



Department of Planning,
Lands and Heritage



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Land Use and Employment Survey 2018 South West

January 2020

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Summary

This report provides a summary of the 2018 Land Use and Employment Survey (LUES) conducted by the Department of Planning, Lands and Heritage (the Department) for the South West region, encompassing the Cities of Bunbury and Busselton and the Shires of Augusta-Margaret River, Boyup Brook, Bridgetown-Greenbushes, Capel, Collie, Dardanup, Donnybrook-Balingup, Harvey, Manjimup and Nannup.

The Land Use and Employment Survey is a survey of all commercial, industrial, public purpose and recreation zoned land in the South West region. It focuses on the number and type of establishments, the floorspace occupied and the number of employed persons. These three main variables are coded according to the Western Australian Standard Land Use Classification (WASLUC) codes and Planning Land Use Categories (PLUC). Information garnered from this analysis serves to identify significant patterns, themes and emerging trends occurring in South West region.

Key statistics

- 16,200 activities were captured across the whole of the South West, 4,983 more than were recorded in the previous South West Land Use and Employment Survey in 2006.
- The number of employees increased from 42,280 in 2006 to 59,845 in 2018.
- Between 2006 and 2018, the total floorspace increased by approximately 50 per cent from 2,722,596m² to over 4,117,497m².
- Storage and distribution services occupy the largest amount of floorspace at 732,046m² while the Office/Business land use have the highest number of employees with 20,186.

1 Introduction

This report presents an overview of trends occurring in the study area through consideration of floorspace, employment and land use. The information underpinning this study is from the 2018 Land use and Employment Survey (LUES).

The LUES collects key information relating to land use and employment, including the type of activities conducted, the floorspace occupied and the number of persons employed by businesses in the study area. The information collected by the survey is critical in employment forecasting and transport modelling. The data is also widely used by internal and external stakeholders such as local governments, state government agencies, academic institutions and property and planning consultants.

The last major analysis of land use and employment for the South West region was in 2006. During the 2018 survey, a total of 18,338 premises were surveyed between February and December 2018 and an 87 per cent response rate was achieved.

1.1 Study area – the South West Region

The study area for this report is the South West region, which consists of 12 local government areas. All commercial, industrial, public purpose and recreational zoned land within the major townsites was surveyed. For this report, the collected data has been collated by sub-region. These sub-regions are as follows:

Bunbury Geographe

City of Bunbury

Shire of Capel

Shire of Collie

Shire of Dardanup

Shire of Donnybrook-Balingup

Shire of Harvey

Leeuwin Naturaliste

City of Busselton

Shire of Augusta-Margaret River

Warren Blackwood

Shire of Boyup Brook

Shire of Bridgetown-Greenbushes

Shire of Manjimup

Shire of Nannup



Figure 1: South West Region

1.2 South West region overview

The South West region is located in the south-western corner of Western Australia (Figure 1). The region's economy consists of mining, agriculture, manufacturing, retail and tourism; with Bunbury serving as the region's commercial and administrative hub. Mining produces the highest revenue within the region with coal, alumina and mineral sands particularly important for the local economy. The South West also has a diverse natural environment, which has made it Western Australia's most popular tourist destination. Visitors are attracted to the world-famous beaches, wineries and national parks as well as coastal towns such as Augusta, Margaret River and Dunsborough.

In 2018, a total of 4,117,497m² floor space (net lettable area) was recorded across the South West region, a 51 per cent increase from the 2,722,596m² recorded in 2006. Storage/distribution accounted for 18 per cent (732,046m²) of land use within the South West, the highest proportion of any in the region. The storage/distribution category also had the largest share of floorspace for both the Bunbury Geographe and Warren-Blackwood (19 per cent) sub-regions. In the Leeuwin-Naturaliste sub-region however, the residential category accounted for the largest proportion of total floorspace at 22 per cent (Figure 2). Figure 3 demonstrates that vacancy rates have remained steady between 2006 - 2018 within both the Bunbury Geographe and Warren-Blackwood sub-regions, both increasing by only one per cent. There has been a slightly larger increase in vacancy rates within the sub-region of Leeuwin-Naturaliste, which showed a three per cent increase since the previous survey. Most of the employment within the region is concentrated in the office/business and shop/retail PLUC, which account for 34 per cent and 20 per cent of employment, respectively (Figure 4). High employment within these PLUCs is largely due to their high labour intensity relative to floor space and their strong representation in almost all of the localities surveyed.

