Refers to Item 6.5
Council meeting
27 November 2017

APPENDIX A

KNOX LAND FOR BUSINESS

BACKGROUND REPORT

KNOX CITY COUNCIL

DECEMBER 2016

AUTHORS

Urban Enterprise:

Paul Shipp, Chris Funtera, Kurt Ainsaar, Jojo Chen, Brett Hannah

Remplan:

Matthew Nichol, Nick Byrne

URBAN ENTERPRISE

URBAN PLANNING LAND ECONOMICS TOURISM PLANNING INDUSTRY SOFTWARE

389 ST GEORGES RD, FITZROY NORTH, VIC 3068| PH: (03) 9482 3888

www.urbanenterprise.com.au

FILENAME: Knox Land for Business –Background Report

VERSION: 4

CONTENTS

FIGURES

TABLES

ACRONYMS

The following acronyms are used for industry sectors:

AFF – Agriculture, Forestry and Fishing

MI – Mining

MA – Manufacturing

EGWWS – Electricity, Gas Water and Waste Services

C - Construction

WT – Wholesale Trade

RT – Retail Trade

AFS – Accommodation and Food Services

TPW – Transport, Postal and Warehousing

IMT – Information, Media and Telecommunications

FIS – Financial and Insurance Services

RHRES – Rental, Hiring and Real Estate Services

PSTS – Professional, Scientific and Technical Services

ASS – Administrative and Support Services

PAS – Public Administration and Safety

ET – Education and Training

HCSA – Health Care and Social Assistance

ARS – Arts and Recreation Services

OS – Other Services

1. PROJECT BACKGROUND

1.1. INTRODUCTION

Knox City Council engaged Urban Enterprise in 2016 to prepare a *Land for Business Strategic Review and Future Directions Plan* for the municipality.

The aim of this project is to respond to Council's vision for a 'prosperous, advancing economy', to ensure that Knox has an appropriate supply of business land into the future, and that is suitable to meet current and future needs of the community.

This report is a Background Report outlining relevant strategies and economic and spatial analysis to underpin the Future Directions Plan to follow.

1.2. AIMS & OBJECTIVES

The Knox Land for Business project involves a strategic review of existing economic conditions, understanding existing and future drivers of change, trends and projections, and an analysis of evidence for employment and business land use. This is an important component to understanding the current and potential performance of the Knox economy. Specifically, the project will deliver:

- An assessment of all Knox business land, planning policy and controls;
- Strategic direction on land supply and how to ensure land adequately meets current and future needs in the short (1-5 years), medium (6-10 years) and long (10-20 years) term; and
- Directions on preferred land use typology/focus for the different business land areas as appropriate.

This Background Report assesses relevant strategies and provide economic and spatial analysis to underpin the Future Directions Plan.

1.3. SCOPE

This project considers demand and supply factors for land in planning zones that support business uses. The business zones currently applied in the City of Knox include:

- Industrial 1 Zone (IN1Z);
- Commercial 1 Zone (C1Z);
- Commercial 2 Zone (C2Z); and
- Mixed Use Zone (MUZ).

Other specialised zones are also applied to support specific sites and employment uses, including the Special Use Zone (SUZ) and the Priority Development Zone (PDZ). Public Use Zones are also included in this analysis for context. For example, PUZ3 provides relevance for Hospitals.

As part of the Strategic Review, a buffer area of 100m around all business zones was also reviewed in order to identify business uses in non-business zones.

1.4. REPORT SECTIONS

The methodology of the background report includes the following:

- Project background;
- Economic and strategic context;
- Land for Business Assessment Area analysis
- Employment Assessment Area and Activity Centre analysis;
- Employment and retail projections;
- Knox Planning Scheme; and
- Issues and opportunities.

The background report is underpinned by two technical reports:

- Technical Report A – Employment Forecasts to 2036, prepared by Remplan; and
- Technical Report B – Land for Business Assessment Areas – Employment Land and Activity Centres, prepared by Urban Enterprise.

1.5. CONTEXT

The Knox municipality is located approximately 25 kilometres east of Melbourne's CBD and is generally bound by Dandenong Creek to the north, Dandenong Creek and adjacent parklands to the west, the Dandenong Ranges to the east and Churchill National Park and low density land uses to the south.

Knox is an established urban municipality renowned for its residential lifestyle, employment opportunities and social and recreational attributes. The municipality covers an area of 114 square kilometres and contains the suburbs of Bayswater, Boronia, Ferntree Gully, Knoxfield, Lysterfield (part of), Sassafras (part of), Scoresby, The Basin, Upper Ferntree gully, Wantirna and Wantirna South.

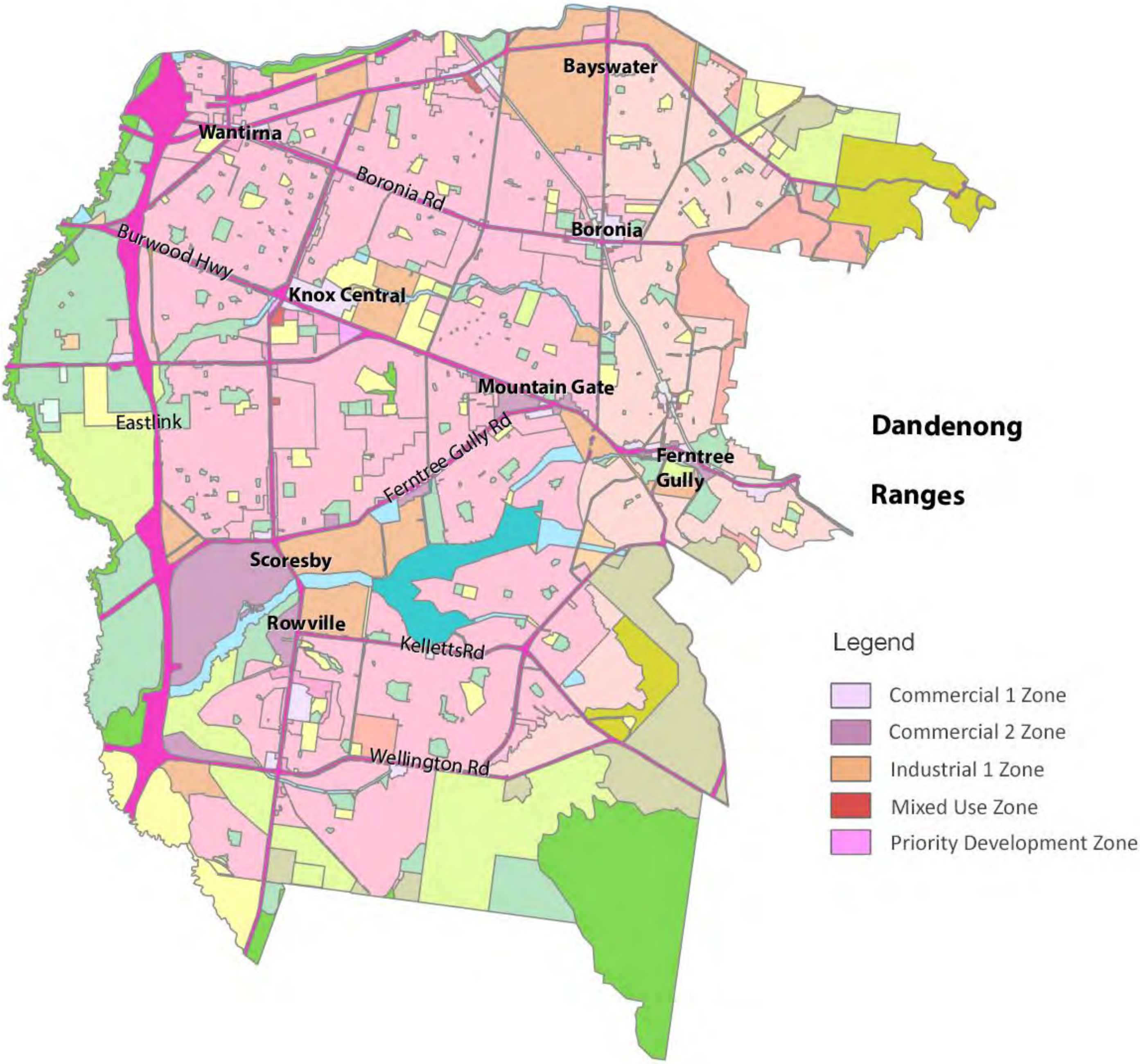
Knox is easily accessible by road with direct access via EastLink, as well as connections to the Monash Freeway via Ferntree Gully Road. The municipality includes a series of arterial roads which connect residents and outside labour to major employment land areas, Activity Centres and adjoining Local Government Areas.

The estimated resident population in Knox as at June 30, 2015 is 155,681.

There is an estimated 55,800 jobs in Knox as at 2011, principally employed by 5,700 registered businesses.

Figure 1 shows an overview of the municipality. There are considerable concentrations of business land in Bayswater, Scoresby, Rowville and Knoxfield, as well as a network of Activity Centres. Further details on planning zones and employment assessment areas are provided in the following sections.

FIGURE 1 BUSINESS LAND



Source: Urban Enterprise 2016

2. ECONOMIC AND STRATEGIC CONTEXT

2.1. INTRODUCTION

This section provides an overview of the Knox economy in terms of its role in Melbourne's east and the state of Victoria, as well as a providing insight into Knox's economic future. Key industry sectors from an employment, economic output and export perspective are discussed.

This section also provides a review of economic strategies and research previously prepared. It does this by highlighting the most relevant studies, strategies and research and outlines the key points or directions relevant to Knox's Land for Business Project.

2.2. ECONOMIC CONTEXT

The Knox Gross Regional Product (GRP) reached a ten year high of $8.08 billion in 2015/16. The increase in GRP is a result of an increase in economic output from industry sectors such as Rental, Hiring and Real Estate Services, Construction, Health Care and Professional, Scientific and Technical Services.

Economic output increased by 2.5% from 2011 to 2016 and is estimated at $20.1 billion. Although Knox is undergoing a transition in its local economy, economic activity remains strong with significant output from manufacturing and wholesale activities.

Manufacturing and Wholesale Trade are responsible for the majority of exports of goods and services. Manufacturing accounts for 75% of total exports. Manufacturing is undergoing a transition from larger format, traditional manufacturing to more of a mix with more technical, advanced forms of manufacturing.

97% of Knox businesses employ less than 20 people. The total number of businesses in Knox declined by 2% from 2012 to 2015. 71% of jobs are attributable to the six industry sectors of Manufacturing, Retail trade, Wholesale Trade, Health Care, Construction and Education. However, Construction, Professional, Scientific and Technical Services and Rental, Hiring and Retail Services account for 43% of all businesses.

Between 2013 and 2014, the resident workforce unemployment rate increased from 4% to 5.7%. Since then, the unemployment rate has been declining and as at December 2015 was 4.7%. Knox has a highly skilled workforce with 55% of the working population considered in this category. High skilled workers are categorised based on satisfaction of criteria including graduate/post graduate qualifications, above average individual weekly income and high tertiary attainment rates. The workforce is also ageing with 42.8% of the workforce over 45 years of age. This aligns with the highly skilled nature of resident workforce across the Melbourne East region, which is "Australia's most qualified workforce".[1]

37% of employment is occupied by local residents and a further 43% of local jobs are occupied by the surrounding areas of Yarra Ranges, Maroondah, Casey, Whitehorse, Monash and Greater Dandenong.

Key economic indicators suggest that the Knox economy, while principally a production and processing based economy, now includes a knowledge based economy. Manufacturing remains a key industry in terms of employment and economic output to the local economy, however, the development of other industries is diversifying the local economy.

The Knox workforce operates across a diverse range of industry sectors. In employment terms, the dominant sector is Manufacturing, which provides 23% of Knox jobs, (down from more than 24% in 2011), followed by Retail Trade 13%, (down from 14% in 2011). Wholesale Trade, (currently at 11% from 12% in 2011), and Construction 7%.

[1] Melbourne East 2020 Prospectus, Regional Development Australia 2016

In the 'knowledge' sectors, Health Care and Social Assistance, (up to 11% from 9%), Education and Training, (6% up from 5%), and Professional, Scientific and Technical Services, (6% up from 4%) are showing minor growth and suggesting some adjustment in the Knox economic structure towards more knowledge based activity.

The transition and diversification of the Knox economy and the growth of knowledge based industries such as Health Care, Professional, Scientific and Technical Services, Financial and Insurance Services and Education suggests that a greater provision of suitably zoned land will be required to satisfy and further encourage growth in these sectors into the future.

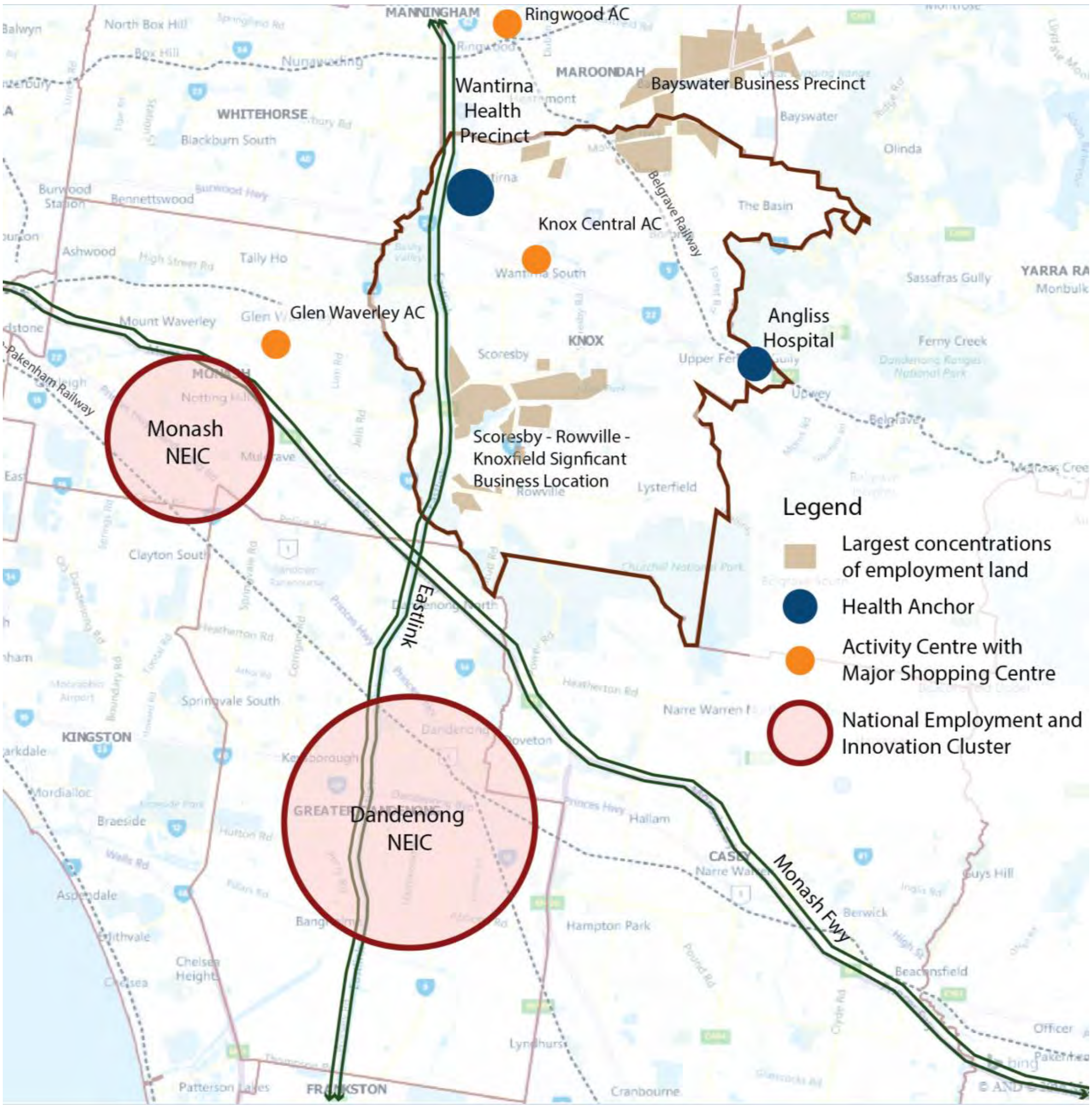
Knox's economy incorporates a diverse range of industry sectors. Recommendations for Knox's future provision and availability of business land must consider the key drivers of change such as population and employment growth, desirability to work locally and the local economic outlook. Potential drivers of change are discussed further throughout this report.

MAJOR ECONOMIC INFRASTRUCTURE

A range of major economic infrastructure assets are located within and near the City of Knox, including universities (Monash Clayton, Swinburne, Wantirna South), hospitals (Knox Private, Wantirna Health, Angliss), major shopping centres (Knox Central, Ringwood, Glen Waverley), freeways (Eastlink M3, Eastern Freeway M3, Monash Freeway M1) and nationally significant employment clusters (Monash National Employment Cluster and Dandenong South National Employment Cluster), and Bayswater Business Precinct and Scoresby Rowville Employment Precinct).

The location of these major assets are shown in Figure 2, and provide a range of opportunities to residents and businesses within Knox and the regional labour market.

FIGURE 2 MAJOR ECONOMIC ASSETS, KNOX AND SURROUNDS



Source: Urban Enterprise 2016

2.3. VICTORIA AND METROPOLITAN MELBOURNE

PLAN MELBOURNE / PLAN MELBOURNE (REFRESH)

Plan Melbourne (2014) is the long term plan for metropolitan Melbourne designed to guide Melbourne's housing, commercial and industrial development through to 2050. Plan Melbourne considers that Victoria's economy is in a state of transition and is constantly evolving. This is also the case in Knox, whereby key economic indicators suggest that the local economy is diversifying and transitioning.

The plan notes that Melbourne's economy has changed significantly in the last 20 years. Globalisation, the growth in Asia's wealth, technological advances and population ageing are just some of the drivers of change. Business services (such as the industry sectors of professional services and finance) are generating a greater share of employment and economic output than they did in the past. Business services and population-related services (such as healthcare and education) are growing in their employment share. Employment in education has increased 44% in the last 10 years and manufacturing continues to play a significant part in the economy but plays a smaller role in employment, due to globalisation and technological changes.

Plan Melbourne projects that over the next 30 years, the following industry sectors will account for approximately 50 per cent of metropolitan Melbourne's employment growth:

- Health Care and Social Assistance;
- Professional, Scientific and Technical Services; and
- Financial and Insurance Services.

Within Knox, Wantirna Hospitals Assessment Area is identified as a place of state significance and the Scoresby / Rowville and Bayswater Employment Assessment Areas as investment and employment opportunities.

Plan Melbourne proposes that Melbourne's productive employment centres will be located around an enhanced transport network, however it is noted that the City of Knox does not have a particularly high quality public transport network. Major infrastructure projects to underpin and link economic precincts include:

- The Port of Hastings;
- The East West Link and the North East Link;
- The Melbourne Rail Link (including the Airport Rail Link);
- The CityLink-Tullamarine Freeway widening;
- The Cranbourne-Pakenham Rail Corridor Project;
- The Outer Metropolitan Ring Road (that will connect Geelong and Avalon with the Hume Freight Corridor).

The Plan Melbourne Refresh (2015) builds on the extensive work and consultation underpinning Plan Melbourne 2014. The Refresh identifies that "the economy is changing, manufacturing has been in decline and business services has grown substantially to become a large contributor to Victoria's economy. A key challenge for Plan Melbourne 2016 is to support growth and innovation."

2.4. MELBOURNE EAST

CREATING EMPLOYMENT IN MELBOURNE'S EAST / FOCUSING ON THE REGION'S CENTRES

Creating Employment in Melbourne's East (Regional Development Australia, 2012) identified education and skill strengths of the population in Melbourne's East and explored the potential synergies with Melbourne's growth industries. Key skill strengths identified for the population of Melbourne include:

- Medical professionals;
- Accountants;
- Nursing professionals;
- Aged and disabled carers;
- Civil, electrical, mechanical and production engineers; and
- Legal professionals.

MELBOURNE EAST 2020 REGIONAL INVESTMENT STRATEGY

The Melbourne East Investment Attraction Strategy (Regional Development Australia, 2015) provides strategies to grow investment in the region and, as a consequence, the number of jobs available.

Population growth is forecast to be more than 185,000 in Melbourne East, which will take the regional population to more than 1.2 million by 2031 resulting in an increase in demand for local goods and services. Melbourne East is well positioned to become a global business hub. There are a number of key factors which affirm this vision, including that Melbourne East is:

- Home to Australia's most highly qualified workforce with approximately 362,000 jobs across the region;
- Host to an existing network of over 102,000 businesses;
- Accessible by major transport networks;
- Connected to high-speed broadband internet;
- A community with above average personal and household income; and
- Exceptionally liveable.

The Strategy argues that Melbourne East has a promising economic outlook with a fast-growing economy, world-class research capabilities, and a highly qualified workforce with targeted skills in:

- Research;
- Technology;
- Education;
- Health;
- Advanced manufacturing; and
- Retail/Professional services.

The Melbourne East Investment Attraction Strategy found that the key propulsive sectors (i.e. drivers of the region's economy) are:

- Manufacturing;
- Wholesale Trade:
- Professional, Scientific and Technical Services;
- Construction; and
- Education.

All of these sectors have a significant presence in Knox, showing signs of growth in output and employment. Challenges to facilitate ongoing change and development in Manufacturing and Wholesale Trade will need to be addressed.

2.5. CITY OF KNOX MUNICIPAL PLANS AND STRATEGIES

MUNICIPAL STRATEGIC STATEMENT (MSS)

The Municipal Strategic Statement (MSS) is a concise statement of the key strategic planning, land use and development objectives for the municipality and the strategies and actions for achieving the objectives. The key influences on business and employment in the MSS relevant to this project include:

- The ability for Knox to maintain and enhance its image as a high quality, attractive business location;
- The availability of a range of industrial sites and premises for sale or lease; and
- Clear and consistent development guidelines that are not overly restrictive or prescriptive.

The key influences on business land include:

- Enhancement of assessment areas to maintain their attractiveness to business;
- Consolidation and redevelopment of underutilised sites within the Bayswater Business Precinct;
- The ongoing partnership with City of Maroondah and Yarra Ranges Shire for the future development of the Bayswater/Bayswater North Industrial area (Bayswater Business Precinct);
- The introduction of a greater mix of uses to support new employment and improved streetscapes in the Knox Central Principal Activity Centre;
- Enhanced accessibility and marketability introduced with the construction of EastLink;
- The establishment of the Scoresby-Rowville Employment Assessment Areas as an emerging Specialised Activity Centre supporting "knowledge based" industry and industry clusters;
- Establishment of a Neighbourhood Activity Centre within the Scoresby-Rowville Employment Assessment Area.
- It is an expectation of the Land for Business project that the economic development section of the MSS will be subsequently revised to reflect the land use planning directions of the final Future Directions Plan component.

KNOX CITY PLAN 2013-2017

The Knox City Plan 2013-2017 outlines the vision for the municipality over this period. The economic vision for Knox is to achieve a prosperous, advancing economy whereby innovation and creativity are valued and local employment is highly desired and encouraged. Knox strives to become a business and investment destination.

Key objectives include the:

- Transition to a more diverse economy that can thrive in national and global markets, incorporating business suitable to Knox including home-based business; and
- Develop business centres and strategic places across the City through improved linking and integration, including Scoresby/Rowville, Bayswater, Knox Central and Wantirna Hospitals Assessment Area.

KNOX INTEGRATED CITY STRATEGY 2015

The Integrated City Strategy and Implementation Plan provides strategic direction to assist Council and community partners to achieve the Vision and City Plan. Relevant strategies for this project include:

- Integrated Strategy 3 - Appropriately plan and provide guidance for land use and development by responding to changing family/living structure and other city drivers of change;

- **Integrated Strategy 10** – Improve business reach and growth into national and global markets and boost local employment by supporting the development of local businesses with a focus on Advanced Manufacturing, Health, Ageing and Business Service Sectors; and
- **Integrated Strategy 11** – Support business and employment growth by promoting the need for improved infrastructure and technology requirements within the municipality and enhancing strategic employment places for business.

KNOX ECONOMY FUTURES STUDY

The Knox Economy Futures Study (AEC Group, 2013) provided guidance for economic development, based on analysis and identification of key strengths and gaps in the market where economic development could enable future economic growth.

The Study identified key drivers of change that are likely to affect the economic landscape in Knox. Key drivers of change include:

- **Demographics** - An increasing percentage of the population are aged over 60, increasing from 1996 to 2012. A growing and moving population: the population is increasing from both increased migration and increased births. Knox's population has increased each year since 2001.
- **Urbanisation**: Knox's close geographical proximity to the city of Melbourne suggests that urban sprawl of the city could begin to effect and benefit the local community.
- **Shifting economic structure**: Key economic indicators suggests that the economy is somewhat shifting from a production and processing based economy to an experimental/knowledge based economy. manufacturing remains a key industry in terms of employment and economic output to the local economy, however, the development of other industries is diversifying the local economy.

KNOX ECONOMIC ANALYSIS AND DEVELOPMENT FRAMEWORK

The Knox Economic Analysis and Development Framework (AEC Group, 2013) provided the key background information and analysis to support Council's economic development activities.

The Framework provides future direction plans for key employment and activity centres in the municipality. The extent that these still hold true are discussed further in the following sections of this report.

Bayswater - There is limited scope for large scale new development. However, the Bayswater 2020 initiative may present opportunities for further redevelopment of older facilities on the western side of the Bayswater business area. The Development Framework discusses that "while there is limited scope for large scale new development, opportunities will exist for providing premises to smaller companies, particularly those companies that do not require large ceiling heights. Additionally, as one of the oldest industrial areas in Knox, innovative redevelopment opportunities should be explored to better utilise existing business land. The exploration and identification of large, single owner sites (or groups of sites) could potentially identify catalytic sites for redevelopment. Additionally, leveraging the presence of global companies such as Siemens and GlaxoSmithKline to create a high end technology or business park would assist in transforming Bayswater Business Area. During consultation, some companies noted increasing pressures from overseas competitors that may impair business viability. As such, Bayswater may be the ideal starting point for a redevelopment of business land across Knox."

Scoresby/Rowville - The Scoresby/Rowville Assessment Area has the largest amount of available industrial land for development within Knox. It represents the most immediate opportunities for continued economic growth. Future business and economic activity in the Scoresby/Rowville Assessment Area should aim to achieve a maximum economic contribution of land (i.e. that businesses are knowledge-based, innovative and are high value-adding). The Scoresby/Rowville Assessment Area has a significant competitive advantage as there is direct access from EastLink.

Knoxfield - Knoxfield has some remaining available greenfield sites, so Council should encourage the development of high value-adding and innovative businesses on these sites. The eastern side of the assessment area along Rushdale Road represents the more established industrial area, which is characterised by smaller lots and older facilities. Over the long term, this area (particularly the southern edge) as well as the lands adjacent to the water features and park area should be considered for redevelopment. However, given the nature of this business area, the clear focus of activities should be on future development of greenfield sites as well as ensuring existing facilities are occupied. There are other areas across Knox that should be redeveloped before Knoxfield.

Knox Central - Key future opportunities for growth exist in adding commercial development on the existing lands north of Knox City. This development would see high quality office jobs locate amongst significant amenity. The local campus of Swinburne University needs to play a key role for future development. Ensuring the campus can expand and continue to assist businesses across the City to grow will be critical.

