
BUTLER DISTRICT CENTRE ACTIVITY CENTRE STRUCTURE PLAN NO. 87

AMENDMENT 3



SEPTEMBER 2017



BUTLER DISTRICT CENTRE ACTIVITY CENTRE STRUCTURE PLAN NO. 87

AMENDMENT 3

PART ONE - IMPLEMENTATION SECTION

Prepared by:



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September 2017

This Amendment to the Butler District Centre Activity Centre Structure Plan is prepared under the provisions of Part 4 of the *Planning and Development (Local Planning Schemes) Regulations 2015*.

**RECORD OF AMENDMENTS MADE TO THE BUTLER DISTRICT CENTRE ACTIVITY CENTRE
 STRUCTURE PLAN NO. 87**

Amendment No.	Description of Amendment	Finally Endorsed Council	Finally Endorsed WAPC
1	To incorporate provisions for the eastern portion of the centre from just east of the rail line to the Mitchell Freeway Reserve	30 April 2013	4 June 2014
2	Amending the Agreed Structure Plan map of the Part 1 Statutory Section to incorporate a portion of Lot 9330 as 'Precinct F-a', with a density code of R160	2 June 2015	10 August 2015
3	Amending Table 1, Clause 6.1 and Table 7, Clause 4.1.2 of Part 1 of the Agreed Structure Plan to increase the shop-retail floorspace limit for Precinct F.		

AMENDMENT NO. 3
TO
BUTLER DISTRICT CENTRE
ACTIVITY CENTRE STRUCTURE PLAN NO. 87

The City of Wanneroo, pursuant to Part 4 of the *Planning and Development (Local Planning Schemes) Regulations 2015*, hereby amends the above Structure Plan by:

1. Amending Part 1 (Implementation Section), Table 1, Clause 6.1 as follows:
The permitted shop-retail floorspace within Plan 1 is a total of 22,500m² NLA for Precincts A to E (inclusive) and 3,500m² NLA for Precinct F.
2. Amending Part 1 (Implementation Section), Table 7, Clause 4.1.2 as follows:
Notwithstanding the provisions of the Precinct F land use permissibility table, a 'shop' use is only permitted in Precinct F where the net lettable area of the 'shop' tenancy is a maximum of:
 - a. 300m² if located on land immediately adjoining the intersection of Butler Boulevard and Benenden Avenue.
 - b. 300m² if located on land between Benenden Avenue and the rail line.
 - c. 200m² if located elsewhere within the precinct.

IT IS CERTIFIED THAT AMENDMENT NO. 3 TO THE BUTLER DISTRICT CENTRE ACTIVITY CENTRE
STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING
COMMISSION ON:

..... Date

Signed for and on behalf of the Western Australian Planning Commission:

.....

an officer of the Commission duly authorised by the Commission pursuant to section 16 of
the *Planning and Development Act 2005* for that purpose.

BUTLER DISTRICT CENTRE ACTIVITY CENTRE STRUCTURE PLAN NO. 87

AMENDMENT 3

PART TWO - EXPLANATORY REPORT

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INTRODUCTION

The purpose of this amendment is to increase the limit of 'shop-retail' floorspace within 'Precinct F' of the Butler District Centre Activity Centre Structure Plan.

Presently limited to 1,000m², this amendment will see a modest increase to 3,500m² allowing the Centre to attract a better mix of non-residential land uses and evolve in the manner that was envisaged. The amendment will also refine the 'shop-retail' tenancy area thresholds that currently exist under the Structure Plan.

There are no modifications to the Structure Plan map proposed as part of this amendment.

CONTEXT AND CURRENT FRAMEWORK

The Butler District Centre is a 1.6km mixed use corridor extending along Butler Boulevard from existing Marmion Avenue at the western edge to the future Mitchell Freeway extension at the eastern edge. The Butler rail station and line is located centrally within the corridor.

The Butler District Centre is rapidly evolving as a quality mix of retail, business, mixed use, residential, entertainment and other community uses, comprising of a number of precincts that are defined by their character, location and staging. Underpinning the development of the District Centre is the Butler District Centre Activity Centre Structure Plan which establishes overarching objectives, land use and built form controls.

Presently the Butler District Centre Activity Centre Structure Plan limits the amount of 'shop-retail' floorspace to 22,500m² and 1,000m² (Net Lettable Area) west and east of the rail respectively. Further, the Structure Plan stipulates that east of the rail, individual shop tenancies must measure less than 300m² on land immediately adjoining the intersection of Butler Boulevard and Benenden Avenue and less than 100m² elsewhere.

These limitations have found to be incongruent with both the objectives and demand for the District Centre as well as being at odds with contemporary lifestyle choices of residents in and around the Butler Centre, with particularly attention to 'Precinct F'. The purpose of this amendment is to refine these 'shop-retail' limitations for land east of the rail (Precinct F). To be clear, this amendment does not look to alter current 'shop-retail' thresholds for land west of the rail.

Approved by the WAPC in February 2013 and subsequently amended in June 2014 and August 2015, a copy of the approved Butler District Centre Activity Centre Structure Plan map is provided as Appendix 1.

AMENDMENT DETAILS

The purpose of this amendment is to increase the limit of 'shop-retail' floorspace within Precinct F of the Butler District Centre Activity Centre Structure Plan. Further to this increase to the 'shop-retail' floorspace limit, this amendment will also refine the tenancy size limits (for 'shop-retail').

The proposed amendments to the Butler District Centre Activity Centre Structure Plan are:

1. Modify Part 1 (Implementation Section); Table 1, Clause 6.1 as follows:

The permitted shop-retail floorspace within Plan 1 is a total of 22,500m² NLA for Precincts A to E (inclusive) and 3,500m² NLA for Precinct F.

2. Modify Part 1 (Implementation Section); Table 7, Clause 4.1.2 as follows

Notwithstanding the provisions of the Precinct F land use permissibility table, a 'shop' use is only permitted in Precinct F where the net lettable area of the 'shop' tenancy is a maximum of:

- a. 300m² if located on land immediately adjoining the intersection of Butler Boulevard and Benenden Avenue.
- b. 300m² if located on land between Benenden Avenue and the rail line.
- c. 200m² if located elsewhere within the precinct.

There are no changes to the Structure Plan map proposed as part of this amendment.

BACKGROUND

Prior to discussing the proposed increase to the 'shop-retail' floorspace, there is merit in first summarising how the current threshold of 1000m² (as now set out in the Structure Plan) came about because this shows how this threshold is more historic rather than based on any contemporary analysis, not having been considered since circa 2004.

Butler-Brighton Charrette (2001)

In August 2001 the (then) Department of Planning and Infrastructure carried out an 'enquiry by design' for the broader Butler-Jindalee area, identifying a number of key principle outcomes such as indicative land uses, residential densities and higher order road networks. Importantly, this included a planned stand along local center located within the eastern portion of what is now 'Precinct f' of the Butler District Centre.

The Butler-Brighton Charrette formed the basis for all subsequent district and local structure planning.

Butler-Jindalee District Structure Plan (2004)

The Butler-Jindalee District Structure Plan served as the district planning framework for the area, establishing broad land uses, major roads, commercial centers and other community infrastructure.

The Butler-Jindalee District Structure Plan formalised the outcomes of the Butler-Brighton Charrette, including showing a local centre at what is now the intersection of Butler Boulevard and Benenden Avenue. A Centres Strategy Study (dated April 2004) was prepared in support of the District Structure Plan, identifying this local centre (referred to it as 'Brighton East') as having 1000m² of 'shop-retail' floorspace.

Butler-Ridgewood Local Structure Plan (Amendment 14; 2008)

Following on from the Butler-Jindalee District Structure Plan, the Butler-Ridgewood Local Structure Plan provided additional detail and clarity around aspects such as land uses, movement networks, residential densities and areas of public open space.

While the Butler-Ridgewood Local Structure Plan zoned the land that has ultimately become the Butler District Centre as 'Centre' - requiring a subsequent structure plan - it did confirm the location of the 'Brighton East' local centre. Critically the Butler-Ridgewood Local Structure Plan retained 1000m² of 'shop-retail' floorspace for this centre via referencing the same Centres Strategy Study that was used to support the District Structure Plan.

Butler District Centre Activity Centre Structure Plan (2013)

All the aforementioned planning culminated in the preparation and approval of the Butler District Centre Activity Centre Structure Plan to which this amendment is targeted.

Initially limited to the corridor of land situated between Marmion Avenue and the immediately east of the rail (inclusive of Precincts B and E), a subsequent amendment saw the corridor (including Precinct F) extend to the future Mitchell Freeway extension.

Critically, the Butler District Centre Activity Centre Structure Plan did not review the 'shop-retail' floorspace allocated to the east of the rail but simply retained the historical 1000m² allocated via preceding Structure Plans, notwithstanding that this was based on the provision of a stand along local centre and not a linear mixed use expansion of the District Centre.

Additional justification to increase this floorspace is discussed further in this report; however, this brief synopsis clearly shows that the current 1000m² 'shop-retail' floorspace limit is at best historic, having little relevance to current context, preventing the delivery of desirable activities within the Butler District Centre.

DISCUSSION

A Retail Sustainability Assessment has been undertaken by Shrapnel Urban Planning, demonstrating that the modest increase proposed to the 'shop-retail' floorspace is economically sustainable and will not have an adverse impact upon the Butler District Centre, or any other existing or planned centres in proximity. Findings of the Retail Sustainability Assessment are summarised out below with a complete copy of the Assessment (dated September 2017) provided as Appendix 2.

Net Lettable Area

A key reason for increasing the current 'shop-retail' floorspace limit is the manner in which the City of Wanneroo District Planning Scheme 2 defines a 'retail' landuse.

The City's Scheme states that retail net lettable area is *'the net lettable area used for any of the purposes listed in Planning Landuse Category 5 – Shop/retail (excluding hotels, taverns and nightclubs) of the WA Standard Landuse Classification'*.

In short, according to the City's Scheme, 'retail' comprises all land uses listed in PLUC5 meaning that this includes a range of land uses that ordinarily would not fall within a retail categorisation. This includes, but is not limited to a number of entertainment activities (restaurants, cafes), some of the more personally commercial services (hairdressers, laundromats) as well as some of the larger items and bulky goods typically sold from showrooms (household appliances, sporting and cycling accessories, pet goods).

This issue recently came to a head when the City received a proposal for a mixed use development within 'Precinct F' which was looking to provide approximately 1000m² of ground floor tenancies to accommodate a number of restaurants and a laundromat. While it was generally acknowledged that these are land uses wholly appropriate for 'Precinct F' given its proximity to a high number of existing and planned residential dwellings as well being consistent with the overall objective for this precinct, the proposal exceeded the current 'retail-shop' limit of 1000m² as approximately 300m² had already been allocated to another site, meaning that the proposal (in terms of retail land use) could not be entertained.

This circumstance would not have arisen if the City's Scheme did not reference PLUC5 as the basis for 'retail' floorspace.

The proposed increase to the 'retail-shop' floorspace is seen as an acceptable and pragmatic solution to the current statutory framework.

Contemporary Land Use

One of the key issues being faced in delivering the desired mix for the Centre is the change in modern lifestyles.

In recent years there has been a considerable increase in restaurant and café patronage, with the ABS indicating that turnover of these establishments has well over doubled since 1982. Importantly, turnover typically drives floorspace productivity and the quantity of retail floorspace to satisfy demand.

With these restaurant and café land uses presently forming part of 'shop-retail' via PLUC 5 (as discussed above), the community's demand for these activities is stifled through the current floorsarea limit meaning these uses will subsequently compete with regular shop/retail tenancies within the Centre Core (west of the rail), in a steadily tightening market. This is an inappropriate outcome given:

- Restaurant /cafes are fundamentally different to other kinds of retail outlets/shop, and do not compete with them in a commercial sense.
- Demand for restaurant /cafes is clearly increasing.
- The current floorspace limit for 'Precinct F' was established well before the shift towards increasing patronage of restaurant /cafes.

The net result is that the proposal to increase the current floorspace limit (for Precinct F) will allow these desired activities to be established adjacent to areas with higher residential population – precisely where demand suggest that they should locate.

Objectives for the Butler District Centre

The Butler District Centre Activity Centre Structure Plan states that the intent for 'Precinct F' is to provide for a range of residential mixed use developments in a linear format along Butler Boulevard, with this precinct to evolve over time to connect with the future transit orient station precinct (Precinct E) with the Mitchell Freeway.

Key objectives relating to land uses are:

- Encourage linear mixed use development along Butler Boulevard.
- Provide flexibility in land use and built form to enable the evolution of the precinct over time.
- Recognise a broad change in land use and building character along the Boulevard, between the transit oriented station precinct and the Mitchell Freeway.

Clearly key to meeting these objectives is to provide adequate flexibility in land uses, thereby allowing 'Precinct F' to evolve as a linear mixed use precinct that can cater for current and future demands; however, whilst land use permissibility set out in the Structure Plan provides this flexibility, the current 'shop-retail' threshold is in effect countering this outcome.

