



TRACT

Landscape Architects
Urban Designers
Town Planners

Background Report

Toolern Employment and Mixed Use UDF
and Revision of the Toolern Town Centre UDF

For: City of Melton

Contract No. Contract 17/028

Prepared by: Tract in association with Essential Economics,
Clarke Hopkins Clarke and GTA Consultants

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O1 INTRODUCTION

1.1 Purpose of the document

As part of the Urban Design Framework (UDF) process, a Background Report is required to provide a comprehensive review and analysis of the Toolern Town Centre UDF area and the Toolern Employment and Mixed Use land in relation to their physical and policy context. In addition, the document will identify the issues and opportunities prior to launching into the UDF design process. Technical reports by economic and transport experts are also included.

This Background Report will build upon the existing work undertaken in the Toolern PSP and Toolern Town Centre UDF of 2012, and these findings will be synthesised to inform and shape the design and development of a revised Town Centre UDF and a new Employment & Mixed Use area UDF.

In order to gain a comprehensive understanding of the issues and opportunities shaping the development of these UDFs, the **Background Report** provides details and findings on the following:

- Summaries of current State & Local policy and contexts, and key influencing documents
- Summary of Movement & Transport Technical Report (including recommendations)
- Summary of Economic Technical Report (including recommendations)
- Benchmarking
- Key site opportunities & constraints
- Broad strategic directions
- Recommendations for the structural revisions of the Toolern Town Centre UDF document

Full Technical Reports are included as appendices to this document.

The Background Report will be released for consultation to seek feedback from landowners, stakeholders and the wider community. Ultimately the feedback will be incorporated into a revision to the Background Report.

1.2 Purpose of the project

The scope of the project includes:

- An Urban Design Framework Plan for the Toolern Employment and Mixed Use land as identified in the Toolern Precinct Structure Plan (PSP).
- Revisions to the current Toolern Town Centre Urban Design Framework (UDF) from 2102.

The **Toolern Employment and Mixed Use UDF** will set out an integrated vision for the area and guide its use and development. The aim of the UDF is to provide certainty in the guidance of future development within the UDF area to both Council and landowners. The document will focus on establishing and quantifying key principles and objectives rather than focusing on specific design measures and treatments. Ultimately, the process will result in a document that will enable Council to assess planning permit applications and guide subdivision applications.

The goals of the UDF are as follows:

- Establish a clear and integrated vision for the Employment and Mixed Use land.
- Guide the use and development of the area through objectives and planning and design requirements and guidelines.
- Establish a implementation program of statutory and strategic initiatives.
- Include internal and external consultation with landowners, occupiers (businesses) relevant stakeholders, Council staff, Councillors and the wider community.
- Establish a process for monitoring and review

At the core of the **Toolern Town Centre UDF** review will be the changes to planning policy that have occurred in the five year period since the document was completed. The most notable change is the centre's new role as a Metropolitan Activity Centre through Plan Melbourne 2017 – 2050. This has particular ramifications to the retail cap that was included in the original document.

Council have also requested that the document be restructured to make the document less complicated and more consolidated. In essence it needs to become more user friendly.

Ultimately the project will result in two separate UDF documents, although this Background Report, associated Technical Reports and stakeholder/community engagement will combine the two projects at this stage since many of the issues are shared.

1.3 What is an Urban Design Framework?

An Urban Design Framework (UDF) is tool used to create a set of strategic planning policies and design guidelines which can assist in informing the future development of an urban place. It includes a vision for how a place may develop, and includes sufficient detail to allow for testing and practical application of the framework.

The aim of a UDF is to provide guidance for local government to assess and critique development applications which sit within the UDF area. The UDF should be designed to be flexible through the identification of key principles and objectives, rather than focusing on specific built form elements.

No development can occur within areas where a UDF is a requirement until one has been approved by Council.

1.4 Structure of the document

The document is arranged into three main sections following the introduction (Refer Figure 1). Section 2 is a general context section that outlines the study area and the project history. Most importantly this section summarises the current State and Local government policy through some key influencing documents. Sections 3 and 4 focus on each of the specific areas – the Toolern Town Centre and the Toolern Employment and Mixed Use land, respectively. The background requirements for each project area are different given that one is the background for a new UDF while the other is updates to an existing UDF. The fifth chapter summarises the current strategic directions for the projects.

1.5 Methodology and Process

The development of the Toolern Town Centre Urban Design Framework and the Toolern Employment and Mixed Use Urban Design Framework will occur over a period of approximately 18 months throughout 2017 and 2018, and will consist of the stages outlined in Figure 2. The Background Report is part of Stage 2, also noted in Figure 2.

Stage 2 has also included initial interactions with both the Project Control Group (PCG) and the Project Working Group (PWG) with presentations summarising the initial findings from the Background Report. A similar presentation was given at a Council Briefing. The first stakeholder engagement will take place in late November 2017 at a Stakeholder Summit for landowners, stakeholders and the general public.

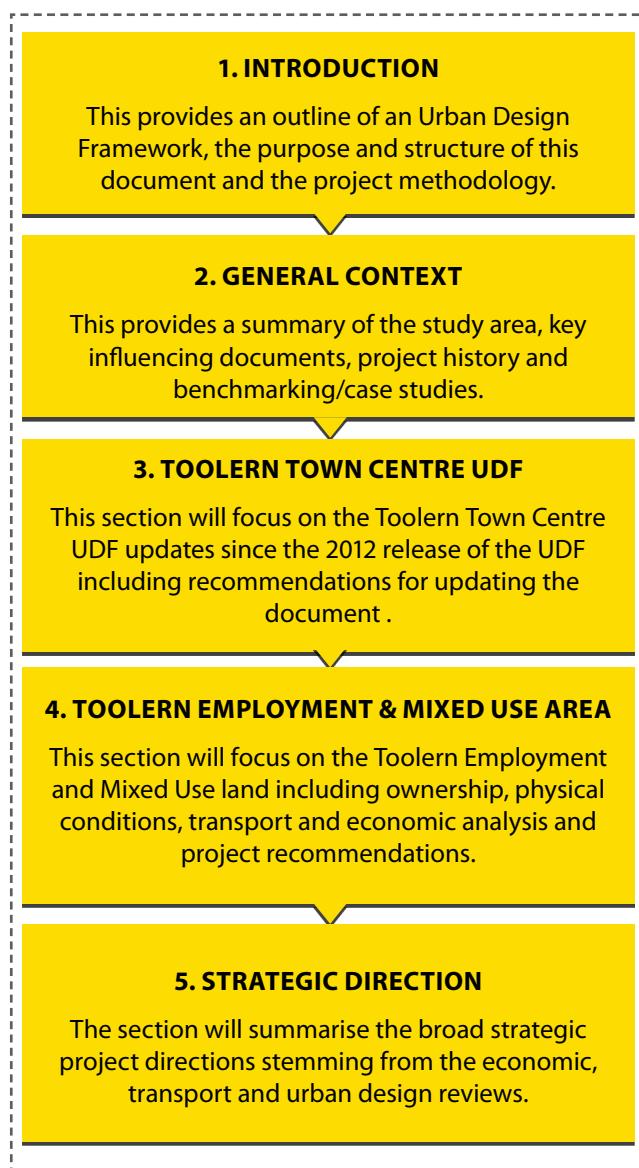


Fig. 1 Document Structure Summary

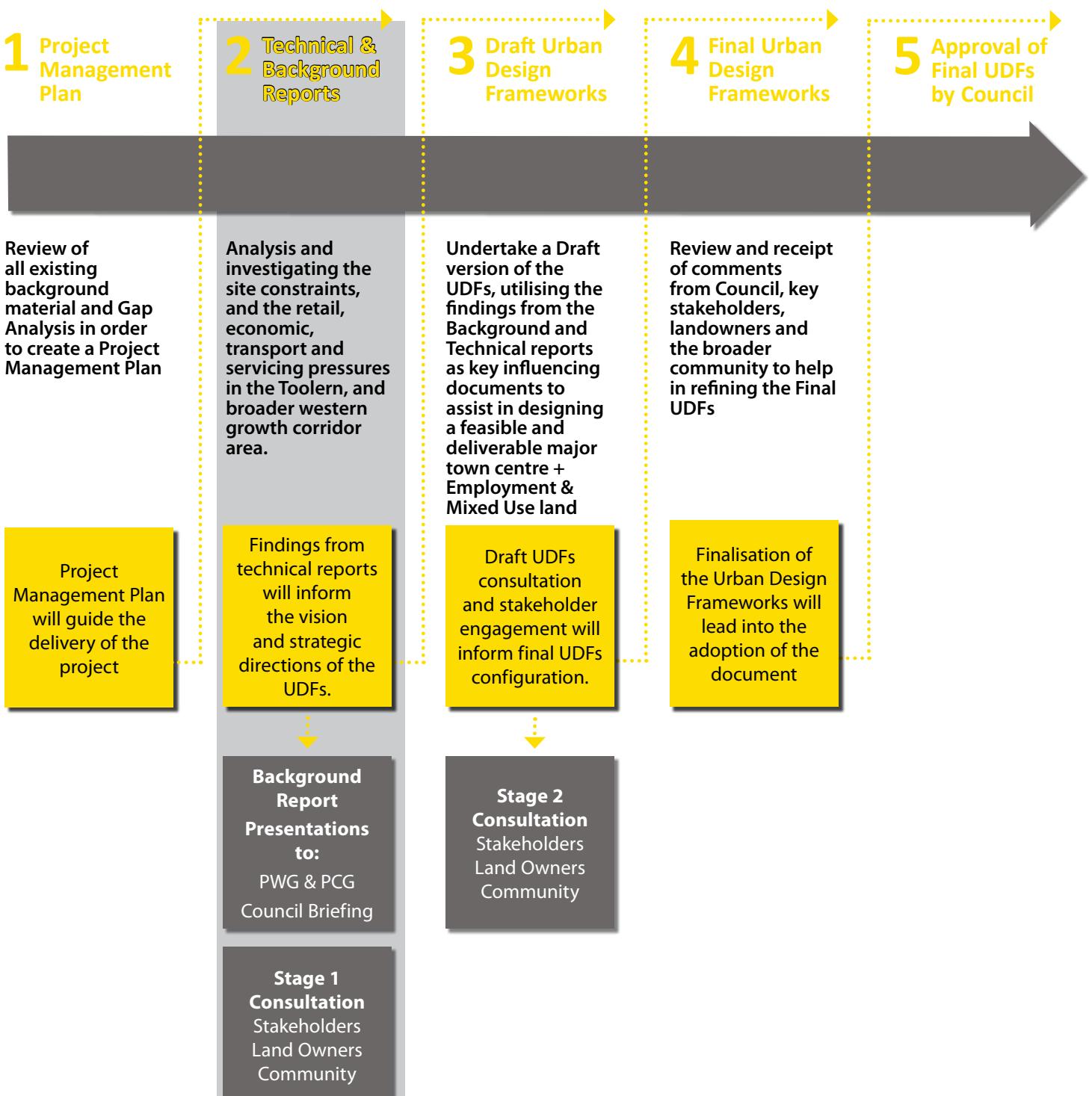


Fig. 2

Methodology and Process Summary

O2 GENERAL CONTEXT

2.1 The Study Area

The City of Melton is located in the outer western area of Melbourne, within 19 kilometres of the Melbourne CBD. One of the fastest growing municipalities in Australia, the City of Melton consists of a series of townships and communities; the larger towns being Caroline Springs and Melton (Caroline Springs is located 19 kilometres west of Melbourne's CBD and Melton Township is 35 kilometres west of Melbourne's CBD). The City of Melton is bounded

by Moorabool Shire in the west, Macedon Ranges Shire in the north, the Cities of Hume and Brimbank in the east and Wyndham City in the south.

The City of Melton is one of metropolitan Melbourne's growth areas, and is estimated to have a population of 241,000 people by 2031 with an ultimate build out of over 400,000 people. At present, the majority of the municipality is undeveloped; however, this will change in the coming years, with large areas of land now within the Urban Growth Boundary (UGB). (Refer Figure 3)

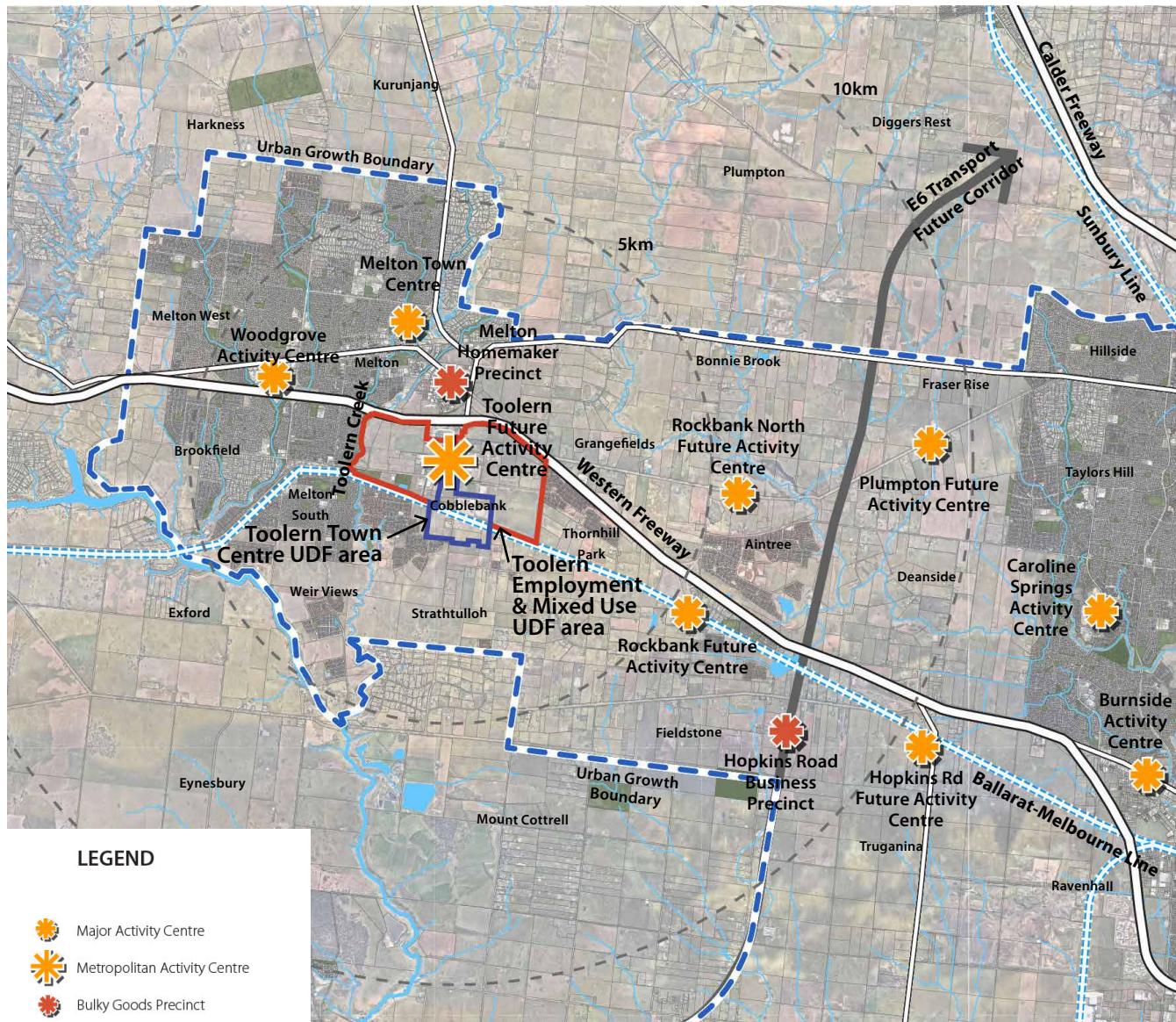


Fig. 3 Regional Context Map

Toolern Employment and Mixed Use UDF area

The area identified for Employment and Mixed Use is approximately 392 hectares in size. It is bounded by the Western Freeway to the north, Mt Cottrell Road to the east, the Melbourne-Ballarat Railway line to the south and the Toolern Creek to the west. The northern boundary of the Toolern Town Centre meets the southern edge of the Employment and Mixed Use land. Tabcorp Park sits between the Employment and Mixed Use land and the freeway. (Refer Figure 4)

Toolern Town Centre

The Town Centre is approximately 100 hectares in size and straddles the Melbourne to Ballarat railway line. The major north-south road through the town centre is Ferris Road. The UDF area is zoned UGZ3 and its schedule identifies the Commercial 1 Zone as the applied zone for the land east of Ferris Road and south of the railway line, and the Commercial 2 Zone as the applied zone for the land west of Ferris Road and north of the railway line. (Refer Figure 4)

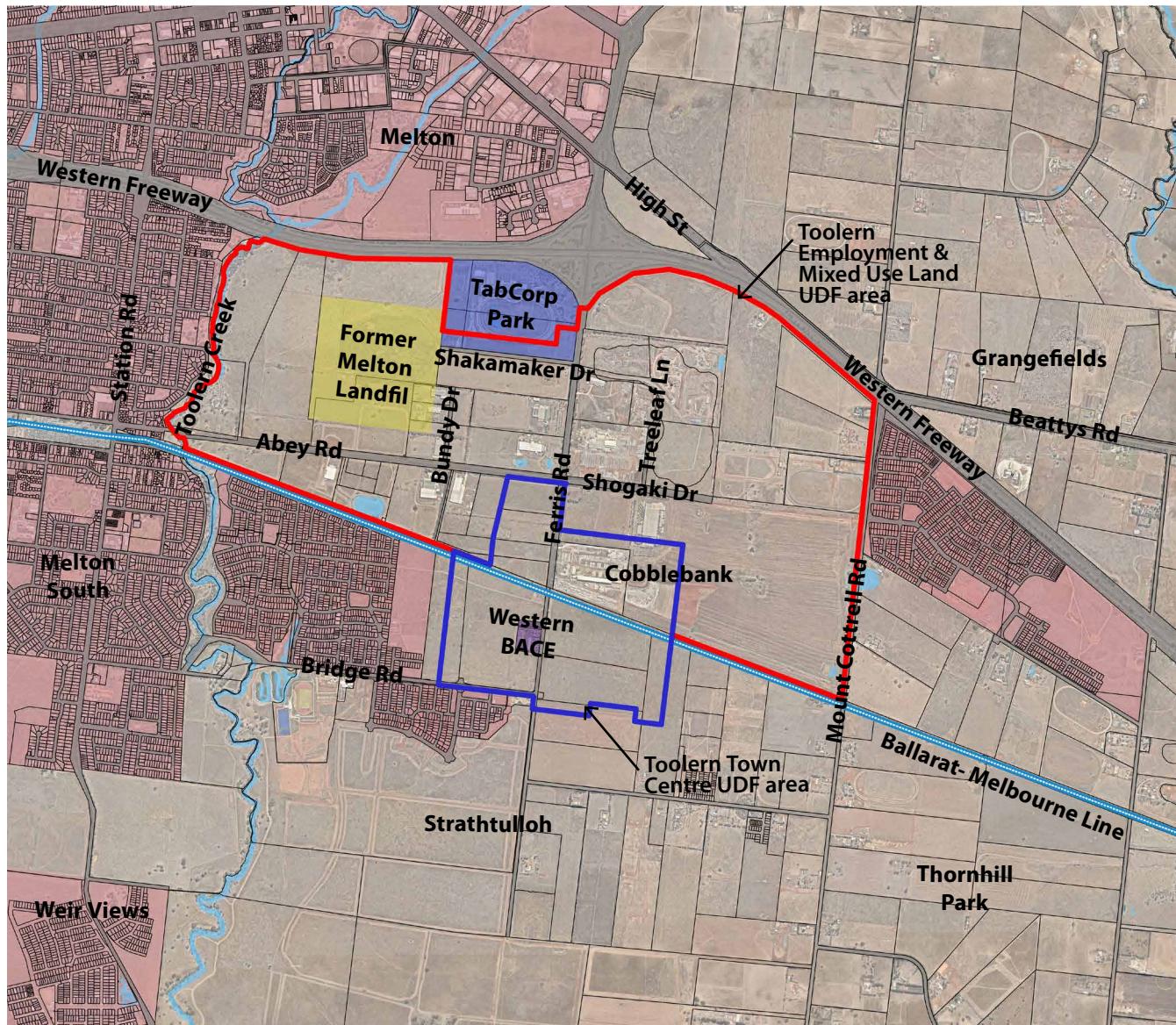


Fig. 4

Local Context Map

2.2 Project History

Both the Town Centre and the Employment and Mixed Use study areas were brought into the Melbourne's Urban Growth Boundary (UGB) and zoned Urban Growth zone as part of the 2010 review of the UGB after the release of 'Melbourne @ 5 million'.

A Precinct Structure Plan for the entire 2,200 hectare area known as Toolern was developed by the Victorian Planning Authority (VPA) (then Melbourne Planning Authority) approved and gazetted in 2011 and updated in 2015.

In 2012 the VPA (then the Growth Areas Authority) together with Melton City Council undertook a UDF for the Toolern Town Centre. To meet the requirements of the UGZ3 schedule both the Town Centre and the Employment and Mixed Use areas require a UDF to be complete prior to any development and subdivision approvals.

Since the completion of the Town Centre UDF little development has occurred within the UDF area, with the exception of Western BACE Business Accelerator and Centre for Excellence on Ferris Road, although residential subdivisions immediately adjacent to the UDF area have been occurred.

2.3 Toolern Train Station Announcement

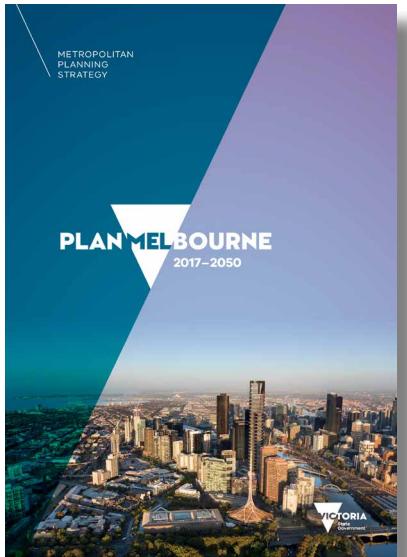
On November 3rd, 2017 the State Government announced a new railway station at Toolern located on Ferris Road and in line with proposals from the Toolern Town Centre UDF. It is set to be complete by late 2019. The project will also include car parking, a bus interchange and bike storage.

2.4 Current State Government Policy & Key Influencing Documents

2.4.1 Plan Melbourne Metropolitan Planning Strategy 2017-2050

Toolern is identified as a Future Metropolitan Activity Centre and as a focus for investment and growth and of state significance. Activity centres aim to provide diverse range of jobs, activities and housing for regional catchments that are well served by public transport. These centres will be important for government, health, justice, education, retail and commercial services.

Toolern will be a hub for public transport services and service delivery. Opportunities exist to partner with the private sector to enable future diversification, investment and employment growth.



2.4.2 Toolern Precinct Structure Plan (including Toolern Native Vegetation Precinct Plan) amended December 2015

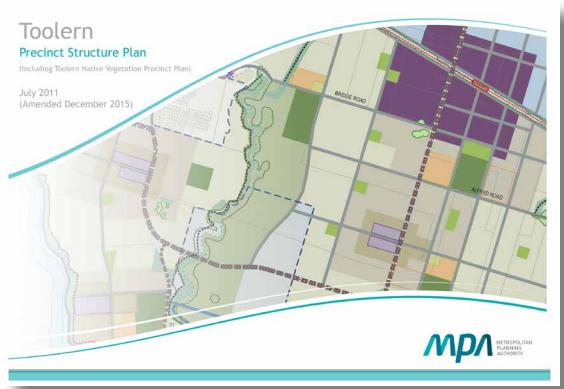
The Toolern PSP was implemented into the Melton Planning Scheme by Amendment C84 (Part 1) and adopted and gazetted in October 2010. Further updates to the PSP were made through subsequent amendments Melton C84 (Part 2), approved and gazetted in November 2011 and Melton C161, and amended in December 2015.

