coherent and relatively consistent streetscape in form and material.

1. Public Realm Element	Public Realm Design Objectives	Applicable Area	Preferred Outcome
1.1 Public Spaces and Pedestrian Connections	To create shared pedestrian and bicycle links into and through the core of the Toolern Town Centre connecting to key public spaces and transport services.	Green Corridor Shown on Figure 22 in Section 1.	▪ A landscaped pedestrian and bicycle corridor which runs east-west along the southern side of the rail reserve, with a pedestrian bridge included across East Road.
	To provide effective and enjoyable public spaces and places that have a clear role in Toolern Central and are designed and constructed to best meet this role. To create a connected network of passive landscape public space that links back into the core of the Toolern Town Centre.	General	▪ Development which ensures key view lines are retained and celebrated along Main Street through the centre of the precinct. ▪ A series of parks/squares as part of office development on the north side of Main Street. These may be privately owned but publicly accessible.
	To ensure that the public squares and piazzas within the Precinct are designed and developed in accordance with the role and character outlined in Section 1 of this UDF.	Transit Street, Main Street East, East Road, Bridge Road. Shown on Figure 22 in Section 1.	▪ An office park south of the rail line which delivers a "hollow square" format with a green square/park framed by a strong continuous urban form. This park will be located atop carparking undercrofts and may be publicly accessible but privately owned. As noted in Section 1, this land is also appropriate for retail uses if additional demand for retail is identified. If retail is developed on this parcel, a public space must be provided within 100m of the Main Street. ▪ A series of privately owned "pocket parks" which are located either within residential or commercial office areas which enliven the visual character of streets, but which are restricted for residents and office workers access.

A pedestrian/cycle corridor (green corridor)which includes minor activity nodes and resting areas at key points.

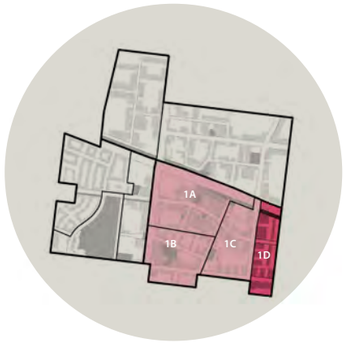
Small green squares separating different uses.

Hollow square and urban space enclosed by a strong urban form.

2. Built Form Element	Built Form Design Objectives	Applicable Area	Preferred Outcome
2.1 Built Form and setbacks	To deliver a sufficient building scale at street intersections and entry points to the precinct on Bridge and East Roads. This principle will apply equally to built form within particular street blocks, with corners being taller and most elaborate, and mid block forms lowest and least visually dominant.	Transit Street, Main Street East, East Road, Bridge Road Shown on Figure 42.	▪ Office or other commercial buildings north of Main Street which accommodate taller forms, between 3-6 storeys in height. Additional retail and residential uses may be considered if market demand exists, but this cannot replace the retail already anticipated in the UDF. ▪ Buildings at the intersection of Bridge Road/Transit Street and Main Street/East Road which are of a sufficient scale and geometric presentation to clearly signal an entry portal to Main Street.
	To create a generous, open character as the prime entry route to the Precinct from the south but with strong built forms.	Transit Street Shown on Figure 42.	▪ A street cross section and spatial character of the street which is increasingly enclosed by built form from south to north.
	To provide a generous green edge to the precinct on Bridge Road and East Road with buildings set as being in a parkland setting.	Bridge Road and East Road Shown on Figure 42.	▪ A 2.5m landscaped setback to East Road and Bridge Road which solely accommodates planting (no parking in this zone) and the shared path - as per Figure 32.
2.2 Weather Protection	To provide all street facades with continuous weather protection to the public realm and encourage movement along streets in rain, in shade or in sun.	Transit Street, Main Street East, East Road, Bridge Road. Shown on Figure 42.	▪ Cantilevered canopies to all commercial shopfronts. These should generally be no more that 3.0m above footpath, but may be elevated further to signify an important entry to a specific destination. (Canopies may not be necessary in the southern section of Transit Street).

3. Access & Circulation Element	Access & Circulation Design Objectives	Applicable Area	Preferred Outcome
3.1 Transport Infrastructure	To minimise the dividing effect of the railway corridors on the Town Centre.	General	▪ A cycle and pedestrian network which improves connectivity around railway corridors through the provision of paths along the rail corridor, in the green corridor and paths to both sides of the rail corridor where possible.
3.2 Vehicles	To provide safe, convenient access for all vehicles to and from the Town Core. To ensure truck movements are in accordance with the service vehicle access in Figure 42. or via the one way service vehicle access lane. To provide safe and efficient loading and servicing of retail sites; adequate access for commercial vehicle, service and loading activities.	General	▪ A service lane for service vehicle access to development south of Main Street between Transit Street and East Road. ▪ Vehicle and service access which is limited to service lanes, away from the core retail and pedestrian streets.
3.3 Road Cross Section	To ensure roads are developed in accordance with the role and cross-sections outlined in Section I of this UDF.	General	▪ A road network which caters for a range of vehicle, pedestrian and cycle movements.

3.2.4 Precinct 1D - Toolern East



OVERVIEW

Precinct 1D is Toolern East which is the eastern edge of the Toolern Town Centre. It serves as a 'sleeve' of activity along East Road, and a form of transition from the core urban areas of the Town Centre to the more standard residential neighbourhoods.

KEY CATALYST SITES & PROJECTS

1. Green Corridor connecting to the residential area to the east of the Town Centre.
2. Main Street / East Road and Bridge Road / East Road signalised intersections

ISSUES & OPPORTUNITIES

- Issue of timing of delivery of grade separation at East Road.
- Issue with the timing of development of East Road for access to Toolern Mixed Use precint and Toolern East.

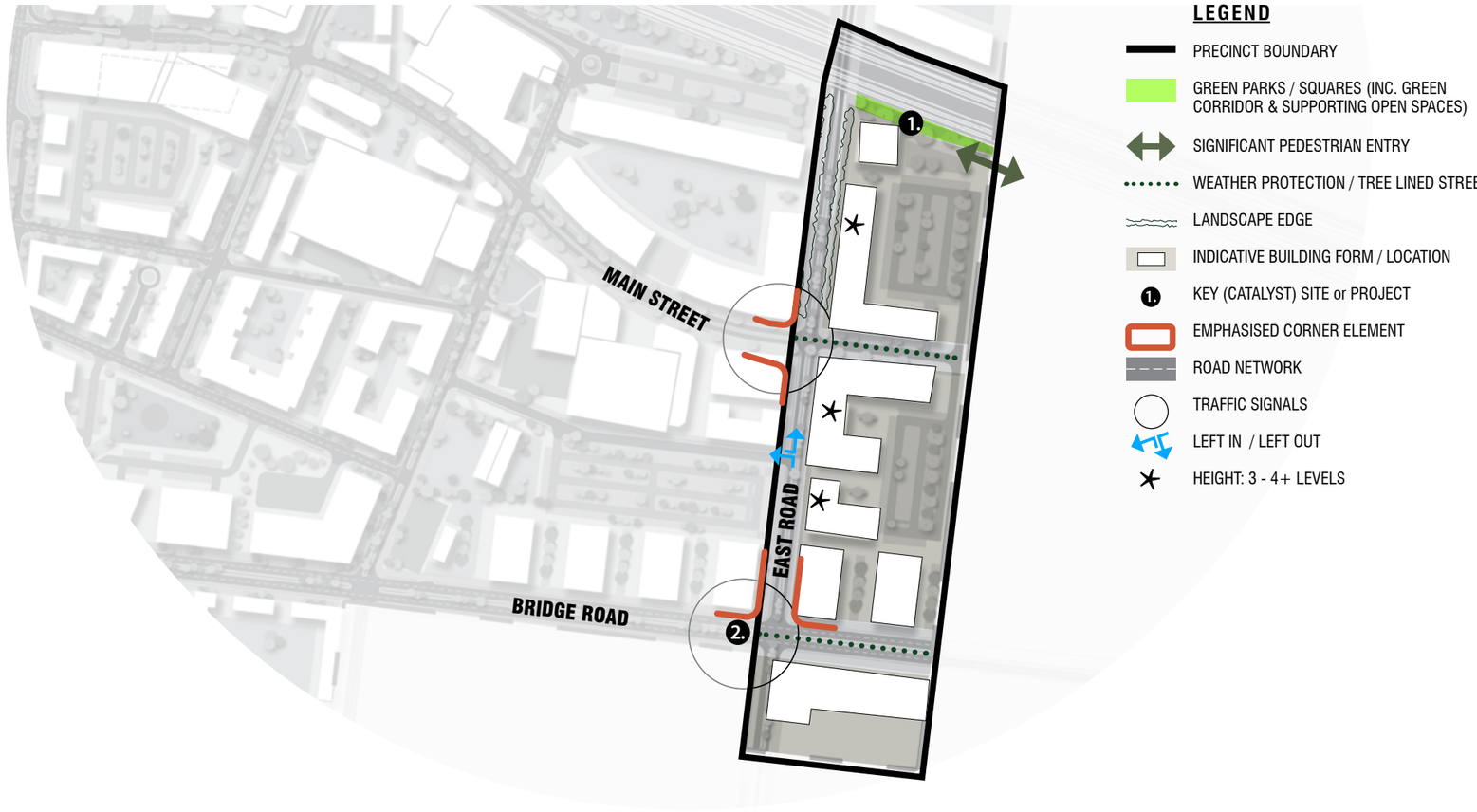


Figure 43_ Toolern East

The tables below outline the key objectives and preferred outcomes for Precinct 1D. Any application for use or building and works in this Precinct must meet the objective and where possible, this should be in accordance with the preferred outcome.

The accompanying images included in Section 6 assist in articulating the preferred outcome for the precincts.

The following tables are to be read in conjunction with the vision in Section I of this UDF as well as the and design objectives and preferred outcomes for the Toolern Town Centres on Page 53-57.

The design objectives are intended to generate a dense urban character within the Toolern Core. Built Forms should reinforce the shape and function of the streets they define, and reinforce the drama and function of public spaces. Streets must present a coherent and relatively consistent streetscape in form and material.

The design objectives are intended to generate a dense urban character within the Town Centre including precincts on the outer edge of the Centre. Precinct 1D will have a support and service function, and as a result a great deal of variety in the built form is anticipated within this precinct.

1. Public Realm Element	Public Realm Design Objectives	Applicable Area	Preferred Outcome
1.1 Public Spaces and Pedestrian Connections	To provide effective and enjoyable public spaces and places that have a clear role in Toolern Central and are designed and constructed to best meet this role.	East Road Shown on Figure 22 in Section I.	▪ Development must ensure key view lines are retained and celebrated along Main Street through the centre of the precinct.
	To provide roads and streets within the precinct that prioritise easy pedestrian movements particularly back to the Town Centre core.	East Road and Bridge Road. Shown on Figure 20 in Section I.	▪ A signalised intersection at East and Bridge Roads which prioritise pedestrian crossing time. Additional crossing points via signalled intersections at Main Street and East Road. ▪ A green corridor which links the residential areas to the east with the town centre and which diminishes the barrier of East Road by providing a pedestrian crossing as part of the East Road grade separation.

2. Built Form Element	Built Form Design Objectives	Applicable Area	Preferred Outcome
2.1 Built Form and Setbacks	To deliver a strong, direct relationship and interaction between the Public Realm and the facades which bound it. To reinforce the legibility of Toolern Central through the built form by adopting greatest building scale at street intersections and along East Road.	General Shown on Figure 43.	▪ Building setbacks on East Road which create a generous "green edge" to this important north-south collector road. A minimum 5m setback containing no carparking is to be provided. ▪ A "green corridor" on the interface between the precinct and the railway reserve which provides for substantial soft landscaping of a depth of 3-5m. ▪ Facades at street level which are predominantly glazed, orientated and located to reinforce the relationship. ▪ Upper level facades which provide a sense of enclosure and definition to the Public Realm spaces.
		General Shown on Figure 43.	▪ Large scale built form to major frontages on East and Bridge Roads, with a lower scale moving to the east to provide a transition to residential use. ▪ Built form of 2-3 storeys in height as a minimum in this location. Alternatively, taller forms with greater built form setbacks above 3 storeys.

3. Access & Circulation Element	Access & Circulation Design Objectives	Applicable Area	Preferred Outcome
3.1 Transport Infrastructure	To provide easy connection from the precinct to the transit interchange within the core of the centre.	East Road, Bridge Road Shown on Figure 20 in Section 1.	▪ Clear and easy pedestrian links along Main Street and the Green Corridor which connect the precinct directly into the transit interchange with bus and train services.
3.2 Vehicles	To provide safe, convenient access for all vehicles to and from Toolern East. To ensure truck movements are in accordance with the service vehicle access in Figure 43.	General	▪ Vehicle and service access which is located away from the East Road frontage wherever possible.
3.3 Road Cross Section	To ensure roads are developed in accordance with the role and cross-sections outlined in Section I of this UDF.	General	▪ A road network which caters for a range of vehicle, pedestrian and cycle movements.

Bus stops on East Road and Bridge Road service public transport routes into and around the centre.

Signage clearly indicates car parking areas to the rear of buildings that front East Road and Bridge Road.

Green Corridor.

3.3 Toolern West Precinct

TOOLERN WEST - PRECINCTS

OVERVIEW:

The Toolern West Quadrant contains four development precincts as follows:

- 2A Bridge Road
- 2B Ferris Road - Civic & Recreation
- 2C High Density Residential

These will be discussed in detail on the following pages.

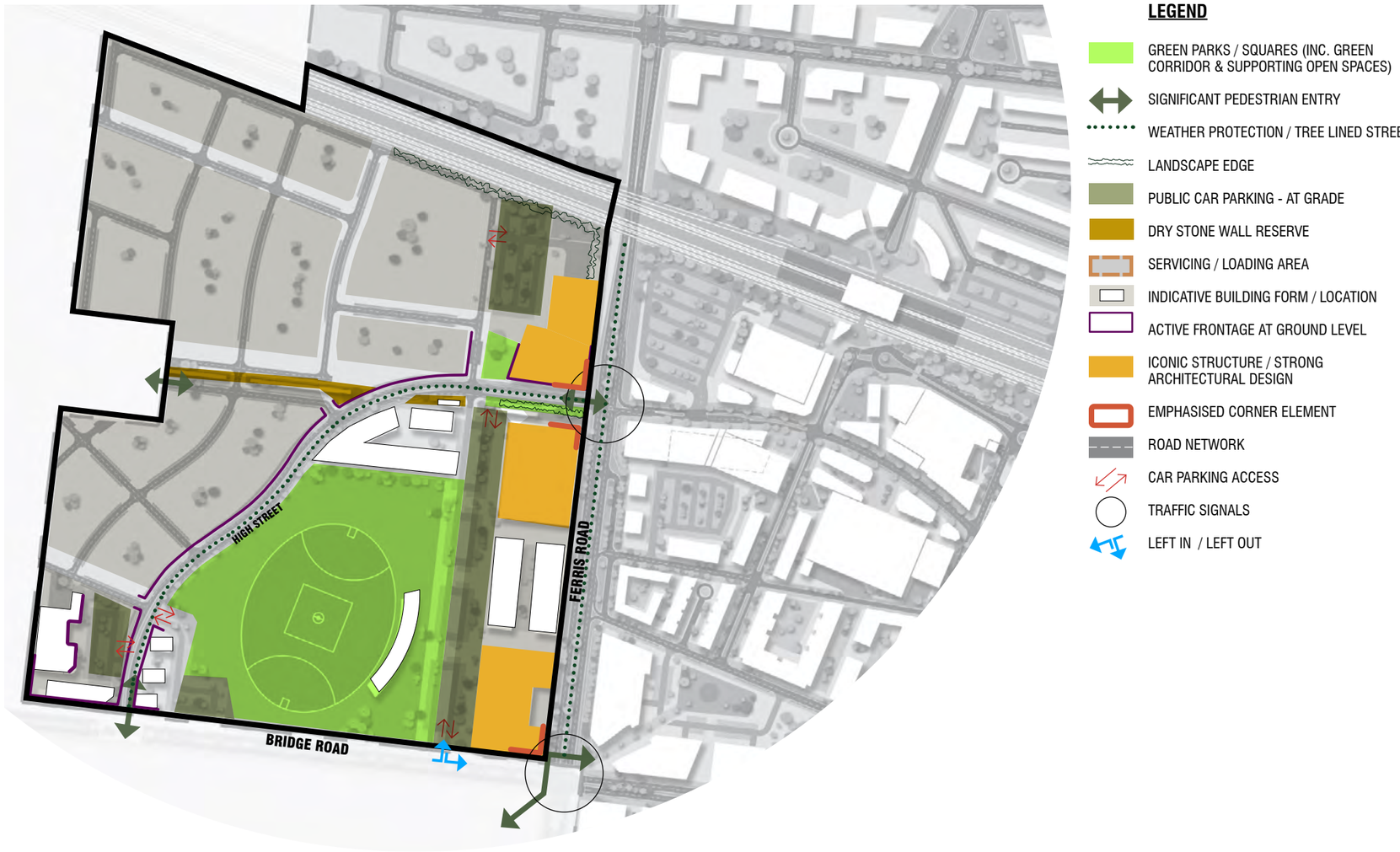


Figure 44_ Toolern West

3.3.1 Precinct 2A - Bridge Road

OVERVIEW

Precinct 2A extends along Bridge Road and includes a convenience and recreation node as well as the district sports fields. This precinct plays a key role in establishing the character and local identity of the Town Centre and will be one of the early stages of development.

KEY CATALYST SITES & PROJECTS

1. Toolern District Sports Grounds -A district oval for cricket and/or football of regional scale that incorporates sports stands and pavilions, car parking, training facilities and associated parkland space.

2. Local Convenience Hub - A local convenience centre, at the south-western corner of the Toolern West quadrant, to provide convenience retail early in the Town Centre staging for new residential neighbourhoods. The LCC is not intended to detract from the early commencemnet of development within Toolern Central (core).

ISSUES & OPPORTUNITIES

- Opportunity of single land ownership within the precinct.
- Opportunity to deliver significant open space early in the development of the Town Centre.
- Opportunity to incorporate a local convenience hub with adjacent residential development early in the development of the Town Centre and Toolern community.
- Opportunity to incorporate the dry stone wall into a green link along High Street.

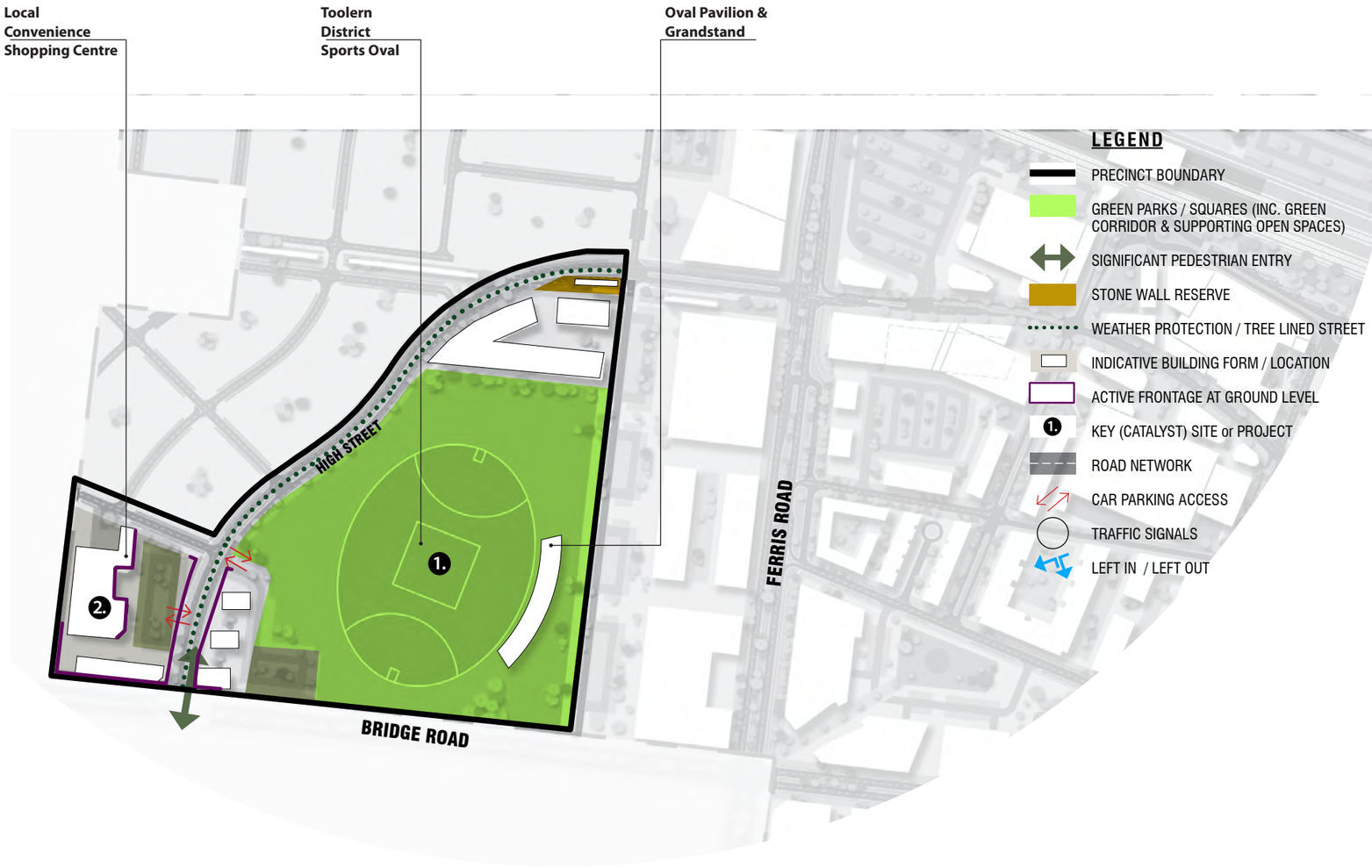


Figure 45_ Bridge Road Local Centre

PRECINCT 2A - BRIDGE ROAD

The tables below outline the key objectives and preferred outcomes for Precinct 2A. Any application for use or building and works in this Precinct must meet the objective and where possible, this should be in accordance with the preferred outcome.