The transition of existing industrial space along Lewis Road is unlikely in the short to medium term, given the economic viability of existing businesses and other areas providing more immediate opportunities for redevelopment. The land on the eastern side of the precinct could provide the opportunities for denser residential development or low impact industrial development. These land uses would be the most suitable in respect of the adjoining residential development to the east of the assessment area. It is noted that a Structure Plan for Knox Central is currently being prepared by Council - draft findings are referred to in Section 2.6.

Overall, the Framework found that Knox does not have an abundance of available land for future economic growth, with 9% of all available business land in Melbourne's South East. Only 40 hectares of industrial land (5% of total locally) and 54 hectares of business lands (49% of total locally) are vacant and available for greenfield development. It was recommended that Council must ensure that all available greenfield sites are utilised to their fullest potential, transition any available land to business land and consider innovative ways to redevelop existing business land.

Given that the Framework was prepared within the last 3 years, the vast majority of findings remain relevant to this study.

STATE OF KNOX REPORT

The State of Knox Report (2015) includes the following key findings and directions to achieve Council's vision for a 'prosperous, advancing economy'.

Knox exhibits sectors and firms representative of an advancing, knowledge-based economy built on the use of modern technologies:

- The local workforce operates across a diverse range of industry sectors. In the 'knowledge' sectors, Health Care and Social Assistance, Education and Training and Professional, Scientific and Technical Services are showing minor growth and suggesting some adjustment in the economic structure towards more knowledge based activity.

Knox benefits from local business, commercial and industrial hubs:

- There are a range of business, commercial and industrial hubs. The most significant of these in terms of economic contribution being the Scoresby/Rowville Employment Precinct (240 hectares of Business zoned land) and the Bayswater employment precinct (750 hectares).
- The Bayswater Employment Precinct is experiencing some transition from the more traditional forms of industry to newer and more advanced industries driven primarily by the age of the building stock, changes in technology and equipment resulting in different and more contemporary premises being necessary in some circumstances. Continued focus on assisting this traditional industry to transition to different forms of commerce, industry and business will be necessary for it to maintain its presence and contribution to the Knox economy and beyond.
- The Scoresby/Rowville Employment Precinct (SREP), is a high amenity employment precinct for production economy related activities with a primary focus on research and development, industry/technology and warehousing/distribution and office uses.

The Report notes that several businesses in the area have relocated from within the municipality or elsewhere to larger or purpose-built premises.

KNOX AT 50 REPORT

The Knox at 50 Report (2013) provided a comprehensive overview of the Knox at 50 Our City Our Future Community Engagement Project that occurred throughout 2012. The Report engaged the local community on a number of issues for the future vision for Knox. Key issues raised by the community that directly relate to 'Land for Business' include the following:

- There was a desire within the local community to live locally (live, work, play, shop). This is associated with increased resource costs, local jobs and a self-sufficient community;
- People anticipated greater flexible employment in the future including working from home, family needs, also less job security/tenure;
- There was an awareness of changes to manufacturing as the industrial base shifts over time, and the need to foster innovative industries; and
- A need for local employment was identified.

The findings of this report are important for the Land for Business study, in that there is a clear desire for jobs to be available within the local area. As the Knox population grows, a commensurate increase in local employment and business growth will be needed, and as traffic congestion increases in other areas of Melbourne, it is likely that opportunities to work closer to home in Knox will be more highly valued, especially for smaller businesses.

KNOX HOUSING STRATEGY

The Knox Housing Strategy (2015) identifies preferred locations for future housing in Knox. The Strategy recognises the need to respond to changing demographics and key driver such as population growth and changed household needs. The Strategy identified four distinct residential areas that support a scaled approach to residential development:

- Bush Suburban - Bush Suburban Areas includes two distinct areas: the Dandenong Foothills and Sites of Biological Significance. Limited and low scale residential development is anticipated in these areas in order to protect the environmental and biological qualities that make these areas distinct;
- Knox Neighbourhood Areas - Knox Neighbourhood Areas represent the majority of Knox's residential areas and have a sense of spaciousness within the public and private realm. These areas will continue to be low scale neighbourhoods, characterised by detached dwellings with large backyards which contribute to the area's green and leafy character;
- Local Living Area - Local Living Areas are focused around the larger local villages of Wantirna Mall, Studfield, Scoresby Village and Mountain Gate. These areas are within walking distance of local shops and have good access to public transport. Medium scale residential development that contributes to the green and leafy character of the area is encouraged within these areas;
- Activity Areas - Knox's Activity Centres contain a range of shops, services and employment and have good access to a range of public transport options. A greater range and increased densities of residential development are encouraged within these areas.

Strategic Investigation Sites are also identified and are generally sites that are not currently used for residential purposes, such as quarries, schools and golf courses. They are sites where the current land use is likely to change in a short to mid-term timeframe, and could be suitable for future residential development. Strategic Investigation Sites are discussed further in Section 4.

The implications of the Strategy for this study are primarily that residential development and population growth will be concentrated in the western half of the municipality and in and around activity centres. This could lead to competition between commercial and residential developers for land within activity centres, and is also likely to result in more population being readily able to access employment, retail and services in other municipalities via the Eastlink Freeway. Further, some of the Strategic Investigation Sites are likely to play a part in Knox's land requirements for Land for Business.

2.6. EXISTING STUDIES REGARDING SPECIFIC LAND FOR BUSINESS ASSESSMENT AREAS AND ACTIVITY CENTRES

KNOX CENTRAL

The Knox Central Land Use, Economic and Property Analysis (Geografia, 2015) provides an assessment of the economic, property and land use trends affecting Knox Central Activity Centre (Knox Central) and has informed the Knox Central Structure Plan which is currently underway (the Structure Plan will replace the Knox Central Urban Design Framework).

Relevant key findings include the following:

- Knox Central is one of the only substantial activity centres in metropolitan Melbourne with a large quantity of industrial land available. Knox Central has a statistically significant manufacturing and wholesaling presence, when compared to other activity centres in Melbourne's east;
- There are some existing clusters of businesses near the Lewis Road area, with differing levels of value add and industrial complexity. These include furniture and floor covering manufacturing and wholesaling; medical, scientific equipment and pharmaceutical manufacturing and laboratories; automobile repair services; and construction businesses;

  There is expected to be no growth in industrial land demand in Knox Central over the coming decades. The demand modelling suggests negative demand over the period of next twenty years. The analysis of land supply suggests there is an opportunity to intensify some of the existing industry in the Lewis Road area, however, the lack of demand suggests there is little benefit from intensification.
- Opportunities exist to build demand, through growing clusters, and focusing on higher value industries. Overall, new employment generated in strong industries will be offset by expected employment declines in other industries. Promoting business park type development that accommodates a mix of office and higher amenity manufacturing/warehousing should be considered. There are a number of large, strategic sites that could accommodate such development.

BAYSWATER INDUSTRIAL PRECINCT REVIEW (DSDBI – 2014)

The Bayswater/Bayswater North and Kilsyth Industrial Precinct stretches over three Local Government Areas including Knox, Maroondah and Yarra Ranges. This precinct is approximately 730 hectares and includes 4,500 businesses employing almost 25,500 jobs. Over 70% of the employees live within one of the three local government areas (Maroondah, Knox and Yarra Ranges). The precinct is now referred to as the Bayswater Business Precinct.

The study highlights that current trends indicate that there is likely to be a greater requirement for office content to accommodate greater level of sales and professional services (scientific, engineering and other services). However, a large proportion of the precinct is characterised by small allotments which is a constraint for development opportunities due to the highly built out nature of the precinct and fragmented ownership patterns.

BAYSWATER ACTIVITY CENTRE STRUCTURE PLAN 2020 (2005)

The Bayswater Activity Centre serves a neighbourhood shopping centre function. The activity centre is spread out with a number of vacant shops and has a relatively poor mix of businesses and the shopping centre does not meet the convenience and service needs of most shoppers.

Key recommendations for the Bayswater Activity Centre include:

- Consolidate the retail core surrounding the train station;
- Advocate for another anchor retailer (supermarket);
- Improve links to the adjoining Bayswater Industrial Precinct to encourage the long term viability of the centre; and

- Encourage a mix of residential, commercial office and entertainment uses on the periphery of the Activity Centre.

BORONIA STRUCTURE PLAN

The Boronia Structure Plan (2006) provides a strategically based series of directions which will best meet the needs of the local community. The Structure Plan sets out a vision for Boronia. A part of that vision states that Boronia should be *'a series of diverse and confident retail and commercial precincts providing a vibrant and complimentary mix of businesses and services, and characterised by a unified trader and commercial community'.*

Furthermore, Land Use and Activity strategic directions include:

- Establish Boronia as a vibrant and identifiable series of specialised commercial destinations, through the development of specialised precinct areas.
- Consolidate the commercial environs and core retail activities within Dorset Square and the Boronia Junction development, with active retail tenancies adjoining pedestrian pathways between these two areas.

ROWVILLE PLAN

The vision for economic development in Rowville is:

- To create opportunities for local employment and education, ensuring skills for the future economy.
- Attract investment in business and infrastructure while preserving the character and community that attracts people to its neighbourhoods.

The Rowville Plan (2015) discusses the potential expansion of the shopping centre, aiming to provide the community with a greater variety in retail including shopping and dining.

The current long-term plan for the expansion of the Stud Park Shopping Centre includes a proposal for a 'Main Street' area of shop fronts, cafes, and enhanced amenity along Fulham Road.

A key strategy in the Rowville Plan is to provide a "Better utilisation of underdeveloped sites to support a more diverse and vibrant commercial core". Objectives to satisfy this strategy are:

- Identify Opportunity Sites for redevelopment that enjoy good access to transportation and services and provide guidance on supported future uses.
- Enact zoning on Opportunity Sites to support higher density residential and commercial development and community uses

MOUNTAIN GATE INDUSTRIAL STRATEGY

The Mountain Gate Industrial Strategy (The Planning Group, 2008) identifies the significant output that the Mountain Gate Industrial Precinct contributes to the local economy. Relevant principles of the industrial strategy include the following:

1. Retain and protect industrial land in Mountain Gate.
2. Recognise that the role of industrial land in Mountain Gate precincts is predominantly to provide for:
    - Regional catchments;
    - Service industry; and
    - Small to medium enterprises (1 to 20 employees occupying floor spaces of 200 to 400 sqm)
3. Make optimal use of vacant and underdeveloped industrial land.

WANTIRNA HEALTH PRECINCT

The Victorian Government has identified the delivery of health precincts as a key strategy to provide for jobs, economic growth and meeting the needs of growing communities in Melbourne.

Plan Melbourne identifies Wantirna South as a site for a health precinct of State significance. The Victorian Planning Authority and the City of Knox are working together to understand health service needs in the Wantirna area and will potentially develop a Precinct Structure Plan to guide future development decisions. The possible precinct boundaries are shown in Figure 3, incorporating the Wantirna Neighbourhood Centre (Wantirna Mall) to the east.

FIGURE 3 POSSIBLE WANTIRNA HOSPITALS ASSESSMENT AREA BOUNDARIES

Source: Wantirna Health Precinct Demand Study, MPA/Knox City Council 2016

2.7. CONSULTATION SUMMARY

Targeted consultation was undertaken with key stakeholders including local businesses, regional groups and real estate agents to inform this project. Key findings from consultation undertaken by the project team include the following:

- The proposed expansion of Knox Central will increase retail floorspace by approximately 30,000 sqm. There will be an additional 100 speciality retail stores, department store, discount department store and Woolworths supermarket. It is expected that the expansion will absorb significant demand for retail floorspace over the medium term;
- Manufacturing, warehousing and distribution accounts for the majority of businesses in the municipality, however there has been an increase in the number of professional service and knowledge based businesses in the municipality;
- Many businesses in Knox prefer to use local supply chains if suitable product and/or service is available;
- Major advantages of doing business in Knox include the proximity and access to Eastlink and major arterials, access to the local workforce, sufficient car parking, the clustering of similar industries, and the continual development of retail amenity;
- Many businesses have a historical relationship with the Knox and wish to remain in the area;
- Many large format manufacturing businesses have moved to other municipalities, typically attracted to Dandenong and Keysborough due to land availability and affordability. As a result, opportunities are presented to redevelop former manufacturing and other large sites.
- A large proportion of new businesses require smaller industrial allotments that include a warehouse/distribution centre and adjoining office. Demand is increasing for strata industrial allotments, and there are many examples of this type of subdivision occurring in recent years and proposed for 2017;
- Some long term business anchors in the municipality are reconsidering their land holdings in Knox. For example, certain businesses are currently looking to sell part of their large site in Bayswater which is no longer required due to the outsourcing of their manufacturing operations;
- It is anticipated that Caribbean Park will absorb short to medium term demand for large commercial office floorspace. New, state-of-the-art facilities that are being established in the area are attracting globally recognised tenants due to the high quality offering;
- Apart from several brownfield sites, there is limited industrial land available.
- Corporate offices/knowledge based industries prefer to be clustered.
- There is uncertainty around the future direction of the Healesville Freeway Reserve, and is a potential development opportunity in the future.

Further consultation conducted by Council's Economic Development Unit on broader issues obtained the following findings relevant to this study from discussions with 48 businesses:

- No zoning issues were identified;
- 9 businesses did not have the ability to expand floor space, with 2 advising they would be able to introduce additional shifts if needed;
- 16 businesses are able to expand within their current footprint, with 2 currently considering mezzanines, and a further 2 having purchased neighbouring land for planned future development;
- 4 businesses saw employment decreasing;
- 11 businesses identified growth, with a further 7 identifying seasonal growth;
- 2 businesses are currently looking to relocate, with one wanting to stay within the municipality and the other working with govt for the potential to move to regional Victoria.

A consultation schedule is provided in Appendix A.

2.8. INDUSTRY TRENDS AND IMPLICATIONS

Up to date economic and industry analysis has been prepared by Remplan to underpin this Land for Business Project. This section summarises key economic trends and implications for industry sectors. These insights and supporting data are detailed in Technical Report A.

Key economic indicators suggest that the Knox economy is a production and processing based economy with a growing component being a knowledge based economy. Manufacturing remains a key industry in terms of employment and economic output to the local economy, however, the development of other industries is diversifying the local economy.

The transition and diversification of the Knox economy and the emergence of knowledge based industries such as Health Care, Professional, Scientific and Technical Services, Financial and Insurance Services and Education suggests that a greater provision of suitably zoned land will be required to satisfy and further encourage growth in these sectors into the future.

Observations for Knox's largest industry sectors are as follows.

MANUFACTURING

- Despite a trending down across a number of sectors, a range of Manufacturing sectors within Knox are of strategic importance because of their employment base, contribution to regional exports and strong alignment with current Victorian State Industry Policy.
- In 2011, the Manufacturing sector was the largest local employer, within Knox LGA supporting 12,569 jobs.
- Manufacturing contributes $9.114 billion (45.2 %) of total output. While the total revenue for the sector has been in decline, the sector remains the largest sector in terms of total revenue.
- The Manufacturing sector has experienced decline in most key economic indicators (Output, Value-added & Local Expenditure), albeit reductions in scale of a modest level compared with other manufacturing sectors with higher volatility.
- There is a demonstrable ongoing strength in regional exports from the sector, particularly associated with Technical Equipment & Appliance Manufacturing that represents 22.4% of total regional exports.
- Significant transition in the Manufacturing sector is relevant to broader National performance of the sector. Despite this, manufacturing businesses located in Knox are well positioned to drive growth in the sector, strongly aligned to current Victorian Government Industry Policy and macro trends towards knowledge intensive manufacturing driven through technological innovation.
- There has been a reduction of $384 million in terms of the sector's contribution to Gross Regional Product (Value-added). However, compared with other manufacturing regions this reduction is relatively modest, demonstrating Knox's manufacturing sector resilience and alignment with the sector's transition from labour intensive to knowledge intensive output.
- All local manufacturing employment is located within the employment assessment areas (detailed in Technical Report B). Bayswater Central (E-01) is the most significant for the sector with 3,832 of Manufacturing jobs (30.5 %) represented at 2011 Census. In terms of Significant Employment Locations (See Part 3.3) Bayswater and Scoresby-Rowville-Knoxfield represent over 85% of Manufacturing jobs.

WHOLESALE TRADE

- Wholesale Trade sector has experienced decline in economic activity over the last four years but remains an important and resilient industry sector within the Knox local economy.
- Between 2006 and 2011 the sector experienced total decrease of 603 jobs, impacting on wages and salaries growth and reflecting a total reduction in local expenditure and income generated through regional exports.
- Local sales to the Manufacturing sector represent 48.7% of wholesale trade within Knox.
- Broader regional decline in the sector reflects increasing automation and structural adjustment following a period of a higher value Australian dollar.

The overall reduction in total output from $2.444 billion to $2.171 billion over the last four years has also seen reduction in wages and salaries, local expenditure and the sector's contribution to Gross Regional Product (value-added). Both Bayswater Central (E-01) and Caribbean Park & Scoresby Industrial (E-07) are the anchors for Wholesale Trade jobs in Knox and represent 49% of local jobs in the sector, while Knoxfield Employment Assessment Area (E-05) supports another 12% of local jobs.

PROFESSIONAL, SCIENTIFIC AND TECHNICAL SERVICES

- The Professional, Scientific & Technical Services sector contributes $795.651 million (3.9 %) of total output. The sector is the 6th largest in terms of total revenue. Total output by the sector increased significantly between 2011 and 2013 and has now stabilised at almost $800 million per annum.
- Growth in wages and salaries has responded to the increased revenue in the sector locally.
- While professional services as a regional export have not increased, local sales represent 75.7% of total sales revenue. This indicates strong local demand for Professional, Scientific & Technical Services within the local economy.
- The Professional, Scientific & Technical Services sector contributes $244.580 million (4.5%) of total local expenditure. Across the Melbourne East Region, the sector contributes 9.2% of total local expenditure. There appears to be greater opportunity for increased local expenditure to support aligned business activities through strategies of collaboration, clustering and partnering.
- The sector is experiencing change that is being driven by technological advances and new business models, which present collaboration and partnering opportunities for computer and technical service related businesses with the broader Professional, Scientific & Technical Services sector.
- Technological advances and new business models are driving change in this sector. There are varying degrees of impact on key industries. There is strong representation of businesses in Knox across Engineering, Accounting, Management Consultancy and Computer System Design, all indicating continued growth in the Professional, Scientific & Technical Services employment.
- Employment in the Professional, Scientific & Technical Services sector is spread across most of the land for business assessment areas. The strongest representation is within the Activity Centres and Employment Assessment Areas. Bayswater Central (E-01) supports 457 jobs (14.97 %) while the Caribbean Park & Scoresby Industrial (E-07) (11.2%), Knox Central Activity Centre (AC-02) (9.5%) and Boronia Activity Centre (AC-03) (7.5%) account for another 866 jobs in the sector.

FINANCIAL AND INSURANCE SERVICES

- The Financial & Insurance Services sector contributes $555.911 million (2.8 %) of total output.
- Total sales revenue (output) has declined over the last five years from $680.145 million to an estimated $555.911 in 2016.
- This decline has impacted on the sector's performance and contribution toward wages and salaries and Gross Regional Product (Value-added).
- Local expenditure in 2016 has returned to levels slightly above 2011 demonstrating strong links to other local professional services and collaboration between the finance and banking sectors within the broader Financial & Insurance Services sector.
- The sector is expected to grow in response to both a growing and ageing resident population.
- The most significant employment activity is concentrated in the Knox Central Employment Assessment Area (E-03) in association with a bank and other businesses that represent 29.7% of local employment in the sector.
- A range of Financial & Insurance Services sector employment is located in the Activity Centres (27.2%) and across the broader Employment land and Neighbourhood Centres.

HEALTH CARE AND SOCIAL ASSISTANCE

- The Health Care & Social Assistance sector contributes $652.792 million (3.2 %) of total output. Total output has increased from 2011 levels, but has seen an overall reduction since 2013.
- The sector is significant in terms of employment (11.1%) and as a contributor to Gross Regional Product (6.7%) (Value-added).
- The sector has experienced a sustained increase in wages and salaries, contributing $417.565 million (10.4 %) of total wages and salaries.
- Despite a reduction in overall output, the sector contributes strongly to Gross Regional Product (Value-added), $500.097 million or 6.7% of Knox's total contribution.
- Health Care and Social Assistance is strongly aligned to demands of a growing and ageing population. It is expected that this sector will continue to support significant local employment opportunities.
- Employment and activity is centred around Wantirna hospitals (HP-01) and Wantirna Mall (NC-03).
- The role of the Activity Centres and Bayswater Central (E-01) are also significant in supporting a range of employment in the sector, while some key locations, such as Angliss Hospital (934 jobs) are located in locations outside of the assessment areas.
- A key opportunity driver for Health Care is the Wantirna Hospital Assessment Area and is discussed further in Sections 3, 4 and 6. Furthermore, population projections identify that Knox is an ageing population, which will increase demand for local health and medical services over time.

TECHNOLOGY AND INNOVATION

In addition to the transitions underway within key industry sectors, a number of broader trends primarily generated by technological advances and globalisation are likely to impact on the way economic activity and land use takes place over the next 20 years.

For example, online retail is capturing in increasing share of retail expenditure in Australia, with turnover growth outpacing traditional store-based retail. This has placed additional pressure on existing retailers and has contributed to challenging economic conditions for all retail sectors. If online market share continues to increase, demand for shopfront floorspace may decrease in response. Conversely, demand for postal services, transport and distribution could increase. There are already many examples of small online retail distributions centres being established in Knox's industrial areas, which are well located to service the significant residential catchment in Melbourne's east.

Further into the future, autonomous vehicles are expected to become prevalent, potentially resulting in fewer vehicles per person/worker, and less space required for car parking. Conversely, higher employment densities are generally experienced as economies transition from traditional manufacturing and wholesale trade uses to more knowledge intensive uses. Although greater employment densities will generally lead to more efficient use of land, loads will increase on infrastructure such as roads, public transport, parking, open space and employment support services such as retail and accommodation. There are international examples of buildings which include 'industrial' floorspace at upper levels, significantly increasing employment densities and land use efficiency. This design opportunity may be relevant to the Knox context later in the planning period once land values appreciate sufficiently, given the lack of greenfield business land in the municipality.

As former industrial areas become more densely occupied and accommodate a broader mix of uses, it is important that employee amenity is improved. Businesses with corporate headquarters, offices and showrooms expect high quality environments, and access to shops and hospitality options in close proximity.

Although the impact and timing of these trends and factors are difficult to predict, the analysis in this report take into account the opportunities wherever possible.

PROPULSIVE SECTORS

The industry sectors which are the key drivers of Knox City's economy in terms of regional exports, employment, value-added and local expenditure on goods and services (backward linkages) are recognised as key 'propulsive industries'. The industry sectors identified as propulsive industries for Knox are as follows, based on analysis by Remplan in 2016:

- Construction;
- Wholesale Trade;
- Manufacturing;
- Other services; and
- Health Care and social services.

Within the manufacturing industry, a number of sub-sectors have also been identified as propulsive, including Professional, Scientific, Computer & Electronic Equipment. Manufacturing; Human Pharmaceutical Product Manufacturing & Specialised & Other Machinery & Equipment Manufacturing.

Based on the consultation undertaken and economic reports reviewed for this study, the types of businesses in propulsive sectors that require land in business zones can be summarised as follows:

- Businesses requiring industrial land for small and medium operations, including:
  - Medium sites for specialised manufacturing, heavy and civil construction with separation from residential areas;
  - Small and medium sites for wholesale trade businesses with ready access to road and freeway networks; and
  - Smaller sites for construction services (trades), including storage and supplies.
- Business requiring a range of office and medical building types and sizes, including:
  - Health care services within medical clinics, activity centres and near hospitals;
  - Aged care and social services in small and medium office spaces generally located in activity centres or near aged care facilities and hospitals.

It is noted that some propulsive sectors could include a proportion of home based businesses and businesses operating in residential zones, including health care services, construction services (trades with no fixed address) and residential care. The implications of employment projections and economic opportunities are discussed later in this report.

2.9. KEY FINDINGS

The key findings of this section are as follows:

- The Knox Gross Regional Product (GRP) reached a ten year high of $8.08 billion in 2015/16. The increase in GRP was a result of an increase in economic output from industry sectors such as Rental, Hiring and Real Estate Services, Construction, Health Care and Professional, Scientific and Technical Services;
- The transition and diversification of the Knox economy and the growth of knowledge based industries such as Health Care, Professional, Scientific and Technical Services, Financial and Insurance Services and Education suggests that a greater provision of suitably zoned land will be required to satisfy and further encourage growth in these sectors into the future;
- A range of major economic infrastructure assets are located within and near the City of Knox, including universities (Monash Clayton, Swinburne Wantirna South), hospitals (Knox Private, Wantirna Health, Angliss), major shopping centres (Knox Central, Ringwood, Glen

Waverley), freeways (Eastlink, Eastern Freeway, Monash Freeway) and nationally significant employment clusters (Monash National Employment Cluster and Dandenong South National Employment Cluster);

- Plan Melbourne proposes that Melbourne's productive employment centres will be located around an enhanced transport network, however it is noted that the City of Knox does not have a particularly high quality public transport network;
- The Melbourne East region is home to Australia's most highly qualified workforce, and identified key propulsive industry sectors for the region have a significant presence in Knox. Challenges to facilitate ongoing change and development in Manufacturing and Wholesale Trade will need to be addressed;
- Community consultation has revealed a clear desire for jobs to be available within the local area. As the Knox population grows, a commensurate increase in local employment and business growth will be needed;
- The Knox Housing Strategy directs residential development and population growth to the western half of the municipality and in and around activity centres. This could lead to competition between commercial and residential developers for land within activity centres, and is also likely to result in more population being readily able to access employment, retail and services in other municipalities via the Eastlink Freeway;
- The Knox economy is shifting towards a knowledge based economy. The primary strengths of the local economy include road access and a skilled workforce;
- The Manufacturing sector remains significant, but changes are leading to a transition from large format manufacturing to technical equipment and other high-tech manufacturing. Many manufacturing businesses in Knox are well positioned to drive growth and are strongly aligned with State policy and macro-trends towards knowledge intensive businesses;
- Wholesale Trade remains an important and resilient sector, strongly linked to Manufacturing. Smaller businesses, including many driven by online retail, are becoming more prevalent;
- There is strong demand for local professional services in the economy. As population growth continues and office space is consumed elsewhere in Melbourne's East, Knox will play an important role in providing land and floorspace for this sector;
- Aging population will drive growth in the health care and insurance sectors, especially near existing clusters and anchors (Knox Central, Wantirna and Upper Ferntree Gully).

3. LAND FOR BUSINESS ASSESSMENT AREAS – EMPLOYMENT LAND AND ACTIVITY CENTRES

3.1. INTRODUCTION

This section provides an overview and assessment of the Land for Business Assessment Areas within the municipality. Demand and supply factors are considered for land in business zones only. Business zones in Knox include:

- Industrial 1 Zone (IN1Z);
- Commercial 1 Zone (C1Z);
- Commercial 2 Zone C2Z);
- Mixed Use Zone (MUZ);
- Special Use Zones (SUZ); and
- Priority Development Zone (PDZ).

3.2. LAND FOR BUSINESS ASSESSMENT AREAS

3.2.1. OVERVIEW

Land for Business is classified into the following categories:

- Employment land;
- Activity Centres;
- Neighbourhood Centres (and Future Neighbourhood Centres);
- Bulky Goods Corridors;
- Strip Shops; and
- Hospital Assessment Area.

This assessment provides a spatial analysis for each assessment area to identify the current zoning and land use within each assessment area, and to identify the level of occupied and vacant land.

