KINGSWAY CITY ACTIVITY CENTRE STRUCTURE PLAN

Agreed Structure Plan No. 59.....

Adopted: .....

This Structure Plan is prepared under the provisions of Part 9 of the City of Wanneroo District Planning Scheme No. 2

ENDORSEMENT PAGE

This structure plan is prepared under the provisions of Part 9 of the City of Wanneroo District Planning Scheme No. 2.

IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

12 November 2010

In accordance with Schedule 2, Part 4, Clause 28 (2) and refer to Part 1, 2. (b) of the *Planning and Development (Local Planning Schemes) Regulations 2015.*

Date of Expiry: **19 October 2027**

RECORD OF AMENDMENTS TO THE
AGREED STRUCTURE PLAN

KINGSWAY CITY ACTIVITY CENTRE

Amendment No.	Description of Amendment	Finally Endorsed by Council	Finally Endorsed by WAPC

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Development Control Plan

PART 1: STATUTORY SECTION

This Structure Plan is in two parts. In accordance with clause 9.8.3 (f) of the City of Wanneroo District Planning Scheme No. 2, this Part, which includes the attached Development Control Plan, has the same force and effect as a provision, standard or requirement of the Scheme. Part 2 is for explanatory and guidance purposes only.

1. Interpretations

In this Part:

(i) "Structure Plan" means this structure plan – City of Wanneroo Agreed Structure Plan No. 59.

(ii) "The Scheme" means the City of Wanneroo District Planning Scheme No. 2.

(iii) Any term used in this Part that is identical to a term listed in Schedule 1 of the Scheme shall have the same meaning as in Schedule 1 of the Scheme.

(iv) "Shop/Retail" means Planning Land Use Category 5 retail uses as defined in State Planning Policy 4.2 Metropolitan Centres Policy Statement, or any State Planning Policy which may replace that State Planning Policy.

2. Structure Plan Area

The Structure Plan Area is depicted in Figure 1. Most of the area comprises part of Lots 2 and 3 on Diagram 24051 (hatched where within the Structure Plan Area).

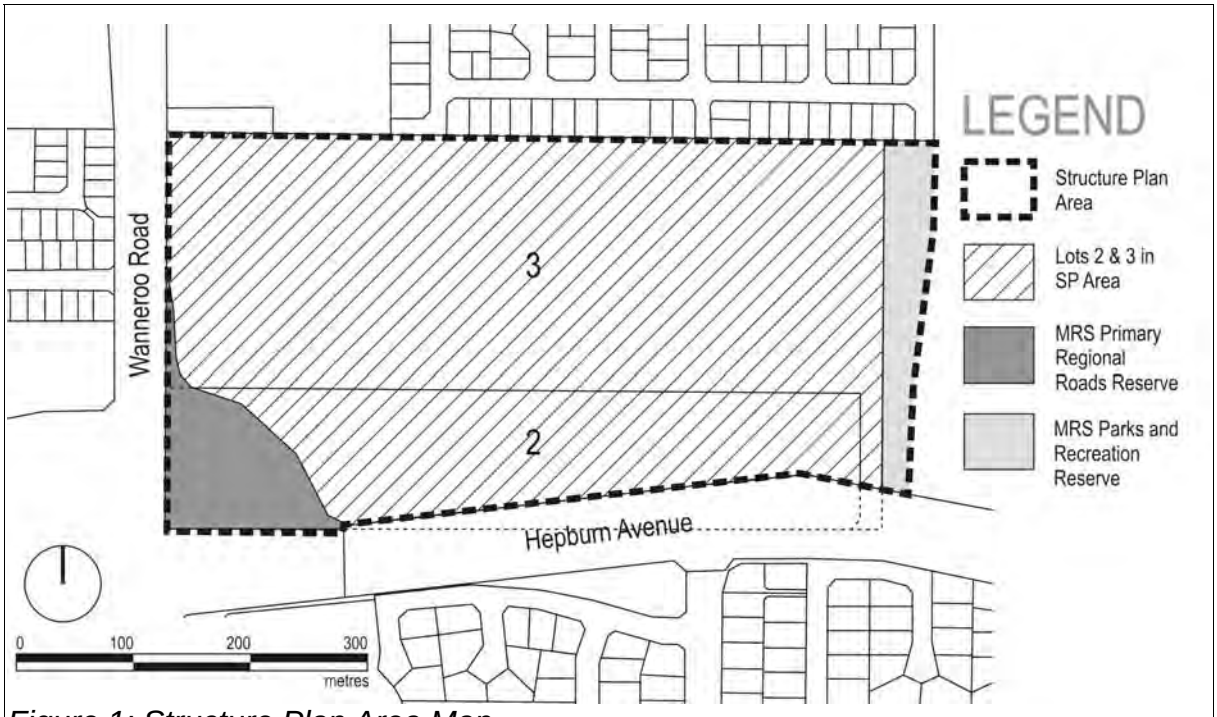

Figure 1: Structure Plan Area Map

3. Purpose

The purpose of the Structure Plan is to facilitate and guide development of the land within the Structure Plan Area generally in accordance with the Development Control Plan, which is attached to this Part.

4. Regional Roads Reserves

The uses and other relevant aspects of any development within a Regional Road Reserve shall accord with such reasonable agreements that may from time to time be made between the land owner, the Council and/ or the Commission, where appropriate.

5. Development Control Plan

(i) The Development Control Plan comprises eleven separate diagrams as follows (by Diagram number):

1. General Land Uses
2. Maximum Extent of Retailing as a Sole Use
3. Active Frontages
4. Principal Service Routes and Service Areas
5. Main Street
6. Town Square
7. Pedestrian Routes
8. Cycle Routes and Parking
9. Anticipated Future Bus Routes
10. Open Spaces Network
11. Height Limitation Zone.

(ii) Development proposals involving one or more minor changes to the Development Control Plan shall be considered to be generally in accordance with the Development Control Plan.

5.1. General Land Uses

(i) Diagram 1 in the Development Control Plan depicts the following general land uses in the Structure Plan Area:

- Existing Shopping Centre and Retail;
- Mixed Use;
- Mixed Use (Civic);
- Residential;
- Open Space.

(ii) Where reference is made within this Structure Plan to zones or residential design codings under the Scheme, the objectives, standards and requirements

applicable to those zones and residential design codings under the Scheme shall apply, unless specific provision to the contrary is made in this Part.

(iii) Any other provision, standard or requirement of this Part that is not otherwise contained in the Scheme shall apply to the land as though it is incorporated into the Scheme, and shall be binding and enforceable to the same extent as if part of the Scheme.

(iv) Within the Structure Plan Area, the amount of floorspace used for Shop/ Retail purposes shall not exceed 32,000 square metres (NLA).

5.1.1. Existing Shopping Centre and Retail

(i) The main purpose of the Existing Shopping Centre and Retail area is to facilitate the expansion of the existing shopping centre.

(ii) In this area development standards and requirements shall, except as otherwise provided for in this Part, be in accordance with the "Commercial" zone of the Scheme.

(iii) In this area Shop/ Retail floorspace may be developed as the sole use (Diagram 2 also refers).

(iv) Uses within the area are not limited to Shop/ Retail uses. The following types of uses are also permitted:

- Banks, Travel Agents, Optometrists, Hairdressers and other such retail services commonly located within shopping centres;
- Restaurants/ Cafes;
- Cinema/s and other entertainment facilities;
- Multiple Dwellings;
- Offices;
- Car Parks.

(v) Any cinema, or other large entertainment use that trades outside normal shopping hours, shall be directly accessible from either the Main Street or the Town Square.

5.1.2. Mixed Use

(i) The main purpose of the Mixed Use areas is to facilitate development over time of a wide variety of commercial, entertainment and residential uses that will contribute to the creation of an attractive mixed use activity centre in the Structure Plan Area.

(ii) In the Mixed Use areas land use permissibility shall be in accordance with the "Commercial" zone in Table 1 (the Zoning Table) of the Scheme; except that the use "Motor Vehicle Repairs" may also be permitted at the discretion of the Council.

(iii) Subject to Clause 5.10, there should not be any limitation placed on the height of buildings within a mixed use development except as shall be necessary to meet overshadowing and wall height/ length to setback standards specified in the Residential Design Codes of Western Australia in respect to adjoining properties.

(iv) The Residential Density Code for the Structure Plan Area shall be as depicted in the Residential Density Code Map (Figure 2 in Sub-Clause 5.1.4.).

5.1.3. Mixed Use (Civic)

(i) The main purpose of the specifically identified Mixed Use (Civic) area is to provide a prime location for the establishment of a City of Wanneroo Civic and Cultural facility within the Mixed Use area.

(ii) The size, form, nature, tenure and use of the Civic and Cultural facility will be the subject of a new reasonable agreement between the land owner and the City of Wanneroo.

(iii) It is intended that the new agreement referred to in clause 5.1.3 (ii) will replace the existing deed of agreement between the land owner and the City regarding the provision of Civic and Cultural land in the Structure Plan Area.

5.1.4. Residential

(i) The main purpose of the specifically identified Residential area is to facilitate the development of multiple dwellings as the predominant use.

(ii) Residential development in the area shall conform to the Residential Design Codes of Western Australia and the Residential Density Code depicted in the Residential Density Code Map (Figure 2).

(iii) In the Residential area land use permissibility shall be in accordance with the "Mixed Use" zone in Table 1 (the Zoning Table) of the Scheme; except that the following uses may also be permitted at the Council's discretion:

- Club (Non-Residential
- Dry Cleaning Premises
- Hotel
- Laundromat
- Laundry
- Liquor Store
- Market (Retail)
- Motel
- Shop
- Showroom
- Supermarket
- Take-Away Food Outlet
- Tavern
- Telecommunications Infrastructure
- Video Hire.

(iv) In the Residential Area a convenience store selling petrol or petroleum products shall not be permitted.

(v) Non-residential development may only be permitted if it forms part of a mixed use development comprising residential development.

(vi) Any non-residential use in the Residential area shall be limited to the ground and first floor levels, unless such use is intended to cater primarily for the

residents of the building containing the non-residential use.

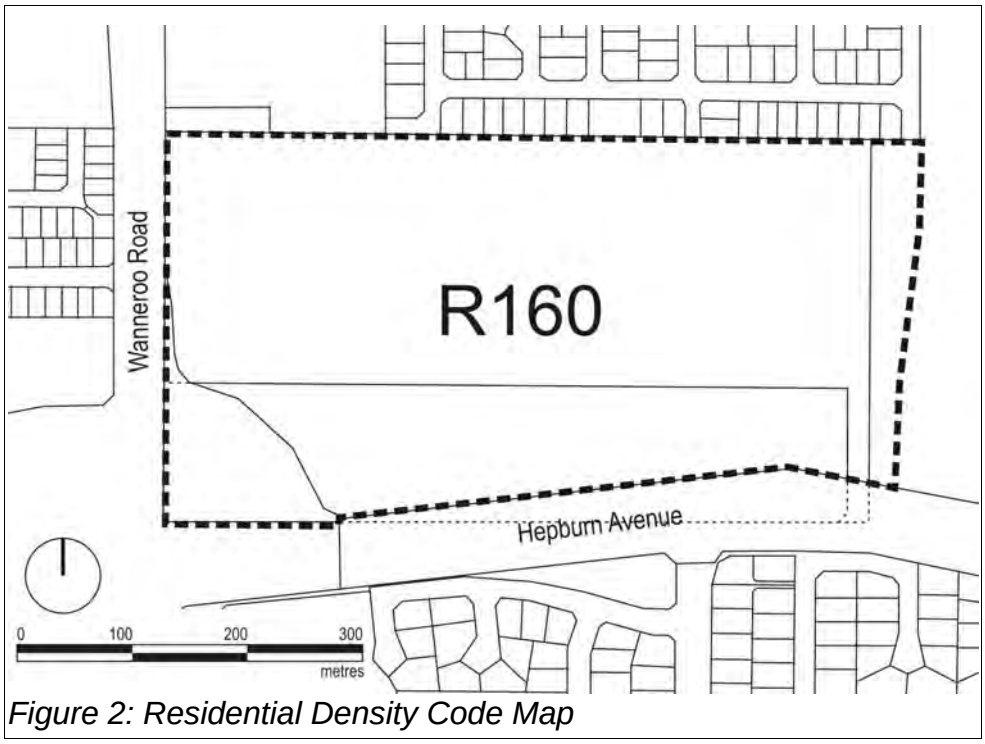

Figure 2: Residential Density Code Map

5.1.5. Open Space

The main purpose of the specifically identified Open Space area is to facilitate the provision of landscaped passive recreational areas, pathways and/ or visual buffers at appropriate locations, particularly in the vicinity of residential development.

5.2. Active Frontages

Development should incorporate active frontages (i.e. street-level frontage incorporating the main entrances to commercial and other premises as well as a reasonable amount of shopfront-style glazing) generally in accordance with Diagram 3 of the Development Control Plan.

5.3. Principal Service Routes and Service Areas

Principal service routes and service areas should be generally in accordance with Diagram 4 of the Development Control Plan.

5.4. Main Street

The following provisions shall apply to any development which is either fully or partially within the Main Street precinct depicted in Diagram 5:

(i) The term “Main Street” refers to the whole of the area so designated in Diagram 5 of the Development Control Plan.

(ii) The term “Street” refers to those areas of the Main Street used for vehicular and pedestrian movement, and other public spaces.

(iii) Buildings or parts of buildings adjacent to the Street shall be a minimum of two storeys and be oriented towards the Street.

(iv) Any building or tenancy adjacent to the Street shall have its primary public entrance from the Street.

(v) Horizontal sections of wall without openings on the ground floor shall not exceed 10 metres.

(vi) At least 70 percent of the length of the façade of buildings shall be glazed.

(vii) The setback to all building façades adjacent to the Street shall be zero.

(viii) The façade of any building adjacent to the Street shall have awnings attached that provide cover to the footpath.

(ix) The awnings on both sides of the Street shall be of the same or complementary style and be made of the same or complementary materials.

(x) The façade of each building either fully or partially within the Main Street Precinct shall exhibit a high standard of design.

(xi) Signs shall not project above a building parapet or extend beyond an eave line unless they are part of a design feature that was identified in an approved development application.

(xii) Footpath widths on the Street shall be sufficient to allow for at least one rank of alfresco dining without restricting movement along the footpath.

5.5. Town Square

The Town Square is intended to provide a sense of place and an attractive focal point for visitors to the centre. The following provisions shall apply to any development which is either fully or partially within the Town Square precinct as depicted in Diagram 6 of the Development Control Plan, except that the Council may at its discretion vary or not require any provision in a particular case if it considers that doing so would result in more appropriate development of the Town Square than would occur if strict adherence to the provisions was maintained:

(i) The term “Town Square Precinct” refers to the whole of the area so designated in Diagram 6 of the Development Control Plan.

(ii) Buildings or parts of buildings adjacent to the Town Square shall be a minimum of two storeys and be oriented towards the Square.

(iii) Buildings located at a corner of the Town Square and the Main Street shall also have an active frontage to the Main Street.

(iv) Any building or tenancy adjacent to the Town Square shall have its primary public entrance from the Town Square.

(v) Horizontal sections of opaque wall without openings on the ground floor shall not exceed 2 metres.

(vi) At least 90 percent of the length of the façade of buildings shall be glazed.

(vii) The setback to all building façades adjacent to the Town Square shall be zero.

(viii) The façade of any building adjacent to the Town Square shall have awnings attached that provide cover adjacent to the building facade.

(ix) The awnings fronting the Town Square shall be of the same or complementary style and be made of the same or complementary materials.

(x) The façade of each building either fully or partially adjacent the Town Square shall exhibit a high standard of design.

(xi) Signs shall not project above a building parapet or extend beyond an eave line unless they are part of a design feature that was identified in an approved development application.

(xii) The design of buildings adjacent to or in the vicinity of the Town Square shall ensure that there is no more than 50% shadow coverage of the Town Square at 12pm on 21st June; and that shadows remain clear of major openings to the habitable rooms of dwellings for at least 3 hours on 21st June.

5.6. Pedestrian Routes

Development should incorporate pedestrian routes generally in accordance with Diagram 7 of the Development Control Plan.

5.7. Cycle Routes and Cycle Parking

Development should incorporate cycle routes and cycle parking facilities generally in accordance with Diagram 8 of the Development Control Plan.

5.8. Anticipated Future Bus Routes

Anticipated future bus routes and stops are depicted in Diagram 9 of the Development Control Plan. The actual location of future bus routes and stops shall be determined to meet the requirements of the Public Transport Authority.

5.9. Open Spaces Network

Development should incorporate the various open spaces generally in accordance with the Development Control Plan.

5.10. Height Limitation Zone

(i) The purpose of the height limitation zone depicted in Diagram 11 of the Development Control Plan is to protect the amenity of existing residential areas to the north of the Structure Plan Area

(ii) No building or part of any building within 20 metres of the northern boundary of the Structure Plan Area shall be higher than 3 storeys above natural ground level.

(iii) “Natural ground level” has the same meaning as used in the Residential Design Codes of Western Australia.

5.11. Car Parking Generally

(i) On-street car parking should generally be provided on streets constructed within the Structure Plan Area, particularly the Main Street.

(ii) Having regard to the provisions contained in Clause 4.2 of the Scheme, the number of off-street parking bays to be provided shall be sufficient to cater for the size and nature of the particular development/s proposed in the Structure Plan Area, as determined by the Council.

(iii) Prior to lodgement of a development application for the first stage of additional development as described in Clause 6., the proponent shall prepare a comprehensive car parking study detailing the proposed parking provision and internal circulation to the reasonable satisfaction of the Council.

5.12. Vehicular Circulation and Traffic Management

(i) Development should incorporate the vehicular circulation routes shown on the Development Control Plan, subject to the outcome of the processes described in clauses 5.12 (ii) and (iii).

(ii) Prior to the lodgement of a development application for the first stage of additional development as described in Clause 6., the proponent shall undertake a comprehensive transport study which assesses on and offsite impacts, for all transport modes as well as infrastructure requirements necessary to service both the interim and ultimate development of the Structure Plan Area, including assessment of the proposed road link to Old Trafford Road and the proposed pedestrian link to Lilac Hill Vista.

(iii) Prior to the lodgement of a development application for the first stage of additional development as described in Clause 6., the proponent shall make reasonable arrangements with relevant transport agencies for the provision of the transport infrastructure identified in the transport study referred to in Clause 5.12 (ii) above, as necessary to accommodate the interim and ultimate development of the Structure Plan Area.

5.13. Cross Sections

Prior to the lodgement of a development application for the first stage of additional development as described in Clause 6., the proponent shall provide cross-sections of the centre to give a clear indication of how levels are intended to be addressed, especially in the eastern and north-eastern parts of the Structure Plan Area.

5.14. Ecological Sustainability

Detailed design and development within the Structure Plan Area shall provide for best practice ecological sustainability elements including energy, water and waste minimisation strategies and initiatives incorporated into the design and functioning of the centre.

6. Staging of Development

6.1. Agreements

Unless the Council is otherwise reasonably satisfied that any development in respect of Stage 1 can be approved in the absence of agreement, the proponent of

development of Stage 1 shall, prior to the Council's determination of a development application for Stage 1, negotiate and enter into agreements on reasonable terms with the City as follows:

(i) An agreement to facilitate the relocation of the proposed Civic and Cultural facility referred to in Clause 5.1.3.(ii) from the existing Civic and Cultural Reserve to the location identified in the Structure Plan; and

(ii) An agreement to provide for the completion of Bellerive Boulevard as part of Stage 1, including resolution of any land tenure matters necessary to facilitate completion of that road.

6.2. Hepburn Avenue

Prior to the commencement of Stage 1 of any additional development, reasonable arrangements (satisfactory to the Commission) are to be made for the ceding, free of cost, of the area of road widening for Hepburn Avenue, such widening as defined by:

(a) the Other Regional Roads reservation in the Metropolitan Region Scheme (as at the date of this Structure Plan); or

(b) alternatively as may be defined by a review study undertaken at the applicant's full cost and satisfactory to the Commission acting reasonably.

6.3. Stage 1

Stage 1 of any additional development shall comprise the construction of:

(i) The proposed extension of the shopping centre.

(ii) The Town Square.

(iii) Commercial tenancies on the northern side of the Main Street sufficient to generate some pedestrian activity on the street.

(iv) The Civic and Cultural facility, unless Council agrees to it being included in a later stage, or agreement for its inclusion in Stage 1 is delayed for any reason.

(v) A minimum of 1,000 sqm of office floorspace adjacent to, or in the vicinity of, the Town Square, or otherwise integrated with Stage 1.

(vi) A minimum of 2,000 sqm of residential floorspace adjacent to, or in the vicinity of, the Town Square. The location of the Stage 1 residential floorspace can vary if it is significantly greater than 2000 sqm in area, provided the residential development is appropriately integrated with Stage 1.

(vii) Appropriate agreed quantities of additional car parking.

(viii) Bellerive Boulevard and necessary access treatments.

(ix) All services infrastructure and road access treatments required for Stage 1.

Development Control Plan,
Comprising Diagrams 1 to 11

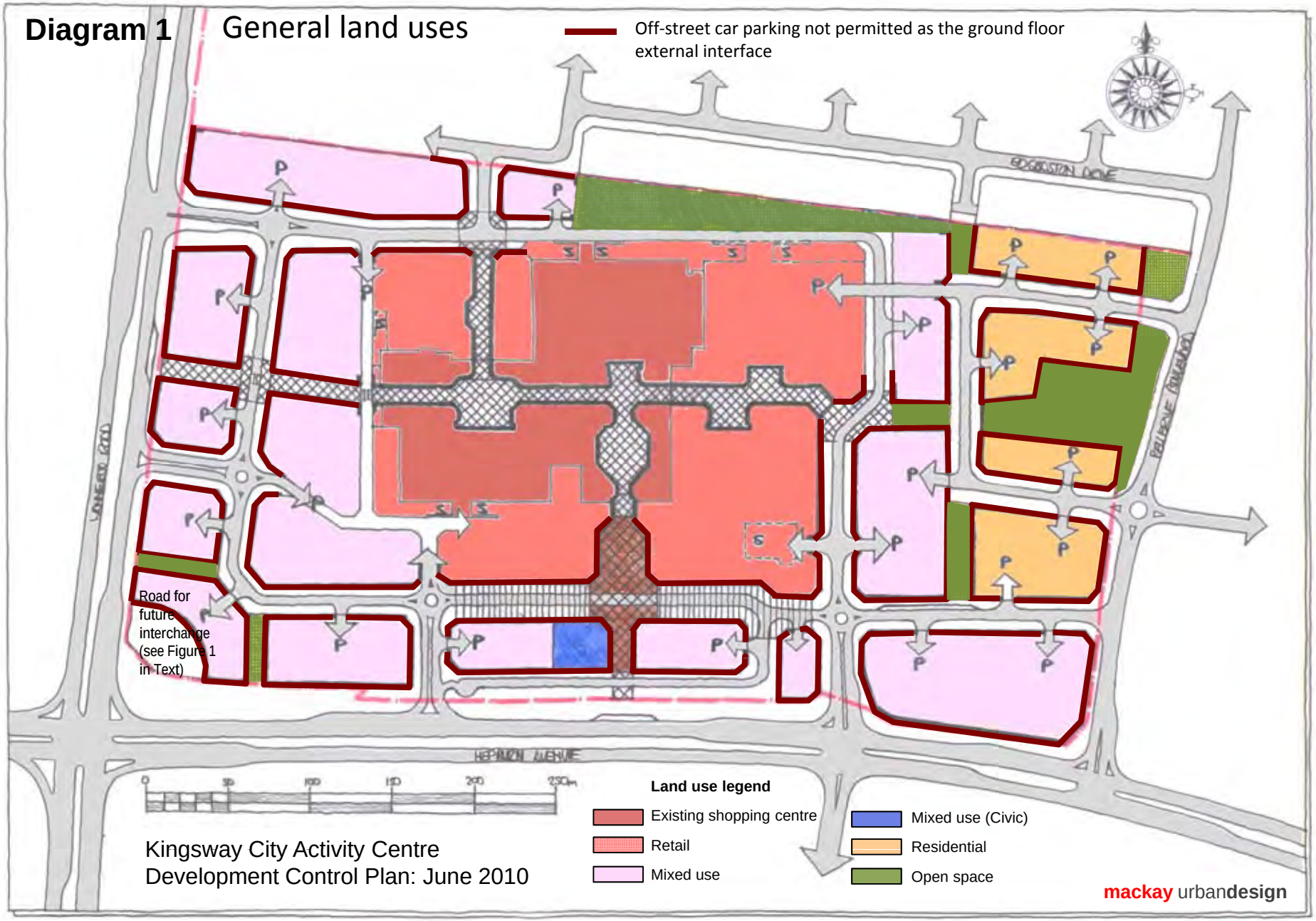
Diagram 1
General land uses
Off-street car parking not permitted as the ground floor external interface
Road for future interchange (see Figure 1 in Text)
Land use legend
Existing shopping centre
Retail
Mixed use
Mixed use (Civic)
Residential
Open space
Kingsway City Activity Centre
Development Control Plan: June 2010
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Diagram 2 Maximum extent of retailing as a sole use

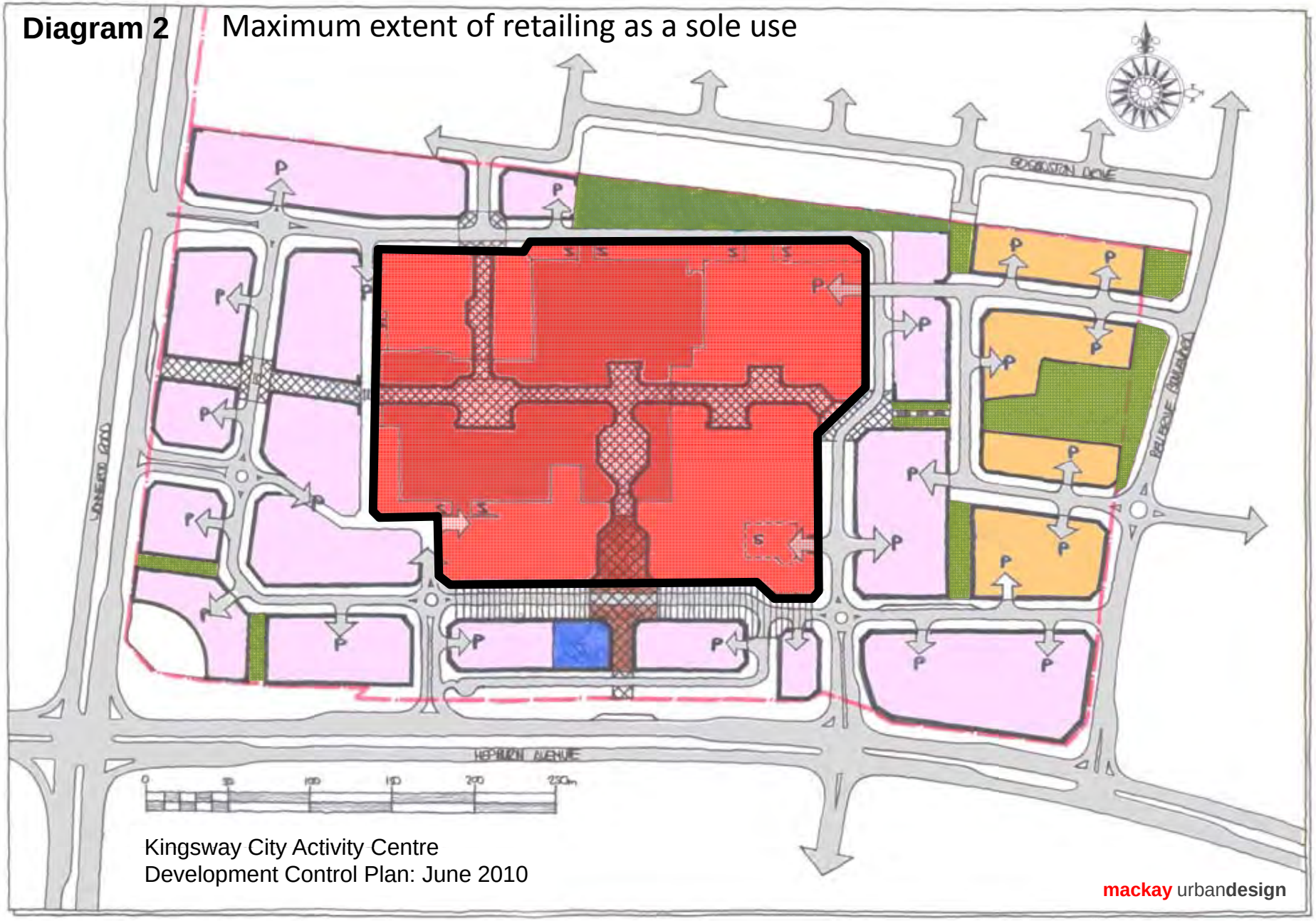

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Diagram 3 Active frontages (shops/showrooms, restaurants/ cafes, entertainment/ culture, offices, residential with habitable rooms, etc)

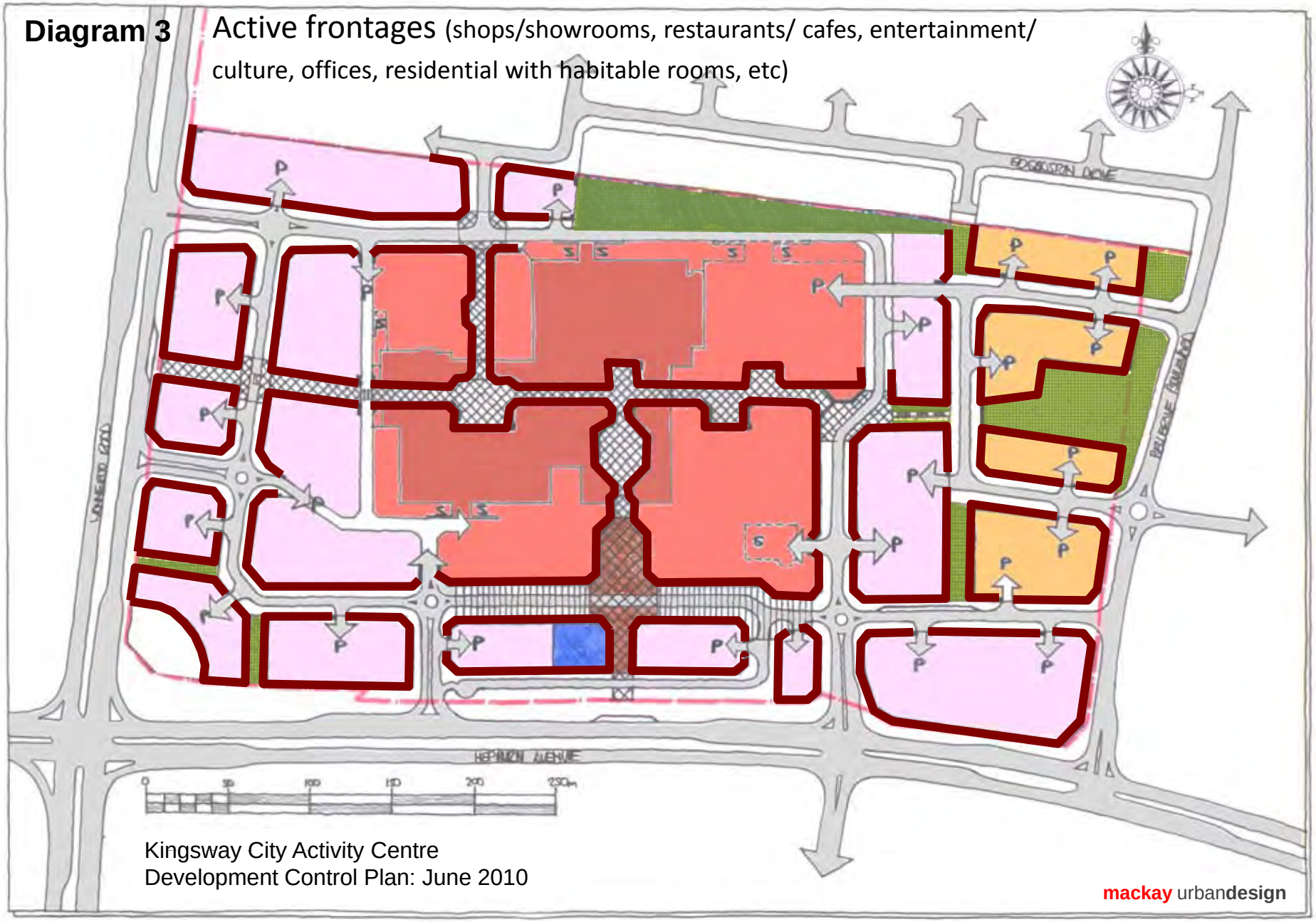

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Diagram 4 Principal service routes and service areas

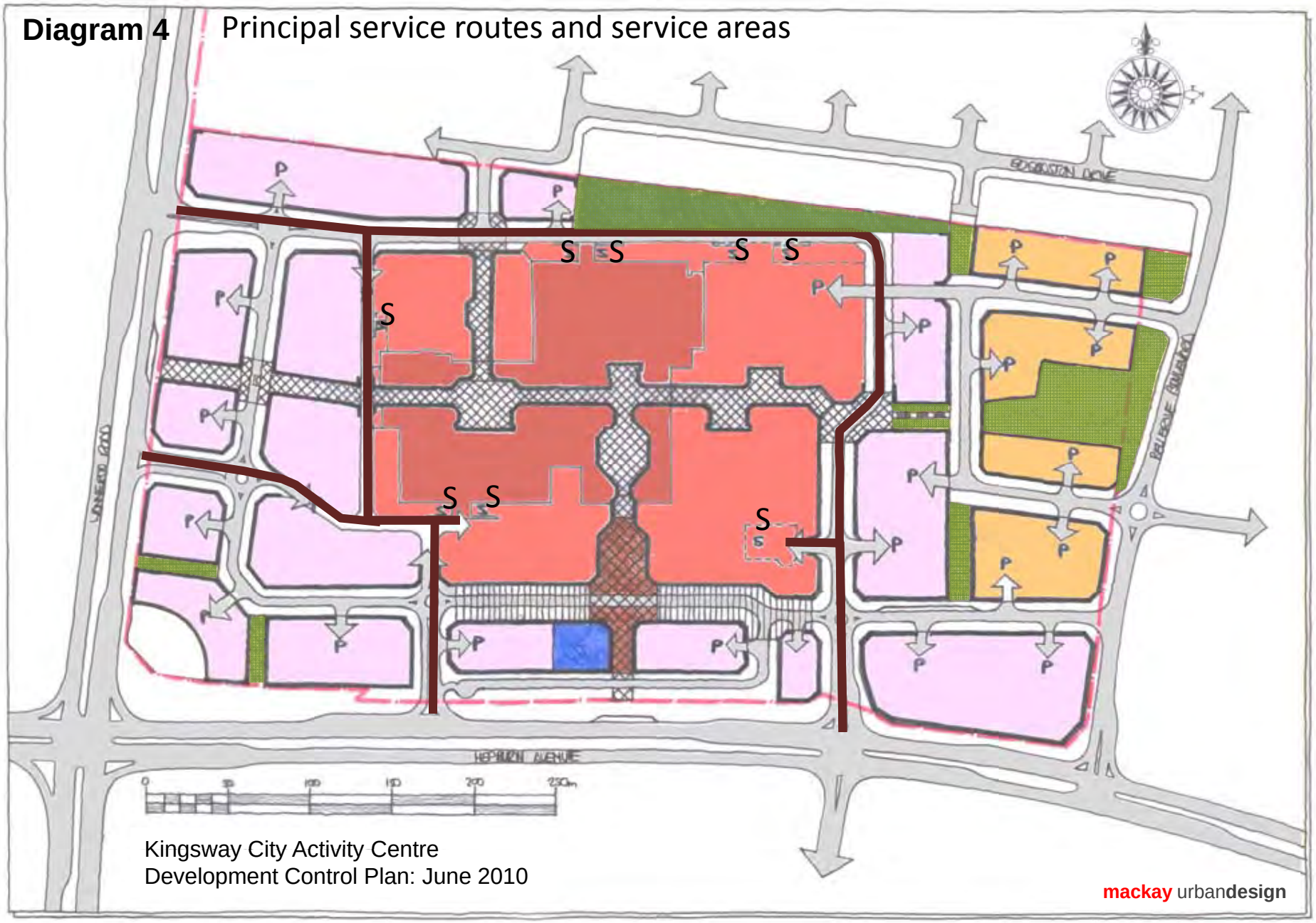

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Diagram 5 Main Street

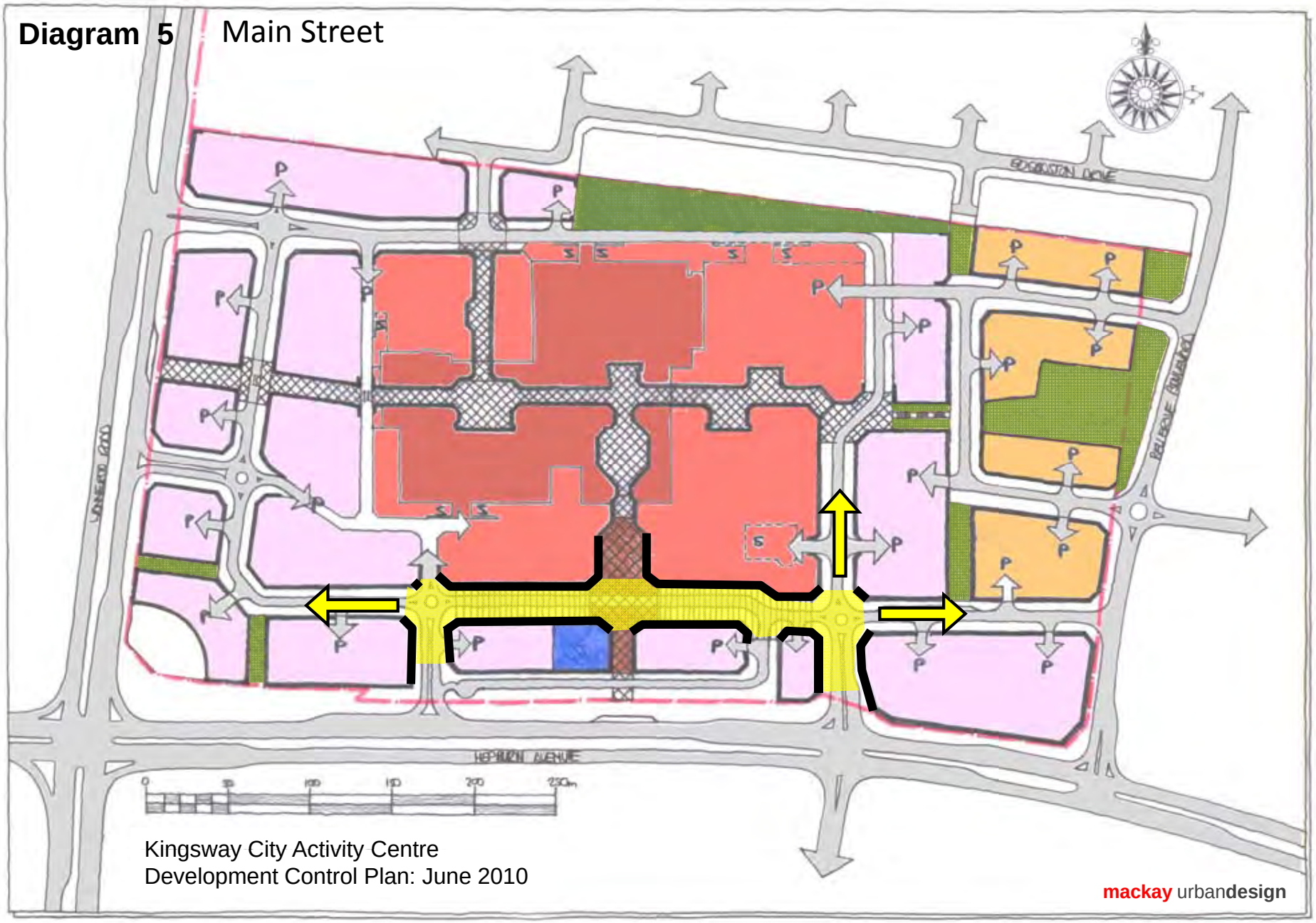

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Diagram 6 Town Square (images are of recognised state-of-the-art ***regional*** centres throughout Australia and New Zealand that have town squares of a similar size)

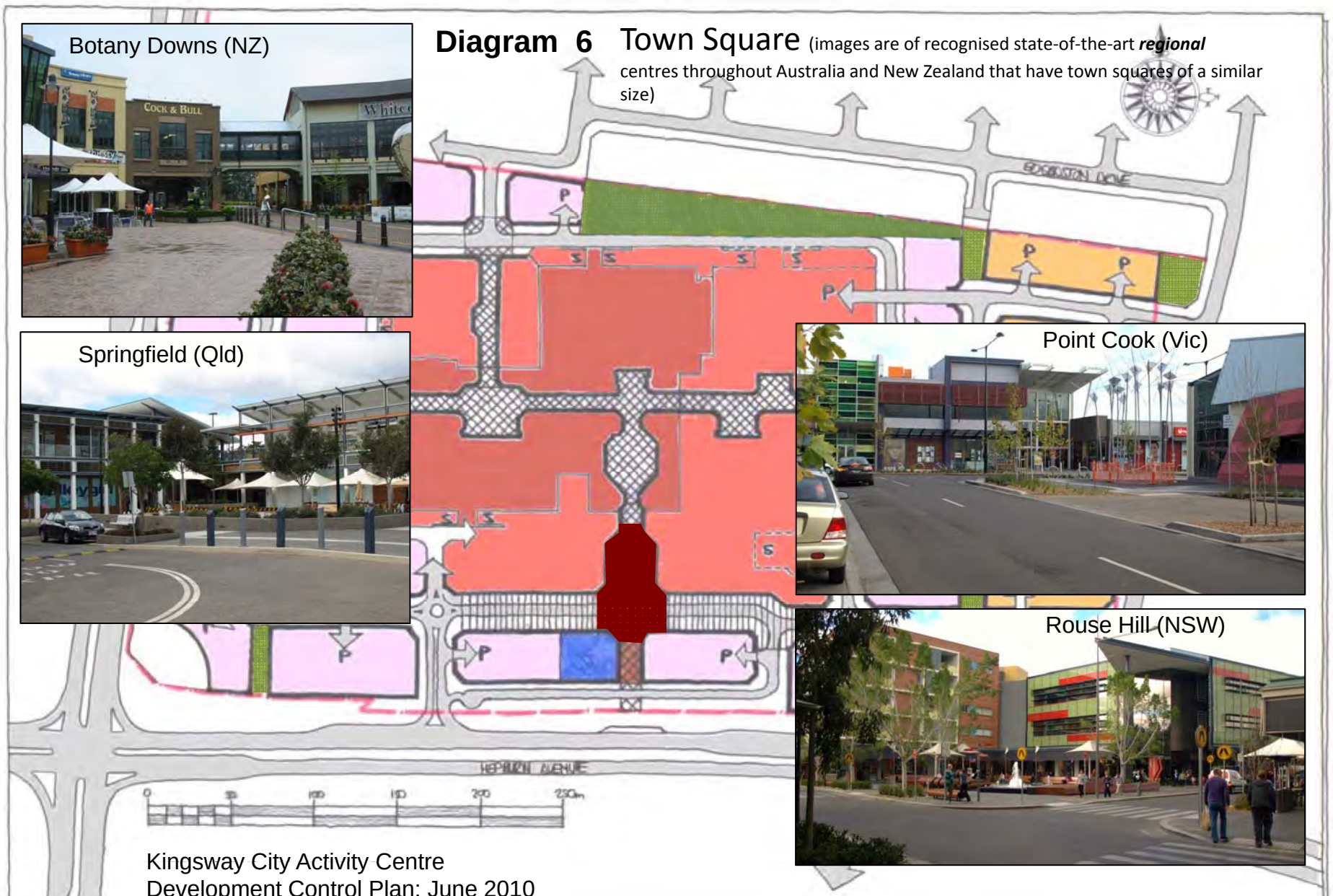

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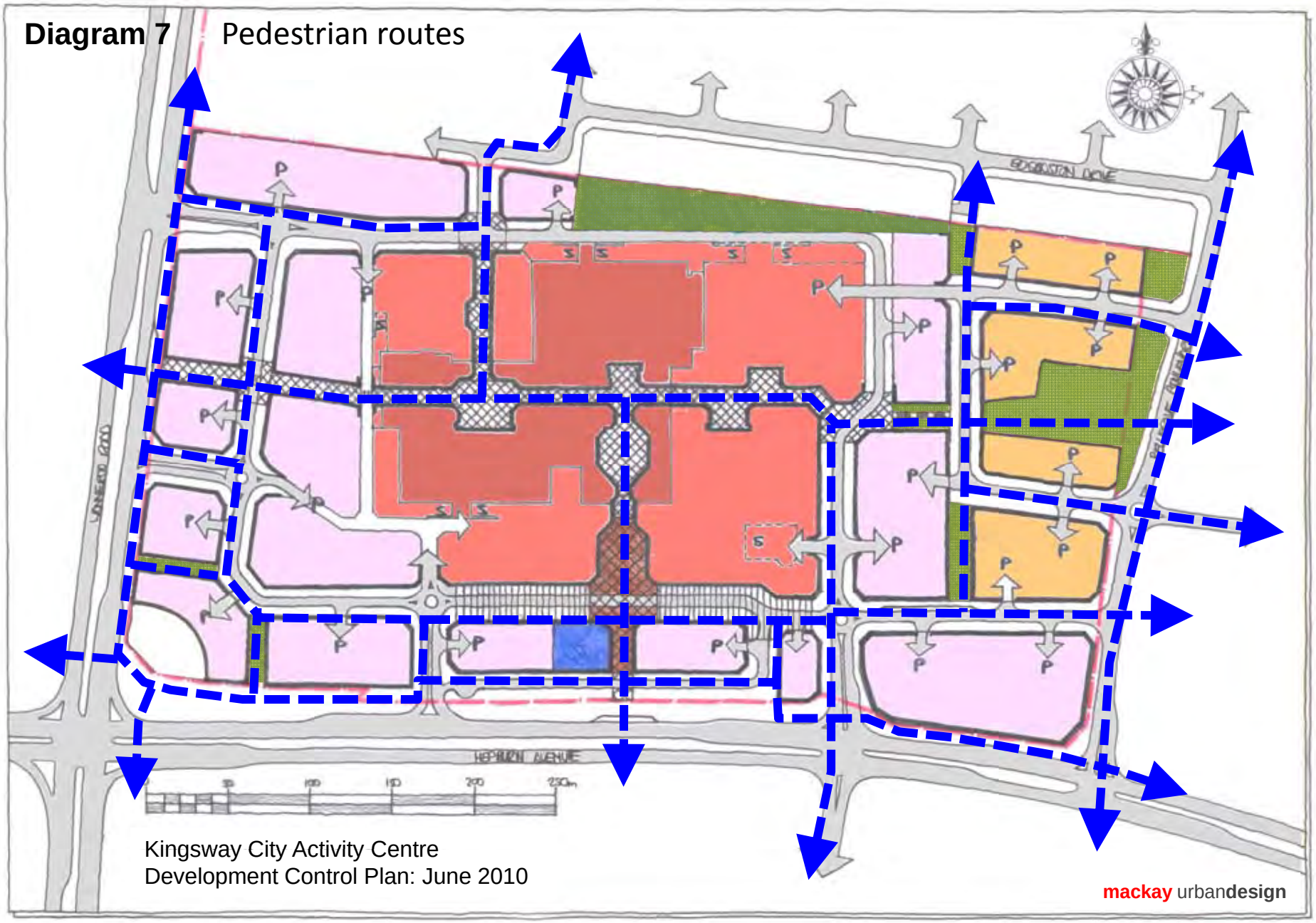
Diagram 7 Pedestrian routes



Kingsway City Activity Centre
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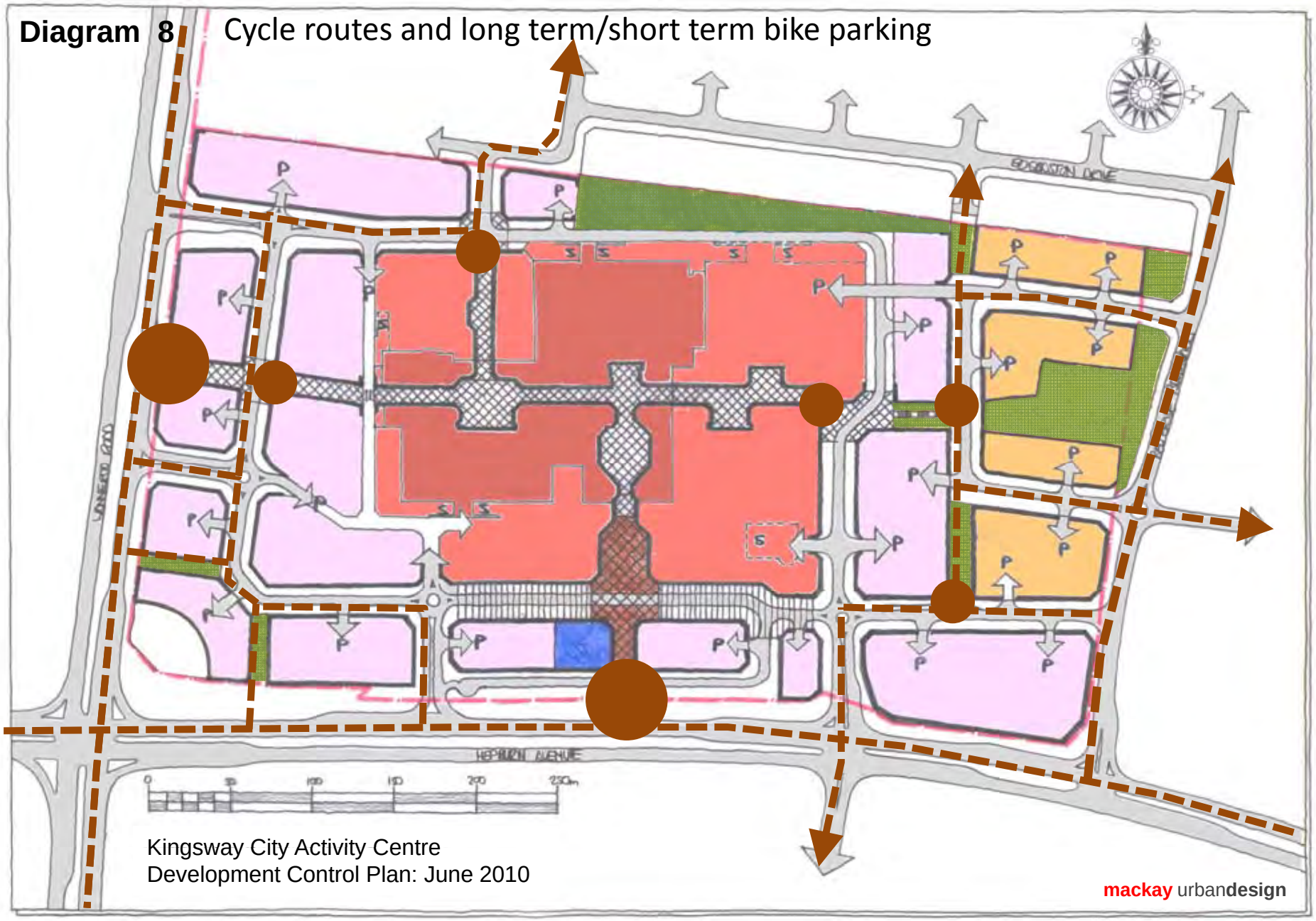
Diagram 8 Cycle routes and long term/short term bike parking



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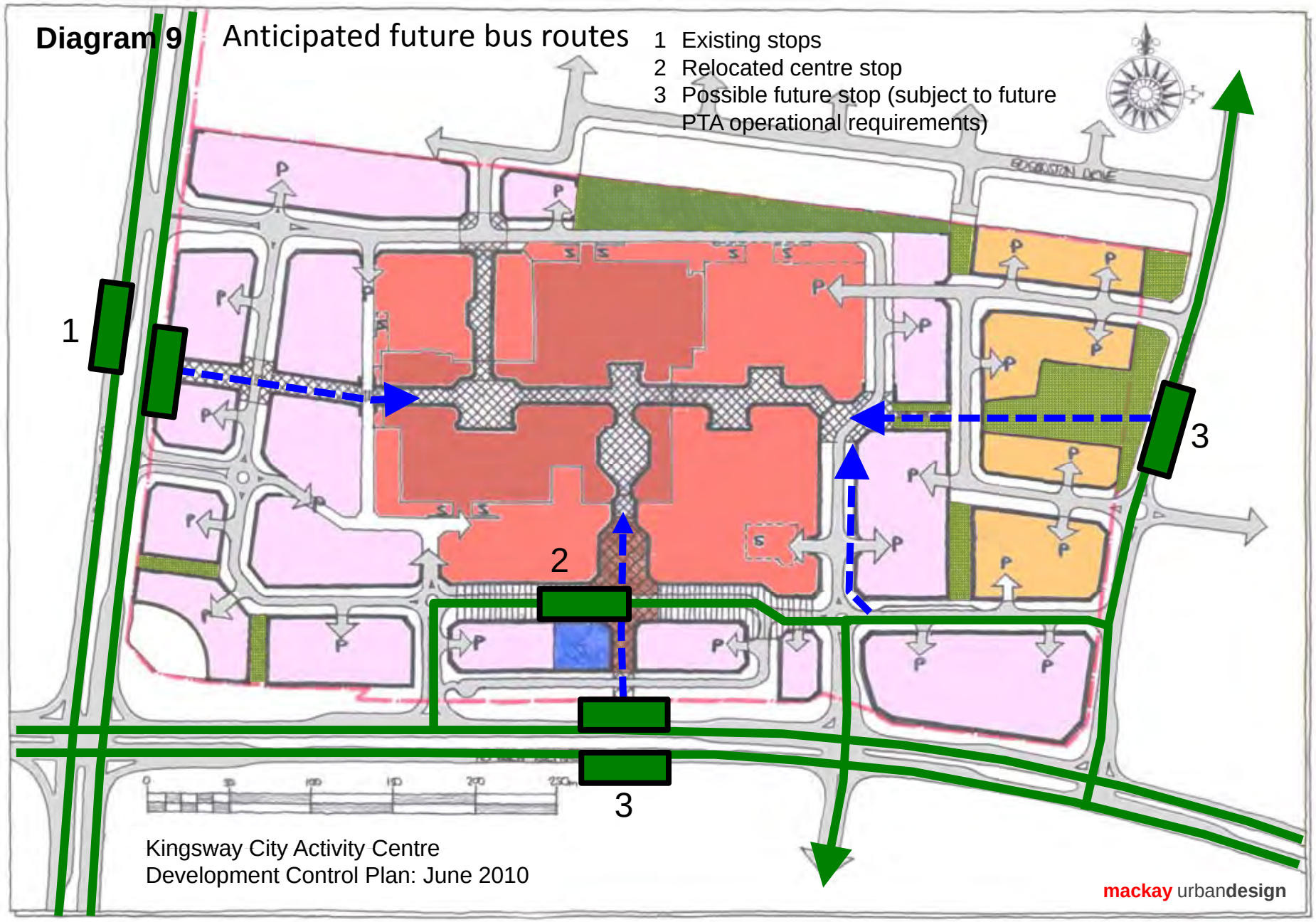
Diagram 9
Anticipated future bus routes
1 Existing stops
2 Relocated centre stop
3 Possible future stop (subject to future PTA operational requirements)
1
2
3
3
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Diagram 10 Open spaces network (integration of parks, landscape buffers and streetscapes)

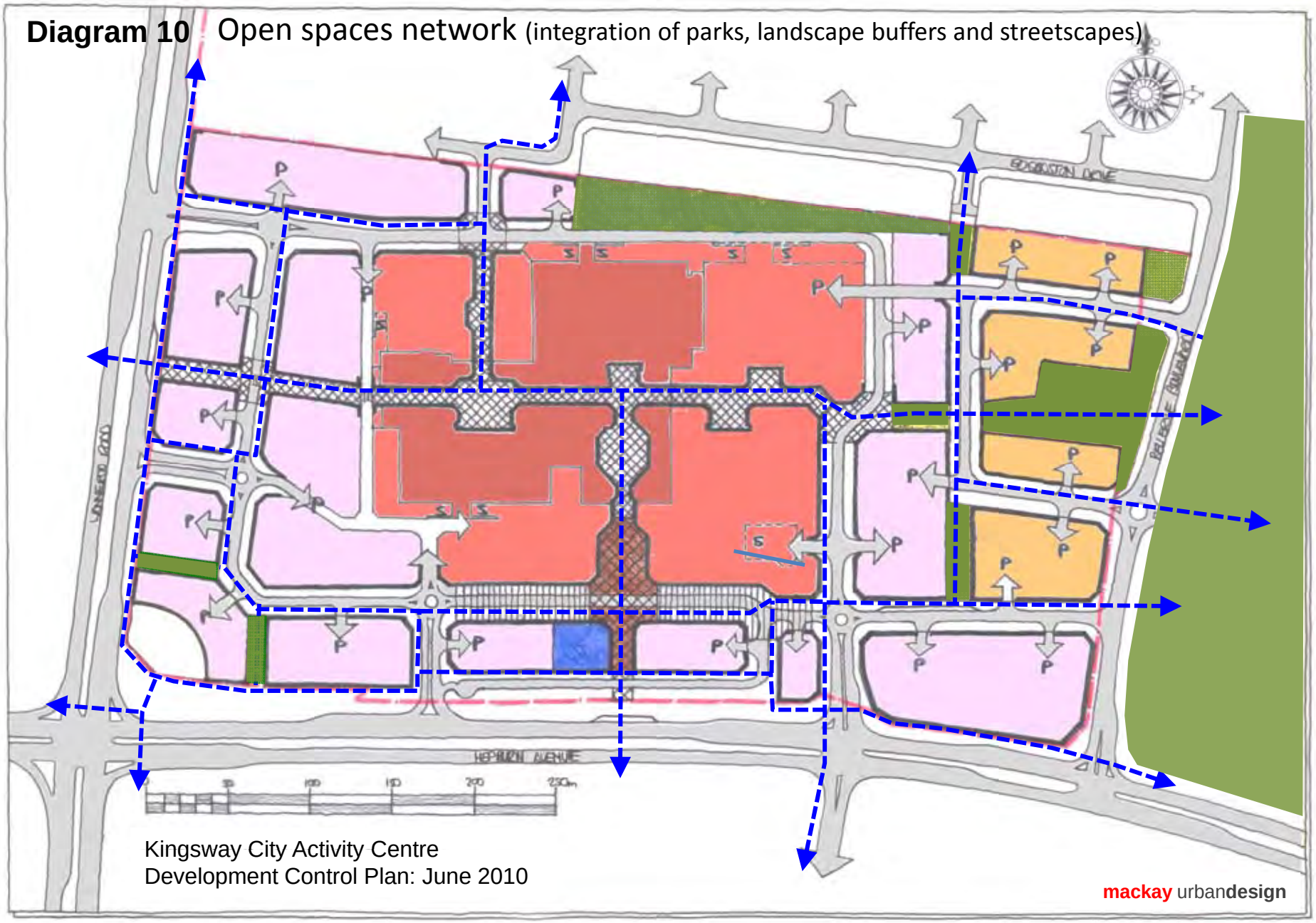

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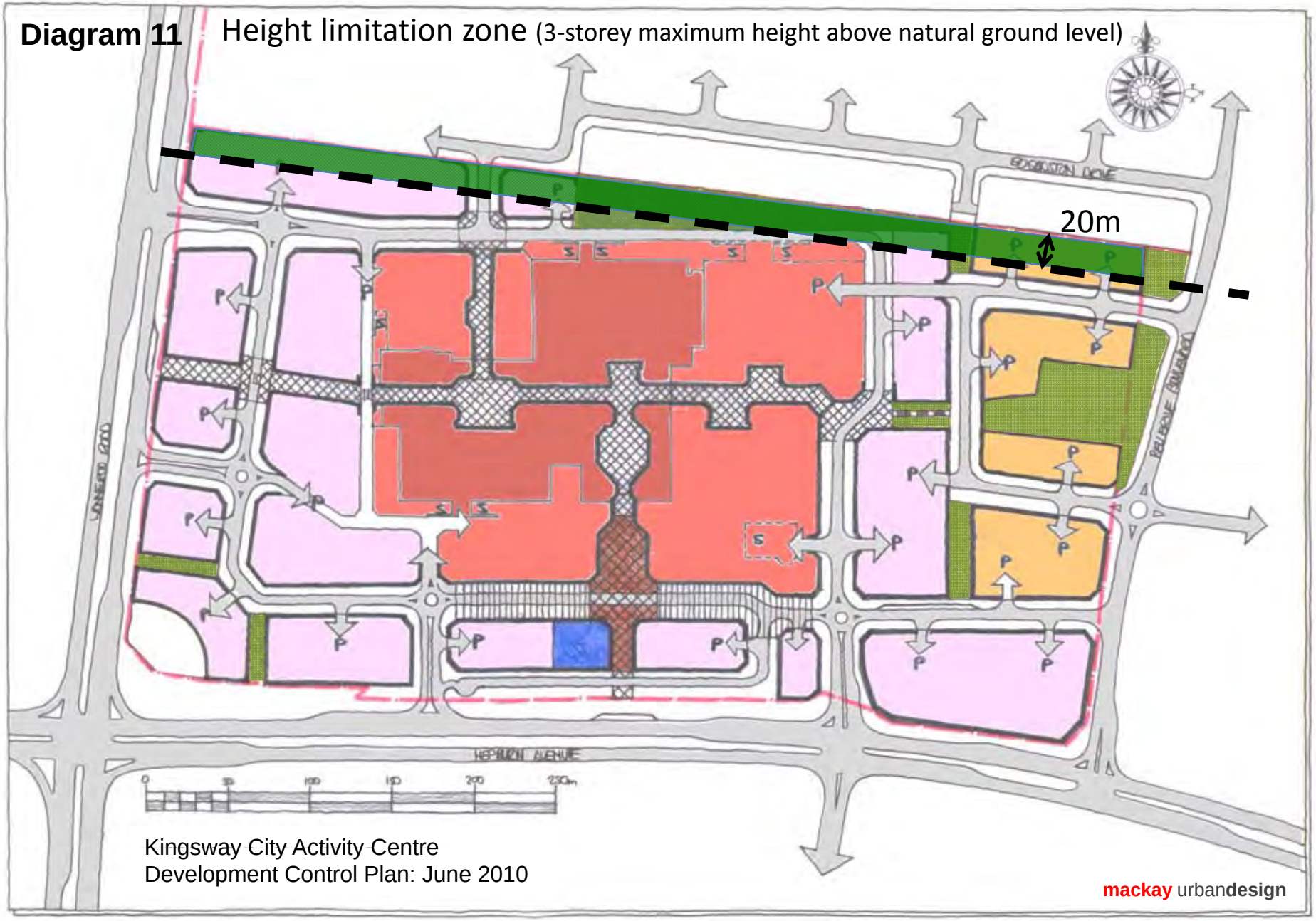
Diagram 11 Height limitation zone (3-storey maximum height above natural ground level)



Kingsway City Activity Centre
Development Control Plan: June 2010

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KINGSWAY CITY ACTIVITY CENTRE
Structure Plan

Explanatory Report (Version 2)

Prepared for:
TAH LAND PTY LTD, for submission to the
CITY OF WANNEROO and
WESTERN AUSTRALIAN PLANNING COMMISSION

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August 2010

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Contents

SUMMARY & CONCLUSIONS

1. It is planned to significantly expand the Kingsway City Shopping Centre in Madeley, more than doubling its current statutory retail floorspace upper limit. This is intended to facilitate the transformation of Kingsway City from a suburban shopping centre into a fully integrated mixed-use ***activity centre***, located at the intersection of two important regional roads (Wanneroo Road and Hepburn Avenue). This proposal, which includes a substantial residential component, accords with and supports the City of Wanneroo's Smart Growth strategy, which is the centrepiece of the City's comprehensive and contemporary approach to achieving sustainable urban development.

2. The Kingsway City site is currently occupied by a single level shopping centre with a total net lettable area (NLA) of some 17,340 sqm; and associated car parking. Not all of this floorspace is used for retail purposes. Retail tenancies fluctuate over time and historically have occupied anywhere between 85 and 95 percent of the main centre's total floorspace. Under DPS 2 Kingsway City currently has a statutory *Shop/ Retail* floorspace upper limit of 15,000 sqm.

3. There are also a number of smaller buildings, which are generally located on the southern and western periphery of the site. These include service stations, car maintenance facilities, fast food outlets, a medical centre, and a number of other miscellaneous services. All of the existing floorspace on the site totals 22,700 sqm NLA. Vacant land areas total about 8 ha.

4. Kingsway City has considerable expansion potential – both physically (due to the significant amount of vacant land) and demographically. The centre owner, Tah Land Pty Ltd, has always indicated to both the City of Wanneroo and the Western Australian Planning Commission (WAPC) a clear intention to significantly increase the size of the existing main shopping centre. Preparation of a concept plan envisaging such an expansion was in fact required by the City of Wanneroo prior to approving the development application for the existing centre.

5. The Estimated Resident Population (ERP) of Wanneroo is projected to increase from 114,600 in 2006 to 201,200 persons by 2021. This represents an average annual growth rate over the period of 3.82 percent, which is considerably higher than the projected Perth Regional average growth rate of 1.42 percent. Significant additional population growth is expected well beyond 2021, with the Department of Planning (DP) projecting a population of 258,400 persons by 2031. Notwithstanding the substantial population growth projected by DP, the City of Wanneroo's own projections predict an even higher growth rate, with the 2021 projection totalling 217,472 persons – some 6,000 more than anticipated by DP.