This impact upon land use flexibility is further eroded when the associated issues of changing lifestyles and how the City's District Planning Scheme defines retail NLA, as has been discussed above.

Tenancy Size

As part of this amendment it is proposed to increase the area threshold for any 'shop-retail' tenancies within 'Precinct F' of the Butler District Centre Activity Centre Structure Plan.

As outlined above, presently the Structure Plan limits these tenancies to 300m² for land abutting the intersection of Butler Boulevards and Benenden Avenue or 100m² if located elsewhere within the precinct. With the evolution of the District Centre, coupled with changing markets and demands, the current thresholds are considered too constrictive, being too small for even modest sized restaurant and retail outlets which typically require up to 200m² to be functional.

Nonetheless, the idea behind a tenancy size threshold is sound, preventing large scale retailer from operating within Precinct F, with these operators better suited west of the rail within the Centre core.

As a consequence, this amendment does not look to remove the thresholds, but instead provide for a small increase; providing for comparatively 'larger' tenancies (up to 300m² NLA) at the intersection of Butler Boulevard and Benenden Avenue, which corresponds with the 'landmark' sites identified on the Structure Plan map, while also providing an increase those permitted elsewhere within the precinct (up to 200m²).

This better reflects the required floorspace for the contemporary land uses expected to locate within the precinct, including restaurants, cafes and other personal services.

This is further discussed within the Retail Sustainability Assessment that is accompanying this amendment.

Built Form Controls

It is worth noting that the built form controls set out in the Structure Plan also require development to not only address Butler Boulevard, but strongly encourages non-residential tenancies to ground floors.

This development control includes:

- Reduced primary and secondary street setbacks to encourage the ground levels to interface and relate to the street, which is at odds with residential development in which increased setbacks from the street to private dwellings is commonplace.
- Ground level development is to be at grade with the street to provide for universal access, which again is at odds with residential development where grade separation provides a level of privacy.
- Increased ground floor ceiling heights to support non-residential land use.
- Unobstructed views from ground floor development to the Boulevard, with a preference for 60% of the building frontage to comprise highly visually permeable material.
- Covered pedestrian awning along the Boulevard to encourage pedestrian activity.

While strictly not predetermining land use, obviously the abovementioned controls for 'Precinct F' strongly encourages non-residential activity to the ground level, interacting with Butler Boulevard. Further, with higher residential densities within and around 'Precinct F', along with changing lifestyles, there is a stronger demand for certain entertainment (restaurant, café) and personal retail services that were envisaged when retail assessment were first undertaken for Brighton (circa 2004).

Retail Impact Modelling and Analysis (Shrapnel Urban Planning)

A Retail Sustainability Assessment (September 2017) has been undertaken by Shrapnel Urban Planning. The purpose of this Assessment was to carry out thorough retailing modelling and analysis to ensure that the proposed increase to the 'shop-retail' floorspace within 'Precinct F' will not adversely affect any other existing or planned activity centers in the region.

The Assessment was spatially contained to two study areas:

- Primary study area in which the modelling results provide usefully planning guidance and assessment the performance of any centre within its bounds; and
- Secondary 'frame' study area in which is included to provide context, ensuring more reliable modelling results within the primary study area.

The primary study area is the land generally located between Eglinton to the north and Catalina (Clarkson) to the south while the secondary study area encompasses most of the balance of the City of Wanneroo and a large portion of the City of Joondalup. The Assessment went on to undertake retail modelling in light of dwelling and population projections, household retail expenditure and the size of current and planned activity centres within the study area.

The Assessment concluded that the modest increase to 'shop-retail' floorspace is economically sustainable and will not have any adverse impact to either the Brighton District Centre core or any other centre within the study area.

The full model and subsequent findings are contained within the Retail Sustainability Assessment, provided as Appendix 2.

CONCLUSION

To conclude, the Butler District Centre is evolving as a quality activity centre in the region, providing a mix of residential and non-residential activity; however, current floorspace limits embedded within the Butler District Centre Activity Centre Structure Plan are preventing the Centre from achieving its full potential. These floorspace limits have their basis in historic assumptions and do not consider current lifestyles or economic context.

A Retail Sustainability Assessment has confirmed that the increase to these floorspace limits are economically sustainable and will have negligible impact to any other existing or planning activity centre within the locality. Ultimately the proposed increase to these floorspace limits will allow the Centre to attract a better mix of non-residential land uses and evolve in the manner that was envisaged.

APPENDICES

Appendix 1: Butler District Centre Activity Centre Structure Plan No. 87

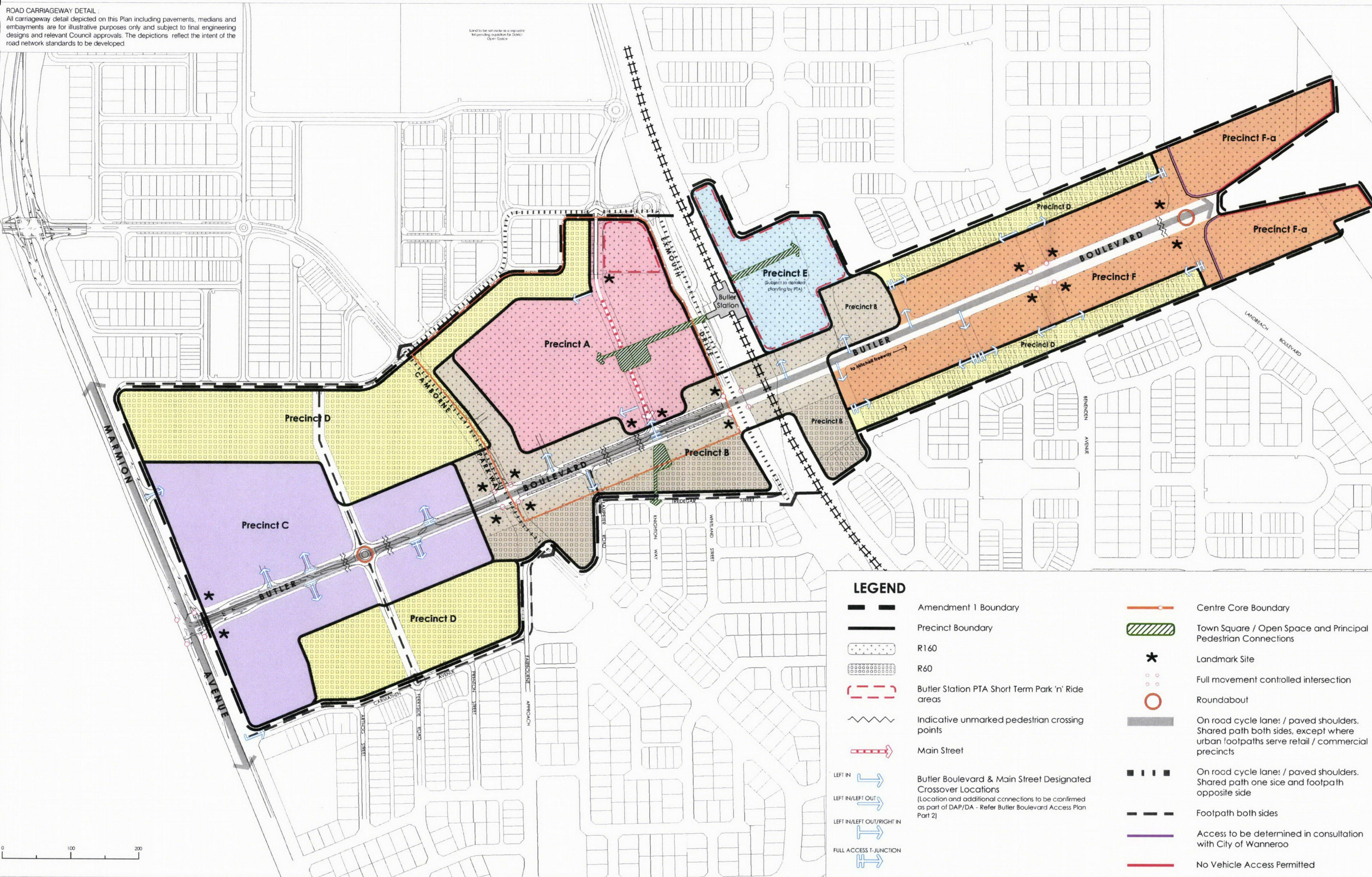
Appendix 2: Retail Sustainability Assessment, September 2017 (Shrapnel Urban Planning)

APPENDIX 1

Butler District Centre Activity Centre Structure Plan No. 87

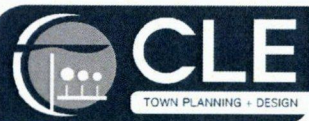
ROAD CARRIAGEWAY DETAIL
 All carriageway detail depicted on this Plan including pavements, medians and embayments are for illustrative purposes only and subject to final engineering designs and relevant Council approvals. The depictions reflect the intent of the road network standards to be developed

Land to be set aside as a reserve
 (to be provided by the State)
 Open Space



LEGEND

- Amendment 1 Boundary
- Precinct Boundary
- R160
- R60
- Butler Station PTA Short Term Park 'n' Ride areas
- Indicative unmarked pedestrian crossing points
- Main Street
- BUTLER BOULEVARD & MAIN STREET Designated Crossover Locations (Location and additional connections to be confirmed as part of DAP/DA - Refer Butler Boulevard Access Plan Part 2)
- LEFT IN
- LEFT IN/LEFT OUT
- LEFT IN/LEFT OUT/RIGHT IN
- FULL ACCESS T-JUNCTION
- Centre Core Boundary
- Town Square / Open Space and Principal Pedestrian Connections
- Landmark Site
- Full movement controlled intersection
- Roundabout
- On road cycle lane: / paved shoulders. Shared path both sides, except where urban footpaths serve retail / commercial precincts
- On road cycle lane: / paved shoulders. Shared path one side and footpath opposite side
- Footpath both sides
- Access to be determined in consultation with City of Wanneroo
- No Vehicle Access Permitted



BUTLER DISTRICT CENTRE ACTIVITY CENTRE STRUCTURE PLAN No. 87
 Consolidated Agreed Structure Plan including Amendment No. 2
 City of Wanneroo



plan no: 885-809A-01
 scale: 1:5000 @ A3
 date: 20.11.2015

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APPENDIX 2

**Retail Sustainability Assessment, September 2017
(Shrapnel Urban Planning)**

BUTLER DISTRICT CENTRE

Proposed Increase in the Potential Shop/ Retail Floorspace of
Precinct 'F'

Retail Sustainability Assessment

Prepared for Satterley Property Group

September 2017

■ Land Use ■ Design ■ Strategy ■ Economics ■ Research

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APPENDIX: Description of the Activity Centres Model and Output Summary Sheets

Butler District Centre – Precinct ‘F’

Proposed Increase in Shop/ Retail Floorspace Potential; Retail Sustainability Assessment; September 2017

SUMMARY AND CONCLUSIONS

1. Satterley Property Group has requested this Retail Sustainability Assessment (RSA) to support a proposal for a modest increase in the amount of Shop/ Retail floorspace permissible within Precinct 'F' of the Butler district centre, which extends along both sides of the eastern section of Butler Boulevard.
2. In the Butler district centre Shop/ Retail floorspace is currently limited to 22,500 sqm NLA west of the rail line and 1,000 sqm NLA east of the rail line. There are also the following limitations on tenancy sizes in Precinct 'F', which is east of the rail line:
 - Tenancies must be less than 300 sqm on land immediately adjoining the Butler Boulevard/ Benenden Avenue intersection; and
 - Less than 100 sqm elsewhere in the precinct.
3. It is considered that both the current overall 1,000 sqm limitation on Shop/ Retail uses in the entire eastern portion of the district centre, and the 100/ 300 sqm floorspace limitations on tenancy size in Precinct 'F' are now impracticable and need to be updated in response to changed circumstances.
4. The Wanneroo TPS 2 definition of retail net lettable area is statutorily tied to Planning Land Use Category (PLUC) 5 and therefore includes restaurants, cafes, hairdressers, etc, as well as the more mainstream types of shops. Inclusion of these uses within a total PLUC 5 cap of 1,000 sqm east of the rail line is unduly limiting.
5. Lifestyle changes have resulted in the number of restaurants, coffee shops/ cafes, etc in Perth increasing significantly over the past several decades.
6. Butler Boulevard has built form requirements and is planned to be a mixed-use environment. Without facilitating additional local retail services, such as restaurants, for example, would be to inhibit convenience and appropriate functioning of a mixed-use precinct.
7. The rationale for the current 1,000 sqm Shop/ Retail limit is weak, having been inherited from earlier planning relating to a local centre. When ASP 87 was updated, the 1,000 sqm Shop/ Retail limit should reasonably have been reassessed. Furthermore, all the floorspace allocation should have been assigned to Precinct 'F' alone, rather than to the entire portion of the centre east of the rail line.
8. It is considered that there is a reasonably compelling planning rationale for increasing the permissibility of Shop/ Retail floorspace in Precinct 'F'. It is therefore proposed that ASP 87 be amended as follows:
 - the total permissible Shop/ Retail floorspace of the Butler district centre should be increased by 2,500 sqm from its current 23,500 sqm to 26,000 sqm.
 - this 2,500 sqm increase, *plus* the existing 1,000 sqm currently permissible floorspace "east of the rail line" should apply to Precinct 'F' alone. Thus, the total Shop/ Retail floorspace cap applicable to Precinct 'F' would become 3,500 sqm.
 - The maximum floorspace permitted for Shop/ Retail tenancies outside the Benenden Avenue intersection in Precinct 'F' should be increased to 300 sqm between Benenden

Avenue and the rail line, while being maintained at the current 300 sqm at the Benenden Avenue/ Butler Boulevard intersection; and increased to 200 sqm elsewhere in the Precinct.