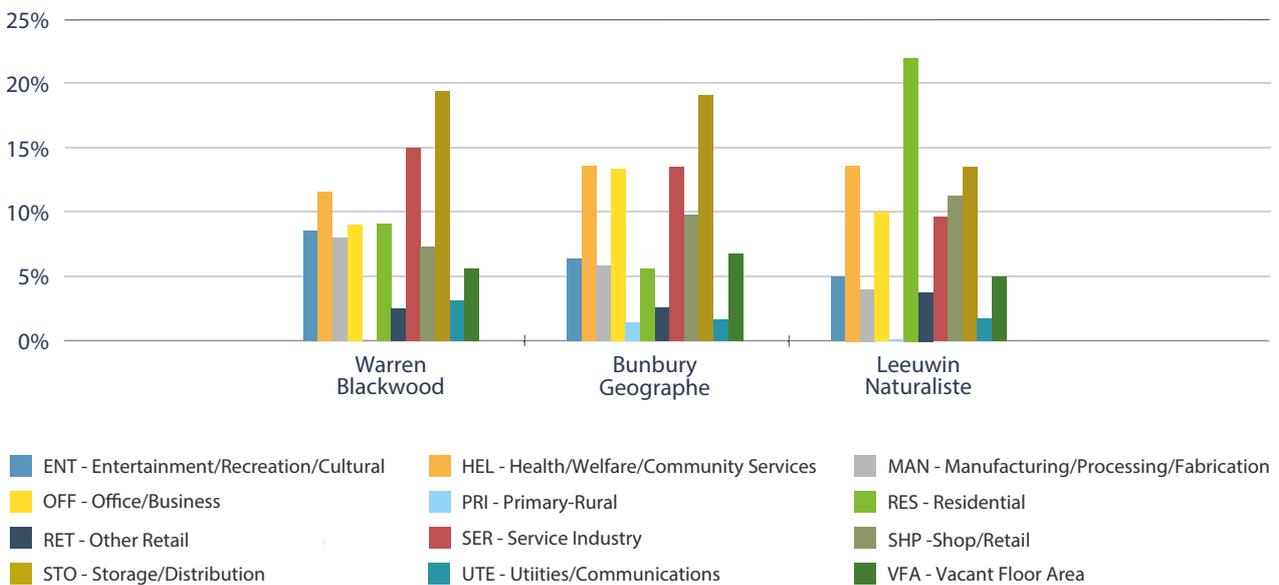


Figure 2: Percentage of land use by sub-region

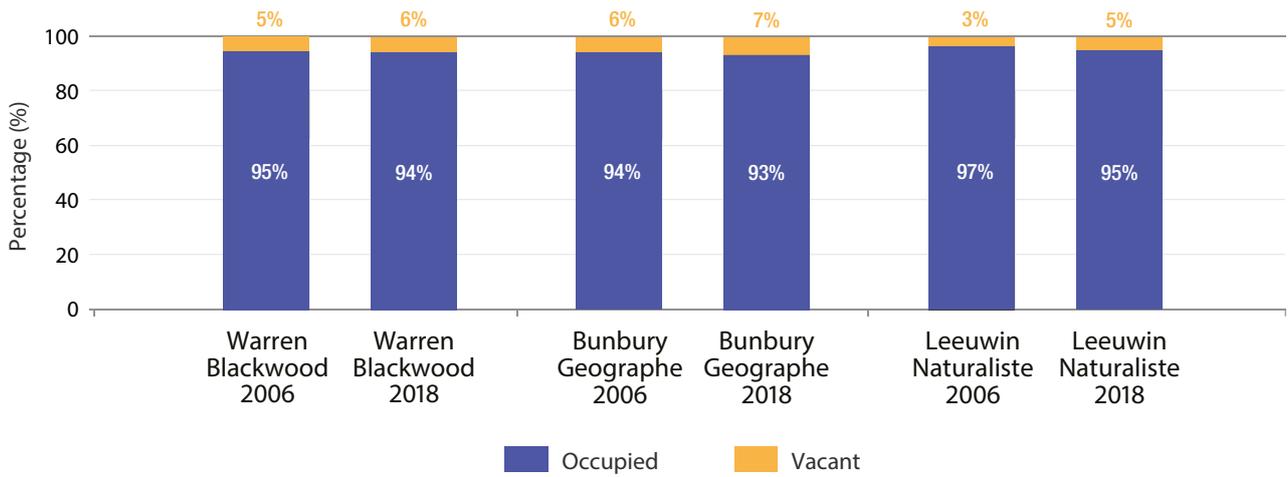


Figure 3: Occupancy and vacancy rates per sub-region comparison 2006 to 2018

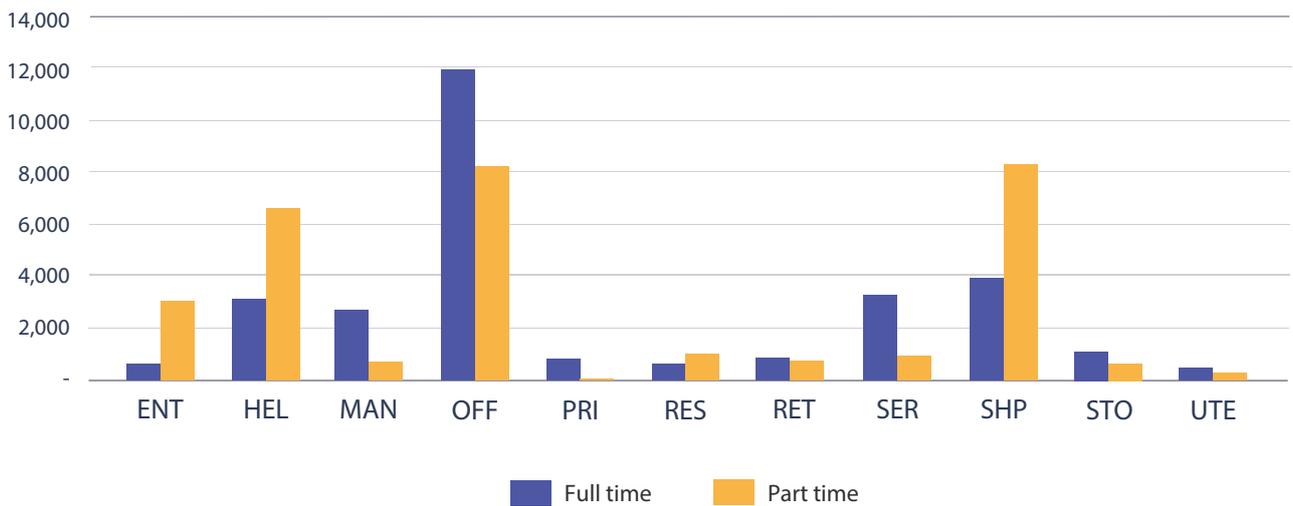


Figure 4: Number of employees in the South West by land use

The Bunbury Geographe sub-region consists of six local governments, as shown in Table1:

Table 1: Bunbury Geographe sub-region local governments

Local government	Land area (km ²)	Estimated Residential Population (2018)
City of Bunbury	65.4	31,776
Shire of Capel	557.9	18,022
Shire of Collie	1709.8	8,754
Shire of Dardanup	525.8	14,368
Shire of Donnybrook-Balingup	1559.9	6,062
Shire of Harvey	1727.6	27,798

This sub-region has the largest economy in regional Western Australia, driven by a mix of mineral processing, energy production, mining, tourism and agriculture. Mining and resource processing are the most active industries and are dominated by coal, alumina and mineral sands. Bunbury is the commercial and administrative hub of the South West, while winery tourism thrives in the Ferguson Valley and Harvey regions, and motorsports attract visitors to Collie.

2.1 Floorspace

There was a total of 2,586,446m² of floorspace (net lettable area) in the Bunbury Geographe sub-region in 2018, an increase of 52 per cent from the 1,697,022m² recorded in 2006. Of the total floorspace recorded, 93 per cent is occupied, accounting for 2,410,721m². The City of Bunbury contained majority of the floorspace (60 per cent) in the Bunbury Geographe sub-region at 59 percent, with the balance being distributed between the Shires of Harvey (16 per cent), Dardanup (nine per cent), Collie (six per cent), Capel (six per cent) and Donnybrook-Balingup (three per cent). Higher levels of activity in the City of Bunbury can be attributed to its large population and role as the major service centre for the South West region.

The Shires of Capel, Collie and Donnybrook-Balingup have the highest proportion of vacant floorspace (nine per cent) followed by Bunbury (eight per cent), Harvey (three per cent) and Dardanup (two per cent). The Shire of Harvey is the only local government area which has experienced a decrease in the vacancy rate, falling by one percent since the last survey.

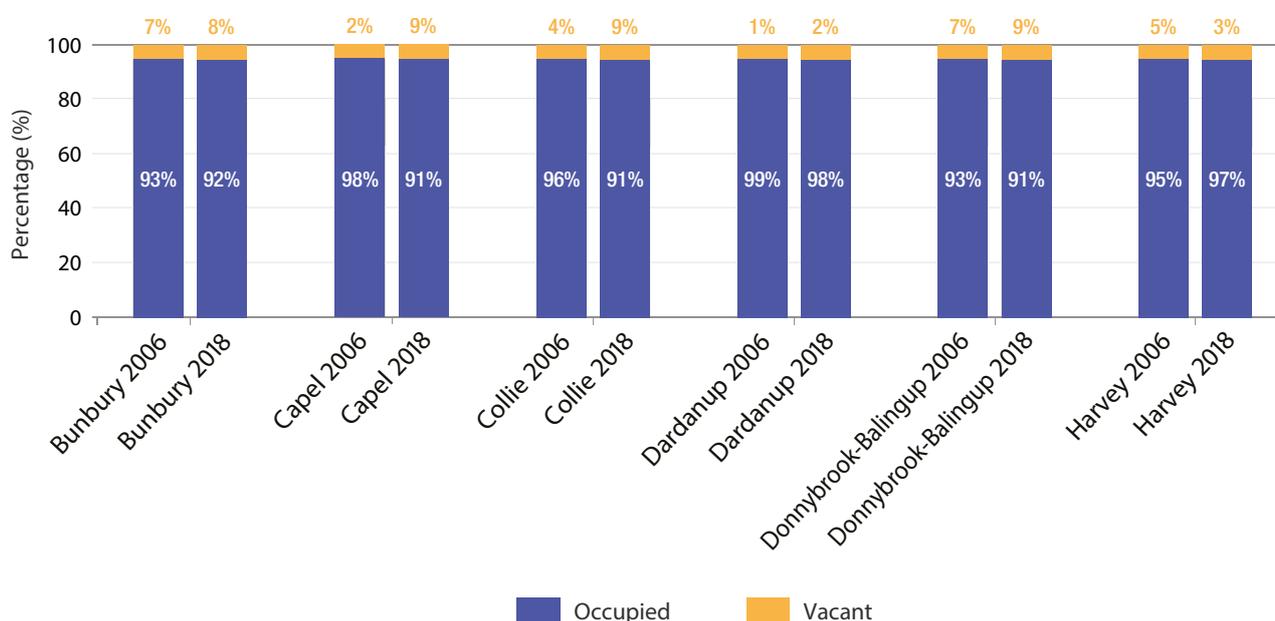


Figure 5: Occupancy and vacancy rates per local government in Bunbury Geographe comparison 2006 to 2018

2.2 Land Uses

The predominant land uses in the Bunbury Geographe sub-region are storage/distribution (496,495m²) and Health/Welfare/Community Services (354,185m²). Together, these land uses occupy 33 per cent of all floorspace within the Bunbury Geographe sub-region. For the storage/distribution category, a high proportion of land use is due to the substantial floorspace required for large operating facilities, for example mineral sands mining and storage services. The service industry and Office/Business PLUC are the next highest recorded land uses, accounting for 350,8986m² and 346,414m², respectively.

The City of Bunbury accounted for a 69 per cent share of storage/distribution land uses recorded in the region. This was followed by the Shires of Harvey (12 per cent) and Dardanup (eight per cent), with the balance being spread across the remaining local government areas. The dominance of Storage/distribution in the City of Bunbury can in part be attributed to large timber plantation and mineral sands mining operations located within the local government area. The higher occupancy of storage/distribution in the Shire of Harvey is attributed to a large earth moving operation as well as milk production and manufacturing.

The share of Health/Welfare/Community Services was more distributed across the local government areas, with the City of Bunbury accounting for almost half (48 per cent) followed by the Shires of Harvey (23 per cent) and Capel (13 per cent). Similar to the storage/distribution category, the share of Office/Business was concentrated more heavily in the City of Bunbury (70 per cent) with Harvey and Dardanup each having nine per cent each.

Figure 6 shows that most land uses have maintained a relatively consistent share of total land use between 2006 and 2018, however there has been a significant decrease in the proportion of land uses dedicated to manufacturing and an increase in health/welfare/community services. An increase in the number of educational and medical facilities can account for the growth in floorspace within health/welfare/community services. This is unsurprising given the population growth in the sub-region since the last survey.

The decline in the manufacturing/processing/fabrication category can likely be attributed to manufacturing processes being increasingly undertaken outside of Western Australia. Bunbury, Capel, Collie, Dardanup and Donnybrook-Balingup all experienced declines in the amount of floorspace dedicated to manufacturing/processing/fabrication, whereas Harvey was the sole local government area to experience an increase. In all cases though, the proportion of total floorspace dedicated to this category experienced significant declines between the 2006 and 2018 surveys.