6. The total number of dwelling units within a 5km radius of Kingsway City itself is expected to increase from 38,383 units in 2001 to approximately 46,470 units in 2011; and 53,030 units in 2031. Most of this increase is expected to occur within the primary catchment area of Kingsway City, being the NE Quadrant of the 5km radius.

7. There is currently a significant under-supply of retail floorspace in the City of Wanneroo, compared to the average for Metropolitan Perth. Unless substantial additional retail floorspace is created within the City, this situation will get worse over time. In 2001 the shortfall of Shop/ Retail floorspace within the Cities of Wanneroo and Joondalup combined was a substantial 100,000 sqm.

8. This should be of concern to the City of Wanneroo, not only because of potential inconvenience to shoppers, but because of the very important role that retail development has to play in increasing employment in the City – particularly for its young people.

9. In order to supply additional floorspace to cater for projected population growth ***and*** make up the existing shortfall, the total additional retail floorspace required between 2001 and 2031 will be 373,759 sqm. This will require provision of new Shop/ Retail floorspace at the average rate of approximately 62,000 sqm every five years.

10. As part of the earlier background research for this structure plan, a shopper survey was carried out in May 2003. The main objectives of the survey were to calibrate the retail model used in the structure plan analysis and gauge the preferences of the local community in relation to Kingsway City. The survey found that there was a significant amount of support in the local community for the retail services provided by Kingsway City – both in the Food & Groceries and Non-Food retail categories.

11. The proposed structure plan:

    - Is considered to be a reasonable response to the vacant land on the site, prevailing demographic trends, retail floorspace under-supply, and the long-standing clear intention of the owner to expand Kingsway City;
    - Reflects and seeks to respond to the current strong trading performance being achieved by Kingsway City;
    - Draws on the current state and local planning context, particularly the rapidly evolving policies, which represent a major shift towards the goal of sustainable urban development; and which in effect lay the groundwork for initiatives such as proposed in this structure plan;
    - Reflects very significant potential population growth within the City of Wanneroo as a whole, and the Kingsway City Primary Catchment Area in particular; and
    - Reflects clearly expressed preference for and interest in the retail services at Kingsway City from the local community.

12. The ***Indicative Development Plan*** (IDP), a copy of which appears at the end of this summary section, provides guidance on the appearance, scale and configuration of the main elements of the Kingsway City activity centre once it is fully developed. The IDP is a long term vision of Kingsway City's development potential that may take many years to fully implement. The IDP incorporates many beneficial planning and urban design principles, including:

    - An externalised 'main street';
    - Greater permeability for motorists and pedestrians within the site;
    - Excellent opportunities for mixed-use development;
    - Opportunities for medium-rise residential apartments, which will facilitate more affordable housing, support local services, reduce car-based travel demand, encourage use of public transport; and provide passive surveillance of public spaces, including Kingsway Reserve, thus assisting the Crime Prevention through Environmental Design (CPTED) initiative.
    - Making more efficient use of urban land;
    - Creating a town square;
    - Establishing a framework that facilitates a logical first stage of development.

13. Transcore Pty Ltd was commissioned to review the transportation aspects of the proposed structure plan and estimate any future impact of the proposed development on traffic in the locality. The adequacy of car parking provision was also assessed. This study concluded that the proposed structure plan was feasible from the traffic, parking and public transport perspectives. Prior to lodgement of a development application for the first stage of additional development, however, a more comprehensive transport study is to be carried out.

14. Creation of more employment opportunities within its municipality is one of the most important challenges faced by the City of Wanneroo. Failure to adequately address this issue will have serious consequences for the transport system (both private and public) as it struggles to accommodate mass long distance commuting by the resident population – a situation which is ultimately unsustainable.

15. Kingsway City has the potential to significantly increase employment opportunities in the City of Wanneroo, through its role as an important commercial activity centre. The following table indicates the amount of employment likely to be provided by an expanded Kingsway City in both the short and longer terms.

Kingsway City Estimated Future Employment

SP Component	Average Sqm per Employee*	Stage 1 Development Commercial (sqm NLA)	Stage 1 Development Employees	Long-Term development Commercial (sqm NLA)	Long-Term development Employees
Retail	30	31,915	1,064	31,915	1,064
Office	26	1,000	38	11,500	442
Showrooms	80	4,230	53	6,350	79
Other Commercial	100	6,550	66	7,500	75
Home Business	50	-	-	2,000	40
Sub-Total	***36***	***43,695***	***1,221***	***59,265***	***1,656***

NOTES:
**Based on averages derived from DP Commercial & Industrial Land Use Survey*
The composition of non-retail floorspace is indicative only and subject to change

16. As part of the background research for this structure plan, an assessment of the potential impact of the proposed retail floorspace expansion was undertaken. The main conclusion of the assessment is that there will be no appreciable or prolonged negative impacts on other centres in the locality as a result of the proposed expansion of Kingsway City. The key reasons for this are that:

    - The City of Wanneroo is currently under-supplied with retail floorspace compared to the Perth Metropolitan Region as a whole.
    - The proposed Kingsway City expansion is not intended to grab additional share from a static market. On the contrary, it is seeking to increase retail floorspace ***to cater for population growth within its primary catchment area***. Modelling clearly shows that the proposed expansion of Kingsway City is sustained by population growth in that area. This helps account for the relatively minor impacts which are estimated to fall on other retail centres in the locality.
    - Significantly, the Kingsway City expansion will not negatively impact on the Wanneroo Town Centre, nor will it affect Wanneroo's potential to expand as currently proposed to 23,000 sqm by 2011 and to 32,000 sqm thereafter, due to the very significant population growth projected to occur within the primary catchment area of the Wanneroo Town Centre.

17. Both Wanneroo and Kingsway City can therefore be expanded substantially by 2011, and co-exist with minimal negative impact occurring to either centre. As well as the substantial population growth projected in both primary catchment areas, the centres are ***far enough apart*** so that their large primary catchment areas can continue to co-exist indefinitely, without appreciable overlap between the two – the overlap that does occur being confined to the secondary catchment areas of both centres.

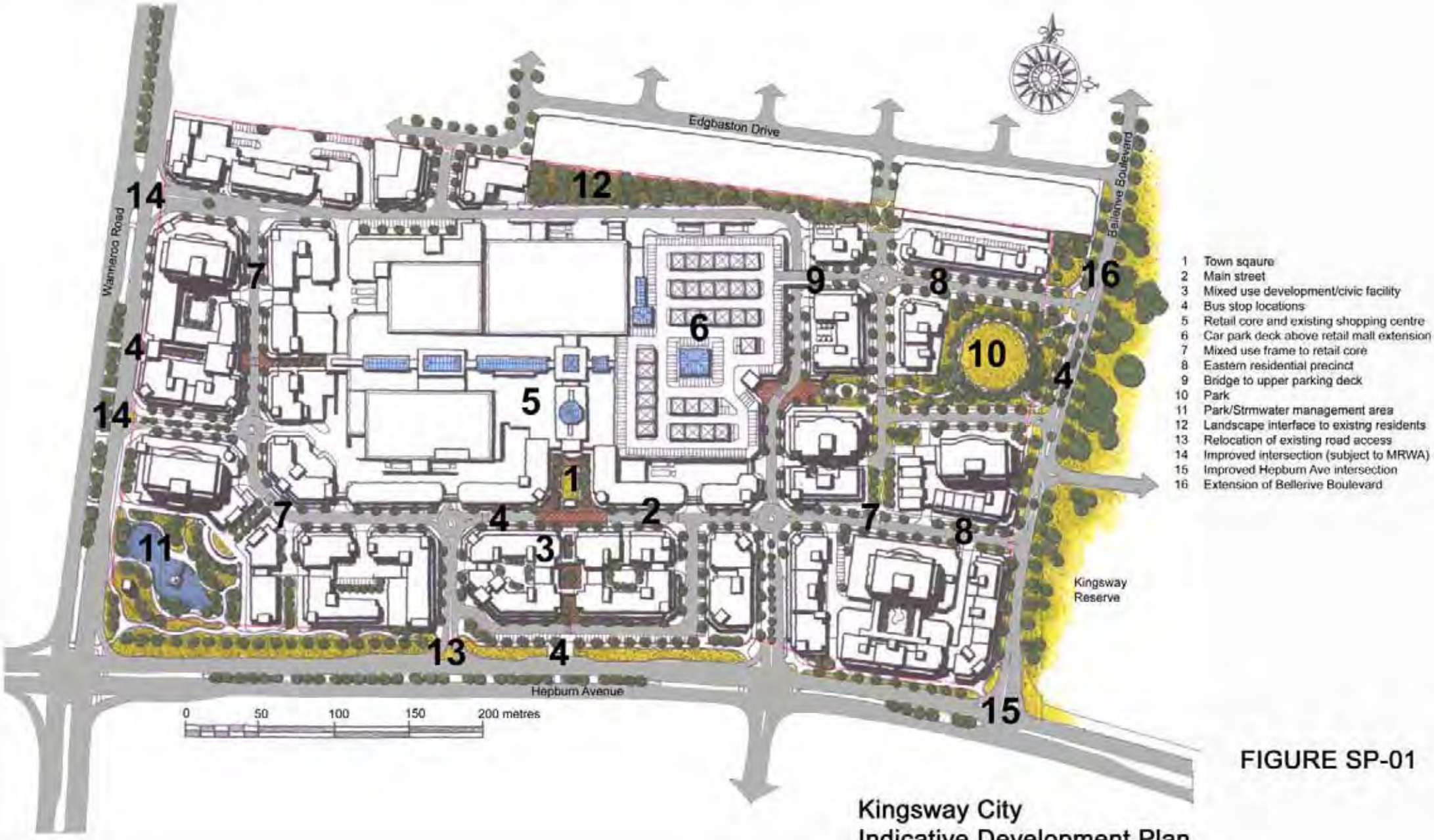


FIGURE SP-01

Kingsway City
Indicative Development Plan

Shrapnel Urban Planning
Mackay Urbandesign
July 2010

PREFACE TO VERSION 2

The first version of this Explanatory Report was produced in August 2006 when the Kingsway City Activity Centre Structure Plan was first presented for consideration by the City of Wanneroo. At that time the main purposes of the report were to both explain the structure plan and its rationale *and* seek to persuade the planning authorities to support and approve it. This latter purpose was not realised initially, and the first version of the structure plan was not approved by the Western Australian Planning Commission (WAPC).

The centre's owner, Tah Land Pty Ltd, sought a review of the Commission's decision in the State Administrative Tribunal (SAT) but, after lengthy proceedings, the SAT dismissed the application for review. The centre's owner then took the matter to the Supreme Court of Western Australia which, after further lengthy consideration, referred the matter back to the SAT for its reconsideration.

This reconsideration subsequently took place through numerous SAT-managed mediation sessions which punctuated a lengthy process of negotiation between the Centre owner and its representatives, the City of Wanneroo, and the WAPC. The final outcome of this process was an agreed "Part 1" of the structure plan – the statutory part – comprising a significantly modified Development Control Plan and written Text.

Accordingly, this version of the Explanatory Report (which is required under clause 9.8.3(f) of DPS 2) has been produced *after* the structure plan has been agreed with all relevant planning authorities and is on the verge of approval by the SAT prior to endorsement by the Commission. The two main implications of this are:

1. The main purpose of this report is now simply to explain and guide – there is no longer a practical need for it to persuade; and

2. Due to the passage of time, some parts of the report are now, to a greater or lesser extent, out-of-date.

Notwithstanding these points, it is considered neither necessary nor practicable to comprehensively update every detail of this report. The report was as current as possible in 2006 when it was first produced and most of the original material remains unchanged. Nowadays it is the fate of many planning reports supporting complex proposals to become somewhat dated between being first written and the eventual approval of the proposal. It serves no useful purpose to retrospectively bring such reports up-to-date, except where it is clearly relevant to do so.

Accordingly, where *relevant* change has occurred during the last four years, words in this report have been modified accordingly. In some cases where the

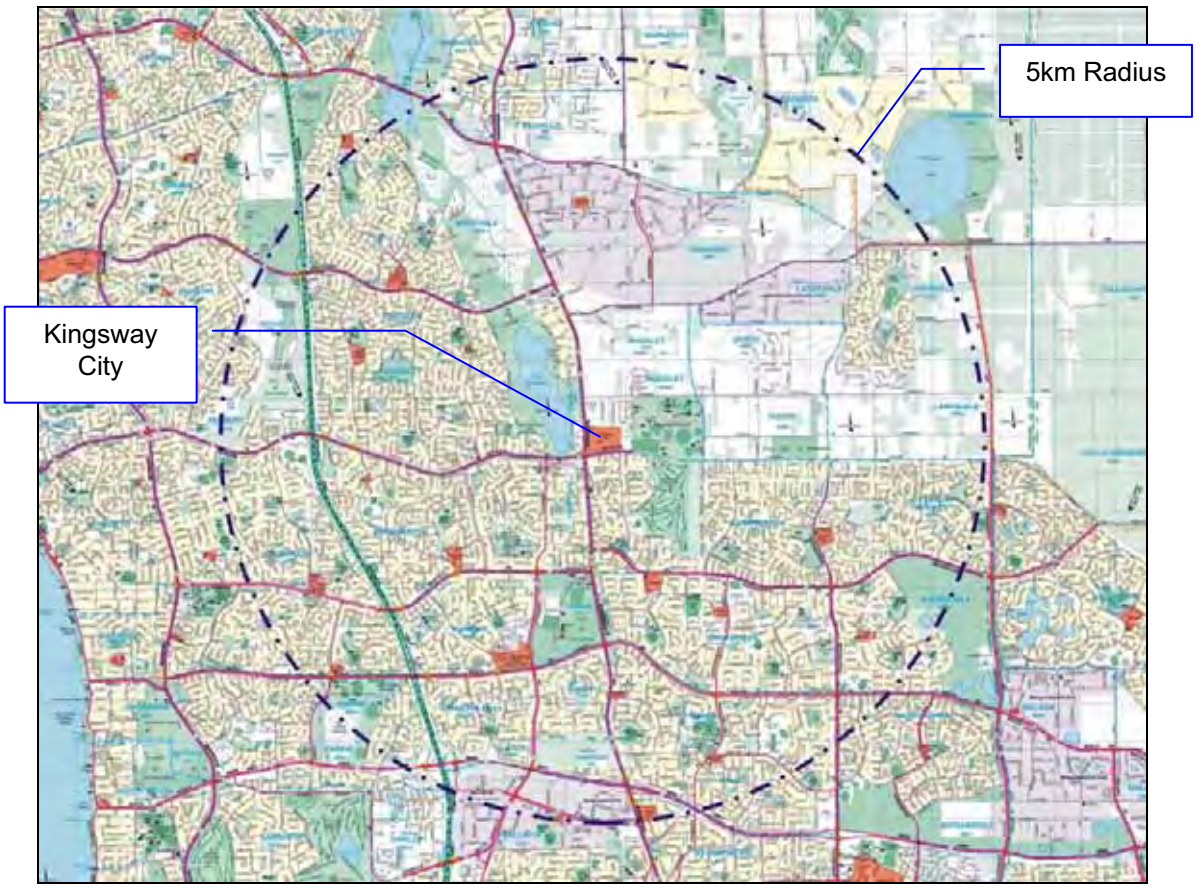
original text is still relevant, but a point still needs to be made in relation to timing, specifically identified notes to this effect have been inserted in the report.

In the instances where it makes no sense at all to retain the original material (for example describing the updated Indicative Development Plan, which completely supersedes the original) then a complete revision of text is presented in this report.

1 INTRODUCTION

Kingsway City is a modern district shopping centre located in the City of Wanneroo in the suburb of Madeley (formerly part of Landsdale) on the north-east corner of the Wanneroo Road/ Hepburn Avenue intersection (Figure 1).

Figure 1 Kingsway City Location



The centre opened for business in March 1996 and in the ensuing decade became popular and successful. Notwithstanding the statutory retail floorspace upper limit of 15,000 sqm imposed by the City of Wanneroo District Planning Scheme (DPS) No. 2, the centre has been incrementally expanded in a somewhat *ad hoc* fashion to some 22,700 sqm through several ***non-retail*** additions such as mixed business (including a medical centre), a health club and two petrol stations with associated auto service functions.

Kingsway City has considerable expansion potential – both physically (the existing site contains a significant amount of vacant land) and demographically. The centre owner, Tah Land Pty Ltd, has always indicated to both the City of Wanneroo and the Western Australian Planning Commission (WAPC) a clear intention to significantly increase the size of the existing main shopping centre. Preparation of a concept plan envisaging such

an expansion was in fact required by the City prior to approving the development application for the existing centre.

As the basis for the existing centre's approval, and to define a local government community purpose site on the eastern side of the site, the concept plan illustrated in Figure 2 was prepared and submitted to the City of Wanneroo in 1995. This plan showed an indicative long-term concept for the Kingsway City shopping centre with retail floorspace in the vicinity of 30,000 sqm, including two supermarkets, two discount department stores, three mini-majors, some cinemas, and the required community facilities.

Figure 2 Kingsway City: 1995 Concept Plan Showing Full Development of Site

Source: Tah Land Pty Ltd

The concept plan was prepared in conjunction with a deed of agreement between the City of Wanneroo and Tah Land Pty Ltd. This deed was intended to facilitate the centre's development as well as various transfers of land required for the intersection of Wanneroo Road and Hepburn Avenue, the construction of Hepburn Avenue, and the community purposes site. The concept plan was accepted by the City of Wanneroo as the basis for approval of the existing Stage 1 of the centre, and the definition of the above-mentioned land requirements.

In recent years, however, the relevant planning authorities have indicated that they no longer recognise the concept plan illustrated in Figure 2 as a suitable basis for the significant policy and statutory planning change that would be required to expand Kingsway City to the extent intended. Several attempts by Tah Land Pty Ltd and its representatives to have the full expansion potential

of the centre recognised and accepted by the City and the WAPC at the policy and statutory planning levels have been unsuccessful. However, the commercial centres policy context has recently changed significantly in three important ways:

1. The City of Wanneroo Centres Strategy (August 2000), which advocated only limited expansion of retail floorspace in Kingsway City, reached the end of its specified planning horizon in 2006, and is in the process of being reviewed and updated by the City.

2. The City has adopted a comprehensive new future-oriented strategy and local planning policy called *Smart Growth*. This initiative, which is consistent with the objectives of the State Sustainability Strategy, is focussed on accommodating the City's projected rapid urban development and population growth in a sustainable manner using a "triple bottom line" approach incorporating a range of economic, environmental and social principles.

3. The WAPC document titled *Network City: Community Planning Strategy for Perth and Peel* proposed many significant new initiatives that have the clear potential to render the existing Metropolitan Centres Policy Statement (SPP 4.2) obsolete. The Network City initiative virtually demanded a comprehensive review of SPP 4.2, including an overhaul of most of its existing rationale including its retail floorspace provisions.

The time is therefore ripe for the planning authorities to seriously consider this latest proposal to significantly expand Kingsway City, ***within the framework of Network City and Smart Growth***, rather than within the context of any obsolescent centre policies. Through this process, a completely revised concept for Kingsway City may be incorporated into the updated centres policies that will inevitably be produced in response to the Network City and Smart Growth initiatives.

Note (2010): Since these words were written, Network City has been superseded by "Directions 31", under the umbrella of which an updated Metropolitan Activity Centres Policy Statement has been produced. The updated Kingsway Centre Activity Centre Structure Plan is consistent with the new policy.

This proposed ***structure plan*** represents the most comprehensive attempt yet undertaken to obtain planning policy and subsequent statutory planning approvals to substantially expand Kingsway City. It envisages Kingsway City in the longer term as a ***fully fledged mixed-use activity centre*** containing, in addition to a significant retail component, a range of non-retail commercial uses, offices, community services, cinemas, restaurants, a significant "main street" element and (importantly) a large number of residential apartments. This vision for Kingsway is new, contemporary and exciting. It responds directly to the recent state and local government sustainability initiatives.

2 KINGSWAY CITY

2.1 Site Area

The site is approximately 20 hectares in area. The existing developed area is 12 hectares; the remaining 8 hectares are vacant (see Figure 6 on Page 9).

2.2 Ownership

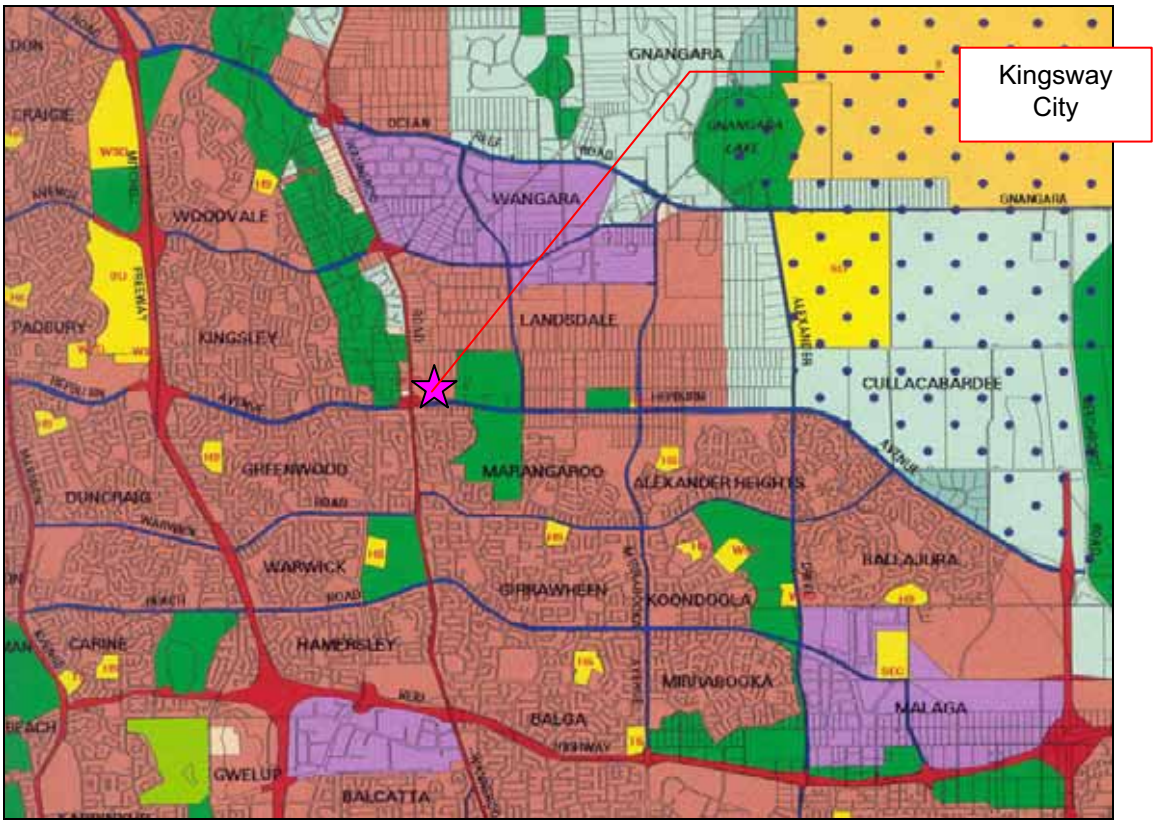
Kingsway City is owned in its entirety by Tah Land Pty Ltd.

2.3 Zoning

2.3.1 Metropolitan Region Scheme

Figure 3 shows the location of the site within the context of the Metropolitan Region Scheme (MRS).

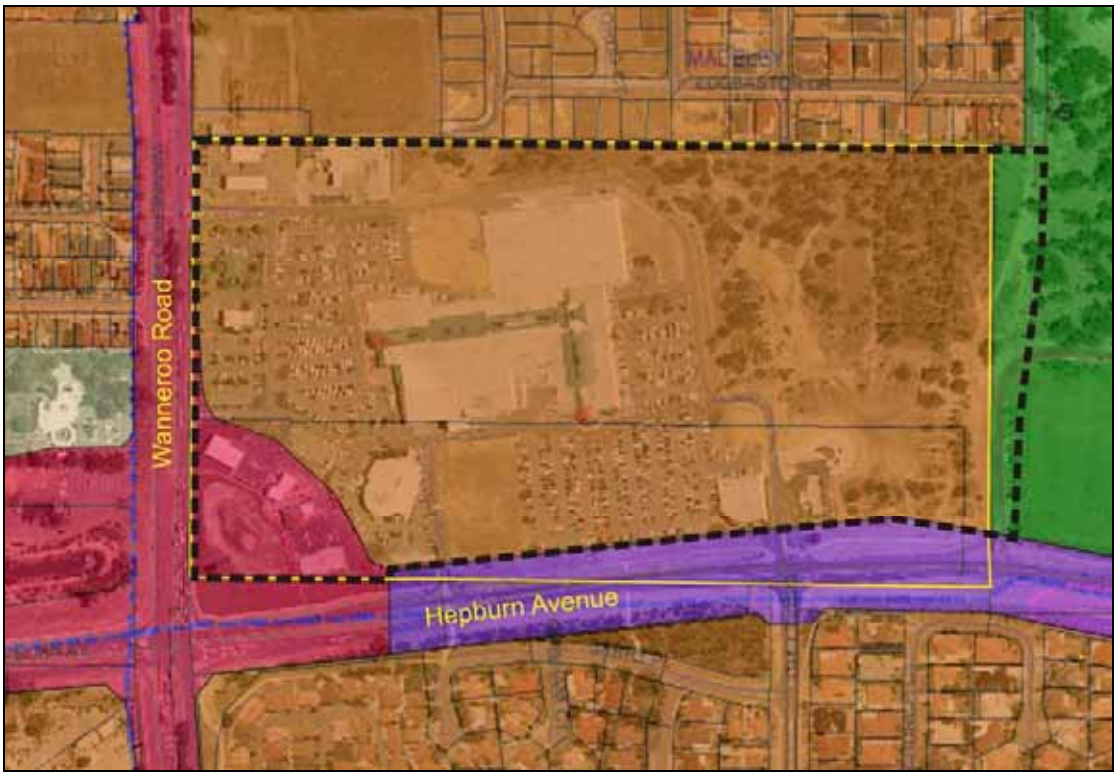
Figure 3 Kingsway City: Sub-Regional Context within MRS



In Figure 3 the strategic location of Kingsway City and its excellent connectivity within the sub-region are clearly evident. Figure 4 presents details

of the MRS affecting the site overlaid on an aerial photograph of the current development.

Figure 4 Kingsway City: Structure Plan Area (black dashed line) and existing private ownership (yellow line) overlaid on MRS Details



Base map and photograph reproduced by permission of the Department of Land Information, Perth, Western Australia, Copyright Licence 35/2005

In Figure 4 the area the subject of this structure plan is defined by the black dashed line, while the privately owned site is outlined in yellow. While most of the site is zoned Urban (brown) under the MRS, it can be seen that the site boundary also encompasses portions of the existing MRS road reserves. It is a requirement of the structure plan that land required for roads within the Hepburn Avenue Other Regional Roads Reserve (blue) is to be ceded to the Crown free of cost.

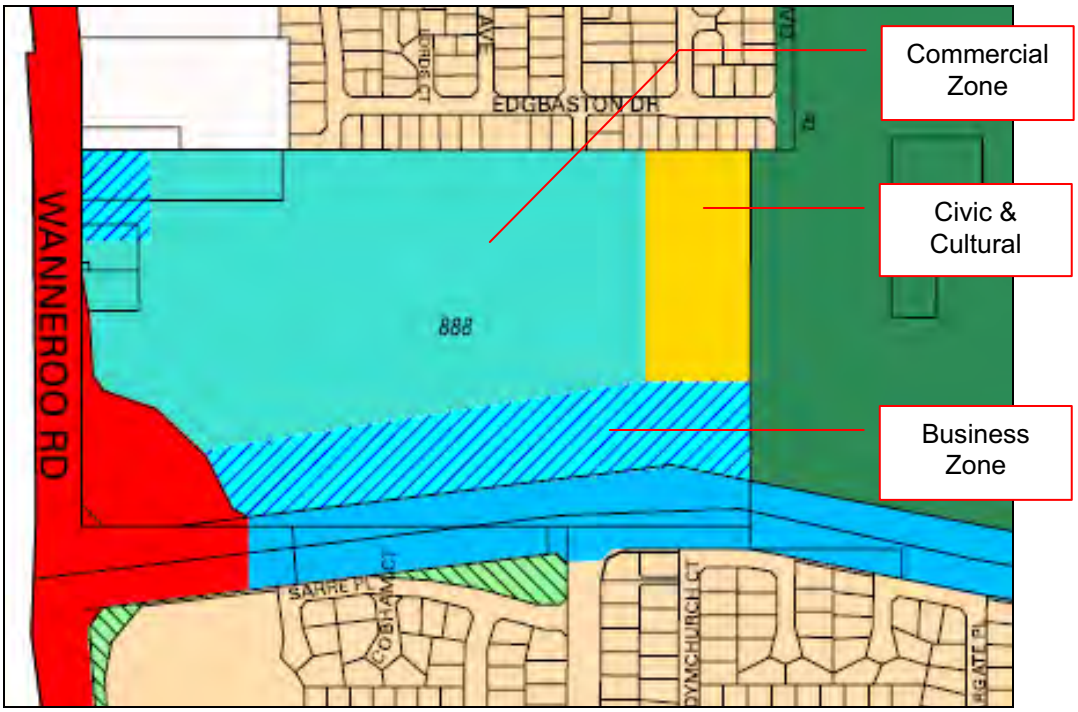
Development has already been permitted on a temporary basis (20 years) within portion of the Primary Regional Roads Reserve (red) at the intersection of Wanneroo Road and Hepburn Avenue. The extent of this Reserve is intended to accommodate the eventual construction of a grade-separated intersection.

With the passage of time, however, it is becoming increasingly unlikely that the option for a grade-separated intersection will need to be retained. Should it be decided in the future that the developed land will never be required for road works, it will revert to the Urban zone and thus be able to form part of the centre's long-term development. It is therefore important to consider this area's potential role in any structure plan for the centre.

2.3.2 City of Wanneroo DPS 2

Figure 5 depicts the existing zoning of the site under the City of Wanneroo DPS 2.

Figure 5 Zoning under City of Wanneroo DPS 2



Source: City of Wanneroo website

Although the proposed expanded retail core of the centre will still fall within the Commercial zone (as it does now), the purpose of this structure plan is to produce a ***fully revised long-term vision*** for the development of Kingsway City, based on careful site analysis and good urban design principles. For this reason adherence to the existing zoning boundaries has not been regarded as a priority in the preparation of this structure plan.

The intent behind all of the zones currently applying to the site does, however, find full expression within the structure plan. For example, it is intended that Civic and Cultural uses (such as a library) be integrated with the main centre, rather than being located on the currently zoned site, which is peripheral and inconveniently located for such a use. Discussions have already occurred between the centre owner and the City of Wanneroo with a view to establishing a library within the centre. Such discussions are also related to the current Deed of Agreement between the owner and the City, several aspects of which remain to be settled.

It is likely that after finalisation of the structure plan a suitable scheme amendment will be required to update the DPS 2 zoning of the Structure Plan Area. Based on the provisions of DPS 2, a “Commercial” zoning over the entire site would probably be most appropriate, but determination of this matter is for the City to decide in due course.

2.4 Existing Land Use

The site is currently occupied by a single level shopping centre with a total net lettable area (NLA) of some 17,340 sqm; and associated car parking. There are also a number of smaller buildings, which are generally located on the southern and western peripheries of the site. These include service stations, car maintenance facilities, fast food outlets, a medical centre, and a number of other miscellaneous services located in a cluster of buildings in the south-western corner of the site (Figure 6). The existing floorspace on the site totals 22,700 sqm NLA. Vacant land totals about 8 ha.

Figure 6 Kingsway City - Existing Land Use

Base photograph reproduced by permission of the Department of Land Information, Perth, Western Australia, Copyright Licence 35/2005

It is envisaged that the peripheral buildings (several of which were planned to be temporary) have a limited lifespan and would therefore be demolished and redeveloped in the future when the value of the land has increased to the point where the development of higher and better land uses becomes feasible.

2.5 Floorspace Composition

The results of the 2001/ 02 Department of Planning (DP) land use survey for Kingsway City are summarised in Table 1.

Table 1 Floorspace Composition of the Kingsway City Complex (2001/ 02)

PLUC	Description	Floorspace (sqm NLA)	Prop.
ENT	Entertainment/ Recreational & Cultural	1,650	8.2%
HEL	Health/ Welfare & Community Services	329	1.6%
OFF	Office/ Business	1,455	7.3%
RET	Other Retail	360	1.8%
SER	Service Industry	428	2.1%
SHP	***Shop/ Retail***	***15,434***	***77.0%***
STO	Storage & Distribution	5	0.0%
UTE	Utilities/ Communications	80	0.4%
VFA	Vacant Floor Area	300	1.5%
Total Centre		***20,041***	***100%***

Source: Department for Planning & Infrastructure

As indicated in Table 1, during 2001/ 02 Kingsway City's total floorspace was recorded by the DP at 20,041 sqm, of which 15,434 sqm (77 percent) was classified as Shop/ Retail floorspace. This is 434 sqm over the current statutory maximum of 15,000 sqm for the centre as specified in City of Wanneroo District Planning Scheme No. 2.

The DP Shop/ Retail floorspace classification is, however, a dynamic measure, being based on actual *activities* occurring within commercial floorspace at the time of each survey; rather than on the nature of the floorspace itself. The actual quantity of Shop/ Retail floorspace in a centre is therefore prone to frequent fluctuations as commercial tenancies change from one type of activity to another.

For this reason, although statutory floorspace limits may be considered necessary for development control purposes to some degree, it is neither practicable nor necessary to try and precisely maintain statutory retail floorspace limits. Fluctuations of plus or minus 5 to 15 percent around nominal retail floorspace limits are commonplace within the Perth Metropolitan Region.

Since the DP survey, some additional non-retail development has been approved and constructed at Kingsway City, including the temporary development in the Primary Regional Roads Reserve at the corner of Wanneroo Road and Hepburn Avenue. Table 2 summarises the total centre floorspace existing on the site, albeit classified in a more general way than the DP data.

Table 2 Kingsway City - Current Floorspace

Component	Floorspace (sqm NLA)	Prop.
Main Shopping Centre	17,340	76.4%
Auto Service Area	690	3.0%
Fast Food Outlets	490	2.2%
Mixed Business West	2,910	12.8%
Health Club	1,000	4.4%
Service Station East	270	1.2%
Total Centre Floorspace	***22,700***	***100%***

Source: Tah Land Pty Ltd

It can be seen from Table 2 that the Mixed Business West area (which includes the temporary development and the medical centre) comprises quite a sizeable proportion (13 percent) of the centre's total existing floorspace.

2.6 Adjacent Land Uses

Immediately to the north of the Structure Plan Area is a suburban residential precinct comprised largely of single houses, together with a portion of undeveloped land that fronts onto Wanneroo Road. It is understood that a plan of subdivision is being prepared for the undeveloped land. To the north of the undeveloped land is the Kingsway Caravan Park, which obviously has good future redevelopment potential.

To the east of the site is Kingsway Reserve which, with approximately 70 hectares dedicated to a variety of sporting and other recreational activities, is one of the most significant sporting precincts in the Perth Metropolitan Region. It is understood that the Council is proposing to spend some $20 million on upgrading facilities in the Reserve. To the south of Kingsway Reserve is the Marangaroo golf course.

To the west of the site, between Wanneroo Road and Lake Goollelal, there is a small residential enclave and a plant nursery. To the south of Hepburn Avenue, there is a suburban residential precinct (the western section of Marangaroo) consisting largely of single houses. No commercial uses are apparent in this area.

Looking more widely, the areas to the west, northwest, south, southeast and southwest of Kingsway City have been largely developed for suburban residential purposes at a relatively low density. To the south, much of the housing stock is ageing and seemingly ripe for redevelopment. There are several commercial complexes of varying sizes in surrounding areas to the south and west of the site. These include the following centres:

- Alexander Heights;
- Summerfield;
- Newpark (Girrawheen);

- Fieldgate Square;
- Warwick Grove;
- Greenwood Village;
- Greenwood Kingsley Plaza; and
- Boulevard Plaza.

The only other commercial area of note is a small service industrial area to the southwest of the Hepburn Avenue/ Wanneroo Road intersection. In time, this area has the potential to be redeveloped to higher and better uses and complement Kingsway City, thus allowing the activity centre to incorporate both sides of the Wanneroo Road activity corridor (see Section 2.8 below for a discussion of these concepts).

Further to the north and northeast, lie two areas which are important to Kingsway City. Firstly, the Madeley/ Darch/ Landsdale area, which is currently under extensive residential development, will provide by far the most important component of the centre's residential catchment area. Secondly, the industrial area in Wangara provides a significant employee catchment area generating demand for commercial services that are unavailable or inappropriate to provide in an industrial area.

2.7 Orientation

A site's proximity to and orientation towards adjacent land uses can be a constraint on the potential for taller buildings, due to problems of overshadowing. This is not the case with the Kingsway City site. The most sensitive adjacent land uses are to the immediate north, where residential uses abut the site. Being to the north, however, overshadowing will not occur.

To the south, Hepburn Avenue provides a buffer of up to 60 metres against any overshadowing of the residential area to the south, as does Wanneroo Road to the west. To the east, there are no sensitive land uses on the western portion of Kingsway Reserve for which overshadowing in the late afternoon would be a problem.

2.8 Movement Network

The site is bounded to the west by Wanneroo Road, which is an important urban arterial road forming one of the main spines for the northern corridor of the Perth Metropolitan Region. Although Wanneroo Road is an important road, there is currently limited vehicular access to the site from it.

Hepburn Avenue, running along the southern boundary of the site, is an important east-west urban arterial which will eventually link Sorrento Quay on the coast to Tonkin Highway, near Whiteman Park in the east.

The fact that the site is located at the intersection of two significant regional roads makes Kingsway City an ideal location for an activity centre of significant scale and density.

To the east, the site is partially bound by the access road to the sporting facilities in Kingsway Reserve. There is a clear opportunity to extend this access road northwards to join Bellerive Boulevard, which would thus become a valuable neighbourhood connector in the Madeley area, linking Hepburn Avenue to Kingsway and, via Sovrana Avenue, to the residential areas further to the north.

While Bellerive Boulevard provides the opportunity to establish a neighbourhood connector to feed the site from the north, Giralt Road already performs a similar function from the south where it extends to the site from Marangaroo Drive through the Marangaroo area (see Figure 6 on page 9).

2.9 Topography

The site has a natural cross fall from east to west of approximately 20 metres. Development activity has, however, required significant earthworks and as a result the land rises quite steeply from Wanneroo Road to a large and relatively level plateau in the centre. The far eastern portion of the site remains at the original ground level but excavation for the main plateau has left it perched above a steep embankment.

The site has a lesser cross fall in the north-south direction. Although negligible at the western end of the site, it amounts to approximately 10 metres at the eastern end.

Given the elevation of the higher portion of the site, expansive local views are available to the west overlooking Lake Goollelal and the ridge beyond. It is likely that new development will, depending on its height, also provide distant views to the hills and the Perth CBD.

2.10 Services Infrastructure

Kellogg Brown and Root Pty Ltd (KBR) was appointed to undertake a review and investigation into the existing utility services at Kingsway City. The aim of the investigation was to assess the existing infrastructure and determine if there are any constraints that may affect the proposed expansion of Kingsway City. The investigation covered the following services:

- Power (Western Power)
- Gas (Alinta Gas)
- Water (Water Corporation)
- Sewer (Water Corporation)

- Telstra

2.10.1 Power (Western Power)

Based on an analysis of several power invoices provided to KBR by the Kingsway City management, it is estimated that the current maximum demand for the centre is 1,940kW. Western Power has advised that the supply required for the proposed expansion can be provided along with HV supply.

2.10.2 Gas (Alinta Gas)

A 150mm medium pressure and a 150mm high pressure gas main are located in Wanneroo Road, with a 150mm medium pressure main in Hepburn Avenue. Discussions with Alinta Gas have indicated that the medium pressure gas main located in Wanneroo Road is sufficient for servicing the proposed development at Kingsway City.

2.10.3 Water Supply (Water Corporation)

From discussions with the Water Corporation and an examination of detailed drawings of existing water supply infrastructure adjacent to the centre, it has been established that there is a 200mm diameter water main located in Wanneroo Road. Ten junctions supply water to the existing centre, with three of these for fire.

The future expansion of Kingsway City can be serviced either using the existing junctions or by the construction of more junctions off the water main. Although Water Corporation officers have indicated unofficially that it is feasible to install more junctions, formal confirmation of this potential can only be provided once a Quotation Form, based on more detailed development designs, has been received.

2.10.4 Sewer (Water Corporation)

Water Corporation officers have stated that they do not have any concerns with the proposed development connecting into the existing sewer. Formal confirmation of this can, however, only be provided once a Quotation Form, based on more detailed development designs, has been received.

2.10.5 Telstra

A lead-in of 3x100 pair copper cables and 12 core optical fibre cables service the Kingsway City site. There are currently 84 vacant cable pairs available for the future development at the Centre.

2.10.6 Conclusion (Services)

The preceding services assessment was of necessity preliminary in nature, being for the purposes of a generalised structure plan. The servicing authorities have advised that more detailed designs of future development proposals will be required in order to determine the full nature and extent of the services required.

Notwithstanding this point, it may be concluded that – based on the investigations undertaken to date – it is unlikely there will be any significant infrastructure or connection constraints in relation to the Kingsway City structure plan proposal.

2.11 Opportunities & Constraints

In summary, the structure planning opportunities associated with the Kingsway City site include:

- Single ownership;
- Significant areas of vacant land, particularly in the eastern portion of the site;
- Significant population growth rates in primary catchment area (see later discussion);
- Paradigm shift occurring in centres planning policy;
- Potential to transform a suburban shopping centre into a significant mixed-use activity centre;
- Strategic, highly visible location at the intersection of two significant regional roads;
- Likely review of Primary Regional Roads Reserve requirements resulting in more permanently developable land;
- Reassessment of existing DPS 2 zoning requirements, facilitating a finer mix of uses;
- Potential to extend Bellerive Boulevard to Hepburn Avenue;
- Possible complementary extension of the activity centre onto the south-west corner of Wanneroo Road and Hepburn Avenue;
- View potential from development in the eastern section of the site.
- Ability to achieve medium-rise development at the eastern end, without overlooking or overshadowing residential areas.
- Potential to use topography to provide unobtrusive decked parking.
- Longer-term potential for redevelopment of peripheral existing uses.

Several constraints are also presented by the Kingsway City site, although it should be noted that these can be offset by corresponding opportunities. The constraints include:

- The need to incorporate the substantial existing shopping centre development in future planning for the activity centre;
- Steep slopes towards the east following previous earthworks.

3 STRUCTURE PLAN RATIONALE

3.1 Planning Context

3.1.1 City of Wanneroo DPS 2

As indicated previously (Page 8) the majority of the Kingsway City site is zoned Commercial under the City of Wanneroo DPS 2. The section fronting Hepburn Avenue is zoned Business, with a parcel occupying a significant area in the north-east corner being zoned Civic & Cultural.

Clause 3.7.3 of DPS 2 requires that in the Commercial zone a maximum permissible retail net lettable area (NLA) is to be specified in Schedule 3 of the Scheme. The Schedule 3 limit for Kingsway City is currently 15,000 sqm. Notwithstanding this limit, Clause 3.7.4 of the scheme does provide for the maximum NLA specified in Schedule 3 to be exceeded where such a provision is made in an agreed structure plan for the centre locality, which has been adopted by the Council and the Commission.

Another option is that the City of Wanneroo amend DPS 2 to increase Kingsway City's Schedule 3 retail floorspace limit, however, Council officers have indicated their unwillingness to do this in the absence of an agreed structure plan. The amount of vacant land on the site does reasonably require that any significant future centre development occurs within a rational planning context. Therefore, whichever course is ultimately used to facilitate Kingsway City's future development (agreement to exceed the specified upper limit, or a Scheme amendment to change the upper limit), preparation of this structure plan is clearly essential.

3.1.2 Commercial Centres Strategy

The City of Wanneroo Centres Strategy was adopted as policy by the Council in August 2000 and had a stated time horizon of 2006, while also having some regard to the "longer term strategic context". Within the defined centres hierarchy, Kingsway City (referred to in the strategy report as Madeley) is designated as a District Centre, in accordance with SPP 4.2.

It is stated in the strategy that most district centres range in size from 10,000 sqm to 20,000 sqm retail floorspace and that it is "generally desirable" to limit the size of such centres to about 15,000 sqm to "optimize accessibility and encourage competition". It is also noted that centres in this category should serve a catchment population of between 25,000 and 50,000 people. The recommended per capita floorspace provision for District Centres in the strategy is 0.41 sqm NLA.

Kingsway City is identified as having existing retail floorspace of approximately 15,000 sqm. The strategy makes the following points in relation to the centre:

- Although computer modelling indicates that expansion of Kingsway to 19,400 sqm may be viable, there is concern that the 2006 population projections on which the modelling is based may be optimistic – taking into account also the poor trading performance of non-food shops in east Wanneroo centres generally. The strategy concluded that caution should be exercised in considering proposals to extend the centre within the strategy period.
- Opportunities to extend the centre beyond this size should be aimed at diversification through the introduction of mixed business and service commercial uses.
- A submission by the centre owners advocating the ultimate development of the centre to 30,000 sqm was not supported by the Strategy on the grounds that it would undermine the development of Wanneroo as the predominant commercial, administrative and cultural centre in the City of Wanneroo.

While concern in relation to this last point is understandable, the detailed analysis undertaken for this structure plan clearly demonstrates that it is not warranted (see Section 5, starting Page 43).

Two "measures" were recommended in the Centres Strategy for Kingsway City. These are:

- **DM1**: No expansion will be considered until it is demonstrated to the satisfaction of the Council that the population of the centre's primary trade area, and improvement in the trading performance of non-food shops for both this centre and nearby centres, has reached a level that according to Council warrants the expansion to an area commensurate with Council's Centres Strategy. Any such expansion will not increase the total area above 20,000 sqm NLA. The balance of the site should be subdivided off from the shopping centre site for mixed business and service commercial uses.
- **DM2**: Any further development of the centre and adjoining mixed business uses shall be subject to an approved revised structure plan.

As stated in the introduction to this report, it is considered that the 2000 Centres Strategy should now be regarded as obsolete by the City and the Commission. The stated time horizon (2006) has lapsed and the current review of the Strategy has not yet been finalised. Sticking rigidly to the current strategy until a new one is available is unreasonable, particularly when it is noted that the strategy was prepared under a previous planning rationale without any possible knowledge of or reference to the significant "paradigm shifts" in centres planning thought which have recently emerged.

3.1.3 Metropolitan Centres Policy Statement

Kingsway City is classified as a District Centre under SPP 4.2[1]. The role of a district centre is to serve the weekly shopping and service needs of the suburban population mainly through the provision of convenience goods, a range of comparison goods, local services and local employment. The policy states that in the absence of an endorsed local planning strategy or centre plan, Shop/ Retail floorspace in district centres should generally be confined to 15,000 sqm.

However, a district centre could potentially be twice this size (or even more), provided the expansion occurred within the framework of an endorsed local planning strategy or centre plan. Requirements for centre plans are outlined in Appendix 3 of the Policy. In the terms of SPP 4.2 the Kingsway City structure plan is a proposed "centre plan" which meets the requirements of the Metropolitan Centres Policy in relation to such plans and which, it is anticipated, will ultimately receive WAPC endorsement.

3.1.4 Network City

The WAPC's September 2004 report "Network City: Community Planning Strategy for Perth and Peel" (a draft for public comment) proposed a regional planning network based on the three key elements of:

- Activity Centres,
- Activity Corridors and
- Transport Corridors.

In the Network City Framework – a conceptual plan illustrating the proposed strategy in diagrammatic form – Kingsway City is shown as part of an Activity Centre at the intersection of the Wanneroo Road and Hepburn Avenue Activity Corridors.

Activity Centres are described as locations where it is intended to encourage the concentration of a wide variety of urban activities. These may include employment, retail, residential (at various densities), entertainment, higher education and specialised medical services. Activity Corridors are connections between the Activity Centres which would be oriented to providing "excellent, high frequency" public transport, as distinct from the high-speed through traffic role of Transport Corridors.

It is indicated in the report that Activity Centres would perform different functions and eventually have different designations applied to them. Unlike the current system (i.e. WAPC Metropolitan Centres Policy), which classifies

[1] WAPC Statement of Planning Policy No. 4.2; Metropolitan Centres Policy Statement for the Perth Metropolitan Region; October 2000

centres largely according to retail floorspace, the new strategy would use a broader range of criteria in the classification process.

Note (2010): Since these words were written, Network City has been superseded by Directions 31, under the umbrella of which an updated Metropolitan Centres Policy Statement has been produced. The updated Kingsway Centre Activity Centre Structure Plan is consistent with the new policy.

3.1.5 Smart Growth

The City of Wanneroo Smart Growth Strategy 2005 represents a thoroughly researched, strong and committed local response to the State Sustainability Strategy[2], complementing its fundamental principles, visions and goals. Importantly, the Smart Growth Strategy recognises the need to respond to the even greater challenges involved in implementing sustainable urban development within a context of very high population growth. The Strategy aims to consider the impact of growth and urban renewal against the four goals of its Strategic Plan, namely:

1. Environmental sustainability;
2. Healthy communities;
3. Economic development; and
4. Corporate management and development.

The Smart Growth Strategy is supported by a number of more specific strategies, three of the most important being:

1. Community Development Strategy;
2. Economic Development Strategy; and
3. Local Environmental Strategy.

Of particular relevance to this structure plan is the Economic Development Strategy which:

> *"focuses upon attracting investment to the Wanneroo region, generating employment opportunities within the City's growing commercial and industrial areas, as well as capitalising upon existing industry clusters" (Page 11)*

The main Smart Growth principles as identified in the Strategy are:

1. Lifestyle and Housing Choice (a variety of housing types and the enhancement of lifestyle options);

[2] The Western Australian State Sustainability Strategy; Government of Western Australia; September 2003

2. Effective Use of Land and Infrastructure (the effective use and development of land and buildings for the benefit of the local area);
3. Long Term Health of the Environment (minimising environmental impact, together conservation and enhancement of natural areas);
4. Identity, Equity and Inclusiveness (creating opportunities to enhance and develop the identity of the City's places and people and improve equity and inclusiveness);
5. Long Term Economic Health (support for opportunities that enhance industry growth and promote job creation); and
6. People and Government (encouragement of citizen and stakeholder participation in governance and development decisions).

The Strategy document goes on to identify numerous specific actions that are to be taken towards implementing these principles. The City has also included these in its complementary Smart Growth Local Planning Policy.

When reviewing the Smart Growth principles and the array of supporting strategies and action statements it becomes obvious that implementation of the structure plan for Kingsway City will make a significant contribution towards the implementation of the Smart Growth Strategy.

The approach being taken to the planning and design of Kingsway City – recognising both its short and long-term development potential as a business, entertainment, civic and residential focal point, as well as being a significant retail centre – is clearly in alignment with the Smart Growth Strategy. Smart Growth thus provides a very powerful strategic planning rationale for the future development of Kingsway City as proposed in this structure plan. In turn the plan itself goes further than any previous development concept for the site and should therefore be welcomed by the City as representing committed support for the City's Smart Growth initiative.

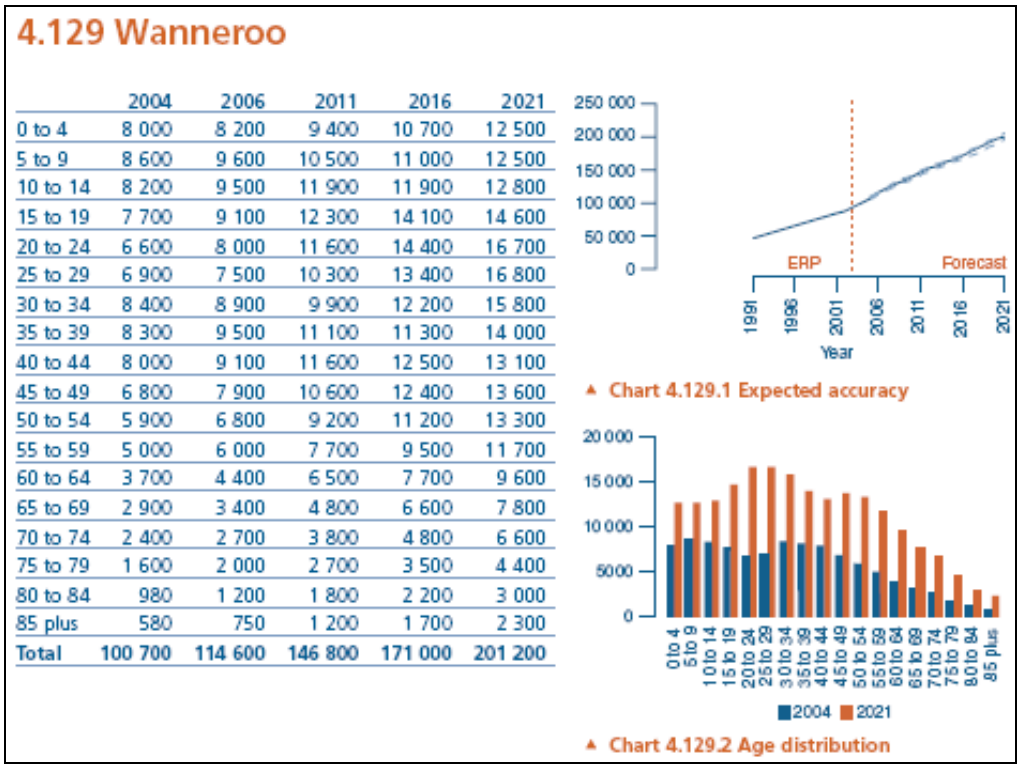
3.2 Population Growth

The preceding sections outline the compelling strategic planning rationale for the proposed expansion of Kingsway City. The demographic rationale, as explained in this section, is equally strong.

3.2.1 City of Wanneroo

Figure 7 presents the most recent published population projections for the City of Wanneroo prepared by the Western Australian Planning Commission.

Figure 7 City of Wanneroo Population Projection 2004 - 2021



4.129 Wanneroo

	2004	2006	2011	2016	2021
0 to 4	8 000	8 200	9 400	10 700	12 500
5 to 9	8 600	9 600	10 500	11 000	12 500
10 to 14	8 200	9 500	11 900	11 900	12 800
15 to 19	7 700	9 100	12 300	14 100	14 600
20 to 24	6 600	8 000	11 600	14 400	16 700
25 to 29	6 900	7 500	10 300	13 400	16 800
30 to 34	8 400	8 900	9 900	12 200	15 800
35 to 39	8 300	9 500	11 100	11 300	14 000
40 to 44	8 000	9 100	11 600	12 500	13 100
45 to 49	6 800	7 900	10 600	12 400	13 600
50 to 54	5 900	6 800	9 200	11 200	13 300
55 to 59	5 000	6 000	7 700	9 500	11 700
60 to 64	3 700	4 400	6 500	7 700	9 600
65 to 69	2 900	3 400	4 800	6 600	7 800
70 to 74	2 400	2 700	3 800	4 800	6 600
75 to 79	1 600	2 000	2 700	3 500	4 400
80 to 84	980	1 200	1 800	2 200	3 000
85 plus	580	750	1 200	1 700	2 300
Total	100 700	114 600	146 800	171 000	201 200

Chart 4.129.1 Expected accuracy

Chart 4.129.2 Age distribution

Source: Western Australia Tomorrow; WAPC; November 2005

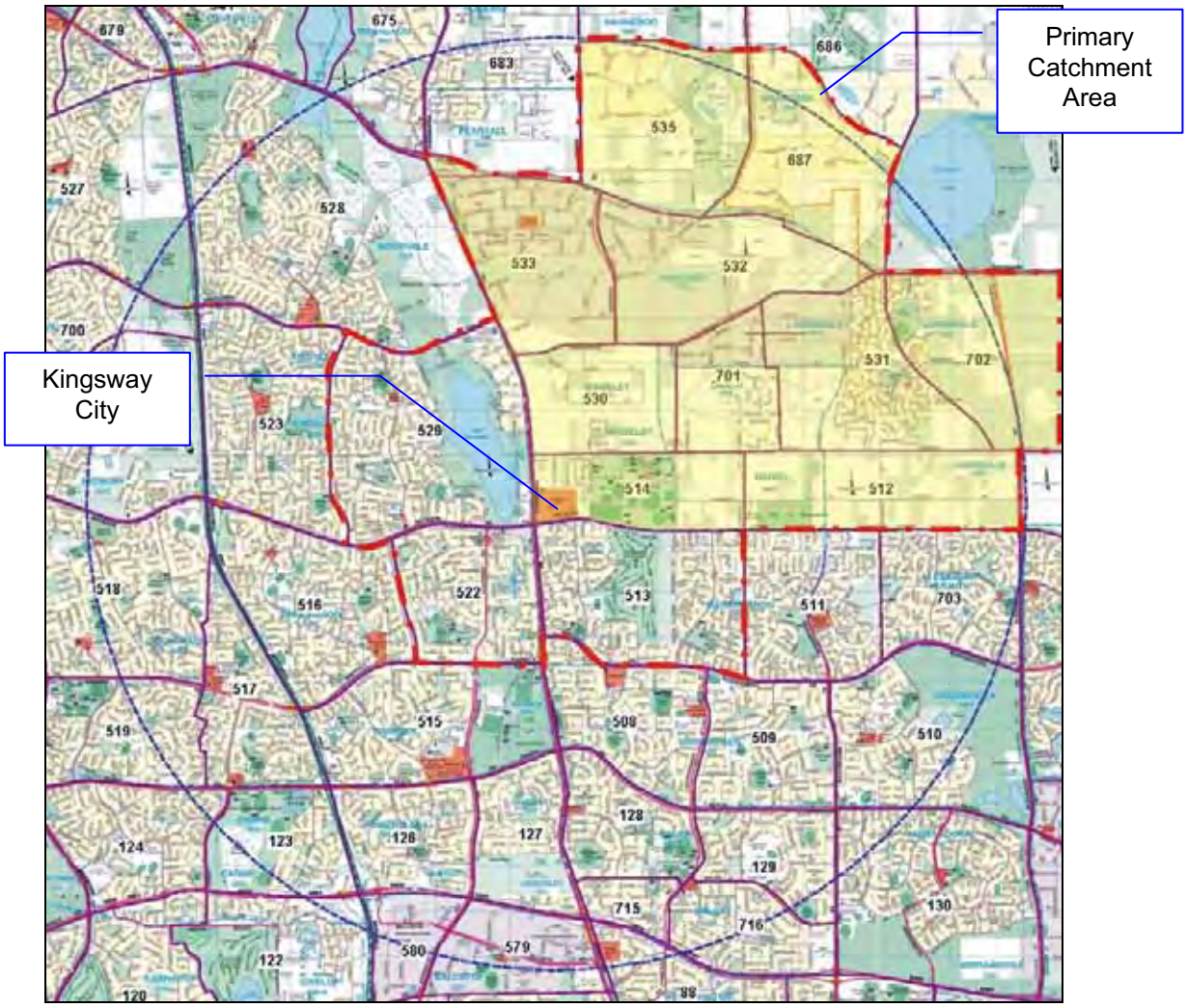
As indicated in Figure 7, the Estimated Resident Population (ERP) of Wanneroo is expected to increase by 86,600 persons from 114,600 in 2006 to 201,200 persons by 2021. This represents an average annual growth rate over the period of 3.82 percent, which is significantly higher than the projected Perth Regional average annual growth rate of 1.42 percent. Significant additional population growth is expected in the City of Wanneroo well beyond the 2021 horizon presented in Figure 7. The current indicative DP projection is for a population of 258,400 persons by 2031.

Notwithstanding the very significant population growth projected by DP, the City of Wanneroo's own projections predict an even higher growth rate, with the 2021 projection totalling 217,472 persons – some 6,000 more than projected by DP. While this more optimistic projection by the City is noted, the modelling carried out for the purposes of this structure plan has been based largely on the more conservative DP estimates. Higher actual growth would then only mean an even stronger case for expansion.

3.2.2 Kingsway City Locality

This section examines population growth within Kingsway City's locality, as defined by a 5km radius around the centre (Figure 8). This radius contains the Primary Catchment Area (PCA) of the centre, which is constrained in a southerly and westerly direction by other major centres, but extends to the 5km radius boundary in an easterly and north-easterly direction.

Figure 8 Kingsway City Primary Catchment Area



The North-East Quadrant (shaded in yellow) is therefore the most significant component of Kingsway City's catchment area in terms of the centre's future growth potential. Retail modelling carried out for the purposes of this structure plan demonstrates (as has previous modelling) the importance of the north-east quadrant to Kingsway City. Table 3 presents ABS population and dwellings data derived from the 1996 and 2001 Census.

Table 3 Area within 5km Radius of Kingsway City

Catchment Sector	1996	2001	Change	Prop.
NE Quadrant (yellow shading)				
Persons (Count)	3,211	6,154	2,943	91.7%
Occ. Private Dw.	1,106	1,953	847	76.6%
Persons in OPD	3,194	6,119	2,925	91.6%
Unocc. Private Dw.	47	127	80	170.2%
Balance of PCA				
Persons (Count)	*17,110*	*17,492*	*382*	*2.2%*
Occ. Private Dw.	*5,544*	*5,981*	*437*	*7.9%*
Persons in OPD	*16,819*	*17,226*	*407*	*2.4%*
Unocc. Private Dw.	*245*	*257*	*12*	*4.9%*
Total of PCA (red outline)				
Persons (Count)	20,321	23,646	3,325	16.4%
Occ. Private Dw.	6,650	7,934	1,284	19.3%
Persons in OPD	20,013	23,345	3,332	16.6%
Unocc. Private Dw.	292	384	92	31.5%
Balance of 5k Radius				
Persons (Count)	*75,547*	*73,384*	*(2,163)*	*-2.9%*
Occ. Private Dw.	*25,351*	*25,570*	*219*	*0.9%*
Persons in OPD	*74,937*	*72,695*	*(2,242)*	*-3.0%*
Unocc. Private Dw.	*1,331*	*1,370*	*39*	*2.9%*
Total of 5k Radius				
Persons (Count)	95,868	97,030	1,162	1.2%
Occ. Private Dw.	32,001	33,504	1,503	4.7%
Persons in OPD	94,950	96,040	1,090	1.1%
Unocc. Private Dw.	1,623	1,754	131	8.1%

Source: Australian Bureau of Statistics Census 1996 and 2001

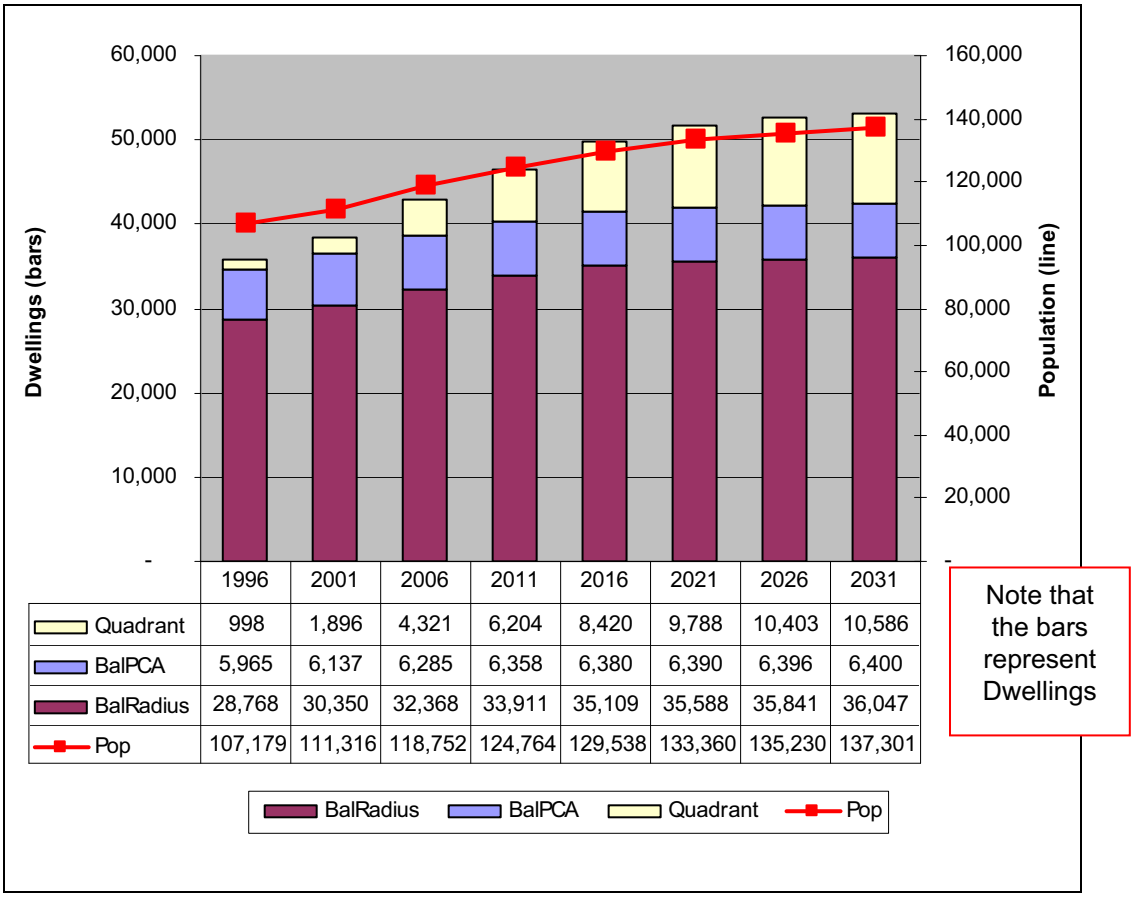
Relevant points from Table 3 are:

- Between 1996 and 2001 the North-East Quadrant was clearly ***the*** growth area within the study area. Over this short period the population of the Quadrant increased by 92 percent, from 3,211 to 6,154 persons. Unoccupied Private Dwellings increased by 170 percent, indicating that household establishment in the area was in full swing during the period.
- The balance of the PCA also increased, albeit far more modestly, resulting in an overall population increase for the PCA as a whole of 3,325 persons (16 percent). ***Growth in the North-East Quadrant accounted for some 89 percent of all population growth within the PCA.***
- By contrast, the population within the balance of the 5km study area (i.e. the 5km study area, minus the area within the PCA) actually fell by 2,163 persons (3 percent) from 75,547 persons to 73,384 persons. The strong growth within the North-East Quadrant more than offset this decline elsewhere to result in a modest 1.2 percent growth over the study area as a whole.