9. The recommended 2,500 sqm represents a modest 10.6% increase to overall district centre size and would maintain the centre well within the established range of district centres in the North-West Corridor. For example, the Clarkson centre is statutorily capped at 28,800 sqm.
10. Based on the activity centres modelling and associated analysis and impact assessment presented in this RSA, it is reasonable to conclude that ***there will not be any unacceptable economic impacts*** on other centres within the study area resulting from the proposed increase in the potential permissibility of Shop/ Retail floorspace in Precinct 'F' of the Butler district centre.

INTRODUCTION

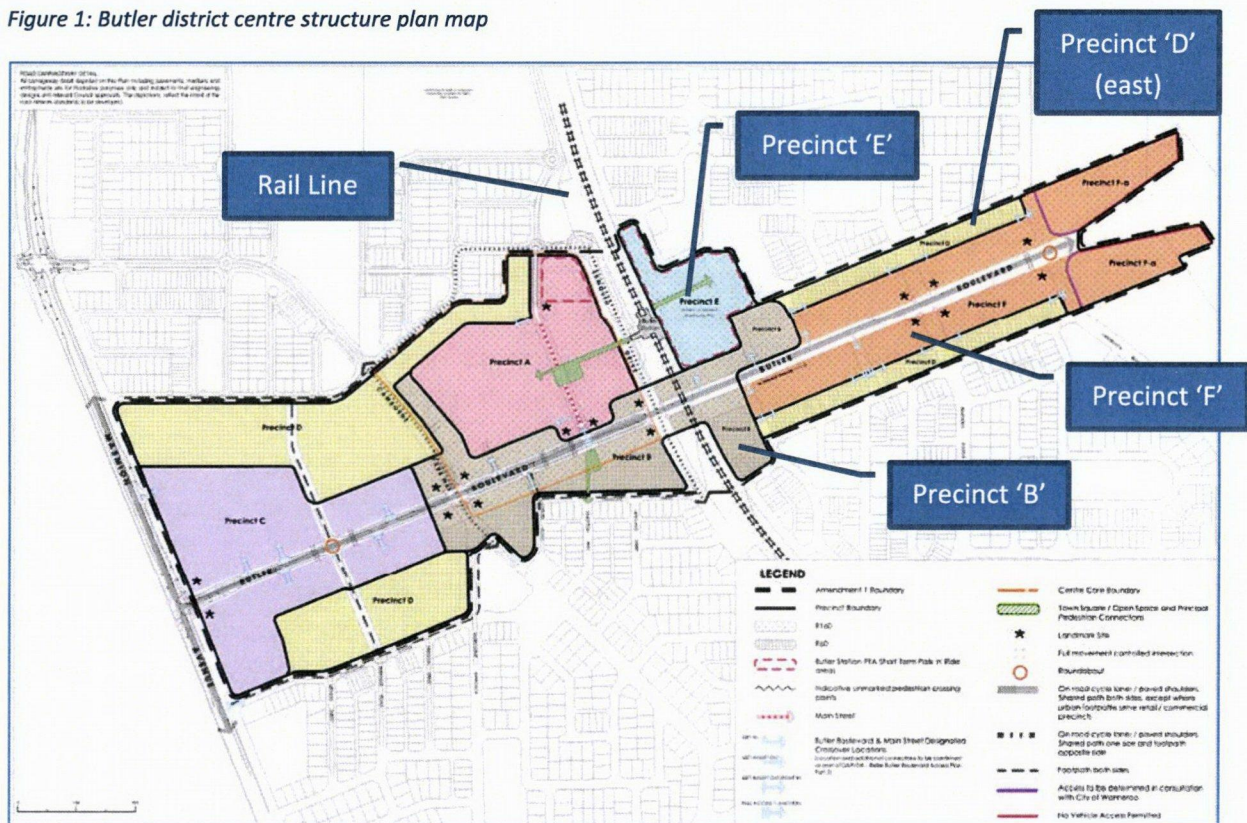
Satterley Property Group has requested this Retail Sustainability Assessment (RSA) to support a proposal for a modest increase in the amount of Shop/ Retail floorspace permissible within the Butler district centre. The relevant structure plan¹ currently limits the amount of Shop/ Retail floorspace to 22,500 sqm NLA west of the rail line and 1,000 sqm NLA east of the rail line.

The proposal for additional retail floorspace east of the rail line has eventuated in response to market pressure for additional retail floorspace, or rather the option to provide it, within Precinct 'F'. So far this has manifested itself in two ways:

- Sales enquiries to Satterley Property Group have indicated a clear market preference for the option of providing some retail floorspace within mixed-use developments in the precinct.
- At least one purchaser of a development site has sought to include a restaurant as part of an aged persons development. This simple, reasonable intention has highlighted the fact that there is very little potential Shop/ Retail floorspace to go around within the precinct.

The area of the district centre east of the rail line is defined by four separate planning precincts – 'B' (in part), 'D' (east), 'E' and 'F' (Figure 1).

Figure 1: Butler district centre structure plan map



The Precinct 'B' section is a relatively significant part of the Butler Boulevard retail/ commercial/ residential main street, most of which is located west of the rail line. Precinct 'E' is currently the main park-and-ride area serving the railway station, however, this short-term use is planned to become a transit-oriented development accommodating a wide range of mixed uses, including

¹ Butler District Centre Activity Centre Structure Plan No. 87 (ASP 87); November 2015

shops. Precinct 'D' is envisaged primarily as a higher density residential and mixed-use transition area between the district centre and surrounding residential development. The Precinct 'D' land east of the rail line has, however, been developed solely for residential purposes.

Precinct 'F' is a 660-metre-long, relatively narrow strip some 50 metres deep along both sides of Butler Boulevard, between the Precinct 'B' boundary and the Mitchell Freeway reserve. The role and character of Precinct 'F' was originally envisaged as a car-oriented commercial/ showroom/ bulky goods strip, with most other potentially permissible uses being of an incidental in nature. In Amendment 1 to ASP 87 this vision was modified to incorporate some residential and mixed-use development, albeit with a lesser emphasis on these uses further east near the freeway.

Since the Boulevard's physical construction to the freeway reserve, and the creation of various development sites fronting it, the potential for Precinct 'F' to satisfactorily accommodate both residential and compatible mixed uses, including some shops and restaurants, particularly in the section between Benenden Avenue and the station, has been clearly recognised by the market. This unanticipated refinement now requires some further modification to ASP 87.

Issues

There is a wide range uses potentially permissible in Precinct 'F', including shops and restaurants. Unlike the other precincts, however, due to the previously envisaged role of Precinct 'F', shops are required to be small – a maximum of 300 sqm per tenancy at the Butler Boulevard/ Benenden Avenue intersection and a maximum of 100 sqm per tenancy in the entire remainder of the precinct. With a 1,000 sqm Shop/ Retail floorspace limit covering the entire centre east of the rail line, it is evident that shops in Precinct 'F' will not only be small, but may be very few.

It is theoretically possible that shop tenancies totalling 1,000 sqm permitted in Precinct 'B' (east) or 'E' would preclude any tenancies at all being permitted in Precinct 'F'. Conversely, if Precinct 'F' was first to reach the 1,000 sqm Shop/ Retail maximum, then no shops (or restaurants) at all could be permitted in Precinct 'E' or 'B' (east), regardless of the permissibility of shops and/ or restaurants in these precincts; not to mention the longer-term plan for Precinct 'E' to become a TOD.

For these reasons, it is considered that **both** the current overall 1,000 sqm limitation on Shop/ Retail uses in the entire eastern portion of the district centre, **and** the 100/ 300 sqm floorspace limitations on tenancy size in Precinct 'F' are now impracticable, given the evident market demand for more flexibility in relation to shops and restaurants. Such a low overall retail floorspace limit could not possibly contribute appropriately to the stated planning objectives of the four precincts east of the rail line. Furthermore, while a 100 sqm maximum tenancy may suffice for a café, it potentially limits the scope for the establishment of restaurants in a context where there is clearly a role for them.

Purpose of this report

In view of the above this RSA contends and seeks to make the case that:

- The Shop/ Retail floorspace limit of 22,500 sqm, which currently applies to the area of the district centre **west** of the rail line should be extended to cover Precinct 'E' as well as that section of Precinct 'B' east of the rail line.

- The quantity of Shop/ Retail floorspace potentially permitted in Precinct 'F' should be increased to 3,500 sqm. This figure includes the original 1,000 sqm, which is now recommended to be allocated in its entirety to Precinct 'F'; plus an additional 2,500 sqm.
- The maximum floorspace permitted for Shop/ Retail tenancies outside the Benenden Avenue intersection in Precinct 'F' should be increased to 300 sqm between Benenden Avenue and the rail line, while being maintained at the current 300 sqm at the Benenden Avenue/ Butler Boulevard intersection; and increased to 200 sqm elsewhere in the Precinct.
- The proposed increase in permissible Shop/ Retail floorspace, and increase in the current tenancy floorspace maxima, are an appropriate planning response to the situation which has evolved as the eastern part of the centre has started to be developed; and
- The proposed increase to the Shop/ Retail floorspace limit, even if eventually reached (which is not inevitable), would constitute a significant benefit to the community and would not adversely impact upon any other existing or planned activity centres in the locality.

Terminology

The following terms may be used in this report:

Retail in its non-technical, common sense meaning is used frequently in the interests of readability.

Shop/ Retail (SHP) – Planning Land Use Category (PLUC) 5 – specifically refers to one of two Retail categories defined by the WAPC (see SPP 4.2 for details) and includes virtually all retail activities normally found within shopping centres. It *excludes* many of the uses normally referred to as “bulky goods” retail, but does include some potentially bulky items such as household appliances.

Other Retail (RET) – Planning Land Use Category (PLUC) 6 – is the other specific Retail category defined in detail by the WAPC. It mostly includes outlets for those retail uses normally referred to as “bulky goods” (e.g. furniture, floor coverings, etc), but also includes hardware. Other Retail precincts often also include one or more fast food outlets, even though these are currently classified as “Shop/ Retail” by the WAPC.

Total Retail specifically refers to Shop/ Retail plus Other Retail.

Net Lettable Area (NLA) in square metres is the unit of measurement for all retail and other commercial floorspace. It includes all internal floorspace except stairs, toilets, lift shafts and motor rooms, escalators, tea rooms and other service areas, lobbies, and areas used for public spaces or thoroughfares². Note that non-public storage areas within large shops (such as supermarkets) are generally not classified by the WAPC as “Shop/ Retail” NLA, but as “Storage” NLA.

Retail Needs Assessment (RNA): The study required under Clause 6.2.2 of SPP 4.2 to estimate the retail needs and indicative distribution of floorspace across the activity centres in a local government area; and to guide the preparation of district and activity centre structure plans.

Retail Sustainability Assessment (RSA): The study required under Clause 6.5 of SPP 4.2 to assess the potential economic and related effects of a significant retail expansion on the network of activity centres in a locality. RSA's are not required where the proposed development is in accordance with an endorsed planning strategy or structure plan that has been based on an RNA.

² The related term Gross Leasable Area (GLA) includes these things.

PLANNING RATIONALE

This section of the RSA sets out the planning rationale for facilitating additional Shop/ Retail floorspace in Precinct 'F'. An estimate of the most appropriate increase is also provided. The next main section quantifies the potential extent of the likely economic impact of facilitating the proposed floorspace increase in Precinct 'F'.

Net lettable area and PLUC 5

The Shop/ Retail floorspace limitation on Precinct 'F' is applied in terms of "(retail) net lettable area"³, the City of Wanneroo TPS 2 definition for which is:

retail net lettable area : means the net lettable area used for any of the purposes listed in Planning Landuse Category 5 – Shop/Retail (excluding hotels, taverns and nightclubs) of the WA Standard Landuse Classification (WASLUC).

