**Appendix 1**

**Economic and Employment Assessment**

**(MacroPlan Dimasi)**

# Economic and employment assessment: Lot 6 Taronga Place, Eglinton

## Urban Quarter

May 2017

MacroPlanDimasi

**Prepared for:** Urban Quarter

Project number: 87669

**MacroPlan Dimasi quality assurance:**

| Version | Version no. | Author(s) | Date | Review | Date |
|---|---|---|---|---|---|
| **Draft report** | 1.0 | AM | 9 February 2017 | SM | 10 February 2017 |
| **Draft report** | 2.0 | AM, SM | 13 March 2017 | BM | 17 March 2017 |
| **Draft report** | 3.0 | AM, SM | 13 March 2017 | SM | 18 April 2017 |
| **Draft report** | 4.0 | AM, SM | 19 May 2017 | SM | 24 May 2017 |
| **Final report** | 5.0 | AM, SM | 31 May 2017 | SM | 1 June 2017 |

**Approved for release:**

| Name | Signature | Date |
|---|---|---|
| **Stuart McKnight** | | 1 June 2017 |

# Executive summary

Urban Quarter appointed MacroPlan Dimasi to undertake an economic and employment assessment for Lot 6 Taronga Place, Eglinton ('subject site'), which is just north of Peet's Shorehaven development and south of the future Eglinton Town Centre in the City of Wanneroo.

This assessment specifically considers the current designation of the 35.6-hectare "Central Precinct" of the subject site as 'service commercial' as per the Alkimos Eglinton District Structure Plan (AEDSP).

Specifically, this assessment considers the appropriateness of this service commercial designation given a number of significant contextual changes since preparation of the AEDSP.

These changes reflect the how much the original assumptions have aged since they were prepared and the evolution of centres in the meantime.

Background facts:

- The City of Wanneroo Smart Growth target set a minimum 40 per cent employment self-sufficiency (ESS) for district structure plans. The economic assessment for the AEDSP indicated that the achievable ESS was between 49 and 65 per cent. As a result, the endorsed AEDSP set a target of achieving 60 per cent employment self-sufficiency within the district.
- The assumption used in the AEDSP *Economic and Employment Strategy 2007* was that 'service commercial' areas would be similar to the industrial areas of Osbourne Park, Myaree or Joondalup as they were in 2001.
- 'Service commercial' provides for a wide variety of business, industrial and recreational developments that the Council may consider would be inappropriate in commercial, business and general industrial zones and which are capable of being conducted in a matter which will prevent them from being obtrusive or detrimental to the local amenity.

The key findings of this report as follows:

- The Central Precinct now constitutes a fraction of the original 'service commercial north' land intended. Since the AEDSP was approved, a large portion of the site has been compromised by:
    - Northern portion rezoned for Eglinton District Centre
    - Northern portion identified for conservation
    - Southern portion affected by the removal of the proposed train station
    - Southern portion zoned as mixed use and business zone
- Access to the Central Precinct of Lot 6 is constrained by the rail reserve to the west, conservation area to the north and the freeway reserve to the east. Therefore, traffic would predominantly come from the south which would have implications for the types of uses supported within a service commercial zone.
- The Central Precinct is immediately west of the Mitchell Freeway, it does not have direct access to the freeway. As a result, freight traffic to the service industrial area would have to use Alkimos Drive on and off ramps.
- The site topography as well as areas of conservation required to be retained, presents limitations to the future use of the land for Service Commercial. The northern end of the site has a level difference of 8 metres between the rail reserve and the freeway reserve (based on the latest levels provided by agencies. Engineering of the site to provide for flat sites (commensurate with service commercial type uses) is also constrained by vegetation within the southern end of the site required for retention. The additional land development costs of developing large lots over an undulating site makes development unviable and unattractive for economic development as service industrial use. This constraint would effectively reduce the developable area by approximately one third.
- Given the surrounding urban characteristic of the area, the most compatible employment uses on the central precinct are those that can complement the school (ie. childcare) and/or the neighbouring residential development (ie. retirement and aged care).
- Residential development of the central precinct would add around 500 dwellings and 1,200 additional residents to the catchments for the Eglinton

and Alkimos activity centres. This would provide an additional $17.5 million (2017 dollars) in retail expenditure each year to the area to stimulate the local economy.

The following table compares and contrasts the subject site against the three industrial complexes that were used in the original AEDSP assumptions as models for service commercial areas.

**Figure 1.** Subject site suitability for service commercial use

| | Osborne Park | Myaree | Joondalup | Subject site |
|---|---|---|---|---|
| **Direct access to regional road network (MRS 'red / blue roads')** | ✓✓✓<br>Yes, straddles Mitchell Fwy (Hutton St on/off ramps) and Scarborough Beach Rd. Access to Jon Sanders Dr (blue road). Future Stephenson Hwy access to Mitchell Fwy. | ✓✓<br>Yes, Leach Hwy, North Lake Rd and Marmon St. | ✓✓✓<br>Yes, bounded by Mitchel Freeway, Shenton Ave, Joondalup Dr and Hodges Drive. Two freeway on/off ramps. | ××× <br>No direct access to regional road network. No direct access to Mitchell Freeway. Vehicles would predominantly have to travel from the south (through residential areas and a school zone). |
| **Topography** | ✓✓✓<br>Predominantly flat sites throughout | ✓✓<br>Relatively flat sites, with some benching/retaining. | ✓✓✓<br>Flat sites throughout | ×××<br>Sloping site makes around 1/3 of the land undevelopable and requires 10% road grades which are unsuitable for heavy vehicle access. |
| **Accessibility** | ✓✓✓<br>Good public transport access (bus and train) allowing some higher-order economic and employment uses. | ✓✓✓<br>Good public transport access (bus) | ✓✓<br>Good public transport access (bus) | ××<br>Very unlikely to have regular public transport (apart from bus services to the school). |
| **Visibility** | ✓✓✓<br>Very high visibility area with major road network and strong traffic flows throughout the area. | ✓✓<br>High visibility, particularly from the south and east of the centre. | ✓✓✓<br>Very high visibility - adjacent to a strategic regional centre | ×××<br>Negligible/no visibility except from local traffic. |

A fundamental principle underpinning SPP 4.2 is retail sustainability – the idea that businesses should be financially viable and be able to operate on an ongoing basis to continue to meet the needs of the community. A number of factors make the subject site unsuitable for development as employment land:

- Lack of visibility from the road network means that businesses would be 'invisible' to their potential customers and client base. There is no visibility from the north (conservation area) or east (Mitchel Freeway) and negligible visibility from the west and south (local access roads only). This makes the site unattractive for business investment and it would severely limit the number and types of businesses that could operate viably in that location
- Lack of activity from the removal of the proposed train station which would have attracted workers, businesses and therefore expenditure to the area
- Lack of direct access to the regional road network, making it unsuitable for businesses that need frequent freight deliveries.

The following table summarises the intended uses for the service commercial areas that was originally intended in the AEDSP and considers the relevance of those land uses to the subject site. The first column shows the Planning Land Use Code (PLUC) as defined by the Department of Planning. The second column defines the approximate proportion of floorspace that was envisaged for service commercial uses (as per Table 12 of the AEDSP Economic Employment Strategy by Syme Marmion). The third and fourth columns describe the specific types of land uses and how they are relevant/appropriate (or not) on the subject site.

**Table 1.** Proposed land uses on service commercial land under the ADSP

| Planning Land Use Code | Service commercial mix (as per AEDSP assumptions) | General description | Relevance to subject site as service commercial designation |
|---|---|---|---|
| **PLUC1 - Primary / Rural** | 0.0% – 0.2% | Related to rural industry | Not relevant |
| **PLUC2 - Manufacturing/ processing/ fabrication (PLUC 2)** | 14.3%–22.3% | Essentially industrial uses and ideally located within industrial areas that provide ready access to a range of industrial business-to-business suppliers. In addition, many of these businesses need direct access to the regional road (freight) network and have off-site impacts (noise) that may be unacceptable next to urban activities (ie. schools, houses). | These land uses are better located in designated MRS industrial areas outside of the AEDSP. This would primarily be Meridian Park (Flynn Drive). |



MacroPlanDimasi

| Planning Land Use Code | Service commercial mix (as per AEDSP assumptions) | General description | Relevance to subject site as service commercial designation |
|---|---|---|---|
| **PLUC3 - Storage / Distribution** | 12.9%-25.9% | These are essentially industrial uses and ideally located within industrial areas that provide ready access to the regional road (freight) network. These businesses have very low employment densities and therefore do not make any significant contribution to employment self-sufficiency. | These uses may have been acceptable at the subject site when the AEDSP was being prepared as it would have had direct access to the freeway at both the northern and southern ends. Given this assess to the subject is now severely limited, it is no longer appropriate. These uses should therefore be located in MRS industrial areas. |
| **Shop/retail uses (PLUC 5)** | 3.0%-5.8% (adjusted down from the actual figures in the benchmark areas) | These jobs should be located within the designated activity centres (Alkimos, Eglinton and the neighbourhood centres). Some shop/retail uses may have been appropriate at the time the AEDSP was being prepared, but only around the proposed train station which has since been removed from the plans | The *AEDSP Economic and Employment Strategy* has fully allocated all the demand for shop/retail floorspace to the centres (regional, district and neighbourhood) in the area, meaning that any additional shop/retail uses are unlikely to be viable and therefore will fail the retail sustainability test under *SPP 4.2 Activity Centres for Perth and Peel.* |
| **PLUC6 - Other retail uses:** | 8.80%-16.7% (adjusted up from the actual figures in the benchmark areas) | Typically these are uses that are motor-vehicle related (service stations, vehicle and motor cycle sales, tyre sales, battery sales, caravan and trailer sales & hire, boat sales, automotive accessories, motor vehicle rentals) and as such require frequent vehicle access. Limited vehicle access and exposure could compromise the viability of such uses. | Other retail uses need to have a high level of visibility to be viable (hardware, furniture sales) but the subject site has negligible passing traffic / visibility and therefore any such business locating in the area are very unlikely to be viable. |
| **PLUC7 -Office/ business uses** | 9.7%-16.7% | These uses should be located within designated activity centres as a first priority or, alternatively, within industrial areas if they are directly related to industrial activity. | These uses are not appropriate within service commercial zones, unless it is a business park development with appropriate amenity (ie public transport). It could have been appropriate under the original AEDSP, but only if the train station was developed as planned. |
| **PLUC8 – Health / Welfare / Community Services** | 1.3%-2.4% | These activities are located within designated activity centres, specialised activity centres or within urbanised areas. | Not relevant or appropriate in service commercial areas. |
| **PLUC9 – Entertain / Recreation / Culture** | 1.1%-2.4% (20.4% in Joondalup in 2001) | These uses include dance studios and churches. Note that they are not typically located within service commercial areas and that Joondalup was an exception with 20.4% of its floor space related to PLUC9 uses. | These uses are not appropriate within service commercial areas. As per SPP4.2, cultural and active recreational facilities should be located within designated activity centres. |
| **PLUC10 - Residential** | 0.0%-0.0% | Essentially this is short-stay and hotel accommodation uses within an appropriate mixed use area. | Not relevant/appropriate. |

| Planning Land Use Code | Service commercial mix (as per AEDSP assumptions) | General description | Relevance to subject site as service commercial designation |
|---|---|---|---|
| **PLUC11 – Utilities / Comms** | 0.7%-2.6% | These are essentially either industrial uses (if they have external impact/ buffer requirements) or they are located within activity centres. | Not relevant/appropriate. |

The previous table demonstrates that the land uses originally intended for the service commercial land under the AEDSP are no longer appropriate, viable or relevant. Instead these land uses should either be redirected to the activity centre network (primarily Alkimos and Eglinton) or to industrial-zoned areas, such as Meridian Park.

Given the importance of satisfying employment targets, as presented by the AEDSP, the following comparison table was prepared to provide an understanding of the difference between jobs provided by service commercial type uses versus residential uses.

**Table 2.** Comparison of jobs yield – Central precinct, subject site

| | Service commercial use | Residential use |
|---|---|---|
| Total precinct area (ha) | **36.62** | **36.62** |
| EPBC area to be retained (ha) | 3.2 | 2 |
| Roads (ha) | 6.08 | 9.96 (30%) |
| Public open space (ha) | N/A | 3.32 (10%) |
| Drainage (ha) | 0.97 | 0.66 (3%) |
| Total non-non developable area (ha) | 10.25 | 13.94 |
| **Nett developable area (ha)** | **25.35** | **19.26** |
| Estimated dwelling yield | - | 500 |
| Additional population yield | - | 1,200 |
| **Estimated job yield**<br>(including yield from dwellings @ 0.132 jobs per dwelling (<u>not including</u> work from home or work at home) | 237 | 173 |



MacroPlanDimasi

**The findings of this assessment clearly demonstrate that the AEDSP as it relates to the Central Precinct of the AEDSP is no longer relevant nor appropriate in its designation of the site as Service Commercial. Consequently, this site will not deliver, in any timeframe, the expectations of the AEDSP. Constrained within a service commercial designation, this land will be sterilised for a considerable period of time offering no economic benefit to the City. There is however, a strong argument to support development of the land for residential development and such development could deliver up to 173 jobs, 1,200 residents and $17.5 million in household expenditure per annum to support activity centres in the district.**

# Table of contents

# Introduction

Urban Quarter appointed MacroPlan Dimasi to undertake an economic and employment assessment to consider the current designation of the 'central precinct' of Lot of Lot 6 Taronga Place, Eglinton ('subject site') as 'service commercial' as per the Alkimos Eglinton District Structure Plan (AEDSP).

Specifically, this assessment considers the appropriateness of this service commercial designation given a number of significant contextual changes since preparation of the AEDSP. The employment assumptions and targets underpinning the AEDSP are addressed in detail in Section 1 of this report.

**Figure 2.** Lot 6 Taronga Place, Eglinton (central precinct in yellow)


The City of Wanneroo recognises the importance of the review of the AEDSP given its age and this assessment can be used to inform this review.

## Subject site and precincts

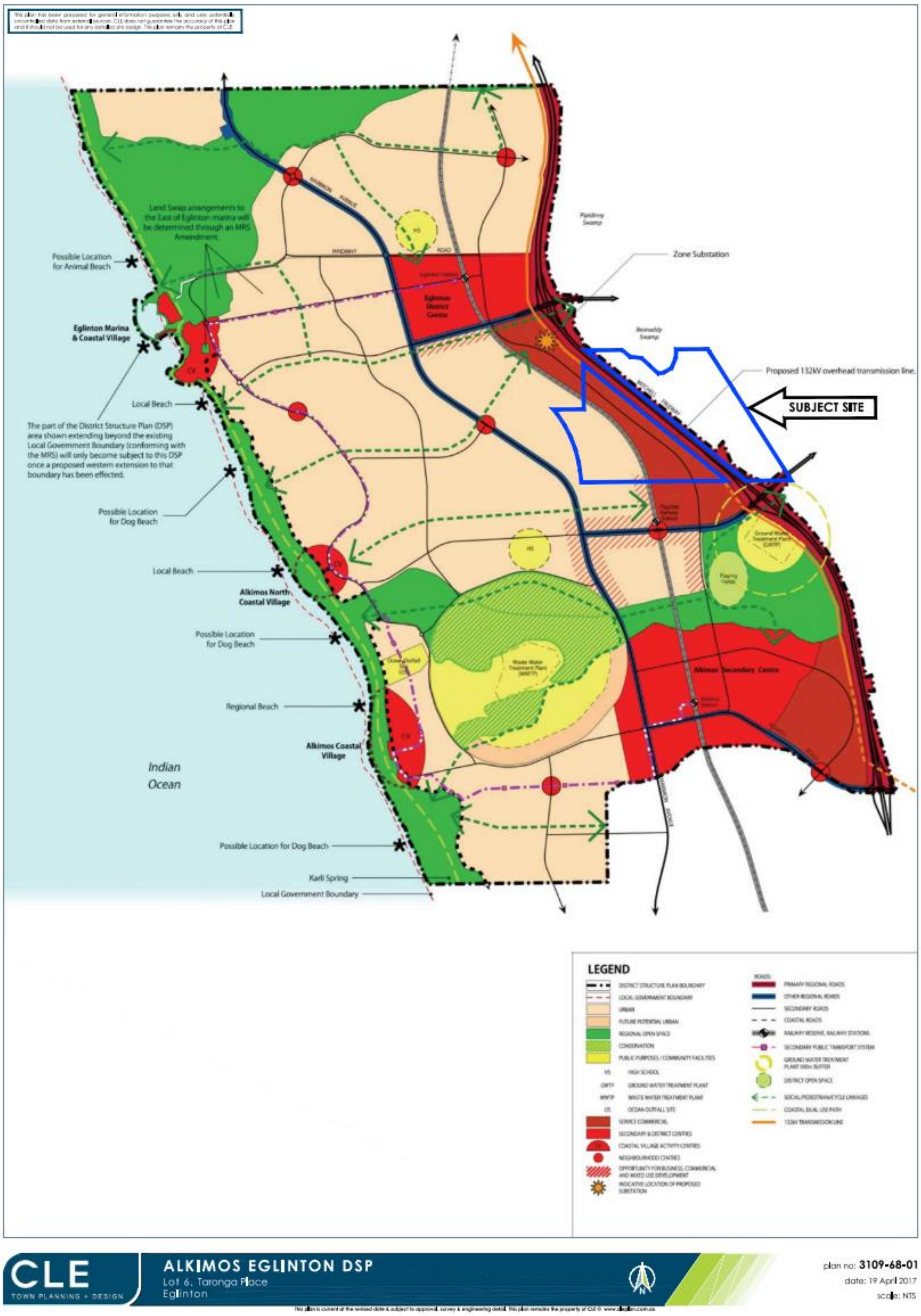
The subject site is trifurcated by the rail and freeway reserves. The following figure shows the AEDSP area with the Lot 6 Taronga Place, Eglinton ("subject site") outlined in blue. The following table provides a summary of the three precincts.