The PSP sets out objectives, and guidelines for land use and development that 'must' be met or 'should' be met. The PSP also determines the use and development controls (including the applied zones) that apply in the accompanying Urban Growth Zone Schedule 3 (UGZ3) in the Melton Planning Scheme.

The document facilitates transition of non-urban to urban land while enabling protection of biodiversity values

Toolern Native Vegetation Precinct Plan has been prepared in conjunction. It highlights native vegetation that can and can't be removed without a permit and the required offsets.

The sections that directly relate to the Employment land, Mixed Use area and Town Centre are summarised on the following pages.



The Urban Structure Plan on the opposite page highlights the broad components of both the Toolern Town Centre and the Employment and Mixed Use Lands

The three major land uses are:

- A Metropolitan Activity Centre
- Employment Land
- Mixed Use

Open Space includes:

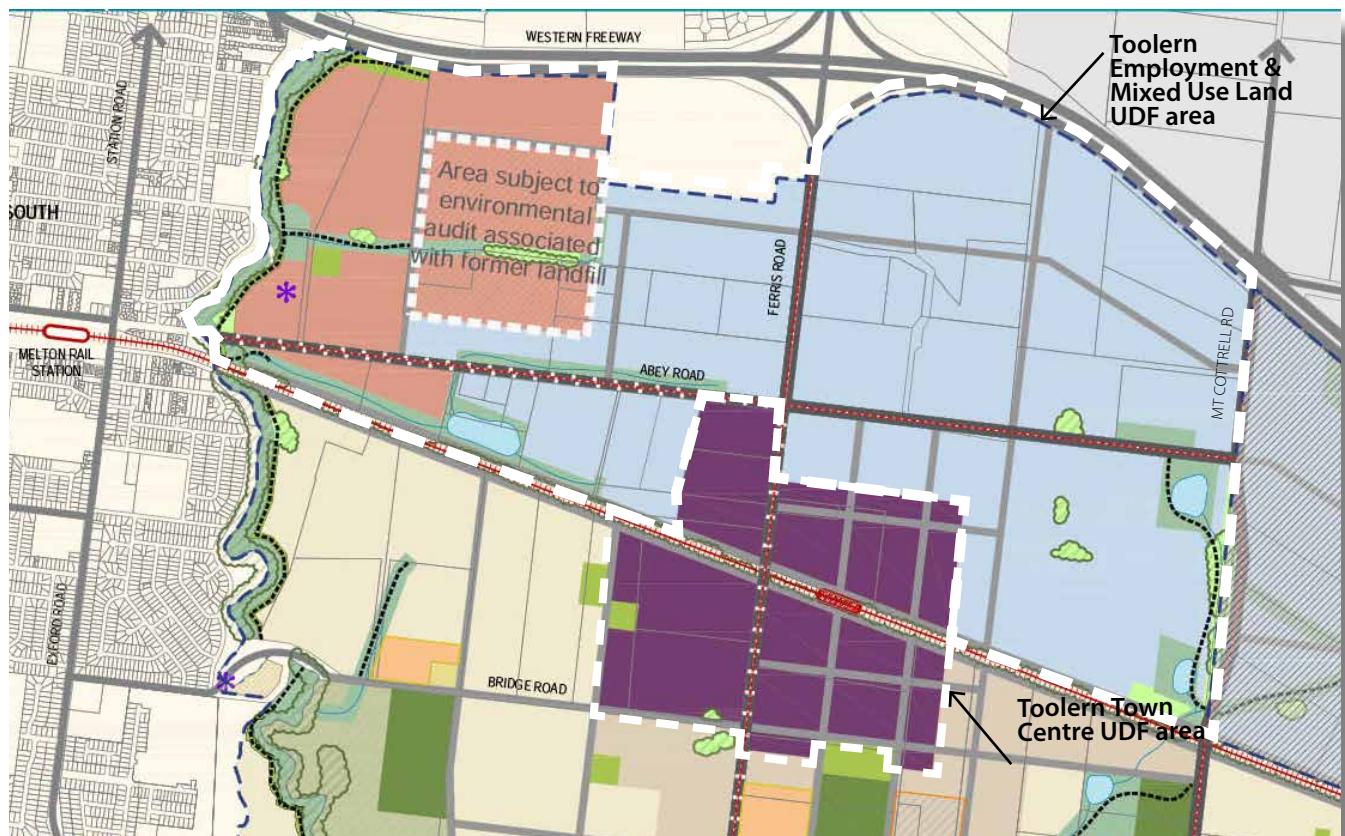
- Unencumbered Passive Open Space located in the Mixed Use area
- Waterway/Drainage Reserve located along Toolern Creek, north of the railway lines and along Abey Road, and along the eastern boundary of the UDF area
- A Wetland/Retarding Basin north of the railway line and two along Mt Cottrell Road

There is a network of roads including primary and secondary arterial roads, connector roads and local access streets.

An off road cycle network is included on Abey Road and Ferris Road. There is a off road shared path within the open space along Toolern Creek and in the drainage corridor running through the Mixed Use area. Another shared path will exist along Mt Cottrell road just inside the UDF area.

A Habitat Zone is identified along Toolern Creek and in other locations in the Mixed Use area and just to the west of Mt Cottrell Road.

Urban Structure (from PSP)



Source: Toolern Precinct Structure Plan

Land Uses

[Dark Purple Box]	Major Activity Centre
[Light Blue Box]	Employment Land
[Red Box]	Mixed use

Roads, Cycle Lanes & Shared Paths

[Solid Line]	Primary Arterial Road
[Dashed Line]	Secondary Arterial Road
[Dotted Line]	Secondary Arterial Road (undivided)
[Thin Line]	Connector Road
[Dashed Line]	Local Access Street - Level 1
[Dotted Line]	Local Access Street - Level 2
[Dashed Line]	Off Road Cycle Lanes (arterial and sub-arterial roads)
[Dotted Line]	Shared Paths (within open space)

Open Space

[Green Box]	Unencumbered Passive Open Space
[Blue Box]	Waterway/Drainage Reserve
[Yellow Box]	Wetland/Retarding Basin

Habitat Zone/Ecological Vegetation Classes (EVC)

Section 4.3 Employment and Activity Centres of the PSP outlines the major objectives for the employment land and the Town Centre. Key objections include:

- Providing opportunities for a broad range of businesses that will ultimately result in the creation of one job for every new business
- Establishing a hierarchy of high quality centres from Major Activity Centres through to Local Convenience Activity Centres with access to public transport, an emphasis on bike and pedestrian access, high quality building form and appropriate massing and provision for a range of entertainment related uses.

4.3.1 EMPLOYMENT AND ACTIVITY CENTRES OBJECTIVES

The objectives for Employment land and Activity Centres are:

- 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.

Source: Toolern Precinct Structure Plan

The planning and design guidelines for **Employment areas** are outlined in Table 4 under Section 4.3 which is replicated on the following page. The guidelines are organised into two categories - those that **must** be met and those that **should** be met. The categories include:

- Building Types, lot size and land use - range of sizes, position of office components
- Frontages - setbacks, ground floor activation
- Height and Massing - consistency, visual bulk
- Parking and Service areas - location of and access to off street parking
- Pedestrian and cyclist movement - both within and beyond
- Landscaping - freeway frontage, buffers, setback

One notable recommendation is to locate large floor plate and industrial uses to the east of Ferris Road. In the same vein, the guidelines outline that new uses which may impinge on amenity must also be located to the east of Ferris Road. These two guidelines essentially set Ferris Road as the divide between large industrial uses and smaller footprint commercial uses.

The planning and design guidelines for **Activity Centres** are outlined under Section 4.3.3 and are also organised into those that **must** be met and those that **should** be met. They have also been replicated on the opposite page. Key guidelines cover the following:

- Encouraging high employment densities
- Limiting the network of predominantly commercial streets, and ensuring that they are edged with mixed use
- Establishing a continuous built edge
- Integration of public transport
- Using building forms and commercial formats that support a street based activity centre

Table 4: Employment Area Guidelines

The following planning and design guidelines must be met:

Theme	Planning and design guidelines
Building types, lot size and land use	<p>The following planning and design guidelines must be met:</p> <ul style="list-style-type: none"> Provide a range of lot sizes that will accommodate a variety of floor plates and building types. Locate new uses which may impinge on amenity to the east of Ferris Road. Position office components of industrial buildings to the street front. <p>The following planning and design guidelines should be met:</p> <ul style="list-style-type: none"> Locate new large floor plate and industrial uses to the east of Ferris Road with good access to the arterial network. Locate small-scale buildings to the west of Ferris Road. Locate taller buildings or those of more notable design on prominent sites and at major intersections.
Frontages	<p>The following planning and design guidelines should be met:</p> <ul style="list-style-type: none"> Minimise front building setbacks with clearly defined principal entrances addressing streets or public spaces. 'Activate' ground-level frontages on commercial sections of streets and ensure the design of upper levels is compatible with overall façade character. Contain signage within built form or in an integrated/shared structure.
Height and massing	<p>The following planning and design guidelines must be met:</p> <ul style="list-style-type: none"> Ensure height, massing and disposition of buildings on the opposite side of roads surrounding the Major Activity Centre are generally consistent with the height, massing and disposition of buildings within the Major Activity Centre. Reduce the visual bulk of large buildings through building and landscape design.
Parking and service areas	<p>The following planning and design guidelines should be met:</p> <ul style="list-style-type: none"> Locate off-street parking behind buildings fronting commercial streets, or in basements or parking structures. Provide access to off-street parking and service areas from side-streets or rear laneways. Screen off-street parking and service areas from the public realm. Provide direct pedestrian access to public streets from parking areas.
Pedestrian and cyclist movement	<p>The following planning and design guidelines must be met:</p> <ul style="list-style-type: none"> Plan for accessible and safe pedestrian and cycling links to, from and within the employment area, and linked to the broader walking and cycling network. Provide a continuous pedestrian connection between the Major Activity Centre and Employment Area.
Landscaping	<p>The following planning and design guidelines must be met:</p> <ul style="list-style-type: none"> Provide only low landscaping along the Western Freeway frontage. <p>The following planning and design guidelines should be met:</p> <ul style="list-style-type: none"> Provide appropriately designed landscaping treatments, setbacks and buffers to minimise the impacts of blank sections of facade fronting principal streets.

Source: Toolern Precinct Structure Plan

4.3.3 PLANNING AND DESIGN GUIDELINES

ACTIVITY CENTRE GUIDELINES

The following planning and design guidelines **must** be met:

- Encourage high employment densities, including the redevelopment of Toolern Business Park.
- Locate activity centres to generally conform to the areas shown on Plan 9.
- Create a limited network of predominantly commercial streets edged by mixed-use buildings accommodating retail, office, community, residential, and other uses.
- Establish a continuous built edge to streets.
- Integrate the planning and design of neighbourhood activity centres with the planning and development of community infrastructure and services.
- Use building forms and commercial formats that support the function and character of a mixed-use, street-based activity centre.
- Integrate public transport with activity centres and ensure public transport infrastructure and facilities are located in commuter-friendly and convenient locations.

The following planning and design guidelines **should** be met:

- Place large retail formats (such as supermarkets or bulky retail units) behind or above street-front retail tenancies.

- Build retail and commercial frontages to the edge of footways with clearly defined principal entrances addressing streets or public spaces.
- 'Activate' ground-level frontages on commercial sections of streets and ensure the design of upper levels is compatible with overall façade character.
- Provide a 'fine-grained' scale of predominantly retail shop-fronts with frequent tenancies along the street.
- Design streets to a building height to street width ratio as close to 1:2 as possible, with a minimum of 1:3.
- Provide as much on-street parking as possible.
- Locate off-street parking behind buildings fronting commercial streets, or in basements or parking structures, and provide access from side-streets or rear laneways.
- Screen off-street parking and service areas from the public realm.
- Provide direct pedestrian access to public streets from parking areas.
- Locate taller buildings or those of more notable design on prominent sites and at major intersections.

Source: Toolern Precinct Structure Plan

Section 4.3.4 Activity Centre- Urban Design Framework

of the PSP outlines the required components of an Urban Design Framework. The key components include checking that the existing UDF complies with existing Council documents (such as City of Melton Retail & Activity Centres Strategy, 2014) and ensuring that the following components are appropriately addressed in the current Toolern Town Centre UDF:

- Location of public spaces
- Landscape concepts
- Environmental sustainability including water management, energy conservation, vegetation protection
- Car parking and service areas
- Advertising signs
- Density (medium and high)

4.3.4 ACTIVITY CENTRE URBAN DESIGN FRAMEWORK

The Urban Design Framework must:

- Be generally consistent with the role and function for the activity centre set out in Table 5.
- Determine the boundaries of the activity centre.
- 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).
- Address the whole of the activity centre site.
- Address any relevant design guidelines prepared by the Victorian Government or Shire of Melton.
- Demonstrate an appropriate design response that addresses the Activity Centre objectives and planning and design Guidelines.
- 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.
- Show how the activity centre relates to existing or approved development in the area.
- Show the location of public spaces, including parks, conservation reserves and squares.
- Include an overall landscape concept for the activity centre.
- 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.
- Demonstrate how public transport will be integrated within the Activity Centre, developed in consultation with the Department of Transport.
- 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.
- Set out design guidelines for the provision of advertising signs.
- 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.
- Show how opportunities for medium and higher density housing and future commercial expansion can be incorporated into the activity centre.

Source: Toolern Precinct Structure Plan

Section 4.3.5 Toolern Employment Land – Urban Design Framework outlines the required components of the Urban Design Framework. The key components as outlined in the PSP are:

- Diversity of lot sizes and development typologies
- Views and sight lines
- Interfaces with different and sometime adverse land uses (including industrial uses and arterial roads)
- Design guidelines for good development
- Addressing sustainability
- Multi-modal options

4.3.5 TOOLERN EMPLOYMENT LAND - URBAN DESIGN FRAMEWORK

The Toolern Employment UDF applies to the land located south of the Western Highway, east of Ferris Road, west of Mount Cottrell Road and north of the Melbourne-Ballarat Railway line.

The Urban Design Framework must:

- Demonstrate a diversity of lot sizes throughout the site to the satisfaction of the responsible authority.
- Address key view lines and sight lines into and out of the area and incorporate within the overall design.
- Locate manufacturing and industrial uses with adverse amenity potential at suitable distances from residential interfaces and incorporate management measures where required.
- Show how the interface with the arterial road network will be managed:
 - to assist the creation of a high amenity, visually attractive environment conducive to the development of land uses with higher density employment (such as office & manufacturing employment);
 - to create gateways at appropriate locations;
 - to provide a high amenity and visually attractive environment on roads leading to residential areas.
- Set out design guidelines for development on arterial roads and other roads which ensure high quality built form through architectural detailing including measures to avoid long blank walls and minimal visual interest, siting and orientation, provision of active frontages, internalised service areas, and landscaping treatments.
- Identify sites in prominent locations particularly on corner intersections with arterial or connector roads for significant high amenity building or landmark structures.
- Set out design guidelines which positively address environmentally sustainability including integrated water management and energy conservation.
- Set out guidelines for the provision of advertising signs which are integrated within the built form.
- Set out guidelines for the achievement of an overall landscape concept for the land.
- Indicate how public transport will be integrated within the employment land, which is developed in accordance with the requirements of the Department of Transport.
- Show how the employment land relates to and responds positively to the adjacent activity centre and residential land through high quality urban design treatments. Set out measures to avoid long blank walls with minimal visual interest.
- Consider the views of and include any requirements of Vic Roads in relation to the future freeway interchange at Mt. Cottrell Road.

Source: Toolern Precinct Structure Plan

Section 4.3.6 North West Mixed Use Precinct – Urban Design Framework

outlines the required components of the Urban Design Framework. The key components are:

- Mix of uses, densities and lot sizes
- Interfaces and compatibility between land uses
- Response to environmental constraints
- Diversity of lot sizes
- Interfaces
- Design guidelines for good development
- An appropriate road network to accommodate the range of users from heavy trucks to cyclists
- Access to Toolern Creek

The PSP clearly states that the retail floor space should be in the order of 70,000 square metres, not 30,000 square metres as outlined in the Toolern Town Centre UDF. Council's stated goal is to deliver 70,000 square metres of retail floor space as per the PSP. The Toolern Town Centre UDF will be updated to reflect this.

4.3.6 NORTH WEST MIXED USE PRECINCT - URBAN DESIGN FRAMEWORK

The North West Mixed Use Precinct comprises the land shown on Plan 7 'Image and Character' of the PSP. (Land shown east of the Toolern Creek (known as the ECNAM site), north of Abey Rd, south of the Western Fwy and west of the Harness Racing Victoria existing facility and Ferris Rd)

The Urban Design Framework plan must:

- Encourage a mix of uses which may include residential, office, business park, industrial and specialized employment uses.
- Ensure the proposed uses and developments are compatible with the existing Harness Racing Victoria facility, which is a significant recreational asset.
- Ensure that the proposed uses and development respond appropriately to any environmental constraints posed by the former Melton landfill.
- Create a range of lot sizes, catering to diverse industry needs to the satisfaction of the responsible authority.
- Address the sensitivities between residential and employment land uses by developing appropriate interface treatments which address visual, acoustic and other amenity requirements.
- Ensure that development interfacing with the existing Harness Racing Facility has a strong emphasis on high quality building and landscape design.
- Ensure that development presents buildings with a high quality frontage to the Ferris Rd, Western Hwy and Abey Road, avoiding blank walls and exposed storage areas.
- Achieve a uniformity of landscaping through the preparation of specific landscape design guidelines.
- Provide service road frontage to the Western Hwy (without providing direct access) if smaller industrial lots are envisaged along this main gateway. If larger industrial lots are envisaged provide a landscape buffer between the rear of larger industrial lots and the Western Freeway.
- Encourage a mixture of housing densities with residential development integrated within the wider precinct.
- Ensure residential development adjacent the Toolern Creek is orientated facing the Toolern Creek through frontage roads.
- Show how the building height, massing, architecture and materials of residential development near the Toolern Creek will be visually compatible with the character of the creek.
- Demonstrate how the development will contribute to the passive surveillance of the creek environs through road layout design, the siting of shared paths and the orientation of development to front roads and open space.
- Ensure residential development adjacent the Toolern Creek is orientated facing the Toolern Creek through frontage roads.
- Show how the building height, massing, architecture and materials of residential development near the Toolern Creek will be visually compatible with the character of the creek.
- Demonstrate how the development will contribute to the passive surveillance of the creek environs through road layout design, the siting of shared paths and the orientation of development to front roads and open space.

Source: Toolern Precinct Structure Plan

Image and Character (from PSP)



Source: Toolern Precinct Structure Plan

The PSP outlines clear guidance in terms of Image and Character, particularly for the Employment and Mixed Use land. The detailed guidelines are outlined on the following page and will need to inform the design process. Generally the guidelines refer to:

- Interfaces and frontage to the rail corridor
- Residential and employment interfaces (including loading, advertising and street trees)
- Interfaces with open space
- Interfaces with the freeway (including the need for a road reservation adjacent to and parallel to the freeway) so that buildings must address the freeway rather than turn their backs to it.
- Quality of roads such as Ferris Rd and Shogaki Dr.

- Create a feature site at the Toolern Gateway site at the corner of Ferris Road and the freeway.
- Ensure noise attenuation within 200m of the freeway

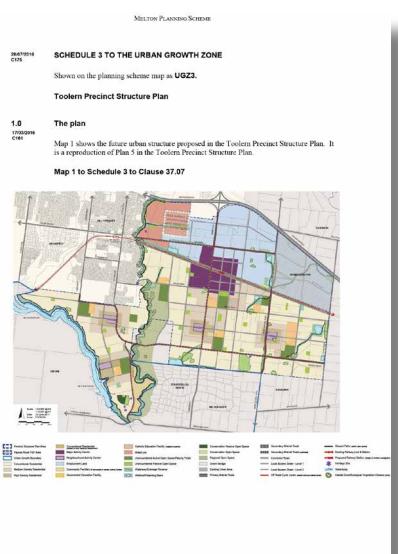
Tract Consultants

C4 – Rail Corridor	<p>The following planning and design guidelines must be met:</p> <ul style="list-style-type: none"> Front development or provide an appropriate frontage to the rail corridor. <p>The following planning and design guidelines should be met:</p> <ul style="list-style-type: none"> Provide a road reservation and shared pathway adjacent and parallel to the rail corridor. Provide low or transparent front fences to buildings to allow passive surveillance of the railway corridor. Ensure buildings, particularly residential buildings, incorporate measures to attenuate the noise impacts associated with train movements (e.g. acoustic insulation, double glazing on windows etc.). Provide pedestrian and cycle crossings adjacent to open space areas, that connect to the wider path network within precinct.
C5 – Residential Employment Interface	<p>The following planning and design guidelines should be met:</p> <ul style="list-style-type: none"> Design commercial buildings to a high quality, incorporating façade articulation and glazing. Build to a maximum height of no more than 9m within 30m of the front boundary of the lot. Hours of operation for employment uses should be limited so as not to unreasonably compromise residential amenity. Provide for loading and deliveries away from the street. Integrate advertising signage into the building so as not dominate the façade, and do not internally illuminate. Incorporate broad canopied, evergreen street trees into street and/or site landscaping.
C6 – Mount Cottrell Road Linear Open Space interface.	<p>The following planning and design guidelines must be met:</p> <ul style="list-style-type: none"> Align Mt Cottrell Road to the east to protect the native vegetation along the western side of the road reservation. Provide landscaping in residential areas that are local indigenous species and sympathetic to the native vegetation character of the conservation area.
C7 – Employment Freeway Interface	<p>The following planning and design guidelines must be met:</p> <ul style="list-style-type: none"> Provide a road reservation adjacent and parallel to the Western Freeway. Address development to the Western Freeway. <p>The following planning and design guidelines should be met:</p> <ul style="list-style-type: none"> Locate office components to the front of the building to face the Western Freeway. Landscape the Western Freeway with low vegetation so as not to obscure visibility from the Western Freeway.
C8 - Ferris Road North and Shogaki Drive	<p>The following planning and design guidelines must be met:</p> <ul style="list-style-type: none"> Ensure an attractive streetscape is achieved through well-designed and high-quality buildings and landscaping along Ferris Road and Shogaki Drive. Provide a well-designed and high quality rail underpass. <p>The following planning and design guidelines should be met:</p> <ul style="list-style-type: none"> Avoid the use of frontage areas for storage of goods and materials. Avoid ad hoc chain mesh fencing along the frontage areas. Activate the street with appropriate ground floor uses. Minimise building setbacks to strengthen built form presence. Locate office components to the front of the building to face the Ferris Road or Shogaki Drive.
C10 – Toolern Gateway site	<p>The following planning and design guidelines must be met:</p> <ul style="list-style-type: none"> Create landmark feature buildings of high quality at the Ferris Road and Western Freeway Interchange. Ensure buildings front the Western Freeway and Ferris Road. <p>The following planning and design guidelines should be met:</p> <ul style="list-style-type: none"> Situate larger buildings in this location. Provide access to and from Ferris Road where possible.
C12 – Western Freeway Interface	<p>The following planning and design guidelines must be met:</p> <ul style="list-style-type: none"> Ensure that development of land within 200m of the Western Freeway is undertaken with appropriate noise attenuation measures to minimise the impact of traffic noise on sensitive uses.
C14 – Proposed Western Fwy /Mt Cottrell Rd interchange interface	<p>The following planning and design guidelines must be met:</p> <ul style="list-style-type: none"> Any application to use or subdivide land, or construct a building and carry out works within the area shown as Character Area 14, must be referred to VicRoads for comment.
C15 -North West Mixed Use Precinct <small>(land shown east of the Toolern Creek (know as the ECNAM property), north of Abey Rd, south of the Western Fwy and west of the Harness Racing Victoria existing facility and Ferris Road)</small>	<p>The following planning and design guidelines must be met:</p> <ul style="list-style-type: none"> Except with the consent of the Responsible Authority, a permit must not be granted to use or subdivide land, or construct a building and carry out works until an Urban Design Framework has been approved by the Responsible Authority. (Refer Section 4.3.6)

2.4.3 Schedule 3 to Clause 37.07 (Urban Growth Zone Schedule 3) in Melton Planning Scheme

The UDF area is zoned UGZ3 and its schedule identifies the Commercial 2 Zone as the applied zone for the employment area and the Mixed Use Zone as the applied zone for the mixed use area. In the Town Centre the schedule identifies Commercial 1 and Commercial 2 zones as the applied zone.