The definition of retail net lettable area is thus statutorily tied to Planning Land Use Category (PLUC) 5 and therefore includes **all PLUC 5 uses** including restaurants, cafes, hairdressers, etc, as well as the more mainstream types of shops. Restricting these uses to a total maximum of 1,000 sqm east of the rail line is limiting enough, but PLUC 5 also includes some categories of larger items and bulky goods usually sold from showrooms including:

- Camping, outdoor and recreation goods;
- Animal supplies including equestrian and pet goods;
- Household appliances, electrical goods and home entertainment goods (this includes air conditioners, washing machines, fridges, etc)
- Office equipment and supplies
- Sporting, cycling, leisure, fitness goods and accessories.

Even though goods in the above list are usually sold from showrooms, as PLUC 5 uses they also (technically) fall within the limitations of the current 1,000 sqm Shop/ Retail floorspace cap applying east of the rail line. This would not occur if the City's town planning scheme was not statutorily welded to PLUC 5 and incorporated the definitions of Shop and Showroom in Schedule 1 of the Regulations⁴. Accordingly, there is an urgent need to rectify what appears to be an untenable existing situation. Some increase to the Shop/ Retail floorspace limitation east of the rail line, as currently proposed, should be part of the solution.

Increase in cafes and restaurants

"Restaurant" is a permitted use in Precincts 'B', 'E' and 'F', as well as being discretionary in Precinct 'D'. As discussed above, by being included within PLUC 5, "Restaurant" falls within the overall 1,000 sqm Shop/ Retail floorspace restriction east of the rail line.

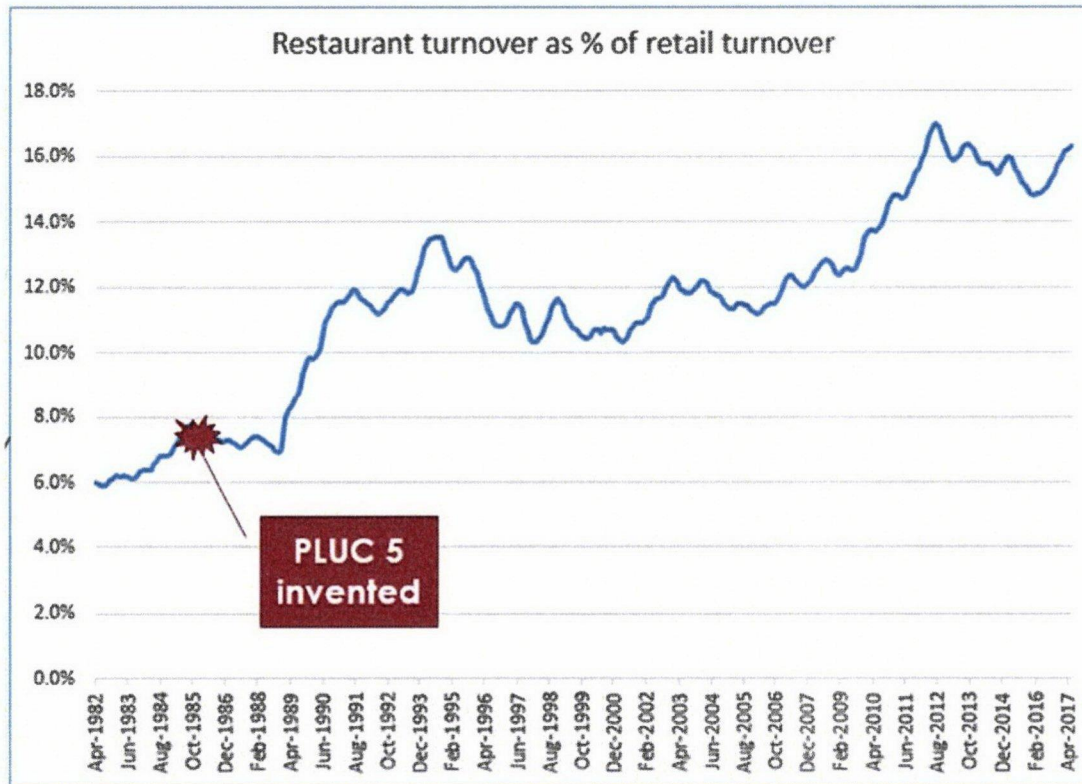
The fact that cafes and restaurants will need to keenly compete with other types of shops for floorspace east of the rail line is an added limitation that works against current trends and the community interest. Lifestyle changes have resulted in the number of restaurants, coffee shops/ cafes, etc in Perth increasing significantly over several decades. This is clearly evident in virtually every activity centre. The extent of this change is indicated in Figure 2, which shows the extent to

³ ASP 87 Pt. 1; Clause 6.1 and Table 7 Clause 4.1.2

⁴ Planning and Development (Local Planning Schemes) Regulations 2015; Schedule 1 – Model provisions for local planning schemes

which restaurant turnover as a proportion of total retail turnover has increased since the 1980's. In the retail industry, turnover drives floorspace productivity and thus the quantity of retail floorspace required to satisfy demand. Accordingly, Figure 2 serves as a partial indicator of increasing retail floorspace demand.

Figure 2: Change in the proportion of sales turnover in cafes, restaurants and take-away food outlets to total retail turnover 1982-2017 (WA)



Source: Australian Bureau of Statistics; Cat 8501.0 Retail Trade Australia; 2017

Restaurants/ cafes, etc were included in the PLUC 5 classification in the mid 80's. As indicated in Figure 2 turnover in restaurants as a proportion of total retail turnover at that time was about half what it is today. It should also be noted that Butler district centre's existing Shop/ Retail floorspace upper limit of between 22,000 sqm and 23,500 sqm has been in place since 1991, if not prior⁵.

Based on this analysis, if the increase in the community's use of restaurants/ cafes, etc is not adequately expressed through provision of sufficient additional retail floorspace to comfortably accommodate these uses, then they will increasingly have to compete with regular shops for Shop/ Retail tenancies in a steadily tightening market. This is not appropriate because:

- Restaurants are fundamentally different in kind to regular shops, so they don't compete with them in the usual commercial sense.
- Demand for restaurants, cafes, etc is clearly increasing.
- The existing floorspace cap for the Butler district centre was established many years ago when demand for restaurant space was considerably lower than it is today.
- Therefore, allowing for more retail floorspace in parts of the district centre where restaurants are likely to be established is appropriate.

⁵ Source: 1991 draft NW Corridor Structure Plan

Creation of a residential/ mixed-use boulevard environment

The format and proposed role of the Precinct 'F' section of Butler Boulevard, while clearly aiming to be different in nature to Precinct 'B', nevertheless lends itself to a more significant Shop/ Retail component than is currently allowed for, particularly in the section between Benenden Avenue and the rail line. Convenience shops, restaurants and personal service tenancies in this section of the boulevard would be a natural and sustainable complement for the residential uses now being approved there. To encourage establishment of a street of this nature through built form requirements and residential approvals, without also facilitating more retail services, is to inhibit convenience and appropriate functioning in what is planned to be a mixed-use environment.

The 1,000 sqm floorspace cap applies to all precincts east of the rail line

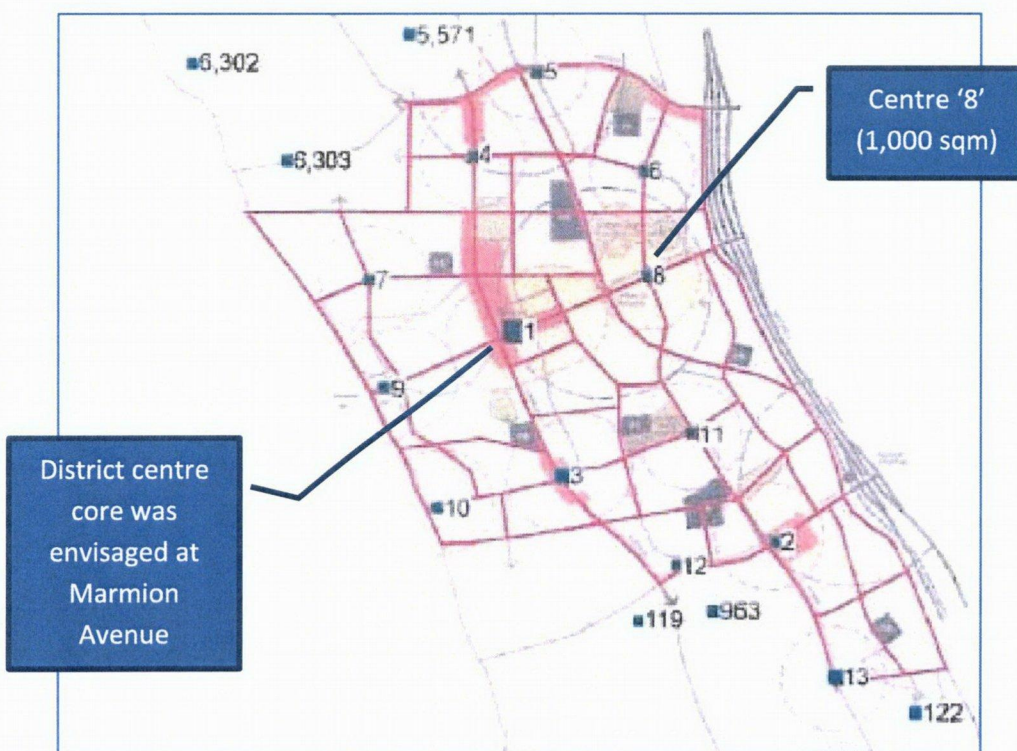
As discussed previously, the 1,000 sqm retail floorspace limitation applies to the entire district centre east of the rail line: part of Precinct 'B' and Precincts 'E' and 'F'. This is problematic because:

- Precincts 'B', 'E' and 'F' may all potentially accommodate a significant variety of PLUC 5 uses, including but not limited to: Bakery, Shop, Beauty Parlour, Hairdresser, Restaurant.
- These precincts may also accommodate Multiple Dwellings which, due to the proximity of the railway station should be encouraged to be as dense as practicable, which will increase population and the demand for supporting local convenience services.
- Precinct 'E' is planned to become a TOD. A significant number of PLUC 5 uses could be needed to make it interesting, attractive and a properly functioning TOD.

The 1,000 sqm is a "legacy" number with no sound basis today

There is only a weak rationale for the current 1,000 sqm limit. Following the Butler Charette, in 2002/4, the 1,000 sqm figure began as a planned stand-alone local centre (Centre '8' in Figure 3).

Figure 3: 2002/4 modelling diagram showing district centre further west and 1,000 sqm local centre '8' (Brighton-E)



The original ASP 87 did not cover Precinct 'F', and a Shop/ Retail floorspace cap of 22,500 sqm was allocated to the entire centre as it was at the time (Figure 4). This included Precinct 'E' and that part of Precinct 'B' now east of the rail line (Figure 4).

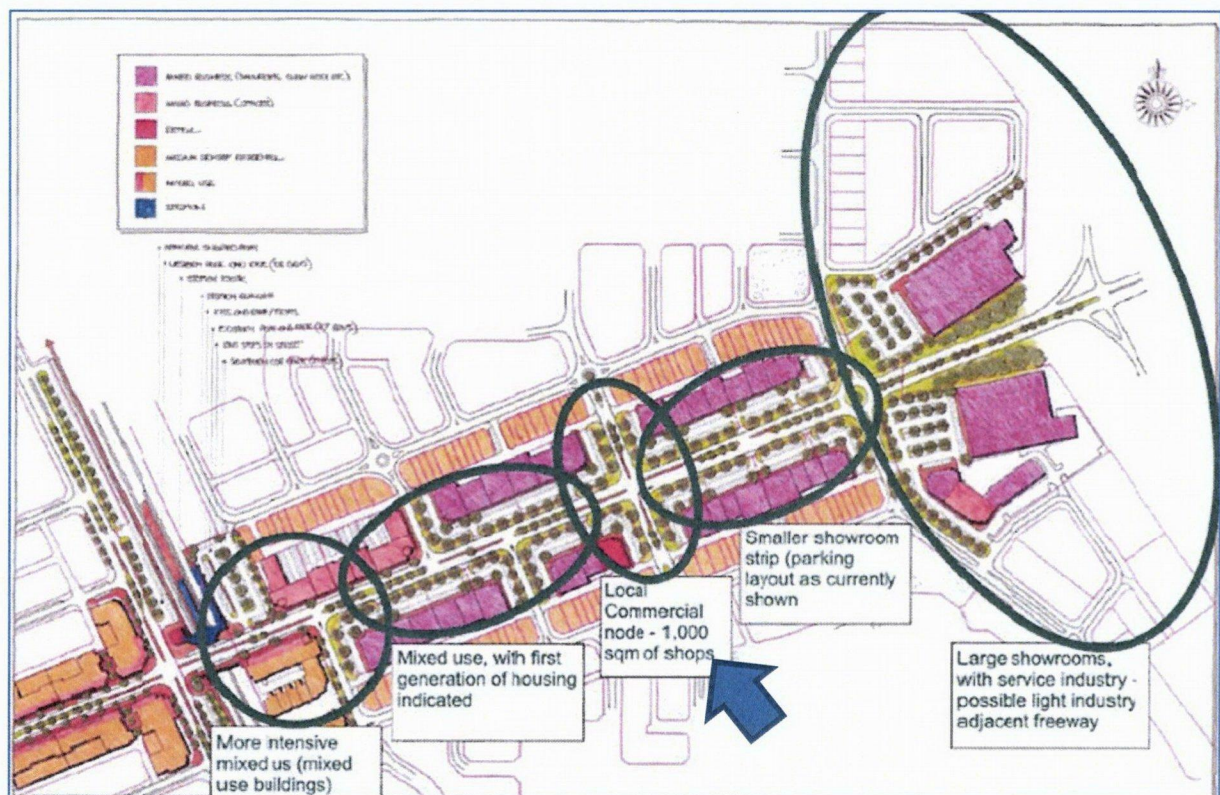
Figure 4: Extract from Butler District Centre ASP 87; April 2012: the 22,500 sqm applied to the entire centre, which included Precinct 'E' and all of Precinct 'B'