3.2.3 Population Projections

For the purposes of the modelling undertaken for this structure plan, the following population projections for the study area have been used (Figure 9).

Figure 9 Kingsway City PCA: Population Projections to 2031



	1996	2001	2006	2011	2016	2021	2026	2031
Quadrant	998	1,896	4,321	6,204	8,420	9,788	10,403	10,586
BalPCA	5,965	6,137	6,285	6,358	6,380	6,390	6,396	6,400
BalRadius	28,768	30,350	32,368	33,911	35,109	35,588	35,841	36,047
Pop	107,179	111,316	118,752	124,764	129,538	133,360	135,230	137,301

Sources: DP; ABS; City of Wanneroo; SHRAPNEL URBAN PLANNING

The data in Table 3 was derived from aggregating 1996 and 2001 Census Collectors District (CD) boundaries, the centroids of which fell within a 5km radius circle from Kingsway City. Although the population estimates presented in Figure 9 have been adjusted to reflect the actual 1996 and 2001 Census results and the most recent DP and City of Wanneroo population projections, they comprise aggregates of *Main Roads Zones* (which are used for the purposes of the retail model) that were selected by the 5km radius.

For this reason there are some differences in the defined geographic areas of the main components of the study area (NE Quadrant, Balance of Primary Catchment Area, and Balance of 5k Radius) between Table 3 and Figure 9. These differences, which merely reflect geographic boundary differences, in no way affect the basic thrust of this analysis. Relevant points from Figure 9 include:

- The total number of dwelling units in the 5km radius study area is expected to increase from 38,383 units in 2001 to approximately 46,470 units in 2011; and 53,030 units in 2031.
- A significant proportion of this growth (approximately 5,700 dwelling units) will occur in the "Balance of Radius" area, while an even more significant 8,690 dwelling units are expected to establish within the NE Quadrant.

Clearly the NE Quadrant is by far the most important component of Kingsway City's Primary Catchment Area, and the extent of the dwelling and population increase anticipated for this area forms another supporting element of the rationale for this structure plan.

3.3 Retail Floorspace Under-Supply

There is currently a significant under-supply of retail floorspace in the City of Wanneroo, compared to the average for Metropolitan Perth. Unless substantial additional retail floorspace is created within the City of Wanneroo, this situation will only get worse over time. Table 4 summarises the situation. For the purpose of accurately depicting the relationship between population and retail floorspace in this case, the Cities of Wanneroo and Joondalup are considered together.

Table 4 Cities of Wanneroo & Joondalup: Population and Retail Floorspace

Year	Population	Shop/ Retail Required @ 1.54	Estimated Supply (approx)	Shortfall	
		sqm NLA			5-yearly shortfall Catch-up
1996	213,368	328,587	218,666	(109,921)	Requirement (sqm) =
2001	240,188	369,890	269,807	(100,083)	16,680

Future Requirements

Year	Population Projection	Shop/ Retail Required @ 1.54	Additional Required Post 2001	Total Shortfall Catch-Up*	Total Additional Requirement	Per 5-Yearly Period
				sqm NLA		
2006	270,300	416,262	46,372	16,680	63,053	63,053
2011	299,700	461,538	91,648	33,361	125,009	61,956
2016	325,100	500,654	130,764	50,041	180,806	55,796
2021	358,600	552,244	182,354	66,722	249,076	68,270
2026	386,700	595,518	225,628	83,402	309,031	59,954
2031	417,900	643,566	273,676	100,083	373,759	64,728

**NOTE: The 2001 Shortfall is assumed to be made up gradually between 2001 and 2031*

Points worthy of note in Table 4 include:

- It is estimated that in 2001 the shortfall of Shop/ Retail floorspace within the Cities of Wanneroo and Joondalup combined was a quite substantial 100,000 sqm.

- Between 2001 and 2031 an ***additional*** 273,676 sqm of Shop/ Retail floorspace will be required in the Cities of Wanneroo and Joondalup ***based on population growth alone***.
- However, in order to supply additional floorspace at a rate that will cater for population growth ***and*** make up the existing shortfall, the total additional retail floorspace required between 2001 and 2031 will be 373,759 sqm.
- As indicated in the far-right column of Table 4, achievement of this target will require provision of new Shop/ Retail floorspace at the average rate of approximately 62,000 sqm every five years.

Notwithstanding that the Joondalup Regional Centre still has several major development stages to go, most of this additional retail floorspace growth will need to be provided in the City of Wanneroo, not in the City of Joondalup.

This should be of both concern and interest to the City, not only because an under-supply of retail floorspace is a potential inconvenience to shoppers resulting in unnecessary travel, but because of the very important potential role that retail development has to play in increasing employment in the City of Wanneroo – particularly for its young people.

3.4 Shopper Survey

As part of earlier background research for this structure plan, a shopper survey was carried out in May 2003. The main purposes of the survey were to calibrate the retail model used in the structure plan analysis, and to gauge the preferences of the local community in relation to Kingsway City. Key points from the survey findings are:

- One-quarter of visitors interviewed at Kingsway City live in the well-established suburbs of Marangaroo (13 percent), and Kingsley (12 percent). Visitors from these suburbs perceived Kingsway City to be their main shopping centre.
- One-third (34 percent) of visitors interviewed had lived at their current address for ’10 years or more’.
- The majority of visitors interviewed (56 percent) travelled between 2 kilometres and 10 kilometres to reach Kingsway City. Only 12 percent of visitors interviewed travelled less than 2 kilometres.
- Some 97 percent of visitors interviewed had travelled from home to Kingsway City, while only 3 percent had travelled from work. Nearly all (96 percent) of visitors interviewed travelled by private vehicle to the centre.
- One-third (32 percent) of all visitors interviewed visit Kingsway City 'two or more times per week' (28 percent), or 'daily' (4 percent).

- One-quarter (25 percent) of visitors interviewed indicated they visit Kingsway City on 'Thursday pm' or 'Saturday am'.
- 45 percent of visitors interviewed stated Kingsway City was the shopping centre they mainly use.
- Some 22 percent of all visitors interviewed stated there were 'no other centres' they mainly use regularly.
- A significant proportion of visitors mentioned that the main purpose for visiting Kingsway City was to purchase 'food and groceries from supermarket' (42 percent), followed by 'clothing and accessories' (8 percent) and 'financial and business services' (6 percent).'
- Over one-quarter (27 percent) of visitors interviewed particularly like Kingsway City because it is 'close to home', while similar proportions like the centre for 'ease of parking/ lots of parking' (26 percent), 'convenient location' (25 percent) and 'range of shops' (24 percent).

The survey indicates a high level of customer satisfaction with Kingsway City. It also demonstrates how the current centre is supported by households within the established parts of its catchment area. This is important to note in juxtaposition with the fact that the most convenient (to Kingsway) parts of its catchment area are, as yet, under-populated.

3.5 Conclusion (Rationale)

This section of the report has documented the main rationale for the proposal to expand Kingsway City to become a significant activity centre at the junction of two important regional roads. In summary, the structure plan:

- Is considered to be a creative and far-sighted response to the existence of under-utilised land on the site, prevailing demographic trends, significant retail floorspace under-supply; and a long-standing ambition of the owner to expand Kingsway City;
- Reflects and seeks to respond to the current very strong trading performance being achieved by Kingsway City;
- Draws strength from the current State and local planning context, particularly the rapidly evolving policies, which represent a major paradigm shift towards sustainable urban development; and which in effect lay the groundwork for bold and far-sighted initiatives such as those proposed in this structure plan;
- Reflects very significant potential population growth within the City of Wanneroo as a whole, and the main Kingsway City Primary Catchment Area in particular; and
- Seeks to build upon clearly expressed preferences for and interest in shopping at Kingsway City from the local community, and extend its positive influence into the newly developing urban areas nearby.

4 STRUCTURE PLAN

4.1 Long Term Vision

The vision and long-term objective for Kingsway City is for its transformation from a suburban shopping centre into a fully integrated, mixed-used Activity Centre.

Kingsway City is seen as a vibrant *Activity Centre* where people will live, work, shop and play. It is envisaged that Kingsway City will contain residential apartments, shops, offices, showrooms, cafés, restaurants, and entertainment facilities such as a cinema complex – all of which will be a short walk from public transport, regional sporting facilities and the amenity of the parkland around Lake Goollelal. In this regard, the structure plan embraces the principles of the City of Wanneroo's *Smart Growth* Strategy.

Figure SP-01 is the Indicative Development Plan (IDP), which illustrates the long-term vision for the Kingsway City Activity Centre. Several cross-sections through the IDP are illustrated in Figure SP-02.

4.2 Indicative Development Plan

The IDP provides guidance on the appearance, scale and configuration of the main elements of the Kingsway City activity centre once it is fully developed. The main features of the IDP include the following, which are annotated on the plan by number:

1. Central town square with direct access to the main street, retail mall, food court and entertainment uses;
2. Main street environment with a building height of at least two storeys;
3. Mixed use development facing main street/ town square incorporating new City of Wanneroo Civic and Cultural facility (e.g. branch library);
4. Indicative bus stop locations;
5. Retail core incorporating the existing shopping centre;
6. Car park deck, with car parking and retail uses underneath;
7. Mixed Use Area – a "frame" to the retail core;
8. Eastern predominantly residential precinct;
9. Bridge to upper parking deck;
10. Public Open Space within the Residential precinct;
11. Park and storm water management area (possible future road interchange);
12. Landscaped interface with existing residential area to north;
13. Relocation of existing Hepburn Avenue access point slightly eastwards;

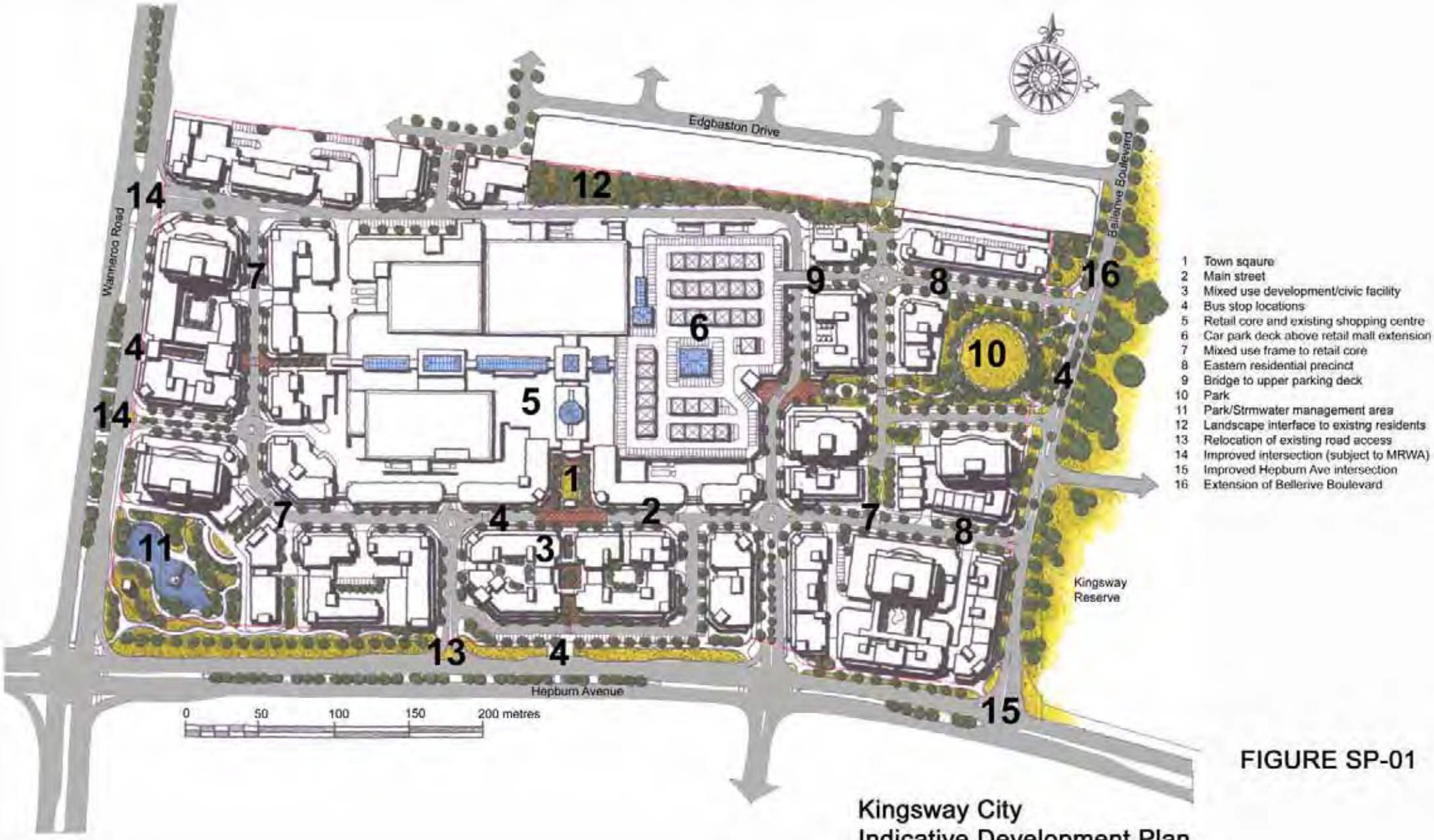
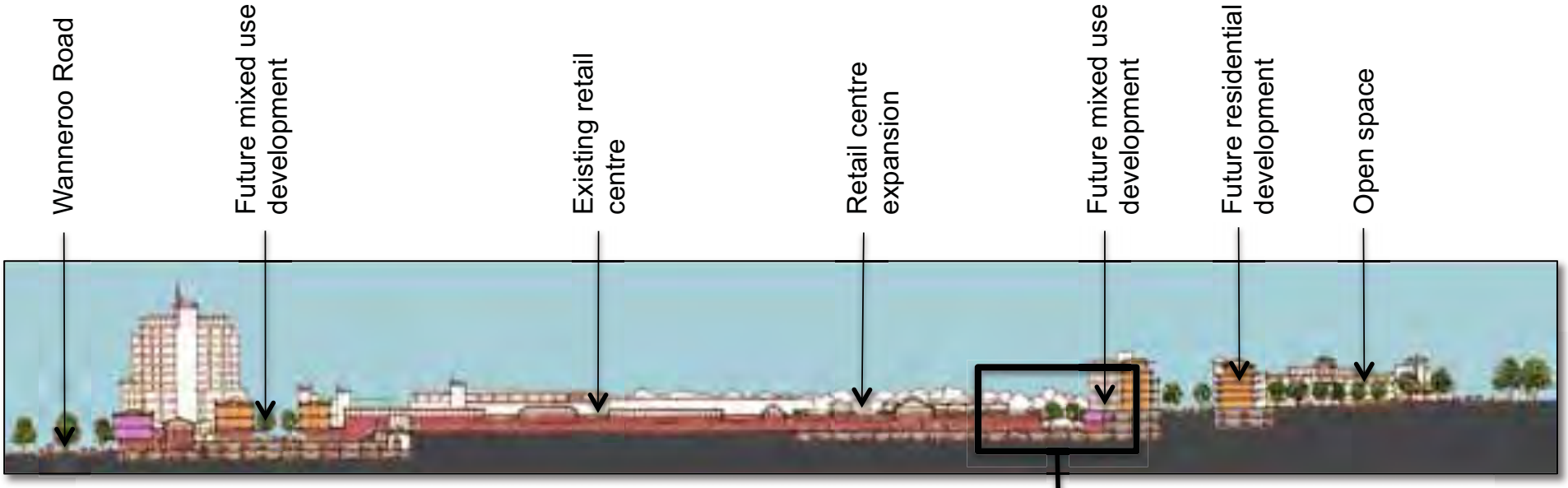


FIGURE SP-01

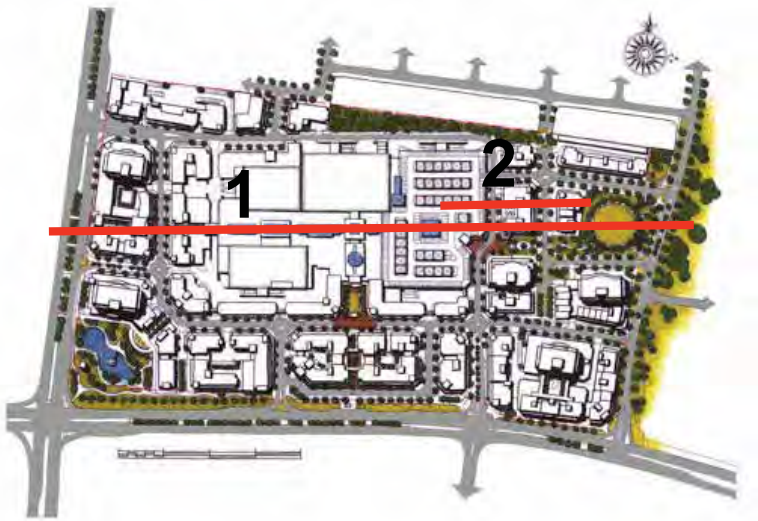
Kingsway City
Indicative Development Plan

Shrapnel Urban Planning
Mackay Urbandesign
July 2010

Indicative cross sections



Section 1

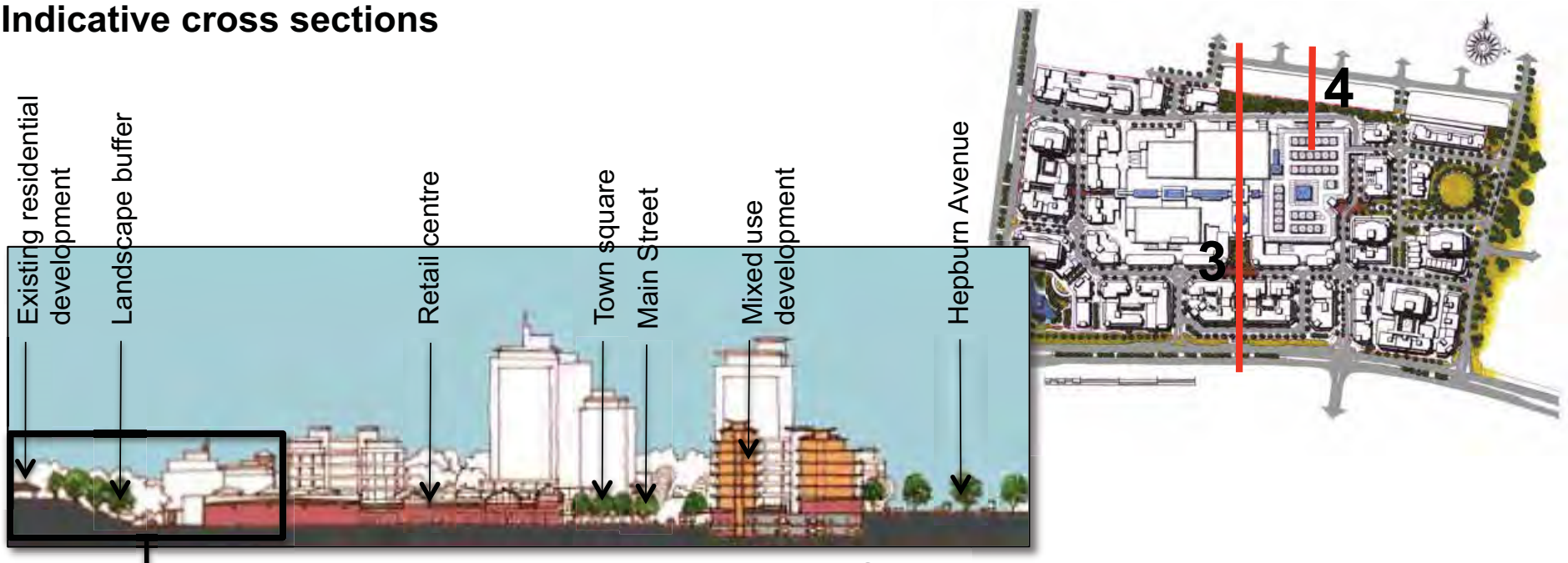


Section 2

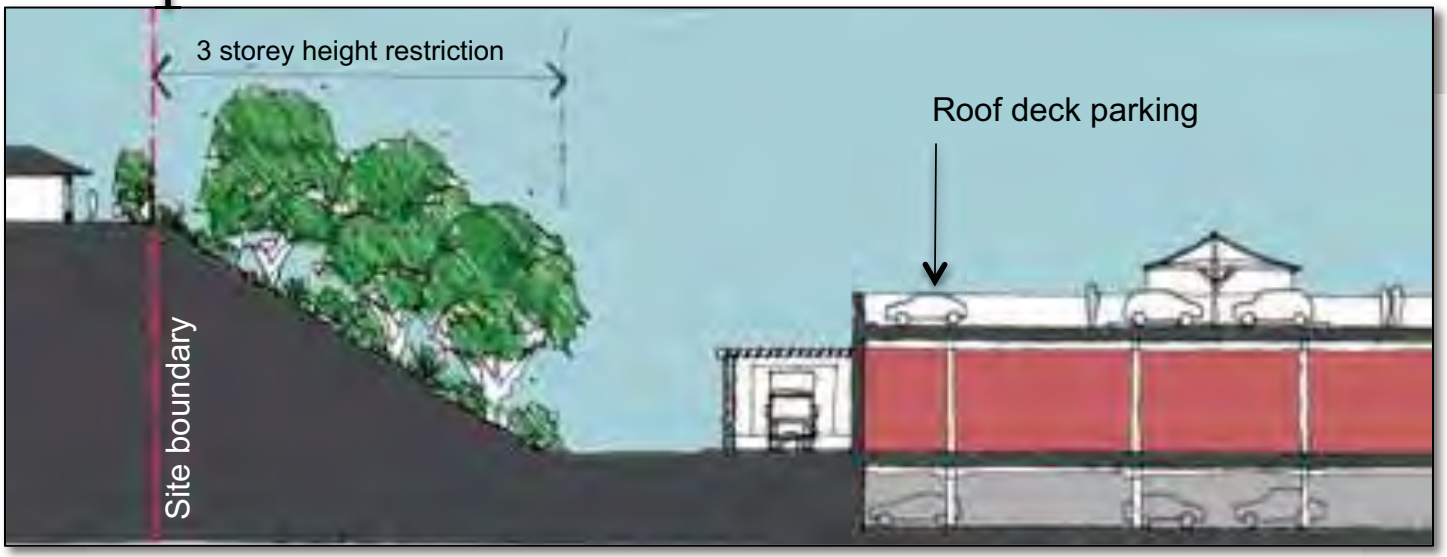
FIGURE SP-02(a)

Kingsway City Activity Centre
August 2010

Indicative cross sections



Section 3

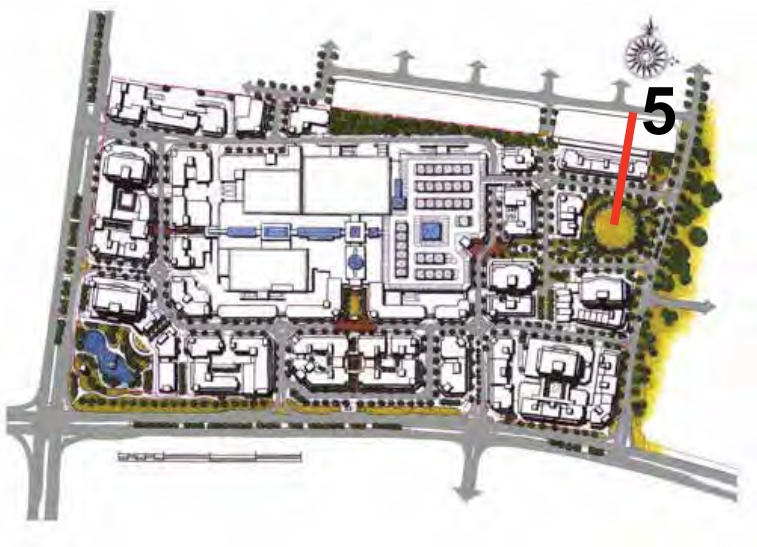


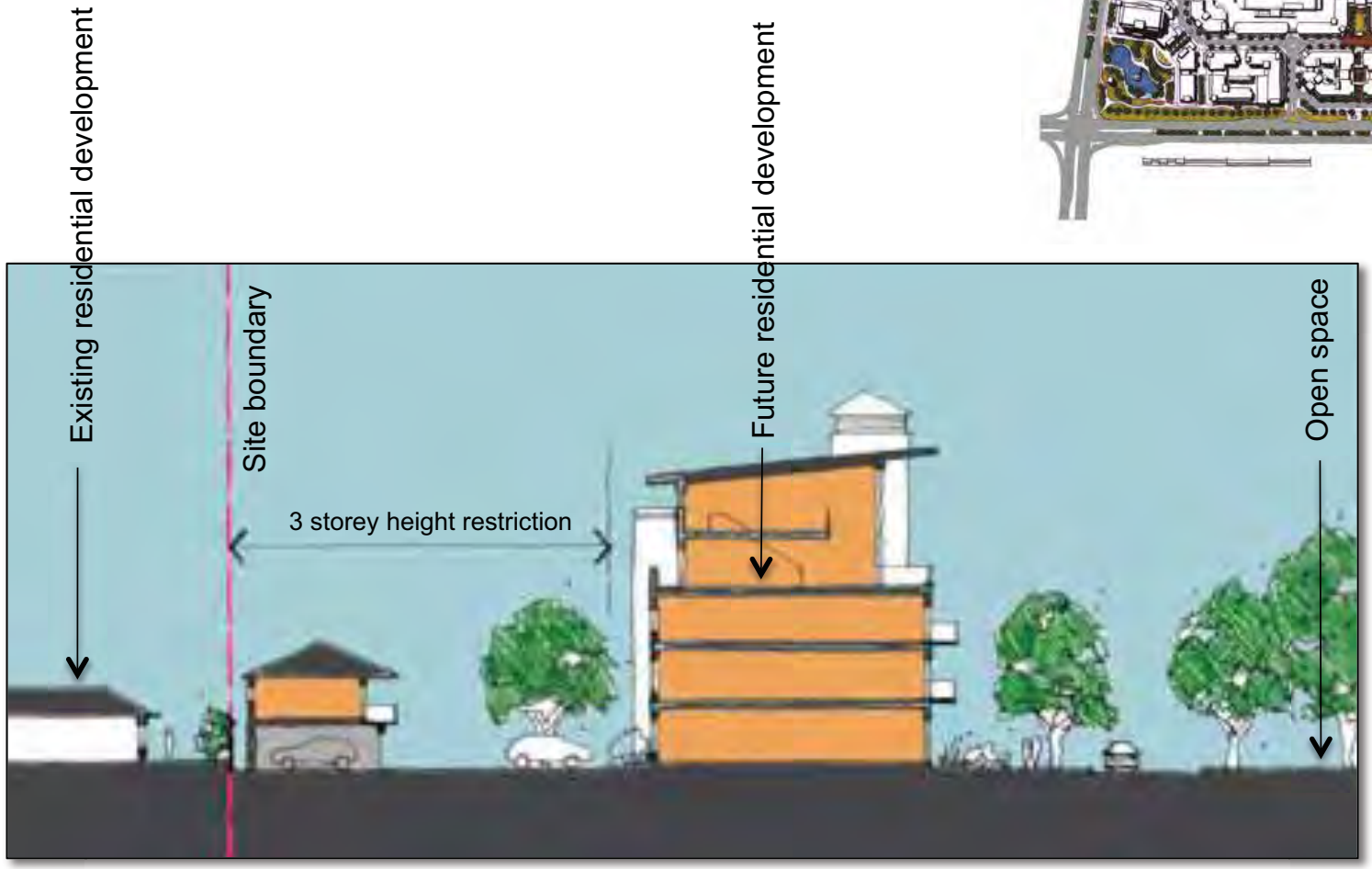
Section 4

FIGURE SP-02(b)

Kingsway City Activity Centre
August 2010

Indicative cross sections





Section 5

FIGURE SP-02(c)

14. Improved intersection with Wanneroo Road, subject to approval from Main Roads WA;
15. Improved Hepburn Avenue intersection to Bellerive Boulevard;
16. Extension of Bellerive Boulevard to Hepburn Avenue.

4.2.1 Town Square

The Town Square is intended to provide a sense of place and an attractive focal point for visitors to the centre. The structure plan contains 12 provisions aimed at ensuring satisfactory development of the Town Square. As part of the IDP, an indicative vision of the Town Square has been prepared by Mackay Urban Design. One view of this is presented in Figure 10, with several others included in Appendix D.

Figure 10 Indicative view of proposed Town Square

4.3 Planning and Urban Design Principles

The IDP, which illustrates the potential of this structure plan to facilitate the incremental transformation of Kingsway City into an important mixed-use activity centre is founded on a number of important planning and urban design principles:

- Creating an externalised 'main street' environment to provide a heightened sense of community, and to allow businesses to operate outside conventional trading-hours;
- Establishing an urban structure to allow greater permeability of pedestrian and vehicular movement around the site;
- Allowing vehicular movement between different areas of the site without having to use the external road network;

- Identifying a series of discreet sites for mixed use development that wrap around a retail core and present an identifiable urban face to the surrounding streets;
- Providing opportunities for residential apartment development above commercial uses wherever possible and in locations that capitalise on available views and facilitate passive surveillance of public spaces, including the Kingsway Reserve. This is important in relation to the important initiatives towards Crime Prevention through Environmental Design (CPTED);
- Allowing medium-rise residential development to facilitate more affordable housing, support local services, create local employment, reduce car-based travel demand, and to encourage travel by public transport;
- Making more efficient use of valuable urban land that is well-located in relation to public transport;
- Establishing a street network which encourages pedestrian movement and engenders a sense of personal security, wherever possible;
- Expanding the retail core to facilitate a competitive range of retail uses;
- Creating a town square to provide a sense of place and centrality to the centre as a whole and to the community that the centre serves;
- Establishing a clearly identifiable form of building fronts and building backs, as far as the existing configuration of the site will allow;
- Improving pedestrian and vehicular access into Kingsway City from the surrounding locality;
- Locating car parking areas where they are less visually prominent from the surrounding street network;
- Incorporating large areas of car parking, wherever possible, into the development structure by the use of decked, undercroft, or roof top parking;
- Use of the internal streets for highly efficient and reciprocal on-street parking;
- Establishing a plan that allows for the logical staging of development.

4.4 Architectural and Landscape Design Principles

The planning and urban design principles listed above provide a sound framework for guiding the general location of buildings, land uses, common infrastructure and movement networks. However, in order to realise the goal of transforming Kingsway City from a suburban shopping centre into a more integrated town centre, more detailed architectural and landscape design principles are also needed.

The following principles, which are consistent with the development illustrated in the IDP, are intended to serve as guidelines for subsequent detailed architectural and landscape design on the Kingsway City site. Several of these guiding principles have been incorporated into specific provisions within Part 1:

4.4.1 Architectural Design Principles

- Buildings should be a minimum of two storeys in height. Where two stories are not viable, buildings should present a parapet elevation to the adjacent streetscape which is two-storeys in scale, except for the core 'main street' area where two storey development is a mandatory minimum;
- Where a building presents to a public or private street, areas of wall on the ground floor without openings should not exceed 10 metres;
- Where a building presents to a public or private street, at least 70 percent of the ground floor elevation should be glazed;
- Any building or tenancy with street frontage whether a public or private street, should have its primary public entrance from the street;
- Where the elevation includes glazing adjacent to a footpath, a canopy should project out above the footpath for a minimum of 3 metres to provide weather protection to pedestrians;
- All buildings adjacent to a pedestrian footpath should provide for the opportunity of passive surveillance of the adjacent footpath;
- The incorporation of residential development at the upper levels of all buildings is to be encouraged;
- Any cinema, or similar entertainment use, should be directly accessible from either the main street or the town square;
- Buildings should maintain a reasonable consistency of wall materials. Acceptable wall materials include: red brick; painted concrete; painted smooth-rendered masonry; or a smooth-finished concrete panel. Mineral fibre sheeting, timber or timber look-alike sheeting, or metal sheeting is only acceptable as a secondary feature material;
- All buildings should maintain a parapet wall to the surrounding streetscape. Domestic-scaled pitched roofs will not be acceptable within the Structure Plan Area;
- Corner buildings should be articulated on both side elevations that face streets, and the corner to express and reinforce the corner situation;
- All buildings should incorporate passive solar design principles wherever possible to minimise energy use for winter heating and summer cooling;
- Where possible, buildings should avoid excessive overshadowing of public spaces such as the town square and the main street;

- Buildings within the development should avoid excessive overshadowing of adjacent development;
- Signage should be incorporated into the architectural design and comply with all relevant local authority requirements;
- Mechanical plant and equipment, refuse storage areas, and loading and other service areas should be screened from view of the adjacent streetscape;
- Mechanical plant and equipment likely to generate noise should be located or screened in a manner to reduce nuisance to nearby residential uses;
- The residential component of any development on the subject site should comply with the requirement of the R-IC (Inner city) coding of the Residential Design Codes of Western Australia (RD Codes);
- No artificial height limit should be placed on development within the subject site. Any limitation on the height of buildings should be determined with reference to the overshadowing and the wall height/ length to setback standards in the RD codes in respect to adjoining properties;
- All commercial buildings should be designed to incorporate the requirements of universal access.

4.4.2 Landscape Design Principles

- High quality landscaping treatment should be provided along the external street frontage of the subject site;
- The use of on-street car parking bays is encouraged wherever possible. Any areas of off-street uncovered at-grade parking should be planted with shade trees at the rate of 1 tree per 8 car parking bays;
- Dense shrubbery is not acceptable adjacent to footpaths;
- Sharp bends in pedestrian paths should be avoided. Where unavoidable, clear pedestrian sightlines should be maintained through the bend;
- All of the main pedestrian routes should be adequately lit for safe use after dark;
- All of the main pedestrian routes should be provided with shade, either by means of a canopy structure, pergola or shade trees;
- Footpath levels and the consistency of paving treatment should be maintained at traffic and pedestrian crossover points to imply priority for pedestrian movement;
- Footpath widths on the main street and the town square should be sufficient to allow for at least one rank of alfresco dining without restricting movement along the footpath;

- Public seating and litter bins should be provided in the main public spaces, such as the town square and the main street;
- The incorporation of public art into the main public spaces, such as the town square and the main street, is to be encouraged.

4.5 Development Control Plan

While the IDP provides in effect a visionary example of how development may occur on the subject site if all of the previously mentioned planning and urban design principles are adopted, it is only one interpretation of those principles. To maintain a degree of flexibility on how those principles might be interpreted by different designers in the future, the IDP has also been transposed into a *Development Control Plan*, which has been produced to illustrate the principles that provide the foundation for the IDP, without dictating a specific built form. The Development Control Plan has been given statutory weight in the structure plan, and is therefore included within Part 1.

4.6 Stage 1 Development

It needs to be recognised that the IDP is a long term vision of Kingsway City's development potential that may take many years to fully implement. Stage 1 of additional development following approval of this structure plan has been agreed between the centre owner, the City of Wanneroo and the WAPC. Detailed provisions relating to the staging of development have been included in Part 1 (Section 6). In summary, Stage 1 will comprise:

- The main shopping centre extension;
- The town square;
- Some commercial tenancies on the main street;
- The civic and cultural facility;
- A minimum of 1,000 sqm of office floorspace;
- A minimum of 2,000 sqm of residential floorspace;
- Additional car parking;
- Construction of Bellerive Boulevard;
- All required infrastructure.

The structure plan also requires that, prior to any significant Stage 1 development, agreements with the City will be required to facilitate relocation of the proposed civic and cultural facility from its current peripheral location to its town square location, and completion of Bellerive Boulevard. Satisfactory arrangements for transferring any privately owned land required for Hepburn Avenue will also need to be made with the Commission.

4.7 Future Land Use & Parking

Estimates for the existing, intermediate and longer-term future parking provision for Kingsway City are tabulated in Table 5. These estimates are indicative and are presented for preliminary information purposes only. Part 1 of the structure plan requires (clause 5.11.(iii)) that, prior to lodgement of a development application for Stage 1, a comprehensive car parking study needs to be prepared.

Table 5 Kingsway City: Existing and Proposed Land Use

Component	Existing Floorspace (sqm NLA)	Car Bays	Floorspace after Stage 1 (sqm NLA)	Car Bays	Long-Term Floorspace (sqm NLA)	Car Bays
Main Shopping Centre	17,340	1,159	31,915	2,050	31,915	2,050
Auto Service Area	690	16	690	30	-	-
Fast Food Outlets	490	52	490	110	-	-
Mixed Use/ Business	2,910	227	5,230	256	22,250	1,851
Health Club	1,000	29	1,000	30	1,000	30
Service Station East	270	10	270	10	-	-
Cinema	-	-	4,100	425	4,100	425
Total	***22,700***	***1,493***	***43,695***	***2,911***	***59,265***	***4,356***

NOTES:
Long-term floorspace is indicative only and excludes that for apartments
In addition to the above, approximately 395 residential apartments are envisaged in the IDP

It is envisaged that the long-term floorspace will be achieved over time through several separate development applications submitted in a staged progression, dependent on feasibility. Figure 11 and Table 6 show in detail how the long-term figures for the Mixed Use/ Business component have been calculated, although it needs to be borne in mind that these estimates are presented as a possible example of the longer term outcome only.

Figure 11 Kingsway City: Long Term Redevelopment Opportunities

Table 6 Kingsway City: Indicative Additional Development Potential (Long-Term)

Area	Apartments	Non-residential floorspace (sqm)	Additional car bays
Area A	30	-	50
Area B	10	450	110
Area C	20	450	90
Area D	30	900	150
Area E	30	1,250	35
Area F	40	500	20
Area G	55	3,700	320
Area H	50	1,900	10
Area J	20	3,750	200
Area K	40	2,500	-
Area L	-	1,000	30
Area M	-	2,250	70
Area N	70	3,600	160
General *	-	-	200
Total	***395***	***22,250***	***1,445***

As indicated in Table 6, some 395 residential apartments are envisaged in the mixed use development areas in the east, south and west of the site. Non-residential floorspace could comprise any combination of office, civic and entertainment uses. While the full development potential should be regarded as long-term, development of areas A to G could prove to be feasible in the medium or even short terms. Depending on the details of various development applications, not all of the additional parking potential indicated in Table 6 may be required.

4.8 Transport

Transcore Pty Ltd was commissioned to review the transportation aspects of the proposed Kingsway City structure plan and estimate any future impact of the proposed development on traffic in the locality. The adequacy of car parking provision was also assessed. This section summarises the main conclusions of Transcore's report, with the complete report being attached as Appendix A to this document.

Note (2010): For the record, the original Transcore study, which was prepared in July 2006 and included within Version 1 of this Explanatory Report (and summarised below) is still presented in Appendix A of this Version 2, together with a traffic study "Update Report" that was prepared in December 2007 and was therefore not included in Version 1 of this report. Both the transport reports were based on Version 1 of the structure plan, and are thus in some respects out of date. However, it is considered important that the reports still be included in this Version 2 report for ease of future reference.

Part 1 of the structure plan now requires that, prior to lodgement of a development application for Stage 1, a comprehensive transport study needs to be produced that assesses on and offsite impacts for all transport modes, as well as infrastructure requirements for both short and long term

development. It is intended that this requirement will be met by expanding the scope of the previous Transcore studies to incorporate modifications to the structure plan that have been agreed since the original studies were carried out, as well as including all the aspects now requiring to be addressed in the future comprehensive transport study.

4.8.1 Traffic

The Traffic Impact Study assessed the operational characteristics of existing centre traffic and estimated the additional traffic that would be generated by the proposed future development. The result of this analysis indicates that the proposed expansion of retail floor space in the Centre will not have a significant impact on the traffic operations of the signalised intersection of Wanneroo Road/ Hepburn Avenue, or the centre's existing four entry/ exit crossovers.

The signalised intersection and the four existing crossovers would continue to operate with about the same Level of Service that now exists. The two proposed new access points from Bellerive Boulevard – which in turn would be extended to form a connection between Kingsway Road and Hepburn Avenue – and the modification of one of the existing crossovers to allow right turns from Wanneroo Road into the centre, would assist in reducing the impact through better and more effective distribution of traffic.

The analysis was undertaken for the typical busiest days of the year, which are accepted as being the Thursday and Saturday before Christmas. As the analysis results indicate that the traffic operations at each of the unsignalised access crossovers would be satisfactory on these days, it can be concluded that the traffic operations would be satisfactory during the entire year.

The City of Wanneroo is currently undertaking a study to improve the capacity and level of service at the signalised intersection of Giralt Road/ Hepburn Avenue) as the existing intersection is not operating satisfactorily. It is expected that the intersection would be able to operate more efficiently with the implementation of the proposed right-turn lanes along Hepburn Avenue and give-way lanes along the Hepburn Avenue westbound approach and the Giralt Avenue northbound approach.

4.8.2 Parking

The result of the parking utilisation surveys, undertaken during the typical busiest Thursday and Saturday of the year, indicate that there is currently an oversupply of parking at the Centre. During the typical highest day of the year (ie. the Saturday before Christmas), the parking utilisation at the Centre was only 85 percent.

Under the proposed interim development scenario, the car parking requirement is estimated to increase to 2,894 bays. Applying the peak parking

utilisation rate of 85 percent, the estimated utilisation would be only 2,460 bays.

The proposed Stage 1 development includes parking provision of 2,911 bays, which is 451 bays more than the demand that would arise from the Stage 1 expansion. Therefore, it is concluded that there would be sufficient parking bays to service the proposed short-term development of the Centre. Additional longer-term development will require additional parking appropriate to the mix of uses planned at the time.

4.8.3 Public Transport

Public transport to and from Kingsway City, currently provided by numerous existing bus services along both Wanneroo Road and Hepburn Avenue, is likely to continue in much the same manner for the foreseeable future. The existing bus terminal and its embayment within Kingsway's circulatory network would be maintained. The proposed general location of all bus stops is illustrated in Diagram 9 of the Development Control Plan in Part 1.

4.8.4 Pedestrians and Cyclists

A comprehensive and accessible pedestrian network within the Activity Centre is proposed to be integrated with the existing cycling and pedestrian network in the surrounding locality. This in turn links into the wider district and regional cycling network. The proposed general location of cycle routes and bike parking facilities is illustrated in Diagram 8 of the Development Control Plan in Part 1.

4.8.5 Mixed Use Development

The Indicative Development Plan includes a longer-tern vision including residential apartments and additional commercial floorspace in several mixed-use developments. The additional volume of private car trips generated by these developments is expected to be accommodated by the surrounding road network. Part of the rationale for mixed-use development is reduced car dependency and this factor, combined with readily available public transport, is expected to result in reduced trip generation rates for at least some of the mixed-use development. The more specific traffic implications of the longer-term mixed use developments can only be determined when details are assessed at the appropriate time.

4.9 Civic & Cultural Uses

As indicated in Figure 5 on Page 8, there is currently a large parcel of land zoned for Civic & Cultural purposes in the north-eastern corner of the site. It is considered that this land would be better utilised for a future medium-rise mixed-use/ residential development, and that any civic and cultural uses within the activity centre would be more accessible and better used if they

were integrated into the main development. In addition to commercial community facilities such as the existing medical centre, health club and proposed cinemas, non-commercial civic and cultural facilities specifically proposed in the structure plan are:

- A Town Square at the main southern entry to the centre;
- A Council branch library to be located adjacent to the Town Square (see Diagram 1 of the Development Control Plan in Part 1).

Re-planning the land currently zoned Civic & Cultural, and provision of the library (the inclusion of which in the Centre has been specifically requested by the City of Wanneroo) will necessitate the renegotiation of some aspects of the current agreement between the City of Wanneroo and the centre's owner. Clause 6.1.(i) of Part 1 requires this agreement to be entered into prior to Council determining a development application for Part 1.

4.10 Employment Potential

Creation of more employment opportunities within its municipality is one of the most important challenges faced by the City of Wanneroo. Failure to adequately address this issue will have serious consequences for the transport system (both private and public) as it struggles to accommodate mass long distance commuting by the resident population – a situation which is ultimately unsustainable. This has been demonstrated in several studies, one of which dates back to the early 1980's[3].

4.10.1 Employment Policy

This reality has prompted the City of Wanneroo to produce its Employment Policy (implemented December 2003, reviewed December 2006), the main purpose of which is "to establish a framework to encourage and retain local employment within the City of Wanneroo and ultimately the North West Corridor". The policy provides a set of "Priority" and "Optional" strategy components, several of which are relevant to the proposed structure plan namely:

<u>Priority Strategies</u>

- Employment supportive designs;
- Employment supportive land uses;
- Flexible use developments within main street or retail centres;
- Adherence to the principles of the Smart Growth Strategy.

<u>Optional Strategies</u>

- Business attraction;

[3] Joondalup Centre Development Plan; Part 1 – Structure Plan; Joondalup Development Corporation; October 1982.

- Family day care;
- Support home based business.

Kingsway City will play a key role in providing employment as part of its basic function as a significant mixed-use activity centre. Although the structure plan proposes a considerable amount of integrated residential development, which will support some home-based business, there is no doubt that it is the commercial uses which are most "employment supportive".

4.10.2 The Employment Challenge

Employment cannot simply be "provided" wherever and in whatever quantities might be required to suit various physical, social and/ or economic objectives. Employment is a result of the economic activity of private business organisations and a wide range of government and semi-government service agencies. In particular it is the ***location decisions*** of firms and government agencies/ service providers that in large measure determine where employment is located throughout the Metropolitan Region.

Some employment generating activities are a natural by-product of urban expansion (e.g. education, local shopping, household service businesses), but this 'natural' activity will not be sufficient to satisfy the City's longer-term employment objectives. The challenge for the City of Wanneroo is therefore to ensure that it is attractive for sufficient non-local businesses, which could potentially locate elsewhere within the Region. Fundamentally, the location decisions of firms are based on maximising profits, the potential for which varies geographically according to factors such as:

- Land/ building costs – other things being equal, locations with lower land and/ or building costs will result in higher profits.
- Transport costs – locations with lower transport costs, for both inputs and final products to market, will contribute to higher profits.
- Localisation economies – the profit of some firms is influenced by proximity to other firms in the same or related industries, while others may benefit from particular local characteristics (e.g. boat hire at a coastal node).

American research[4] indicates that the location decision of many firms is basically a two-phase process involving a "general area" decision, followed by a "particular site" decision. In relation to the general area decision, the most important influences are:

- Good infrastructure;
- Proximity to customers/ markets;

[4] Service Firm Location Decisions: Some Midwestern Evidence; Roger W. Schmenner; International Journal of Service Industry Management; Vol 5, Issue 3; 1994.

- Accessibility to qualified employees.

In relation to the particular site decision, the most important influences are:

- Availability of parking;
- An appropriately designed building which satisfies spatial requirements;
- A competitive cost or rental.

It is considered that the provision of ***"particular sites"*** for business activity within the City of Wanneroo can be readily accomplished through the established urban planning process which allocates sufficient well-located land for commercial, industrial and institutional purposes, and facilitates its timely development. This is one of the main objectives of urban planning generally.

The main focus of the City of Wanneroo's employment policy, therefore needs to be on making the City attractive to business in terms of the "general area decision", so that the available land will be taken up by potentially non-local business organisations, as well as those local firms which would normally be expected to accompany urban expansion.

4.10.3 Employment in Kingsway City

Kingsway City has the potential to become a significant employment focus in the City of Wanneroo for the following reasons:

- The currently developable land on the site can facilitate a significant amount of new retail and non-retail commercial development providing many new employment opportunities at the interface between established and developing areas.
- The population growth expected in Kingsway's primary catchment area will result in a significant increase in the workforce in this area. The proposed development of Kingsway City will provide locally-based job opportunities for many members of the new local workforce.
- A large proportion of the proposed new development is to be retail development, which is one of the most significant potential employers in the City, due to the relatively large numbers of people required by the industry and because of its potential to employ young people on both a full and part time basis.
- Kingsway's location at the corner of two major arterial roads – Wanneroo Road and Hepburn Avenue – which accommodate public transport services as well as private transport, provides it with excellent overall accessibility to the wider region, which is a distinct locational advantage and attraction for business.

- Kingsway's close proximity to a major general industrial area (Wangara) will be an advantage for many service/ support activities, which could conveniently service the area from Kingsway City.

In 2001/ 02 approximately 770 people were employed in Kingsway City. Table 7 indicates the amount of employment likely to be provided by the activity centre in both the interim and longer terms.

Table 7 Kingsway City Estimated Future Employment

SP Component	Average Sqm per Employee*	Stage 1 Development Commercial (sqm NLA)	Employees	Long-Term development Commercial (sqm NLA)	Employees
Retail	30	31,915	1,064	31,915	1,064
Office	26	1,000	38	11,500	442
Showrooms	80	4,230	53	6,350	79
Other Commercial	100	6,550	66	7,500	75
Home Business	50	-	-	2,000	40
Sub-Total	***36***	***43,695***	***1,221***	***59,265***	***1,656***

NOTES:
**Based on averages derived from DP Commercial & Industrial Land Use Survey*
The composition of non-retail floorspace is indicative only and subject to change

As indicated in Table 7, it is anticipated that approximately 1,220 people would be employed in the centre after development of Stage 1 (450 more than were employed in 2001/ 02). Looking to the longer term, it is estimated that there is potential for the centre to employ some 1,650 people, which is 880 more than were employed in the centre 2001/ 02.

While the extent of retail floorspace, and thus retail employment, can be fairly confidently estimated at this stage, estimates of the other types of floorspace and employment should be regarded as less certain. Notwithstanding this point, it is clear that Kingsway City will – if developed to the potential illustrated in the Indicative Development Plan – have the capacity to make a significant contribution toward employment growth in the City of Wanneroo.

5 IMPACT ASSESSMENT

Previous sections of this report have described the proposed structure plan in some detail, and explained its rationale. A major feature of the structure plan is the plan to expand the permissible retail floorspace from its current 15,000 sqm (Shop/ Retail NLA) to some 32,000 sqm. As discussed in the preceding section, the short and long-term employment opportunities presented by this development will clearly deliver many positive results for the community. There are, however, several understandable concerns about the potential negative impacts that the proposed retail expansion may have on other retail centres in the locality, and these are addressed in this section.

The following impact assessment is based on a detailed analysis assisted by a computerised centres model of the Perth Metropolitan Region. A full description of the model, and copies of the detailed output summary sheets for each of the modelled scenarios is provided at Appendix B.

Note (2010): For the record, the original impact assessment is still presented in the following sub-sections, with technical information provided in Appendix B, as per Version 1 of this Explanatory Report. However, during the SAT proceedings that culminated in eventual approval of a modified structure plan, some additional retail modelling was carried out as a check/ confirmation on the results and conclusions of the original assessment. This new material, with some explanatory comment, has been added to the end of Appendix B in this Version 2 of the report.

5.1 Centre Performance

One of the most persuasive commercial reasons for expanding the retail component of Kingsway City relates to its existing strong retail performance, in a context where the centre's "natural" retail catchment is, as yet, nowhere near fully populated. This opportunity is very apparent to various commercial interests, for example Coles Myer has expressed its strong interest in establishing a Coles supermarket and Target discount department store in Kingsway City. (Refer to Appendix C).

There have been significant increases in the performance of Kingsway City every year since its opening. Table 8 compares the 2005/06 performance figures of the Shop/ Retail floorspace in the centre with the situation four years prior during 2001/02.

Table 8 Kingsway City Trade of Shop/ Retail Floorspace 2001/02 and 2005/06

Category (Shop/ Retail Only)	2001/02 Fspace (sqm NLA)	2001/02 Trade	2001/02 $/sqm	2005/06 F-space (sqm NLA)	2005/06 Trade	2005/06 $/sqm
Food & Groceries						
Woolworths	4,028	$40,231,305	$9,988	4,028	$39,216,253	$9,736
Other Food	435	$1,855,535	$4,263	508	$4,066,670	$7,999
sub-tot	*4,463*	*$42,086,840*	*$9,430*	*4,536*	*$43,282,923*	*$9,541*
Liquor	203	$3,862,244	$19,073	203	$4,594,651	$22,690
sub-tot	*4,666*	*$45,949,084*	*$9,848*	*4,739*	*$47,877,574*	*$10,103*
Eating	944	$4,918,591	$5,213	1,187	$8,086,310	$6,811
Total Food	***5,609***	***$50,867,675***	***$9,068***	***5,926***	***$55,963,884***	***$9,443***
Non-Food						
Big W	6,882	$18,420,796	$2,677	6,882	$22,485,544	$3,267
Other Non-Food	2,731	$11,183,705	$4,095	3,586	$15,440,502	$4,306
Total Non-Food	**9,613**	**$29,604,501**	**$3,080**	**10,468**	**$37,926,046**	**$3,623**
Total Shop Retail	***15,222***	***$80,472,176***	***$5,286***	***16,394***	***$93,889,930***	***$5,727***

Source: Kingsway City Shopping Centre; Department for Planning & Infrastructure

Points worthy of note in Table 8 are:

- In the four years separating the two periods presented, retail sales and resulting floorspace performance in Kingsway City have increased significantly in both the “Food & Groceries” and “Non-Food” categories.
- Between 2001/02 and 2005/06, after a period of very rapid growth, Woolworth’s annual sales appear to have stabilised at around $39.20 million, producing a floorspace performance of $9,988 per sqm per annum in 2001/02 and $9,736 in 2005/06. This was significantly above the Australian average of $9,067 per sqm per annum for full range chain supermarkets in single metropolitan DDS-based centres[5].
- The increase in the performance of the “Other Food” category was by far the most significant, with a 119 percent increase in total sales from $1.86 million in 2001/02 to $4.06 million over the period. The increase in turnover performance per sqm in this category was 87.6 percent.
- The growth in the performance of “Non-Food“ floorspace was also quite considerable, with turnover per square metre increasing from an average of $3,080 per sqm per annum to $3,623 per sqm per annum – an increase of 17.6 percent.

5.2 Model Calibration

In order to calibrate the model against actual results, the respondents of the in-centre survey (discussed on Page 27 of this report) who were not employees in the centre were asked to identify from a map the Main Roads Zone (MRZ) in which they lived. The model was then run for the year 2003

[5] Source: JHD Retail Averages; March 2005

and calibrated to ensure that the retail turnover for Kingsway City (separate Food and Non-Food categories), that the model was predicting, reasonably accurately reflected the actual turnover of the centre at that time, as reported by the centre owner.

The trade distribution predicted by the model was then compared to the customer distribution pattern as revealed by the shopper survey using regression analysis. The correlation coefficient of this comparison was calculated at 75 percent. When four apparently anomalous results from the modelling were removed from the zone set being analysed (a total of 61 zones in all), the correlation coefficient increased to 87 percent. These results are considered satisfactory for the purposes of a long term predictive exercise of this type, and for this reason the model results are considered to provide a reliable indication of the potential implications of the centre's development.

5.3 Development Scenarios

The proposed expansion of Kingsway City is to include both retail and non-retail components. In terms of total retail floorspace (sqm NLA) the following development is proposed for the Kingsway City shopping centre (Table 9).

Table 9 Proposed Development (Total Retail Floorspace Only)

Stage	Food	Non-Food	Total Stage	Total Centre
1 (existing)	5,926	10,468	16,394	16,394
2 (2011 Addition)	4,700	10,906	15,606	32,000
Total	***10,626***	***21,374***	***32,000***	***32,000***

Source: Tah Land Pty Ltd

To assess the impact of the proposed expansion on other centres, the following scenarios were modelled:

1. 2006/ Existing: Kingsway City and Wanneroo Town Centre at their current retail floorspace;
2. 2011/ Base Case: Kingsway City and Wanneroo at their current retail floorspace; other centres expanded in accordance with current planning and/ or population growth;
3. 2011: As per 2. above but with Wanneroo expanded to 23,000 sqm in accordance with current planning;
4. 2011: As per 3. above, but with Kingsway City expanded to 32,000 sqm in accordance with this structure plan;
5. 2016: Kingsway City maintained at 32,000 sqm and Wanneroo expanded to 30,000 sqm in accordance with longer-term planning; other centres expanded in accordance with current planning and/ or population growth;
6. 2021: As per 5. above five years on;
7. 2026: As per 6. above five years on;
8. 2031: As per 7. above five years on.

As indicated by these descriptions, the main methodology employed in the analysis has been to:

- Establish a sound basis for measuring the impact of Kingsway's expansion;
- Measure the "immediate" impact of the expansion;
- Assess the longer-term implications of the expansion.

It is also evident from the scenario descriptions that considerable attention is being given to the impact of the proposed Kingsway expansion on the Wanneroo Town Centre. It is well known that there are firm plans to expand Wanneroo, which are being supported and actively facilitated by the City of Wanneroo and the WAPC. It is also known that one of the major concerns associated with the proposal to expand Kingsway City is the perceived potential negative impact on Wanneroo.

As this analysis demonstrates, such concerns (though understandable) are unfounded, largely because of the significant, separate, future "natural" population catchments relating to each of Wanneroo and Kingsway City. It should be noted that even though Wanneroo is the main focus of this impact assessment, impacts on all relevant centres are estimated by the model and the results presented.

5.4 The Existing Situation

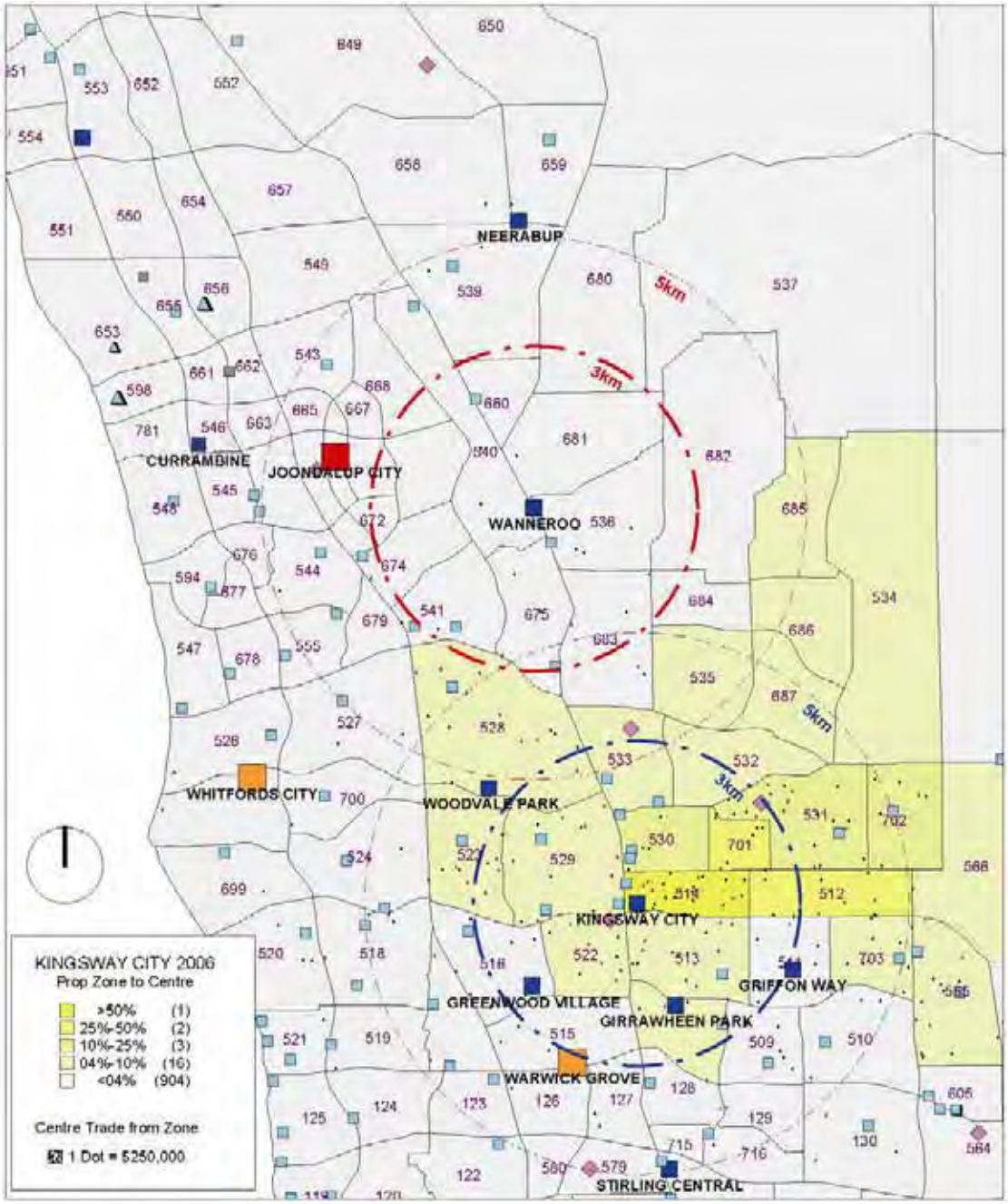
The modelling results for the various centre development scenarios are presented in full in Appendix B. Scenario 1 (2006) is an estimate of the current situation, which has been adapted for graphic representation of the estimated catchment areas for both Kingsway City (Figure 12) and Wanneroo (Figure 13). Both of the following diagrams show the current estimated catchment areas for each of the centres by illustrating two related aspects of the model's calculations:

1. The shaded areas are those MRZ's which are estimated to be of most geographic significance to each centre. The darker the shading of an MRZ, the higher the *proportion* of its spending potential is being attracted to the centre.
2. The dots graphically represent the actual trade from each MRZ being attracted to the centre. Therefore, the greater the concentration of dots, the greater is the MRZ's contribution to the centre's actual trade. Each dot represents $250,000.

It can be appreciated that the MRZ's of most significance to a centre will be those indicating ***both*** dark shading and many dots. Zones that are dark shaded with few dots are *potentially* very important to the centre geographically, but are underpopulated and therefore not contributing much

actual trade to the centre. Any population growth in these zones will be more beneficial to the centre than equivalent population growth in a lighter-shaded zone.

Figure 12 Estimated Main Catchment Area, 2006: Kingsway City



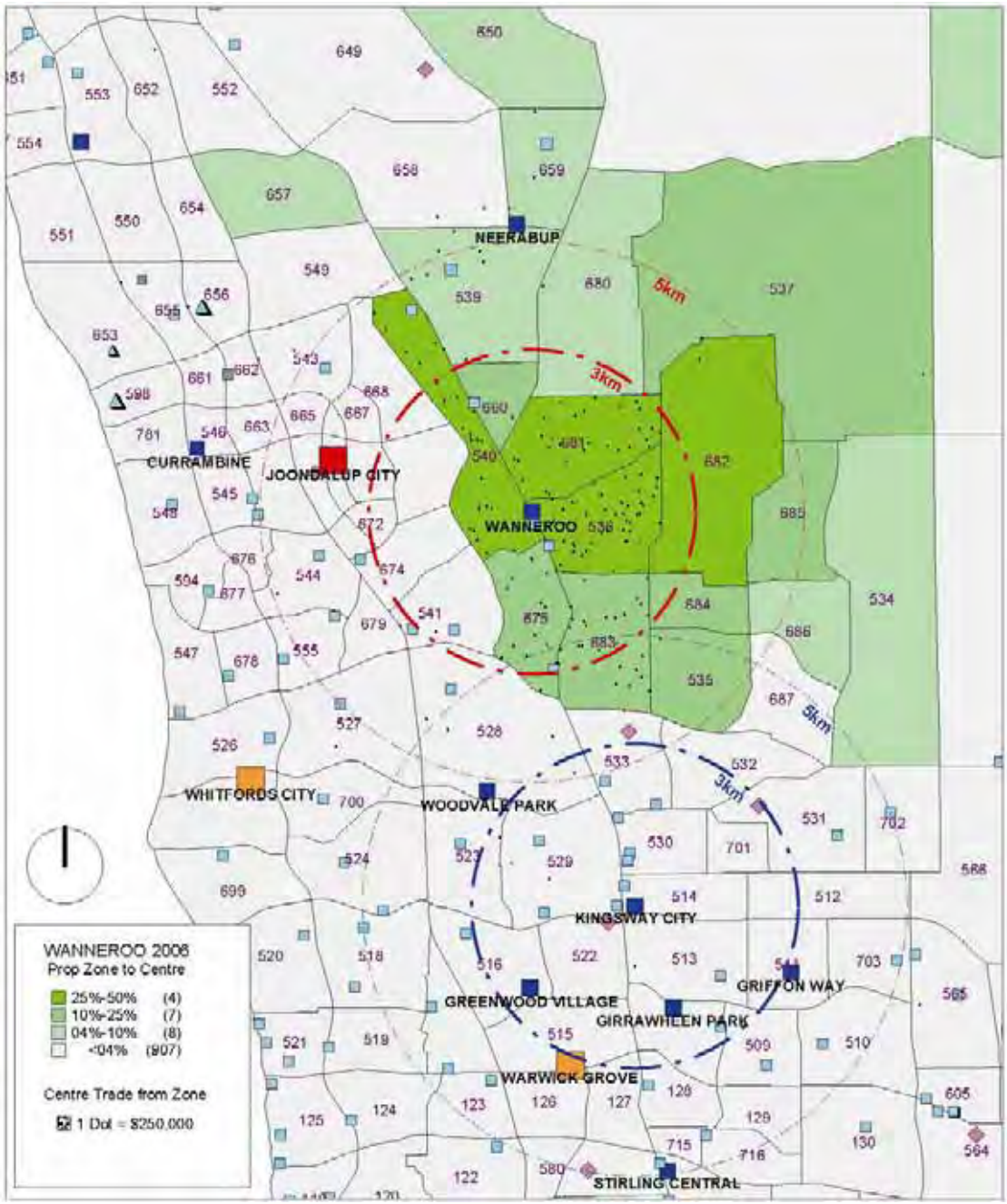
With this in mind, points worthy of note in Figure 12 are:

- The primary catchment area for Kingsway City, (in this case comprising the six most geographically significant MRZ's), is concentrated to the north and east of the centre.