The accompanying images included in Section 6 assist in articulating the preferred outcome for the precincts.

The following tables are to be read in conjunction with the vision in Section I of this UDF as well as the and design objectives and preferred outcomes for the Toolern Town Centres on Page 53-57.

The design objectives are intended to generate a dense urban character within the Toolern Core. Built Forms should reinforce the shape and function of the streets they define, and reinforce the drama and function of public spaces. Streets must present a coherent and relatively consistent streetscape in form and material.

1. Public Realm Element	Public Realm Design Objectives	Applicable Area	Preferred Outcome
1.1 Public Spaces and Pedestrian Connections	To provide effective, enjoyable and attractive public spaces and places that have a clear role in Toolern West and are designed and constructed to best meet this role.	General	▪ Development which emphasises key view lines to the district oval and Pavilion. ▪ A series of public spaces which leverage off or are associated with the district oval which enable a 'sharing' of facilities. ▪ Public spaces incorporated within the local convenience hub which are typically north facing with built form along the southern boundary. ▪ A local convenience hub which concentrates shops into continuous active frontages. ▪ Visual interest in the public realm which includes the integration of public art particularly in areas such as High Street, and the District Oval open space areas.
	To develop streetscapes and public places that reflect a unique character for Toolern and reinforce the Toolern 'vision', with significant landscape character planting.	General - High Street Shown on Figure 27 in Section 1.	▪ Wayfinding and signage for Toolern West to create a character and identity for Toolern through materials, finishes and street furniture. ▪ A streetscape character along High Street which reinforces the extension of the Main Street core to the east of Ferris Road, and visually read as the key street in the precinct. ▪ Ground based soft and hard landscaping on all 'tree lined boulevards' which create a pedestrian experience. ▪ Landscape which integrates heritage elements (dry stone walls), particularly in the landscape along High Street. ▪ Vegetation which is used to provide shade, shelter and good solar access; closely spaced on the eastern side of the road with larger trees to the western side of the road (subject to key view lines).
	To ensure the minor public squares and piazzas in Precinct 2A are designed in accordance with the role and character outlined in Section I of this UDF.	High Street south (convenience retail). Shown on Figure 22 in Section 1.	▪ A small gathering place within the heart of the local convenience centre which provides for public congregation and offers multiple address points within the centre.
	To prioritise walking and cycling as the easiest and most efficient way of getting around Toolern West and connecting to the other areas in Toolern.	General - Streets Shown on Figure 5 in Section 1.	▪ Development which provides a sense of enclosure at footpath level on High Street particularly through the local convenience hub, that gives pedestrians protection from the sun, wind and rain. ▪ Well defined, attractive and safe pedestrian friendly footpath system with a particular focus on connecting communities to the south with Toolern Core via High Street and the District Sports Ovals.

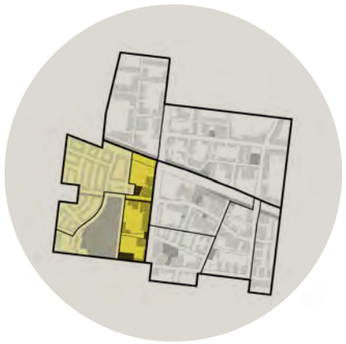
Mixed-uses along High Street activate the footpath with visually permeable frontages.

Shared spaces with multiple functions associated with the District Oval.

2. Built Form Element	Built Form Design Objectives	Applicable Area	Preferred Outcome
2.1 Built Form	To ensure built form reinforces the legibility of Toolern Town Centre from close and long range perspectives. The scale of built form will be greatest at street intersections, and at entry points to the precinct on Bridge Road.	High Street, Bridge Road Shown on Figure 45.	▪ Buildings at the intersection of Bridge Road and High Street which are of sufficient scale (at least present as 2 storeys) and geometric presentation to clearly signal an entry to Main Street. ▪ Roof forms which are symbolic or contain real activities.
	To define a close relationship between built form and public realm uses. Upper level uses and occupancy should activate and enliven the building facades above this interface. To ensure that the local commerce centre on High Street serves a small, local catchment to provide early amenity for residential arreas. To ensure it does not impede on development of the Toolern Town Centre, it must not exceed 1200m² of retail premises.	High Street, Bridge Road Shown on Figure 45.	▪ At street level, uses are to be predominantly public (ie retail, office or shopfront in character), particularly within the local convenience hub. Residential may also occur at street level provided that additional setback can be provided and public rooms face the street to ensure passive surveillance of the public realm. The convenience hub is only for localised neighbourhood retail and amenities. ▪ At upper floors, uses may be residential or office.
2.2 Building Setbacks	To ensure a strong and direct relationship between the Public Realm and the facades which bound it within the convenience hub. Visual permeability is crucial to achieve this. To celebrate and define the entry points at the intersection of Bridge and High Street with dense built form and minimal setbacks to both streets.	High Street south, Bridge Road Shown on Figure 45.	▪ Cohesive streetscapes which are characterised by a consistent building setback relative to the street form and geometry. ▪ Immediate interaction between shop front building facades and the public realm. Seek to provide minimal or zero setbacks to streets and avoid colonnades or unnecessary courtyards. ▪ Facades at street level which are predominantly glazed, orientated and located to reinforce the relationship. Upper level facades which give a sense of enclosure and definition to the Public Realm spaces (Image A).
	To create a generous, open character along the south/east side of High Street to expose the playing fields to view, and provide for both passive and active recreation.	High Street west and north Shown on Figure 45.	▪ A band of soft landscaping to south and east side of High Street.

3. Access & Circulation Element	Access & Circulation Design Objectives	Applicable Area	Preferred Outcome
3.1 Vehicles	To provide safe, convenient access for all vehicles to and from Toolern West. To ensure truck movements are in accordance with the service vehicle access in Figure 45. To provide for the safe and efficient loading and unloading of vehicles associated with convenience hubs.	General	▪ Clear and efficient access for service vehicles to the rear of the Convenience Centre, via the most direct route from Bridge Road (avoid High Street where possible) . ▪ Loading areas which are at the rear or side of the property, away from the primary street frontage (Bridge Road and High Street). ▪ Development which minimises the impacts of traffic on surrounding sensitive land uses including the interface between the Convenience Hub and residential areas.
	To provide access and car parking arrangements that are logical and legible to visitors and employees, without adverse impacts on streetscapes.	Convenience Hub & District Sports Facilities. Shown on Figure 29 in Section 1.	▪ Off-street parking provided behind buildings fronting High Street, Bridge Road and Ferris Road, or in basement or parking structures.
3.2 Road Cross Section	To ensure roads are developed in accordance with the role and cross-sections outlined in Section I of this UDF.	General	▪ Road network which caters for a range of vehicle, pedestrian and cycle movements.

3.3.2 Precinct 2B - Ferris Road Civic & Recreation



OVERVIEW

Precinct 2B is the Ferris Road Civic and Recreation precinct which incorporates the western interface of Ferris Road, south of the railway line. It plays a crucial role in establishing a built form and urban character for the Toolern Town Centre as Ferris Road is the key north-south axis into and through the centre.

The precinct also incorporates a 'gateway' function into the core of the centre.

KEY CATALYST SITES & PROJECTS PRECINCT 2B

1. Toolern Aquatic And Leisure Centre - A major sports and recreation facility located on the corner of Ferris Road and Main Street

2. Toolern Performing Arts Centre - Performing Arts Centre located opposite the Aquatic and Leisure Centre as a bookmark to the Town Centre.

3. High Street Linear Trail - Incorporation of the existing heritage-value stone wall on the site. Generous, shared trails, seating and landscaping along the eastern end of High Street creating a clear link with Toolern Central

ISSUES & OPPORTUNITIES

- Opportunity of single land ownership within the precinct.
- Opportunity for Ferris Road staged upgrade works and interfaces.
- Issues and opportunities relating to the timing and delivery of the rail - road grade separation at Ferris Road.
- Opportunity for staged timing and delivery of the key facilities - Aquatic and Leisure Centre and Performing Arts Centre.

Figure 46_ Ferris Road Civic & Recreation

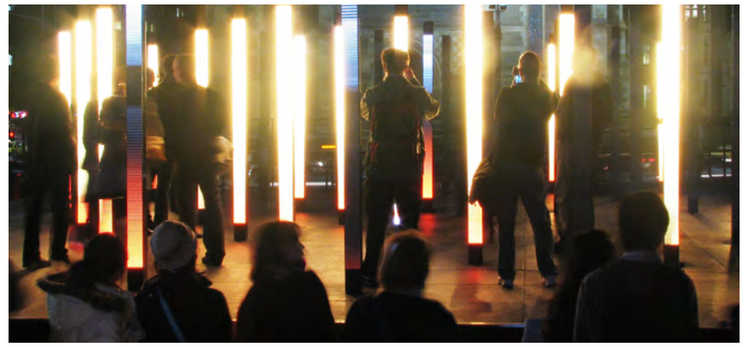
The tables below outline the key objectives and preferred outcomes for Precinct 2B. Any application for use or building and works in this Precinct must meet the objective and where possible, this should be in accordance with the preferred outcome.

The accompanying images included in Section 6 assist in articulating the preferred outcome for the precincts.

The following tables are to be read in conjunction with the vision in Section I of this UDF as well as the and design objectives and preferred outcomes for the Toolern Town Centres on Page 53-57.

The design objectives are intended to generate a dense urban character within the Toolern Core. Built Forms should reinforce the shape and function of the streets they define, and reinforce the drama and function of public spaces. Streets must present a coherent and relatively consistent streetscape in form and material.

1. Public Realm Element	Public Realm Design Objectives	Applicable Area	Preferred Outcome
1.1 Public Spaces and Pedestrian Connections	To provide effective and enjoyable public spaces and places that have a clear role in Toolern West and are designed and constructed to best meet this role.	General	▪ Development which retains and celebrates key view lines to key public spaces such as the forecourt and entry areas of the Performing Arts Centre, Aquatic and Leisure Centre and mixed use on the corner. ▪ Spaces which are designed to support local events in conjunction with the Performing Arts Centre. ▪ Landscapes which integrate heritage elements and create a visual link across Ferris Road towards Toolern Central.
	To focus pedestrian activity outdoors to the street, particularly focused on High Street as the 'artery' of Toolern West.	High Street Shown on Figure 22 in Section 1.	▪ Streetscape character along High Street which reinforces the extension of the Main Street core to the east of Ferris Road, and visually read as the key street 'spine' in the precinct. ▪ Mixed-uses along High Street, (primarily non residential/mixed use) which activate the footpath level via visually permeable frontages, and entries.
	To provide major and minor open spaces which work as entrances to key buildings.	General Shown on Figure 22 in Section 1.	▪ Entry to each major building on the eastern side of the precinct which is identified by an urban public square or forecourt incorporating urban street trees as appropriate. ▪ Spaces which directly front onto the entry foyer of the building they serve, which may include coffee shops/restaurants and retail spaces specifically associated with the building's function (sport, or arts).
	To prioritise walking and cycling as the easiest and most efficient way of getting around Toolern West.	General - Streets Shown on Figure 5 in Section 1.	▪ A pedestrian footpath system which has strong visual cues between destination nodes and public places. ▪ High amenity pedestrian connections to the transport hub in Toolern. Core and safe connections across Ferris Rd, including the provision of a signalised intersection. ▪ Pedestrian crossing points at the intersection of High Street/Ferris Road and Ferris Road/Bridge Road.



Visual interest of pedestrian scale in the public realm.

Spaces which are designed to support local events.

PRECINCT 2B - FERRIS ROAD CIVIC & RECREATION

2. Built Form Element	Built Form Design Objectives	Applicable Area	Preferred Outcome
2.1 Built Form	To reinforce the legibility of Toolern Central from both close and long range views via the built form. The scale of built form will be greatest on major roads (Ferris and Bridge Roads) and at entry points to the precinct on Bridge Road. Built form on main road frontages (Ferris Road, Bridge Road) should respect and combine with adjacent built forms to form a consistent scale and presentation.	Transit Street, Main Street East, East Road, Bridge Road Shown on Figure 46.	▪ Conventional fine grained presentation at street level with large format forms (coarse built form) located above and behind this streetscape shield or sleeve. ▪ Buildings at the intersection of Bridge Road and High Street which are of sufficient scale and geometric presentation to clearly signal an entry to Main Street. ▪ Built form within particular facades which respond to the urban function and approach sequence of visitors, particularly the western facade, where a smaller pedestrian scale should be evident.
	To activate upper levels and enliven the public realm and built form interface, and select uses which will achieve this.	High Street, Bridge and Ferris Roads Shown on Figure 46.	▪ At street level, uses which are to be predominantly active. Public spaces (associated with the uses internally) which face outwards to the most important public streets or spaces.
	To ensure facades are articulated and the scale of these large buildings respond to their urban and operational function.	High Street, Ferris and Bridge Roads Shown on Figure 46.	▪ Large volume buildings such as the indoor sports and aquatic facility to include substantial transparency at street levels, in order to provide activation and life on the street, and permit a degree of passive surveillance. ▪ Building facades and forms which make large scale geometric and massing gestures, commensurate with the civic and community importance of these buildings (Performing Arts, Aquatic Centre). ▪ The carpark zone be treated as a "street" facade and composed as a consistent streetscape, utilising colours, materials and finishes from a restricted palette in order to allow the creation of a sense of place and unique function.
2.2 Building Setbacks	To ensure buildings form a "hard edge" to the western side of Ferris Road, defining this section of road as being within the urban space of Toolern Town Centre.	Ferris Road Shown on Figure 46.	▪ Cohesive streetscapes which are characterised by a consistent building setback relative to the street form and geometry. ▪ A series of buildings which form a boundary to the public road, but provide a "pavilion in the park" character, with landscaped setbacks to Ferris Road with building setbacks to be considered as part of a detailed design.
	To establish modest building setbacks on the Ferris/ High intersection in order to create an appropriate entry statement to this precinct.	High Street Shown on Figure 46.	▪ Building forms which "close up" at the intersection, and step back as High Street runs west.
2.3 Weather Protection	Provide for weather protected pedestrian movement north-south within the precinct, and the creation of external "mustering" areas for schools and clubs.	Carpark facades Shown on Figure 46.	▪ Canopies which provide shelter for pedestrians, en route from carparks to the entries of each major building. Larger covered areas for mustering of large numbers of building users when arriving in groups. ▪ A safe, highly visible pedestrian route which connects pedestrian movement desire lines from the Ferris/Bridge intersection to the grade separated underpass to the north.

3. Access & Circulation Element	Access & Circulation Design Objectives	Applicable Area	Preferred Outcome
3.1 Road Cross Section	To ensure roads are developed in accordance with the role and cross-sections outlined in Section I of this UDF.	General	▪ A road network which caters for a range of vehicle, pedestrian and cycle movements.

Buildings at the intersection of Main Street and Ferris Road of sufficient scale and geometric presentation to clearly signal an entry portal to Main Street.

Civic buildings presented as "pavilions in the park" with substantial setbacks and a garden setting.

Civic Street Looking West

3.3.3 Precinct 2C - High & Medium Density Residential

OVERVIEW

Precinct 2C is the High and Medium Density Residential precinct which incorporates the western-most neighbourhoods of the Toolern Town Centre. It provides some opportunities for mixed use at ground level towards the eastern edge of the precinct.

KEY CATALYST SITES & PROJECTS PRECINCT 2C

1. High Street Linear Trail

- Incorporation of the existing heritage- dry stone wall on the site, into the linear trail of High Street. This includes generous, shared trails, seating and landscaping along the High Street east-west axis as a visual link back into the core of the centre.

ISSUES & OPPORTUNITIES

- Opportunity of single land ownership in the precinct.
- Opportunity to stablish a clear road and movement hierarchy for the precinct which integrates with the Town Centre.
- Opportunity to conserve and enhance the existing dry stone wall as a feature of the development.

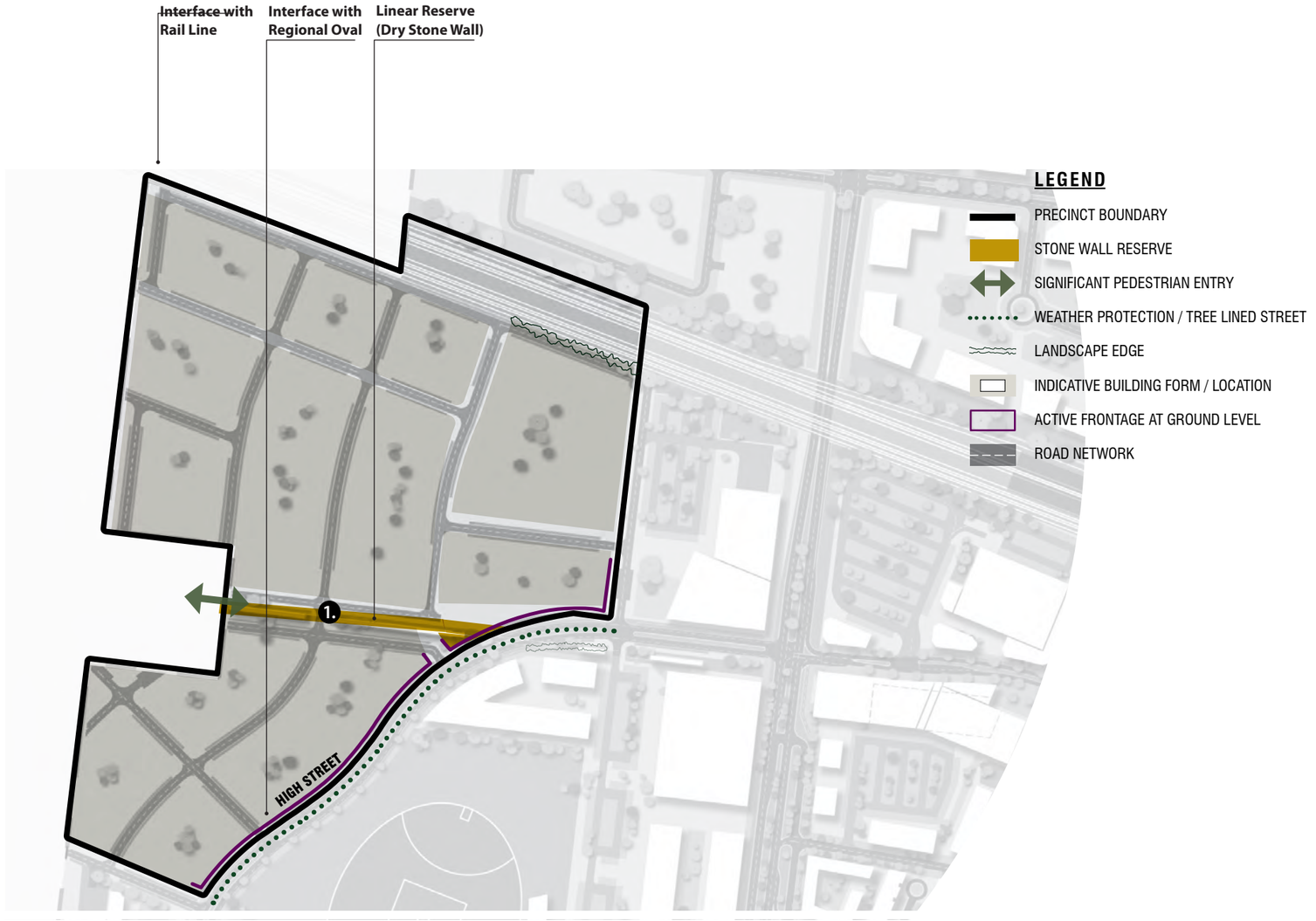


Figure 47_ High & Medium Density Residential

The tables below outline the key objectives and preferred outcomes for Precinct 2C. Any application for use or building and works in this Precinct must meet the objective and where possible, this should be in accordance with the preferred outcome.