**Table 3.** Precincts of Lot 6, Taronga Place, Eglinton

| | West precinct | Central precinct | East precinct |
|---|---|---|---|
| **Location** | *West of the rail reserve for the future Perth to Eglinton rail* | *East of the rail reserve and west of the Mitchell Freeway reserve* | *East of the Mitchell Freeway reserve* |
| **Gross land area (approx.)** | 28.02ha | 35.6ha | 74ha |
| **MRS zoning** | Urban | Urban | Rural |
| **Designated use Alkimos Eglinton DSP** | Residential | Service Commercial | Not included in DSP |
| **LSP (in preparation)** | ~460 residential lots | NA | NA |

*Source: MacroPlan (2017)*

**Figure 3.** AEDSP and Lot 6 Taronga Place Eglinton ("subject site")




*Source: CLE Town Planning and Design*

# Section 1: Original assumptions in Alkimos Eglinton DSP

## Employment assumptions

The *North West Corridor Structure Plan 1992* sets a target of achieving 60 per cent employment self-sufficiency (ESS)[1]. This means that the number of jobs that are based (by place of employment) in the corridor is to be 60 per cent or more of the total number of employed residents living in the corridor. Subsequent targets used by the City of Wanneroo have used an ESS target of 72 per cent across the corridor.

The ESS target is based on the long term growth and ultimate build out of the corridor. The highest concentration of these jobs would be located in the primary centre in the corridor -Yanchep Strategic Regional Centre (previously known and St Andrews).

At the time that the economic research for the Alkimos Eglinton District Structure Plan was being prepared, the City of Wanneroo had a target of achieving 40 per cent ESS in district structure plans:

> The City's Smart Growth Assessment Tool sets a target of 40% employment self sufficiency at the district structure plan level[2].

The basis for achieving the jobs targets in the AEDSP was to allocate sufficient land for employment uses based on demand assessments and employment densities as determined by:

- *Alkimos Eglinton DSP: Retail Assessment 2006* by IBECON
- *Alkimos Eglinton Economic and Employment Strategy 2007*, prepared by Syme Marmion

Employment assumptions in these supporting documents were based on the Australian Bureau of Statistics *2001 Census of Population and Housing* and the

[1] Ratio of the jobs in the area to the number of working residents in the area. See appendix 1 for additional details.
[2] Syme Marmion & Co. *Alkimos Eglinton District Structure Plan. Appendix 7: Economic Employment Strategy,* December 2010, page 4.

Western Australian Planning Commission (WAPC) *Land Use and Employment Survey 2001/02* (LUES) – the most recently available information on population and employment to floorspace ratios at that time.

The LUES defines floor space use into logical groupings based on Planning Land-Use Codes (PLUCs). This are designed to reflect types of economic activities rather than directly reflect particular land use zones.

The starting point for the AEDSP, was the requirement to deliver 11,080 jobs within the AEDSP area (*Alkimos Eglinton Economic and Employment Strategy 2007, page 11)*:

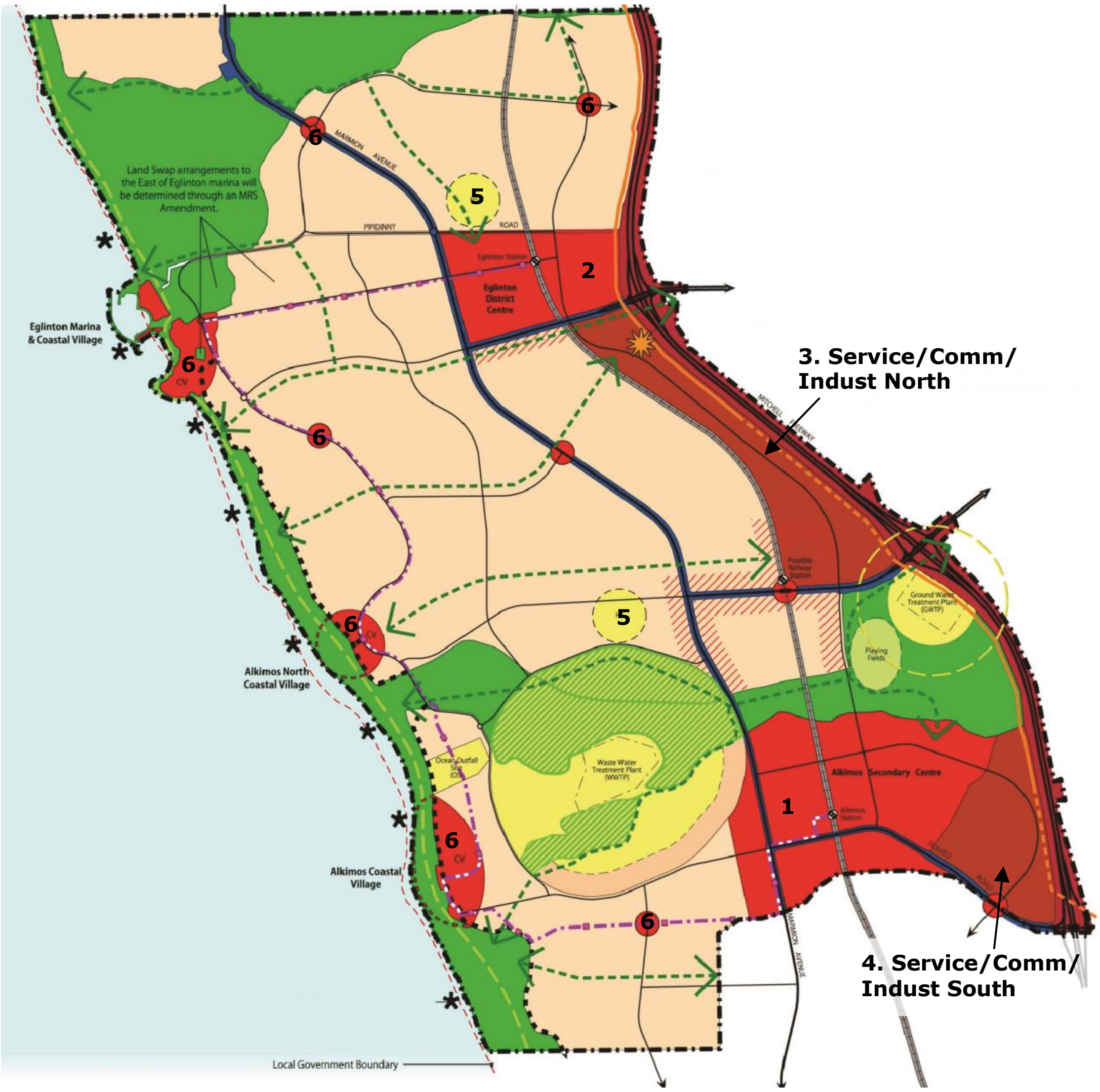
> The City of Wanneroo has set a target employment self sufficiency of 40% for District Structure Plans. The job self-sufficiency ratio is determined by the following formula:
>
> Jobs available in the Area ÷ Workers Living Within Area
>
> This measure indicates the raw local employment opportunities potentially available to the local workforce. The current ratio of workers per dwelling in the City of Wanneroo is 1.16. Therefore, the estimated number of workers residing in the Alkimos Eglinton structure plan area at full development (in approximately 30 years) based on 23,884 dwellings at a ratio of 1.16 workers per dwelling is approximately 27,700. To achieve an employment self sufficiency of 40%, the Alkimos Eglinton Structure Plan will need to provide for 11,080 jobs within the structure plan area.

At the time the AEDSP was being developed, the City of Wanneroo had a target of 40 per cent employment self-sufficiency (ESS) for Districts (and DSPs) and a 60 per cent ESS target for the North West Corridor. However, the *Alkimos Eglinton Economic and Employment Strategy 2007,* identified that a 40 per cent ESS (11,080 jobs by 2040) was more than achievable. This analysis instead identified that employment could feasibly reach between 13,500 and 17,900 jobs (between 49 per cent and 65 per cent ESS). Consequently, at the time that the AEDSP was adopted in 2010, a more ambitious 60 percent ESS target was then set as the objective for the Alkimos-Eglinton district.

The AEDSP includes six different types of employment areas:

1. Alkimos Regional Centre
2. Eglinton District Centre
3. Service Commercial /Industrial North
4. Service Commercial /Industrial South
5. Education locations
6. Other neighbourhood centres including coastal nodes

**Figure 4.** Employment land




*Source: City of Wanneroo, Alkimos Eglinton District Structure Plan 2010*



MacroPlanDimasi

At a high level, the floor space need and employment outcomes for these areas was based on a population-driven employment assessment based on similar urbanised areas across the Perth metropolitan region:

1. Determining the catchment population and applying a population-to-floorspace ratio to get the estimated floorspace required for each use
2. Applying a floorspace-to-jobs ratio to estimate the number of locally-employed people.

## Provision of retail floorspace in the AEDSP

The floorspace provisions for the AEDSP are driven by the prevailing planning policy at the time – *Statement of Planning Policy 9: Metropolitan Centres Policy Statement for the Perth Metropolitan Region (2000).* This provision is based on the benchmark across the Perth Metropolitan Region from the LUES 2001/02.

The provision ratio is based on the total amount of shop/retail floorspace across all centres in the metropolitan area divided by the total resident population (all ages) to determine the average amount of floorspace per person. Note that the following table provides the 'shop/retail' floorspace ratios, define under Planning Land Use Code 5.

**Table 4.** Shop/retail floorspace (PLUC 5) provisions as per WAPC: Metropolitan Centres Policy (2000)

| Guidelines on Shopping Floorspace Provision | |
|---|---|
| **Centre Type** | **Per Capita $m^2$ nla** |
| Perth Central Area | 0.20 |
| Regional Centres | 0.61 |
| District Centres | 0.40 |
| Neighbourhood & Local Centres | 0.53 |
| **Total** | **1.74** |

*Source: Syme Marmion, Alkimos Eglinton Economic and Employment Strategy 2007 (table 7)*

This recognises that the Perth Central Area performs a specialised retail function for residents that is not met within the district. This floorspace averages 0.20 $m^2$ per capita.

As the AEDSP includes regional, district and neighbourhood centres, it adopts the assumption that the district has to provide 1.54 $m^2$ of shop/retail floorspace per resident to meet demand and be self-sufficient for retail expenditure (other than the specialised retail function of the Perth Central Area).

The base assumption for the AEDSP is that it would contain 23,884 dwellings and at an assumed average household size of 2.4 persons per dwelling, it would have 57,320 residents.

On this basis the *Alkimos Eglinton Economic and Employment Strategy 2007* calculates that the AEDSP needed 88,273 $m^2$ of floorspace to meet the requirements of the district's resident population (but not for the retail needs of any residents beyond the AEDSP area):

**Table 5.** Estimated shop/retail centres floorspace required based on prevailing WAPC guidelines

| Centre Type | Ratio Per Capita | Floor Area ($m^2$) |
|---|---|---|
| Regional (Alkimos) | 0.61 | 34,965 |
| District (Eglinton) | 0.4 | 22,928 |
| Neighbourhood (Other Nodes) | 0.53 | 30,380 |
| **Total Retail - Centres** | | **88,273** |

*Note: Figures based on local population only – regional floorspace likely to be 50,000$m^2$*

*Source: Syme Marmion, Alkimos Eglinton Economic and Employment Strategy 2007 (table 8)*

The reference to 'regional floorspace requirement likely to be 50,000 $m^2$' is based on the assumption that the Alkimos Regional Centre would provide a higher level of amenity than the regional centres as outlined in the WAPC policy. This meant a reallocation of the floorspace in the AEDSP to recognise the primary role of Alkimos as per the following table.

**Table 6.** Indicative shop / retail floorspace ratios by centre type

| Centre Type | Floor Area | Ratio |
|---|---|---|
| Regional (Alkimos) | 50,000 | 0.87 |
| District (Eglinton) | 17,220 | 0.30 |
| Neighbourhood/Local | 21,000 | 0.37 |
| **Total** | **88,220** | **1.54** |

*Source: Syme Marmion, Alkimos Eglinton Economic and Employment Strategy 2007 (table 16)*

The previous two tables show that there was a conscious decision in the *AEDSP Economic and Employment Strategy* to understate the floorspace in the Eglinton district and neighbourhood centres below the benchmarks that were based on actual centres around the metropolitan region (from the LUES data). The floorspace in the Eglinton district centre was reduced by 5,708 $m^2$ below the average benchmark and the neighbourhood centres were reduced by 9,380 $m^2$ below the benchmark.

These floor space allocations then form the basis for the floor space allocation across all the employment land areas (including the service commercial land) as discussed in the following sections.

## Service commercial land use

The term 'service commercial' as used in the AEDSP does not neatly fit into any particular group of particular economic activities, nor does it match any specific land use zones. This was noted at the time the AEDSP was prepared and suggested that the 'service commercial' term was a type of catchall term applied to areas that were not retail centres, not business/commercial and not industrial, but could have the characteristics of each of these:

> The ultimate capacity of the Service Commercial areas is more difficult to predict due to uncertainty regarding precisely how they will ultimately develop. For the purposes of this report, 3 possible scenarios are used. The scenarios rely on 2001 data for the industrial areas of Osborne Park, Myaree and Joondalup. These case examples are expected to provide an indicative range of the likely intensity of the service commercial areas assuming a net area of 124.8 hectares. Note that all scenarios have been adjusted to ensure that the Shop Retail and Other Retail floorspace are not oversupplied. Also note that the IBECON retail analysis did not assess retail requirements for the service commercial areas.[3]

The three scenarios are shown in the following table, however, note that the actual amount of shop/retail floorspace in each of these three areas has been adjusted (reduced), given the preference to locate these uses into regional, district and neighbourhood centres.

---

[3] Syme Marmion, Alkimos Eglinton DSP Economic and Employment Strategy 2007 (page 14).

**Table 7.** Scenarios for service commercial areas by PLUC

| Service Commercial Scenarios | Primary/ Rural | Manufact/ Process/ Fabrication | Storage/ Distrib | Service Industry | Shop/ Retail (adjusted) | Other Retail (adjusted) | Office/ Business | Health/ Welfare/ Community Services | Entertain/ Recreation/ Culture | Residential (Short Stay Accomm) | Utilities/ Comm | Alkimos/ Eglinton Modelled Floor Area Total (NLA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Scenario 1** - Osborne Park adjusted (2001) | 0.0% | 18.7% | 25.9% | 20.4% | 3.0% | 8.8% | 19.9% | 1.3% | 1.1% | 0.0% | 0.7% | **570,758** |
| **Scenario 2** - Myaree (2001) | 0.2% | 22.3% | 12.7% | 27.3% | 4.5% | 13.0% | 13.3% | 1.7% | 2.4% | 0.0% | 2.6% | **387,563** |
| **Scenario 3** - Joondalup (2001) | 0.0% | 14.3% | 12.9% | 17.0% | 5.8% | 16.7% | 9.7% | 2.4% | 20.4% | 0.0% | 0.9% | **302,177** |

*Source: Syme Marmion, Alkimos Eglinton Economic and Employment Strategy 2007 (table 12)*

Note that a single business may have more than one PLUC activity. For example a lawnmower repair business may have a small retail showroom (shop/retail), administration area (office) and a workshop (service industry). Therefore, within a 'service commercial' area it would be still appropriate to have a small amount shop/retail floorspace that would not be appropriate for other activity centres.