Land recently brought into the Urban Growth Boundary for future development, is zoned Urban Growth Zone, and requires a Precinct Structure Plan (PSP) to guide the transition of non-urban land into urban land. Once a PSP is prepared for an area, Urban Design Frameworks (UDFs) may be required as an extra level of planning for specific areas within the PSP.



2.4.4 Paynes Road Precinct Structure Plan, February 2016

The 199 hectares of land within the Paynes Road Precinct Structure Plan was previously designated as future industrial land use, but was changed to residential from the employment-based zoning applied under the Toolern PSP. This change was established by the West Growth Corridor Plan to create a better interface with the Western Freeway and to increase accessibility to the rail network.

The site sits immediately adjacent to the eastern boundary of the Employment and Mixed Use land. To the north lies the Western Freeway , to the south lies the Melbourne-Ballarat Rail Corridor and to the east lies Paynes Road.

The PSP remains linked to the incorporated Toolern PSP because of a need to share transport and social infrastructure across both PSP areas, but has currently been removed from the Toolern Development Contributions Plan.

The plan includes a potential future railway station on the Melbourne-Ballarat corridor & both government and non-government primary schools at the core.

The vision is to be an attractive and walkable neighbourhood with a central community hub, accessible by shared paths and linear waterway corridors. Bus services will link residents to all community and commercial destinations including local convenience centre and nearby Toolern. A variety of housing is to be provided.



2.4.5 Toolern Development Contributions Plan

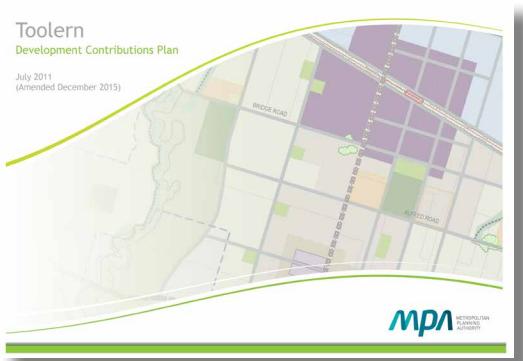
The Toolern Development Contributions Plan (DCP) was developed to support the provision of certain specified works, services and facilities to be used by the future community of Toolern.

Infrastructure is provided through subdivision construction, development contributions, utility service provider contributions and capital works projects by Council, state government agencies & community groups.

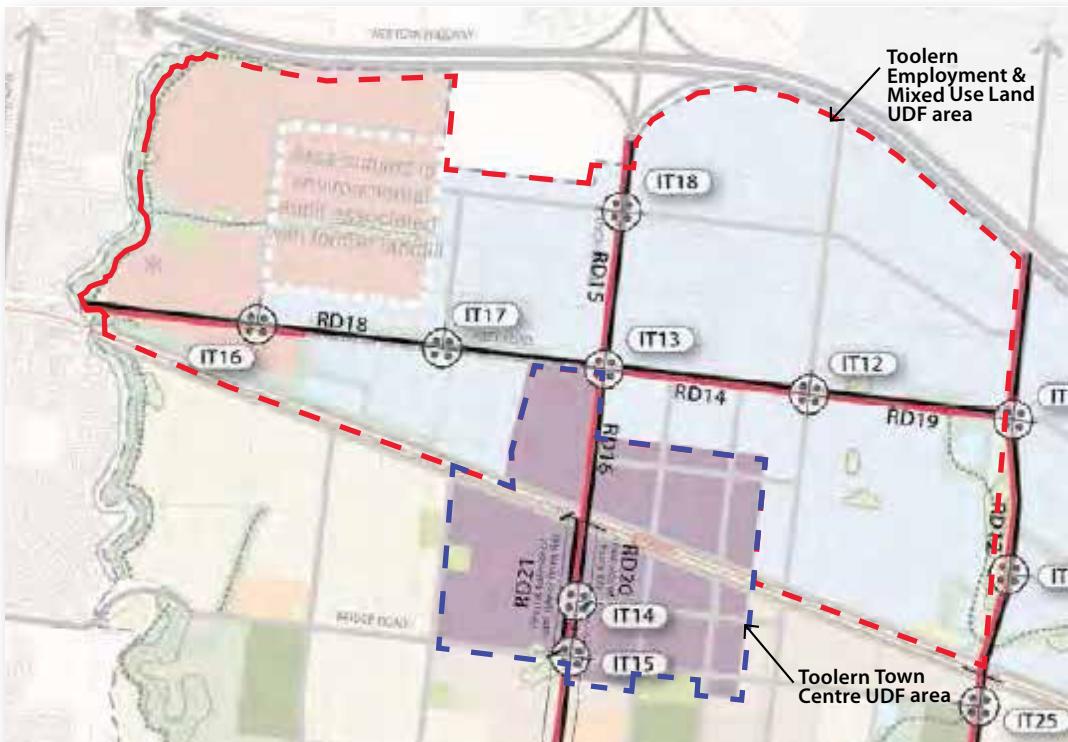
Key roadway upgrades will occur at Ferris Road, Abbey Road and Paynes Road including several signalised intersections. Three pedestrian underpasses are identified under the railway line.

A library and aquatic centre are identified within the Town Centre. No active recreation areas are identified within the Employment and Mixed Use land or the Town Centre.

The following pages identify the roads and intersections, bridges and public transport and community facilities outlined as part of the DCP.



Roads and intersections



Source: Toolern Development Contributions Plan

RD12	Mount Cottrell Road: Western Freeway to Melbourne Ballarat Rail Line. Upgrade of existing 2-lane unsealed road to provide 2-lane carriageway of primary arterial road (45 metre road reserve, length 1,680 metres) *Interim layout*. Purchase land (including native vegetation re-alignment) to increase reserve width from 20m to 45m for 1,680 metres (ultimate).	RD18	Abey Road: Toolern Creek to Ferris Road. Upgrade of existing 2-lane sealed/unsealed road to provide 2-lane carriageway of divided secondary arterial road (38 metre road reserve, length 2,160 metres) *Interim layout*. Purchase land to increase reserve with from 19m to 38m for 270 metres east of Toolern Creek (ultimate).
RD14	Shogaki Drive: Ferris Road to Mount Cottrell Road (Western Half). Upgrade existing 2-lane sealed road to provide 2-lane carriageway of primary arterial road (45 metre road reserve, length 800 metres). *Interim layout*. Purchase land to increase reserve width from 40m to 45m for 800 metres (ultimate).	RD19	Shogaki Drive: Ferris Road to Mount Cottrell Road (Eastern Half). Construct new 2-lane carriageway of primary arterial road (45 metre road reserve, length 800 metres) *Interim layout*. Purchase land to increase reserve width from 0m to 45m for 800 metres (ultimate).
RD15	Ferris Road: Western Freeway to Shogaki Drive. Construction of additional lane in either direction to existing 4-lane divided road to provide ultimate 6-lane divided arterial road (45 metre road reserve, length 940 metres). Purchase land to increase reserve width from 34m to 45m for 940 metres (ultimate).	RD20	Ferris Road: Melbourne Ballarat Rail Line to East West Arterial. Purchase land to increase reserve width from 20m to 38m, for road section on Property 30 only. Area = 0.50 hectares (ultimate).
RD16	Ferris Road: Abey Road to Melbourne Ballarat Rail Line. Upgrade of existing 2-lane sealed/ unsealed road to provide 2-lane carriageway of divided secondary arterial road (38 metre road reserve, length 620 metres) *Interim layout*. Purchase land to increase reserve width from 34m to 38m for 620 metres (ultimate).	RD21	Ferris Road: Melbourne Ballarat Rail Line to East West Arterial. Purchase land to increase reserve width from 20m to 38m, for balance of required land (excluding Property 30). Area = 3.45 hectares (ultimate).
		IT10	Mount Cottrell Road and Shogaki Drive: Intersection. *Interim layout* Construction of signalised 4-way intersection and slip lanes. Purchase of 0.301 hectares of additional required land.
		IT12	Shogaki Drive and Collector Street: Intersection. *Interim layout* Construction of signalised 4-way intersection and slip lanes.
		IT13	Ferris Road and Shogaki Drive: Intersection. *Interim layout* Construction of signalised 4-way intersection and slip lanes. Purchase of 0.47 hectares of additional required land.
		IT14	Ferris Road and MAC Northern Collector Road: Intersection. *Interim layout* Construction of signalised T-intersection and slip lanes.
		IT15	Ferris Road and Bridge Road: Intersection. *Interim layout* Construction of signalised 4-way intersection and slip lanes.
		IT16	Abey Road and Industrial Connector Road: Intersection. *Interim layout* Construction of a signalised T-intersection and slip lanes.
		IT17	Abey Road and Bundy Drive: Intersection. *Interim layout* Construction of signalised T-intersection and slip lanes.
		IT18	Ferris Road and Shakamaker Drive: Intersection. **Ultimate layout** Construction of signalised 4-way intersection and slip lanes.
		IT19	Mount Cottrell Road and Murray Road: Intersection. *Interim layout* Construction of signalised T-intersection and slip lanes.

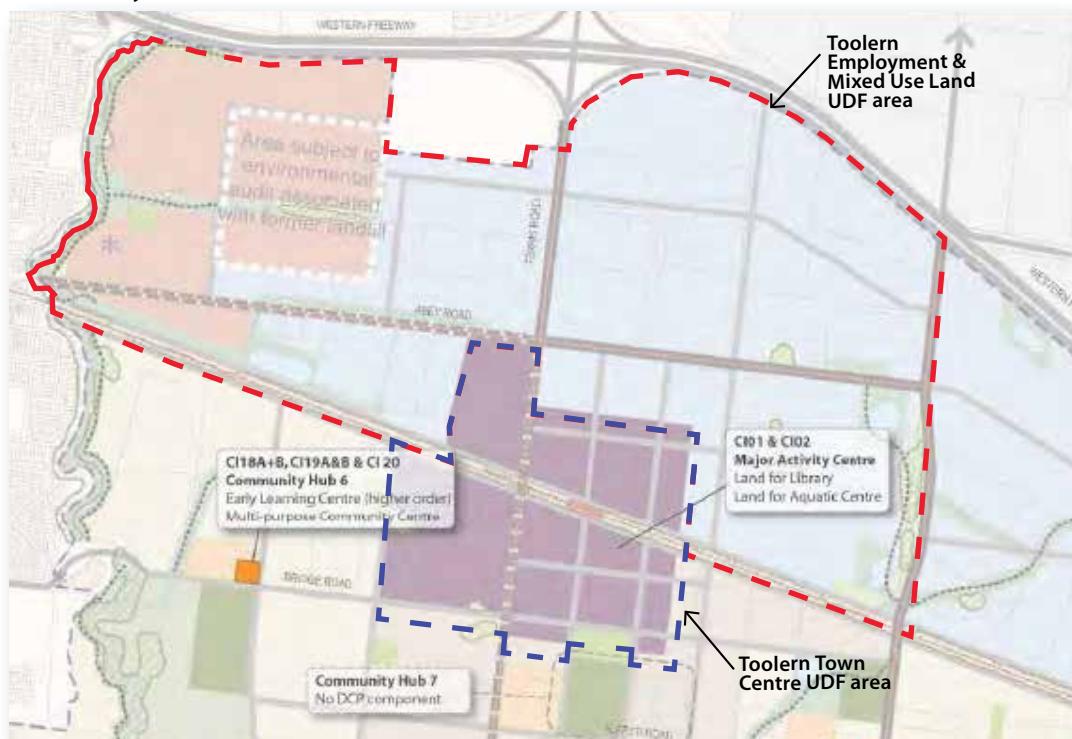
Bridges and Public transport



Source: Toolern Development Contributions Plan

BD01	Abey Road Bridge. 2-lane bridge over Toolern Creek, incorporating abutments and street lighting (12 metre wide concrete structure, deck length 61 metres).
BD08	Pedestrian Underpass 2: Melbourne Ballarat Railway. Construction, including 3-metre wide, 50-metre long box culverts, endwalls, concrete path, drainage and lighting.
BD09	Pedestrian Underpass 3: Melbourne Ballarat Railway. Construction, including 3-metre wide, 50-metre long box culverts, endwalls, concrete path, drainage and lighting.
BD10	Pedestrian Underpass 4: Melbourne Ballarat Railway. Construction, including 3-metre wide, 50-metre long box culverts, endwalls, concrete path, drainage and lighting.
BD11	Pedestrian Underpass 5: Melbourne Ballarat Railway. Construction, including 3-metre wide, 50-metre long box culverts, endwalls, concrete path, drainage and lighting.
BD14	Shared Use Pedestrian Bridge (No. 6). Bridge over Toolern Creek, incorporating abutments and lighting (3-metre wide timber structure, deck length 30 metres).
PT01	Purchase land to provide for Local Bus Interchange (1 hectare).

Community Facilities



Source: Toolern Development Contributions Plan

CI01	Purchase land to provide library located in Major Activity Centre (4 hectares).
CI02	Purchase of land to provide Aquatic / Leisure Centre (Level 3), located in Major Activity Centre (2.5 hectares).

2.4.6 Toolern Town Centre Urban Design Framework, 2012

The Toolern Town Centre Urban Design Framework, commissioned by VPA (formerly the GAA) will be reviewed and updated as part of this study.



2.4.7 Planning Practice Note 17: Urban Design Frameworks (DELWP, July 2015)

This note sets out what should be included in an urban design framework as well as highlighting important steps in the framework study process. Key tasks include: analysis of context including the broader context, referencing existing studies, liaising with stakeholders, incorporating major infrastructure, setting out an implementation strategy, illustrating opportunities and constraints, creating a 'layered response' by jumping from broad contextual issues down to detailed design studies. This UDF process will cross check with this planning practice note throughout the design process.

2.5 Current Local Government Policy Framework & Key Influencing Documents

2.5.1 City of Melton Retail & Activity Centres Strategy, 2014

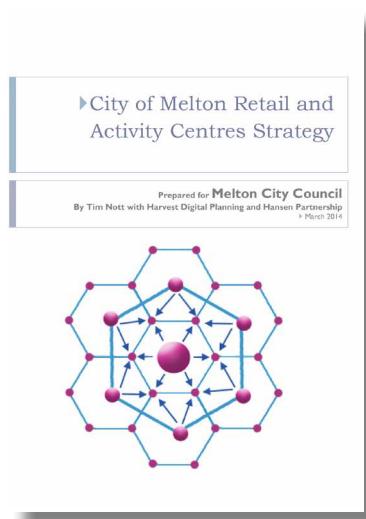
The document identifies goals and strategies to provide new communities with effective, equitable and sustainable services and opportunities for employment.

Principles include: equity of access to jobs and services, improving sustainability of urban development, improving local employment opportunities, providing community focal points, encouraging viability of services and improving quality of service.

Proposes a network of centres including: neighbourhood centres, activity centres, a metropolitan activity centre (the Toolern MAC) as well as local centres.

The document states that the 30,000 square metres of retail floor space in the Toolern MAC as outlined in the Toolern Town Centre UDF is not sufficient to encourage the broadest mix of uses and the many higher order activities that will deliver services to the whole region.

The document also emphasises higher density housing and the location of major new social infrastructure and government investment at the Toolern MAC.

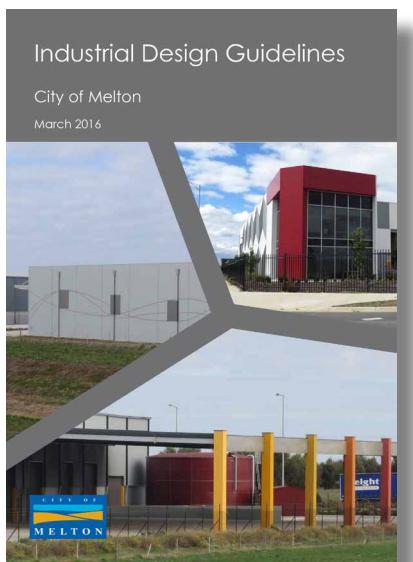


2.5.2 City of Melton Industrial Design Guidelines, March 2016

The document establishes design principles for industrial developments and subdivisions to ensure a high level of amenity and functionality.

The objectives are to encourage high quality development, facilitate clear assessment of planning applications, encourage environmental and sustainability principles, facilitate consistent built form outcomes, provide benchmarks for industrial zone development and provide a clear framework for decision making.

The design of the Toolern Employment land will need to reference these guidelines, specifically the Street Network section, which covers connections to existing streets, solar orientation and interfaces. Cross checks with the Lot Design section and the Development Design section will also be important throughout the design process.



2.5.3 Current Zoning & Overlays

The entire study area is zoned as Urban Growth Zone -Schedule 3 which covers land that is transitioning from non-urban land to urban land supported by a Precinct Structure Plan.

A Heritage Overlay is in place on the western side of the site near Toolern Creek. HO74 include Parklea at 148-200 Abey Road, a house, driveway, trees and farm outbuildings.

There are two areas requiring environmental audits, including the Former Melton Landfill site, prior to development.

Areas of environmental significance are covered by overlays along Toolern Creek to the west of the study area and in the grasslands along the Melbourne-Ballarat Rail Reserve.

In addition, all uses will need to comply Clause 52.10 Uses with Adverse Amenity Potential. This will mean some manufacturing can be within 400 metres but other uses will need a greater buffer than 400 metres.

Refer Figure 5

Heritage Overlay (HO74) 148-200 Abey Rd

The heritage overlay covers the house, driveway, the peppercorn trees flanking driveway and cypress trees nearby the house, two farm outbuildings and the immediate settling. The Heritage Overlay is still in place although a fire destroyed the house earlier in 2017.

Environmental Audit Overlay Former Melton Landfill

Environmental Audit Overlay 133-199 Ferris Road

Environmental Significant Overlay Schedule 1
Railway Corridor

Environmental Significant Overlay Schedule 2
Toolern Creek Corridor

Development Contributions Plan Overlay See Development Contributions Plan earlier in the Section

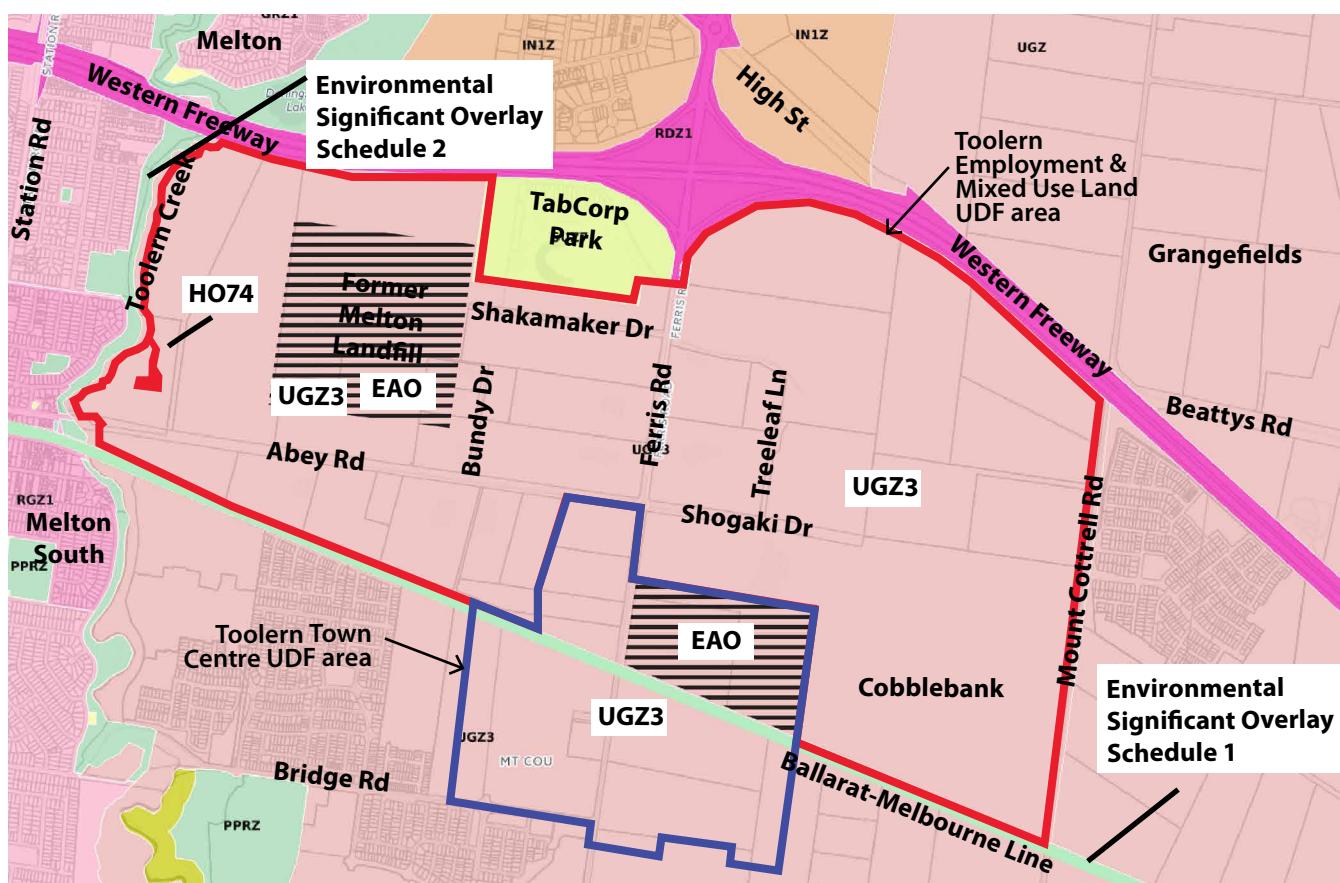


Fig. 5 Zones and Heritage, Landscape and Environment and Environmental Audit Overlays

2.5.4 Section 173 Agreements

Section 173 agreements facilitating economic development apply to some properties within both UDF areas. These agreements were created to ensure that industrial/employment land was developed within a certain timeframe, continued to be used for employment purposes and had the potential to employ a certain number of employees.

Council considers these agreements once identified as such to be redundant and is prepared to end the agreement, once requested by the landowner.

2.6 Summary of Key Influencing Documents

The Toolern PSP will have the most influence throughout the life of the project. The detailed list of essential components is an obvious starting point for the design process.

In summary the themes across the employment land, mixed use land and town centre land are:

- High quality centres with an emphasis on public transport, bike and pedestrian access, and high quality building form
- Diversity of lot sizes, building types and land uses
- Encouraging high employment densities
- Creating a diversity of lot sizes, densities, typologies and uses
- Focusing on good interfaces between uses, particularly those adverse uses such as industrial uses and interfaces with arterial roads, freeways and the rail line.
- Addressing sustainability (including appropriate responses to environmental constraints)
- Creating a truly multi-modal environment.
- Providing opportunities for a broad range of businesses that will ultimately result in the creation of one job for every new business

These broad themes will be important touchstones throughout the process. As such some of them also form the basis for the Benchmarking included in this Background Report.

The other crucial piece of information included in the Toolern PSP is that the retail floor space must be a minimum of **70,000 square metres** and not 30,000 square metres as set out in the 2012 Toolern Town Centre UDF.

Both the City of Melton Retail & Activity Centres Strategy and the City of Melton Industrial Design Guidelines should be referenced throughout the process.