The accompanying images included in Section 6 assist in articulating the preferred outcome for the precincts.

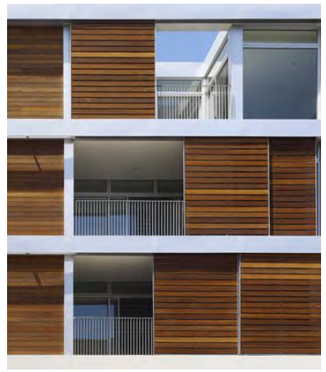
The following tables are to be read in conjunction with the vision in Section I of this UDF as well as the and design objectives and preferred outcomes for the Toolern Town Centres on Page 53-57.

The design objectives are intended to generate a dense urban character within the Toolern West. Built Forms should reinforce the shape and function of the streets they define, and reinforce the drama and function of public spaces. Streets must present a coherent and relatively consistent streetscape in form and material.

1. Public Realm Element	Public Realm Design Objectives	Applicable Area	Preferred Outcome
1.1 Public Spaces and Pedestrian Connections	To provide effective and enjoyable public spaces and places that have a clear role in Toolern West and are designed and constructed to best meet this role.	General	▪ Development which ensures key view lines are retained and celebrated to key public space nodes such as the forecourt and entry areas of the Performing Arts Centre and mixed use development (High St/Ferris Road) the Aquatic and Leisure Centre, and the future park adjoining the western boundary.
	To focus pedestrian activity outdoors to the street, particularly focused on High Street as the main/key street of Toolern West.	General - High Street Shown on Figure 22 in Section I.	▪ Mixed-use development with continuous active frontages to High Street between Ferris Rd and the active open space. ▪ Support uses located adjacent to the Performing Arts forecourt including cafes, restaurants etc. ▪ Landscapes which integrate heritage elements and create a visual link across Ferris Road towards Toolern Central.
	To incorporate a high denisty residential subdivision with a safe network of pedestrian paths which benefits from natural surveillance.	Entire Precinct	▪ A network of pathways which are lined by windows from the adjoining residential buildings to provide for passive surveillance. ▪ A network which provides a permeable subdivision pattern between private residential blocks.
	To deliver a number of small, pocket parks to break pedestrian journeys or offer very local relief and meeting places within the larger subdivision pattern.	Pedestrian Network Shown on Figure 5 in Section I.	▪ Parks which are evenly distributed throughout the precinct allow for regular travel stops, or create clusters of dwellings served by a “village green“.

2. Built Form Element	Built Form Design Objectives	Applicable Area	Preferred Outcome
2.1 Built Form	To ensure the built form responds to the residential character intended within the precinct. Generally streets should contain a restricted and consistent built form of 2 storeys in height, with taller forms restricted to much larger corner sites or those with a particular urban function.	All Streets Shown on Figure 47.	▪ Streets which are bounded by buildings of similar scale and built form character with modest variation for individual dwellings. ▪ Larger buildings, of more than 5 storeys (Apartment buildings), which provide contrast, particularly at entry points.
	To ensure facades within streetscapes are carefully composed in response to conventions of base, middle and top. Taller apartment buildings should adopt the concept of a “recessive” facade. To encourage roof forms to provide for a degree of variety in streetscapes.	All Streets and Laneways Shown on Figure 47.	▪ Facades which are clearly residential in character and relate in form, height and material to those they immediately abut, in order to create a unified streetscape. ▪ Facades which provide passive surveillance of streets from public rooms within the buildings. ▪ Roof forms which respond to corner or mid block location to create a focal point.
2.2 Building Setbacks	To ensure building setbacks respond to the scale and character of residential uses and forms elected. Setbacks to create a strongly defined private realm which will relate directly to the public realm within the street reserves.	All Streets Shown on Figure 47.	▪ Cohesive streetscapes which are characterised by a consistent building setback relative to the street form and geometry. ▪ Townhouse or terrace forms of a modest setback from the street, with crossovers minimised (shared between abutting units) if access is from the front. Parking and driveways may occur within the setback. ▪ A “mews” character, which provides rear service lane access. ▪ Larger setbacks to front and side for larger apartment formats reflect the changed scale of the buildings and the effect on the street character.

3. Access & Circulation Element	Access & Circulation Element Design Objectives	Applicable Area	Preferred Outcome
3.1 Road Cross Section	To ensure the local road network responds to future planning for local bus services through the northern part of the Town Centre to the future train station	High Street western extension	▪ Expanded local street cross section may be required to provide for local bus services from the Town Centre through the residential areas further west (road reserve requirements should be defined in association with PTV).



Creative use of facade materials, forms, recesses and screening at upper levels.

Street level awnings and signage.

Consistent materials at street level.

3.4 Toolern North Precinct

TOOLERN NORTH PRECINCTS

OVERVIEW

Precinct 3A is Toolern North which accommodates land north of the railway line. It accommodates the later stages of town centre development, once the Toolern Core is maturing as a precinct.

Toolern North provides for higher order uses such retail, office, health and potentially large tertiary uses to be supported by secondary/ convenience retail. Upper level, higher density residential will be incorporated above street level activities and around tertiary facilities.

KEY CATALYST SITES & PROJECTS

1. Toolern train station northern platforms and connections - Creation of the northern connections of the train station providing access to platforms and the full underpass from the northern side of the railway line.

2. Toolern Transit Plaza North - Delivery of a central meeting place on the northern side of the railway line.

3. Green Corridor - Provision of the Green Corridor on the northern side of the railway line, connecting from the train station west across Ferris Road to Toolern Central and adjoining developments.

4. Construction of East Road - Provision of East Road, as a key north-south access into and through the Toolern Town Centre. This incorporates grade separation at the railway line, and potentially a skewed alignment north of North Road to accommodate existing buildings.

ISSUES & OPPORTUNITIES

- Issue of fragmented landownership.
- Opportunity to provide a longer term development sites to provide for higher order uses and allow the existing businesses to continue in the interim.
- Issue of delivery of East Road grade separation to open up eastern section of the Precinct.

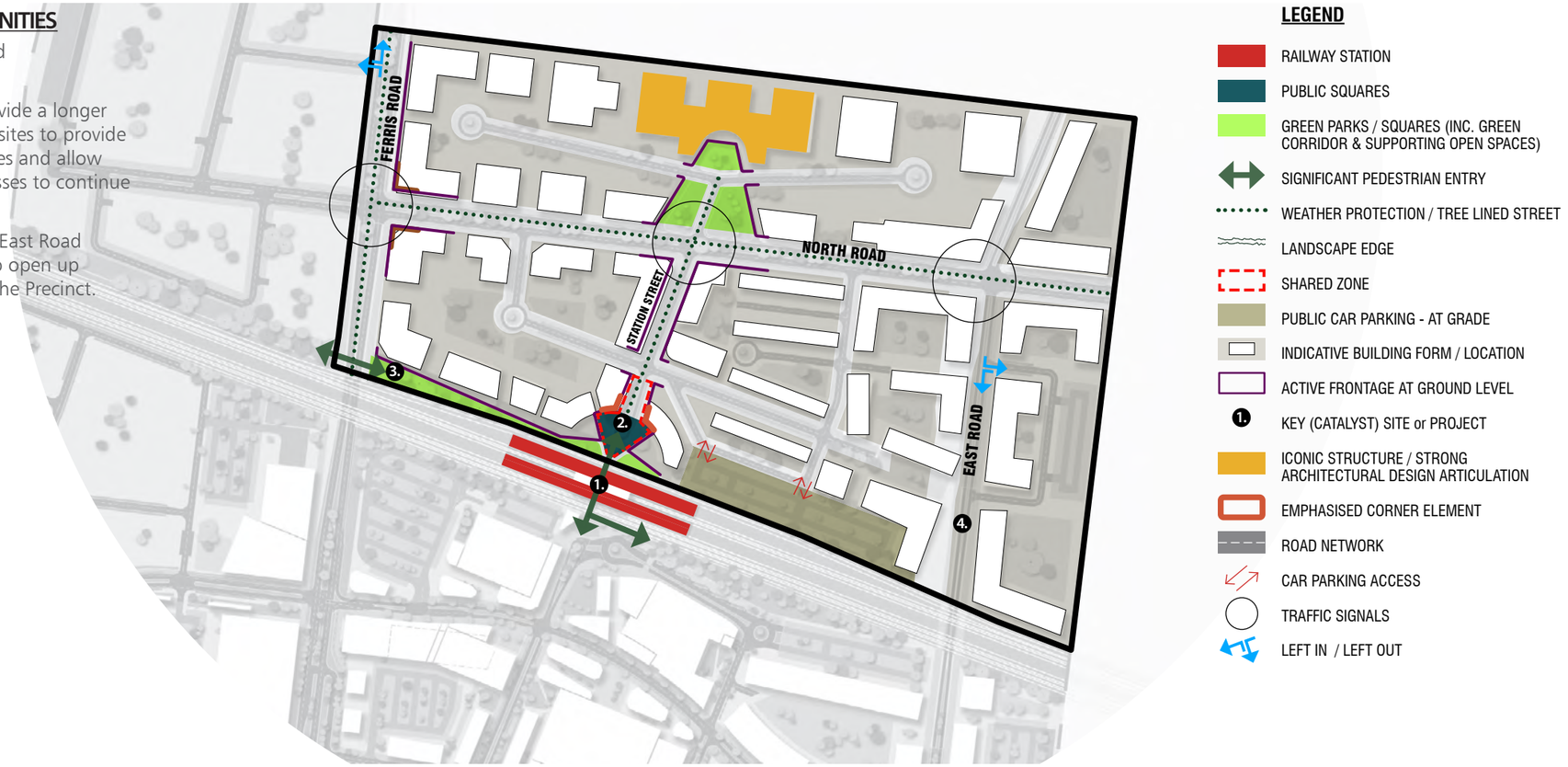


Figure 48_ Toolern North

3.4.1 Precinct 3A - Toolern North

The tables below outline the key objectives and preferred outcomes for Precinct 3A. Any application for use or building and works in this Precinct must meet the objective and where possible, this should be in accordance with the preferred outcome.

The accompanying images included in Section 6 assist in articulating the preferred outcome for the precincts.

The following tables are to be read in conjunction with the vision in Section I of this UDF as well as the and design objectives and preferred outcomes for the Toolern Town Centres on Page xx.

Precinct 3A is of mixed-use character that will be developed in the later stages of the Town Centre growth. The design objectives seek to ensure built form signifies the precinct as the north 'gateway' into the Town Centre. The control of the built form along Ferris Road is critical to the character of the centre and must provide a frontage to Ferris Road, which is activated and visually permeable at street level. It incorporates a street and block pattern that allows for flexible urban growth over time, and is able to incorporate a number of potential uses compatible with a Town Centre location.

1. Public Realm Element	Public Realm Design Objectives	Applicable Area	Preferred Outcome
1.1 Public Spaces and Connections	To provide effective and enjoyable public spaces and places that have a clear role in Toolern North and are designed and constructed to best meet this role.	General	▪ Development which reinforces and lines key view lines, particularly along the length of Station Street (north) to the Northern Plaza and the Transit Plaza North around the train station. ▪ Public spaces incorporated within the tertiary and mixed-use facilities which provide shade, cover, enclosure and weather protection. ▪ Spaces which use typically north facing with built form along the southern boundary, giving protection from southerly winds and capturing the northern sun.
	To focus pedestrian activity outdoors to the street, particularly focused on Station Street North as the primary axis of Toolern North.	Station Street North Shown on Figure 5 in Section 1.	▪ Mixed-use development along Station Street North which concentrates tenancies and frontages into continuous active frontages to the street with no setbacks (except where a landscape edge applies). ▪ Where they are non-residential uses they provide activation to the street.
	To develop streetscapes and public places that reflect a unique character for Toolern and reinforce the Toolern 'vision', with significant landscape character planting.	General	▪ Streetscape character along Station Street North which reinforces the extension of Station Street (South) via the train station underpass, and visually reads as the key north-south axis in the Toolern Core. ▪ Public spaces such as Transit Square North which incorporate hard paved areas for local gatherings and events.
	A number of minor public squares and piazzas have been identified in Precinct 3A, the design of these spaces must be in accordance with the role and character outlined in Section I of this UDF	Station Street Shown on Figure 22 in Section 1.	▪ A Transit Plaza North which provides termination to the pedestrian and visual axis of Station Street, an easy manner by which to gain access to the Town Centre itself. This space will be bounded by active, shopfront uses. ▪ At the northern extent of the Station Street axis, a large landscaped court which provides a termination of the axis, and a forecourt for the institutional uses within the sub-precinct; (Health or Education).
	To deliver a number of small, pocket parks to break pedestrian journeys or offer very local relief and meeting places within the larger subdivision pattern of each sub-precinct.	Pedestrian Network Shown on Figure 22 in Section 1.	▪ Distributed pocket parks throughout each of the street blocks which are designed to provide a high degree of physical and visual permeability, commensurate with the restrictions of particular uses. ▪ Parks which are sufficiently located to allow for regular travel stops, or create clusters of dwellings served by a "village green".

Station Street with significant landscaped footpaths.

Local mixed-use and higher density residential streets which are pedestrian and bicycle friendly.

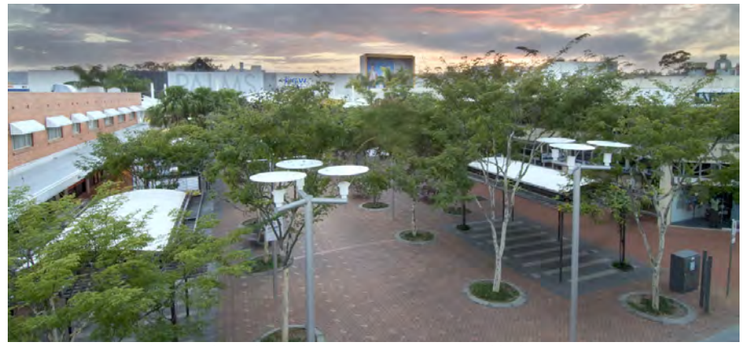
Urban laneways and pedestrian routes.

Public spaces such as Transit Square North should incorporate hard paved areas for local gatherings and events.

Seating and street furniture in local streetscapes.

2. Built Form Element	Built Form Design Objectives	Applicable Area	Preferred Outcome
2.1 Built Form	To define street character by built form. Higher order streets will be celebrated by greater height and more dominant forms such as on the east-west corridor of North Road. This principle will apply equally to built form within particular street lengths, with taller architectural corner elements.	Main Street West and Central, Station Street, mid section of Transit Street. Shown on Figure 49.	▪ "Hollow squares" format for the health and education neighbourhoods with buildings lining external streets, and softer internal pedestrian and vehicular movements (required to support the particular operational character of the use) within the central landscaped court. ▪ Car parking screened by buildings from views from the street, over time these will develop to be landscaped roofs over carpark undercrofts. ▪ Strong "hollow square" layouts in the two eastern most blocks with inner area developed to create a very different subdivision of streets, courts and buildings. The ''hollow squares'' format allows a flexibility for the land use being an appropriate layout for education, residential or commercial.
	Facades should relate in form, height and material to those they abut, in order to create a unified streetscape.	North Road, Station Street, East Road. Shown on Figure 49.	▪ Facades have a predominantly horizontal emphasis at street level, and a predominantly vertical emphasis for upper stories. ▪ Entries to major destinations, (ie Education, Hospital) which are distinguished through architectural design, scale and mass of the buildings. ▪ Facades which present a rhythm of shopfronts, at appropriate parts of Station Street North and Transit Plaza North, which present a small grained scale, with shopfronts broken by regular tenancy dividing panels either in masonry or carrying graphics and signage. ▪ Signage below the canopy which responds to the approach direction and sightline of the viewer, both parallel with and perpendicular to the shopfront and building facade. (Transit Plaza North only).
2.2 Building Setbacks	To define streetscapes and public realm by placement of buildings and activities which reflect the operational character of primary functions with each sub-precinct.	North Road, Station Street, East Road. 49.	▪ Buildings which present within a generous green corridor, with soft landscaped setbacks to the frontage and narrower soft landscaped setbacks between individual buildings. ▪ Consistent setback from the North Road frontage, with no parking within this zone. ▪ New buildings which echo the character of the Core Precinct, with lesser setbacks and greater density of activity. Setbacks of between 0m and 3m to Station Street North.
2.3 Weather Protection	To support pedestrian movement patterns by the placement of continuous weather protection canopies.	Station Street, internal facades within institutional sub precincts. Shown on Figure 49.	▪ Cantilevered canopies which provide cover for all commercial shopfronts. These are generally no more that 3.0m above footpath, but may be elevated further to signify an important entry to a specific destination.

3. Access & Circulation Element	Access & Circulation Element Design Objectives	Applicable Area	Preferred Outcome
3.1 Road Cross Section	To ensure the local road network responds to future planning for local bus services through the Town Centre and surrounding residential areas	Station Street North, other local streets	▪ Expanded local street cross section may be required to provide for local bus services to/from North and East Road and the train station (road reserve requirements should be defined in association with Public Transport Victoria.



Transit Plaza North providing shaded structures, seating and lighting in a plaza fronted by the train station and connected to the Green Corridor.

Larger format premises directly fronting the Green Corridor .

Local shaded and weatherproof plaza.

Local streets with creative landscape and water sensitive urban design treatments .

Contiguous weather protection to retail footpath areas.

3.5 Toolern North West Precinct

TOOLERN NORTH WEST - PRECINCTS

OVERVIEW

Precinct 4A is Toolern North West which is an area located north of the rail line and west of Ferris Road.

It's role is to provide for larger format retail premises on the entry to Toolern from the north.

KEY CATALYST SITES & PROJECTS PRECINCT 4A

1. Intersection of Abey Road and Ferris Road - Construction of an important intersection of Ferris and Abey Road to facilitate east-west movement

2. Green Corridor - Provision of the Green Corridor on the northern side of the railway line, connecting from the train station west across Ferris Road

ISSUES & OPPORTUNITIES

- Issue of fragmented land ownership.

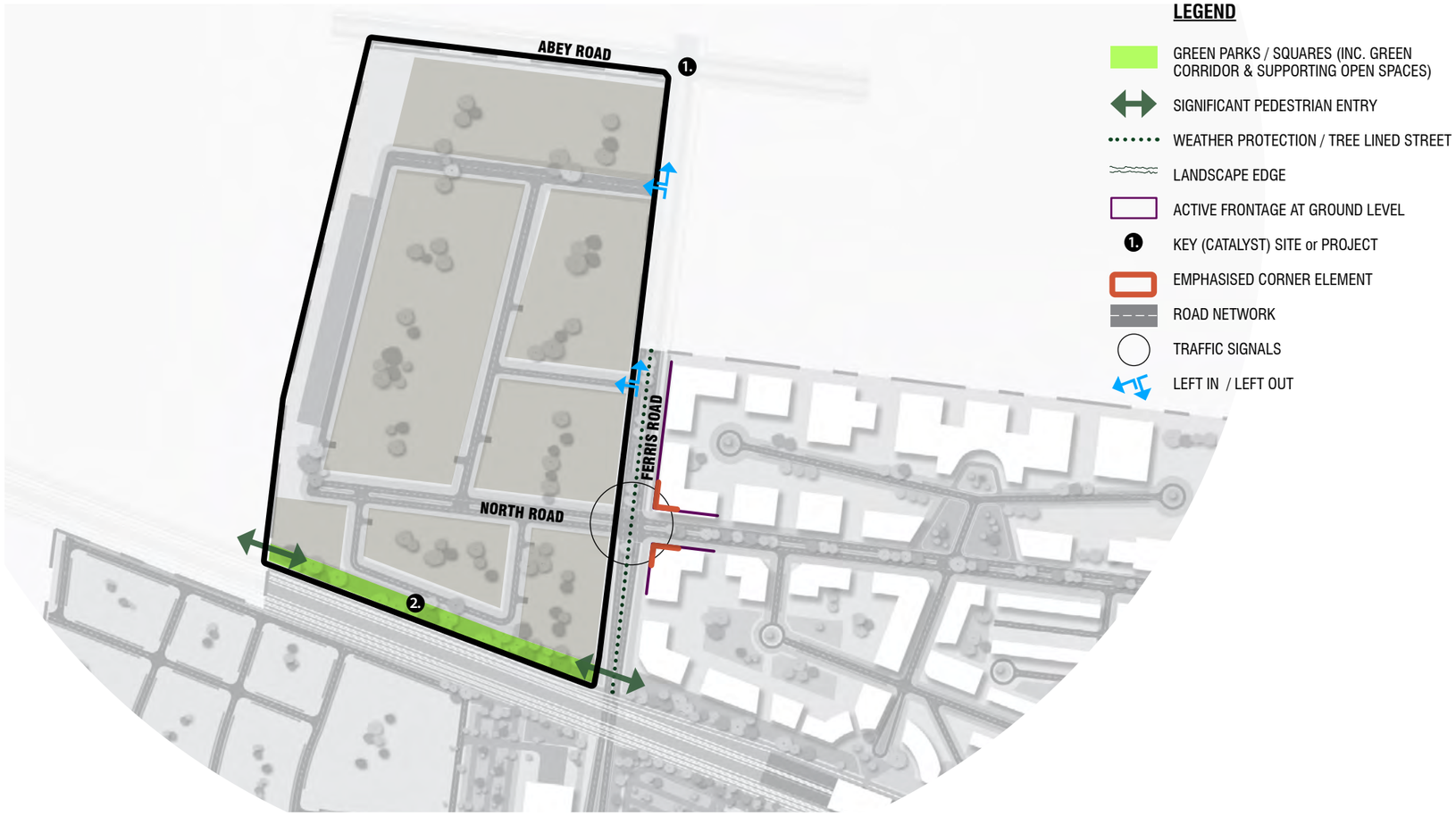


Figure 49_ Toolern North West

3.5.1 Precinct 4A - Toolern North West

The tables below outline the key objectives and preferred outcomes for Precinct 4A. Any application for use or building and works in this Precinct must meet the objective and where possible, this should be in accordance with the preferred outcome.

