

HERITAGE ASSESSMENT AND IMPACT STATEMENT

*DEMOLITION OF EXISTING BOTTLE SHOP,  
CAPTAIN STIRLING HOTEL,  
80 STIRLING HIGHWAY NEDLANDS*

PREPARED FOR  
FABCOT PTY LTD  
REF:

*Date May 2012*

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## 1.0 Introduction

It is proposed to demolish the 'drive through bottle shop' at the Captain Stirling Hotel as part of a redevelopment plan for the whole of the site. The plan includes the retention of the Captain Stirling Hotel and new works to the rear of the site that is not the subject of this assessment.

The assessment is focused on the drive through bottle shop (1958), its condition, significance in the context of the hotel, and contribution to the streetscape, and whether or not its demolition could be supported following on from these findings.

## 2.0 Heritage Listings

The listings noted here are confined to the statutory ones.

### State Register

The Captain Stirling Hotel has yet to be assessed by the Heritage Council of Western Australia, though it is clear that the place is of interest to it, namely for its streetscape value, its association with the consolidation of the suburb and links with the development of motor transport, as a fine example of the Inter-War Mediterranean style, social value and its associations with Marshal Clifton and the Johnson family who developed a large number of hotels.

### Municipal Inventory

Captain Stirling Hotel is included at a Category B Management Level. With reference to the intent of this level of management, the inventory category states that Category B is....

Worthy of a high level of protection; to be retained and conserved; provide maximum encouragement to the owner under the City of Nedlands Town Planning Scheme to conserve the significance of the place. A more detailed Heritage Assessment/Impact Statement to be undertaken before approval given for any major redevelopment. Incentives to promote heritage conservation should be considered.

### TPS 2

Under the provisions of TPS2, Clause 5.9 affords protection to 'places of natural beauty and historic buildings and objects of historic or scientific interest provided the places are included in Appendix II. Changes to such a place require the City's consent.

Captain Stirling Hotel is not currently included in Appendix II of TPS 2.

## 3.0 Statement of Significance

According to the Municipal Heritage Inventory Place Record Form: -

The Captain Stirling Hotel has aesthetic, historic and social cultural heritage significance. The Captain Stirling Hotel is one of several building constructed in the Inter-War period along Stirling Highway, reflecting the development of the City (sic) of Nedlands and the growing importance of the motor vehicle.

The building is a fine example of the Inter-War Mediterranean style (sic). Its detailing presents a high standard of artistic excellence. The arcaded design has proved particularly suitable for the Perth suburban environment. Sufficient exterior fabric remains for the building to reveal its design while the intact fabric of the upper floor is a fine example of its type.

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The Captain Stirling Hotel has operated as a significant meeting place for members of the local community since its construction. The hotel is significant for its association with architects Marshal Clifton and Herbert Parry. Clifton rose to prominence in Western Australia through his development of a Mediterranean (sic) architectural style in the Inter-War Period.

The building is also important for its associations with the Johnson family, as one of their extensive property holdings in Western Australia and as part of their hotel chain.

In the first value, the reference should be to the consolidation of a suburb as it then was, rather than the City of Nedlands. Two mentions are made of the Inter-War Mediterranean style, when it would be more accurate to describe both the hotel itself and much of Clifton's work as being Inter-War Spanish Mission style.

There is no reference to the drive through bottle shop in the values, though it is noted in the documentation. There is no reference to Marshal Clifton being responsible for the design, but it is asserted that Bill Evans was the delineator in Marshal Clifton's office.

### 3.1 Description of the Place

The site of *Captain Stirling Hotel* extends between Florence Road and Stanley Street, along the south side of Stirling Highway, Nedlands. At this point, the land slopes down from the road towards the southern boundary of the site. Stirling Highway has a number of impressive buildings built in the 1930s including Windsor Theatre together with associated shops a block away to the west, and several contemporary blocks of flats and large residences. Development along Stirling Highway was consolidating at that time due to the increasing reliance on motor transport. The Stirling Highway streetscape in the vicinity is endowed with a number of buildings of similar age, set back and garden maturity. *Captain Stirling Hotel* sets the scene. The buildings are constructed in the same materials within a short time span, and provide a variety of styles that are related in time.

The hotel is set along the north side of the site at its western end. The eastern end contains a stand-alone drive-through bottle shop.

The main building is a two-storey brick and tile construction with steel framed windows. The building is rectangular, facing north, with its long axis lying east-west. The ground floor level of the Hotel is well below footpath level at the eastern end and well out of the ground at the Florence Road end due to the cross slope along the Highway frontage. The original approach and exit was via a curved drive from Stirling Highway leading to the main entrance.

The drive through bottle shop was added, to a design by Marshall Clifton's office, in the north east corner of the site in the year 1958. The delineation was by Bill Evans and the place was altered on a number of occasions from the 1960s onwards, with documented changes by Michael Patroni Pty Ltd in 1991 that saw one drive through lane closed, the coolroom expanded, an earlier coolroom removed and turned into display, new doors introduced into western wall, and the addition of a canopy.

The drive through bottle shop is set at an angle to the boundaries and once featured two drive through paths. It is a simple rectangular building with a butterfly roof. The plan form was driven by two cool rooms and their bottle bins and a cashpoint between them, and the car paths either side of the cashpoint. All of these planning features are no longer in place, other than the northern driveway. A rose garden that was located between the driveways remains in place.

The plan form now comprises the northern driveway, a new and large cool room to its south and a display area where the second driveway and coolroom once stood.

The external walls are painted Cardup bricks and are deteriorating a low level in part due to the fact that they have been painted. The original butterfly roof form has been retained and the asbestos cement sheeting replaced with metal decking. Deep timber fascias have deteriorated markedly. The soffits were to have been lined in pegboard, compressed

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fibreboard. This would have failed in a very short time and it is likely that the current lining boards were fixed in their place. The latter are in poor condition.

The north elevation was documented to have steel framed showcases and windows though it appears that these were constructed in timber to a carefully arranged pattern. The system has been obscured and damaged.

The west elevation now has one drive through, a centrally located door constructed in 1991, and the scars of the second drive through to the southern end of the wall. An awning has been constructed over the new door and a set of ice fridges located outside the wall alignment.

The southern wall was designed as a plain brick wall punctuated with four steel framed fixed glass windows and two sets of timber louvres set at low level, with a large scaled hopper and downpipe set at the centre of the wall. There is no evidence of the windows, though the louvres remain. A door has been introduced. Because the levels fall away towards the south, this part of the building is set on a battered stone revetment wall that was part of the original scheme.

Like the west elevation, the east elevation has one of the drive throughs blocked off, this time by doors. The kerbing to the blocked southern drive through remains in place.

The interior comprises the northern drive through, display fridges that now obscure the northern glazed wall. To the western end there is a cash desk and to the northern end a large contemporary cool room with display fronts. The floors are granolithic, walls painted brickwork and the pegboard-lined soffit is now fibreboard. A feature plasterboard detail that ran under the box gutter has been removed.

Overall the place has moderate to low authenticity and moderate integrity.

In its original form and detail the place had a degree of finesse in its design resolution, reflecting some post World War II preoccupations in the Perth Regional style, taking International style elements and giving them a local flavour. In its present form the aesthetic qualities the place might have possessed have been much diluted.

The proposed Stirling Highway Road widening, if realised, would necessitate the removal of both hotel and drive through bottle shop. It passes almost through the middle of both buildings.

A brief examination of hotels in the metropolitan area indicated that from the 1950s through to 2000 few inner city hotels had the capacity to include a drive through bottle shop facility. Conversely, suburban and some country towns did have the capacity. Of those examined, around two thirds developed drive through bottle shops attached to the main building offering staffing efficiency and better security for operating staff. The remainder of the sample including the Captain Stirling, Como, Leederville, and Subiaco hotels had remotely located drive through bottle shops. When developed, drive through bottle shops offered little in the way of display and reflected the needs of a much less sophisticated market.

With changes in drink driving laws, more widespread licencing and patterns of hospitality, bottle shops have had to compete in a different market and like the Captain Stirling Hotel, most have had to respond to the demand with significant physical changes to facilities.

Captain Stirling drive through bottle shop is representative of the remotely located type of drive through bottle shop.



### 3.2 Heritage Values

Heritage values			
Aesthetic	The place has limited aesthetic significance as a representative example of post World War II Perth Regional Style.		
Historic	The place reflects post World War II development of the drive through bottle shop and affirms the growth of car ownership and the adopting American ideas.		
Social	The place reflects changing purchasing habits.		
Scientific	----		
Heritage Attributes			
Rarity	----		
Representativeness	The place is representative post World War II Perth Regional style and changing pattern of purchasing arising from increase motor vehicle use.		
Integrity	The place continues to serve its function, albeit in a much modified form and retains a moderate degree of integrity.		
Authenticity	The place has a moderate to low degree of authenticity.		
Significance			
Exceptional	Considerable	Some	Limited or none
Comments:			
<i>The place has limited significance.</i>			

### 4.0 Statement of Heritage Impact

How does the proposed development impact on the heritage significance of the place with regard to the following criteria:	
Degree of change (positive and negative) on the place in light of its heritage significance.	The demolition of this place would have negligible impact on cultural heritage values in Nedlands.
Degree of permanent impact (irreversible loss of value) that the proposal is likely to have on the heritage significance of the place	Demolition will result in permanent loss of heritage significance, though as has been noted, its heritage significance is limited.
Compatibility with heritage building in terms of scale, bulk, height – the degree to which the proposal dominates, is integrated with, or is subservient to a heritage place	Not part of this assessment.
Compatibility with the streetscape and/or heritage area in terms of the siting, local architectural patterns, and the degree of harmonised integration of old and new.	Removal would have little or no impact on the streetscape.
Compatibility with heritage building in terms of the design solutions and architectural language such as refinement and finesse of detailing, texture, materials, finishes and quality of	Not part of this assessment

craftsmanship.	
Degree of impact on the important public views, vistas, landmarks, landscape features	Demolition would not result in any negative impact in respect of any of these elements.

**5.0 Recommendation**

- The degree of significance of the Captain Stirling Drive through Bottle Shop is limited and its streetscape value negligible. Council could reasonably consider and allow its demolition.
- If Council is prepared to allow demolition, an archive record should be prepared, with plans, photographs of each façade and each room as a condition of approval.



Captain Stirling drive through bottle shop viewed from the west. Griffiths Architects April 2012.





Captain Stirling drive through bottle shop north and west faces. Griffiths Architects April 2012



Captain Stirling drive through bottle shop south and east faces. Griffiths Architects April 2012





Captain Stirling drive through bottle shop drive through looking west. All original fittings and linings have been removed and replaced. Griffiths Architects April 2012



Captain Stirling drive through bottle shop drive through looking south. The coolroom and shop replaces the southern drive though. Griffiths Architects April 2012

**APPENDIX 4 – RETAIL SUSTAINABILITY ASSESSMENT**



## **Retail Sustainability Assessment**

### **Captain Stirling Village Hub (Scheme Amendment #197)**

Lot 1 Stirling Highway, Lots 21, 22 and 23 Florence Road and Lots 32 and 33 Stanley Street

Prepared for:

**Fabcot Pty. Ltd.**



By:

**MGA**  
TOWN PLANNERS

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Version	Prepared By	Date
Final	Jeff Malcolm	19 September 2012

## 1.0 Introduction

The retail modelling herein has been undertaken by MGA Town Planners to determine the impact of the establishment of a new supermarket, convenience shops and personal services on Lot 1 Stirling Highway, Lots 21, 22 and 23 Florence Road and Lots 32 and 33 Stanley Street, referred to herein as the subject land and also known as the Captain Stirling Hotel site.

The modelling undertaken incorporates the establishment of an additional 5,513m<sup>2</sup> of shop/retail floor space, including a supermarket having 3,849m<sup>2</sup> NLA, 1,662m<sup>2</sup> NLA of convenience shops / personal services. A total of 8,873m<sup>2</sup> of shop/retail floor space will be distributed between the subject land and the existing adjoining Local Neighbourhood Activity Centre in the Village Hub.

The retail modelling exercises undertaken determine trade impacts on competing activity centres based on the distribution of expenditure on all PLUC 5 shop/retail goods and services. The modelling assumes development at 2011 and tracks trade impacts to 2016.

The retail gravity modelling exercises undertaken demonstrate that the proposed additional PLUC 5 shop/retail floor space will result in no significant adverse economic impact from a local community benefit / access perspective. The following sections of this report discuss the relevant study area and its market, the existing framework of competing retail facilities; and a summary of results and observations.

*Refer Figure 1 – Aerial Site Plan*





NOTES:

North arrow



Subject Land



A4



Date: 24 April 2012  
Ref: 2705Schmidlauer St

All dimensions and areas subject to survey

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Figure 1  
AERIAL SITE PLAN

## **2.0 Local / Regional Context**

### **2.1 Regional Context**

The subject land is located approximately 5.2km south west of the Perth CBD and adjoins the Stirling Highway, which is identified as a Primary Regional Road under the Perth Metropolitan Region Scheme. The Stirling Highway serves as a significant movement corridor connecting residents within the localities of Cottesloe, Mosman Park, Peppermint Grove, Claremont and Nedlands to employment destinations within the Perth CBD, West Perth and Subiaco. The Subiaco town centre is located approximately 4.5km north - west of the subject land and the Claremont Secondary Activity Centre is located 2.2km to the west on Stirling Highway, functioning as a shopping centre having a regional level of attraction.

The Stirling Highway is therefore a corridor of regional significance, accommodating a number of employment, shopping and recreational opportunities. The Stirling Highway Activity Corridor Study (SHACS) being progressed by the Department of Planning; will result in the identification of additional employment and retail nodes and desirable locations for higher density residential development.

### **2.2 Local Context**

To the north, east, west and south there exists established medium and low density residential development in the suburbs of Nedlands, Crawley and Dalkeith.

The University of Western Australia is located 1.2km to the east in Crawley; and the QE2 Hospital is located 1.6km to the north east. The Claremont Showgrounds and Equestrian Centre are located 1.7km to the north - west and Kings Park is located 1.3km to the east. The Cottesloe Golf Course is located 3km to the north - west. Local residents therefore have the benefit of a number of high quality medical, recreational and educational facilities.

In addition, Stirling Highway features a range of commercial premises, including offices, showrooms, shops, restaurants and educational facilities within close proximity to the subject land. Local shopping facilities are dispersed throughout the locality, including restaurants, supermarkets, convenience retail and other local services.



### 3.0 Study Area

- 3.1 A trade area can be defined as: *“A geographically delineated region, containing potential customers for whom there exists a probability greater than zero of their purchasing a given class of products or services offered for sale by a particular firm or agglomeration of firms”* (David L. Huff). The retail gravity model defines the main trade area of the Village Hub as an output, along with the main trade area of all other centres identified, being the area from which approximately 80% - 85% of trade is drawn.
- 3.2 The subject land is located in the suburb of Nedlands and is located immediately east of a small Neighbourhood Activity Centre, separated by Florence Street. The existing centre accommodates a small IGA supermarket and shops. PLUC 5 retail floorspace is located immediately opposite the subject land on Stirling Highway and on sites between Mountjoy and Dalkeith Road having a total floor space area of 3,160m<sup>2</sup>, as recorded under the most recent WAPC Land Use and Employment Survey 2008.
- 3.3 The identified study area is shown in **Figure 2**, showing the extent of the study area from which expenditure is drawn for the purpose of the modelling exercises and the location of PLUC 5 shop/retail floorspace among competing activity centres. The study area acknowledges the prevailing pattern of urban development including competing centres, the local road network and regional connectivity.
- 3.4 **Figure 3** identifies the distribution of supermarket / grocery food retailing outlets.

**See Figure 2 – Retail Modelling Study Area and Centres**

**See Figure 3 – Supermarket / Grocery Retailing**

- 3.5 The study area accommodates all CD's within the entire City of Nedlands and Town of Claremont LGA's, in addition to a small area surrounding the University of Western Australia (UWA) located within the City of Subiaco.
- 3.6 The study area is bound by Stephenson Avenue, Bold Park and Hay Street to the north. To the south, the Swan River provides a natural boundary. To the east, the study area is identified by Kings Park, Hollywood Hospital, Selby Street and Railway Road. To the southwest, the study area is defined by the Town of Cottesloe and Shire of Peppermint Grove LGA boundaries. The study area extent is reflective of the functional role of the activity centre and sufficient to determine the effect of surrounding competing centres on the distribution of household expenditure.
- 3.7 The passenger railway line passes centrally through the study area in a north-east / south-west direction. Connectivity is relatively unconstrained and does not pose as a significant deterrent to accessibility for customers throughout the study area. It is noted that all supermarkets within the study area are located south of the railway line.

- 3.8 The weekly grocery and daily convenience shopping requirements of residents in the locality are served by a variety of local, neighbourhood, district and secondary activity centres. The study area itself includes only one Secondary Centre, being the Claremont Secondary Activity Centre located 2km west of the subject land, in addition to a range of Neighbourhood and Local Activity Centres.
- 3.9 The Floreat Forum District Activity Centre is located 4.6km to the north; and the Subiaco Secondary Activity Centre exists 4.0km to the north east. To the south west there exists the Cottesloe Town Centre.
- 3.10 A number of centres are identified and included in the modelling undertaken that are external to the study area, in addition to the two abovementioned. These external centres influence the level of visitation to activity centres within the study area, including the subject land.
- 3.11 Table 3 of SPP 4.2 identifies that Neighbourhood Activity Centres provide for daily and weekly household shopping needs, community facilities and a small range of other convenience services. In particular, Table 3 identifies that they may accommodate supermarket/s (more than one), convenience shops and personal services.

#### 4.0 Socio - Economic Characteristics

The following tables provide an overview of the socio-economic profile of residents within the study area, taken from the 2006 Census.