Technical Report B 'Land for Business Assessment Areas' provides a detailed overview of all of the assessment areas including:

- Total land area and gross floorspace by zone;
- Land use by gross floorspace and zone;
- Lot size distribution and configuration;
- Vacant and underutilised land; and
- A summary of findings from site visits.

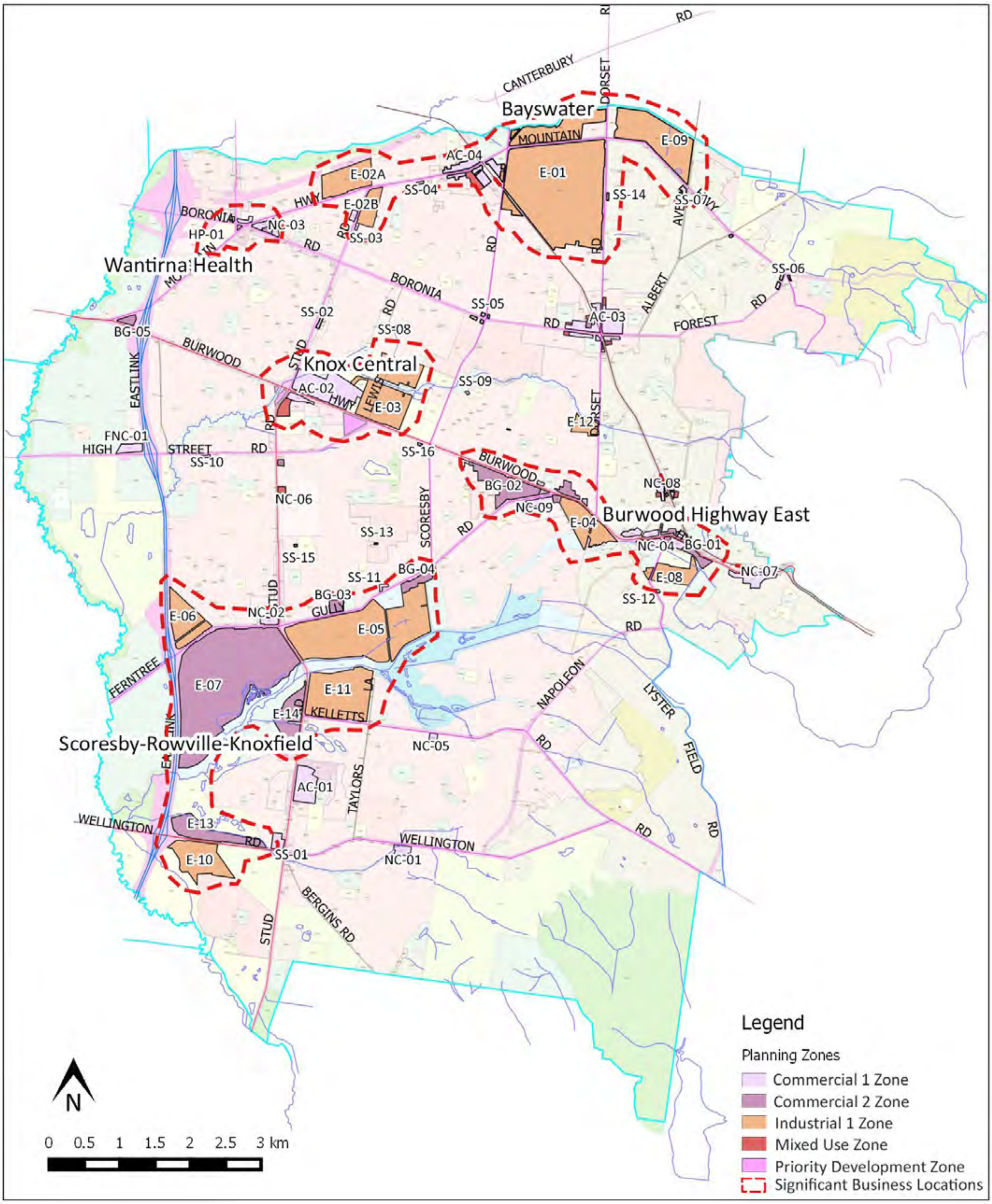
Technical Report B should be used as a reference for each Land for Business Assessment Area and Activity Centre within Knox.

3.2.2. LOCATION OF LAND FOR BUSINESS ASSESSMENT AREAS

The Assessment Areas vary in terms of land use, business use, functionality and service role. Within the municipality there are four Activity Centres, fifteen Employment areas, nine Neighbourhood Centres, five Bulky Goods Corridors, sixteen Strip Shops, one Hospital Assessment Area and one Future Neighbourhood Centre.

Figure 4 shows all of the Assessment Areas with accompanying information in Table 1.

FIGURE 4 LAND FOR BUSINESS ASSESSMENT AREAS



Source: Urban Enterprise 2016

TABLE 1 LIST OF LAND FOR BUSINESS ASSESSMENT AREAS

Code	Name of Assessment Area as per Background Report and associated Attachments A & B	Current Zone	Location/Address	Significant Business Location
AC-01	Rowville Activity Centre	C1Z	Stud Rd & Fulham Rd, Rowville	
AC-02	Knox Central Activity Centre	C1Z, MUZ, PU6Z, RGZ1, PDZ1	Burwood Hwy & Stud Rd, Wantirna South	Knox Central
AC-03	Boronia Activity Centre	C1Z, C2Z, MUZ	Dorset Rd & Boronia Rd	
AC-04	Bayswater Activity Centre	C1Z, MUZ, PUZ6	Mountain Hwy, Bayswater station	
E-01	Bayswater (Central)	IN1Z	Mountain Hwy, Power Rd & Dorset Rd	Bayswater Business Precinct
E-02a	Bayswater (West- Mountain Hwy & Stud Rd)	IN1Z	Mountain Hwy & Stud Rd	Bayswater Business Precinct
E-02b	Bayswater (West - Stud Rd)	C1Z	Mountain Hwy & Stud Rd	Bayswater Business Precinct
E-03	Knox Central Employment	IN1Z	Burwood Hwy & Lewis Rd	Knox Central
E-04	Mountain Gate Industrial Estate	IN1Z	Burwood Hwy & Dorset Rd	Burwood Highway East
E-05	Knoxfield Employment	IN1Z, C2Z	Ferntree Gully Rd, Stud Rd & Bunjil Way	Scoresby-Rowville-Knoxfield
E-06	Scoresby (north Ferntree Gully Rd/Jellico Dr)	IN1Z	Ferntree Gully Rd, Jellico Dr, Rocco Dr & Eastlink	Scoresby-Rowville-Knoxfield
E-07	Caribbean Park & Scoresby Industrial	C2Z	Ferntree Gully Rd & Eastlink	Scoresby-Rowville-Knoxfield
E-08	Upper Ferntree Gully	C2Z	Burwood Hwy & Acacia Rd	Burwood Highway East
E-09	Bayswater (East)	IN1Z	Mountain Hwy & Colchester Rd	Bayswater Business Precinct
E-10	Rowville (south side Wellington Rd)	C2Z, IN1Z	Wellington Rd, Viewtech Pl, Myer Pl & Eastlink	Scoresby-Rowville-Knoxfield
E-11	Rowville (Kelletts Rd)	IN1Z, C2Z	Stud Rd & Kelletts Rd	Scoresby-Rowville-Knoxfield
E-12	Edina Rd Industrial Estate	IN1Z	Dorset Rd & Edina Rd	
E-13	Rowville (Corporate Ave, Wellington Rd)	IN1Z	Wellington Rd, Corporate Ave & Eastlink	Scoresby-Rowville-Knoxfield
E-14	Enterprise Business Park	IN1Z	Enterprise Dr & Stud Rd	Scoresby-Rowville-Knoxfield
HP-01	Wantirna hospitals	PUZ3, RGZ3	Mountain Hwy & Boronia Rd	Wantirna Health
NC-01	Wellington Village Shopping Centre	C1Z	Wellington Rd & Gearon Ave	
NC-02	Scoresby Village Shopping Centre	C1Z	Ferntree Gully Rd & Stud Rd	Scoresby-Rowville-Knoxfield
NC-03	Wantirna Mall	C1Z	Mountain Hwy & Boronia Rd	Wantirna Health
NC-04	Ferntree Gully (north Burwood Hwy)	C1Z, C2Z	Burwood Hwy & Selman Avenue	Burwood Highway East
NC-05	Rowville Lakes	C1Z	Kelletts Rd & St Lawrence Way	
NC-06	Harcrest Boulevard	MUZ	Stud Rd & Harcrest Blvd	
NC-07	Upper Ferntree Gully Village	C1Z	Burwood Hwy & Dawson St	
NC-08	Ferntree Gully Village	C1Z, MUZ	Station St & Ferntree Gully Station	
NC-09	Mountain Gate Central	C1Z	Ferntree Gully Rd & Burwood Hwy	Burwood Highway East
FNC-01	The Orchards	C1Z	High St & Eastlink	
BG-01	Ferntree Gully (Burwood Hwy central)	C2Z, C1Z	Burwood Hwy & Selman Avenue	Burwood Highway East
BG-02	Mountain Gate Triangle	C2Z	Ferntree Gully Rd & Burwood Hwy	Burwood Highway East
BG-03	Knoxfield Bunnings	C2Z	Ferntree Gully Rd near Carrington Park	Scoresby-Rowville-Knoxfield
BG-04	Knoxfield (south Ferntree Gully Rd)	C2Z	Ferntree Gully Rd & Rushdale St	Scoresby-Rowville-Knoxfield
BG-05	EastLink Triangle	C2Z	EastLink, Mountain Hwy and Burwood Hwy	
SS-01	Stamford	C1Z	Stud Rd & Wellington Rd (north west side)	
SS-02	Studfield Shopping Centre (Wantirna)	C1Z	Stud Rd, Coleman Rd & Somerset Rd	
SS-03	Stud Bay (Stud Rd, north of Leonard St)	C1Z	Stud Rd, Leonards Rd & Phyllis St	
SS-04	Mountain Hwy/Kumala Rd	C1Z	Mountain Hwy & Kumala Rd	
SS-05	Boronia Rd/Scoresby Rd	C1Z	Scoresby Rd & Boronia Rd	
SS-06	The Basin	C1Z	Basin-Olinda Rd, Mountain Hwy & Forest Rd, The Basin	
SS-07	Alchester Village	C1Z	Mountain Hwy & Albert Ave	
SS-08	Lewis Rd/Coleman Rd	C1Z	Coleman Rd & Lewis Rd	
SS-09	Fairhills Shops (Manuka Dr/Loretta Ave)	C1Z	Manuka Rd & Loretto Ave	
SS-10	Knox Gardens	C1Z	High St & Fonteyn Dr	
SS-11	Knoxfield shops	C1Z	Kathryn Rd & Knox Pl	
SS-12	Glenfern Rd/Mason St	C1Z	Glenfern Rd & Mason St	
SS-13	Anne Rd	C1Z	Anne Rd & Kathryn Rd	
SS-14	Dorset Rd/Landscape Dr	C1Z	Dorset Rd (between Landscape Dr & Bellevue Ct)	
SS-15	Cavell St/Armin St	C1Z	Cavell St & Armin St, Scoresby	
SS-16	Bunnett Rd/Burwood Hwy	C1Z	Bunnett Rd & Burwood Hwy, Knoxfield	

Source: Urban Enterprise 2016

3.2.3. LAND USE BY ZONE

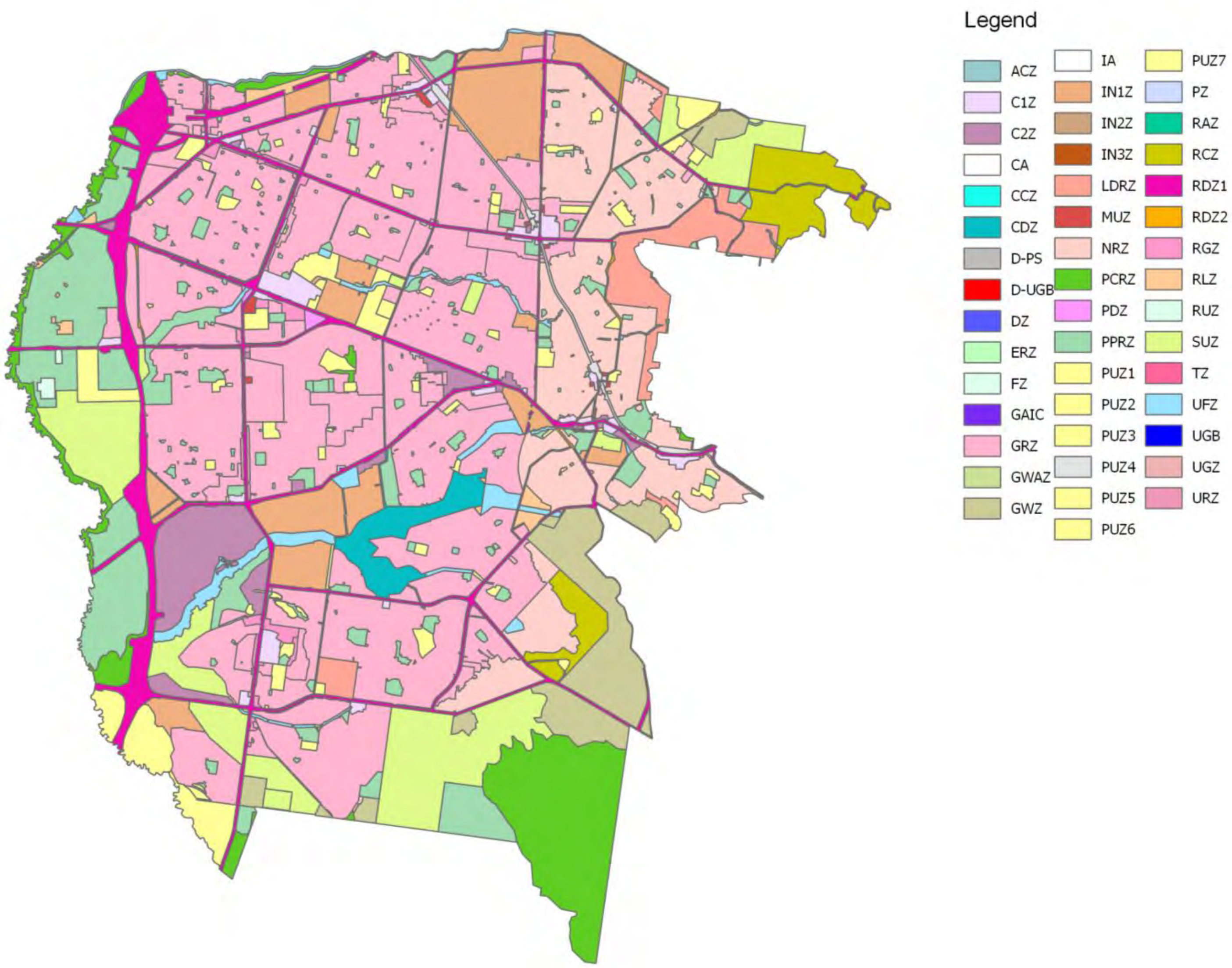
As at 2016, Knox has 1,032 hectares of business land and approximately 3.6 million square metres of gross floorspace within the business zones.

Figure 5 shows the distribution of zoned land (all zones) across the municipality. Tables 2 and 3 shows the total land area and gross floorspace for the business zoned land in Knox. The amount of gross floorspace in each land use is based on Council's rates categories:

- **Industrial** – 2,855,000 sqm;
- **Retail** –500,000 sqm;
- **Health and Medical** - 72,000 sqm;
- **Office** - 61,000 sqm; and
- **Highway Sales –** 25,000 sqm.

It is noted that some properties appear to be incorrectly classified in the rates database, resulting in an overestimate of retail floorspace and an under-estimate of office floorspace. This is discussed in more detail in Section 4.

FIGURE 5 EXISTING PLANNING ZONES



Source: Current planning zones for the City of Knox, Urban Enterprise 2016

TABLE 2 LAND AREA BY ZONE

Business Zones	Land area (ha)
Commercial 1 Zone (C1Z)	130
Commercial 2 Zone (C2Z)	275.8
Industrial 1 Zone (IN1Z)	591.1
Mixed Use Zone (MUZ)	10.1
Priority Development Zone 1 (PDZ1)	7.4
Public Use Zone 2 (PUZ3) (hospital)	10.1
Public Use Zone 6 (PUZ6)	4.7
Residential Growth Zone 3 (RGZ3) (hospital)	3.8
Total	1,033

Source: Council Rates Database 2016, derived by Urban Enterprise 2016

TABLE 3 GROSS FLOORSPACE BY LAND USE CATEGORY

Business Floorspace	Gross Floorspace (sqm)
Industrial	2,854,739
Retail	500,365
Health and Medical	71,915
Office	61,251
Highway Sales	24,753
Pubs and Gaming	12,932
Industrial Development Site	10,878
Other Commercial	7,052
Accommodation	4,206
Sub-Total Employment Floorspace	3,548,091
Other Floorspace	
Residential	56,355
Recreation and Leisure	23,306
Education	14,833
Religious	15,726
Civic	10,460
Infrastructure and Utility	1,277
Open Space	838
Emergency Services	538
Other	325
Sub-Total Other Floorspace	123,658
Grand Total	3,671,749

Source: Council Rates Database 2016, derived by Urban Enterprise 2016

3.2.4. VACANT AND UNDERUTILISED LAND AREA BY ZONE

Table 4 shows the total vacant and underutilised industrial and commercial zoned land in Knox. Currently, there is 69.6 ha of vacant land in the municipality including:

- 2.9 ha of vacant Commercial 1 Zone (C1Z) land.
- 36.1 ha of vacant Commercial 2 Zone (C2Z) land; and
- 30.6 ha of vacant Industrial 1 Zone (IN1Z) land.

There is a further 39.7 ha of underutilised industrial and commercial zoned land[2] in the municipality. Underutilised and vacant land areas for each assessment area are detailed in Technical Report B.

TABLE 4 VACANT AND UNDERUTILISED LAND BY ZONE

	Land Area (ha)
Vacant	
Commercial 1 Zone (C1Z)	2.9
Commercial 2 Zone (C2Z)	36.1
Industrial 1 Zone (IN1Z)	30.6
Vacant sub-total	69.6
Underutilised	
Commercial 1 Zone (C1Z)	8.6
Commercial 2 Zone (C2Z)	2.1
Industrial 1 Zone (IN1Z)	15.9
Priority Development Zone (PDZ1)	3.0
Public Use Zone (PUZ3)	10.1
Underutilised sub-total	39.7
Total	**109.3**

Source: Council Rates Database 2016, derived by Urban Enterprise 2016

URBAN DEVELOPMENT PROGRAM

The Urban Development Program (UDP) provides data relating to the occupancy of industrial land by Local Government Area (LGA). In the UDP, 'industrial land' includes:

- Industrial 1, 2 and 3 Zones; and
- Commercial 2 Zone.

[2] Underutilised land was identified by Urban Enterprise within each assessment area through site visits and analysis of aerial photography. Underutilised land includes sites with low value improvements or unused buildings on the site, or sites which are occupied (and therefore not 'vacant') but only partly utilised with large areas vacant or unused. Underutilised parcels generally present secondary development opportunities, such as redevelopment of the entire parcel, subdivision to create new vacant sites and/or expansion of existing floorspace on land that is not currently utilised. However, development opportunities depend on the intentions and financial capacity of the landowners and occupiers, and would typically occur at slower rates than take up of vacant land. Under-utilised sites identified do not include sites that are currently fully occupied and operational for business uses that could be converted to new / higher density employment uses in the future through subdivision or redevelopment.

Table 5 shows the change in occupied and vacant industrial land in Knox from 2012/13 to 2014/15. Over this period, Knox's occupied industrial land increased by 4 ha. This equates to a growth of 2 hectares of occupied industrial zoned land per annum.

According to the most recent UDP data, there was a supply of 68 ha of vacant industrial land in Knox in 2014/15 (including Industrial 1 Zone and Commercial 2 Zoned land that was formerly within the Business 3 Zone). 32 ha (47%) is within the Caribbean Park & Scoresby Industrial (E-07), controlled by a single land owner and progressively being made available to the market. While this allows for future growth and take-up, recent data shows that there has not been significant take up of vacant industrial land. Discussions with real estate agents found that most industrial land development is taking place through redevelopment and subdivision of older style industrial properties.

TABLE 5 OCCUPIED AND VACANT INDUSTRIAL LAND (INCLUDING FORMER BUSINESS 3 ZONE), UDP

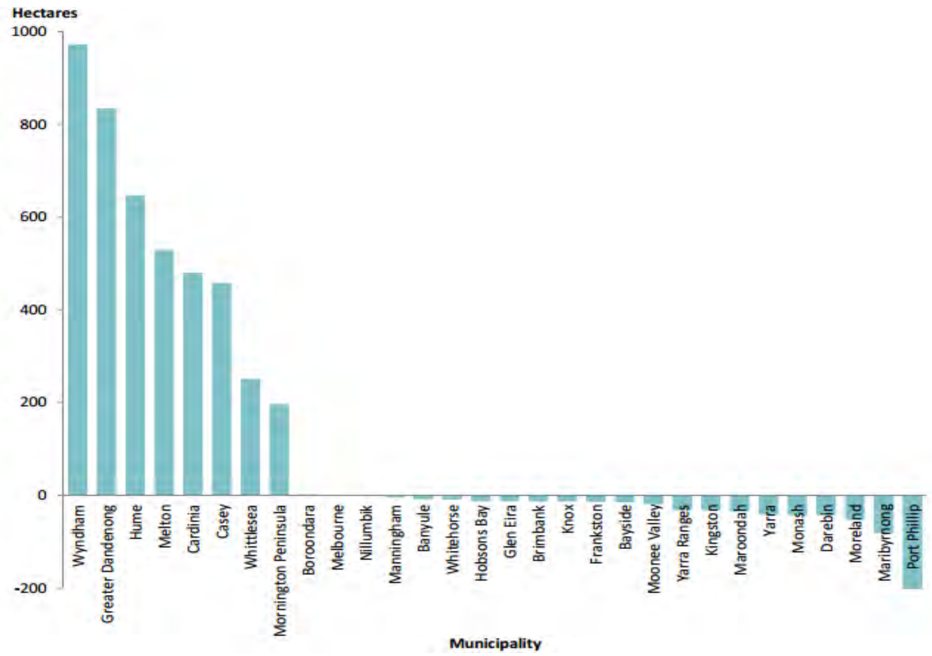
Occupied Industrial Land (Ha)	2012/13	2013/14	2014/15	Ave increase per annum
Occupied	744 ha	743 ha	748 ha	2 ha
Vacant	77 ha	77 ha	68 ha	
Total	821 ha	820 ha	817 ha	

Source: Urban Development Program, 2013, 2014, 2015

Research prepared by Spatial Economics in 2009 found that there was an estimated 712ha occupied industrial land in Knox in 2009. Over the 6 year period to 2015, the amount of occupied industrial land increased by 36ha at an average of 6 ha per annum, indicating that recent consumption has been very low based on medium term trends and has been constrained by a lack of greenfield land supply.

Figure 6 shows the change in the area of industrial zoned land for metropolitan municipalities in Melbourne from 2000/01 to 2014/15. In Knox, there has been a minor decrease in the net provision of industrial land across the municipality since 2000/01, indicating that there have not been any significant changes to the quantum of industrial land in Knox for 15 years.

FIGURE 6 NET CHANGE OF INDUSTRIAL ZONED LAND BY MUNICIPALITY, 2000-01 TO 2014-15



Source: Department of Environment, Land, Water and Planning, 2015

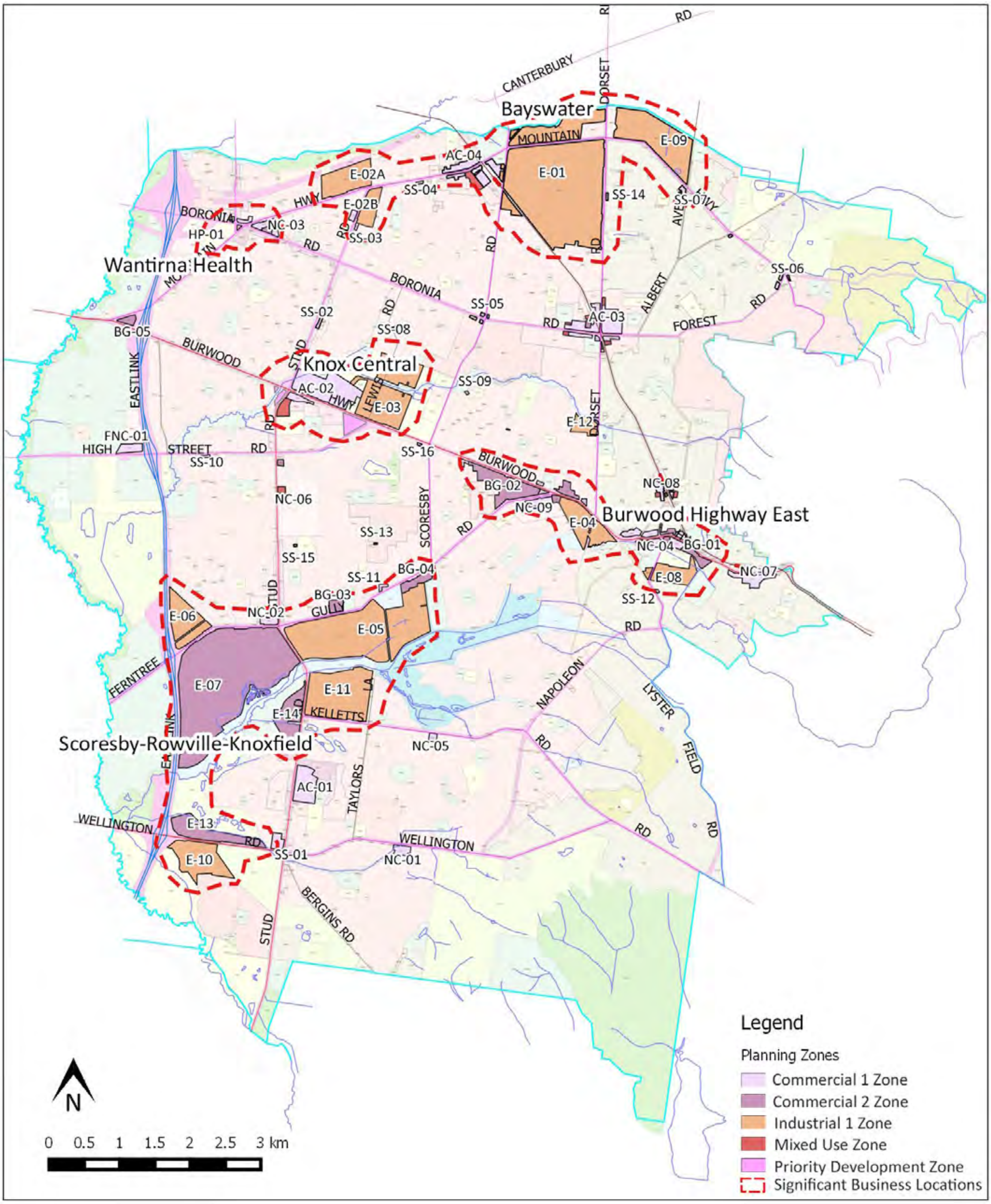
3.3. SIGNIFICANT BUSINESS LOCATIONS

Within the City of Knox, the Land for Business Assessment Areas identified in this report often combine to form significant or strategic business locations that comprise a range of business types, incorporating industrial, commercial and retail. Examples of these include:

1. **Wantirna Health** - includes HP-01 (Wantirna hospitals) and NC-03 (Wantirna Mall);
2. **Bayswater Business Precinct/Bayswater Activity Centre** – includes land in AC-04 (Bayswater Activity Centre), E-01 (Bayswater (Central)), E-02A (Bayswater (West – Mountain Hwy & Stud Rd), E-02B (Bayswater (West – Stud Rd), E-09 (Bayswater (East) along with land for employment in the neighbouring municipalities of Yarra Ranges and Maroondah further to the north;
3. **Scoresby-Rowville–Knoxfield** – a range of industrial, bulky goods, office and retail centres along Ferntree Gully, Stud, Kelletts and Wellington Roads, comprising E-05 (Knoxfield Employment, E-06 (Scoresby (north Ferntree Gully Rd), E-07a (Caribbean Park & Scoresby Industrial), E-10 (Rowville (south side of Wellington Rd), E-11 (Rowville (Kelletts Rd), E-13 (Rowville (Corporate Ave, Wellington Rd), E-14 (Enterprise Business Park), BG-03 (Knoxfield Bunnings), BG-04 (Knoxfield (south Ferntree Gully Rd) and; NC-02 (Scoresby Village Shopping Centre);
4. **Knox Central** – includes Westfield Knox and other uses in AC-02 (Knox Central Activity Centre), along with employment land in E-03 (Knox Central Employment); and
5. **Burwood Highway East** - Employment land along the Burwood Highway and Ferntree Gully Road corridor through Ferntree Gully and Upper Ferntree Gully forms what is almost a continuous linear employment corridor, including bulky goods, employment land and retail uses. It includes E-04 (Mountain Gate Industrial Estate Gully, E-08 (Upper Ferntree Gully), NC-04 (Ferntree Gully (north Burwood Hwy), NC-09 Mountain Gate Central, BG-01 Ferntree Gully (Burwood Hwy central) and BG-02 Mountain Gate Triangle).