Table 1: Butler District Centre - Indicative Floorspace and Dwelling Unit Yield Estimates

DESCRIPTION	PRECINCTS					TOTAL
	A Core	B Boulevard	C Marmion	D Frame	E ⁵ Station	
Retail ² NLA	20,000	1,500	500	0	500	22,500
Non-Retail Commercial ³ NLA	3,000	10,000	35,000	1,000	5,000	54,000
Total Retail/Commercial Floorspace	23,000	11,500	35,500	1,000	5,500	76,500

During preparation of Amendment 1 to ASP 87 some consideration was given to differentiating the role of various sections of Precinct 'F', including maintenance of a 1,000 sqm local commercial node at the Boulevard/ Benenden Avenue intersection (Figure 5). However, the amendment eventually resulted in treating the entire length of Precinct 'F' (excluding what became Precincts 'F-a' and 'F-b') in a consistent manner throughout, with a 1,000 sqm Shop/ Retail limit applied to all parts of the district centre east of the freeway, rather than just Precinct 'F' alone.

Figure 5: Consideration given to differentiating use combinations along Precinct 'F' Boulevard



It therefore appears that the current 1,000 sqm Shop/ Retail floorspace cap east of the freeway was a number inherited from earlier planning thinking relating to local centre '8', the provision of which

clearly made sense at the time due to the (separate) district centre being envisaged further west. When the updated planning of ASP 87 was carried out, the 1,000 sqm Shop/ Retail effectively became part of the district centre's overall floorspace. At that time, it should reasonably have been reassessed. Furthermore, all the floorspace allocation should have been assigned to Precinct 'F' alone, rather than to the entire portion of the centre east of the rail line.

Notwithstanding this, the rationale for provision of the original 1,000 sqm local centre, in a situation well separated from the district centre, was fundamentally different to the rationale for providing for a certain quantity of retail floorspace in the eastern boulevard component of the district centre, which Precinct 'F' has become. The role of the land uses, and the nature and extent of the demand for retail floorspace in the Precinct 'F' component of the district centre will be fundamentally different to what would have applied in the previously envisaged 1,000 sqm stand-alone local centre.

Tenancy size limitations

Most of the above discussion has focussed on the issues associated with the total 1,000 sqm floorspace cap applying to Shop/ Retail floorspace in the part of Butler district centre located east of the rail line. However, it is considered that, to facilitate a more appropriate evolution of Precinct 'F' the size limitations on Shop/ Retail tenancies should also be adjusted. The current Shop/ Retail tenancy size requirements in Precinct 'F' are:

- Tenancies must be less than 300 sqm on land immediately adjoining the Butler Boulevard/ Benenden Avenue intersection; and
- Less than 100 sqm elsewhere in the precinct.

The rationale for having tenancy size limitations in Precinct 'F' is sound. The main issue is that, although 100 sqm tenancies may be suitable for boutiques, small convenience shops and cafes, this size would preclude the establishment of some, even quite modestly sized, restaurants and other suitable retail tenancies. For this reason, it is considered that a maximum Shop/ Retail tenancy size of 300 sqm in the section of Precinct 'F' between Benenden Street and the rail line would be more appropriate for this section of the Boulevard, rather than the current 100 sqm limit. The current 100 sqm limit is recommended to be increased to 200 sqm elsewhere in the precinct. The existing Benenden Avenue/ Butler Boulevard intersection limit of 300 sqm should remain unchanged.

These proposed changes will not result in the quantity of Shop/ Retail floorspace increasing beyond the now recommended overall 3,500 sqm upper limit applicable to Precinct 'F'. The changes will simply provide greater flexibility to enable the designated overall upper floorspace limit to be distributed in a manner that responds to the requirements of market.

Proposed Shop/ Retail floorspace increase

It is considered that the issues discussed above provide a reasonably compelling rationale for increasing the quantity of Shop/ Retail floorspace in the Butler district centre to some reasonable extent. Furthermore, it is evident that any such increase in floorspace permissibility should apply only to Precinct 'F'. It is therefore proposed that ASP 87 be amended as follows:

- the total permissible Shop/ Retail floorspace of the Butler district centre should be increased by 2,500 sqm from its current 23,500 sqm to 26,000 sqm.

- this 2,500 sqm increase, **plus** the existing 1,000 sqm currently permissible floorspace “east of the rail line” should apply to Precinct ‘F’ alone. Thus, the total Shop/ Retail floorspace cap applicable to Precinct ‘F’ would become 3,500 sqm.

The proposed increase in overall floorspace was based on the following considerations:

- An increase in floorspace is regarded as a necessary response to the evolution of a set of circumstances differing from those envisaged during earlier planning phases of the Butler district centre.
- Detailed information regarding the intentions and aspirations of purchasers of development sites in Precinct ‘F’ indicated an increase was necessary (source: Satterley property Group).
- 2,500 sqm represents a modest 10.6% increase to overall centre size and would maintain the centre well within the established range of district centres in the North-West Corridor. For example, the Clarkson centre is statutorily capped at 28,800 sqm.
- Preliminary calculations of the potential economic impacts of the increase on other centres indicated minimal potential impacts. This initial finding has now been substantiated by systematic activity centres modelling (see following section).

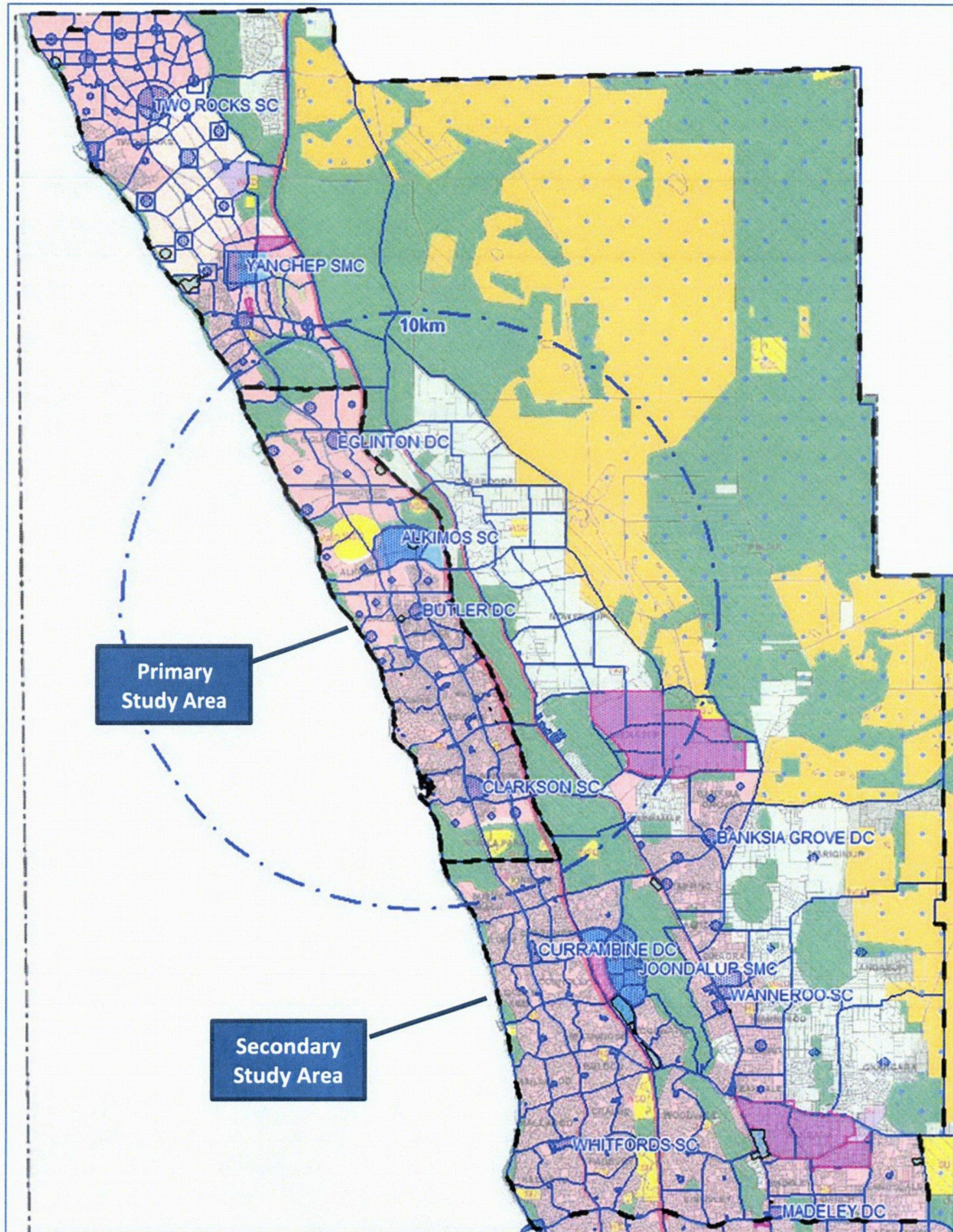
IMPACT ASSESSMENT

To confirm that the proposed additional floorspace permissibility would be sustainable, and not impose undue negative impacts on other existing or planned centres, a gravity model has been used.

Study area

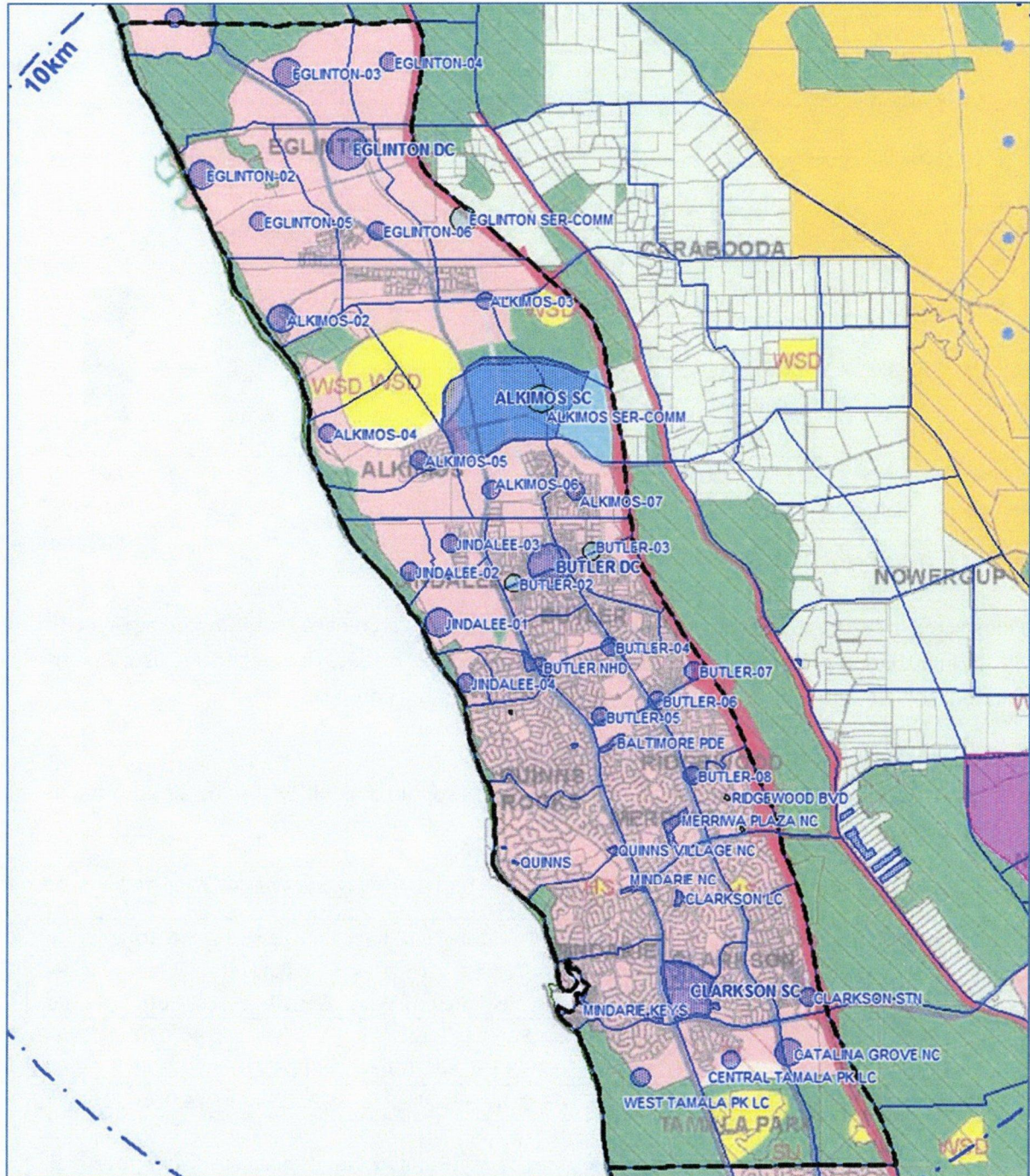
The overall study area defined for the modelling project is illustrated in Figure 6.