**Table 1 – Study Area Age Profile 2006**

Characteristic	Study Area %	PSD %
<b>Age Distribution (% of Population)</b>		
Aged 0 – 9	10.4	12.6
Aged 10 – 19	16.3	14.3
Aged 20 – 29	14.4	14.0
Aged 30 – 39	9.9	14.6
Aged 40 – 49	13.7	14.9
Aged 50 – 59	13.8	13.0
Aged 60 +	21.5	16.5

Table 2 – Study Area Socio-Economic Profile 2006

Characteristic	City of Nedlands	Town of Claremont	Crawley (University)	PSD
<b>Population (Persons) and % of Total Study Area Popn</b>	8,942 (28.7%)	20,335 (65.4%)	1835 (5.9%)	
<b>Weekly Income</b>				
Median Individual (14y+)	\$659	\$585	\$417	\$513
% variation from PSD median	+ 28.4%	+ 14.0%	-18.7%	-
Median Household	\$1,704	\$1,198	\$759	\$1,086
% variation from PSD median	+ 56.9%	+ 10.3%	-30.1%	-
Median Family	\$2,438	\$2,021	\$1,262	\$1,298
% variation from PSD median	+ 87.8%	+ 55.7%	- 2.77%	-
<b>Housing Status %</b>				
Fully Owned	41.5	39.6	14.8	29.6
Being Purchased	28.2	22.4	8.3	37.6
Rented	21.5	26.4	68.7	24.7
Other Tenure Type	2.3	2.8	0.0	0.9
Not Stated	6.5	8.7	8.2	7.2
Group Households	3.7	4.0	19.3	3.6
Lone Person Households	21.7	32.1	43.7	23.6
Family Households	69.4	56.7	37.0	67.2
<b>Median Monthly Home Loan</b>	\$2,058	\$1,800	\$1,485	\$1,300
<b>Family Characteristics</b>				
Couple Family With Children	54.2	39.9	29.2	45.8
Couple Family No Children	32.0	42.0	49.7	37.1
Other Families	2.3	2.9	13.0	1.9
One Parent Families	11.5	15.3	8.1	15.2

- The study area accommodates the entire Town of Claremont LGA, the entire City of Nedlands LGA area and a small area surrounding the University of Western Australia included in the City of Subiaco LGA area. These are depicted separately in Table 3, providing a comparison of socio-economic characteristics of the two LGA areas making up the majority of the study area.
- The small area surrounding the University of Western Australia features a high proportion of group and lone person households, predominantly accommodating students who have lower incomes and make up only 5.9% of the study area population. However, families make up approximately 37% of the small area adjacent the University, with incomes consistent with the Perth median.
- Home ownership within the study area is much greater than the proportion over the entire Perth Statistical Division (PSD), varying in the order of 10% above PSD levels for the majority of the study area. The number of homes being purchased is consequently lower than the corresponding PSD proportion by a similar proportion (10%). This suggests a higher potential level of discretionary spending outside of home loan and rent payments.



- The City of Nedlands features a higher proportion of couple families with children, exceeding the level identified in the PSD. The Town of Claremont however, features a higher proportion of couple families with no children and lone person households than the PSD proportions, also suggesting higher discretionary spending.
- Median family income within the City of Nedlands was over 87% higher than the PSD average. Similarly, families in the Town of Claremont had incomes over 55% higher than the PSD average.
- Employment is highly skewed to white collar professional and managerial roles, being 71% in Nedlands and 68% in Claremont.
- Persons within the study area are likely to be highly mobile and not restricted in terms of the retail facilities they choose to visit.

The study area may therefore be described as being very affluent; with residents predominantly in white collar occupations having high discretionary spending capacity.

## **5.0 Retail Hierarchy and Competitive Environment**

### **5.1 Activity Centres Policy for Perth and Peel 2010**

The Western Australian Planning Commission administers the Activity Centres Policy for Perth and Peel (SPP 4.2, October 2010), which guides the function, scale and design of commercial centres in the Perth Metropolitan Region. SPP 4.2 establishes a hierarchy of centres headed by the Perth CBD and followed by Strategic Metropolitan Centres, Secondary Centres, District Centres and Neighbourhood Centres.

**Table 4** below, is a copy of Table 3 in SPP 4.2, which summarises the hierarchy of centres. SPP 4.2 aims to ensure that commercial functions and uses are appropriate to each centre's position in the hierarchy and that people will have the benefit of adequate access to retail facilities.



**Table 3: Activity Centres Policy Hierarchy (From Table 3 of SPP - 4.2)**

**Centre Functions**

	Strategic Metropolitan Centres	Secondary Centres	District Centres	N'hood Centres
Main role / function	Strategic metropolitan centres are the main regional activity centres. They are multipurpose centres that provide a diversity of uses. These centres provide the full range of economic and community services necessary for the communities in their catchments.	Secondary centres share similar characteristics with strategic metropolitan centres but serve smaller catchments and offer a more limited range of services, facilities and employment opportunities. They perform an important role in the city's economy, and provide essential services to their catchments.	District centres have a greater focus on servicing the daily and weekly needs of residents. Their relatively smaller scale catchment enables them to have a greater local community focus and provide services, facilities and job opportunities that reflect the particular needs of the catchments.	Neighbourhood centres provide for daily and weekly household shopping needs, community facilities and a small range of other convenience services.
Transport connectivity and accessibility	Important focus for passenger rail and high frequency bus networks.	Important focus for passenger rail and/or high frequency bus network.	Focal point for bus network.	Stopping / transfer point for bus network.
Typical retail types	<ul style="list-style-type: none"> <li>• Department stores.</li> <li>• Discount department stores.</li> <li>• Supermarkets.</li> <li>• Full range of specialty shops.</li> </ul>	<ul style="list-style-type: none"> <li>• Department store/s.</li> <li>• Discount Department Stores.</li> <li>• Supermarkets.</li> <li>• Specialty Shops.</li> </ul>	<ul style="list-style-type: none"> <li>• Discount department stores.</li> <li>• Supermarkets.</li> <li>• Convenience goods.</li> <li>• Small scale comparison shopping.</li> <li>• Personal services.</li> <li>• Some specialty shops.</li> </ul>	<ul style="list-style-type: none"> <li>• Supermarket/s.</li> <li>• Personal services.</li> <li>• Convenience shops.</li> </ul>
Typical office development	<ul style="list-style-type: none"> <li>• Major offices.</li> <li>• State government agencies.</li> </ul>	<ul style="list-style-type: none"> <li>• Major offices.</li> <li>• Professional and business services.</li> </ul>	<ul style="list-style-type: none"> <li>• District level office development.</li> <li>• Local professional services.</li> </ul>	<ul style="list-style-type: none"> <li>• Local professional services.</li> </ul>

## 5.2 Competing Centres

The competing activity centres incorporated in the retail gravity modelling undertaken are identified below based on their position under the SPP 4.2 hierarchy. The centres are numbered according to **Figure 2**. The following list identifies centres located external to the study area; which are likely to have a significant impact on residents shopping trip patterns.

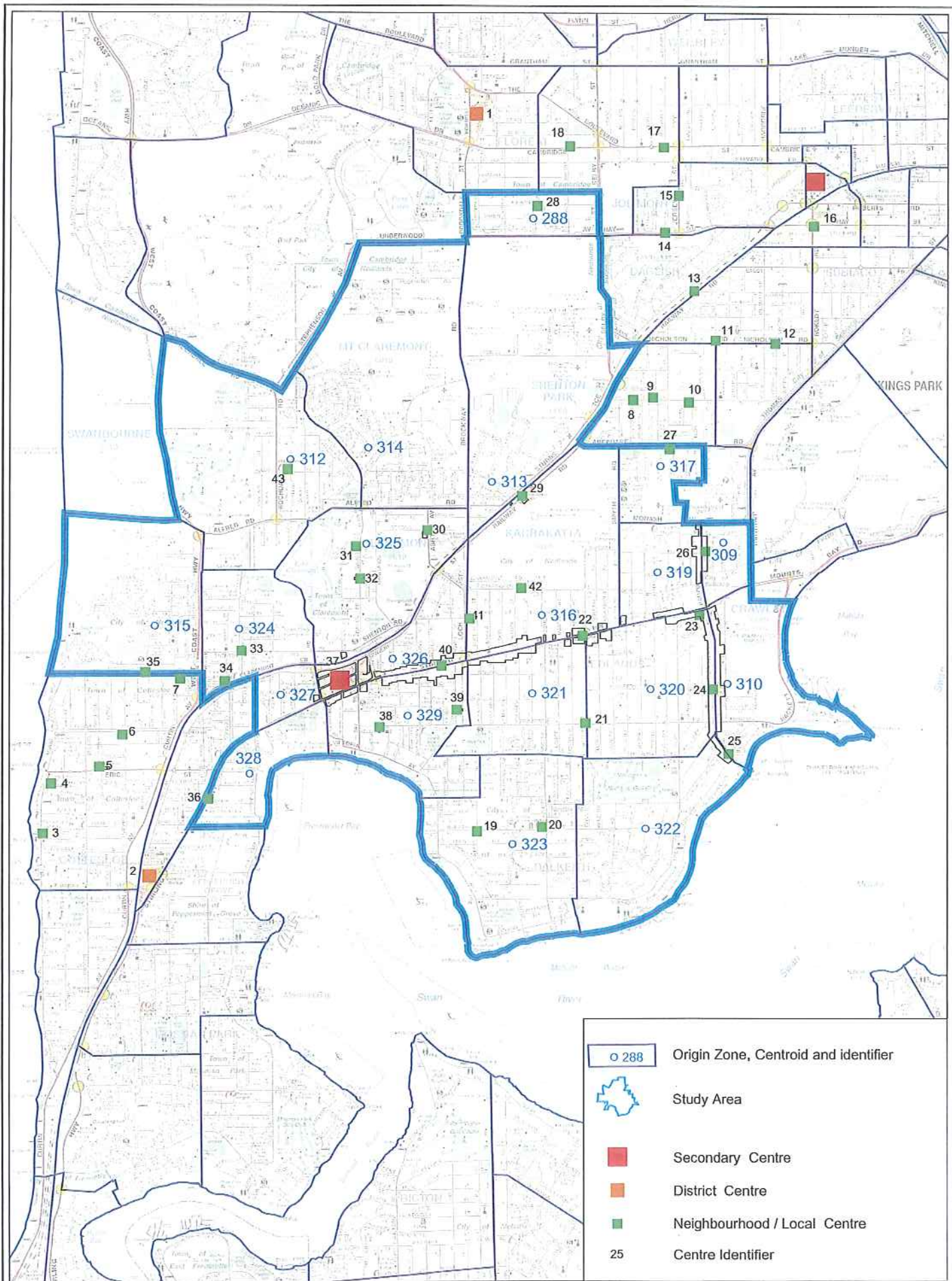
### Secondary Centres

- The Subiaco Secondary Activity Centre (Map reference 16) is located to the north east, externally to the study area. The centre comprised 53,554m<sup>2</sup> of PLUC 5 shop/retail floor space as at 2008 under the WAPC land use and employment survey. Grocery food retailing in the centre currently totals 8,111m<sup>2</sup> and includes the Centro development at Jolimont. Woolworths, Farmer Jacks and Coles supermarkets are present in Subiaco. Subiaco is essentially an extension of the Perth CBD and features a range of amenities including an oval; healthcare facilities and hospitals, specialty shops, three supermarkets, commercial offices and a train station.
- The Claremont Secondary Activity Centre (Map reference 37) is located within the study area. The centre comprised 25,451m<sup>2</sup> of PLUC 5 shop/retail floor space as at 2008 under the WAPC Land Use and Employment Survey. The Property Council Shopping Centres Directory (2011) identifies 29,337m<sup>2</sup> as at 2011, following redevelopment of Claremont Quarter Stage 1 and 2. Redevelopment of the Coles supermarket and David Jones was involved. Adding other retail floor space in main street areas results in a total of 43,664m<sup>2</sup>, which has been added to the gravity model. Grocery food retailing totalled 4,253m<sup>2</sup> under the 2008 WAPC survey; however an additional 450m<sup>2</sup> of floor space associated with the Coles refurbishment and an additional 1,050m<sup>2</sup> of food retailing, including Jack's Wholefood's and Groceries, is identified in the 2011 Shopping Centre Directory. This additional floor space brings grocery food retailing floor space to a total of 5,753m<sup>2</sup>.

### District Centres

- The Cottesloe District Activity Centre, incorporating 'The Grove' at Peppermint Grove (Map reference 2) is located to the south west and external to the study area. The centre comprised 16,684m<sup>2</sup> of PLUC 5 shop/retail floor space as at 2008 under the WAPC land use and employment survey, with grocery food retailing totalling 5,287m<sup>2</sup>, inclusive of a Woolworths supermarket.
- The Floreat Forum District Activity Centre (Map reference 1) is located to the north, external to the study area. The centre comprised 9,938m<sup>2</sup> of PLUC 5 shop/retail floor space and 5,645m<sup>2</sup> of grocery food retailing floor space as at 2008 under the WAPC land use and employment survey, inclusive of a Coles and a Woolworths supermarket.





NOTES: 25mm at scale

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0 750  
Metres  
Scale 1:30,000

Date: 16 April 2012  
Ref: 2703/Nadlands - Final/A3PB  
All dimensions and areas subject to survey

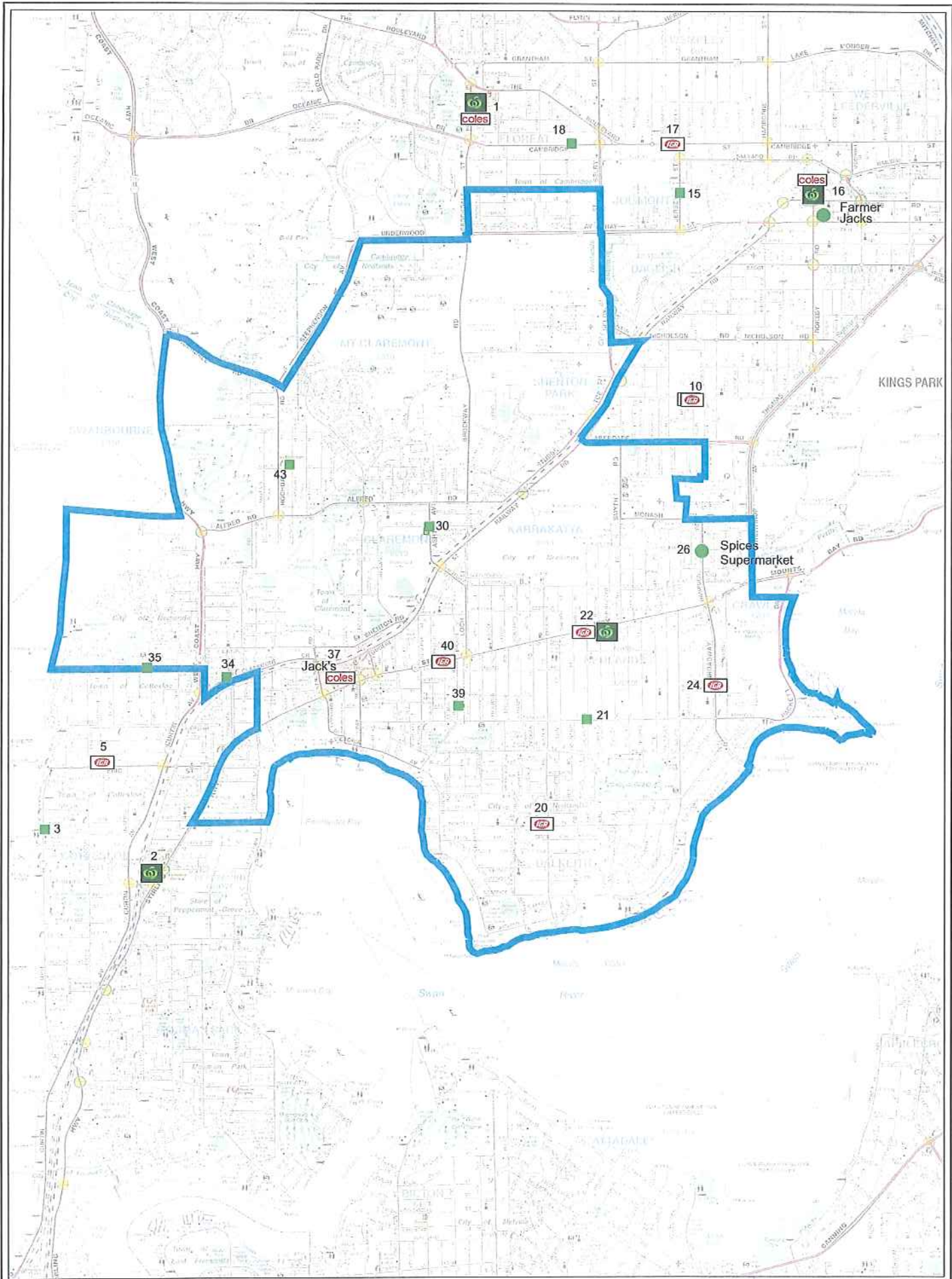
A3

Figure 2  
RETAIL STUDY AREA

### Neighbourhood and Local Activity Centres

- The Cottesloe Beach front includes a general store, takeaways and cafes (map reference 3) totalling 1,006m<sup>2</sup> of PLUC 5 shop/retail floor space as at 2008 under the WAPC land use and employment survey, with grocery food retailing totalling 90m<sup>2</sup> floor space. To the north, there exists the Ocean Beach Hotel; having 239m<sup>2</sup> of shop/retail floor space (map reference 4). These centres are located external to the study area.
- The local centre on Eric Street (map reference 5) included 1,135m<sup>2</sup> of PLUC 5 shop/retail floor space as at 2008 under the WAPC land use and employment survey, with grocery food retailing totalling 635m<sup>2</sup> of floor space. To the north, there exists a cafe having 100m<sup>2</sup> of shop/retail floor space (map reference 6). A retail node having 195m<sup>2</sup> of floor space exists on Airlie Street, Claremont (map reference 7). These centres are external to the study area.
- A delicatessen having 230m<sup>2</sup> of shop/retail floor space (map reference 35) and gourmet food takeaway having 70m<sup>2</sup> of shop/retail floor space (reference 7) are identified in the Town of Cottesloe.
- Three retail nodes are located immediately north of the study area on Onslow Road, referenced as 8, 9 and 10 on Figure 2, featured 595m<sup>2</sup>, 160m<sup>2</sup> and 3542m<sup>2</sup> of PLUC 5 shop/retail floor space respectively and the latter of these centres incorporates 787m<sup>2</sup> of grocery (food/non-food) retailing floor space inclusive of an IGA supermarket.
- Two local centres are located on Nicholson Road (map references 11 and 12), including 533m<sup>2</sup> and 565m<sup>2</sup> of PLUC 5 shop/retail floor space respectively.
- The local centres, numbered 13 – 15 on Figure 2, included 192m<sup>2</sup>, 253m<sup>2</sup> and 1,012m<sup>2</sup> of PLUC 5 Shop/retail respectively. Of these three local centres, a delicatessen being 80m<sup>2</sup> is located at map reference 15.
- The local centres at map references 17 and 18 featured 6,005m<sup>2</sup> and 1,474m<sup>2</sup> of PLUC 5 shop/retail floor space respectively. Of this PLUC 5 total, 2,085m<sup>2</sup> and 411m<sup>2</sup> of grocery floor space exists at local centres 17 and 18 respectively, including an IGA supermarket having an area of 2,085m<sup>2</sup> at local centre 17.
- Two local centres are located on Waratah Road, Dalkeith (map references 19 and 20), including 630m<sup>2</sup> and 2,255m<sup>2</sup> of PLUC 5 shop/retail floor space respectively. A 512m<sup>2</sup> IGA supermarket is located at map reference 20, and total food retailing of 630m<sup>2</sup>.
- A shop exists on Dalkeith Road (map reference 21) that is 90m<sup>2</sup> in area.