Figure 7 shows the location of each of these significant business locations, with labels reflecting the numbered list above. References in this report are often made to these combined groups of assessment areas, given the high degree of interactivity between the uses.

FIGURE 7 SIGNIFICANT BUSINESS LOCATIONS



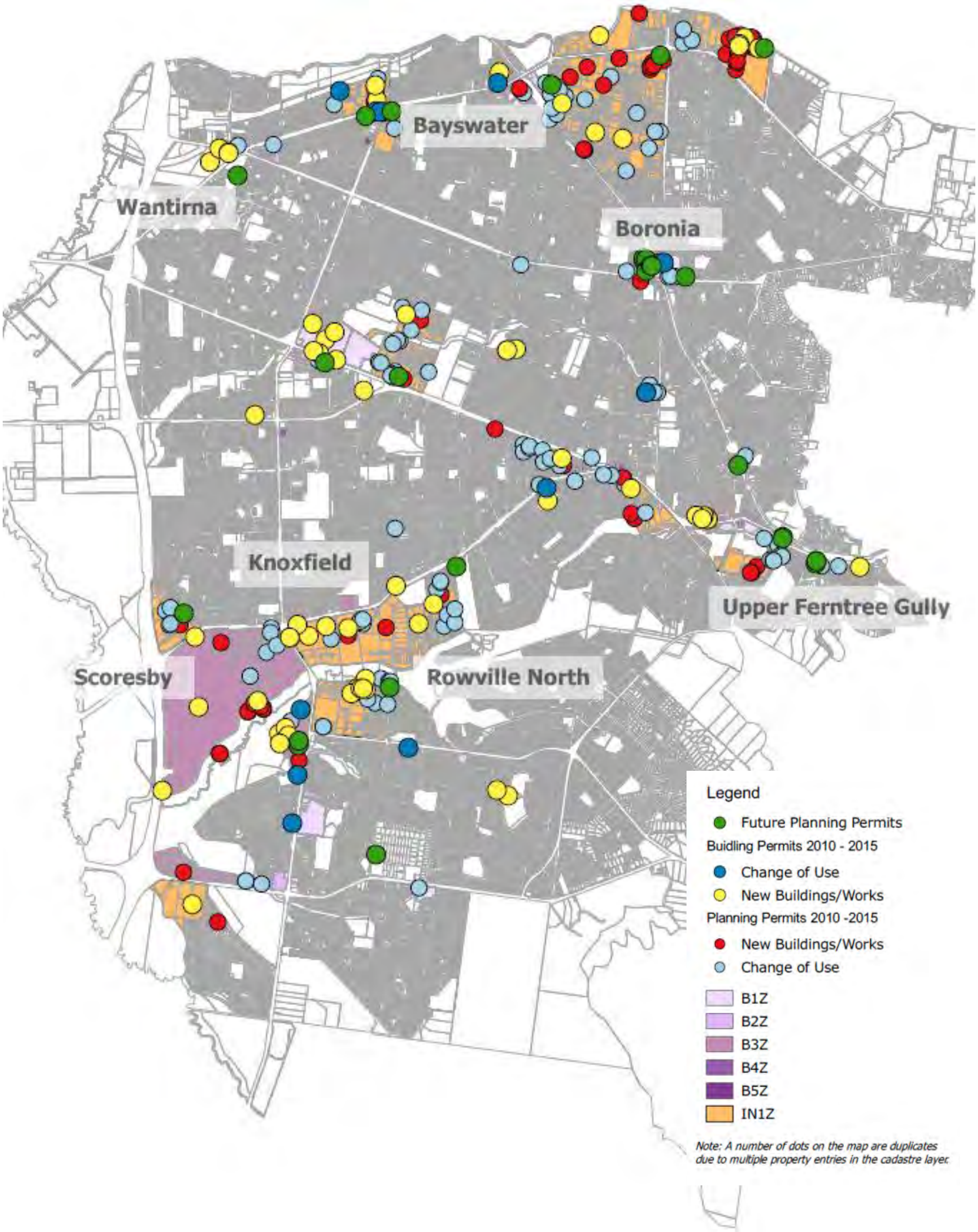
Source: Urban Enterprise.

3.4. RECENT DEVELOPMENT ACTIVITY

This section reports on planning and building permits for retail, commercial and industrial uses in all zones, including new buildings and change of use permits between 2010 and 2015. Future (i.e. pending) planning permits for new buildings and changes of use are also reported.

Figure 8 shows the location of all planning and building permits for commercial and industrial uses between 2010 and 2015.

FIGURE 8 MAP OF PLANNING AND BUILDING PERMITS 2010-2015



Source: Knox City Council 2016, derive d by Urban Enterprise 2016

Table 6 provides a summary of the building and planning permit activity by assessment area over the past 5 years.

TABLE 6 PLANNING AND BUILDING PERMITS OVERVIEW

Precinct Name	Precinct Code	Permit Activity
Bayswater (Central)	E-01	2 planning permits for multi-warehouse development (25 and 29 warehouses subdivision) and 1 planning permit for a new office complex. Change of use for restricted recreation facility (4 permits), and car sales (2 permits).
Bayswater (West – Mountain Hwy & Stud Rd)	E-2a	3 change of use planning permits in E-2a relating to non-industrial use - recreation facilities (fitness centre, martial art centre and cheerleading studio).
Knox Central Employment	E-03	2 planning permits approved for a multi-warehouse development. Majority of change of use planning permits relate to restricted/indoor creation facilities and place of worship.
Knoxfield Employment	E-05	Change of use planning permits were related to restricted recreation facilities (5 permits).
Scoresby (north Ferntree Gully Rd)	E-06	Change of use planning permits were for place of assembly, restricted recreation facility and car sales.
Caribbean Park & Scoresby Industrial	E-07	4 change of use planning permits in E-07, all relating to non-employment uses – indoor/restricted recreation facility and education. Planning permit was issued for 2 new multi-storey office buildings
Upper Ferntree Gully	E-08	3 ha site was issued with a building permit for a multi-warehouse development
Bayswater (East)	E-09	Planning and building permits for new buildings - warehouses/offices
Rowville (Kelletts Rd)	E-11	Majority of change of use planning permits related to non-industrial uses – place of assembly, place of worship and restricted recreation facility.
Edina Rd Industrial Estate	E-12	Change of use planning permits issued for restricted recreation facility and place of worship.
Rowville (Corporate Ave, Wellington Rd)	E-13	All planning permits (new works and change of use) were for a restricted recreation facility.
Enterprise Business Park	E-14	Planning permit for a new supermarket with related food and drink premises
Mountain Gate Triangle	BG-02	Majority of the change of use planning permits relate to non- retail. The most common land use is a restricted recreation facility.
Knoxfield (south Ferntree Gully Rd)	BG-04	Pending planning permit for a 20 warehouse development
Upper Ferntree Gully Village	NC-07	Pending planning permit for a mixed use development (residential, retail and commercial)
Ferntree Gully Village	NC-08	Supermarket proposed in PUZ4

Source: Knox City Council, 2016.

Warehouses and associated offices were the most common development types granted permits over the period. There were a number of multi-warehouse subdivisions in E-01, E-03, E-08 and BG-04, generally resulting in 20 or more small industrial tenancies on a previously large industrial site. E-07 (Caribbean Park & Scoresby Industrial) had a number of approvals for large office and industrial uses.

A number of mixed use developments (residential, a small amount of retail and office space on ground floor) are currently proposed in the Activity Centres and Neighbourhood Centres.

There are 2 supermarkets proposed, one of which (Boronia) is subject to a current Planning Scheme Amendment. There is no clear evidence of recent or proposed permits for out-of-centre retail proposals that would disrupt the Activity Centre hierarchy, with the possible exception of a proposed supermarket in E-14 (Enterprise Business Park).

Between 2010 and 2015, there were a significant number of permits issued for a change of use within employment land areas, often resulting in changes away from traditional industrial uses. Permits were issued for restricted and indoor recreation facilities, places of worship and places of assembly. Non-industrial uses are discussed in the Planning section later in this report.

The majority of planning and building permits on the periphery (outside business zones) of Activity Centres were related to medical facilities and childcare centres.

3.5. KEY FINDINGS

There is a total of 69.6 ha of vacant land (IN1Z, C1Z and C2Z) in Knox. There is a significant lack of vacant C1Z land in the municipality. Total vacant land within the commercial and industrial zones in Knox are as follows:

- 2.9 ha of Commercial 1 Zone (C1Z) land;
- 36.1 ha of Commercial 2 Zone (C2Z) land; and
- 30.6 ha of Industrial 1 Zone (IN1Z) land.

Vacant Industrial 1 Zone land within Knox is predominantly located within the major employment land assessment areas:

- E-01 (Bayswater (Central)) currently has 4.2 ha of vacant IN1Z land (15 land parcels);
- E-05 (Knoxfield Employment) has approximately 13.9 ha of vacant IN1Z land (13 land parcels); and
- E-10 (Rowville (south side of Wellington Rd)) has approximately 6.8 ha of vacant IN1Z land (2 land parcels); and

Vacant Commercial 2 Zone land is concentrated primarily in Caribbean Park & Scoresby Industrial (E-07). Vacant land includes:

- E-07 (Caribbean Park & Scoresby Industrial) has approximately 32.2 ha of vacant C2Z land (1 land parcel); and
- E-14 (Enterprise Business Park) has approximately 3.84 ha of vacant C2Z land (3 land parcels).

The remaining vacant Commercial 1 Zone land is distributed across Activity Centres, Neighbourhood Centres and Bulky Goods Corridors, with the largest site located in NC-03 (Wantirna Mall).

The Urban Development Program (UDP) shows that there has not been significant take up of industrial land in Knox in recent years (2ha per annum). This is likely due to the lack of greenfield industrial land supply available, meaning that development has largely been occurring on formerly large industrial lots being subdivided into smaller warehouse and office 'business parks'.

Recent development activity has generally been concentrated in the significant business locations of Scoresby-Rowville-Knoxfield and Bayswater, with ongoing activity in Knox Central and the Burwood Highway East corridor through Ferntree Gully. Warehouse and office developments were most common, with a number of subdivisions of larger industrial sites into smaller tenancies. A significant number of permits were issued to change the use of commercial and industrial buildings to recreation and religious purposes.

4. EMPLOYMENT AND RETAIL PROJECTIONS

4.1. INTRODUCTION

This section provides an assessment of the existing workforce and industry base in Knox and provides employment projections with consideration to projected population growth and other employment drivers. Floorspace projections are derived using two models:

- An Employment Growth Model, which converts the number of projected additional jobs in the municipality into floorspace requirements, taking into account the proportion of employment currently located within the Assessment Areas, current job densities and site coverage averages for each land use; and
- A Retail Model, which estimates growth in retail expenditure, which is then converted into floorspace based on retail benchmarks.

A detailed overview of employment by industry is provided in Technical Report A, which identifies the scale of employment, structure of occupations and relative distribution of business across each assessment area.

Employment projections are categorised using the Australian and New Zealand Standard Industrial Classification (ANZSIC) classification of 19 industry sectors.

4.1.1. KNOX'S WORKFORCE

The estimated resident population as at June 30, 2015 was 155,681 people. Between 2005 and 2015 the resident population increased by 6,319 people. Between 2016 and 2031, the population is projected to increase by 21,184. The average annualised projected population growth between 2016 and 2026 of 0.46% is higher than the average annualised growth rates experienced over the previous 10 years and the highest of the LGA's within the Melbourne East RDA.

The total number of people working in Knox in all Industry sectors in 2011 was 55,807[3]. This represented a -0.82% decrease in local employment from the previous 2006 Census. The top three employers in 2011 within Knox included:

- Manufacturing (22.5%);
- Retail Trade (13.3%); and
- Wholesale Trade (11.2%).

During the previous Census period both positive and negative change was experienced across the industry sectors in terms of local employment. The most significant positive change included:

- Health Care & Social Assistance (13.4%);
- Professional, Scientific & Technical Services (23.8%); and
- Construction (7.9%).

4.1.2. LAND FOR BUSINESS ASSESSMENT AREAS

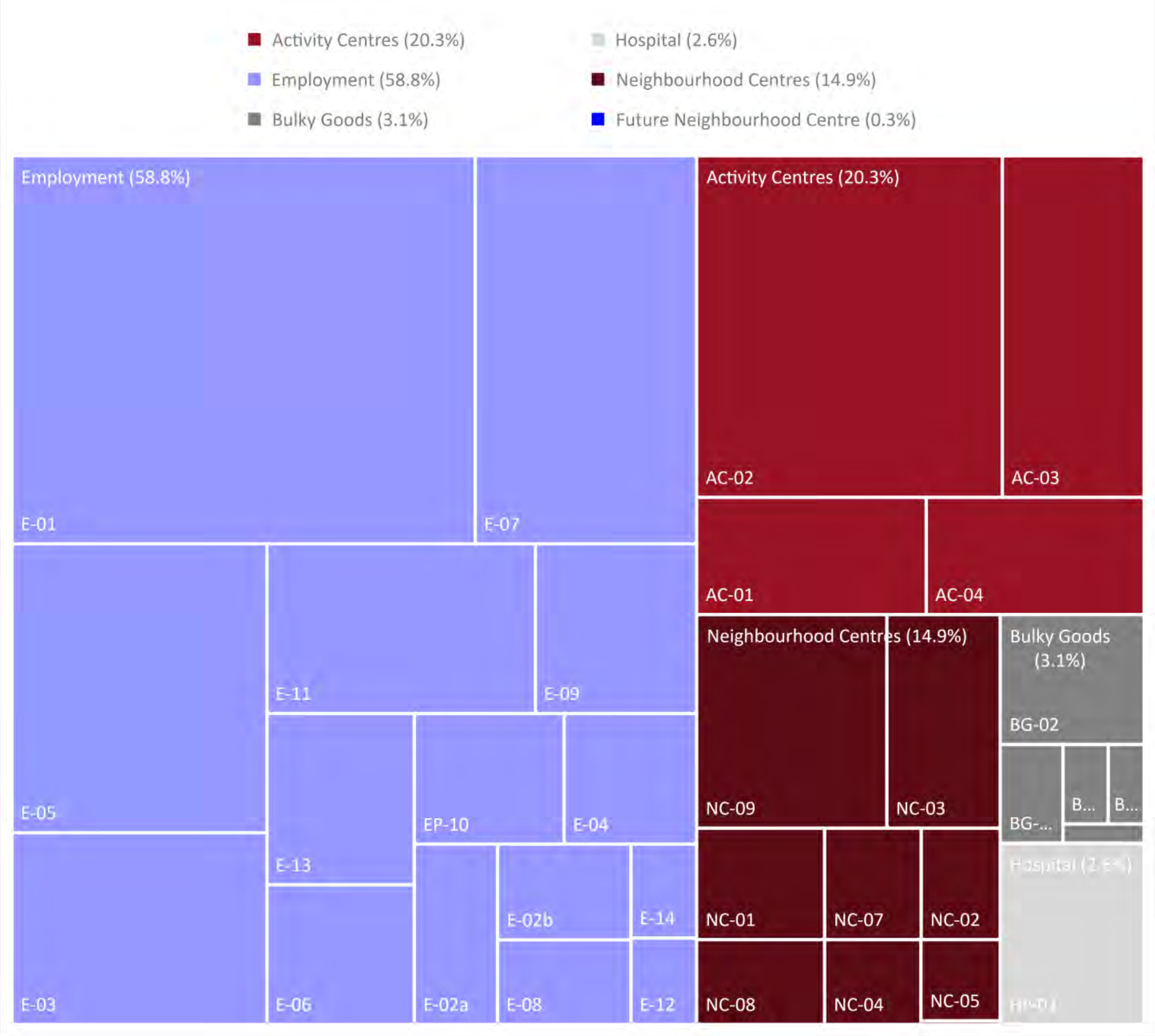
It is estimated that 47,421 or 85% of employment within Knox is located within the assessment areas identified for review in the Land for Business project. The Employment land areas (58.8%) accommodate the largest proportion of employment, followed by Activity Centres

[3] Workforce breakdown by Industry (Place of Work), ANZSIC Industry definition.

(20.3%), Neighbourhood Centres (14.9%), Bulk Goods Corridors (3.1%) and the Hospital Assessment Area (2.6%). The share of employment throughout the assessment areas is visually demonstrated in Figure 9.

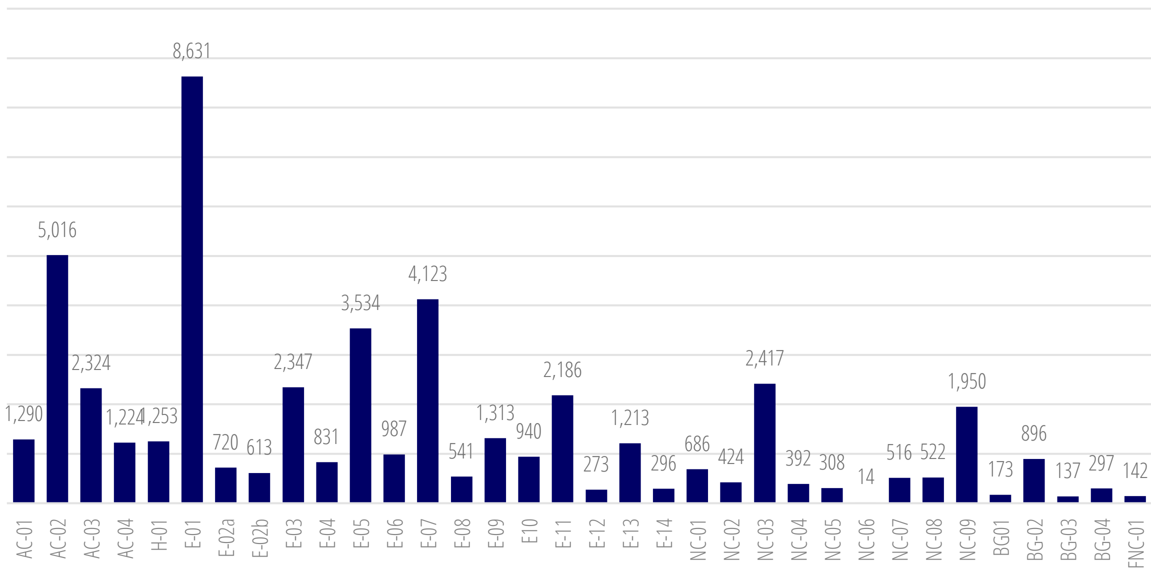
While the Land for Business Assessment Areas contain the bulk of business activity, the relative strengths of industry sectors across each assessment area varies. Figure 10 and Table 7 shows the distribution of employment within the assessment areas and industry sectors.

FIGURE 9 DISTRIBUTION OF EMPLOYMENT



Source: ABS 2011 Census – JTW Data. Compiled by REMPLAN

FIGURE 10 EMPLOYMENT BY ASSESSMENT AREA 2016



Source: Remplan 2016

TABLE 7 EMPLOYMENT BY PRECINCT AND INDUSTRY SECTOR 2016 (ACTIVITY CENTRES AND EMPLOYMENT AREAS)

Industry*	AC-01	AC-02	AC-03	AC-04	HP-01	E-01	E-02a	E-02b	E-03	E-04	E-05	E-06	E-07	E-08	E-09	E-10	E-11	E-12	E-13	E-14	Total
AFF	0	0	0	0	0	5	0	0	15	0	4	0	4	4	0	16	0	0	0	0	49
MI	0	0	0	0	0	4	0	0	4	0	0	0	0	0	3	0	0	0	0	7	18
MA	16	139	59	150	0	3832	327	119	728	267	1676	401	1404	93	960	476	980	0	398	142	12167
EGWWS	0	18	0	0	0	26	32	4	18	13	14	0	20	0	33	0	6	0	0	0	184
C	39	74	82	56	0	594	68	103	141	125	172	190	145	90	86	60	254	92	259	16	2645
WT	0	38	58	17	0	1568	155	45	279	57	755	227	1525	62	56	173	376	0	267	62	5719
RT	619	1825	683	338	0	688	40	43	84	132	290	67	191	150	18	40	91	9	64	23	5395
AFS	272	682	225	104	0	146	0	11	5	154	49	7	13	30	5	7	10	2	0	3	1723
TPW	11	17	16	49	0	223	3	143	108	39	264	17	66	9	27	41	109	0	8	4	1155
IMT	27	188	54	0	0	30	0	0	44	4	8	0	97	5	7	19	28	0	7	0	518
FIS	57	102	101	41	0	51	0	5	284	53	8	0	26	0	0	0	7	0	5	0	739
RHRES	54	55	94	80	0	123	0	5	26	34	4	0	19	0	0	7	14	0	7	0	521
PSTS	37	293	231	107	0	457	9	35	162	84	95	18	342	22	55	46	91	0	62	4	2152
ASS	37	195	72	33	0	114	19	17	41	36	63	7	93	11	7	10	48	0	59	0	862
PAS	28	795	113	25	0	26	3	10	159	65	48	0	29	7	6	3	15	0	0	0	1333
ET	37	86	15	7	0	26	5	5	12	4	10	0	0	55	6	3	3	0	0	13	287
HCSA	8	392	279	161	1253	287	0	18	20	26	6	6	55	4	0	3	6	170	10	22	2724
ARS	9	41	150	0	0	83	0	12	45	25	7	0	48	0	0	10	14	0	7	0	452
OS	39	77	93	54	0	352	57	41	171	144	61	47	46	0	43	25	133	0	60	0	1444
Total AC and E	1290	5016	2324	1224	1253	8631	720	613	2347	1263	3534	977	4123	541	1313	940	2186	273	1213	296	40076

Source: Remplan 2016

* Industry Codes detailed on Page 1 of this report

4.1.3. LOCAL WORKFORCE DRIVERS

There are a number of key drivers for future employment in Knox. These include population, technology, transport infrastructure and non-assessment area based employment.

Manufacturing is the most significant employer in Knox but is undergoing a transition. Capabilities that support lower cost, but higher output businesses are increasingly driving opportunities for smaller entrepreneurial firms. Typically, smaller firms can support greater innovation and increased job creation. While demand for higher order employment is forecast (greater skills in research and development) coupled with advances in technology, it is expected that opportunities for Manufacturing within Australia and locations such as Knox will continue. Long term expectations for a lower Australian dollar and tapering wages growth will also boost the productivity of the sector.

The City of Knox is strategically located at the juncture of significant road transport infrastructure, including East Link, Mountain Highway, Burwood Highway and Ferntree Gully Road. There is significant demand for movement of the workforce both to and from the region to support economic activity. The investment in key Activity Centres located on the Melbourne train network facilitates the movement of the workforce. Despite the projected expansion of Westfield Knox in the Knox Central Activity Centre, the limited rail network may have impacts on the role, function and performance of this centre when compared with locations such as the Ringwood Major Activity Centre (MAC) and the Glen Waverley MAC.

While most employment is contained within the assessment areas, some sectors have representation throughout residential areas and other locations. Most notably this includes Education & Training and Construction, and to a lesser extent Health Care & Social Assistance.

Representation of both Professional Scientific & Technical Services and Other Services is also higher in locations outside of the assessment areas. This typically represents a proportion of self-employed or home-based business that are operating from residential addresses.

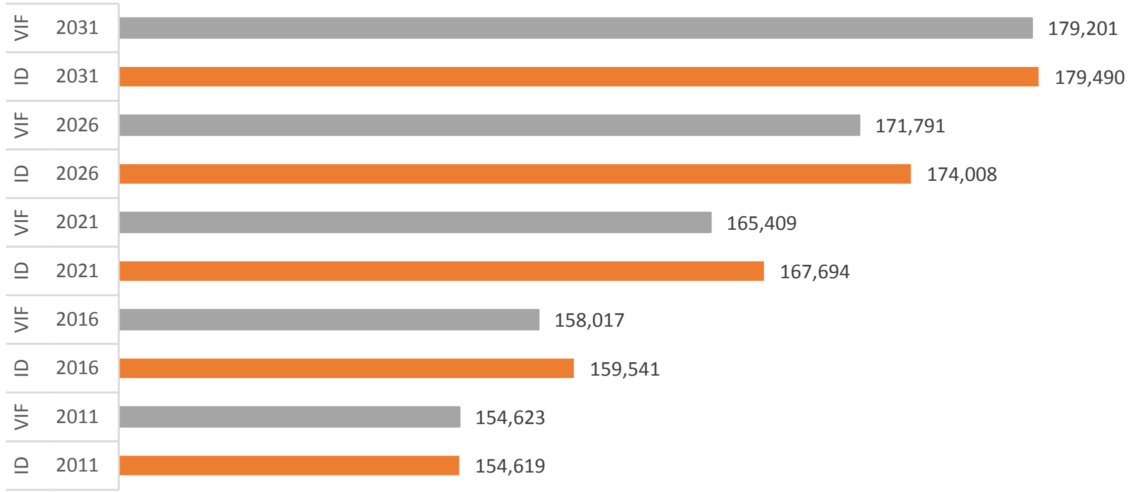
4.1.4. WORKFORCE FORECAST APPROACH

To determine the future workforce scale for 19 Industry sectors, the following factors were considered for each industry sector:

- Residential population projections by age based on VIF and id forecasts;
- The propensity of residents by age cohort to work;
- The propensity of working residents by age cohort to work in particular industry sectors;
- ABS Labour Force Survey based projections of working residents to work in particular industry sectors;
- Smoothed employment forecasts for working residents (across VIF, id and Labour Force based forecast);
- Projections regarding the future propensity of working residents to work locally;
- 'Journey to Work' linked areas, population projections and propensities for people living in these areas to work in Knox;
- Land supply constraints and limitations of commercial expansion in relevant sectors requiring available land to increase either the scale or intensity of their operations;
- Current and planned future infrastructure initiatives likely to impact the accessibility of jobs in Knox for external residents, as well as the accessibility of externally based jobs for Knox City residents; and
- Innovation and technological advances that are enabling new business models and driving structural change.