- This area extends in a northerly direction only as far as MRZ 530, which falls well within Kingsway's 3km radius. However, the area extends more than 5km to the east, to include MRZ 702.
- Of the secondary catchment area zones (those from which the centre only attracts between 4 and 10 percent of the retail potential), none extends further north than the 3km radius around Wanneroo.

Figure 13 is based on the same modelled scenario as in Figure 12, but illustrates the catchment area for the Wanneroo Town Centre.

Figure 13 Estimated Main Catchment Area, 2006: Wanneroo Town Centre



Points worthy of note in Figure 13 are:

- The eleven most geographically significant zones for Wanneroo (which constitute the primary catchment area) are located to the north, south and east of the Wanneroo Town Centre.
- This area extends to the 5km radius in the southerly direction, and beyond it to the north-east.
- Apart from the elongated section of MRZ 540, this area only extends to the 3km radius in the northerly direction, due mainly to the influence of Joondalup, which is more accessible to the northern MRZ's. (In this 2006 scenario Neerabup district centre has no retail floorspace as yet).
- A comparison between Figure 13 and Figure 12 clearly shows that the MRZ in the area of overlap of the two centres' 5km radii are of somewhat greater significance to Wanneroo than to Kingsway. This is a positive for Wanneroo.

The above analysis demonstrates how each of the centres has its own fairly well defined primary catchment area. The centres are sufficiently far apart so that the primary catchment areas of both centres do not overlap. Only the secondary areas overlap, albeit to a fairly minimal extent. Similar diagrams are presented later in this report which demonstrate that this coexistence can be maintained in the future, even with both centres significantly expanded. The presence of discrete primary catchments for each centre is the main reason that the proposed major expansion of Kingsway City does not impact unduly on the expansion potential of Wanneroo.

5.5 Initial Impact Estimates

Scenarios 1 to 3 do not envisage any expansion of Kingsway City. The initial impact of the proposed expansion of the centre is estimated by a comparison of the results of Scenario 3 with those of Scenario 4. In Scenario 3 it is assumed that Wanneroo will have expanded to some 23,000 sqm of retail floorspace by 2011, but Kingsway will remain the same. The proposed expansion of Wanneroo appears to be fully supported by the relevant planning authorities, so it is taken to be a "given" in this analysis.

Scenario 4 envisages that Kingsway City will also expand to its full retail potential of 32,000 sqm by 2011. There is ***no other difference*** between Scenarios 3 and 4, so the comparison between these two scenarios therefore represents the potential impact of Kingsway City's expansion on the other centres in the locality and district, including Wanneroo. A comparison of these modelled results is presented in Table 10.

Table 10 Estimated Impact of Proposed Expansion of Kingsway City: 2011

Scenario Years…			Scenario 3		Scenario 4	
S3 2011				Trade ($million)		Percentage
S4 2011			Total Retail	Kingsway	Kingsway	Change
MR		Reg / Dist	Floorspace	As is	Expand to	Between
Zone	SUBURB	Centre Name	(sqm)		32,000 sqm	Scenarios
514	LANDSDALE	KINGSWAY CITY	16,574	$102.54	$183.46	78.9%
536	WANNEROO	WANNEROO	23,095	$132.97	$130.21	-2.1%
670	JOONDALUP	JOONDALUP CITY	90,000	$373.35	$369.27	-1.1%
515	WARWICK	WARWICK GROVE	34,110	$202.07	$197.27	-2.4%
508	GIRRAWHEEN	GIRRAWHEEN PARK	11,876	$50.53	$48.62	-3.8%
511	MARANGAROO	GRIFFON WAY	12,000	$71.93	$69.35	-3.6%
516	GREENWOOD	GREENWOOD VILLAGE	10,288	$42.80	$41.45	-3.2%
528	WOODVALE	WOODVALE PARK	9,683	$50.68	$48.73	-3.8%
513	MARANGAROO	-	494	$2.59	$2.47	-4.6%
522	GREENWOOD	-	4,549	$12.88	$12.48	-3.1%
529	KINGSLEY	-	1,010	$3.98	$3.82	-4.0%
530	LANDSDALE	-	1,918	$6.59	$6.19	-6.1%
532	WANGARA	-	-	$0.00	$0.00	0.0%
533	WANGARA	-	61,759	$95.06	$92.12	-3.1%
535	WANNEROO	-	-	$0.00	$0.00	0.0%
687	GNANGARA	-	-	$0.00	$0.00	0.0%
701	LANDSDALE	-	2,955	$6.56	$6.14	-6.4%
509	GIRRAWHEEN	-	570	$3.26	$3.16	-3.1%
512	LANDSDALE	-	2,048	$8.07	$7.23	-10.4%
523	KINGSLEY	-	3,378	$13.67	$13.21	-3.4%
531	LANDSDALE	-	900	$2.94	$2.76	-6.1%
684	WANNEROO	-	-	$0.00	$0.00	0.0%
686	GNANGARA	-	-	$0.00	$0.00	0.0%
702	LANDSDALE	-	619	$2.56	$2.38	-7.0%
703	ALEXANDER HTS	-	490	$2.59	$2.49	-3.9%
	Total		***288,316***	***$1,188***	***$1,243***	***4.6%***

Points worthy of note in Table 10 are:

- Calculated negative impacts range between 1.1 percent (MRZ 670 Joondalup) to 10.4 percent (MRZ 512 Landsdale).
- The significant majority of the negative impacts are below 5 percent. Of the 19 Zones in which negative impacts are listed, 14 are below 5 percent.
- The negative impact of the Kingsway City expansion on Wanneroo is estimated at only 2.1 percent, while on Girrawheen Park it is estimated at a relatively minor 3.8 percent.
- The most significant "impact" of 10.4 percent falls on an *assumed centre* of some 2,000 sqm in MRZ 512 – Landsdale.

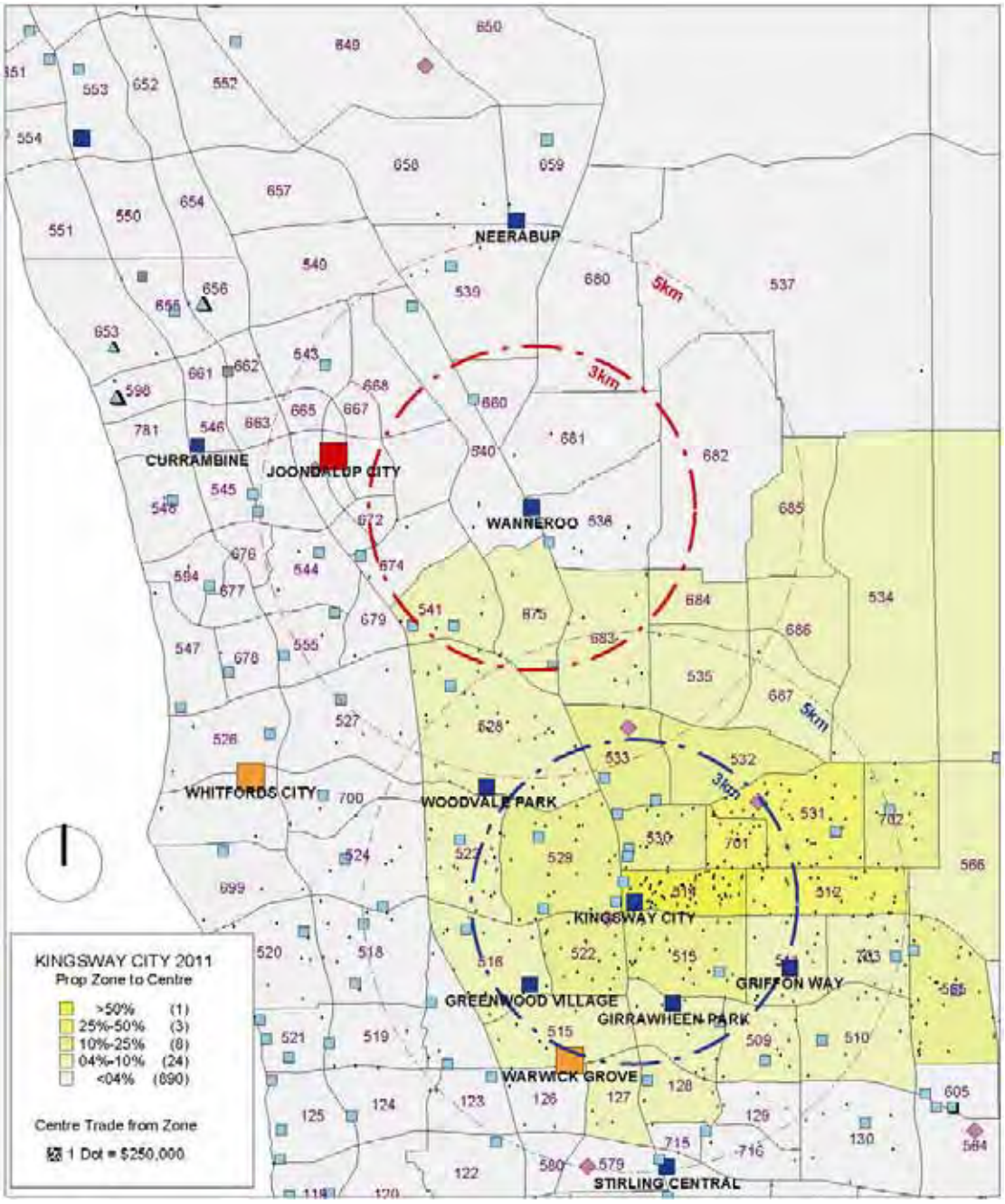
It should be noted that the impact referred to in this last point does not affect an *existing* centre. It has been assumed that by 2011 a planned neighbourhood centre will be developed in MRZ 512. Should this eventuate, it is estimated that the centre would trade at about 10 percent below what it would, if Kingsway did not expand. In this situation the negative impact is

therefore on potential, rather than actual trade; so it is quite different to the impact experience of an actual centre. Furthermore, as population growth in MRZ 512 continues beyond 2011, it is estimated that the performance of any neighbourhood centres in the zone will increase beyond their estimated potential in 2011, without Kingsway City's expansion.

5.5.1 The Catchment Areas in 2011

The expanded influence associated with the increase in size of both Kingsway City and the Wanneroo Town Centre is evident in the catchment area calculations for Scenario 4. Figure 14 shows the 2011 catchment area of an expanded Kingsway and Figure 15 shows the equivalent for Wanneroo.

Figure 14 Scenario 4: Estimated Main Catchment Area, 2011 – Kingsway City

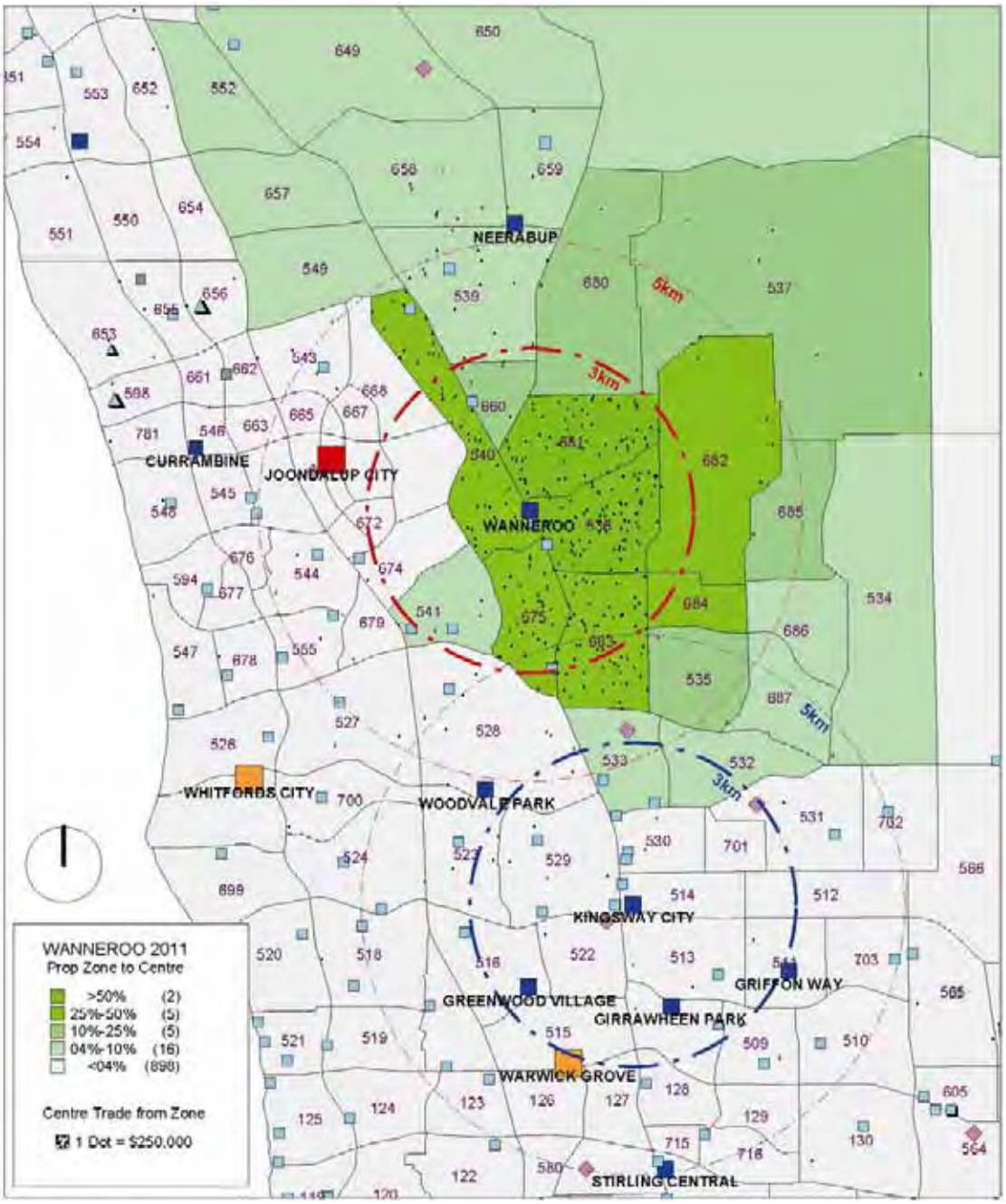


Significant points from Figure 14 are:

- The number of MRZ's comprising the primary catchment area has increased from 6 (Figure 12 on Page 47) to 12. To the north these extend to MRZ 532 and 533, which straddle the 3km radius. Once again, it is only in the easterly direction that the primary trade area extends to or beyond the 5km radius.
- The secondary catchment area (comprising the 24 MRZ's contributing between 4 and 10 percent of their retail potential to Kingsway City) is extended quite considerably to the north and south. This indicates that an expanded Kingsway City would certainly expand its market share into these areas, but only up to the 10 percent level. It is this fairly wide spread of small proportional market share increases that contributes to Kingsway's increased trading levels, while resulting in relatively low negative impacts over a wide area.
- Of most significance to Kingsway City, however, is the large increase in the number of dots within its most important MRZ's: 514, 512, 531 and 701. This clearly demonstrates how it is the ***growing population*** within these areas that is the most important factor in Kingsway's expansion potential.

Figure 15 is based on exactly the same modelled scenario as in Figure 14, but illustrates the catchment area for the Wanneroo Town Centre.

Figure 15 Scenario 4: Estimated Main Catchment Area, 2011 – Wanneroo



Points to note from Figure 15 are:

- The number of MRZ's comprising the primary trade area has increased from 11 (Figure 13 on Page 48) to 12, although an increase in the shading intensity is clearly evident (for example the number of MRZ contributing 25 percent or more of their potential to the centre has increased from 4 in 2006 to 7). This intensification has mainly occurred in the southerly direction.
- The secondary trade area (now comprising the 16 MRZ contributing between 4 and 10 percent of their retail potential to Kingsway City as

opposed to the 8 in Figure 13) is extended very significantly to both the north and south.

- Of most significance by far to the Wanneroo Town Centre is the large increase in the number of dots within its most important MRZ's, almost all of which fall within its 3km radius. This demonstrates that it is the growing population within these areas of most geographic importance to Wanneroo which is sustaining its expansion potential, ***virtually regardless of what happens at Kingsway City***.

The preceding analysis indicates quite conclusively that both Wanneroo and Kingsway City can both be expanded substantially by 2011, and co-exist with minimal negative impact occurring to either. The two main reasons for this are:

1. The centres are ***far enough apart*** so that significantly large primary catchment areas can co-exist, without appreciable overlap between the two – the overlap that does occur is confined to the secondary trade areas of both centres; ***and***
2. The very significant short and medium term population growth projected within both of these primary catchment areas.

5.6 The Longer Term (10 Years)

By 2016 it is assumed that Wanneroo will have expanded to its longer term potential of more than 30,000 sqm. This scenario was modelled to confirm that the proposed expansion of Kingsway City would not inhibit Wanneroo's potential to achieve this greater size anytime after 2011. Table 11 compares the centre sizes and trade performance as at 2011 (Scenario 4) with those at 2016, assuming Wanneroo has by then expanded to 30,000 sqm (Scenario 5). It should be noted that by 2016 the expansion of several other centres is also assumed in the modelling.

Table 11 Comparison of Performance of Study Area Centres: 2011 and 2016 (with Wanneroo expanded to 30,000 sqm)

Scenario Years… S4 2011 S5 2016			Scenario 4		Scenario 5		
MR Zone	SUBURB	Reg / Dist Centre Name	Total Retail Floorspace (sqm)	Total Trade ($million)	Total Retail Floorspace (sqm)	Total Trade ($million)	Percent Change Between Scenarios
514	LANDSDALE	KINGSWAY CITY	32,181	$183.46	32,181	$200.83	9.5%
536	WANNEROO	WANNEROO	23,095	$130.21	30,095	$177.93	36.6%
670	JOONDALUP	JOONDALUP CITY	90,000	$369.27	95,000	$407.20	10.3%
515	WARWICK	WARWICK GROVE	34,110	$197.27	35,110	$205.26	4.1%
508	GIRRAWHEEN	GIRRAWHEEN PARK	11,876	$48.62	11,876	$48.86	0.5%
511	MARANGAROO	GRIFFON WAY	12,000	$69.35	12,000	$70.22	1.3%
516	GREENWOOD	GREENWOOD VILLAGE	10,288	$41.45	10,288	$41.86	1.0%
528	WOODVALE	WOODVALE PARK	9,683	$48.73	9,683	$48.92	0.4%
513	MARANGAROO	-	494	$2.47	494	$2.49	0.7%
522	GREENWOOD	-	4,549	$12.48	4,549	$12.75	2.2%
529	KINGSLEY	-	1,010	$3.82	1,010	$3.87	1.2%
530	LANDSDALE	-	1,918	$6.19	2,753	$9.94	60.6%
532	WANGARA	-	-	$0.00	-	$0.00	0.0%
533	WANGARA	-	61,759	$92.12	61,759	$99.79	8.3%
535	WANNEROO	-	-	$0.00	-	$0.00	0.0%
687	GNANGARA	-	-	$0.00	-	$0.00	0.0%
701	LANDSDALE	-	2,955	$6.14	2,955	$6.86	11.7%
509	GIRRAWHEEN	-	570	$3.16	570	$3.19	1.0%
512	LANDSDALE	-	2,048	$7.23	2,742	$10.76	48.9%
523	KINGSLEY	-	3,378	$13.21	3,378	$13.24	0.2%
531	LANDSDALE	-	900	$2.76	900	$3.09	11.9%
684	WANNEROO	-	-	$0.00	-	$0.00	0.0%
686	GNANGARA	-	-	$0.00	-	$0.00	0.0%
702	LANDSDALE	-	619	$2.38	829	$3.43	44.0%
703	ALEXANDER HTS	-	490	$2.49	490	$2.56	2.7%
	Total		***303,923***	***$1,242.81***	***318,662***	***$1,373.05***	***10.5%***

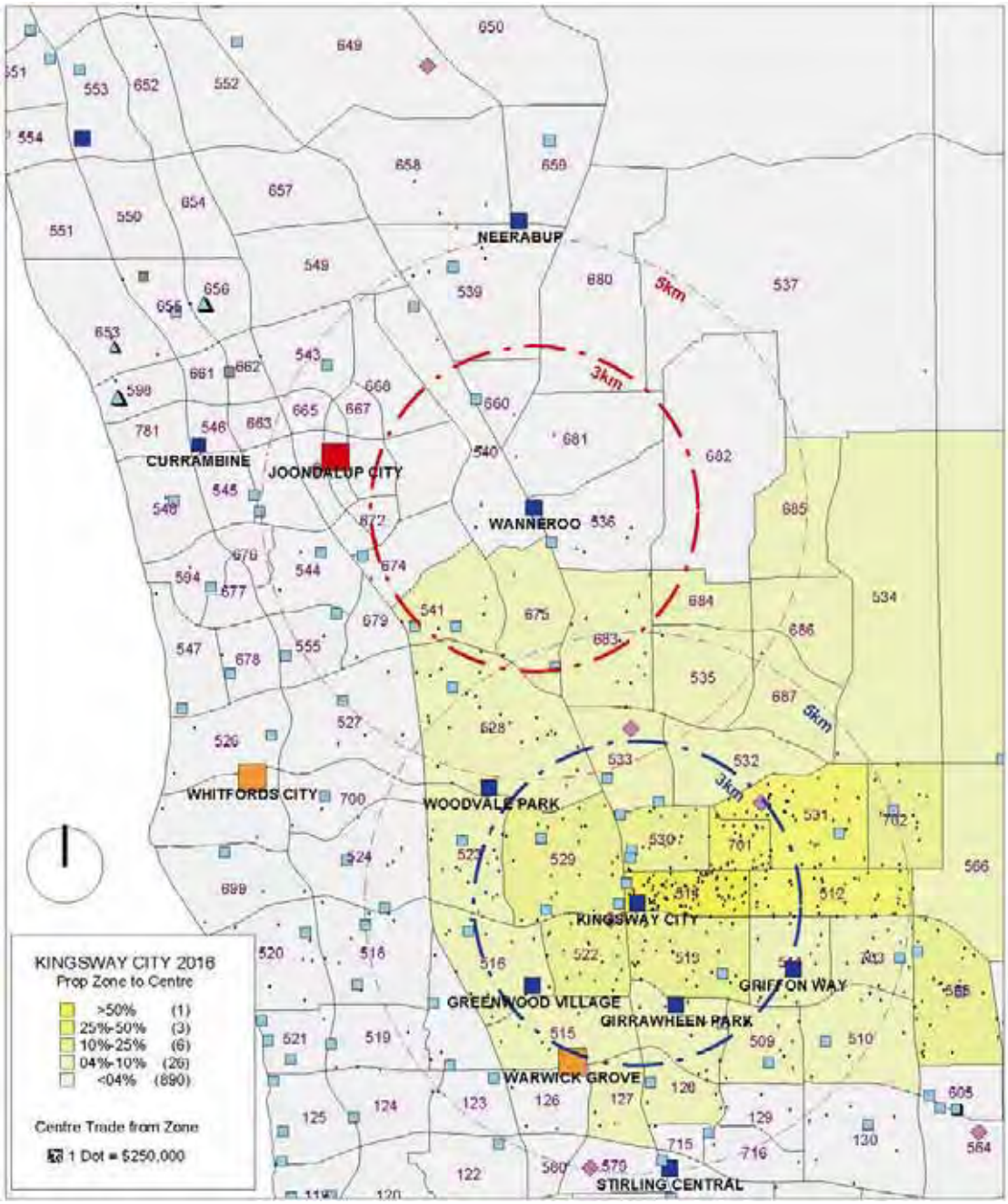
Points worthy of note in Table 11 include:

- At its expanded size, Kingsway City's performance is estimated to increase a further 9.5 percent between 2011 and 2016, even with the expansion of Wanneroo to 30,000 sqm, which will increase its trade by 36.6 percent.
- An increase in the performance of all other centres is anticipated. In some cases this is due to an increase in centre floorspace as well as market growth; in others the increase is due to market growth alone.

The main conclusion to be drawn from the analysis in Table 11 is that all of the proposed centre expansions can be accommodated, as a result of the strong population growth in their surrounding localities. The negative impacts resulting from Kingsway City's expansion in 2011 (see Table 10 on Page 50) have virtually dissipated by 2016, due to population growth.

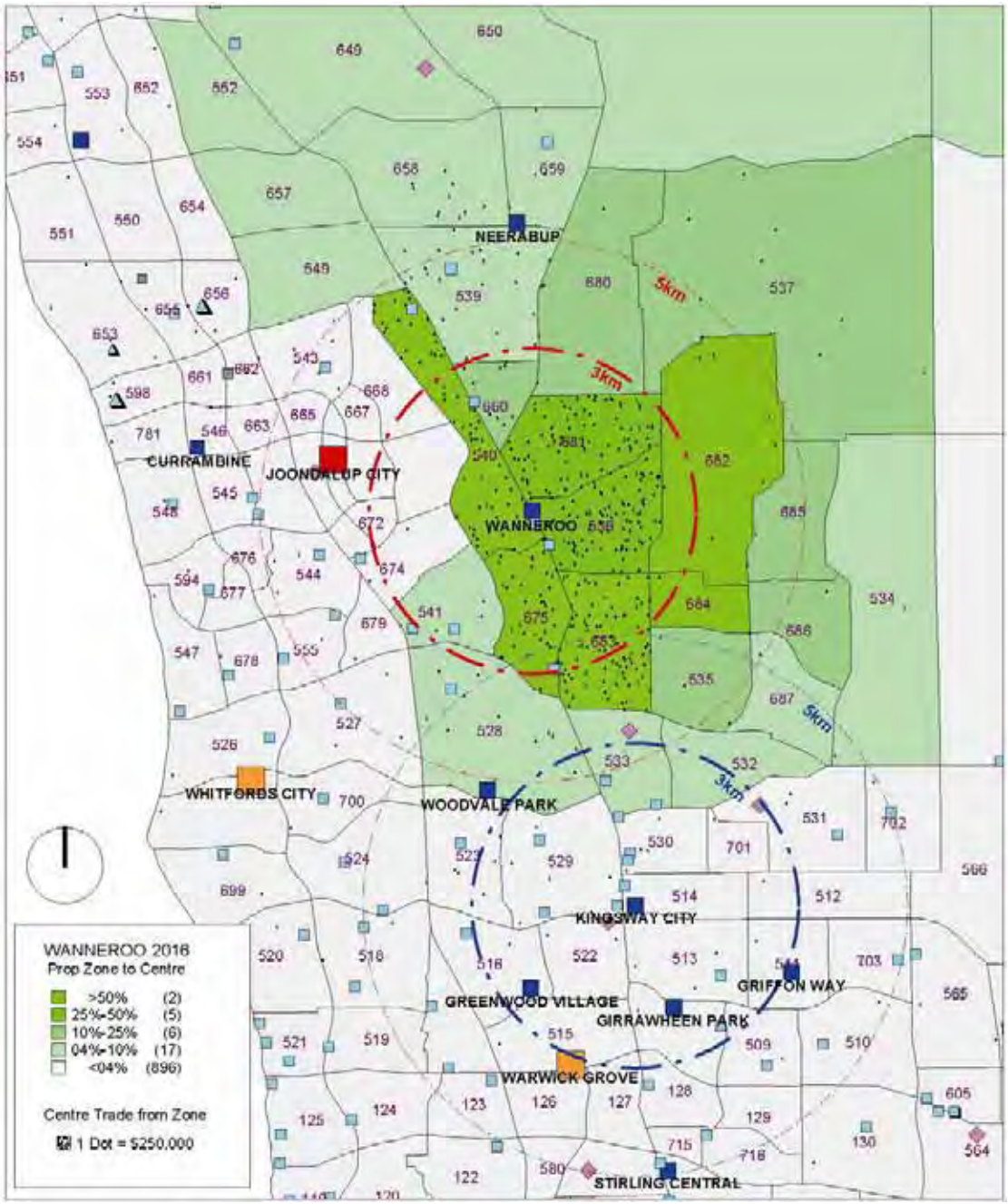
Graphic representations of the estimated catchment areas for both Kingsway City and Wanneroo in 2016 are presented in Figure 16 and Figure 17.

Figure 16 Scenario 5: Estimated Main Catchment Area, 2016 – Kingsway City



With Wanneroo's assumed additional expansion to 30,000 sqm by 2016, it can be seen that Kingsway City's geographic catchment area remains virtually unaffected, with only a slight retreat in the north in MRZ's 532 and 533. The absence of dots in these two MRZ's indicates that these areas are virtually unpopulated (this is the Wangara industrial area).

Figure 17 Scenario 5: Estimated Main Catchment Area, 2016 – Wanneroo

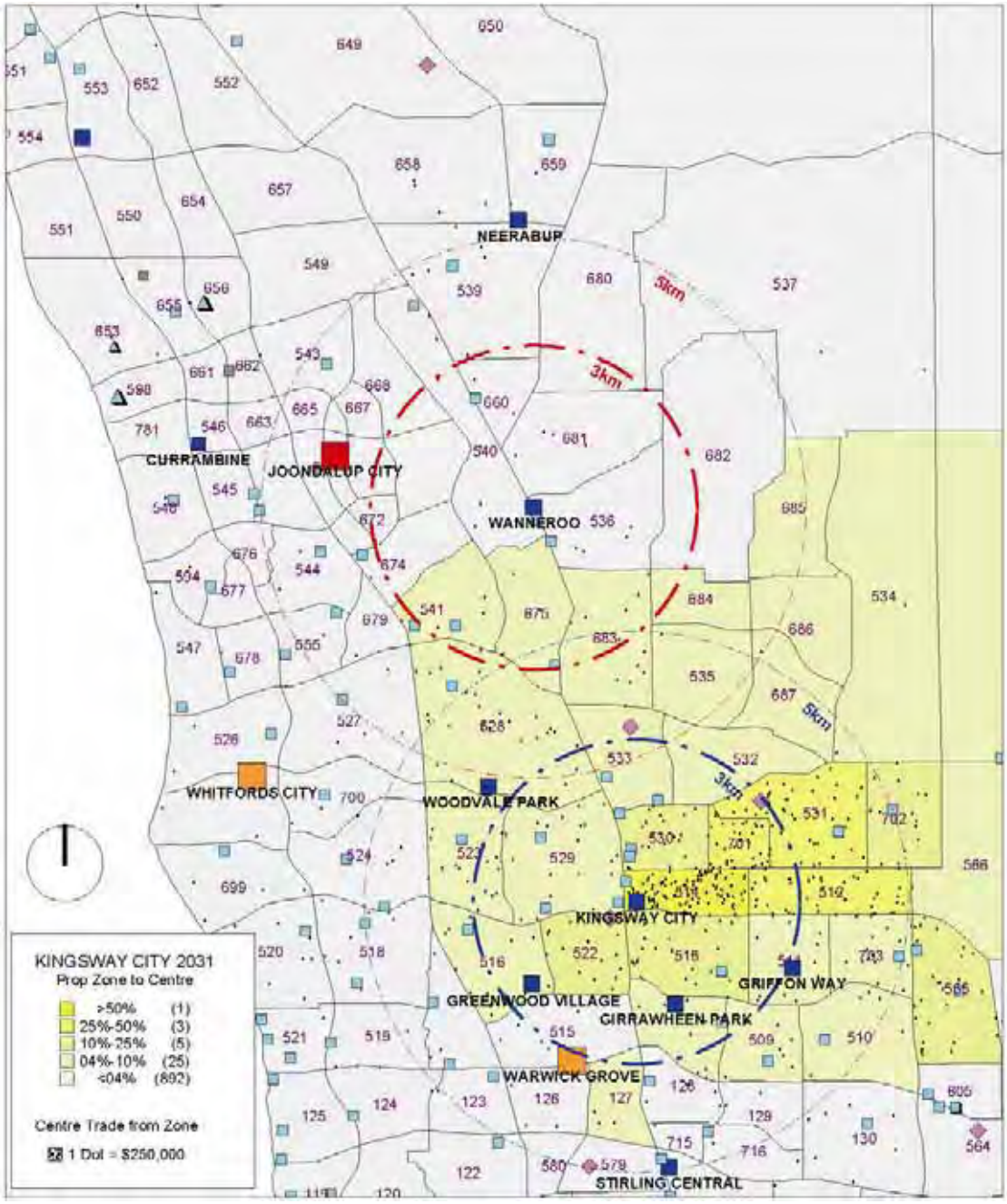


With its expansion to 30,000 sqm Wanneroo's catchment intensifies in some areas (e.g. MRZ's 528 and 686) but it is the further intensification of black dots within the 3km radius that indicates where the extra trade is coming from to sustain the expansion – from significant population growth in the immediate catchment area.

5.7 Very Long Term (25 Years)

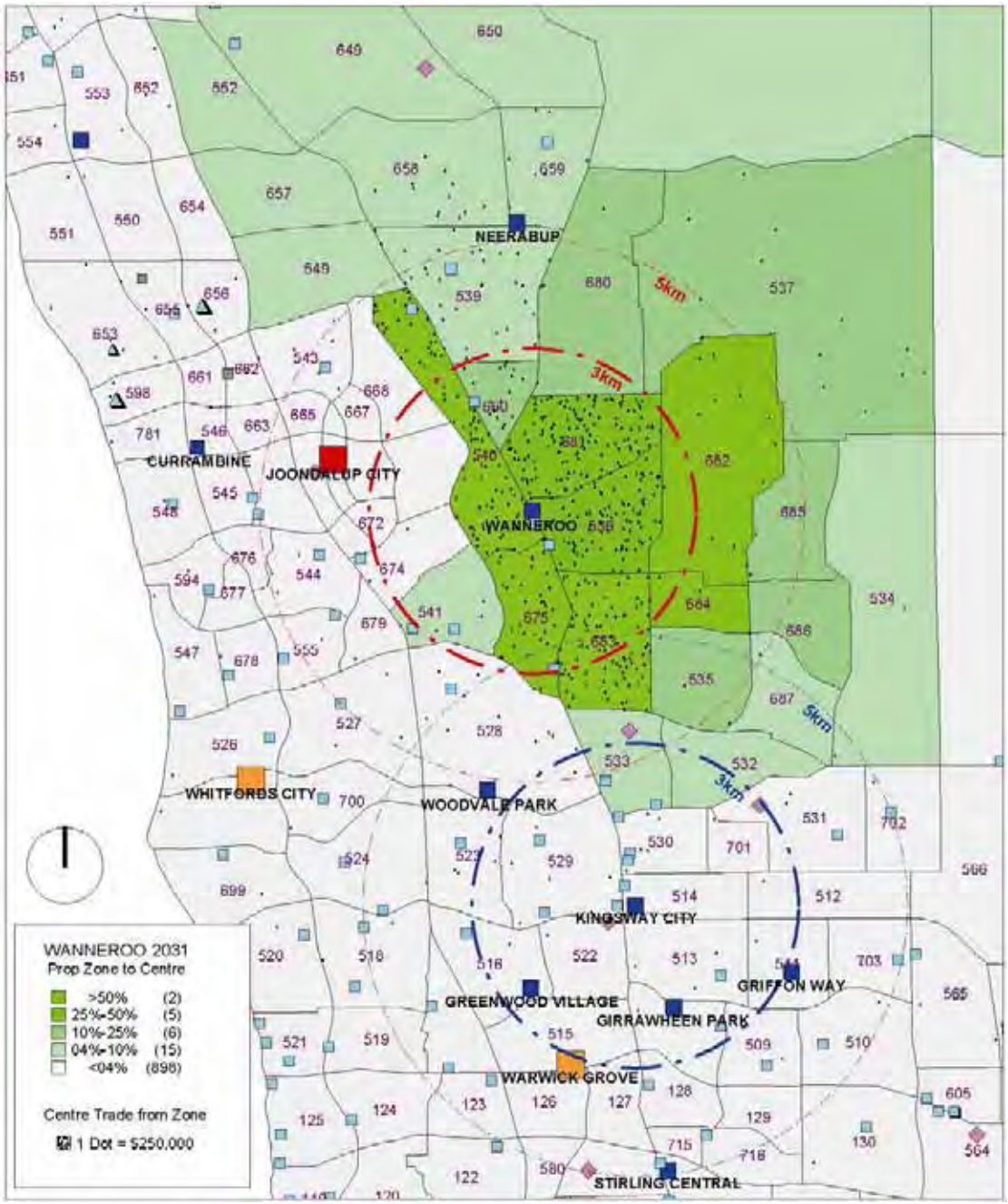
To complete the impact assessment, the estimated catchment areas for Kingsway City and Wanneroo as at 2031 have also been mapped. These are illustrated in Figure 18 and Figure 19.

Figure 18 Scenario 8: Estimated Main Catchment Area, 2031 – Kingsway City



Even over a 25 year timeframe it is clear where Kingsway City's primary catchment is likely to remain – to its north-east and east where its "natural" population catchment is concentrated.

Figure 19 Scenario 8: Estimated Main Catchment Area, 2031 – Wanneroo



Wanneroo's primary catchment area also remains consistent into the long term, drawing mainly on population within its 3km radius, but extending to between 3 and 5km in certain areas. It can be seen that, even in the long term, proportional market penetration to the north into the Neerabup area is kept constrained by future significant retail developments in that locality. The number of dots in the Neerabup area does nevertheless indicate that the area is still contributing quite significantly to the Wanneroo centre's trading performance.

5.8 Conclusions (Impact Assessment)

The main conclusion of this impact assessment is that there will be no appreciable nor prolonged negative impacts on other centres in the district or locality associated with the proposed expansion of Kingsway City. The main reasons for this are summarised and reiterated as follows:

- The City of Wanneroo is currently under-supplied with retail floorspace compared to the Perth Metropolitan Region as a whole. This is a situation the City should actively seek to rectify, due (in part) to the major employment benefits associated with retail floorspace.
- The proposed Kingsway City expansion is not intended to grab additional share from a static market. On the contrary, it is seeking to increase retail floorspace ***to cater for population growth within its primary catchment area***. Modelling clearly shows that the proposed expansion of Kingsway City is sustained by population growth in that area. This helps account for the relatively minor impacts which are estimated to fall on other retail centres in the locality.
- Of particular note is the fact that the Kingsway City expansion does not negatively impact on the Wanneroo Town Centre, nor does it affect Wanneroo's potential to expand as currently proposed to 23,000 sqm by 2011; and to 30,000 sqm thereafter.
- Once again the reason for this is the very significant population growth projected to occur within the primary catchment area of the Wanneroo Town Centre.
- Wanneroo and Kingsway City are therefore not competing for their share of the same "pie". In effect they both have their own very significant and expanding pies. It is this situation that is the key to the low-impact growth potential of retail floorspace in both Kingsway City and Wanneroo.

KINGSWAY CITY ACTIVITY CENTRE STRUCTURE PLAN

APPENDIX A

Traffic Impact Study by Transcore Pty Ltd

Kingsway City Activity Centre

Proposed Structure Plan

Traffic Impact Study

Prepared for:
TAH LAND PTY LTD

July 2006

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TABLE OF CONTENTS

1.0 INTRODUCTION

This Traffic Impact Study has been prepared by Transcore on behalf of TAH LAND PTY LTD with regard to a Structure Plan being prepared for Kingsway City Shopping Centre, Madeley. The structure plan envisages Kingsway City's future development into a significant mixed-use activity centre.

Kingsway City is located approximately 15km north of the Perth CBD on the north-east corner of the signalised intersection of Wanneroo Road and Hepburn Avenue. The north-south Mitchell Freeway-Hepburn Avenue exit ramp is approximately 3.5km west of the Centre.

This report aims to assess the impact of the proposed development upon the surrounding road network. For this purpose, the existing traffic operations at the intersection of Wanneroo Road and Hepburn Avenue and all entry/exit points for the centre will be quantified as well as the effect of the additional traffic that would be generated by the proposed interim development.

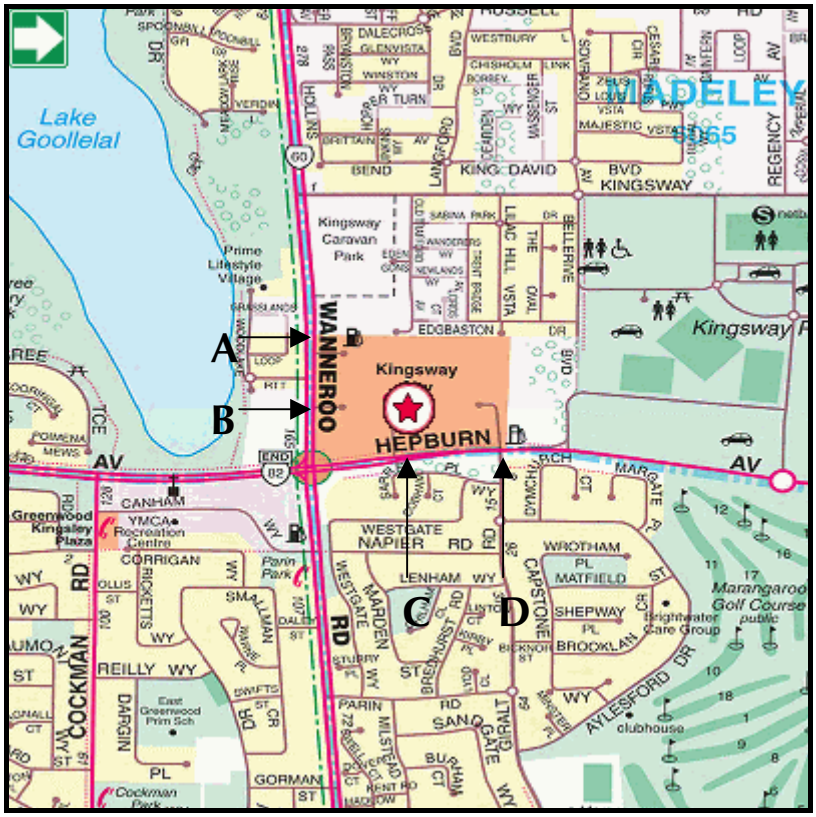
The report also addresses the parking demand for the Shopping Centre, the pedestrian and cyclists network and future road network developments.

2.0 EXISTING SITUATION

Kingsway City Shopping Centre is located on the north-east corner of the signalised intersection of Hepburn Avenue and Wanneroo Road. Refer to **Figure 1**. The Centre is currently served by four crossovers, two each on both Wanneroo Road and Hepburn Avenue. The crossovers are summarised as follows:

- Wanneroo Road northern crossover: left in, left out and right out allowed (Access A);
- Wanneroo Road southern crossover: left in, left out allowed (Access B);
- Hepburn Avenue western crossover: left-in, left-out allowed (Access C); and,
- Hepburn Avenue eastern crossover: signalised and full movements allowed (Access D).

Figure 1: Site Map



The Hepburn Avenue eastern crossover is located immediately opposite Giralt Road and therefore forms a four-way intersection. This intersection has recently been signalised.

Wanneroo Road is a dual divided carriageway standard and entails a signposted speed limit of 70 km/hr in the vicinity of the subject site. According to Main Roads WA document "Metropolitan Functional Road Hierarchy" (August 1999), Wanneroo Road is classified as a Primary Distributor road.

According to traffic count data sourced from Main Roads WA, Wanneroo Road carried traffic volumes of 36,350 vehicles per day (2005) north of Hepburn Avenue and 31,800 vehicles per day (2003) north of Marangaroo Drive.

Hepburn Avenue entails a sign-posted speed limit of 60 km/hr east of Wanneroo Road and is a dual divided carriageway immediately east of its intersection with Wanneroo Road before becoming a single lane divided carriageway on approach to the western Shopping Centre crossover. Hepburn Avenue then flares out to divided carriageway in the vicinity of the Giralt Road signalised intersection. According to the abovementioned Main Roads document, Hepburn Avenue is classified as a District Distributor (A) road.

According to traffic count data sourced from Main Roads WA, Hepburn Avenue carried traffic volumes of 22,270 vehicles per day (2003) west of Wanneroo Road.

The main land use surrounding the site is residential, with Kingsway Reserve to the east and north-east, Marangaroo Golf Course nearby to the south east and Lake Goollelal to the west and north-west.

At present, Kingsway City comprises a total floorspace of 22,700 m^2 of which 17,340 m^2 is contained within the main shopping centre and 5,360 m^2 is within several other peripheral developments. The existing land uses entail the following:

- Woolworths supermarket
- Big W department store
- Two Service Stations
- Car Wash
- Two Fast Food Outlets
- Medical Centre
- Veterinary Clinic
- Speciality Shops

In order to establish the existing traffic patterns and the traffic volumes for the Shopping Centre access points (Accesses A – D), traffic turn counts undertaken by Transcore in 2002 were sourced. From the traffic volume information sourced from Main Roads WA, it was established that the road network peak period, in the vicinity of the Shopping Centre, was between 4:00p.m. – 6:00p.m. As Thursday evenings feature late night shopping, the combined road network traffic and retail traffic peaks were established to be on a Thursday during the same time period. Therefore, Transcore undertook traffic turn counts at each of the Centre's access points on Thursday 19th December 2002 from 4:00p.m. to 7:00pm. The results of these surveys are used in Section 4 of this report.

The dominant pedestrian routes to the Shopping Centre are north and south along Wanneroo Road and across Hepburn Avenue in the vicinity of Giralt Road. A dual use path exists on the northern side of Hepburn Avenue and a footpath

along the eastern side of Wanneroo Road. Site inspections in December 2002, January 2003, February 2003 and June 2006 indicated that very few people walk to and from the Shopping Centre although no formal pedestrian survey has been undertaken. The recent signalisation of Hepburn Avenue/Giralt Road provides for signalised crossing facilities for pedestrians and cyclists.

There is also an existing unsignalised crossing facility at Hepburn Avenue/Access C, which includes pedestrian ramps, a gap in the Hepburn Avenue median to provide a pedestrian refuge and allow crossing of Hepburn Avenue in two-stages, grab rails, and tactile ground surface indicators for the disabled pedestrians.

Kingsway City is currently served by Bus Route Numbers 346, 363, 365, 373 and 374, with Route 346 stopping along Wanneroo Road and the other routes stopping within the Shopping Centre grounds south of the Shopping Centre complex. The buses along Route Numbers 363, 365, 373 and 374 travel along Giralt Road and enter the Shopping Centre via Access D (signalised intersection of Hepburn Avenue/Giralt Road). They traverse through the Shopping Centres internal circulatory road in an anticlockwise manner, calling at the bus terminal located south of the Shopping Centre complex. These buses then continue in an anticlockwise direction to exit left via the Shopping Centre's Access C, and thereafter turn right into Giralt Road.

3.0 PROPOSED SITUATION

3.1 Proposed Development

Based on information provided to Transcore by Shrapnel Urban Planning and Mackay Urban Design, the proposed interim (short-term) expansion of the Centre entails a total floor space of 40,270m^2, which is an increase of 17,570m^2 from the total existing floor space. The total floor space is comprised of 31,915 m^2 of "Shopping Centre" (predominantly retail) floor space and 8,355m^2 of non-retail (commercial) floor space. This is an increase in both retail and non-retail floor space of 15,521m^2 and 2,049m^2 respectively. In addition to the expansion of the commercial floor area, the proposal also entails a cinema of 1,700 seats, which would be developed at a later stage but before the ultimate development scenario. **Table 1** summarises these details.

Table 1: Net Land Use Change

LAND USE	EXISTING	PROPOSED	NET CHANGE
Retail floor space	16,394 m^2	31,915 m^2	15,521 m^2
Non-retail floor space	6,306 m^2	8,355 m^2	2,049 m^2
Cinemas	Nil	1,700 seats	1,700 seats
TOTAL GLA	22,700 m^2	40,270 m^2	17,570 m^2

It is proposed that the existing crossover layout and operation would mostly be maintained to cater for the increase in floor area. However, it is proposed that a right-turn in facility be provided at Access A. Currently, there is an opening in the median along Wanneroo Road opposite Access A. This opening caters for right-turn egress movements from Access A into Wanneroo Road, and U-turn movements from traffic on the southbound carriageway wanting to head north.

It is proposed that the U-turn facility be relocated as there is another existing U-turn facility 100m further south along the southbound carriageway of Wanneroo Road. The relocation of the U-turn facility would need to be finalised with Main Roads WA. With the relocation of this facility, the median opening at Access A could then be modified into a full-movement crossover and allow for right-turn ingress movements into the Shopping Centre from Wanneroo Road. In so doing, the right-turn traffic demand at the south approach of the Wanneroo Road/Hepburn Avenue signalised intersection would be reduced, and the overall intersection capacity and level of service of the Wanneroo Road/Hepburn Avenue intersection would be improved. This is further discussed in Section 4 of this report.

Access C would be shifted 50m to the west of its existing location, and would be 200 metres east of the Hepburn Avenue/Wanneroo Road signalised intersection, and 200 metres west of the Hepburn Avenue/Giralt Road (Access D) signalised intersection. Main Roads WA has been consulted and has provided its agreement to this relocation of Access C.

The development would also entail two new accesses (Accesses E and F) to the Centre on Bellerive Boulevard, with Access F leading to a roof-top car park. Currently, Bellerive Boulevard extends south from its T-intersection at Kingsway Road/Bellerive Boulevard and is cul-de-saced south of Edgbaston Drive. Bellerive Boulevard also extends north from its T-intersection with Hepburn Avenue, and traverses easterly towards Kingsway Park. As part of the proposed development, these two sections of Bellerive Boulevard would be connected.

A copy of the Concept Plan for the proposed interim development of the Centre is provided in **Appendix A** of this report.

The ultimate development scenario as shown in the Kingsway City Indicative Development Plan (Appendix C) includes an additional 395 residential apartments and 22,250m^2 of non-residential floor space (10,000m^2 of offices and 12,250m^2 of showrooms).

3.2 Future Road Network

The City of Wanneroo has commissioned a Blackspot Road Safety Audit of the recently-signalised intersection of Hepburn Avenue/Giralt Road.

Preliminary discussions with the Consultant have indicated that right-turn slip lane facilities should be provided together with a dedicated right-turn green arrow phase on Hepburn Avenue to accommodate safe right-turning movements from Hepburn Avenue into the Centre. This proposed improvement has been assumed in the traffic analysis for both the interim (short-term) and longer term.

As discussed in Section 3.1 of this Report, Bellerive Boulevard would be extended north of its intersection with Hepburn Avenue towards Kingsway Road. It is proposed that the new Bellerive Boulevard would function as a local access street. Based on the guidelines of the Liveable Neighbourhoods Edition 3 (WAPC, 2004), the function of an access street is to accommodate shared pedestrian, bike and vehicular movement. It would be able to accommodate a daily traffic volume of approximately 3,000 vehicles per day. These types of roads would be able to accommodate on-street parking on one-side of the road and footpaths on both sides of the road, and is sufficient to serve the proposed residential dwellings along the western side of the new Bellerive Boulevard for the ultimate scenario of the Structure Plan as shown in the Kingsway City Indicative Development Plan.

Appropriate local area traffic management treatments would need to be installed to ensure that the new Bellerive Boulevard is used primarily as a local access street only, and not as a district connector road between Kingsway Road and Hepburn Avenue.

3.3 Future Public Transport Routes

The existing public transport routes would not be affected as part of this proposed development. The existing bus terminal and its embayment within the Shopping Centre circulatory network would be maintained however it would be slightly shifted and re-located to the west of the Centre's southern entrance. This is shown in the Kingsway City Structure Plan Diagram in **Appendix B** of this report.

Liaisons with the Public Transport Authority and Transperth have also revealed that there are no future plans to alter the existing public transportation services and routes.

3.4 Future Pedestrian and Cycle Networks

The Cycling Network Plan (**Appendix D**) sourced from the City of Wanneroo for the vicinity shows that there are:

- Proposed shared paths along the western boundary of the Shopping Centre (Wanneroo Road southbound kerb);
- Proposed shared path to the north along Kingsway Road (westbound kerb);
- Existing shared path (to be added to Register) along the southern boundary of Kingsway City (Hepburn Avenue eastbound kerb);
- Proposed shared paths east of Bellerive Boulevard/Hepburn Avenue intersection, along Hepburn Avenue eastbound kerb.

This network of shared path will provide good connectivity between the surrounding residential areas and Kingsway City, thus encouraging non-motorised forms of transportation to and from the Centre.

As part of the redevelopment, pedestrian links between the Centre and existing bus stops will be maintained, including compliance with relevant Universal Access requirements. The existing crossing facilities at Hepburn Avenue/Access C, and the signalised pedestrian crossing facilities at the signalised intersection of Giralt Road/Hepburn Avenue/Access D would also be maintained.

The proposed principal pedestrian routes as shown in **Appendix B** of this report allow for good connectivity within the Kingsway City site and provide effective connectivity from the bus-stops on Wanneroo Road (and Hepburn Avenue) to the Shopping Centre eastern, western and southern entrances. There would also be full connectivity between each of the various land uses within the Kingsway City Structure Plan.

The internal circulatory road network would also be modified to allow good permeability throughout the site. The network takes advantage of the natural ground contours to allow smooth navigation between the access points and the

at-grade or upper-level car park. It also allows motorists entering the site from Wanneroo Road and Hepburn Avenue to access all the proposed car parks.

4.0 TRAFFIC ANALYSIS

In order to assess the traffic impact of the proposed Kingsway City interim development, a traffic generation and distribution exercise was undertaken. The aim of this exercise was to establish the traffic that would be generated from the expanded development and quantify the effect of this additional traffic upon the operations of the surrounding road network. The analysis documented in this report is mainly focused on the interim development concept, including the Cinemas, but also takes account of the potential long-term development potential as illustrated in **Appendix C**.

4.1 Traffic Generation/Distribution

To establish the traffic generation rates for the main centre and the proposed residential areas, the document "Land Use Traffic Generation Guidelines, Director-General of Transport, South Australia" was sourced. From this document the daily and peak hour traffic generation rates were established.

Due to the nature and location of the development, it is assumed that the combined traffic peaks for the development and the surrounding road network would occur on a Thursday evening.

It was therefore estimated that the proposed expansion of the shopping centre would generate a total of 6,200 daily vehicle trips and 650 peak hour vehicle trips for a typical Thursday evening. This peak hour traffic was then superimposed onto the shopping centre traffic that was observed during the Thursday evening in 2002. It should be noted that the observed counts were distributed to allow for the recent signalisation of the intersection of Giralt Road/Hepburn Avenue.

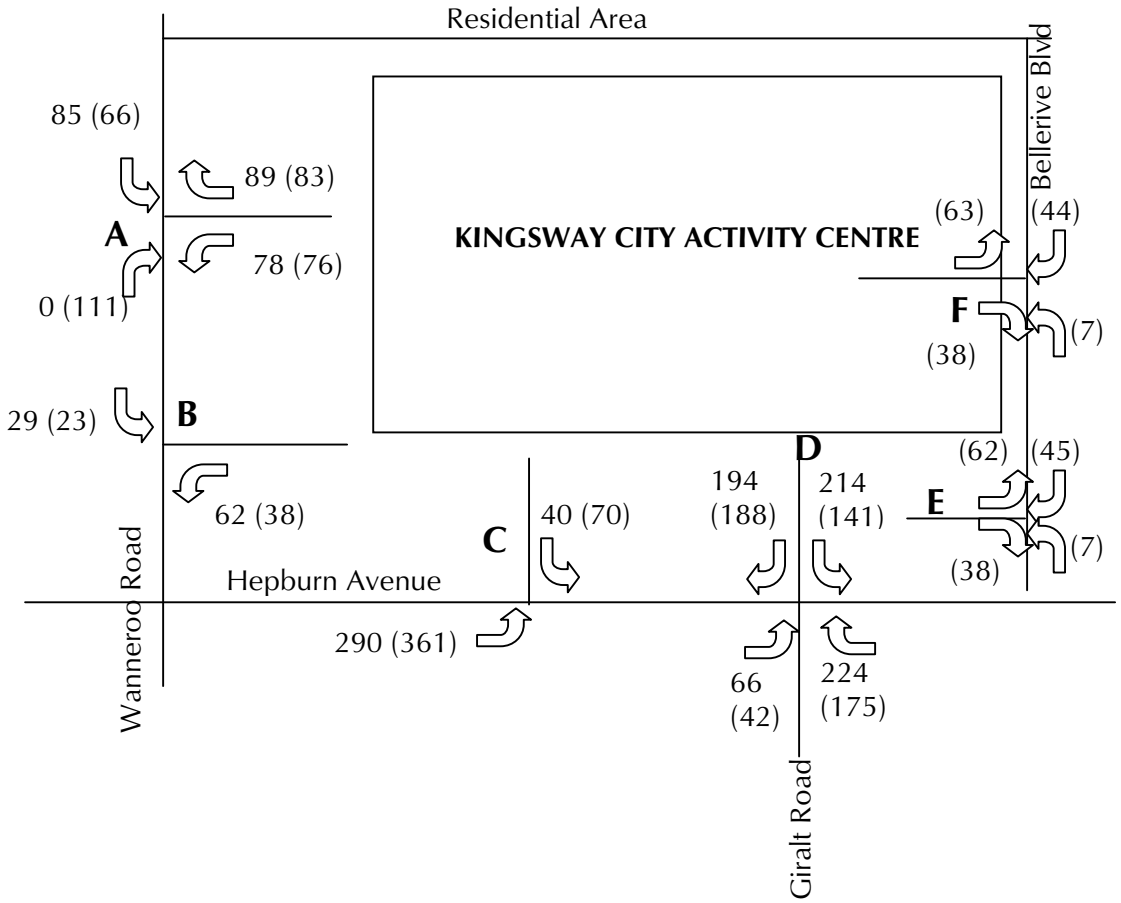
For the traffic distribution exercise, the existing pattern of origin – destination (O-D) movements observed from the surveys was assumed. This existing O-D pattern is shown in **Table 2** below.

Table 2: Origin – Destination of Kingsway City Shopping Centre Visitors/Patrons

APPROACH	INBOUND	OUTBOUND
North West Approach	8%	11%
North East Approach	8%	11%
South Approach	26%	20%
West Approach	26%	209%
East Approach	32%	38%

The existing and resulting trips generated by the proposed Centre development (existing plus expansion) are shown below in **Figure 3**.

Figure 3: Existing (Generated) Thursday Evening Peak Shopping Centre Traffic



4.2 Intersection Analysis

Traffic analysis was undertaken for the Thursday peak hour scenarios using the SIDRA computer package. The traffic analysis undertaken indicates that the three existing unsignalised crossovers serving the Shopping Centre operate satisfactorily during the typical busiest Thursday of the year, both for the existing traffic and existing plus expansion traffic scenarios.

The recently signalised intersection of Giralt Road/Hepburn Avenue (Access D) is operating at a poor level of service during the typical peak periods. This is an existing problem arising from the Hepburn Avenue extension and upgrade to the east, which has brought about an increase in traffic volumes along Hepburn Avenue. The layout/design for the intersection is not optimal and is unable to accommodate this increase in traffic volumes. The City of Wanneroo has commissioned a study to be undertaken as part of a Blackspot Funding program to investigate improvement for this intersection. Although the outcomes of the study have not been finalised at the time of this report, Transcore has been informed that a proposal entailing the addition of right-turn lanes along Hepburn Avenue, and 70° give-way lanes for Hepburn Avenue westbound approach and Giralt Road northbound approach is being considered and is expected to improve the intersection capacity and level of service.

An analysis was also conducted for Accesses E and F, which are the proposed accesses off the new Bellerive Boulevard, and the results also indicate that these accesses would operate satisfactorily during the peak Thursday evening hour.

The analysis undertaken for the existing signalised intersection of Wanneroo Road/Hepburn Avenue showed that the right-turn slip lane at the southern leg of this intersection is performing unsatisfactorily during peak hours. This is verified with site observations of consistent spillover of right-turn queuing traffic from the slip lane onto the straight-through lane of Wanneroo Road northbound lanes.

In order to address this issue by removing most if not all of the Centre-related right turning traffic from the slip lane, it is proposed that as part of the proposed interim development, Access A be modified to permit right-turn entry movements from Wanneroo Road into the Centre. This action would improve the operation and efficiency of Wanneroo Road/Hepburn Avenue intersection and provides for better accessibility of Kingsway City from Wanneroo Road.

4.3 Indicative Development Scenario

The Indicative Development Plan includes proposed 395 residential apartments and additional 22,250m^2 office/showroom floor space. Based on current trip generation rates and considering the nature of the ultimate development plan, better availability of public transport and more walk/cycle patronage to Kingsway City due to continual increases in fuel prices, it is likely that the traffic generation associated with the additional indicative proposed development would reduce to an estimated 3,200 daily trips and 320 peak hour trips (inbound and outbound).

At Kingsway City under ultimate development plan, there would be some multi-purpose trips between the different land uses. Furthermore, given the proximity between each of these different land uses, particularly between the residential and the retail land use, a significant number of the generated trips would be walking trips.

The bus terminal within the Kingsway City would also serve to encourage the use of public transportation as the primary mode of transport. There would also be a potential for the terminal to serve additional bus routes and services. Also, there is a potential for Kingsway Reserve, located at the north-eastern corner of Bellerive Boulevard/Hepburn Avenue intersection, to be a site for a future bus terminal, not only serving Kingsway City but the surrounding residential areas as well.

There is enough general capacity in the surrounding network to accommodate the ultimate traffic generation of Kingsway City. However, due to uncertainty of the exact nature of the ultimate development scenario, further future upgrades to the road network, and public transport services and facilities, no detailed traffic analysis of the ultimate development scenario has been undertaken. It is suggested that at the time of implementation of the ultimate development

scenario, the up-to-date traffic generation figures be considered and the additional traffic associated with the ultimate development be established.

5.0 PARKING

The existing current parking provision for Kingsway City is 1,404 bays. It is proposed that a total of 2,911 car bays would be provided to service the short-term (interim development) concept, including the cinemas.

To establish the existing parking demand for the Centre, the parking utilisation survey that was conducted at the same time as the traffic turn counts, i.e. Thursday 19th December 2002 between 4:00pm – 7:00pm and Saturday 21st December 11:00am – 2:00pm was sourced. These periods represent the busiest times of the year.

The results of the parking survey at the existing Centre are shown in **Tables 3 and 4** for the peak Thursday and Saturday periods respectively.

Table 3: Parking Utilisation Survey – Peak Thursday 4:00pm - 7:00pm

Time	Total	Overall Utilisation
4:00 – 4:30PM	670	50.7%
4:30 – 5:00PM	690	52.2%
5:00 – 5:30PM	674	51.0%
5:30 – 6:00PM	658	49.8%
6:00 – 6:30PM	673	50.9%
6:30 – 7:00PM	683	51.7%

Table 4: Parking Utilisation Survey – Peak Saturday 4:00pm - 7:00pm

Time	Total	Overall Utilisation
11:00AM – 11:30AM	1097	83.0%
11:30AM – 12:00PM	1086	82.2%
12:00PM – 12:30PM	1075	81.4%
12:30PM – 1:00PM	1062	80.4%
1:00PM – 1:30PM	1109	84.0%
1:30PM – 2:00PM	1115	84.4%

The survey results indicated that the highest utilisation of all parking areas (for retail and non-retail land uses) occurred between 1:30 to 2:00pm on Saturday, 21st December 2002. The utilisation for this period was approximately 85%.

The peak parking utilisation indicates that currently, there is an oversupply of parking at the Centre. Current practice is to provide parking supply for the 5th or 7th highest day of the year. As a result, it is recommended that the parking supply for the Centre, incorporating the proposed expansions, should consider the current oversupply and the fact that during the typical highest peak, the utilisation at the Centre was only 85%.

Given the proposed total gross floor area for the main Shopping Centre, the non-retail commercial land uses, fast-food and auto-service land uses, the total car parking requirement is 2,894 bays. Using the peak parking utilisation rate of 85%, the estimated utilisation would be 2,460 bays only. The proposed development entails a parking provision of 2,911 bays, which is 450 bays more than the demand.

Therefore, the proposed parking provision is more than adequate to meet both the short-term and potential long-term needs of the proposed development during peak periods.

The Kingsway City Indicative Development Plan would ultimately include residential dwellings along the western side of the new Bellerive Road. The parking requirements for these land uses would be satisfied within each of the proposed development sites.

6.0 CONCLUSIONS AND RECOMMENDATIONS

This Traffic Impact Study set out to address the impact of the proposed interim development of the Kingsway City Activity Centre upon the surrounding road network. This was achieved by assessing the traffic operations of the existing Centre traffic and assessing the traffic that would be generated by the proposed interim development of the Centre.