The accompanying images included in Section 6 assist in articulating the preferred outcome for the precincts.

The following tables are to be read in conjunction with the vision in Section I of this UDF as well as the and design objectives and preferred outcomes for the Toolern Town Centres on Page xx.

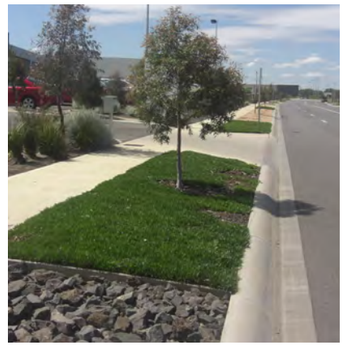
The built form within this precinct is driven by its intended function for large format retail. The design objectives seek to provide balance with the functional requirements for large format retail and its role as an entrance to the Town Centre from the north.

1. Public Realm Element	Public Realm Design Objectives	Applicable Area	Preferred Outcome
1.1 Public Space and Pedestrian Connections	To provide effective and enjoyable public streets that service the uses and activities of the precinct.	General	▪ Local streets within Toolern North-West which allow easy and efficient vehicle access and egress from Ferris Road into carpark or loading areas (Image C). ▪ Local streets and carparking areas which prioritise pedestrian movements over car movements by incorporating contiguous footpaths, pedestrian crossings and access points.
	To deliver a number of public piazzas to signal particular functions and destinations with a differing character when viewed from Ferris Road.	Ferris Road and carparks/ internal streets Shown on Figure 22 in Section I.	▪ Piazzas which provide contrast and destinations within the large format built form, and allow for the development of spaces to incoporate food and beverage outlets, play areas for children, or public sculpture.

2. Built Form Element	Built Form Design Objectives	Applicable Area	Preferred Outcome
2.1 Built Form	To provide a consistent built form scale to Ferris Road. Built Forms will bear a strong relationship to each other creating a "cluster" of compatible forms in scale and presentation.	Ferris Road and carparks/ internal streets Shown on Figure 51.	▪ Larger scaled built forms which are farthest from Ferris Road, to allow exposure to smaller spaces embedded within the frontage zone.
	To ensure facades facing Ferris Road and any carparking areas are predominantly transparent. Cladding systems and graphics should be employed to create visual impact for large format buildings.	Ferris Road and carparks/ internal streets Shown on Figure 51.	▪ Facades which are capable of being "read" from passing vehicular traffic. Scale and graphics should be utilised to create variety and impact. ▪ Large scale "shopfront " or showroom frontages which dominate the Ferris Road frontage. ▪ Signage zones which allow for a graduation in scale of signage and graphics from large scale elements capable of being understood at speed in a vehicle, down to specific small scale signage for particular outlets and functions (Cafe, Restaurant, children's play).
2.2 Building Setbacks	To provide a varied presentation of building and parking relative to Ferris Road "highway frontage" zone.	Ferris Road, Western Boundary and Southern Boundary Shown on Figure 51.	▪ Building setbacks along the Ferris Road frontage which create a series of showroom frontages with "supergraphics" to define the alignment of this important road, but expose a degree of grade parking to be visible from the street. ▪ A minimum landscaped setback of 5m to Ferris Road which creates a consistent, green presentation to the road reserve, and a suitable location for large format signage. No parking is to be provided within this setback.
2.3 Weather Protection	Use design of canopies and awnings as a unifying element.	Ferris Road and carparks/ internal streets Shown on Figure 51.	▪ Canopies which guide visitors to major entry points and provide a unifying visual element on the facades. ▪ "Powercentre" concepts delivered as legible destinations with multiple merchandise options, but unified by a pedestrian movement structure.

On-street parking can be incorporated where appropriate.

Facades which are clearly "read" from passing vehicular traffic.



Safe vehicle access points to car parking areas.

"Powercentre" concepts delivered as legible destinations.

4.0 Development Staging & Delivery

The Toolern Town Centre Masterplan is a 20+ year plan which includes the early development of a neighbourhood level centre, with the centre set to expand and develop in line with population growth and public investment/infrastructure delivery.

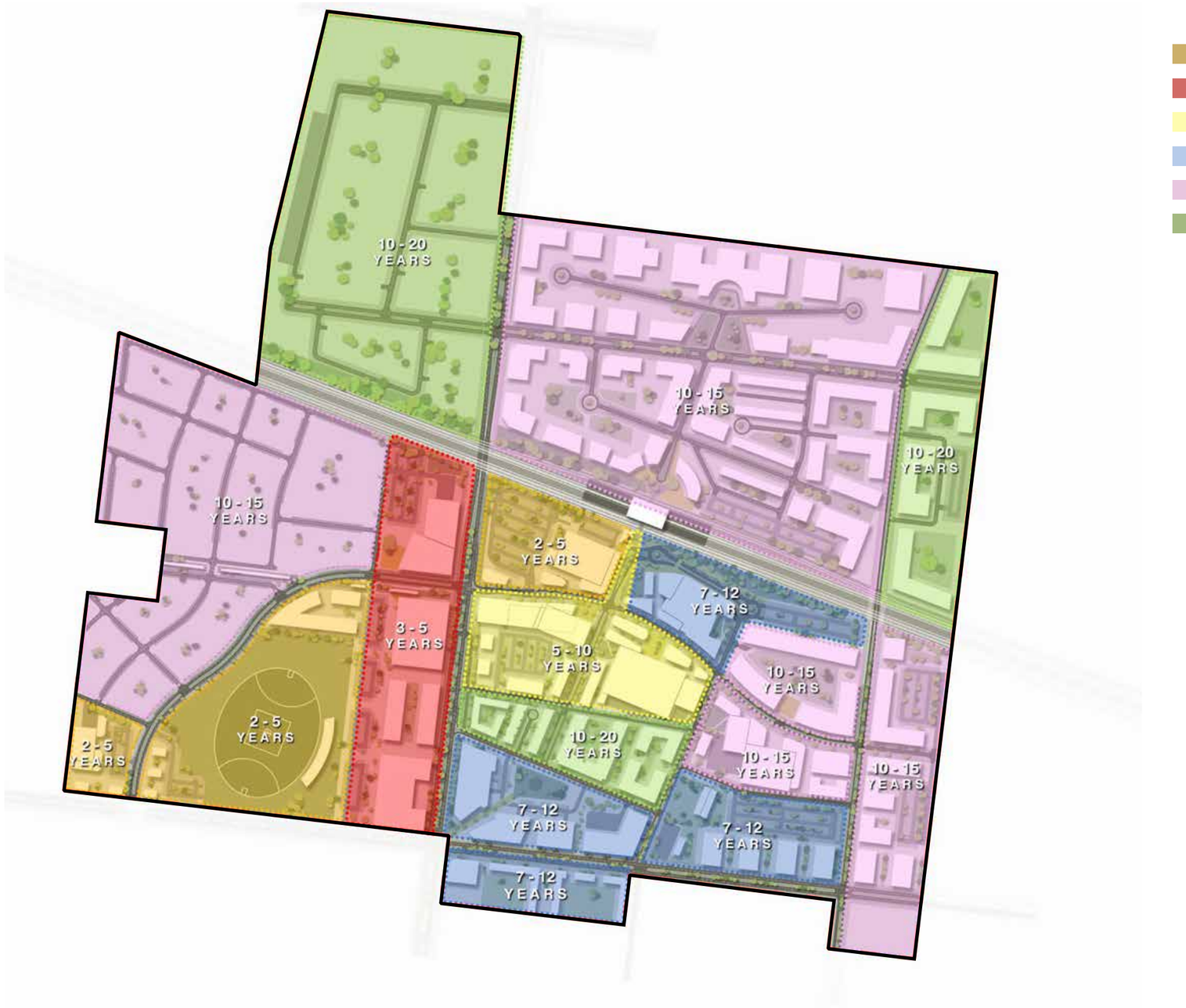


Figure 50_ Indicative Staging (Years)

INDICATIVE STAGING

The program below is an indicative staging plan which is intended to provide a general overview of the build out of the Town Centre based upon the research and analysis undertaken in preparing the UDF.

The staging plan is based upon:

- Formulating staging to manage long term constraints, such as the grade separation at East Road and the presence of existing uses. The early stages of development will occur to the south of the railway corridor where land is less constrained and more accessible.
- Leveraging off existing roads (Ferris and Bridge) and the rail crossing at Ferris Road which provide immediate access and exposure for the early stages of development.
- Assumptions in relation to the probable delivery dates of the variety of uses to be located within each precinct based upon population growth.
- Recognising the delivery time frames associated with roads and other infrastructure items which are funded by the Toolern Precinct Structure Plan Development Contributions Plan and those which are to be delivered by landowners at their own expense.
- Recognition that the early residential population in and around the town centre may create demand for local convenience retail within the residential precinct prior to the delivery of the first stage of major retailing in the retail core.
- Delivery of the first stage of major retailing and commencement of the residential precinct prior to grade separation of Ferris Road and the rail corridor.
- Delivery of the first stage of major retailing adjacent to the future railway station site to set the foundation for a public transport interchange which will ultimately provide a seamless connection between bus and fixed rail.
- Ensuring that the future grade separations of Ferris and East Roads with the railway corridor do not undermine the commercial exposure of the centre.
- Achieving appropriate road and pedestrian connections between parallel development fronts occurring within precincts to ensure convenient movement patterns for users throughout the centre's evolution.
- Ensuring the town centre has a structure which is underpinned by functional road and pedestrian movement patterns and key sight lines.
- Recognising that the majority of car parking will be provided at-grade until such a time that land value makes the provision of basement parking financially viable. This means that existing at grade car parks may be redeveloped with new buildings and associated basement parking. Possible locations are shown on Figure 28.
- Recognising that the Business 4 zoned land will be a destination in its own right and will have less integration with the Town Centre than between the other precincts.

The staging program is principally based upon a growth pattern for the town centre which is demand driven commencing at a local scale and growing to a regional centre in an incremental manner.

It is acknowledged that the real growth of the centre and in turn its staging will be influenced by a multitude of complex factors including:

- The rate of growth of the Toolern population.
- The amount of private sector investment in the town centre.
- The availability of government funding for major infrastructure projects, in particular the delivery of a railway station.
- Competition.
- Economic conditions.

There will be overlap between stages and the order and composition of stages will vary due to a variety of influences.

Based upon the work undertaken in the preparation of the UDF, a higher degree of certainty exists in relation to the composition and timing of stages 1 and 2 than the longer term stages. The masterplan has been designed to accommodate changes in land uses for areas designated long term to meet demands.

Whilst the staging program below is indicative, any proposals to vary the order and composition of stages must demonstrate that they do not compromise the short, medium and long term visions and functions of the town centre.

Road Infrastructure

Pedestrian Connections

Medium - High Density Residential

Indicative Staging Program

STAGE 01

- Upgrade Ferris and Bridge Roads by Lend Lease Communities in agreement with the Shire of Melton.
- Construction of the interim east-west intersection with Ferris Road to provide access into the core retail and residential precincts.
- Construction of the interim intersection at Ferris and Bridge Roads.
- Delivery of the district sports oval by Lend Lease Communities in agreement with the Shire of Melton.
- Potential delivery of a small convenience retail centre (1,200sqm retail floorspace).
- Delivery of the first stage of the core retail offering to the east of Ferris Road. This includes a full-line supermarket and speciality retailing.
- Improvements to the at grade crossing including pedestrian safety gates by DoT.
- Construction of the first section of Main Street to provide access to the retail centre and to enable a bus to service the centre.

Figure 51_ Indicative Stage 1

STAGE 02

- Delivery of the community facilities to the west of Ferris Road with associated car parking, including:
  - Performing Arts Centre
  - Sports and Aquatic Centre
  - Office, Education and Training Facilities.
- Buildings along the north side of main street may be single storey in the initial stages but must be developed to accommodate upper levels at Stage 4 or, redeveloped to accommodate levels in later stages.

Figure 52_ Indicative Stage 2

STAGE 03

- Delivery of initial railway station.
- Construction of public open spaces on the corner of Main and Station Streets.
- Construction of the central section of Main Street, the northern section of Transit Street to provide access to the bus interchange and the northern section of Main Street incorporating the kiss n' ride.
- Development of the Council land potentially including a library and municipal offices.
- Expansion of the retail precinct to include a discount department store, additional speciality retail and a mini-major and car parking.
- Potential delivery of high density residential development within the town centre along Station Street.
- Duplication of Ferris Road.
- Construction of service road to enable delivery/loading to discount department store.

Figure 53_ Indicative Stage 3

INDICATIVE STAGING PROGRAM

STAGE 04

- Development of the entertainment precinct, a mini-major and additional speciality retailing.
- Delivery of the 'Market Square' adjacent to the entertainment precinct and the main pedestrian link (urban lane) between the railway station/bus interchange and Main Street.
- Construction of the southern section of East Road.
- Development of mixed use area with associated car parking along the extension of Bridge Road.
- Construction of Civic Street and the southern section of Transit Road.
- Development of the civic precinct.
- Extension of Bridge Road including the intersections of Bridge Road/Transit Street and Bridge Road/East Road.
- Commuter parking provided via agreement with landowner.
- Delivery of built form and upper level uses.

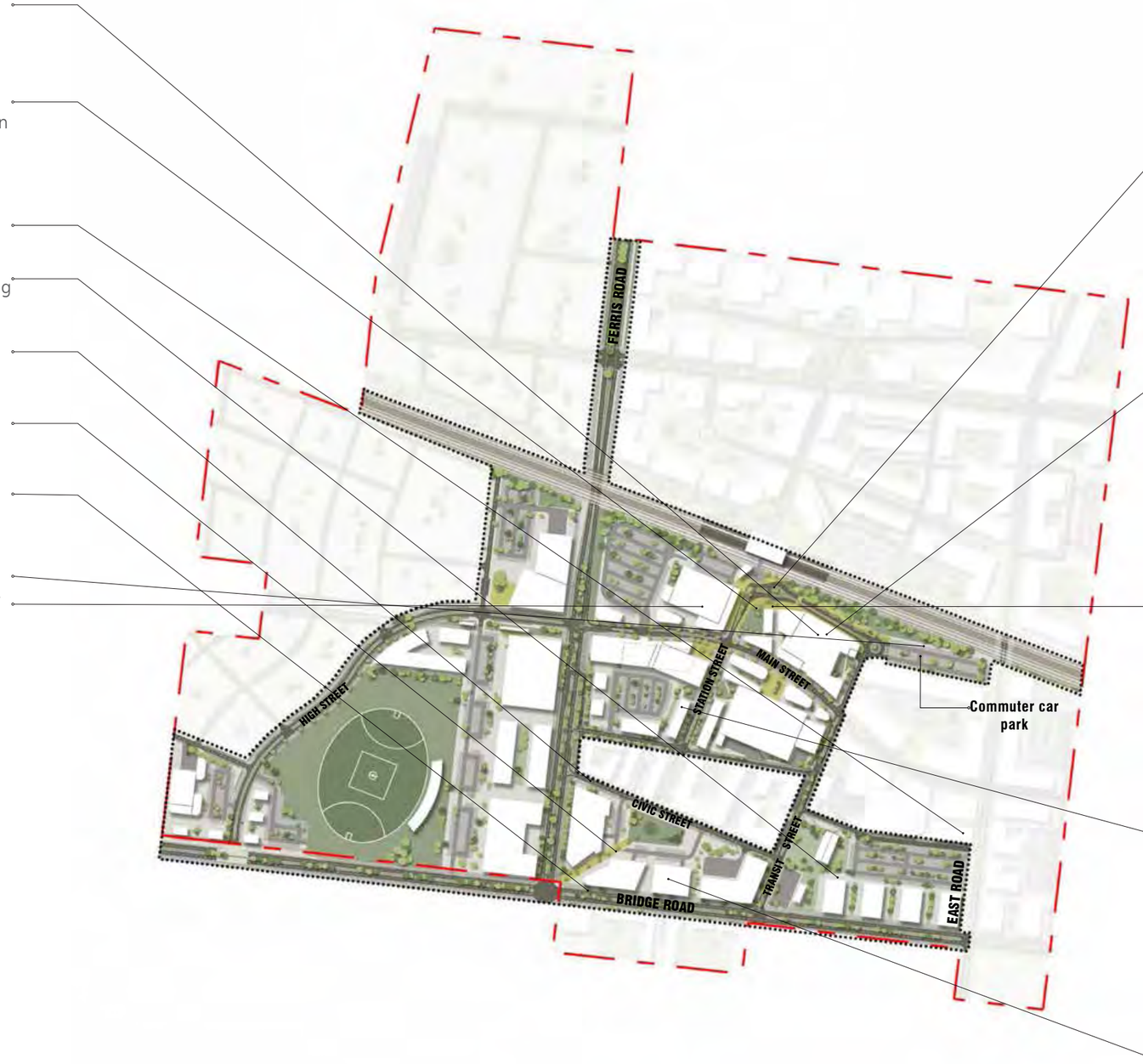


Figure 54_ Indicative Stage 4

STAGE 05

- Provision of public open space at the intersection of North Road and Station Street North.
- Construction of North Road between Ferris and East Roads.
- Commencement of development to the north of the railway line, including health, education and residential uses.
- Provision of commuter car parking to the north of the railway corridor (via lease or purchase by PTV).
- Expansion of the railway station.
- Development of the office precinct to the along Main Street/East Road.
- Construction of the second full-line supermarket, a mini-major and additional speciality retailing at the eastern end of Main Street.
- Construction of grade separation at East Road.

Figure 55_ Indicative Stage 5

INDICATIVE STAGING PROGRAM

STAGE 06

- Expansion of the health, education and residential uses to the north of the railway corridor.
- Development of mixed use area retailing along East Road.
- Development the high density residential land along Civic Street and Station Street.
- Development of the bulky goods precinct to the west of Ferris Road

Figure 56_ Indicative Stage 6

4.1 Key Development Drivers

This section outlines the key drivers behind the development of the toolern Town Centre, which includes delivery of infrastructure, stong population growth, and government investment.

The following outlines the drivers which can bring forward and influence timing of the ultimate development of the Toolern Town Centre:

Stage 1:

- Negotiate triggers for infrastructure delivery in terms of major investments (e.g. sports oval and roads).
- Sourcing of retail tenant pre- commitment for supermarket and supporting shops to underpin construction finance.
- Government and other stakeholders to raise awareness about Toolern / Toolern PTC and associated opportunities.
- Trade area population to support full-line supermarket. This is especially important as the key factor influencing households' choice of supermarket and discount department store (DDS) is proximity to where they live.
- Engage a major developer to facilitate pre- commitment of full-line supermarket and supporting specialities (already achieved).

Stage 2:

- Encourage commencement of secondary residential development front within the Toolern PSP to create competition and critical mass.
- Council to facilitate delivery of community facilities as per DCP and arrange appropriate management of facilities.