NOTES:

25mm at scale

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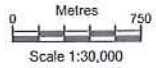


Figure 3  
SUPERMARKET / GROCERY RETAILING

A3



Date: 24 April 2012  
Ref: 2703/Nedlands - Final/A3 Supermarkets  
All dimensions and areas subject to survey



- The subject land accommodates 300m<sup>2</sup> of shop/retail floor space in the existing Captain Stirling Hotel and adjoining liquor store. The existing centre adjacent the subject land and other sites within the vicinity of the subject land accommodate 3,160m<sup>2</sup> of PLUC 5 shop/retail floor space. Of this, 870m<sup>2</sup> of grocery retailing floor space exists, including a 700m<sup>2</sup> IGA store.
- The retail outlets at the corner of Stirling Highway and Broadway (map reference 23), accommodates restaurants, cafes and takeaway outlets totalling 1,676m<sup>2</sup>.
- The neighbourhood centre on Broadway (map reference 24), accommodates shop/retail floor space totalling 4,050m<sup>2</sup>. Total grocery retailing amounts to 1,392m<sup>2</sup>, inclusive of an IGA store being 757m<sup>2</sup> in area.
- The retail node at the bottom of Broadway (map reference 25), includes 1,130m<sup>2</sup> of shop/retail floor space, including takeaways, liquor sales, restaurants and cafes.
- The neighbourhood centre on Hampden Road (map reference 26), accommodates 7,092m<sup>2</sup> of shop/retail floor space and 450m<sup>2</sup> of grocery retailing, being a 'Spices Supermarket'.
- The local centre at Croyden Road (map reference 27), accommodates 155m<sup>2</sup> of shop/retail floor space.
- The local centre located on Kirwan Street, Floreat (map reference 28) features only 75m<sup>2</sup> of PLUC 5 shop/retail floorspace. The Commercial Strategy identifies a potential for 150m<sup>2</sup>, which has been modelled.
- The local centre on Railway Road (map reference 29) features 160m<sup>2</sup> of shop/retail floor space.
- The local centre on Ashton Avenue (map reference 30) features 479m<sup>2</sup> of shop/retail floor space, including 200m<sup>2</sup> associated with grocery retailing.
- The local centre on Davies Road (map reference 31) features 394m<sup>2</sup> of shop/retail floor space.
- The local centre positioned further south on Davies Road (map reference 32) features 195m<sup>2</sup> of shop/retail floor space.
- The local centre on Shenton Road (map reference 33) features 280m<sup>2</sup> of shop/retail floor space.
- The neighbourhood centre on Claremont Crescent (map reference 34) features 1,328m<sup>2</sup> of shop/retail floor space, including 435m<sup>2</sup> associated with grocery retailing.

- The local centre on North Street (map reference 35) has 230m<sup>2</sup> of shop/retail floor space associated with grocery retailing. The Nedlands local commercial strategy identifies a total potential of 460m<sup>2</sup> of PLUC 5 floor space, which has been modelled.
- The local centre on North Street (map reference 36) has 420m<sup>2</sup> of shop/retail floor space.
- The local centre on Railway Road (map reference 38) has 80m<sup>2</sup> of shop/retail floor space.
- The local centre on Ashton Avenue (map reference 39) has 50m<sup>2</sup> of shop/retail floor space.
- Those commercial complexes on Stirling Highway east of Claremont Secondary Centre (map reference 40) features 13,287m<sup>2</sup>, including 490m<sup>2</sup> of shop/retail floor space associated with the Nedlands IGA Supa Value.
- The local centre on Loch Street (map reference 41) features 70m<sup>2</sup> of shop/retail floor space.
- The local centre on Carrington Street (map reference 42) features 740m<sup>2</sup> of shop/retail floor space.
- The local centre on Asquith Street (map reference 43) is identified as having the capacity to accommodate 1,100m<sup>2</sup> of PLUC 5 shop retail floor space, which has been modelled. There is currently 196m<sup>2</sup> of grocery food retailing floor space at this site, including a delicatessen and patisserie.

*Data Source:*

1. *WAPC Land Use and Employment Survey 2008 Perth Metropolitan Region:*
  - a. *PLUC 5 Total Floorspace In Survey Development Areas By Planning Land Use Category Extracted On 23 November 2010.*
  - b. *Grocery Total - Floorspace For Trade Names In Survey Development Areas By Planning Land Use Category – Selected WASLUCS Extracted On 13 April 2012.*

## 6.0 Retail Gravity Model

### 6.1 Description

The retail gravity model forecasts customer choice for different retail centres, resulting from the distribution of shopping floor space and the nature of the transport network linking households to retail centres.

The gravity model assumes that shoppers are more likely to use shopping centres which are located closer to their homes, rather than use centres that are further away. However, the model also accommodates the potential for shoppers to travel to other competing centres further away through bypassing smaller shopping centres, particularly to visit larger centres, as in a real world situation.

The model determines a trade area for each activity centre simultaneously, based on the probability of visitation to each centre from each origin zone in the study area. The gravity model assumes that patronage from a given origin zone to a certain shopping centre, is proportional to a product of the size measure of the centre and the travel time between the origin zone to the centre.

$$S_{ij} = O_i \frac{A_j (\exp^{-\beta T_{ij}})}{\sum_j A_j (\exp^{-\beta T_{ij}})}$$

The modelling undertaken involved use of the above formula, where:

- $S_{ij}$  = the proportion of population or \$ household expenditure attracted from origin zone  $i$  to centre  $j$ ;
- ' $O$ ' = population in zone  $i$ ;
- ' $A$ ' = is a measure of centre size;
- ' $T$ ' = travel time from each origin zone to each shopping centre; and
- ' $\beta$ ' = the gravity parameter.

In summary, the model estimates the level of expenditure associated with each shopping centre modelled, based on the distribution of the population and their travel times to each shopping centre. The resulting estimate of expenditure in a centre may be divided by the floor area to determine turnover.



## 6.2 Methodology / Data Inputs

### 6.2.1 PLUC 5 Floorspace Modelled

The scope of the RSA involved modelling total PLUC 5 shop/retail floor space within and surrounding the study area. Total PLUC 5 shop/retail floorspace is listed in Table 6 below. This data was extracted by the Department of Planning (DoP) for the purposes of this study.

The study area incorporates a large proportion of linear commercial development on the Stirling Highway and Broadway. The modelling process involved the clustering of floor space to identify centres for modelling purposes. Where floor space has been clustered, locations have been determined consistent with the City's current Commercial Strategy (2000), which also involved the use of a similar retail gravity model.

All PLUC 5 shop/retail floorspace in competing retail facilities, both within the study area and external to the study area have been incorporated into the model, as identified on Figure 2 and Table 4 below.

The modelling excludes the PLUC 5 shop/retail floor space identified within UWA on the basis that this retailing serves visiting students. The model is based on expenditure at retail facilities in the study area by local residents only. The model makes no assumption for expenditure by students attending the University at local retail facilities; or local residents spending at University food outlets and shops.

**Table 4:**

WA Planning Land Use Category 5 (PLUC 5) - Shop/Retail: (WASLUCS and WASLUC Description)

5694 ACCESSORIES RETAIL NEC	5724 ELECTRONIC EQUIPMENT AND PARTS RETAIL	5693 KNITTING WOOL AND ACCESSORIES RETAIL
5946 ADULT PRODUCTS - RETAIL	5691 FABRIC SHOP AND DRESSMAKING ACCESSORIES RETAIL	5997 LEATHER GOODS AND SADDLERY - RETAIL
5931 ANTIQUES - RETAIL	5954 FIREARMS - RETAIL	5921 LIQUOR - RETAIL
6233 BEAUTY SALONS	5422 FISH AND SEAFOODS - RETAIL	5713 MANCHESTER GOODS AND SOFT FURNISHINGS - RETAIL
5952 BICYCLES - RETAIL	5981 FLORISTS - RETAIL	5421 MEATS - RETAIL
5943 BOOKSELLERS	5661 FOOTWEAR - RETAIL	5611 MEN'S AND BOYS' CLOTHING - RETAIL
5461 BREAD AND CAKE STORES	6496 FOOTWEAR REPAIR SERVICES	6231 MEN'S HAIRDRESSERS
5961 BUSINESS AND COMPUTING EQUIPMENT	5431 FRUITS AND VEGETABLES - RETAIL	6398 MOTION PICTURE DISTRIBUTION AND SERVICES
5991 CAMERAS AND PHOTOGRAPHIC SUPPLIES - RETAIL	5692 FUR AND LEATHER CLOTHING RETAIL	5722 MUSIC AND MUSICAL INSTRUMENTS - RETAIL
6391 CLOTHING HIRE	5719 FURNITURE AND HOME FURNISHINGS AND EQUIPMENT RETAIL NEC	5941 NEWSAGENTS
5631 COMBINED MEN'S & WOMEN'S CLOTHING STORES - RETAIL	5331 GENERAL MARKETS	5499 OTHER RETAIL FOOD TRADE NEC
5962 COMPUTER SOFTWARE - RETAIL	5322 GENERAL MERCHANDISE - RETAIL	5999 OTHER RETAIL TRADE NEC
5412 CONFECTIONERS AND TOBACCONISTS	5945 GIFTS, NOVELTIES & SOUVENIRS-RETAIL	5995 PETS AND PET SUPPLIES - RETAIL
5944 CRAFT AND ART SUPPLIES - RETAIL	5492 HEALTH FOODS	5911 PHARMACIES, CHEMISTS
5491 DELICATESSEN	5721 HOUSEHOLD APPLIANCES - RETAIL	6221 PHOTOGRAPHIC SERVICES
5321 DEPARTMENT STORES - RETAIL	0003* INTERNET CAFE	5811 RESTAURANTS, CAFES AND FUNCTION CENTRES
5341 DUTY FREE STORES	5714 KITCHENWARE - RETAIL	5932 SECONDHAND MERCHANDISE - RETAIL
5992 SHEEPSKINS RETAIL	5942 STATIONERS	5971 WATCHMAKERS AND JEWELLERS - RETAIL
5951 SPORTING GOODS AND TROPHIES - RETAIL	5411 SUPERMARKETS AND GROCERS	6234 WEIGHT REDUCING SALONS
0008* SPORTS STORE - CLOTHING/EQUIPMENT ETC	5441 TAKE AWAY FOOD AND MILK BARS	5621 WOMEN'S, GIRLS' AND INFANTS' WEAR STORES - RETAIL
6232 WOMENS HAIRDRESSERS (INCLUDING UNISEX)	5953 TOYS AND HOBBIES - RETAIL	

**Table 5: PLUC 5 Grocery WASLUCS**

WASLUC CODE	WASLUC DESCRIPTION
5411	Supermarkets
5412	Confectioners and Tobacconists
5421	Meats Retail
5422	Fish and Seafoods Retail
5431	Fruits and Vegetables Retail
5441	Milk Bars
5451	Milk Vendors
5461	Bread and Cake Stores
5491	Delicatessen
5492	Health Foods
5499	Other Retail Food Trade

**Table 6: Floorspace Data**

Centre / Location	Map Ref (Fig. 10)	Internal / External to Study Area	Floorspace PLUC 5 (m <sup>2</sup> )	Floorspace Grocery (m <sup>2</sup> ) (WASLUCS 5411, 5412, 5421, 5422, 5431, 5451, 5461, 5491, 5492 5499)	Supermarket (m <sup>2</sup> ) (WASLUC 5411)
Floreat Forum	1	External	9938	5645	5322
Cottesloe TC	2	External	16684	5287	2696
104 Marine Parade	3	External	1006	90	
140 Marine Parade	4	External	239		
150 Broome St	5	External	1135	665	665
303 Marmion Street	6	External	100		
16 North Street	7	External	70		
81 Onslow Road	8	External	595		
289 Onslow Road	9	External	160		
200 Onslow Road	10	External	3542	787	642
205 Nicholson Road	11	External	533		
93 Nicholson Road	12	External	565		
289 Hammersley Road	13	External	192		
30 Cardigan Terrace	14	External	253		
98 Jersey Street	15	External	2315	80	
Subiaco TC	16	External	53554	8111	6932
336 Cambridge Street	17	External	6005	2085	1975
444 Cambridge Street	18	External	1474	411	
133 Waratah Ave	19	Internal	560		
80A Waratah Ave	20	Internal	2255	630	512
123 Dalkieth Road	21	Internal	290	90	
<b>Subject Centre</b>	22	Internal	3160 (8873 after)	870 (4719 after)	700 (4549 after)
7 Broadway	23	Internal	1676		
82 Broadway	24	Internal	4050	1392	757
166 Broadway	25	Internal	1130		
31 Hampden Road	26	Internal	7092	450	400
53 Aberdare Road	27	Internal	155		
47 Kirwan Street	28	Internal	75		
81 Railway Road	29	Internal	160		
8 Ashton Avenue	30	Internal	479		
63 Davies Road	31	Internal	394		
21 Davies Road	32	Internal	195		
93 Shenton Road	33	Internal	280		
129 Claremont Cres	34	Internal	1328	435	
63 North Street	35	External	460	230	
414 Stirling Highway	36	External	420		
Claremont TC	37	Internal	43664	5753	4050
19 Pennell Road	38	Internal	80		
29 Bay Road	39	Internal	50	50	
223B Stirling Highway	40	Internal	13287	490	490
30 Loch Street	41	Internal	70		
Carrington	42	Internal	740		
Asquith	43	Internal	1100	190	

Source:

1. WAPC Land Use and Employment Survey 2008 Perth Metropolitan Region:
  - a. PLUC 5 Total - Floorspace In Survey Development Areas By Planning Land Use Category Extracted On 23 November 2010.
  - b. Grocery Total - Floorspace For Trade Names In Survey Development Areas By Planning Land Use Category - Selected 'Food' WASLUCS Extracted On 13 April 2012.



## 6.2.2 Population

The population within the identified study area has been identified for the years 2011 and 2016 by the Department of Planning and utilised for the purpose of the modelling exercises undertaken. The dwelling projections are provided in the form of Main Roads Transport Zones (MTZ) and indicate a dwelling count of 14,621 within the study area as at 2011 and rising to 15,410 by 2016.

A summary of population data for the study area is summarised as follows:

**Table 7: Population Data**

Area	Household Projections 2011 DoP	Households Projections 2016 DoP	Households 2011 ABS	Population Projections 2011 DoP	Population Projections 2016 DoP	Population 2011 ABS
Study Area	14,621	15,410	14,382	33,235	34,560	32,743
MTA	6,861	6,970	6,689	16,080	16,102	15,976

*Source: Department of Planning - Population and Dwelling Projections (MTZ), ABS Census 2011*

For the purpose of the gravity modelling undertaken, household projections by MTZ prepared by the DoP have been utilised.

## 6.2.3 Driving Travel Time

Travel time is an important factor impacting on the relative attractiveness of a centre and a measurement taken into account in the retail gravity model. The shortest travel time through the road network from the centroid of each origin zone (MTZ) to the location of each shopping centre is provided as an input to the model, this data is obtained through use of Main Roads travel time data, (between MTZ's) and refined / compared with Google Maps travel time data to coincide with shopping centre locations.

#### 6.2.4 Household Expenditure

Household expenditure was estimated by MDS Market Data Systems, based on the Western Australian PLUC 5 shop/retail goods and services categories. Grocery expenditure was also estimated by MDS Market Data Systems based on the WASLUC categories mentioned in Table 5 above, which excludes liquor.

The micro-simulation model run by MDS Market Data Systems is based on the ABS Household Expenditure Survey (HES) and census population data; which is updated through the use of data informing spending behaviour such as Australian National Accounts and Taxation Statistics. Various socio-economic characteristics evident within separate census collector districts are also taken into consideration. The data product is based on 2009/2010 dollars, i.e. (June 2009 – June 2010).

In addition, household expenditure was estimated by MDS for take-home grocery items. Various items sold within supermarkets are excluded from this take – home grocery expenditure estimate, such as stationary, clothing, magazines, newspapers, books, DVD's, glassware, cutlery and cooking utensils, electronic goods such as DVD players and televisions. This is because such goods are attributed to other categories of PLUC 5 expenditure. On this basis, the expenditure estimate as it relates to grocery retailing is understated.

The following provides a summary of *median* household and per capita expenditure.

**Table 8: Expenditure / Household (\$2010) – Study Area**

	Household PLUC 5	Household Grocery WASLUCS	Per Capita PLUC 5	Per Capita Grocery WASLUCS
Median Study Area	\$34,232.13	\$12,873.35	\$13,022.29	\$4,908.03
Median MTA	\$38,358.59	\$14,383.75	\$13,551.37	\$4,978.09

MDS Market Data Systems

MGA Town Planners

## **7.0 Demand and Impact Assessment**

### **7.1 Preamble**

This section identifies the results of the modelling and the trade impacts on competing centres.

### **7.2 Proposed Development Assumptions**

Based on the nature of the planning and approvals processes associated with the proposal, including the scheme amendment and subsequent development application and building licence; it is estimated that the proposed development will be established during 2015. On this basis, trade impacts are also identified as at 2014/2015.