The result of the traffic analysis undertaken indicates that the proposed expansion of retail floor space in the Centre will not have a significant impact on the traffic operations of the signalised intersection of Wanneroo Road/Hepburn Avenue or the existing four entry/exit crossovers. The signalised intersection and the four existing crossovers would continue to operate with more or less the same Level of Service as per the existing situation. The proposed new accesses from Bellerive Boulevard which in turn would be extended to form a connection between Kingsway Road and Hepburn Avenue and the amendment of crossover A to allow right turns from Wanneroo Road into the Shopping Centre would assist in reducing the impacts through better and more effective distribution of traffic.

It should be noted that the analysis undertaken was for the typical busiest Thursday and Saturday of the year. These were the Thursday and Saturday before Christmas. As the analysis results indicate that the traffic operations at each of the unsignalised access crossovers (Accesses A, B, C, E and F) would be satisfactory during the typical busiest time of the year, it is concluded that the traffic operations would be satisfactory during the entire year.

The City of Wanneroo is currently undertaking a study to improve the capacity and level of service at Access D (signalised intersection of Giralt Road/Hepburn Avenue) as the existing intersection is not operating satisfactorily. It is expected that the intersection would be able to operate more efficiently with the implementation of the proposed right-turn lanes along Hepburn Avenue and 70° give-way lanes along Hepburn Avenue westbound approach and Giralt Avenue northbound approach.

A comprehensive and accessible pedestrian network within the Activity Centre would also be developed and integrated with the existing cycling and pedestrian network along the surrounding road network. The existing bus routes servicing Kingsway City would be maintained which continue to assist in patronage to the Centre.

The result of the parking utilisation surveys, undertaken during the typical busiest Thursday and Saturday of the year, indicate that currently, there is an oversupply of parking at the Centre. During the typical highest day of the year (ie. the Saturday before Christmas), the parking utilisation at the Centre was only 85% (2,460 bays). With the proposed additional land uses, the car parking demand is estimated to be 2,894 bays. The proposed development entails a parking provision of 2,911 bays, which is 450 bays more than the demand that would arise from the expansion. Therefore, it is concluded that there would be sufficient

parking bays to service both the proposed short-term and potential long-term development of the Centre.

The Indicative Development Plan includes proposed residential apartments and additional office/showroom floor space. Given the multi-purpose nature of trips between the various land uses within the Kingsway City and the increased modal split between motorised and non-motorised trips as well as the increased modal split between private and public transport, the additional volume of private car trips generated is expected to be accommodated by the surrounding road network.

Appendix A

Interim Development Concept

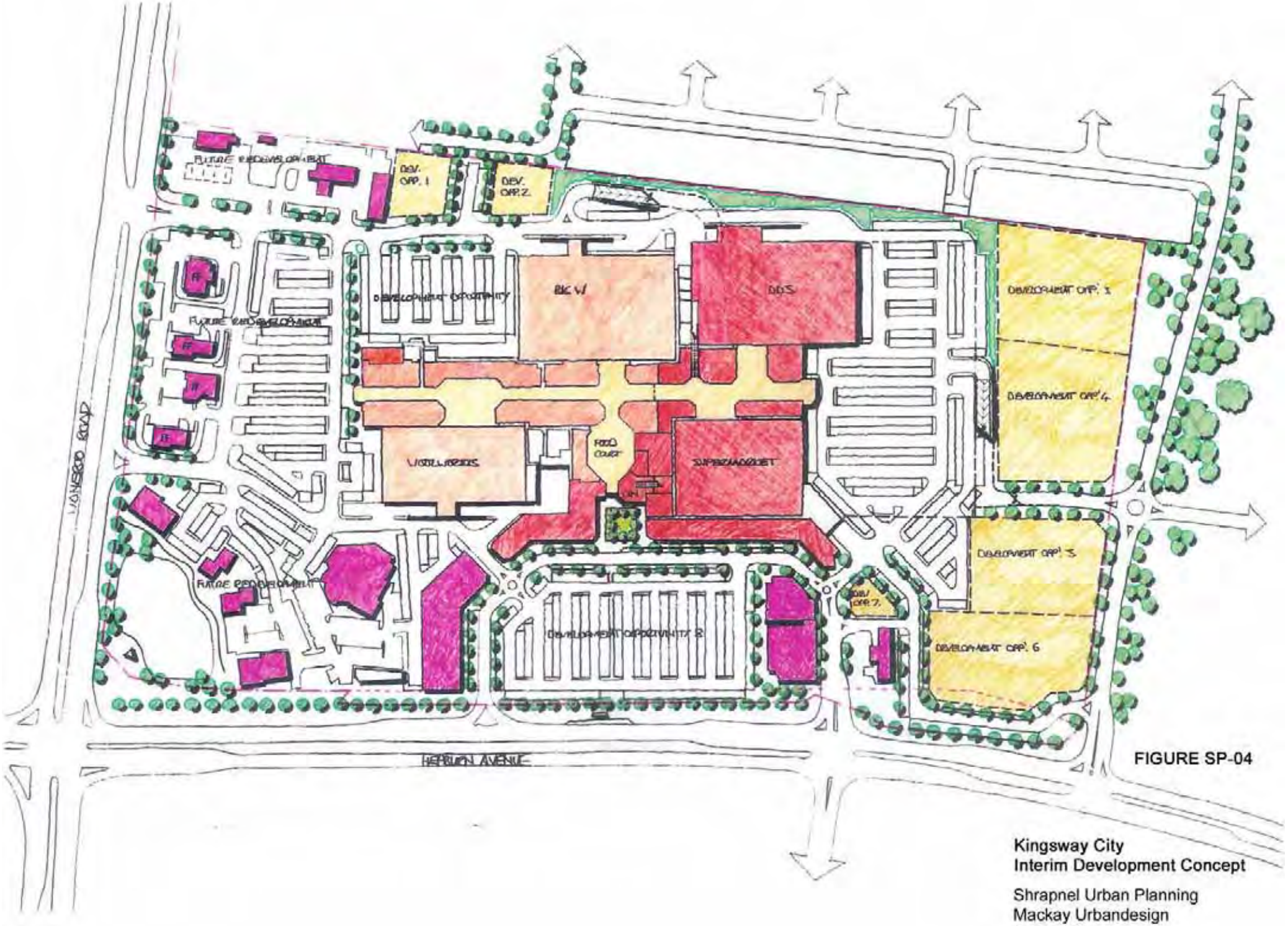


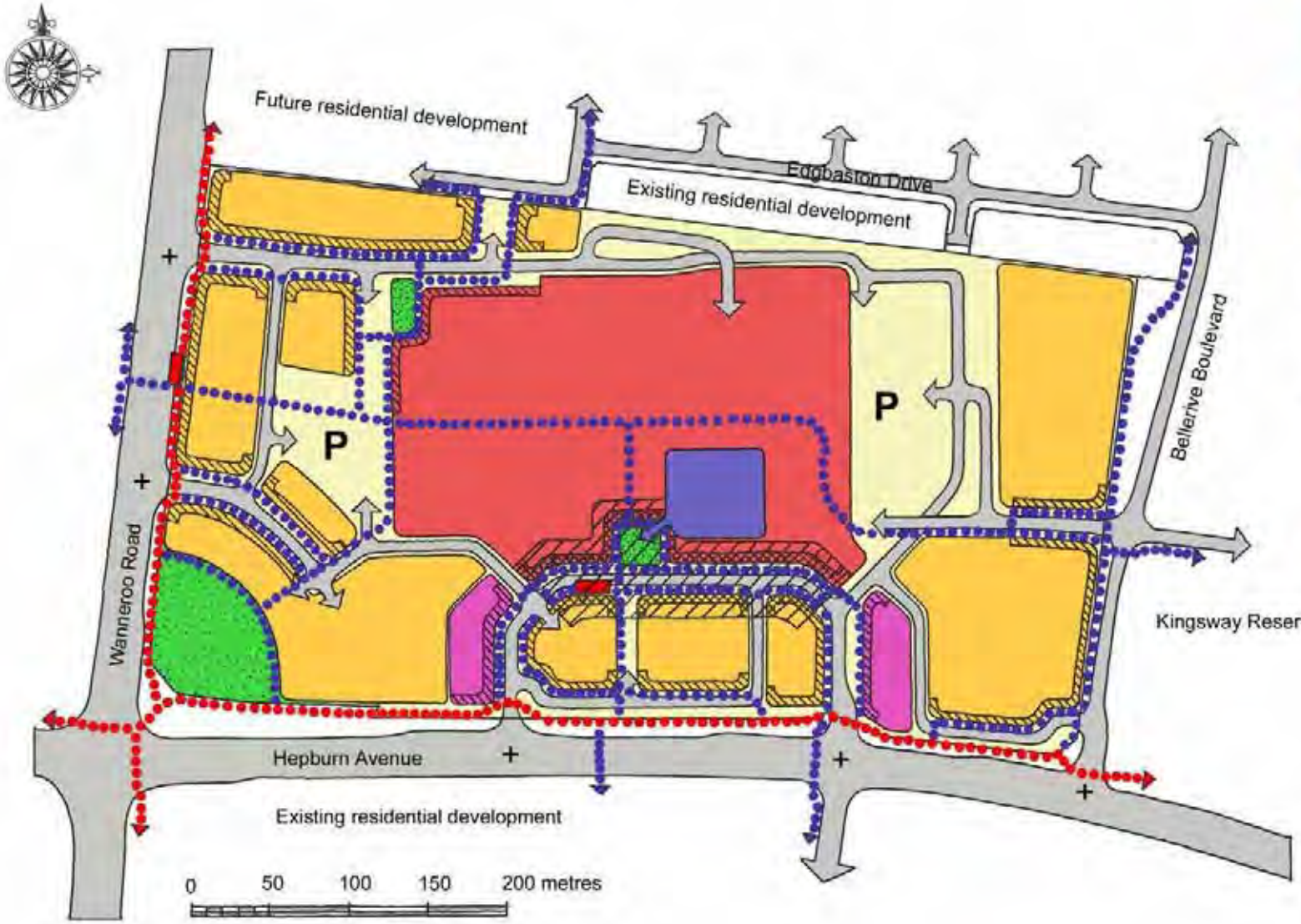
FIGURE SP-04

Kingsway City
Interim Development Concept

Shrapnel Urban Planning
Mackay Urbandesign
July 2006

Appendix B

Kingsway City Structure Plan Diagram



Legend

- Retail core
- Mixed use development
- Showroom, other commercial or mixed use development
- Entertainment
- Park or piazza spaces
- Bus stops
- Principal pedestrian routes
- Principal locations for active commercial frontage
- Main street precinct with two storey minimum development
- Mandatory active commercial frontage
- + Intersection treatments subject to endorsment from MRWA
- P Principal parking areas
- Regional cycle routes

FIGURE SP-03

Kingsway City Structure Plan Diagram

Shrapnel Urban Planning
Mackay Urbandesign
July 2006

Appendix C

Kingsway City Indicative Development Plan

1 Main piazza
2 Main street
3 Mixed use development to main street
4 Bus stop location
5 Retail core and existing shopping centre
6 Cinema
7 Car park deck above retail mall extension
8 Showrooms
9 Relocation of existing road access
10 Existing medical centre
11 Mixed use development on corner
12 Mixed use development to Wanneroo Rd
13 Improved intersection (subject to MRWA)
14 Secondary piazza
15 Car park decks
16 Mixed use development
17 Ramp to upper parking deck
18 Residential development to Bellerive Bvd
19 Extension of Bellerive Bvd
20 Mixed use development
21 Improved Hepburn Ave intersection

FIGURE SP-01

Kingsway City
Indicative Development Plan

Shrapnel Urban Planning
Mackay Urbandesign
July 2006

Appendix D

Cycling Network Plan

LEGEND

Cycling Network

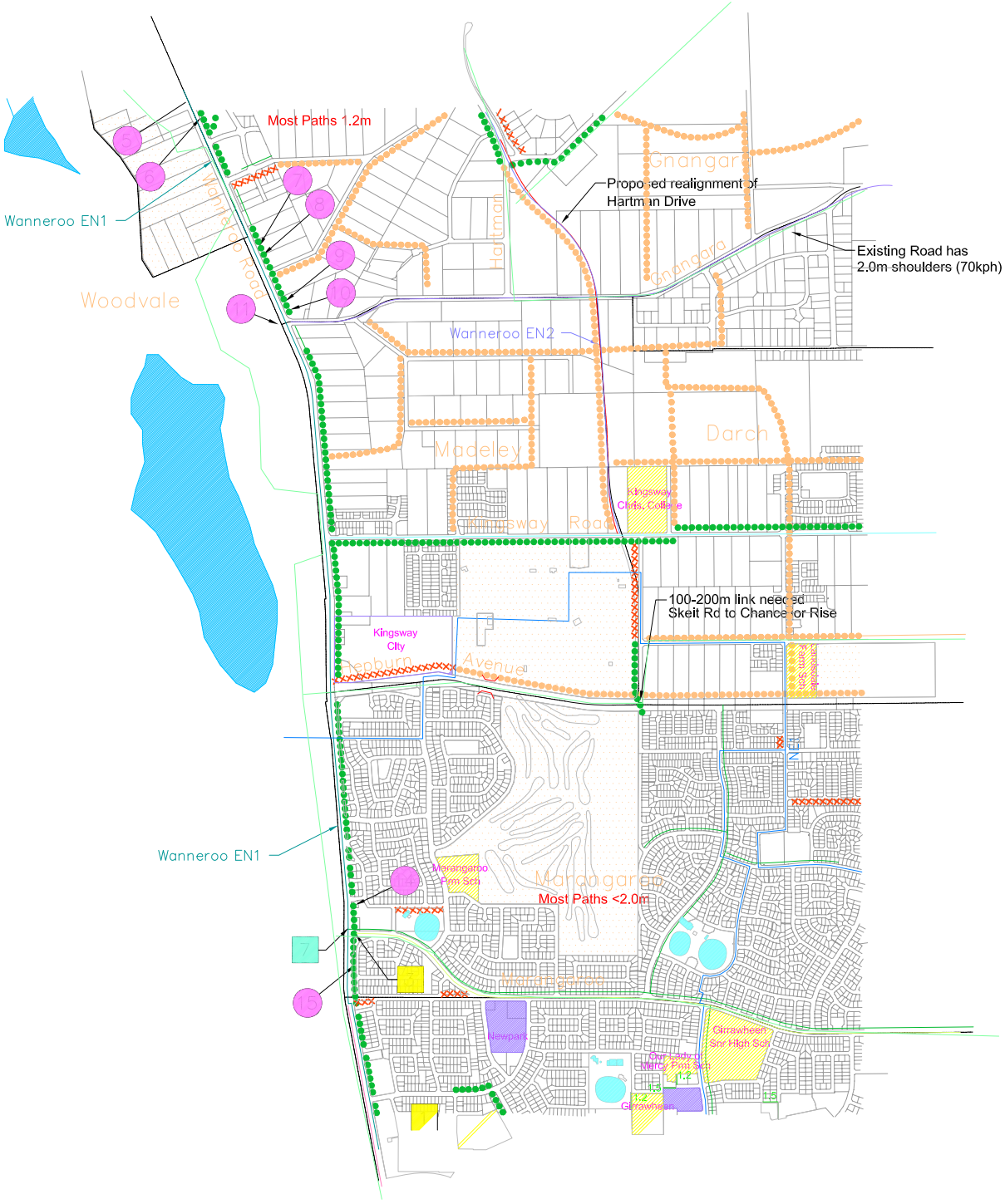
- Perth Bicycle Network - Stage 1
- Perth Bicycle Network - Stage 2
- Proposed Perth Bicycle Network - Additional Stages
- Proposed Regional Path
- Shared Path
- Proposed Shared Paths
- Proposed Shared Paths (Future Works)
- Shared Path to be Added to Register
- Proposed Sealed Shoulder
- KR Kerb Ramp
- 1.8 PAW <2m (width if known)
- 12 Hazards located along the proposed shared path on Wanneroo Rd (Ocean Reef Rd to Beach Rd)

Improvements

- 12 (1 - 11) Spot Improvements from previous local area bicycle plan
- 12 (1 - 17) New paths identified in previous local area bicycle plan including improvements to local bicycle routes (stages 2/3)
- 12 (1 - 14) Additional Spot Improvements

Land Uses

- School Sites
- Golf Courses
- Parks
- Recreational Buildings
- Recreational Facilities
- Regional Open Space
- Greenways
- Suburb Boundary



Kingsway City Activity Centre

Proposed Structure Plan

Traffic Impact Study
Update Report

Prepared for:
TAH LAND PTY LTD

December 2007

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TABLE OF CONTENTS

1.0 INTRODUCTION

This report is based on updating a Traffic Impact Study prepared in July 2006 by Transcore on behalf of Tah Land Pty Ltd with regard to a Structure Plan being prepared for Kingsway City Shopping Centre, Madeley. The structure plan envisages Kingsway City's future development into a significant mixed-use activity centre.

The primary focus of the Traffic Impact Study is on the proposed interim stage of expansion of this centre, which represents part of the ultimate development envisaged in the Structure Plan.

The July 2006 Traffic Impact Study was based on traffic surveys undertaken in 2002. This update report includes updated traffic surveys undertaken in August 2007 with shopping centre traffic flows and intersection capacity analysis updated accordingly. This supersedes those elements of the July 2006 Traffic Impact Study report.

2.0 EXISTING SITUATION

Kingsway City Shopping Centre is located on the north-east corner of the signalised intersection of Hepburn Avenue and Wanneroo Road. The Centre is currently served by four crossovers, two each on both Wanneroo Road and Hepburn Avenue. The crossovers are summarised as follows:

- Wanneroo Road northern crossover: left in, left out and right out allowed (Access A);
- Wanneroo Road southern crossover: left in, left out allowed (Access B);
- Hepburn Avenue western crossover: left-in, left-out allowed (Access C); and,
- Hepburn Avenue eastern crossover: signalised and full movements allowed (Access D).

The Hepburn Avenue eastern crossover is located immediately opposite Giralt Road and therefore forms a four-way intersection. This intersection has recently been signalised.

Wanneroo Road is a dual divided carriageway standard and entails a signposted speed limit of 70 km/hr in the vicinity of the subject site. According to Main Roads WA document "Metropolitan Functional Road Hierarchy" (August 1999), Wanneroo Road is classified as a Primary Distributor road.

At present, Kingsway City comprises a total floorspace of 22,700 m^2 of which 17,340 m^2 is retail and 5,360 m^2 is non-retail.

In order to establish the existing traffic patterns and the traffic volumes for the Shopping Centre access points (Accesses A – D), traffic turn counts were undertaken by Transcore on a Thursday evening and Saturday peak period in August 2007. Traffic flow data from the SCATS signalised intersection system at the Wanneroo Rd / Hepburn Ave and Hepburn Ave / Giralt Rd intersections was obtained from Main Roads WA for the same days and the unsignalised left turn movements were included in the manual traffic turn counts undertaken by Transcore. The results of these surveys are used in Section 4 of this report.

3.0 PROPOSED SITUATION

3.1 Proposed Development

Based on information provided to Transcore by Shrapnel Urban Planning and Mackay Urban Design, the proposed interim (short-term) expansion of the Centre entails a total floor space of 40,270m^2, which is an increase of 17,570m^2 from the total existing floor space. The total floor space is comprised of 31,915 m^2 of "Shopping Centre" (predominantly retail) floor space and 8,355m^2 of non-retail (commercial) floor space. This is an increase in both retail and non-retail floor space of 15,521m^2 and 2,049m^2 respectively. In addition to the expansion of the commercial floor area, the proposal also entails a cinema of 1,700 seats, which would be developed at a later stage but before the ultimate development scenario. **Table 1** summarises this interim development proposal.

Table 1: Net Land Use Change

LAND USE	EXISTING	PROPOSED	NET CHANGE
Retail floor space	16,394 m^2	31,915 m^2	15,521 m^2
Non-retail floor space	6,306 m^2	8,355 m^2	2,049 m^2
Cinemas	Nil	1,700 seats	1,700 seats
TOTAL GLA	22,700 m^2	40,270 m^2	17,570 m^2

It is proposed that the existing crossover layout and operation would mostly be maintained to cater for the increase in floor area. However, it is proposed that a right-turn in facility be provided at Access A. Currently, there is an opening in the median along Wanneroo Road opposite Access A. This opening caters for right-turn egress movements from Access A into Wanneroo Road, and U-turn movements from traffic on the southbound carriageway wanting to head north.

It is proposed that the U-turn facility be relocated as there is another existing U-turn facility 100m further south along the southbound carriageway of Wanneroo Road. The relocation of the U-turn facility would need to be finalised with Main Roads WA. With the relocation of this facility, the median opening at Access A could then be modified into a full-movement crossover and allow for right-turn ingress movements into the Shopping Centre from Wanneroo Road. In so doing, the right-turn traffic demand at the south approach of the Wanneroo Road/Hepburn Avenue signalised intersection would be reduced, and the overall intersection capacity and level of service of the Wanneroo Road/Hepburn Avenue intersection would be improved. This is further discussed in Section 4 of this report.

Access C would be shifted 50m to the west of its existing location, and would be 200 metres east of the Hepburn Avenue/Wanneroo Road signalised intersection, and 200 metres west of the Hepburn Avenue/Giralt Road (Access D) signalised intersection. As noted in the July 2006 Traffic Impact Study report Main Roads WA has been consulted and has provided its agreement to this relocation of Access C.

The development would also entail two new accesses (Accesses E and F) to the Centre on Bellerive Boulevard, with Access F leading to a rooftop car park. Currently, Bellerive Boulevard extends south from its T-intersection at Kingsway Road/Bellerive Boulevard and is cul-de-saced south of Edgbaston Drive. Bellerive Boulevard also extends north from its T-intersection with Hepburn Avenue, and traverses easterly towards Kingsway Park. As part of the proposed development, these two sections of Bellerive Boulevard would be connected.

A copy of the Concept Plan for the proposed interim development of the Centre is provided in **Appendix A** of this report.

The ultimate development scenario as shown in the Kingsway City Indicative Development Plan includes an additional 395 residential apartments and 22,250m^2 of non-residential floor space (10,000m^2 of offices and 12,250m^2 of showrooms).

3.2 Future Road Network

The future road network around the Kingsway City site is illustrated in the concept plan in **Appendix A.**

The City of Wanneroo has funding this financial year (2007/08) to extend the Hepburn Avenue dual carriageway eastwards through the Giralt Road and Bellerive Boulevard intersections and has recently obtained Federal Government funding for extension of this dual carriageway to Alexander Drive within the next 3 years.

The City of Wanneroo commissioned a Blackspot Road Safety Audit of the signalised intersection of Hepburn Avenue/Giralt Road and has subsequently prepared plans to upgrade this intersection this financial year. Lengthened left and right turn slip lanes are proposed in both directions on Hepburn Avenue and the Giralt Road approach will also be widened. It is understood that a dedicated right-turn green arrow phase will be provided on Hepburn Avenue to accommodate safe right-turning movements from Hepburn Avenue into the Centre. These proposed improvements have been assumed in the traffic analysis in this report.

As discussed in Section 3.1 of this report, Bellerive Boulevard would be extended north of its intersection with Hepburn Avenue towards Kingsway Road. It is proposed that the new Bellerive Boulevard would function as a local access street. Based on the guidelines of the Liveable Neighbourhoods Edition 3 (WAPC, 2004), the function of an access street is to accommodate shared pedestrian, bike and vehicular movement. It would be able to accommodate a daily traffic volume of approximately 3,000 vehicles per day.

4.0 TRAFFIC ANALYSIS

This section of the Update report updates and revises the traffic analysis of the proposed Kingsway City interim development. It establishes the traffic that would be generated from the expanded development and quantify the effect of this additional traffic upon the operations of the surrounding road network.

4.1 Traffic Generation/Distribution

The existing Thursday and Saturday peak hour traffic movements, as recorded in the August 2007 traffic surveys, are shown in **Figures 1 and 2 (in Appendix B).**

To establish the traffic generation rate for the shopping centre the document "Land Use Traffic Generation Guidelines, Director-General of Transport, South Australia" was sourced. From this document the Thursday and Saturday peak hour traffic generation rates were established, then checked against the surveyed traffic counts. From this analysis it is estimated that the interim stage expansion of the shopping centre (ie an increase of 15,521m^2 retail and 2,049m^2 non-retail floor space and 1,700 cinema seats) will add approximately 1,220vph (vehicles per hour) during the Thursday PM peak hour and 1,400vph during the Saturday peak hour. The existing and interim development traffic generation of Kingsway City are summarised in **Table 2**.

Table 2: Kingsway City Traffic Generation

Development scenario	Peak period	Total vehicle movements
Existing	Thursday 4:30-5:30	1,980vph
Existing	Saturday 11:00-12:00	2,330vph
Interim development	Thursday 4:30-5:30	3,200vph
Interim development	Saturday 11:00-12:00	3,730vph

The existing distribution of trips has been derived from the turning movement counts at the four existing driveways into Kingsway City. The trip distribution assumed for the additional trips generated by the interim development of Kingsway City has three components. 20% of the new traffic generation is anticipated to come from motorists already passing by the site. 40% of the new traffic generation is anticipated to come from existing developed suburbs in the centre's catchment area and is assumed to have a similar distribution to the existing traffic visiting the site. The final 40% is anticipated to come from rapidly growing suburbs such as Madeley and Darch east and northeast of the site. The resultant distribution of the additional trips attracted to Kingsway City are summarised in **Table 3**.

Table 3: Distribution of additional trips to Kingsway City interim development

Approach road	
Wanneroo Rd pass-by traffic	10%
Hepburn Ave pass-by traffic	10%
Wanneroo Rd north	9%
Hepburn Ave west	8%
Wanneroo Rd south	8%
Giralt Rd south	5%
Hepburn Ave east	30%
Bellerive Bvd north	20%

The resultant total traffic movements after the interim development of Kingsway City are shown in **Figures 3 and 4 (in Appendix B)**. These figures include the assumption that a quarter of the traffic travelling to Kingsway City from Hepburn Ave west and from Wanneroo Rd south will be attracted to the new right turn entry proposed on Wanneroo Rd instead of turning left into the site from Hepburn Ave, and that half of these redistributed trips will also exit back onto Wanneroo Rd instead of Hepburn Ave.

4.2 Intersection Analysis

Traffic movements at all access points and intersections adjacent to the site are shown in Figures 3 and 4 (in Appendix B) for the Thursday evening and Saturday peak hours, respectively. In almost all of these locations the Saturday peak flows are higher than the Thursday PM peak hour. Therefore, in most cases intersection capacity analysis has only been undertaken for the Saturday peak hour.

The intersection analysis has been undertaken using the SIDRA computer package. This package is a commonly used intersection-modelling tool by traffic engineers for all types of intersections. SIDRA outputs are presented in the form of Degree of Saturation, Level of Service, Average Delay and 95% Queue. These items are defined as following:

- **Degree of Saturation**: is the ratio of the arrival traffic flow to the capacity of the approach during the same period. The Degree of Saturation ranges from close to zero for varied traffic flow up to one for saturated flow or capacity.
- **Level of Service**: is the qualitative measure describing operational conditions within a traffic stream and the perception by motorists and/or passengers. In general, there are 6 levels of services, designated from A to F, with Level of Service A representing the best operating condition (i.e. free flow) and Level of Service F the worst (i.e. forced or breakdown flow).
- **Average Delay**: is the average of all travel time delays for vehicles through the intersection.
- **95% Queue**: is the queue length below which 95% of all observed queue lengths fall.

4.2.1 Wanneroo Rd / Hepburn Ave intersection

The SIDRA analysis indicates that this intersection is currently operating slightly above capacity (level of service F) during both the Thursday and Saturday peak hours evaluated. The existing Saturday situation is summarised in **Table 4.** The traffic flows in this analysis are based on SCATS signalised intersection data and traffic turn counts undertaken by Transcore in August 2007.

The additional traffic attracted through this intersection by the proposed interim development is not excessively large but would still adversely affect the performance of this intersection. It is therefore recommended that the interim development should also include widening the right turn pocket on the Hepburn Avenue eastern approach to two lanes wide to increase the overall intersection capacity. **Table 5** shows that the intersection would still operate at the same level of service but degree of saturation, average delays and queue lengths would actually be slightly improved.

This complies with a criterion frequently applied in development control, that a proposed development should not make an existing poor situation worse but should not reasonably be required to remedy an existing poor situation.

Table 4: SIDRA Output – Existing Wanneroo Rd / Hepburn Ave intersection during existing Saturday peak hour

SATURDAY PEAK HOUR (Existing)					
Approach	**Movement Type**	**Degree of Saturation**	**Level of Service**	**Average Delay (sec)**	**95 % Queue (m)**
Wanneroo Rd South Approach	L	0.213	A	8.8	20
	T	0.977	F	94.4	272
	R	1.057	F	160.3	194
APPROACH		**1.057**	**F**	**92.0**	**272**
Hepburn Ave East Approach	L	0.295	A	8.4	19
	T	1.036	F	132.0	280
	R	1.036	F	115.4	200
APPROACH		**1.036**	**F**	**97.5**	**280**
Wanneroo Rd North Approach	L	0.233	A	8.6	16
	T	1.061	F	142.3	518
	R	1.000#	E	60.7	129
APPROACH		**1.061**	**F**	**115.4**	**518**
Hepburn Ave West Approach	L	0.627	A	8.9	49
	T	1.025	F	125.0	200
	R	0.708	E	73.8	83
APPROACH		**1.025**	**E**	**73.6**	**200**
ALL VEHICLES		**1.061**	**F**	**96.9**	**518**

T – through lane, R – right turn lane, L – left turn lane (signal cycle 140 seconds)

Table 5: SIDRA Output – Proposed* Wanneroo Rd / Hepburn Ave intersection during Saturday peak hour with interim development

SATURDAY PEAK HOUR (With Interim Development)					
Approach	**Movement Type**	**Degree of Saturation**	**Level of Service**	**Average Delay (sec)**	**95 % Queue (m)**
Wanneroo Rd South Approach	L	0.207	A	8.7	19
	T	0.969	F	85.5	269
	R	1.018	F	128.6	170
APPROACH		**1.018**	**F**	**80.7**	**269**
Hepburn Ave East Approach	L	0.321	A	8.5	21
	T	0.914	E	74.3	147
	R	1.007	F	126.3	120
APPROACH		**1.007**	**E**	**72.6**	**147**
Wanneroo Rd North Approach	L	0.231	A	8.7	16
	T	1.051	F	129.4	503
	R	1.000#	E	57.2	129
APPROACH		**1.051**	**F**	**105.6**	**503**
Hepburn Ave West Approach	L	0.723	A	8.9	57
	T	1.002	F	106.1	180
	R	0.693	E	68.6	78
APPROACH		**1.002**	**E**	**61.1**	**180**
ALL VEHICLES		**1.051**	**F**	**82.9**	**503**

T – through lane, R – right turn lane, L – left turn lane (signal cycle 130 seconds)
*Proposed intersection layout includes double right turn pocket on Hepburn Ave east approach

4.2.2 Hepburn Ave / Giralt Rd / Kingsway access D intersection

The operation of the existing intersection is unsatisfactory (level of service E overall and several movements at level of service F) and as noted in section 3.2 there is already a commitment for the City of Wanneroo to upgrade this intersection by extending the dual carriageway on Hepburn Avenue through this intersection. The base case modelled in **Table 6** therefore includes this upgrading of Hepburn Avenue. The result is that the intersection will operate at level of service D during existing Saturday peak hour flows.

The proposed interim development of Kingsway City would add a significant amount of turning traffic at this intersection. In order to maintain the overall operation of this intersection at approximately the same level as for the "existing" situation modelled above, it is recommended that there should also be additional improvements at this intersection. These should include widening the proposed Hepburn Ave east approach right turn pocket to two lanes, adding a 70-degree channelised left slip on the Giralt Rd approach and lengthening the existing three-lane section of the Kingsway access D approach north of this intersection. Together these improvements would counteract the effects of increased traffic flows associated with the proposed interim development of Kingsway City as shown in **Table 7**.

Table 6: SIDRA Output – Upgraded* Hepburn Ave / Giralt Rd / Kingsway access D intersection during existing Saturday peak hour

SATURDAY PEAK HOUR (Existing)					
Approach	**Movement Type**	**Degree of Saturation**	**Level of Service**	**Average Delay (sec)**	**95 % Queue (m)**
Giralt Rd South Approach	L	0.378	E	55.7	25
	T	0.714	D	49.2	87
	R	0.713	E	57.0	87
APPROACH		**0.714**	**D**	**52.9**	**87**
Hepburn Ave East Approach	L	0.077	A	8.0	4
	T	0.404	B	18.9	101
	R	0.944	E	59.6	129
APPROACH		**0.944**	**C**	**28.5**	**129**
Kingsway access D North Approach	L	0.169	A	8.1	8
	T	0.699	D	48.1	94
	R	0.699	E	55.4	94
APPROACH		**0.699**	**D**	**39.8**	**94**
Hepburn Ave West Approach	L	0.057	A	8.7	4
	T	0.951	E	71.2	198
	R	0.307	D	48.8	26
APPROACH		**0.951**	**E**	**66.0**	**198**
ALL VEHICLES		**0.951**	**D**	**44.5**	**198**

T – through lane, R – right turn lane, L – left turn lane (signal cycle 110 seconds)
*Upgraded intersection layout modelled includes upgrading of Hepburn Ave to dual carriageway but no improvements to the side streets.

Table 7: SIDRA Output – Upgraded* Hepburn Ave / Giralt Rd / Kingsway access D intersection during Saturday peak hour with interim development

SATURDAY PEAK HOUR (With Interim Development)					
Approach	**Movement Type**	**Degree of Saturation**	**Level of Service**	**Average Delay (sec)**	**95 % Queue (m)**
Giralt Rd South Approach	L	0.120	A	8.5	4
	T	0.654	D	48.5	82
	R	0.654	E	58.5	82
APPROACH		**0.654**	**D**	**44.1**	**82**
Hepburn Ave East Approach	L	0.080	A	8.0	4
	T	0.533	C	31.3	131
	R	0.933	E	59.1	107
APPROACH		**0.933**	**D**	**38.4**	**131**
Kingsway access D North Approach	L	0.301	A	8.1	16
	T	0.820	E	57.3	118
	R	0.820	E	65.6	118
APPROACH		**0.820**	**D**	**41.2**	**118**
Hepburn Ave West Approach	L	0.118	A	8.4	8
	T	0.941	E	73.1	196
	R	0.575	E	71.4	36
APPROACH		**0.941**	**E**	**64.9**	**196**
ALL VEHICLES		**0.941**	**D**	**47.0**	**196**

T – through lane, R – right turn lane, L – left turn lane (signal cycle 120 seconds)
*Proposed intersection layout includes upgrading of Hepburn Ave to dual carriageway, double right turn on Hepburn Ave east approach, short left turn slip lane on Giralt Rd south approach and lengthened left and right turn lanes on Kingsway access D approach.

4.2.3 Wanneroo Rd / Kingsway access A intersection

Observations of the operation of the northernmost access on Wanneroo Rd indicate that it operates satisfactorily without excessive queues during peak periods. However, a normal SIDRA analysis of this existing situation grossly overestimates queues and delays because SIDRA analysis of unsignalised intersections does not take into account the bunching of traffic flows on the main road (Wanneroo Rd). Therefore it was necessary to adjust the modelled flows and time period to represent the traffic flow pattern on Wanneroo Rd. The SIDRA analysis in **Table 8** assumes that 75% of the southbound traffic on Wanneroo Rd is bunched as a result of upstream traffic signals and the remaining 25% is randomly distributed during the periods between bunches (platoons) of traffic. The beneficial effects of bunching of northbound traffic on Wanneroo Rd did not need to be modelled as the right turn from the median showed satisfactory results without that further refinement of the SIDRA analysis. The results in **Table 8** are a composite of results from separate SIDRA models of the different sets of interacting movements at this intersection (ie those interacting with southbound and northbound Wanneroo Rd flows respectively).

The results of this analysis are considered representative of the current operation of this intersection. The critical movement is the right turn out from Access A to the median opening on Wanneroo Rd, which currently operates at level of service B during the Saturday peak hour.

A similar analysis has been undertaken for the proposed modification of this intersection to permit the right turn into Access A from Wanneroo Road south. **Table 9** presents the results of the SIDRA analysis for Saturday peak hour traffic flows with the additional traffic generated by the proposed interim development of Kingsway City. It should be noted that this analysis was an iterative process with the traffic volumes turning right out of Access A being reduced until acceptable queue lengths and delays were achieved. This reflects the reality that drivers will turn left to exit (then make a U-turn at the U-turn slot on Wanneroo Rd) if the queue for the right turn gets too long. The end result is that 45 vehicles divert to the left turn and U-turn (the traffic volumes shown on **Figure 4** include this result) during the Saturday peak hour. In this analysis the critical movement is the right turn out from Access A to the median opening on Wanneroo Rd, which will operate at level of service E, with average delays of 50 seconds and queues sometimes exceeding 90 metres during the Saturday peak hour.

Table 8: SIDRA Output – Existing Wanneroo Rd / Kingsway access A intersection during existing Saturday peak hour

SATURDAY PEAK HOUR (Existing)					
Approach	**Movement Type**	**Degree of Saturation**	**Level of Service**	**Average Delay (sec)**	**95 % Queue (m)**
Wanneroo Rd South Approach	T	0.449	A	0.0	0
APPROACH		**0.449**	**A**	**0.0**	**0**
Kingsway access A East Approach	L*	0.437	C	15.0	20
	R (to median)*	0.593	B	14.4	31
	R (from median)	0.382	C	15.6	15
APPROACH		**0.593**			**31**
Wanneroo Rd North Approach	L	0.166	A	7.6	5
	T	0.408	A	0.0	0
	U	0.006	A	10.0	0
APPROACH		**0.408**	**A**	**1.3**	**5**
ALL VEHICLES		**0.937**	**NA**		**31**

T – through lane, R – right turn lane, L – left turn lane, U – U-turn lane, NA – Not Applicable
These results are a composite of separate SIDRA analyses of the different sets of interacting movements at this intersection (ie those interacting with southbound and northbound Wanneroo Rd flows respectively).
* These results assume 75% platooning of southbound Wanneroo Rd traffic

Table 9: SIDRA Output – Proposed modified Wanneroo Rd / Kingsway access A intersection during Saturday peak hour with interim development

SATURDAY PEAK HOUR (With Interim Development)					
Approach	**Movement Type**	**Degree of Saturation**	**Level of Service**	**Average Delay (sec)**	**95 % Queue (m)**
Wanneroo Rd South Approach	T	0.395	A	0.0	0
	R*	0.267	B	11.9	10
APPROACH		**0.395**			**10**
Kingsway access A East Approach	L*	0.831	C	23.0	77
	R (to median)*	0.937	E	49.9	89
	R (from median)	0.435	B	14.0	19
APPROACH		**0.937**			**89**
Wanneroo Rd North Approach	L	0.334	A	8.2	15
	T	0.397	A	0.0	0
	U	0.006	A	10.0	0
APPROACH		**0.397**	**A**	**1.8**	**15**
ALL VEHICLES		**0.937**	**NA**		**89**

T – through lane, R – right turn lane, L – left turn lane, U – U-turn lane, NA – Not Applicable
These results are a composite of separate SIDRA analyses of the different sets of interacting movements at this intersection (ie those interacting with southbound and northbound Wanneroo Rd flows respectively).
* These results assume 75% platooning of southbound Wanneroo Rd traffic

4.2.4 Wanneroo Rd / Kingsway access B intersection

The operation of the existing left in / left out intersection is quite satisfactory with level of service C on the critical movement, the left turn out of Access B onto Wanneroo Rd. SIDRA results are shown in **Table 10** for existing Saturday peak hour flows.

The proposed interim development of Kingsway City would increase the turning traffic at this intersection, increasing queues and delays slightly but the critical movement would remain at level of service C as shown in **Table 11.** No modifications are proposed at this access point.

Table 10: SIDRA Output – Existing Wanneroo Rd / Kingsway access B intersection during existing Saturday peak hour

SATURDAY PEAK HOUR (Existing)					
Approach	**Movement Type**	**Degree of Saturation**	**Level of Service**	**Average Delay (sec)**	**95 % Queue (m)**
Kingsway access B East Approach	L	0.510	C	21.8	20
APPROACH		**0.510**	**C**	**21.8**	**20**
Wanneroo Rd North Approach	L T	0.032 0.435	A A	7.6 0.0	1 0
APPROACH		**0.435**	**A**	**0.5**	**1**
ALL VEHICLES		**0.510**	**NA**	**4.0**	**20**

T – through lane, L – left turn lane, NA – Not Applicable

Table 11: SIDRA Output – Existing Wanneroo Rd / Kingsway access B intersection during Saturday peak hour with interim development

SATURDAY PEAK HOUR (With Interim Development)					
Approach	**Movement Type**	**Degree of Saturation**	**Level of Service**	**Average Delay (sec)**	**95 % Queue (m)**
Kingsway access B East Approach	L	0.536	C	20.2	24
APPROACH		**0.536**	**C**	**20.2**	**24**
Wanneroo Rd North Approach	L T	0.048 0.224	A A	7.6 0.0	1 0
APPROACH		**0.224**	**A**	**0.7**	**1**
ALL VEHICLES		**0.536**	**NA**	**4.4**	**24**

T – through lane, L – left turn lane, NA – Not Applicable

4.2.5 Hepburn Ave / Kingsway access C intersection

The operation of the existing left in / left out intersection is quite satisfactory with level of service C on the critical movement, the left turn out of Access C onto Hepburn Ave. SIDRA results are shown in **Table 12** for existing Saturday peak hour flows.

The proposed interim development of Kingsway City would increase the turning traffic at this intersection, although the proposed extension of the Hepburn Ave dual carriageway (giving Hepburn Ave two lanes eastbound at this intersection) would almost completely cancel out the effects of the traffic increase. There would only be a marginal change in queues and delays and the critical movement would remain at level of service C as shown in **Table 13.**

Table 12: SIDRA Output – Existing Hepburn Ave / Kingsway access C intersection during existing Saturday peak hour

SATURDAY PEAK HOUR (Existing)					
Approach	**Movement Type**	**Degree of Saturation**	**Level of Service**	**Average Delay (sec)**	**95 % Queue (m)**
Kingsway access C North Approach	L	0.445	C	17.3	18
APPROACH		**0.445**	**C**	**17.3**	**18**
Hepburn Ave West Approach	L T	0.158 0.367	A A	7.6 0.0	5 0
APPROACH		**0.367**	**A**	**2.2**	**5**
ALL VEHICLES		**0.445**	**NA**	**4.8**	**18**

T – through lane, L – left turn lane, NA – Not Applicable

Table 13: SIDRA Output – Existing Hepburn Ave / Kingsway access C intersection during Saturday peak hour with interim development

SATURDAY PEAK HOUR (With Interim Development)					
Approach	**Movement Type**	**Degree of Saturation**	**Level of Service**	**Average Delay (sec)**	**95 % Queue (m)**
Kingsway access C North Approach	L	0.444	C	16.0	20
APPROACH		**0.444**	**C**	**16.0**	**20**
Hepburn Ave West Approach	L T	0.162 0.182	A A	7.6 0.0	5 0
APPROACH		**0.182**	**A**	**2.3**	**5**
ALL VEHICLES		**0.444**	**NA**	**4.9**	**20**

T – through lane, L – left turn lane, NA – Not Applicable

4.2.6 Hepburn Ave / Bellerive Bvd intersection

The City of Wanneroo currently has plans to extend the dual carriageway on Hepburn Avenue past Bellerive Boulevard in 2008. The City's current planning proposes to turn the Hepburn Ave / Bellerive Bvd intersection into a left in / left out arrangement (ie no right turns permitted) to accommodate a 200-metre long right turn pocket on the Hepburn Ave east approach to Giralt Rd / Kingsway Access D. However, if the right turn movement is permitted from Hepburn Ave east to Bellerive Bvd north (for traffic to the proposed Kingsway accesses E and F on Bellerive Bvd) then the right turn volume at the Hepburn Ave / Giralt Rd / Kingsway Access D intersection would be minimised. As noted in section 4.2.2 the proposed improvements at Hepburn Ave / Giralt Rd / Kingsway Access D include widening the proposed Hepburn Ave east approach right turn pocket to two lanes, which would not need to be 200m long.

The SIDRA analysis undertaken for the proposed modification of this intersection assumes it would be a full movement T-junction. **Table 14** presents the results of the SIDRA analysis for Saturday peak hour traffic flows with the additional traffic generated by the proposed interim development of Kingsway City. This analysis shows that the intersection would operate satisfactorily for the Saturday peak hour traffic generated by the proposed interim development of Kingsway City (level of service D for the low volume right turn out of Bellerive Bvd and level of service C on the right turn into Bellerive Bvd and the left turn out from Bellerive Bvd).

The right turn into Bellerive Bvd from Hepburn Ave is an essential element of the access strategy for the proposed interim development of Kingsway City but the right turn out from Bellerive Bvd is not essential and probably should not be permitted, as it would be likely to attract too much right turning traffic from the neighbouring area that could not be handled by this unsignalised intersection.

Table 14: SIDRA Output – Proposed Hepburn Ave / Bellerive Bvd intersection during Saturday peak hour with interim development

SATURDAY PEAK HOUR (With Interim Development)					
Approach	**Movement Type**	**Degree of Saturation**	**Level of Service**	**Average Delay (sec)**	**95 % Queue (m)**
Hepburn Ave East Approach	T	0.334	A	0.0	0
	R	0.314	C	19.6	11
APPROACH		**0.334**	**A**	**1.6**	**11**
Bellerive Bvd North Approach	L	0.445	C	23.6	17
	R (to median)	0.046	D	29.9	1
	R (from median)	0.025	C	17.9	1
APPROACH		**0.445**			**17**
Hepburn Ave West Approach	L	0.006	A	8.0	0
	T	0.297	A	0.0	0
APPROACH		**0.297**	**A**	**0.0**	**0**
ALL VEHICLES		**0.445**	**NA**	**2.1**	**17**

T – through lane, R – right turn lane, L – left turn lane, NA – Not Applicable

4.2.7 Bellerive Bvd / Kingsway access E intersection

This proposed full movement access onto Bellerive Boulevard would operate very satisfactorily (level of service A on all movements) for Saturday peak hour flows with the proposed interim development of Kingsway City as shown in **Table 15.**

Table 15: SIDRA Output – Proposed Bellerive Bvd / Kingsway access E intersection during Saturday peak hour with interim development

SATURDAY PEAK HOUR (With Interim Development)					
Approach	**Movement Type**	**Degree of Saturation**	**Level of Service**	**Average Delay (sec)**	**95 % Queue (m)**
Bellerive Bvd	L	0.061	A	8.2	0
South Approach	T	0.061	A	0.0	0
APPROACH		**0.061**	**A**	**1.0**	**0**
Bellerive Bvd	T	0.066	A	0.4	3
North Approach	R	0.066	A	8.8	3
APPROACH		**0.066**	**A**	**1.4**	**3**
Kingsway access E	L	0.048	A	9.3	2
West Approach	R	0.048	A	9.5	2
APPROACH		**0.048**	**A**	**9.4**	**2**
ALL VEHICLES		**0.066**	**NA**	**2.5**	**3**

T – through lane, R – right turn lane, L – left turn lane, NA – Not Applicable

4.2.8 Bellerive Bvd / Kingsway access F roundabout

This proposed access onto Bellerive Boulevard from the upstairs carpark in the proposed interim development of Kingsway City is proposed to be constructed as a single-lane roundabout. It would operate very satisfactorily (level of service A or B on all movements) for Saturday peak hour flows as shown in **Table 16.**

Table 15: SIDRA Output – Proposed Bellerive Bvd / Kingsway access F roundabout during Saturday peak hour with interim development

SATURDAY PEAK HOUR (With Interim Development)					
Approach	**Movement Type**	**Degree of Saturation**	**Level of Service**	**Average Delay (sec)**	**95 % Queue (m)**
Bellerive Bvd	L	0.104	A	8.2	5
South Approach	T	0.104	A	6.1	5
APPROACH		**0.104**	**A**	**8.0**	**5**
Bellerive Bvd	T	0.121	A	4.8	4
North Approach	R	0.121	B	11.5	4
APPROACH		**0.121**	**B**	**10.9**	**4**
Kingsway access F	L	0.160	A	5.4	7
West Approach	R	0.160	B	11.3	7
APPROACH		**0.160**	**A**	**8.0**	**7**
ALL VEHICLES		**0.160**	**A**	**8.8**	**7**

T – through lane, R – right turn lane, L – left turn lane

5. ULTIMATE DEVELOPMENT

The ultimate development proposed in the Kingsway City Activity Centre Structure Plan would increase the non-retail floor space to 23,250m^2 (compare with the interim development in Table 1) and add 395 residential apartments to this centre.

These additional land uses would further enhance the opportunities for multipurpose trips within this centre, meaning that some visitors would only make one car trip instead of several trips to different destinations. The new residential population in the apartments would also be able to make a significant number of their trips by walking within the centre instead of driving at all.

In this ultimate scenario it is also assumed that there would be enhancements to public transport services serving this centre. This would further reduce the amount of car trips generated by most of the land uses proposed in this centre in the longer term, although retail trips are less considered less likely to be significantly affected by public transport.

The overall reduction in car traffic generation rates resulting from these factors is estimated at approximately one third of the traffic generation that would be expected from these non-retail and residential land uses if they were not located within a mixed-use centre such as this.

The overall increase in traffic generation (from the interim development to the ultimate development scenario) is estimated at 340 vehicles per hour. A similar increase is anticipated during the Thursday PM peak and the Saturday peak hour. The total traffic generation of each stage of development is summarised in **Table 16**.

Table 16: Kingsway City Traffic Generation – Ultimate development

Development scenario	Peak period	Total vehicle movements
Existing	Thursday 4:30-5:30	1,980vph
Existing	Saturday 11:00-12:00	2,330vph
Interim development	Thursday 4:30-5:30	3,200vph
Interim development	Saturday 11:00-12:00	3,730vph
Ultimate development	Thursday 4:30-5:30	3,540vph
Ultimate development	Saturday 11:00-12:00	4,070vph

The overall distribution of this additional traffic is expected to be similar to the overall distribution of traffic from the total interim development. The effects of this additional traffic have not been assessed in detail, as the land use proposals in the ultimate scenario have not been developed in detail at this stage. However, the overall level of traffic increase (an increase of around 9% of the total Saturday peak traffic from the interim stage of development) is expected to be able to be accommodated on the surrounding road network with further improvements to the existing and proposed intersections.

6. CONCLUSIONS AND RECOMMENDATIONS

A Traffic Impact Study was prepared in July 2006 by Transcore on behalf of Tah Land Pty Ltd with regard to a Structure Plan being prepared for Kingsway City Shopping Centre, Madeley. The structure plan envisages Kingsway City's future development into a significant mixed-use activity centre.

The primary focus of the Traffic Impact Study is on the proposed interim stage of expansion of this centre, which represents part of the ultimate development envisaged in the Structure Plan.

The July 2006 Traffic Impact Study was based on traffic surveys undertaken in 2002. This Update report includes updated traffic surveys undertaken in August 2007 with shopping centre traffic flows and intersection capacity analysis updated accordingly. This supersedes those elements of the July 2006 Traffic Impact Study report.

This revised analysis has found that the Saturday peak hour (approximately 11:00 to 12:00) is the busiest period at this location, both for traffic generated by the shopping centre and total traffic flows on the adjacent roads.

The proposed access arrangement for the interim development of Kingsway City involves 2 existing accesses (1 modified) onto Wanneroo Rd, 2 existing accesses (1 modified) onto Hepburn Ave, 2 new accesses onto Bellerive Bvd and extension of Bellerive Bvd to Kingsway. The analysis has found that overall this access arrangement provides sufficient capacity to accommodate the Saturday peak hour traffic movements generated by the proposed interim development of Kingsway City. Two of those accesses (the northernmost crossover (Access A) onto Wanneroo Rd and the Hepburn Ave / Giralt Rd / Access D intersection) will be particularly busy but are expected to operate satisfactorily under the proposed access strategy.

The Wanneroo Rd / Access A intersection is proposed to be modified to allow right turn traffic into Kingsway City from Wanneroo Rd. The right turn out of Kingsway City would experience significant queues and delays but the ability for drivers to turn left onto Wanneroo Rd instead (to use the U-turn slot further south on Wanneroo Rd) will allow this intersection to operate satisfactorily.

The signalised Hepburn Ave / Giralt Rd / Access D intersection will also be particularly busy. It is recommended that the Kingsway access road should be upgraded to 2 lanes northbound and 3 lanes southbound (ie lengthen the existing turn pockets). It is also recommended that the planned right turn pocket on the Hepburn Ave east approach should be widened to two lanes to accommodate the increased right turning traffic generated by the proposed interim development of Kingsway City.

The proposed upgrading of the Hepburn Ave / Bellerive Bvd intersection by the City of Wanneroo would restrict this intersection to left in / left out movements

only. The right turn into Bellerive Bvd from Hepburn Ave is an essential element of the access strategy for the proposed interim development of Kingsway City. It is recommended that the right turn from Hepburn Ave into Bellerive Bvd should be allowed.

The additional traffic generated by the proposed interim development of Kingsway City will also increase traffic volumes at the already congested Wanneroo Rd / Hepburn Ave signalised intersection. The analysis in this report shows that widening the right turn pocket on the Hepburn Ave east approach to two lanes would fully compensate for the increase in traffic flows through this intersection. It is therefore recommended that the proposed interim development of Kingsway City should include widening of this right turn pocket to two lanes so that the proposed development will not worsen the overall operation of this existing intersection.

The effects of additional traffic from the ultimate development envisaged in the structure plan have not yet been assessed in detail, as the land use proposals in the ultimate scenario have not been developed in detail at this stage. However, preliminary analysis indicates the overall level of traffic increase associated with this ultimate development is likely to be around 9% of the total Saturday peak traffic from the interim stage of development. This level of additional traffic increase is expected to be able to be accommodated on the surrounding road network with further improvements to the existing and proposed intersections analysed in this report.

Appendix A

Interim Development Concept

Appendix B

Peak Hour Traffic Movement Diagrams

Figure 1.
Existing Thursday PM Peak Traffic
(Thursday 16 August 2007)
4:30 – 5:30pm

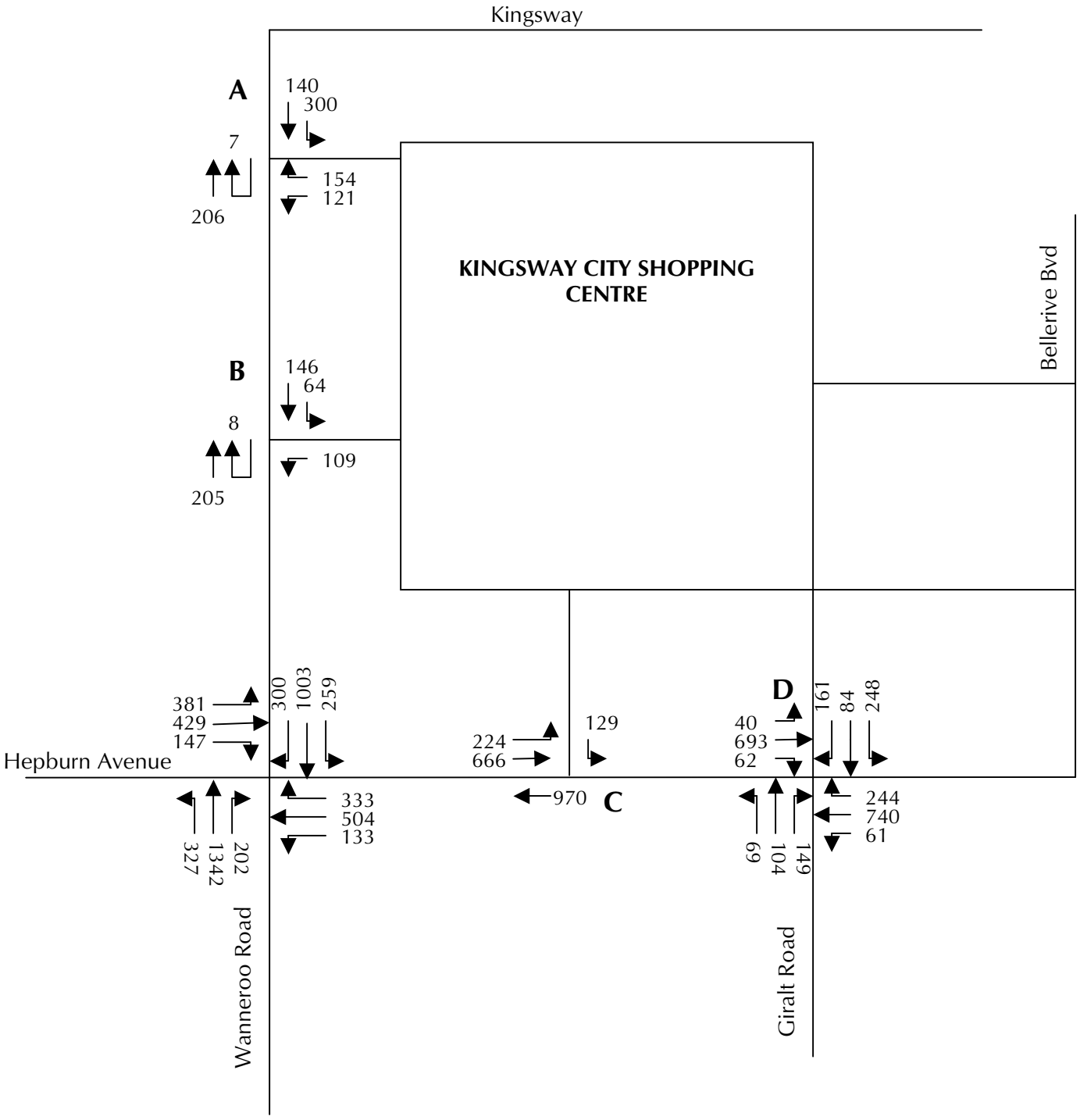


Figure 2.
Existing Saturday Peak Hour Traffic
(Saturday 18 August 2007)
11:00 am – 12:00pm

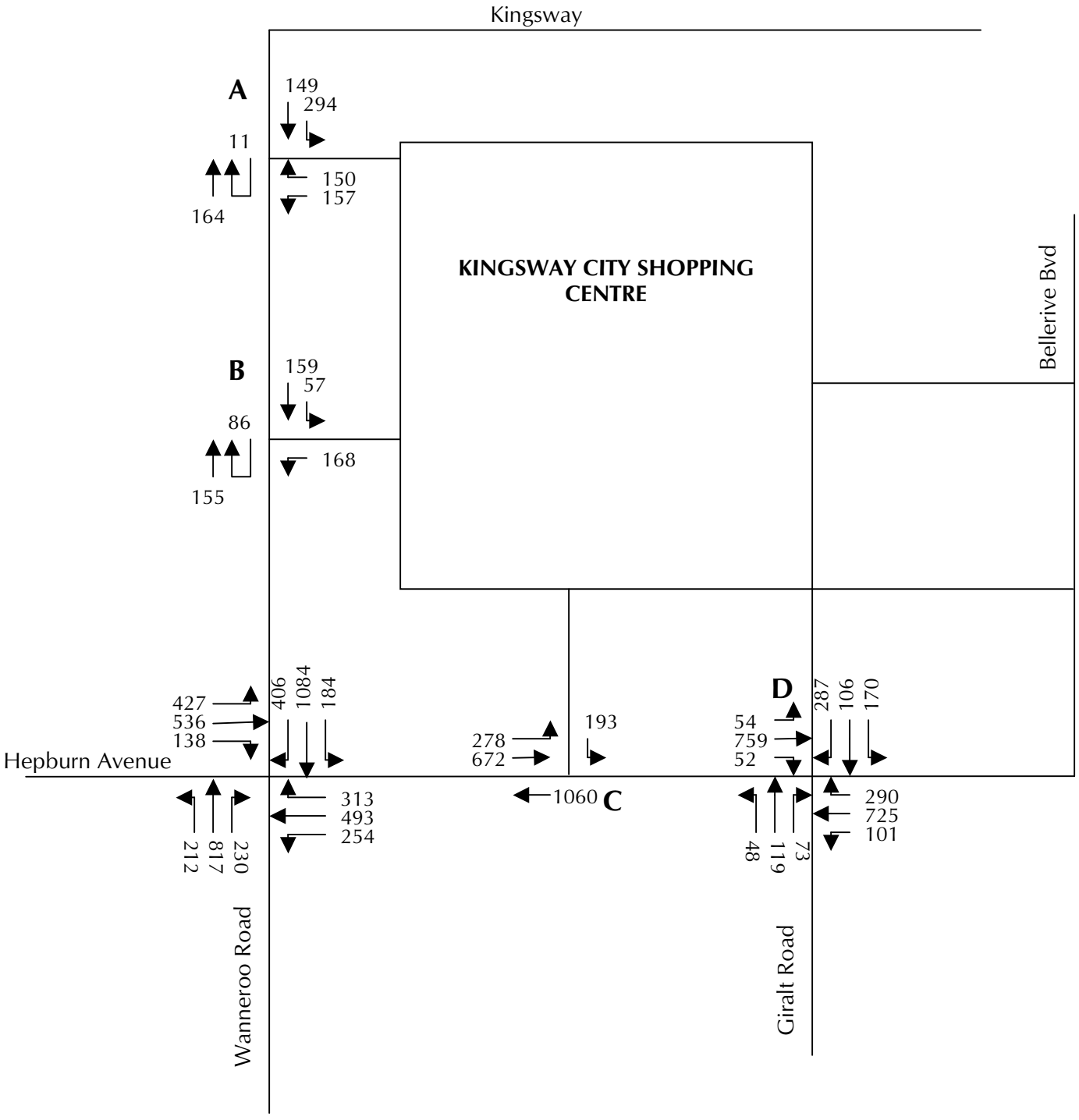


Figure 3.
Thursday PM Peak Hour Total Traffic Volumes
Including proposed interim development of Kingsway City.