Figure 6: Overall study area



The study area is in two parts: a primary area and a secondary or “frame” area. The primary area is the area within which the results of the modelling are a useful guide, for urban planning purposes, to a centre’s performance, relative to others located within the primary area. The secondary area, which in this case covers most of the balance of the City of Wanneroo and most of the City of Joondalup, is included in the model solely to facilitate reliable primary area results. A more detailed map of the primary study area is presented in Figure 7.

Figure 7: Primary study area

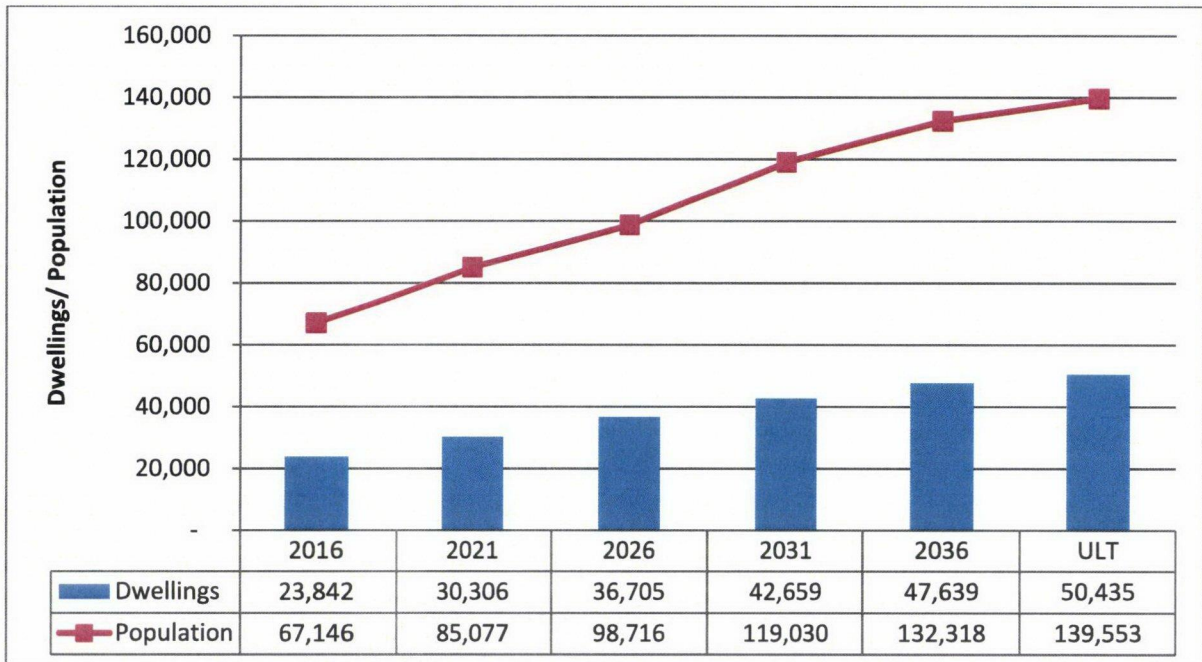


In Figure 7 existing and planned activity centres are depicted as either blue circles or irregular shapes. Irregular shapes are based on existing known boundaries, whereas centres depicted by circles are diagrammatic representations of planned or partially developed centres and not to scale.

Dwellings and Population

For the purposes of the activity centres modelling, each of the residential precincts illustrated in Figure 7 (blue outlines) contains its own dwellings and population projection for the years being modelled – 2016 in five-yearly increments through to 2036/ “Ultimate”. The projected population and dwellings for the entire primary study area are presented in Figure 8.

Figure 8 Primary study area: occupied dwellings & population projections



Sources: City of Wanneroo (forecast.id); SHRAPNEL URBAN PLANNING

As illustrated in Figure 8, the current population of the primary study area is estimated at 67,146 persons in 2016 and projected to increase by a further 65,172 to 132,318 persons by 2036. As indicated, some additional population growth is anticipated beyond 2036.

Household retail expenditure

Household retail expenditure data used in the model was supplied by MDS⁶. The totals applying to the primary study area are presented in Table 1.

Table 1: Primary study area retail expenditure (2014 and 2036); MDS estimates applied to population projections

Retail Expenditure Category	2014 (2014 dollars)			2036 (2014 dollars)		
	Total	Per	Per	Total	Per	Per
	\$million	Hhold	Person	\$million	Hhold	Person
Shop/ Retail	\$709.15	\$32,886	\$11,681	\$1,619.59	\$34,010	\$12,245
Other Retail	\$261.61	\$12,132	\$4,309	\$608.60	\$12,780	\$4,601
Total Retail Expenditure	\$970.8	\$45,018	\$15,990	\$2,228.2	\$46,790	\$16,846

It is evident from Table 1 that a very significant increase (130%) in the retail expenditure potential of the primary study area is projected between 2014 and 2036. Adequately catering for this expenditure increase through provision of sufficient additional retail floorspace will be a significant

⁶ MarketInfo 2014; MDS Market Data Systems Pty Ltd; May 2015.

challenge in the future, particularly as modelling of the current situation indicates that there is a significant undersupply of retail floorspace in the primary area at present.

Activity centres

Figure 7 on Page 11 illustrates the location of each of the existing and planned activity centres within the primary study area. A selection of these centres and an estimate of their Retail floorspace in 2016 and 2036 are listed in Table 2.

Table 2 Selected primary area activity centres and estimated retail floorspace (2016 and 2036)

ID	Centre Name	Hierarchy	2016			2036		
			Shop/ Retail n/a	Other Retail n/a	Total Retail n/a	Shop/ Retail n/a	Other Retail n/a	Total Retail n/a
BU-01	BUTLER DC	5 DIS	3,000	500	3,500	22,500	3,000	25,500
BU-02	BUTLER-02	8 OTH C	500	5,000	5,500	1,000	25,000	26,000
BU-03	BUTLER-03	8 OTH C	-	-	-	3,500	10,000	11,000
BU-8805	BUTLER NHD	6 NHD	5,000	2,500	7,500	5,000	2,500	7,500
BU-04	BUTLER-04	7 LOC	950	-	950	950	-	950
BU-05	BUTLER-05	7 LOC	950	-	950	950	-	950
BU-06	BUTLER-06	7 LOC	2,500	-	2,500	2,500	-	2,500
BU-07	BUTLER-07	7 LOC	-	-	-	850	-	850
8788	BALTIMORE PDE	7 LOC	540	360	900	540	360	900
JI-01	JINDALEE-01	6 NHD	-	-	-	3,000	500	3,500
JI-02	JINDALEE-02	7 LOC	-	-	-	300	-	300
JI-03	JINDALEE-03	7 LOC	-	-	-	500	-	500
JI-04	JINDALEE-04	7 LOC	500	-	500	500	-	500
AL-949	ALKIMOS SC	4 SEC	-	-	-	50,000	15,000	65,000
AL-02	ALKIMOS-02	6 NHD	-	-	-	6,000	500	6,500
AL-04	ALKIMOS-04	7 LOC	-	-	-	1,500	-	1,500
AL-05	ALKIMOS-05	7 LOC	-	-	-	1,500	-	1,500
AL-06	ALKIMOS-06	7 LOC	-	-	-	500	-	500
AL-07	ALKIMOS-07	7 LOC	-	-	-	500	-	500
AL-08	ALKIMOS SER-COMM	8 OTH C	-	-	-	1,000	20,000	21,000
EG-01	EGLINTON DC	5 DIS	-	-	-	15,000	3,500	18,500
EG-02	EGLINTON-02	6 NHD	-	-	-	10,000	500	10,500
EG-07	EGLINTON SER-COMM	8 OTH C	-	5,000	5,000	10,000	30,000	40,000
667	QUINNS VILLAGE NC	6 NHD	1,673	305	1,978	1,673	305	1,978
8789	MERRIWA PLAZA NC	6 NHD	3,304	620	3,924	3,304	620	3,924
8791	MINDARIE NC	6 NHD	1,610	200	1,810	1,610	200	1,810
672	CLARKSON SC	4 SEC	40,000	35,000	75,000	40,000	35,000	75,000
Total Floorspace (net lettable area)			60,527	49,485	110,012	184,677	146,985	331,662

Although the model includes all centres in both the primary and secondary study area, the list in Table 2 comprises only those centres within the primary area which, due to their location and/ or significance, could possibly be subject to some measurable degree of economic impact resulting from the proposed expansion of the Butler district centre. As indicated in the table, most of the listed centres are yet to be fully developed. The extent of the anticipated expansion in retail floorspace in the primary area between 2016 and 2036 is also evident in Table 2. The magnitude of this expansion reflects both a “catch-up” as the current floorspace under-supply is rectified, combined with keeping pace with the additional population growth that is anticipated in the area.

Modelling results

Because most of the centres that might possibly be affected by the Butler district centre expansion (including the main part of the district centre itself) are yet to be fully developed, the estimate of the impact of the proposed expansion on other centres is a theoretical future scenario, rather than a factual immediate one. For this reason, the potential impact of the proposed expansion simply takes the form of a straightforward calculated estimate of the modelled system at more-or-less full development in 2036 without the proposed expansion, compared to a scenario that includes the proposed expansion. This comparison is presented in Table 3.

Table 3: Butler district centre (Butler-03 section) 2036 retail turnover comparison with and without expansion scenarios