### **7.3 General Economic Impacts**

The proposed expansion of the Nedlands Village Hub is likely to result in a range of economic impacts, such as the following:

- Improved range of retailing for local consumers. The development will improve local provision and alternatives for local residents who are limited in their choice of convenient full scale supermarkets.
- The proposed development will significantly improve the level of attraction and amenity of the Nedlands Village Hub; and encourage local residents to shop locally, as opposed to visiting alternative retail outlets in adjoining local authority areas.
- The proposal will result in the creation of additional local jobs, both in construction and for local residents once the expansion is completed. As discussed previously, the proposal will aid in achieving required employment targets for the Perth central sub-region. Based on a rate of 50 employees per 1000m<sup>2</sup> associated with the supermarket and 60 employees per 1000m<sup>2</sup> for the remaining shops, it is estimated the development will provide 250 – 280 permanent and part time jobs.
- Although a number of economic benefits are identified, trade impacts on competing centres are also to be considered and are analysed in Section 6.8.7.
- The gravity modelling indicates that following expansion, the Village Hub will service a population of approximately 15,000 persons identified for Neighbourhood Activity Centres under Table 3 of SPP4.2.
- The MTA population is approximately 16,000 people however this is only due to the size and shape of the origin zones. The probability mapping provides a more accurate indication as to the proportion of shopper visiting the site.



#### 7.4 Limitations and Considerations

- This assessment identifies the extent to which the proposed development may affect consumer behaviour, but cannot reasonably account for all consumer choice and preference. In addition, the modelling cannot take into consideration qualitative matters such as physical amenity, store range or customer service as matters influencing attraction.
- Consumers choose from a range of retail outlets for different reasons and shopping facilities do not serve a single catchment. Some shoppers prefer one brand of supermarket over another, or a greater range, or the convenience of access may significantly influence other shoppers.
- A definitive trade impact on any one retailer cannot reasonably be identified, given that retailers will normally respond to their competitive environment, in a way that either reduces or avoids trade impacts.
- Further, sales value will increase over time, as demonstrated through the reduced trade impacts between 2011 and 2016 modelled. The modelling undertaken is based on sales in \$2010 dollars and therefore the turnover in \$/m<sup>2</sup> will be greater by 2014/2015 when the development is established.
- The likely trade impacts identified below, when assessed against the positive economic outcomes resulting from the proposal and above limitations and considerations; are within an acceptable range of tolerance.

## 8.0 PLUC 5 Model, Main Trade Area and Outputs

### 8.1 Scenarios

The PLUC 5 model includes all activity centres identified both within an external to the study area to determine the distribution of household expenditure attributed to the PLUC 5 category, among all corresponding floorspace.

- **Scenario 1** – The first scenario involved establishing a benchmark based on the current distribution of expenditure among all centres as at 2011.
- **Scenario 2** – The second scenario involved assuming an expansion of 5,713m<sup>2</sup> in the Village Hub as at 2012; from the current 3,160m<sup>2</sup> of PLUC 5 floorspace to 8,873m<sup>2</sup>.
- **Scenarios 3 and 4** – The steps associated with Scenarios 1 and 2 were repeated to determine the impact of the proposal assuming development at 2016.

The retail gravity model defined the MTA for the Captain Stirling Village Hub, based on the probability of visitation from each origin zone to the Village Hub. This again, is a reflection of travel time between centres and origin zones; and the size of competing centres. Maps illustrating the modelled MTA both pre – development and post -development are shown in **Figures 4a – 4b**. These maps provide a graphical depiction as to the probability households from various origin zones will visit the Village Hub pre and post development; and also represent the area from which 82% (pre-development) and 85% (post-development) of turnover for the Village Hub.

The probability of visitation to the Village /hub falls below 5% West of Loch Street and below 2% north of the railway line; and ~ 1% from areas within the City of Subiaco external to the study area which have been omitted. The distribution of total PLUC 5 expenditure resulting from the gravity modelling is depicted in Table 8 below.

**Table 9: Expenditure by Sector – Current Situation 2011 PLUC 5**

Sector	Study Area Resident Expenditure	MTA Resident Expenditure	Turnover Originating From MTA	Estimated Additional Turnover from beyond MTA	Existing Floorspace MTA (m <sup>2</sup> )
Current PLUC 5	\$468.8M	\$220.2M	\$91.1M	15%	21,548

*MDS Market Data Systems*

The modelling shows that a significant proportion of PLUC 5 MTA expenditure is escaping, particularly to larger activity centres including Subiaco, Claremont and Floreat. A better planning outcome would retain more expenditure locally, especially convenience based expenditure.

Outputs from the model include the trade impact assessments in Tables 10/11 assuming development in the years 2011 and 2016.

## 8.2 Activity Centre Trade Impacts – PLUC 5 Model Outputs

Trade impacts are approximations only and are to be considered in light of the trading environment and limitations identified above.

**Table 10: Trade Impacts 2011 – PLUC 5 Shop / Retail Expenditure**

Centre / Location	Map Ref (Fig. 10)	Internal / External to Study Area	Base Turnover \$/ m <sup>2</sup> 2011	Turnover \$/ m <sup>2</sup> 2011 Post Expansion	Trade Impact 2011
Floreat Forum	1	External	\$1,334.21	\$1,309.06	-1.88%
Cottesloe TC	2	External	\$2,181.95	\$2,106.36	-3.46%
Cottesloe	3	External	\$981.11	\$953.05	-2.86%
Cottesloe	4	External	\$1,226.44	\$1,190.78	-2.91%
Eric St	5	External	\$1,723.80	\$1,678.21	-2.64%
Cottesloe	6	External	\$1,978.87	\$1,931.15	-2.41%
North Street	7	External	\$3,951.29	\$3,889.30	-1.57%
Onslow Road	8	External	\$1,653.62	\$1,542.01	-6.75%
Onslow Road	9	External	\$1,752.27	\$1,639.54	-6.43%
Onslow Road	10	External	\$2,007.86	\$1,884.84	-6.13%
Nicholson Road	11	External	\$1,229.52	\$1,156.86	-5.91%
Nicholson Road	12	External	\$1,171.45	\$1,091.31	-6.84%
Hammersley Rd	13	External	\$885.01	\$842.19	-4.84%
Cardigan Tce	14	External	\$1,361.64	\$1,331.56	-2.21%
Jersey Street	15	External	\$987.24	\$61.87	-2.57%
Subiaco TC	16	External	\$471.78	\$449.87	-4.64%
Cambridge St	17	External	\$485.63	\$474.18	-2.36%
Cambridge St	18	External	\$1,147.30	\$1,117.64	-2.58%
Waratah Ave	19	Internal	\$7,588.43	\$7,294.28	-3.88%
Waratah Ave	20	Internal	\$7,585.99	\$7,257.86	-4.33%
Dalkeith Rd	21	Internal	\$7,206.27	\$6,691.50	-7.14%
<b>Subject Centre</b>	22	Internal	\$4,140.51	\$3,794.89	-8.35%
Broadway	23	Internal	\$4,125.99	\$3,770.99	-8.63%
Broadway	24	Internal	\$4,338.05	\$3,979.11	-8.29%
Broadway	25	Internal	\$3,834.89	\$3,520.18	-8.21%
Hampden Road	26	Internal	\$4,754.34	\$4,378.28	-7.91%
Aberdare Road	27	Internal	\$3,188.13	\$2,989.17	-6.24%
Kirwan Street	28	Internal	\$2,521.55	\$2,488.85	-1.30%
Railway Road	29	Internal	\$2,667.64	\$2,558.55	-4.09%
Ashton Avenue	30	Internal	\$5,867.33	\$5,703.76	-2.79%
Davies Road	31	Internal	\$6,183.87	\$6,080.48	-1.67%
Davies Road	32	Internal	\$6,213.66	\$6,112.08	-1.63%
Shenton Road	33	Internal	\$5,828.67	\$5,747.97	-1.38%
Claremont Cres	34	Internal	\$3,544.26	\$3,475.71	-1.93%
North Street	35	External	\$3,754.17	\$3,697.59	-1.51%
Airlie Street	36	External	\$3,301.41	\$3,193.92	-3.26%
Claremont TC	37	Internal	\$4,131.13	\$3,981.91	-3.61%
Pennell Road	38	Internal	\$5,659.67	\$5,442.91	-3.83%
Bay Road	39	Internal	\$5,920.63	\$5,599.22	-5.43%
Stirling Hwy	40	Internal	\$4,769.93	\$4,589.66	-3.78%
Loch Street	41	Internal	\$5,255.05	\$4,995.65	-4.94%
Carrington	42	Internal	\$5,908.08	\$5,587.55	-5.43%
Asquith	43	Internal	\$6,172.09	\$6,112.05	-0.97%

Source:

MGA Town Planners

Marketinfo 2010, MDS Market Data Systems Pty Ltd



**Table 11: Trade Impacts Development 2016 – PLUC 5 Shop / Retail Expenditure**

Centre / Location	Map Ref (Fig. 10)	Internal / External to Study Area	Base Turnover \$/ m <sup>2</sup> 2016	Turnover \$/ m <sup>2</sup> 2016 Post Expansion	Trade Impact 2016
Floreat Forum	1	External	\$1,510.72	\$1,483.28	-1.82%
Cottesloe TC	2	External	\$2,279.46	\$2,201.83	-3.41%
Cottesloe	3	External	\$1,019.78	\$990.59	-2.86%
Cottesloe	4	External	\$1,278.61	\$1,241.70	-2.89%
Eric St	5	External	\$1,806.23	\$1,759.32	-2.60%
Cottesloe	6	External	\$2,084.31	\$2,035.16	-2.36%
North Street	7	External	\$4,224.37	\$4,163.52	-1.44%
Onslow Road	8	External	\$1,770.51	\$1,654.60	-6.55%
Onslow Road	9	External	\$1,909.32	\$1,791.92	-6.15%
Onslow Road	10	External	\$2,150.14	\$2,022.27	-5.95%
Nicholson Road	11	External	\$1,335.74	\$1,259.81	-5.68%
Nicholson Road	12	External	\$1,240.02	\$1,156.98	-6.70%
Hammersley Rd	13	External	\$978.27	\$933.03	-4.62%
Cardigan Tce	14	External	\$1,532.95	\$1,500.73	-2.10%
Jersey Street	15	External	\$1,098.20	\$1,070.93	-2.48%
Subiaco TC	16	External	\$501.23	\$478.24	-4.59%
Cambridge St	17	External	\$532.05	\$519.50	-2.36%
Cambridge St	18	External	\$1,312.38	\$1,280.27	-2.45%
Waratah Ave	19	Internal	\$7,872.63	\$7,578.22	-3.74%
Waratah Ave	20	Internal	\$7,848.77	\$7,519.51	-4.20%
Dalkeith Rd	21	Internal	\$7,430.99	\$6,902.48	-7.11%
<b>Subject Centre</b>	22	Internal	\$4,260.91	\$3,905.02	-8.35%
Broadway	23	Internal	\$4,234.28	\$3,869.04	-8.60%
Broadway	24	Internal	\$4,451.08	\$4,082.15	-8.27%
Broadway	25	Internal	\$3,918.16	\$3,595.51	-8.23%
Hampden Road	26	Internal	\$4,923.48	\$4,536.24	-7.87%
Aberdare Road	27	Internal	\$3,477.97	\$3,271.07	-5.95%
Kirwan Street	28	Internal	\$2,811.45	\$2,778.11	-1.19%
Railway Road	29	Internal	\$3,131.81	\$3,016.98	-3.67%
Ashton Avenue	30	Internal	\$6,551.64	\$6,384.37	-2.55%
Davies Road	31	Internal	\$6,839.36	\$6,736.50	-1.50%
Davies Road	32	Internal	\$6,791.21	\$6,690.58	-1.48%
Shenton Road	33	Internal	\$6,223.19	\$6,146.40	-1.23%
Claremont Cres	34	Internal	\$3,743.88	\$3,675.09	-1.84%
North Street	35	External	\$4,014.46	\$3,958.96	-1.38%
Airlie Street	36	External	\$3,465.51	\$3,355.84	-3.16%
Claremont TC	37	Internal	\$4,377.72	\$4,224.27	-3.51%
Pennell Road	38	Internal	\$5,911.18	\$5,690.86	-3.73%
Bay Road	39	Internal	\$6,161.75	\$5,832.47	-5.34%
Stirling Hwy	40	Internal	\$5,039.63	\$4,854.86	-3.67%
Loch Street	41	Internal	\$5,592.21	\$5,325.37	-4.77%
Carrington	42	Internal	\$6,274.27	\$5,944.63	-5.25%
Asquith	43	Internal	\$6,857.87	\$6,803.14	-0.80%

Source:

MGA Town Planners

Marketinfo 2010, MDS Market Data Systems Pty Ltd

### 8.3 Analysis

The economic impact of the Captain Stirling Village Hub expansion is derived by determining the difference in total turnover for all competing centres; both with and without expansion of the Village Hub. Those retail nodes potentially experiencing a trade impact of - 7.0% or more are listed below in Table 6.

**Table 12: Impacts**

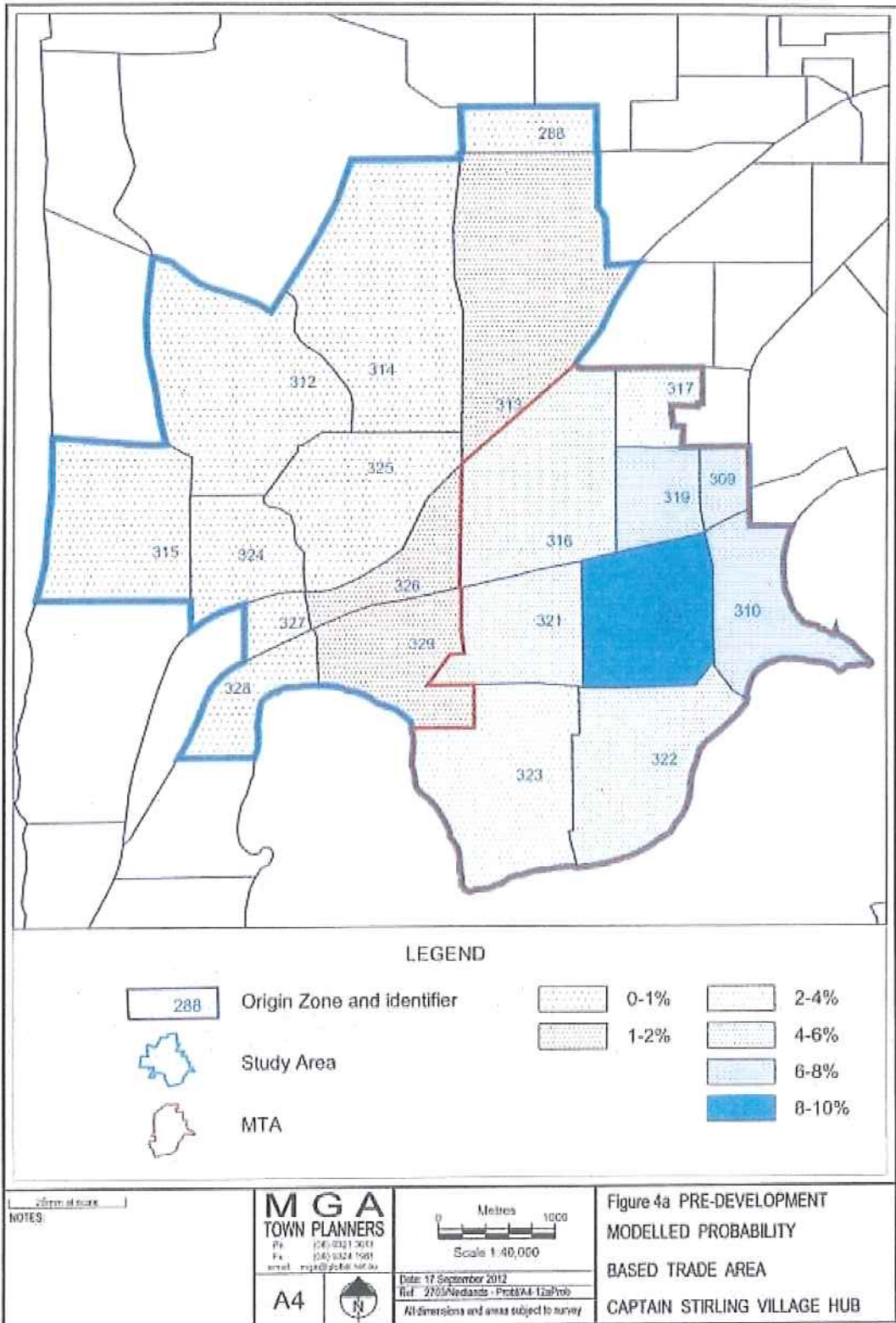
Centre / Location	Map Ref (Fig. 10)	Internal / External to Study Area	Trade Impact 2011	Trade Impact 2016
Dalkeith Rd	21	Internal	-7.14%	-7.11%
Broadway	23	Internal	-8.63%	-8.60%
Broadway	24	Internal	-8.29%	-8.27%
Broadway	25	Internal	-8.21%	-8.23%
Hampden Road	26	Internal	-7.91%	-7.87%

Source:

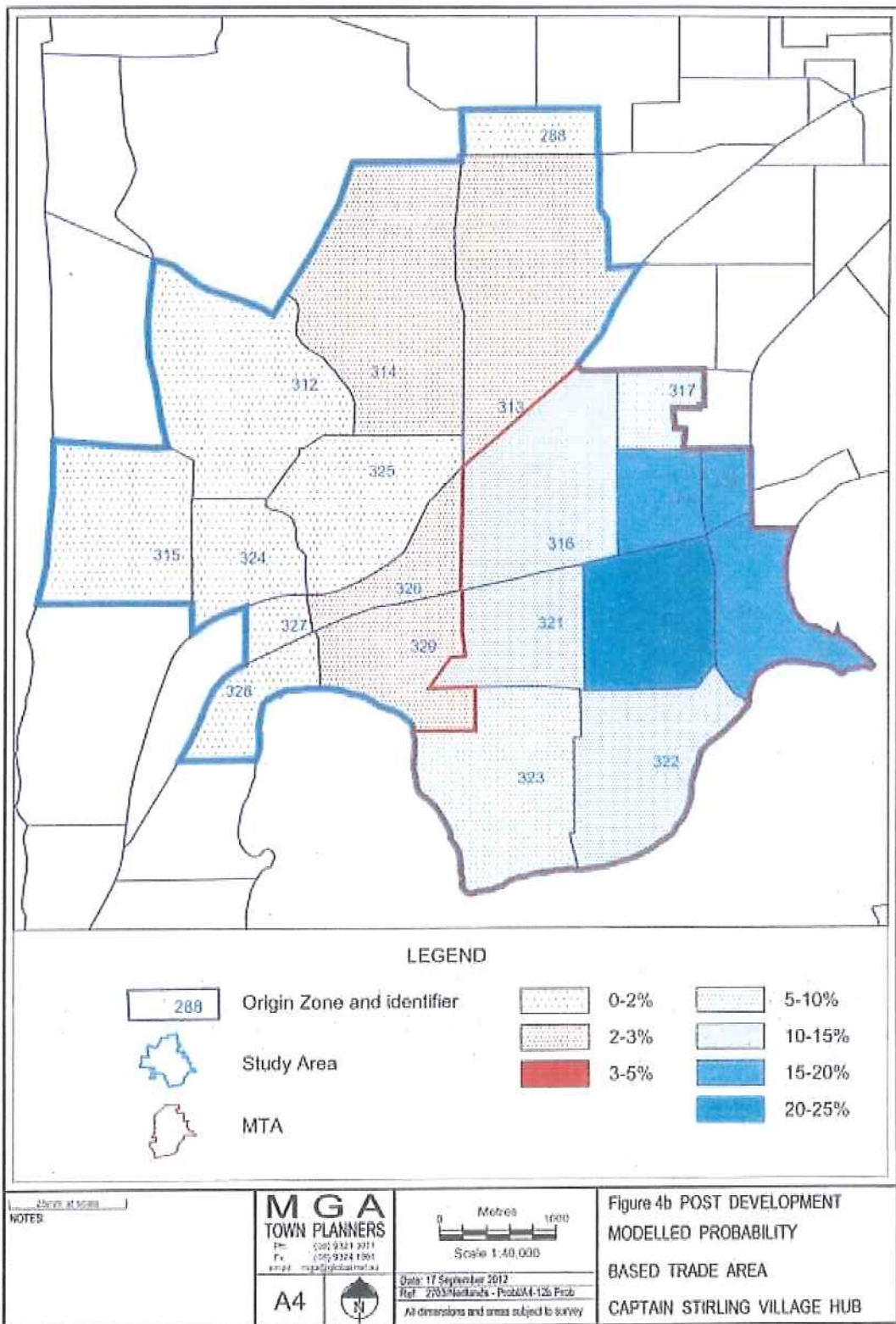
*MGA Town Planners*

*Marketinfo 2010, MDS Market Data Systems Pty Ltd*

- Trade impacts at 2011 are similar to those where assuming development at 2016. The development timeframe is during 2015.
- The shop/retail floor space at Dalkeith Road (Map Ref 21) is a gourmet and health food store, selling specialised and unique food items not readily available in supermarkets. On this basis, the identified trade impact is likely to be beyond the actual impact that would be experienced.
- The shops at the corner of Broadway and Stirling Highway (Map reference 23), are a collection of cafe and fast food outlets, which will not be significantly impacted by the proposed development.
- The neighbourhood activity centre on Broadway (Map reference 24), may be expected to experience a trade impact of approximately 8%, however this is also an acceptable initial trade impact that would improve in time beyond 2015/16
- The centre on Hampden Road (Map reference 26), is adjacent to the northern periphery of the study area and therefore, the trade impacts identified do not account for expenditure at this centre originating from residential areas to the north of the study area in Subiaco.







## 8.4 Grocery Retailing / Supermarket Potential

The level of expenditure on supermarket / grocery retailing was estimated by MDS Market Data Systems, based on those categories of the Western Australian Land Use Codes identified previously in Table 8. A gravity model scenario was run to determine the loss of grocery expenditure from the MTA, in respect of all competing grocery related retailing as defined on Figure 3 and Table 6; external and internal to the study area.

**Table 13: Expenditure Grocery WASLUCS – Current Situation 2011**

Year / Sector	Study Area Resident Expenditure	MTA Resident Expenditure	Current Estimated Turnover Originating From and Maintained in MTA	Estimated Additional Turnover from beyond MTA	Existing Floorspace MTA (m <sup>2</sup> )
2011 Current Grocery	\$180,890,000	\$88,101,000	\$46,600,000	11%	3,432

The Activity Centres Policy indicates in Clause 6.5 that a Retail Sustainability Assessment is to assess the potential economic and related effects of a retail expansion and address such effects from a local community access or benefit perspective only. *'Competition between businesses of itself is not considered a relevant planning consideration.'* Table 14 below describes the current distribution of grocery related household expenditure.

Of the total MTA resident expenditure on grocery related retailing identified in Table 13, the potential turnover of supermarkets in the MTA has been estimated at \$61.67 million of total resident grocery expenditure as at 2011 identified in Table 13. Much of this potential expenditure in the MTA is being directed away, particularly to the Claremont Quarter, Subiaco and Floreat, due to the modest provision of supermarkets in the MTA.

A benchmark target trading or productivity level for supermarkets is identified with reference to Perth and other major city benchmarks, being \$8,500 / m<sup>2</sup> - \$9,000 / m<sup>2</sup> (\$2010). It is noted however, that supermarkets may operate viably at lower levels.

**Table 15: Supermarkets - MTA**

Main Trade Area – Captain Stirling Village Hub	2011	2011	2016 - Post Development
Population (Households)	6861	6861	6970
MTA - s/mkt expenditure	61.67M	61.67M	62.6M
Turnover Benchmark \$ / m <sup>2</sup> (\$2010)	8,500	8,500	8,500
Indicative Floorspace Potential	7,255	7,255	7,364
MTA Existing / Planned Supermarkets			
Floorspace Existing (IGA and Spices supermarkets)	2,369	2,369	6,218
Proposed Woolworths		~3,849	
Balance - Available Capacity (m <sup>2</sup> )	4,866	1,037	1,164



- A supermarket may be established during 2015 and on this basis it is identified there is adequate potential to accommodate a supermarket of this size. Given the capacity identified, the indicative average turnover among supermarkets is expected to remain over the \$8,500/m<sup>2</sup> benchmark (\$2010) post development.
- As previously stated, the MDS Market Data Systems estimate for household expenditure on take home grocery items excludes many items such as: stationary, clothing, magazines, newspapers, books, DVD's/players, glassware, cutlery and cooking utensils etc; sold in supermarkets (and a number of other retail stores). On this basis, the household expenditure estimates for supermarket retailing is likely to be understated.

## 9.0 RSA Summary and Discussion

A summary of key observations and conclusions in respect of the RSA is provided below:

- The proposed additional 5,513m<sup>2</sup> of PLUC 5 shop/retail floor space to be established on the subject land is identified as being orderly and will not result in any significant adverse economic impact in the short term; or any significant impact from a community access / benefit perspective, given the capacity and limited trade impacts identified.
- The neighbourhood activity centre on Broadway is likely to be subject of an impact of ~ 8% following development of the Village Hub. Activity centres on Broadway, Hampden Road and Dalkeith Road are also likely to experience a trade impact in the order of ~ 7%. These are tolerable impacts that will improve over time.
- The socio-demographic profile of the study area population identifies an affluent population in white collar occupations, having high discretionary spending capacity. A range of household types are present, including traditional families, single person households and couples with no children.
- No loss of community benefit or reduced accessibility to goods and services offered at the local and neighbourhood level will affect members of the community. Further, the proposal will improve the local competitive environment and range of goods available to consumers; particularly residents in the Dalkeith, Crawley and Nedlands areas.
- The subject land is strategically located on the Stirling Highway Activity Corridor, being a significant area of growth, particularly following rationalisation of the road reserve. The corridor is the most appropriate location for the establishment of new retail facilities.
- The study area features a limited number of full scale supermarkets and aside from the Coles at Claremont Quarter; full scale supermarkets are currently limited to locations in Subiaco, Cottesloe and Floreat.



- Within the study area, there is only one higher order activity centre; and many residents must travel an inconvenient distance to visit a full scale supermarket.
- Residents of Dalkeith and Nedlands are able to access the subject land far more quickly and simply than shopping alternatives that provide a similar full range supermarket. Currently, local residents in the City of Nedlands are likely to undertake grocery shopping at full scale supermarkets within the City of Subiaco and Town of Claremont.
- The proposal will result in the introduction of a full range supermarket that will more appropriately service the needs and expectations of local residents. Further, the proposal will reduce the extent of escape expenditure from the City of Nedlands and the trade area identified.
- The proposed development will result in positive economic benefits including additional choice in shopping destinations and a form of grocery retailing currently lacking within the City of Nedlands. A greater human presence and provision of an attractive destination having a high level of physical amenity in the activity centre will result; along with the creation of new employment positions.
- Actual sales value will increase over time. Trade impacts are identified in \$2010 dollars; and the actual turnover in \$/m<sup>2</sup> will be greater at the time of development. Further, turnover will improve with incremental population growth in the locality and changes to CPI.
- A definitive estimate of turnover or trade impact on retailers cannot reasonably be identified, given that retailers will normally respond to their competitive environment. Any one retail outlet will usually react in a way that either reduces or avoids trade impacts, however the gravity modelling identifies that there is capacity for competing centres to operate viably following the establishment of additional retail floor space.
- The retail sustainability assessment identifies that the proposal will result in no significant adverse economic impact on competing retail facilities; that would result in a reduction in community benefit and reasonable access to required retail goods and services. Modelling of turnover potential among competing centres following the expansion identifies that there is capacity for outlets to operate viably.
- Given there is sufficient identified demand and no potential for significant adverse impacts from a community access and benefit perspective; it is considered to be in the interest of the community to allow the scheme amendment to progress based on the floorspace proposed.

# Proposed Shopping Centre, Captain Stirling Hotel Site, Nedlands

## TRANSPORT ASSESSMENT

Prepared for  
Woolworths Limited

Prepared by  
Uloth and Associates

18 June 2012; Revised 26 September 2012

## EXECUTIVE SUMMARY

MGA Town Planners are preparing a proposed Scheme Amendment for the '*Proposed Expansion of the Nedlands Village Hub*' which is to include a new shopping centre (of 6,192 square metres GLA) on the site of the existing Captain Stirling Hotel between Florence Road and Stanley Street.

The proposed development will provide a total of 299 parking spaces on-site in order to cater for the combined peak parking demand of both the new retail development and the existing Hotel, as calculated in Chapter A.5 in the Technical Appendix. This takes into account the current parking demand fluctuations for the existing Hotel, together with the expected peak parking demand of 4.5 spaces per 100 square metres GLA for the proposed Village Hub.

With increased traffic flows accessing the site off Stirling Highway, it is recommended to introduce a minor widening of Stirling Highway at Florence Road, in order to create a pseudo right turn lane within Stirling Highway at Florence Road, as shown in Figure 2 in Chapter 3 Recommendations. This minor widening will not only accommodate the increased right turn movements resulting from the proposal, but will also improve the existing situation by ensuring that right turn vehicles can stop within the painted median without blocking the eastbound through traffic movement.

The recommended modifications require a reduction of the wide existing footpath immediately west of Florence Road, but with no impact on the existing property boundaries on this corner. However, it will be necessary to give up some land from the north west corner of the Captain Stirling Hotel site to accommodate the proposed widening.

It will also be necessary to widen both Florence Road and Stanley Street, as also shown in Figure 2 in Chapter 3, in order to accommodate the increased traffic movements in each of these roads.

With the proposed on-site parking supply of 299 spaces, the recommended road modifications identified in Figure 2, and the likely long term widening of Stirling Highway, it is concluded that the proposed shopping centre development can be accommodated in both the short term and long term scenarios.



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## **1. INTRODUCTION**

KPA Architects have prepared plans for a proposed shopping centre at the site of the existing Captain Stirling Hotel in Nedlands. In order to accommodate the proposed development, MGA Town Planners are preparing a proposed Scheme Amendment for the 'Proposed Expansion of the Nedlands Village Hub'.

Uloth and Associates has been commissioned to prepare a Transport Assessment Report for the proposed development.

### **1.1 STUDY OBJECTIVES**

The overall study objective is to identify the parking and access requirements for the proposed development. The specific objectives include a shared parking analysis for the existing Hotel and proposed Shopping Centre, estimation of the future traffic generation and distribution, and a detailed analysis of future intersection operational characteristics to identify the overall access requirements.

## **2. STUDY FINDINGS AND CONCLUSIONS**

The study findings and conclusions for the existing and future situation at the Captain Stirling Hotel site are presented in the chapter.

### **2.1 EXISTING SITUATION**

- The proposed development site is located on the southern side of Stirling Highway between Florence Road and Stanley Street, as shown in the Locality Plan in Figure 1.
- The overall development includes the site of the existing Captain Stirling Hotel and Bottleshop, together with 5 adjacent residential Lots located immediately to the south, as shown in the existing topographical plan in Figure A.1 in the Technical Appendix.
- In order to identify the existing traffic situation, Uloth and Associates carried out PM peak period traffic counts at the existing site access driveways off Stirling Highway as well as at the Stirling Highway intersections with Dalkeith Road, Florence Road/Boronia Avenue, Kinninmont Avenue and Stanley Street, on Thursday 17 May 2012. The PM peak hour traffic flows at each location are shown in Figure A.2 in Chapter A.2 in the Technical Appendix.
- It can be seen in Figure A.2 that Stirling Highway carries a 2-way flow of approximately 2,600 vehicles during the PM peak hour, which translates to a daily traffic flow of approximately 35,000 vehicles per day (based on Main Roads WA counts showing peak hour flows at approximately 7.5 percent of daily flows). It can also be seen that Florence Road carries approximately 150 vehicles during the PM peak hour (suggesting approximately 1,500 to 2,000 vehicles per day), while Stanley Street carries 40 vehicles per hour (perhaps 400 vehicles per day).
- Intersection operational analyses have then also been carried out, as documented in Tables A.1 to A.3 in Chapter A.2 in the Technical Appendix.







- Table A.1 shows that the signalised intersection at Stirling Highway - Dalkeith Road currently operates at an acceptable overall Level of Service C during the Thursday PM peak hour, indicating satisfactory operating conditions with average traffic delays. However, it is important to note that the Stirling Highway approaches operate at a high Level of Service B, indicating good operating conditions with short traffic delays, while Dalkeith Road operates at Levels of Service D and E, indicating poor but manageable to undesirable operating conditions with long to very long traffic delays.
- Table A.2 shows that the right turn from Florence Road into Stirling Highway east currently operates at Level of Service F; however this movement is lightly trafficked and the queue is minimal. It can also be seen in Table A.2 that the left turn out of Florence Road operates at Level of Service C, as does the combined through/right movement from Stirling Highway west. However, the lack of a right turn pocket results in delays to through traffic .
- Table A.3 shows that the right turn from Stanley Street into Stirling Highway east also operates at Level of Service F; however, as at Florence Road, this movement is lightly trafficked and queues are minimal. The left turn from Stanley Street also operates at an acceptable Level of Service C, as does the combined through/right movement from Stirling Highway west.
- In order to identify the existing parking situation at the Hotel, Uloth and Associates also carried out parking demand and vehicle occupancy surveys on Thursday 3, Friday 4 and Saturday 5 May 2012, as detailed in Table A.4 in Chapter A.3 in the Technical Appendix.
- However, through discussions with the Hotel Management and on-site observations, it is clear that the Hotel car park is occupied by vehicles parked for other businesses in the area, and therefore the vehicles parked on-site do not represent the actual Hotel parking demand.
- Additional surveys were therefore also carried out to allow the actual Hotel parking demand to be determined, as documented in Tables A.5 to A.10 in Chapter A.3 in the Technical Appendix.

## 2.2 FUTURE WIDENING OF STIRLING HIGHWAY

- Metropolitan Region Scheme (MRS) Amendment 1210/41 *Rationalisation of Stirling Highway Reservation* was published by the Western Australian Planning Commission in March 2012. The concept plan supporting the proposed amendment in the vicinity of the Captain Stirling Hotel site is shown in Figure A.3 in Chapter A.4 in the Technical Appendix.
- The plan indicates that Stirling Highway will be widened to accommodate a 6 metre median incorporating a right turn seagull treatment at Stanley Street, the closure of right turn movements in and out of Florence Road, Boronia Avenue and Kinninmont Avenue, and the provision of a westbound bus lane beginning immediately west of Stanley Street. The bus lane will provide bus priority through the traffic signals at Dalkeith Road, with a similar treatment for eastbound buses west of Dalkeith Road.
- It is important to note that under this proposed plan, access to the existing Captain Stirling Shopping Centre on Florence Road will be severely restricted, with no rights turns possible to or from Stirling Highway. An alternative treatment would be to create a signalised 4-way intersection at Florence Road/Boronia Avenue, directly linked with the existing signals at Dalkeith Road.

## 2.3 PROPOSED DEVELOPMENT

The proposed development plans, as prepared by KPA Architects, are shown in Figures A.4 and A.5 in Chapter A.5 in the Technical Appendix.



- The proposed development consists of the retention of the existing Captain Stirling Hotel and the construction of a Shopping Centre including a Supermarket, Speciality Shops, and a Liquor Store, as shown in Figure A.4, with an overall area of 6,192 square metres GLA.
- Vehicular access is proposed via 3 driveways off both Florence Road and Stanley Street. The driveways nearest Stirling Highway will provide access to a surface level car park, and a small upper level car park deck, while the southern driveways will provide access to a basement car park. Service vehicles will also enter the site via the southern driveway off Stanley Street, and will exit via the third driveway onto Florence Road.
- The plans indicate a total on-site parking supply of 299 parking spaces, with 207 spaces in the basement, 57 spaces at ground level and a further 35 spaces on the small parking deck in the north east corner of the site. An additional 9 on-street spaces are also shown within Florence Road.

## 2.4 SHARED PARKING ANALYSIS

- WAPC State Planning Policy 4.2 '*Activity Centres for Perth and Peel*' suggests a suitable parking provision of 4 to 5 spaces per 100 square metres. Applying an average rate of 4.5 spaces per 100 square metres to the proposed Centre results in an overall parking requirement of 279 spaces (for the 6,192 square metres of retail floorspace). This rate is considered appropriate, based on the availability of public transport services along Stirling Highway and the planned provision of bicycle parking and end of trip facilities to encourage alternative modes of transport.
- It is also necessary to take into account the parking demand of the existing Captain Stirling Hotel. However, it must be acknowledged that the peak parking demand for the Hotel will occur at a very different time to the peak demand for the Shopping Centre.
- A shared parking analysis has therefore been carried out, as documented in Chapter A.6 in the Technical Appendix, identifying a combined peak parking requirement of 296 spaces for the Shopping Centre and Hotel uses.
- It is important to note, however, that this analysis assumes that the existing usage patterns for the Hotel will continue to apply in the future. It may therefore be necessary to implement a management strategy to ensure that this is the case.