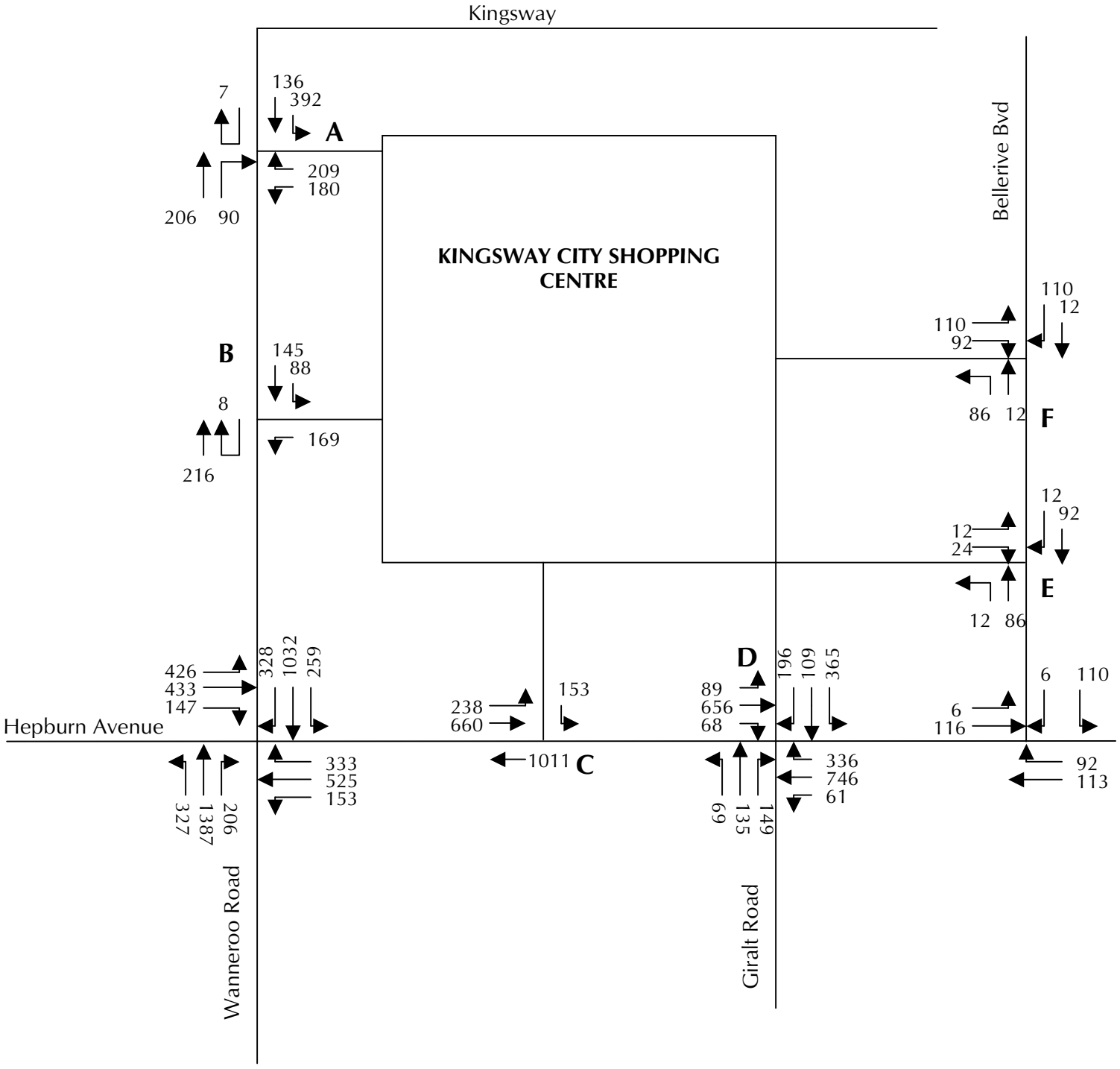
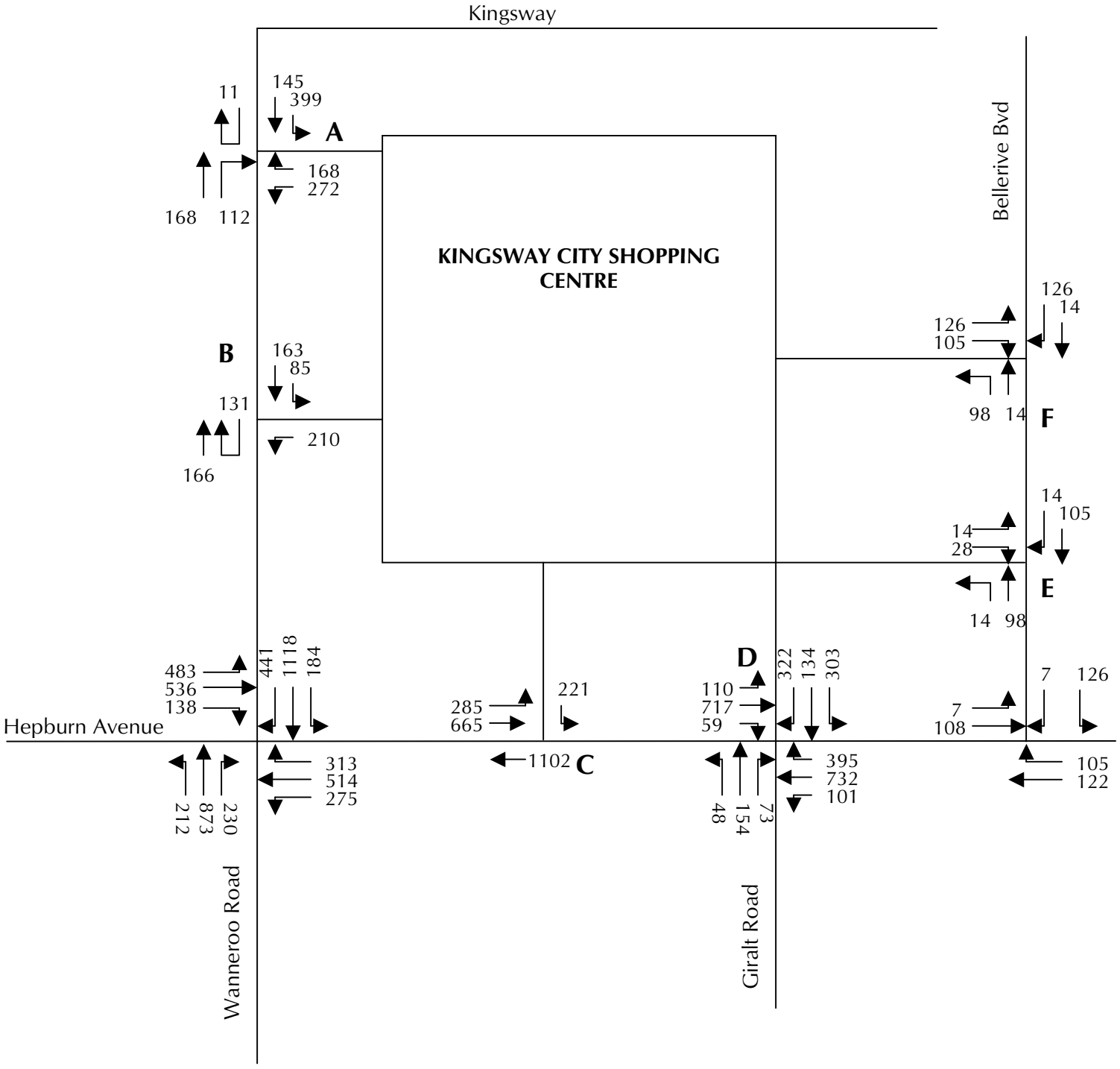


Figure 4.
Saturday Peak Hour Total Traffic Volumes
Including proposed interim development of Kingsway City.



KINGSWAY CITY ACTIVITY CENTRE STRUCTURE PLAN

APPENDIX B

General Description of Centres Model Including Output Summary Sheets

THE RETAIL MODEL

The retail model used in this study is a form of gravity model which has been used in retail analysis for many years. The term "gravity" model is derived from an early analogy, formed in the late 1950's and early 1960's, between physics and social behavior. In the same manner that the attraction between physical bodies is related to their mass and distance between them, so too (it was hypothesized) is the attraction between certain social phenomena such as commercial centres and populations.

Though there is no true parallel between the physical and social sciences, this phenomenon of "social gravity" has been clearly demonstrated by numerous overseas and local researchers. The name "gravity model" has therefore persisted, and many useful models derived from this concept have been produced and used in various parts of the world, particularly in the United States of America and England.

SHRAPNEL URBAN PLANNING has used gravity models for retail analysis since 1982, and has produced a significant body of work for various public and private sector clients. The form of the gravity model which SHRAPNEL URBAN PLANNING has adapted for local use was originally developed by Lakshmanan and Hansen[1] to aid in the location of large new shopping centres in the Baltimore region. The model is expressed mathematically as follows:

$$P_{ij} = T_i \frac{A^a{}_j \Big/ d_{ij}{}^b}{\sum_{j=1}^{n} A^a{}_j \Big/ d_{ij}{}^b}$$

Where:

P_{ij} = The number of people living in zone *i* who are attracted to centre *j*
T_i = The total number of people living in zone *i*
A_j = A measure of the relative attractiveness of centre *j*
d_{ij} = A measure of the distance between zone *i* and centre *j*
a = An exponent applied to the attraction variable.
b = An exponent applied to the distance variable.

The basic premise of this model is that people are more likely, on the whole, to use shopping centres which are located close to where they live than they are to use centres which are located further away. This is not always the case, however, and some people will travel further to shop than they really need, sometimes passing one centre to visit a preferred one further away. Often this by-passing will be the by-passing of a smaller centre to visit a larger one. This "real world" situation is reflected in the results of the model. The older method

[1] Lakshmanan T.R. and Hansen W.G. (1965). A Retail Market Potential Model, *AIP Journal, May 1965.*

of describing a centre's "catchment area" by a single line around the centre, and assuming that all persons or dwellings on the inside of the line are "in" the catchment and all those outside the line are "out" of the catchment is clearly artificial.

The basic data unit (***P***) is usually population grouped into identifiable zones, such as suburbs. Population counts and forecasts are reasonably easily obtained. Other data units can, however, be used. It may be decided to use households rather than population, or household income or estimates of household retail expenditure. Whichever data unit is used, the way it is processed is the same. When estimates of household expenditure are used, however, the total amount of retail dollars attracted to the centre can then be divided by the floor area of the centre to provide a calculation of the annual turnover per square metre of the centre.

The measure of attractiveness of each centre (***A***) which is used is normally the size of the centre in square metres of net lettable floor area. This most significant of inputs can be easily measured and kept up-to-date. Other measures of attractiveness can be included in the model as well (such as values representing relative "image", ease of car parking, etc); but these factors are much more difficult to reliably quantify. Unless the results of detailed empirical research are available to clearly demonstrate the reliability of measuring these types of additional variables, the model provides more useful results without them. Where such research can be done, then these additional factors will increase the sophistication of the model.

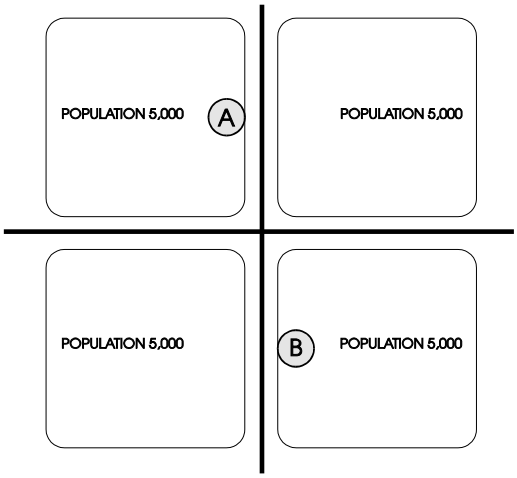
The measure of the distance between each residential zone and each shopping centre (***d***) is usually an estimate of the driving time in minutes. This estimate may be derived from measures of the straight line distances involved, or by distances along traffic routes. There is little difference in the model's results between straight line measures and road network measures where major physical impediments to direct travel are absent. A measure which takes account of the structure of the road network is superior to the straight line distance measure, however, where major geographic features (such as lakes or rivers for example) make straight line distance measures less accurate.

Thus the model relates ***all the shopping centres*** in a study area with ***all the people*** (grouped into zones) within the area. The relationship between these two sets of data is determined by the ***set of driving times*** - a separate measurement between each shopping centre and each residential zone. The model's main use is to estimate the future relative performance of a shopping centre given the future size and distribution of the population and all other shopping centres. The impact of creating or expanding any shopping centre, or even the effects of changing the road network, can also be estimated using the model.

It must always be remembered that the model results are a calculation, based on a mathematical formula and certain selected data inputs. When the results are presented in a way which has real meaning to a shopping centre

developer, such as dollar turnover per square metre, it is tempting to assume that the model is actually predicting the future financial performance of the centre. This is not the case, and is why other considerations must always also be taken into account by decision makers. The model is therefore an aid to decision making - not a "black box" which spits out the "right" answer.

For example, in a hypothetical urban area of 20,000 people, there might be two centres of exactly equal size - Centre A and Centre B, spaced evenly in relation to the population. The situation might be as illustrated in the following diagram:



HYPOTHETICAL URBAN AREA

In this simple hypothetical situation, as common sense itself dictates, the model would distribute half the total population to Centre A and half to Centre B (though a higher proportion of the population living near Centre A would be distributed to Centre A and vice versa). This is because the two centres are equal in size, and are located equally in relation to an evenly distributed population. But if "in reality" Centre A was a clean, well managed centre containing many excellent shops; while Centre B was run down, had poor car parking and an uninteresting array of shops, Centre A would out-perform Centre B easily. The model would not indicate this difference unless the research was available to quantify the additional relative attraction factors. Thus the results of the model are a function of the inputs. They only represent the real world partially. This does not detract from the model's usefulness as an analytical tool, but it illustrates its limitations and the need for the use of sound judgment as well.

Output Summary Sheets

	Datasets >>>	06Fd$		06NonFd$									
MR Zone	SUBURB	Reg / Dist Centre Name		IND Area IND Name	Food sqm	Non-Food sqm	Total sqm	Food Sales 2001$	Food Sales/sqm	Non-Food Sales 2001$	Non-Food Sales/sqm	Total Sales 2001$	Total Sales/sqm
514	LANDSDALE	KINGSWAY CITY		-	5,926	10,648	16,574	55,379,408	$9,345	38,277,178	$3,595	93,656,585	$5,651
536	WANNEROO	WANNEROO		-	5,874	2,536	8,410	54,326,683	$9,249	10,404,360	$4,103	64,731,043	$7,697
670	JOONDALUP	JOONDALUP CITY		-	13,934	46,058	59,992	78,954,740	$5,666	182,752,982	$3,968	261,707,723	$4,362
515	WARWICK	WARWICK GROVE		-	11,500	22,610	34,110	87,703,516	$7,626	114,178,227	$5,050	201,881,743	$5,919
508	GIRRAWHEEN	GIRRAWHEEN PARK		-	9,301	2,575	11,876	43,468,398	$4,674	7,272,015	$2,824	50,740,413	$4,273
511	MARANGAROO	GRIFFON WAY		-	6,000	4,000	10,000	44,495,253	$7,416	17,274,972	$4,319	61,770,225	$6,177
516	GREENWOOD	GREENWOOD VILLAGE		-	5,065	5,223	10,288	27,002,379	$5,331	16,206,787	$3,103	43,209,166	$4,200
528	WOODVALE	WOODVALE PARK		-	6,073	3,610	9,683	38,772,682	$6,384	13,626,256	$3,775	52,398,938	$5,411
513	MARANGAROO	-		-	400	94	494	2,211,392	$5,528	391,391	$4,164	2,602,783	$5,269
522	GREENWOOD	-		CANHAM WAY	415	4,134	4,549	1,694,026	$4,082	11,147,295	$2,696	12,841,321	$2,823
529	KINGSLEY	-		-	544	466	1,010	2,500,401	$4,596	1,557,946	$3,343	4,058,348	$4,018
530	LANDSDALE	-		-	591	278	870	1,972,195	$3,336	678,974	$2,439	2,651,169	$3,049
532	WANGARA	-		-	0	0	0	0	na	0	na	0	na
533	WANGARA	-		WANGARA	2,224	59,535	61,759	4,965,675	$2,233	86,719,194	$1,457	91,684,869	$1,485
535	WANNEROO	-		-	0	0	0	0	na	0	na	0	na
687	GNANGARA	-		-	0	0	0	0	na	0	na	0	na
701	LANDSDALE	-		LANDSDALE	350	2,605	2,955	990,482	$2,830	4,984,407	$1,913	5,974,889	$2,022
509	GIRRAWHEEN	-		-	420	150	570	2,604,677	$6,202	642,814	$4,285	3,247,491	$5,697
512	LANDSDALE	-		-	872	374	1,245	3,459,525	$3,969	1,061,252	$2,841	4,520,777	$3,631
523	KINGSLEY	-		-	2,021	1,357	3,378	9,487,212	$4,694	4,584,864	$3,379	14,072,076	$4,166
531	LANDSDALE	-		-	0	900	900	0	$4,205	2,700,704	$3,001	2,700,704	$3,001
684	WANNEROO	-		-	0	0	0	0	na	0	na	0	na
686	GNANGARA	-		-	0	0	0	0	na	0	na	0	na
702	LANDSDALE	-		-	282	121	403	1,234,107	$4,374	367,184	$3,037	1,601,291	$3,973
703	ALEXANDER HEIGHTS	-		-	100	390	490	704,488	$7,045	1,862,827	$4,776	2,567,315	$5,239
Regional & District Only					***57,600***	***93,650***	***151,250***	***$391.3***	***$6,794***	***$386.4***	***$4,126***	***$777.7***	***$5,142***
Totals & Average for Selected Zone Set					71,892	167,664	239,556	$461.9	$6,425	$516.7	$3,082	$978.6	$4,085
Nhood Only (excludes Regional, District, Industrial)					33,098	96,246	129,344	$24.2	$730	$13.8	$144	$38.0	$294
								(million)		(million)		(million)	

NB: These are calculated figures from a statistics-based "Retail Potentials" model, which is used for particular forms of comparative analysis.
Therefore, actual sales and floorspace performances may differ from those above, depending on various external physical and social factor

Scenario 01: 2006; Existing; Kingsway City and Wanneroo at current size.

	Datasets >>>	11Fd$		11NonFd$									
MR Zone	SUBURB	Reg / Dist Centre Name		IND Area IND Name	Food sqm	Non-Food sqm	Total sqm	Food Sales 2001$	Food Sales/sqm	Non-Food Sales 2001$	Non-Food Sales/sqm	Total Sales 2001$	Total Sales/sqm
514	LANDSDALE	KINGSWAY CITY		-	5,926	10,648	16,574	61,053,590	$10,303	43,442,390	$4,080	104,495,980	$6,305
536	WANNEROO	WANNEROO		-	5,874	2,536	8,410	57,467,621	$9,783	11,653,651	$4,595	69,121,272	$8,219
670	JOONDALUP	JOONDALUP CITY		-	20,000	70,000	90,000	105,994,067	$5,300	275,917,845	$3,942	381,911,912	$4,243
515	WARWICK	WARWICK GROVE		-	11,500	22,610	34,110	87,845,224	$7,639	116,084,313	$5,134	203,929,538	$5,979
508	GIRRAWHEEN	GIRRAWHEEN PARK		-	9,301	2,575	11,876	43,647,935	$4,693	7,363,351	$2,860	51,011,287	$4,295
511	MARANGAROO	GRIFFON WAY		-	6,500	5,500	12,000	48,554,354	$7,470	24,026,017	$4,368	72,580,371	$6,048
516	GREENWOOD	GREENWOOD VILLAGE		-	5,065	5,223	10,288	26,903,913	$5,312	16,424,261	$3,145	43,328,174	$4,212
528	WOODVALE	WOODVALE PARK		-	6,073	3,610	9,683	38,310,566	$6,308	13,821,624	$3,829	52,132,190	$5,384
513	MARANGAROO	-		-	400	94	494	2,221,111	$5,553	397,716	$4,231	2,618,826	$5,301
522	GREENWOOD	-		CANHAM WAY	415	4,134	4,549	1,696,707	$4,088	11,345,648	$2,744	13,042,355	$2,867
529	KINGSLEY	-		-	544	466	1,010	2,480,826	$4,560	1,585,508	$3,402	4,066,333	$4,026
530	LANDSDALE	-		-	1,325	593	1,918	5,129,254	$3,871	1,666,851	$2,811	6,796,105	$3,543
532	WANGARA	-		-	0	0	0	0	na	0	na	0	na
533	WANGARA	-		WANGARA	2,224	59,535	61,759	5,213,967	$2,344	94,288,786	$1,584	99,502,753	$1,611
535	WANNEROO	-		-	0	0	0	0	na	0	na	0	na
687	GNANGARA	-		-	0	0	0	0	na	0	na	0	na
701	LANDSDALE	-		LANDSDALE	350	2,605	2,955	1,102,927	$3,151	5,649,890	$2,169	6,752,817	$2,285
509	GIRRAWHEEN	-		-	420	150	570	2,633,686	$6,271	656,019	$4,373	3,289,705	$5,771
512	LANDSDALE	-		-	1,434	614	2,048	6,221,779	$4,340	1,958,232	$3,187	8,180,011	$3,994
523	KINGSLEY	-		-	2,021	1,357	3,378	9,297,716	$4,601	4,597,702	$3,388	13,895,418	$4,114
531	LANDSDALE	-		-	0	900	900	0	$4,519	2,997,725	$3,331	2,997,725	$3,331
684	WANNEROO	-		-	0	0	0	0	na	0	na	0	na
686	GNANGARA	-		-	0	0	0	0	na	0	na	0	na
702	LANDSDALE	-		-	433	186	619	1,988,496	$4,591	609,961	$3,286	2,598,457	$4,200
703	ALEXANDER HEIGHTS	-		-	100	390	490	708,635	$7,086	1,900,826	$4,874	2,609,462	$5,325
Regional & District Only					***64,166***	***119,092***	***183,258***	***$431.5***	***$6,724***	***$494.9***	***$4,156***	***$926.4***	***$5,055***
Totals & Average for Selected Zone Set					79,905	193,726	273,631	$508.5	$6,363	$636.4	$3,285	$1,144.9	$4,184
Nhood Only (excludes Regional, District, Industrial)					46,677	144,750	191,427	$30.7	$657	$16.4	$113	$47.1	$246
								(million)		(million)		(million)	

NB: These are calculated figures from a statistics-based "Retail Potentials" model, which is used for particular forms of comparative analysis.
Therefore, actual sales and floorspace performances may differ from those above, depending on various external physical and social factor

Scenario 02: 2011; Base Case; Kingsway and Wanneroo at current size;
Other centres expanded in line with planning or population growth.

	Datasets >>>	11Fd$		11NonFd$									
MR Zone	SUBURB	Reg / Dist Centre Name		IND Area IND Name	Food sqm	Non-Food sqm	Total sqm	Food Sales 2001$	Food Sales/sqm	Non-Food Sales 2001$	Non-Food Sales/sqm	Total Sales 2001$	Total Sales/sqm
514	LANDSDALE	KINGSWAY CITY		-	5,926	10,648	16,574	59,913,798	$10,110	42,626,332	$4,003	102,540,131	$6,187
536	WANNEROO	WANNEROO		-	10,000	13,095	23,095	83,565,374	$8,357	49,406,943	$3,773	132,972,318	$5,758
670	JOONDALUP	JOONDALUP CITY		-	20,000	70,000	90,000	103,615,730	$5,181	269,732,944	$3,853	373,348,673	$4,148
515	WARWICK	WARWICK GROVE		-	11,500	22,610	34,110	87,062,948	$7,571	115,005,589	$5,086	202,068,538	$5,924
508	GIRRAWHEEN	GIRRAWHEEN PARK		-	9,301	2,575	11,876	43,237,596	$4,649	7,289,991	$2,831	50,527,587	$4,255
511	MARANGAROO	GRIFFON WAY		-	6,500	5,500	12,000	48,121,586	$7,403	23,806,232	$4,328	71,927,818	$5,994
516	GREENWOOD	GREENWOOD VILLAGE		-	5,065	5,223	10,288	26,577,618	$5,247	16,224,131	$3,106	42,801,749	$4,160
528	WOODVALE	WOODVALE PARK		-	6,073	3,610	9,683	37,231,591	$6,131	13,451,850	$3,726	50,683,441	$5,234
513	MARANGAROO		-	-	400	94	494	2,195,019	$5,488	392,757	$4,178	2,587,776	$5,238
522	GREENWOOD		-	CANHAM WAY	415	4,134	4,549	1,675,726	$4,038	11,199,747	$2,709	12,875,473	$2,830
529	KINGSLEY		-	-	544	466	1,010	2,426,893	$4,461	1,552,561	$3,332	3,979,454	$3,940
530	LANDSDALE		-	-	1,325	593	1,918	4,970,407	$3,751	1,618,629	$2,730	6,589,036	$3,435
532	WANGARA		-	-	0	0	0	0	na	0	na	0	na
533	WANGARA		-	WANGARA	2,224	59,535	61,759	4,967,554	$2,234	90,093,983	$1,513	95,061,537	$1,539
535	WANNEROO		-	-	0	0	0	0	na	0	na	0	na
687	GNANGARA		-	-	0	0	0	0	na	0	na	0	na
701	LANDSDALE		-	LANDSDALE	350	2,605	2,955	1,069,320	$3,055	5,487,913	$2,107	6,557,233	$2,219
509	GIRRAWHEEN		-	-	420	150	570	2,614,090	$6,224	650,660	$4,338	3,264,750	$5,728
512	LANDSDALE		-	-	1,434	614	2,048	6,135,594	$4,280	1,931,551	$3,144	8,067,146	$3,939
523	KINGSLEY		-	-	2,021	1,357	3,378	9,142,479	$4,524	4,523,497	$3,333	13,665,976	$4,046
531	LANDSDALE		-	-	0	900	900	0	$4,421	2,936,065	$3,262	2,936,065	$3,262
684	WANNEROO		-	-	0	0	0	0	na	0	na	0	na
686	GNANGARA		-	-	0	0	0	0	na	0	na	0	na
702	LANDSDALE		-	-	433	186	619	1,959,460	$4,524	601,301	$3,239	2,560,761	$4,139
703	ALEXANDER HEIGHTS		-	-	100	390	490	703,161	$7,032	1,886,129	$4,836	2,589,290	$5,284
Regional & District Only					***68,292***	***129,651***	***197,943***	***$452.1***	***$6,620***	***$524.1***	***$4,042***	***$976.2***	***$4,932***
Totals & Average for Selected Zone Set					84,031	204,285	288,316	$527.2	$6,274	$660.4	$3,233	$1,187.6	$4,119
Nhood Only (excludes Regional, District, Industrial)					46,677	144,750	191,427	$30.1	$646	$16.1	$111	$46.2	$242
								(million)		(million)		(million)	

NB: These are calculated figures from a statistics-based "Retail Potentials" model, which is used for particular forms of comparative analysis. Therefore, actual sales and floorspace performances may differ from those above, depending on various external physical and social factor

Scenario 03: 2011; As per S-02 but with Wanneroo retail expanded to 23,000 sqm in accordance with current planning.

	Datasets >>>	11Fd$		11NonFd$									
MR Zone	SUBURB	Reg / Dist Centre Name		IND Area IND Name	Food sqm	Non-Food sqm	Total sqm	Food Sales 2001$	Food Sales/sqm	Non-Food Sales 2001$	Non-Food Sales/sqm	Total Sales 2001$	Total Sales/sqm
514	LANDSDALE	KINGSWAY CITY		-	10,626	21,554	32,180	101,651,415	$9,566	81,812,046	$3,796	183,463,462	$5,701
536	WANNEROO	WANNEROO		-	10,000	13,095	23,095	81,666,329	$8,167	48,539,389	$3,707	130,205,718	$5,638
670	JOONDALUP	JOONDALUP CITY		-	20,000	70,000	90,000	102,169,670	$5,108	267,095,787	$3,816	369,265,457	$4,103
515	WARWICK	WARWICK GROVE		-	11,500	22,610	34,110	84,518,558	$7,349	112,748,307	$4,987	197,266,865	$5,783
508	GIRRAWHEEN	GIRRAWHEEN PARK		-	9,301	2,575	11,876	41,540,027	$4,466	7,078,051	$2,749	48,618,078	$4,094
511	MARANGAROO	GRIFFON WAY		-	6,500	5,500	12,000	46,225,489	$7,112	23,119,561	$4,204	69,345,049	$5,779
516	GREENWOOD	GREENWOOD VILLAGE		-	5,065	5,223	10,288	25,616,517	$5,058	15,836,394	$3,032	41,452,912	$4,029
528	WOODVALE	WOODVALE PARK		-	6,073	3,610	9,683	35,634,229	$5,868	13,100,704	$3,629	48,734,932	$5,033
513	MARANGAROO	-		-	400	94	494	2,093,104	$5,233	379,707	$4,039	2,472,811	$5,006
522	GREENWOOD	-		CANHAM WAY	415	4,134	4,549	1,602,967	$3,863	10,873,764	$2,630	12,476,731	$2,743
529	KINGSLEY	-		-	544	466	1,010	2,313,033	$4,252	1,509,211	$3,239	3,822,244	$3,784
530	LANDSDALE	-		-	1,325	593	1,918	4,628,300	$3,493	1,559,959	$2,631	6,188,258	$3,226
532	WANGARA	-		-	0	0	0	0	na	0	na	0	na
533	WANGARA	-		WANGARA	2,224	59,535	61,759	4,703,736	$2,115	87,412,573	$1,468	92,116,309	$1,492
535	WANNEROO	-		-	0	0	0	0	na	0	na	0	na
687	GNANGARA	-		-	0	0	0	0	na	0	na	0	na
701	LANDSDALE	-		LANDSDALE	350	2,605	2,955	965,370	$2,758	5,176,492	$1,987	6,141,862	$2,078
509	GIRRAWHEEN	-		-	420	150	570	2,526,973	$6,017	635,130	$4,234	3,162,103	$5,548
512	LANDSDALE	-		-	1,434	614	2,048	5,432,798	$3,790	1,798,964	$2,928	7,231,762	$3,531
523	KINGSLEY	-		-	2,021	1,357	3,378	8,791,908	$4,350	4,418,308	$3,256	13,210,216	$3,911
531	LANDSDALE	-		-	0	900	900	0	$3,951	2,756,726	$3,063	2,756,726	$3,063
684	WANNEROO	-		-	0	0	0	0	na	0	na	0	na
686	GNANGARA	-		-	0	0	0	0	na	0	na	0	na
702	LANDSDALE	-		-	433	186	619	1,803,709	$4,165	573,796	$3,091	2,377,505	$3,843
703	ALEXANDER HEIGHTS	-		-	100	390	490	668,733	$6,687	1,826,249	$4,683	2,494,982	$5,092
Regional & District Only					***72,992***	***140,557***	***213,549***	***$483.4***	***$6,622***	***$556.2***	***$3,957***	***$1,039.6***	***$4,868***
Totals & Average for Selected Zone Set					88,731	215,191	303,922	$554.6	$6,250	$688.3	$3,198	$1,242.8	$4,089
Nhood Only (excludes Regional, District, Industrial)					46,677	144,750	191,427	$28.3	$605	$15.5	$107	$43.7	$228
								(million)		(million)		(million)	

NB: These are calculated figures from a statistics-based "Retail Potentials" model, which is used for particular forms of comparative analysis.
Therefore, actual sales and floorspace performances may differ from those above, depending on various external physical and social factor

Scenario 04: 2011; As per S-03 but with Kingsway City retail expanded to 32,000 sqm in accordance with this structure plan.

	Datasets >>>	16Fd$		16NonFd$									
MR Zone	SUBURB	Reg / Dist Centre Name		IND Area IND Name	Food sqm	Non-Food sqm	Total sqm	Food Sales 2001$	Food Sales/sqm	Non-Food Sales 2001$	Non-Food Sales/sqm	Total Sales 2001$	Total Sales/sqm
514	LANDSDALE	KINGSWAY CITY		-	10,626	21,554	32,180	109,694,183	$10,323	91,136,546	$4,228	200,830,728	$6,241
536	WANNEROO	WANNEROO		-	13,000	17,095	30,095	108,553,523	$8,350	69,376,025	$4,058	177,929,548	$5,912
670	JOONDALUP	JOONDALUP CITY		-	25,000	70,000	95,000	125,180,445	$5,007	282,014,252	$4,029	407,194,698	$4,286
515	WARWICK	WARWICK GROVE		-	11,500	23,610	35,110	84,859,162	$7,379	120,404,840	$5,100	205,264,003	$5,846
508	GIRRAWHEEN	GIRRAWHEEN PARK		-	9,301	2,575	11,876	41,643,123	$4,477	7,217,679	$2,803	48,860,802	$4,114
511	MARANGAROO	GRIFFON WAY		-	6,500	5,500	12,000	46,546,100	$7,161	23,675,227	$4,305	70,221,327	$5,852
516	GREENWOOD	GREENWOOD VILLAGE		-	5,065	5,223	10,288	25,651,691	$5,064	16,210,555	$3,104	41,862,246	$4,069
528	WOODVALE	WOODVALE PARK		-	6,073	3,610	9,683	35,373,891	$5,825	13,550,239	$3,754	48,924,130	$5,053
513	MARANGAROO		-	-	400	94	494	2,098,457	$5,246	388,321	$4,131	2,486,778	$5,034
522	GREENWOOD		-	CANHAM WAY	415	4,134	4,549	1,607,981	$3,875	11,142,268	$2,695	12,750,250	$2,803
529	KINGSLEY		-	-	544	466	1,010	2,307,413	$4,242	1,557,408	$3,342	3,864,821	$3,827
530	LANDSDALE		-	-	1,909	843	2,753	7,425,453	$3,889	2,514,966	$2,982	9,940,419	$3,611
532	WANGARA		-	-	0	0	0	0	na	0	na	0	na
533	WANGARA		-	WANGARA	2,224	59,535	61,759	4,890,713	$2,199	94,902,469	$1,594	99,793,182	$1,616
535	WANNEROO		-	-	0	0	0	0	na	0	na	0	na
687	GNANGARA		-	-	0	0	0	0	na	0	na	0	na
701	LANDSDALE		-	LANDSDALE	350	2,605	2,955	1,052,553	$3,007	5,803,769	$2,228	6,856,321	$2,320
509	GIRRAWHEEN		-	-	420	150	570	2,540,009	$6,048	651,176	$4,341	3,191,185	$5,599
512	LANDSDALE		-	-	1,919	823	2,742	8,038,810	$4,188	2,722,905	$3,310	10,761,716	$3,925
523	KINGSLEY		-	-	2,021	1,357	3,378	8,717,508	$4,313	4,525,398	$3,335	13,242,906	$3,920
531	LANDSDALE		-	-	0	900	900	0	$4,301	3,088,260	$3,431	3,088,260	$3,431
684	WANNEROO		-	-	0	0	0	0	na	0	na	0	na
686	GNANGARA		-	-	0	0	0	0	na	0	na	0	na
702	LANDSDALE		-	-	580	249	829	2,582,706	$4,449	843,938	$3,392	3,426,645	$4,132
703	ALEXANDER HEIGHTS		-	-	100	390	490	673,865	$6,739	1,881,885	$4,825	2,555,750	$5,216
Regional & District Only					***80,992***	***145,557***	***226,549***	***$542.1***	***$6,694***	***$610.0***	***$4,191***	***$1,152.2***	***$5,086***
Totals & Average for Selected Zone Set					97,948	220,713	318,661	$619.4	$6,324	$753.6	$3,414	$1,373.0	$4,309
Nhood Only (excludes Regional, District, Industrial)					57,894	145,272	203,166	$34.4	$594	$18.2	$125	$52.6	$259
								(million)		(million)		(million)	

NB: These are calculated figures from a statistics-based "Retail Potentials" model, which is used for particular forms of comparative analysis. Therefore, actual sales and floorspace performances may differ from those above, depending on various external physical and social factor

Scenario 05: 2016; Kingsway City maintained at 32,000 sqm; Wanneroo expanded to 30,000 sqm as per longer-term planning; Other centres expanded in line with population growth.

	Datasets >>>	21Fd$		21NonFd$									
MR Zone	SUBURB	Reg / Dist Centre Name		IND Area IND Name	Food sqm	Non-Food sqm	Total sqm	Food Sales 2001$	Food Sales/sqm	Non-Food Sales 2001$	Non-Food Sales/sqm	Total Sales 2001$	Total Sales/sqm
514	LANDSDALE	KINGSWAY CITY		-	10,626	21,554	32,180	114,978,254	$10,820	95,552,413	$4,433	210,530,667	$6,542
536	WANNEROO	WANNEROO		-	13,000	17,095	30,095	119,292,417	$9,176	78,154,116	$4,572	197,446,533	$6,561
670	JOONDALUP	JOONDALUP CITY		-	25,000	75,000	100,000	127,492,102	$5,100	311,550,713	$4,154	439,042,815	$4,390
515	WARWICK	WARWICK GROVE		-	12,500	26,610	39,110	91,828,845	$7,346	134,777,656	$5,065	226,606,501	$5,794
508	GIRRAWHEEN	GIRRAWHEEN PARK		-	9,301	2,575	11,876	41,622,261	$4,475	7,125,832	$2,767	48,748,093	$4,105
511	MARANGAROO	GRIFFON WAY		-	6,500	5,500	12,000	46,745,683	$7,192	23,418,563	$4,258	70,164,246	$5,847
516	GREENWOOD	GREENWOOD VILLAGE		-	5,065	5,223	10,288	25,643,452	$5,063	16,182,222	$3,098	41,825,674	$4,065
528	WOODVALE	WOODVALE PARK		-	6,073	3,610	9,683	35,766,870	$5,889	13,753,362	$3,810	49,520,232	$5,114
513	MARANGAROO	-		-	400	94	494	2,098,557	$5,246	385,113	$4,097	2,483,670	$5,028
522	GREENWOOD	-		CANHAM WAY	415	4,134	4,549	1,605,361	$3,868	11,090,258	$2,683	12,695,618	$2,791
529	KINGSLEY	-		-	544	466	1,010	2,320,508	$4,266	1,570,575	$3,370	3,891,083	$3,853
530	LANDSDALE	-		-	2,257	992	3,250	9,301,831	$4,121	3,127,508	$3,151	12,429,339	$3,825
532	WANGARA	-		-	0	0	0	0	na	0	na	0	na
533	WANGARA	-		WANGARA	2,224	59,535	61,759	5,084,862	$2,286	99,134,183	$1,665	104,219,045	$1,688
535	WANNEROO	-		-	0	0	0	0	na	0	na	0	na
687	GNANGARA	-		-	0	0	0	0	na	0	na	0	na
701	LANDSDALE	-		LANDSDALE	350	2,605	2,955	1,112,358	$3,178	6,109,507	$2,345	7,221,865	$2,444
509	GIRRAWHEEN	-		-	420	150	570	2,541,944	$6,052	642,360	$4,282	3,184,304	$5,586
512	LANDSDALE	-		-	2,264	970	3,234	10,076,330	$4,451	3,390,600	$3,494	13,466,930	$4,164
523	KINGSLEY	-		-	2,021	1,357	3,378	8,722,717	$4,316	4,538,205	$3,344	13,260,922	$3,926
531	LANDSDALE	-		-	0	900	900	0	$4,549	3,247,980	$3,609	3,247,980	$3,609
684	WANNEROO	-		-	120	52	172	469,066	$3,898	186,421	$3,615	655,486	$3,813
686	GNANGARA	-		-	0	0	0	0	na	0	na	0	na
702	LANDSDALE	-		-	741	318	1,059	3,464,077	$4,674	1,120,645	$3,528	4,584,722	$4,330
703	ALEXANDER HEIGHTS	-		-	100	390	490	679,041	$6,790	1,873,203	$4,803	2,552,244	$5,209
Regional & District Only					***81,992***	***153,557***	***235,549***	***$567.6***	***$6,923***	***$666.8***	***$4,342***	***$1,234.4***	***$5,240***
Totals & Average for Selected Zone Set					99,922	229,130	329,052	$650.8	$6,514	$816.9	$3,565	$1,467.8	$4,461
Nhood Only (excludes Regional, District, Industrial)					58,868	155,689	214,557	$39.7	$674	$20.1	$129	$59.8	$279
								(million)		(million)		(million)	

NB: These are calculated figures from a statistics-based "Retail Potentials" model, which is used for particular forms of comparative analysis.
Therefore, actual sales and floorspace performances may differ from those above, depending on various external physical and social factor

Scenario 06: 2021; As per S-05, but five years on.

	Datasets >>>	26Fd$		26NonFd$									
MR Zone	SUBURB	Reg / Dist Centre Name		IND Area IND Name	Food sqm	Non-Food sqm	Total sqm	Food Sales 2001$	Food Sales/sqm	Non-Food Sales 2001$	Non-Food Sales/sqm	Total Sales 2001$	Total Sales/sqm
514	LANDSDALE	KINGSWAY CITY		-	10,626	21,554	32,180	117,186,519	$11,028	97,726,536	$4,534	214,913,055	$6,678
536	WANNEROO	WANNEROO		-	13,000	17,095	30,095	125,243,651	$9,634	83,424,904	$4,880	208,668,555	$6,934
670	JOONDALUP	JOONDALUP CITY		-	25,000	75,000	100,000	129,059,454	$5,162	318,450,256	$4,246	447,509,710	$4,475
515	WARWICK	WARWICK GROVE		-	12,500	28,110	40,610	91,859,859	$7,349	142,584,535	$5,072	234,444,394	$5,773
508	GIRRAWHEEN	GIRRAWHEEN PARK		-	9,301	2,575	11,876	41,651,460	$4,478	7,142,672	$2,774	48,794,132	$4,109
511	MARANGAROO	GRIFFON WAY		-	6,500	5,500	12,000	46,854,074	$7,208	23,512,805	$4,275	70,366,878	$5,864
516	GREENWOOD	GREENWOOD VILLAGE		-	5,065	5,223	10,288	25,685,076	$5,071	16,223,783	$3,106	41,908,860	$4,074
528	WOODVALE	WOODVALE PARK		-	6,073	3,610	9,683	35,904,038	$5,912	13,866,820	$3,841	49,770,858	$5,140
513	MARANGAROO		-	-	400	94	494	2,100,235	$5,251	386,145	$4,108	2,486,380	$5,033
522	GREENWOOD		-	CANHAM WAY	415	4,134	4,549	1,607,181	$3,873	11,113,883	$2,688	12,721,063	$2,796
529	KINGSLEY		-	-	544	466	1,010	2,326,126	$4,276	1,579,915	$3,390	3,906,042	$3,867
530	LANDSDALE		-	-	2,350	1,032	3,383	9,892,263	$4,209	3,327,705	$3,223	13,219,968	$3,908
532	WANGARA		-	-	0	0	0	0	na	0	na	0	na
533	WANGARA		-	WANGARA	2,224	59,535	61,759	5,149,558	$2,315	101,047,830	$1,697	106,197,389	$1,720
535	WANNEROO		-	-	0	0	0	0	na	0	na	0	na
687	GNANGARA		-	-	0	0	0	0	na	0	na	0	na
701	LANDSDALE		-	LANDSDALE	350	2,605	2,955	1,134,906	$3,243	6,243,765	$2,397	7,378,671	$2,497
509	GIRRAWHEEN		-	-	420	150	570	2,542,797	$6,054	645,818	$4,305	3,188,615	$5,594
512	LANDSDALE		-	-	2,366	1,014	3,380	10,822,767	$4,574	3,639,837	$3,589	14,462,604	$4,279
523	KINGSLEY		-	-	2,021	1,357	3,378	8,725,423	$4,317	4,554,035	$3,356	13,279,458	$3,931
531	LANDSDALE		-	-	0	900	900	0	$4,660	3,328,480	$3,698	3,328,480	$3,698
684	WANNEROO		-	-	120	52	172	475,568	$3,952	190,904	$3,702	666,471	$3,877
686	GNANGARA		-	-	0	0	0	0	na	0	na	0	na
702	LANDSDALE		-	-	741	318	1,059	3,546,331	$4,785	1,145,608	$3,607	4,691,939	$4,431
703	ALEXANDER HEIGHTS		-	-	100	390	490	684,963	$6,850	1,892,317	$4,852	2,577,280	$5,260
Regional & District Only					***81,992***	***155,057***	***237,049***	***$577.5***	***$7,044***	***$689.1***	***$4,444***	***$1,266.6***	***$5,343***
Totals & Average for Selected Zone Set					100,117	230,714	330,831	$662.5	$6,617	$842.0	$3,650	$1,504.5	$4,548
Nhood Only (excludes Regional, District, Industrial)					59,063	155,773	214,836	$41.1	$696	$20.7	$133	$61.8	$288
								(million)		(million)		(million)	

NB: These are calculated figures from a statistics-based "Retail Potentials" model, which is used for particular forms of comparative analysis.
Therefore, actual sales and floorspace performances may differ from those above, depending on various external physical and social factor

Scenario 07: 2026; As per S-06, but five years on.

	Datasets >>>	31Fd$		31NonFd$									
MR Zone	SUBURB	Reg / Dist Centre Name		IND Area IND Name	Food sqm	Non-Food sqm	Total sqm	Food Sales 2001$	Food Sales/sqm	Non-Food Sales 2001$	Non-Food Sales/sqm	Total Sales 2001$	Total Sales/sqm
514	LANDSDALE	KINGSWAY CITY		-	10,626	21,554	32,180	118,212,533	$11,125	98,917,756	$4,589	217,130,289	$6,747
536	WANNEROO	WANNEROO		-	13,000	17,095	30,095	124,846,901	$9,604	83,447,805	$4,881	208,294,706	$6,921
670	JOONDALUP	JOONDALUP CITY		-	25,000	75,000	100,000	130,168,377	$5,207	325,540,493	$4,341	455,708,870	$4,557
515	WARWICK	WARWICK GROVE		-	12,500	28,110	40,610	91,663,189	$7,333	143,523,889	$5,106	235,187,078	$5,791
508	GIRRAWHEEN	GIRRAWHEEN PARK		-	9,301	2,575	11,876	41,612,604	$4,474	7,186,935	$2,791	48,799,540	$4,109
511	MARANGAROO	GRIFFON WAY		-	6,500	5,500	12,000	46,922,434	$7,219	23,668,325	$4,303	70,590,760	$5,883
516	GREENWOOD	GREENWOOD VILLAGE		-	5,065	5,223	10,288	25,690,082	$5,072	16,337,444	$3,128	42,027,526	$4,085
528	WOODVALE	WOODVALE PARK		-	6,073	3,610	9,683	35,967,684	$5,923	13,967,427	$3,869	49,935,112	$5,157
513	MARANGAROO	-		-	400	94	494	2,098,945	$5,247	388,446	$4,132	2,487,390	$5,035
522	GREENWOOD	-		CANHAM WAY	415	4,134	4,549	1,605,780	$3,869	11,180,090	$2,704	12,785,869	$2,811
529	KINGSLEY	-		-	544	466	1,010	2,328,892	$4,281	1,591,398	$3,415	3,920,289	$3,881
530	LANDSDALE	-		-	2,350	1,032	3,383	9,978,626	$4,245	3,365,414	$3,260	13,344,040	$3,945
532	WANGARA	-		-	0	0	0	0	na	0	na	0	na
533	WANGARA	-		WANGARA	2,224	59,535	61,759	5,180,979	$2,330	102,136,716	$1,716	107,317,695	$1,738
535	WANNEROO	-		-	0	0	0	0	na	0	na	0	na
687	GNANGARA	-		-	0	0	0	0	na	0	na	0	na
701	LANDSDALE	-		LANDSDALE	350	2,605	2,955	1,145,954	$3,274	6,315,076	$2,424	7,461,030	$2,525
509	GIRRAWHEEN	-		-	420	150	570	2,539,484	$6,046	650,974	$4,340	3,190,458	$5,597
512	LANDSDALE	-		-	2,366	1,014	3,380	10,960,603	$4,632	3,689,139	$3,638	14,649,742	$4,334
523	KINGSLEY	-		-	2,021	1,357	3,378	8,725,117	$4,317	4,583,880	$3,378	13,308,997	$3,940
531	LANDSDALE	-		-	0	900	900	0	$4,719	3,371,976	$3,747	3,371,976	$3,747
684	WANNEROO	-		-	120	52	172	474,519	$3,943	191,621	$3,716	666,140	$3,875
686	GNANGARA	-		-	0	0	0	0	na	0	na	0	na
702	LANDSDALE	-		-	841	360	1,201	4,071,416	$4,844	1,316,874	$3,656	5,388,290	$4,487
703	ALEXANDER HEIGHTS	-		-	100	390	490	689,692	$6,897	1,912,997	$4,905	2,602,689	$5,312
Regional & District Only					***81,992***	***155,057***	***237,049***	***$579.1***	***$7,063***	***$698.6***	***$4,506***	***$1,277.7***	***$5,390***
Totals & Average for Selected Zone Set					100,216	230,756	330,973	$664.9	$6,634	$853.3	$3,698	$1,518.2	$4,587
Nhood Only (excludes Regional, District, Industrial)					59,162	155,815	214,978	$41.9	$708	$21.1	$135	$62.9	$293
								(million)		(million)		(million)	

NB: These are calculated figures from a statistics-based "Retail Potentials" model, which is used for particular forms of comparative analysis.
Therefore, actual sales and floorspace performances may differ from those above, depending on various external physical and social factor

Scenario 08: 2031; As per S-07, but five years on.

KINGSWAY CITY ACTIVITY CENTRE STRUCTURE PLAN

PLUC 5 Economic Impact Assessment

October 2009

Land Use Design Strategy Economics Research

SHRAPNEL URBAN PLANNING

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CONCLUSIONS

1. Whether the proposed Kingsway City expansion occurs by 2011 or 2016, the estimated percentage impacts on other centres will be about the same.
2. The only established centre likely to experience a major impact (i.e. 10% or more) from Kingsway's expansion is The Broadview neighbourhood centre in Landsdale (MRZ 531). Two other “centres” would experience impacts of similar magnitude, but these are hypothetical centres only, in that they are not established as yet, but are assumed to be established by 2011. In reality, the actual impact in relation to these centres may be that their development is deferred for a few years.
3. Four other centres (including two hypothetical centres) would experience moderate impacts (between 5% and 10%) with Kingsway's expansion, while all other centres regardless of size or location would experience impacts of less than 5%.
4. The estimated impacts on the Wanneroo Town Centre are minimal. They would be -2.2% if Kingsway's expansion occurred by 2011 and -2.0% if the expansion occurred by 2016.
5. Population growth in the locality and wider sub-region (especially to the north) will ensure that all centres which experienced a moderate or major impact as a result of Kingsway's expansion in 2011, would experience an increase in their trade between 2011 and 2016. Some increases between 2011 and 2016 are relatively high.
6. In most (but not all) cases the 2016 estimated trade with Kingsway expanded also exceeds the 2011 trade with Kingsway as is.– in other words most significant impacts are going to be relatively short-lived, due to the anticipated population growth in the locality and sub-region from 2011 onwards. In cases where this recovery in trade is not completed by 2016, it does occur in later years.

1. INTRODUCTION

This Economic Impact Assessment (EIA) report has been prepared to assist the Western Australian Planning Commission (WAPC) in its reconsideration of the Kingsway City Activity Centre Structure Plan. It is assumed that the reader is familiar with all the background to the structure plan process, and the methodology used for the main EIA that was included within the original structure plan document.

2. THE MODEL

The gravity model used for the purposes of this EIA is the same as that used for the main (structure plan) EIA, except some of the input data has been modified.

2.1. Input Data Modifications

Differences in data inputs between the previous modelling and this modelling have been kept to the necessary minimum. They are:

- PLUC 5 floorspace is being modelled instead of PLUC 5 and 6 floorspace combined.
- Some PLUC 5 floorspace assumptions for 2011 and later have been changed following consideration of results from the Department of Planning's 2008 Commercial and Industrial Land Use Survey.
- The data units being distributed from households in each MRZ to the PLUC 5 floorspace in each MRZ are Persons, not dollar estimates of retail expenditure.

Each of these points is briefly elaborated upon in the following sub-sections.

2.1.1. PLUC 5 Floorspace Modelled

The main EIA modelled Total Retail floorspace (i.e. PLUC 5 and PLUC 6 floorspace combined) in the centres and complexes within each MRZ; whereas this EIA limits the scope of the retail floorspace being modelled to PLUC 5 (Shop/ Retail) floorspace. This variation produces relatively minor changes in the floorspace of most shopping centres, but some quite substantial reductions in the amount of retail floorspace within industrial and mixed business areas, where there is often a large amount of PLUC 6 (Other Retail) floorspace.

2.1.2. PLUC 5 Assumptions

The estimates of impact calculated by the model rely on assumptions made about the amount of PLUC 5 floorspace occurring in centres within each Main Roads Zone (MRZ). The Output Summary Sheets and the Impact Assessment Sheets between them show all of the PLUC 5 floorspace assumptions for each MRZ within a 15km radius of Kingsway City (see also next section on Outputs).

2.1.3. Person Equivalents

By using population (persons) as the data unit being allocated by the model to each

MRZ containing PLUC 5 floorspace, the amount of retail trade attracted to the floorspace in each MRZ is indicated by the number of "Person Equivalents". These express the use of a centre by many people for part of their shopping needs as the equivalent of full per-person use. For example, if 1,000 people use a centre for 50% of their retail requirements, the "Person Equivalents" attracted to that centre would be expressed as 500 "Person Equivalents".

2.2. Data Sources

2.2.1. Main Roads Zones

- Version (geography only): Initial set, estimated sometime in 1996; Subsequent set, estimated sometime in 2002.
- Number of Zones: 926.
- Coverage: Perth Metropolitan Region + the Mandurah and Murray LGA's.
- Date of Publication: Not actually "published" to our knowledge.

2.2.2. Population Estimates and Projections

Initial set (1996), provided by DPI. Subsequent updates (1996 more-or-less continuously to the present, with full update of Cities of Wanneroo, Joondalup, Stirling and Swan following 2001 Census), prepared by SHRAPNEL URBAN PLANNING, utilising base data from DPI, ABS (Census), various Local Governments, various planning consultants providing lot yield estimates from structure plans, plus lot counts from various aerial photographs and subdivision plans, etc.

2.2.3. Retail Floorspace Data

Initial set of *existing* floorspace (1996), DPI. Subsequent updates (1996 more-or-less continuously to the present), SHRAPNEL URBAN PLANNING, directly (through inspections) or utilising base data from DPI, various Local Governments; Centre owners and managers and Property Council of Australia. Floorspace data for selected MRZ presented in the Output Summary Sheets (see Appendix A) has been updated for the purpose of this EIA from information supplied by DP from its 2008 Commercial and Land Use Survey

Future floorspace in various centres is either calculated by the model (in the case of MRZs where no centres have been identified, but will probably be required in the future) and/ or includes future potential assessments/ assumptions as per various commercial strategies prepared by SUP and others.

2.2.4. Driving Times

Driving Times (estimated in minutes between each MRZ) – Sources: Initial set for 2021 projected road network provided by Main Roads (1996). Subsequent updates by SUP where a few anomalies have been detected and/ or where drive time surveys indicate that an update is required.

2.2.5. Other Assumptions

Other assumptions included in the model are presented in Table 1. These have been presented before, however, former adjustments to household retail expenditure have been excluded, as this is not used in this modelling exercise.

Drivetimes Constant	2		Added to each drivetime in the matrix
a & b values	**Food**	**NonFd**	
RDIS Centres 'S' (a)	1	1	Strategic Regional Centres
RDIS Centres 'S' (b)	2.96	2.7	Strategic Regional Centres
RDIS Centres 'R' (a)	1	1	Regional Centres
RDIS Centres 'R' (b)	2.96	2.7	Regional Centres
RDIS Centres 'D' (a)	1	1	District Centres
RDIS Centres 'D' (b)	2.98	2.8	District Centres
IND Centres (a)	0.95	0.95	Industrial Areas
IND Centres (b)	3.1	2.8	Industrial Areas
OTH Centres (a)	1	1	Mostly neighbourhood / local centres
OTH Centres (b)	3.1	2.8	Mostly neighbourhood / local centres
ADDIT_OTH Per Capita	0.53	Note: Changed from .5 on 990127 to account for under-provision in RDIS zones	
ADDIT_OTH_FD Prop	70.0%	The addit_Other floorspace is calculated additional neighbourhood / local floorspace	
ADDIT_OTH_NonFd Prop	30.0%	based on population growth. It is calculated by the model unless over-ride values exist.	
	100.0%		
ADDIT_OTH Pop Threshold	200	Population needs to increase by at least this much to generate a local centre.	
ADDIT_OTH Centre Incrmnt	100	Local centre req has to increase by at least this much to add to centre size.	

Table 1: Other Model Assumptions

2.3. Outputs

The results of the modelling are presented in whole or part in the Appendices to this report. Note that for ease of reference the Appendices have had a page number added to the bottom right corner of each page. In general terms the content of the appendices is as follows:

- Appendix A – Output Summary Sheets. These present PLUC 5 floorspace input data and model results for all MRZ containing Regional Centres within a 15km Radius of Kingsway City (except Subiaco, but including Clarkson); All MRZ containing District Centres within a 10km radius of Kingsway City; and all MRZ containing all Other centres within a 5km radius of Kingsway City (including industrial complexes, plus the Joondalup mixed business complex).
- Appendix B – Impact Assessment Sheets. These present Total PLUC 5 floorspace input data, model results and comparative impacts for ***all*** MRZ within a 15km radius of Kingsway City. These records are sorted by impacts from the most significant to the least significant. The first series of Sheets (Pages 11 to 14) relate to development Scenarios 1 and 2. The second series of sheets (Pages 15 to 18) relate to Scenarios 3 and 4. The third series (Pages 19 to 21) relates to Scenarios 1, 2 and 4.
- Appendix C – Thematic Maps. These present model results for Kingsway City and Wanneroo Town Centre in both 2011 (Scenarios 1 and 2) and 2016 (Scenario 3).

3. DEVELOPMENT SCENARIOS

In this assessment the estimated economic impact of Kingsway City's expansion is the difference in the calculated total trade of other centres in a given year with Kingsway's expansion, compared to the same calculation without Kingsway's expansion. The modelled centre development scenarios specifically aimed at assessing impacts are:

1. 2011 – Kingsway As Is.
2. 2011 – Kingsway Expanded.
3. 2016 – Kingsway As Is.
4. 2016 – Kingsway Expanded.

Other scenarios intended to demonstrate on-going development potential, in each case assuming Kingsway has been expanded have also been prepared for the years 2021, 2026 and 2031.

3.1. Scenario 1 – 2011 – Kingsway As Is

Modelled outputs for this scenario are presented in Pages 2, 11, 19, 23 and 24 of the Appendices. The object of this Scenario is to establish a 2011 benchmark against which the impact of expanding Kingsway City can be compared. Note that Wanneroo Town Centre is assumed to be above its recorded 2008 level, due to major development that has recently been completed.

3.2. Scenario 2 – 2011 – Kingsway Expanded

Modelled outputs for this scenario are presented in Pages 3, 11, 19, 25 and 26 of the Appendices. The only change between this and Scenario 1 is that Kingsway City has been expanded from 16,095 sqm to 32,180 sqm. The MRZ the subject of negative impacts larger than 5% are summarised in Table 2:

MRZ	Centre/s	PLUC 5	Impact (%)
512	Hypothetical	1,809	-11.5
701	Hypothetical	988	-10.6
531	The Broadview	3,065	-10.6
702	Queensway	547	-7.9
530	Hypothetical	1,672	-6.9
532	Wangara/ Landsdale Industrial (Pt)	1,047	-5.3
534	Hypothetical	137	-5.1
565	Ballajura/ Summer Lakes	1,845	-4.8
533	Wangara Industrial (Main)	18,954	-4.5
513	Marangaroo	494	-4.5
529	Moolanda Nth & Sth/ Waldecks	964	-4.2
703	Alinjarra	490	-4.1

Table 2: Scenario 2: Negative Impacts >4%

Reference to “Hypothetical” centres in this table occurs where no formal centre is established in the relevant MRZ as yet, but in the modelling it is assumed that a centre or centres will be established by the year being modelled. In reality, the actual impact in

these cases may be that the development of these centres is deferred for a few years.

Another point worthy of note is that the calculated impact on the Wanneroo Town Centre is -2.2% (not shown in this table – see Page 11 of the Appendices).

3.3. Scenario 3 – 2016 – Kingsway As Is

Modelled outputs for this scenario are presented in Pages 4 and 15 of the Appendices. The object of this Scenario is to establish a 2016 benchmark against which the impact of expanding Kingsway City can be compared, given that Kingsway may not now be operational until after 2011. Note that Wanneroo Town Centre is assumed to have expanded above its assumed 2011 level, to over 30,000 sqm by 2016 – its currently permitted statutory upper limit.

3.4. Scenario 4 – 2016 – Kingsway Expanded

Modelled outputs for this scenario are presented in Pages 5, 15, 19, 27 and 28 of the Appendices. The only change between this and Scenario 3 is that Kingsway City has been expanded from 16,095 sqm to 32,180 sqm. The MRZ the subject of negative impacts larger than 5% are summarised in Table 3.

MRZ	Centre/s	PLUC 5	Impact (%)
512	Hypothetical	1,809	-11.9
701	Hypothetical	988	-11.4
531	The Broadview	3,065	-10.9
702	Queensway	547	-8.0
530	Hypothetical	1,672	-7.0
532	Wangara/ Landsdale Industrial (Pt)	1,047	-5.5
534	Hypothetical	137	-5.1
565	Ballajura/ Summer Lakes	1,845	-4.8
533	Wangara Industrial (Main)	18,954	-4.6
513	Marangaroo	494	-4.4
529	Moolanda Nth & Sth/ Waldecks	964	-4.1
703	Alinjarra	490	-4.1

Table 3: Scenario 4: Negative Impacts >4%

Another point worthy of note is that the calculated impact on the Wanneroo Town Centre is -2.0%.

3.5. Comparison of Scenarios 2 and 4

Scenarios 2 and 4 both envisage Kingsway City as having expanded to 32,000 sqm, with impacts being recorded on other centres. A comparison between the performance of the most heavily impacted centres in both 2011 and 2016 with (in both cases) Kingsway assumed to have expanded is presented in Table 4.

MRZ	Centre/s	2011 Trade (Pers.Equiv)	2016 Trade (Pers.Equiv)	Change (%)
512	Hypothetical	1,912	2,729	42.7%
701	Hypothetical	1,010	1,512	49.7%
531	The Broadview	3,319	3,489	5.1%
702	Queensway	608	831	36.7%
530	Hypothetical	1,645	2,588	57.3%
532	Wangara/ Landsdale Industrial (Pt)	576	596	3.5%
534	Hypothetical	83	84	1.2%
565	Ballajura/ Summer Lakes	2,293	2,166	-5.5%
533	Wangara Industrial (Main)	8,021	8,244	2.8%
513	Marangaroo	652	607	-6.9%
529	Moolanda Nth & Sth/ Waldecks	940	917	-2.4%
703	Alinjarra	618	575	-7.0%

Table 4: Summary of Comparison of Scenarios 2 and 4

This table shows that the calculated trade in 2016 for each of the other centres most heavily impacted by Kingsway's expansion (see Tables 2 and 3) is higher, in some cases considerably higher, in 2016 than in 2011. In most (but not all) cases the 2016 trade with Kingsway expanded exceeds the 2011 trade with Kingsway as is (see Page 19 of the Appendices).

3.6. Scenarios 5 to 7

Modelled outputs for these scenarios are presented in Pages 6, 7 and 8 of the appendices. They assume that the PLUC 5 in Kingsway City and Wanneroo Town Centre remain unchanged, but expansion of many of the other centres is in fact assumed in line with the continuing growth in this part of the Perth Metropolitan Region. The purpose of presenting these scenarios is to show how, regardless of what impacts might occur as a result of the Kingsway expansion, after that the trade in virtually all centres continues to increase over time.

3.7. Scenario 8

Scenario 8 is identical to Scenario 7, except that the Wanneroo Town Centre is assumed to have expanded to in excess of 50,000 sqm. The fact that the impact on the total trade of Kingsway City with this assumption is a mere 1.5% demonstrates the discrete nature of their trade areas, which is clearly evident in the various thematic maps.

APPENDIX A
Output Summary Sheets

S1

	Datasets >>>	p2011	p2011									
MR Zone	SUBURB	Reg / Dist Centre Name	IND Area IND Name	Food sqm	Non-Food sqm	Total PL5 sqm	Food Person Equiv.	Food Sqm/Capita	Non-Food Person Equiv.	Non-Food Sqm/Capita	Total Person Equiv.	Total Approx Sqm/Capita
514	LANDSDALE	KINGSWAY CITY	-	5,154	10,941	16,095	13,400	0.38	11,592	0.94	24,991	1.33
536	WANNEROO	WANNEROO	-	10,000	13,095	23,095	21,096	0.47	12,574	1.04	33,670	1.52
92	MIRRABOOKA	MIRRABOOKA SQUARE	-	12,600	26,650	39,250	23,142	0.54	26,779	1.00	49,921	1.54
121	KARRINYUP	KARRINYUP	-	6,000	45,100	51,100	12,239	0.49	47,161	0.96	59,400	1.45
131	MORLEY	MORLEY-GALLERIA	-	16,630	80,020	96,650	28,597	0.58	68,190	1.17	96,787	1.76
515	WARWICK	WARWICK GROVE	-	10,500	17,110	27,610	21,001	0.50	19,155	0.89	40,156	1.39
525	HILLARYS	WHITFORDS CITY	-	12,100	32,000	44,100	24,815	0.49	33,775	0.95	58,590	1.44
670	JOONDALUP	JOONDALUP CITY	-	20,000	70,000	90,000	28,891	0.69	59,480	1.18	88,372	1.87
698	ELLENBROOK	ELLENBROOK 1	-	15,500	21,500	37,000	21,474	0.72	19,837	1.08	41,311	1.81
717	INNALOO	INNALOO	-	17,800	40,092	57,892	23,538	0.76	26,025	1.54	49,563	2.30
83	BALCATTA	NORTHLANDS	-	9,040	11,940	20,980	11,459	0.79	7,614	1.57	19,074	2.36
88	WESTMINSTER	STIRLING CENTRAL	-	8,700	8,700	17,400	12,132	0.72	6,049	1.44	18,181	2.16
97	DIANELLA	DIANELLA PLAZA	-	14,700	11,445	26,145	22,575	0.65	7,556	1.51	30,131	2.17
116	MORLEY	NORANDA SQUARE	-	10,320	3,320	13,640	15,813	0.65	2,392	1.39	18,205	2.04
508	GIRRAWHEEN	GIRRAWHEEN PARK	-	13,182	4,644	17,826	14,794	0.89	2,710	1.71	17,504	2.60
511	MARANGAROO	GRIFFON WAY	-	4,230	1,600	5,830	8,619	0.49	1,699	0.94	10,319	1.43
516	GREENWOOD	GREENWOOD VILLAGE	-	5,495	3,833	9,328	7,631	0.72	2,658	1.44	10,289	2.16
528	WOODVALE	WOODVALE PARK	-	9,060	5,460	14,520	14,324	0.63	4,780	1.14	19,104	1.77
546	CURRAMBINE	CURRAMBINE MARKET PL	-	5,000	1,600	6,600	8,284	0.60	1,272	1.26	9,556	1.86
553	CLARKSON	CLARKSON	-	9,990	18,950	28,940	14,386	0.69	15,249	1.24	29,635	1.94
659	BANKSIA GROVE	NEERABUP	-	3,500	1,500	5,000	5,375	0.65	1,504	1.00	6,880	1.65
522	GREENWOOD	-	CANHAM WAY	415	2,070	2,485	445	0.93	1,330	1.56	1,775	2.49
532	WANGARA	-	WANG/ LDALE	315	732	1,047	236	1.34	373	1.96	608	3.30
533	WANGARA	-	WANGARA	2,834	16,120	18,954	1,800	1.57	6,596	2.44	8,396	4.02
579	BALCATTA	-	BALCATTA	1,532	19,874	21,406	1,183	1.29	8,275	2.40	9,458	3.70
669	JOONDALUP	-	JOONDALUP MB1	1,390	18,400	19,790	905	1.54	6,866	2.68	7,771	4.22
128	BALGA	-	-	550	351	901	742	0.74	300	1.17	1,042	1.91
509	GIRRAWHEEN	-	-	300	150	450	495	0.61	159	0.95	653	1.55
510	KOONDOOLA	-	-	1,330	710	2,040	2,558	0.52	838	0.85	3,396	1.37
512	LANDSDALE	-	-	1,266	543	1,809	1,693	0.75	468	1.16	2,161	1.91
513	MARANGAROO	-	-	400	94	494	588	0.68	94	1.00	682	1.68
517	DUNCRAIG	-	-	5,660	4,580	10,240	9,688	0.58	4,305	1.06	13,992	1.65
523	KINGSLEY	-	-	2,415	1,470	3,885	2,924	0.83	1,113	1.32	4,037	2.15
529	KINGSLEY	-	-	544	420	964	653	0.83	328	1.28	980	2.12
530	LANDSDALE	-	-	1,170	502	1,672	1,387	0.84	380	1.32	1,767	2.16
531	LANDSDALE	-	-	2,060	1,005	3,065	2,810	0.73	901	1.12	3,711	1.85
565	BALLAJURA	-	-	1,215	630	1,845	1,824	0.67	584	1.08	2,408	1.74
675	WANNEROO	-	-	1,140	170	1,310	1,601	0.71	174	0.98	1,775	1.69
683	HOCKING	-	-	1,954	838	2,792	2,555	0.76	789	1.06	3,345	1.83
701	DARCH	-	-	692	296	988	878	0.79	252	1.18	1,130	1.96
702	LANDSDALE	-	-	383	164	547	521	0.73	140	1.17	661	1.91
703	ALEXANDER HEIGHTS	-	-	100	390	490	189	0.53	455	0.86	644	1.39
715	BALGA	-	-	1,840	1,030	2,870	2,514	0.73	872	1.18	3,386	1.91
Regional & District Only				***219,501***	***429,500***	***649,001***	***353,586***	***0.62***	***378,051***	***1.14***	***731,637***	***1.76***
Totals & Average for Selected Zone Set				249,006	500,038	749,045	391,774	0.64	413,642	1.21	805,416	1.84
"Other" Only (excludes Regional, District & Industrial)				23,019	13,342	36,362	33,619	0.68	12,152	1.10	45,771	1.78

NB: These are calculated figures from a statistics-based "Retail Potentials" model, which is used for particular forms of comparative analysis.
Therefore, actual sales and floorspace performances may differ from those above, depending on various external physical and social factors.