Stage 3:

- Encourage commencement of additional residential developments projects within the Toolern PSP to create competition and critical mass.
- Preparation of business case to support funding and delivery train station, public open space, civic uses/ library and bus interchange.
- State / Local Government to investigate possibility of Council office/civic uses and library to be delivered via mechanism (e.g. Public Private Partnership) that mandates inclusion of high-density housing (including possibly for social housing and / or aged care or private).

Stage 4:

- Facilitate delivery of the progressive expansion of the entertainment precinct and associated retail facilities and public space
- Encourage commencement of additional residential developments projects within the Toolern PSP to create competition and critical mass
- Commence planning and development of secondary civic precinct. An office-suite building could be considered to provide for lawyers and associated professionals.
- Facilitate construction of roads and streets (including Bridge Road and East Road)
- Facilitate development of showrooms along Bridge Road

Stage 5:

- Facilitate expansion of railway station and grade separation
- Engage major developer to facilitate pre- commitment of second full-line supermarket and supporting specialities at eastern end of Main Street
- Facilitate the commence of development to the north of the railway line of various uses including health, education and residential
- Facilitate construction of North Road between Ferris and East Roads
- Facilitate the provision of open space at North Road and Station Street North intersection
- The construction of the East Road grade separation is important to the viability of the northern and eastern precincts of the Toolern Town Centre. The benefits of its construction lay primarily with the developments surrounding East Road.
- Facilitate development of office precinct along Main Street / East Road by ensuring that the precinct offers high amenity including retail, recreation / open space and child-care facilities. The first building in this precinct should be targeted to office–suite users to cater for those firms and businesses servicing the local population (accountants, lawyers, finance and insurance). This office–suite building could incorporate a managed business incubator to promote the transition of local home-based businesses and other micro/ small enterprises to the mainstream.

Stage 6:

- State / Local Government to investigate possibility of high-density housing (including possibly for social housing and / or aged care) along Civic Street and Station Street via mechanism (e.g. Public Private Partnership).
- Facilitate development of bulky goods precinct west of Ferris Road.
- Health, education and residential uses to continue to develop to the north of the railway corridor. Greater awareness of the MAC's progress to date at this stage (by Government and other key stakeholders) may also attract further investment and business to the Town Centre.

Civic Buildings.

Street Based Retail.

4.2 Development Land Contributions

DCP AREAS		
	TRANSPORT AREAS	
1	3674 SQM	
2	6343 SQM	
	10017 SQM	
	COUNCIL PUBLIC SPACES	
3	2530 SQM	SOFT LANDSCAPE
4	2614 SQM	URBAN HARDSCAPE
5	797 SQM	SOFT LANDSCAPE
6	447 SQM	SOFT LANDSCAPE
7	1092 SQM	URBAN HARDSCAPE
8	934 SQM	SOFT LANDSCAPE
9	698 SQM	SOFT LANDSCAPE
10	1062 SQM	SOFT LANDSCAPE
	10174 SQM	

Figure 57_ Approximate DCP Areas

4.3 Community Spaces

COMMUNITY SPACES	
	COUNCIL / COMMUNITY SPACE
1	13000 SQM
2	22500 SQM
3	29500 SQM
TOTAL	65000 SQM

Figure 58_ Approximate Council Community Spaces

SECTION III

SUPPORTING ANALYSIS

5.0 OVERVIEW

Significant background technical work was undertaken as part of the development of the UDF. The following section summarises some of the key findings of this technical work, and explains how these have informed the preparation of the UDF.

Some of the key issues addressed by this technical work, and set out in this section include:

- Potential design and delivery of the Toolern Train Station, as part of any future Melton Rail Line upgrade.
- The components of a town centre public transport interchange.
- Bus circulation through the Town Centre, and design requirements for local streets.
- Planning for future grade separation of key roads at the rail line, and structural implications for the Town Centre.
- A road network to serve a broad range of functions, including priority routes for pedestrians as well as private and commercial vehicles.
- Provision, distribution and form of car parking, relative to projected demand.
- The level of retailing and office activities able to be supported in the Town Centre, and factors influencing the potential for further growth.
- The scale, mix and location of community infrastructure, including higher order facilities servicing a regional catchment.

Much of this technical work involved comprehensive consultation with a range of different stakeholders, including:

- Landowners
- Department of Transport
- VicTrack
- VicRoads
- Department of Justice
- Victoria Police
- Country Fire Authority
- Ambulance Victoria
- State Emergency Services
- Department of Business and Innovation
- Ballarat University
- Department of Health

In addition, Section III includes an assessment of the UDF against the various statutory requirements set out at 4.3.4 of the Toolern Precinct Structure Plan.

5.1 Land Ownership and Current Uses

As at January 2012, the Toolern Town Centre comprises 14 separate titles with 9 different land owners including the Shire of Melton.

Toolern West

This quadrant comprises three properties owned by the Shire of Melton, which all form part of the Atherstone joint venture.

Land within this quadrant is largely vacant (with the exception of a dry stone wall running east-west through the centre of the quadrant)

Toolern Central

Four properties are located within Toolern Central. This quadrant features a vacant dwelling on Ferris Road, as well as some buildings associated with the former rural use of the site.

Toolern North

This precinct is currently owned by two landowners, both with established and ongoing manufacturing uses on their sites. It is understood that both these industrial uses are likely to continue for the foreseeable future meaning town centre-oriented development in this quadrant is a longer term proposition.

Toolern North-West

Four properties in this quadrant owned by three landowners including the Shire of Melton. All land is vacant at present.

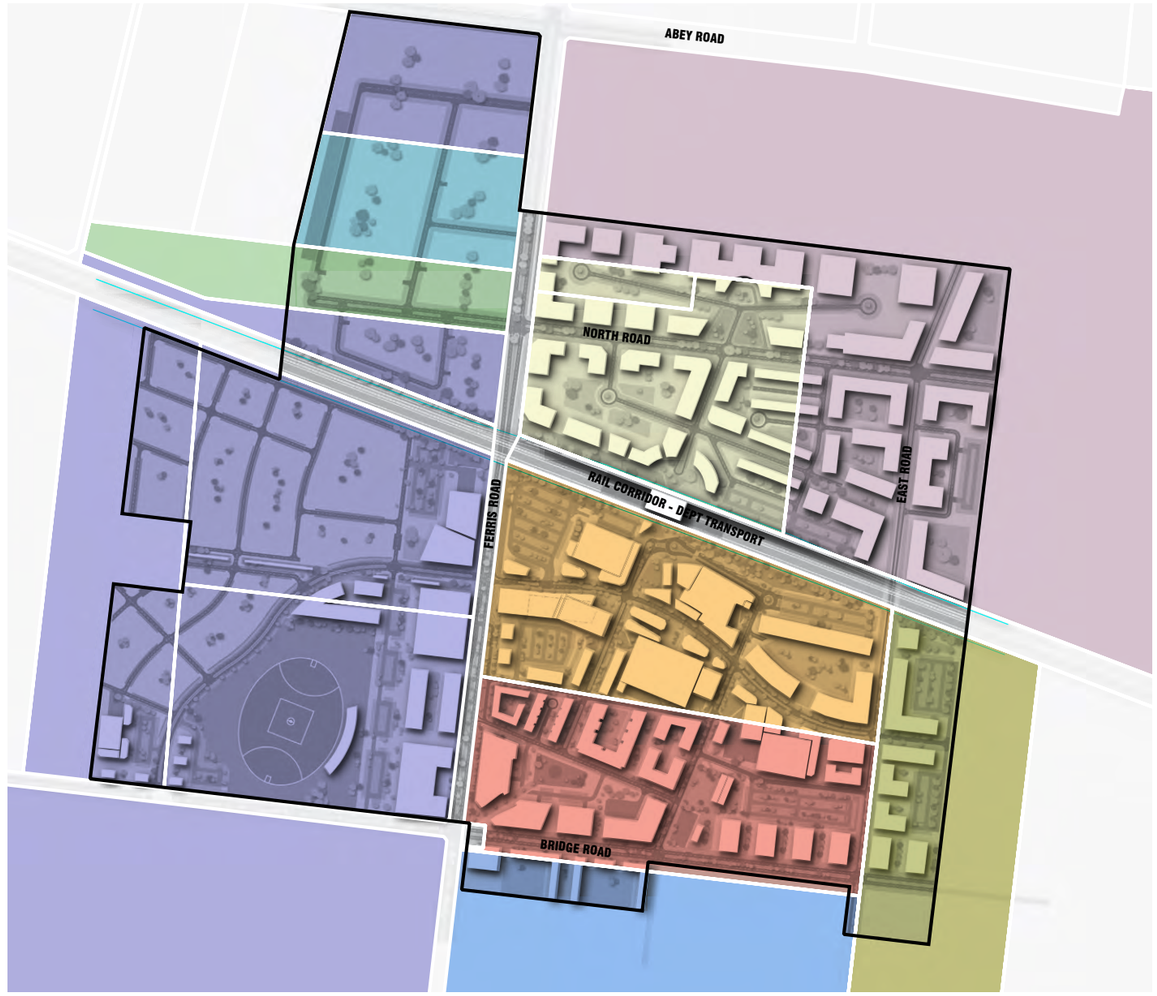


Figure 59 Land Ownership

6.1 Transport

RELEVANT KEY TECHNICAL INPUTS:

- Broader review of transport network and needs, intersection and road design, car parking demand and provision – GTA Consultants
- Traffic modelling for the Town Centre and surrounds road network – Veitch Lister Consulting
- Preliminary concept design for train station design/rail reserve requirements and grade separations – AECOM Australia
- General advice on rail and transport interchange requirements (including previous work on rail corridor upgrades, and current associated projects), bus network – Department of Transport.

6.1.1 Public Transport

I) TRAIN STATION/RAIL LINE

ISSUES

Some limited high level-planning work had been undertaken on any upgrade of the Melton Rail Line corridor and the potential future provision of a train station at Toolern, through the preparation of the Toolern PSP.

Given the centrality of the train station to the future form and function of the Town Centre, the land use and structural framework of the Centre established by the UDF needed to be able to respond to the future location of the train station, and its relationship to the balance of the centre.

SCOPE OF TECHNICAL WORK:

A high level concept design was prepared by AECOM Australia for the proposed Toolern train station (and associated grade separation of Ferris Road) to inform the UDF. The key purpose of this concept design was to:

- Provide some certainty to the potential location options for the future train station.
- Confirm ultimate rail reservation requirements, based on the Public Transport Victoria (PTV) potential ultimate build out of the rail corridor.

The purpose of the concept design was to ensure that the key strategic elements of the UDF were robust. The station itself will be subject to a much more detailed design process, which will be informed by a whole range of future decisions regarding the staged upgrade of the entire rail corridor.

OUTPUTS:

The concept design is based on planning for an initial single platform station servicing the existing single, bi-directional rail line, as well as ultimate build out based upon a six track rail reserve. The design was based upon the following assumptions:

- A single sided platform to be built adjacent to the existing track (which remains on its current alignment) that can be upgraded to two sides at duplication.
- An ultimate track configuration consisting of 4 x broad gauge tracks with electrification on the northern two tracks to allow for metropolitan passenger services to Melton and non-electrified tracks in the centre of the corridor for regional passenger services to Ballarat and beyond.
- 2 x dual gauge freight tracks with provision for double stacked containers on the south side of the corridor.
- Future grade separation of Ferris Road - either underpass (preferred) or overpass.

Two options were assessed as part of the concept design work for the station. Both involve all the components outlined above, with Option 1 assuming duplication of the regional passenger tracks to the north of the existing track, and Option 2 assuming duplication to the south of the existing track. Both assume the provision of the dual gauge freight tracks to the south again of the regional passenger tracks.

These concept design options were prepared in consultation with the PTV, and were informed by early work PTV had undertaken in relation to potential track design and function in the Melton Rail Corridor.

PTV have also advised that there may be a requirement to widen the rail reserve through the Toolern precinct by up to six metres (more at the train station itself). The UDF makes provision for this future widening, which would need to be acquired by PTV.

UDF RESPONSE:

- Preferred train station location defined east of Ferris Road.
- Transit Street alignment defined by the potential location of the train station (with pedestrian underpass component of the train station on this alignment)
- Provision for potential addition of m of land for the expansion of the rail reserve to the south (more will be required at the train station itself). This is outside the existing rail reserve and would require acquisition by PTV.
- Provision of Transit Plaza adjacent to the station to provide for passenger services and access.
- Grade separation of Ferris Road delivered via an underpass.

Figure 60 Concept Design Toolern Station – Option 1

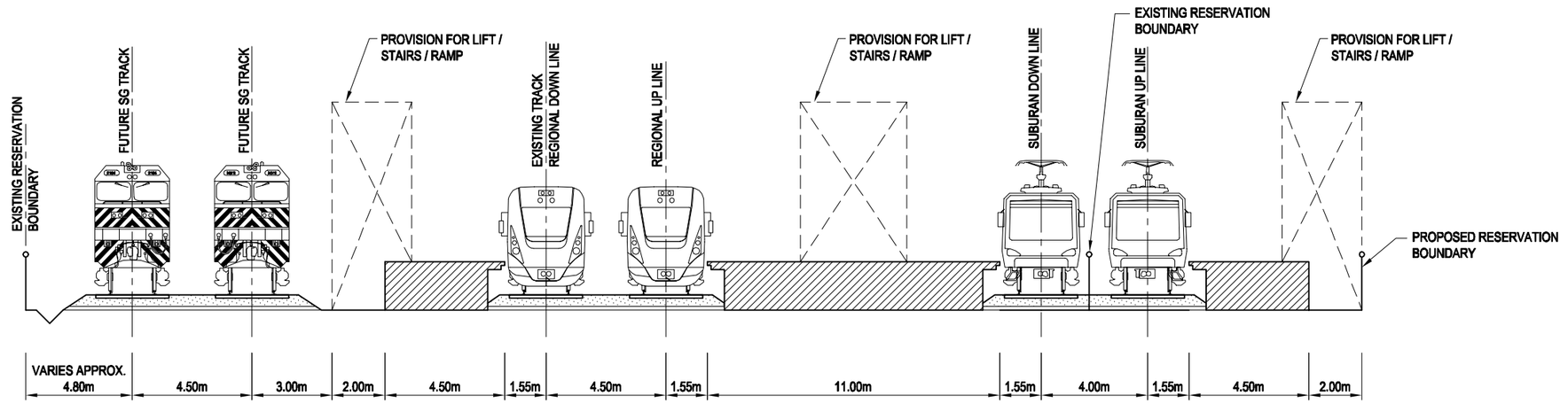
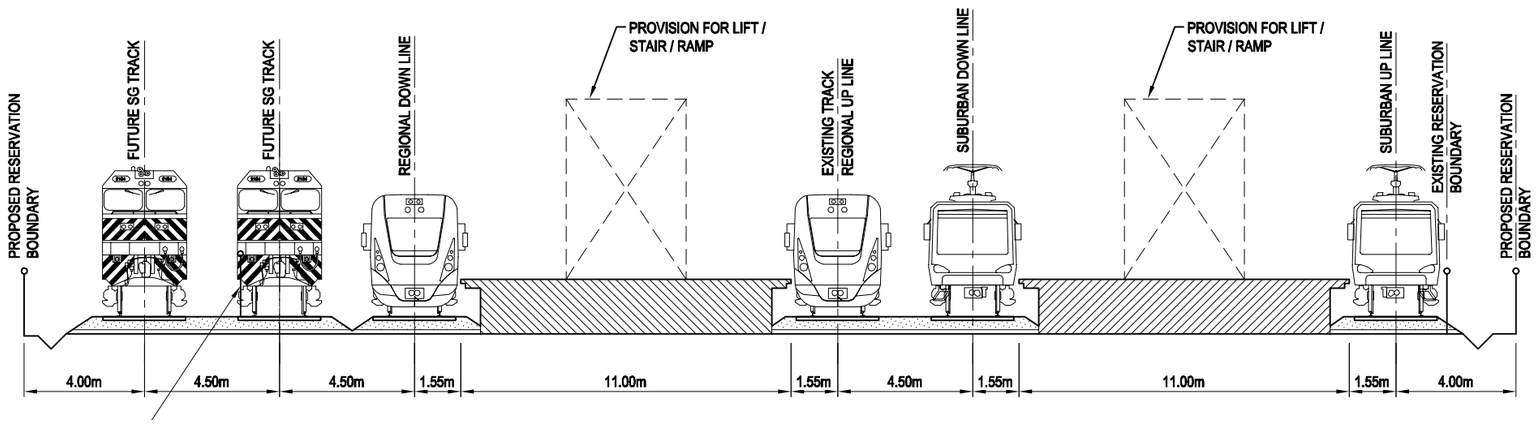


Figure 61 Concept Design Toolern Station – Option 2



II) PUBLIC TRANSPORT INTERCHANGE

ISSUES:

The Town Centre will ultimately serve as a destination in its own right, as well as a major transport interchange (particularly following development of the station). The Toolern DCP makes provision for land for the purpose of a public transport interchange adjacent to the future train station site.

Whilst the interchange will be subject to a future detailed design process, the UDF needed to provide some direction on:

- The components, size and configuration of the public transport interchange;
- Its relationship to adjacent land uses (including the train station and any public spaces);
- The movement of a number of transport modes (buses, taxis and pedestrians) to and through the interchange.
- Identify some of the potential issues which will need to be addressed as part of the future detailed design.

SCOPE OF TECHNICAL WORK:

A concept design for an integrated public transport interchange was prepared by the project team as part of the development of the UDF. This was based upon input from PTV.

OUTPUTS:

The entire public transport interchange precinct will be subject to a future detailed design process, however as part of the development of the UDF, a preliminary concept was worked up for both the train station and bus interchange.

The preliminary concept was based on an interchange servicing both the town centre and the rail station with provision for:

- Bus interchange;
- 'Kiss and ride' facilities;
- Commuter car parking;
- A taxi rank.

The bus interchange component of the transport interchange was based on the following requirements, as defined by PTV:

- The provision of up to 6 bus bays;
- The need to preserve the opportunity for 2 way bus movements within the Town Centre, to cater for potential longer term growth scenarios for the Melton Growth Corridor;
- The provision of two way movement with access from both ends and a turn-around area at the eastern end ('dumb bell' configuration).
- A pedestrian underpass which aligns with the proposed north-south street leading to the station;

In addition, opportunities to provide public space to provide passenger services and amenities and integrate the station precinct with the balance of the town centre. Transit Plaza North and South perform this role either side of the train station.

GTA point to examples elsewhere in Melbourne where bus routes successfully navigate local streets without a 7m clear zone, and balanced against the needs of other users of the town centre, the cross sections set out at Section 3.5 are justified.

A detailed design will ultimately be required for the interchange, and this will allow a number of elements to be bedded down, including:

- Land requirements for the interchange, swept paths, and therefore the extent of developable land adjacent the interchange.
- The number of bays required and their configuration.
- Provision for temporary bus stops including rail replacement services; if required at the station.

UDF RESPONSE:

- Provision for public transport interchange as per PTV's requirements to the immediate south of the potential train station site.
- Preliminary concept design for the public transport interchange built in to the UDF.
- Provision for two public spaces either side of the train station (Transit Plaza North and South)

III) BUS CIRCULATION

ISSUE:

The Toolern Town Centre will be a major destination for a range of trips within Toolern, both to access services and facilities within the town centre, and ultimately as an interchange point with the future Toolern Train Station.

The design of the local street network within the Town Centre needs to provide for efficient movement of buses through the centre, without compromising the access and amenity of pedestrians.

SCOPE OF TECHNICAL WORK:

A potential bus network through the Toolern Central quadrant was defined by GTA Consultants, as part of their broader review of the town centre transport network. This focused on access to the public transport interchange from the surrounding road network, route coverage, and the efficiency of bus movements through the town centre.

OUTPUTS:

The potential bus network defined as part of GTA's report proposes a hierarchy of streets with different cross sections forming part of that network. Specifically, the designated bus routes through the Town Centre have been defined to avoid areas where pedestrian priority and amenity is particularly important (including Station Street, the central part of Main Street, and laneways etc).

PTV guidelines generally require a 7m clear zone on all designated bus routes (or a trafficable median), to allow a bus to overtake a broken down bus. Many of the streets forming part of the proposed bus network do not meet this requirement.