The Paynes Road PSP is a reminder that beyond the employment land is another residential community complete with schools and a station. Although technically beyond the boundaries of the Toolern PSP its success is intrinsically linked to design and planning decisions made during this process.

2.7 Benchmarking

A thorough investigation of precedent developments is included in Appendix 1. Below is a summary of the benchmarking from which to draw conclusions, reference new thinking and understand what can and can't 'work' in the real world.

2.7.1 Employment Areas

Employment areas in today's context can be so much more than the industrial parks and business parks of previous decades. Benchmarking included in Appendix 1 covers a range of case studies that focus on innovation, education, a diverse mix of uses, research and development against a backdrop of environmental excellence.

The case studies include:

- Tonsley Innovation District, SA
- Werribee National Employment & Innovation Cluster, VIC
- Ballarat West Employment Zone, VIC
- Merrifield Business Park, VIC
- M1 & M2 Industry Park, Greater Dandenon

2.7.2 Sustainability

The goal of these UDFs should be to embed sustainability into the design rather than it just being an 'add-on.' There are many good examples of urban developments that are doing just that. Moreover the trend in sustainability now is that of going beyond 'green' design and moving towards regenerative design where the goal is to actually improve the existing environment. Appendix 1 covers the following case studies:

- Alkimos Beach, WA
- Aura, QLD
- Bowden, SA
- Ecco Ripley, QLD
- Barangaroo South, NSW

2.7.3 Interfaces

Appropriate interfaces between land uses in Toolern will be critical to the ultimate success of the project. The design will need to grapple with:

- Arterial/Freeway interfaces
- Industrial interfaces with mixed use areas
- Railway interfaces

Appendix 1 covers a range of examples, both good and bad to help guide the design.

2.7.4 Trends in Town centres since 2012

Trends in town centres include:

- Street-based town centres are the norm now as opposed to internal or 'mall' style centres. The Toolern Town Centre UDF has a strong main street but it is interesting to note that the main street trend is continuing to grow in importance.
- There is a trend to better consider a number of core tenancies as an integrated whole as opposed to the reliance on a single anchor.
- Pedestrian flow and the reduction or minimisation of major barriers between key destinations in a town centre is critical to the success of the town centre
- There is a stronger emphasis on the quality of the public realm. It needs to offer a variety of passive and active spaces at differing scales. Provision also needs to be made for outdoor spaces that don't require spending money.
- There has been a shift towards 'foodie'/Hospitality culture and increase in food based retail exposure.
- While town centres must maintain relative, and co-location of businesses and uses is still important, there has been a shift away from the purity of uses in clearly defined quadrants or precincts as previously designed. The food and experience culture must permeate throughout the whole centre rather than having highly social places in one quadrant and the retailing component in another.

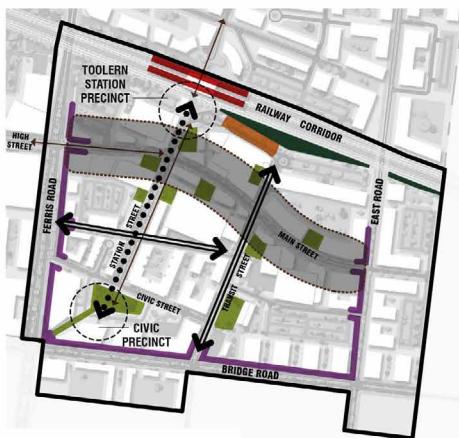
- Localised employment spaces are also on the rise as providing the diversity to future town centres. It is also predicted that more localised employment will further extend the activation times and types of activities. There is almost an integration of town centres and contemporary business parks. Western BACE is already a good example of this trend.
- Evolving town centre design should also provide contingencies and future proofed options for a reduction of existing car parking provisions to address future lower car parking ratios in future.

Appendix 1 also includes a Town Centre trends package.

03 TOOLERN TOWN CENTRE



TOOLERN CENTRAL - STRUCTURE & URBAN FORM



TOOLERN CENTRAL - USE, BUILT FORM AND MOVEMENT

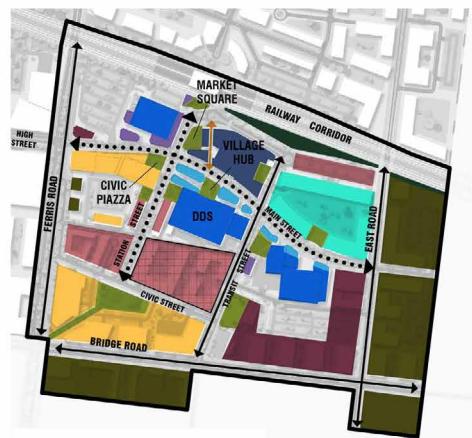


Fig. 6

Toolern Town Centre UDF from 2012

The Toolern Town Centre UDF will be reviewed and updated. This section of the Background Report seeks to identify the new information and/or conditions that have changed or come to light in the last five years. The goal is not to recreate the UDF, but rather update the existing design with current information and thinking.

3.1 Existing Conditions

3.1.1 Current Ownership

Melton Council owns large parcels of land west of Ferris Road where Western BACE (Business Accelerator and Centre for Excellence) is located. There are seven other landowners with the Town Centre UDF area. (Refer Figure 7)

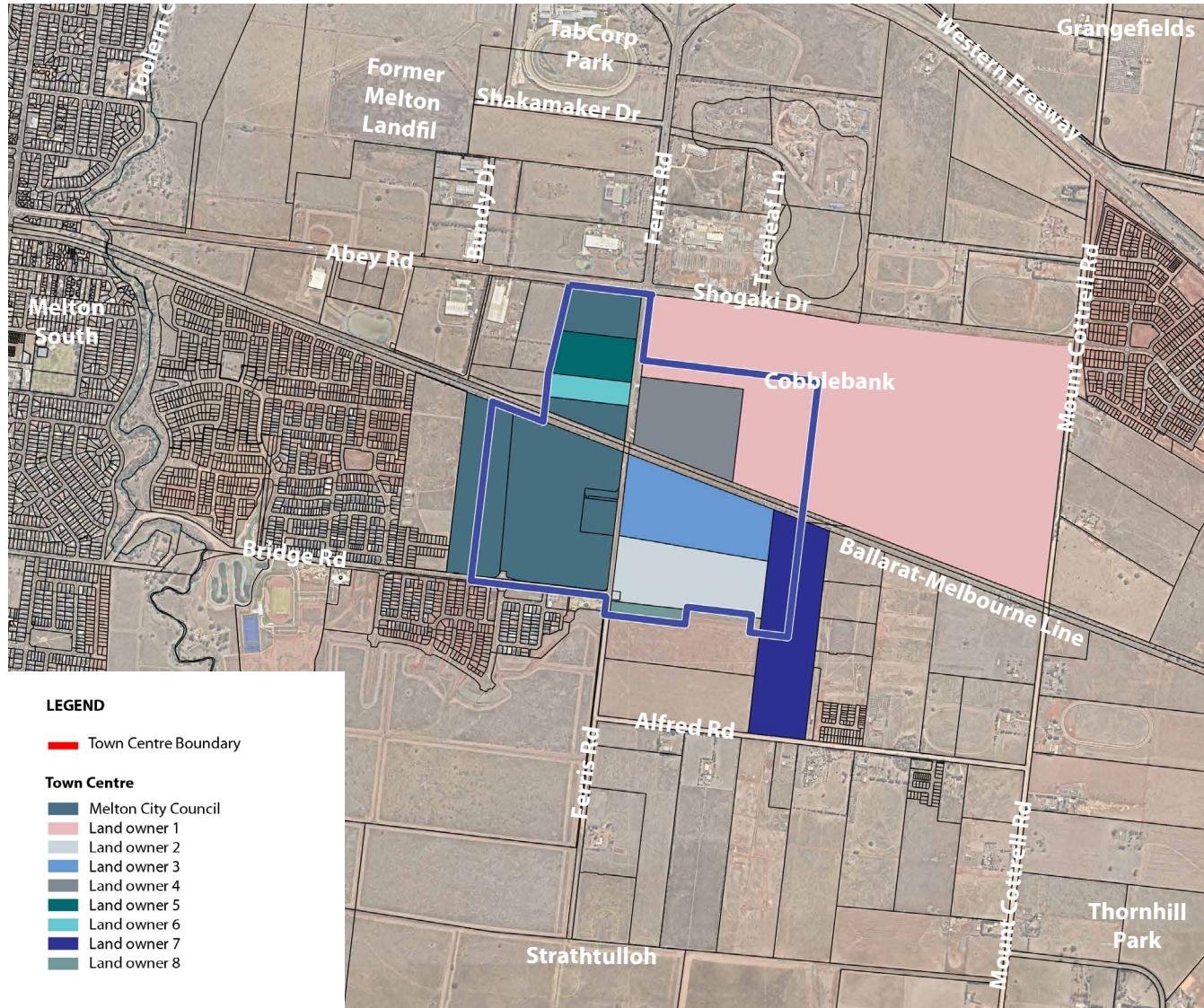


Fig. 7 Toolern Town Centre - Ownership

3.1.2 Physical Changes since 2012

The Western BACE was opened in 2015 as a federally funded local initiative. It is a business and community hub offering support to local businesses and entrepreneurs in the form of affordable space for lease, business coaching and vocational education. It is built on the western side of Ferris Road immediately south of the train line.

Very little has changed in the physical environment in the five years since the Toolern Town Centre UDF was completed.

3.1.3 Heritage

Aboriginal Cultural Heritage

There is currently no Registered Aboriginal Party that covers the UDF area. The area is contested by three parties, The Bunurong Land Council Aboriginal Corporation, the Boon Wurrung Foundation Ltd and the Wurundjeri Tribe Land and Compensation Cultural Heritage Council.

Four areas of Aboriginal Cultural Heritage Sensitivity are identified in the Toolern Town Centre UDF area within the Toolern West quadrant.

Post-Contact Cultural Heritage

Dry Stone Wall No. L182 runs east-west from Ferris Road to Atherstone Stage 7. The wall is not listed on the schedule to the Heritage Overlay but is an important landscape element that will be retained within Council's land, in roadside or open space reserves, where possible as identified in the Toolern Town Centre UDF.



Western BACE (Business Accelerator and Centre of Excellence)



Railway Crossing (Ferris Rd)



View Toward Employment and Mixed Use Area



Surrounding View



Industrial Uses (Concrete Manufacturer)



Existing Drainage along Arterial Roads

3.2 Movement & Transportation Assessment

3.2.1 Transport Modelling (Refer Appendix 3)

In terms of transportation modelling the most notable difference between now and the 2012 release of the Town Centre UDF is understood to relate to employment numbers with a recent push to increase the number of jobs within the Western Growth Corridor.

The demographic data implies that there are expected to be marginally more residents and dwellings and almost five times as many jobs within the Toolern PSP area which has a clear implication to traffic and transportation.

Within the Toolern PSP in 2031 the arterial road network is expected to be able to reasonably accommodate the anticipated traffic volumes except for a few key roads including Ferris Road and Mt Cottrell Road.

Within the Toolern PSP in 2046 the arterial road network is expected to operate in a similar manner as 2031, except that there are additional road sections expected to exceed their theoretical capacity, namely Ferris Road's approach to the Western Freeway interchange and a section of Paynes Road.

The broader road network of the Toolern PSP is expected to be suitable to support the future level of development. There will be some locations of congestion, such as the key signalised access points to the town centre from the arterial road, but these are expected to be able to be designed out, such as through limiting property and car park access within the town centre from the internal local roads and more from the sounding arterial and connector level roads.

However, further revised modelling is required to account for the increased employment numbers (i.e. 20,000 more jobs than anticipated in VITM) before this can be confirmed. In addition, the refined road network is required for both the Town Centre, and Employment and Mixed Use land to suitably test and assure it can support the future proposed level of development.

3.2.2 Movement & Transport (Refer Appendix 3)

Current Conditions

Currently the two closest railway stations are located at Rockbank (East) and Melton (west), although the State Government has now committed to building a Toolern Station in the Toolern Town Centre UDF. There is currently only 1 bus service in the vicinity of the UDF areas. Accessibility via public transport is severely limited.

Due to proximity to the Western Freeway there is a high level of road based accessibility. Central Melbourne can be accessed within approximately 40 minutes.

There is very little or no walking or cycling infrastructure

Future Conditions

There are a number of transportation infrastructure projects that have been proposed and will affect the transport outcomes of the UDF areas:

- Toolern Station
- Ballarat Line Upgrade
- Melton Line Electrification
- Outer Metropolitan Ring Road

The Movement and Transport Technical Report states that the UDF road network is still suitable in terms of the general grid and arterial and connector level road design, however the report does caution the need for careful design of Main Street to avoid it being a cut through route. As mentioned in the Town Centre trends, it is critical that the Main Street is successful.

The existing UDF has a fairly comprehensive pedestrian and cycling network of access to and around the town centre. Access to the station is good however access through the station needs review. End-of-trip facilities need also to be considered.

The report also states a multi-modal approach to the whole area, not just the town centre, should be carefully considered because the success of the Town Centre relies heavily on the catchment beyond it.

The Movement and Transport Technical Report outlines that the Toolern Railway station delivery is critical to the area's success and that proper integration in terms of bus services, bicycle and pedestrian connections both to and from and

also across the rail line must be considered. Success will lie in the detail of these design components.

Since the 2012 when Toolern Town Centre UDF was completed the Melbourne-Ballarat railway upgrade has received funding and will begin construction later this year.

3.3 Economics Assessment (Refer Appendix 4)

The Vision for the retail and commercial uses in the Town Centre is as follows:

Toolern Town Centre will serve the entire Melton urban growth corridor and Bacchus Marsh. The centre will have a strong range of convenience and comparison retailing, complemented by a vibrant dining and entertainment scene. A high-amenity street-based environment will be supported by protected areas offering shoppers and visitors a pleasant year-around environment.

Key elements of the town centre will also include commercial uses, as well as important health and education providers. Access to both retail and non-retail elements of the town centre will be made safe and convenient by high-quality public transport links.

The 70,000m² of retail outlined in the Toolern PSP is reasonable given the development potential, trends and retailing in general and a review of similar sized centres throughout Australia.

A staging approach would be as outlined in the first of the two tables below.

Toolern Town Centre Supportable Retail Floorspace at Development Capacity

	Stage 1	Stage 2	Full Development (*)
Major Tenants			
Discount Department Store 1	-	7,000m ²	7,000m ²
Discount Department Store 2	-	-	7,000m ²
Supermarket 1	4,000m ²	4,000m ²	4,500m ²
Supermarket 2	-	4,000m ²	4,500m ²
Supermarket 3 (Discount Supermarket)	-	-	<u>1,500m²</u>
Total Majors	4,000m²	15,000m²	24,500m²
Mini Majors (@ 1,500m ² each)	1,500m ²	4,500m ²	12,000m ²
Specialty Shops			
Café and Restaurant	500m ²	2,000m ²	6,000m ²
Other Food	1,000m ²	1,500m ²	2,500m ²
Non-Food	<u>1,000m²</u>	<u>7,000m²</u>	<u>15,000m²</u>
Total Specialty Shops	2,500m²	10,500m²	23,500m²
Total Shop Retail	8,000m²	30,000m²	60,000m²
Restricted Retail	-	10,000m ²	10,000m ²
Total Retail	8,000m²	40,000m²	70,000m²

Source: Essential Economics, published sources;

Potential exists for a further 120,000m² of non-retail uses in the Town Centre as outlined in the table below.

Toolern Town Centre Non-Retail Floorspace at Development Capacity

Land Use Type	Full Development
Commercial Office	30,000m ²
Entertainment	15,000m ²
Other Commercial	15,000m ²
Medical	10,000m ²
Administration/Community	10,000m ²
Tertiary Education	30,000m ²
Aquatic/Leisure Centre	10,000m ²
Total Commercial	120,000m²

Source: Essential Economics

The total land requirement for the retail and commercial land uses is estimated to be 482,500m² or 50ha rounded which is in keeping with the expectations of the Town Centre footprint.

1 Toolern Town Centre Indicative Land Budget

Land Use	Floorspace	Land Coverage Ratio	Land Requirement
Retail	70,000m ²	35%	200,000m ²
Shopfront Office	15,000m ²	30%	50,000m ²
Non-Shopfront Office	15,000m ²	200%	7,500m ²
Other Commercial	<u>90,000m²</u>	<u>40%</u>	<u>225,000m²</u>
Total	190,000m²	39%	482,500m²

Source: Essential Economics

3.4 Things to Consider

- Upgrade to a Metropolitan Activity Centre through Plan Melbourne
- Incorporating into the revised UDF the 70,000 square metres of retail floor space as identified by the Toolern PSP
- Design of the Toolern Rail Station
- Grade separation at Ferris Road and the Melbourne-Ballarat railway line
- Reviewing Main Street to confirm that it will not function as a cut through route to ensure its success as a main street
- Confirming Council commitment to civic uses within the Town Centre and east of Ferris Road
- The addition of the open space along the western edge of the UDF area
- The completion of Western BACE and the benefits and implications to further development
- Review of access not just to the station but also across it and the design of the bus Interchange-hub, given its importance to the multi-modal goals of both UDFs.
- Potential scope to increase density within the Town Centre given recommendations in the Retail
- Review the impacts of the rise of the ‘foodie’ culture and the shift away from the purity of uses in clearly defined quadrants or precincts as previously designed. The food and experience culture must permeate throughout.
- With a stronger influence on public realm as part of the retail experience, reviewing potential of the public places in the Town Centre will be important

3.5 Town Centre UDF Document Review

A core component of this project will be the structural changes to the Toolern Town Centre UDF, 2012 document. The following recommendations have emerged from recent conversations with Council with the goal of making the document more user-friendly. The revised table of contents appears in Appendix 2.

Generally the goal is to make the document shorter, more succinct and simpler. A few of the strategies to achieve this include:

- Limiting the chapters to four key chapters
 - 1.0 Introduction
 - 2.0 Urban Design Framework
 - 3.0 Design Guidelines
 - 4.0 Implementation and Staging
- Keeping design guidelines at a quadrant level not a sub-precinct level
- Focusing on requirements and recommendations ('must' and 'should') only
- Simplifying the high level organisation principles and carrying them through the document
- Avoiding any repetition
- Simplifying maps and legends and ensuring that nomenclature is consistent

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04 TOOLERN EMPLOYMENT & MIXED USE AREA

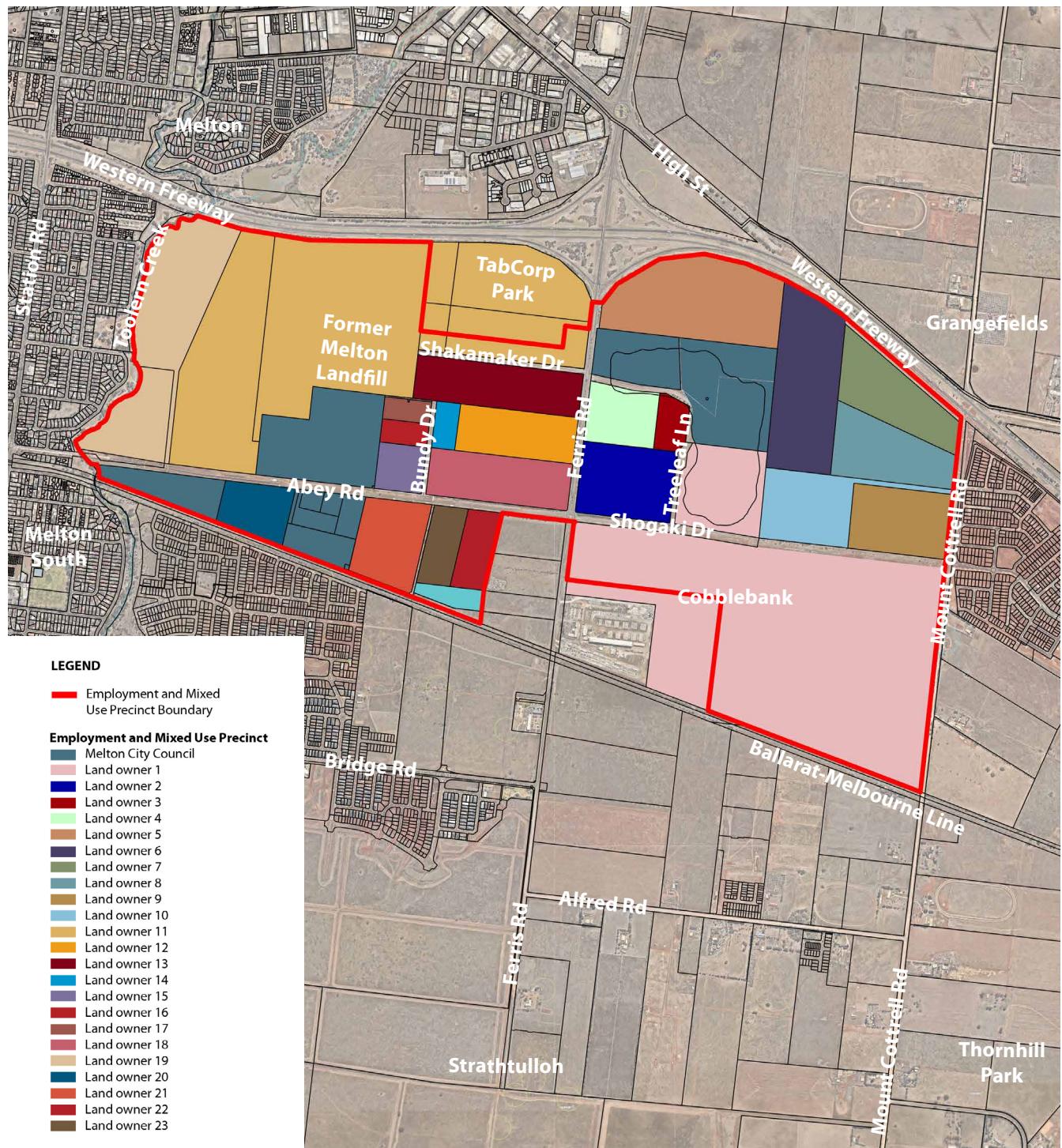


Fig. 8 Toolern Employment and Mixed Use Land - Ownership

4.1 Existing Conditions

4.1.1 Current Ownership

Melton Council is a major landowner in the UDF area particularly to the east of Ferris Road. There are 23 other landowners. (Refer Figure 8)

4.1.2 Heritage

Aboriginal Cultural Heritage

There is currently no Registered Aboriginal Party that covers the UDF area. The area is contested by three parties, The Bunurong Land Council Aboriginal Corporation, the Boon Wurrung Foundation Ltd and the Wurundjeri Tribe Land and Compensation Cultural Heritage Council.

Areas of Aboriginal Cultural Heritage Sensitivity are identified along Toolern Creek.

Post-Contact Cultural Heritage

The post –contact heritage site known as ‘Parklea’ is located at 148-200 Abey Road and is protected by Heritage Overlay 74 (HO74). The HO74 Citation describes ‘Parklea’ as a modest interwar bungalow style house including rear outbuildings, a tank stand, huts and trees and identifies it and as being of local significance for its historical, architectural and aesthetical qualities.

In 2017, a fire destroyed the main house of ‘Parklea’ leaving the tank stand, driveway and trees unscathed. Despite the fire, the HO74 remains in place, although Council are aware the statement of significance will need to be updated.

4.1.3 Topography, Drainage and Views

The UDF area is primarily flat and sits within the Werribee River catchment. Land west of Ferris Road drains south west directly to Toolern Creek. East of Ferris Road the land slopes slightly towards the south east. The highest land is around the Ferris Road intersection with the Western Freeway.

There is a ridge line just to the east of Ferris Rd and one obvious high point at the Former Melton Landfill site.

There is very little existing drainage infrastructure with a

few retarding basins abutting the rail corridor and Western Freeway, where natural low points in topography exist or where physical barriers impact the flow of the surface water.