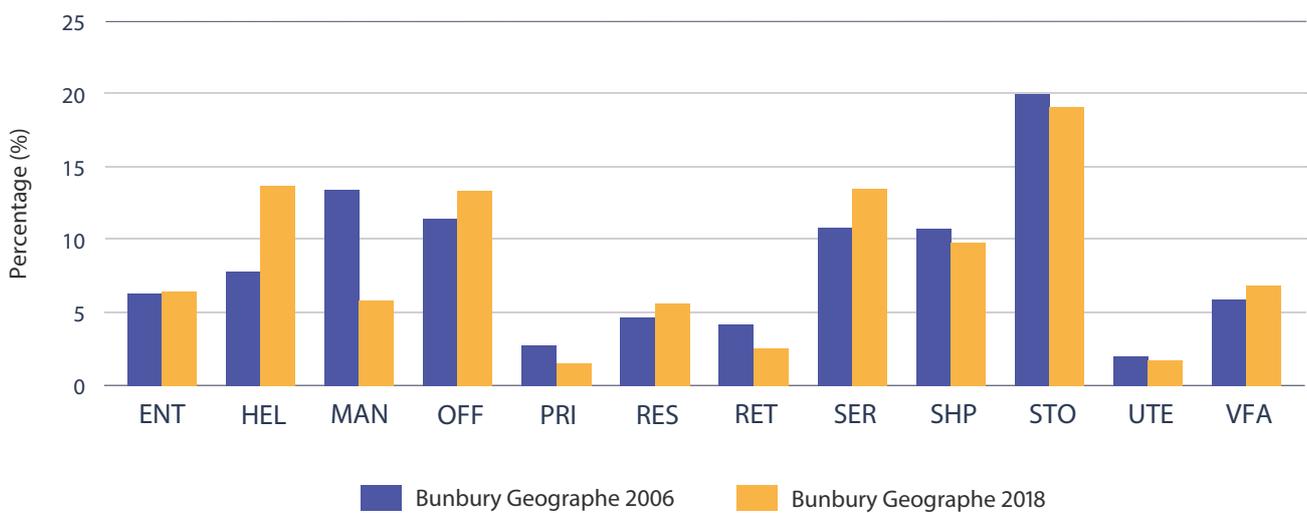


Figure 6: Bunbury Geographe change in land use comparison

Figure 7 shows the distribution of land uses for each of the local government areas. Storage/distribution is the predominant land use for the Donnybrook-Balingup and Bunbury local government areas, accounting for 27 and 22 per cent respectively. In Dardanup, the largest proportion of floorspace is occupied by the service industry, which accounts for 20 per cent. Capel, Collie and Harvey's dominant land use is health/welfare/community services, accounting for 30, 21 and 20 per cent respectively. The prominence of education facilities such as schools and technical colleges within the three shires, along with churches and hospitals, all contribute to the strength of this land use in these areas. Harvey also has a strong manufacturing/processing/fabrication sector which accounts for 20 per cent of floorspace in the Shire.

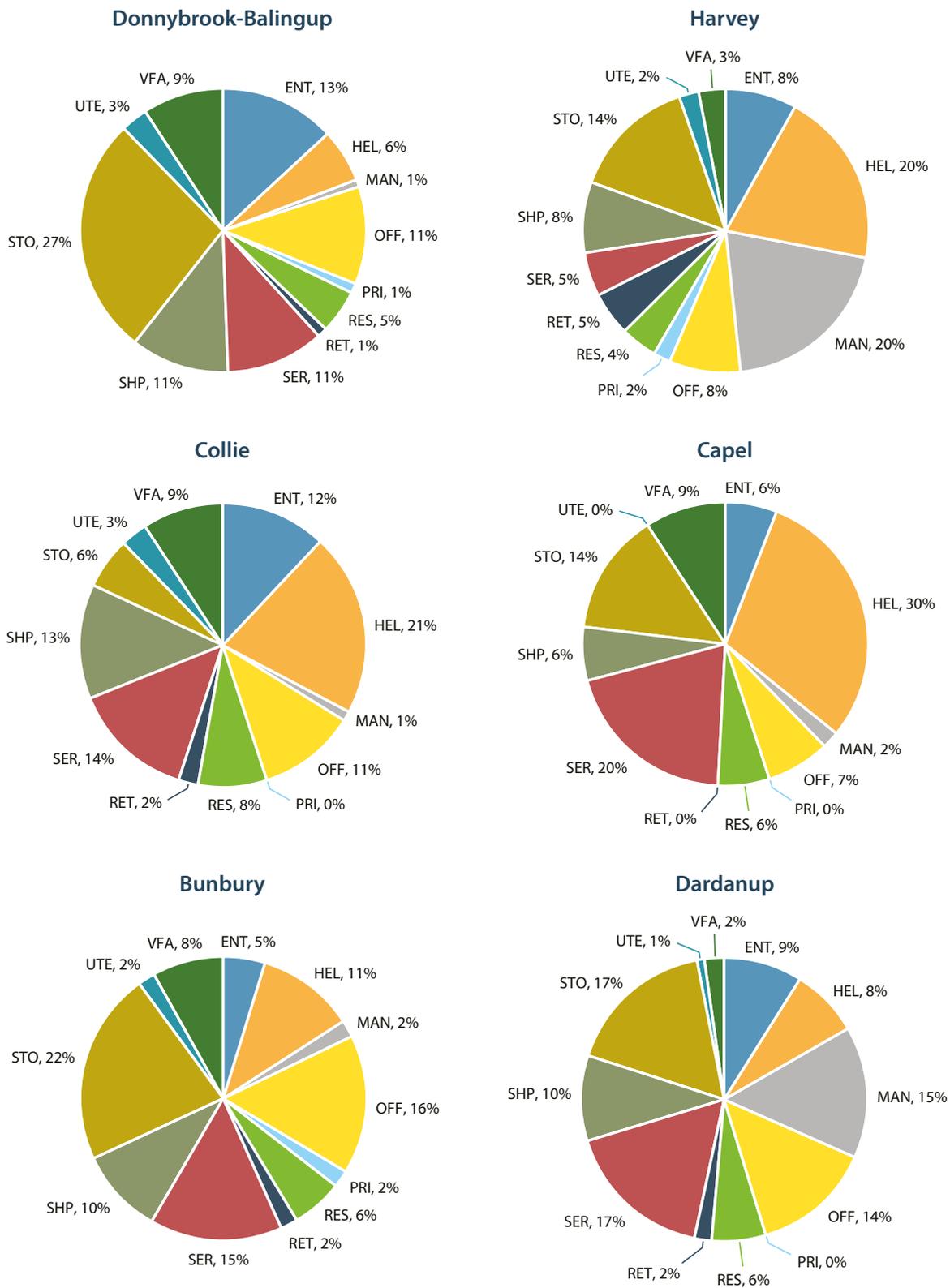


Figure 7: Land use in the City of Bunbury and Shires of Capel, Collie, Dardanup, Donnybrook-Balingup and Harvey

ENT - Entertainment/Recreation/Cultural HEL - Health/Welfare/Community Services MAN - Manufacturing/Processing/Fabrication
 OFF - Office/Business PRI - Primary-Rural RES - Residential
 RET - Other Retail SER - Service Industry SHP - Shop/Retail
 STO - Storage/Distribution UTE - Utilities/Communications VFA - Vacant Floor Area

2.3 Employment

There is a total of 35,338 employees in the Bunbury Geographe sub-region. Of these, 18,676 are employed full-time, accounting for 53 per cent of total employment. In the sub-region, 58 per cent of people are employed within the City of Bunbury with the balance distributed between the Shires of Harvey (17 per cent), Dardanup (ten per cent), Collie (seven per cent), Capel (five per cent) and Donnybrook-Balingup (three per cent). There are 20,448 employees in the City of Bunbury and 6,082 employees in the Shire of Harvey, which reflects the higher population in both local government areas (Table 1).

The workforce in the Bunbury Geographe sub-region is dominated by those working in the office/business or shop/retail PLUC, representing 36 and 20 per cent of the total workforce respectively. Figure 9 demonstrates the high proportion of employment compared to proportion of floorspace occupied by these PLUCs. This is a result of the concentrated nature of these land uses compared to, for example, storage/distribution which has a high proportion of land use compared to the proportion of employment, likely due to the large amount of land required for the industry. In the City of Bunbury, there are 7,882 persons employed in the PLUC of office/business and 4,054 persons employed in shop/retail, accounting for 39 per cent and 20 per cent respectively of the total employees in the City of Bunbury.