Two population forecast data sets were used to determine population workforce estimates. Population projection estimates vary between the two forecasts (Figure 11).

FIGURE 11 SUMMARY OF POPULATION PROJECTIONS



Source: Victoria in Future 2015 (Knox LGA), id Forecast 2014.

In 2011, estimates for the projected population for Knox are in the range of 154,619 to 154,623 people. By 2031 the forecast population ranges from 179,201 to 179,490 people, which represents compounding annual growth rates of 0.78% (VIF) and 0.78% (id). While the headline forecasts and growth rates align, there are notable differences year-to-year in the composition (both age and size) of the forecast population, which has significant implications for the propensity of people to be engaged in the workforce and for also their industry sectors of employment.

4.1.5. SUMMARY OF EMPLOYMENT FORECAST FINDINGS

Victoria in the Future, id population forecasts and the REMPLAN Workforce Module have been applied to build an understanding of future residential populations, broken down by age profile. Different age cohorts have varying propensities to be engaged in the workforce, and there are also observable patterns in terms of employment by industry sector for respective age cohorts. For instance, young people are more likely to be employed in sectors such as retail and food services, whereas older workers are more likely to be employed in sectors such as manufacturing, health, education and professional services.

There are also notable patterns across respective industry sectors in terms of where local residents travel for work, and where people working in Knox reside.

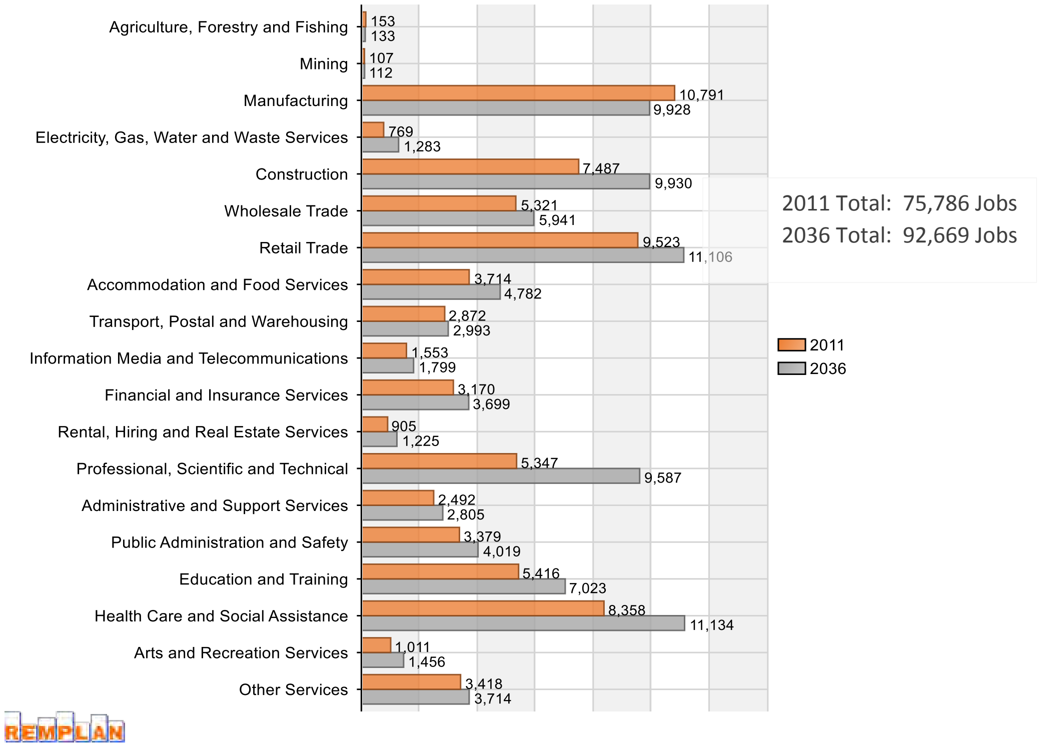
Population projections by age in Knox and the surrounding Melbourne East Region, propensities to work by age cohort, complex patterns of people living in one area and working in another, structural shifts in employment over time, as well as broader strategic and situational analysis have been applied to generate 2 types of employment forecasts for Knox:

1. Employment Forecasts to 2036 – Working Residents;
2. Employment Forecasts to 2036 – Jobs in Knox.

Results are shown in Figures 12 and 13. Between 2011 and 2036 it is forecast that there will be 16,883 additional **working residents** in Knox, an increase of 22.3%. Between 2011 and 2036 it is forecast that there will be 15,142 additional **jobs** in Knox, an increase of 27.1%.

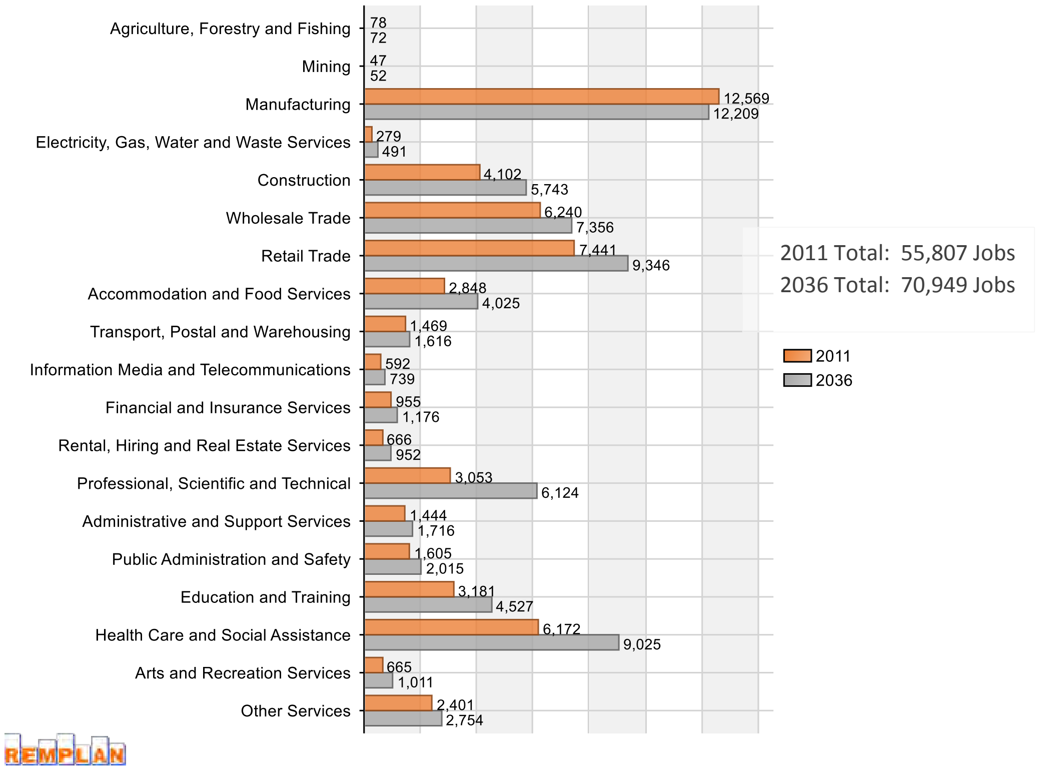
Table 8 provides a breakdown of workforce projections by industry over the next 20 years, and considerations for the assessment areas that may be affected by these changes.

FIGURE 12 EMPLOYMENT FORECASTS – WORKING RESIDENTS



Source: Employment forecasts for working residents, Remplan 2016

FIGURE 13 EMPLOYMENT FORECASTS – JOBS IN KNOX



Source: Employment forecasts for working residents, Remplan 2016.

TABLE 8 INDUSTRY SECTOR FORECASTS – SUMMARY FINDINGS

Industry Sector	Current Jobs (2011)	Assessment Area jobs	% Jobs in Assessment Areas	Workforce Projections				Key Assessment Areas	Impact for Assessment Areas
				2021	2026	2031	2036		
Agriculture, Forestry & Fishing	78	48	61.5%	68	66	69	72	E-04 Mountain Gate Industrial Estate E-11 Rowville (Kelletts Rd)	LOW
Mining	47	22	46.8%	49	49	50	52	E-07 Caribbean Park & Scoresby Industrial	LOW
Manufacturing	12,569	12,569	100%	12,840	12,565	12,390	12,209	E-01 Bayswater (Central) E-03 Knox Central Employment E-05 Knoxfield Employment E-07 Caribbean Park & Scoresby Industrial E-09 Bayswater (East) E-11 Rowville (Kelletts Rd)	HIGH
Electricity, Gas, Water & Waste Services	279	184	66%	382	416	456	491	E-01 Bayswater (Central) E-02a Bayswater (West - Mountain Hwy & Stud Road)	LOW
Construction	4,102	3,332	81.2%	4,933	5,171	5,475	5,743	E-01 Bayswater (Central) E-11 Rowville (Kelletts Rd)	MEDIUM
Wholesale Trade	6,240	6,240	100%	6,841	6,906	7,059	7,356	E-01 Bayswater (Central) E-07 Caribbean Park & Scoresby Industrial	MEDIUM
Retail Trade	7,441	7,137	95.9%	8,398	8,615	8,921	9,346	AC-02 Knox Central Activity Centre AC-01 Rowville Activity Centre E-01 Bayswater (Central) NC-09 Mountain Gate Central	HIGH
Accommodation & Food Services	2,848	2,533	88.9%	3,358	3,524	3,724	4,025	AC-02 Knox Central Activity Centre AC-01 Rowville Activity Centre AC-03 Boronia Activity Centre	HIGH
Transport, Postal & Warehousing	1,469	1,320	89.9%	1,564	1,572	1,589	1,616	E-01 Bayswater (Central) E-05 Knoxfield Employment E-02b Bayswater (West – Stud Rd) E-03 Knox Central Employment E-11 Rowville (Kelletts Rd)	HIGH
Information Media & Telecommunications	592	536	90.5%	654	675	701	739	AC-02 Knox Central Activity Centre E-07 Caribbean Park & Scoresby Industrial	MEDIUM
Financial & Insurance Services	955	919	96.2%	1,067	1,100	1,139	1,176	E-03 Knox Central Employment AC-02 Knox Central Activity Centre AC-03 Boronia Activity Centre	MEDIUM
Rental, Hiring & Real Estate Services	666	666	100%	832	867	910	952	E-01 Bayswater (Central) AC-03 Boronia Activity Centre AC-04 Bayswater Activity Centre	HIGH
Professional, Scientific & Technical Services	3,053	2,634	86.3%	4,315	4,799	5,325	6,124	E-01 Bayswater (Central) E-07 Caribbean Park & Scoresby Industrial AC-02 Knox Central Activity Centre	MEDIUM
Administrative & Support Services	1,444	1,083	75%	1,589	1,606	1,645	1,716	AC-02 Knox Central Activity Centre E-01 Bayswater (Central) E-07 Caribbean Park & Scoresby Industrial	MEDIUM

Industry Sector	Current Jobs (2011)	Assessment Area jobs	% Jobs in Assessment Areas	Workforce Projections				Key Assessment Areas	Impact for Assessment Areas
				2021	2026	2031	2036		
Public Administration & Safety	1,605	1,475	91.9%	1,806	1,863	1,934	2,015	AC-02 Knox Central Activity Centre	MEDIUM
Education & Training	3,181	616	19.4%	3,720	3,905	4,153	4,527	NC-03 Wantirna Mall AC-02 Knox Central Activity Centre NC-09 Mountain Gate Central	LOW
Health Care & Social Assistance*	6,172	3,492	56.6%[1]	7,314	7,717	8,254	9,025	NC-03 Wantirna Mall HP-01 Wantirna Hospitals	MEDIUM
Arts & Recreation Services	665	603	90.7%	850	900	961	1,011	AC-03 Boronia Activity Centre E-01 Bayswater (Central)	MEDIUM
Other Services	2,401	2,012	83.8%	2,622	2,653	2,705	2,754	E-01 Bayswater (Central) E-03 Knox Central Employment E-04 Mountain Gate Industrial Estate E-11 Rowville (Kelletts Rd)	LOW

Source: Remplan 2016

*The projected figures for Health Care and Social Assistance may differ as the Wantirna Hospital Assessment Area develops over time.

1. Includes employment within HP-01. 36% of all health jobs are in employment assessment areas outside HP-01.

The industries that are expected to experience the greatest change over the next 20 years, and the assessment areas that will be most impacted by these changes, are:

- The manufacturing industry is expected to remain a significant industry of employment in Knox, however a decrease in employment is likely to lead to less jobs in Bayswater, Knox Central Employment, Knoxfield and Scoresby. This is likely to be offset somewhat by employment growth in Construction, Transport Postal and Warehousing and Wholesale Trade employment, however these industries may require different land types than those currently occupied by manufacturers;
- Employment in population servicing industries including Retail Trade and Accommodation and Food Services are expected to experience significant job growth, resulting in further land and floorspace required within existing activity centres (particularly Knox Central);
- Employment growth across industries generally requiring office floorspace will lead to significant demand growth for commercial and office floorspace, particularly in Activity Centres and Caribbean Park; and
- Strong employment growth in the health sector will lead to demand for suitable land and buildings within activity centres and near existing health infrastructure, particularly the Wantirna Hospital Assessment Area and Upper Ferntree Gully.

4.2. RETAIL FLOORSPACE PROJECTIONS

This section summarises the current retail floorspace in Knox using rates data provided by Knox City Council, as well as a desktop and ground truth audit of all Activity Centres, Neighbourhood Centres, Bulky Goods Corridors and Strip Shops.

The section also estimates the future demand for retail floorspace from 2016 to 2036 using a Retail Model. Retail floorspace projections are calculated using three projected population growth scenarios (low, moderate and high) and are based on the projected increase in retail expenditure of residents.

OCCUPIED RETAIL FLOORSPACE

Knox currently has 500,158 sqm of occupied gross floorspace categorised as 'retail' in Council's rates database, including retail uses that are in the IN1Z within employment land areas. Through a desktop and ground truth audit, it was observed a significant amount of floorspace categorised as 'retail' within the IN1Z is actually office or industrial uses. This floorspace has been deducted from this analysis.

It is also difficult to distinguish between retail and non-retail uses such as entertainment and recreation (e.g. cinema) within Activity Centres, Neighbourhood Centres and Bulky Goods Corridors in the Council rates database. Entertainment and recreation floorspace is not included in retail expenditure modelling, and has therefore been excluded from the total retail floorspace in this section.

Table 9 shows the estimate of occupied retail floorspace within business zoned land. There is an estimated total of 377,000 sqm of occupied retail floorspace in the City, equating to 2.31sqm per resident. Across Australia, the average retail floorspace provision per person is estimated at 2.29sqm per capita[4] indicating that Knox currently has an average provision of retail floorspace per capita. This reflects the good balance of retail types and activity centres across the City.

TABLE 9 OCCUPIED RETAIL FLOORSPACE BY EMPLOYMENT ASSESSMENT AREA, ACTIVITY CENTRE AND ZONE, KNOX 2016

Centre Type	Occupied C1Z retail floorspace (sqm)	Occupied C2Z retail Floorspace (sqm)	Occupied INZ retail floorspace (sqm)	Total retail (sqm)	% of total
Knox Central Activity Centre	112,354	0	0	112,354	29.8%
Other Activity Centres	88,490	1,427	0	89,917	23.9%
Bulky Goods	0	50,792	0	50,792	13.5%
Employment Areas	0	10,292	28,319	38,611	10.3%
Neighbourhood Centres	49,691	8,426	0	58,118	15.4%
Strip Shops	20,483	0	0	19,558	5.2%
Other	7,054	0	0	7,054	1.9%
Total	**278,071**	**70,938**	**28,319**	**377,328**	**100%**

Source: Council Rates Database, Knox City Council, derived by Urban Enterprise 2016

[4] Essential Economics, Retail Floorspace Forecasts for Metropolitan Melbourne, 2006.

DEMAND PROJECTIONS

Population growth and an expected increase in real retail expenditure per capita over time will result in additional demand for retail floorspace in Knox. Demand for retail floorspace has been projected based on the following, which take into account trends in consumer behaviour:

- The projected increase in population and therefore retail expenditure of Knox residents over time;
- Current retail expenditure per person in Knox derived from MarketInfo micro-simulation data;
- Real retail expenditure growth per capita of 1% per annum for the period 2016 - 2026 to reflect long term upward trends in retail expenditure per person;
- Online retail accounting for 5% in 2016 (based on National Australia Bank estimates of current expenditure patterns), increasing over time to 8% by 2036 to reflect the increasing trend in the online share of retail expenditure; and
- Assumptions of an average retail turnover density of $6,000 per sqm, and an escalation rate of 0.5% per annum over time to reflect higher intensity of use of retail space and higher value goods being sold.

The results of projected retail floorspace demand growth across the municipality from 2016 to 2036 are shown in Table 10. This is based on the broad assumption that the current supply of retail floorspace is adequate to meet the needs of the Knox population, and new residents will drive net additional demand for retail floorspace (along with real per capita spending growth of existing residents). All values shown in this section are expressed in constant 2016 dollars.

It is projected that over the next 20 years the City of Knox could anticipate demand for an additional 91,000sqm of retail floorspace. The Retail Model projection results are derived from the expected increase in retail expenditure of Knox residents based on population growth, as distinct from the Employment Growth Model (in the following section) which derives floorspace demand from projected changes in the economy and subsequent employment growth projections.

TABLE 10 MUNICIPAL RETAIL MODEL, CITY OF KNOX, 2016 - 2036

	AAG%	2016	2026	2036
Municipal Population	0.74%	156,327	168,289	181,165
Per capita expenditure	1.00%	$13,168	$14,545	$16,067
Resident expenditure($m)	1.75%	$2,058	$2,448	$2,911
% captured in-store		95%	93%	92%
Turnover captured in-store ($m)	1.58%	$1,956	$2,289	$2,678
Non-resident expenditure ($m)	1.58%	$313	$366	$428
Total expenditure ($m)	1.73%	$2,371	$2,814	$3,339
Average turnover density ($/sqm)	0.50%	$6,000	$6,307	$6,629
Supportable retail floorspace (sqm)	1.08%	378,000	421,000	469,000
Change in supportable retail floorspace 2016-36 (sqm)				**+91,000**
Change in core retail supportable floorspace 2016-36 (sqm)				+71,000
Change in bulky goods supportable floorspace 2016-36 (sqm)				+19,600

Source: Urban Enterprise, 2016, based on Market info 2014, AAG = Average annual growth. Population data source: 2015 ERP Knox, ABS, increased to 2016 using previous 10 year average growth rate, projected to 2036 based on VIF 2015 growth rate.

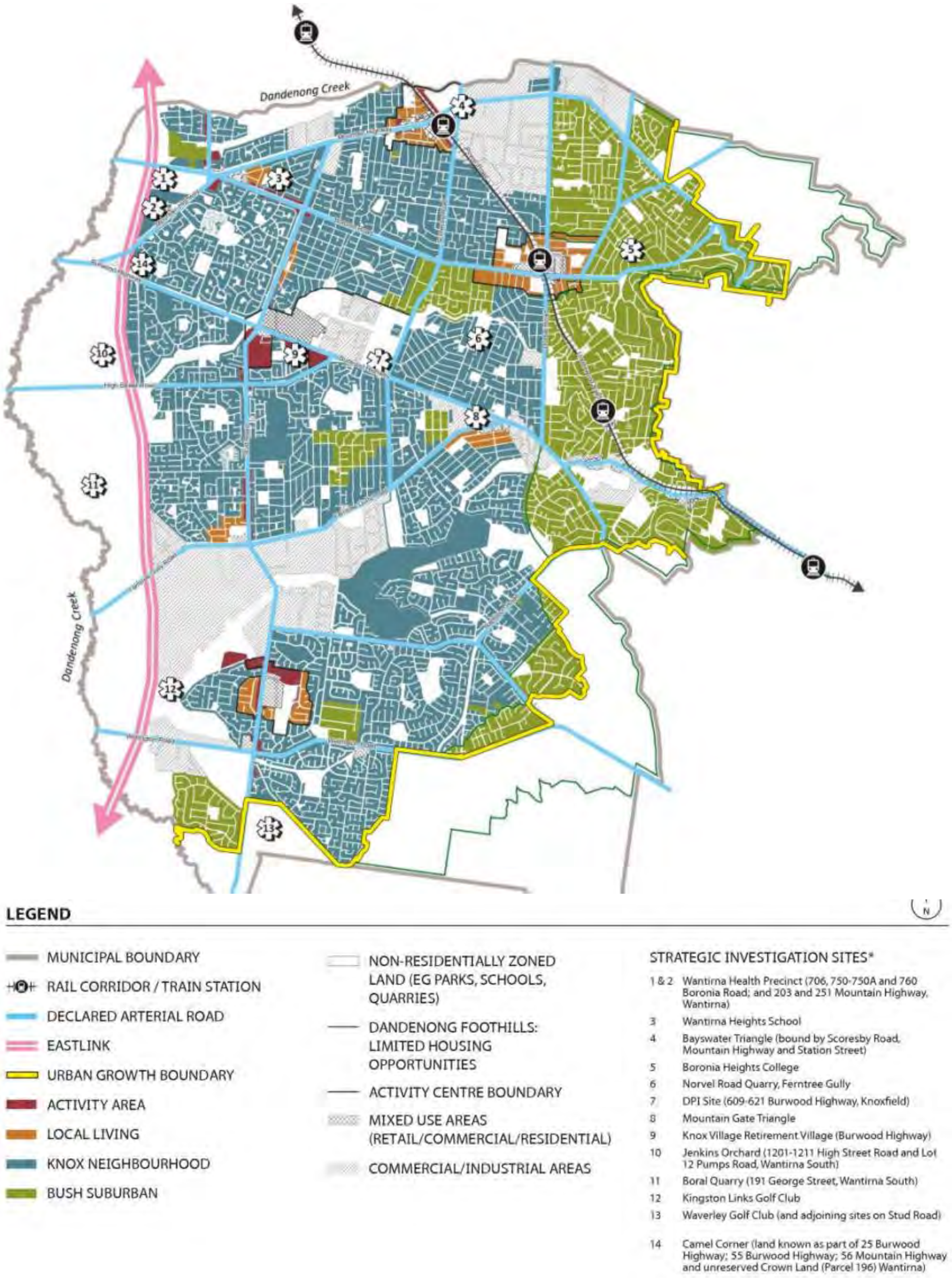
ORIGIN OF ADDITIONAL RETAIL EXPENDITURE

Additional retail expenditure generated by population growth will vary depending on the location of residential development. Additional floorspace will be required in current (and potentially new) activity centres and neighbourhood centres that are well located to service this residential growth.

Figure 14 shows the Knox Housing Framework Plan, which identifies 14 strategic investigation sites for future housing provision in Knox. It is expected that a significant proportion of population and retail expenditure growth will occur in these areas. The Strategic Investigation Sites include:

1. Wantirna Hospital Assessment Area (706, 750-750A and 760 Boronia Road);
2. 203 and 251 Mountain Highway, Wantirna;
3. Wantirna Heights School;
4. Bayswater Triangle (bound by Scoresby Road, Mountain Highway and Station Street);
5. Boronia Heights College;
6. Norvel Road Quarry, Ferntree Gully;
7. DPI Site (609-621 Burwood Highway, Knoxfield);
8. Mountain Gate Triangle;
9. Knox Village Retirement Village (Burwood Highway);
10. Jenkins Orchard (1201-1211 High Street Road and Lot 12 Pumps Road, Wantirna South);
11. Kingston Links Golf Club;
12. Waverley Golf Club (and adjoining sites on Stud Road); and
13. Camel Corner (land known as part of 25 Burwood Highway; 55 Burwood Highway; 56 Mountain Highway and unreserved Crown Land (parcel 196) Wantirna).

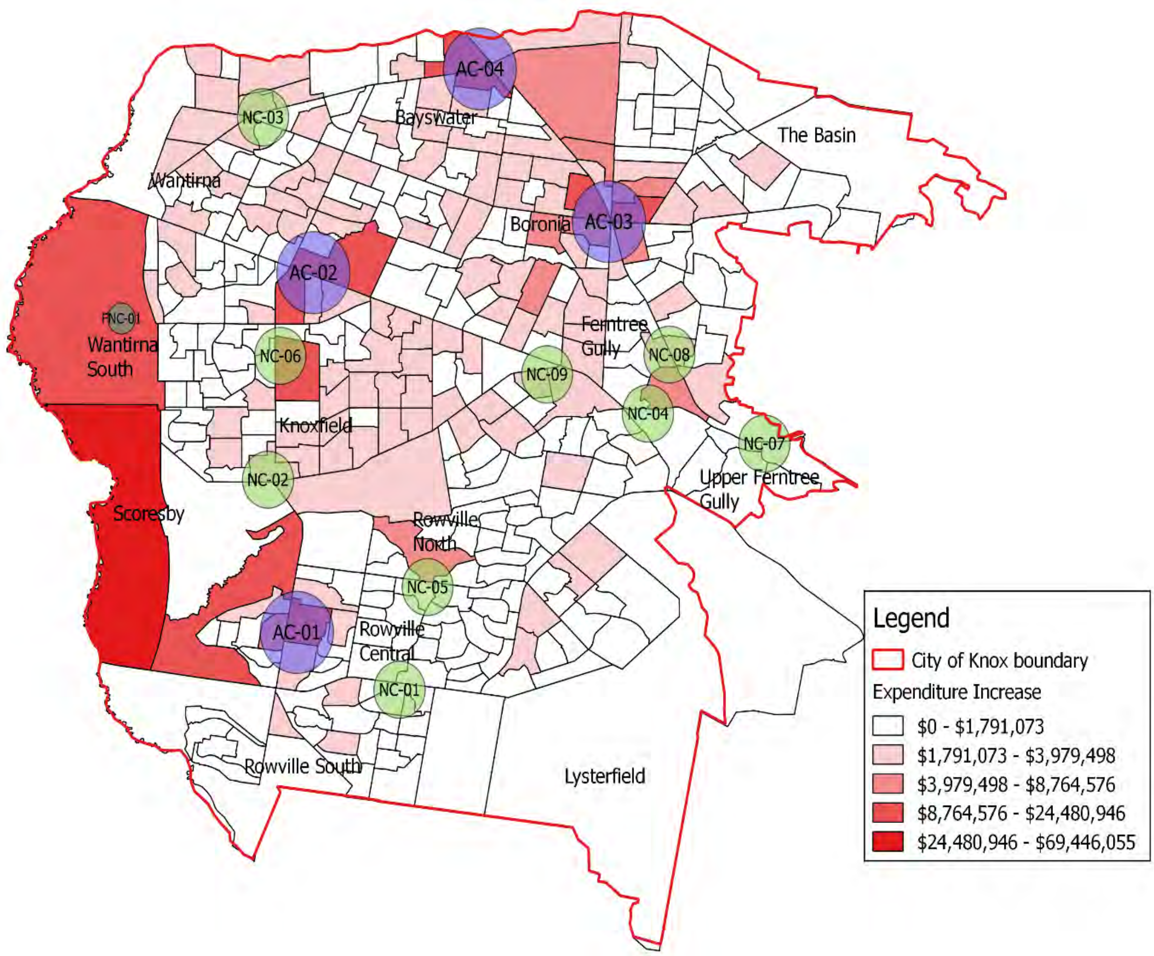
FIGURE 14 HOUSING FRAMEWORK, KNOX HOUSING STRATEGY 2015



Source: Knox Planning Scheme 2016.