## 2.5 FUTURE TRAFFIC FLOWS

- In identifying estimated future traffic flows for a new retail development, it is important to consider the expected level of trade and the daily, weekly and monthly variations that will occur at the site, taking into account the surrounding catchment area and the location of competing developments. However, in order to provide a robust technical assessment of the proposal, and to ensure that peak period traffic loads can be accommodated, it is also important to assume that each and every new Centre will trade in line with industry-standard trip generation rates.
- An accepted source of traffic generation data for use in Western Australia is the NSW Roads and Traffic Authority (RTA) "*Guide to Traffic Generating Developments*" publication, which provides both daily and peak hour trip generation rates for shopping centres of various sizes.
- On the basis of the specified trip rates for shopping centres of up to 10,000 square metres of gross leasable area, the calculated trip generation for the proposed shopping centre development at the Captain Stirling Hotel site is 7,610 vehicle trips per day, with 780 vehicle trips during the PM peak hour. It is also estimated that 25 percent of peak hour trips will be passing trade from traffic already travelling past the site on Stirling Highway.

- To identify the actual traffic volumes expected to occur, however, it is important to note that the Western Australian Planning Commission has stated (in its *Transport Assessment Guidelines*) that the RTA trip generation rates are expected to fall by almost 20 percent as a result of extended trading hours. It is also important to note that trip rates also fall when a development is part of a larger Activity Centre with other trip generating developments in close proximity.
- It is therefore expected that the proposed Woolworths development will in fact generate in the order of 4,800 vehicle trips (2,400 vehicles entering and existing the site) on a typical Thursday, with significantly lower numbers across all other days of the week. However, for the purposes of providing a robust assessment of necessary infrastructure upgrades, the traffic analysis in this report is carried out for the initially calculated figures of 7,610 vehicle trips per day with 780 vehicle trips during the PM peak hour.
- Taking into account the population distribution and other shopping centres within the surrounding residential areas, it is estimated that the additional traffic flows accessing the site will do so from the following approach routes:
 

– Stirling Highway, west:	25%
– Dalkeith Road, north:	15%
– Stirling Highway, east:	25%
– Florence Road and Stanley Street, south:	35%
- However, it is important to note that there is no available capacity for vehicles exiting the site to turn right onto Stirling Highway, so vehicles travelling east will instead do so by exiting the site towards the south in order to then travel east via Edward Street towards Broadway.
- It is also important to note that vehicles turning right from Stirling Highway west to access the site off either Florence Road or Stanley Street will cause queuing and delays within Stirling Highway, which will need to be addressed as part of the proposed plans. It is therefore recommended to introduce a minor (2 metre) widening of Stirling Highway towards the south of Florence Road, as shown in Figure 2 in Chapter 3 Recommendations, in order to achieve a pseudo right turn lane for vehicles turning right into Florence Road to access the site (noting that this recommended plan requires a small but acceptable reduction of the existing footpath width immediately west of Florence Road).
- On the basis of the above assumptions, the anticipated short term future traffic flows at the affected Stirling Highway intersections are as shown in the upper part of Figure A.6 in the Technical Appendix, made up of existing traffic plus 5 percent growth, plus the calculated (worst-case) estimated development traffic.
- It must also be acknowledged, however, that in the long term, the planned upgrading of Stirling Highway shows no right turns at Florence Road but a full median opening at Stanley Street. This means that there will be a greater focus of development traffic on Stanley Street in the long term. The long term future traffic flows are therefore as shown in the lower part of Figure A.6, including 10 percent growth of the existing traffic flows on Stirling Highway.
- It can therefore be seen that traffic flows on Florence Road will increase to a worst-case scenario of approximately 3,500 to 4,000 vehicles per day as a result of the proposed development, while traffic on Stanley Street will increase to a worst-case of between 3,000 and 3,500 vehicles per day.
- It will therefore be necessary to widen and improve both Florence Road and Stanley Street, as shown in Figure 2 in Chapter 3 Recommendations, as part of the proposed development.

## 2.6 INTERSECTION OPERATIONAL ANALYSES

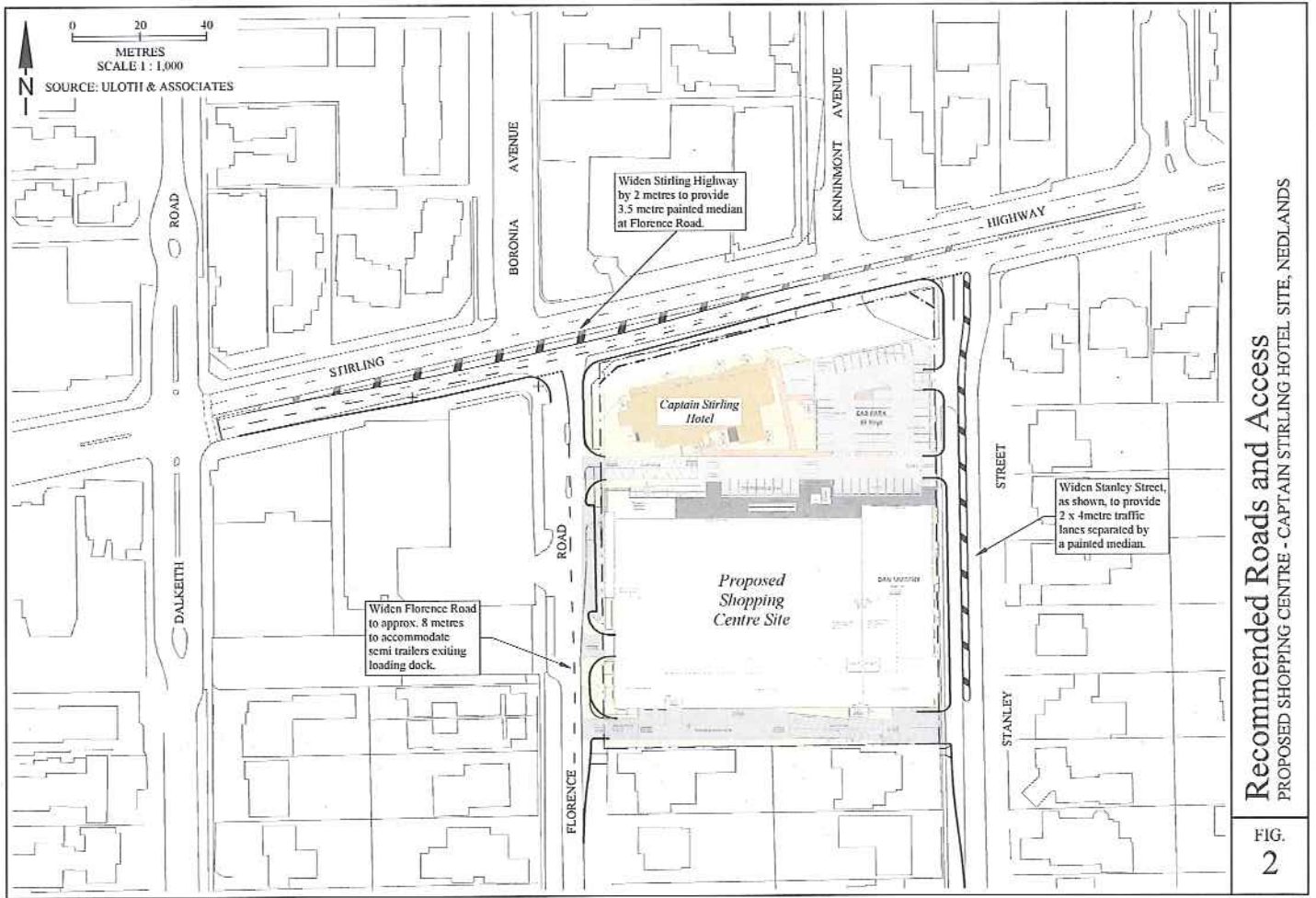
- The intersection operational analyses for the short term scenario are shown in Tables A.12 to A.14 in Chapter A.7 the Technical Appendix.
- It can be seen in Table A.13 that while the right turn out of Florence Road will remain at Level of Service F, the proposed widening of the Highway provides sufficient queuing space for the right turns into Florence Road, and therefore allows the eastbound through traffic to operate at an unimpeded Level of Service A.
- Table A.14 shows that the right turn out of Stanley Street will also remain at Level of Service F, while the shared through/right lane in Stirling Highway west will fall to Level of Service D. However, it is important to note that this reduction is due solely to the assumed growth in Stirling Highway traffic, even without the proposed development, and can only be improved through the implementation of the long term concept plan in Figure A.3, with long term intersection operational characteristics as reflected in Table A.15 in the Technical Appendix.



### 3. RECOMMENDATIONS

On the basis of the study findings and conclusions documented and discussed in Chapter 2, the following recommendations are made in regard to the traffic access and parking situation for the proposed Shopping Centre.

- It is recommended to provide a minimum of 300 parking spaces for the proposed development, in order to accommodate the shared peak parking demand for the existing Hotel and the proposed Shopping Centre.
- However, it is important to note that this shared parking demand is based on an assumption that the existing Hotel operation will remain as is. It may therefore also be necessary implement a management plan to limit the use of the Hotel during shopping hours.
- It is recommended to widen Stirling Highway at Florence Road by 2.0 metres towards the south, as shown in Figure 2, in order to widen the existing painted median (to 3.5 metres) to allow vehicles turning right into Florence Road to queue without blocking through traffic (similar to the widened median to the west of Dalkeith Road).
- The overall road widening should therefore extend from Dalkeith Road to Stanley Street, as shown in Figure 2, in order to accommodate the 60 metre tapers required to achieve the 2.0 metre lateral shift of the westbound through lanes.
- With increased traffic flows on Stanley Street as a result of the proposed Centre, it is recommended to widen Stanley Street to an overall width of 10 metres, as indicated in Figure 2, with a 4 metre traffic lane in each direction separated by a 2 metre painted median. This increased width will also be sufficient to accommodate semi-trailers accessing the proposed loading dock at the southern end of the site.
- It is also recommended to widen Florence Road adjacent to the site, to a width of 8 metres, as also indicated in Figure 2, in order to accommodate semi-trailers exiting the proposed loading dock.
- In the long term, the proposed widening of Stirling Highway with right turn movements at Stanley Street will provide suitable access for the proposed Shopping Centre and Hotel, with left-in/left-out movements only at Florence Road.



**Recommended Roads and Access**  
PROPOSED SHOPPING CENTRE - CAPTAIN STIRLING HOTEL SITE, NEDLANDS

FIG. 2

**APPENDIX 5 – ULOTH AND ASSOCIATES TRAFFIC IMPACT ASSESSMENT**

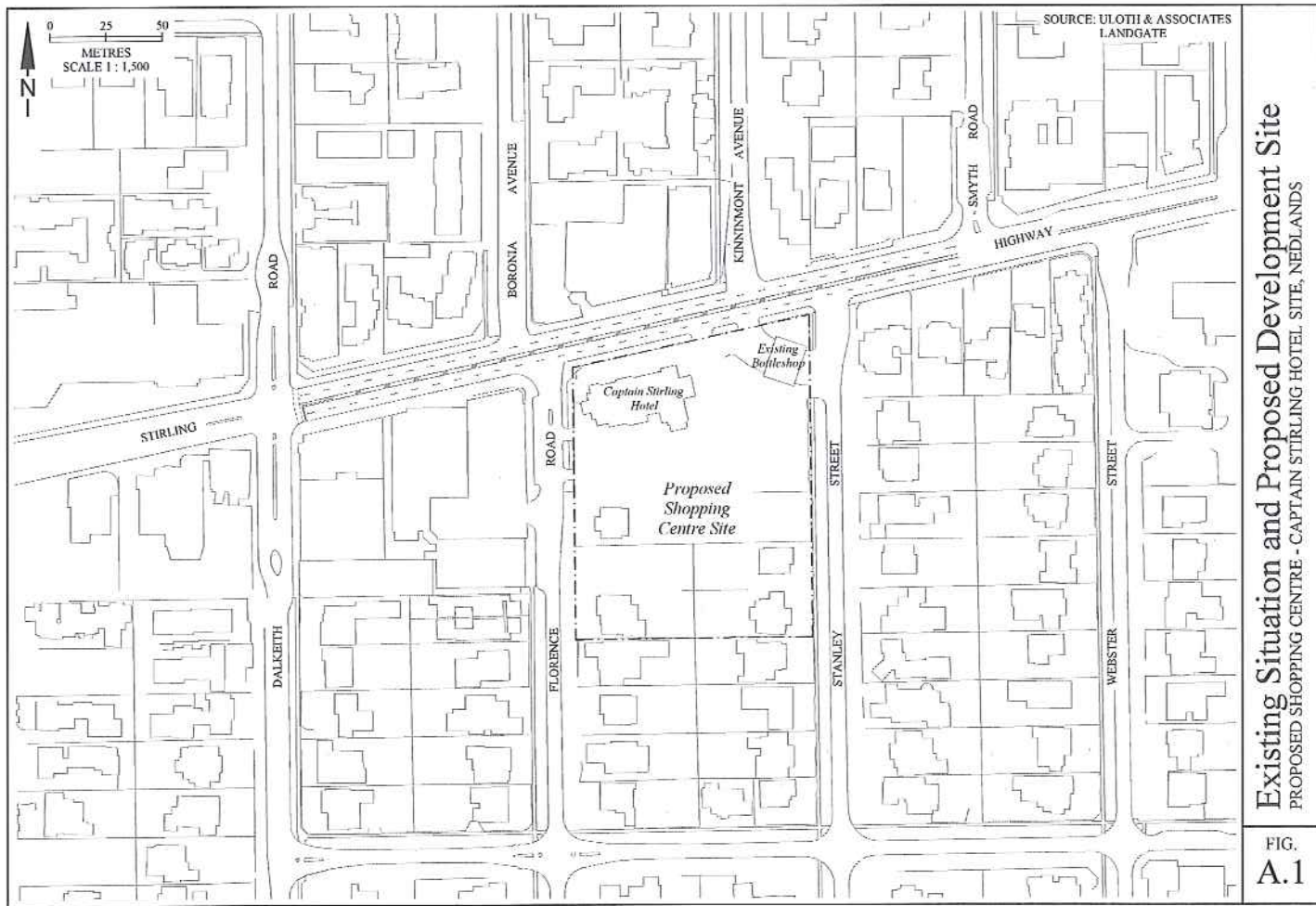


## **TECHNICAL APPENDIX**

This Appendix documents the existing situation at the proposed development site, together with the proposed plans, future traffic flows and intersection operational analyses.

## **A.1 EXISTING ROADS AND INTERSECTIONS**

Figure A.1 shows the existing situation in the vicinity of the proposed development site, including the site itself and the various intersections along Stirling Highway.



**Existing Situation and Proposed Development Site**  
PROPOSED SHOPPING CENTRE - CAPTAIN STIRLING HOTEL SITE, NEDLANDS

FIG.  
A.1



## A.2 EXISTING TRAFFIC AND INTERSECTION OPERATIONAL ANALYSIS

Figure A.2 shows the existing PM peak hour traffic flows at the Stirling Highway intersections and junctions between Dalkeith Road and Stanley Street, as surveyed by Uloth and Associates on Thursday 17 May 2012.

The intersection operational analyses for the intersections with Dalkeith Road, Florence Road/Boronia Avenue and Stanley Street are shown in Tables A.1, A.2 and A.3, respectively.

TABLE A.1  
OPERATIONAL CHARACTERISTICS FOR SIGNALISED STIRLING HIGHWAY -  
DALKEITH ROAD INTERSECTION – EXISTING THURSDAY PM PEAK HOUR

ITEMS	OPERATIONAL CHARACTERISTICS					
	Existing PM Peak Hour					
No. of Approach Lanes: N E S W	2 2 2 2					
No. of Phases	3					
Cycle Time (sec)	110					
Max X Value	0.651					
Average Delay (sec)	23.4					
Level of Service	C					
Approach	Move-ment	X-Value	Max. Queue		Avrge Delay (sec)	Level of Serv.
			Veh.	Metres		
Dalkeith Road - north	LT	0.594	9.4	68	48.2	D
	R	0.607	5.3	37	61.7	E
Stirling Highway - east	LT	<u>0.651</u>	25.9	183	17.8	B
	T	<u>0.651</u>	26.0	183	17.6	B
Dalkeith Road - south	LT	0.528	9.8	68	45.8	D
	R	0.629	8.8	62	41.1	D
Stirling Highway - west	LT	0.531	18.9	135	16.1	B
	T	0.531	19.0	135	15.9	B

Notes: Level of Service calculations are based on Average Delay and Degree of Saturation.  
Underlined X-values denote maximum values.

Source: Uloth and Associates

TABLE A.2  
 OPERATIONAL CHARACTERISTICS FOR UNSIGNALISED STIRLING HIGHWAY -  
 FLORENCE ROAD - BORONIA AVENUE INTERSECTION  
 EXISTING THURSDAY PM PEAK HOUR

ITEMS	OPERATIONAL CHARACTERISTICS					
	Existing PM Peak Hour					
No. of Approach Lanes: N E S W	2 2 2 2					
Approach	Move-ment	X-Value	Max. Queue		Avrge Delay (sec)	Level of Serv.
			(veh)	m		
Boronia Avenue - north	L R <sup>1)</sup>	0.068 -	0.2 -	1 -	14.9 -	B -
Stirling Highway - east	LT TR	0.380 0.380	0.0 8.1	0 57	0.6 12.8	A B
Florence Road - south	L R	0.096 0.113	0.3 0.3	2 2	11.0 93.8	B F
Stirling Highway - west	LT TR	<u>0.395</u> <u>0.395</u>	0.0 7.3	0 52	0.1 19.5	A C

Notes: 1) No right turns were recorded for Boronia Avenue during the PM peak hour.  
 Level of Service calculations are based on Average Delay and Degree of Saturation.  
 Underlined X-values denote maximum values.