GTA indicated that consistency with this guideline would not be desirable within the Toolern Central quadrant as it would lead to:

- Increased vehicle speeds which can lead to increased frequency and severity of accidents
- Greater potential for head-on accidents as a result of illegal use of the clear zone
- Reduced pedestrian safety due to increased crossing distances and potential for conflict between pedestrian standing on a median and a bus driving on the median (notwithstanding the fact that the bus routes do not traverse priority pedestrian areas)
- Reduced vehicle safety when driving on the median due to the reduced traction of a paved median when compared with the road surface
- Increased potential for vehicle conflict due to lack of clarity of motorist priority when entering, driving on, or exiting the median
- Increased construction and maintenance costs
- Additional land requirements which would lead to increased land costs and reduced development yields
- Reduced visual amenity through less opportunity for vegetation
- Less opportunity for median stormwater treatments.

PTV have indicated that future local bus network planning might result in a bus route needing to be provided through the local street network and through the residential areas adjacent to Toolern West, to ensure that part of the precinct is sufficiently well serviced by buses. The Toolern PSP did not specifically identify a potential bus connection through this part of the precinct (and does not make provision for a connector road to service buses). Planning for the design of local roads in this part of the town centre (and beyond) will therefore need to consider the need to provide for potential bus movements, and should involve input from PTV.

Similarly, the need to support local bus movements between North Road and the station precinct in Toolern North will need to be considered as part of future detailed design/planning applications.

UDF RESPONSE:

- Road network within Toolern Core quadrant designed to support circulation of buses with access to and from the public transport interchange.
- Bus routes designated to be separate from pedestrian priority areas.
- Indicative local street cross sections designed without provision for 7m clear zone to preserve pedestrian mobility and amenity.
- Provide for more detailed assessment of bus network requirements through the Toolern West and North quadrants (and impact on local street network) as part of the detailed subdivision design (planning application stage).

Figure 62 Local Bus Network through the Town Centre (subject to PTV)

6.1.2 Grade Separation

ISSUE:

The Toolern PSP identified two road grade separations of the Melton Rail Line through the precinct at Ferris Road and Mount Cottrell Road, (the East Road opportunity was first identified through the development of the UDF).

Grade separation of Ferris Road at the rail line could ultimately be delivered in one of three forms, namely:

i) Road underpass (Ferris Road under the rail line)

ii) Road overpass (Ferris Road as a bridge over the rail line); or

iii) Rail underpass (sinking the existing rail reserve, with Ferris Road over on a bridge at grade.

The Rail Underpass option would provide the best outcome in terms of encouraging investment and development in the Town Centre. Through consultation with PTV and VicRoads however , this is considered a less likely treatment for Toolern, given the likely cost and an extended disruption to existing rail services during construction

The Toolern PSP had specifically highlighted a Ferris Road underpass as the preferred form of grade separation, on the basis of urban design/amenity impact on the town centre, and the UDF has reaffirmed this. In particular, a road underpass would:

- Provide greater opportunities for east-west connection across Ferris Road;
- Limit visual impact and preserve key view lines within the Town Centre;
- Provide for greater pedestrian perceptions of safety.

For this reason, a road overpass is seen as being the less desirable option.

SCOPE OF TECHNICAL WORK:

AECOM investigated grade separation options for Ferris Road at the rail line. The key purpose of this work was to determine the impacts of the future grade separation and determine alignment and access roads within the Town Centre (including Main Street).

OUTPUTS:

As outlined above, the road underpass option formed the basis for the grade separation concept designs, which was prepared in line with the following assumptions:

- 5.9m vertical clearance between Ferris Road and the underside of the rail bridge.
- Maximum allowable road grades and vertical curve design parameters.
- Rail bridge structural depth, based on 2x16m spans (pier in centre of Ferris Road).
- Rail levels at Ferris Road remain at their existing height and the track is raised through the station (to the east) to achieve compliant rail drags through the station.
- Drainage of the underpass based upon a sump and pump arrangement.

AECOM assessed the design requirements for a grade separated underpass of Ferris Road based on the two rail reserve profile options discussed at 8.1.1 (that is, one option with the regional passenger lines duplicated to the north, and a second option with the duplication occurring to the south). A key component of this assessment was the potential impact on the location of the Main Street/High Street intersection with Ferris Road. This intersection needs to be located a safe distance from where Ferris Road returns to grade.

Option 1 – Regional Passenger Duplication to the North

Option 1 is considered to have the least impact on the Main Street/Ferris Road intersection because the ultimate rail bridge is further to the north. In turn, this means Ferris Road returns to grade further north than in Option 2.

Maximum grades and vertical curve limits were applied which resulted in the design level of Ferris Road being 0.25m below existing surface levels. The vertical curve extends through the intersection, finishing approximately 50m south of the intersection.

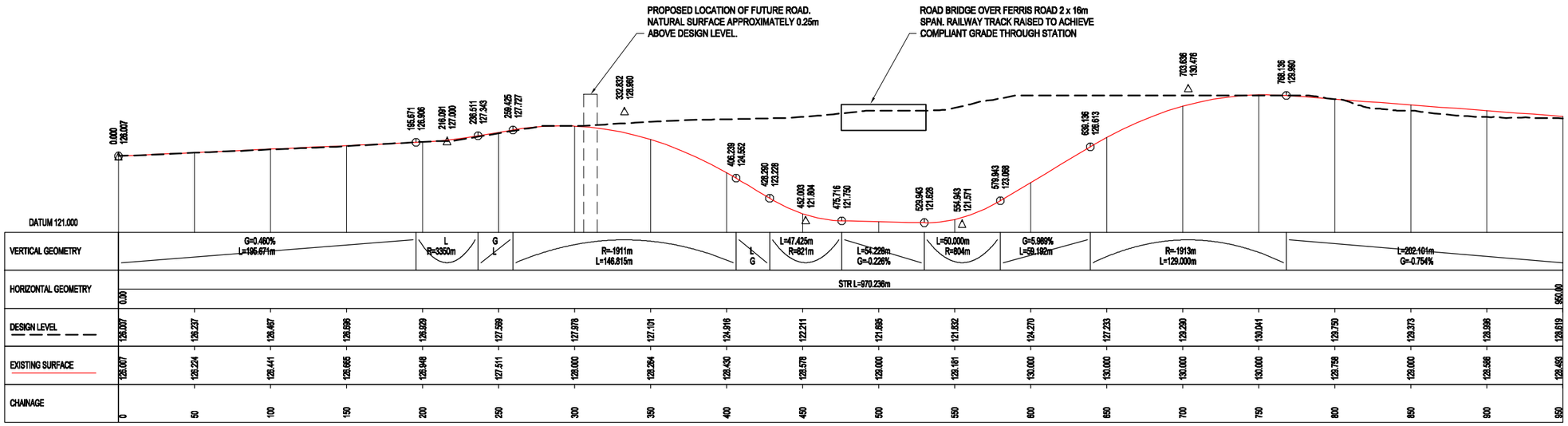


Figure 63 Ferris Road Underpass Long Section - Rail Option 1

Option 2 – Regional Passenger Duplication to the South

Option 2 would likely have a more significant impact on the Main Street/Ferris Road intersection, as the rail bridge alignment would sit further south, forcing Ferris Road to return to grade further south. It would also result in more of the Ferris Road frontage through Toolern Central and Toolern West being lost (as Ferris Road does not return to grade as quickly as in Option 1).

For Option 2, the design level of Ferris Road is 0.4m below existing surface levels at the location of the future intersection. The Ferris Road vertical curve extends through the intersection, finishing approximately 60m south of the intersection.

Whilst Option 1 is preferable as it would preserve more opportunity for at grade frontage (not access) to Ferris Road for Toolern Central (and Toolern West), the UDF has located the Main Street intersection sufficiently far south to accommodate either option.

Similarly, whilst an underpass is the preferred form of grade separation for Ferris Road, the UDF has been prepared such that the urban structure established for the town centre will work irrespective of the form that grade separation ultimately takes

The upgrade of Ferris Road is funded through the Toolern Development Contributions Plan. The duplication of the road and the construction of the grade separation of the rail line will need to be funded through other avenues (and may be considered for a GAIC 'works in kind' agreement).

AECOM's work was focussed specifically on the Ferris Road grade separation, and therefore did not involve any review of future design requirements for a grade separation of East Road. This will need to occur as part of a future planning process and will likely also involve review of potential funding sources for this project, which may include (amongst a range of options):

- The addition of this project to the Toolern Development Contributions Plan; or
- Developer works (to unlock development potential within the eastern parts of the Town Centre.
- 'Road under rail' nominated as the preferred form of grade separation for Ferris Road within the UDF.
- Funding options for the future East Road grade separation to be determined.

UDF RESPONSE:

- Intersections of Ferris Road with North Road and Main Street set a sufficient distance from the rail line to allow Ferris Road to safely return to grade.
- Lower value land uses (car parking, loading) which don't require high amenity located adjacent to the Ferris Road grade separation (given limited visibility in these locations).
- Preflowed underpass for the Ferris and East Road grade separations.
- Potential funding sources for East Road grade separation to be explained including a review of the existing Toolern DCP.

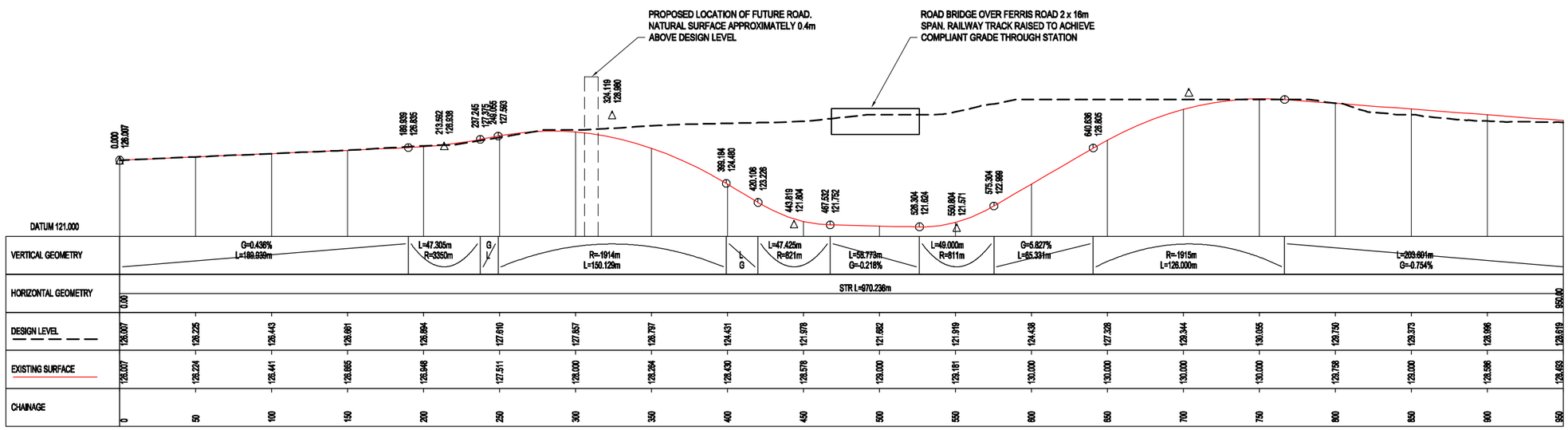


Figure 64 Ferris Road Underpass Long Section - Rail Option 2

6.1.3 Road Network

ISSUE:

The key elements of the road network within and around the Toolern Town Centre were defined through the Toolern PSP. Following this more detailed planning has been undertaken for the surrounding network, largely in response to the expansion of the Urban Growth Boundary and the preparation of the draft Growth Corridor Plans. This network planning may have implications on access to the Toolern Town Centre.

SCOPE OF TECHNICAL WORK:

An updated traffic model was prepared by Veitch Lister for the Toolern PSP area, to specifically identify any road network capacity issues for access to and within the Toolern Town Centre. The model represented an update of the modelling undertaken as part of the preparation of the Toolern PSP, taking account of the following:

- The expansion of the UGB in the Melton Growth Corridor;
- A clearer picture of the likely components of the Town Centre; and
- An improved understanding of the broader network in the region.

As part of their broader assessment of the transport network within the PSP, GTA assessed the implications of this modelling on planning for the form and function of the road network around and within the Town Centre.

OUTPUTS:

The assessment around the capacity and performance of the proposed road network undertaken by GTA is summarised below, based on three themes:

- Town Centre Access Roads
- Internal Roads and Intersections
- Service Vehicles and Loading

I) TOWN CENTRE ACCESS ROADS

There are three principal roads which will provide access to the Town Centre itself, being Ferris Road, Bridge Road and East Road, noting that the primary catchment for the Town Centre is south of the rail line.

In the Toolern PSP, Ferris Road is defined as a 'secondary arterial road' with 4 lanes and a 38m road reserve through the town centre. Bridge Road and East Road are both defined as 'connector roads' with 2 lanes and a 25m cross section (East Road in the PSP is shown slightly further east than in the UDF and is not specifically named 'East Road).

GTA have undertaken an assessment of the capacity of each of these roads, based upon traffic modelling undertaken by Veitch Lister for the Town Centre. They have concluded that:

- Ferris Road can be reduced to a 34m road reserve through the Town Centre (to reduce its impact on east-west pedestrian movement). A 34m cross section can accommodate the modelled daily traffic numbers, and can incorporate the elements of the road reserve anticipated within the Toolern PSP (see Figure 7).
- East Road will likely experience higher volumes than the theoretical capacity of a connector street. However capacity can be increased through additional capacity at controlled intersections. GTA have identified a slightly wider cross section than that in the PSP (25.4m rather than 25m), principally to accommodate the median. Other elements in the cross section have also been reconfigured (see Figure 19).

Whilst Bridge Road is identified in the Toolern PSP as a 'connector road', it should be constructed as a four lane divided road adjacent to the Town Centre. It is anticipated that Bridge Road will carry significantly higher volumes in the interim (prior to construction and connection of East Road across the railway line) than in the ultimate, and these higher volumes will require construction to a higher order to provide additional capacity.

In all cases, these road classifications and reserves are based upon the ultimate modelled traffic numbers (i.e. at full development of the Town Centre and Toolern Precinct), and it is likely that the construction of these roads will be staged, as per the staging plans at 4.1.

Table 1: Aniticipated Traffic Volumes - External Road Network

Road	Road Classification	Road Reserve Width
Ferris Road	Arterial Road	34m
Bridge Road	Connector Road (4 lanes in Town Centre)	34m
East Road	Connector Road	25.4m

1] Modelling undertaken by Veitch Lister Consulting (refer to later section of this memo).
[2] Sourced from AustRoads.
[3] Sourced from Clause 56.06 of the Melton Planning Scheme, assuming a connector street level road.

II) INTERNAL ROADS AND INTERSECTIONS

All remaining roads within the Toolern Central quadrant are local roads with slightly different road reserve widths and cross sections depending on the adjacent land uses and their pedestrian priority. GTA have assessed each of these local roads against the projected daily traffic volumes in the Veitch Lister model, and have concluded that all are well within the design capacity (see Table 2)

GTA have undertaken an assessment of the intersection spacing within the Town Centre, and have concluded that these are appropriate for a Town Centre environment. In the arterial road network, vehicle access is restricted and through movements prioritised. However in a town centre environment the internal road network should provide priority for pedestrians, access and servicing/loading. Controlled intersections should be located closer together.

GTA have concluded that the provision of signals will provide additional capacity for vehicles to access the town centre as well as providing a safer environment for pedestrians.

In addition, GTA identified opportunities for two dedicated pedestrian crossings into Toolern Central on key pedestrian desire lines. These crossings, on Ferris Road at Civic Street and on Bridge Road east of Ferris Road, will be signalised pedestrian crossings.

Table 2: Anticipated Traffic Volumes - Internal Road Network (Town Centre Only)

Road	Road Reserve Width	Carriageway Width	No. of Traffic Lanes	Road Classification	Anticipated Daily Traffic Volumes (vpd) {1}	Anticipated Midblock Capacity (vpd)
Main Street (central)	22.2m	7,0m	2 lane road	Main Street	4,800	7,000 to 10,000
Main Street (east and west)	24.2m	2x3.5m and 2m median	2 lane divided road	Main Street	3,800	7,000 to 10,000
Transit Street	23.3m	2x3.5m and 3m median	2 lane divided road	Main Street	1,700	7,000 to 10,000
Station Street	23.3m	2x3.5m and 3m median	2 lane divided road	Main Street	600	7,000 to 10,000
Civic Street	20.3m	7.0m	2 lane road	Main Street	1,200	7,000 to 10,000

Modelling undertaken by Veitch Lister Consulting

III) SERVICE VEHICLES AND LOADING

GTA reviewed the internal road network to ensure that service and loading vehicle movements within the Toolern Central quadrant (where the commercial loading access will be most required) could be adequately provided for without creating unnecessary conflict with pedestrians within the town centre.

They concluded that the network generally avoids the potential for conflict, given:

- the location of and access to the servicing priority network through this quadrant (Figure 66), and
- the relationship of this network to the principle retail anchors within the centre (i.e. those uses likely to generate the greatest number of large service vehicle trips).

UDF RESPONSE:

Town Centre Access Roads

- Provide for a 34m road reserve for Ferris Road and a 25.4m road reserve for East Road, generally consistent with the role and function of these roads in the Toolern PSP
- Provide for a 34m road reserve for Bridge Road though the town centre, reflecting the high volumes anticipated on this road ahead of construction of East Road across the rail line.
- Internal Roads and Service Vehicles
- Provide for a series of local streets with different profiles and characteristics, reflecting the proposed land uses adjacent to each and the pedestrian and servicing priority network through the town centre.
- Provide for a network of local streets with efficient access for service vehicles, focussed on large retail anchor uses.
- Provide for additional pedestrian crossings of Ferris Road and Bridge Road respectively, along key pedestrian desire lines to Toolern Central (including extra crossing between Transit Street and East Road on Bridge Road)

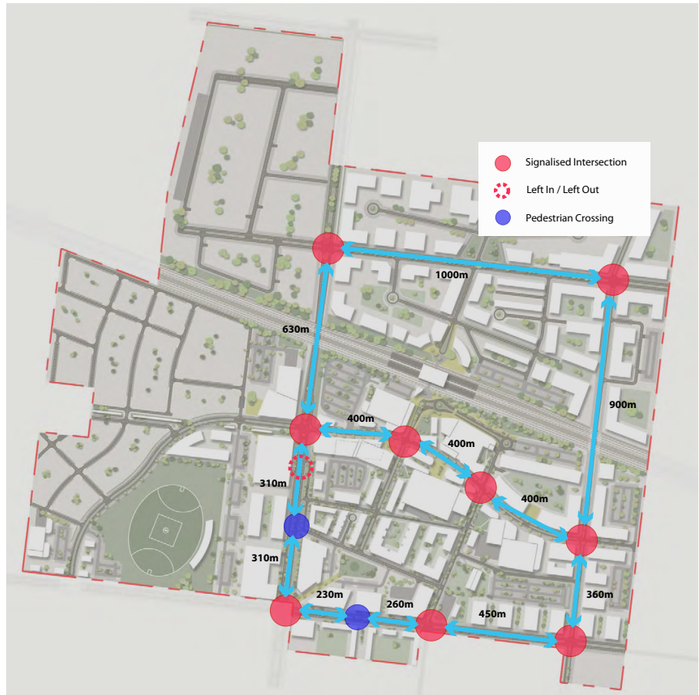


Figure 65 Controlled Intersections within the Toolern Town Centre

Figure 66 Loading and Servicing Priority

6.1.4 Car Parking Provision

ISSUE:

The provision of car parking in the Town Centre needs to serve a range of uses and be delivered in a range of different formats. The car parking rates required for specific land uses at Clause 52.06 of the Victorian Planning Provisions are generally considered to be outdated, and do not reflect that opportunities for shared car parking (with different uses having different demand 'peaks' for car parking) that are otherwise encouraged in town centres.

SCOPE OF TECHNICAL WORK:

GTA provided advice through the preparation of the UDF to determine an appropriate level of car parking, acknowledging the staging of the Town Centre. In addition, GTA undertook an assessment of the car parking provision within the Toolern Central quadrant against likely demand, based upon the projected land uses within this quadrant.

An assessment was not undertaken for the other three quadrants, given that there is relatively less certainty surrounding future floor space in each of these, and that the core uses likely to generate significant car parking demand are largely concentrated within Toolern Central. The UDF also sets out a dense and compact urban form for the Toolern Central quadrant, which the location and form of car parking has the potential to affect. Nevertheless, the rates established as part of this assessment are based on land use, and the rates should be applied as part of the assessment of car parking needs for particular uses in the remaining precincts.

Specifically, the car parking provision assessment:

- Defined appropriate provision rates for car parking for a range of land uses across the town centre.
- Assessed the car parking provision requirements for these uses and for the Toolern Central quadrant as a whole, based on these rates and the projected level of floor space for each land use in the quadrant.