Figure 15 shows the expected distribution and location of increases in retail expenditure within Knox using Forecast ID assumptions relating to the location of dwelling growth, key development sites and infill assumptions (drawn from the Housing Strategy). A significant proportion of additional retail expenditure is expected to occur along the western municipal boundary in major redevelopment areas. The proposed The Orchards Neighbourhood Centre will service some of the future residential growth in this area.

FIGURE 15 LOCATION OF PROJECTED INCREASES IN POPULATION AND RETAIL EXPENDITURE



Source: Retail Expenditure, Market Info 2014 / Forecast ID 2016, derived by Urban Enterprise 2016 using SA1 boundaries.

Table 11 shows the projected population growth for local retail catchments within Knox, the additional retail expenditure and additional supportable retail floorspace from 2016 to 2036. Retail floorspace demand is broken into each broad retail category, including:

- **FLG/FC/RS** – Food, Liquor, Groceries/Food Catering/Retail Services;
- **AHL** – Apparel, Homewares, Leisure; and
- **BG** – Bulky Goods.

The majority of demand for AHL and BG activity is expected to be absorbed by AC-02 (Knox Central Activity Centre), Bulky Goods Centres in Knox and higher order centres in other municipalities such as Eastland, Chadstone, The Glen and the Melbourne CBD.

The majority of FLG/FC/RS retail expenditure is likely to be absorbed by local retail centres (e.g. smaller activity and neighbourhood centres), especially in supermarkets, take away food and personal care retailers.

It is noted that this Local Retail Model generates a slightly higher retail floorspace demand than the Municipal Retail Model shown in Table 10 due to different base information available to inform an assessment of this detail (i.e. Forecast ID population projections at the local area).

One aspect of this demand model that is somewhat uncertain is the future timing, yield and land use mix within the proposed Boral Quarry redevelopment. In the absence of other guidance, projected demand for retail floorspace from early population estimates (4,400 residents) has been distributed to proximate retail centres with full line supermarkets including AC-02 Knox Central (50%) and AC-01 Rowville, NC-02 Scoresby Village Shopping Centre and FNC-The Orchards (16.5% each). This distribution should be reviewed once further details are available regarding the redevelopment.

TABLE 11 LOCAL RETAIL MODEL - PROJECTIONS BY INDICATIVE RETAIL CENTRE CATCHMENT, 2016 - 2036

Centre/ Catchment	Population increase 2016 - 2036	Additional Expenditure 2016-2036	Additional floorspace supported by catchment residents (sqm)	Additional FLG/FC/RS floorspace (sqm)	Additional AHL floorspace (sqm)	Additional BG floorspace (sqm)
AC-01	3,389	$91,660,000	10,900	5,100	3,500	2,300
AC-02	5,570	$161,800,000	19,000	9,000	6,000	4,100
AC-03	4,121	$142,870,000	15,600	7,500	4,900	3,300
AC-04	3,059	$86,870,000	10,000	4,800	3,100	2,100
NC-01	45	$33,820,000	2,700	1,300	900	600
NC-02	1,597	$50,570,000	5,700	2,700	1,800	1,200
NC-03	848	$38,550,000	4,100	1,900	1,300	900
NC-04	121	$19,680,000	1,700	800	500	400
NC-05	167	$44,470,000	3,700	1,700	1,200	900
NC-06	1,800	$53,460,000	6,200	2,900	1,900	1,300
NC-07	0	$6,940,000	500	200	200	100
NC-08	142	$20,070,000	1,700	800	500	400
NC-09	1,069	$57,340,000	5,700	2,700	1,800	1,200
FNC-01	1,909	$31,540,000	4,300	2,000	1,400	900
Total	23,838	$839,660,000	91,900	43,300	27,600	18,700

Source: Retail Expenditure, Market Info 2014. Population growth: Forecast ID 2016, small area catchment breakdowns derived by Urban Enterprise 2016. Note: catchments are based on supermarkets. AC-02 (Knox Central Activity Centre) is a major retail centre with a broader catchment for other retail goods and services that attracts residents from across and outside Knox, and will therefore absorb a significant proportion of non-convenience expenditure such as apparel, homewares and leisure in addition to food and retail services.

4.2.1. PROPOSED RETAIL DEVELOPMENTS

A number of retail developments are proposed to be constructed in the short to medium term in the municipality.

The Knox Central Structure Plan was informed by economic analysis which estimated demand for a total of 70,000 sqm of retail floorspace in the Centre over the period 2015-2035, most of which is expected to be absorbed by expansion of the Knox Central Shopping Centre. Consultation with centre representatives confirmed that the shopping centre will undergo a significant expansion in the short term to incorporate an additional 30,000 sqm of retail floorspace, with construction expected to commence in 2018. The expansion will increase the total floorspace of the centre from 130,000 sqm to 160,000 sqm, resulting in a higher total retail floorspace than competitors Doncaster and Eastland. The expansion of Knox Central is expected to include 100 speciality stores, 2 department stores and a full line supermarket.

It is likely that the expansion of Knox Central will cater to latent demand for higher order retail floorspace, and attract additional expenditure from residents outside the municipality (eg. Monash). A second stage expansion of the shopping centre is also proposed over the medium to long term, however the timing, scale and retail mix is not yet known.

A Future Neighbourhood Centre (FNC-01) will be established in Wantirna South west of Eastlink (The Orchards development) and will service residents of The Orchards development area. It is likely that this centre will be anchored by a supermarket and accommodate in the order of 5,000sqm of retail floorspace.

Future supermarkets are also proposed in Rowville Activity Centre and Boronia Activity Centre (Aldi). A Planning Scheme Amendment (C145) was exhibited in September 2016 to rezone land from Commercial 2 to Commercial 1 to facilitate development of the proposed Boronia Aldi supermarket, allowing a total of 1,860sqm of retail floorspace.

Overall, current retail proposals comprise a total of approximately 40,000sqm of additional retail floorspace across the municipality, all of which is likely to be constructed within the next 5 - 10 years.

4.3. LAND REQUIREMENTS

EMPLOYMENT GROWTH MODEL FLOORSPACE REQUIREMENTS

This section provides an estimate of floorspace and land requirements within Knox to accommodate projected employment growth from 2016 to 2036, based on the employment projections prepared by Remplan contained in **Technical Report A**.

For the purpose of this assessment, certain assumptions have been applied. Employment projections have been converted to floorspace requirements using employment density benchmarks. Benchmarks have been derived through an analysis of current floorspace to employment ratios within the City of Knox, along with other employment analysis reports prepared by Urban Enterprise for the Monash National Employment Cluster and other examples within the Cities of Moreland and Greater Dandenong.

Table 12 details net additional floorspace requirements from 2016 to 2036 (by five year periods) for each industry, including floorspace both within Land for Business Assessment Areas and elsewhere in the municipality.

TABLE 12 EMPLOYMENT GROWTH MODEL - ADDITIONAL FLOORSPACE REQUIRED IN KNOX 2016-2036

Industry	Employment Change from 2016				Benchmark (sqm/job)	Change in floorspace required from 2016 (sqm)			
	2021	2026	2031	2036		2021	2026	2031	2036
Agriculture, Forestry & Fishing	-11	-13	-10	-7	95	-1,045	-1,235	-950	-665
Mining	0	2	2	3	95	0	190	190	285
Manufacturing	-172	-447	-622	-803	120	-20,640	-53,640	-74,640	-96,360
Electricity, Gas Water and Waste Services	37	71	111	146	90	3,330	6,390	9,990	13,140
Construction	266	504	808	1,076	70	18,620	35,280	56,560	75,320
Wholesale Trade	177	242	395	692	100	17,700	24,200	39,500	69,200
Retail Trade	212	429	735	1,160	45	9,540	19,305	33,075	52,200
Accommodation and Food Services	140	306	506	807	35	4,900	10,710	17,710	28,245
Transport, Postal and Warehousing	22	30	47	74	100	2,200	3,000	4,700	7,400
Information Media and Telecommunications	23	44	70	108	35	805	1,540	2,450	3,780
Financial and Insurance Services	42	75	114	151	35	1,470	2,625	3,990	5,285
Rental, Hiring and Real Estate Services	40	75	118	160	35	1,400	2,625	4,130	5,600
Professional, Scientific and Technical Services	473	957	1,483	2,282	35	16,555	33,495	51,905	79,870
Administrative and Support Services	42	59	98	169	35	1,470	2,065	3,430	5,915
Public Administration & Safety	73	130	201	282	60	4,380	7,800	12,060	16,920
Education and Training	211	396	644	1,018	70	14,770	27,720	45,080	71,260
Health Care and Social Assistance	449	852	1,389	2,160	40	17,960	34,080	55,560	86,400
Arts and Recreation	50	100	161	211	35	1,750	3,500	5,635	7,385
Other Services	45	76	128	177	35	1,575	2,660	4,480	6,195
Total	2,119	3,888	6,378	9,866		96,740	162,310	274,855	437,375

Source: Urban Enterprise / Remplan 2016

EMPLOYMENT SUPPORTED WITHIN BUSINESS ZONES

Not all of the expected growth in employment will occur within existing Land for Business Assessment Areas. A proportion of employment is currently located outside land in commercial and industrial zones. For example, most education institutions are located within Special Use and Public Use Zones, resulting in a minimal requirement for business zoned land, and a number of other businesses are operated from residences.

Table 13 shows that, assuming that the current proportion of employment within commercial and industrial zones is maintained for each industry, 284,000 sqm of additional employment floorspace will be required in the Knox LFB assessment areas by 2036. The industries that will require the most floorspace include:

- Professional, Scientific and Technical Services: +69,000 sqm;
- Wholesale Trade: +69,000 sqm;
- Construction: +61,000 sqm;
- Retail Trade: +50,000 sqm; and
- Health Care and Social Assistance: +31,000 sqm (excluding land within HP-01).

Floorspace required to support the employment in the manufacturing industry is projected to decrease by approximately 96,000 sqm over the next 20 years.

TABLE 13 EMPLOYMENT GROWTH MODEL - ADDITIONAL FLOORSPACE REQUIRED WITHIN LAND FOR BUSINESS ASSESSMENT AREAS, 2016-2036

Industry	Projected Net Employment Change 2016-36	% Jobs in LFB Assessment Areas	Additional jobs in LFB Assessment Areas	Net additional floorspace required in LFB Assessment Areas (sqm)
Agriculture, Forestry & Fishing	-7	62%	-4	-409
Mining	3	47%	1	133
Manufacturing	-803	100%	-803	-96,360
Electricity, Gas Water and Waste Services	146	66%	96	8,659
Construction	1,076	81%	874	61,160
Wholesale Trade	692	100%	692	69,200
Retail Trade	1,160	96%	1,112	50,060
Accommodation and Food Services	807	89%	717	25,110
Transport, Postal and Warehousing	74	90%	67	6,653
Information Media and Telecommunications	108	91%	98	3,421
Financial and Insurance Services	151	96%	145	5,084
Rental, Hiring and Real Estate Services	160	100%	160	5,600
Professional, Scientific and Technical Services	2,282	86%	1,969	68,928
Administrative and Support Services	169	75%	127	4,436
Public Administration & Safety	282	92%	259	15,549
Education and Training	1,018	19%	197	13,824
Health Care and Social Assistance	2,160	36%[1]	784	31,343
Arts and Recreation	211	91%	191	6,698
Other Services	177	84%	148	5,191
Total	**9,866**	**69%**	**6,831**	**284,281**

Source: Urban Enterprise / Remplan, 2016.

1. Excluding HP-01. Further employment growth will be accommodated in HP-01 as planning and development progresses.

EMPLOYMENT GROWTH MODEL LAND REQUIREMENTS

Existing site coverage ratios for Knox LFB Assessment Areas show that, on average:

- Industrial floorspace takes up 38% of land area;
- Commercial floorspace takes up 31% of land area;
- Retail floorspace takes up 34% of land area; and
- Other floorspace (health and education) takes up approximately 32% of land area.

Applying these ratios to the projected business land floorspace requirements, it is estimated that 86.1 ha of business land will be required by 2036, as shown in Table 14. This includes 37.1 ha of commercial land, 12.9 ha of industrial land, 22.1 ha of retail land and 14.1 ha of land for health and education (within commercial and industrial zones).

TABLE 14 EMPLOYMENT GROWTH MODEL FLOORSPACE AND LAND AREA REQUIREMENTS -2016 -2036

Land Use	Industries supported	Indicative Zones	Floorspace (sqm)	Land Area (Ha)
Industrial	Manufacturing, Construction, Wholesale Trade, Transport Postal and Warehousing, Agriculture and Mining and Electricity, Gas, Water and Waste Services	IN1Z, IN3Z	49,000	12.9
Office	Information Media and Telecommunications, Financial and Insurance Services, Rental, Hiring and Real Estate Services, Professional, Scientific and Technical Services, Administrative and Support Services, Public Administration & Safety, Arts and Recreation and Other Services.	C1Z, C2Z, IN1Z	115,000	37.1
Retail	Retail Trade, Accommodation and Food Services	C1Z, C2Z	75,000	22.1
Health and Education	Health Care and Social Assistance, Education and Training	C1Z, C2Z	45,000	14.1
Total			284,000	86.1

Source: Urban Enterprise 2016

4.4. KEY FACTORS INFLUENCING FUTURE LAND REQUIREMENTS

INDUSTRIAL LAND

Although the amount of industrial land required to accommodate the projected net increase in employment in industry sectors that require industrial land is in the order of 13 ha (based on the Employment Growth Model), the total amount of land required may significantly exceed this quantum for the following reasons:

- The industrial role of Knox is in transition, and there is a lack of available greenfield land to accommodate purpose-built facilities for businesses looking to move to or within the municipality. Further, the projected decrease in employment in the manufacturing industry is expected to result in more industrial premises being vacated on larger lots, which then become available for smaller manufacturing lots and other industrial land uses such as distribution, construction and wholesale trade. These growing industries will require a range of lot and building sizes, generally medium to small premises in proximity to major transport routes, and the space needs will not always be met by existing lot sizes and premises. There is expected to be a time lag during which planning and development of new lots occurs to provide premises that are better aligned with demand. Therefore, it is expected that more land will be required in the short to medium term than would otherwise be required if broad hectare land was available to be subdivided in a manner which directly meets the new needs of businesses;
- Consumption of vacant industrial land has averaged 2ha per annum over the past 3 years, following a period of much higher land consumption between 2005 and 2010 of 8.4ha per annum. The construction of the Eastlink freeway led to strong industrial land consumption in the west of Knox that influenced the 8.4ha per annum rate of consumption, while the lack of remaining greenfield land is likely to have led to the more recent low vacant land consumption rates; and
- An average of 8,500sqm of additional industrial floorspace was approved for construction each year in the City of Knox over the period 2009 – 2016[5]. If this rate of development were to continue, a total of 170,000sqm of additional industrial floorspace would be required over the next 20 years, requiring approximately 45 ha of industrial land at the current Knox average industrial site coverage of 38%.

Taking both the Employment Growth Model result (49,000sqm) and a projection based on the recent rate of construction (170,000sqm) into account, an average rate of industrial floorspace growth has been adopted of 109,500sqm over the 20 year period. This floorspace would result in demand for 29 hectares of industrial land at 38% site coverage. A higher growth scenario would result in demand for up to 40ha over the period at an average land consumption rate of 2ha per annum – this scenario could be considered as a contingency amount.

This land should be within the Industrial 1 Zone (or Industrial 3 Zone if in locations that require consideration of buffer zones to sensitive nearby uses). Research and consultation undertaken for this project has indicated that there is no clear demand or requirement for heavy industries that would require land in the Industrial 2 Zone within Knox.

As the Knox economy transitions to more knowledge intensive forms of economic activity and a different mix of industrial land uses, the types of land required will also change. Larger manufacturers and transport businesses are seeking large sites, cheap land and direct freeway network access in nearby areas such as Dandenong and Pakenham. Economic opportunities in the high-tech manufacturing, construction and wholesale trade industries will generally require smaller lots than traditional manufacturing, seek opportunities to form clusters of similar activity, and seek locations close to main road networks, activity centres and other supporting services. Across metropolitan Melbourne, industry types that occupy zoned industrial land[6] found the following average land size occupancy for major industries:

- Transport, Postal and Warehousing – 1.6 ha;
- Rental, Hiring, and Real Estate Services – 0.8 ha;

---

[5] Victorian Building Authority, 2017.

[6] Spatial Economics, 2009, Composition of Industrial Land – Melbourne.

- Manufacturing – 0.7 ha;
- Wholesale Trade – 0.6 ha; and
- Construction – 0.5 ha.

The Construction and Wholesale Trade industries constitute the majority of projected employment growth and additional industrial land requirements, and these industries have the lowest average land size across Melbourne.

Overall, it is expected that industrial land in Knox will be most sought after in locations in proximity to Eastlink; within or near major employment land areas, major anchor businesses and activity centres; and in areas which offer smaller lots in higher amenity employment land environments compared with traditional larger lots in many established industrial areas.

LAND AND FLOORSPACE FOR OFFICE USES

There is expected to be significant demand for additional office floorspace and land over the next 20 years in Knox. Employment growth in Industries which typically require office floorspace is expected to generate demand for an additional 115,000 sqm by 2036. In addition, some businesses in the growing health sector will also require office space.

The land area required to accommodate office floorspace will depend on the type of developments that take place over the next 20 years including large scale multi-level offices (for example in Caribbean Park and other employment land areas) and smaller scale activity centre developments (which are often combined with retail and other commercial uses). Although Knox does not currently accommodate many stand-alone large 'headquarter' office buildings, the recent construction of multi-level office space in Caribbean Park indicates that some larger scale office floorplates may be feasible in the coming years. However, it is expected that the majority of office demand will be from micro, small and medium businesses requiring small to medium office premises in close proximity to activity centres and residential areas.

It is likely that the 37ha of land to meet projected employment growth in industries using office floorspace will not be required in full, given the likelihood that new office will be constructed at greater site coverages than the current situation, primarily due to many office spaces likely to be constructed at upper levels within activity centres.

Land will primarily be required in the Commercial 1 Zone, however the Commercial 2 Zone can also accommodate a significant proportion of office space, especially in Caribbean Park. Given that there is very limited vacant land within the Commercial 1 Zone, it is likely that some land within the Commercial 2 Zone and Industrial 1 Zone will continue to be converted to office uses over time, given there is no policy or zone controls currently directing or limiting office floorspace.

Office uses have higher employment densities than industrial and other commercial uses, and businesses generally seek higher amenity locations proximate to services. It is important that the majority of office floorspace is accommodated in areas within or near activity centres and along public transport routes.

Council has the option of introducing a cap on office floorspace in industrial zones – this is an option to be considered in the Future Directions Plan.

RETAIL AND COMMERCIAL LAND

The Employment Growth Model found that additional employment in the Retail Trade and Accommodation and Food Services sectors will require an additional 75,000sqm of floorspace and 22 ha of land. This covers all retail types, including core retail and bulky goods.

The Municipal Retail Model shows that population growth and per capita retail expenditure growth is expected to generate significant additional demand for retail and related floorspace over the next 20 years, resulting in an estimated increase in supportable retail floorspace in the order of 91,000sqm over the period 2016 to 2036, including 71,000sqm of core retail floorspace and 20,000sqm of bulky goods.

It is considered appropriate for strategic planning to accommodate the higher end of the range of potential demand outcomes to ensure that sufficient land is available for business over the next 20 years. Therefore, the results of the Municipal Retail Model are carried forward in this report.

The majority of this floorspace would be required within the Commercial 1 Zone in existing and new activity centres, with secondary allowances for restricted retail to locate within the Commercial 2 Zone (19,000sqm) and convenience retail to locate in the Industrial 1 Zone.

The Westfield Knox expansion within the Knox Central Activity Centre will result in significant floorspace growth (30,000sqm, Stage 1) within existing zoned land through increased site utilisation, with the balance of floorspace to be delivered potentially also at this site and in other parts of the municipality.

Given the lack of vacant land in the Commercial 1 Zone, and the expected strong competition from office and residential uses for land in activity centres, it will be important for Council to identify strategic opportunities to support additional retail floorspace growth, and encourage efficient use of land within existing activity centres.

The implications of changes to the commercial zones are discussed in the following section.

HEALTH SECTOR

Significant employment growth is projected in the health sector, with an estimated 31,000 sqm of floorspace required over the next 20 years within business zones (in addition to the employment growth that could be accommodated in other areas such as hospitals, including within the Wantirna Health Precinct). Note: this excludes education, which when combined with health comprises estimated demand for 45,000sqm of floorspace over the projection period.

The majority of health floorspace demand is expected to be located within medical centres, allied health facilities, child care centres, general office space and retail shopfronts. Demand for these facilities will be led by population growth (primarily in the west of the municipality and around existing activity centres) and ageing of the existing population (municipal-wide). Businesses will be likely to seek proximity to existing and new population concentrations and public transport routes, as well as co-locating with other medical centres and hospitals. The Wantirna Health Precinct, and to a lesser extent the Angliss Hospital in Upper Ferntree Gully, present particularly strong opportunities to facilitate health clusters. It is important that sufficient land is available within suitable employment zones (both Commercial 1 Zone and Commercial 2 Zone) near hospitals and along public transport routes.

THE ROLE OF CARIBBEAN PARK

As mentioned earlier, the availability of land for business in Knox will rely heavily on the release of land and the provision of supporting infrastructure within Caribbean Park, the only greenfield land for business in the municipality.

The Caribbean Business Park Development Plan (Tract, April 2012) identifies that the majority of the remaining vacant land is within an area designated as an 'Office Park' which will "comprise high quality industrial / business and office park uses catering for high end information technology, research and development." The Development Plan expects that "Warehouse and distribution businesses will also be accommodated within the precinct" and that "typical future tenants may include warehousing and distribution, research and development, technology and associated office uses as subject to market demand." (p.13)

Discussions with the land owner confirmed that much of the remaining land will be used for multi-storey offices, with a longer term opportunity for a retail-based activity centre. Industrial land will be available on individual vacant lots remaining in the assessment area containing 'existing development', and may also be accommodated in the Office Park subject to demand, although the Office Park area is expected to primarily accommodate stand-alone multi-storey office buildings.

4.5. COMPARING LAND REQUIREMENTS WITH LAND AVAILABILITY

Table 15 shows a comparison of land requirements against vacant land supply. Land requirements are derived from the Municipal Retail Model (Section 4.2) and Employment Growth Model land requirements (Section 4.3), and adjusted in line with the factors discussed in Section 4.4.

Overall, future employment and business growth will generate significant demand for additional land for business up to a total land requirement estimated in the order of 105 -120 ha. Major sites, such as Caribbean Park, Knox Central and The Orchards, have capacity to accommodate approximately 10 hectares of industrial land demand, 60,000sqm of office floorspace and 40,000 sqm of retail floorspace over the next 20 years. The balance of land demand (approximately 65ha) would need to be met across the municipality in existing Employment Precincts and Activity Centres. At present, there is a total of 37.5ha of vacant land available in these areas (outside the major sites identified), indicating that there is likely to be a significant overall shortfall of employment land within the next 20 years in the City of Knox unless additional land is zoned for business purposes.

When individual land uses are considered, it is apparent that there could be significant land shortages for office, retail and health and education uses. These uses generally require land in the Commercial 1 Zone and Commercial 2 Zone, however there is clear lack of vacant land supply in these zones (6.9ha excluding Caribbean Park). There is a particular lack of vacant land in the Commercial 1 Zone, which is the primary zone to accommodate office and retail uses.

There is likely to be sufficient land in the Industrial 1 Zone to accommodate projected demand from businesses requiring industrial land assuming that 10ha of the remaining land in the Caribbean Park estate is available for industrial use. However as mentioned earlier, there is expected to be a significant transition in the types of industrial businesses operating in the municipality with a decrease in manufacturing employment and an increase in other industrial sectors. It is important that existing industrial land is retained to enable this transition to occur, and, where relevant, policy introduced to reinforce the importance of industrial land to underpin the Knox economy.

Major sites have the following indicative capacities:

- Caribbean Park: 60,000 office floorspace, 10ha industrial land and 5,000sqm retail;
- Knox Central: 30,000sqm retail;
- The Orchards: 5,000 sqm retail plus ancillary commercial;
- Vacant Masters store: 10,000sqm bulky goods retail.

The balance of land demand would need to be met across the municipality in existing Employment Land areas and Activity Centres.

TABLE 15 COMPARISON OF BUSINESS LAND REQUIREMENTS AND AVAILABILITY

Land Use	Demand 2016-36			Major sites				Balance to be accommodated		Balance vacant supply available		
	Floorspace (sqm)	Ave Site coverage	Land area (ha)	Caribbean Park	Knox Central Stage 1	The Orchards	Masters	Floorspace (sqm)	Land area (ha)	IN1Z	C1Z	C2Z
Industrial	109,500	38%	28.8	30,000				79,500	20.9	30.6		
Office	115,000	31%	37.1	60,000				55,000	17.7			
Core retail	71,000	34%	20.9	5,000	30,000	5,000		31,000	9.1			4.0
Bulky goods retail	20,000	34%	5.9				10000	10,000	2.9		2.9	
Health and Education	45,000	32%	14.1					45,000	14.1			
Total	**360,500**		**106.7**					**220,500**	**64.7**	**30.6**	**2.9**	**4.0**

Source: Urban Enterprise, 2016.

4.6. FLOORSPACE PROJECTIONS

Floorspace projections have been prepared for the municipality and for each Assessment Area based on the availability of vacant land, likely land uses suited to each Assessment area and known development proposals. The methods applied to establish the projections and the forecast results are shown in Appendix B.

4.7. KEY BUSINESS LAND FINDINGS

Retail

- Knox's current occupied retail floorspace is in the order of 377,000 sqm. Approximately 200,000 sqm of existing retail floorspace is located within the four Activity Centres. Knox Central Activity Centre (AC-02) includes the largest provision of retail floorspace in the municipality (112,000 sqm).
- By 2036, it is estimated that Knox could support 91,000sqm of additional retail floorspace, driven by population and real expenditure growth. The majority of Food, Liquor, Groceries (FLG), Food Catering (FC), Retail Services (RS) and Apparel, Homewares and Leisure (AHL) expenditure will be absorbed by the existing Activity Centres, and in particular AC-02 (Knox Central Activity Centre).
- Knox Central Activity Centre (AC-02) will undergo a significant expansion anticipated to commence in 2018. The expansion is expected to provide an additional 30,000 sqm of retail floorspace. 100 speciality retail stores, 2 department stores and a full line supermarket will be provided. It is expected that AC-02 and FNC-01 will absorb a significant proportion of the projected demand for retail floorspace over the next 10 years.
- The majority of population and dwelling growth in Knox over the next 20 years is expected to occur within and adjacent to existing Activity Centres. This will further centralise demand for retail floorspace in the centres of Bayswater, Boronia and Knox Central, requiring these centres to support a higher retail role and service the population for both convenience-based and higher order retail.
- It is expected that existing role of Neighbourhood Centres in Knox will not significantly change over time. Neighbourhood Centres will continue to service nearby residential areas and attract passing trade. A Future Neighbourhood Centre (FNC-01) will be established in Wantirna South and will service the resident population of the proposed Orchards development.

Land Requirements for Business

Based on employment projections by industry, 284,000 sqm of additional employment floorspace will be required in the Knox LFB assessment areas and activity centres by 2036. The industries that will require the highest proportion of floorspace include:

- Professional, Scientific and Technical Services: +69,000 sqm;
- Wholesale Trade: +69,000 sqm;
- Construction: +61,000 sqm;
- Retail Trade: +50,000 sqm; and
- Health Care and Social Assistance: +31,000 sqm (excluding land within HP-01).