The previous table shows the degree of variation in service commercial land uses across the three scenarios and demonstrates:

- there is no one typical form or standard land uses for service commercial areas and they include a range of uses that might otherwise locate in retail, industrial or commercial/business areas
- service commercial areas are developed on relatively flat sites and adjacent to larger industrial and commercial centres
- floorspace (and employment) densities vary considerably across the sites.

**Table 8.** Nature of the three areas used to model service commercial land for the AEDSP

| | Osborne Park (scenario 1) | Myaree (scenario 2) | Joondalup (scenario 3) |
|---|---|---|---|
| **Land Use and Employment Survey designation** | Industrial complex | Industrial complex | Industrial complex |
| **Total occupied floorspace ($m^2$)** | 1,011,558$m^2$ in 2002 | 228,756$m^2$ in 2002 | 100,674$m^2$ in 2002 |
| **MRS zoning (predominant)** | Industrial (west of freeway) and some urban (east of freeway).<br>Some areas affected by MRS Clause 32 areas (particularly train station precincts). | Industrial | Urban |
| **LPS zoning (predominant)** | Industry (with some special use zones along Scarborough Beach Rd). | Service commercial (fringed by restricted and additional use areas interfacing residential development). | Service industrial |

| | Osborne Park (scenario 1) | Myaree (scenario 2) | Joondalup (scenario 3) |
|---|---|---|---|
| **Direct access to regional road network (MRS 'red / blue roads')** | Yes, straddles Mitchell Fwy (Hutton St on/off ramps) and Scarborough Beach Rd. Access to Jon Sanders Dr (blue road). Future Stephenson Hwy access to Mitchell Fwy. | Yes, Leach Hwy, North Lake Rd and Marmon St. | Yes, bounded by Mitchel Freeway, Shenton Ave, Joondalup Dr and Hodges Dr. Two freeway on/off ramps. |
| **Topography** | Predominantly flat sites throughout | Relatively flat sites, with some benching/retaining. | Flat sites throughout |
| **Accessibility** | Good public transport access (bus and train) allowing some higher-order economic and employment uses. | Good public transport access (bus) | Good public transport access (bus) |
| **Visibility** | Very high visibility area with major road network and strong traffic flows throughout the area. | High visibility, particularly from the south and east of the centre. | Very high visibility - adjacent to a strategic regional centre |

For the purposes of the AEDSP, Myaree industrial area ('scenario 2') was used as the benchmark for the uses within the service commercial areas. Note that this land is zoned as industrial under the MRS and service commercial under the local planning scheme.

The following table provides an overview of the floorspace allocations to each of the major employment zones in the AEDSP. This defines two areas for service commercial use (north and south).

**Table 9.** Floorspace and jobs capacity by land use (Scenario 2 for service commercial)

| CENTRE/ACTIVITY | Primary/ Rural | Manufact/ Process/ Fabrication | Storage/ Distrib | Service Industry | Shop/ Retail | Other Retail | Office/ Business | Health/ Welfare/ Community Services | Entertain/ Recreation/ Culture | Residential (Short Stay Accomm) | Utilities/ Comm | Total (NLA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkimos Regional Centre | 0 | 1,343 | 2,384 | 4,500 | 50,000 | 15,000 | 46,121 | 13,609 | 6,830 | 1,346 | 884 | **142,017** |
| Eglinton District Centre | 0 | 316 | 1,474 | 1,673 | 17,220 | 2,780 | 7,399 | 1,421 | 3,991 | 1,530 | 359 | **38,163** |
| Service/Comm/Indust South | 373 | 33,335 | 18,994 | 40,759 | 6,734 | 19,378 | 19,792 | 2,559 | 3,588 | 0 | 3,854 | **149,367** |
| Service/Comm/Indust North | 595 | 53,160 | 30,289 | 64,999 | 10,739 | 30,903 | 31,563 | 4,081 | 5,721 | 0 | 6,146 | **238,196** |
| Education | | | | | | | | 27,500 | | | | **27,500** |
| Other Neighbourhood Centres (includes coastal nodes) | 0 | 310 | 272 | 2,768 | 21,000 | 991 | 3,939 | 113 | 2,244 | 303 | 0 | **31,939** |
| **TOTAL $m^2$ (NLA)** | **968** | **88,464** | **53,413** | **114,699** | **105,694** | **69,052** | **108,813** | **49,283** | **22,375** | **3,179** | **11,242** | **627,181** |
| **Jobs (Excluding Home Based)** | **11** | **1,040** | **288** | **1,731** | **4,005** | **1,356** | **4,050** | **1,165** | **391** | **43** | **57** | **14,137** |
| **Home Based (4%)** | | | | | | | | | | | | **955** |
| **Total Jobs (Incl Home Based)** | | | | | | | | | | | | **15,092** |

*Source: Syme Marmion, Alkimos Eglinton Economic and Employment Strategy 2007 (table 14)*

The key factors derived directly from this information are:

1. More shop/retail (PLUC 5) floorspace was allocated to the service commercial centres than was allocated to the Eglinton District Centre (17,475 $m^2$ versus 17,220 $m^2$). This effectively means that around 752 shop/retail jobs were to be located outside of the main activity centres (ie. outside of the regional, district and neighbourhood centres).

2. Proportion of net lettable area (NLA) floorspace allocated to each centre/ activity within the AEDSP.

**Table 10.** Proportion of employment floorspace allocated to each centre in AEDSP

| CENTRE/ACTIVITY | Proportion of employment floorspace (NLA) |
|---|---|
| Alkimos Regional Centre | 22.6% |
| Eglinton District Centre | 6.1% |
| Service/Comm/Indust South | 23.8% |
| Service/Comm/Indust North | 38.0% |
| Education | 4.4% |
| Other Neighbourhood Centres (includes coastal nodes) | 5.1% |
| **TOTAL m2 (NLA)** | **100.0%** |

*Source: Derived from Syme Marmion, Alkimos Eglinton Economic and Employment Strategy 2007*

3. The ratio of service commercial land area to net lettable area of floorspace indicates that about 31% of the net land area is can be developed and used for net lettable floorspace area.

**Table 11.** Ratio of net service commercial land area to net lettable area (floorspace)

| | |
|---|---|
| Total service commercial NLA floorspace (149,367 $m^2$ plus 238,196 $m^2$) ($m^2$) | 387,196 |
| Net service commercial land area (hectares) | 124.8 |
| **Ratio of net land area to net lettable area** | **0.31** |

*Source: Derived from Syme Marmion, Alkimos Eglinton Economic and Employment Strategy 2007*

4. The ratio of floorspace (in square metres) to jobs for each type of land use. The following table indicates the range of employment ratios from high-density employment areas (ie. low floorspace to job ratios) such as office and shop/retail uses through to low-density employment uses such as storage/distribution and utilities/communication.

**Table 12.** Floorspace to worker ratios used for the AEDSP by PLUC

| Average job density ratio | Primary/ Rural | Manufact/ Process/ Fabrication | Storage/ Distrib | Service Industry | Shop/ Retail | Other/ retail | Office/ Business | Health/ Welfare/ Community Services | Entertain/ Recreation/ Culture | Residential (Short Stay Accomm) | Utilities/ Comm | **All land uses (weighted average)** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Floorspace per worker ($m^2$) | 88.00 | 85.06 | 185.46 | 66.26 | 26.39 | 50.92 | 26.87 | 42.30 | 57.23 | 73.93 | 197.23 | **44.36** |

*Source: Derived from Syme Marmion, Alkimos Eglinton Economic and Employment Strategy 2007*

Although the Syme Marmion report only included the total employment target across all centres rather than the employment from each centre, there is sufficient information in the *AEDSP Economic and Employment Strategy* to derive these numbers.

This demonstrates that the Alkimos Regional Centre was intended to be the main employment centre followed by the two service commercial areas (north and south). Collectively these three centres were anticipated to provide 11,287 jobs which would be 79.8 per cent of all centre-based employment (ie. excluding home-based and mobile jobs) in the AEDSP area.

This shows the relative importance of the two service commercial areas to provide employment within the AEDSP. The north and south service commercial areas were anticipated to deliver some 6,821 jobs (48.2 per cent of all centre-based jobs in the AEDSP area).

**Table 13.** Jobs targets based on original assumptions by centre

| **CENTRE/ACTIVITY** | **Primary/ Rural** | **Manufact/ Process/ Fabrication** | **Storage/ Distrib** | **Service Industry** | **Shop/ Retail** | **Other retail** | **Office/ Business** | **Health/ Welfare/ Community Services** | **Entertain/ Recreation/ Culture** | **Residential (Short Stay Accomm)** | **Utilities/ Comm** | **Total jobs** | **Proportion of jobs** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkimos Regional Centre | 0 | 16 | 13 | 68 | 1,895 | 295 | 1,717 | 322 | 119 | 18 | 4 | **4,466** | 31.6% |
| Eglinton District Centre | 0 | 4 | 8 | 25 | 653 | 55 | 275 | 34 | 70 | 21 | 2 | **1,145** | 8.1% |
| Service/ Comm/ Indust South | 4 | 392 | 102 | 615 | 255 | 381 | 737 | 60 | 63 | 0 | 20 | **2,629** | 18.6% |
| Service/ Comm/ Indust North | 7 | 625 | 163 | 981 | 407 | 607 | 1,175 | 96 | 100 | 0 | 31 | **4,192** | 29.7% |
| Education | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 650 | 0 | 0 | 0 | **650** | 4.6% |
| Other Neighbourhood Centres (includes coastal nodes) | 0 | 4 | 1 | 42 | 796 | 19 | 147 | 3 | 39 | 4 | 0 | **1,055** | 7.5% |
| **TOTAL JOBS** (excl. home based) | **11** | **1,040** | **288** | **1,731** | **4,005** | **1,356** | **4,050** | **1,165** | **391** | **43** | **57** | **14,137** | **100.0%** |

*Source: Derived from Syme Marmion, Alkimos Eglinton Economic and Employment Strategy 2007*

Section 2 of this report covers in detail the validity of these assumptions and relevance to the future planning and development of the AEDSP area.

## Infrastructure assumptions

The area identified as "service/commercial/industry north" (see Figure 4. ) was planned to deliver 88.11 hectares of service commercial land with the following features:

- Two direct road access points to the future Mitchell Freeway – Eglinton to the north and at Shorehaven at the south. This would have enabled direct access to the regional road network and facilitated freight and passenger movements to and from the businesses within the service commercial area
- Business, commercial and mixed used development across nearly 15 to 20 hectares in the southwest of the site which was adjacent to the proposed railway station (a transit oriented development with associated appropriate employment uses).

More recent decisions now mean that there is no direct road access to the freeway, road access is limited to only have limited access the north and the south, and the train station will not be built.

## Implications for the subject site using original assumptions

The central precinct of the subject site is the focus of this assessment as it forms part of the land that was originally identified as 'service / commercial / industrial north' in the *AEDSP Economic and Employment Strategy*.

Starting with the land originally identified for service commercial use in the AEDSP (see Figure 3. ), this adds to an estimated total gross area of 149.07 hectares. The *AEDSP Economic and Employment Strategy* used a net land area for the service commercial land of 124.8 hectares or approximately 83.7 per cent of the gross area. The net developable land area is affected by easements (such as the 132kV overhead transmission line) and regional road network in the area.

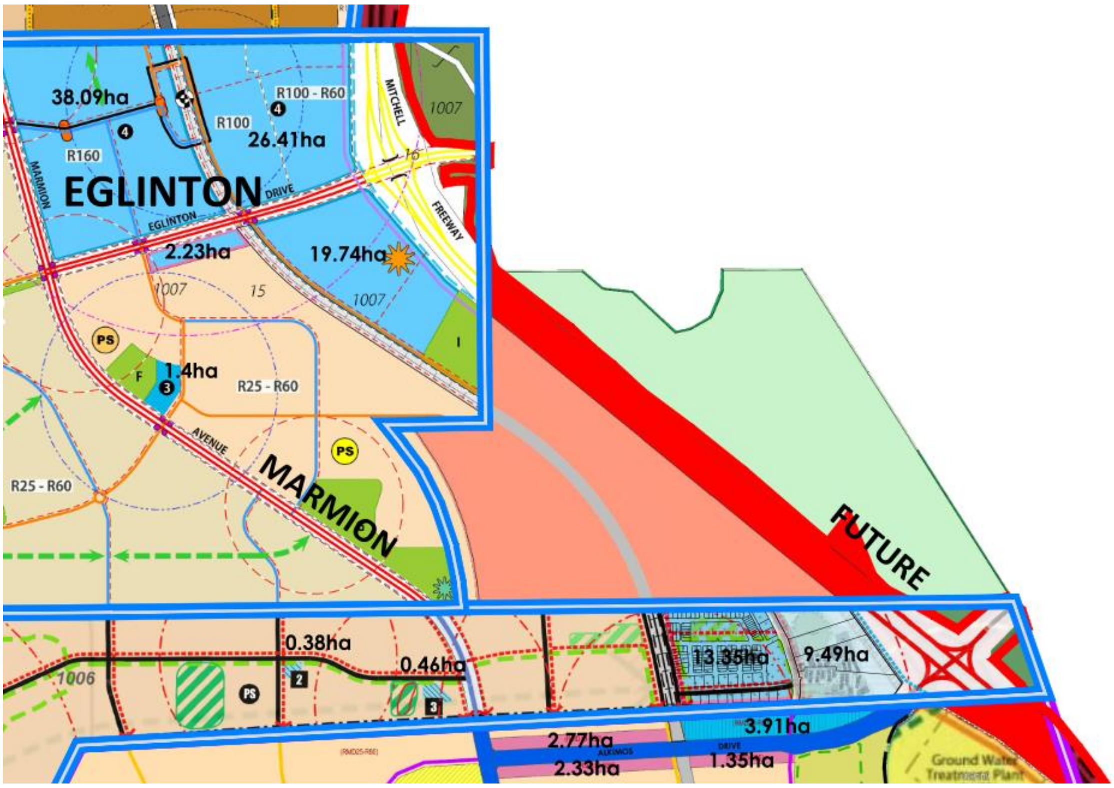
**Table 14.** Gross and net land area for service commercial land in the AEDSP

| Land area | Description | Gross area (hectares) | Net area (hectares) |
|---|---|---|---|
| **Service/Comm/Indust North** | | | |
| *Northern portion* | Eglinton District Centre | 25.34 | 21.21 |
| *Middle portion* | Central precinct, Lot 6 Taronga, Eglinton | 36.24 | 30.34 |
| *South portion* | Shorehaven activity centre | 26.53 | 22.21 |
| **Total Service/Comm/Indust North** | | **88.11** | **73.76** |
| **Service/Comm/Indust South** | – | 60.96 | 51.04 |
| **ALL SERVICE COMMERCIAL LAND** | | **149.07** | **124.80** |

*Source: Derived from CLE plan (3109-46-01)*

On this basis using the same assumptions, the net developable area of the central precinct of the subject site is 30.34 hectares. Note that this estimate ignores the topography of the site (slope, access, etc), easements required for infrastructure (ie. the 132kV line) and simply applies the same ratio (83.7 per cent) as used across the all the service commercial land.

**Figure 5.** LSP changes to the service commercial land identified in the AEDSP




*Source: Extracted from CLE plan (3109-47-01)*

Again applying the same ratio as used in the *AEDSP Economic and Employment Strategy*, the total amount of net lettable floorspace area across the service commercial land is shown in the following table.

**Table 15.** Net lettable floorspace area for service commercial land in the AEDSP

| Land area | **Description** | **Net lettable floorspace area (m²)** |
|---|---|---|
| **Service/Comm/Indust North** | | |
| *Northern portion* | Eglinton District Centre | 68,504 |
| *Middle portion* | Central precinct, Lot 6 Taronga, Eglinton | 97,971 |
| *South portion* | Shorehaven activity centre | 71,721 |
| **Total Service/Comm/Indust North** | | **238,196** |
| **Service/Comm/Indust South** | – | 149,366 |
| **ALL SERVICE COMMERCIAL LAND** | | **387,562** |

*Source: MacroPlan, derived from Syme Marmion, Alkimos Eglinton Economic and Employment Strategy 2007 and CLE plan (3109-47-01)*

Regarding the assumptions underpinning the *AEDSP Economic and Employment Strategy*:

- The AEDSP does not have any industrial zones of its own meaning that the quantitative assessment does not allocate any of the land uses or employment appropriate to industrial areas. Therefore, the service commercial areas in the AEDSP were planned to absorb land uses and jobs that would / should otherwise have gone to industrial areas such as Neerabup (Meridian Park)
- While the shop/retail (PLUC 5) uses were adjusted (reduced) and the other retail (PLUC 6) increased correspondingly, there was no demand assessment to underpin whether there was sufficient demand support this additional 'other retail' floorspace.