Source: Uloth and Associates

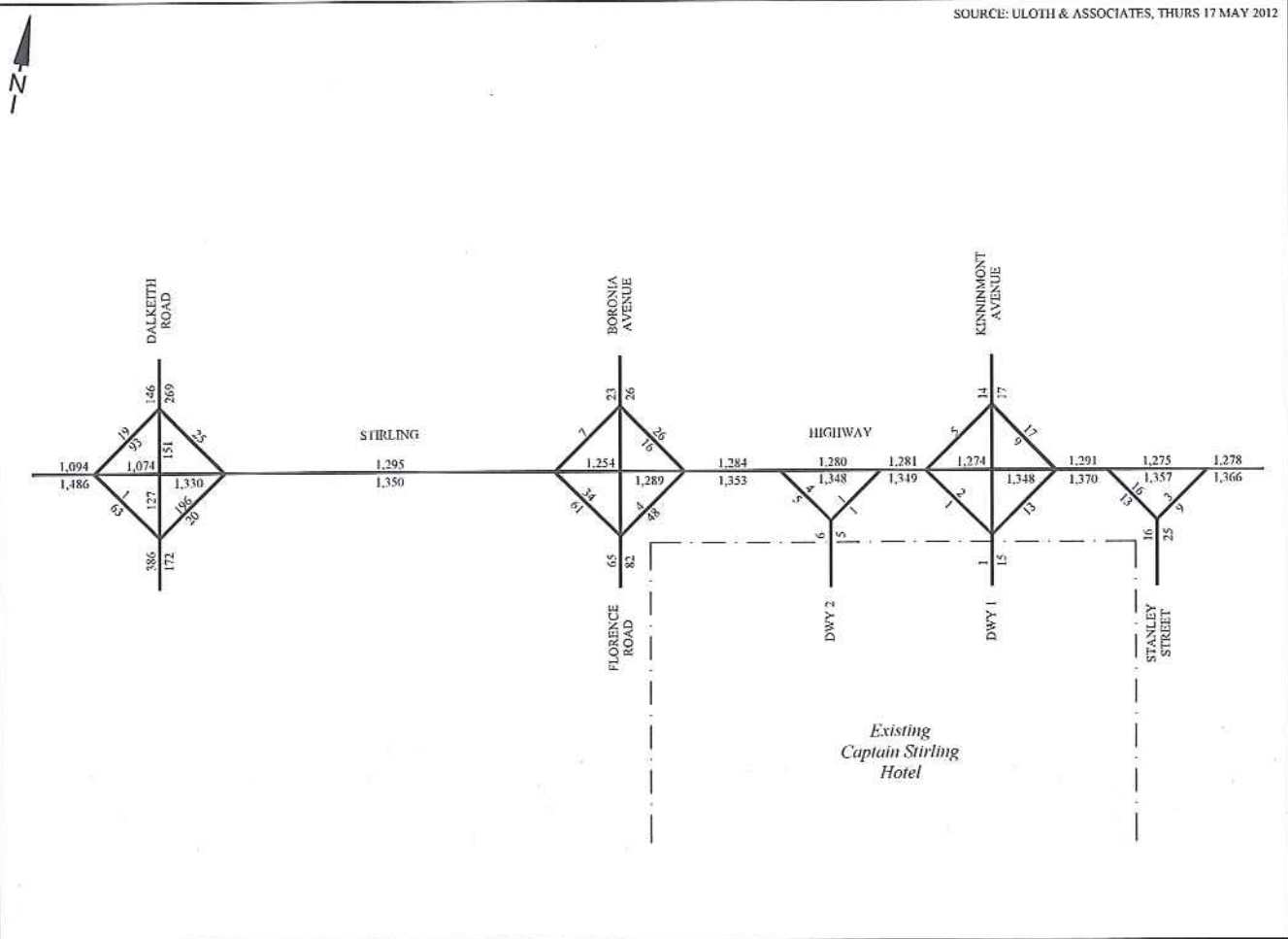
TABLE A.3  
 OPERATIONAL CHARACTERISTICS FOR UNSIGNALISED STIRLING HIGHWAY -  
 STANLEY STREET JUNCTION – EXISTING THURSDAY PM PEAK HOUR

ITEMS	OPERATIONAL CHARACTERISTICS					
	Existing PM Peak Hour					
No. of Approach Lanes: N E S W	- 2 2 2					
Approach	Move-ment	X-Value	Max. Queue		Avrge Delay (sec)	Level of Serv.
			(veh)	m		
Stirling Highway - east	LT T	0.371 0.371	0.0 0.0	0 0	0.1 0.0	A A
Stanley Street - south	L R	0.021 0.102	0.1 0.3	0 2	11.0 109.1	B F
Stirling Highway - west	T TR	<u>0.373</u> <u>0.373</u>	0.0 8.2	0 58	0.0 19.8	A C

Notes: Level of Service calculations are based on Average Delay and Degree of Saturation.  
 Underlined X-values denote maximum values.

Source: Uloth and Associates

SOURCE: OLOTH & ASSOCIATES, THURS 17 MAY 2012



Existing PM Peak Hour Traffic Flows  
STIRLING HIGHWAY INTERSECTIONS - DALKEITH ROAD TO STANLEY STREET

FIG. A.2



### A.3 EXISTING HOTEL PARKING DEMAND

- Table A.4 shows the existing parking accumulation within the Captain Stirling Hotel car park, as surveyed by Uloth and Associates on Thursday 3, Friday 4 and Saturday 5 May 2012.
- It can be seen that the park parking demand occurred during the Friday lunch time period, with 74 vehicles parked on site at 1:00pm. However it is clear, both from site observations and reports from Hotel Management, that a high proportion of vehicles parking on the site are generated by other developments, including local shops and businesses, the nearby University, and also Sir Charles Gardner Hospital (which is currently undergoing major redevelopment), with many using the Hotel car park as a Park 'n' Ride facility to then travel on buses along Stirling Highway.
- In order to identify the true parking demand of the existing Hotel, Uloth and Associates therefore also carried out comprehensive surveys of vehicle occupancy rates for Hotel patrons, and a headcount of the number of patrons in the Hotel throughout the survey period, as documented below in Tables A.5 to A.7.
- Tables A.8 to A.10 then show the calculation of the existing Hotel parking demand throughout the survey period, based on the number of patrons within the Hotel, and the related average vehicle occupancy for each given time.
- It can be seen in Table A.9 that the maximum calculated Hotel parking demand occurred on the Friday night at approximately 9:00pm, with an estimated parking demand of 70 vehicles.
- It is important to note that the calculated parking demand is in some instances higher than the surveyed demand shown in Tables A.4 to A.6. However, it is reasonable to assume that the difference between the calculated and observed values is associated with customers walking to the Hotel from the local area or arriving via public transport. The calculated parking demand is therefore a conservatively high figure, which ensures a robust analysis of the future shared parking requirements calculated below in Chapter A.6.
- It should also be noted that as part of the proposed development, the operator is planning to introduce management measures to prevent the mis-use of the car park by others, in order to ensure that parking is available for shopping centre patrons.

TABLE A.4  
 SURVEYED PARKING ACCUMULATION - CAPTAIN STIRLING HOTEL  
 THURSDAY 3, FRIDAY 4 AND SATURDAY 5 MAY 2012

TIME	NUMBER OF VEHICLES PARKED		
	Thursday	Friday	Saturday
11 <sup>00</sup> am	49	46	21
11 <sup>15</sup> am	58	44	18
11 <sup>30</sup> am	56	41	19
11 <sup>45</sup> am	57	40	19
12 <sup>00</sup> pm	58	48	22
12 <sup>15</sup> pm	61	55	19
12 <sup>30</sup> pm	64	68	24
12 <sup>45</sup> pm	64	73	25
1 <sup>00</sup> pm	63	<b>74</b>	25
1 <sup>15</sup> pm	<b>64</b>	67	24
1 <sup>30</sup> pm	59	58	26
1 <sup>45</sup> pm	54	59	26
2 <sup>00</sup> pm	-	-	-
2 <sup>15</sup> pm	-	-	-
2 <sup>30</sup> pm	-	-	-
2 <sup>45</sup> pm	-	-	-
3 <sup>00</sup> pm	-	48	21
3 <sup>15</sup> pm	-	47	17
3 <sup>30</sup> pm	-	52	15
3 <sup>45</sup> pm	-	62	15
4 <sup>00</sup> pm	53	63	19
4 <sup>15</sup> pm	51	64	20
4 <sup>30</sup> pm	44	65	21
4 <sup>45</sup> pm	40	56	26
5 <sup>00</sup> pm	40	62	26
5 <sup>15</sup> pm	35	66	31
5 <sup>30</sup> pm	36	62	33
5 <sup>45</sup> pm	39	-	36
6 <sup>00</sup> pm	37	-	-
6 <sup>15</sup> pm	35	-	-
6 <sup>30</sup> pm	36	-	-
6 <sup>45</sup> pm	29	-	-
7 <sup>00</sup> pm	29	53	46
7 <sup>15</sup> pm	30	58	50
7 <sup>30</sup> pm	31	57	48
7 <sup>45</sup> pm	33	60	52
8 <sup>00</sup> pm	-	59	54
8 <sup>15</sup> pm	-	55	47
8 <sup>30</sup> pm	-	55	<b>55</b>
8 <sup>45</sup> pm	-	55	43
9 <sup>00</sup> pm	-	55	52
9 <sup>15</sup> pm	-	51	48
9 <sup>30</sup> pm	-	51	47
9 <sup>45</sup> pm	-	50	41

Note: Bold figures denote daily peak parking accumulation.

Source: Uloth and Associates

TABLE A.5  
 SURVEYED VEHICLE OCCUPANCY AND NUMBER OF PATRONS IN HOTEL  
 THURSDAY 3 MAY 2012

TIME	VEHICLE OCCUPANCY			PATRONS IN HOTEL
	Number of People	Number of Vehicles	People per Vehicle	
11 <sup>00</sup> am	4	3	1.33	0
11 <sup>15</sup> am	13	2	6.50	13
11 <sup>30</sup> am	3	1	3.00	13
11 <sup>45</sup> am	3	3	1.00	17
12 <sup>00</sup> pm	1	1	1.00	19
12 <sup>15</sup> pm	6	5	1.20	26
12 <sup>30</sup> pm	3	2	1.50	33
12 <sup>45</sup> pm	3	2	1.50	16
1 <sup>00</sup> pm	5	4	1.25	17
1 <sup>15</sup> pm	1	1	1.00	17
1 <sup>30</sup> pm	0	0	0.00	15
1 <sup>45</sup> pm	0	0	0.00	12
Total	42	24	1.75	n.a
4 <sup>00</sup> pm	0	0	0.00	13
4 <sup>15</sup> pm	3	3	1.00	12
4 <sup>30</sup> pm	0	0	0.00	5
4 <sup>45</sup> pm	4	3	1.33	5
5 <sup>00</sup> pm	1	1	1.00	4
5 <sup>15</sup> pm	4	4	1.00	4
5 <sup>30</sup> pm	7	7	1.00	12
5 <sup>45</sup> pm	2	1	2.00	17
6 <sup>00</sup> pm	10	4	2.50	29
6 <sup>15</sup> pm	5	4	1.25	27
6 <sup>30</sup> pm	9	5	1.80	28
6 <sup>45</sup> pm	3	2	1.50	28
7 <sup>00</sup> pm	4	2	2.00	28
7 <sup>15</sup> pm	4	3	1.33	33
7 <sup>30</sup> pm	0	0	0.00	32
7 <sup>45</sup> pm	7	4	1.75	40
Total	63	43	1.47	n.a

Note: n.a = not applicable.

Source: Uloth and Associates



TABLE A.6  
 SURVEYED VEHICLE OCCUPANCY AND NUMBER OF PATRONS IN HOTEL  
 FRIDAY 4 MAY 2012

TIME	VEHICLE OCCUPANCY			PATRONS IN HOTEL
	Number of People	Number of Vehicles	People per Vehicle	
11 <sup>00</sup> am	1	1	1.00	24
11 <sup>15</sup> am	0	0	0.00	21
11 <sup>30</sup> am	5	3	1.67	1
11 <sup>45</sup> am	20	9	2.22	4
12 <sup>00</sup> pm	12	5	2.40	25
12 <sup>15</sup> pm	21	8	2.63	35
12 <sup>30</sup> pm	35	18	1.94	59
12 <sup>45</sup> pm	13	8	1.63	87
1 <sup>00</sup> pm	5	4	1.25	100
1 <sup>15</sup> pm	0	0	0.00	78
1 <sup>30</sup> pm	2	2	1.00	55
1 <sup>45</sup> pm	10	3	3.33	41
Total	124	61	2.03	n.a
3 <sup>00</sup> pm	6	3	2.00	20
3 <sup>15</sup> pm	2	2	1.00	22
3 <sup>30</sup> pm	12	10	1.20	28
3 <sup>45</sup> pm	15	11	1.36	37
4 <sup>00</sup> pm	7	6	1.17	46
4 <sup>15</sup> pm	6	5	1.20	51
4 <sup>30</sup> pm	0	0	0.00	39
4 <sup>45</sup> pm	12	8	1.50	39
5 <sup>00</sup> pm	11	7	1.57	53
5 <sup>15</sup> pm	17	10	1.70	65
5 <sup>30</sup> pm	12	8	1.50	66
5 <sup>45</sup> pm	4	4	1.00	68
Total	104	74	1.41	n.a
7 <sup>00</sup> pm	3	2	1.50	61
7 <sup>15</sup> pm	5	3	1.67	57
7 <sup>30</sup> pm	14	7	2.00	58
7 <sup>45</sup> pm	7	4	1.75	65
8 <sup>00</sup> pm	3	2	1.50	77
8 <sup>15</sup> pm	6	3	2.00	97
8 <sup>30</sup> pm	2	2	1.00	96
8 <sup>45</sup> pm	8	5	1.60	118
9 <sup>00</sup> pm	2	1	2.00	124
9 <sup>15</sup> pm	7	2	3.50	112
9 <sup>30</sup> pm	4	3	1.33	123
9 <sup>45</sup> pm	5	3	1.67	122
Total	66	37	1.78	n.a

Note: n.a = not applicable.

Source: Uloth and Associates

TABLE A.7  
 SURVEYED VEHICLE OCCUPANCY AND NUMBER OF PATRONS IN HOTEL  
 SATURDAY 5 MAY 2012

TIME	VEHICLE OCCUPANCY			PATRONS IN HOTEL
	Number of People	Number of Vehicles	People per Vehicle	
11 <sup>00</sup> am	0	0	0.00	0
11 <sup>15</sup> am	1	1	1.00	1
11 <sup>30</sup> am	2	2	1.00	1
11 <sup>45</sup> am	1	1	1.00	1
12 <sup>00</sup> pm	3	2	1.50	4
12 <sup>15</sup> pm	6	2	3.00	6
12 <sup>30</sup> pm	12	6	2.00	10
12 <sup>45</sup> pm	1	1	1.00	20
1 <sup>00</sup> pm	5	3	1.67	28
1 <sup>15</sup> pm	2	1	2.00	22
1 <sup>30</sup> pm	8	5	1.60	29
1 <sup>45</sup> pm	4	3	1.33	18
Total	45	27	1.67	n.a
3 <sup>00</sup> pm	0	0	0.00	6
3 <sup>15</sup> pm	1	1	1.00	1
3 <sup>30</sup> pm	1	1	1.00	2
3 <sup>45</sup> pm	7	5	1.40	2
4 <sup>00</sup> pm	8	6	1.33	12
4 <sup>15</sup> pm	0	0	0.00	14
4 <sup>30</sup> pm	2	1	2.00	13
4 <sup>45</sup> pm	2	1	2.00	15
5 <sup>00</sup> pm	16	6	2.67	18
5 <sup>15</sup> pm	7	4	1.75	29
5 <sup>30</sup> pm	4	3	1.33	33
5 <sup>45</sup> pm	12	3	4.00	39
Total	60	31	1.94	n.a
7 <sup>00</sup> pm	17	8	2.13	66
7 <sup>15</sup> pm	9	4	2.25	88
7 <sup>30</sup> pm	2	1	2.00	75
7 <sup>45</sup> pm	10	4	2.50	92
8 <sup>00</sup> pm	5	3	1.67	70
8 <sup>15</sup> pm	1	1	1.00	87
8 <sup>30</sup> pm	2	1	2.00	82
8 <sup>45</sup> pm	0	0	0.00	93
9 <sup>00</sup> pm	0	0	0.00	72
9 <sup>15</sup> pm	0	0	0.00	86
9 <sup>30</sup> pm	0	0	0.00	84
9 <sup>45</sup> pm	0	0	0.00	71
Total	46	22	2.09	n.a

Note: n.a = not applicable.

Source: Uloth and Associates

TABLE A.8  
 CALCULATION OF HOTEL PARKING DEMAND  
 THURSDAY 3 MAY 2012

TIME	PATRONS IN HOTEL <sup>1)</sup>	AVERAGE VEHICLE OCCUPANCY <sup>1)</sup>	HOTEL PARKING DEMAND
11 <sup>00</sup> am	0	1.75	0
11 <sup>15</sup> am	13	1.75	7
11 <sup>30</sup> am	13	1.75	7
11 <sup>45</sup> am	17	1.75	10
12 <sup>00</sup> pm	19	1.75	11
12 <sup>15</sup> pm	26	1.75	15
<b>12<sup>30</sup> pm</b>	<b>33</b>	<b>1.75</b>	<b>19</b>
12 <sup>45</sup> pm	16	1.75	9
1 <sup>00</sup> pm	17	1.75	10
1 <sup>15</sup> pm	17	1.75	10
1 <sup>30</sup> pm	15	1.75	9
1 <sup>45</sup> pm	12	1.75	7
4 <sup>00</sup> pm	13	1.47	9
4 <sup>15</sup> pm	12	1.47	8
4 <sup>30</sup> pm	5	1.47	3
4 <sup>45</sup> pm	5	1.47	3
5 <sup>00</sup> pm	4	1.47	3
5 <sup>15</sup> pm	4	1.47	3
5 <sup>30</sup> pm	12	1.47	8
5 <sup>45</sup> pm	17	1.47	12
6 <sup>00</sup> pm	29	1.47	20
6 <sup>15</sup> pm	27	1.47	18
6 <sup>30</sup> pm	28	1.47	19
6 <sup>45</sup> pm	28	1.47	19
7 <sup>00</sup> pm	28	1.47	19
7 <sup>15</sup> pm	33	1.47	23
7 <sup>30</sup> pm	32	1.47	22
<b>7<sup>45</sup> pm</b>	<b>40</b>	<b>1.47</b>	<b>27</b>

Note: 1) From Table A.5  
 Bold figures denote peak Hotel parking demand for each period.