Figure 8 shows that there is a large proportion of part-time employment within shop/retail, health/welfare/community services and entertainment/recreation/culture. Of the three PLUC's, the shop/retail category employs the highest number of part-time employees (4,837 persons), followed by the health/welfare/community services (3,524 persons) and finally entertainment/recreation/culture (1,480 persons). This is to be expected given that workforce in retail and food outlets, such as clothing stores or cafes, are dominated by casual or part-time employees. Part-time employment within health/welfare/community services was mostly associated with churches (i.e. part-time volunteers within the church) as well as hospital and school staff. For the entertainment/recreation/culture land use, sporting clubs accounted for the greatest amount of part-time staff. Comparatively, office/business, manufacturing/processing/fabrication and the service industry have a higher proportion of full-time employment. This is to be expected, as many of the occupations represented by these land use categories are commonly full-time.

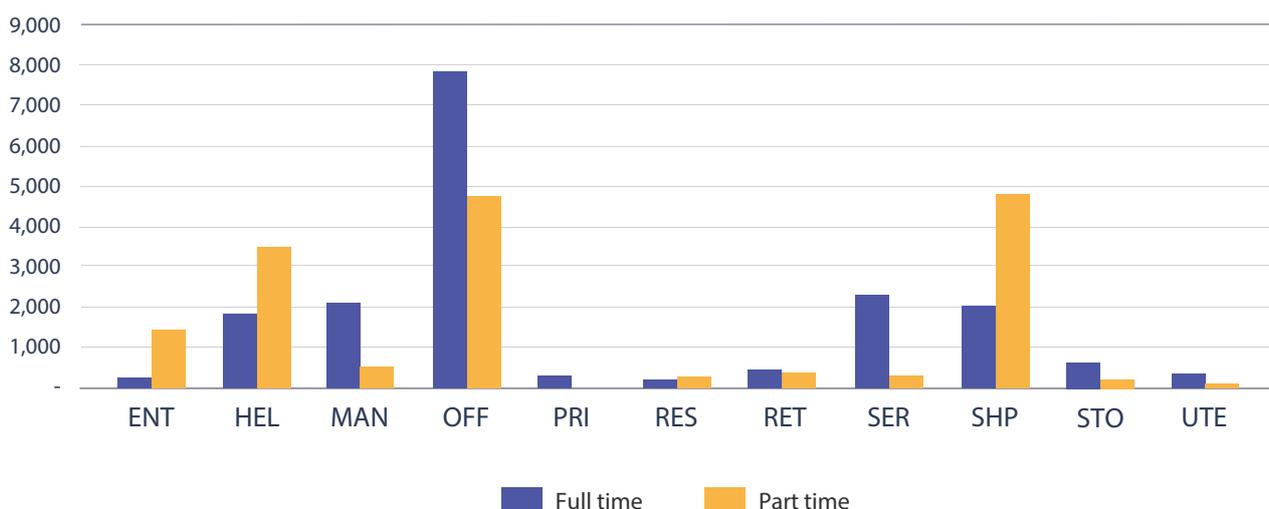


Figure 8: Number of employees in Bunbury Geographe by land use

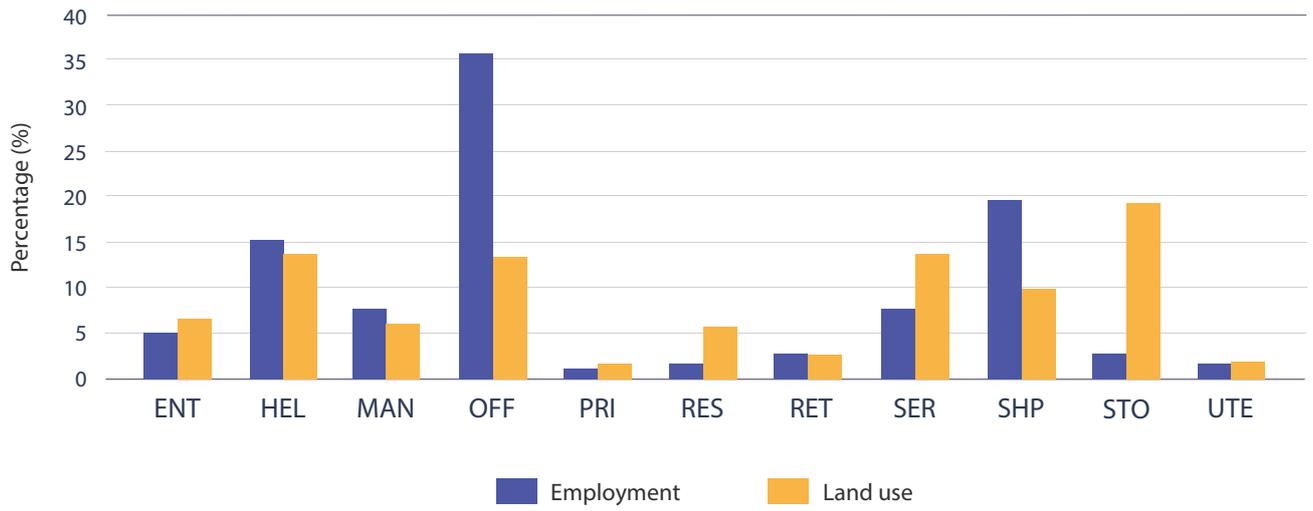


Figure 9: Percentage of employment and land use comparison in Bunbury Geographe

3 Leeuwin Naturaliste

The Margaret River wine region has significant tourism value and attracts both international and domestic visitors, with potential to expand into high-end, corporate or nature-based tourism. Other major contributors to the economy are viticulture and agriculture, the latter of which is dominated by dairy and beef cattle. Concurrent with the tourism industry, there's also growth in the hospitality and retail sector. Creative industries including design, visual arts, music and performing arts also capitalise on high visitor numbers.

The City of Busselton has strong employment activity, a diverse economy and growing population. Its key assets include a growing construction industry, a thriving commercial sector and its reputation as a popular holiday destination. The Leeuwin-Naturaliste Newtown development outside of Busselton, a mix of residential, commercial, industrial and education facilities, is a master-planned estate that meets housing demand and is nearing completion.

The Leeuwin-Naturaliste sub-region consists of two local government areas, as shown in Table 2.

Table 2: Leeuwin Naturaliste sub-region local governments

Local government	Land area (km ²)	Estimated Residential Population (2018)
Shire of Augusta-Margaret River	2122.4	15,700
City of Busselton	1454.1	38,926

3.1 Floorspace

There is a total of 1,059,465m² floorspace (net lettable area) in the Leeuwin-Naturaliste sub-region, a 62 per cent increase on the 654,606m² recorded in 2006. Of this, 1,006,165m² is occupied, representing 95 per cent of the total. The City of Busselton has the largest amount of total floorspace with 725,768m², followed by the Shire of Augusta-Margaret River with a total of 333,697m². The residential PLUC is the most prominent land use within the sub-region, accounting for 22 per cent of total floorspace. This is due to the strength of the tourism industry within the Leeuwin-Naturaliste sub-region, which produces a high demand for accommodation facilities.

The City of Busselton has the largest proportion of vacant floorspace with 40,514m² (five per cent) unoccupied while the Shire of Augusta-Margaret River has a total of 12,785m² (four per cent). There has been a slight increase in vacancy rates within both local governments since the last survey in 2006 (Figure 10) which may be attributable to the large increase in total floorspace over this time period.

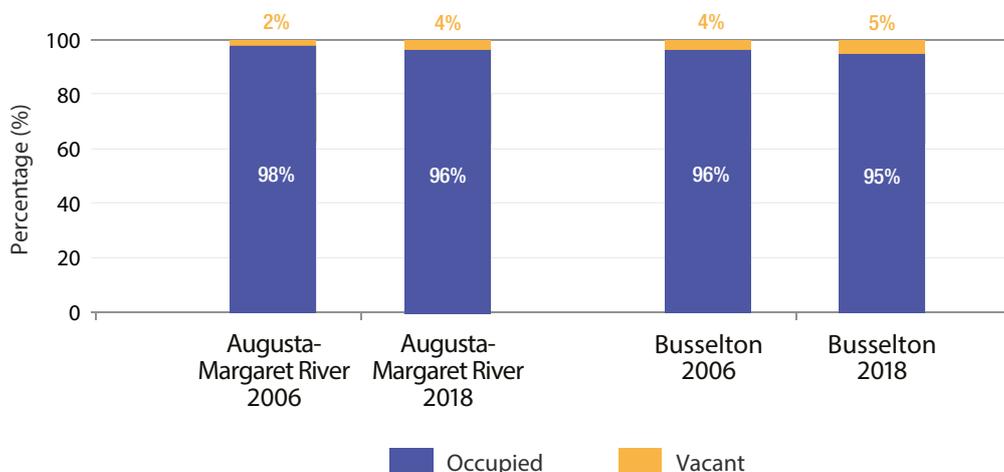


Figure 10: Occupancy and vacancy rates per local government in Leeuwin Naturaliste comparison 2006 to 2018

3.2 Land Uses

From a sub-regional perspective, residential land uses comprise the majority of floorspace at 233,800m², representing 22 per cent of the total floorspace in the sub-region. In 2006, the residential PLUC accounted for over a quarter of land use within the sub-region, however, the diversification of industry within the Leeuwin-Naturaliste region has resulted in a slight decline relative to other emerging activities.