## Summary of original assumptions

The original key assumptions regarding the service commercial land when the AEDSP was prepared were:

- 'Service commercial' areas were modelled on three industrial complexes in Perth that are essentially light and general industrial to light industrial in nature (Osbourne Park, Myaree, Joondalup), with very good road access, visibility, public transport services and directly adjacent to major retail activity centres. Two of these areas (Osbourne Park and Myaree) are predominantly zoned industrial under the Metropolitan Region Scheme.
- When the AEDSP was prepared the planning policy regarding centres was focused on retail floorspace hierarchy, rather than the new policy which provides for mixed-use activity centres with a range of civic, recreational, residential, commercial, entertainment and cultural uses *in addition to* the core retail functions.
- The AEDSP assumptions did not explicitly include land uses or employment that are better suited to industrial areas such as Meridian Park (Flynn Drive). Instead, it seems that the service commercial areas designated in the AEDSP were supposed to fill this role.

# Section 2: Review of employment assumptions and relevancy today

## Planning and development changes surrounding the subject site

The employment assumptions and targets in the *Alkimos Eglinton District Structure Plan 2010* were based on the *Alkimos Eglinton Economic and Employment Strategy*, which, in turn, was based on data from the WAPC *Land Use and Employment Survey 2001/02* and the WAPC *Statement of Planning Policy 9: Metropolitan Centres Policy Statement for the Perth Metropolitan Region (2000)*.

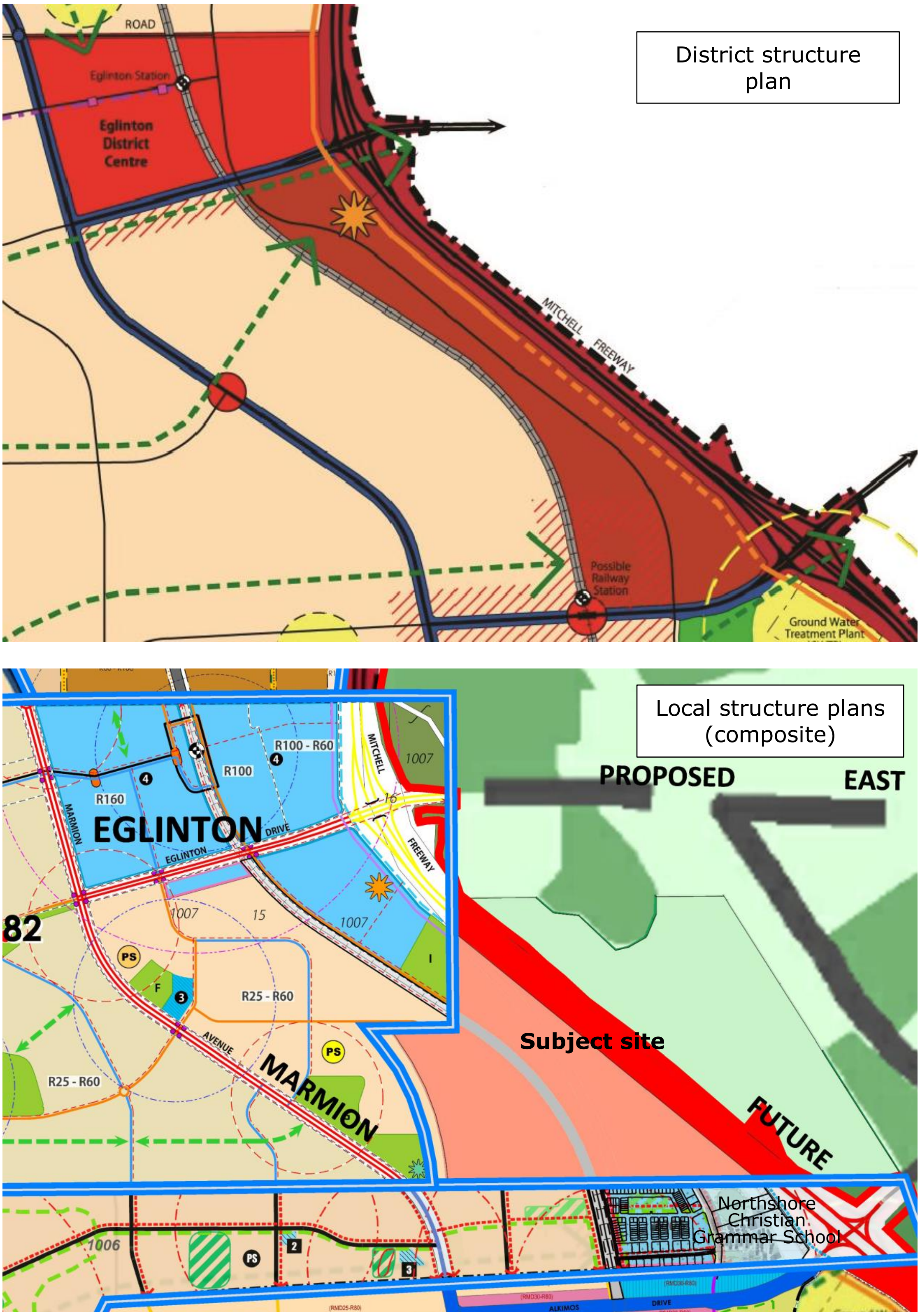
The Central precinct of the subject site is a fraction of the original are that was identified as 'service commercial north' in the AEDSP. Changes in land use designations to the north and south of the subject site have effectively superseded the original planning rationale. Under the AEDSP, the 'service commercial north' area precinct was to have direct connections to the freeway at both the northern and the southern ends. Also at that time, the eastern side of the site is constrained by an easement for a 132kV overhead transmission line.

Since the AEDSP was approved, the extent of the subject site has been compromised by:

- Northern portion rezoned for Eglinton District Centre
- Northern portion identified for conservation, limiting a centrally located road as show on the DSP, for access to the north
- Southern portion affected by the removal of the proposed train station
- Southern portion developed as Shorehaven mixed use precinct, with residential development permitted, the Northshore Christian Grammar School (K – 12)
- Direct freeway connection at both the northern and southern ends is now significantly restricted by final land use allocation as provided by LSPs.

As a result of such significant changes, the use of the central precinct is now 'infrastructure locked' on two sides (west and east). Access opportunities are also significantly affected by the conservation reserves at both the southern and northern ends of the site.

**Figure 6.** Comparison Eglinton – Alkimos Eglinton DSP and local structure plans




*Source: CLE plans (3109-46-01 & 3109-47-01)*

The Northshore Christian Grammar School opened in 2017, initially offering K-6 classes and will grow to a K-12 school over six years. The school is located between the central precinct of the subject site and the onramp to the Mitchell Freeway. All traffic travelling to and from the central precinct of the subject site would therefore have to travel down Scothorn Drive on the west side of the school and then along Alkimos Drive to either access the Mitchell Freeway or Marmion Avenue.

**Figure 7.** Shorehaven Central Precinct and Northshore Christian Grammar School


*Source: Northshore Christian Grammar School*

With limited access to the north, the surrounding land uses have effectively made the central precinct of the subject site a *cul de sac* that is predominantly only accessible through an urban (residential plus school) neighbourhood.

## Changes to planning policy relevant to service commercial and employment land

The employment assumptions that underpin the AEDSP were made at a time when:

- Floor space allocations within 'shopping centres' were tightly controlled under *Statement of Planning Policy 9 Metropolitan Centres Policy Statement for Perth*
- Centres were dominated by retail activities and employment, whereas now they are mixed-use centres bringing in a number of other civic, cultural, recreational, residential and other compatible uses (under *State Planning Policy 4.2 Activity Centres for Perth and Peel*)
- Employment structure by industry sector was considerably different and was prior to the dramatic increase in services employment
- Retail and office employment 'leakage' meant that areas identified as "service commercial" land uses had a significant amount of shop/retail (PLUC

5) and office/business (PLUC 7) employment. Prevailing planning policy is to push these land uses and jobs into designated regional, district and neighbourhood centres. As evidence, the *AEDSP Economic and Employment Strategy* had to adjust the shop/retail employment in benchmark areas (Osborne Park, Myaree and Joondalup) to produce the desired outcome for the structure plan area.

- The precinct around proposed train station could have justified some shop/retail and office/business uses, which would have had high employment densities per floorspace area. Without that critical infrastructure, the subject site lacks the fundamental triggers to achieve the originally envisaged employment outcomes.

### Service commercial scenario assumptions

The AEDSP assessed three established areas of Perth as the basis for the types of land uses and jobs outcomes that were desired for the 'service commercial' land in the AEDSP:

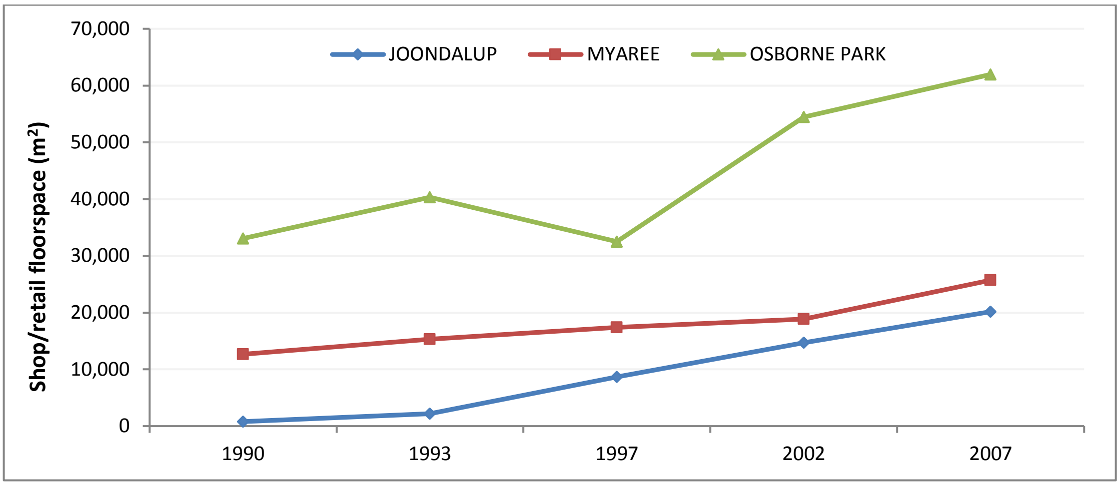
- Osborne Park ("scenario 1") developed in the 1920s and significant industrial development starting post-World War II
- Myaree ("scenario 2") established as light industrial in the late 1950s
- Joondalup ("scenario 3") substantially developed from the end of the 1980s

These areas are identified as industrial complexes under the WAPC Land Use and Employment Survey which reflects their predominant zonings under the respective local planning schemes. Each these areas are essentially light/general industrial uses fringed with shop/retail (PLUC 5) and office/business (PLUC 7) uses in the high-visibility corridors.

The *AEDSP Economic and Employment Strategy* deliberately reallocated the actual shop/retail floorspace in these three centres to 'other retail' in order to manage the desired outcome; ensure that the regional, district and neighbourhood centres were viable and ensure that the floor space provision did not exceed the assessed demand in the catchment.

The following figure shows the three case study areas over the last four Land Use and Employment Surveys and indicates the amount of shop/retail floorspace in each of those centres. The key points are that (1) these three areas have a significant amount of shop/retail floorspace and (2) that they are increasingly fulfilling a role that should ideally be located within designated regional, district and neighbourhood centres.

**Figure 8.** Shop/retail (PLUC 5) floorspace in complexes used as the in the AEDSP




*Source: WAPC Land Use and Employment Surveys (1990-2007)*

The following table demonstrates that land can be quite dynamic over time, across many of the land use (PLUC) categories.

**Table 16.** Distribution of floorspace by PLUC and change over time in industrial complexes

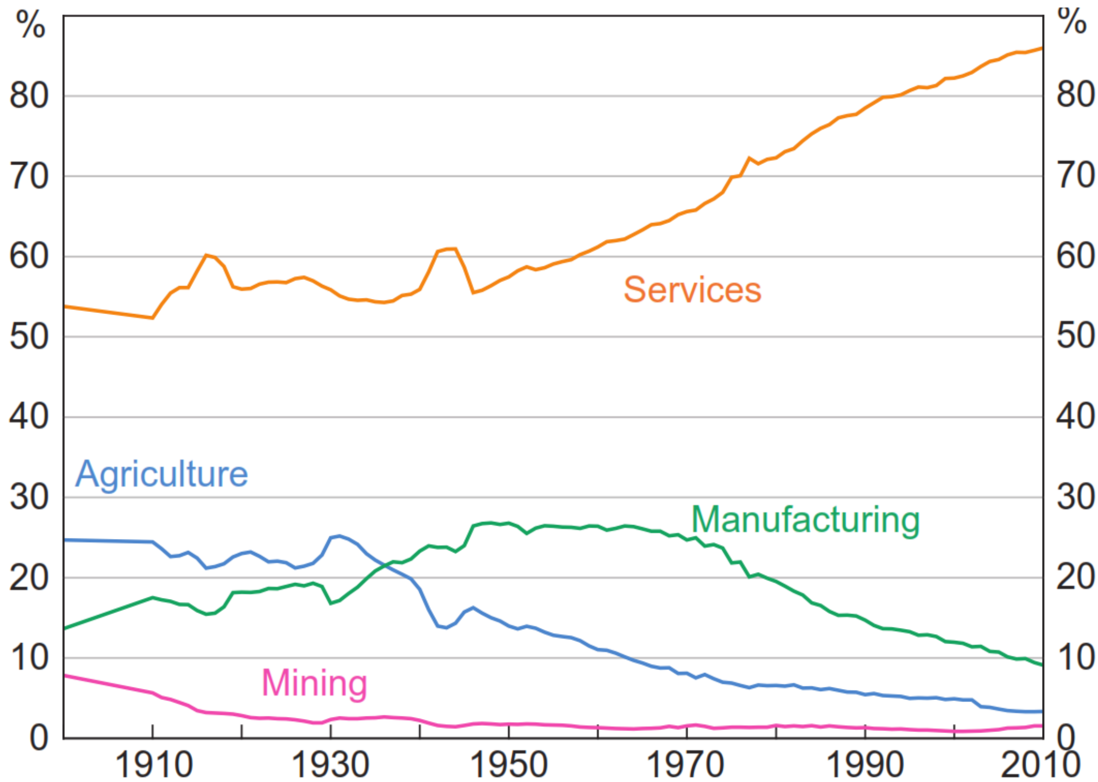
| Centre/ survey year | Primary/ Rural | Manufacturing/ Processing/ Fabrication | Storage/ Distribution | Service Industry | Shop/ Retail | Other Retail | Office/ Business | Health/ Welfare/ Community Services | Entertainment/ Recreation / Culture | Residential | Utilities/ Communications | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **OSBORNE PARK ("scenario 1")** | | | | | | | | | | | | |
| 1990 | 0.0% | 31.6% | 24.8% | 13.6% | 4.0% | 11.0% | 10.7% | 1.4% | 1.8% | 0.0% | 1.1% | **100.0%** |
| 1993 | 0.1% | 31.4% | 21.4% | 14.1% | 4.6% | 10.5% | 13.1% | 1.2% | 1.8% | 0.0% | 1.7% | **100.0%** |
| 1997 | 0.0% | 23.0% | 26.2% | 18.7% | 3.5% | 8.7% | 16.3% | 0.8% | 1.1% | 0.0% | 1.6% | **100.0%** |
| 2002 | 0.0% | 18.3% | 25.3% | 19.9% | 5.4% | 8.6% | 19.4% | 1.3% | 1.0% | 0.0% | 0.7% | **100.0%** |
| 2007 | 0.0% | 17.7% | 29.9% | 13.1% | 5.7% | 10.5% | 19.8% | 1.6% | 1.3% | 0.0% | 0.5% | **100.0%** |
| **MYAREE ("scenario 2")** | | | | | | | | | | | | |
| 1990 | 3.4% | 26.6% | 17.4% | 21.9% | 6.0% | 13.0% | 8.5% | 1.2% | 1.4% | 0.0% | 0.6% | **100.0%** |
| 1993 | 3.4% | 25.5% | 17.7% | 19.7% | 6.7% | 13.3% | 9.6% | 1.4% | 1.8% | 0.0% | 0.8% | **100.0%** |
| 1997 | 0.2% | 24.4% | 15.4% | 24.6% | 7.8% | 12.1% | 11.4% | 1.7% | 1.5% | 0.0% | 1.0% | **100.0%** |
| 2002 | 0.2% | 21.2% | 12.1% | 25.9% | 8.2% | 13.3% | 12.6% | 1.6% | 2.3% | 0.0% | 2.5% | **100.0%** |
| 2007 | 0.1% | 16.3% | 15.7% | 21.1% | 10.5% | 14.1% | 15.2% | 1.1% | 2.5% | 2.0% | 1.4% | **100.0%** |
| **JOONDALUP ("scenario 3")** | | | | | | | | | | | | |
| 1990 | 0.0% | 13.8% | 2.3% | 2.8% | 5.5% | 25.7% | 10.3% | 0.0% | 25.1% | 0.0% | 14.6% | **100.0%** |
| 1993 | 0.8% | 22.5% | 5.9% | 11.5% | 5.9% | 23.6% | 9.5% | 3.0% | 11.7% | 0.0% | 5.6% | **100.0%** |
| 1997 | 0.0% | 19.7% | 8.0% | 15.1% | 11.4% | 28.7% | 6.6% | 1.1% | 8.5% | 0.0% | 0.9% | **100.0%** |
| 2002 | 0.0% | 12.0% | 10.8% | 14.3% | 14.6% | 20.2% | 8.2% | 2.0% | 17.1% | 0.0% | 0.8% | **100.0%** |
| 2007 | 0.0% | 12.4% | 13.8% | 12.5% | 15.3% | 18.5% | 7.9% | 1.5% | 17.6% | 0.0% | 0.5% | **100.0%** |

*Source: WAPC Land Use and Employment Surveys (1990-2007)*

The *AEDSP Economic and Employment Strategy* was based on a single point in time (the 2002 LUES) and the Myaree example was selected ("scenario 2") as the basis for planning the service commercial land in the structure plan area.