OUTPUTS:

GTA's work was not based upon an assessment of the car parking provision rates as set out in Clause 52.06 of the Melton Planning Scheme, as it is widely recognised that these rates are outdated and do not reflect the integrated nature of land uses within the Town Centre. The assessment is based upon:

- Empirical car parking rates for different land uses collated by the consultants;
- Car parking rates proposed under the recent review of provisions in the Victoria Planning Provisions;
- Rates adopted for other outer metropolitan activity centres.

The car parking rates applied as part of this assessment are set out at Table 3.

Table 3: Recommended Car Parking Rates

Use	Recommended Car Parking Rate
Office	3 spaces per 100sq.m NFA
Shop (Supermarket)	5 spaces per 100sq.m LFA
Shop (Discount Department Store)	3.5 spaces per 100sq.m LFA
Shop (Other)	3.5 spaces per 100sq.m LFA
Restricted Retail Premises	2.0 spaces per 100sq.m LFA
Industry and Warehouse	3.0 spaces per 100sq.m NFA for any office component, otherwise 1.5 spaces per 100sq.m NFA
Dwellings (Standalone)	2 spaces per dwelling
Dwellings (medium density)	1.0 resident space per 1 and 2 bedroom dwelling
	1.5 resident spaces per 3+ bedroom dwelling
	1 visitor space per 5 dwellings
Hotel (serviced apartment)	0.5 spaces per apartment

Given the floor space projected within the UDF for different land uses in the Toolern Central quadrant, and based upon the car parking rates set out in Table 3 a total of 3,700 car parking spaces would be required within the Toolern Central quadrant. This is set out in Table 4 on the following page.

Table 4: Car Parking Demand by Precinct

Precinct	Use	Size	Car Parking Generation Rate	Car Parking Demand (spaces)
1A	Mixed Use	1,055sq.m	3.5 spaces per 100sq.m	37
	Entertainment	3,376sq.m	3.5 spaces per 100sq.m	118
	Office	12,889sq.m	3.0 spaces per 100sq.m	387
	Residential	51apartments (1 and 2-bedrooms)	1.2 spaces per apartment	61
	Retail	13,221sq.m	3.5 spaces per 100sq.m	463
	Supermarket	4,628sq.m	5.0 spaces per 100sq.m	231
			Sub Total	1297
1B	Mixed Use	22,180sq.m	3.5 spaces per 100sq.m	776
	Civic Use	7,669sq.m	3.5 spaces per 100sq.m	268
			Sub Total	1045
1C	Mixed Use	908sq.m	3.5 spaces per 100sq.m	32
	Office	18,569sq.m	3.0 spaces per 100sq.m	557
	Retail	6,027sq.m	3.5 spaces per 100sq.m	211
	Restricted Retail	5,173sq.m	2.0 spaces per 100sq.m	103
	Supermarket	3,510sq.m	5.0 spaces per 100sq.m	176
			Sub Total	1079
1D	Mixed Use	8,009sq.m	3.5 spaces per 100sq.m	280
	Restricted Retail	2,587sq.m	2.0 spaces per 100sq.m	52
			Sub Total	332
			TOTAL	3,753 spaces

As set out in Table 5, Toolern Central provides a higher than the projected demand (around 691 spaces). There is also likely to be additional car parking provision, given opportunities for shared use of parking (uses with demand for spaces peaking at different times). Commuter car parking in association with the train station has not been considered as part of this assessment of demand, however is likely to be made available for other town centre uses (particularly after hours).

The demand assessment also does not take account for the proposed provision of on-street parking spaces on most streets within the town centre (estimated 300+ spaces). When added to the car parking provision, the level of car parking contingency in the quadrant will likely exceed 1,000 spaces.

This level of contingency is only likely to be realised at full development of the town centre. The contingency will provide the opportunity for certain parts of the car parking provision to change form over time (eg. conversion of at grade to decked parking) without significant disruption to car parking supply during construction.

Table 5: Car Parking Demand vs Car Parking Provision

Precinct	Car Parking Demand	Car Parking Provision	Car Parking Surplus/Shortfall
1A	1,297 spaces	1,447 spaces	+150 spaces
1B	1,045 spaces	1,128 spaces	+83 spaces
1C	1,079 spaces	1,369 spaces	+290 spaces
1D	332 spaces	500 spaces (approx.) [2]	+168 spaces
Total	3,753 spaces	4,444 spaces	+691 spaces

[1] Excluding any car parking designated as commuter parking.

It is noted that the car parking demand assessment is based upon lower provision rates than required under Clause 52.06 of the Melton Planning Scheme. As such, a planning permit will still be required to reduce or waive the car parking provision rate from those set out at Clause 52.06 (unless a car parking precinct plan in accordance with the UDF is ultimately incorporated in to the planning scheme).

UDF RESPONSE:

- Car parking within the Toolern Central quadrant provided generally as per the precinct demand assessment by GTA.
- The level of car parking required as part of each stage/development within the town centre will need to be assessed as part of future planning permit applications.
- Support opportunities for additional interim commuter car parking in Toolern Central, prior to the construction of the commuter parking in Toolern North.

PTV have indicated that there may be a need to provide additional interim commuter car parking associated with the train station on the south side of the rail line (in light of the likely later development staging of land to the north of the rail line). The UDF identifies opportunities for additional commuter car parking to be established at appropriate locations within Toolern Central in the interim, to be replaced by permanent commuter parking in Toolern North as those sites within Toolern Central are developed for their intended use. PTV will need to enter into agreements with landowners to establish this interim commuter parking.

6.2 Economic Demand and Drivers

RELEVANT KEY TECHNICAL INPUTS:

- Review of supportable retail and office floor space within the Toolern Town Centre, and identification of opportunities for further future expansion – Charter Keck Kramer

ISSUE:

The Toolern PSP had provided for up to 70,000m^2 of retail floor space within the Toolern Town Centre, as well as a significant amount of commercial office space.

The Town Centre UDF needs to make accurate provision for the likely level of ultimate floor space within a reasonably densely developed urban form. The UDF also needed to build in flexibility to allow further expansion of these land uses in the event that future demand increases.

SCOPE OF TECHNICAL WORK:

The retail and commercial floor space requirements for the Town Centre were reviewed in a report by Charter Keck Cramer (CKC). The main components of the report included:

- An analysis of and response to the retail floor space assessment work that informed the preparation of the Toolern Precinct Structure Plan:
- A reassessment of likely supportable retail floor space in the Toolern Town Centre, and identification of future opportunities for expansion:
- An assessment of likely future demand for private and public office floor space within the town centre.

6.2.1 Response to the Toolern UDF Strategy

CKC concluded that the supportable retail floor space projected in the Toolern PSP had been overestimated on the basis that:

- The Toolern PSP retail report (Shire of Melton: Retail Strategy – Melton Major Activity Centre and Surrounds, MacroPlan Australia, September 2008) based its assessment of supportable floor space at Toolern on the attracting a uniform market share across the Main Trade Area (MTA).
- The MTA included the Melton Balance SLA (including Melton Township and Toolern) within a Primary Trade Area, plus the Melton East Statistical Local Area and the eastern part of the Shire of Moorabool (including Bacchus Marsh) in a Secondary Trade Area

CKC undertook a catchment and trade area assessment, based upon a projected population of in excess of 111,000 by 2031 for Melton Township (including Toolern) and assessed the total number of anchor retail uses (department store, discount department store and full line supermarket) that this population could support, based upon the Melbourne metropolitan average of:

- Department Stores – 1 per 235,295 people
- Discount Department Stores – 1 per 53,335 people
- Full-Line Supermarkets – 1 per 14,388 people.

Based upon these metropolitan averages, the report concluded that approximately 30,000m^2 of core retail uses could be supported within the Toolern Town Centre (assuming the average size for a centre anchored by a discount department store and two full line supermarkets). The 30,000m^2 figure is consistent with the 'as of right' floor space for 'shop uses' permitted in the town centre as part of the applied Business 1 Zone. In the findings, CKC acknowledged however that the Town Centre was strategically well placed to extend its trade area and market share beyond that which is typical of similar centres. This access advantage would be particularly realised when fixed rail services are delivered in the centre (and is reflective of Toolern's elevation to a PTC).

CKC also advised through the preparation of the UDF that small convenience retail node (in the Toolern West quadrant) could be supported without undermining the performance of the retail core.

6.2.2 Office Floor Space Requirements

CKC also assessed the likely office space requirements for the Town Centre, and concluded that at full development the Toolern precinct is likely to generate demand for a total of 36,250m^2 of office floor space. This includes population driven office space requirements for both private and public uses. The assumptions informing this assessment are set out in Table 6.

Table 6: Toolern Town Centre - Office Space Requirement Assumptions

A	Toolern Population @ 2031	54,686
B	Employment rate – private office (outer suburban SLA average for property/ business services and finance/insurance)	24 jobs per 1,000 residents
C	Employment rate – public office (outer suburban SLA average for government)	9.2 jobs per 1,000 residents
D	Total office employment rate (B+C)	33.3 per 1,000 residents
E	Total office employment (A/D)	1,815
F	Office space per employee	20m2
G	Total Office Space Requirements (ExF)	36,250m2

CKC assumed that the predominant demand for office space in the Toolern Town Centre would be generated by small businesses servicing local residents, as well as government services. Small businesses servicing a local catchment usually prefer to locate in town centres where they will have the greatest exposure to potential customers.

It should be acknowledged that there are two constraints with this assessment, which are considered likely to balance each other out, as outlined below:

- **All demand for office space generated by the population of Toolern is located within the Toolern Town Centre:** At least some of this demand is likely to be met in the local town centres, as well as within the Toolern Employment Precinct (where appropriate, and in association with manufacturing and warehouse uses).
- **Demand for office space will be generated only by the Toolern Precinct population itself:** Given the draft Growth Corridor Plans nominate the site as a Principal Town Centre and it services the broader corridor (particularly in relation to major public offices), it can reasonably be assumed that the Town Centre will likely accommodate a higher share of office space than average for outer suburban Statistical Local Areas (SLA).

UDF RESPONSE:

- Provision made for 30,000m2 of retail within Toolern Central, anchored by two supermarkets and a discount department store.
- Provision made for a large office building/complex in Toolern Central, noting that this area can support further retail in the event that additional retail floor space is justified.
- Office uses encouraged at various locations, including at upper levels within Toolern Central and at all levels around the retail core.
- Office uses encouraged within Toolern North, particularly in association with the potential health and higher education uses.
- Provision made for a convenience retail node of up to 1,200m^2 within Toolern West to provide early amenity for the local area, and for a small convenience node in Toolern North associated with the train station and institutional uses.

6.3 Community Infrastructure

RELEVANT KEY TECHNICAL INPUTS:

- Review of community infrastructure requirements set out in the Toolern PSP, and identification of any additional or larger scale facilities – ASR Research

6.3.1 Toolern PSP Community Infrastructure Requirements

Much of the community infrastructure planned for within the Toolern Town Centre was identified through Toolern Precinct Structure Plan. As the largest and most important centre within the precinct, the Toolern Town Centre was earmarked for a broad range of higher-order community infrastructure items servicing a large regional catchment.

Specifically, the Toolern PSP identified the need for the Toolern Town Centre to provide for:

- Emergency services precinct (1ha, incorporating SES, fire and ambulance services)
- Council civic centre-library (4ha)
- Aquatic/Leisure Centre (2.5ha)
- Justice Precinct (2ha, incorporating law court and police)

It also identified the opportunity to establish an Education precinct of up to 8.5ha, as well as a Health precinct of up to 1ha (though these uses were not specifically set out in the Land Budget in the PSP).

6.3.2 Toolern Town Centre UDF Community Infrastructure Review

ISSUE:

Whilst the Toolern PSP identified a suite of community infrastructure requirements within the Toolern Town Centre, and the land take associated with a number of these uses, it did not involve an assessment of the relationship between these uses.

Further, the classification of Toolern as a Principal Town Centre (PTC) within the draft Growth Corridor Plans (GCP) has implications in terms of the range of community facilities required within the Town Centre.

SCOPE OF TECHNICAL WORK:

An assessment of community infrastructure requirements in the Town Centre was undertaken by ASR Research as part of the UDF process. This assessment reviewed community facility requirements as set out in the Toolern PSP in the context of the:

- Elevated role to the Toolern Town Centre (in the GCP); and
- Significant increase in the population in the Western Corridor anticipated in the GCP.

This review identified requirements to increase the size of a number of facilities to service the larger catchment, as well as make provision for a range of additional facilities.

The review also identified spatial relationships between uses, and recommended general locations within the Town Centre for each use.

OUTPUTS:

This review reaffirmed the need for the suite of community infrastructure in the Town Centre identified in the PSP. It also recommended additional infrastructure and expansion of infrastructure identified in the PSP. These recommendations are based on the elevated status of Toolern as a PTC (servicing a much larger catchment than the PSP alone) as well as more advanced planning by Council.

The review recommended the provision of a number of additional infrastructure items including;

- a potential regional Performing Arts Centre:
- a district "town oval" for higher order active recreation uses.

The report recommended the upgrade of a number of items, including;

- Additional provision for multi-purpose indoor courts as part of the proposed aquatic/leisure centre (and increase in land area from 2.5ha to 4ha).
- Preserving the potential for provision of higher level health precinct/hospital rather than simply a level 3 health precinct (and an increase in the land area from 1ha to 10ha).
- Increasing the land area earmarked for 'education' from 1ha to 10ha, in recognition of the longer term potential for higher education provision within the town centre (and acknowledging the locational requirements of this use – accessibility to a large regional catchment)

An outline of the full suite of community infrastructure recommended by ASR for provision within the Town Centre is included at Table 7.

Table 7: Community Infrastructure Recommendations within the Toolern Town Centre - ASR Research

Item	Recommendations - Toolern TC UDF	Land Area (ha)	Floor Area (m^2)	Location
Passive Open Space	Establish a series of 'hard' and 'soft' spaces throughout the town centre, as well as a 'green corridor' along the rail line for cyclists and pedestrians	Various	N/A	All quadrants
Active Open Space	Establish a "District Sports Oval" as provided for in Council's joint venture development agreement with Lend Lease Communities.	6	N/A	Toolern West
Indoor Recreation Precinct	Provide for an indoor recreation facility/precinct comprising one or more of the following major components: -aquatic facilities; -gym facilities; -6-10 multi purpose indoor courts	4	10,000	Toolern West
Council Civic Centre/ Library	Provide for an integrated civic centre and library facility (branch library and potentially main municipal civic centre)	2	12,000 (combined)	Toolern Central
Performing Arts Centre	Plan for the provision of a regional Performing Arts Centre as part of an integrated leisure and arts precinct.	0.6	2,500	Toolern West
Justice Precinct (Law Court and Police)	Plan for the provision of a justice precinct within the town centre	2	As required	Toolern Central
Emergency Services Precinct (Fire, Ambulance and SES)	Plan for the provision of an emergency services precinct in the northern part of the town centre	1.5	As required	Toolern North or North West
Health Precinct	Plan for the provision of a health precinct in the town centre, and encourage the Victorian Dept of Health to recognise the centre as a "special investigation area" for a future significant health precinct	10	As required	Toolern North
Higher Education, Skills and Training Precinct	Plan for the provision of tertiary education, and encourage potential providers to explore opportunities within the town centre	10	As required	Toolern North

The Toolern PSP itself makes provision for a significant hub of community infrastructure to the immediate south of the Town Centre (including a government and Catholic secondary school, town park, and district active open space reserve). These uses will naturally have a strong relationship with the Town Centre.

UDF RESPONSE:

Open Spaces

- Provision for four 'hard' civic squares, focussed near the public transport interchange and on Main Street.
- Provision for three 'soft' public spaces at key points along the Station Street spine.
- Support the provision of private spaces with public access at key nodes through the centre.
- Provision for a pedestrian/cycling corridor ('green corridor') along the rail line.
- Provision for a district sports reserve in the Toolern West quadrant.

Council Facilities

- Provision for an Indoor Recreation precinct along the western side of Ferris Road, incorporating a designated site for a Leisure/Aquatic Centre and the opportunity for Indoor Sports Courts.
- Provision for flexible "Civic Space" within the Toolern Central quadrant, including a branch library and Council customer service centre/offices.
- Provision for a Performing Arts Centre site on the west side of Ferris Road, north of the Indoor Recreation precinct.

Other Facilities

- Provision for a police station and law courts complex in the south east of the centre.
- No specific provision for Emergency Services, as the relevant agencies are at different stages of planning for servicing Toolern. Given the relatively small land take, opportunities can continue to be explored for a consolidated emergency precinct or individual sites for different agencies.
- Earmark land for health and tertiary education precincts, in the Toolern North quadrant, given:
  - the long term provision timelines associated with these two uses,
  - the continuing use of this land in the interim for manufacturing uses, and
  - the locational requirements (proximity to high capacity public transport, large land take).
- Designate less land than recommended by ASR for these two uses (6.5ha for the health precinct, 3.8ha for tertiary education), on the basis that both uses should be encouraged to develop at a higher density, given the town centre location. Opportunities will likely exist for the health precinct to expand north (outside the town centre, into the Business 3 Zoned land) if necessary.

7.0 INFRASTRUCTURE DELIVERY

A range of significant infrastructure projects will need to be rolled out as part of the implementation of the Toolern Town Centre UDF.

Some of these are defined and costed, with a funding source and delivery responsibilities locked in via the PSP and DCP. Others will require additional work, in terms of scope, cost and timing, before any formal commitments are made.

This section summarises the key infrastructure requirements within the Toolern Town Centre, the lead planning and/or delivery agency, any identified funding opportunities, land associated with any particular project, and the indicative timing associated with delivery of this infrastructure.

Road Infractructure

Item	Project Lead	Funding Source	Comments
Ferris Road Upgrade	Council/Developer	DCP	
Ferris Road Grade Separation	PTV	Potential future budget commitment/GAIC 'Works In Kind'	Detailed design still required.
Local Streets	Developer	Development Cost	
East Road Grade Separation	Council/Developer	Development Cost/ Potential DCP	Design and construction to be funded by developer in association with commercial development, or through potential amendment to the DCP

Public Transport

Item	Project Lead	Funding Source	Comments
Town Centre Public Transport Interchange	Council/PTV	DCP (land only)	Future detailed design required for public transport interchange. May need to revisit elements of the UDF following detailed design.
Melton Rail Line Upgrade	PTV	Potential future budget commitment	Subject to broader review of state transport strategic priorities (and network planning)
Toolern Train Station (including pedestrian underpass)	PTV	Potential future budget commitment	Subject to broader review of state transport strategic priorities (and network planning). Detailed design still required.
Commuter Carparking	PTV	Potential future budget commitment	Provision likely to be staged with opportunities for shared use and provision of interim car parking on sites yet to be developed

Open Space/Recreation Infrastructure

Item	Project Lead	Funding Source	Comments
Town Centre Oval	Council/Developer	Development Cost (joint venture)	5ha in total. Non-DCP item.
Aquatic/Leisure/Indoor Sports Centre	Council	DCP (land only)	Approximately 2.5ha provided for on the western side of Ferris Road
Public Squares/Spaces	Council	DCP (land only)	1ha approximate in total, delivered in eight separate spaces of various sizes.
Private Squares/Spaces	Developer	Development Cost	
Green Corridor	Council	Development Cost	1.5ha approximately, delivered in four separate spaces.

Community Infractructure

Item	Project Lead	Funding Source	Comments
Council Civic Space/ Library	Council	DCP (land only)	1.3ha in total on south side of Main Street
Council Civic Precinct	Council	DCP (land only)	2.2ha in total at southern end of Station Street (corner Ferris and Bridge Road)
Civic Use	Council	DCP (land only)	0.5ha to the west of Ferris Road (co-located with Aquatic/Indoor Sports Centre)
Performing Arts Centre	Council	Development Cost (joint venture – land only)	
Justice Precinct	Department of Justice	Potential future budget commitment	Opportunity for magistrates court/police station in south-east portion of Toolern Central quadrant
Health Precinct	Department of Health/Private providers	To be determined	
Tertiary Education Precinct	A range of potential providers	To be determined	

8.1 Role and Status of the UDF

The Toolern Town Centre UDF is a requirement of the Melton Planning Scheme. Clause 2.6 of Schedule 3 to the Urban Growth Zone (37.07) sets out that a planning permit must not be granted for use and/or development of land within the Toolern Town Centre until a UDF has been prepared for that land (unless Council consider that the any planning permit issued is generally consistent with the requirements set out for the UDF in the PSP)

The UDF is to be prepared to the satisfaction of the responsible authority (Melton Shire Council) and may be amended, to the satisfaction of Council.

The Toolern Town Centre UDF applies to all the land shown as 'Major Activity Centre' in the Toolern PSP (Plan 9) and the Urban Growth Zone, Schedule 3 (Map 1).