Given that the land is quite flat, the major view lines tend to be located along the straight road corridors such as Abey Road and Ferris Road or along the rail corridor.

There is one long view north east from Ferris Road near the railway line.

There are shorter views into the Toolern Creek Corridor.

Refer Figure 9

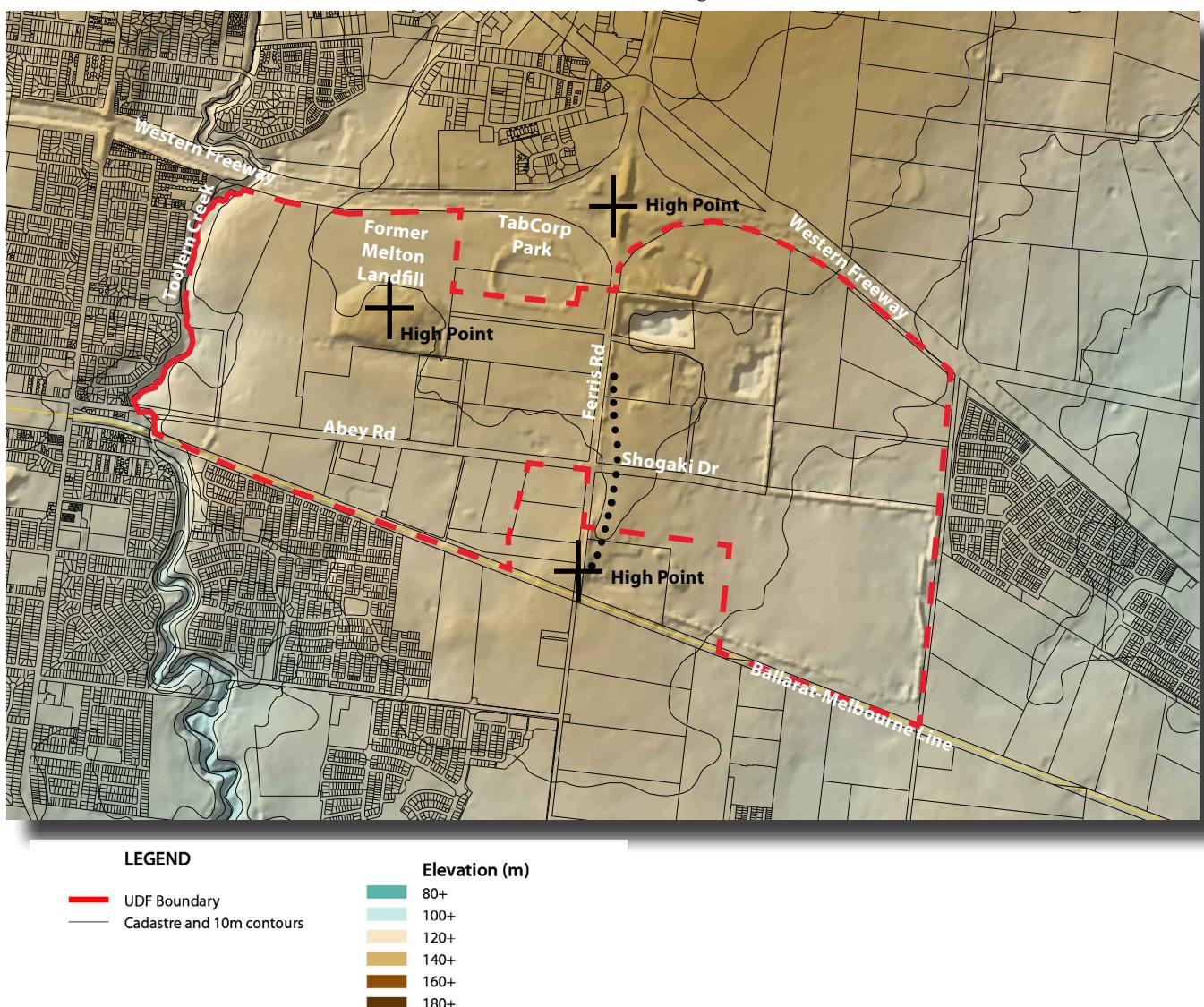


Fig. 9 Toolern Employment and Mixed Use Land -Topography

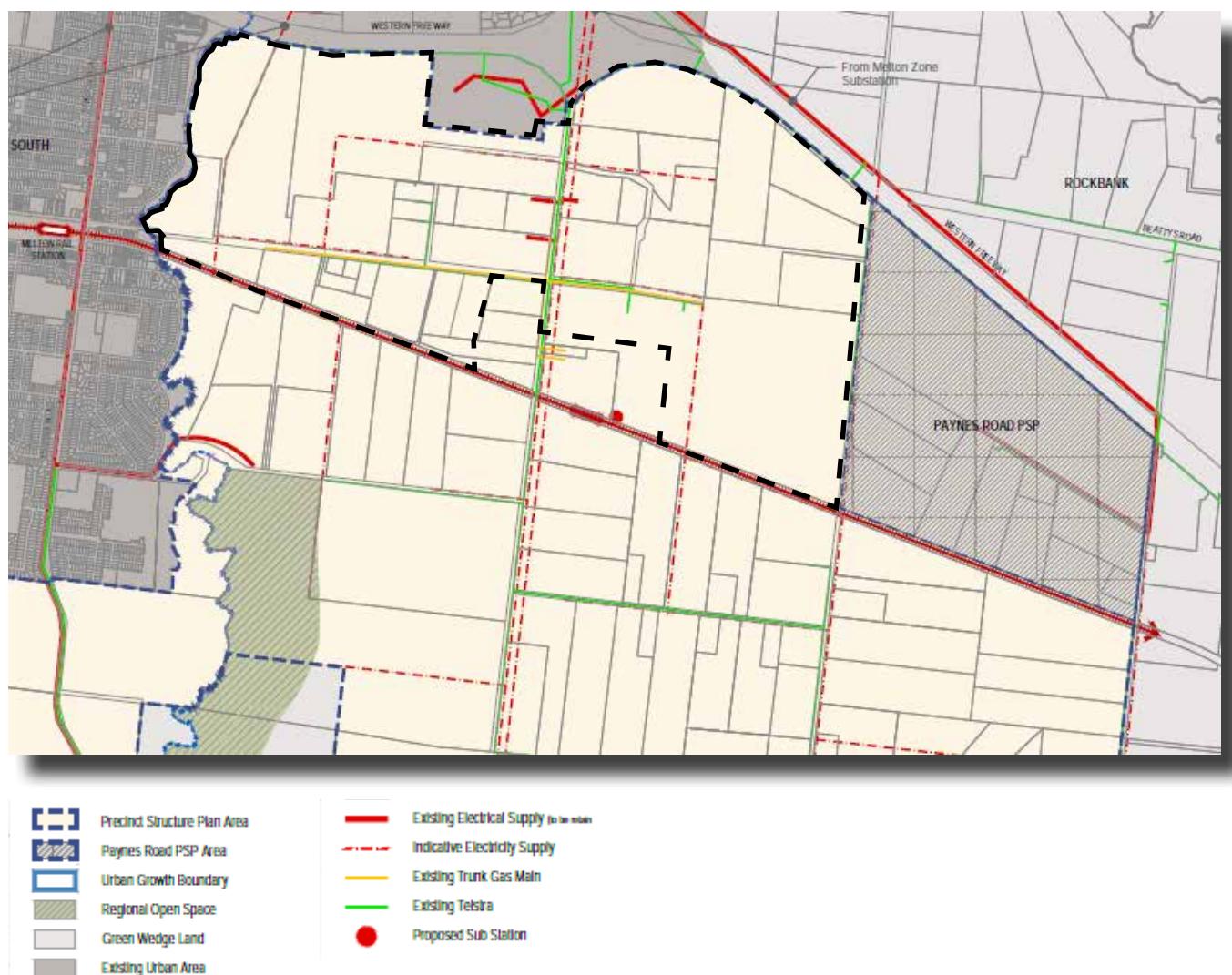
4.1.4 Utilities and Servicing

The PSP highlights the following existing utilities:

- The electrical supply to be retained is limited to a few locations along Ferris Road
- The trunk gas main is located along Abey Road
- Telstra utilities are located on Ferris Road and Abey Road.

A larger indicative electrical supply has been identified in the PSP. The completion of Western BACE would have extended the utilities network.

The Melton Outfall Sewer is on the east side of Toolern Creek, near Bridge Rd, 150-400m from the bank and has the capacity to service the PSP area.



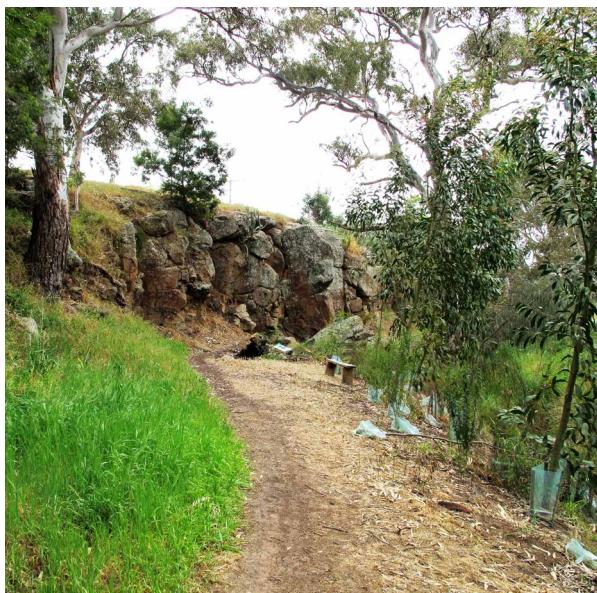
Source: Toolern Precinct Structure Plan



Central Intersection (Ferris Rd + Abey Rd)



Ferris Rd with planted nature strip



Toolern Creek Trail



Passive Open Space associated with existing residential along Toolern Creek (immediately adjacent to study area)



Toolern Creek



Western Freeway Interface (immediately adjacent to study area)

4.1.5 Former Melton Landfill

A former landfill site is located at 2-26 Ferris Road, Cobblebank. The land is subject to an Environmental Protection Authority (EPA) Pollution Abatement Notice (PAN 14 October 2002) as amended by the Notice of Amendment issued by the EPA on 22 June 2004 and any ongoing obligations under the Waste Discharge License No ES445.

The land is privately owned, however the obligations of the PAN remain the responsibility of Melton City Council. There is a 500m buffer around the site with 21.82 hectares declared as land affected by the PAN as reflected on plan of subdivision PS4415214K (Lot 1).

An Environment Audit Overlay (EAO) currently exists over the former landfill site and immediate surrounds. As stated by Urban Growth Zone Schedule 3:

'Unless a reduced distance is accepted by the Responsible Authority and EPA based on the findings of a satisfactory environmental audit report, an application for residential subdivision and development of land within 500m of the former 22.18 hectares Melton Landfill site on Ferris Road must be referred in accordance with Section 55 of the Planning and Environment Act, 1987 to the EPA.'

4.1.6 41-53 Abey Road

As stated by the Urban Growth Zone Schedule 3, due to the operations on the land at 41-53 Abey Road, any planning application for a sensitive use north of the railway line and within 440m of the land (measured from the boundary of 41-53 Abey Road) must be referred in accordance with Section 55 of the Planning and Environment Act, 1987 to the Environment Protection Agency (EPA) and WorkSafe Victoria.

4.1.7 Melton Recycling Facility

The Melton Recycling Facility is located at 33-41 Ferris Road, Cobblebank and is owned by Melton City Council.

The total area is approximately 18 hectares with the recycling facility occupying an area of approximately 7 hectares and the remaining area occupied under a lease agreement. The remaining area consists of a former quarry site which is currently being filled.

The Facility is managed and operated by a contractor and is currently open 7 days a week. This facility is expected to serve the municipality well into the future. The volume of materials is expected to double in the next 5-10 years, as are the vehicle movements.

Over the next two years, Council (in partnership with Sustainability Victoria) will invest \$1.1 million in critical infrastructure to improve resource recovery, with further investment anticipated to assist with growth.

The site manages approximately 45,000 tonnes of materials per annum with an average throughput of 70,000 vehicles per annum. Materials that are accepted in the facility are as follows:

Mattresses, green waster, E-waste, concrete, clean fill, timber, metals, engine/motor oil, tyres, commingled recyclables, paint, fluorescent lighting, white goods, batteries, BBQ gas bottles, general residual waste. Asbestos is not permitted nor are trucks and commercial vehicles, excluding Council Contractors.

4.1.8 Flora & Fauna

The UDF area supports:

- Habitat for threatened species listed under national and state environmental legislation (e.g. Growling Grass Frog, Golden Sun Moth, Striped Legless Lizard, Buloke)
- Threatened ecological/vegetation communities listed under national and state environmental legislation (e.g. Natural Temperate Grasslands of the Victorian Volcanic Plain listed as critically endangered under the Environment Protection and Biodiversity Conservation Act)
- Broad habitat types include remnant woodland, Lignum wetlands, scattered remnant trees, planted trees and shrubs, artificial water bodies, native grassland and introduced grassland which provide habitat for threatened species and other flora and fauna (e.g. Eastern Grey Kangaroo)
- Previous flora surveys have identified a native orchid population of Diuris sp. (recently identified as most likely D. chryseopsis) west of Ferris road and north of the railway reserve. Melton City Council are investigating whether it is feasible to translocate the individuals to one of Council's conservation reserves prior to any development at this site.
- Any works within 100m of Toolern Creek must complete a Growling Grass Frog Conservation Management Plan to the satisfaction of DELWP and Council.



Fig. 10 Toolern Employment and Mixed Use Land - Site Conditions

4.1.9 Site Conditions Summary

The Employment and Mixed Use land is predominantly flat with the exception of the a constructed mound at the former landfill site, topographic variation around the Toolern Creek and a ridge to the east of Ferris Road.

Toolern Creek is an attractive natural feature and also a site of Aboriginal cultural heritage sensitivity. It is also the location of most of the remnant vegetation to be retained in the UDF area. Other pockets of vegetation to be retained exist in the eastern part of the site close to Mt Cottrell Road.

The freeway and the railway line, while providing excellent access to the broader Melbourne area, also act as local barriers to Melton itself and the future Town Centre, although measures are in the place in the PSP and the DCP to improve access across the railway line.

Currently Abey Road does not connect through to Mount Cottrell Road.

Existing residential development exists off Mt Cottrell Road in the Paynes Road PSP area and west of Toolern Creek. Both residential areas have their own freeway access points and do not rely solely on Ferris Road.

The two existing major destinations in the area are TabCorp Park which lies to immediately north of the Employment and Mixed Use land and just south of the Western Freeway, and Western BACE which sits within the Town Centre UDF area but is accessed via Ferris Road.

A smattering of other commercial and industrial uses are dotted throughout the area. Of specific interest are:

- The Melton Recycling Facility is located on Ferris Road and will continue to operate. Refer Section 4.1.7
- Planning applications for the site at 41-53 Abey Road must be referred to the EPA and Worksafe Victoria as outlined in more detail in Section 4.1.6
- The former Melton Landfill site is located at 2-26 Ferris Road and is subject to a Environment Audit Overlay (EAO). Refer 4.1.5.

Refer Figure 10 for site specific detail

LEGEND

	Study Area
	Cadastre
	Existing Level Crossing
	Low Point
	High Point
	Heritage Site
	Waterbody
	Key Viewlines
	Former Melton Landfill
	41-53 Abey Road
	Melton Recycling Facility
	City Circle
	Built Form
	Future Truncated Road
	Internal Connections
	Arterial Road
	Railway Line
	Riparian Zone
	Existing Vegetation
	Vegetation to be Retained
	Ridgeline
	Aboriginal Cultural Heritage Sensitivity

4.2 Movement & Transport Assessment

(Refer Appendix 3)

The Toolern Employment and Mixed-Use land will accommodate a range of commercial land use types, both in terms of activities and size. As such, a supporting road network that helps activate small sites, provides good access to arterial roads for larger sites, and minimises conflict between car park access and frontages of sites is desired.

This, much like the current proposed road network for the Town Centre, will be built off the main arterial roads with connector level roads forming a grid based network, and local roads providing property access to smaller lots in a circuitous manner to minimise the attractiveness of through movements.

The Movement and Transport Technical Report covers the following in its assessment of the Employment and Mixed Use area:

- Commitment to the station is key to the success of the Employment and Mixed Use land as is good integration of the train station into the community.
- More bus services from the station to the community beyond will be essential to a successful Toolern
- Good pedestrian and cyclist connections into the Employment and Mixed Use land are essential.

Transport Modelling

As outlined in Section 3.2.2 Transport Modelling, the arterial road network is generally expected to be able to reasonably accommodate the anticipated traffic volumes.

Ferris Road south of the Western Freeway will start accommodating arterial level traffic volumes in 2031, if only as it nears the interchange with the Western Freeway.

The Melton Highway forms the northern approach to the interchange with the Western Freeway, and the traffic volumes are expected to double between 2016 and 2031.

Mount Cottrell Road is a very attractive north-south route, potentially due to the congestion associated with the Ferris Road interchange with the Western Freeway interchange.

4.3 Economics Assessment

(Refer Appendix 4)

The Toolern Employment and Mixed Use land consists of approximately 300ha of land dedicated for employment uses from a total of 4,255 ha of land available for industrial and employment uses in the overall Melton growth corridor. With an annual rate of employment land consumption of 60ha-70ha, the Melton growth corridor has at least a 50 year supply of employment land. (The Toolern Employment and Mixed Use land itself is likely to develop over a period of 30 years)

The report outlines several key drivers, the most significant of which include:

- An expanding population driving service industries encouraged by low development costs and larger parcels
- Competitive land costs
- Excellent transport connectivity
- Scale of the Employment and Mixed Use land (390ha) will mean that the land use will be diverse and that a precinct-based approach would be beneficial

The report summarises the likely development outcomes as:

- Light Industry
- Restricted Retail/Showrooms
- Business Park
- Specialised Uses - research or education, public sector infrastructure, Large scale recreation uses

A snippet from the Essential Economics Report is opposite, suggesting that the Employment and Mixed Use area could support 315 hectares of employment uses with other non-employment uses being located primarily in the mixed use area. This is consistent with the PSP.

TEMU Indicative Land Use Mix	
Land Use	Area
Light Industry	200 ha
Restricted Retail/Showroom	35 ha
Business Park	30 ha
Specialised Uses	50 ha
Other (residential, public space etc)	75 ha
Total TEMU	390 ha

Source: Essential Economics

Source: Economic Technical Report

4.4 Urban Design Site Assessment

The Western Freeway and the Railway line, while ultimately providing excellent access to the broader metropolitan area do currently act as barriers. Urban design efforts will need to consider this challenge and design appropriately. The PSP and the DCP address additional proposed points of access into the Employment lands via bridges.

The land is so flat that urban design efforts will not be able to rely on dramatic topographic features to create interest, however Toolern Creek is a feature that should be both protected and embraced. Views to the creek should be capitalised on. Mixed use development should be oriented to the creek and additional open space should adjoin to leverage the recreational and storm water benefits of the creek system.

In lieu of dramatic topography or strong existing landscape features, massing and built form will need to provide the architectural interest and variety in the UDF area, particularly at key development sites at major intersections.

Retaining vegetation where necessary and also where appropriate will be key to creating more interesting urban environments in the short term.

The freeway, railway and major roads of Ferris Road, Abey Road and Mt Cottrell Road are significant pieces of infrastructure that will require appropriate treatment of

interfaces to ensure high quality urban design outcomes. They must also be high amenity roads since they are the major conduits into the UDF area.

The PSP suggests that large footprint industrial uses be located east of Ferris Road and smaller footprint commercial uses be located west of Ferris Road between Ferris Road and the Mixed Use area. This can be a general assumption moving forward in the design process however appropriate buffers between industrial uses and the existing residential areas in the Paynes Road UDF area will need to be considered.

As outlined in the economic summary the scale of the UDF area means that land uses can be diverse and arranged into precincts. The precinct based approach will be investigated as part of the design process.

Appropriate consideration will be important for uses on and /or adjacent to the former Melton Landfill site, 41-53 Abey Road and the Melton Recycling Facility.

Appropriate integration of the Ferris Road overpass into the surrounding urban form is key. Part of the design process will also be considering the other north-south roads through the UDF areas and determining with Council which will be grade separated.

Urban Design recommendations are outlined in Figure 11 and in Section 5.1.3

05 RECOMMENDATIONS & STRATEGIC DIRECTION

5.1 General Recommendations

5.1.1 Movement and Transport

- State Government has announced their commitment to a new train station in Toolern. The proposed train station will result in a significant increase in accessibility of the area by public transport, and help unlock its proposed development. Also, given its implementation at the start of Toolern's development, it provides an opportunity to help develop more sustainable travel behaviours from the outset and not over provide road infrastructure.
- The planning of the revised Toolern PSP will provide sufficient road capacity, but in areas of high population and employment densities, such as the Toolern Town Centre, and Toolern Employment and Mixed-Use Land, more space efficient modes (walking, cycling and public transport) must be prioritised.
- Beyond achieving an orderly road network structure to support access to the Toolern Town Centre, a key road within it will be Main Road, which currently extends between Ferris Road and East Road, and could potentially be an acceptable through route. To avoid its use as a through route, consider additional design measures.
- Limit property and car park access from Main Road (more from the surrounding arterial and connector roads) - promote access from rear laneways. Main Road should have pedestrian, bicycle and/or public transport priority as part of VicRoads SmartRoads Policy for road network management.
- Provide a low speed environment (30km/h or less) through suitable surfacing and traffic calming measures to make Main Street a place for people to spend time.
- The Toolern Employment and Mixed Use Land will accommodate a range of commercial land use types, both in terms of activities and size. As such, a supporting road network that helps activate small sites, provides good access to arterial roads for larger sites, and minimises conflict between car park access and frontages of site is required.
- When the Toolern Railway Station is delivered, part of its success will be based on the integration with bus services, via a well located transport hub, which should be located as close as possible to the station, prioritised over and separated from any commuter car parking and be connected via high-quality pedestrian network for the stations catchment..
- The bus network should provide a high level of coverage throughout the Toolern PSP, i.e. 95% of residents and jobs within 400m of a bus route.
- Within the Toolern Town Centre, the road environment and pedestrian crossing arrangements are expected to prioritise pedestrian movements through the design elements such as low speed environment, suitable surfacing and traffic calming measures, and/or shared spaces; Crossing facilities on each intersecting road that prioritise pedestrians, such as zebra crossings and/or wombat crossings; and traffic signals that prioritise pedestrian crossing movements by increasing the signal time allocated to pedestrian movements above the typical minimum and have shorter cycle times so pedestrian crossing opportunities occur more often.
- Within the Toolern Employment and Mixed Use land, it is expected that pedestrian paths will be provided along the majority of road ways and pedestrian crossing facilities provided on all intersecting roads that contain footpaths.
- Within the town centre, the road environment is expected to be a low speed environment of less than 30km per hour, which enables cyclists to mix with traffic. However, majority of cyclists are expected to access the Town Centre via separated bicycle facilities, with priority crossing facilities on lower order roads.
- It is expected that broadly the following bicycle facilities will be provided within and connecting the Toolern Town Centre and Toolern Employment and Mixed-Use Land, as follows, which is based on the VicRoads Guidance for planning Road Networks in Growth Areas:
 - Separated bicycle facilities along all arterial roads
 - On-road bicycle lanes on 60km/h or lower sign posted connector level roads (separated facilities on higher speed roads)
 - Mixed traffic conditions on low speed local roads (i.e. 30km/h or less)
 - Prioritised crossings when linking to the path network, key destinations and public transport facilities.