The assumption is that the Myaree industrial complex with the mix of uses as was developed in 2002 was a template for the types and mix of uses most appropriate for the Alkimos Eglinton district. Given the evidence regarding the dynamics across different employment land uses, this template is no longer relevant in a jobs market which increasingly dominated by services.

**Figure 9.** Employment by industry* (share of total)




* Data are interpolated between 1900 and 1910

*Sources: ABS; RBA; Withers, Endres and Perry (1985) from RBA (2010) Structural Change in the Australian Economy*

## Intensity of land use in Alkimos and Eglinton centres

As the planning has progressed for the Alkimos Regional Centre and the Eglinton District Centre, the employment land use intensity has increased with additional floorspace proposed. For example:

- Proposed increase in shop/retail floorspace in Alkimos centre from 55,000 m$^2$ to 67,500m$^2$. The AEDSP had planned for 50,000 m$^2$ shop retail floorspace in the centre. This effectively means that the Alkimos centre would have 947 more jobs than had originally been planned (using the same floorspace to worker ratio as used by the *AEDSP Economic and Employment Strategy*).

- Proposed 80,000 m$^2$ bulky goods floorspace for the Alkimos centre up from 20,000 m$^2$. This was not anticipated when the AEDSP was prepared, which only allowed for 15,000 m$^2$ of other retail uses in the centre. This effectively means an additional 650 jobs in the Alkimos centre that had not been included in the original AEDSP assumptions.

  Although the bulky good proposal for the Alkimos centre was later recommended to be 60,000 m$^2$ (rather than 80,000 m$^2$), it would still add another 450 additional jobs over and above the 150 originally planned.

These changes reflect the how much the original assumptions have aged since they were prepared and the r/evolution of centres in the meantime.

# Section 3: Suitability of the subject site for employment use

## Land uses not appropriate to service commercial land

The central precinct of subject site has become severely constrained from being viable for employment uses for several reasons. The following points focus on the employment sectors that were proposed to provide a significant number of the jobs in the service commercial areas:

Manufacturing/ processing/ fabrication (PLUC 2)

- These are essentially industrial uses and ideally located within industrial areas that provide ready access to a range of industrial business-to-business suppliers. In addition, many of these businesses need direct access to the regional road (freight) network and have off-site impacts (noise) that may be unacceptable next to urban activities (ie. schools, houses).

Storage / Distribution (PLUC 3)

- These are essentially industrial uses and ideally located within industrial areas that provide ready access to the regional road (freight) network. These businesses have very low employment densities and therefore do not make any significant contribution to employment self-sufficiency.
- These uses may have been acceptable at the subject site when the AEDSP was being prepared as it would have had direct access to the freeway at both the northern and southern ends.

Shop/retail uses (PLUC 5)

- These jobs should be located within the designated activity centres (Alkimos, Eglinton and the neighbourhood centres). Some shop/retail uses may have been appropriate at the time the AEDSP was being prepared, but only around the proposed train station which has since been removed from the plans
- The *AEDSP Economic and Employment Strategy* has fully allocated all the demand for shop/retail floorspace to the centres (regional, district and neighbourhood) in the area, meaning that any additional shop/retail uses

are unlikely to be viable and therefore will fail the retail sustainability test under *SPP 4.2 Activity Centres for Perth and Peel.*

Other retail (PLUC 6) uses:

- Typically these are uses that are motor-vehicle related (service stations, vehicle and motor cycle sales, tyre sales, battery sales, caravan and trailer sales & hire, boat sales, automotive accessories, motor vehicle rentals) and as such require frequent vehicle access. Limited vehicle access and exposure could compromise the viability of such uses.
- other retail uses need to have a high level of visibility to be viable (hardware, electrical fittings, furniture sales) but the subject site has negligible passing traffic / visibility and therefore any such business locating in the area are very unlikely to be viable.
- The remainder of the PLUC 6 type uses are essentially industrial (chemical sales, plumbing, paint, fuel, heating sales) or semi-rural (livestock sales, feedstock sales, agricultural equipment, farm and garden supplies) in nature and are not appropriate in close proximity to urban development.

Office/business uses (PLUC 7)

- not preferred as these should be located within the designated activity centres and around public transport nodes.

The Alkimos – Eglinton catchment is unlikely to support service commercial land as proposed by the Alkimos-Eglinton District Structure Plan. The types of businesses that could possibly locate in the area are likely to generate only low density 'semi-industrial' employment uses (ie. storage/warehousing or light fabrication/ manufacturing). Arguably these business-to-business uses need to be located within general industrial areas. Therefore, many of these lower density industrial employment uses would better be located in an appropriate industrial area such as Meridian Park.

A fundamental principle underpinning SPP 4.2 is retail sustainability – the idea that businesses should be financially viable and be able to operate on an ongoing basis to continue to meet the needs of the community. A number of factors make the subject site unsuitable for development as employment land:

- Lack of visibility from the road network means that businesses would be 'invisible' to their potential customers and client base. This would essentially limit the number and types of businesses that could locate there
- Lack of activity from the removal of the proposed train station which would have attracted workers, businesses and therefore expenditure to the area
- Lack of direct access to the regional road network, making it unsuitable for businesses that need frequent freight deliveries.

There is no single archetypical service commercial development. When the employment strategy for the AEDSP was being prepared it compared three areas that had significantly different mixes of land uses (PLUCs). Even though the Myaree area was selected as the most appropriate type of development, even that had to be adjusted to understate the actual amount shop/retail floor space in the area (given that such uses were preferred in designated activity centres).

The following table outlines the types of land uses that are appropriate within service commercial areas and the ideal or preferred location. This indicates that service industry and other retail uses are the appropriate uses within service commercial areas and that other land uses are ideally located either in activity centres (Alkimos, Eglinton or neighbourhood centres) or industrial locations. The significant vacant land holdings at Meridian Park and the potential future industrial land proposed under Perth and Peel at 3.5 million will provide for the light and general industrial needs.

**Table 17.** Appropriate land uses in service commercial areas

| Planning Land Use Code (PLUC) | Appropriateness to 'service commercial' areas | Ideal / preferred location |
|---|---|---|
| Primary/Rural | × | Industrial or rural industry |
| Manufacturing/ Processing/ Fabrication | × | Industrial (with access to regional transport network) |
| Storage/Distribution | × | Industrial (with access to regional transport network) |
| Service Industry | ✓ | Service commercial and light industrial areas |
| Shop/Retail | × | Activity centres |
| Other Retail | ✓ | Industrial and service commercial areas |
| Office/Business | × | Activity centres |
| Health/ Welfare/ Community Services | × | Activity centres |
| Entertainment/ Recreation/ Culture | × | Activity centres |
| Residential | × | Residential and mixed-use activity centres |
| Utilities/Communications | - | Industrial and service commercial areas |

*Source: MacroPlan Dimasi (2017)*

Following this preferred allocation of land uses, but still applying the same assumptions as per the original AEDSP, the following table demonstrates the overall impact on floorspace and jobs on the central precinct of the subject site. This is based on the assessment in the previous section.

**Table 18.** Maximum net lettable floorspace and jobs by employment sector for service commercial land in the AEDSP

| Central precinct of subject site | Primary / Rural | Manufact/ Process/ Fabrication | Storage/ Distrib | Service Industry | Shop/ Retail | Other Retail | Office/ Business | Health/ Welfare/ Community Services | Entertain/ Recreation / Culture | Residential (Short stay accom) | Util/ Comm | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Net lettable floorspace m²) | ~~245~~ | ~~21,865~~ | ~~12,458~~ | 26,734 | ~~4,417~~ | 12,710 | ~~12,982~~ | ~~1,679~~ | ~~2,353~~ | ~~0~~ | 2,528 | **41,972** |
| Jobs | ~~3~~ | ~~257~~ | ~~67~~ | 403 | ~~167~~ | 250 | ~~483~~ | ~~40~~ | ~~41~~ | ~~0~~ | 13 | **666** |

*Source: MacroPlan, derived from Syme Marmion, Alkimos Eglinton Economic and Employment Strategy 2007 and CLE plan (3109-47-01)*

Note that this table ignores any of the other limitations on reaching this outcome such as the topography of the site which will reduce the development yields; the fact it does not have the necessary attributes to establish a customer base (negligible visibility from passing traffic affecting the 'other retail' potential), and the limitations to accessibility which will limit the use for service industry.

## Impact of the site topography

Analysis of the service commercial south area of the AEDSP demonstrated the impact of undulating land on the viability of service commercial uses could reduce employment outcomes by up to 90 per cent.

Preliminary earthworks designs prepared by Cossill and Webley indicate a considerable fall across most of the northern half of this property severely compromising the potential to create and operate useable and accessible commercial lots. With the levels for the rail on the western side and the freeway on the eastern side fixed, it reveals a fall of almost 10 – 12m across the site, which is only about 200m wide in this location. The ability to deal with topography through design is further compromised along the eastern edge by the need to allow for a flat 32m wide powerline easement section. What all this would mean is that it is almost impossible to create flat and accessible commercial lots with good access as retaining walls (with wrap around walls) up to 4m in height would be required. This is unfeasible from both a commercial and functional perspective give the manner in which these lots would be used, the need for flat commercial sites and the requirement for good vehicle access. The topography is far more readily dealt with through residential development where smaller lots generate the need for smaller retaining walls and access for commercial vehicles is clearly not an issue.

### Comparison of site attributes

The original assumptions for the service commercial areas in the AEDSP was that they would have a similar set of land uses as those evident in Osbourne Park, Myaree and/or Joondalup. The following table provides a comparison of the key factors affecting the economic 'investability' and viability of these areas with the subject site.

**Figure 10.** Subject site suitability for service commercial use

| | Osborne Park | Myaree | Joondalup | Subject site |
|---|---|---|---|---|
| **Direct access to regional road network (MRS 'red / blue roads')** | ✓✓✓<br>Yes, straddles Mitchell Fwy (Hutton St on/off ramps) and Scarborough Beach Rd. Access to Jon Sanders Dr (blue road). Future Stephenson Hwy access to Mitchell Fwy. | ✓✓<br>Yes, Leach Hwy, North Lake Rd and Marmon St. | ✓✓✓<br>Yes, bounded by Mitchel Freeway, Shenton Ave, Joondalup Dr and Hodges Drive. Two freeway on/off ramps. | ××× <br>No direct access to regional road network. No direct access to Mitchell Freeway. Vehicles would predominantly have to travel from the south (through residential areas and a school zone). |
| **Topography** | ✓✓✓<br>Predominantly flat sites throughout | ✓✓<br>Relatively flat sites, with some benching/retaining. | ✓✓✓<br>Flat sites throughout | ×××<br>Sloping site makes around 1/3 of the land undevelopable and requires 10% road grades which are unsuitable for heavy vehicle access. |
| **Accessibility** | ✓✓✓<br>Good public transport access (bus and train) allowing some higher-order economic and employment uses. | ✓✓✓<br>Good public transport access (bus) | ✓✓<br>Good public transport access (bus) | ××<br>Very unlikely to have regular public transport (apart from bus services to the school). |
| **Visibility** | ✓✓✓<br>Very high visibility area with major road network and strong traffic flows throughout the area. | ✓✓<br>High visibility, particularly from the south and east of the centre. | ✓✓✓<br>Very high visibility - adjacent to a strategic regional centre | ×××<br>Negligible/no visibility except from local traffic. |

# Section 4: Jobs outcomes

## Jobs from service commercial development

If the central precinct of the subject side were to be developed for service commercial uses then the site would be developed for service industry and other retail uses.

**Table 19.** Average floorspace ($m^2$) per employee by type of activity centre in Perth (2008 ratios)

| Planning Land Use Category (PLUC) | Industrial |
|---|---|
| Service Industry | 97.1 |
| Other Retail | 94.8 |
| **Weighted average applicable to service commercial land use** | **96.1** |

*Source: Department of Planning Land Use and Employment Survey 2008; MacroPlan Dimasi*

The central precinct of the subject site would deliver a net 25.35 hectares of developable land. Given the undulating site topography, this land cannot support typical service commercial uses at the same development density as can flat land. Generally service commercial land can be developed to yield a net lettable area of 1,800 $m^2$ per hectare, however, undulating sites meant that additional development costs and reduced site facility limit the types of businesses that can locate on these site. This reduces the net lettable area to 900 $m^2$ per hectare.

**Therefore, if the central precinct of the subject site were to be developed for service commercial use, it would yield approximately 237 jobs.**

**Table 20.** Service commercial jobs yield – Central precinct, subject site

| Land use and yield | Metric |
|---|---|
| Total precinct area (ha) | **36.2** |
| EPBC area to be retained (ha) | 3.2 |
| Roads (ha) | 6.08 |
| Public open space (ha) | N/A |
| Drainage @ 5% (ha) | 0.97 |
| **Nett developable area (ha)** | **25.35** |
| Estimated net lettable floorspace yield (at 900$m^2$ per ha) | 22,815 |
| Estimated job yield (at 96.1$m^2$ floorspace per worker) | 237 |

*Source: MacroPlan Dimasi (2017)*

## Jobs from residential development

The development of the site for residential use would have a lower net land yield (due to additional roads and POS). Taking into account the site topography, residential lots the precinct would be 370 $m^2$ to 400$m^2$. Therefore the site could deliver around 500 dwellings.

Dwellings and households generate demand for employment (including home maintenance, cleaning and related services) at an average rate of 0.132 full-time equivalent jobs per dwelling. Therefore, the precinct would generate 66 jobs.

Note that this does not include work from home and work at home jobs. The AEDSP treats these jobs as a normal function of the local economy and are excluded from the calculations forth centre-based employment.

**Table 21.** Residential jobs yield – Central precinct, subject site

| | Metric |
|---|---|
| Total precinct area (ha) | **36.2** |
| EPBC area to be retained (ha) | 3.0 |
| Roads (ha) | 9.96 (30%) |
| Public open space (ha) | 3.32 (10%) |
| Drainage (ha) | 0.66 (3%) |
| Total non-non developable area (ha) | 13.94 |
| **Nett developable area (ha)** | **19.26** |
| Estimated dwelling yield | 500 |
| **Estimated job yield from dwellings @ 0.132 jobs per dwelling (<u>not including</u> work from home or work at home)** | 66 |

*Source: MacroPlan Dimasi (2017)*

**The impact of developing the central precinct of the subject site for residential use would be to deliver around 500 dwellings and 66 net additional full-time equivalent jobs**

## Expenditure and activation benefits

An additional 500 households would bring an additional 1,200 residents to the area. These people would increase the overall catchment expenditure by an estimated $17.5 million each year. Most of these expenditure would be spent in the reginal, district local activity centres within the AEDSP area. This adds to the viability of the Alkimos and Eglinton activity centres and helps support jobs in those centres that would not have otherwise been created.