The health/welfare/community services and storage/distribution land uses have the second highest net lettable area at 14 per cent each, accounting for 144,283m² and 143,828m² of floorspace, respectively. Following this are shop/retail (11 per cent), office/business (ten per cent) and the service industry (ten per cent). There has been a steady diversification of land uses within the Leeuwin-Naturaliste region with small changes in land use patterns between 2006 and 2018. Worth noting however is the increase in health/welfare/community services and the decline in manufacturing between the survey periods (Figure 10). An increase in health/welfare/community services can be linked to the overall increase in population within the local government areas over the past decade, resulting in a greater need for community facilities. A decline in the manufacturing/processing/fabrication category is most likely linked to the general diversification of the region as well as manufacturing processes being increasingly undertaken outside of Western Australia.

Within the City of Busselton, the majority of floorspace is occupied by residential land uses, accounting for 24 per cent of the total area. This was due to a large number of holiday resorts and caravan parks. Similar to the Leeuwin-Naturaliste sub-region, health/welfare/community services is the second highest land use in Busselton, accounting for 14 per cent, while storage/distribution and shop/retail both account for 12 per cent of land use in the City. Floor space in the City of Busselton has increased by 67 per cent since 2006, growing from 435,379m² to 725,768m². This is indicative of the growth in the Shire, particularly in Busselton and Dunsborough, during the past decade.

Within the Shire of Augusta-Margaret River, the majority of floorspace is occupied by the storage/distribution and residential land use categories, both accounting for 18 per cent of total floorspace. The high proportion of land identified as storage/distribution can be credited to the large area of land dedicated to wine production. This land use requires significant storage facilities to operate. Holiday resorts and tourist accommodation accounts for the high residential floorspace. Residential floorspace in 2006 within the Shire of Augusta-Margaret River contributed to 27 per cent of total floorspace, which by 2018 had decreased to only 18 per cent. This relative decline is demonstrative of the diversification and growth of other industries, reflected in the growing population and increase in land use within health/welfare/community services, despite the floorspace dedicated to this land use remaining almost unchanged over the time period.

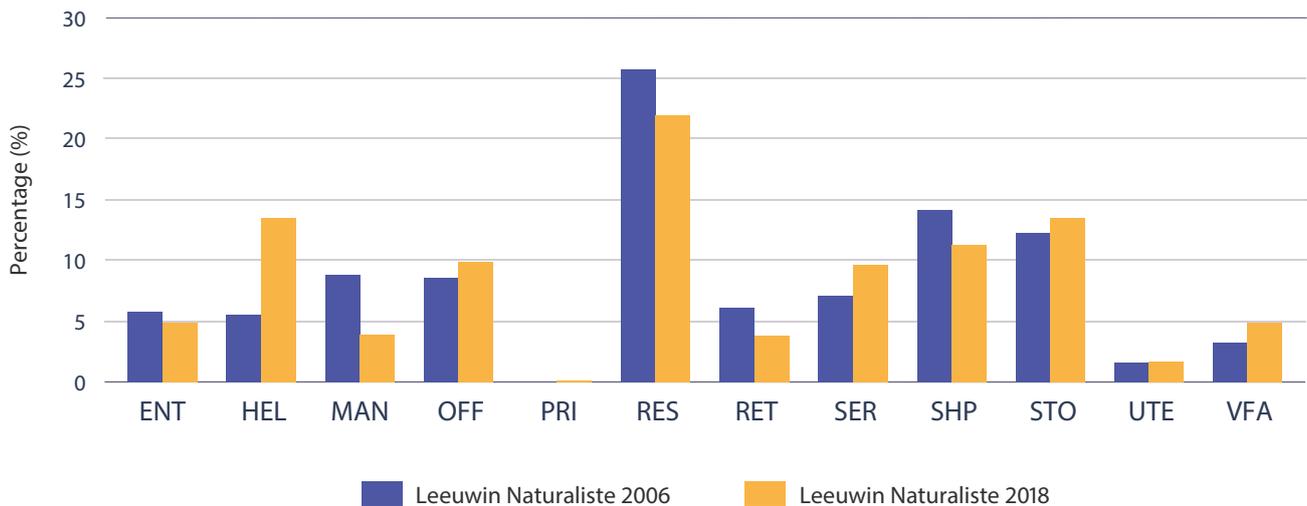


Figure 11: Change in Land Use comparison Leeuwin Naturaliste

3.3 Employment

There were a total of 18,109 persons employed in the Leeuwin-Naturaliste sub-region in 2018. Of these persons, 7,767 (43 per cent) were employed full-time and 10,342 (57 per cent) were employed part-time. The City of Busselton has the largest number of employees with 12,408 followed by the Shire of Augusta-Margaret River with 5,701 employed persons. The breakdown of full-time and part-time employees within both local governments mirrors the Leeuwin-Naturaliste sub-region, demonstrating consistent employment groupings despite the City of Busselton having a much larger working population.

The greatest number of employed persons in the Leeuwin-Naturaliste sub-region was in the PLUC of office/business, totalling 5,207 persons (Figure 12). This represents 29 per cent of overall employment in the region as well as 29 per cent of the employment in each of the local government areas. Shop/retail land uses had the second highest number of employees with 4,407 (24 per cent). Persons employed in shop/retail land uses accounted for 25 per cent of overall employment in the City of Busselton and 23 per cent in the Shire of Augusta-Margaret River. Notably, from a sub-regional perspective only 35 per cent of employees within the shop/retail PLUC worked full-time, meaning 65 per cent of employees are part-time (Figure 12). This is indicative of the larger retail industry, with many part-time employees required to support the everyday functions of a business.

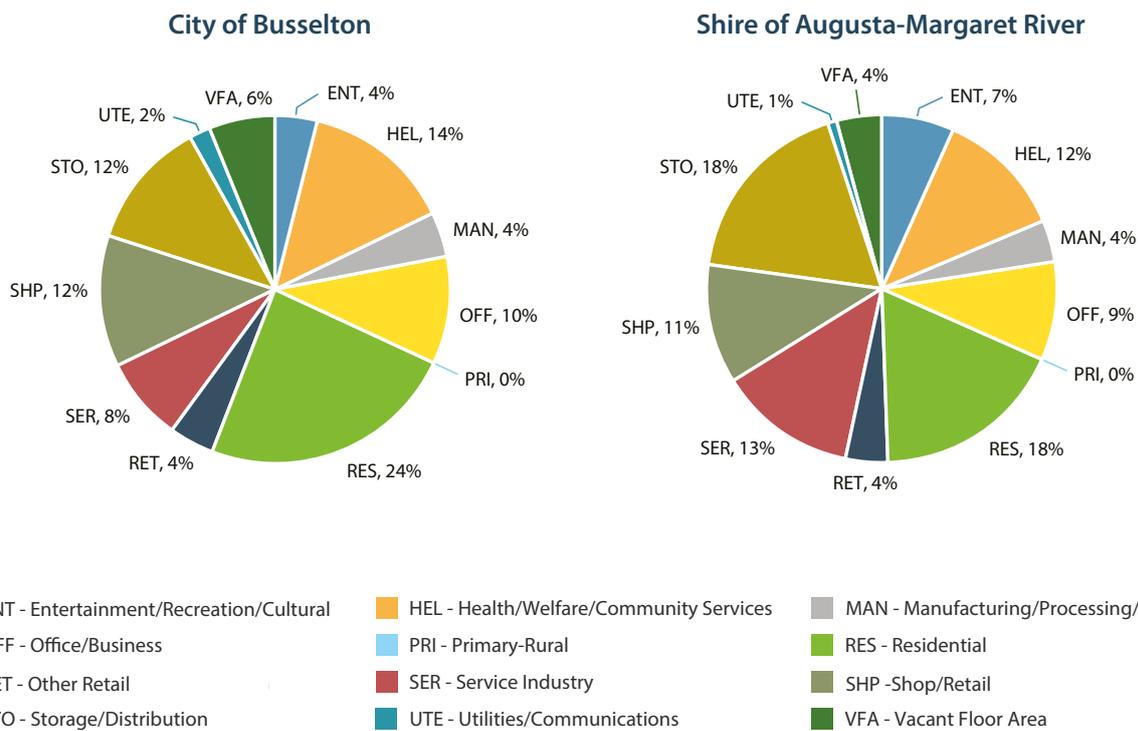


Figure 12: Land use in City of Busselton and Shire of Augusta-Margaret River

Figure 13 shows the comparison of land use and employment within the Leeuwin-Naturaliste sub-region. Both residential and storage/distribution show higher land use in comparison to employment, this is indicative of both industries, for example, residential requiring a large amount of floor space for accommodation purposes with a relatively small number of employees. Within office/business and shop/retail, there is a larger proportion of employment compared to land use, again due to these industries requiring a higher intensity of employment/labour relative to floor space. For example, a retail shop may be only 100m² but have four employees working both full-time and part-time on the premises.