- End-of-trip facilities will be also required at key gateway and destination places. These are recommended to be provided as public facilities and not solely relied on to be provided as part of private development.
- Integrate behaviour change initiatives with infrastructure projects to achieve an increased shift away from private car use
- Start adopting and planning for the upcoming technology disruptions to transport use, such as better, connected and real time data, as well as electric and autonomous public and private vehicles

5.1.2 Economics

The Economic Technical Report outlines the following trends in town centres which will need to be considered in the review of the Town Centre UDF to determine relevance:

- The importance of major retail chains in a town centre
- The resurgence of street-based centres and shift away from internal malls
- The emergence of the ‘foodie’ culture and its role in a complete ‘retail experience’
- Town Centres as a social and cultural hub
- Major demographic shifts ‘time-poor’ families, smaller household units
- The rise of the internet and technology and the effects on town centres

Beyond the Town Centre, there is essentially 30 years worth of employment land in the growth corridor, meaning that some land will not be developed for some time. Success will be in the staging. Development must start at the centre and work its way out to ensure there are few ‘gaps’ in the urban structure.

The range of uses are likely to include:

- Light industrial (such as trade & service industries, warehousing and logistics, construction support)
- Restricted Retail>Showroom. This should be located with good exposure and key road transport connections.
- Business Park. The UDF may be attractive for larger regional corporate offices that require access to an extensive labour force.

- Specialised Uses. The size of the UDF provides excellent opportunity for large-footprint and hard-to-locate land uses to operate in proximity to a metropolitan activity centre. Possible specialised uses could include highly specialised research or education facilities (e.g. synchrotron equivalent), major specialised Government/public sector infrastructure (e.g. police training academy equivalent), large-scale recreational facilities (e.g. theme park), medical facility or hospital (major regional-level hospital, including research facilities), or major accommodation and conference facility.

5.1.3 Urban Design

The following recommendations in conjunction with Figure 11 outline a range of issues that will be considered as part of the design process. Urban design efforts must:

- Overcome barriers created by the Western Freeway and the railway line and de-emphasise through a range of design measures
- Create appropriate interfaces along the Western Freeway, the railway line, Ferris Road, Abey Road and Mt Cottrell. High quality urban design must not be compromised by these interfaces.
- Create features through appropriate and creative massing and built form since the predominantly flat landscape will not provide dramatic interest in itself. Emphasise important intersections through built form and massing.
- Ensure building proportion, scale and character are appropriate to their context with taller buildings on prominent sites and small-scale buildings to the West of Ferris Rd.
- Locate new, manufacturing and industrial uses, which may impinge on amenity to the East of Ferris Rd at suitable distances from residential interfaces.
- Protect and embrace Toolern Creek as the major natural site feature. Views to and orientation towards the creek will be important to the success of the Mixed Use area.
- Leverage the recreational and storm water management benefits of Toolern Creek by featuring adjoining open space and orienting development towards the creek and providing high quality public access.

- Protect the quality of life for the existing residential communities to the east of Mt Cottrell Road and west of Toolern Creek by the careful placement of adverse land uses.
- Consider a precinct based design approach in the employment lands given the size of the area. (This notion is also supported by recommendations for land uses in the PSP)
- Appropriately consider the constraints, buffers and land uses around the former Melton landfill site, 41-53 Abey Road and the Melton Recycling Facility
- Retain vegetation where necessary and also where appropriate. Existing vegetation can add significant character to the UDF area particularly in the short term.
- Ensure a diversity of lot sizes in the Employment land to accommodate a variety of uses and building types.
- Carefully follow the detailed urban design recommendations outlined in the PSP
- Support the delivery of the train station.
- Make staging a key piece of the design process to ensure that the ultimate success of Toolern won't be hampered by urban 'gaps' given the anticipated 30 year build out of the Employment areas.
- Review the current location of anchor retail in the Town Centre.
- Accommodate the additional 40,000 square metres of retail in the Town Centre.
- Determine if the 'foodie' culture trend will change anything within the current Town Centre design.
- Confirm that the design of the Main Street will work since its success will impact the success of many other parts of the UDF areas.
- Integrate the Ferris Road road overpass into a high quality Town Centre design by minimising visual bulk through design measures and appropriate land uses. Confirm location of other grade separations in the UDF areas
- Recognise that the arterial roads in the UDF areas need to accommodate a range of users from trucks to pedestrians and that all users must be catered for.
- Activate street frontages on commercial sections of streets with minimal building setbacks and locate parking and service areas to rear.

5.2 Strategic Direction

The following points outline the broad strategic direction while the more detailed recommendations continue to be developed and shaped throughout the design process.

- Ensure that the station is fully integrated and the urban design supports the speedy realisation of the station. Ensure that the design process identifies and removes any hurdles to realisation.
- Make the discussion around staging an integral part of the design process to better avoid 'gaps' in development, given 30 year build-out timeline.
- Be current. For Toolern to be highly successful as an Employment area it will be important to learn from what is being done elsewhere. Setting the bar high for employment areas in Victoria should be a focus of the project. For example, investigating the possibility of an innovation district such as Tonsley, or partnering with a university might give Toolern a competitive edge. In the same vein, updating the current Town Centre UDF to reflect current trends will also be key to its competitiveness in the marketplace.
- Be realistic. If a key use in the Toolern Town Centre UDF appears unlikely in short term, it's critical to make the difficult decision to ensure that something else takes its place. The UDFs must be rooted in economic realities. For example, it will be important to utilise the connections with anchor retail to determine the best approach for creating a town centre that can be realised in the near future. Understand Council's commitment to developing in the Town Centre.
- Be forward-looking. Make the environment and sustainability a focus not an add-on. Highlight environmental design and sustainability as a key feature in all aspects of the UDFs and ultimately the development.
- Create a truly multi-modal environment. It's inevitable that trucks will be a key piece of these UDF areas which means that the goal must be to create a road network that is appealing to all users - drivers, cyclists, public transport users and pedestrians. The better integration of the train station into the town centre and beyond will also be critical. Abey Road and Ferris Road in particular need to function at multiple levels but they also need to be highly attractive and appealing streets given their role as the major conduits into the site.
- The land must accommodate both a Town Centre and industry so it is critical that the design guidelines are stringent enough to maintain high standards so that the industrial lands do not detract from the Town Centre.
- Be bold. This is the chance to push the status quo. For example the City of Melton Retail & Activity Centres Strategy suggests that there is opportunity to investigate higher density housing and the location of major new social infrastructure and government investment within the Study Area.

General Notes:

Ensure a diversity of lot sizes throughout the employment area.

Encourage a mix of housing densities.

Consider careful location of manufacturing/

- 1** industrial uses with adverse amenity near mixed use or residential use

Mixed use area will foster a diverse mix of uses

- 2** including residential, office, business park, industrial and specialised employment

Compatible uses with Harness Racing Victoria and
3 suitable building interfaces are important

- 4** Appropriate uses on former Melton landfill will need to meet EPA requirements

- 5** Create appropriate interfaces between residential and employment land uses

- 6** Emphasise a high quality and appropriate frontage to Abey Rd

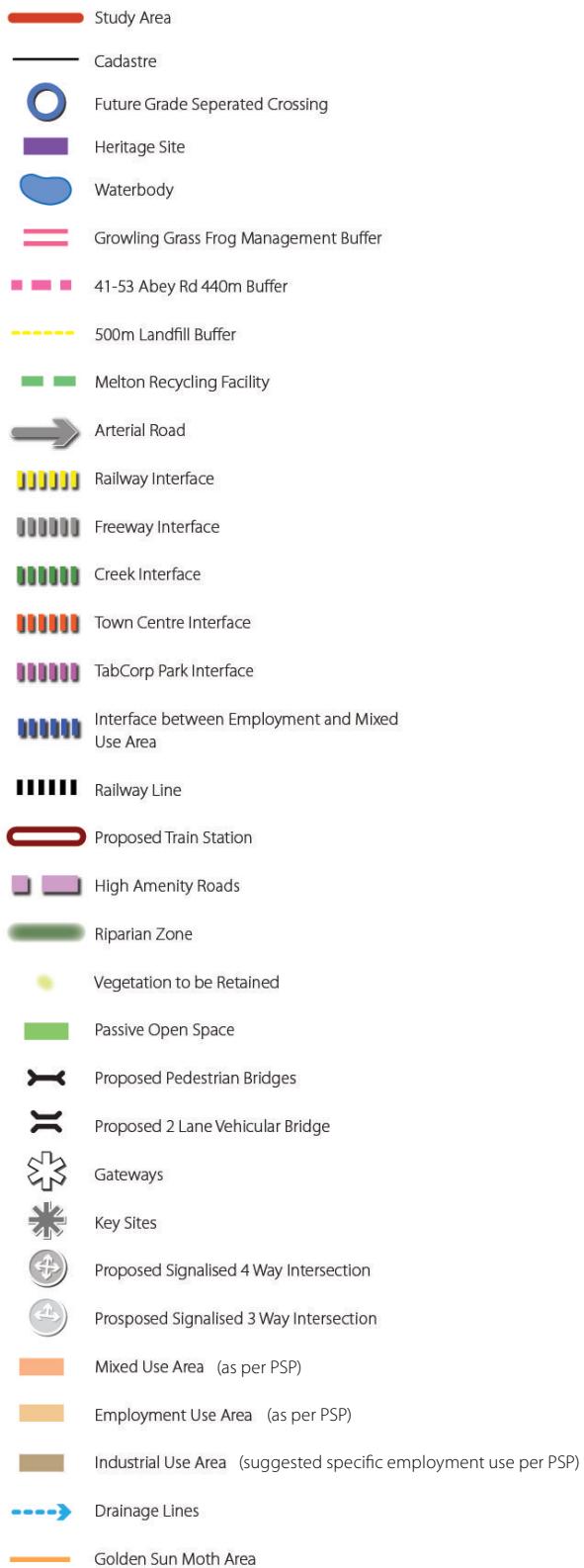
- 7** Ensure an appropriate interface between employment land or mixed use and freeway (consider frontage road or landscape buffer)

- 8** Ensure residential development on Toolern Creek is orientated to the creek on frontage roads

- 9** New large floor plate and industrial uses to be located east of Ferris Rd where possible (as per PSP suggestion)

- 10** New small scale buildings to be located west of Ferris Rd (as per PSP suggestion)

LEGEND



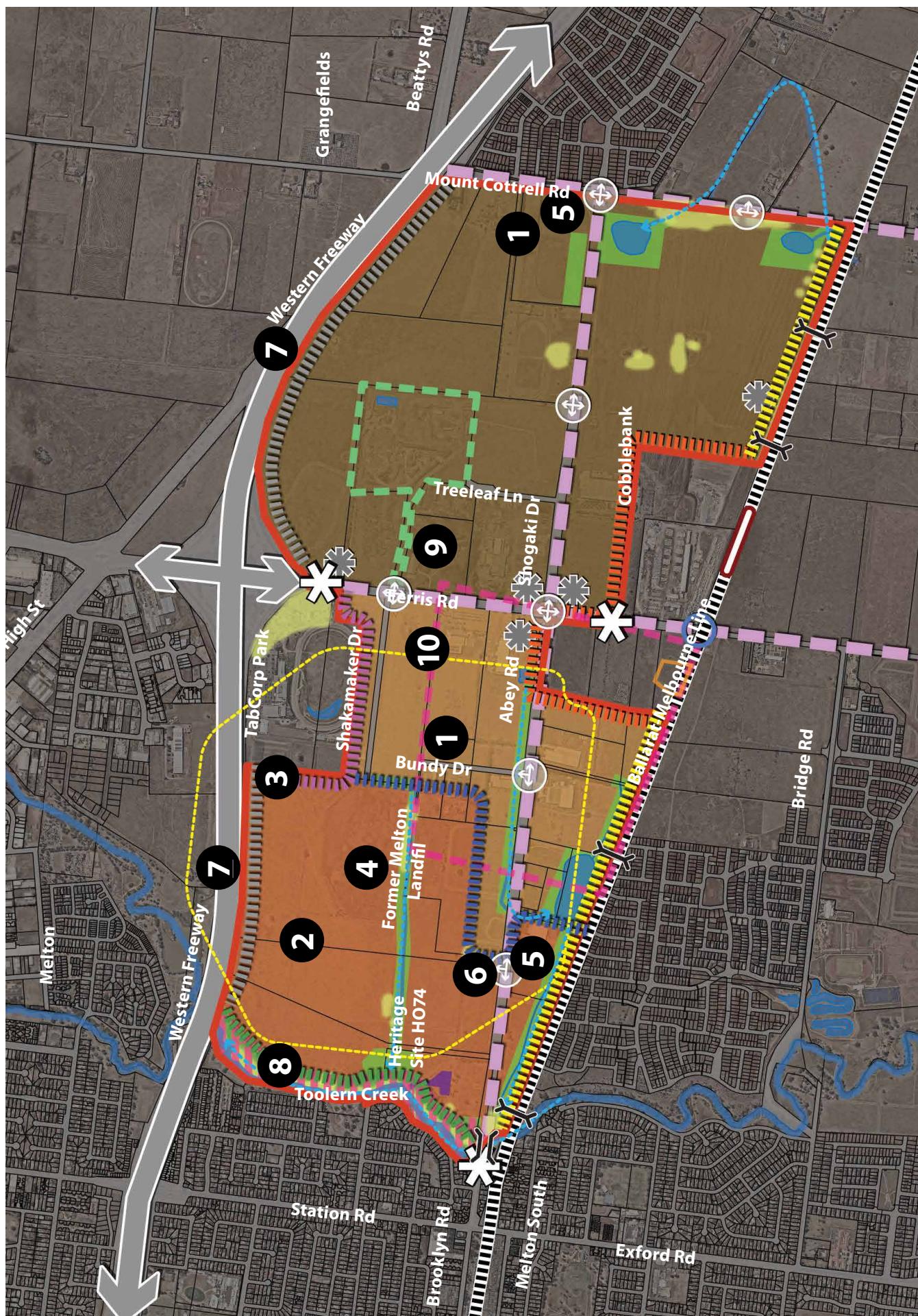


Fig. 11

Toolern Employment and Mixed Use Land - Site Opportunities and Constraints

APPENDIX 1: BENCHMARKING

CASE STUDY - EMPLOYMENT AREAS

TONSLEY INNOVATION DISTRICT, SOUTH AUSTRALIA

OVERVIEW

Tonsley Innovation District is a mixed use precinct focused on high-value manufacturing industries.

KEY FEATURES

RESIDENTIAL

- 11 hectares for approximately 650 homes and 1,200 residents.

HIGH VALUE INDUSTRY / COMMERCIAL

- 24 hectares for business (light industry or commercial use).
- Focus on minerals and energy resources; health, medical devices and assistive technologies; software and simulation and cleantech and renewable energy

EDUCATION

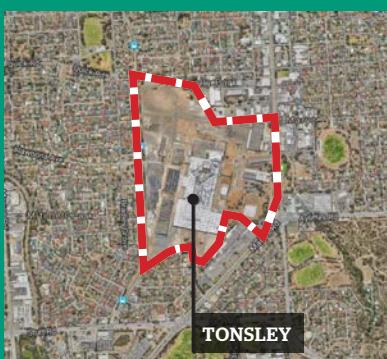
- 8,500 students to attend Flinders University and TAFE SA's Sustainable Industries Education Centre.

RETAIL AND CIVIC SPACE

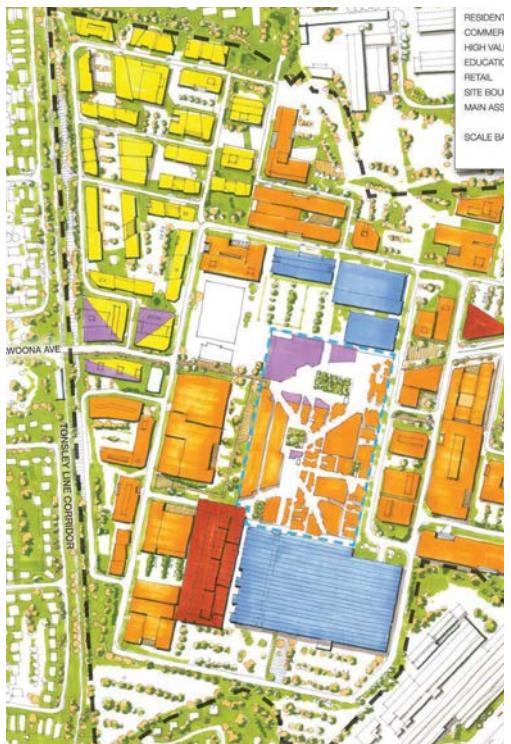
- Town square in the refurbished, former automotive, main assembly building.
- Centre for social activity beyond 9-5 business hours.
- Shops, cafes, services and facilities.

LOCATION

South Rd, Tonsley, Clovelly Park, South Australia.



'Tonsley provides a high quality, people-focused and knowledge - driven environment.'



'Australia's first innovation district'

HOW IS THIS RELEVANT TO TOOLERN?

- The development of a strong 'brand' for an employment precinct which conveys innovation and resilient future employment sectors, such as will be needed at Toolern.
- A mixed use precinct including a focus for growth and fostering of manufacturing industries, which is the plan for the Toolern site.
- Incorporates a focus on renewable energy which is potentially a market-difference for Toolern as an activity centre.

WHY IS THIS INTERESTING?

It's an example of mixed-use employment precinct manufacturing showcasing innovation. Tonsley can provide good references for dealing with difficult interfaces.

CASE STUDY - EMPLOYMENT AREAS

WERRIBEE NATIONAL EMPLOYMENT & INNOVATION CLUSTER

OVERVIEW

A national employment cluster, East Werribee will provide employment opportunities on the 775 hectare site of the former State Research Farm.

KEY FEATURES

- Anticipated to provide 58,000 jobs, 7,000 dwellings, 170 hectares of open space and waterways, and services and amenities.
- A multi-storey Town Centre with active retail, entertainment and commercial uses at ground floor level and residential and commercial uses above.
- A New State Research Farm Heritage Park/ Botanic Gardens surrounded by active uses.
- Waterway and open space network.
- A multi-storey Commercial Precinct including modern commercial towers and apartments.
- A Health and Learning Precinct with larger footprint medical and educational uses surrounded by green spaces and car parking areas.
- Modern medium & higher density residential, as well as conventional residential areas.

LOCATION

Princess Highway, Werribee East, Victoria.



'A new approach to integrated economic and land use planning'



'A leading edge innovation precinct'



HOW IS THIS RELEVANT TO TOOLERN?

- Potential learnings from the innovation strategy in a Melbourne greenfield setting, establishing employment businesses in an integrated way.
- Incorporation of precinct-scale water strategies both as engineering solution but also as an identity - could be applied to Toolern Creek to unify the different areas together to make a cohesive precinct.
- The precinct is a good local example that is also located in the Western growth area, subject to the same market, growth and political forces.

WHY IS THIS INTERESTING?

Toolern employment businesses will exist in the same growth corridor as the Werribee precinct, with potentially market advantages around existing infrastructure and access at Toolern.

CASE STUDY - EMPLOYMENT AREAS BALLARAT WEST EMPLOYMENT ZONE

OVERVIEW

The Ballarat West Employment Zone is an industrial estate providing for a range of manufacturing, agribusiness, construction, freight and logistics, and research and development uses.

KEY FEATURES

- 623 hectare (438 developable) precinct.
- Site is owned by Council (Ballarat Airport) and the Victorian Government.
- Well connected - located near Ballarat West Growth Area, the Ballarat Airport, rail infrastructure and the Western Link Road.
- Potential to deliver 9,000 local jobs for our community and inject \$5 billion into the economy annually.
- Bio Economy Innovation/ Research and Development Centre will allow companies to work collaboratively on projects and improve research and development capability for new and existing businesses.
- Co Gen Bio Energy Plant will reduce energy costs to ensure a more cost competitive environment for businesses.

LOCATION

Ballarat Ring Road, Ballarat West, Victoria.



HOW IS THIS RELEVANT TO TOOLERN?

- Similar connection and access advantages to Toolern's location just south of the Western Fwy and the ability to leverage future rail connections (subject to delivery).
- It is a local project also based in the Western growth corridor and so will have similar broader limitations and opportunities.
- The 'collaborative approach' could be a useful strategy for the Toolern employment and mixed use areas, particularly given the existing model of Western BACE.

WHY IS THIS INTERESTING?

Provides an alternative governance model potentially useful for Toolern into the future. It also provides a good example of constructive collaboration on a precinct-wide scale.

CASE STUDY - EMPLOYMENT AREAS

MERRIFIELD BUSINESS PARK

OVERVIEW

A 330-hectare purpose-built business park planned to accommodate both big and small business operators.

KEY FEATURES

- Co-located with the future 330 ha Merrifield Living precinct and 140 ha Merrifield City Centre precinct.
- 21 ha of landscaped open space (across Merrifield) including Merrifield Park.
- High-speed NBN connection.
- A proposed University, tertiary facilities and vocational training opportunities.
- Well located with 80% of the national population accessible within 12 hours using road, air and rail infrastructure.
- Clean energy solar paneling, including solar potential analysis offered to all occupants at Merrifield Business Park.
- Demonstrating innovations in energy-efficient street lighting and water-preservation.
- Full six-leaf UDIA and EnviroDevelopment accreditation across all categories of Waste, Energy, Water, Community, Materials, and Ecosystem.

LOCATION

Donnybrook Road, Mickleham, Victoria.



'Merrifield Business Park offers unrivalled flexibility and exposure.'



'...set to foster an environment of innovation and opportunity'

HOW IS THIS RELEVANT TO TOOLERN?

- Provide a business park incorporating a range in size of business operators similar to Toolern.
- Interface treatments and interaction between employment uses could provide learnings for Toolern.
- The site has a high standard of environmental accreditations as well as solar PV installation offered to all occupants and sets an example of what could be achieved at Toolern as a future activity centre.
- The site is a very similar size to Toolern's 392Ha of employment and mixed use, which may help to guide and determine appropriate densities.

WHY IS THIS INTERESTING?

Interface treatments between employment uses are crucial to good urban design outcomes. Sustainability incentives also potentially provide a point of difference to attract businesses and tenancies.

CASE STUDY - EMPLOYMENT AREAS

M1 & M2 INDUSTRY PARK, GREATER DANENONG

OVERVIEW

M1 and M2 comprise approximately 120 hectares of commercial and industrial land, separated by an urban forest.

KEY FEATURES

- Multiple controlled estate entrances
- Quality controlled with protective covenants for types of uses allowed within the estate and garden maintenance.
- Environmentally sustainable design initiatives
- Lifestyle precinct including lake, walking tracks and restaurant
- Nature reserve with native trees, walking tracks and picnic facilities
- Architecturally designed buildings
- Dedicated showroom/trade precinct
- New child care centre and indoor kids playcentre
- Future provision for gymnasium
- High speed fibre optic internet capability
- Proposed inland port opposite
- Future provisions for mixed-use retail precinct

LOCATION

Abbotts Road, Dandenong South, Victoria.



'Dandenong's Highest Quality Industry Parks'



'M1 and M2 Industry Parks are the sites for success...'