Catchment growth and viability of investment in centres is one of the major factors for the north west sub-region given the physical and topographical constraints. This makes a typical radial catchment impossible in the area, given the narrow urban corridor and the lack of any inland urban development.

### Other benefits

Access to the subject site is constrained by the rail reserve to the west, conservation area to the north and the freeway reserve to the east. Therefore traffic would have to come predominantly from the south although there is also some limited access from the north. The site has no direct access to the Mitchell Freeway. As a result, freight traffic to the service industrial area would have to use Alkimos Drive on and off ramps.

The proposed land uses immediately to the south include aged care, a private school and residential uses which would be incompatible with any significant level of heavy transport use at the Central Precinct site to access the service industrial area.

Many of the types of business that would have previously located in service industrial zones are actually better located in activity centres. For example automotive repairs (servicing, tyres, etc) prefer to locate in areas next to shopping centres and/or good public transport as their customers have an expectation that they can 'trip chain' these needs (ie. to drop the car off on the way to shopping, work, movies, gym) and collect it later.

### Jobs difference and options

If the central precinct of the subject site were to be designated as  residential under the AEDSP rather than service commercial it would have a net impact of reducing the overall employment created by 171 jobs (237 jobs from service commercial less 66 jobs from residential).

For the proposal to stand on its own, this means that additional employment uses within the central precinct of the subject site would have to make up the shortfall. Potential options for this development include:

- Child care – given the proximity of the school this would meet the needs of the local working parents (long day care) as well as before- and after-school care.
- Aged care – has high employment densities for 24-hour care and under the current operational arrangements is often used to provide a hub for home care services. In comparable greenfield areas, demand for retirement and aged care facilities has been high as the grandparents move to greenfield areas to be closer to their families.
- Medical centre – including GP, dentist, pharmacy and complementary health care services
- Small retail node – up to 500m$^2$ with café and convenience retail shopping.

Given the urban uses of the surrounding are (housing, school) this limits the types of compatible employment land uses that may be possible on the central precinct of the subject site. These are also land uses that are appropriate outside of activity centres. The following table indicates the expected number of jobs that could be created for these uses.

**Table 22.** Land uses and jobs outcomes from developments compatible with residential areas

| Land use | Jobs per facility (FTE) |
|---|---|
| **Education** | |
| Childcare (60-80 places) | 10 |
| **Health** | |
| Retirement living (100 units) | 15 |
| Aged care (80 beds) | 45 |
| **Health** | |
| Medical centre, GP, dentist, allied health | 20 |
| **Local centre** | |
| Convenience retail | 17 |
| **Total jobs** | **107** |

Therefore development for the subject site for residential and compatible employment uses would deliver around 173 jobs (66 + 107) to the AEDSP area.

# References:


City of Wanneroo, *Alkimos Eglinton District Structure Plan 2010*.

IBECON (2006) *Alkimos Eglinton DSP: Retail Assessment.*

Syme Marmion (2007), *Alkimos Eglinton Economic and Employment Strategy*.

Western Australian Planning Commission (2003), *Land Use and Employment Survey 2001/02* (LUES)

Western Australian Planning Commission (2000), *Statement of Planning Policy 9: Metropolitan Centres Policy Statement for the Perth Metropolitan Region (2000).*

Western Australian Planning Commission (2010), *State Planning Policy 4.2: Activity Centres for Perth and Peel.*

# Appendix 1: Employment self-sufficiency targets

## Employment self-sufficiency and self-containment

Journey to work information from the Census of Population and Housing provides insights as to how and where people travel to work. From this information it is possible to calculate the employment self-sufficiency and self-containment:

$$\text{Employment self-sufficiency} = \frac{\text{Number of jobs within a specified area}}{\text{Number of employed persons living within a specified area}}$$

Employment self-sufficiency does not consider where people actually work; it simply takes into account the number of worker who live in an area and the number of people who work in that same area. It is essentially a crude measure of the potential opportunity to find work locally – the higher the level of self-sufficiency, the higher the potential to find work locally. A major shortcoming is that it does not take into account whether someone has the suitable qualifications or industry experience to work in the types of jobs that are available in the local area.

The following table of employment self-containment and self-sufficiency for Perth's (by Statistical Area 3 definitions) in 2011 excludes FIFO employment. This demonstrates some interesting factors such as the area with the highest employment– Perth City – with employment self-sufficiency of 379.7 per cent has an employment self-containment of 61.1 per cent. This means that 38.9 per cent of employed residents living in Perth City work outside of the city and therefore those people likely require the transport network to access their employment.

**Table 23.** Employment self-sufficiency and self-containment for Perth (by Statistical Area 3) - 2011

| Statistical Area | Employment self-containment | Employment self-sufficiency |
|---|---|---|
| **Cottesloe – Claremont (SA3)** | 35.1% | 123.9% |
| **Perth City (SA3)** | 61.1% | 379.7% |
| **Perth - Inner (SA4)** | **71.0%** | **284.6%** |
| **Bayswater - Bassendean (SA3)** | 21.4% | 67.2% |
| **Mundaring (SA3)** | 29.1% | 48.0% |
| **Swan (SA3)** | 36.5% | 105.2% |
| **Perth - North East (SA4)** | **43.6%** | **81.3%** |
| **Joondalup (SA3)** | 31.1% | 53.3% |
| **Stirling (SA3)** | 29.4% | 80.8% |
| **Wanneroo (SA3)** | 29.1% | 51.8% |
| **Perth - North West (SA4)** | **48.9%** | **63.1%** |
| **Armadale (SA3)** | 28.5% | 50.9% |
| **Belmont - Victoria Park (SA3)** | 28.9% | 174.0% |
| **Canning (SA3)** | 31.7% | 156.1% |
| **Gosnells (SA3)** | 22.0% | 47.4% |
| **Kalamunda (SA3)** | 27.7% | 55.3% |
| **Serpentine - Jarrahdale (SA3)** | 26.7% | 41.8% |
| **South Perth (SA3)** | 18.2% | 61.0% |
| **Perth - South East (SA4)** | **56.5%** | **92.1%** |
| **Cockburn (SA3)** | 28.4% | 72.5% |
| **Fremantle (SA3)** | 37.6% | 178.7% |
| **Kwinana (SA3)** | 22.9% | 99.3% |
| **Melville (SA3)** | 27.8% | 70.2% |
| **Rockingham (SA3)** | 48.3% | 60.3% |
| **Perth - South West (SA4)** | **58.9%** | **81.7%** |

*Source: Australian Bureau of Statistics 2011 Census of Population and Housing; MacroPlan Dimasi*

## Employment targets

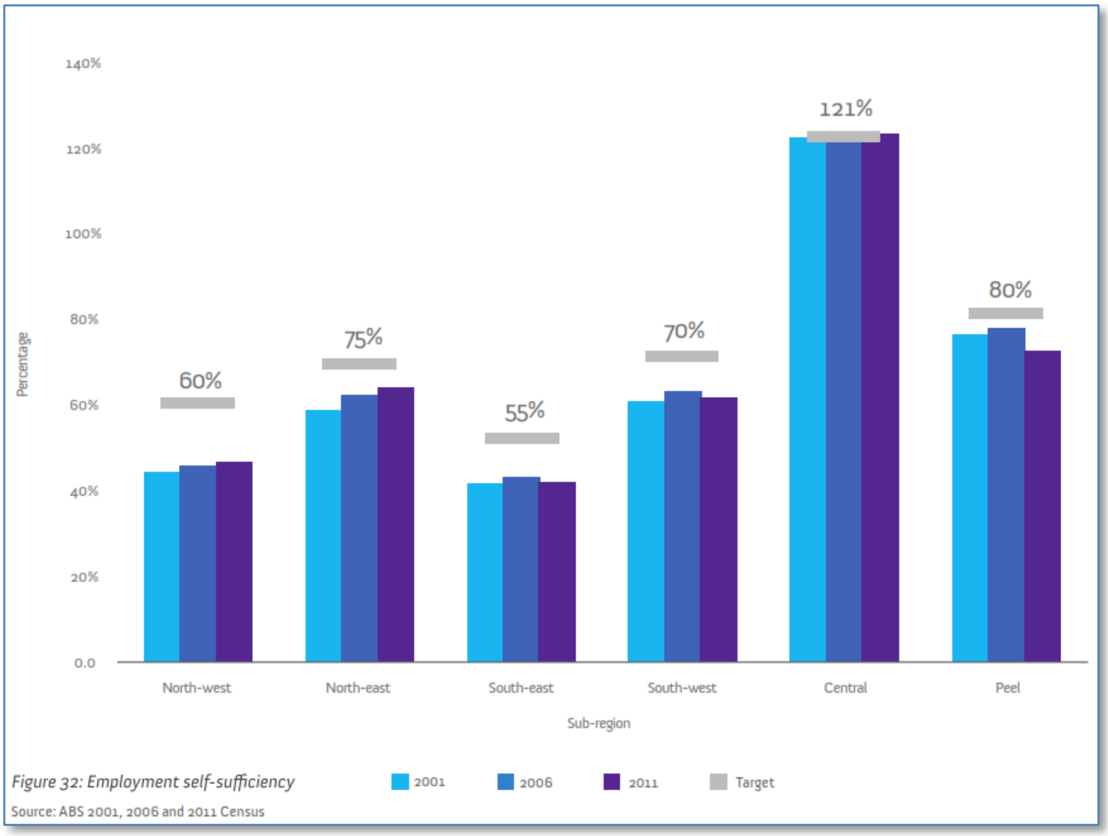
*Directions 2031 and Beyond* sets targets for employment self-sufficiency for Perth and Peel's six sub-regions. In essence, these targets encourage the development of employment land in the outer sub-regions to at least (partially) keep pace with the expansion of the urban front with the intention of limiting the consequential demand on transport networks by commuters travelling to their place of employment. There are a range of economic, social and environmental benefits from reducing the distance and/or time that workers spend commuting to work.

*Directions 2031 and Beyond* sets a target for the north-west sub-region of achieving 60 per cent employment self-sufficiency. *S*elf-sufficiency targets for each of the sub-regions in Perth and Peel vary from 55 per cent in the south-east sub-region, up to 121 per cent in the central sub-region. In other words, all employment self-sufficiency needs to increase for all the outer regions and the central region needs to stay at its current level.

These targets are a logical impossibility as they can only be achieved by creating substantially more jobs across Perth and Peel than there are workers. Employment self-self-sufficiency of the outer sub-regions can only increase if the employment self-sufficiency of the central sub-region decreases. Decreasing employment self-sufficiency in the central sub-region is neither desirable (as it would contradict the Directions 2031 urban consolidation strategy) nor likely (with the State Government's investment in substantial increases in CBD floor space in the Perth City Link, Elizabeth Quay and Riverside redevelopment projects).

The following figure indicates the employment self-sufficiency targets for each of the sub-regions in Perth and Peel.

**Figure 11.** Employment self-sufficiency targets from *Directions 2031 and Beyond*




*Source: WAPC, Directions 2031 and Beyond Annual Report Card 2013*

Achieving employment self-sufficiency needs to account for factors over which developers (and land use planners) have little to no control (such as the economic and social factors that drive FIFO employment arrangements).

### Shortcomings of employment self-sufficiency targets

- **Employment self-sufficiency** is based on an assumption that if jobs are available in an area, then they are more likely to be filled by people living locally. The WAPC's target of 60 per cent is a fundamental factor to the approval of structure plans. While employment self-sufficiency is the measure chosen to assess structure plans, a much better measure is employment self-containment, which is the measure of people who both live and work in the same location. This measure is important as it indicates those workers who do not use the regional transport network to access employment. *Directions 2013 and Beyond* acknowledges the importance of employment self-containment but does not set targets.

- **Extra-metropolitan employment** - employment self-sufficiency calculations typically include jobs that are located outside of the Perth metropolitan area (ie. such as FIFO) and jobs that have no fixed place of work (ie. construction workers and trades people). This means that the employment self-sufficiency ratios are lower than if they had only included people who live and work within the Perth metropolitan region and have a fixed place of work.

Reasons why the employment should only include workers who live and work within Perth:

- FIFO employees are by definition spending most of their time outside of the metropolitan area and are therefore not putting a demand on the transport networks on a daily basis (which the major argument for increasing employment self-self-sufficiency);
- Developers cannot be expected to have any control over the level of FIFO or employment outside of Perth, it would be more appropriate to only include only those workers who have a fixed place of work that is within the Perth metropolitan region.

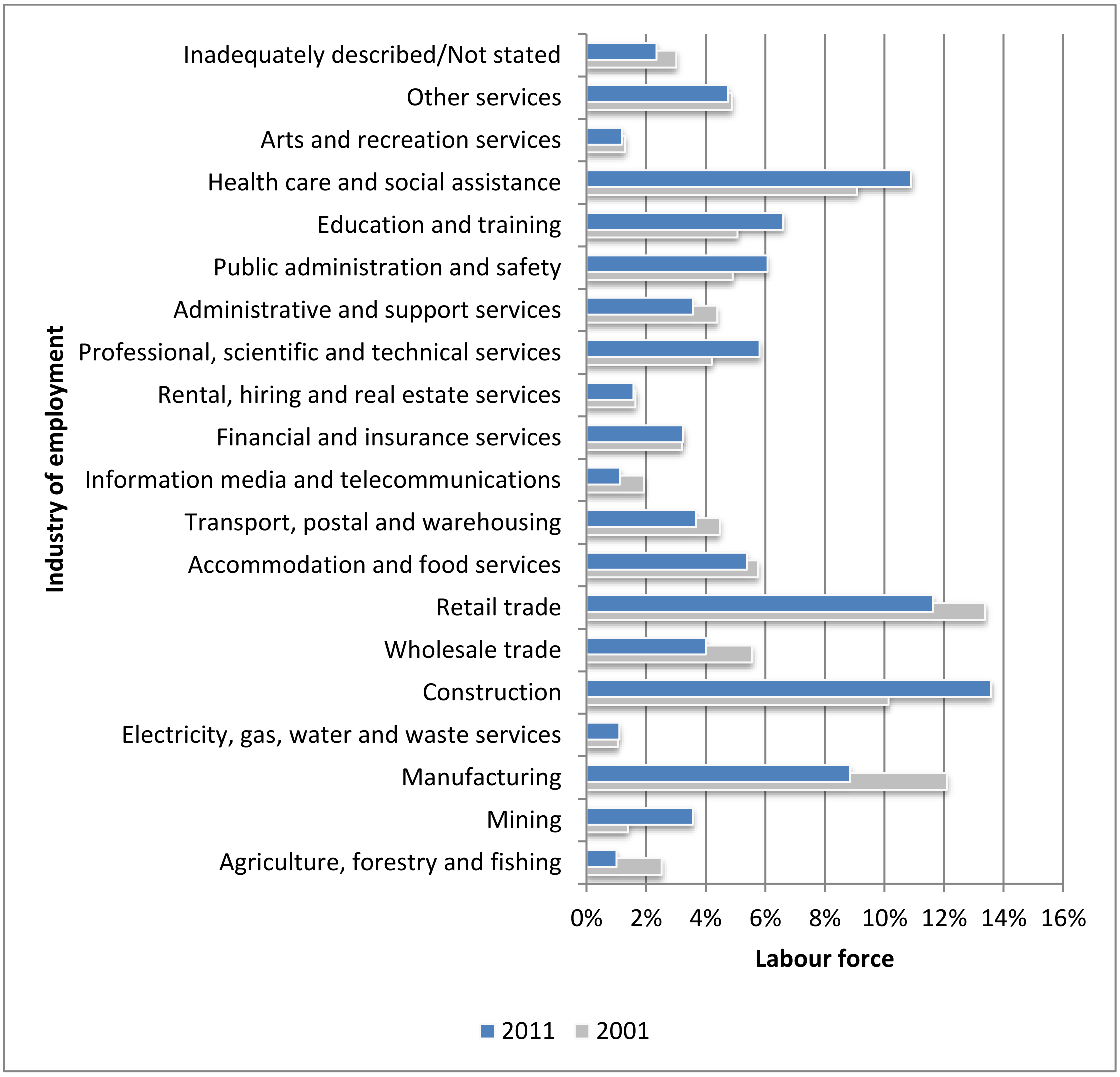
.