The UGZ and PSP require that any planning permit issued within the Toolern Town Centre needs to be generally in accordance with the approved UDF. Melton Shire will monitor the controls as they relate to the Toolern Town Centre as part of their ongoing monitoring and review of the Melton Planning Scheme. Council has the ability to explore an alternative set of planning controls (including incorporating the UDF into the planning scheme via a planning scheme amendment, or rezoning the site to an Activity Centre Zone include provisions and requirements on a precinct basis).

8.2 Applied Zone Boundaries

Clause 2.2 of Schedule 3 to the Urban Growth Zone in the Melton Planning Scheme requires that the precise boundary of zones applied in activity centres, mixed use and employment areas through the schedule is defined by the UDF prepared for those areas.

The applied zone boundaries are defined through the UDF process as shown in Figure 67 below. The key difference between the applied zones in the Urban Growth Zone (Schedule 3) and the applied zone boundaries in Figure # relates to Toolern West. The applied zone boundary has been amended to better reflect the residential land use of the north-western portion of this precinct.

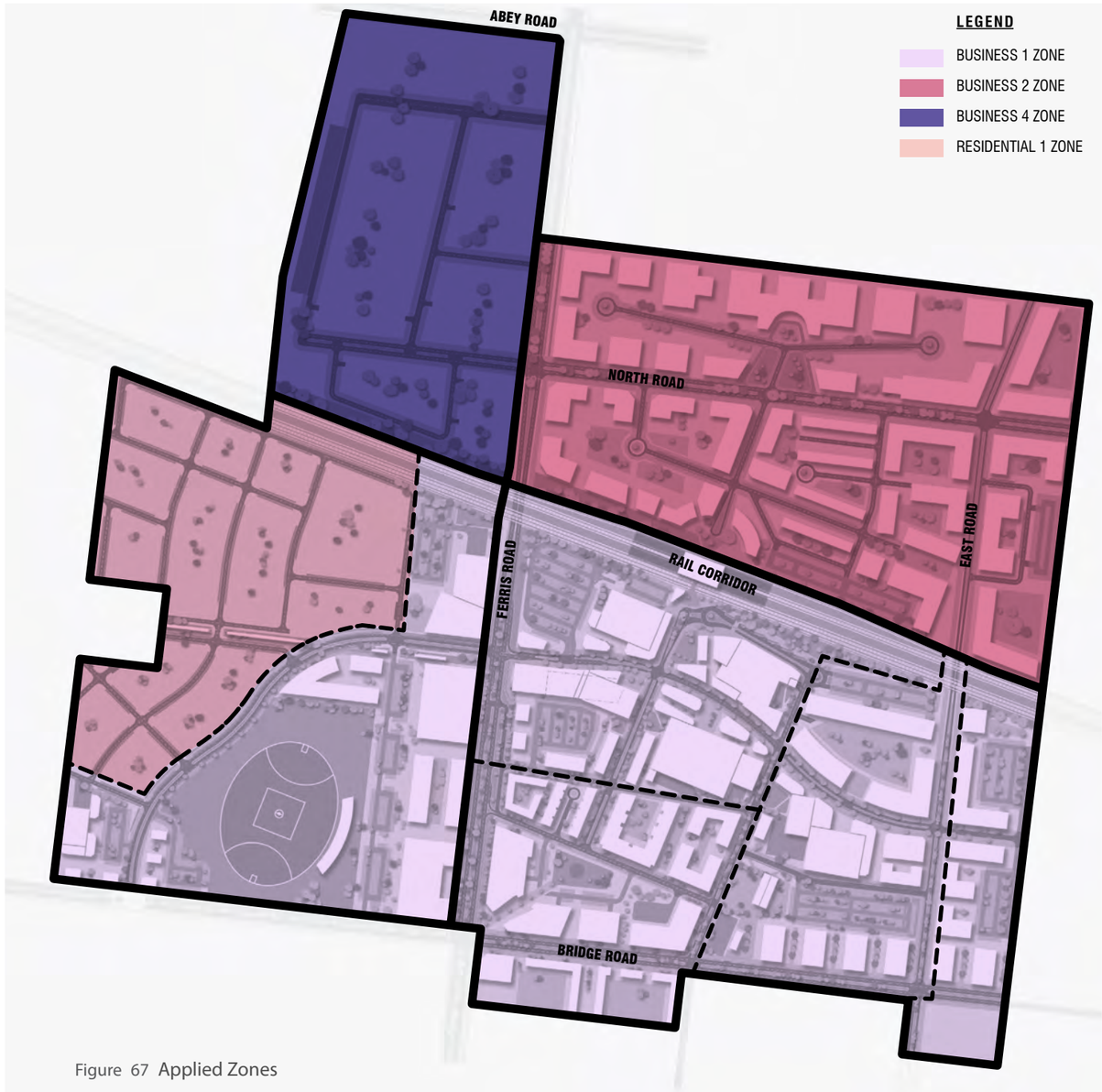


Figure 67 Applied Zones

8.3 Statutory Assessment of the UDF

The Toolern PSP sets out a series of objectives in relation to all activity centres within the PSP, and these objectives in turn provided the basis for a series of statutory requirements for the preparation of UDFs. Below is an assessment of the Toolern Town Centre UDF against these relevant requirements in the PSP.

NOTE: Many of the statutory requirements set out in the PSP relate specifically to the Toolern Central quadrant (given the land uses and 'main street' character of this precinct), and are not directly relevant for the remaining quadrants. Where this is the case, the assessment below relates specifically to how the UDF has responded to this requirement within Toolern Central.

Employment and Activity Centre objectives in the Toolern Precinct Structure Plan (4.3.1)
Provide opportunities for a broad range of business sizes and types that will enable the creation of one job for every new household.
Establish a hierarchy of high-quality, mixed-use, urban activity centres that are functional, attractive, and meet the needs of business and the community, where: ▪ A Major Activity Centre serves as the primary activity centre and retailing node for the Toolern Precinct Structure Plan area ▪ A series of Neighbourhood Activity Centres provide neighbourhood retailing and services, including community uses. ▪ Provide Neighbourhood Activity Centres which are integrated with the adjacent residential neighbourhoods. ▪ Local Convenience Centres outside designated centres provide local retailing and services.
Facilitate walking, cycling and public transport usage within and to activity centres and employment areas.
Make public transport integral to the function of activity centres and employment areas.
Ensure that building proportion, scale and character are appropriate to their urban context.
Accommodate a range of entertainment, leisure and tourism related uses that complement Melton Entertainment Complex.
To boost local employment opportunities through the development and promotion of employment land in Toolern.

Activity Centre Guidelines in the Toolern Precinct Structure Plan (4.3.3)		
Requirement The following planning and design guidelines must be met:	**Compliance**	**Comments**
Encourage high employment densities, including the redevelopment of Toolern Business Park.	Y	The UDF seeks to provide a breadth of employment opportunities within the Town Centre, to be developed at higher densities. The UDF identifies opportunities for employment uses and densities to increase over time (eg health and education precinct) as new opportunities emerge or the market evolves. Land is also set aside for a range of office uses, within Toolern Central and elsewhere.
Locate activity centres to generally conform to the areas shown on Plan 9.	Y	The Toolern Town Centre as defined by the UDF is located consistent with Plan 9 in the Toolern PSP.
Create a limited network of predominantly commercial streets edged by mixed-use buildings accommodating retail, office, community, residential, and other uses.	Y	Set out through the UDF, particularly at 3.2 – Development Quadrants (Toolern Central) and 6.2.1 – Precinct 1A (Toolern Core)
Establish a continuous built edge to streets.	Y	Particularly focused on the Toolern Core precinct within the Toolern Central quadrant, where there is a requirement for active frontage at ground level along most of Main Street. The requirement for continuous built form with active frontage in other precincts has been applied more selectively, in recognition of the full range of uses anticipated within the Town Centre, and the need to focus activating uses at key nodes/gateways.
Integrate the planning and design of neighbourhood activity centres with the planning and development of community infrastructure and services.	N/A	
Use building forms and commercial formats that support the function and character of a mixed-use, street-based activity centre.	Y	The 'street based' characteristic of the centre is embodied in the Strategic Principles underpinning the preparation of the UDF. The UDF supports a broad range of uses, particularly within Toolern Central.
Integrate public transport with activity centres and ensure public transport infrastructure and facilities are located in commuter-friendly and convenient locations.	Y	The train station and associated transport interchange has been a central focus in the development of the structure of the entire Town Centre. The UDF provides direction around the design and location of the train station and public transport interchange, and has anticipated future bus movements through Toolern Central.

Requirement The following planning and design guidelines should be met:	**Compliance**	**Comments**
Place large retail formats (such as supermarkets or bulky retail units) behind or above street-front retail tenancies.	Y	Each of the three designated large format retail uses along Main Street is proposed to be 'sleeved' by a finer grain retail mix.
Build retail and commercial frontages to the edge of footways with clearly defined principal entrances addressing streets or public spaces.	Y	The UDF sets up a land use structure to support this and guidelines which require it at a permit stage.
'Activate' ground-level frontages on commercial sections of streets and ensure the design of upper levels is compatible with overall façade character.	Y	Specifically along Main Street within Toolern Central, the UDF provides for ground level retail uses and supports professional suites and offices at upper levels. The Built Form Design Objectives in relevant precincts also set out preferred outcomes for treatment of facades and building setbacks.
Provide a 'fine-grained' scale of predominantly retail shop-fronts with frequent tenancies along the street.		Larger retail tenancies have been deliberately 'sleeved' behind a finer grain of retail tenancies, particularly on Main Street. Also required through the Built Form Design Objectives for respective precincts.
Design streets to a building height to street width ratio as close to 1:2 as possible, with a minimum of 1:3.	Y	Provided for in the proposed building heights through the town centre, particularly on both sides of Main Street, as represented in Figure 11 and 12 and at 6.2.1 – Precinct 1A – Toolern Core.
Provide as much on-street parking as possible.	Y	Planned provision for 312 parking spaces on street within Toolern Central. These spaces are to be provided in addition to the assessed demand for parking across the precinct (which will be entirely provided for off street). The on street car parking and street network have been planned in such a way to preserve pedestrian amenity in areas of likely high pedestrian movements.
Locate off-street parking behind buildings fronting commercial streets, or in basements or parking structures, and provide access from side-streets or rear laneways.	Y	Off street car parking has been located and designed to minimise impact on streetscapes and vehicular movements on pedestrians, having regard for access to major trip generators.
Screen off-street parking and service areas from the public realm.		This outcome has been central to the development of the Car Parking strategy for the Town Centre, and is set out at 3.7 – Car Parking.
Provide direct pedestrian access to public streets from parking areas.	Y	The UDF sets up this outcome, and it is a specific requirement at 3.7 – Car Parking. Detailed planning permit applications will need to ensure this is achieved.
Locate taller buildings or those of more notable design on prominent sites and at major intersections.		The Precinct Plans identify a number of sites where an 'emphasised corner element' and/or 'iconic structure' are required through the Town Centre, and in the Built Form Design Objectives for the respective precincts.

UDF Requirements in the Toolern Precinct Structure Plan (4.3.4)		
Requirement	**Compliance**	**Comments**
Generally consistent with the role and function of the activity centre set out in Table 5 of the PSP	Y	UDF is generally consistent with the land use mix outlined in the PSP. The retail floor space planning for in the UDF is less than outline in the PSP, and has been informed by a further economic assessment. Nevertheless, the UDF has taken account of future opportunities to increased the amount of retail floorspace within the centre, should further development in the catchment enhance its viability.
Determine the boundaries of the activity centre.	Y	The UDF determines both the precise boundaries of the broader town centre, as well as the applied zones within the centre (as required by Clause 2.2 of Schedule 3 to the Urban Growth Zone in the Melton Planning Scheme).
Address the location and integration of community facilities and services. (Note: The Urban Design Framework Plans should seek to provide community facilities within or directly abutting the centres).	Y	The UDF makes provision for a broad range of higher order community facilities (including additional infrastructure items not specifically identified in the Toolern PSP). The community facilities effectively straddle Ferris Road, with a strong degree of integration to the surrounding commercial uses. In addition, the plan has been developed having regard for the locational requirements and large land takes associated with tertiary education and health services, as well as the long lead time associated with planning/committing for these facilities.
Address the whole of the activity centre site.	Y	The UDF sets out a planning framework for the full activity town site and beyond. The UDF specifically seeks to lock in considerable detail for the earlier stages of development (within the town centre core and along the Ferris Road spine), yet providing some flexibility for later stages to be planned to adapt to changing circumstances.
Address any relevant design guidelines prepared by the Victorian Government or Shire of Melton.	Y	UDF is generally consistent with the role and form set out for significant town centres in the PSP guidelines, and in the draft Growth Corridor Plans.
Demonstrate an appropriate design response that addresses the Activity Centre objectives and planning and design Guidelines.	Y	See above.
Explain how the Framework responds to feedback received following consultation with infrastructure agencies including VicRoads and the Department of Transport or landowners within the activity centre.	Y	Both VicRoads and DoT have indicated that they're generally comfortable with the key transport elements of the UDF. Further views will be sought during exhibition of the UDF.

Requirement	**Compliance**	**Comments**
Show how the activity centre relates to existing or approved development in the area.	Y	The UDF has been prepared in concert with more detailed planning for the first stages of residential development south of the railway line, adjacent to the centre (specifically the Atherstone development) In addition, the plan has been prepared having regard for existing industrial uses within and adjacent to the northern precinct within the town centre. The designation of long term uses (potential tertiary education and health services) in the northern part of the centre recognises the likely continued operation in the area of existing industrial uses.
Show the location of public spaces, including parks, conservation reserves and squares.	Y	The UDF clearly sets out the size, distribution and function of the full range of public spaces planned within the town centre. In addition, it provides direction around the development of these spaces (including landscaping and amenities) as well as that of surrounding uses.
Include an overall landscape concept for the activity centre.	Y	The detailed landscape vision for the town centre is set out in a number of different sections of the UDF. The 'Public Realm' section in part one sets out a detailed description of the purpose, key uses, and landscape themes for the key public spaces (including public squares and reserves, streetscapes and laneways) within the town centre. In addition, part two of the UDF sets out a series of 'public realm' related design objectives and outcomes for individual precincts.
Set out guidelines to positively address environmental sustainability including integrated water management, energy conservation and where appropriate, the vegetation protection objectives in the Toolern Native Vegetation Precinct Plan.	Y	Section 3.4 – Local Sustainability sets out development principles for the town centre in relation to the minimisation of energy consumption, management of water, transport efficiency, social inclusion and heritage values. Part 2 of the UDF includes a series of design objectives which future development will need to have regard to that are informed by these principles.
Demonstrate how public transport will be integrated within the Activity Centre, developed in consultation with the Department of Transport.	Y	Public transport access and integration has been central to the development of the UDF
Set out provisions for car parking including the location and design of car parking areas and car parking rates for proposed uses within the activity centre.	Y	Section 3.7 of the UDF outlines the location and type of car parking proposed throughout the Toolern Core quadrant (where car parking is considered most likely to be in high in demand and where the greatest opportunity exists to share parking across uses). This section also sets out the parking rate adopted for different uses within the UDF.
Set out design guidelines for the provision of advertising signs.	Y	Built Form Element 2.1 at section 6.2 of the UDF describes a series of preferred outcomes in relation to signage, particularly within the sensitive streetscapes of the retail core and within public spaces.
Set out arrangements for the provision of service areas for deliveries and waste disposal including access for larger vehicles and measures to minimise the impact on the amenity of the activity centre and adjoining neighbourhoods.	Y	Managing the impact of delivery and loading from commercial vehicles has been central to the overall design of the town centre, particularly within Toolern Central. The plan sets out a specific movement network to support commercial deliveries, and design guidelines for major service/loading areas to minimise their impact on the amenity of the centre.
Show how opportunities for medium and higher density housing and future commercial expansion can be incorporated into the activity centre.	Y	The plan clearly identifies those parts of the town centre where higher density residential is to have a specific focus, and those areas where opportunities exist for shop top housing within Toolern Central. The plan also anticipates further eastern expansion of the commercial core of Toolern Central, in the event of future demand for additional floor space.

Glossary of Terms

Active Frontages

Active Frontages normally directly abut the Public Realm, and typically contain activities of a public nature located within a private building. The facades or frontages are normally highly visually and/or physically transparent, and commonly direct movement is possible between the public and private realms on such frontages. Examples of active frontages would be shops and restaurants, but also "shopfront" presentations to swimming pools and libraries.

Arterial Roads

Arterial roads are the principal routes for the movement of goods and people within an area's road network. Arterial Roads have traditionally been further divided into primary and secondary arterials. Secondary arterials supplement the primary arterial roads by providing for through-traffic movement to a determined carrying limit that is sensitive to roadway characteristics and abutting land uses. (Ref: VicRoads traffic engineering manual, vol 1).

Community Facilities

Infrastructure provided by government or non-government organisations for accommodating a range of community support services, programs and activities, or by private providers such as doctors, physiotherapists and the like. This includes facilities for education and learning (such as childcare, pre-schools, government and non-government primary and secondary schools, universities, adult learning centres), health and community services (such as maternal and child health, hospitals, aged care, doctors, dentists, family and youth services, specialist health services); community (such as civic centres, libraries, neighbourhood houses), arts and culture (such as galleries, museums, performance space), sport, recreation and leisure (such as public open space, swimming pools and other recreation), justice (such as law courts), voluntary and faith (such as places of worship) and emergency services (such as police, fire and ambulance stations).

Fine Grain Street System

A street and block pattern that encourages more intensive pedestrian use by ensuring parallel streets are spaced no more than 80 - 100 metres from each other, and each block has a perimeter no greater than 400 metres. Evidence of common pedestrian behaviour suggests larger blocks discourage regular pedestrian use and therefore reduce street activity.

Hollow Square

The Hollow Square format is commonly seen as having derived from European models in cities such as Paris, Edinburgh or Barcelona, where the built form provides an intensively occupied, relatively continuous building form fronting the public realm or street layout, with more private, often green spaces created within the resulting doughnut format. The built edge to the hollow square is often referred to as the "city wall".

Integration

The spatial and functional linking of areas of development and their inhabitants. Integrated areas form a coherent physical whole where, in liveability terms, the whole is greater than the sum of its parts.

Bulky Goods

Bulky goods refers to large scale retail uses which fit within the definition of 'restricted retail' within the Victorian Planning Scheme

Large Format (Showroom) Retail

Restricted retail. Generally large format sales buildings with a minimum floor area, selling a restricted range of goods.

Local Convenience Centre

A small centre that provides access to early retail/service business and meeting place for residents.

Mews

Mews houses were generally located to the rear of grander city dwellings accommodating staff and often the carriage or later the car. The term is now used to mean small scale, usually very urban places with shared vehicular/pedestrian public realm spaces, garages facing the street, with apartment dwellings at first and second floors in a continuous, terrace format.

Mixed Use Development

Good mixed use development involves the fine-grained mixing of compatible land uses in a balanced mix. Physically, it includes both vertical and horizontal mixes of use. No single use should dominate other uses, and residential land use should generally not exceed 60% of the land use.

Natural (or Passive) Surveillance

'Eyes on the street' provided by local people as they go about their daily activities – this can deter anti-social behaviour and make places 'feel' safer. Specifically, passive surveillance is best generated by residential uses overlooking the public realm , be this street or park.

Public Spaces

Refers to spaces that are publicly owned and which are intended for use by the public; and spaces that are privately owned but encourage public use free of any imposed rules or constraints on normal public behaviour.

'Sinuous' Main Street

The adoption of a curving, organic form or non rectilinear geometry, in the street to encourage/ generate built forms which demand a design response peculiar to the geometry, urban function and orientation of especially for corner sites.

Street (sense of) Enclosure

The use of buildings and regularly spaced large street trees to create a sense of defined public space in the street. Often a sense of left-over space has resulted from piecemeal development, where buildings that are set well back from the street and relate poorly to each other in scale.

Water Sensitive Urban Design (WSUD)

A sustainable water management approach that aims to provide water-quality treatment, flood management to reduce the pollution carried to our waterways and more sustainable urban landscapes. Key principles include minimising water resistant areas; recharging natural groundwater aquifers (where appropriate) by increasing the amount of rain absorbed into the ground; encouraging onsite reuse of rain; encouraging on-site treatment to improve water quality and remove pollution and using temporary rainfall storage (retarding basins / wetlands) to reduce the load on drains and improve landscape viability.

Disclaimer

Civil Design and Works to be in accordance with the current Engineering Design and Construction Manual.

Source: Glossary of terms adopted from Activity Centre Design Guidelines. Published by the Victorian Government Department of Sustainability and Environment, January 2005 and additional terms provided by Tract Consultants and Growth Areas Authority.