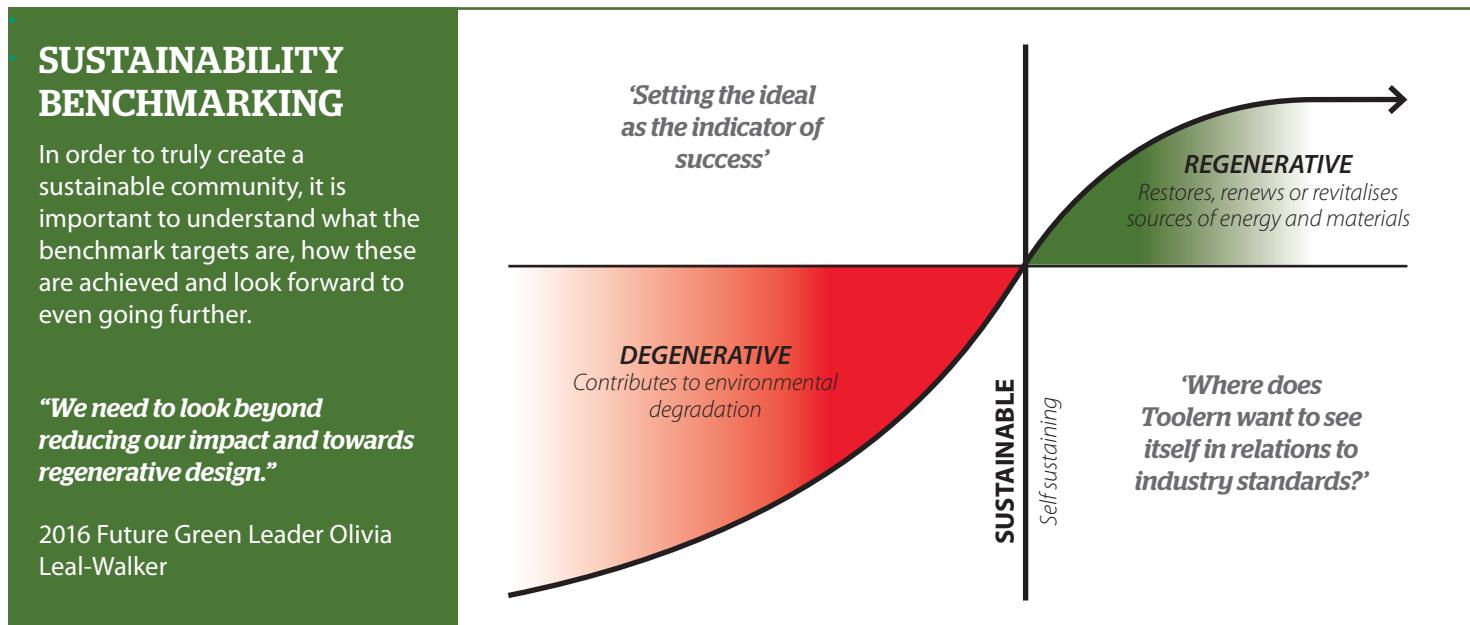
HOW IS THIS RELEVANT TO TOOLERN?

- This project uses an urban forest as an interesting way to divide the site into different precincts. As Toolern is much larger, incorporating some form of vegetation corridor or feature green space could aid the interface conditions between the employment and mixed use area.
- The project has a strong focus on providing amenity for residents whilst still acting as a workplace for others which could prove useful for the mixed use area of Toolern.

WHY IS THIS INTERESTING?

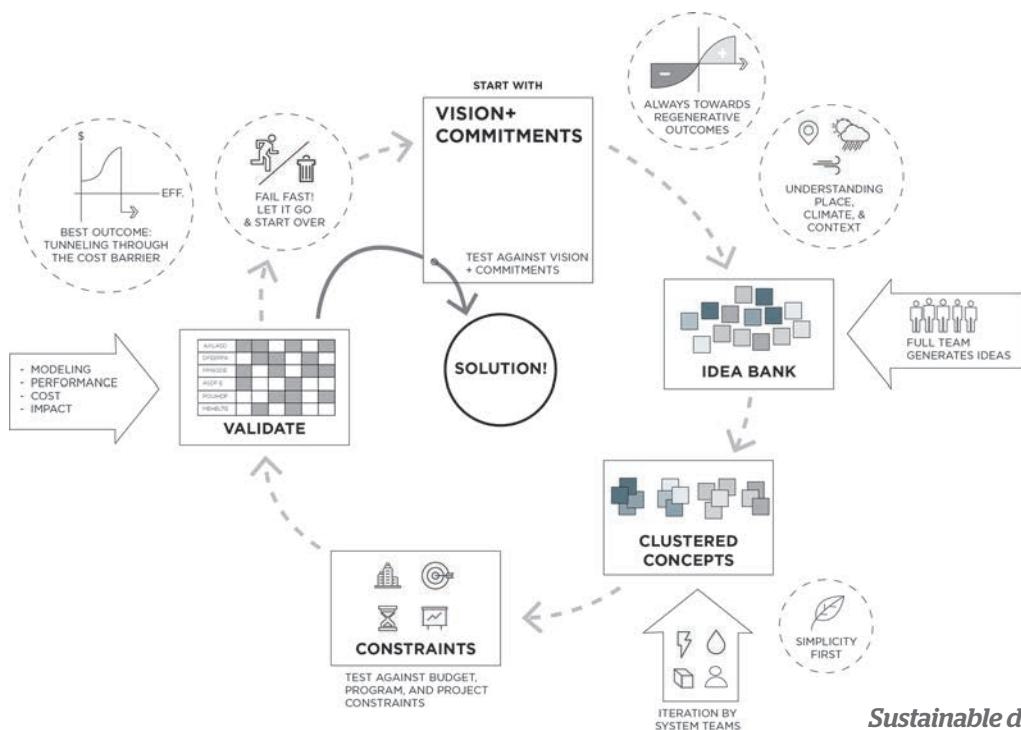
Embraces the key natural features of the precinct. It utilises an urban forest as a key feature for practical, environmental and aesthetic outcomes.

CASE STUDY - SUSTAINABILITY OVERVIEW



THE REGENERATIVE DESIGN PROCESS

Regenerative design is a process driven theory that aims to not only be self sustaining but also to improve the surrounding environment.



The Regenerative Design Process

Sustainable design aims to provide for fundamental human needs; regenerative design goes further in that it plans for the future co-existence and co-evolution of humans and other species.

CASE STUDY - SUSTAINABILITY ALKIMOS BEACH, WESTERN AUSTRALIA

OVERVIEW

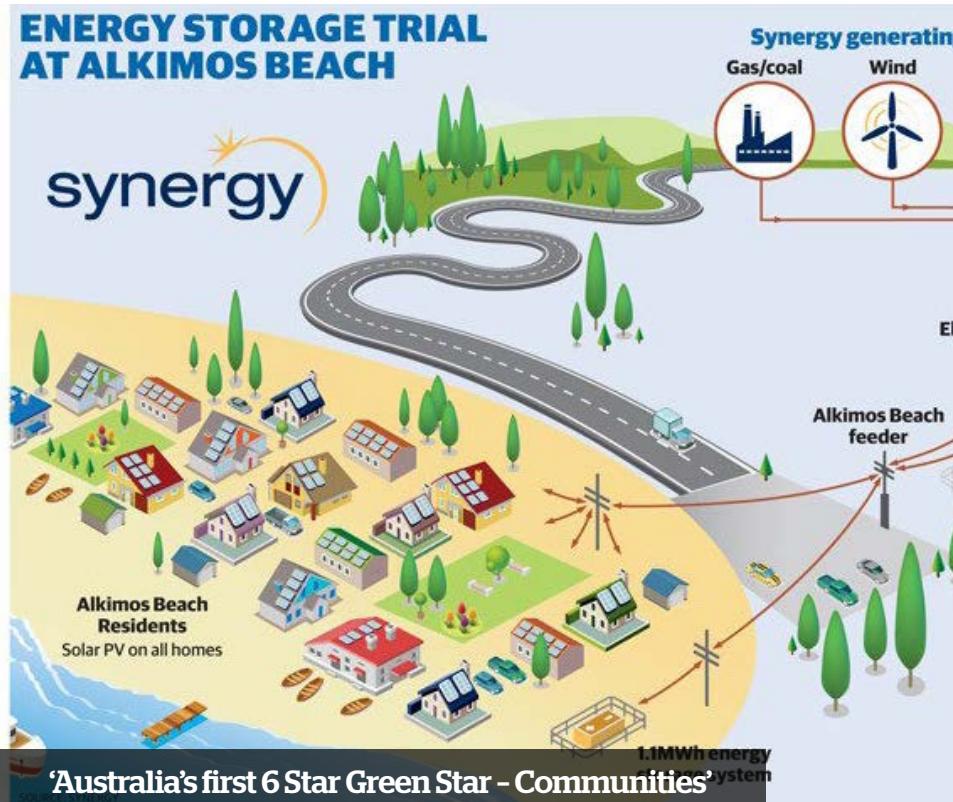
A 710 hectare master-planned community, awarded Australia's first 6 Star Green Star – Communities rating for a residential master-planned project from the Green Building Council of Australia (GBCA).

KEY FEATURES

- Mandatory solar panels and gas boosted solar hot water systems as well as other energy-efficient appliances for all homes.
- Smart water initiatives including stormwater retention, bore water irrigation and water efficient appliances in each home.
- Fibre-to-the-Premises internet connectivity.
- Australia's first community energy storage trial. More than 50 homes connected virtually to innovative solar energy storage to reduce peak electricity demand.
- A comprehensive education program providing energy, water and waste management tips.
- Connections to a regional town centre and transport links.
- Extensive park and shared trail networks (all homes are less than 200m from a park).
- Sprout Hub community facilities supporting micro and start up businesses.

LOCATION

Alkimos, Western Australia



HOW IS THIS RELEVANT TO TOOLERN?

- Demonstrates the benefits of a full 'masterplan' approach to the new communities model.
- Includes examples of both 'hard infrastructure' (designed places, streets etc) and also 'soft infrastructure' (incentives and community strategies) that will be needed for Toolern.
- Indicates the benefits of early delivery and staging of community infrastructure

WHY IS THIS INTERESTING?

Alkimos is the current industry leader as the first 6-star green star - Communities rating and provides an element of best practice for Toolern. It also demonstrates the trialling of technologies and initiatives.

CASE STUDY - SUSTAINABILITY AURA, CALOUNDRA SOUTH

OVERVIEW

A masterplanned community awarded GBCA's 6 Star Green Star – Communities, anticipated to provide homes for over 50,000 people.

KEY FEATURES

- 700 hectares of former pine plantation to be rehabilitated and designated as a conservation area.
- New habitats for rare and endangered flora and fauna species created.
- Installation of the most advanced water reticulation, filtration, storage and treatment system ever installed in any Australian community
- Annual environmental reporting.
- Establishment of an environmental education facility and sustainability awareness programs
- A dedicated Caloundra South economic development strategy aimed at creating 19,500 direct jobs and long-term local employment opportunities.
- Business innovation and incubator hubs.
- All homes will be close to parks and a maximum of one kilometre away from community vegetable gardens.

LOCATION

Caloundra South, Sunshine Coast,



'Aura is the largest mixed-use development ever undertaken under single ownership in Australia'



HOW IS THIS RELEVANT TO TOOLERN?

- Demonstrates the benefits of retention and celebration of natural elements of the precinct.
- The economic development strategy, developed in conjunction with the physical masterplan, could be a useful learning model for the Toolern precinct.
- Builds upon the concept of business and incubator hub already 'seeded' at Toolern via the Western BACE.

WHY IS THIS INTERESTING?

It will regenerate 700 ha of former pine forest and include a highly advanced water reticulation and treatment system

CASE STUDY - SUSTAINABILITY BOWDEN, SOUTH AUSTRALIA

OVERVIEW

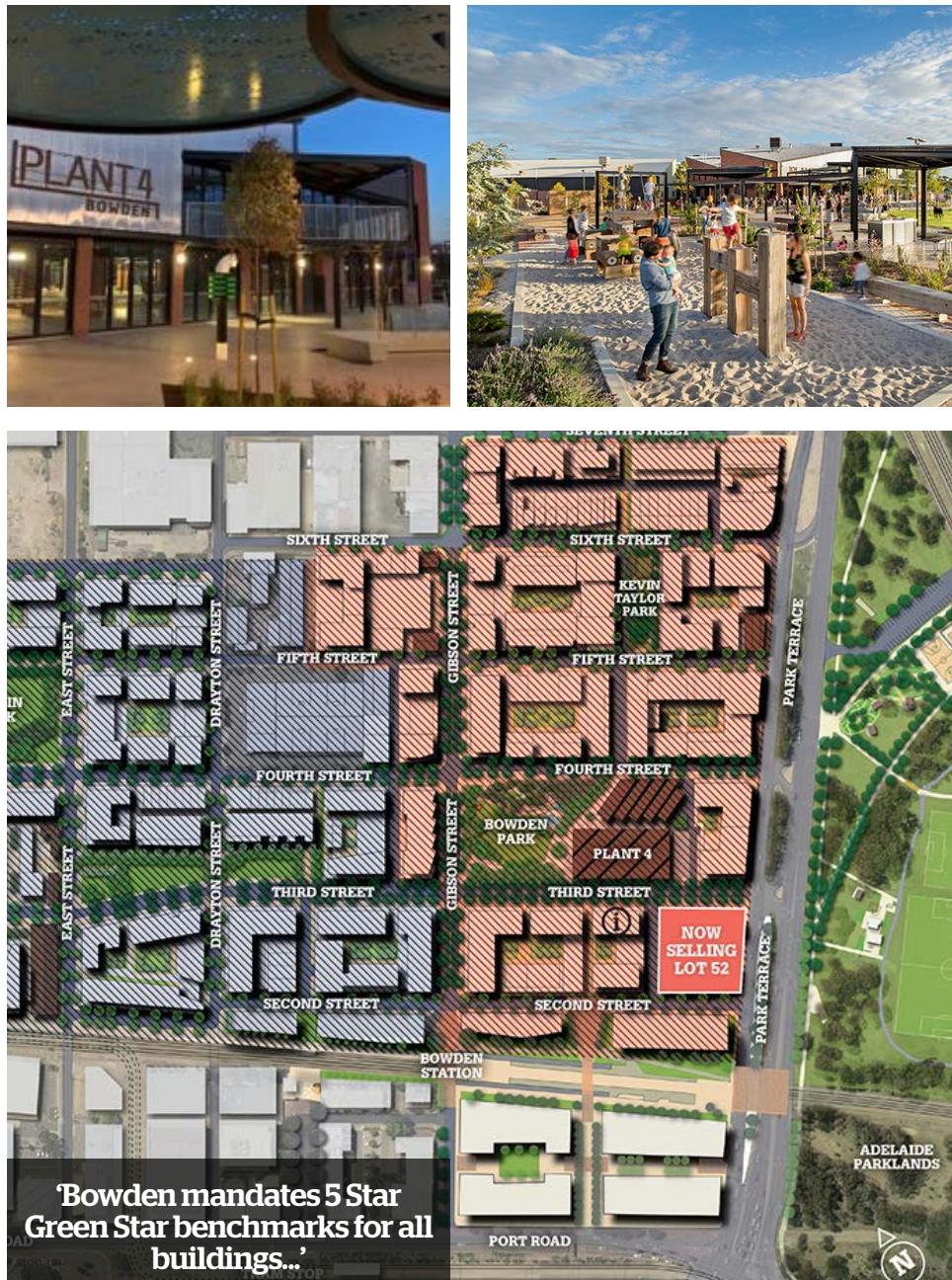
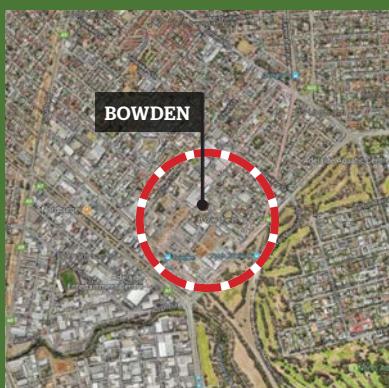
A 16.3 hectare and 6 Star Green Star – Communities, urban renewal project located on the western edge of Adelaide City Parklands.

KEY FEATURES

- All buildings at Bowden must meet 5 Star Green Star 'Australian Excellence' sustainability benchmarks.
- Highest concentration of Green Star homes in Australia.
- First terraces in Australia to receive a 5 Star Green Star rating.
- A transport and parking strategy that reduces the number of parking spaces allocated and encourages the use of public transport and alternatives to single car commuting.
- A state-of-the-art gym, cafes and restaurants, a pub, deli and a vintage shop.
- An artist-run, not-for-profit space for locals working in the arts.
- A photographic studio, art gallery and co-working space.
- A dance studio runs and a cyclists' collective.
- An Organic and Sustainable market on Sundays.

LOCATION

Bowden, Adelaide, South Australia



HOW IS THIS RELEVANT TO TOOLERN?

- Demonstrates the benefits of density when applied to a 'town centre' and transit oriented hub - with application around the Toolern Train Station.
- Includes examples of both 'hard infrastructure' (designed places, streets etc) and also 'soft infrastructure' (incentives and community strategies) that will be needed for Toolern.

WHY IS THIS INTERESTING?

It has the highest concentration of green star homes in Australia, with a selection of interesting medium density housing typologies being delivered in a highly price-sensitive market.

CASE STUDY - SUSTAINABILITY ECCO RIPLEY, QUEENSLAND

OVERVIEW

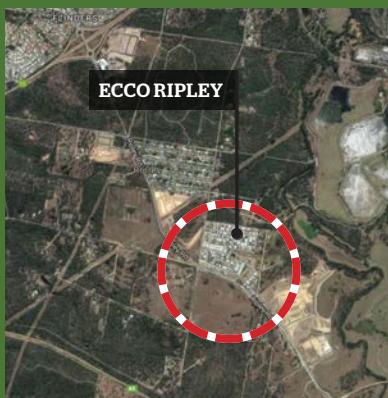
A masterplanned community awarded a 5 Star Green-Star Community rating from the Green Building Council of Australia.

KEY FEATURES

- Fibre optic cabling to all homes.
- Over 12,000 jobs expected to be created over the life of the project.
- 25% of housing will be affordable for first home buyers and key workers, 10% allocated for accessible housing and 5% for social housing.
- Development of an arts and culture program.
- Development of a 25-hectare Town Centre for Ripley Valley.
- Over 6 hectares of recreation parks and gardens.
- Every home within 400m of green open space.
- Large scale tree planting.
- An active transport plan, involving buses, on and off-road cycling, and pedestrian footpaths.

LOCATION

Ripley Valley, Ipswich, Queensland



HOW IS THIS RELEVANT TO TOOLERN?

- Demonstrates the benefits of a full 'masterplan' approach to the new communities model.
- A precinct-wide model of successful open space network benefiting both residential and employment areas.

WHY IS THIS INTERESTING?

It has an emphasis on affordable housing for first home buyers while still achieving environmental excellence

CASE STUDY - SUSTAINABILITY BARANGAROO SOUTH, NEW SOUTH WALES

OVERVIEW

Barangaroo South is a 22ha urban renewal project located in Sydney. It will provide homes to around 1,500 residents and office space for 23,000 workers.

KEY FEATURES

- Over 50% of the site will be allocated to open public space.
- 100% of the waterfront will be publicly accessible.
- Aims to become Australia's first large scale carbon neutral community.
- One of only 17 projects globally to be part of the C40 Cities-Clinton Climate Initiative's Climate Positive Development Program.
- Capable of being water positive.
- On-site blackwater treatment plant capable of supplying one million litres of recycled water a day to the precinct and surrounding suburbs.
- Rainwater collection in each commercial tower.
- 6,000 square metres of solar panels on site.
- Energy education programs.
- Targeting zero net waste to landfill by 2020.
- Investigating on site energy generation including co-generation and tri-generation.

LOCATION

Sydney, New South Wales



BARANGAROO



'...what a sustainable city looks like...'

HOW IS THIS RELEVANT TO TOOLERN?

- Demonstrates the benefits of significant public space investment, albeit in a distinctly different setting.
- Application of a strong governance and advocacy regime to deliver strong public realm outcomes, which could provide attractors for retail, commercial and civic tenancies and uses within the core of Toolern.

WHY IS THIS INTERESTING?

More than 50% of the 22 ha site (accommodating 1500 residents and 23000 workers) will be dedicated to open space

CASE STUDY - INTERFACES ARTERIAL / FREEWAY INTERFACES

SIDE AND REAR FACING LOTS

EXAMPLE:

M1 PORT MELBOURNE, VICTORIA

- Industrial built form back onto and sides directly onto adjacent arterial road.
- No screening is provided.

LOCATION



POSITIVES

- Freeway / arterial width is minimised (i.e not expanded by additional roads and service roads adjacent).
- Side / rear fences or buildings define the edge of the public and private realm.
- Efficient use of space.

NEGATIVES

- Fencing / building dominant in the streetscape.
- Dense landscape planting could provide privacy and a green edge to the street but would require additional space.
- Adjacent building may require noise attenuation (a cost for builders).

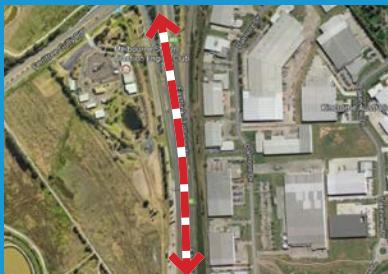
REAR / SIDE FACING WITH PLANTED BUFFER

EXAMPLE:

EASTLINK, SCORSEBY, VICTORIA

- Mounding and dense vegetation screens adjacent uses from arterial road.
- Space required for planting / mounding approximately 35m wide.

LOCATION



POSITIVES

- Freeway / arterial width is minimised (i.e not expanded by additional roads and service roads adjacent).
- Landscaping defines the edge of the public and private realm and screens adjacent uses.
- Landscaping enhances of freeway / arterial appearance.

NEGATIVES

- Additional space required for landscaping.
- Dense landscape planting and / or mounding / sound wall is required to provide adequate screening.
- Maintenance required for landscaping.

CASE STUDY - INTERFACES ARTERIAL / FREEWAY INTERFACES

OPEN SPACE / LINEAR TRAIL

EXAMPLE: EASTLINK, NOBLE PARK, VICTORIA

- Open space provided as interface between arterial road and industrial uses.
- Open space approximately 100-160m wide and includes a wetland / drain and trails.

LOCATION



POSITIVES

- Landscaping defines the edge of the public and private realm and screens adjacent uses.
- Landscaping enhances of freeway / arterial appearance.
- Provides opportunity for safe cycle and pedestrian access adjacent.
- Potential to collect and treat stormwater runoff from road network.

NEGATIVES

- Additional space required for landscaping / linear reserve (and possibly to provide separation between cyclists and pedestrians and passing cars).
- Maintenance required for landscaping.
- Limited passive surveillance for adjacent open space given grade separation and industrial uses backing on.

INTERNAL STREET ADDRESS

EXAMPLE: WESTERN HIGHWAY, BURNSIDE, VICTORIA

- Industrial uses address arterial road.
- Internal service road provides access to industrial uses.

LOCATION



POSITIVES

- Adjacent uses address and provide surveillance of arterial / freeway.
- Less likely to see 'back of house' uses than if lots were backing on.
- Exposure for adjacent uses i.e. employment uses.

NEGATIVES

- Overall streetscape width expanded by roads, service roads and car parking adjacent - effective width up to 80m wide.
- Streetscape dominated by asphalt however additional landscaping could provide some relief and enhance the appearance of the freeway / arterial.
- Signage associated with adjacent uses may visually clutter streetscape.
- Maintenance required for landscaping.

CASE STUDY - INTERFACES ARTERIAL / FREEWAY INTERFACES

BUILT FORM

EXAMPLE:

WESTERN RING ROAD, SUNSHINE WEST, VICTORIA

- Industrial built form back onto and sides directly onto adjacent arterial road.
- Landscape screening provided.

LOCATION



POSITIVES

- Built form screens adjacent uses.
- Materials used creatively provide visual interest and contribute to a sense of identity for the arterial road.
- Freeway / arterial width is minimised (i.e not expanded by additional roads and service roads adjacent).

NEGATIVES

- Potential overshadowing of adjacent uses.
- Cooperation and subsequent maintenance and management of buildings is dependant on individual landowners.
- Potential amenity issues for building i.e. solar access and noise.

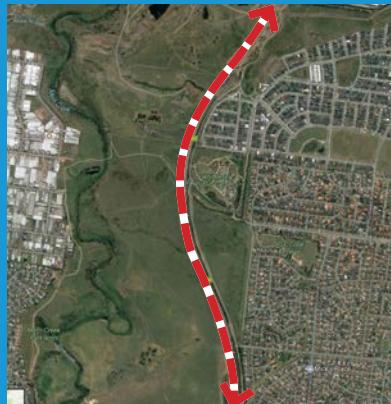
SOUND WALL

EXAMPLE:

CRAIGIEBURN BYPASS, CRAIGIEBURN, VICTORIA

- Sound wall screens adjacent uses.
- Sound wall incorporates landscaping, lighting to provide visual interest and create a sense of identity.