ID	Name	Sc1: 2036 No Expansion			Sc2: 2036 Expansion of Butler 03			2036 % Change (impact)		
		SHP	RET	TOT	SHP	RET	TOT	SHP	RET	TOT
		\$million	\$million	\$million	\$million	\$million	\$million	Prop.	Prop.	Prop.
BU-01	BUTLER DC	\$189.92	\$15.80	\$205.72	\$186.50	\$15.80	\$202.29	-1.8%	0.0%	-na
BU-02	BUTLER-02	\$7.19	\$134.03	\$141.22	\$7.08	\$134.03	\$141.10	-1.6%	0.0%	-na
BU-03	BUTLER-03	\$7.17	\$52.43	\$59.60	\$27.38	\$52.43	\$79.82	282.1%	0.0%	-na
BU-8805	BUTLER NHD	\$43.89	\$14.72	\$58.61	\$43.33	\$14.72	\$58.06	-1.3%	0.0%	-na
BU-04	BUTLER-04	\$7.77	\$0.00	\$7.77	\$7.63	\$0.00	\$7.63	-1.7%	-na	-na
BU-05	BUTLER-05	\$6.82	\$0.00	\$6.82	\$6.74	\$0.00	\$6.74	-1.3%	-na	-na
BU-06	BUTLER-06	\$20.26	\$0.00	\$20.26	\$20.02	\$0.00	\$20.02	-1.2%	-na	-na
BU-07	BUTLER-07	\$5.28	\$0.00	\$5.28	\$5.21	\$0.00	\$5.21	-1.4%	-na	-na
8788	BALTIMORE PDE	\$3.47	\$2.12	\$5.59	\$3.42	\$2.12	\$5.54	-1.3%	0.0%	-na
JI-01	JINDALEE-01	\$22.82	\$2.61	\$25.43	\$22.54	\$2.61	\$25.15	-1.3%	0.0%	-na
JI-02	JINDALEE-02	\$1.45	\$0.00	\$1.45	\$1.42	\$0.00	\$1.42	-1.7%	-na	-na
JI-03	JINDALEE-03	\$3.93	\$0.00	\$3.93	\$3.87	\$0.00	\$3.87	-1.5%	-na	-na
JI-04	JINDALEE-04	\$3.13	\$0.00	\$3.13	\$3.08	\$0.00	\$3.08	-1.6%	-na	-na
AL-949	ALKIMOS SC	\$329.06	\$70.05	\$399.11	\$325.60	\$70.05	\$395.65	-1.0%	0.0%	-na
AL-02	ALKIMOS-02	\$37.53	\$2.48	\$40.01	\$37.28	\$2.48	\$39.76	-0.7%	0.0%	-na
AL-04	ALKIMOS-04	\$8.12	\$0.00	\$8.12	\$8.04	\$0.00	\$8.04	-1.0%	-na	-na
AL-05	ALKIMOS-05	\$10.79	\$0.00	\$10.79	\$10.65	\$0.00	\$10.65	-1.2%	-na	-na
AL-06	ALKIMOS-06	\$3.70	\$0.00	\$3.70	\$3.64	\$0.00	\$3.64	-1.6%	-na	-na
AL-07	ALKIMOS-07	\$3.74	\$0.00	\$3.74	\$3.65	\$0.00	\$3.65	-2.6%	-na	-na
AL-08	ALKIMOS SER-COMM	\$4.46	\$78.55	\$83.01	\$4.38	\$78.55	\$82.93	-1.7%	0.0%	-na
EG-01	EGLINTON DC	\$96.13	\$17.29	\$113.42	\$95.61	\$17.29	\$112.90	-0.5%	0.0%	-na
EG-02	EGLINTON-02	\$51.59	\$2.13	\$53.71	\$51.30	\$2.13	\$53.43	-0.5%	0.0%	-na
EG-07	EGLINTON SER-COMM	\$62.72	\$124.56	\$187.28	\$62.30	\$124.56	\$186.86	-0.7%	0.0%	-na
667	QUINNS VILLAGE NC	\$12.25	\$1.91	\$14.16	\$12.15	\$1.91	\$14.06	-0.8%	0.0%	-na
8789	MERRIWA PLAZA NC	\$29.32	\$4.14	\$33.46	\$29.08	\$4.14	\$33.22	-0.8%	0.0%	-na
8791	MINDARIE NC	\$12.03	\$1.32	\$13.35	\$11.94	\$1.32	\$13.26	-0.7%	0.0%	-na
672	CLARKSON SC	\$317.68	\$226.70	\$544.38	\$316.11	\$226.70	\$542.81	-0.5%	0.0%	-na
Total Turnover (\$million)		\$1,302.21	\$750.83	\$2,053.04	\$1,309.96	\$750.83	\$2,060.79	-1.0%	0.0%	-na

It should be noted in relation to the centre turnover figures presented in Table 3, that they are calculations of each centre's relative economic "potential" based on the parameters used in the gravity model, which have been produced solely for urban planning purposes. Various qualitative and competitive aspects of activity centres are not fully accounted for in the model, and the actual economic performance of a centre will not necessarily accord with its geographic/ demographic/ economic potential as calculated by the model.

Precinct 'F' is (in effect) identified as centre "BUTLER-03" in Table 3. Although, as discussed previously in this report, Precinct 'F' is part of the district centre, it was modelled separately from the main centre to help assess the extent of the possible impact on the major district centre component west of the rail line. It should also be noted that the retail floorspace in BUTLER-03 was assumed for the purposes of the modelling to be the maximum that would be permitted under the proposed structure plan amendment. Given the nature of the role that retail is expected to play in Precinct 'F', reaching this maximum is by no means inevitable. Obviously if the maximum is not reached by 2036, then the theoretical impacts would be even lower than those presented in Table 3.

Increasing the assumed 2036 Shop/ Retail floorspace of Precinct 'F' from 1,000 sqm to 3,500 sqm naturally results in a more-or-less proportional increase in its turnover. However, as indicated in Table 3 the theoretical 'impact' will be negligible right across the board (remembering that the centres in the area will evolve with the assumed increase over time – there will not be a sudden, actual, negative impact in 2036). Calculated impacts range from -2.6% to -0.5%. The average overall negative impact on all centres combined would be 1%. This calculation of overall average impact excludes Butler-03 completely so that the positive "impact" it experiences does not feed into the overall average impact percentage affecting the other centres.

Conclusions (Impact Assessment)

Based on the activity centres modelling and associated analysis and impact assessment described above, it is reasonable to conclude that **there will not be any unacceptable economic impacts** on other centres within the study area resulting from the proposed increase in the potential permissibility of Shop/ Retail floorspace in Precinct 'F' of the Butler district centre.

APPENDIX

Description of the Activity Centres Model and 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 Hansen¹ to aid in the location of large new shopping centres in the Baltimore region. The model is expressed mathematically as follows:

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

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.

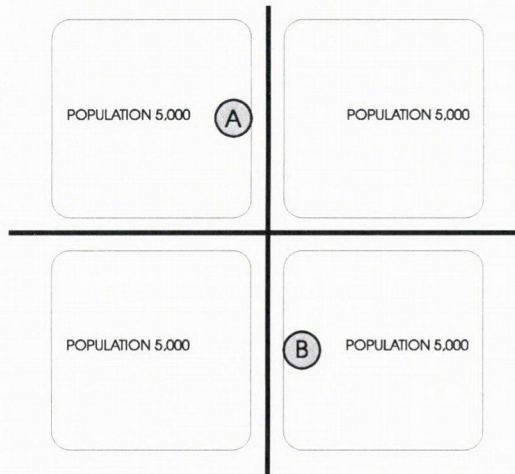
The measure of the distance between each residential zone and each shopping centre (**d**) is usually an estimate of the driving time in minutes. This estimate may be derived from measures of the straight line distances involved, or by distances along traffic routes. There is little difference in the 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.

BUTLER DISTRICT CENTRE (BLVD)

Lookup	ID	Type	Name	Hierarchy	SHP n/a	RET n/a	TOT n/a	SHP-\$Mil	PerSqm	RET-\$Mil	PerSqm	TOT-\$Mil	PerSqm	SHP-Pers	Sqm/Cap*	RET-Pers	Sqm/Cap*
3	BU-01	P	BUTLER DC	5 DIS	22,500	3,000	25,500	\$189.9	\$8,441	\$15.8	\$5,266	\$205.7	\$8,067	15,637	1.44	3,419	0.88
40	BU-02	P	BUTLER-02	8 OTH C	1,000	25,000	26,000	\$7.2	\$7,194	\$134.0	\$5,361	\$141.2	\$5,432	597	1.68	28,711	0.87
41	BU-03	P	BUTLER-03	8 OTH C	1,000	10,000	11,000	\$7.2	\$7,167	\$52.4	\$5,243	\$59.6	\$5,418	602	1.66	11,377	0.88
9	BU-8805	C	BUTLER NHD	6 NHD	5,000	2,500	7,500	\$43.9	\$8,777	\$14.7	\$5,890	\$58.6	\$7,815	3,577	1.40	3,156	0.79
23	BU-04	P	BUTLER-04	7 LOC	950	-	950	\$7.8	\$8,175	\$0.0	\$0	\$7.8	\$8,175	655	1.45	-	-
24	BU-05	P	BUTLER-05	7 LOC	950	-	950	\$6.8	\$7,183	\$0.0	\$0	\$6.8	\$7,183	569	1.67	-	-
25	BU-06	P	BUTLER-06	7 LOC	2,500	-	2,500	\$20.3	\$8,103	\$0.0	\$0	\$20.3	\$8,103	1,701	1.47	-	-
26	BU-07	P	BUTLER-07	7 LOC	850	-	850	\$5.3	\$6,213	\$0.0	\$0	\$5.3	\$6,213	451	1.88	-	-
16	8788	C	BALTIMORE PDE	7 LOC	540	360	900	\$3.5	\$6,417	\$2.1	\$5,900	\$5.6	\$6,210	293	1.84	463	0.78
12	JI-01	P	JINDALEE-01	6 NHD	3,000	500	3,500	\$22.8	\$7,608	\$2.6	\$5,220	\$25.4	\$7,267	1,854	1.62	546	0.92
32	JI-02	P	JINDALEE-02	7 LOC	300	-	300	\$1.4	\$4,824	\$0.0	\$0	\$1.4	\$4,824	120	2.49	-	-
33	JI-03	P	JINDALEE-03	7 LOC	500	-	500	\$3.9	\$7,859	\$0.0	\$0	\$3.9	\$7,859	329	1.52	-	-
34	JI-04	P	JINDALEE-04	7 LOC	500	-	500	\$3.1	\$6,259	\$0.0	\$0	\$3.1	\$6,259	256	1.95	-	-
2	AL-949	C	ALKIMOS SC	4 SEC	50,000	15,000	65,000	\$329.1	\$6,581	\$70.0	\$4,670	\$399.1	\$6,140	26,547	1.88	14,757	1.02
8	AL-02	P	ALKIMOS-02	6 NHD	6,000	500	6,500	\$37.5	\$6,254	\$2.5	\$4,961	\$40.0	\$6,155	3,032	1.98	522	0.96
19	AL-04	P	ALKIMOS-04	7 LOC	1,500	-	1,500	\$8.1	\$5,414	\$0.0	\$0	\$8.1	\$5,414	661	2.27	-	-
20	AL-05	P	ALKIMOS-05	7 LOC	1,500	-	1,500	\$10.8	\$7,192	\$0.0	\$0	\$10.8	\$7,192	878	1.71	-	-
21	AL-06	P	ALKIMOS-06	7 LOC	500	-	500	\$3.7	\$7,405	\$0.0	\$0	\$3.7	\$7,405	303	1.65	-	-
22	AL-07	P	ALKIMOS-07	7 LOC	500	-	500	\$3.7	\$7,486	\$0.0	\$0	\$3.7	\$7,486	307	1.63	-	-
39	AL-08	P	ALKIMOS SER-COMM	8 OTH C	1,000	20,000	21,000	\$4.5	\$4,459	\$78.5	\$3,927	\$83.0	\$3,953	366	2.73	16,557	1.21
4	EG-01	P	EGLINTON DC	5 DIS	15,000	3,500	18,500	\$96.1	\$6,409	\$17.3	\$4,939	\$113.4	\$6,131	7,786	1.93	3,676	0.95
10	EG-02	P	EGLINTON-02	6 NHD	10,000	500	10,500	\$51.6	\$5,159	\$2.1	\$4,252	\$53.7	\$5,115	4,181	2.39	452	1.11
42	EG-07	P	EGLINTON SER-COMM	8 OTH C	10,000	30,000	40,000	\$62.7	\$6,272	\$124.6	\$4,152	\$187.3	\$4,682	5,066	1.97	26,316	1.14
5	667	C	QUINNS VILLAGE NC	6 NHD	1,673	305	1,978	\$12.3	\$7,323	\$1.9	\$6,262	\$14.2	\$7,159	1,012	1.65	404	0.76
6	8789	C	MERRIWA PLAZA NC	6 NHD	3,304	620	3,924	\$29.3	\$8,874	\$4.1	\$6,673	\$33.5	\$8,526	2,456	1.35	923	0.67
7	8791	C	MINDARIE NC	6 NHD	1,610	200	1,810	\$12.0	\$7,473	\$1.3	\$6,599	\$13.4	\$7,376	964	1.67	267	0.75
1	672	C	CLARKSON SC	4 SEC	40,000	35,000	75,000	\$317.7	\$7,942	\$226.7	\$6,477	\$544.4	\$7,258	24,846	1.61	44,999	0.78

Dwelling Unit/ Population Projections

Primary Study Area						
Year	2016	2021	2026	2031	2036	ULT
Dwellings	23,842	30,306	36,705	42,659	47,639	50,435
Population	67,146	85,077	98,716	119,030	132,318	139,553

Data Sets (this sheet)

DW2036	SHP36	RET36
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Model Run Stats (primary area only)

Shop/Retail	NLA (sqm)	\$million /annum	\$/sqm /annum	Person (Equip.)	Sqm/ Capita*	Sqm/ Capita~
Regional	90,000	\$646.7	\$7,186	51,393	1.75	0.68
District	37,500	\$286.1	\$7,628	23,422	1.60	0.28
N'hood	30,587	\$209.4	\$6,847	17,075	1.79	0.23
Local	11,090	\$78.5	\$7,074	6,523	1.70	0.08
Other Com	13,000	\$81.5	\$6,273	6,630	1.96	0.10
Industrial	-	\$0.0	\$0	-	-	-
Total SHP	182,177	\$1,302.2	\$7,148	105,044	1.73	1.38

crosscheck OK OK OK

Other Retail	NLA (sqm)	\$million /annum	\$/sqm /annum	Person (Equip.)	Sqm/ Capita*	Sqm/ Capita~
Regional	50,000	\$296.7	\$5,935	59,756	0.84	0.38
District	6,500	\$33.1	\$5,090	7,095	0.92	0.05
N'hood	5,125	\$29.31	\$5,719	6,270	0.82	0.04
Local	360	\$2.1	\$5,900	463	0.78	0.00
Other Com	85,000	\$389.6	\$4,583	82,961	1.02	0.64
Industrial	-	\$0.0	\$0	-	-	-
Total RET	146,985	\$750.8	\$5,108	156,545	0.94	1.11

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TOTAL Retail	NLA (sqm)	\$million /annum	\$/sqm /annum	Sqm/ Capita*
Regional	140,000	\$943.5	\$6,739	1.06
District	44,000	\$319.1	\$7,253	0.33
N'hood	35,712	\$238.7	\$6,685	0.27
Local	11,450	\$80.6	\$7,037	0.09
Other Com	98,000	\$471.1	\$4,807	0.74
Industrial	-	\$0.0	\$0	-
Total RETAIL	329,162	\$2,053.0	\$6,237	2.49

crosscheck OK OK

* Derived from person equivalents attracted to centre
~ Derived from primary study area population projection alone

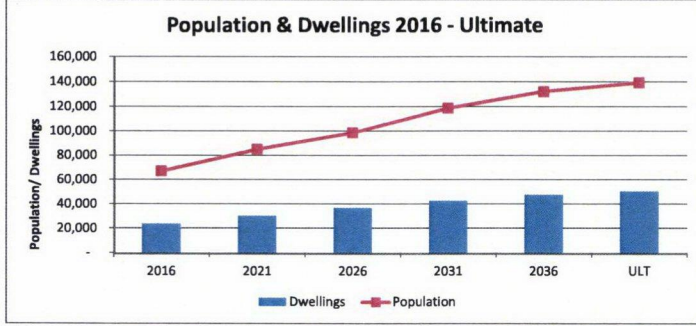
NOTE:
Totalling of Person Equivalents for Total Retail is a double-count of population and therefore not valid.