# Appendix 2: Census data for employment

## Selected tables from the 2001, 2006 and 2011 Census of Population and Housing

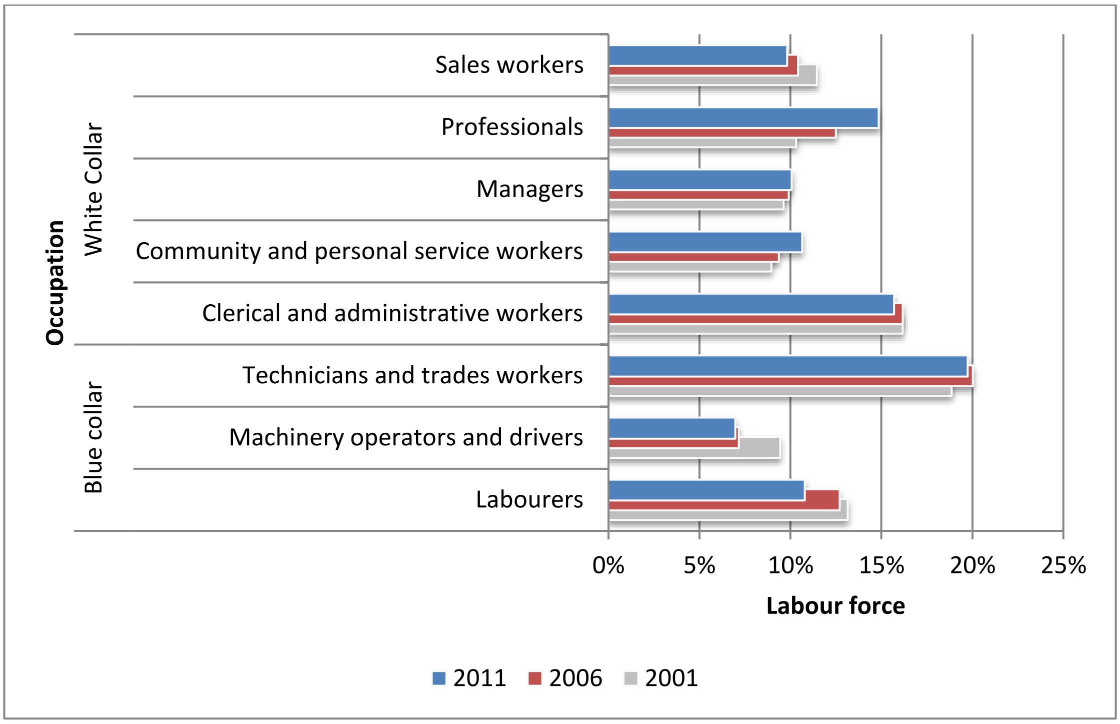
The following figures show employment data for people who live within the City of Wanneroo.

**Figure 12.** Employment by industry – City of Wanneroo



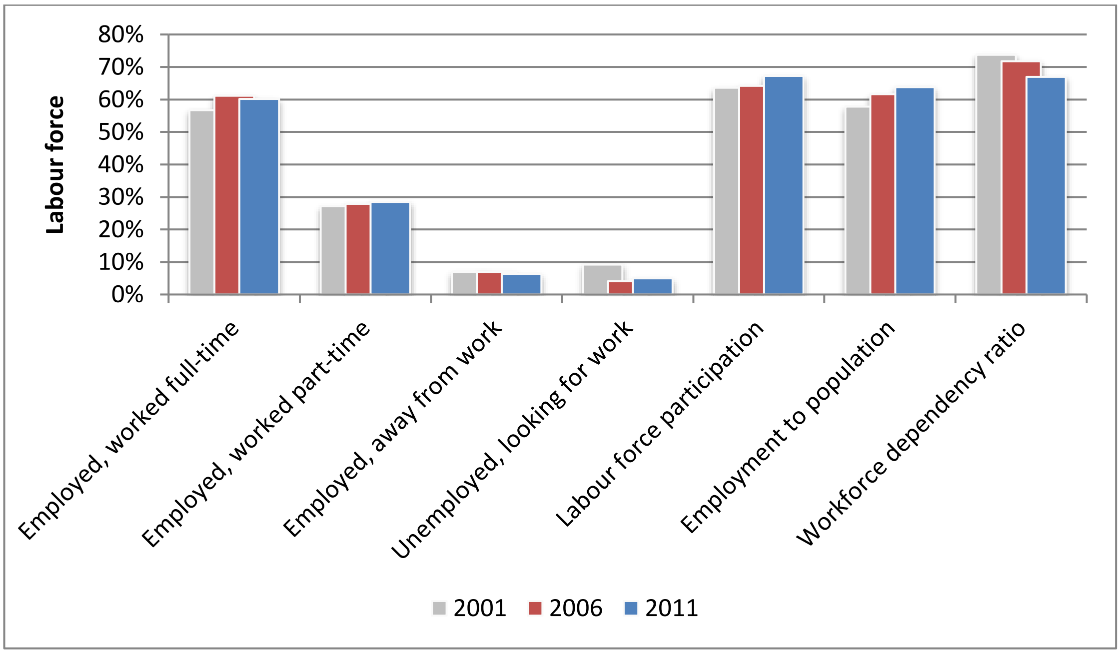

*Source: Australian Bureau of Statistics, 2001, 2006 & 2011 Census of Population and Housing*

**Figure 13.** Occupation (blue collar – white collar) – City of Wanneroo




*Source: Australian Bureau of Statistics, 2001, 2006 & 2011 Census of Population and Housing*

**Figure 14.** Labour force status and participation – City of Wanneroo




*Source: Australian Bureau of Statistics, 2001, 2006 & 2011 Census of Population and Housing*

# Appendix 3: Floorspace and employment

## Floorspace ratios

**Table 24.** Average floorspace ($m^2$) per employee by type of activity centre in Perth (2008 ratios)

| Planning Land Use Category (PLUC) | Commercial | Industrial | Other centres | All centres |
|---|---|---|---|---|
| Primary/Rural | 54.0 | 259.4 | 84.8 | **168.3** |
| Manufacturing/Processing/Fabrication | 41.5 | 111.5 | 395.3 | **103.6** |
| Storage/Distribution | 169.7 | 243.9 | 307.5 | **233.5** |
| Service Industry | 68.9 | 97.1 | 130.6 | **92.1** |
| Shop/Retail | 29.4 | 61.6 | 15.8 | **31.1** |
| Other Retail | 69.2 | 94.8 | 37.6 | **81.4** |
| Office/Business | 24.2 | 35.0 | 19.9 | **26.7** |
| Health/Welfare/Community Services | 27.6 | 39.3 | 85.9 | **58.9** |
| Entertainment/Recreation/Culture | 55.5 | 91.1 | 141.5 | **82.5** |
| Residential | 153.3 | 103.7 | 107.2 | **130.2** |
| Utilities/Communications | 43.8 | 105.7 | 121.6 | **85.5** |
| **TOTAL** | **35.9** | **94.9** | **74.8** | **59.3** |

*Source: Department of Planning Land Use and Employment Survey 2008; MacroPlan Dimasi*

### Benchmark areas used for the AEDSP Economic and Employment Strategy

The three areas used for the service commercial employment assessment are all identified as industrial complexes in the WAPC Land Use and Employment Survey. The following figures show the extent of these areas and zoning under the Metropolitan Region Scheme (MRS). In addition to the zoning, the figures also show the proximity to the regional road network (MRS 'red' and 'blue' roads).

**Figure 15.** Osborne Park industrial complex (9) from LUES

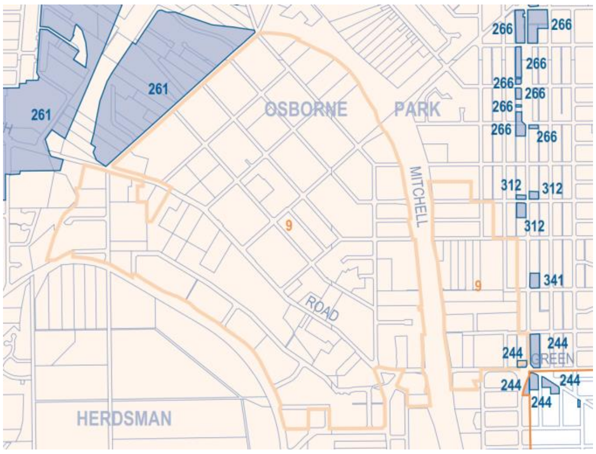



**Figure 16.** Osborne Park industrial complex – MRS zoning (industrial)

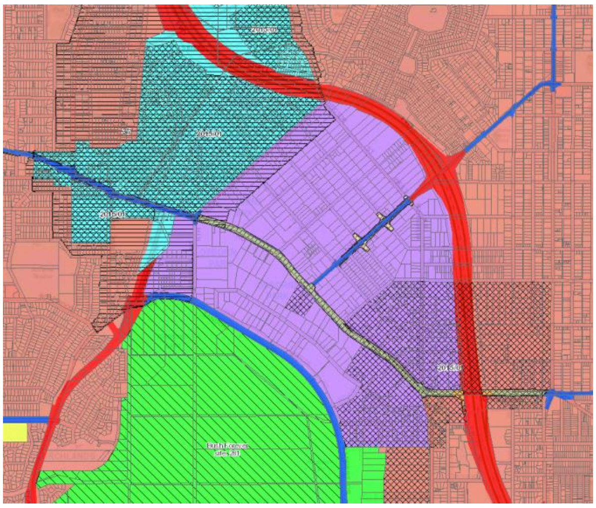


**Figure 17.** Myaree industrial complex (9) from LUES

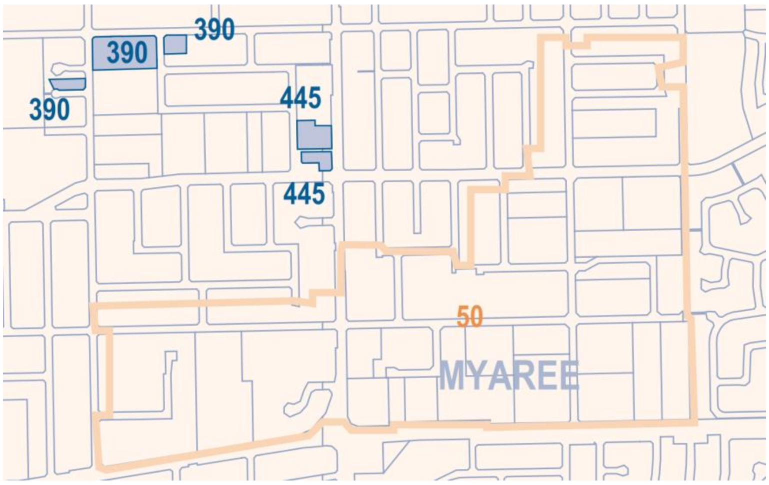



**Figure 18.** Myaree industrial complex – MRS zoning (industrial)



MacroPlanDimasi

**Figure 19.** Joondalup industrial complex (9) from LUES

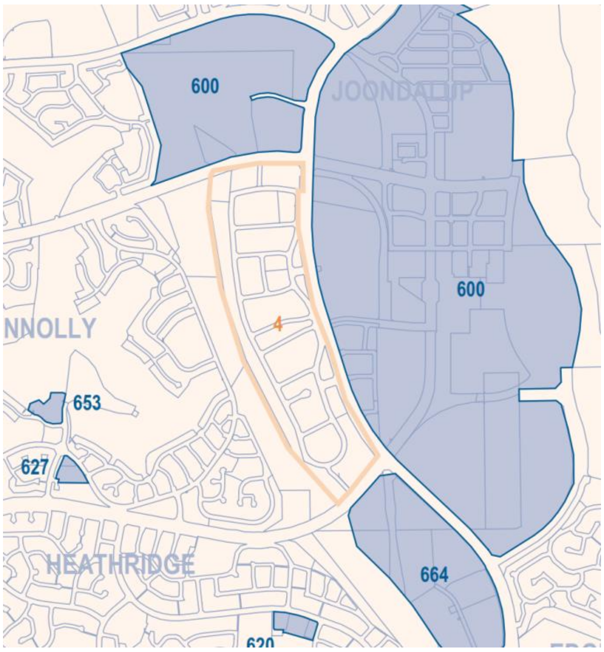
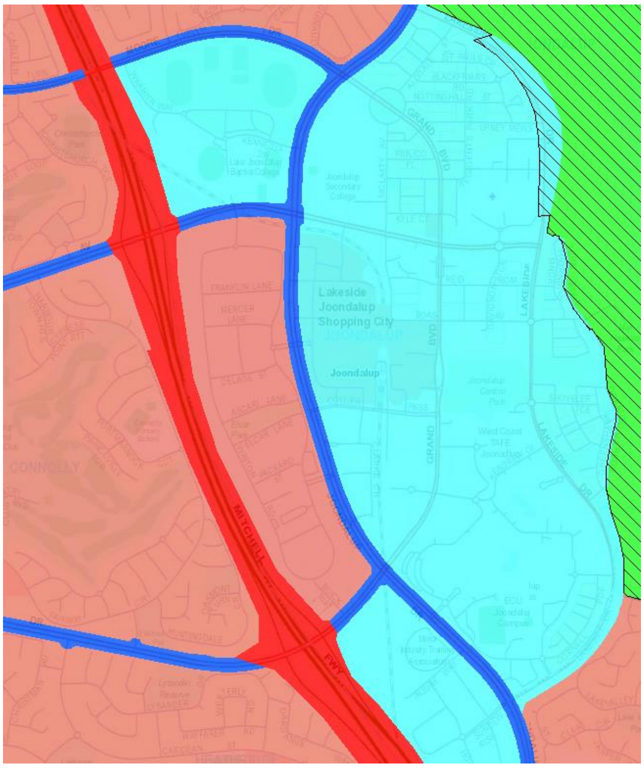