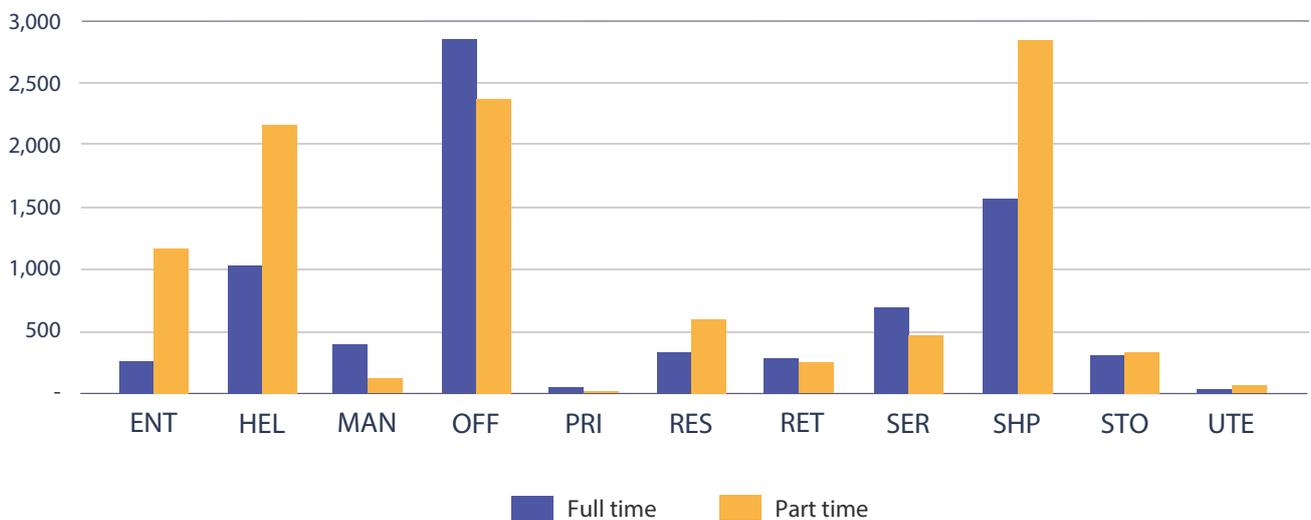


Figure 13: Number of employees in Leeuwin Naturaliste by land use

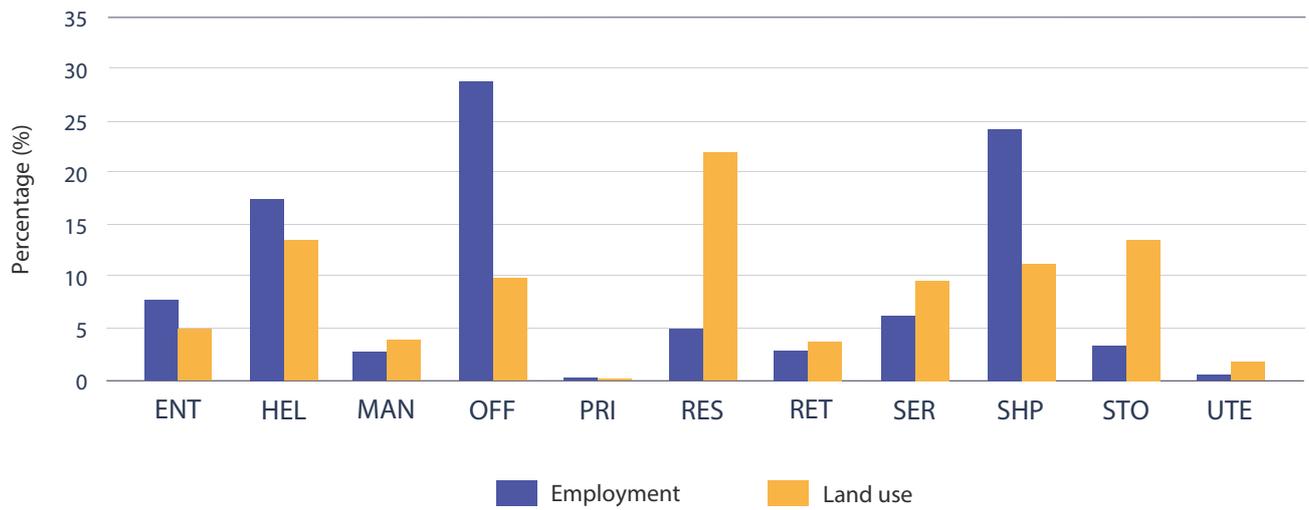


Figure 14: Percentage of employment and land use comparison in Leeuwin Naturaliste

4 Warren Blackwood

Warren-Blackwood is a largely wooded area, with its economy traditionally driven by forestry and agriculture. Industry and hardwood production have been scaled back in recent years and the area has diversified into timber processing, lithium mining and tourism.

The Shire of Boyup Brook has retained its reliance on industry and remains dominated by large-scale agriculture, secondary industries and service industries. The townsite is active with commercial activities including a grain terminal, agricultural suppliers and stock yard sales. The Shires of Nannup and Bridgetown attract significant tourism through their heritage and nature values.

Renewable energy opportunities are also being explored in the sub-region, with a 40 mega-watt biomass project near Manjimup, using forestry by-products as fuel, approved by the Minister for Energy. The Talison Lithium plant on the outskirts of Greenbushes, already a major economic driver for the area, has also proposed a second-stage expansion to double its production. The mine has a current life of 40 years and this is estimated to have the largest deposit of lithium (spodumene) in the world.

As a regional centre, retail activity is significant within the Manjimup townsite, and its surrounding agricultural land forms the state's most productive "food bowl". The region has the capacity to double food production, which will be critical as the state's population increases. New crops are also being grown in the area including green tea, avocados and truffles which are aimed at both Australian and export markets.

The Warren-Blackwood sub-region consists of four local government areas, as shown in Table 3:

Table 3: Warren Blackwood sub-region local governments

Local government	Land area (km ²)	Estimated Residential Population (2018)
Shire of Boyup Brook	2826.5	1,756
Shire of Bridgetown-Greenbushes	1337.4	4,722
Shire of Manjimup	7029.6	9,159
Shire of Nannup	3053.9	1,363

4.1 Floorspace (at LGA level)

There is a total of 471,586m² of floorspace (net lettable area) within the Warren-Blackwood sub-region, a 27 per cent increase from the 370,968m² recorded in 2006. 445,114m² of floor space is occupied, giving the sub-region an occupancy rate of 94 per cent. The local government area with the lowest proportion of vacant floorspace is the Shire of Nannup (two per cent). The Shires of Boyup Brook, Bridgetown-Greenbushes and Manjimup have a vacancy rate of 13, six and five per cent, respectively (Figure 14). Boyup Brook's high vacancy rate may be linked to its small population and high reliance on the agricultural industry. As Boyup-Brook is a small satellite town, many people would likely be attracted to larger settlements, such as Bridgetown, for the greater array of services that is offered.

The Shire of Manjimup has the highest share of the sub-region's floorspace totalling 311,195m² or 66 per cent. This is followed by the Shires of Bridgetown-Greenbushes, Nannup and Boyup Brook, accounting for 18, ten and six per cent, respectively. The storage/distribution PLUC is the most prominent in the sub-region, accounting for 19 per cent of floorspace, followed by the service industry which contributes 15 per cent. Floorspace within the Warren-Blackwood region is more evenly distributed compared to other sub-regions within the South West due to the diversity of land use between local government areas.

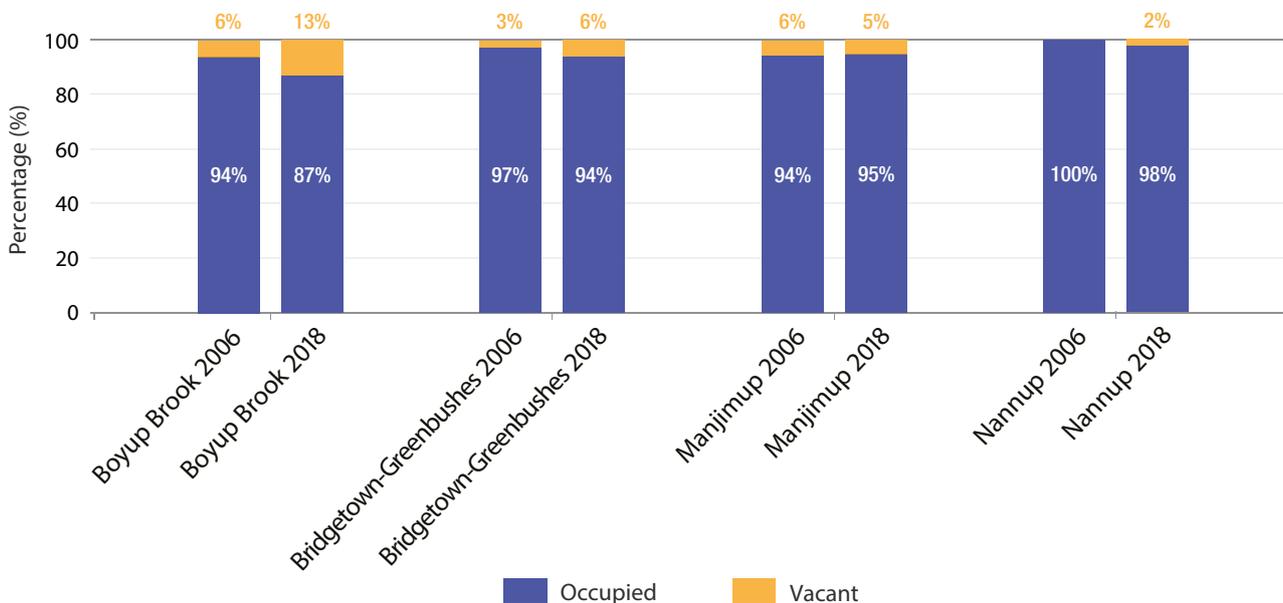


Figure 15: Occupancy and vacancy rates per local government in Warren Blackwood comparison 2006 to 2018