2

S2

	Datasets >>>	p2011	p2011									
MR Zone	SUBURB	Reg / Dist Centre Name	IND Area IND Name	Food sqm	Non-Food sqm	Total PL5 sqm	Food Person Equiv.	Food Sqm/Capita	Non-Food Person Equiv.	Non-Food Sqm/Capita	Total Person Equiv.	Total Approx Sqm/Capita
514	LANDSDALE	**KINGSWAY CITY**	-	10,626	21,554	32,180	25,202	0.42	21,014	1.03	46,216	1.45
536	WANNEROO	WANNEROO	-	10,000	13,095	23,095	20,621	0.48	12,312	1.06	32,933	1.55
92	MIRRABOOKA	MIRRABOOKA SQUARE	-	12,600	26,650	39,250	22,792	0.55	26,415	1.01	49,207	1.56
121	KARRINYUP	KARRINYUP	-	6,000	45,100	51,100	12,116	0.50	46,729	0.97	58,846	1.46
131	MORLEY	MORLEY-GALLERIA	-	16,630	80,020	96,650	28,368	0.59	67,670	1.18	96,037	1.77
515	WARWICK	WARWICK GROVE	-	10,500	17,110	27,610	20,406	0.51	18,709	0.91	39,114	1.43
525	HILLARYS	WHITFORDS CITY	-	12,100	32,000	44,100	24,399	0.50	33,318	0.96	57,717	1.46
670	JOONDALUP	JOONDALUP CITY	-	20,000	70,000	90,000	28,500	0.70	58,768	1.19	87,267	1.89
698	ELLENBROOK	ELLENBROOK 1	-	15,500	21,500	37,000	21,196	0.73	19,620	1.10	40,816	1.83
717	INNALOO	INNALOO	-	17,800	40,092	57,892	23,349	0.76	25,824	1.55	49,173	2.31
83	BALCATTA	NORTHLANDS	-	9,040	11,940	20,980	11,311	0.80	7,525	1.59	18,836	2.39
88	WESTMINSTER	STIRLING CENTRAL	-	8,700	8,700	17,400	11,948	0.73	5,966	1.46	17,914	2.19
97	DIANELLA	DIANELLA PLAZA	-	14,700	11,445	26,145	22,390	0.66	7,497	1.53	29,887	2.18
116	MORLEY	NORANDA SQUARE	-	10,320	3,320	13,640	15,640	0.66	2,369	1.40	18,008	2.06
508	GIRRAWHEEN	GIRRAWHEEN PARK	-	13,182	4,644	17,826	14,234	0.93	2,619	1.77	16,852	2.70
511	MARANGAROO	GRIFFON WAY	-	4,230	1,600	5,830	8,279	0.51	1,641	0.98	9,919	1.49
516	GREENWOOD	GREENWOOD VILLAGE	-	5,495	3,833	9,328	7,360	0.75	2,581	1.49	9,941	2.23
528	WOODVALE	WOODVALE PARK	-	9,060	5,460	14,520	13,736	0.66	4,627	1.18	18,363	1.84
546	CURRAMBINE	CURRAMBINE MARKET PL	-	5,000	1,600	6,600	8,205	0.61	1,261	1.27	9,466	1.88
553	CLARKSON	CLARKSON	-	9,990	18,950	28,940	14,296	0.70	15,157	1.25	29,453	1.95
659	BANKSIA GROVE	NEERABUP	-	3,500	1,500	5,000	5,315	0.66	1,486	1.01	6,801	1.67
522	GREENWOOD	-	CANHAM WAY	415	2,070	2,485	426	0.97	1,283	1.61	1,709	2.59
532	WANGARA	-	WANG/ LDALE	315	732	1,047	221	1.43	356	2.06	576	3.49
533	WANGARA	-	WANGARA	2,834	16,120	18,954	1,698	1.67	6,323	2.55	8,021	4.22
579	BALCATTA	-	BALCATTA	1,532	19,874	21,406	1,163	1.32	8,153	2.44	9,316	3.75
669	JOONDALUP	-	JOONDALUP MB1	1,390	18,400	19,790	892	1.56	6,779	2.71	7,672	4.27
128	BALGA	-	-	550	351	901	724	0.76	293	1.20	1,017	1.96
509	GIRRAWHEEN	-	-	300	150	450	479	0.63	154	0.97	633	1.60
510	KOONDOOLA	-	-	1,330	710	2,040	2,474	0.54	815	0.87	3,289	1.41
512	LANDSDALE	-	-	1,266	543	1,809	1,486	0.85	426	1.27	1,912	2.13
513	MARANGAROO	-	-	400	94	494	561	0.71	90	1.04	652	1.75
517	DUNCRAIG	-	-	5,660	4,580	10,240	9,493	0.60	4,234	1.08	13,727	1.68
523	KINGSLEY	-	-	2,415	1,470	3,885	2,817	0.86	1,082	1.36	3,899	2.22
529	KINGSLEY	-	-	544	420	964	623	0.87	316	1.33	940	2.20
530	LANDSDALE	-	-	1,170	502	1,672	1,284	0.91	361	1.39	1,645	2.30
531	LANDSDALE	-	-	2,060	1,005	3,065	2,492	0.83	827	1.22	3,319	2.04
565	BALLAJURA	-	-	1,215	630	1,845	1,731	0.70	562	1.12	2,293	1.82
675	WANNEROO	-	-	1,140	170	1,310	1,558	0.73	170	1.00	1,727	1.73
683	HOCKING	-	-	1,954	838	2,792	2,482	0.79	769	1.09	3,251	1.88
701	DARCH	-	-	692	296	988	778	0.89	232	1.28	1,010	2.17
702	LANDSDALE	-	-	383	164	547	477	0.80	131	1.25	608	2.05
703	ALEXANDER HEIGHTS	-	-	100	390	490	180	0.56	438	0.89	618	1.45
715	BALGA	-	-	1,840	1,030	2,870	2,455	0.75	854	1.21	3,309	1.96
Regional & District Only				***224,973***	***440,113***	***665,086***	***359,661***	***0.63***	***383,106***	***1.15***	***742,767***	***1.77***
Totals & Average for Selected Zone Set				254,478	510,651	765,130	396,154	0.64	417,754	1.22	813,908	1.86
"Other" Only (excludes Regional, District & Industrial)				23,019	13,342	36,362	32,093	0.72	11,755	1.13	43,848	1.85

NB: These are calculated figures from a statistics-based "Retail Potentials" model, which is used for particular forms of comparative analysis.
Therefore, actual sales and floorspace performances may differ from those above, depending on various external physical and social factors.

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S3

	Datasets >>>	p2016	p2016									
MR Zone	SUBURB	Reg / Dist Centre Name	IND Area IND Name	Food sqm	Non-Food sqm	Total PL5 sqm	Food Person Equiv.	Food Sqm/Capita	Non-Food Person Equiv.	Non-Food Sqm/Capita	Total Person Equiv.	Total Approx Sqm/Capita
514	LANDSDALE	KINGSWAY CITY	-	5,154	10,941	16,095	14,403	0.36	12,503	0.88	26,906	1.23
536	WANNEROO	WANNEROO	-	13,000	17,095	30,095	26,986	0.48	16,897	1.01	43,883	1.49
92	MIRRABOOKA	MIRRABOOKA SQUARE	-	12,600	26,650	39,250	23,175	0.54	26,835	0.99	50,009	1.54
121	KARRINYUP	KARRINYUP	-	6,000	45,100	51,100	12,220	0.49	47,118	0.96	59,338	1.45
131	MORLEY	MORLEY-GALLERIA	-	16,630	80,020	96,650	28,786	0.58	69,031	1.16	97,816	1.74
515	WARWICK	WARWICK GROVE	-	11,500	23,610	35,110	22,463	0.51	25,426	0.93	47,889	1.44
525	HILLARYS	WHITFORDS CITY	-	12,100	32,000	44,100	24,123	0.50	33,270	0.96	57,394	1.46
670	JOONDALUP	JOONDALUP CITY	-	25,000	70,000	95,000	33,223	0.75	58,466	1.20	91,689	1.95
698	ELLENBROOK	ELLENBROOK 1	-	15,500	26,500	42,000	23,338	0.66	25,828	1.03	49,166	1.69
717	INNALOO	INNALOO	-	19,625	49,958	69,583	25,879	0.76	32,240	1.55	58,119	2.31
83	BALCATTA	NORTHLANDS	-	9,040	11,940	20,980	11,562	0.78	7,647	1.56	19,209	2.34
88	WESTMINSTER	STIRLING CENTRAL	-	8,700	8,700	17,400	12,106	0.72	6,023	1.44	18,129	2.16
97	DIANELLA	DIANELLA PLAZA	-	14,700	11,445	26,145	22,899	0.64	7,691	1.49	30,590	2.13
116	MORLEY	NORANDA SQUARE	-	10,320	3,320	13,640	15,804	0.65	2,406	1.38	18,211	2.03
508	GIRRAWHEEN	GIRRAWHEEN PARK	-	13,182	4,644	17,826	13,856	0.95	2,503	1.86	16,359	2.81
511	MARANGAROO	GRIFFON WAY	-	4,230	1,600	5,830	8,010	0.53	1,566	1.02	9,576	1.55
516	GREENWOOD	GREENWOOD VILLAGE	-	5,565	5,223	10,788	7,529	0.74	3,488	1.50	11,017	2.24
528	WOODVALE	WOODVALE PARK	-	9,060	5,460	14,520	13,895	0.65	4,718	1.16	18,613	1.81
546	CURRAMBINE	CURRAMBINE MARKET PL	-	7,000	3,000	10,000	10,360	0.68	2,318	1.29	12,678	1.97
553	CLARKSON	CLARKSON	-	9,990	18,950	28,940	13,166	0.76	14,213	1.33	27,380	2.09
659	BANKSIA GROVE	NEERABUP	-	7,500	7,500	15,000	11,486	0.65	7,484	1.00	18,970	1.66
522	GREENWOOD	-	CANHAM WAY	415	2,070	2,485	429	0.97	1,266	1.64	1,695	2.60
532	WANGARA	-	WANG/ LDALE	315	732	1,047	241	1.31	390	1.88	631	3.18
533	WANGARA	-	WANGARA	2,834	16,120	18,954	1,824	1.55	6,821	2.36	8,645	3.92
579	BALCATTA	-	BALCATTA	1,532	19,874	21,406	1,181	1.30	8,214	2.42	9,395	3.72
669	JOONDALUP	-	JOONDALUP MB1	1,390	18,400	19,790	834	1.67	6,745	2.73	7,580	4.39
128	BALGA	-	-	550	351	901	730	0.75	292	1.20	1,022	1.96
509	GIRRAWHEEN	-	-	300	150	450	465	0.65	148	1.01	613	1.66
510	KOONDOOLA	-	-	1,330	710	2,040	2,430	0.55	794	0.89	3,224	1.44
512	LANDSDALE	-	-	1,696	727	2,422	2,423	0.70	673	1.08	3,096	1.78
513	MARANGAROO	-	-	400	94	494	548	0.73	87	1.08	635	1.81
517	DUNCRAIG	-	-	5,660	4,580	10,240	9,495	0.60	4,172	1.10	13,667	1.69
523	KINGSLEY	-	-	2,415	1,470	3,885	2,831	0.85	1,084	1.36	3,915	2.21
529	KINGSLEY	-	-	544	420	964	636	0.86	321	1.31	957	2.16
530	LANDSDALE	-	-	1,687	723	2,409	2,180	0.77	601	1.20	2,782	1.98
531	LANDSDALE	-	-	2,060	1,005	3,065	2,957	0.70	958	1.05	3,915	1.75
565	BALLAJURA	-	-	1,215	630	1,845	1,718	0.71	557	1.13	2,275	1.84
675	WANNEROO	-	-	1,140	170	1,310	1,559	0.73	179	0.95	1,738	1.68
683	HOCKING	-	-	2,746	1,177	3,923	3,595	0.76	1,172	1.00	4,767	1.77
701	DARCH	-	-	971	416	1,387	1,325	0.73	382	1.09	1,707	1.82
702	LANDSDALE	-	-	513	220	732	711	0.72	192	1.14	904	1.86
703	ALEXANDER HEIGHTS	-	-	100	390	490	175	0.57	425	0.92	600	1.49
715	BALGA	-	-	1,840	1,030	2,870	2,505	0.73	859	1.20	3,364	1.93
Regional & District Only				***236,396***	***463,656***	***700,052***	***375,270***	***0.63***	***407,673***	***1.14***	***782,942***	***1.77***
Totals & Average for Selected Zone Set				268,048	535,114	803,162	416,061	0.64	444,007	1.21	860,068	1.85
"Other" Only (excludes Regional, District & Industrial)				25,166	14,262	39,428	36,283	0.69	12,898	1.11	49,181	1.80

NB: These are calculated figures from a statistics-based "Retail Potentials" model, which is used for particular forms of comparative analysis.
Therefore, actual sales and floorspace performances may differ from those above, depending on various external physical and social factors.

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	Datasets >>>	p2016	p2016									
MR Zone	SUBURB	Reg / Dist Centre Name	IND Area IND Name	Food sqm	Non-Food sqm	Total PL5 sqm	Food Person Equiv.	Food Sqm/Capita	Non-Food Person Equiv.	Non-Food Sqm/Capita	Total Person Equiv.	Total Approx Sqm/Capita
514	LANDSDALE	KINGSWAY CITY	-	10,626	21,554	32,180	26,567	0.40	22,320	0.97	48,886	1.37
536	WANNEROO	WANNEROO	-	13,000	17,095	30,095	26,436	0.49	16,573	1.03	43,009	1.52
92	MIRRABOOKA	MIRRABOOKA SQUARE	-	12,600	26,650	39,250	22,837	0.55	26,484	1.01	49,321	1.56
121	KARRINYUP	KARRINYUP	-	6,000	45,100	51,100	12,101	0.50	46,702	0.97	58,803	1.46
131	MORLEY	MORLEY-GALLERIA	-	16,630	80,020	96,650	28,563	0.58	68,516	1.17	97,079	1.75
515	WARWICK	WARWICK GROVE	-	11,500	23,610	35,110	21,841	0.53	24,854	0.95	46,695	1.48
525	HILLARYS	WHITFORDS CITY	-	12,100	32,000	44,100	23,726	0.51	32,823	0.97	56,549	1.48
670	JOONDALUP	JOONDALUP CITY	-	25,000	70,000	95,000	32,787	0.76	57,791	1.21	90,578	1.97
698	ELLENBROOK	ELLENBROOK 1	-	15,500	26,500	42,000	23,054	0.67	25,550	1.04	48,604	1.71
717	INNALOO	INNALOO	-	19,625	49,958	69,583	25,678	0.76	31,999	1.56	57,677	2.33
83	BALCATTA	NORTHLANDS	-	9,040	11,940	20,980	11,418	0.79	7,561	1.58	18,979	2.37
88	WESTMINSTER	STIRLING CENTRAL	-	8,700	8,700	17,400	11,929	0.73	5,943	1.46	17,872	2.19
97	DIANELLA	DIANELLA PLAZA	-	14,700	11,445	26,145	22,718	0.65	7,633	1.50	30,351	2.15
116	MORLEY	NORANDA SQUARE	-	10,320	3,320	13,640	15,637	0.66	2,383	1.39	18,019	2.05
508	GIRRAWHEEN	GIRRAWHEEN PARK	-	13,182	4,644	17,826	13,343	0.99	2,422	1.92	15,765	2.91
511	MARANGAROO	GRIFFON WAY	-	4,230	1,600	5,830	7,697	0.55	1,513	1.06	9,210	1.61
516	GREENWOOD	GREENWOOD VILLAGE	-	5,565	5,223	10,788	7,263	0.77	3,389	1.54	10,652	2.31
528	WOODVALE	WOODVALE PARK	-	9,060	5,460	14,520	13,328	0.68	4,567	1.20	17,895	1.88
546	CURRAMBINE	CURRAMBINE MARKET PL	-	7,000	3,000	10,000	10,266	0.68	2,299	1.30	12,565	1.99
553	CLARKSON	CLARKSON	-	9,990	18,950	28,940	13,089	0.76	14,132	1.34	27,221	2.10
659	BANKSIA GROVE	NEERABUP	-	7,500	7,500	15,000	11,387	0.66	7,418	1.01	18,804	1.67
522	GREENWOOD	-	CANHAM WAY	415	2,070	2,485	410	1.01	1,222	1.69	1,632	2.71
532	WANGARA	-	WANG/ LDALE	315	732	1,047	225	1.40	371	1.97	596	3.37
533	WANGARA	-	WANGARA	2,834	16,120	18,954	1,717	1.65	6,527	2.47	8,244	4.12
579	BALCATTA	-	BALCATTA	1,532	19,874	21,406	1,161	1.32	8,098	2.45	9,259	3.77
669	JOONDALUP	-	JOONDALUP MB1	1,390	18,400	19,790	823	1.69	6,663	2.76	7,486	4.45
128	BALGA	-	-	550	351	901	712	0.77	286	1.23	998	2.00
509	GIRRAWHEEN	-	-	300	150	450	451	0.67	145	1.04	595	1.70
510	KOONDOOLA	-	-	1,330	710	2,040	2,353	0.57	773	0.92	3,126	1.48
512	LANDSDALE	-	-	1,696	727	2,422	2,119	0.80	610	1.19	2,729	1.99
513	MARANGAROO	-	-	400	94	494	523	0.76	84	1.12	607	1.89
517	DUNCRAIG	-	-	5,660	4,580	10,240	9,309	0.61	4,105	1.12	13,415	1.72
523	KINGSLEY	-	-	2,415	1,470	3,885	2,729	0.88	1,054	1.39	3,783	2.28
529	KINGSLEY	-	-	544	420	964	607	0.90	310	1.36	917	2.25
530	LANDSDALE	-	-	1,687	723	2,409	2,019	0.84	569	1.27	2,588	2.11
531	LANDSDALE	-	-	2,060	1,005	3,065	2,613	0.79	875	1.15	3,489	1.94
565	BALLAJURA	-	-	1,215	630	1,845	1,631	0.75	535	1.18	2,166	1.92
675	WANNEROO	-	-	1,140	170	1,310	1,521	0.75	175	0.97	1,696	1.72
683	HOCKING	-	-	2,746	1,177	3,923	3,502	0.78	1,144	1.03	4,646	1.81
701	DARCH	-	-	971	416	1,387	1,163	0.83	349	1.19	1,512	2.03
702	LANDSDALE	-	-	513	220	732	651	0.79	181	1.22	831	2.00
703	ALEXANDER HEIGHTS	-	-	100	390	490	167	0.60	409	0.95	575	1.55
715	BALGA	-	-	1,840	1,030	2,870	2,447	0.75	842	1.22	3,290	1.97
Regional & District Only				***241,868***	***474,269***	***716,137***	***381,663***	***0.63***	***412,873***	***1.15***	***794,536***	***1.78***
Totals & Average for Selected Zone Set				273,520	545,727	819,247	420,516	0.65	448,198	1.22	868,714	1.87
"Other" Only (excludes Regional, District & Industrial)				25,166	14,262	39,428	34,517	0.73	12,446	1.15	46,963	1.88

NB: These are calculated figures from a statistics-based "Retail Potentials" model, which is used for particular forms of comparative analysis.
Therefore, actual sales and floorspace performances may differ from those above, depending on various external physical and social factors.

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S5

	Datasets >>>	p2021	p2021									
MR Zone	SUBURB	Reg / Dist Centre Name	IND Area IND Name	Food sqm	Non-Food sqm	Total PL5 sqm	Food Person Equiv.	Food Sqm/Capita	Non-Food Person Equiv.	Non-Food Sqm/Capita	Total Person Equiv.	Total Approx Sqm/Capita
514	LANDSDALE	**KINGSWAY CITY**	-	10,626	21,554	32,180	27,621	0.38	23,086	0.93	50,707	1.32
536	WANNEROO	WANNEROO	-	13,000	17,095	30,095	29,254	0.44	18,438	0.93	47,692	1.37
92	MIRRABOOKA	MIRRABOOKA SQUARE	-	12,600	37,000	49,600	22,919	0.55	35,894	1.03	58,813	1.58
121	KARRINYUP	KARRINYUP	-	6,000	45,100	51,100	12,096	0.50	46,870	0.96	58,965	1.46
131	MORLEY	MORLEY-GALLERIA	-	16,630	80,020	96,650	29,012	0.57	69,471	1.15	98,483	1.73
515	WARWICK	WARWICK GROVE	-	12,500	26,610	39,110	23,432	0.53	27,409	0.97	50,841	1.50
525	HILLARYS	WHITFORDS CITY	-	15,000	40,000	55,000	28,128	0.53	39,278	1.02	67,406	1.55
670	JOONDALUP	JOONDALUP CITY	-	25,000	75,000	100,000	32,954	0.76	62,152	1.21	95,106	1.97
698	ELLENBROOK	ELLENBROOK 1	-	18,500	36,500	55,000	28,912	0.64	35,657	1.02	64,569	1.66
717	INNALOO	INNALOO	-	19,625	49,958	69,583	25,838	0.76	32,267	1.55	58,104	2.31
83	BALCATTA	NORTHLANDS	-	9,040	11,940	20,980	11,574	0.78	7,555	1.58	19,128	2.36
88	WESTMINSTER	STIRLING CENTRAL	-	8,700	8,700	17,400	11,961	0.73	5,817	1.50	17,778	2.22
97	DIANELLA	DIANELLA PLAZA	-	14,700	11,445	26,145	22,666	0.65	7,574	1.51	30,240	2.16
116	MORLEY	NORANDA SQUARE	-	10,320	3,320	13,640	15,938	0.65	2,412	1.38	18,349	2.02
508	GIRRAWHEEN	GIRRAWHEEN PARK	-	13,182	4,644	17,826	12,714	1.04	2,263	2.05	14,978	3.09
511	MARANGAROO	GRIFFON WAY	-	6,500	5,500	12,000	11,046	0.59	4,761	1.16	15,806	1.74
516	GREENWOOD	GREENWOOD VILLAGE	-	5,565	5,223	10,788	7,201	0.77	3,335	1.57	10,537	2.34
528	WOODVALE	WOODVALE PARK	-	9,060	5,460	14,520	13,365	0.68	4,560	1.20	17,924	1.88
546	CURRAMBINE	CURRAMBINE MARKET PL	-	7,000	3,000	10,000	10,247	0.68	2,274	1.32	12,521	2.00
553	CLARKSON	CLARKSON	-	9,990	18,950	28,940	12,709	0.79	13,946	1.36	26,655	2.14
659	BANKSIA GROVE	NEERABUP	-	8,450	12,000	20,450	15,043	0.56	12,876	0.93	27,919	1.49
522	GREENWOOD	-	CANHAM WAY	415	2,070	2,485	402	1.03	1,185	1.75	1,586	2.78
532	WANGARA	-	WANG/ LDALE	315	732	1,047	236	1.33	388	1.88	625	3.22
533	WANGARA	-	WANGARA	2,834	16,120	18,954	1,783	1.59	6,768	2.38	8,551	3.97
579	BALCATTA	-	BALCATTA	1,532	19,874	21,406	1,164	1.32	8,018	2.48	9,183	3.79
669	JOONDALUP	-	JOONDALUP MB1	1,390	18,400	19,790	825	1.68	6,675	2.76	7,500	4.44
128	BALGA	-	-	550	351	901	706	0.78	277	1.27	983	2.05
509	GIRRAWHEEN	-	-	300	150	450	428	0.70	135	1.11	563	1.81
510	KOONDOOLA	-	-	1,330	710	2,040	2,252	0.59	726	0.98	2,978	1.57
512	LANDSDALE	-	-	2,000	857	2,857	2,616	0.76	746	1.15	3,362	1.91
513	MARANGAROO	-	-	400	94	494	497	0.80	79	1.20	576	2.00
517	DUNCRAIG	-	-	5,660	4,580	10,240	9,172	0.62	4,017	1.14	13,189	1.76
523	KINGSLEY	-	-	2,415	1,470	3,885	2,702	0.89	1,038	1.42	3,740	2.31
529	KINGSLEY	-	-	544	420	964	606	0.90	308	1.37	913	2.26
530	LANDSDALE	-	-	1,994	855	2,849	2,510	0.79	704	1.21	3,214	2.01
531	LANDSDALE	-	-	2,060	1,005	3,065	2,726	0.76	907	1.11	3,633	1.86
565	BALLAJURA	-	-	1,215	630	1,845	1,607	0.76	523	1.20	2,130	1.96
675	WANNEROO	-	-	1,140	170	1,310	1,592	0.72	184	0.92	1,776	1.64
683	HOCKING	-	-	2,871	1,231	4,102	3,848	0.75	1,262	0.98	5,109	1.72
701	DARCH	-	-	1,137	487	1,625	1,431	0.79	427	1.14	1,858	1.94
702	LANDSDALE	-	-	655	281	935	853	0.77	235	1.19	1,088	1.96
703	ALEXANDER HEIGHTS	-	-	100	390	490	158	0.63	383	1.02	541	1.65
715	BALGA	-	-	1,840	1,030	2,870	2,448	0.75	823	1.25	3,271	2.00
Regional & District Only				***251,988***	***519,019***	***771,007***	***404,629***	***0.62***	***457,893***	***1.13***	***862,522***	***1.76***
Totals & Average for Selected Zone Set				284,685	590,925	875,610	445,191	0.64	493,700	1.20	938,891	1.84
"Other" Only (excludes Regional, District & Industrial)				26,211	14,710	40,921	36,152	0.73	12,773	1.15	48,925	1.88

NB: These are calculated figures from a statistics-based "Retail Potentials" model, which is used for particular forms of comparative analysis.
Therefore, actual sales and floorspace performances may differ from those above, depending on various external physical and social factors.

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	Datasets >>>	p2026	p2026									
MR Zone	SUBURB	Reg / Dist Centre Name	IND Area IND Name	Food sqm	Non-Food sqm	Total PL5 sqm	Food Person Equiv.	Food Sqm/Capita	Non-Food Person Equiv.	Non-Food Sqm/Capita	Total Person Equiv.	Total Approx Sqm/Capita
514	LANDSDALE	**KINGSWAY CITY**	-	10,626	21,554	32,180	28,259	0.38	23,679	0.91	51,938	1.29
536	WANNEROO	WANNEROO	-	13,000	17,095	30,095	32,659	0.40	21,149	0.81	53,809	1.21
92	MIRRABOOKA	MIRRABOOKA SQUARE	-	12,600	37,000	49,600	23,434	0.54	36,786	1.01	60,220	1.54
121	KARRINYUP	KARRINYUP	-	6,000	45,100	51,100	12,326	0.49	48,082	0.94	60,408	1.42
131	MORLEY	MORLEY-GALLERIA	-	16,630	80,020	96,650	29,624	0.56	71,078	1.13	100,702	1.69
515	WARWICK	WARWICK GROVE	-	12,500	28,110	40,610	23,813	0.52	29,398	0.96	53,211	1.48
525	HILLARYS	WHITFORDS CITY	-	15,000	40,000	55,000	28,466	0.53	39,894	1.00	68,360	1.53
670	JOONDALUP	JOONDALUP CITY	-	25,000	75,000	100,000	33,539	0.75	64,130	1.17	97,669	1.91
698	ELLENBROOK	ELLENBROOK 1	-	18,500	46,500	65,000	28,132	0.66	42,364	1.10	70,495	1.76
717	INNALOO	INNALOO	-	19,625	49,958	69,583	26,339	0.75	33,083	1.51	59,422	2.26
83	BALCATTA	NORTHLANDS	-	9,040	11,940	20,980	11,969	0.76	7,826	1.53	19,795	2.28
88	WESTMINSTER	STIRLING CENTRAL	-	8,700	8,700	17,400	12,260	0.71	5,973	1.46	18,233	2.17
97	DIANELLA	DIANELLA PLAZA	-	14,700	11,445	26,145	23,354	0.63	7,805	1.47	31,158	2.10
116	MORLEY	NORANDA SQUARE	-	10,320	3,320	13,640	16,343	0.63	2,474	1.34	18,817	1.97
508	GIRRAWHEEN	GIRRAWHEEN PARK	-	13,182	4,644	17,826	12,708	1.04	2,260	2.05	14,968	3.09
511	MARANGAROO	GRIFFON WAY	-	6,500	5,500	12,000	10,993	0.59	4,734	1.16	15,727	1.75
516	GREENWOOD	GREENWOOD VILLAGE	-	5,565	5,223	10,788	7,316	0.76	3,390	1.54	10,706	2.30
528	WOODVALE	WOODVALE PARK	-	9,060	5,460	14,520	13,611	0.67	4,679	1.17	18,290	1.83
546	CURRAMBINE	CURRAMBINE MARKET PL	-	7,000	3,000	10,000	10,379	0.67	2,321	1.29	12,700	1.97
553	CLARKSON	CLARKSON	-	9,990	18,950	28,940	12,660	0.79	13,874	1.37	26,534	2.15
659	BANKSIA GROVE	NEERABUP	-	10,900	15,000	25,900	19,840	0.55	17,261	0.87	37,101	1.42
522	GREENWOOD	-	CANHAM WAY	415	2,070	2,485	406	1.02	1,198	1.73	1,604	2.75
532	WANGARA	-	WANG/ LDALE	315	732	1,047	252	1.25	420	1.74	672	2.99
533	WANGARA	-	WANGARA	2,834	16,120	18,954	1,870	1.52	7,193	2.24	9,063	3.76
579	BALCATTA	-	BALCATTA	1,532	19,874	21,406	1,195	1.28	8,237	2.41	9,432	3.69
669	JOONDALUP	-	JOONDALUP MB1	1,390	18,400	19,790	840	1.66	6,883	2.67	7,723	4.33
128	BALGA	-	-	550	351	901	723	0.76	283	1.24	1,006	2.00
509	GIRRAWHEEN	-	-	300	150	450	428	0.70	135	1.11	563	1.81
510	KOONDOOLA	-	-	1,330	710	2,040	2,254	0.59	727	0.98	2,982	1.57
512	LANDSDALE	-	-	2,090	896	2,986	2,792	0.75	796	1.13	3,588	1.87
513	MARANGAROO	-	-	400	94	494	496	0.81	79	1.20	574	2.00
517	DUNCRAIG	-	-	5,660	4,580	10,240	9,303	0.61	4,073	1.12	13,376	1.73
523	KINGSLEY	-	-	2,415	1,470	3,885	2,743	0.88	1,058	1.39	3,801	2.27
529	KINGSLEY	-	-	544	420	964	616	0.88	314	1.34	931	2.22
530	LANDSDALE	-	-	2,076	890	2,966	2,685	0.77	759	1.17	3,444	1.95
531	LANDSDALE	-	-	2,060	1,005	3,065	2,804	0.73	935	1.07	3,739	1.81
565	BALLAJURA	-	-	1,215	630	1,845	1,611	0.75	525	1.20	2,136	1.95
675	WANNEROO	-	-	1,140	170	1,310	1,643	0.69	195	0.87	1,838	1.57
683	HOCKING	-	-	2,871	1,231	4,102	4,135	0.69	1,391	0.88	5,526	1.58
701	DARCH	-	-	1,137	487	1,625	1,480	0.77	444	1.10	1,924	1.87
702	LANDSDALE	-	-	655	281	935	869	0.75	239	1.17	1,108	1.93
703	ALEXANDER HEIGHTS	-	-	100	390	490	157	0.64	381	1.02	538	1.66
715	BALGA	-	-	1,840	1,030	2,870	2,523	0.73	847	1.22	3,370	1.95
Regional & District Only				***254,438***	***533,519***	***787,957***	***418,023***	***0.61***	***482,240***	***1.11***	***900,263***	***1.72***
Totals & Average for Selected Zone Set				287,307	605,499	892,806	459,846	0.62	519,352	1.17	979,198	1.79
"Other" Only (excludes Regional, District & Industrial)				26,383	14,784	41,167	37,261	0.71	13,181	1.12	50,442	1.83

NB: These are calculated figures from a statistics-based "Retail Potentials" model, which is used for particular forms of comparative analysis.
Therefore, actual sales and floorspace performances may differ from those above, depending on various external physical and social factors.

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	Datasets >>>	p2031	p2031									
MR Zone	SUBURB	Reg / Dist Centre Name	IND Area IND Name	Food sqm	Non-Food sqm	Total PL5 sqm	Food Person Equiv.	Food Sqm/Capita	Non-Food Person Equiv.	Non-Food Sqm/Capita	Total Person Equiv.	Total Approx Sqm/Capita
514	LANDSDALE	KINGSWAY CITY	-	10,626	21,554	32,180	28,893	0.37	24,520	0.88	53,413	1.25
536	WANNEROO	WANNEROO	-	13,000	17,095	30,095	35,476	0.37	23,381	0.73	58,857	1.10
92	MIRRABOOKA	MIRRABOOKA SQUARE	-	12,600	37,000	49,600	24,019	0.52	38,199	0.97	62,218	1.49
121	KARRINYUP	KARRINYUP	-	6,000	45,100	51,100	12,580	0.48	49,622	0.91	62,202	1.39
131	MORLEY	MORLEY-GALLERIA	-	16,630	80,020	96,650	30,063	0.55	73,074	1.10	103,137	1.65
515	WARWICK	WARWICK GROVE	-	12,500	28,110	40,610	24,163	0.52	30,238	0.93	54,401	1.45
525	HILLARYS	WHITFORDS CITY	-	15,000	40,000	55,000	28,542	0.53	40,544	0.99	69,087	1.51
670	JOONDALUP	JOONDALUP CITY	-	25,000	75,000	100,000	34,033	0.73	66,269	1.13	100,302	1.87
698	ELLENBROOK	ELLENBROOK 1	-	18,750	46,500	65,250	29,466	0.64	44,464	1.05	73,930	1.68
717	INNALOO	INNALOO	-	19,625	49,958	69,583	26,840	0.73	34,115	1.46	60,955	2.20
83	BALCATTA	NORTHLANDS	-	9,040	11,940	20,980	12,270	0.74	8,104	1.47	20,375	2.21
88	WESTMINSTER	STIRLING CENTRAL	-	8,700	8,700	17,400	12,582	0.69	6,202	1.40	18,784	2.09
97	DIANELLA	DIANELLA PLAZA	-	14,700	11,445	26,145	23,816	0.62	8,047	1.42	31,863	2.04
116	MORLEY	NORANDA SQUARE	-	10,320	3,320	13,640	16,631	0.62	2,550	1.30	19,181	1.92
508	GIRRAWHEEN	GIRRAWHEEN PARK	-	13,182	4,644	17,826	13,043	1.01	2,346	1.98	15,388	2.99
511	MARANGAROO	GRIFFON WAY	-	6,500	5,500	12,000	11,300	0.58	4,925	1.12	16,225	1.69
516	GREENWOOD	GREENWOOD VILLAGE	-	5,565	5,223	10,788	7,400	0.75	3,479	1.50	10,878	2.25
528	WOODVALE	WOODVALE PARK	-	9,060	5,460	14,520	13,758	0.66	4,807	1.14	18,565	1.79
546	CURRAMBINE	CURRAMBINE MARKET PL	-	7,000	3,000	10,000	10,467	0.67	2,370	1.27	12,837	1.93
553	CLARKSON	CLARKSON	-	9,990	18,950	28,940	13,094	0.76	14,622	1.30	27,716	2.06
659	BANKSIA GROVE	NEERABUP	-	10,900	18,000	28,900	20,530	0.53	20,608	0.87	41,138	1.40
522	GREENWOOD	-	CANHAM WAY	415	2,070	2,485	412	1.01	1,235	1.68	1,647	2.68
532	WANGARA	-	WANG/ LDALE	315	732	1,047	266	1.19	453	1.62	718	2.80
533	WANGARA	-	WANGARA	2,834	16,120	18,954	1,974	1.44	7,752	2.08	9,727	3.51
579	BALCATTA	-	BALCATTA	1,532	19,874	21,406	1,224	1.25	8,538	2.33	9,762	3.58
669	JOONDALUP	-	JOONDALUP MB1	1,390	18,400	19,790	851	1.63	7,109	2.59	7,960	4.22
128	BALGA	-	-	550	351	901	753	0.73	298	1.18	1,050	1.91
509	GIRRAWHEEN	-	-	300	150	450	440	0.68	140	1.07	581	1.75
510	KOONDOOLA	-	-	1,330	710	2,040	2,317	0.57	757	0.94	3,074	1.51
512	LANDSDALE	-	-	2,090	896	2,986	2,850	0.73	823	1.09	3,673	1.82
513	MARANGAROO	-	-	400	94	494	508	0.79	81	1.15	589	1.94
517	DUNCRAIG	-	-	5,660	4,580	10,240	9,373	0.60	4,157	1.10	13,530	1.71
523	KINGSLEY	-	-	2,415	1,470	3,885	2,764	0.87	1,084	1.36	3,848	2.23
529	KINGSLEY	-	-	544	420	964	624	0.87	324	1.30	948	2.17
530	LANDSDALE	-	-	2,076	890	2,966	2,754	0.75	794	1.12	3,548	1.87
531	LANDSDALE	-	-	2,060	1,005	3,065	2,918	0.71	990	1.01	3,908	1.72
565	BALLAJURA	-	-	1,215	630	1,845	1,660	0.73	548	1.15	2,208	1.88
675	WANNEROO	-	-	1,140	170	1,310	1,663	0.69	202	0.84	1,866	1.53
683	HOCKING	-	-	2,871	1,231	4,102	4,317	0.67	1,491	0.83	5,808	1.49
701	DARCH	-	-	1,137	487	1,625	1,535	0.74	469	1.04	2,004	1.78
702	LANDSDALE	-	-	742	318	1,061	1,013	0.73	284	1.12	1,297	1.85
703	ALEXANDER HEIGHTS	-	-	100	390	490	161	0.62	396	0.98	557	1.61
715	BALGA	-	-	1,840	1,030	2,870	2,643	0.70	894	1.15	3,536	1.85
Regional & District Only				***254,688***	***536,519***	***791,207***	***428,967***	***0.59***	***502,485***	***1.07***	***931,452***	***1.66***
Totals & Average for Selected Zone Set				287,645	608,537	896,182	471,987	0.61	541,304	1.12	1,013,291	1.73
"Other" Only (excludes Regional, District & Industrial)				26,471	14,822	41,293	38,293	0.69	13,733	1.08	52,026	1.77

NB: These are calculated figures from a statistics-based "Retail Potentials" model, which is used for particular forms of comparative analysis.
Therefore, actual sales and floorspace performances may differ from those above, depending on various external physical and social factors.

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	Datasets >>>	p2031	p2031									
MR Zone	SUBURB	Reg / Dist Centre Name	IND Area IND Name	Food sqm	Non-Food sqm	Total PL5 sqm	Food Person Equiv.	Food Sqm/Capita	Non-Food Person Equiv.	Non-Food Sqm/Capita	Total Person Equiv.	Total Approx Sqm/Capita
514	LANDSDALE	KINGSWAY CITY	-	10,626	21,554	32,180	28,731	0.37	23,868	0.90	52,599	1.27
536	WANNEROO	WANNEROO	-	15,000	35,095	50,095	39,198	0.38	39,223	0.89	78,421	1.28
92	MIRRABOOKA	MIRRABOOKA SQUARE	-	12,600	37,000	49,600	23,983	0.53	37,878	0.98	61,860	1.50
121	KARRINYUP	KARRINYUP	-	6,000	45,100	51,100	12,563	0.48	49,211	0.92	61,774	1.39
131	MORLEY	MORLEY-GALLERIA	-	16,630	80,020	96,650	30,036	0.55	72,691	1.10	102,727	1.65
515	WARWICK	WARWICK GROVE	-	12,500	28,110	40,610	24,091	0.52	29,774	0.94	53,864	1.46
525	HILLARYS	WHITFORDS CITY	-	15,000	40,000	55,000	28,450	0.53	39,902	1.00	68,352	1.53
670	JOONDALUP	JOONDALUP CITY	-	25,000	75,000	100,000	33,786	0.74	64,055	1.17	97,841	1.91
698	ELLENBROOK	ELLENBROOK 1	-	18,750	46,500	65,250	29,409	0.64	43,986	1.06	73,395	1.69
717	INNALOO	INNALOO	-	19,625	49,958	69,583	26,808	0.73	33,864	1.48	60,671	2.21
83	BALCATTA	NORTHLANDS	-	9,040	11,940	20,980	12,251	0.74	8,035	1.49	20,286	2.22
88	WESTMINSTER	STIRLING CENTRAL	-	8,700	8,700	17,400	12,560	0.69	6,144	1.42	18,704	2.11
97	DIANELLA	DIANELLA PLAZA	-	14,700	11,445	26,145	23,795	0.62	8,006	1.43	31,801	2.05
116	MORLEY	NORANDA SQUARE	-	10,320	3,320	13,640	16,613	0.62	2,535	1.31	19,148	1.93
508	GIRRAWHEEN	GIRRAWHEEN PARK	-	13,182	4,644	17,826	13,000	1.01	2,307	2.01	15,307	3.03
511	MARANGAROO	GRIFFON WAY	-	6,500	5,500	12,000	11,264	0.58	4,848	1.13	16,112	1.71
516	GREENWOOD	GREENWOOD VILLAGE	-	5,565	5,223	10,788	7,369	0.76	3,408	1.53	10,777	2.29
528	WOODVALE	WOODVALE PARK	-	9,060	5,460	14,520	13,635	0.66	4,612	1.18	18,248	1.85
546	CURRAMBINE	CURRAMBINE MARKET PL	-	7,000	3,000	10,000	10,408	0.67	2,309	1.30	12,717	1.97
553	CLARKSON	CLARKSON	-	9,990	18,950	28,940	13,040	0.77	14,349	1.32	27,389	2.09
659	BANKSIA GROVE	NEERABUP	-	10,900	18,000	28,900	20,325	0.54	19,678	0.91	40,003	1.45
522	GREENWOOD	-	CANHAM WAY	415	2,070	2,485	410	1.01	1,208	1.71	1,619	2.72
532	WANGARA	-	WANG/ LDALE	315	732	1,047	261	1.21	420	1.74	681	2.95
533	WANGARA	-	WANGARA	2,834	16,120	18,954	1,945	1.46	7,256	2.22	9,201	3.68
579	BALCATTA	-	BALCATTA	1,532	19,874	21,406	1,222	1.25	8,447	2.35	9,668	3.61
669	JOONDALUP	-	JOONDALUP MB1	1,390	18,400	19,790	845	1.64	6,871	2.68	7,716	4.32
128	BALGA	-	-	550	351	901	751	0.73	294	1.19	1,045	1.93
509	GIRRAWHEEN	-	-	300	150	450	439	0.68	139	1.08	577	1.77
510	KOONDOOLA	-	-	1,330	710	2,040	2,312	0.58	748	0.95	3,060	1.52
512	LANDSDALE	-	-	2,090	896	2,986	2,839	0.74	807	1.11	3,646	1.85
513	MARANGAROO	-	-	400	94	494	506	0.79	80	1.18	586	1.97
517	DUNCRAIG	-	-	5,660	4,580	10,240	9,352	0.61	4,110	1.11	13,462	1.72
523	KINGSLEY	-	-	2,415	1,470	3,885	2,749	0.88	1,055	1.39	3,805	2.27
529	KINGSLEY	-	-	544	420	964	620	0.88	313	1.34	933	2.22
530	LANDSDALE	-	-	2,076	890	2,966	2,728	0.76	760	1.17	3,488	1.93
531	LANDSDALE	-	-	2,060	1,005	3,065	2,898	0.71	960	1.05	3,858	1.76
565	BALLAJURA	-	-	1,215	630	1,845	1,656	0.73	540	1.17	2,196	1.90
675	WANNEROO	-	-	1,140	170	1,310	1,598	0.71	172	0.99	1,770	1.70
683	HOCKING	-	-	2,871	1,231	4,102	4,154	0.69	1,276	0.96	5,430	1.66
701	DARCH	-	-	1,137	487	1,625	1,520	0.75	450	1.08	1,970	1.83
702	LANDSDALE	-	-	742	318	1,061	1,008	0.74	278	1.15	1,286	1.88
703	ALEXANDER HEIGHTS	-	-	100	390	490	160	0.62	391	1.00	552	1.62
715	BALGA	-	-	1,840	1,030	2,870	2,637	0.70	883	1.17	3,520	1.86
Regional & District Only				***256,688***	***554,519***	***811,207***	***431,315***	***0.60***	***510,682***	***1.09***	***941,997***	***1.68***
Totals & Average for Selected Zone Set				289,645	626,537	916,182	473,925	0.61	548,140	1.14	1,022,066	1.75
"Other" Only (excludes Regional, District & Industrial)				26,471	14,822	41,293	37,927	0.70	13,257	1.12	51,184	1.82

NB: These are calculated figures from a statistics-based "Retail Potentials" model, which is used for particular forms of comparative analysis.
Therefore, actual sales and floorspace performances may differ from those above, depending on various external physical and social factors.

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APPENDIX B
Impact Assessment Sheets

YEAR: 2011 (S1 & S2)				Total	Trade (Person Equivalents)		Percentage
				PLUC 5	S1: Kingsway	S2: Kingsway	Change
MR		Reg / Dist	Ind	Floorspace	As is	Expand to	Between
Zone	SUBURB	Centre Name	Centre Name	(sqm)		32,000 sqm	S1 & S2
514	LANDSDALE	KINGSWAY CITY	-	16,095	24,991	46,216	84.9%
512	LANDSDALE	-	-	1,809	2,161	1,912	-11.5%
701	DARCH	-	-	988	1,130	1,010	-10.6%
531	LANDSDALE	-	-	3,065	3,711	3,319	-10.6%
702	LANDSDALE	-	-	547	661	608	-7.9%
530	LANDSDALE	-	-	1,672	1,767	1,645	-6.9%
532	WANGARA	-	WANG/ LDALE	1,047	608	576	-5.3%
534	GNANGARA	-	-	137	87	83	-5.1%
565	BALLAJURA	-	-	1,845	2,408	2,293	-4.8%
533	WANGARA	-	WANGARA	18,954	8,396	8,021	-4.5%
513	MARANGAROO	-	-	494	682	652	-4.5%
529	KINGSLEY	-	-	964	980	940	-4.2%
703	ALEXANDER HEIGHTS	-	-	490	644	618	-4.1%
528	WOODVALE	WOODVALE PARK	-	14,520	19,104	18,363	-3.9%
511	MARANGAROO	GRIFFON WAY	-	5,830	10,319	9,919	-3.9%
522	GREENWOOD	-	CANHAM WAY	2,485	1,775	1,709	-3.7%
508	GIRRAWHEEN	GIRRAWHEEN PARK	-	17,826	17,504	16,852	-3.7%
523	KINGSLEY	-	-	3,885	4,037	3,899	-3.4%
516	GREENWOOD	GREENWOOD VILLAGE	-	9,328	10,289	9,941	-3.4%
510	KOONDOOLA	-	-	2,040	3,396	3,289	-3.2%
509	GIRRAWHEEN	-	-	450	653	633	-3.1%
683	HOCKING	-	-	2,792	3,345	3,251	-2.8%
675	WANNEROO	-	-	1,310	1,775	1,727	-2.7%
682	JANDABUP	-	-	231	179	174	-2.7%
515	WARWICK	WARWICK GROVE	-	27,610	40,156	39,114	-2.6%
604	BALLAJURA	-	-	3,450	5,094	4,965	-2.5%
541	EDGEWATER	-	-	6,389	5,080	4,954	-2.5%
128	BALGA	-	-	901	1,042	1,017	-2.4%
715	BALGA	-	-	2,870	3,386	3,309	-2.3%
130	MIRRABOOKA	-	-	1,273	1,657	1,621	-2.2%
536	WANNEROO	WANNEROO	-	23,095	33,670	32,933	-2.2%
716	BALGA	-	-	227	282	277	-2.0%
540	WANNEROO	-	-	1,807	1,969	1,930	-2.0%
603	BALLAJURA	-	-	5,830	5,357	5,249	-2.0%
524	PADBURY	-	-	4,135	4,734	4,642	-1.9%
564	MALAGA	-	MALAGA	41,740	20,514	20,119	-1.9%
700	PADBURY	-	-	648	833	817	-1.9%
517	DUNCRAIG	-	-	10,240	13,992	13,727	-1.9%
518	DUNCRAIG	-	-	2,918	3,908	3,836	-1.8%
681	SINAGRA/ WANNEROO	-	-	1,414	1,431	1,405	-1.8%
660	ASHBY	-	-	1,608	1,901	1,868	-1.7%
527	CRAIGIE	-	-	2,081	2,343	2,302	-1.7%
537	MARIGINIUP	-	-	443	288	283	-1.7%
519	DUNCRAIG	-	-	810	1,064	1,046	-1.7%
674	EDGEWATER	-	-	3,035	1,672	1,644	-1.7%
699	HILLARYS	-	-	603	668	657	-1.7%
704	HENLEY BROOK	-	-	186	127	125	-1.6%
124	CARINE	-	-	433	578	569	-1.5%
122	GWELUP	-	-	135	158	155	-1.5%
520	SORRENTO	-	-	9,316	9,229	9,087	-1.5%
579	BALCATTA	-	BALCATTA	21,406	9,458	9,316	-1.5%
93	DIANELLA	-	-	632	814	802	-1.5%
525	HILLARYS	WHITFORDS CITY	-	44,100	58,590	57,717	-1.5%
688	BULLSBROOK	-	-	109	37	37	-1.5%
88	WESTMINSTER	STIRLING CENTRAL	-	17,400	18,181	17,914	-1.5%
673	JOONDALUP	-	JOONDALUP MB2	12,450	4,744	4,675	-1.5%
521	MARMION	-	-	1,799	2,047	2,018	-1.4%
92	MIRRABOOKA	MIRRABOOKA SQUARE	-	39,250	49,921	49,207	-1.4%
544	HEATHRIDGE	-	-	2,087	2,689	2,651	-1.4%
526	KALLAROO	-	-	1,000	854	842	-1.4%
709	WHITEMAN	-	-	850	712	702	-1.4%
555	BELDON	-	-	9,701	12,777	12,611	-1.3%
539	CARAMAR/ TAPPING	-	-	5,770	8,144	8,040	-1.3%
669	JOONDALUP	-	JOONDALUP MB1	19,790	7,771	7,672	-1.3%
671	JOONDALUP	-	-	234	190	188	-1.3%
81	GWELUP	-	-	5,051	5,102	5,038	-1.3%
670	JOONDALUP	JOONDALUP CITY	-	90,000	88,372	87,267	-1.2%

YEAR: 2011 (S1 & S2)				Total PLUC 5 Floorspace (sqm)	Trade (Person Equivalents)		Percentage Change Between S1 & S2
					S1: Kingsway As is	S2: Kingsway Expand to 32,000 sqm	
MR Zone	SUBURB	Reg / Dist Centre Name	Ind Centre Name				
83	BALCATTA	NORTHLANDS	-	20,980	19,074	18,836	-1.2%
94	DIANELLA	-	-	680	780	770	-1.2%
120	KARRINYUP	-	-	108	106	105	-1.2%
125	WATERMAN	-	-	3,919	2,948	2,912	-1.2%
698	ELLENBROOK	ELLENBROOK 1	-	37,000	41,311	40,816	-1.2%
678	MULLALOO	-	-	2,250	2,972	2,936	-1.2%
668	JOONDALUP	-	-	115	93	92	-1.2%
549	NEERABUP	-	-	107	97	95	-1.2%
594	OCEAN REEF	-	-	1,657	1,842	1,821	-1.2%
659	BANKSIA GROVE	NEERABUP	-	5,000	6,880	6,801	-1.1%
87	NOLLAMARA	-	-	4,972	6,037	5,968	-1.1%
664	CONNOLLY	-	-	2,362	2,656	2,626	-1.1%
78	BALCATTA	-	-	1,485	1,549	1,532	-1.1%
119	NORTH BEACH	-	-	1,687	1,741	1,721	-1.1%
116	MORLEY	NORANDA SQUARE	-	13,640	18,205	18,008	-1.1%
547	MULLALOO	-	-	264	198	196	-1.0%
543	JOONDALUP	-	-	1,762	1,905	1,886	-1.0%
86	NOLLAMARA	-	-	3,378	4,132	4,091	-1.0%
114	MORLEY	-	-	570	871	863	-1.0%
546	CURRAMBINE	CURRAMBINE MARKET Pl	-	6,600	9,556	9,466	-0.9%
121	KARRINYUP	KARRINYUP	-	51,100	59,400	58,846	-0.9%
561	BEECHBORO	-	-	4,691	5,844	5,790	-0.9%
548	OCEAN REEF	-	-	2,791	3,763	3,728	-0.9%
76	STIRLING	-	-	156	175	173	-0.9%
663	CURRAMBINE	-	-	132	161	160	-0.9%
90	DIANELLA	-	-	363	549	545	-0.9%
111	MORLEY	-	-	5,300	8,472	8,401	-0.8%
662	CURRAMBINE	-	-	142	195	193	-0.8%
781	ILUKA	-	-	158	224	222	-0.8%
656	KINROSS	-	-	158	225	223	-0.8%
598	ILUKA	-	-	918	1,253	1,243	-0.8%
97	DIANELLA	DIANELLA PLAZA	-	26,145	30,131	29,887	-0.8%
653	BURNS	-	-	1,605	2,179	2,161	-0.8%
112	MORLEY	-	-	114	162	160	-0.8%
717	INNALOO	INNALOO	-	57,892	49,563	49,173	-0.8%
131	MORLEY	MORLEY-GALLERIA	-	96,650	96,787	96,037	-0.8%
69	INNALOO	-	-	3,099	1,818	1,804	-0.8%
719	YOKINE	-	-	4,487	4,294	4,262	-0.8%
655	KINROSS	-	-	680	1,078	1,070	-0.8%
567	OSBORNE PARK	-	OSBORNE PARK	54,476	16,771	16,646	-0.7%
85	TUART HILL	-	-	473	615	610	-0.7%
75	OSBORNE PARK	-	-	8,526	7,143	7,090	-0.7%
560	LOCKRIDGE	-	-	1,721	1,978	1,964	-0.7%
70	DOUBLEVIEW	-	-	694	771	766	-0.7%
89	YOKINE	-	-	580	689	685	-0.7%
98	DIANELLA	-	WALTER ROAD	1,761	1,305	1,296	-0.7%
110	MORLEY	-	-	816	1,105	1,098	-0.7%
132	EMBLETON	-	BAYSWATER	8,775	3,947	3,922	-0.6%
570	BASSENDEAN	-	BASSENDEAN	3,496	1,461	1,452	-0.6%
109	BASSENDEAN	-	-	1,850	2,288	2,274	-0.6%
73	SCARBOROUGH	SCARBOROUGH	-	13,559	15,326	15,229	-0.6%
105	BEDFORD	-	-	1,355	1,289	1,281	-0.6%
720	JOODANNA	DOG SWAMP	-	12,284	15,802	15,705	-0.6%
143	GLENDALOUGH	-	-	1,227	1,183	1,176	-0.6%
65	MT HAWTHORN	MT HAWTHORN	-	16,707	13,740	13,657	-0.6%
84	JOODANNA	-	-	207	273	272	-0.6%
67	WOODLANDS	-	-	1,607	1,687	1,677	-0.6%
71	DOUBLEVIEW	-	-	4,922	6,042	6,006	-0.6%
63	COOLBINIA	-	-	2,027	1,299	1,292	-0.6%
133	BAYSWATER	-	-	3,595	3,259	3,240	-0.6%
64	NORTH PERTH	-	-	3,030	2,239	2,226	-0.6%
104	INGLEWOOD	INGLEWOOD	-	19,864	18,744	18,641	-0.6%
58	NORTH PERTH	FITZGERALD ST	-	19,335	15,983	15,898	-0.5%
103	BAYSWATER	-	-	1,494	1,310	1,304	-0.5%
68	DOUBLEVIEW	-	-	2,352	2,471	2,458	-0.5%
11	WEST PERTH	-	-	75	31	31	-0.5%
57	NORTH PERTH	-	-	5,596	3,304	3,287	-0.5%

YEAR: 2011 (S1 & S2)				Total	Trade (Person Equivalents)		Percentage
				PLUC 5	S1: Kingsway	S2: Kingsway	Change
MR		Reg / Dist	Ind	Floorspace	As is	Expand to	Between
Zone	SUBURB	Centre Name	Centre Name	(sqm)		32,000 sqm	S1 & S2
10	LEEDERVILLE	LEEDERVILLE	-	15,531	8,322	8,279	-0.5%
56	LEEDERVILLE	-	-	3,280	2,698	2,684	-0.5%
176	NORTHBRIDGE	CITY 1	-	40,966	26,350	26,219	-0.5%
593	WEST PERTH	WEST PERTH	-	36,430	20,698	20,596	-0.5%
12	WEST PERTH	-	W PERTH	8,041	2,272	2,261	-0.5%
721	MT LAWLEY	-	-	4,793	3,052	3,037	-0.5%
102	MAYLANDS	-	-	3,497	2,352	2,340	-0.5%
140	WEMBLEY	-	-	4,084	2,845	2,831	-0.5%
142	LEEDERVILLE	-	-	220	97	97	-0.5%
59	MT LAWLEY	MT LAWLEY	-	17,268	12,772	12,711	-0.5%
60	MT LAWLEY	-	-	650	349	348	-0.5%
72	SCARBOROUGH	-	-	4,688	5,121	5,097	-0.5%
135	FLOREAT	-	-	2,036	1,743	1,735	-0.5%
13	PERTH CITY	-	-	765	330	329	-0.5%
66	WEMBLEY DOWNS	-	-	141	163	163	-0.5%
101	BAYSWATER	-	-	912	945	940	-0.5%
141	LEEDERVILLE	-	-	12,527	6,222	6,194	-0.5%
15	PERTH CITY	HIGHGATE	-	20,569	12,172	12,117	-0.5%
18	PERTH CITY	-	-	3,514	1,535	1,528	-0.4%
136	FLOREAT	FLOREAT FORUM	-	11,430	16,194	16,123	-0.4%
55	WEMBLEY DOWNS	-	-	1,203	1,496	1,490	-0.4%
24	SUBIACO	SUBIACO	-	80,600	59,233	58,987	-0.4%
100	MAYLANDS	MAYLANDS	MAYLANDS	13,375	13,676	13,619	-0.4%
25	JOLIMONT	-	CARDIGAN TERRACE	14,426	4,641	4,623	-0.4%
139	WEMBLEY	-	-	2,216	1,651	1,644	-0.4%
138	WEMBLEY	-	-	6,474	4,666	4,648	-0.4%
26	DAGLISH	-	-	447	208	207	-0.4%
137	FLOREAT	-	-	166	127	126	-0.3%
27	SUBIACO	-	-	3,239	1,634	1,629	-0.3%
1	WEST PERTH	-	-	-	-	-	na
2	WEST PERTH	-	-	-	-	-	na
3	WEST PERTH	-	-	-	-	-	na
4	WEST PERTH	-	-	-	-	-	na
5	WEST PERTH	-	-	-	-	-	na
6	WEST PERTH	-	-	-	-	-	na
7	WEST PERTH	-	-	-	-	-	na
8	WEST PERTH	-	-	-	-	-	na
9	WEST PERTH	-	-	-	-	-	na
14	PERTH CITY	-	-	-	-	-	na
16	PERTH CITY	-	-	-	-	-	na
17	PERTH CITY	-	-	-	-	-	na
19	MT LAWLEY	-	-	-	-	-	na
21	MT LAWLEY	-	-	-	-	-	na
28	SUBIACO	-	-	-	-	-	na
54	CITY BEACH	-	-	-	-	-	na
61	MT LAWLEY	-	-	-	-	-	na
62	MT LAWLEY	-	-	-	-	-	na
74	HERDSMAN LAKE	-	-	-	-	-	na
77	OSBORNE PARK	-	-	-	-	-	na
79	STIRLING	-	-	-	-	-	na
80	INNALOO	-	-	-	-	-	na
82	STIRLING	-	-	-	-	-	na
91	DIANELLA	-	-	-	-	-	na
95	DIANELLA	-	-	-	-	-	na
96	DIANELLA	-	-	-	-	-	na
113	MORLEY	-	-	-	-	-	na
115	NORANDA	-	-	-	-	-	na
117	NORANDA	-	-	-	-	-	na
118	KARRINYUP	-	-	-	-	-	na
123	CARINE	-	-	-	-	-	na
126	HAMERSLEY	-	-	-	-	-	na
127	HAMERSLEY	-	-	-	-	-	na
129	BALGA	-	-	-	-	-	na
161	PERTH CITY	-	-	-	-	-	na
162	PERTH CITY	-	-	-	-	-	na
174	WEST PERTH	-	-	-	-	-	na
175	NORTHBRIDGE	-	-	-	-	-	na

YEAR: 2011 (S1 & S2)				Total PLUC 5 Floorspace (sqm)	Trade (Person Equivalents)		Percentage Change Between S1 & S2
					S1: Kingsway As is	S2: Kingsway Expand to 32,000 sqm	
MR Zone	SUBURB	Reg / Dist Centre Name	Ind Centre Name				
177	NORTHBRIDGE	-	-	-	-	-	na
178	PERTH CITY	-	-	-	-	-	na
181	WEST PERTH	-	-	-	-	-	na
182	PERTH CITY	-	-	-	-	-	na
183	PERTH CITY	-	-	-	-	-	na
184	WEST PERTH	-	-	-	-	-	na
185	PERTH CITY	-	-	-	-	-	na
186	WEST PERTH	-	-	-	-	-	na
329	WEST SWAN	ALBION TOWN		-	-	-	na
330	WHITEMAN	-	-	-	-	-	na
331	BULLSBROOK	-	-	-	-	-	na
535	WANNEROO	-	-	-	-	-	na
542	JOONDALUP	-	-	-	-	-	na
545	CONNOLLY	-	-	-	-	-	na
562	BEECHBORO	-	-	-	-	-	na
563	MALAGA	-	-	-	-	-	na
566	CULLACABARDEE	-	-	-	-	-	na
568	OSBORNE PARK	-	-	-	-	-	na
569	BAYSWATER	-	-	-	-	-	na
580	BALCATTA	-	-	-	-	-	na
596	INNALOO	-	-	-	-	-	na
605	MALAGA	-	-	-	-	-	na
657	NEERABUP	-	-	-	-	-	na
658	CARRAMAR	-	-	-	-	-	na
661	CURRAMBINE	-	-	-	-	-	na
665	JOONDALUP	-	-	-	-	-	na
666	JOONDALUP	-	-	-	-	-	na
667	JOONDALUP	-	-	-	-	-	na
672	JOONDALUP	-	-	-	-	-	na
676	HEATHRIDGE	-	-	-	-	-	na
677	OCEAN REEF	-	-	-	-	-	na
679	HEATHRIDGE	-	-	-	-	-	na
680	MARIGINIUP	-	-	-	-	-	na
684	WANNEROO	-	-	-	-	-	na
685	JANDABUP	-	-	-	-	-	na
686	GNANGARA	-	-	-	-	-	na
687	GNANGARA	-	-	-	-	-	na
705	HENLEY BROOK	-	-	-	-	-	na
718	OSBORNE PARK	-	-	-	-	-	na
Total				*1,404,637*	*1,296,985*	*1,301,400*	