NOTE:
Centre names are a combination of DoP Complex names, LGA local names, and SUP database reference names. They may or may not accord with their commercial trading names.

NOTE:
This page displays the calculations of a mathematical "Retail Floorspace Potential" model, which is used to estimate retail floorspace needs and impacts for urban planning purposes.

Various qualitative aspects of centres are not fully accounted for in the model, and the actual economic performance of a centre will not necessarily accord with its theoretical potential as calculated by the model.

Although the model includes all centres in the total study area, the list above comprises only those centres within the Primary Study Area which, by virtue of their location and/or significance, could possibly be subject to some measurable degree of economic effect resulting from the proposed expansion of the Butler District Centre.



District & Higher Only	127,500	56,500	184,000	\$932.8	\$7,316	\$329.8	\$5,838	\$1,262.6	\$6,862	74,816	1.70	66,851	0.85
TOTAL (Primary Study Area)	182,177	146,985	329,162	\$1,302.2	\$7,148	\$750.8	\$5,108	\$2,053.0	\$6,237	105,044	1.73	156,545	0.94

2036 WITHOUT INCREASE

BUTLER DISTRICT CENTRE (BLVD)

Lookup	ID	Type	Name	Hierarchy	SHP n/a	RET n/a	TOT n/a	SHP-\$Mil	PerSqM	RET-\$Mil	PerSqM	TOT-\$Mil	PerSqM	SHP-Pers	Sqm/Cap*	RET-Pers	Sqm/Cap*
3	BU-01	P	BUTLER DC	5 DIS	22,500	3,000	25,500	\$186.5	\$8,289	\$15.8	\$5,266	\$202.3	\$7,933	15,344	1.47	3,419	0.88
40	BU-02	P	BUTLER-02	8 OTH C	1,000	25,000	26,000	\$7.1	\$7,076	\$134.0	\$5,361	\$141.1	\$5,427	587	1.70	28,711	0.87
41	BU-03	P	BUTLER-03	8 OTH C	3,500	10,000	13,500	\$27.4	\$7,824	\$52.4	\$5,243	\$79.8	\$5,912	2,280	1.53	11,377	0.88
9	BU-8805	C	BUTLER NHD	6 NHD	5,000	2,500	7,500	\$43.3	\$8,667	\$14.7	\$5,890	\$58.1	\$7,741	3,531	1.42	3,156	0.79
23	BU-04	P	BUTLER-04	7 LOC	950	-	950	\$7.6	\$8,034	\$0.0	\$0	\$7.6	\$8,034	643	1.48	-	-
24	BU-05	P	BUTLER-05	7 LOC	950	-	950	\$6.7	\$7,090	\$0.0	\$0	\$6.7	\$7,090	561	1.69	-	-
25	BU-06	P	BUTLER-06	7 LOC	2,500	-	2,500	\$20.0	\$8,008	\$0.0	\$0	\$20.0	\$8,008	1,680	1.49	-	-
26	BU-07	P	BUTLER-07	7 LOC	850	-	850	\$5.2	\$6,125	\$0.0	\$0	\$5.2	\$6,125	444	1.91	-	-
16	8788	C	BALTIMORE PDE	7 LOC	540	360	900	\$3.4	\$6,331	\$2.1	\$5,900	\$5.5	\$6,158	289	1.87	463	0.78
12	JI-01	P	JINDALEE-01	6 NHD	3,000	500	3,500	\$22.5	\$7,513	\$2.6	\$5,220	\$25.1	\$7,185	1,831	1.64	546	0.92
32	JI-02	P	JINDALEE-02	7 LOC	300	-	300	\$1.4	\$4,743	\$0.0	\$0	\$1.4	\$4,743	118	2.53	-	-
33	JI-03	P	JINDALEE-03	7 LOC	500	-	500	\$3.9	\$7,740	\$0.0	\$0	\$3.9	\$7,740	324	1.54	-	-
34	JI-04	P	JINDALEE-04	7 LOC	500	-	500	\$3.1	\$6,159	\$0.0	\$0	\$3.1	\$6,159	252	1.98	-	-
2	AL-949	C	ALKIMOS SC	4 SEC	50,000	15,000	65,000	\$325.6	\$6,512	\$70.0	\$4,670	\$395.7	\$6,087	26,259	1.90	14,757	1.02
8	AL-02	P	ALKIMOS-02	6 NHD	6,000	500	6,500	\$37.3	\$6,213	\$2.5	\$4,961	\$39.8	\$6,117	3,011	1.99	522	0.96
19	AL-04	P	ALKIMOS-04	7 LOC	1,500	-	1,500	\$8.0	\$5,360	\$0.0	\$0	\$8.0	\$5,360	655	2.29	-	-
20	AL-05	P	ALKIMOS-05	7 LOC	1,500	-	1,500	\$10.7	\$7,103	\$0.0	\$0	\$10.7	\$7,103	867	1.73	-	-
21	AL-06	P	ALKIMOS-06	7 LOC	500	-	500	\$3.6	\$7,286	\$0.0	\$0	\$3.6	\$7,286	298	1.68	-	-
22	AL-07	P	ALKIMOS-07	7 LOC	500	-	500	\$3.6	\$7,292	\$0.0	\$0	\$3.6	\$7,292	299	1.67	-	-
39	AL-08	P	ALKIMOS SER-COMM	8 OTH C	1,000	20,000	21,000	\$4.4	\$4,384	\$78.5	\$3,927	\$82.9	\$3,949	360	2.78	16,557	1.21
4	EG-01	P	EGLINTON DC	5 DIS	15,000	3,500	18,500	\$95.6	\$6,374	\$17.3	\$4,939	\$112.9	\$6,103	7,743	1.94	3,676	0.95
10	EG-02	P	EGLINTON-02	6 NHD	10,000	500	10,500	\$51.3	\$5,130	\$2.1	\$4,252	\$53.4	\$5,088	4,157	2.41	452	1.11
42	EG-07	P	EGLINTON SER-COMM	8 OTH C	10,000	30,000	40,000	\$62.3	\$6,230	\$124.6	\$4,152	\$186.9	\$4,671	5,031	1.99	26,316	1.14
5	667	C	QUINNS VILLAGE NC	6 NHD	1,673	305	1,978	\$12.1	\$7,261	\$1.9	\$6,262	\$14.1	\$7,107	1,003	1.67	404	0.76
6	8789	C	MERRIWA PLAZA NC	6 NHD	3,304	620	3,924	\$29.1	\$8,803	\$4.1	\$6,673	\$33.2	\$8,466	2,435	1.36	923	0.67
7	8791	C	MINDARIE NC	6 NHD	1,610	200	1,810	\$11.9	\$7,418	\$1.3	\$6,599	\$13.3	\$7,327	957	1.68	267	0.75
1	672	C	CLARKSON SC	4 SEC	40,000	35,000	75,000	\$316.1	\$7,903	\$226.7	\$6,477	\$542.8	\$7,237	24,717	1.62	44,999	0.78

Dwelling Unit/ Population Projections

Primary Study Area						
Year	2016	2021	2026	2031	2036	ULT
Dwellings	23,842	30,306	36,705	42,659	47,639	50,435
Population	67,146	85,077	98,716	119,030	132,318	139,553

Data Sets (this sheet)

DW2036	SHP36	RET36
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Model Run Stats (primary area only)

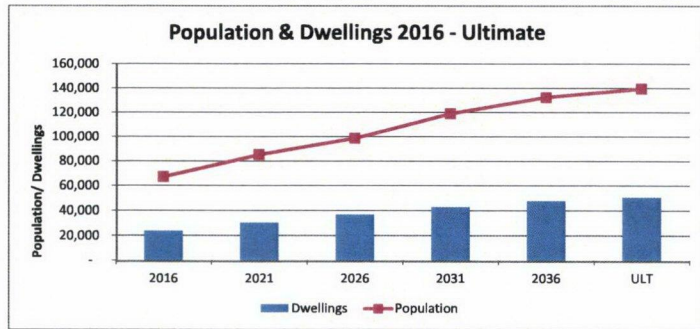
Shop/Retail	NLA (sqm)	\$million /annum	\$/sqm /annum	Person (Equiv.)	Sqm/ Capita*	Sqm/ Capita**
Regional	90,000	\$641.7	\$7,130	50,976	1.77	0.68
District	37,500	\$282.1	\$7,523	23,087	1.62	0.28
N'hood	30,587	\$207.6	\$6,788	16,925	1.81	0.23
Local	11,090	\$77.4	\$6,976	6,432	1.72	0.08
Other Com	15,500	\$101.1	\$6,526	8,258	1.88	0.12
Industrial	-	\$0.0	\$0	-	-	-
Total SHP	184,677	\$1,310.0	\$7,093	105,678	1.75	1.40
crosscheck	OK	OK		OK		

Other Retail	NLA (sqm)	\$million /annum	\$/sqm /annum	Person (Equiv.)	Sqm/ Capita*	Sqm/ Capita**
Regional	50,000	\$296.7	\$5,935	59,756	0.84	0.38
District	6,500	\$33.1	\$5,090	7,095	0.92	0.05
N'hood	5,125	\$29.31	\$5,719	6,270	0.82	0.04
Local	360	\$2.1	\$5,900	463	0.78	0.00
Other Com	85,000	\$389.6	\$4,583	82,961	1.02	0.64
Industrial	-	\$0.0	\$0	-	-	-
Total RET	146,985	\$750.8	\$5,108	156,545	0.94	1.11
crosscheck	OK	OK		OK		

TOTAL Retail	NLA (sqm)	\$million /annum	\$/sqm /annum	Sqm/ Capita**	NOTE:
Regional	140,000	\$938.5	\$6,703	1.06	Totaling of Person Equivalents for Total Retail is a double-count of population and therefore not valid.
District	44,000	\$315.2	\$7,163	0.33	
N'hood	35,712	\$236.9	\$6,635	0.27	
Local	11,450	\$79.5	\$6,943	0.09	
Other Com	100,500	\$490.7	\$4,883	0.76	
Industrial	-	\$0.0	\$0	-	
Total RETAIL	331,662	\$2,060.8	\$6,214	2.51	
crosscheck	OK	OK			

* Derived from person equivalents attracted to centre
 ** Derived from primary study area population projection alone

Although the model includes all centres in the total study area, the list above comprises only those centres within the Primary Study Area which, by virtue of their location and/or significance, could possibly be subject to some measurable degree of economic effect resulting from the proposed expansion of the Butler District Centre.



District & Higher Only	127,500	56,500	184,000	\$923.8	\$7,246	\$329.8	\$5,838	\$1,253.7	\$6,813	74,063	1.72	66,851	0.85
TOTAL (Primary Study Area)	184,677	146,985	331,662	\$1,310.0	\$7,093	\$750.8	\$5,108	\$2,060.8	\$6,214	105,678	1.75	156,545	0.94

NOTE:
 Centre names are a combination of DoP Complex names, LGA local names, and SUP database reference names. They may or may not accord with their commercial trading names.

NOTE:
 This page displays the calculations of a mathematical "Retail Floorspace Potential" model, which is used to estimate retail floorspace needs and impacts for urban planning purposes.
 Various qualitative aspects of centres are not fully accounted for in the model, and the actual economic performance of a centre will not necessarily accord with its theoretical potential as calculated by the model.

2036 WITH INCREASE