**Figure 20.** Joondalup industrial complex – MRS zoning (urban)



# Appendix 4: Floorspace in Perth's Activity Centres (2008)

**Table 25.** Floorspace ($m^2$) by activity centre in Perth (2008)

| Complex Name | Complex type | PRI | MAN | STO | SER | SHP | RET | OFF | HEL | ENT | RES | UTE | VFA | TOTAL | Office/Total floorspace |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CANNING VALE** | Industrial | 1,400 | 361,862 | 482,800 | 85,773 | 27,774 | 43,158 | 233,001 | 4,431 | 11,614 | 0 | 19,970 | 65,471 | 1,337,254 | 17% |
| **OSBORNE PARK** | Industrial | 62 | 192,589 | 325,827 | 143,225 | 61,967 | 114,085 | 215,822 | 17,247 | 14,424 | 124 | 5,712 | 64,038 | 1,155,122 | 19% |
| **MALAGA** | Industrial | 1,267 | 340,345 | 245,754 | 194,335 | 41,512 | 61,864 | 207,830 | 6,922 | 13,072 | 260 | 14,042 | 99,572 | 1,226,775 | 17% |
| **KEWDALE** | Industrial | 0 | 111,465 | 340,121 | 67,206 | 19,613 | 5,621 | 207,485 | 0 | 0 | 0 | 68,289 | 65,757 | 885,557 | 23% |
| **WELSHPOOL-W** | Industrial | 800 | 192,248 | 363,516 | 164,316 | 13,413 | 28,881 | 180,476 | 2,170 | 22,890 | 0 | 14,056 | 94,571 | 1,077,337 | 17% |
| **WELSHPOOL-E** | Industrial | 0 | 233,814 | 342,525 | 107,618 | 2,211 | 10,165 | 147,694 | 500 | 120 | 0 | 52,380 | 46,870 | 943,897 | 16% |
| **BALCATTA** | Industrial | 0 | 77,170 | 128,035 | 63,435 | 22,375 | 40,363 | 117,716 | 7,957 | 14,663 | 0 | 5,637 | 43,773 | 521,124 | 23% |
| **BELMONT** | Industrial | 0 | 64,892 | 160,349 | 41,108 | 10,473 | 18,724 | 117,501 | 1,849 | 5,344 | 0 | 5,558 | 41,586 | 467,384 | 25% |
| **SUBIACO** | Commercial | 0 | 3,644 | 6,524 | 7,013 | 48,192 | 6,209 | 91,710 | 7,464 | 7,967 | 112 | 3,191 | 23,926 | 205,952 | 45% |
| **FREMANTLE CITY CENTRE** | Commercial | 0 | 4,055 | 20,128 | 2,866 | 70,751 | 1,664 | 77,231 | 33,946 | 32,787 | 25,083 | 3,612 | 65,085 | 337,208 | 23% |
| **WANGARA** | Industrial | 0 | 176,531 | 130,717 | 97,970 | 19,630 | 50,945 | 75,579 | 2,723 | 7,446 | 0 | 4,377 | 57,906 | 623,824 | 12% |
| **BIBRA** | Industrial | 8,883 | 177,450 | 393,791 | 80,832 | 8,804 | 33,474 | 75,336 | 1,050 | 14,583 | 150 | 12,399 | 65,275 | 872,027 | 9% |
| **VICTORIA PARK** | Commercial | 0 | 3,087 | 43,670 | 15,289 | 21,016 | 18,184 | 66,879 | 7,130 | 3,080 | 350 | 4,588 | 14,146 | 197,419 | 34% |
| **PERTH AIRPORT** | Public purp | 0 | 12,000 | 13,148 | 37,438 | 4,172 | 2,623 | 66,842 | 2,640 | 182 | 1,112 | 111,113 | 6,760 | 258,030 | 26% |
| **JOONDALUP CITY** | Commercial | 0 | 364 | 1,557 | 4,327 | 72,831 | 7,040 | 61,990 | 107,051 | 52,524 | 7,059 | 6,054 | 7,713 | 328,510 | 19% |
| **BASSENDEAN** | Industrial | 0 | 122,522 | 117,650 | 88,541 | 3,519 | 11,739 | 60,478 | 150 | 200 | 0 | 12,082 | 45,812 | 462,693 | 13% |
| **HAZELMERE** | Industrial | 0 | 32,454 | 44,381 | 15,567 | 1,543 | 4,505 | 58,693 | 2,970 | 290 | 0 | 2,558 | 10,300 | 173,261 | 34% |
| **MIDLAND CENTRE** | Commercial | 0 | 1,552 | 1,516 | 4,088 | 68,385 | 14,245 | 56,552 | 10,749 | 15,389 | 1,208 | 1,624 | 16,286 | 191,594 | 30% |
| **MADDINGTON** | Industrial | 8,980 | 157,575 | 75,807 | 119,107 | 4,407 | 40,658 | 49,240 | 1,350 | 13,333 | 500 | 25,628 | 31,519 | 528,104 | 9% |
| **KWINANA BEACH** | Industrial | 19,870 | 256,152 | 125,583 | 24,815 | 1,477 | 7,417 | 48,266 | 1,046 | 535 | 0 | 22,975 | 14,753 | 522,889 | 9% |
| **CANNING CENTRAL CITY** | Commercial | 0 | 115 | 28,058 | 2,172 | 94,492 | 19,154 | 47,908 | 4,006 | 6,281 | 0 | 8,055 | 11,406 | 221,647 | 22% |
| **O'CONNOR** | Industrial | 280 | 134,158 | 157,283 | 53,724 | 15,857 | 12,794 | 45,734 | 2,100 | 6,250 | 0 | 9,700 | 72,810 | 510,690 | 9% |

| Complex Name | Complex type | PRI | MAN | STO | SER | SHP | RET | OFF | HEL | ENT | RES | UTE | VFA | TOTAL | Office/Total floorspace |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **BURSWOOD** | Public purp | 0 | 0 | 0 | 0 | 237 | 0 | 45,000 | 0 | 102,151 | 12,808 | 0 | 0 | 160,196 | 28% |
| **INNALOO** | Commercial | 0 | 22,212 | 51,776 | 14,083 | 57,843 | 46,321 | 43,511 | 2,728 | 11,195 | 0 | 4,440 | 17,447 | 271,556 | 16% |
| **BAYSWATER** | Industrial | 0 | 101,009 | 100,566 | 72,560 | 6,458 | 10,585 | 41,925 | 287 | 3,881 | 0 | 13,583 | 44,531 | 395,385 | 11% |
| **HENDERSON** | Industrial | 0 | 183,472 | 72,569 | 40,482 | 330 | 2,550 | 39,593 | 312 | 1,130 | 1,060 | 64,893 | 7,652 | 414,043 | 10% |
| **LEEDERVILLE** | Commercial | 0 | 1,105 | 50 | 1,678 | 11,562 | 1,921 | 39,526 | 1,009 | 7,729 | 170 | 720 | 5,093 | 70,563 | 56% |
| **HIGHGATE** | Commercial | 0 | 2,101 | 17,907 | 6,342 | 15,934 | 7,104 | 38,223 | 6,809 | 6,384 | 2,518 | 1,591 | 22,292 | 127,205 | 30% |
| **MYAREE** | Industrial | 130 | 40,017 | 38,499 | 51,854 | 25,707 | 34,519 | 37,226 | 2,763 | 6,248 | 5,000 | 3,509 | 31,673 | 277,145 | 13% |
| **STIRLING PP** | Public purp | 0 | 0 | 640 | 800 | 552 | 0 | 35,278 | 180,292 | 17,308 | 59,221 | 6,124 | 1,176 | 301,391 | 12% |
| **ROCKINGHAM CITY** | Commercial | 0 | 960 | 1,032 | 3,703 | 59,119 | 9,205 | 34,880 | 36,703 | 17,291 | 20 | 959 | 11,644 | 175,516 | 20% |
| **CAMBRIDGE PP** | Public purp | 0 | 0 | 40 | 0 | 250 | 0 | 33,322 | 72,107 | 5,345 | 7,902 | 400 | 1,192 | 120,558 | 28% |
| **COLLIER TECH PARK 2** | Commercial | 0 | 0 | 7,339 | 34,273 | 400 | 0 | 32,157 | 0 | 0 | 0 | 1,851 | 0 | 76,020 | 42% |
| **FORRESTFIELD** | Industrial | 3,800 | 59,497 | 67,137 | 42,994 | 0 | 1,565 | 28,882 | 0 | 3,000 | 145 | 21,843 | 19,370 | 248,233 | 12% |
| **QE2** | Public purp | 0 | 0 | 8,569 | 17,730 | 3,245 | 1,370 | 28,408 | 120,558 | 946 | 0 | 593 | 0 | 181,419 | 16% |
| **FREMANTLE PORT** | Industrial | 0 | 2,000 | 79,216 | 4,835 | 810 | 600 | 27,571 | 0 | 9,800 | 0 | 15,951 | 3,067 | 143,850 | 19% |
| **JOLIMONT** | Industrial | 0 | 7,282 | 9,208 | 3,921 | 8,574 | 8,090 | 27,173 | 220 | 9,420 | 252 | 687 | 7,639 | 82,466 | 33% |
| **GEH WEST** | Commercial | 0 | 3,312 | 9,326 | 3,939 | 2,893 | 798 | 27,158 | 2,904 | 0 | 7,110 | 6,800 | 7,134 | 71,374 | 38% |
| **JUDD STREET** | Commercial | 0 | 90 | 170 | 715 | 701 | 0 | 26,111 | 1,502 | 0 | 0 | 25 | 1,323 | 30,637 | 85% |
| **CANNING BRIDGE** | Commercial | 0 | 231 | 200 | 584 | 4,714 | 710 | 25,232 | 662 | 5,041 | 0 | 43 | 1,206 | 38,623 | 65% |
| **NAVAL BASE** | Industrial | 0 | 111,485 | 38,188 | 27,524 | 3,485 | 6,399 | 24,809 | 72 | 2,198 | 4,500 | 17,422 | 9,558 | 245,640 | 10% |
| **GARDEN CITY** | Commercial | 0 | 270 | 2,508 | 1,327 | 57,833 | 82 | 23,741 | 621 | 5,599 | 0 | 283 | 1,629 | 93,893 | 25% |
| **JOONDALUP PP** | Public purp | 0 | 0 | 14 | 515 | 200 | 0 | 23,506 | 219,032 | 8,446 | 11,917 | 225 | 150 | 264,005 | 9% |
| **GEH EAST** | Commercial | 0 | 4,333 | 13,103 | 5,710 | 8,415 | 12,192 | 22,545 | 445 | 1,570 | 500 | 2,710 | 9,397 | 80,920 | 28% |
| **MORLEY-GALLERIA** | Commercial | 0 | 9,258 | 16,215 | 31,521 | 94,795 | 20,443 | 22,187 | 6,028 | 13,327 | 102 | 3,233 | 17,360 | 234,469 | 9% |
| **MIRRABOOKA SQUARE** | Commercial | 0 | 370 | 1,234 | 4,776 | 39,129 | 2,075 | 21,769 | 11,170 | 7,426 | 0 | 13,108 | 11,586 | 112,643 | 19% |
| **REDCLIFFE-N** | Industrial | 0 | 6,400 | 25,261 | 16,283 | 0 | 3,569 | 21,512 | 200 | 0 | 0 | 80 | 0 | 73,305 | 29% |
| **COLLIER TECH PARK** | Commercial | 0 | 11,726 | 400 | 6,176 | 800 | 0 | 21,458 | 3,147 | 230 | 0 | 0 | 4,294 | 48,231 | 44% |
| **MIDVALE** | Industrial | 0 | 34,407 | 31,794 | 36,354 | 5,749 | 14,693 | 21,282 | 300 | 1,280 | 0 | 4,902 | 11,667 | 162,428 | 13% |
| **HAZELMERE S** | Industrial | 0 | 16,129 | 42,790 | 39,635 | 0 | 603 | 19,796 | 0 | 0 | 0 | 600 | 0 | 119,553 | 17% |
| **HERALD AVENUE** | Commercial | 0 | 10,464 | 27,809 | 19,663 | 13,047 | 16,629 | 17,478 | 804 | 2,560 | 0 | 1,368 | 7,262 | 117,084 | 15% |
| **STIRLING HWY** | Commercial | 0 | 766 | 3,575 | 2,627 | 14,907 | 14,867 | 17,001 | 530 | 790 | 0 | 0 | 3,307 | 58,370 | 29% |

| Complex Name | Complex type | PRI | MAN | STO | SER | SHP | RET | OFF | HEL | ENT | RES | UTE | VFA | TOTAL | Office/Total floorspace |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **JANDAKOT-E** | Industrial | 0 | 45,122 | 30,989 | 19,960 | 828 | 650 | 16,673 | 1,400 | 2,590 | 0 | 1,074 | 18,268 | 137,554 | 12% |
| **LANDSDALE** | Industrial | 0 | 50,191 | 27,680 | 28,596 | 1,047 | 2,702 | 15,650 | 0 | 0 | 0 | 1,504 | 4,687 | 132,057 | 12% |
| **UWA** | Public purp | 0 | 103 | 160 | 0 | 2,992 | 0 | 15,507 | 230,186 | 2,402 | 19,916 | 1,887 | 0 | 273,153 | 6% |
| **MAIN STREET** | Commercial | 0 | 807 | 1,240 | 925 | 6,755 | 680 | 14,920 | 2,463 | 3,099 | 250 | 427 | 1,426 | 32,992 | 45% |
| **SOUTHPORT** | Commercial | 0 | 5,238 | 7,083 | 2,210 | 4,097 | 1,545 | 13,742 | 247 | 1,022 | 0 | 0 | 5,969 | 41,153 | 33% |
| **EAST ROCKINGHAM** | Industrial | 1,500 | 122,009 | 37,623 | 44,569 | 14,187 | 40,009 | 13,654 | 3,609 | 3,606 | 0 | 16,345 | 42,177 | 339,288 | 4% |
| **ARMADALE PP** | Public purp | 0 | 0 | 0 | 0 | 0 | 0 | 13,585 | 76,634 | 3,731 | 0 | 7,167 | 1,324 | 102,441 | 13% |
| **EAST VICTORIA PARK** | Commercial | 0 | 564 | 2,431 | 583 | 24,549 | 1,508 | 13,544 | 3,292 | 2,499 | 600 | 184 | 3,323 | 53,077 | 26% |
| **SOUTH GUILDFORD** | Industrial | 180 | 4,323 | 30,521 | 35,106 | 390 | 10,649 | 13,526 | 0 | 288 | 470 | 1,629 | 4,943 | 102,025 | 13% |
| **SWAN PP** | Public purp | 0 | 0 | 604 | 470 | 145 | 0 | 13,364 | 65,489 | 7,413 | 25,762 | 777 | 0 | 114,024 | 12% |
| **FITZGERALD ST** | Commercial | 0 | 1,169 | 1,936 | 1,435 | 16,580 | 1,380 | 13,167 | 5,075 | 5,271 | 1,750 | 470 | 3,454 | 51,687 | 25% |
| **CURTIN UNI** | Public purp | 0 | 36 | 507 | 90 | 2,674 | 0 | 12,760 | 199,071 | 4,863 | 9,504 | 458 | 0 | 229,963 | 6% |
| **WHITEMAN PARK** | Recreation | 0 | 0 | 0 | 0 | 100 | 0 | 12,652 | 0 | 1,927 | 426 | 615 | 0 | 15,720 | 80% |
| **ARMADALE T CENTRE** | Commercial | 0 | 260 | 914 | 880 | 52,666 | 1,810 | 12,446 | 9,131 | 2,856 | 0 | 3,148 | 2,502 | 86,613 | 14% |
| **IRWIN BARRACKS** | Public purp | 0 | 0 | 191 | 1,500 | 1,030 | 0 | 11,922 | 61,740 | 2,406 | 0 | 2,500 | 198 | 81,487 | 15% |
| **BENTLEY HOSPITAL** | Public purp | 0 | 0 | 0 | 1,967 | 0 | 0 | 11,903 | 16,473 | 0 | 0 | 0 | 0 | 30,343 | 39% |
| **MT HAWTHORN** | Commercial | 0 | 2,347 | 2,618 | 1,744 | 12,669 | 1,906 | 11,574 | 431 | 2,766 | 600 | 620 | 3,705 | 40,980 | 28% |
| **MT LAWLEY EC** | Public purp | 0 | 0 | 25 | 418 | 1,434 | 0 | 11,492 | 55,012 | 6,360 | 0 | 0 | 0 | 74,741 | 15% |
| **CANNINGTON** | Commercial | 0 | 290 | 3,448 | 6,900 | 8,369 | 12,193 | 11,368 | 2,558 | 2,358 | 2,525 | 0 | 9,346 | 59,355 | 19% |
| **HAMPDEN ROAD** | Commercial | 0 | 0 | 2,413 | 1,250 | 3,546 | 120 | 11,271 | 750 | 385 | 0 | 0 | 858 | 20,593 | 55% |
| **COOPER STREET** | Commercial | 0 | 130 | 45 | 85 | 1,676 | 40 | 11,139 | 3,763 | 280 | 0 | 0 | 3,715 | 20,873 | 53% |
| **HAMILTON HILL** | Commercial | 800 | 8,313 | 19,628 | 13,249 | 10,072 | 1,985 | 10,682 | 60 | 3,460 | 0 | 90 | 8,113 | 76,452 | 14% |
| **JOONDALUP** | Industrial | 0 | 16,269 | 18,158 | 16,470 | 20,159 | 24,411 | 10,380 | 1,960 | 23,158 | 0 | 660 | 8,864 | 140,489 | 7% |
| **PRESTON STREET** | Commercial | 0 | 0 | 498 | 205 | 4,301 | 40 | 10,307 | 0 | 1,037 | 1,060 | 300 | 676 | 18,424 | 56% |
| **GOSNELLS CITY COUNCIL** | Commercial | 0 | 1,021 | 620 | 1,508 | 17,283 | 3,705 | 10,111 | 3,146 | 1,673 | 400 | 367 | 2,071 | 41,905 | 24% |
| **CAMBRIDGE ST** | Commercial | 0 | 200 | 6,123 | 660 | 5,773 | 0 | 10,092 | 600 | 620 | 0 | 106 | 2,501 | 26,675 | 38% |

*Note: List is sorted by amount of office space (only includes centres with more than 10,000m2 office floorspace)*
*Source: Department of Planning Land Use and Employment Survey 2008; MacroPlan Dimasi*

## Sydney

Level 6
39 Martin Place
Sydney  NSW 2000
(02) 9221 5211

## Perth

Level 1
89 St Georges Terrace
Perth  WA 6000
(08) 9225 7200

## Brisbane

Level 15
111 Eagle Place
Brisbane  Qld 4000
(07) 3221 8166

## Gold Coast

Level 1 / 1 Le Boulevard
2 Elkhorn Avenue
Surfers Paradise  Qld 4217
PH: (07) 3221 8166

## Melbourne

Level 16
333 Collins Street
Melbourne  Vic 3000
(03) 9600 0500

MacroPlanDimasi