YEAR: 2016 (S3 & S4)				Total PLUC 5 Floorspace (sqm)	Trade (Person Equivalents)		Percentage Change Between S3 & S4
					S3: Kingsway As is	S4: Kingsway Expand to 32,000 sqm	
MR Zone	SUBURB	Reg / Dist Centre Name	Ind Centre Name				
514	LANDSDALE	KINGSWAY CITY	-	16,095	26,906	48,886	81.7%
512	LANDSDALE	-	-	2,422	3,096	2,729	-11.9%
701	DARCH	-	-	1,387	1,707	1,512	-11.4%
531	LANDSDALE	-	-	3,065	3,915	3,489	-10.9%
702	LANDSDALE	-	-	732	904	831	-8.0%
530	LANDSDALE	-	-	2,409	2,782	2,588	-7.0%
532	WANGARA	-	WANG/ LDALE	1,047	631	596	-5.5%
534	GNANGARA	-	-	137	89	84	-5.1%
565	BALLAJURA	-	-	1,845	2,275	2,166	-4.8%
533	WANGARA	-	WANGARA	18,954	8,645	8,244	-4.6%
513	MARANGAROO	-	-	494	635	607	-4.4%
529	KINGSLEY	-	-	964	957	917	-4.1%
703	ALEXANDER HEIGHTS	-	-	490	600	575	-4.1%
528	WOODVALE	WOODVALE PARK	-	14,520	18,613	17,895	-3.9%
511	MARANGAROO	GRIFFON WAY	-	5,830	9,576	9,210	-3.8%
522	GREENWOOD	-	CANHAM WAY	2,485	1,695	1,632	-3.7%
508	GIRRAWHEEN	GIRRAWHEEN PARK	-	17,826	16,359	15,765	-3.6%
523	KINGSLEY	-	-	3,885	3,915	3,783	-3.4%
516	GREENWOOD	GREENWOOD VILLAGE	-	10,788	11,017	10,652	-3.3%
510	KOONDOOLA	-	-	2,040	3,224	3,126	-3.0%
509	GIRRAWHEEN	-	-	450	613	595	-3.0%
683	HOCKING	-	-	3,923	4,767	4,646	-2.5%
515	WARWICK	WARWICK GROVE	-	35,110	47,889	46,695	-2.5%
682	JANDABUP	-	-	231	178	174	-2.5%
604	BALLAJURA	-	-	3,450	4,896	4,775	-2.5%
675	WANNEROO	-	-	1,310	1,738	1,696	-2.4%
541	EDGEWATER	-	-	6,389	4,980	4,859	-2.4%
128	BALGA	-	-	901	1,022	998	-2.3%
129	BALGA	-	-	133	195	191	-2.2%
715	BALGA	-	-	2,870	3,364	3,290	-2.2%
130	MIRRABOOKA	-	-	1,655	2,223	2,175	-2.2%
536	WANNEROO	WANNEROO	-	30,095	43,883	43,009	-2.0%
603	BALLAJURA	-	-	5,830	5,102	5,001	-2.0%
716	BALGA	-	-	227	279	273	-2.0%
524	PADBURY	-	-	4,135	4,617	4,530	-1.9%
700	PADBURY	-	-	648	811	795	-1.9%
564	MALAGA	-	MALAGA	41,740	20,385	20,002	-1.9%
517	DUNCRAIG	-	-	10,240	13,667	13,415	-1.8%
540	WANNEROO	-	-	2,610	2,975	2,920	-1.8%
518	DUNCRAIG	-	-	2,918	3,806	3,737	-1.8%
563	MALAGA	-	-	109	112	111	-1.7%
527	CRAIGIE	-	-	2,081	2,258	2,220	-1.7%
674	EDGEWATER	-	-	3,035	1,653	1,626	-1.7%
519	DUNCRAIG	-	-	810	1,040	1,022	-1.6%
699	HILLARYS	-	-	734	800	786	-1.6%
681	SINAGRA/ WANNEROO	-	-	1,956	1,919	1,888	-1.6%
520	SORRENTO	-	-	9,316	9,021	8,885	-1.5%
705	HENLEY BROOK	-	-	450	706	695	-1.5%
660	ASHBY	-	-	1,834	2,081	2,049	-1.5%
124	CARINE	-	-	433	571	562	-1.5%
537	MARIGINIUP	-	-	713	466	459	-1.5%
122	GWELUP	-	-	135	158	156	-1.5%
704	HENLEY BROOK	-	-	250	203	200	-1.5%
525	HILLARYS	WHITFORDS CITY	-	44,100	57,394	56,549	-1.5%
93	DIANELLA	-	-	632	816	804	-1.4%
579	BALCATTA	-	BALCATTA	21,406	9,395	9,259	-1.4%
673	JOONDALUP	-	JOONDALUP MB2	12,450	4,674	4,607	-1.4%
88	WESTMINSTER	STIRLING CENTRAL	-	17,400	18,129	17,872	-1.4%
526	KALLAROO	-	-	1,000	832	821	-1.4%
521	MARMION	-	-	1,799	2,003	1,975	-1.4%
544	HEATHRIDGE	-	-	2,087	2,556	2,521	-1.4%
92	MIRRABOOKA	MIRRABOOKA SQUARE	-	39,250	50,009	49,321	-1.4%
688	BULLSBROOK	-	-	109	37	37	-1.3%
709	WHITEMAN	-	-	1,403	1,244	1,228	-1.3%
555	BELDON	-	-	9,701	12,212	12,059	-1.3%
669	JOONDALUP	-	JOONDALUP MB1	19,790	7,580	7,486	-1.2%
671	JOONDALUP	-	-	234	176	174	-1.2%

YEAR: 2016 (S3 & S4)				Total	Trade (Person Equivalents)		Percentage
				PLUC 5	S3: Kingsway	S4: Kingsway	Change
MR		Reg / Dist	Ind	Floorspace	As is	Expand to	Between
Zone	SUBURB	Centre Name	Centre Name	(sqm)		32,000 sqm	S3 & S4
81	GWELUP	-	-	5,187	5,284	5,220	-1.2%
670	JOONDALUP	JOONDALUP CITY	-	95,000	91,689	90,578	-1.2%
83	BALCATTA	NORTHLANDS	-	20,980	19,209	18,979	-1.2%
94	DIANELLA	-	-	813	940	929	-1.2%
120	KARRINYUP	-	-	214	210	208	-1.2%
125	WATERMAN	-	-	3,919	2,921	2,887	-1.2%
678	MULLALOO	-	-	2,250	2,851	2,818	-1.2%
698	ELLENBROOK	ELLENBROOK 1	-	42,000	49,166	48,604	-1.1%
668	JOONDALUP	-	-	115	86	85	-1.1%
594	OCEAN REEF	-	-	1,657	1,742	1,722	-1.1%
87	NOLLAMARA	-	-	5,087	6,201	6,133	-1.1%
82	STIRLING	-	-	153	143	141	-1.1%
78	BALCATTA	-	-	1,588	1,671	1,653	-1.1%
664	CONNOLLY	-	-	2,362	2,450	2,424	-1.1%
539	CARAMAR/ TAPPING	-	-	9,920	12,146	12,016	-1.1%
549	NEERABUP	-	-	107	89	88	-1.1%
119	NORTH BEACH	-	-	1,876	1,925	1,904	-1.1%
116	MORLEY	NORANDA SQUARE	-	13,640	18,211	18,019	-1.0%
547	MULLALOO	-	-	264	195	193	-1.0%
86	NOLLAMARA	-	-	3,613	4,459	4,417	-0.9%
114	MORLEY	-	-	570	867	859	-0.9%
543	JOONDALUP	-	-	1,762	1,728	1,712	-0.9%
95	DIANELLA	-	-	263	278	276	-0.9%
121	KARRINYUP	KARRINYUP	-	51,100	59,338	58,803	-0.9%
546	CURRAMBINE	CURRAMBINE MARKET Pl	-	10,000	12,678	12,565	-0.9%
561	BEECHBORO	-	-	4,691	5,908	5,856	-0.9%
659	BANKSIA GROVE	NEERABUP	-	15,000	18,970	18,804	-0.9%
76	STIRLING	-	-	325	368	365	-0.9%
548	OCEAN REEF	-	-	2,791	3,517	3,487	-0.9%
663	CURRAMBINE	-	-	132	146	144	-0.8%
90	DIANELLA	-	-	500	742	736	-0.8%
113	MORLEY	-	-	143	176	174	-0.8%
111	MORLEY	-	-	5,300	8,475	8,406	-0.8%
329	WEST SWAN	ALBION TOWN	-	5,000	7,996	7,932	-0.8%
97	DIANELLA	DIANELLA PLAZA	-	26,145	30,590	30,351	-0.8%
662	CURRAMBINE	-	-	142	176	175	-0.8%
781	ILUKA	-	-	158	212	210	-0.8%
112	MORLEY	-	-	114	162	161	-0.8%
717	INNALOO	INNALOO	-	69,583	58,119	57,677	-0.8%
131	MORLEY	MORLEY-GALLERIA	-	96,650	97,816	97,079	-0.8%
656	KINROSS	-	-	158	203	202	-0.7%
598	ILUKA	-	-	918	1,192	1,183	-0.7%
69	INNALOO	-	-	3,099	1,811	1,798	-0.7%
719	YOKINE	-	-	4,487	4,277	4,246	-0.7%
653	BURNS	-	-	2,476	3,429	3,404	-0.7%
85	TUART HILL	-	-	473	612	608	-0.7%
567	OSBORNE PARK	-	OSBORNE PARK	54,476	16,774	16,654	-0.7%
75	OSBORNE PARK	-	-	8,658	7,329	7,277	-0.7%
560	LOCKRIDGE	-	-	1,721	1,992	1,979	-0.7%
655	KINROSS	-	-	680	1,032	1,025	-0.7%
70	DOUBLEVIEW	-	-	805	893	887	-0.7%
89	YOKINE	-	-	745	889	884	-0.7%
98	DIANELLA	-	WALTER ROAD	1,761	1,328	1,320	-0.6%
110	MORLEY	-	-	930	1,269	1,261	-0.6%
132	EMBLETON	-	BAYSWATER	8,775	3,988	3,962	-0.6%
570	BASSENDEAN	-	BASSENDEAN	3,496	1,480	1,471	-0.6%
109	BASSENDEAN	-	-	1,850	2,293	2,279	-0.6%
105	BEDFORD	-	-	1,355	1,306	1,298	-0.6%
73	SCARBOROUGH	SCARBOROUGH	-	13,559	15,409	15,316	-0.6%
720	JOODANNA	DOG SWAMP	-	12,284	15,845	15,750	-0.6%
143	GLENDALOUGH	-	-	1,227	1,183	1,176	-0.6%
65	MT HAWTHORN	MT HAWTHORN	-	16,707	13,759	13,679	-0.6%
84	JOODANNA	-	-	207	274	272	-0.6%
63	COOLBINIA	-	-	2,027	1,309	1,301	-0.6%
67	WOODLANDS	-	-	1,607	1,680	1,670	-0.6%
133	BAYSWATER	-	-	3,595	3,282	3,263	-0.6%
71	DOUBLEVIEW	-	-	4,922	6,053	6,019	-0.6%

YEAR: 2016 (S3 & S4)				Total PLUC 5 Floorspace (sqm)	Trade (Person Equivalents)		Percentage Change Between S3 & S4
					S3: Kingsway As is	S4: Kingsway Expand to 32,000 sqm	
MR Zone	SUBURB	Reg / Dist Centre Name	Ind Centre Name				
64	NORTH PERTH	-	-	3,030	2,250	2,238	-0.5%
104	INGLEWOOD	INGLEWOOD	-	19,864	18,953	18,852	-0.5%
58	NORTH PERTH	FITZGERALD ST	-	19,335	16,079	15,995	-0.5%
103	BAYSWATER	-	-	1,494	1,321	1,315	-0.5%
68	DOUBLEVIEW	-	-	2,460	2,585	2,572	-0.5%
57	NORTH PERTH	-	-	5,596	3,323	3,306	-0.5%
11	WEST PERTH	-	-	75	32	32	-0.5%
10	LEEDERVILLE	LEEDERVILLE	-	15,531	8,357	8,315	-0.5%
56	LEEDERVILLE	-	-	3,280	2,699	2,686	-0.5%
12	WEST PERTH	-	W PERTH	8,041	2,290	2,279	-0.5%
176	NORTHBRIDGE	CITY 1	-	40,966	26,553	26,427	-0.5%
593	WEST PERTH	WEST PERTH	-	36,430	20,842	20,743	-0.5%
721	MT LAWLEY	-	-	4,900	3,209	3,194	-0.5%
102	MAYLANDS	-	-	3,611	2,523	2,511	-0.5%
60	MT LAWLEY	-	-	650	354	353	-0.5%
140	WEMBLEY	-	-	4,084	2,834	2,821	-0.5%
59	MT LAWLEY	MT LAWLEY	-	17,268	12,885	12,825	-0.5%
135	FLOREAT	-	-	2,036	1,741	1,733	-0.5%
72	SCARBOROUGH	-	-	4,872	5,355	5,330	-0.5%
142	LEEDERVILLE	-	-	220	97	97	-0.5%
13	PERTH CITY	-	-	765	333	331	-0.5%
66	WEMBLEY DOWNS	-	-	141	163	162	-0.5%
101	BAYSWATER	-	-	1,078	1,147	1,142	-0.5%
18	PERTH CITY	-	-	3,514	1,552	1,545	-0.4%
15	PERTH CITY	HIGHGATE	-	20,569	12,274	12,220	-0.4%
141	LEEDERVILLE	-	-	12,527	6,231	6,204	-0.4%
136	FLOREAT	FLOREAT FORUM	-	11,430	16,196	16,127	-0.4%
55	WEMBLEY DOWNS	-	-	1,310	1,625	1,619	-0.4%
24	SUBIACO	SUBIACO	-	80,600	59,361	59,124	-0.4%
100	MAYLANDS	MAYLANDS	MAYLANDS	13,375	13,763	13,708	-0.4%
25	JOLIMONT	-	CARDIGAN TERRACE	14,426	4,647	4,629	-0.4%
139	WEMBLEY	-	-	2,216	1,643	1,636	-0.4%
138	WEMBLEY	-	-	6,474	4,658	4,640	-0.4%
26	DAGLISH	-	-	447	208	208	-0.4%
137	FLOREAT	-	-	166	127	127	-0.3%
27	SUBIACO	-	-	3,239	1,638	1,633	-0.3%
1	WEST PERTH	-	-	-	-	-	0.0%
2	WEST PERTH	-	-	-	-	-	0.0%
3	WEST PERTH	-	-	-	-	-	0.0%
4	WEST PERTH	-	-	-	-	-	0.0%
5	WEST PERTH	-	-	-	-	-	0.0%
6	WEST PERTH	-	-	-	-	-	0.0%
7	WEST PERTH	-	-	-	-	-	0.0%
8	WEST PERTH	-	-	-	-	-	0.0%
9	WEST PERTH	-	-	-	-	-	0.0%
14	PERTH CITY	-	-	-	-	-	0.0%
16	PERTH CITY	-	-	-	-	-	0.0%
17	PERTH CITY	-	-	-	-	-	0.0%
19	MT LAWLEY	-	-	-	-	-	0.0%
21	MT LAWLEY	-	-	-	-	-	0.0%
28	SUBIACO	-	-	-	-	-	0.0%
54	CITY BEACH	-	-	-	-	-	0.0%
61	MT LAWLEY	-	-	-	-	-	0.0%
62	MT LAWLEY	-	-	-	-	-	0.0%
74	HERDSMAN LAKE	-	-	-	-	-	0.0%
77	OSBORNE PARK	-	-	-	-	-	0.0%
79	STIRLING	-	-	-	-	-	0.0%
80	INNALOO	-	-	-	-	-	0.0%
91	DIANELLA	-	-	-	-	-	0.0%
96	DIANELLA	-	-	-	-	-	0.0%
115	NORANDA	-	-	-	-	-	0.0%
117	NORANDA	-	-	-	-	-	0.0%
118	KARRINYUP	-	-	-	-	-	0.0%
123	CARINE	-	-	-	-	-	0.0%
126	HAMERSLEY	-	-	-	-	-	0.0%
127	HAMERSLEY	-	-	-	-	-	0.0%
161	PERTH CITY	-	-	-	-	-	0.0%

YEAR: 2016 (S3 & S4)				Total	Trade (Person Equivalents)		Percentage
				PLUC 5	S3: Kingsway	S4: Kingsway	Change
MR		Reg / Dist	Ind	Floorspace	As is	Expand to	Between
Zone	SUBURB	Centre Name	Centre Name	(sqm)		32,000 sqm	S3 & S4
162	PERTH CITY	-	-	-	-	-	0.0%
174	WEST PERTH	-	-	-	-	-	0.0%
175	NORTHBRIDGE	-	-	-	-	-	0.0%
177	NORTHBRIDGE	-	-	-	-	-	0.0%
178	PERTH CITY	-	-	-	-	-	0.0%
181	WEST PERTH	-	-	-	-	-	0.0%
182	PERTH CITY	-	-	-	-	-	0.0%
183	PERTH CITY	-	-	-	-	-	0.0%
184	WEST PERTH	-	-	-	-	-	0.0%
185	PERTH CITY	-	-	-	-	-	0.0%
186	WEST PERTH	-	-	-	-	-	0.0%
330	WHITEMAN	-	-	-	-	-	0.0%
331	BULLSBROOK	-	-	-	-	-	0.0%
535	WANNEROO	-	-	-	-	-	0.0%
542	JOONDALUP	-	-	-	-	-	0.0%
545	CONNOLLY	-	-	-	-	-	0.0%
562	BEECHBORO	-	-	-	-	-	0.0%
566	CULLACABARDEE	-	-	-	-	-	0.0%
568	OSBORNE PARK	-	-	-	-	-	0.0%
569	BAYSWATER	-	-	-	-	-	0.0%
580	BALCATTA	-	-	-	-	-	0.0%
596	INNALOO	-	-	-	-	-	0.0%
605	MALAGA	-	-	-	-	-	0.0%
657	NEERABUP	-	-	-	-	-	0.0%
658	CARRAMAR	-	-	-	-	-	0.0%
661	CURRAMBINE	-	-	-	-	-	0.0%
665	JOONDALUP	-	-	-	-	-	0.0%
666	JOONDALUP	-	-	-	-	-	0.0%
667	JOONDALUP	-	-	-	-	-	0.0%
672	JOONDALUP	-	-	-	-	-	0.0%
676	HEATHRIDGE	-	-	-	-	-	0.0%
677	OCEAN REEF	-	-	-	-	-	0.0%
679	HEATHRIDGE	-	-	-	-	-	0.0%
680	MARIGINIUP	-	-	-	-	-	0.0%
684	WANNEROO	-	-	-	-	-	0.0%
685	JANDABUP	-	-	-	-	-	0.0%
686	GNANGARA	-	-	-	-	-	0.0%
687	GNANGARA	-	-	-	-	-	0.0%
718	OSBORNE PARK	-	-	-	-	-	0.0%
Total				*1,475,626*	*1,373,566*	*1,378,086*	

YEAR: 2011 (S1 & S2) and 2016 (S4)				Total	Trade (Person Equivalents)		Percentage	Trade (Person Equivalents)	
				PLUC 5	S1: Kingsway	S2: Kingsway	Change	S4 (2016): Kingsway	Change
MR		Reg / Dist	Ind	Floorspace	As is	Expand to	Between	Expand to	Between
Zone	SUBURB	Centre Name	Centre Name	(sqm)		32,000 sqm	S1 & S2	32,000 sqm	S2 & S4
514	LANDSDALE	KINGSWAY CITY	-	16,095	24,991	46,216	84.9%	48,886	5.8%
512	LANDSDALE	-	-	1,809	2,161	1,912	-11.5%	2,729	42.7%
701	DARCH	-	-	988	1,130	1,010	-10.6%	1,512	49.7%
531	LANDSDALE	-	-	3,065	3,711	3,319	-10.6%	3,489	5.1%
702	LANDSDALE	-	-	547	661	608	-7.9%	831	36.6%
530	LANDSDALE	-	-	1,672	1,767	1,645	-6.9%	2,588	57.3%
532	WANGARA	-	WANG/ LDALE	1,047	608	576	-5.3%	596	3.5%
534	GNANGARA	-	-	137	87	83	-5.1%	84	1.8%
565	BALLAJURA	-	-	1,845	2,408	2,293	-4.8%	2,166	-5.5%
533	WANGARA	-	WANGARA	18,954	8,396	8,021	-4.5%	8,244	2.8%
513	MARANGAROO	-	-	494	682	652	-4.5%	607	-6.9%
529	KINGSLEY	-	-	964	980	940	-4.2%	917	-2.4%
703	ALEXANDER HEIGHTS	-	-	490	644	618	-4.1%	575	-6.9%
528	WOODVALE	WOODVALE PARK	-	14,520	19,104	18,363	-3.9%	17,895	-2.5%
511	MARANGAROO	GRIFFON WAY	-	5,830	10,319	9,919	-3.9%	9,210	-7.2%
522	GREENWOOD	-	CANHAM WAY	2,485	1,775	1,709	-3.7%	1,632	-4.5%
508	GIRRAWHEEN	GIRRAWHEEN PARK	-	17,826	17,504	16,852	-3.7%	15,765	-6.5%
523	KINGSLEY	-	-	3,885	4,037	3,899	-3.4%	3,783	-3.0%
516	GREENWOOD	GREENWOOD VILLAGE	-	9,328	10,289	9,941	-3.4%	10,652	7.2%
510	KOONDOOLA	-	-	2,040	3,396	3,289	-3.2%	3,126	-5.0%
509	GIRRAWHEEN	-	-	450	653	633	-3.1%	595	-6.0%
683	HOCKING	-	-	2,792	3,345	3,251	-2.8%	4,646	42.9%
675	WANNEROO	-	-	1,310	1,775	1,727	-2.7%	1,696	-1.8%
682	JANDABUP	-	-	231	179	174	-2.7%	174	-0.1%
515	WARWICK	WARWICK GROVE	-	27,610	40,156	39,114	-2.6%	46,695	19.4%
604	BALLAJURA	-	-	3,450	5,094	4,965	-2.5%	4,775	-3.8%
541	EDGEWATER	-	-	6,389	5,080	4,954	-2.5%	4,859	-1.9%
128	BALGA	-	-	901	1,042	1,017	-2.4%	998	-1.8%
715	BALGA	-	-	2,870	3,386	3,309	-2.3%	3,290	-0.6%
130	MIRRABOOKA	-	-	1,273	1,657	1,621	-2.2%	2,175	34.2%
536	WANNEROO	WANNEROO	-	23,095	33,670	32,933	-2.2%	43,009	30.6%
716	BALGA	-	-	227	282	277	-2.0%	273	-1.1%
540	WANNEROO	-	-	1,807	1,969	1,930	-2.0%	2,920	51.3%
603	BALLAJURA	-	-	5,830	5,357	5,249	-2.0%	5,001	-4.7%
524	PADBURY	-	-	4,135	4,734	4,642	-1.9%	4,530	-2.4%
564	MALAGA	-	MALAGA	41,740	20,514	20,119	-1.9%	20,002	-0.6%
700	PADBURY	-	-	648	833	817	-1.9%	795	-2.7%
517	DUNCRAIG	-	-	10,240	13,992	13,727	-1.9%	13,415	-2.3%
518	DUNCRAIG	-	-	2,918	3,908	3,836	-1.8%	3,737	-2.6%
681	SINAGRA/ WANNEROO	-	-	1,414	1,431	1,405	-1.8%	1,888	34.4%
660	ASHBY	-	-	1,608	1,901	1,868	-1.7%	2,049	9.7%
527	CRAIGIE	-	-	2,081	2,343	2,302	-1.7%	2,220	-3.6%
537	MARIGINIUP	-	-	443	288	283	-1.7%	459	62.3%
519	DUNCRAIG	-	-	810	1,064	1,046	-1.7%	1,022	-2.3%
674	EDGEWATER	-	-	3,035	1,672	1,644	-1.7%	1,626	-1.1%
699	HILLARYS	-	-	603	668	657	-1.7%	786	19.7%
704	HENLEY BROOK	-	-	186	127	125	-1.6%	200	60.3%
124	CARINE	-	-	433	578	569	-1.5%	562	-1.2%
122	GWELUP	-	-	135	158	155	-1.5%	156	0.3%
520	SORRENTO	-	-	9,316	9,229	9,087	-1.5%	8,885	-2.2%
579	BALCATTA	-	BALCATTA	21,406	9,458	9,316	-1.5%	9,259	-0.6%
93	DIANELLA	-	-	632	814	802	-1.5%	804	0.3%
525	HILLARYS	WHITFORDS CITY	-	44,100	58,590	57,717	-1.5%	56,549	-2.0%
688	BULLSBROOK	-	-	109	37	37	-1.5%	37	-0.6%
88	WESTMINSTER	STIRLING CENTRAL	-	17,400	18,181	17,914	-1.5%	17,872	-0.2%
673	JOONDALUP	-	JOONDALUP MB2	12,450	4,744	4,675	-1.5%	4,607	-1.5%
521	MARMION	-	-	1,799	2,047	2,018	-1.4%	1,975	-2.1%
92	MIRRABOOKA	MIRRABOOKA SQUARE	-	39,250	49,921	49,207	-1.4%	49,321	0.2%
544	HEATHRIDGE	-	-	2,087	2,689	2,651	-1.4%	2,521	-4.9%
526	KALLAROO	-	-	1,000	854	842	-1.4%	821	-2.5%
709	WHITEMAN	-	-	850	712	702	-1.4%	1,228	74.9%
555	BELDON	-	-	9,701	12,777	12,611	-1.3%	12,059	-4.4%
539	CARAMAR/ TAPPING	-	-	5,770	8,144	8,040	-1.3%	12,016	49.5%
669	JOONDALUP	-	JOONDALUP MB1	19,790	7,771	7,672	-1.3%	7,486	-2.4%
671	JOONDALUP	-	-	234	190	188	-1.3%	174	-7.4%
81	GWELUP	-	-	5,051	5,102	5,038	-1.3%	5,220	3.6%
670	JOONDALUP	JOONDALUP CITY	-	90,000	88,372	87,267	-1.2%	90,578	3.8%
83	BALCATTA	NORTHLANDS	-	20,980	19,074	18,836	-1.2%	18,979	0.8%
94	DIANELLA	-	-	680	780	770	-1.2%	929	20.6%
120	KARRINYUP	-	-	108	106	105	-1.2%	208	98.2%
125	WATERMAN	-	-	3,919	2,948	2,912	-1.2%	2,887	-0.9%
698	ELLENBROOK	ELLENBROOK 1	-	37,000	41,311	40,816	-1.2%	48,604	19.1%
678	MULLALOO	-	-	2,250	2,972	2,936	-1.2%	2,818	-4.0%
668	JOONDALUP	-	-	115	93	92	-1.2%	85	-8.0%
549	NEERABUP	-	-	107	97	95	-1.2%	88	-7.3%
594	OCEAN REEF	-	-	1,657	1,842	1,821	-1.2%	1,722	-5.4%
659	BANKSIA GROVE	NEERABUP	-	5,000	6,880	6,801	-1.1%	18,804	176.5%
87	NOLLAMARA	-	-	4,972	6,037	5,968	-1.1%	6,133	2.8%
664	CONNOLLY	-	-	2,362	2,656	2,626	-1.1%	2,424	-7.7%
78	BALCATTA	-	-	1,485	1,549	1,532	-1.1%	1,653	7.9%
119	NORTH BEACH	-	-	1,687	1,741	1,721	-1.1%	1,904	10.6%
116	MORLEY	NORANDA SQUARE	-	13,640	18,205	18,008	-1.1%	18,019	0.1%

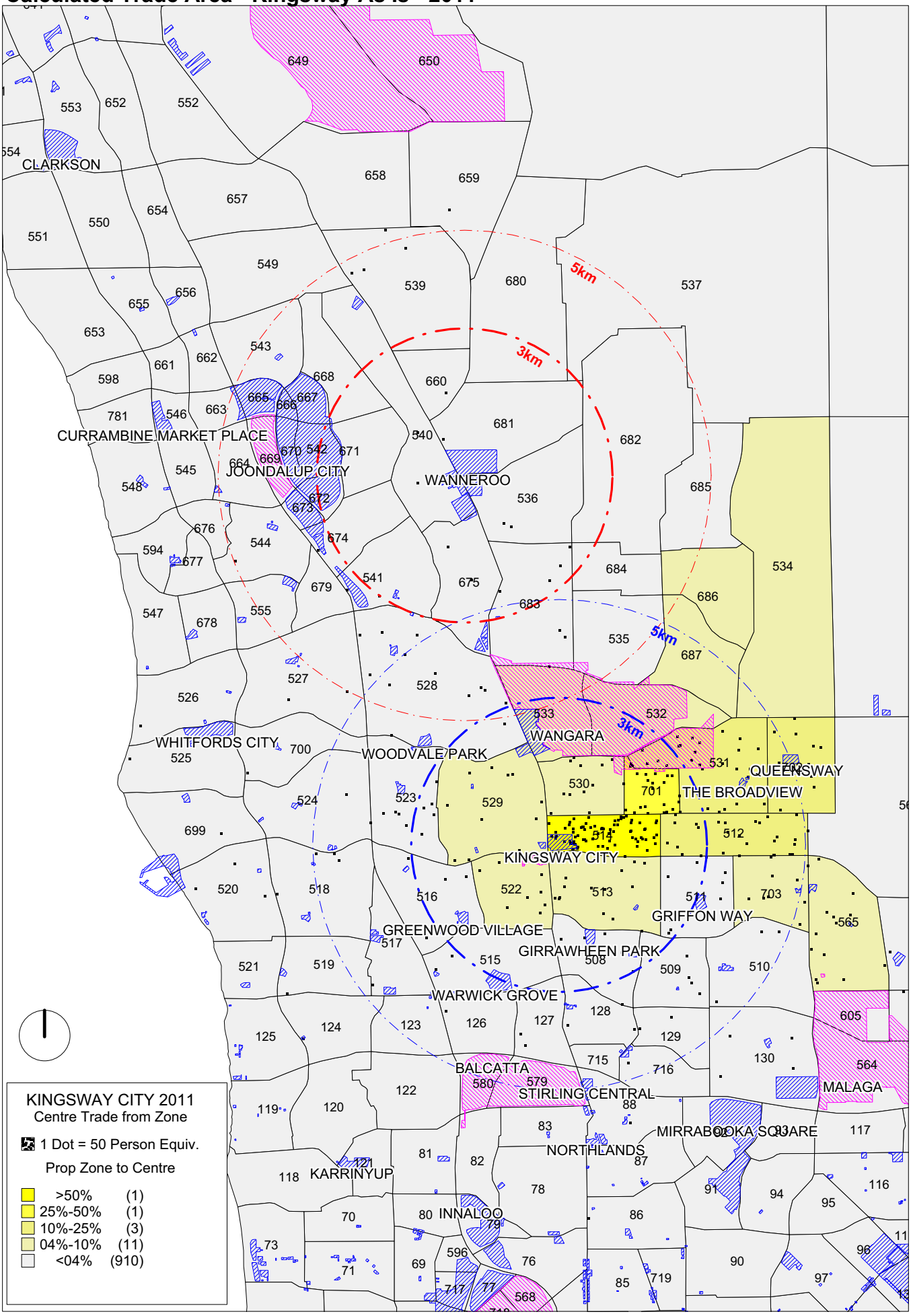
YEAR: 2011 (S1 & S2) and 2016 (S4)				Total	Trade (Person Equivalents)		Percentage	Trade (Person Equivalents)	
				PLUC 5	S1: Kingsway	S2: Kingsway	Change	S4 (2016): Kingsway	Change
MR		Reg / Dist	Ind	Floorspace	As is	Expand to	Between	Expand to	Between
Zone	SUBURB	Centre Name	Centre Name	(sqm)		32,000 sqm	S1 & S2	32,000 sqm	S2 & S4
547	MULLALOO	-	-	264	198	196	-1.0%	193	-1.9%
543	JOONDALUP	-	-	1,762	1,905	1,886	-1.0%	1,712	-9.2%
86	NOLLAMARA	-	-	3,378	4,132	4,091	-1.0%	4,417	8.0%
114	MORLEY	-	-	570	871	863	-1.0%	859	-0.5%
546	CURRAMBINE	CURRAMBINE MARKET PL	-	6,600	9,556	9,466	-0.9%	12,565	32.7%
121	KARRINYUP	KARRINYUP	-	51,100	59,400	58,846	-0.9%	58,803	-0.1%
561	BEECHBORO	-	-	4,691	5,844	5,790	-0.9%	5,856	1.1%
548	OCEAN REEF	-	-	2,791	3,763	3,728	-0.9%	3,487	-6.5%
76	STIRLING	-	-	156	175	173	-0.9%	365	110.7%
663	CURRAMBINE	-	-	132	161	160	-0.9%	144	-9.5%
90	DIANELLA	-	-	363	549	545	-0.9%	736	35.1%
111	MORLEY	-	-	5,300	8,472	8,401	-0.8%	8,406	0.1%
662	CURRAMBINE	-	-	142	195	193	-0.8%	175	-9.6%
781	ILUKA	-	-	158	224	222	-0.8%	210	-5.3%
656	KINROSS	-	-	158	225	223	-0.8%	202	-9.5%
598	ILUKA	-	-	918	1,253	1,243	-0.8%	1,183	-4.8%
97	DIANELLA	DIANELLA PLAZA	-	26,145	30,131	29,887	-0.8%	30,351	1.6%
653	BURNS	-	-	1,605	2,179	2,161	-0.8%	3,404	57.5%
112	MORLEY	-	-	114	162	160	-0.8%	161	0.4%
717	INNALOO	INNALOO	-	57,892	49,563	49,173	-0.8%	57,677	17.3%
131	MORLEY	MORLEY-GALLERIA	-	96,650	96,787	96,037	-0.8%	97,079	1.1%
69	INNALOO	-	-	3,099	1,818	1,804	-0.8%	1,798	-0.3%
719	YOKINE	-	-	4,487	4,294	4,262	-0.8%	4,246	-0.4%
655	KINROSS	-	-	680	1,078	1,070	-0.8%	1,025	-4.3%
567	OSBORNE PARK	-	OSBORNE PARK	54,476	16,771	16,646	-0.7%	16,654	0.0%
85	TUART HILL	-	-	473	615	610	-0.7%	608	-0.4%
75	OSBORNE PARK	-	-	8,526	7,143	7,090	-0.7%	7,277	2.6%
560	LOCKRIDGE	-	-	1,721	1,978	1,964	-0.7%	1,979	0.7%
70	DOUBLEVIEW	-	-	694	771	766	-0.7%	887	15.8%
89	YOKINE	-	-	580	689	685	-0.7%	884	29.0%
98	DIANELLA	-	WALTER ROAD	1,761	1,305	1,296	-0.7%	1,320	1.8%
110	MORLEY	-	-	816	1,105	1,098	-0.7%	1,261	14.9%
132	EMBLETON	-	BAYSWATER	8,775	3,947	3,922	-0.6%	3,962	1.0%
570	BASSENDEAN	-	BASSENDEAN	3,496	1,461	1,452	-0.6%	1,471	1.3%
109	BASSENDEAN	-	-	1,850	2,288	2,274	-0.6%	2,279	0.2%
73	SCARBOROUGH	SCARBOROUGH	-	13,559	15,326	15,229	-0.6%	15,316	0.6%
105	BEDFORD	-	-	1,355	1,289	1,281	-0.6%	1,298	1.3%
720	JOODANNA	DOG SWAMP	-	12,284	15,802	15,705	-0.6%	15,750	0.3%
143	GLENDALOUGH	-	-	1,227	1,183	1,176	-0.6%	1,176	0.0%
65	MT HAWTHORN	MT HAWTHORN	-	16,707	13,740	13,657	-0.6%	13,679	0.2%
84	JOODANNA	-	-	207	273	272	-0.6%	272	0.3%
67	WOODLANDS	-	-	1,607	1,687	1,677	-0.6%	1,670	-0.4%
71	DOUBLEVIEW	-	-	4,922	6,042	6,006	-0.6%	6,019	0.2%
63	COOLBINIA	-	-	2,027	1,299	1,292	-0.6%	1,301	0.7%
133	BAYSWATER	-	-	3,595	3,259	3,240	-0.6%	3,263	0.7%
64	NORTH PERTH	-	-	3,030	2,239	2,226	-0.6%	2,238	0.5%
104	INGLEWOOD	INGLEWOOD	-	19,864	18,744	18,641	-0.6%	18,852	1.1%
58	NORTH PERTH	FITZGERALD ST	-	19,335	15,983	15,898	-0.5%	15,995	0.6%
103	BAYSWATER	-	-	1,494	1,310	1,304	-0.5%	1,315	0.9%
68	DOUBLEVIEW	-	-	2,352	2,471	2,458	-0.5%	2,572	4.6%
11	WEST PERTH	-	-	75	31	31	-0.5%	32	0.7%
57	NORTH PERTH	-	-	5,596	3,304	3,287	-0.5%	3,306	0.6%
10	LEEDERVILLE	LEEDERVILLE	-	15,531	8,322	8,279	-0.5%	8,315	0.4%
56	LEEDERVILLE	-	-	3,280	2,698	2,684	-0.5%	2,686	0.1%
176	NORTHBRIDGE	CITY 1	-	40,966	26,350	26,219	-0.5%	26,427	0.8%
593	WEST PERTH	WEST PERTH	-	36,430	20,698	20,596	-0.5%	20,743	0.7%
12	WEST PERTH	-	W PERTH	8,041	2,272	2,261	-0.5%	2,279	0.8%
721	MT LAWLEY	-	-	4,793	3,052	3,037	-0.5%	3,194	5.2%
102	MAYLANDS	-	-	3,497	2,352	2,340	-0.5%	2,511	7.3%
140	WEMBLEY	-	-	4,084	2,845	2,831	-0.5%	2,821	-0.4%
142	LEEDERVILLE	-	-	220	97	97	-0.5%	97	0.4%
59	MT LAWLEY	MT LAWLEY	-	17,268	12,772	12,711	-0.5%	12,825	0.9%
60	MT LAWLEY	-	-	650	349	348	-0.5%	353	1.4%
72	SCARBOROUGH	-	-	4,688	5,121	5,097	-0.5%	5,330	4.6%
135	FLOREAT	-	-	2,036	1,743	1,735	-0.5%	1,733	-0.1%
13	PERTH CITY	-	-	765	330	329	-0.5%	331	0.8%
66	WEMBLEY DOWNS	-	-	141	163	163	-0.5%	162	-0.4%
101	BAYSWATER	-	-	912	945	940	-0.5%	1,142	21.4%
141	LEEDERVILLE	-	-	12,527	6,222	6,194	-0.5%	6,204	0.2%
15	PERTH CITY	HIGHGATE	-	20,569	12,172	12,117	-0.5%	12,220	0.8%
18	PERTH CITY	-	-	3,514	1,535	1,528	-0.4%	1,545	1.1%
136	FLOREAT	FLOREAT FORUM	-	11,430	16,194	16,123	-0.4%	16,127	0.0%
55	WEMBLEY DOWNS	-	-	1,203	1,496	1,490	-0.4%	1,619	8.7%
24	SUBIACO	SUBIACO	-	80,600	59,233	58,987	-0.4%	59,124	0.2%
100	MAYLANDS	MAYLANDS	MAYLANDS	13,375	13,676	13,619	-0.4%	13,708	0.7%
25	JOLIMONT	-	CARDIGAN TERRACE	14,426	4,641	4,623	-0.4%	4,629	0.1%
139	WEMBLEY	-	-	2,216	1,651	1,644	-0.4%	1,636	-0.5%
138	WEMBLEY	-	-	6,474	4,666	4,648	-0.4%	4,640	-0.2%
26	DAGLISH	-	-	447	208	207	-0.4%	208	0.2%
137	FLOREAT	-	-	166	127	126	-0.3%	127	0.3%
27	SUBIACO	-	-	3,239	1,634	1,629	-0.3%	1,633	0.2%
1	WEST PERTH	-	-	-	-	-	na	-	na

YEAR: 2011 (S1 & S2) and 2016 (S4)				Total	Trade (Person Equivalents)		Percentage	Trade (Person Equivalents)	
				PLUC 5	S1: Kingsway	S2: Kingsway	Change	S4 (2016): Kingsway	Change
MR		Reg / Dist	Ind	Floorspace	As is	Expand to	Between	Expand to	Between
Zone	SUBURB	Centre Name	Centre Name	(sqm)		32,000 sqm	S1 & S2	32,000 sqm	S2 & S4
2	WEST PERTH	-	-	-	-	-	na	-	na
3	WEST PERTH	-	-	-	-	-	na	-	na
4	WEST PERTH	-	-	-	-	-	na	-	na
5	WEST PERTH	-	-	-	-	-	na	-	na
6	WEST PERTH	-	-	-	-	-	na	-	na
7	WEST PERTH	-	-	-	-	-	na	-	na
8	WEST PERTH	-	-	-	-	-	na	-	na
9	WEST PERTH	-	-	-	-	-	na	-	na
14	PERTH CITY	-	-	-	-	-	na	-	na
16	PERTH CITY	-	-	-	-	-	na	-	na
17	PERTH CITY	-	-	-	-	-	na	-	na
19	MT LAWLEY	-	-	-	-	-	na	-	na
21	MT LAWLEY	-	-	-	-	-	na	-	na
28	SUBIACO	-	-	-	-	-	na	-	na
54	CITY BEACH	-	-	-	-	-	na	-	na
61	MT LAWLEY	-	-	-	-	-	na	-	na
62	MT LAWLEY	-	-	-	-	-	na	-	na
74	HERDSMAN LAKE	-	-	-	-	-	na	-	na
77	OSBORNE PARK	-	-	-	-	-	na	-	na
79	STIRLING	-	-	-	-	-	na	-	na
80	INNALOO	-	-	-	-	-	na	-	na
82	STIRLING	-	-	-	-	-	na	141	na
91	DIANELLA	-	-	-	-	-	na	-	na
95	DIANELLA	-	-	-	-	-	na	276	na
96	DIANELLA	-	-	-	-	-	na	-	na
113	MORLEY	-	-	-	-	-	na	174	na
115	NORANDA	-	-	-	-	-	na	-	na
117	NORANDA	-	-	-	-	-	na	-	na
118	KARRINYUP	-	-	-	-	-	na	-	na
123	CARINE	-	-	-	-	-	na	-	na
126	HAMERSLEY	-	-	-	-	-	na	-	na
127	HAMERSLEY	-	-	-	-	-	na	-	na
129	BALGA	-	-	-	-	-	na	191	na
161	PERTH CITY	-	-	-	-	-	na	-	na
162	PERTH CITY	-	-	-	-	-	na	-	na
174	WEST PERTH	-	-	-	-	-	na	-	na
175	NORTHBRIDGE	-	-	-	-	-	na	-	na
177	NORTHBRIDGE	-	-	-	-	-	na	-	na
178	PERTH CITY	-	-	-	-	-	na	-	na
181	WEST PERTH	-	-	-	-	-	na	-	na
182	PERTH CITY	-	-	-	-	-	na	-	na
183	PERTH CITY	-	-	-	-	-	na	-	na
184	WEST PERTH	-	-	-	-	-	na	-	na
185	PERTH CITY	-	-	-	-	-	na	-	na
186	WEST PERTH	-	-	-	-	-	na	-	na
329	WEST SWAN	ALBION TOWN		-	-	-	na	7,932	na
330	WHITEMAN	-	-	-	-	-	na	-	na
331	BULLSBROOK	-	-	-	-	-	na	-	na
535	WANNEROO	-	-	-	-	-	na	-	na
542	JOONDALUP	-	-	-	-	-	na	-	na
545	CONNOLLY	-	-	-	-	-	na	-	na
562	BEECHBORO	-	-	-	-	-	na	-	na
563	MALAGA	-	-	-	-	-	na	111	na
566	CULLACABARDEE	-	-	-	-	-	na	-	na
568	OSBORNE PARK	-	-	-	-	-	na	-	na
569	BAYSWATER	-	-	-	-	-	na	-	na
580	BALCATTA	-	-	-	-	-	na	-	na
596	INNALOO	-	-	-	-	-	na	-	na
605	MALAGA	-	-	-	-	-	na	-	na
657	NEERABUP	-	-	-	-	-	na	-	na
658	CARRAMAR	-	-	-	-	-	na	-	na
661	CURRAMBINE	-	-	-	-	-	na	-	na
665	JOONDALUP	-	-	-	-	-	na	-	na
666	JOONDALUP	-	-	-	-	-	na	-	na
667	JOONDALUP	-	-	-	-	-	na	-	na
672	JOONDALUP	-	-	-	-	-	na	-	na
676	HEATHRIDGE	-	-	-	-	-	na	-	na
677	OCEAN REEF	-	-	-	-	-	na	-	na
679	HEATHRIDGE	-	-	-	-	-	na	-	na
680	MARIGINIUP	-	-	-	-	-	na	-	na
684	WANNEROO	-	-	-	-	-	na	-	na
685	JANDABUP	-	-	-	-	-	na	-	na
686	GNANGARA	-	-	-	-	-	na	-	na
687	GNANGARA	-	-	-	-	-	na	-	na
705	HENLEY BROOK	-	-	-	-	-	na	695	na
718	OSBORNE PARK	-	-	-	-	-	na	-	na
Total				*1,404,637*	*1,296,985*	*1,301,400*		*1,378,086*	

APPENDIX C
Thematic Maps

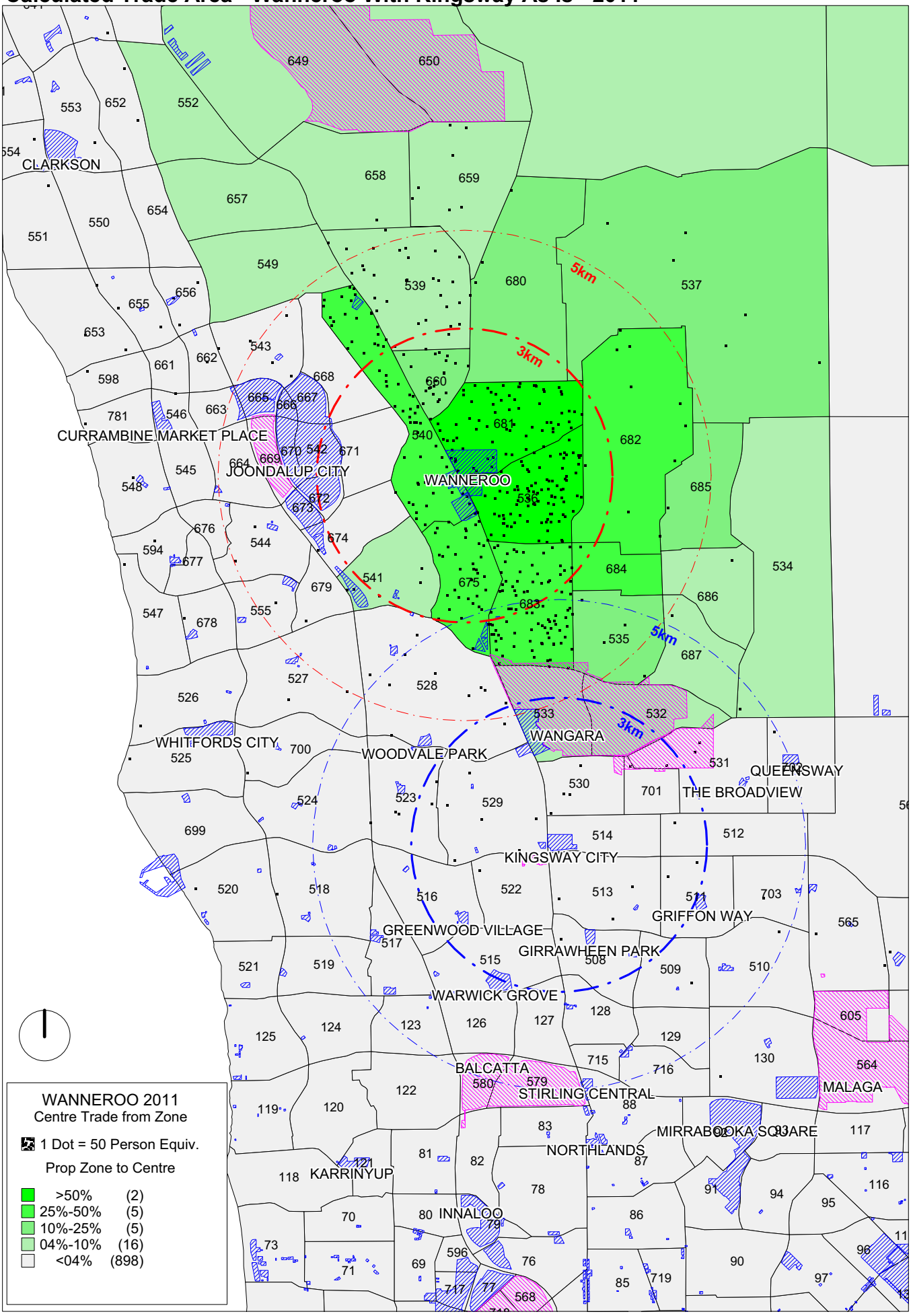
S1

Calculated Trade Area - Kingsway As Is - 2011



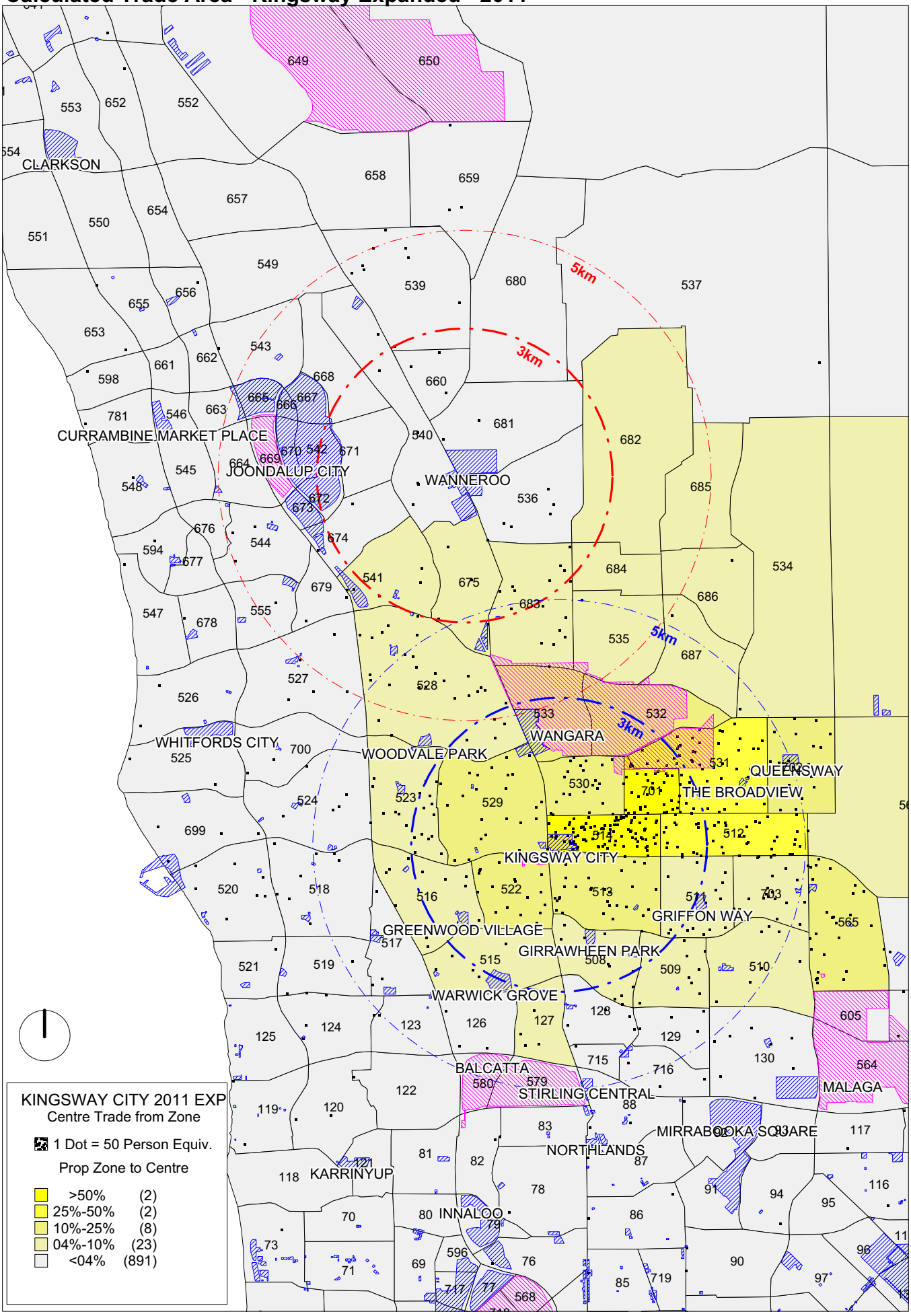
S1

Calculated Trade Area - Wanneroo With Kingsway As Is - 2011



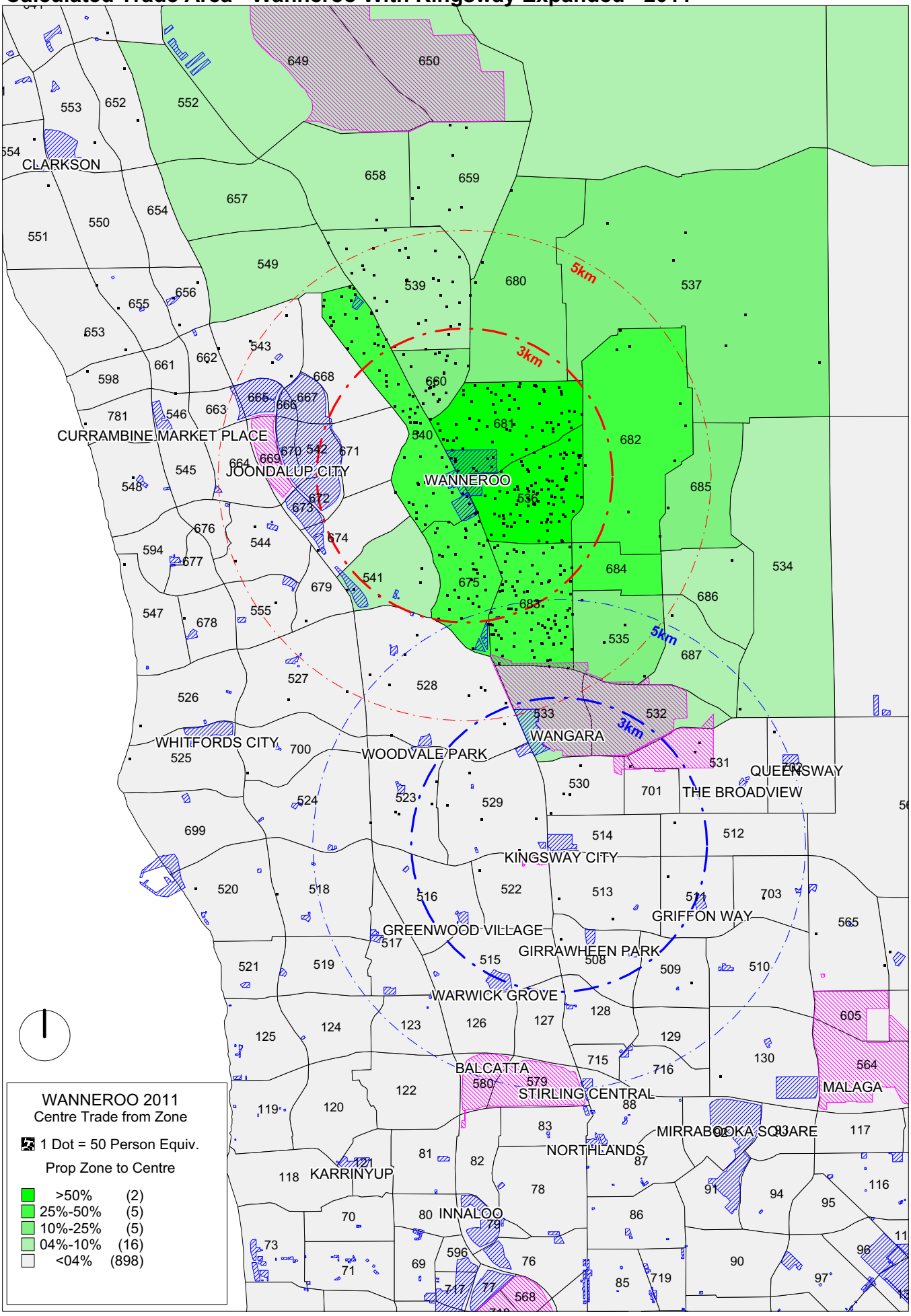
S2

Calculated Trade Area - Kingsway Expanded - 2011



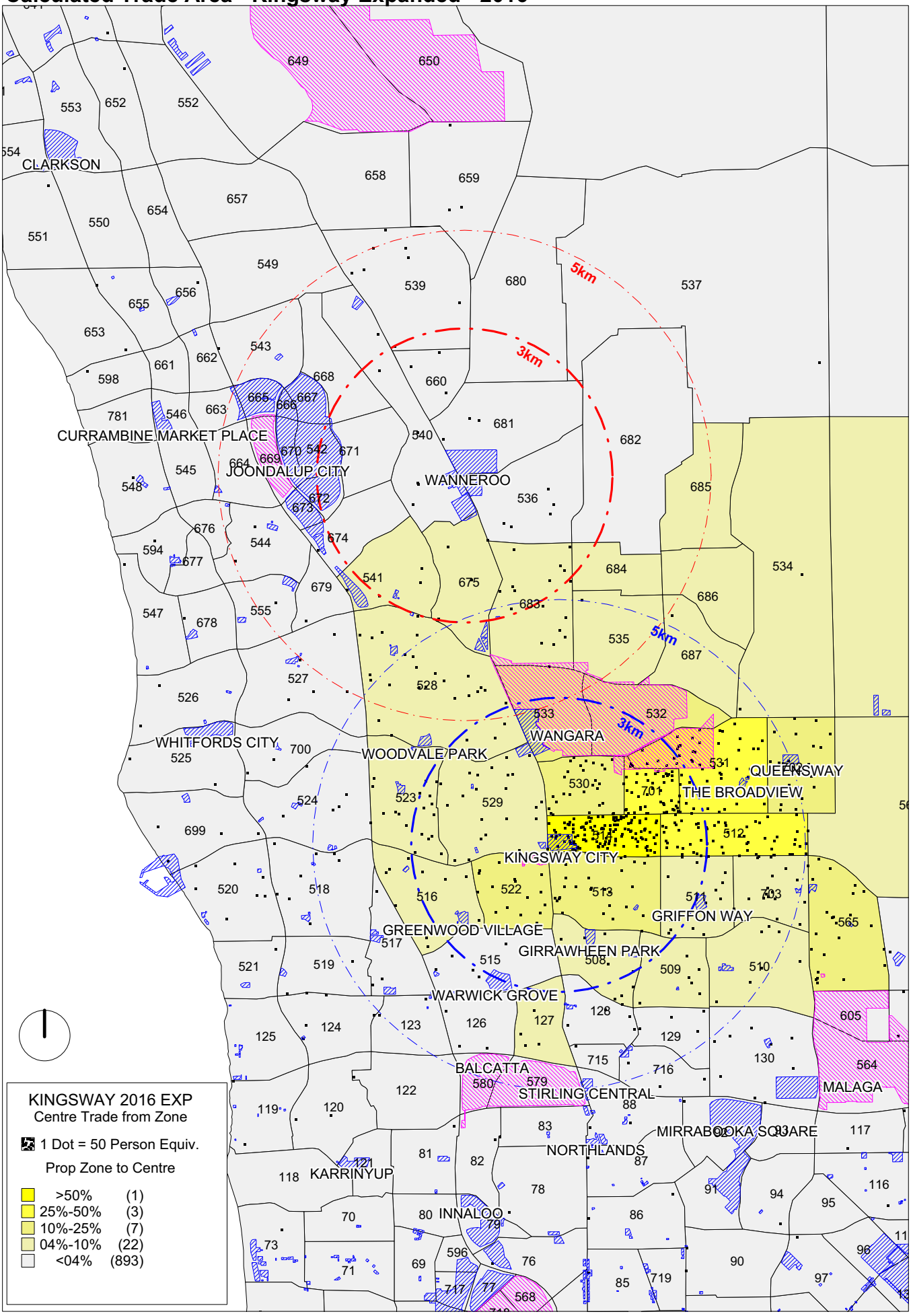
S2

Calculated Trade Area - Wanneroo With Kingsway Expanded - 2011



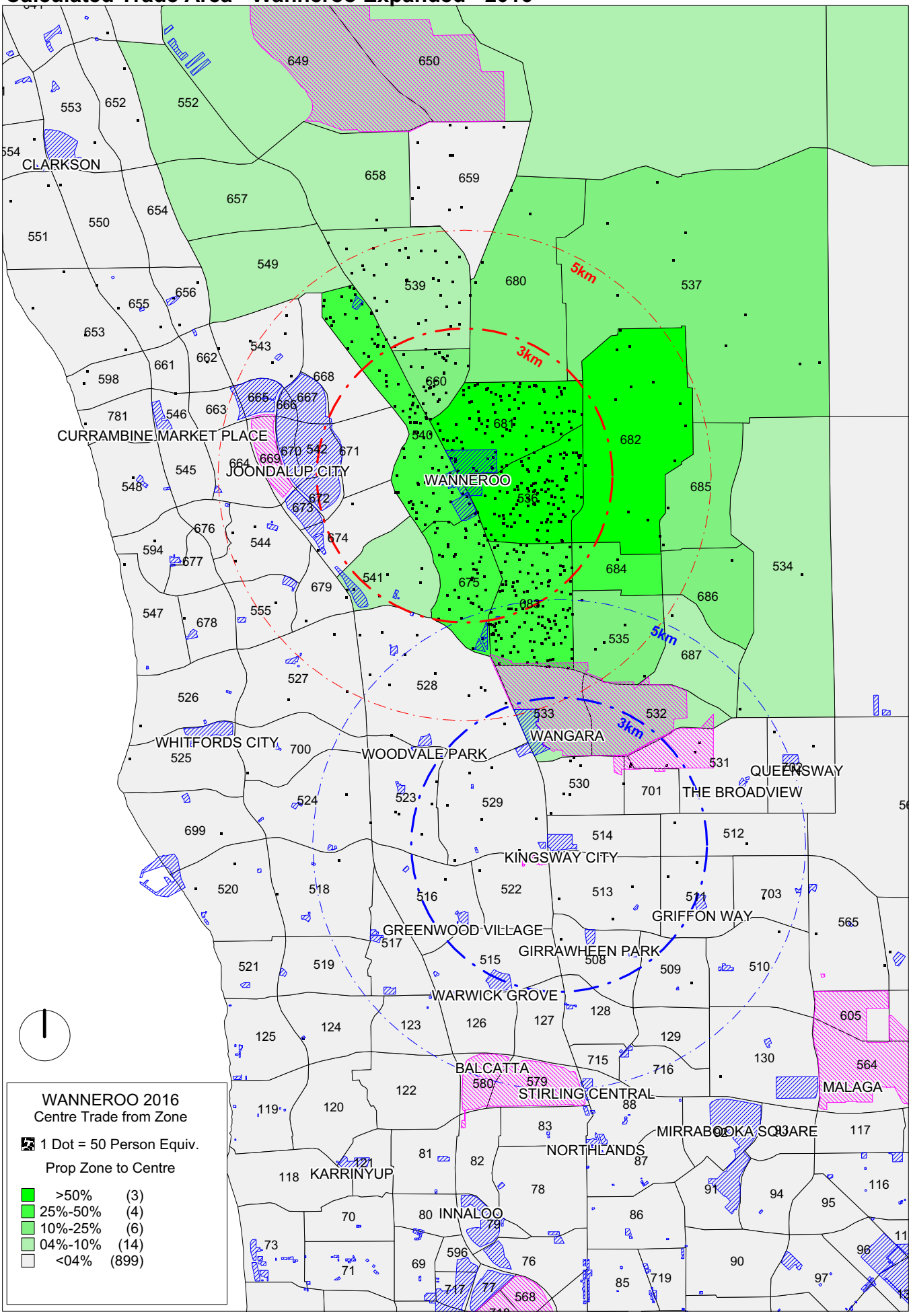
S3

Calculated Trade Area - Kingsway Expanded - 2016



S3

Calculated Trade Area - Wanneroo Expanded - 2016



KINGSWAY CITY ACTIVITY CENTRE STRUCTURE PLAN

APPENDIX C

Correspondence from Coles Myer Ltd.

Coles Myer Ltd.

ABN 11 004 089 936

Telephone: (08) 9350 4255
Facsimile: (08) 9350 4226
E-mail: ross.cameron@colesmyer.com.au

6 July 2006

Mr Raymond Tan
Tah Land Pty Ltd
168 Kewdale Road
KEWDALE WA

Dear Raymond,

Re: Kingsway Centre Structure Plan

Coles Myer have for some considerable time earmarked your centre as the major centre in the district and are very anxious to have their brands of Coles Supermarkets and Target Discount Store represented in the complex as soon as planning approval is granted.

I believe we have almost finalised our commercial negotiations with you for the two brands representation in the expanded centre subject to legal documentation and planning approvals.

For your information Coles Supermarkets will not be renewing their lease at the Newpark Centre in Girrawheen which expires in the second half of this calendar year and look forward to opening a new store which will feature the latest retail concepts for customers in the Landsdale catchment.

We look forward to hearing from you in due course when you receive planning approval for the expansion of the centre.

Yours sincerely,
Coles Myer Ltd

Ross Cameron
Real Estate Manager WA

KINGSWAY CITY ACTIVITY CENTRE STRUCTURE PLAN

APPENDIX D

Conceptual Indicative Images of Town Square

Kingsway City – Aerial view of town square from the South West
(Shadows at 12 noon 21st June)

Kingsway City – Aerial view of town square from the South
(Shadows at 12 noon 21st June)

Kingsway City – Aerial view of town square from the South East
(Shadows at 12 noon 21st June)

Kingsway City – Aerial view of town square from the North East
(Shadows at 12 noon 21st June)

Kingsway City – Street level view of town square from the South
(Shadows at 12 noon 21st June)

Kingsway City – Street level view of town square from the North
(Shadows at 12 noon 21st June)