Floorspace required to support the employment in the manufacturing industry is projected to decrease by approximately 96,000 sqm over the next 20 years.

It is recommended that Knox should plan for additional industrial land in the range of 29ha to 40ha over the next 20 years. The current land supply is sufficient to accommodate this demand if Caribbean Park provides in the order of 10ha of land for industrial use, and other vacant land across the municipality is made available to the market.

This land should be within the Industrial1 Zone (or Industrial 3 Zone if in locations that require consideration of buffer zones to sensitive nearby uses such as residential areas). Research and consultation undertaken for this project has indicated that there is no clear demand or requirement for heavy industries that would require land in the Industrial 2 Zone within Knox.

There is expected to be significant demand for additional office floorspace and land over the next 20 years in Knox. Employment growth in industries which typically require office floorspace is expected to generate demand for an additional 115,000 sqm by 2036. In addition, some businesses in the growing Health sector would also require office space.

Land will primarily be required in the Commercial 1 Zone, however the Commercial 2 Zone can also accommodate a significant proportion of office space, especially in Caribbean Park. Given that there is very limited vacant land within the Commercial 1 Zone, it is likely that land within the Commercial 2 Zone and Industrial 1 Zone will continue to accommodate an increasing proportion of office space over time, given the lack of policy or zone controls currently in place to direct or limit office floorspace.

Modelling indicates that there will be demand for approximately 91,000sqm of retail floorspace. The majority of this floorspace would be required to locate within the Commercial 1 Zone in existing and new activity centres, with secondary allowances for restricted retail to locate within the Commercial 2 Zone and convenience retail (and potentially small supermarkets) to locate in the Industrial 1 Zone.

Significant employment growth is projected in the health sector, with an estimated 31,000sqm of floorspace required over the next 20 years within business zones (in addition to the employment growth that could be accommodated in other areas such as hospitals and the Wantirna Hospital Assessment Area).

The Wantirna Health Precinct, and to a lesser extent the Angliss Hospital in Upper Ferntree Gully, present particularly strong opportunities to facilitate health clusters. It is important that sufficient land is available within suitable employment zones (both Commercial 1 Zone and Commercial 2 Zone) near the hospitals and along public transport routes.

Comparing Land Requirements with Available Supply

Overall, there is likely to be a significant shortfall of business land within the next 20 years in the City of Knox unless additional land is zoned for business purposes.

There could be significant land shortages for office, retail and health and education uses. These uses generally require land in the Commercial 1 Zone and Commercial 2 Zone, however there is a clear lack of vacant land supply in these zones, with the exception of the proposed supply of large format office buildings in Caribbean Park.

There is likely to be sufficient land in the Industrial 1 Zone to accommodate projected demand from businesses requiring industrial land assuming that 10ha of the remaining land in the Caribbean Park estate is available for industrial use, however given the competing demands for employment land, it will be important that the quantum of existing industrial land is maintained for industrial purposes.

5. KNOX PLANNING SCHEME

5.1. INTRODUCTION

This section provides an overview of the Knox Planning Scheme in relation to business zones and identifies the primary role and purpose of each zone. This section also assesses the implications of changes to commercial zones implemented in 2013.

5.2. STATE PLANNING POLICY FRAMEWORK (SPPF)

The SPPF outlines the following relevant clauses, including the objective and strategies (Table 16).

TABLE 16 RELEVANT SPPF POLICIES

Clause	Objective	Relevant Strategies
11.01-2 Activity centre planning	To encourage the concentration of major retail, residential, commercial, administrative, entertainment and cultural developments into activity centres which provide a variety of land uses and are highly accessible to the community	• Provide a focus for business, shopping, working, leisure and community facilities. • Encourage economic activity and business synergies. Locate significant new education, justice, community, administrative and health facilities that attract users from large geographic areas in or on the edge of Central Activities Districts, Principal or Major Activity Centres with good public transport.
11.02-1 Supply of urban land	To ensure a sufficient supply of land is available for residential, commercial, retail, industrial, recreational, institutional and other community uses.	• Ensure the ongoing provision of land and supporting infrastructure to support sustainable urban development. • Ensure that sufficient land is available to meet forecast demand. • Plan to accommodate projected population growth over at least a 15-year period and provide clear direction on locations where growth should occur.
17.01-1 Business	To encourage development which meet the communities' needs for retail, entertainment, office and other commercial services and provides net community benefit in relation to accessibility, efficient infrastructure use and the aggregation and sustainability of commercial facilities.	• Locate commercial facilities in existing or planned activity centres. • Provide new convenience shopping facilities to provide for the needs of the local population in new residential areas and within, or immediately adjacent to, existing commercial centres. • Provide small scale shopping opportunities that meet the needs of local residents and workers in convenient locations. • Provide outlets of trade-related goods or services directly serving or ancillary to industry and which have adequate on-site car parking. • Locate cinema based entertainment facilities within or on the periphery of existing or planned activity centres. Such facilities should not require a permit for use within activity centres and are not encouraged on freestanding sites. • A five-year time limit for commencement should be attached to the planning approval for all shopping centres or expansions of over 1,000 square metres in floorspace.
17.01-2 Out of centre development for Metropolitan Melbourne	To manage out of centre development in Metropolitan Melbourne.	• Ensure that proposals or expansion of single use retail, commercial and recreational facilities outside activity centres are discouraged by giving preference to locations in or on the border of an activity centre. • Ensure that out-of-centre proposals are only considered where the proposed use or development is of net benefit to the community in the region served by the proposal or provides small scale shopping opportunities that meet the needs of local residents and workers in convenient locations.
17.02-1 Industrial land development	To ensure availability of land for industry.	• Protect and carefully plan existing industrial areas to, where possible, facilitate further industrial development. • Provide an adequate supply of industrial land in appropriate locations including sufficient stocks of large sites for strategic investment. • Protect industrial activity in industrial zones from the encroachment of unplanned commercial, residential and other sensitive uses which would adversely affect industry viability. • Encourage industrial uses that meet appropriate standards of safety and amenity to locate within activity centres. • Avoid approving non-industrial land uses, which will prejudice the availability of land for future industrial requirements, in identified industrial areas.

5.3. LOCAL PLANNING POLICY FRAMEWORK (LPPF)

Relevant local policies are outlined under the **Economic Development Theme (21.07)**. The theme supports the development of high quality employment assessment areas in line with increasing demand and economic change. Local policy emphasises that a central challenge to activity centres within Knox, is the increasing pressure for non-centre based retailing activity and the fragmented land holdings within most activity centres that inhibits redevelopment. The key relevant strategies to supply and demand for commercial land include:

- Encourage restricted retail to locate in designated highway locations and discourage out of centre development.
- Discourage restricted retail sales and other non-industrial related activities from locating in Industrial 1 zoned areas to ensure sufficient land for industrial and production economy related uses.
- Provide for development that supports and accommodates emerging business trends that contribute to economic development in Knox.
- Encourage the formation of industry clusters and networks.
- Encourage infill development of vacant commercial and industrial sites and innovative development of car parks, to create pedestrian interest and active frontages onto local streets around activity centres.
- Support consolidation, investment and change in retail, office, service and increased residential activities within Major Activity Centres.

Clause 22.12 Residential Land use and Development within the Commercial 1 Zone relates to the implementation of the Knox Housing Strategy, to facilitate residential development within commercial centres which is complimentary to the role and scale of the centre. The clause outlines design guidelines for residential development, as well as the preferred scale of residential development (building height) for each commercial centre based on the following categories:

- Local Living: 3 storey built form (9 metres)
- Knox Neighbourhood: 2-3 storey built form (8-9 metres)
- Dandenong Foothills: 1-2 storey built form (up to 8 metres)

Clause 22.02 Industrial and Restricted Retail Sales Area and Design applies to all land in an Industrial 1 Zone or Commercial 2 Zone. The clause outlines design guidelines for industrial and restricted sales areas to maintain and enhance their appearance and ensure that they are compatible with adjoining built form and landscape character. Guidelines are provided for subdivision, building siting, landscaping and signage.

Clause 22.02-4 provides performance standards for subdivision, siting, landscaping and signage. A key standard for siting includes:

- 'Buildings and car parking areas are set back a minimum of 20 metres from all Category 1 Roads (and their service roads).'

This does not apply to sites on Kellets Road or Dorset Road which are more than 1 kilometre from "garden industrial" development (as shown on the Industrial & Restricted Retail Sales plan included in this Clause), where a smaller minimum setback may be provided.

If a site is within 1 kilometre on the same road of "garden industrial" development, lots along the common road frontage are at least 4,000 square metres with frontages of at least 35 metres and depths of at least 60 metres. Alternatively, the lots along the common road frontage have the same or larger dimensions as the average of those of the "garden industrial" development.

These setback provisions provide clear guidelines for businesses. They encourage visually appealing commercial and industrial business land. However, they present a potential issue for the productive use of land in the municipality. This is discussed further in Section 6 of this report.

Other local polices are relevant to activity centres and employment assessment areas, as discussed below.

Clause 22.04 Knox Central Principal Activity Centre outlines the future directions for the activity centre. Relevant strategies include:

- Support the expansion of the retail and shopping role of the Knox City Shopping Centre, to retain its role as a pre-eminent regional shopping destination.

- Encourage the diversification of business and employment opportunities in existing industrial areas, consistent with the emergence of Knox as a major suburban business centre.

Clause 22.05 Bayswater Major Activity Centre sets out strategies the future development of the activity centre including a number of major redevelopment sites. Relevant strategies include:

- Consolidate retail activity to within the retail core.
- Encourage retail floor space outside the retail core to be redeveloped for other uses that compliment and do not compete with the function of the retail core. Such uses include offices, showrooms, entertainment and community uses.
- Encourage mixed use development to locate west of High Street with active uses located at ground level and office/residential uses above
- Encourage sites along Mountain Highway, west of the retail core to be redeveloped for large scale mixed use developments with offices/showrooms at ground level and residential above.
- Facilitate the preferred development of Key Redevelopment Sites to act as catalyst for further development and investment in the centre.
- Some locations developed with dwellings may be better zoned an alternative to Commercial 1 Zone.

Clause 22.06 Boronia Major Activity Centre sets out policy that applies to all land in the Boronia Major Activity Centre, being that land affected by Schedule 7 of the Design and Development Overlay.

Relevant strategies include:

- Provide opportunities for residential and mixed-use activity within the commercial environs, whilst discouraging further fragmentation of commercially zoned land.
- Promote active uses such as retail that address the street along the Principal Pedestrian Linkage between Dorset Square and Boronia Junction. Inactive uses including offices, residential, and community facilities will be encouraged on upper floor levels that overlook the street.
- Support the established medical and health related services area along Boronia Road between Park and Pine Crescents.
- Facilitate growth in retail expenditure in Boronia by promoting the development of a bulky goods store and other homewares and ancillary stores, which will encourage linked trips to established core retail outlets.

Clause 22.08 Scoresby-Rowville Employment Assessment Area policy applies to Commercial 2, Public Use and Public Park and Recreation zoned land bounded by Ferntree Gully, Stud and Wellington Roads and the EastLink reservation.

Relevant strategies include:

- The use and development of production economy related businesses with a primary focus on research and development, industry/technology, warehousing/distribution and office business park is encouraged.
- The use and development of restricted retail premises within the assessment area, including the neighbourhood activity centre, is discouraged.

Clause 22.13 Rowville Activity Centre policy applies to all planning applications within the Rowville Activity Centre. Relevant strategies include:

- Encourage a more diverse mix of activities, services, retail, dining, and entertainment in the Commercial Core.
- Support the development of Fulham Road as a 'Main Street' that accommodates a variety of street-front shops, cafes, and outdoor dining that emphasis pedestrian activity, safety, and amenity.
- Support the expansion of the Stud Park Shopping Centre.

5.4. PLANNING SCHEME AMENDMENTS

AMENDMENT C150

The Amendment proposes to restructure and update the local section of the Knox Planning Scheme, including: a new Municipal Strategic Statement (MSS); new and updated local policies; updates to some zone and overlay schedules; updates to some particular provisions; and some map changes. Public exhibition was recently concluded.

The proposed changes include:

- An amendment to the Municipal Strategic Statement (MSS) to provide a clear Council vision for land use and development in Knox. The revised MSS will guide decision making on planning applications and sets out ways to address issues such as housing growth, liveability for local residents, and managing activity centres;
- Introduction of four new local policies on advertising signs, non-residential uses in residential areas, gaming machines, and environmentally sustainable development; and
- Some updated zone and overlay schedules to improve clarity and reduce red tape.

In respect of non-residential uses in residential areas, the proposed local policy provides support for specific uses to be located in residential zones on arterial roads and connector streets, on the periphery of activity centres or major facilities such as hospitals, adjacent to existing non-residential uses and on or close to public transport routes. Non-residential uses subject to this policy include medical centres, veterinary centres, display homes, convenience shops, child-minding centres, places of assembly and places of worship. No quantitative criteria are proposed for distance to public transport, activity centres and hospitals.

Amendment C150 does not seek to make much change to the Scheme's economic development section or associated clauses as it was envisaged that this was best undertaken as a result of the Land for Business project.

AMENDMENT C141

The Amendment implements the Upper Gully Strategic Plan, by giving effect to the land use, design strategies and objectives for the Activity Centre. The permanent planning controls proposed (Amendment C141) will guide new development in Upper Gully including building heights and setbacks, building colours and materials. These changes will replace interim height controls that currently apply to the centre.

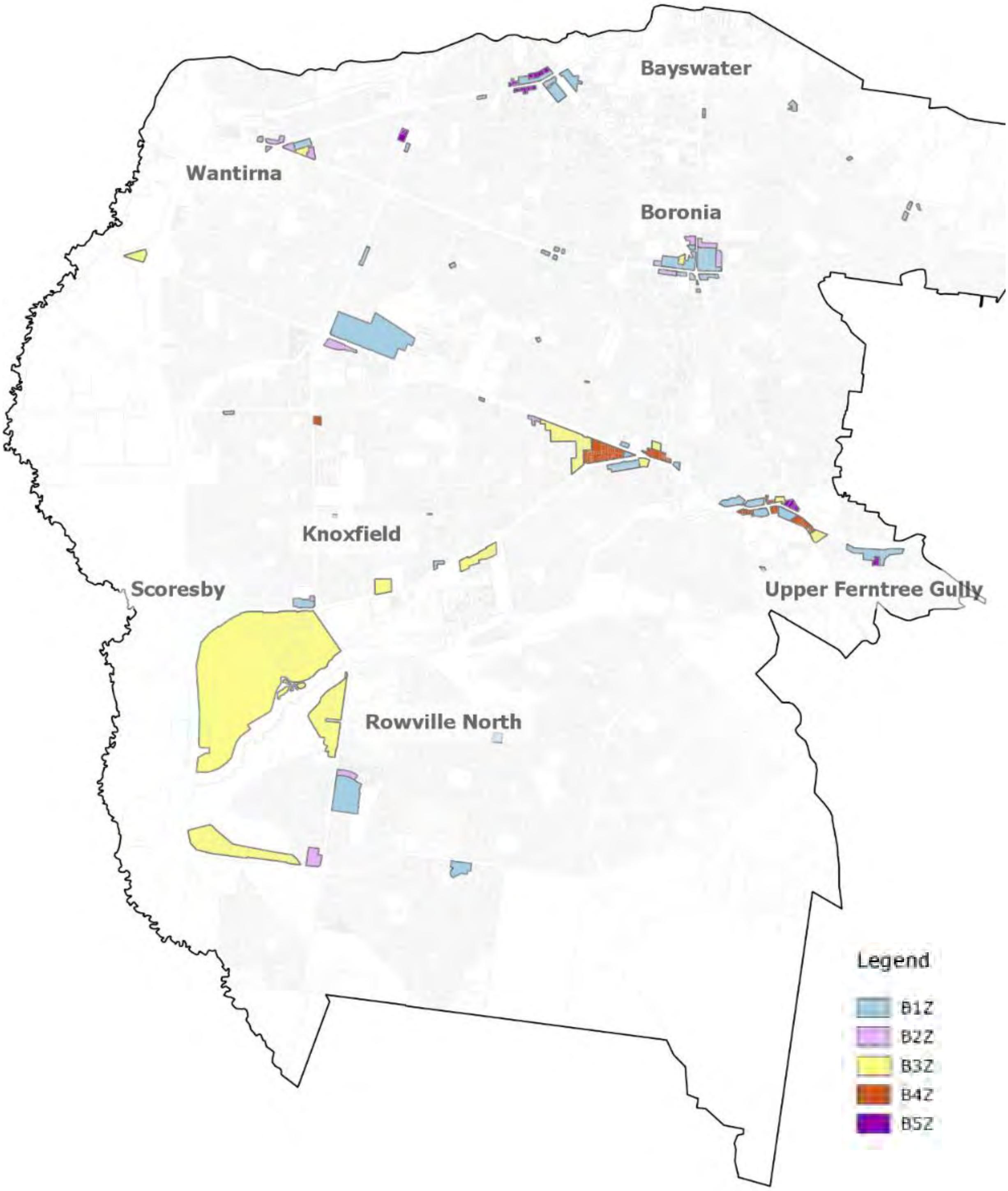
5.5. PLANNING ZONES AND COMMERCIAL ZONE CHANGES

In 2013, Victoria's zoning framework was subject to major review and a series of new and revised commercial and industrial zones were introduced in the Victorian Planning Provisions in mid-2013. The new commercial and industrial zones have had the general effect of broadening the range of commercial development options on land within Knox's employment assessment areas.

Two Commercial zones (the Commercial 1 and Commercial 2 zones) automatically replaced the five previous business zones (Business 1, 2, 3, 4 and 5 Zones) which were applied across Knox commercial areas to achieve differentiation and specific outcomes for each area. Council also utilised floor space limitations within the zone header provisions and schedules to the former business zones to control certain land uses in some areas.

The following provides an overview of the current planning zones relevant to Knox's employment assessment areas, and changes which occurred as a result of the 2013 zone reforms. A map showing the previous Business Zones is provided in Figure 16 for context.

FIGURE 16 LOCATION OF FORMER BUSINESS ZONES



Source: Urban Enterprise, 2016.

COMMERCIAL 1 ZONE

The Commercial 1 Zone promotes vibrant mixed use commercial centres for retail, office, business, entertainment and community uses, as well as residential uses at densities complementary to the role and scale of the commercial centre.

The Commercial 1 Zone allows for a high degree of flexibility, and allows a very wide variety of uses as of right, with the only relevant use that is discretionary being warehouses, all other uses are as of right (industry, office, supermarkets, shops, restricted retail, dwellings, education facilities). As it is the zone that allows the widest variety of uses, and due to its objectives, it is generally the zone to be used when the most intensive forms of development are sought and mixed (e.g. Activity Centres).

The Commercial 1 Zone replaced the Business 1 Zone, Business 2 Zone and Business 5 Zone. Some of the significant changes include:

- Residential use in this zone does not require a planning permit, subject to a condition that the ground-floor frontage does not exceed two metres. This is intended to encourage an 'optimum' mix of employment and residential uses within the zone;
- 'Retail premises' (including shop) do not require a permit (previously only Business 1 Zone allowed shop without a permit, while a shop (other than a convenience shop) was prohibited in the Business 5 Zone);
- 'Office' is now a use allowed without a permit and without floor area or ground level restrictions. Previously some restrictions applied across the Business 1, 2 and 5 Zones;
- 'Industry' and 'Warehouse' are now permit required uses. Previously these uses were prohibited in the Business 5 Zone.

The changes are summarised in Table 17.

TABLE 17 CHANGES TO COMMERCIAL 1 ZONE

Use	C1Z	B1Z	B2Z	B5Z
Accommodation	Permit not required * C	Permit Required *	Permit Required *	Permit Required
Dwelling	Permit not required C	Permit not required C	Permit Required	Permit not required * C
Office	Permit not required C	Permit not required * C	Permit not required C	Permit not required C
Restricted Retail	Permit not required	Permit not required C	Permit Required C	Prohibited
Supermarket	Permit not required	Permit not required C	Permit Required C	Prohibited
Shop	Permit not required *	Permit not required * C	Permit Required * C	Prohibited *
Restaurant	Permit not required	Permit not required C	Permit Required	Permit Required
Food and Drink Premises	Permit not required	Permit not required *	Permit Required	Permit Required
Tavern	Permit not required	Permit Required	Permit Required	Prohibited
Retail Premises	Permit not required *	Permit Required *	Permit Required *	Permit Required *
Industry	Permit Required C	Permit Required C	Permit Required C	Prohibited

*Some uses nested under this use are subject to different controls. C = use subject to conditions.

COMMERCIAL 2 ZONE

The Commercial 2 Zone seeks to develop commercial areas for offices, appropriate manufacturing and industries, bulky goods retailing, other retail uses and associated business and commercial services to ensure that uses do not affect the safety and amenity of adjacent, more sensitive uses.

The Commercial 2 Zone also has a degree of flexibility, however no residential uses are allowed making it effectively an 'employment-only' zone. The Commercial 2 Zone replaced the B3Z and B4Z. Some of the notable changes from the former zones include the following:

- Allowing a small scale supermarket up to 1,800 sqm without a permit within all metropolitan planning schemes;
- 'Restricted retail premises' allowed without a permit (previously this would have required a permit in the Business 3 Zone);
- 'Office' allowed without a permit and without floor area restrictions (previously a permit was required in the Business 4 Zone and it had a 500 sqm floor cap);
- 'Motel and Residential hotel' allowed subject to permit (previously only Motel allowed in Business 4 Zone);
- 'Food and drink premises' up to 100sqm allowed without a permit (previously this would have required a permit);
- 'Trade supplies' allowed without a permit (previously this would have required a permit in the Business 3 Zone).

The Commercial 2 zone changes are summarised in Table 18.

TABLE 18 COMMERCIAL 2 ZONE CHANGES

Use	C2Z	B3Z	B4Z
Accommodation	Prohibited *	Prohibited *	Prohibited *
Dwelling	Prohibited	Prohibited	Prohibited
Office	Permit not required	Permit not required C	Permit required * C
Restricted Retail	Permit not required	Permit required	Permit not required
Supermarket	Permit not required C	Prohibited	Prohibited
Shop	Permit not required * C	Prohibited	Prohibited
Restaurant	Permit not required C	Permit required	Permit required
Food and Drink Premises	Permit not required C	Permit required	Permit required
Tavern	Permit not required C	Permit required	Permit required
Retail Premises	Permit required *	Permit required *	Permit required *
Industry	Permit not required * C	Permit not required * C	Permit not required * C

*Some uses nested under this use are subject to different controls. C = use subject to conditions

INDUSTRIAL 1 ZONE

The purpose of the Industrial 1 Zone is to provide for manufacturing industry, the storage and distribution of goods and associated uses in a manner which does not affect the safety and amenity of local communities. The zone is generally applied to core industrial areas and to other locations that are reasonably well separated from residential properties and where special controls are not required over the types of businesses that locate.

The opportunity exists for 'non-industrial' employment use in the zone as the 500 sqm limit on freestanding offices was been removed as part of the 2013 zone reforms, and office uses are now a Section 2 use (discretionary). The changes may result in an increase in office development in industrial zones in Knox. This may be contrary to existing local planning policy which discourages non-industrial office uses from locating in

Industrial 1 zoned areas. The appropriateness of applying a floorspace cap on office development will need to be considered as part of the study.

In Knox, the Industrial 1 Zone is applied to all industrial areas. In other municipalities, the Industrial 3 Zone is commonly used to separate heavy industrial uses the Industrial 1 Zone, from sensitive uses (e.g. residential). The appropriateness of adopting the Industrial 3 Zone for land in more sensitive locations will need to reviewed as part of this study.

MIXED USE ZONE

The purpose of the Mixed Use Zone is:

- To provide for a range of residential, commercial, industrial and other uses which complement the mixed-use function of the locality.
- To provide for housing at higher densities.
- To encourage development that responds to the existing or preferred neighbourhood character of the area.
- To facilitate the use, development and redevelopment of land in accordance with the objectives specified in a schedule to this zone.

The reformed MUZ allows for the inclusion of local objectives within the schedule to the zone, however, in the case of Knox this has not been included. Other changes as part of the 2013 reforms include:

- Removes the floorspace area restrictions from the schedule to the zone for office, shop and trade supplies.
- Removes or reduces restrictions on non-residential land uses such as a place of worship, medical centre and convenience shop.

IMPLICATIONS OF ZONE CHANGES

For some of Knox's activity centres, the former business zones were applied to achieve, or encourage, differentiation between uses. The transition of these business zones into the Commercial 1 Zone undermines this intent. Given very few permit required land uses in C1Z and C2Z there are limited cases where local policy can be applied.

Prior to the commercial zone changes, Knox utilised all five business zones to direct land use and development of varying types to different parts of the municipality. The changes to the Commercial Zones in 2013 were automatically applied, resulting in:

- An expansion of the Commercial 1 Zone at the edges to annex former Business 2 and Business 5 Zone areas (such as Ferntree Gully Village, Upper Ferntree Gully, Knox Central, Boronia, Stud Park and Scoresby);
- Significant alterations to the area and location of land in the Commercial 1 Zone in Wantirna (former B2Z) and Bayswater (former B5Z);
- Creation of new stand-alone sections of land in the Commercial 1 Zone through former B2Z and B5Z zoned land - 3.5 ha of land at the Stamford Hotel (SS-01), 0.8 ha of land at the western end of the Mountain Gate BG-02, and 1.2 ha of land (SS-03) adjacent to the Wantirna Employment Assessment Area (E-02); and
- Removal of the differentiation between Business 3 and Business 4 Zones once combined into the Commercial 2 Zone. This affected large tracts of land, most notably in Ferntree Gully, Mountain Gate and Scoresby Rowville.

Planning and building permits approved and proposed since 2013 (when the new commercial zones were introduced) show only a small number of applications for uses that would not have been permitted under the previous zoning of the land. Of the planning and building permits approved since 2013 in the former Business 2, 3, 4 and 5 Zones, only 5 permits or proposed permits are for uses that were previously prohibited, limited by conditions or required a permit. These include:

- Change of use to a food and drink premises in the former B2Z, now C1Z, (440 Burwood Highway, Wantirna South);
- Change of use to a food and drink premises in the former B2Z, now C1Z (2-3/854 Burwood Highway, Ferntree Gully);
- A combined amendment/permit application for a supermarket in the former B3Z, now C2Z (1 Erica Avenue, Boronia); and

- A current planning application for a supermarket in the former B3Z, now C2Z (962 Stud Road, Rowville).

The low number and scale of the uses that were facilitated by the commercial zone changes indicates that there is yet to be a major impact on the overall retail and business land hierarchy in Knox. It may be more relevant to consider the *potential* for ongoing retail use of land now in the C2Z that was formerly in the B3Z or B4Z, and land now in the C1Z that was formerly B2Z or B5Z. In cases where such land is adjacent to existing C1Z areas, the risk of retail floorspace altering the activity centre hierarchy is low, however the result is that Council has significantly less control over the location of core retail and the interface between commercial and residential areas. The location of retail floorspace is less restricted, which will mean the market will decide what the highest and best use of land across these activity centres and neighbourhood centres is.

In other areas, however, the 'overnight' creation of new sections of C1Z land remote from existing activity centres has the potential to attract new shopping centres and retail anchors (i.e. supermarkets) that would further disperse retail expenditure and shopping trips. In some cases, increasing the local convenience retail floorspace available to nearby residents and employees will create positive outcomes, however the importance of collocating a range of retail, commercial, civic and transport uses in activity centres is well established in State and local planning policy.