4.2 Land Uses

The predominant land uses in the Warren-Blackwood sub-region are the storage/distribution (91,723m²) and service industries (70,952m²), accounting for 19 and 15 per cent, respectively. Health/welfare/community services occupies the third highest proportion of floorspace at 12 per cent, while both entertainment/recreation/cultural and office/business occupy the fourth largest proportion, each with nine per cent. Land use within storage/distribution is high due to the associated industries requiring large amounts of land for storage facilities. Within the Warren-Blackwood, this would include viticulture, horticulture and timber storage facilities. Similarly, service industry land use is high within the Warren-Blackwood sub-region due to industries including timber, viticulture and horticulture services requiring large amounts of land to operate effectively.

Figure 15 shows that the changes in land use between 2006 and 2018 have fluctuated, with some similarities to other sub-regions in the South West. Manufacturing has declined across the sub-region, with particularly marked declines recorded in the Shires of Bridgetown-Greenbushes and Manjimup. The service industry, health/welfare/community services and storage/distribution are the most notable increases in land use. The service industry and storage/distribution land uses are concentrated mainly within the Shires of Manjimup and Nannup (Figure 15), indicative of the storage and distribution requirements within the timber and horticulture industries.

A strong increase in health/welfare/community services has been identified within the Warren-Blackwood, similar to Leeuwin-Naturaliste. This can be linked to the overall increase in population within the local governments over the past decade, resulting in a greater need for community facilities.

Despite the declines since 2006, manufacturing is still the highest occupier of floorspace, accounting for 21 per cent of the total, followed by storage/distribution, accounting for 16 per cent, within the Shire of Bridgetown-Greenbushes. The concentration of these industries can be attributed to the prominent wine manufacturing and timber processing operations within the Shire.

In the Shire of Boyup Brook, land use is quite dispersed, however the largest land use within the local government area is health/welfare/community services at 22 per cent. As Boyup Brook is a small farming town, a large proportion of land uses within the town are community facilities such as schools, hospitals and other community organisations.

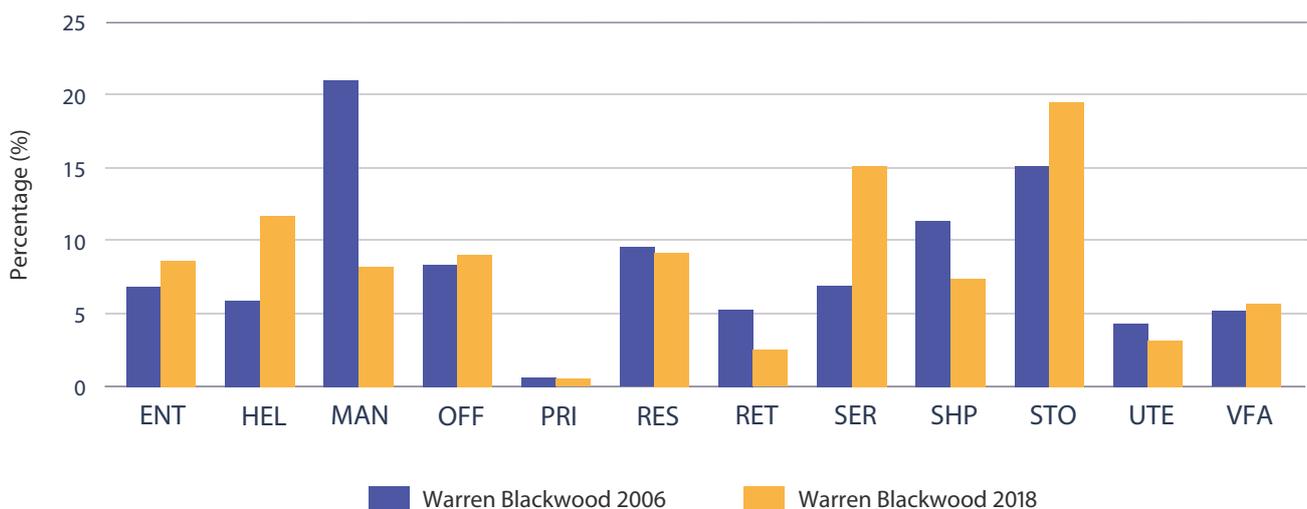


Figure 16: Warren Blackwood change in land use comparison

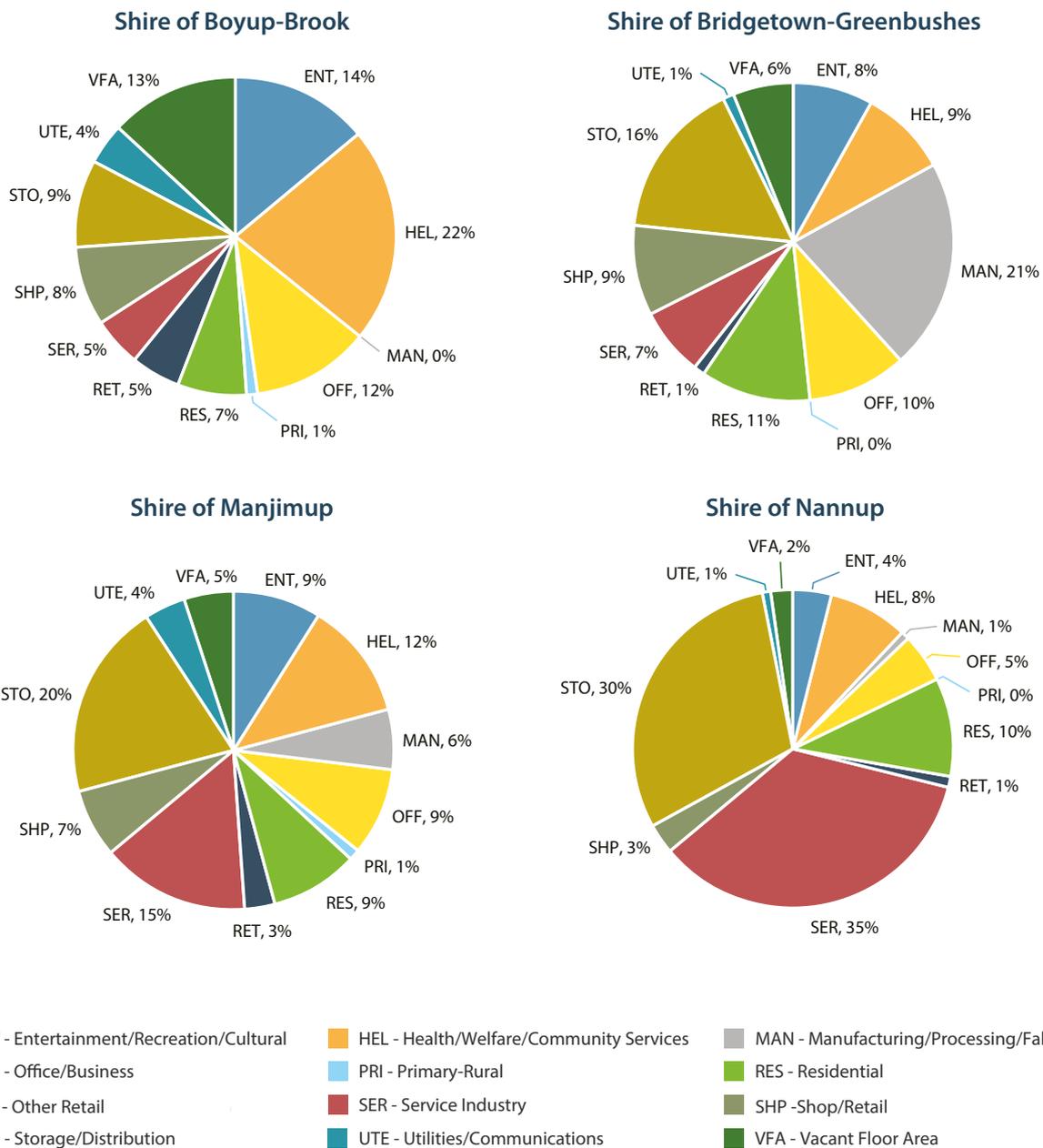


Figure 17: Land use in the Shires of Boyup Brook, Bridgetown-Greenbushes, Manjimup and Nannup

4.3 Employment

There are a total of 6,398 persons employed within the Warren-Blackwood sub-region. Of these, 2,981 are employed part-time and 3,417 are employed full-time, equating to 47 and 53 per cent, respectively. The Shire of Manjimup has the highest number of employees within Warren-Blackwood sub-region, accounting for 3,702 (58 per cent), followed by the Shires of Bridgetown-Greenbushes (29 per cent), Nannup (seven per cent) and Boyup Brook (six per cent). The greatest number of employees within the Warren-Blackwood sub-region falls within the office/business PLUC, totalling 2,347 persons or 37 per cent (Figures 14 and 15). Within the Shire of Manjimup, office/business employment comprises nearly half of total employment (44 per cent), demonstrating the importance of the town as the administrative centre of the Warren-Blackwood sub-region.