LOCATION



POSITIVES

- Sound wall screens and provides noise attenuation for adjacent uses.
- Sculpture, lighting and artwork incorporated into design create a sense of identity for the arterial road and provides a landmark for passers by.
- Minimal space required for sound wall itself (additional required for landscaping etc)
- Freeway / arterial width is minimised (i.e not expanded by additional roads and service roads adjacent).

NEGATIVES

- Potential overshadowing of adjacent uses.
- Access required for maintenance.

CASE STUDY - INTERFACES INDUSTRIAL / RESIDENTIAL INTERFACES

BUILT FORM

EXAMPLE:

WAVERLEY PARK, MULGRAVE, VICTORIA

- Housing is 2 storeys and indicatively 12m deep and 8-12.5m wide.
- Private open space is provided in the front setback. High solid fence screens front setback open space.
- Single garage product only.

LOCATION



POSITIVES

- Compact housing solution.
- Built form screens adjacent uses.

NEGATIVES

- High solid fence appears dominant in streetscape.
- Example is a single garage product only.
- Unique building product i.e. not available to all builders.

BUILT FORM

EXAMPLE:

METRO 3175 (FORMER DANDENONG SALE YARDS), DANDENONG SOUTH, VICTORIA

- Housing is 1-2 storeys and indicatively 28m deep and 9 - 12m wide.
- Private open space is provided in side setback.
- Industrial setback to avoid overshadowing of residential.

LOCATION



POSITIVES

- Compact housing solution.
- Built form screens adjacent uses.
- Streetscape appears residential (i.e. industrial is obscured).

NEGATIVES

- Unique building product i.e. not available to all builders.

CASE STUDY - INTERFACES INDUSTRIAL / RESIDENTIAL INTERFACES

OPEN SPACE / LINEAR TRAIL

EXAMPLE:

FEDERATION TRAIL, TRUGANINA, VICTORIA

- Linear trail approximately 80-100m wide provides interface.
- Includes federation trial (a shared path that follows the heritage listed Main Outfall Sewer alignment).
- Residential uses address trail.

LOCATION



POSITIVES

- Open space / linear trial provides separation between industrial uses and residential uses - distance may mitigate amenity issues.
- Residential uses provide passive surveillance along north edge.
- Linear trail provides shared path connections (multi functional).

NEGATIVES

- Passive surveillance along southern edge is limited - industrial buildings back onto linear trail.
- Open space / linear trial requires maintenance.

ROAD

EXAMPLE:

MIDDLEBOROUGH ROAD, BOX HILL, VICTORIA

- 4 lane arterial road separates industrial / bulky goods and residential uses.
- Road includes street tree planting, naturestrip and footpath access.

LOCATION



POSITIVES

- Road provides separation between industrial uses and residential uses.
- Road is activated at all times of the day, by uses either side.

NEGATIVES

- Potential amenity issues for residential uses i.e. noise and safety relating to passing trucks.
- Some residential homes have high solid fencing which appears dominant within the streetscape. This may be in response to both the road and adjacent uses.

CASE STUDY - INTERFACES INDUSTRIAL / RESIDENTIAL INTERFACES

TRANSITIONAL USES

EXAMPLE:

HANSEN PARK, FOOTSCRAY, VICTORIA

- Active open space reserve provides separation between residential and industrial uses.
- Some direct interface issues.
- Road also provided to edge of park on residential side.

LOCATION



POSITIVES

- Open space provides separation between industrial uses and residential uses - distance may mitigate amenity issues.
- Residential uses provide passive surveillance to adjacent open space.
- Other appropriate uses may include office, retail and community uses.

NEGATIVES

- Passive surveillance along industrial interface is limited given industrial buildings back on.
- Open space / linear trail requires maintenance.

REAR / SIDE FACING LOTS

EXAMPLE:

BOUNDARY ROAD, BRAESIDE, VICTORIA

- Conventional housing provided, backing onto industrial uses.
- Industrial built form backs onto residential uses.

LOCATION



POSITIVES

- Allows for conventional housing to be provided adjacent.
- Built form screens adjacent uses from the street.

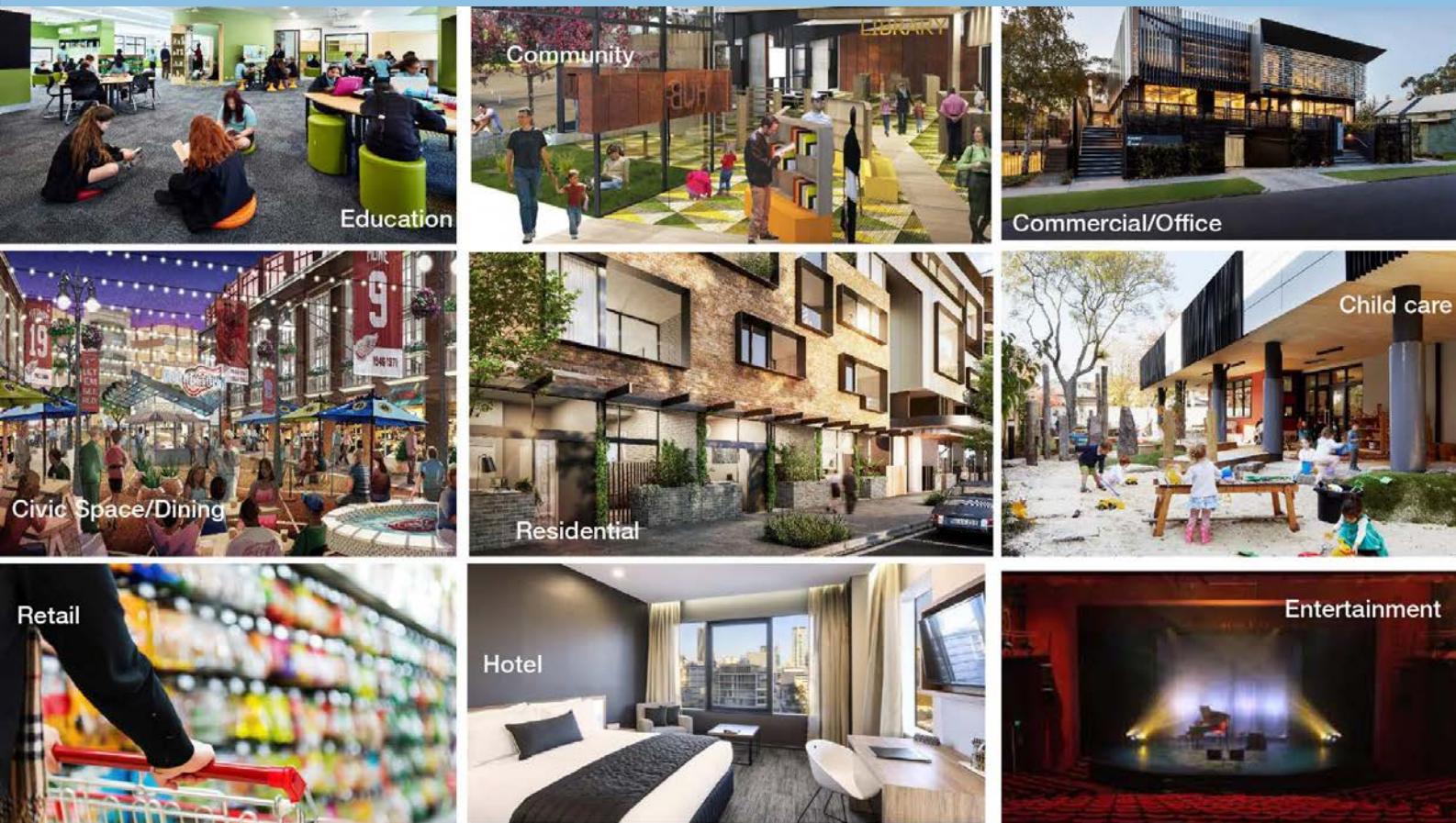
NEGATIVES

- May be potential amenity issues for residential uses i.e. overshadowing, noise, air pollution associated with uses etc.
- Some industrial buildings are visible between residential built form.

CASE STUDY TRENDS IN TOWN CENTRES

Create an integrated mix of uses

the longer people stay, the higher average spending patterns are



CASE STUDY TRENDS IN TOWN CENTRES

1 Create an integrated mix of uses



SOHO Village, Point Cook

A focus on
food-based retail

Millennials are driving changes in the country's eating behaviours with their approach to food choice and preparation

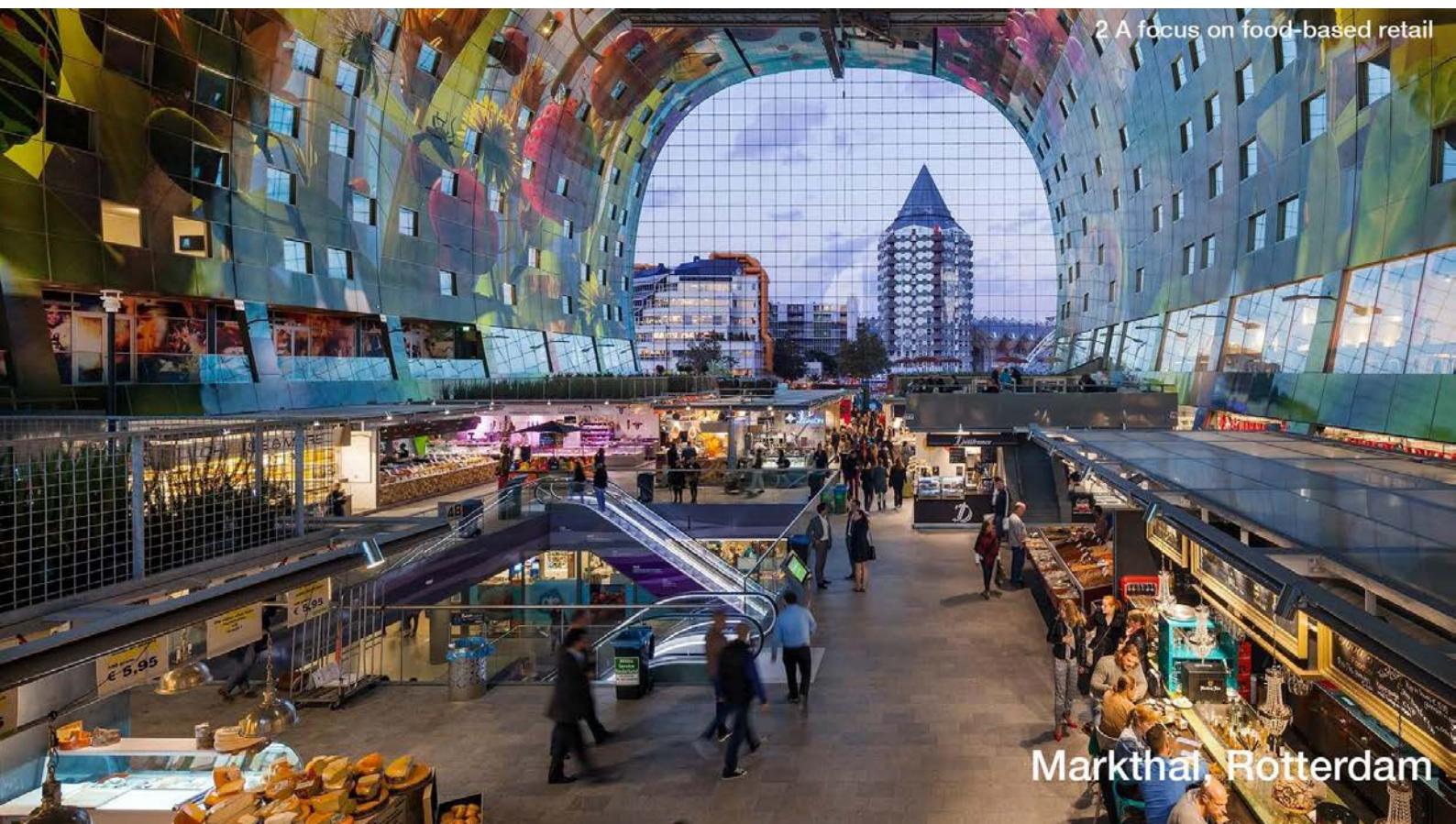


CASE STUDY

TRENDS IN TOWN CENTRES



CASE STUDY TRENDS IN TOWN CENTRES



CASE STUDY TRENDS IN TOWN CENTRES

A local gathering place



Tactical urbanism



Places for activities



Focus on community



The third place



3 Place-making for people

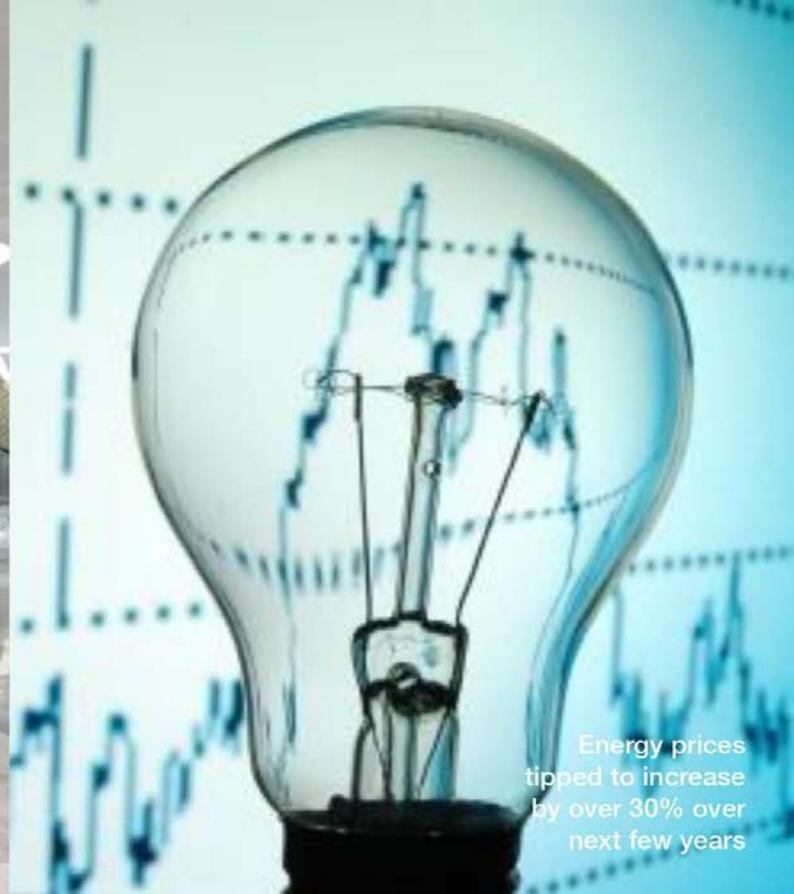
Gap Filler, Christchurch



CASE STUDY TRENDS IN TOWN CENTRES

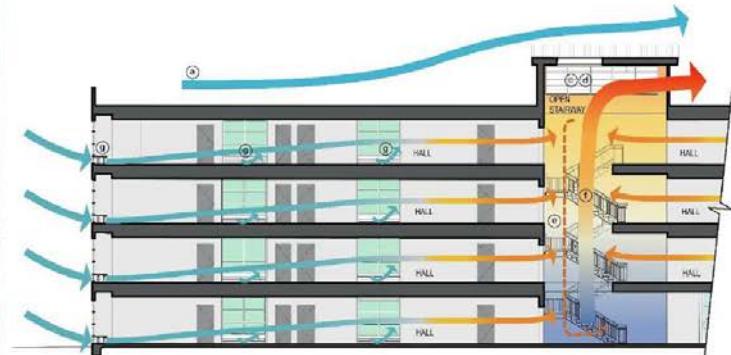


Electricity is the largest ongoing cost for shopping centres

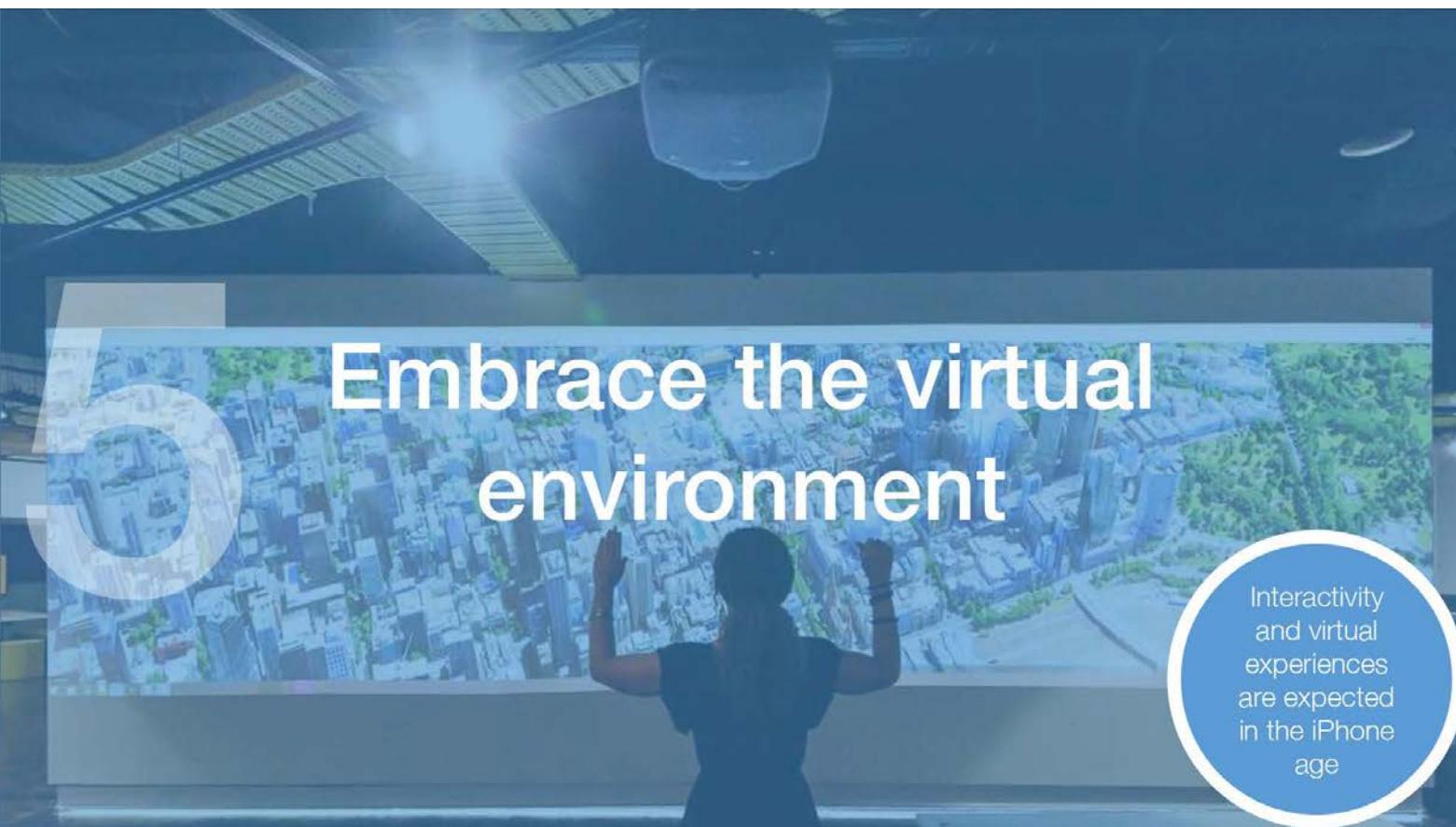


Energy prices tipped to increase by over 30% over next few years

CASE STUDY TRENDS IN TOWN CENTRES



CASE STUDY
TRENDS IN TOWN CENTRES



Interactivity and virtual experiences are expected in the iPhone age

5 Embrace the virtual environment



Foy's Arcade
(ISPT Experience Centre)
Melbourne

CASE STUDY
TRENDS IN TOWN CENTRES

the most important
trend...



...consumers want
a retail experience

CASE STUDY
TRENDS IN TOWN CENTRES



115 Sackville Street
Collingwood Victoria
www.chc.com.au
(03) 9419 4340

APPENDIX 2: TOWN CENTRE REVISED STRUCTURE

2012 Toolern Town Centre UDF

Document Structure Review

Suggested Changes & Proposed Table of Contents

October 8th, 2017 DRAFT only

1.0 Introduction

Proposed Changes:

- Separate the explanation of purpose of document and structure of document. Include a 'how-to-use' guide
- Make Vision succinct & 'punchy'
- Replace existing 5 primary objectives (page 6) and develop a new set of principles centred on 7 organisational components (which will stem from the 12 themes currently located on page 7 of UDF)
- Remove current section 1.3 Context & Organising elements & add into an appendix
- Remove current section 1.4 Issues & Opportunities & add into an appendix

- 1.1 Purpose of Document
- 1.2 Structure of Document
- 1.3 Vision
- 1.4 Strategic Principles (will fall under 7 organisational categories)
 - Urban Structure
 - Land Use
 - Connectivity
 - Amenity
 - Public Realm & Community
 - Built Form, Massing & Density
 - Sustainability & Landscape
 - Implementation

(Placeholder only - final principle categories to be reviewed with Council)

2.0 Urban Design Framework

Proposed Changes:

- Remove Development Quadrant information from this chapter completely
- Avoid repetition
- Simplify legends (fewer categories)
- Ensure that nomenclature is identical throughout on diagrams and in text

- 2.1 Framework Plan and Urban Structure

2.2 Land Use

2.3 Movement & Access

- Vehicles
- Pedestrians & cyclists
- Typical street sections
- Car Parking
- Public Transport

2.4 Public Realm & Community

- Parks & squares
- Pedestrian focused streets
- Community amenities
- Important public realm sections

2.5 Built Form, Massing & Density

2.6 Sustainability & Landscape

3.0 Design Guidelines

Proposed Changes:

- *Design Guidelines will go to a quadrant level, but will not include sub-precincts*
- *Succinct explanations of each quadrant with most information going into requirements & recommendations*
- *Remove objectives and focus instead on applicable area, requirements and recommendations*
- *All guidelines will be organised into Requirements 'Must' & Recommendations 'Should'*

3.1 Toolern Central

- Structure & function (includes diagram)
- Requirements
- Recommendations

3.2 Toolern West

- Structure & function (include diagram)
- Requirements
- Recommendations

3.3 Toolern North-West

- Structure & function (includes diagram)
- Requirements
- Recommendations

3.4 Toolern North

- Structure & function (includes diagram)
- Requirements
- Recommendations

Design Guidelines will fall under the following categories and which will be numbered consistently throughout design guidelines. Categories may be tweaked to simplify.

1 Public Realm & Community

- 1.1 Public Spaces & Pedestrian Connections
- 1.2 Public Realm Character
- 1.3 Laneways
- 1.4 Street Life
- 1.5 Safety & Security
- 1.6 Landscape & WSUD

2 Built Form & Massing

- 2.1 Building Activities
- 2.2 Facades
- 2.3 Roof Forms
- 2.4 Colours, Materials & Finishes
- 2.5 Setbacks
- 2.6 Signage & Advertising
- 2.7 Energy Efficient Building Design
- 2.8 Water Management
- 2.9 Weather Protection

3 Movement & Access

- 3.1 Pedestrian & Cycle
- 3.2 Public Transport
- 3.3 Vehicles

4.0 Implementation & Staging

Proposed Changes:

- Remove all precedent imagery from this chapter
- Simplify

- 4.1 Indicative staging strategy
- 4.2 Key development drivers & dependencies
- 4.3 Stages
- 4.4 Development Land Contributions
- 4.5 Community Spaces

APPENDIX 3: MOVEMENT & TRANSPORT TECHNICAL REPORT

APPENDIX 4: ECONOMIC TECHNICAL REPORT