In most cases, land parcels in areas rezoned to the C1Z are not sufficient to accommodate a full line supermarket, but many could support a small supermarket. Examples include:

- A 1 ha vacant property (3 parcels) in Wantirna on Thaxted Parade;
- An occupied 0.6 ha parcel at 52 Stud Road;
- 0.8 ha in three parcels on Burwood Highway occupied by highway sales uses; and
- A 0.9 ha vacant parcel located adjacent to the Stamford Hotel.

The largest three of these sites could potentially accommodate a full line supermarket of up to 3,000 sqm if site consolidation is achieved. Although these areas do not have sufficient area to accommodate a shopping centre, the zone changes could result in existing activity centres such as Stud Park and Boronia facing significant increases in competition from 'out of centre' supermarkets.

The inclusion of a small supermarket (less than 1,800 sqm) as a Section 1 use in the Commercial 2 Zone (and Industrial 3 Zone which is not currently applied in Knox) has the potential to further disperse retail activity and dilute the strength of the existing activity centre hierarchy. Although medium-sized supermarkets of 1500 to 1800 sqm are somewhat smaller than full line supermarkets, the success of Aldi has meant that these supermarkets are often seen as a genuine competitor to Coles and Woolworths for weekly and convenience grocery shopping trips.

Some benefits are created by the rezoning of multiple sites to Commercial 1, primarily that ongoing population growth will lead to demand for additional retail floorspace over time, and there is a very low supply of vacant land in the existing activity centres. However, it is important to ensure that land is made available for employment uses as well as retail through the use of the Commercial 2 Zone where appropriate (especially given the encroachment of permitted core retail uses into that zone post-zone changes).

The application of the Commercial 1 Zone to areas that were previously in the Business 5 Zone and are predominantly used for residential or office uses creates particular issues for land use compatibility and the risk of dispersed retail activity. For example, land in E-02b (office) and BG-01 (residential) is now within the Commercial 1 Zone, resulting in an inconsistent land use planning outcome that warrants review.

OPTIONS FOR APPLYING COMMERCIAL AND INDUSTRIAL ZONES IN KNOX

Despite the recent changes to commercial zones, the Victorian Planning Provisions offer a range of zone and schedule options to direct retail, commercial and industrial uses to desired locations. Table 19 provides a summary of major uses that are 'as of right', permitted and prohibited in each zone, along with key conditions or limitations that can be applied by Council.

TABLE 19 CURRENT COMMERCIAL AND INDUSTRIAL ZONES AVAILABLE TO COUNCIL

Section 1 (Permit not required)	Section 2 (Permit Required)	Section 3 (Prohibited)

Use	Commercial 1 Zone	Commercial 2 Zone	Mixed Use Zone	Industrial 1 Zone	Industrial 3 Zone
Accommodation	Max 2m ground frontage	Except Hotel and motel (S2)			
-Dwelling	Max 2m ground frontage	Prohibited			
Retail Premises		Permit required *	Other than Food and Drink and Shop	Other than Shop	Other than Shop
- Food and Drink Premises		Max. 100sqm	Max. 150sqm		
-Shop	Option: schedule cap	Adjoin supermarket, max. 500sqm combined, max. 30m from RDZ	Max 150sqm		Adjoin supermarket, max. 500sqm combined, max. 30m from RDZ
- Supermarket	Option: schedule cap	Max. 1,800sqm, max. 30m from RDZ			Max. 1,800sqm, max. 30m from RDZ
- Restricted Retail	Option: schedule cap				
Office	Option: schedule cap		Max. 250sqm	Option: Schedule cap	Option: Schedule cap
Hospital					
Education Centre				Not primary or secondary school	Not primary or secondary school
Industry					
Warehouse					

Source: Urban Enterprise, derived from the Victorian Planning Provisions, 2016.

The Industrial 2 Zone is not included given that consultation and research shows that heavy industries are unlikely to be suited to Knox in the medium term. At present, Council does not utilise the Industrial 3 Zone, and only makes limited use of the Mixed Use Zone. These zones present the opportunity make greater use of these options given the dilution of Commercial zones following the 2013 review.

The Future Directions Plan will identify appropriate zones for locations where changes are required / recommended to better align the planning framework with business and economic opportunities in Knox.

5.6. NON-INDUSTRIAL USES IN INDUSTRIAL ZONES

Across Melbourne and Victoria, there is a trend of non-industrial uses establishing within industrial areas to take advantage of large buildings and relatively cheap rent. Indoor recreation uses are particularly common, such as indoor cricket/soccer/tennis, yoga and dance studies and gymnasiums. Although these uses are generally incompatible with industrial use (and sometimes complement employment uses by generating peak visitation in the evenings when some employment uses are inactive), the consumption of otherwise usable industrial space for uses that are relatively low in employment density and non-export oriented can result in lesser economic outcomes for a local government area. The SPPF specifically directs Councils to "avoid approving non-industrial land uses, which will prejudice the availability of land for future industrial requirements, in identified industrial areas."

Recent permit data shows that there has been a significant trend towards the approval of non-industrial uses in the Industrial 1 and Commercial 2 Zones in Knox in recent years. In particular, new restricted recreation uses (such as personal training studios, private gyms, yoga studios, dance studios and indoor recreation) have been common, typically replacing former low value industrial uses. From 2010 to 2016, Knox City Council recorded an increase in permit applications for a change in use for specific uses within the IN1Z across the municipality. A permit for a change in use is generally issued for a Place of Worship, a Place of Assembly, a Restricted Recreation Facility and an Indoor Recreation Facility if there is no alteration to the building's footprint.

It is estimated that non-industrial uses have consumed 1.4 ha of business land (IN1Z and C2Z) in the past 3 years. Given that these permits contradict the purpose of the Industrial 1 Zone, further direction should be provided as to where these uses are not supported so as to restrict industrial land in strategic locations for industrial uses. In other industrial zones that are not considered to be core industrial areas, locations that are close to activity centres and areas that serve a surrounding residential catchment, it is considered appropriate for non-industrial uses that service the local population to be permitted in industrial zones.

5.7. KEY FINDINGS

- In 2013, a series of new and revised commercial and industrial zones were introduced in the Victorian Planning Provisions in mid-2013. The new commercial and industrial zones have had the general effect of broadening the range of commercial development options on land within Knox's employment assessment areas;
- For some of Knox's activity centres, the former Business zones were applied to achieve, or encourage, differentiation between uses. The transition of these business zones into the Commercial 1 Zone undermines this intent. Given very few permit required land uses in C1Z and C2Z there are limited cases where local policy can be applied;
- The changes to the Commercial Zones in 2013 were automatically applied, resulting in an expansion of the Commercial 1 Zone at the edges of activity centres and neighbourhood centres, significant alterations to the area and location of land in the Commercial 1 Zone in Wantirna (former B2Z) and Bayswater (former B5Z), creation of new stand-alone sections of land in the Commercial 1 Zone and removal of the differentiation between Business 3 and Business 4 Zones once combined into the Commercial 2 Zone;
- The 'overnight' creation of new sections of C1Z land remote from existing activity centres has the potential to attract new retail anchors (i.e. supermarkets) that would further disperse retail expenditure and shopping trips. In some cases, this could create positive outcomes, however in others the zoning should be reviewed;
- The inclusion of a small supermarket (less than 1,800 sqm) as a Section 1 use in the Commercial 2 Zone (and Industrial 3 Zone which is not currently applied in Knox) has the potential to further disperse retail activity and dilute the strength of the existing activity centre hierarchy;
- The application of the Commercial 1 Zone to areas that were previously in the Business 5 Zone and are predominantly used for residential or office uses creates particular issues for land use compatibility and the risk of dispersed retail activity – the zoning of land in E-02b (office) and BG-01 (residential) results in an inconsistent land use planning outcome that warrants review;
- At present, Council does not utilise the Industrial 3 Zone, and only makes limited use of the Mixed Use Zone. These zones present the opportunity make greater use of these options given the dilution of Commercial zones;
- Recent permit data shows that there has been a significant trend towards the approval of non-industrial uses in the Industrial 1 and Commercial 2 Zones in Knox in recent years. It is estimated that non-industrial uses have consumed 1.4 ha of business land in the past 3 years. Further direction should be provided as to where these uses are not supported so as to restrict industrial land in strategic locations for industrial uses.

6. ISSUES AND OPPORTUNITIES

6.1. INTRODUCTION

This section summarises the key issues and opportunities relevant to current and future business land within Knox. Findings in this section are based on key literature reviewed, data analysis and targeted consultation with key stakeholders including businesses, commercial real estate agents and regional development groups.

6.2. ISSUES

- The Knox economy is becoming more diversified, and key industries are continuing to develop and evolve including Advanced Manufacturing, Wholesale Trade and Warehousing and Distribution; Population based industries such as Health Care, Education, Construction, Retail and Entertainment; and Business services such as Professional, Scientific and Technical, Financial and Insurance Services, and Real Estate Services. These industries require a different mix of land to the existing zones which are tailored towards traditional larger format manufacturing and highway retail/commercial uses;
- Employment projections prepared for this project point to strong growth in office, health and education jobs, and ongoing growth in retail and food employment. Manufacturing employment is expected to decline, offset by increases in other industrial land users in the construction, wholesale trade and transport industries;
- Industrial land is predominantly designed for traditional manufacturing and commercial uses – in order to attract new businesses to Knox, smaller lots and higher amenity employment locations will be required. Some business land is not well located in relation to the freeway network, including the Bayswater Business Precinct;
- Other industrial areas to the south (such as Dandenong South, Pakenham and Officer) will continue to supply large greenfield lots that will attract large industrial businesses to cheaper land and direct freeway network access. Knox cannot compete with these advantages, and will need to facilitate an ongoing transition to higher value and density employment uses within the municipality;
- There is a clear lack of vacant industrial and commercial land in Knox which is likely to have restricted land consumption rates and opportunities for new business attraction over the past 3 years. There are no areas currently designated as greenfield employment areas, meaning that the majority of business and employment growth needs to be accommodated through redevelopment of existing employment sites;
- Many sites within major employment land areas, such as Caribbean Park, are being used for office purposes, and some areas are experiencing land use transition towards non-industrial uses such as recreation and religious uses. As a result, there is significant competition for industrial businesses seeking a site in Knox;
- Planning controls in industrial areas include some site coverage requirements that could be reviewed to ensure land is used effectively;
- There is a particular lack of vacant within existing activity centres, and there is likely to be strong competition for new developments from developers of residential, retail and commercial properties. Strategic sites to expand or redevelop land within activity centres should be identified so that existing activity centres can increase and improve the retail and commercial offer to meet demand generated by population growth;
- Knox Central faces strong competition from other centres with location advantages, such as Eastland and The Glen. It is important that this centre is supported to expand and consolidate its retail role, and a complimentary range of civic, residential, entertainment and business uses are provided to minimise the risk of increasing escape expenditure of Knox residents;

- Planning zone changes have diluted the differentiation between the commercial zones currently in the Knox Planning Scheme, with some areas now within inappropriate commercial zones which could result in out-of-centre retail developments and/or land use conflicts.
- Despite being strategically located alongside Eastlink and a substantial arterial road network, rail access is limited with some access in the north eastern area of the LGA via the Belgrave Rail line. This includes passenger railway stations at Bayswater, Boronia, Ferntree Gully and Upper Ferntree Gully. Significant areas of the LGA are not serviced by rail.

6.3. OPPORTUNITIES

- Population growth will generate ongoing demand for additional industrial, commercial and retail floorspace and employment. Growth is projected primarily near Activity Centres and in the western part of the City, which will consolidate demand for retail and commercial space in existing activity centres;
- Knox is located in Melbourne East which accommodates a significant residential catchment and highly skilled workforce. Other municipalities in this region (with the exception of Monash) have relatively limited industrial and commercial land stocks, providing Knox with the opportunity to attract businesses wishing to service the region and make use of the significant labour catchment;
- Given predicted growth in employment for Health Care and Education and Training in Victoria, there is an opportunity for Knox to leverage off existing infrastructure such as the land availability within the Wantirna Hospital Assessment Area, Angliss Hospital and Swinburne University. A significant cluster of health services and supporting commercial, office and retail floorspace is possible within and near the Wantirna Hospital Assessment Area;
- Industrial business needs are changing, with demand increasing for smaller factories and offices in industrial areas. There is the opportunity to support subdivision of existing larger land parcels to improve the utilisation of land and increase employment densities. Major land users no longer require the full extent of their land holdings, presenting the opportunity for subdivision and redevelopment;
- Opportunities exist to encourage clustering of businesses in the Health, professional services and advanced manufacturing industries;
- Given the lack of available land, there may be the opportunity to permit or encourage industrial development at upper levels to allow light industrial uses such as technical, mechanical and digital manufacturing. This would require land value appreciation and innovative approaches to car parking;
- Applying the Industrial 3 Zone and Mixed Use Zone in appropriate locations may improve the planning framework for business land, along with considering office floorspace caps and policy discouragement of non-industrial uses in core industrial areas that do not directly support the industrial area;
- Some limited opportunities exist to potentially establish new land for business. For example, west of Eastlink, the Boral Quarry land when redeveloped. This site could be an important Land for Business opportunity given the size of the site, its location, and excellent access to the freeway network;
- The proposed Non-Residential Uses in Residential Areas policy presents the opportunity to accommodate some employment growth outside commercial and industrial zones. This will be critical to enabling employment growth to keep pace with population growth in the context of limited land availability.

6.4. KEY CONSIDERATIONS FOR THE FUTURE DIRECTIONS PLAN

The following key directions will inform the Future Directions Plan:

1. Existing Activity Centres will need to accommodate significant growth in retail and office floorspace and employment;
2. Established industrial and employment areas will need to accommodate increased employment densities and facilitate a transition in lot sizes, siting, building types and in some cases, improvements in business amenity;
3. Non-industrial uses and large office buildings should be directed to non-core industrial area;
4. Facilitate the Bayswater significant employment location giving support to a range of businesses, big and small, with high quality supporting business amenities;
5. Strategic redevelopment sites present the opportunity to increase utilisation of employment land and facilitate land use transition with appropriate policy support;
6. Realising opportunities for new employment land (e.g. Boral Quarry) will be critical to support employment growth;
7. Some assessment areas are well suited to attract growth in the office sector, particularly Knox Central which could support clusters of professional services and IT;
8. Employment land and opportunities along key public transport routes will be most accessible for population driven growth industries, including health, office and education uses.

The implications of and potential responses to these findings and directions will be explored in the Future Directions Plan.

APPENDIX A CONSULTATION SCHEDULE

TABLE 20 CONSULTATION SCHEDULE – LIST OF STAKEHOLDERS ENGAGED

Business	Form of engagement	Contact
Siemens	Phone meeting	Barry Clement (Property Manager)
Westfield Knox	Phone meeting	Marcus Hinzack
Tasty Trucks	Phone meeting	Colin Lear (Managing Director)
Parmalat	Phone meeting	Donna Gray (Site Manager)
Regional Groups	**Form of engagement**	**Contact**
Melbourne East Regional Economic Group (MERDA)	One-on-one meeting	Steve Kozlowski (Maroondah CEO/MERDA Chair)
Melbourne East Regional Economic Group (MEREG)	One-on-one meeting	Ben Harnwell (coordinator Economic Development and Tourism)
South East Melbourne Manufacturer's Alliance (SEMMA)	One-on-one meeting	Adrian Boden (Executive Officer)
Melbourne East Regional Development Australia	One-on-one meeting	Joanne Butterworth-Gray
Real Estate Agents	**Form of engagement**	**Contact**
Appleby Real Estate	Phone meeting	Nick Draffin
Colliers	Phone meeting	Andrew Chrapot
Savills Australia	Phone meeting	David Kalb
Others	**Form of engagement**	**Contact**
Bayswater Business Precinct Consultant	Phone meeting	Gary Cattran
Caribbean Business Park	Phone meeting	Ben Spooner

APPENDIX B FLOORSPACE PROJECTIONS

Floorspace projections have been prepared for the municipality for core retail, bulky goods retail, office and industrial land uses according to the following method.

It should be noted that any exercise that projects floorspace growth across a long time-period and across a large geographic area is an approximation based on information available at the time the projections were prepared. These projections should be reviewed and updated on a regular basis to take into account known proposals, actual floorspace growth rates experienced and any changes to the planning and development context of employment areas in the municipality.

PARAMETERS

- The existing or base floorspace for each land use has been derived from the Knox City Council Rates Database, current as at February 2016.
- Base floorspace is calculated for each Assessment Area as summarised in Technical Report B. This covers all land in commercial and industrial zones in the City.
- Projections are applied in 5 year increments for the period 2016 – 2036. While in practice the delivery of new commercial and industrial floorspace will not be consistent over time, these projections are based on average annual increases.

CORE RETAIL

Retail floorspace growth has been projected by reference to the following inputs:

1. Known proposals

There are a number of known major retail development proposed, including a two-stage expansion of the Knox Central Shopping Centre, a new Aldi supermarket in Boronia and a proposed Neighbourhood Activity Centre at The Orchards. These known proposals and indicative timing have been directly added to the projections.

2. Growth in retail expenditure

It is then assumed that the balance of retail floorspace growth will respond to increases in demand within the catchment for each relevant activity centre, based on the retail model outlined in the Background Report. This model takes into account projected population growth and retail expenditure growth.

These projections direct floorspace growth to existing Activity Centres and Neighbourhood Activity Centres. Strip Shop areas have limited opportunity for expansion and no floorspace growth is projected for these areas. Although some growth is possible, this is likely to be negligible at the municipal scale.

BULKY GOODS RETAIL

The Background Report estimates demand for a further 20,000sqm of bulky goods retail floorspace over the next 20 years in the City of Knox.

This floorspace growth has been allocated to Commercial 2 Zones which have vacant and underutilised sites, including:

- Re-occupation of the existing vacant Masters premises in Knoxfield;
- E-14, the only Commercial 2 Zone location with substantial vacant land outside Caribbean Park; and
- The balance to BG-1 and BG-2 which include many properties in the Commercial 2 Zone with exposure to passing traffic along the Burwood Highway and Ferntree Gully Road.

OFFICE, HEALTH AND EDUCATION

The Background Report estimates demand for 115,000 sqm of office space over the next 20 years, and a further 45,000sqm of health and education floorspace. This excludes the Wantirna Health Precinct, and other health and education uses that are located on public land such as schools.

At least 60,000sqm of large floorplate office floorspace is proposed to be constructed in Caribbean Gardens.

The balance of office, health and education floorspace demand has been distributed to Activity Centres, Neighbourhood Centres and selected industrial areas which are well positioned to accommodate office space based on the current proportion of office space contained in these centres.

The distribution to Activity Centres and Neighbourhood Centres has been capped at the current proportion of commercial floorspace to overall commercial and retail floorspace in each centre. As a result of this approach, approximately 20,000sqm of office/commercial/health/education floorspace demand has not been included in the projections. This floorspace would need to be provided in new zoned land, such as strategic employment opportunity sites.

INDUSTRIAL

Over the period 2009 – 2016, an average of 8,500sqm in additional industrial floorspace was constructed in the City of Knox. If this trend continues, there would be demand for a total of 170,000 sqm over 20 years. However, employment projections are for a significant decline in manufacturing employment, which would be offset by other industrial sectors. Employment projections indicate a long-term demand for a net additional 49,000sqm of industrial floorspace.

Taking the mid-point of these two projection methods, a long-term projection of 109,500sqm of industrial floorspace has been adopted. This floorspace has been distributed on the following basis:

- Up to 10 ha of vacant land in the Commercial 2 Zone remains in part of the Caribbean Park estate that is dedicated to industrial uses. 30,000sqm of future industrial floorspace is projected for Caribbean Park over the next 20 years;
- The balance of industrial floorspace requirements has been distributed to industrial areas with vacant land with an average a site coverage of 38% (the average across Knox as at 2016). The projections result in most of the vacant industrial land being consumed by the end of the 20 year period.

TABLE 21 FLOORSPACE PROJECTIONS (SQM)

	Retail						Commercial						Industrial					
	2016	16-21	21-26	26-31	31-36	2036	2016	16-21	21-26	26-31	31-36	2036	2016	16-21	21-26	26-31	31-36	2036
AC-01	28553	935	935	935	935	32292	1132	308	308	308	308	2363	0	0	0	0	0	0
AC-02	142752	30000	2159	2159	2159	179230	20702	5682	5682	5682	5682	43431	0	0	0	0	0	0
AC-03	56560	2000	1493	1493	1493	63038	23203	4583	4583	4583	4583	41537	0	0	0	0	0	0
AC-04	32219	859	859	859	859	35654	11091	2281	2281	2281	2281	20215	0	0	0	0	0	0
	Retail/commercial												Industrial					
	2016	16-21	21-26	26-31	31-36	2036												
E-01	16715	0	0	0	0	16715							806392	3339	3339	3339	3339	819750
E-02a	1325	0	0	0	0	1325							122286	961	961	961	961	126132
E-02b	2567	0	0	0	0	2567							0	0	0	0	0	0
E-03	20382	2500	2500	2500	2500	30382							199002	0	0	0	0	199002
E-04	12005	0	0	0	0	12005							50777	1337	1337	1337	1337	56126
E-05	23787	0	10000	0	0	33787							439370	10947	10947	10947	10947	483158
E-06	243	0	0	0	0	243							103771	0	0	0	0	103771
E-07	12818	30000	15000	15000	5000	77818							400147	7500	7500	7500	7500	430147
E-08	0	0	0	0	0	0							58059	0	0	0	0	58059
E-09	991	0	0	0	0	991							129691	0	0	0	0	129691
E-10	147	0	0	0	0	147							69961	2681	2681	2681	2681	80686
E-11	1025	0	0	0	0	1025							218808	111	111	111	111	219252
E-12	1267	0	0	0	0	1267							21478	498	498	498	498	23469
E-13	4860	0	0	0	0	4860							92798	0	0	0	0	92798
E-14	1728	1750	1750	1750	1750	8728							53400	0	0	0	0	53400

	Retail						Commercial						Industrial					
	2016	16-21	21-26	26-31	31-36	2036	2016	16-21	21-26	26-31	31-36	2036	2016	16-21	21-26	26-31	31-36	2036
NC-01	5516	228	228	228	228	6429	694	180	180	180	180	1412	0	0	0	0	0	0
NC-02	8029	489	489	489	489	9986	705	202	202	202	202	1511	0	0	0	0	0	0
NC-03	10376	348	348	348	348	11767	10952	1480	1480	1480	1480	16874	0	0	0	0	0	0
NC-04	13368	141	141	141	141	13933	486	122	122	122	122	975	507	0	0	0	0	507
NC-05	1743	304	304	304	304	2960	862	245	245	245	245	1842	0	0	0	0	0	0
NC-06	1521	533	533	533	533	3651	0	0	0	0	0	0	0	0	0	0	0	0
NC-07	10149	43	43	43	43	10323	4515	771	771	771	771	7600	975	0	0	0	0	975
NC-08	8483	141	141	141	141	9048	280	72	72	72	72	569	450	0	0	0	0	450
NC-09	24540	489	489	489	489	26497	1778	448	448	448	448	3569	3030	0	0	0	0	3030
FNC-01	0	0	5000	0	0	5000	0	0	2143	0	0	2143	0	0	0	0	0	0
BG-01	7634	125	125	125	125	8134	10475	0	0	0	0	10475	5116	0	0	0	0	5116
BG-02	35527	625	625	625	625	38027	1265	0	0	0	0	1265	32740	0	0	0	0	32740
BG-03	12515	0	0	0	0	12515	0	0	0	0	0	0	0	0	0	0	0	0
BG-04	10444	0	0	0	0	10444	0	0	0	0	0	0	9315	0	0	0	0	9315
BG-05	0	0	0	0	0	0	0	0	0	0	0	0	2004	0	0	0	0	2004
SS-01	3234	0	0	0	0	3234	1542	0	0	0	0	1542	0	0	0	0	0	0

knox
your city

Update

September 2017

Knox City Council

Knox Land for Business Background Report - September 2017 Update

2.5. City of Knox Municipal Plans and Strategies

Knox Community and Council Plan 2017-2021

The Community and Council Plan 2017-2021 has replaced the Knox City Plan 2013-2017 and Knox Integrated City Strategy 2015 and is the long-term plan to guide Knox for the next four years and beyond. It outlines the long-term, shared goals and aspirations for the future.

Goal 5 of the Plan is "We have a strong regional economy, local employment and learning opportunities".

Key strategies under this goal include:

- Strategy 5.1 – Attract new investment to Knox and support the development of existing local businesses, with a particular focus on Advanced Manufacturing, Health, Ageing and Business Services sectors.
- Strategy 5.2 – Plan for a range of key strategic centres that provide a diversity of employment, services and amenities to support the changing needs of our community.

Council initiatives to support these key strategies include advancing the planning for the Wantirna Health Precinct and implementing the strategic review of land for business and employment in the municipality.

State of Knox Report 2nd edition 2016

In 2016 a second edition of the State of Knox Report was produced. The updated Report outlines that Knox is striving towards:

- Knox enjoys a globally competitive economy.
- Knox is well regarded as a location for sustainable business and investment.
- Knox benefits from a thriving local economy.
- People in Knox have a high level of personal economic capacity.
- Local employment is desired and encouraged.
- Knox enjoys a skilled and contemporary workforce.
- Businesses in Knox benefit from strong collaborative networks and increased skills and capabilities.
- Knox exhibits sectors and firms representative of an advancing, knowledge-based economy built on the use of modern technologies.

2.6. Existing Studies Regarding Specific Land for Business Assessment Areas and Activity Centres

Knox Central Structure Plan 2017

Council has prepared a Structure Plan and associated Planning Scheme Amendment (C149) for the Knox Central Activity Centre. This has gone through public exhibition and a panel hearing process. A report on the Structure Plan Amendment and Panel Report is scheduled to be reported to Council in October 2017.

An area of focus (Objective 3) of the Plan is to establish Knox Central as a focal point of activity including employment, retail, community, entertainment and leisure activity.

Relevant key findings are:

- Businesses in Knox Central are dominated by retail, however Knox Central has a unique position within Melbourne's eastern region of having a manufacturing and wholesaling presence in an activity centre context.
- Additional demand for industrial and commercial floor space is not expected within the Centre.
- Knox Ozone is the focus of Knox's 'night time economy'.
- There is a lack of diversity in retail/hospitality/leisure spaces across Knox Central.

Strategies to address Objective 3 include:

- Facilitating a shift from the industrial nature of Lewis Road Mixed Use precinct to ground level commercial with upper level residential uses.
- Supporting the expansion of activity in the Commercial core precinct as the focus for major entertainment, hospitality, retail and leisure in Knox Central.
- Support small scale and complementary retail and hospitality operations outside of the commercial core in order to provide street level activity throughout Knox Central.
- Support ground level commercial with upper level residential uses in the Burwood Highway South precinct.
- Support the provision a mixed use precinct, which includes local convenience retailing on the strategic redevelopment site.
- Support the role of Knox Ozone as the focus for Knox's 'night time economy', while managing potential negative impacts such as those associated with excessive alcohol use.

Bayswater Activity Centre Structure Plan 2020 (2005)

This plan included the recommendation for grade separation of the rail which has now occurred. This change is considered a catalyst project for further change in the centre which would benefit by a review of the Structure Plan.

Boronia Structure Plan – Boronia Renewal Project

Council in 2017 commenced work on 'Boronia Renewal' which includes developing a new Plan for Boronia. It involves developing a holistic and shared direction for Boronia and covers civic projects, new infrastructure and changes to the Knox Planning Scheme.