Health/welfare/community services was the second highest employer, with 1,134 persons within the sub-region employed in the category, accounting for 18 per cent. Eighty per cent of employees in the health/welfare/community services category are employed part-time (Figure 14), which is reflective of community services such as fire brigades, ambulance stations and community groups having only part-time or volunteer staff. Figure 15 demonstrates similar characteristics to the rest of the South West, with storage/distribution and the service industry showing high levels of floorspace in comparison to employment. This is indicative of the large amount of floorspace in comparison to persons employed to operate large storage and production facilities within both the timber and horticulture industry. Office/business and shop/retail have a higher proportion of employees compared to floorspace due to the nature of both industries being more labour intensive relative to the floorspace required.

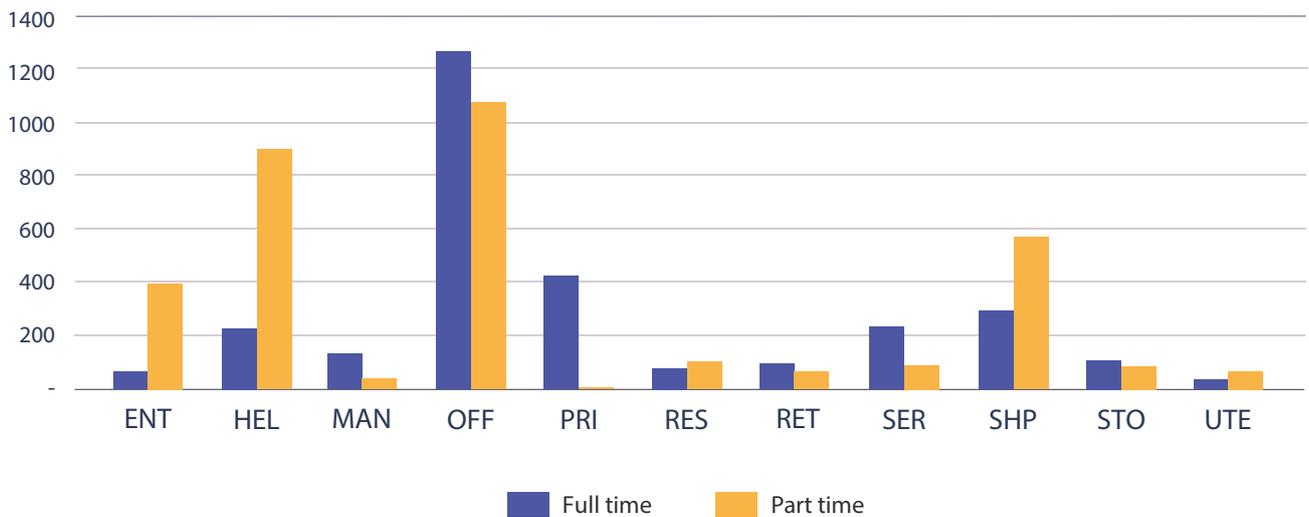


Figure 18: Number of employees in Warren Blackwood by land use

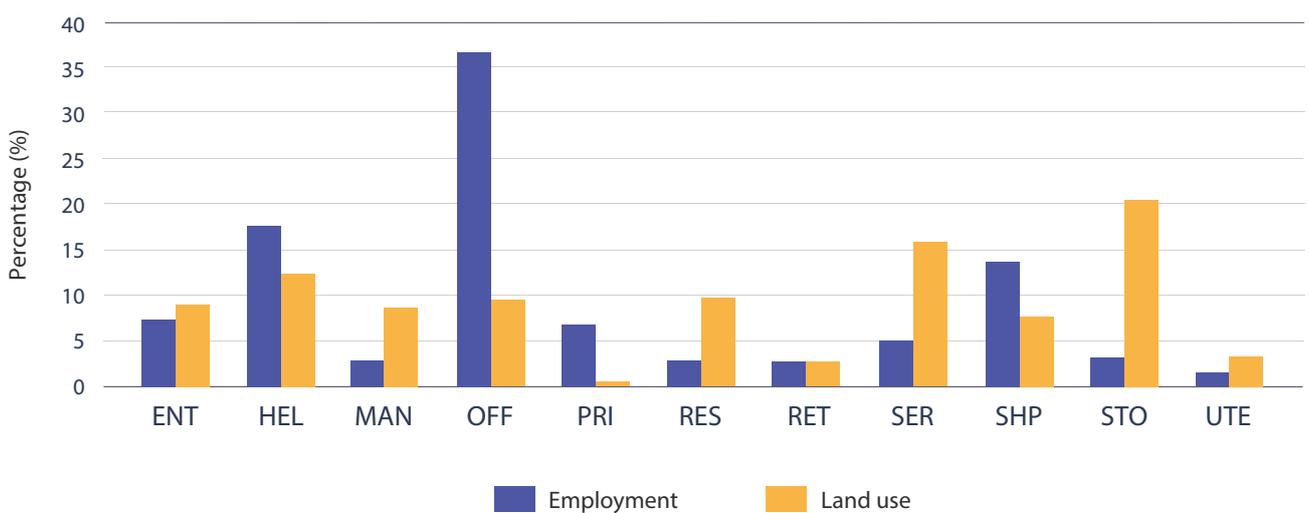


Figure 19: Percentage of employment and land use comparison in Warren Blackwood

Appendices

Appendix A – Planning Land Use Category (PLUC)

PRI – Primary-Rural

Land use activities which usually involve the use of large areas of land, including mining, agriculture, fishing and nature conservation. The function of many of these activities is to make use of, or extract from, the land in its natural state. Since such activities are the first step in the production process they are quite distinct from the other categories.

MAN – Manufacturing/Processing/Fabrication

This category includes land use activities involving the manufacture, processing and fabrication of all general goods. Both the scale and associated environmental impact of these activities separate them from other land use categories.

STO – Storage/Distribution

Any land use activity which involves the storage, warehousing or wholesaling of goods usually conducted from large structures, or involving large bulk goods, but does not include activities that attract the general retail trade activities.

SER – Service Industry

This category includes service industries offering a range of services. The scale and environmental impact of such activities require their separation from other land uses. These services include film processing, cleaning, motor vehicle and other repair services, and other servicing activities, including some construction activities.

SHP – Shop/Retail

Any activity which involves the sale of goods from a shop located separate to, and/or in, a shopping centre other than those included in Other Retail.

RET – Other Retail

Many of these activities are not normally accommodated in a shopping centre. By virtue of their scale and special nature the goods of these activities separate them from the Shop/Retail category (e.g. car sales yard, carpet showroom).

OFF – Office/Business

Administrative, clerical, professional and medical offices are activities which do not necessarily require the land area/floor space or exposure of other land uses. Although offices require building and parking facilities, these needs are quite distinct from those of commercial uses and service industries.

HEL – Health/Welfare/Community Services

Includes government, government subsidised and non-government activities, which provide the community with a specific service, such as hospitals, schools, personal services and religious activities.

ENT – Entertainment/Recreation/Cultural

Activities which provide entertainment, recreation and culture for the community and which occur in buildings and/or on land, such as passive and active sports venues, museums, amusements and gambling services.

RES – Residential

Includes all types of residential land use ranging from single housing to nursing homes for the aged, residential hotels, motels, other holiday housing, institutions and religious housing.

UTE – Utilities/Communications

All forms of local, state national and international communication, transportation and other utilities (e.g. electricity, gas, water, sewerage, roads, parking and other transport or communications related activities) covering the public and private sectors.

VFA – Vacant Floor Area

This category accounts for vacant floor areas of buildings, including both non-residential and residential.

VLA – Vacant Land Area

Includes land which has not been improved by development and remains unused.