Source: Uloth and Associates



TABLE A.9  
CALCULATION OF HOTEL PARKING DEMAND  
FRIDAY 4 MAY 2012

TIME	PATRONS IN HOTEL <sup>1)</sup>	AVERAGE VEHICLE OCCUPANCY <sup>1)</sup>	HOTEL PARKING DEMAND
11 <sup>00</sup> am	24	2.03	12
11 <sup>15</sup> am	21	2.03	10
11 <sup>30</sup> am	1	2.03	0
11 <sup>45</sup> am	4	2.03	2
12 <sup>00</sup> pm	25	2.03	12
12 <sup>15</sup> pm	35	2.03	17
12 <sup>30</sup> pm	59	2.03	29
12 <sup>45</sup> pm	87	2.03	43
1 <sup>00</sup> pm	<b>100</b>	<b>2.03</b>	<b>49</b>
1 <sup>15</sup> pm	78	2.03	38
1 <sup>30</sup> pm	55	2.03	27
1 <sup>45</sup> pm	41	2.03	20
3 <sup>00</sup> pm	20	1.41	14
3 <sup>15</sup> pm	22	1.41	16
3 <sup>30</sup> pm	28	1.41	20
3 <sup>45</sup> pm	37	1.41	26
4 <sup>00</sup> pm	46	1.41	33
4 <sup>15</sup> pm	51	1.41	36
4 <sup>30</sup> pm	39	1.41	28
4 <sup>45</sup> pm	39	1.41	28
5 <sup>00</sup> pm	53	1.41	38
5 <sup>15</sup> pm	65	1.41	46
5 <sup>30</sup> pm	66	1.41	47
5 <sup>45</sup> pm	<b>68</b>	<b>1.41</b>	<b>48</b>
7 <sup>00</sup> pm	61	1.78	34
7 <sup>15</sup> pm	57	1.78	32
7 <sup>30</sup> pm	58	1.78	33
7 <sup>45</sup> pm	65	1.78	36
8 <sup>00</sup> pm	77	1.78	43
8 <sup>15</sup> pm	97	1.78	54
8 <sup>30</sup> pm	96	1.78	54
8 <sup>45</sup> pm	118	1.78	66
9 <sup>00</sup> pm	<b>124</b>	<b>1.78</b>	<b>70</b>
9 <sup>15</sup> pm	112	1.78	63
9 <sup>30</sup> pm	123	1.78	69
9 <sup>45</sup> pm	122	1.78	68

Note: 1) From Table A.5  
Bold figures denote peak Hotel parking demand for each period.

Source: Uloth and Associates

TABLE A.10  
CALCULATION OF HOTEL PARKING DEMAND  
SATURDAY 5 MAY 2012

TIME	PATRONS IN HOTEL <sup>1)</sup>	AVERAGE VEHICLE OCCUPANCY <sup>1)</sup>	HOTEL PARKING DEMAND
11 <sup>00</sup> am	0	1.67	0
11 <sup>15</sup> am	1	1.67	1
11 <sup>30</sup> am	1	1.67	1
11 <sup>45</sup> am	1	1.67	1
12 <sup>00</sup> pm	4	1.67	2
12 <sup>15</sup> pm	6	1.67	4
12 <sup>30</sup> pm	10	1.67	6
12 <sup>45</sup> pm	20	1.67	12
1 <sup>00</sup> pm	28	1.67	17
1 <sup>15</sup> pm	22	1.67	13
1 <sup>30</sup> pm	<b>29</b>	<b>1.67</b>	<b>17</b>
1 <sup>45</sup> pm	18	1.67	11
3 <sup>00</sup> pm	6	1.94	3
3 <sup>15</sup> pm	1	1.94	1
3 <sup>30</sup> pm	2	1.94	1
3 <sup>45</sup> pm	2	1.94	1
4 <sup>00</sup> pm	12	1.94	6
4 <sup>15</sup> pm	14	1.94	7
4 <sup>30</sup> pm	13	1.94	7
4 <sup>45</sup> pm	15	1.94	8
5 <sup>00</sup> pm	18	1.94	9
5 <sup>15</sup> pm	29	1.94	15
5 <sup>30</sup> pm	33	1.94	17
5 <sup>45</sup> pm	<b>39</b>	<b>1.94</b>	<b>20</b>
7 <sup>00</sup> pm	66	2.09	32
7 <sup>15</sup> pm	88	2.09	42
7 <sup>30</sup> pm	75	2.09	36
7 <sup>45</sup> pm	92	2.09	44
8 <sup>00</sup> pm	70	2.09	33
8 <sup>15</sup> pm	87	2.09	42
8 <sup>30</sup> pm	82	2.09	39
8 <sup>45</sup> pm	<b>93</b>	<b>2.09</b>	<b>44</b>
9 <sup>00</sup> pm	72	2.09	34
9 <sup>15</sup> pm	86	2.09	41
9 <sup>30</sup> pm	84	2.09	40
9 <sup>45</sup> pm	71	2.09	34

Note: 1) From Table A.5

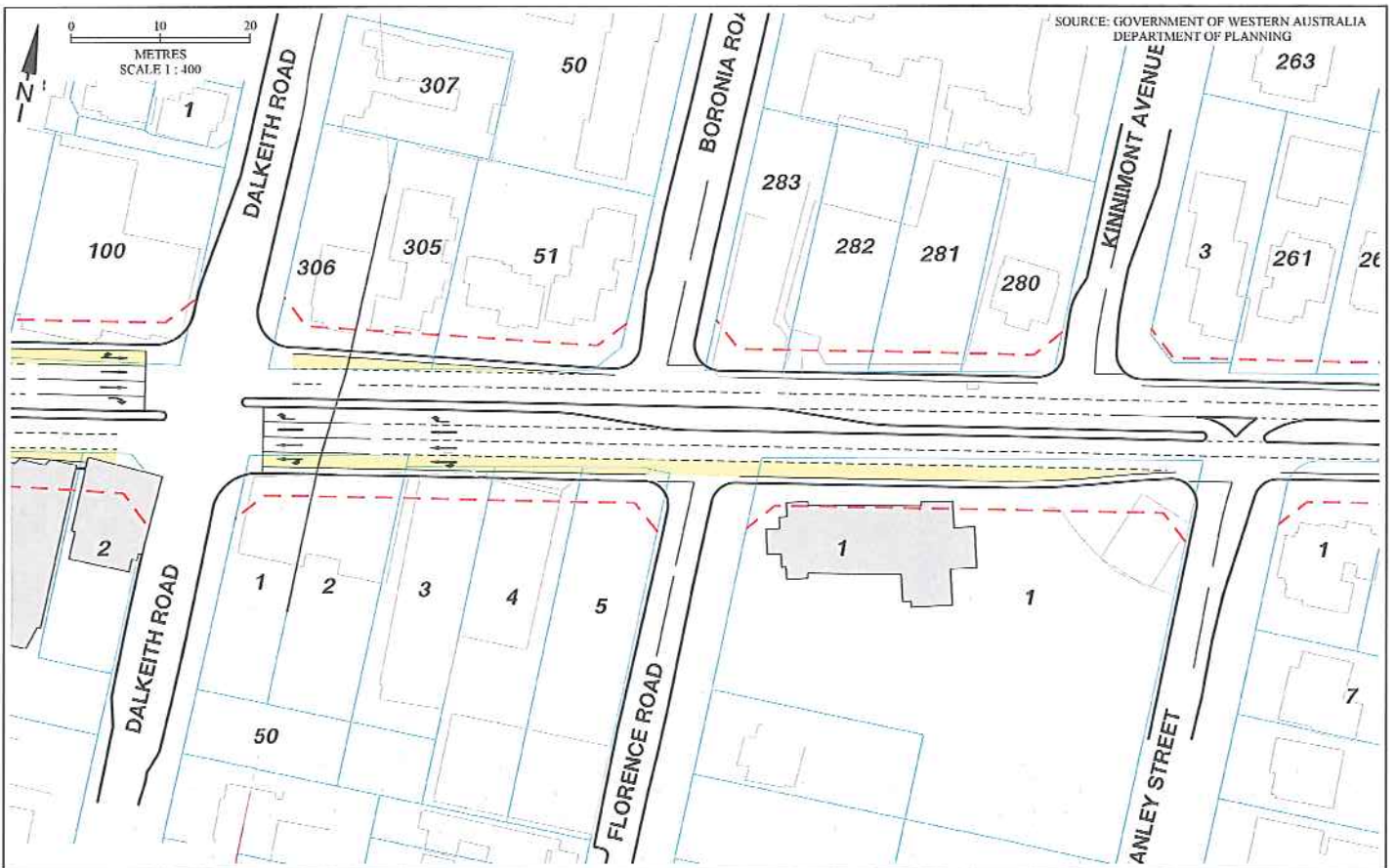
Bold figures denote peak Hotel parking demand for each period.

Source: Uloth and Associates

#### **A.4 FUTURE WIDENING OF STIRLING HIGHWAY**

Figure A.3 shows the proposed concept plan for the future widening of Stirling Highway in the vicinity of the proposed development site, as advertised by WAPC in March 2012 for the proposed MRS Amendment 1210/41 '*Rationalisation of Stirling Highway Reservation*'.



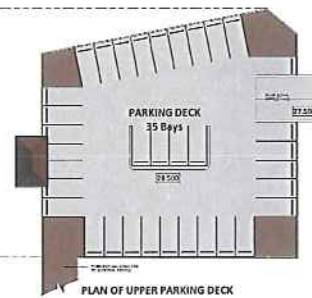
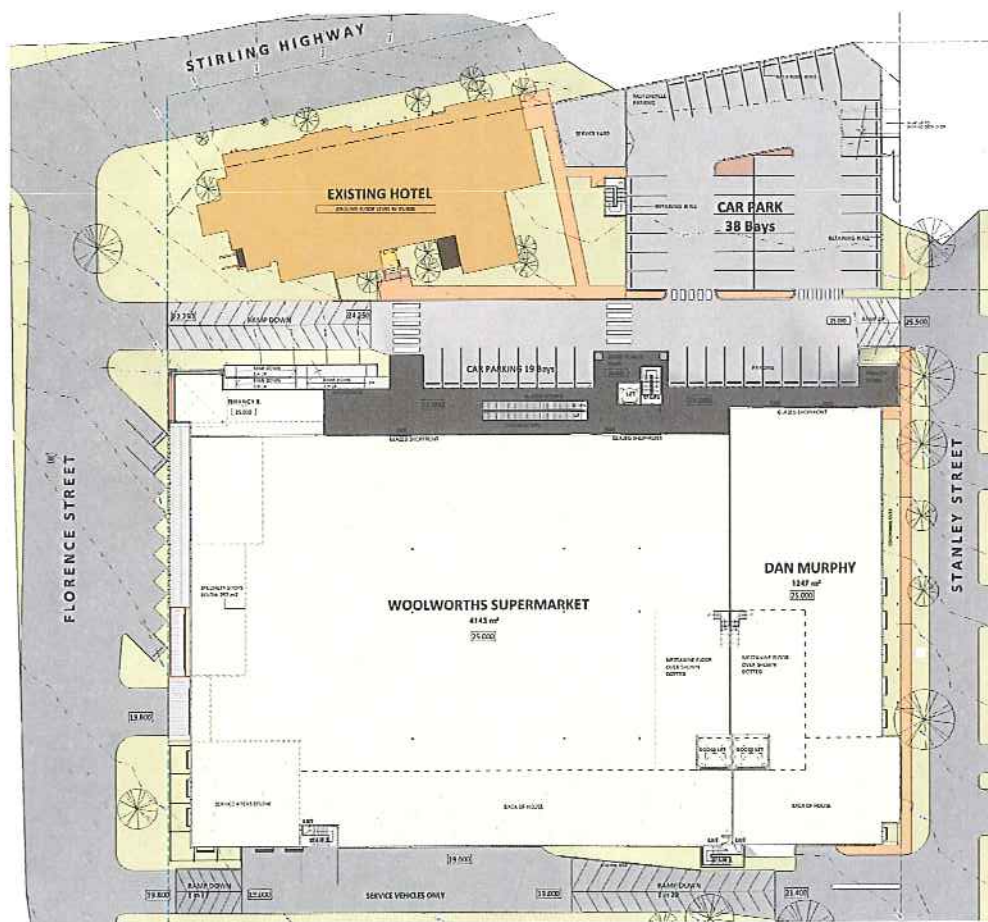


Future Widening of Stirling Highway  
FOR PROPOSED MRS AMENDMENT 1210/41

FIG.  
A.3

## **A.5 PROPOSED DEVELOPMENT**

The proposed development plans, as prepared by KPA Architects, are shown in Figures A.4 and A.5. The proposed Shopping Centre comprises 6,192 square metres GLA, with an overall on-site parking supply of 299 parking spaces.



Ground Floor Plan  
CAPTAIN STIRLING HOTEL REDEVELOPMENT

SCALE: 1:200

ISSUED FOR SCHEME AMENDMENT 13/06/2012

FIG.  
A.4



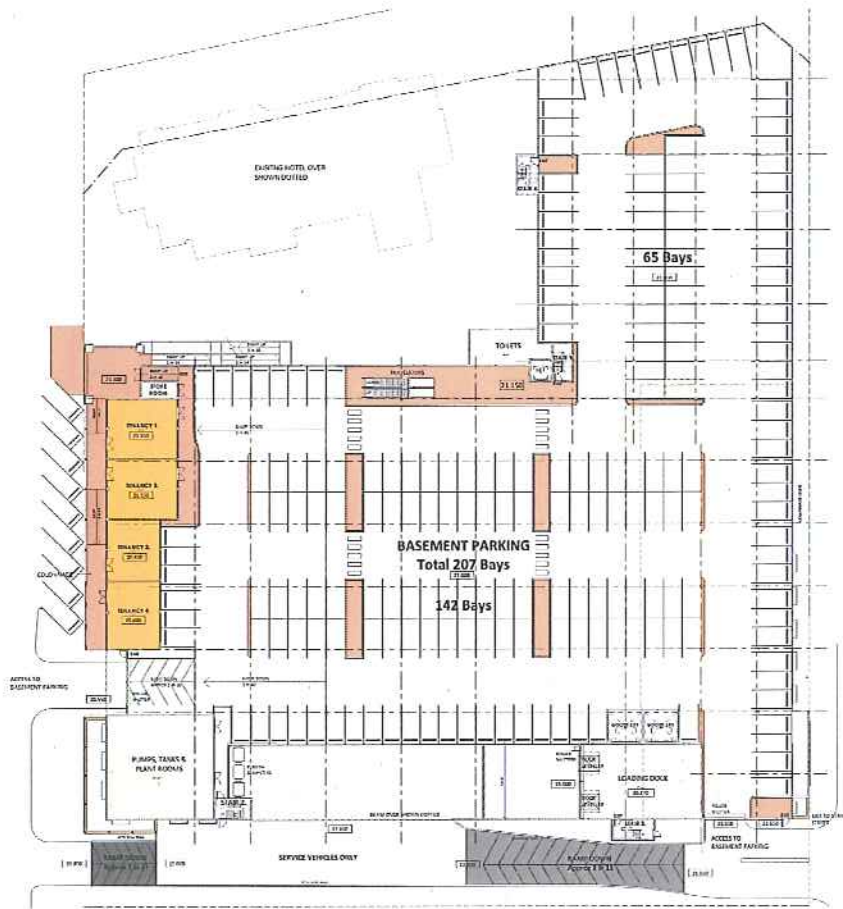
**KPA**  
ARCHITECTS

SHEET No.  
DA 03 (E)

15/06/2012 2:41:35 PM 10/024

KPA ARCHITECTS





Basement Floor Plan  
CAPTAIN STIRLING HOTEL REDEVELOPMENT

SCALE: 1:200

ISSUED FOR SCHEME AMENDMENT 13/06/2012

FIG. A.5



## A.6 SHARED PARKING ANALYSIS

- Consistent with State Planning Policy 4.2 '*Activity Centres for Perth and Peel*', it is recommended to adopt a parking requirement of 4.5 spaces per 100 square metres of floorspace for the proposed Shopping Centre. However, it is also necessary to acknowledge the existing parking demand of the Captain Stirling Hotel, and to ensure that the combined parking demand of the 2 developments can be accommodated within the redeveloped site.
- This recommended parking ratio of 4.5 spaces per 100 square metres gives a peak parking requirement of 279 spaces for the proposed Shopping Centre.
- On the basis of previous parking surveys at a variety of existing shopping centres, it is assumed (for the purposes of a detailed shared parking analysis) that the peak parking demand of the proposed Centre will occur during the lunchtime period on a Saturday. The maximum parking demand outside of this period will then only reach 80 percent of this peak during shopping hours, falling to 5 percent when the shopping centre is closed (to allow for staff restocking, cleaning etc.).
- Table A.11 therefore shows the calculation of the shared peak parking demand using the highest calculated Hotel parking demand in each surveyed time period, from Tables A.8 to A.10 in Chapter A.3, together with the estimated Shopping Centre parking demand, as described above.
- It can be seen in Table A.11 that the results of the shared parking analysis indicate a maximum future parking demand of 296 spaces for the combined Hotel and Shopping Centre site, occurring during the Saturday lunch time period.
- It is important to note, however, that this overall peak parking demand is based on the surveyed level of operation of the existing Hotel. It is therefore necessary to ensure that the existing levels of operation (particularly during regular shopping hours) are maintained in the future.

TABLE A.11  
 CALCULATION OF SHARED PEAK PARKING DEMAND  
 PROPOSED SHOPPING CENTRE AND EXISTING CAPTAIN STIRLING HOTEL

PEAK PARKING PERIOD (DAY & TIME)	SHOPPING CENTRE PARKING DEMAND		SURVEYED HOTEL PARKING DEMAND <sup>2)</sup> (VEHICLES)	COMBINED PEAK PARKING DEMAND (VEHICLES)
	Percent of Peak <sup>1)</sup>	Number of Vehicles		
<u>Thursday</u>				
• 11 <sup>00</sup> am - 2 <sup>00</sup> pm	80%	223	19	242
• 4 <sup>00</sup> pm - 8 <sup>00</sup> pm	80%	223	27	250
<u>Friday</u>				
• 11 <sup>00</sup> am - 2 <sup>00</sup> pm	80%	223	49	272
• 3 <sup>00</sup> pm - 6 <sup>00</sup> pm	80%	223	48	271
• 7 <sup>00</sup> pm - 10 <sup>00</sup> pm	5%	14	70	84
<u>Saturday</u>				
• <b>11<sup>00</sup> am - 2<sup>00</sup> pm</b>	<b>100%</b>	<b>279</b>	<b>17</b>	<b>296</b>
• 3 <sup>00</sup> pm - 6 <sup>00</sup> pm	80%	223	20	243
• 7 <sup>00</sup> pm - 10 <sup>00</sup> pm	5%	14	44	58

Notes: 1) Shopping Centre parking fluctuations assumed based on previous surveys at a variety of Centres.

2) Hotel parking demand from Tables A.8 to A.10.

Bold figures denote overall shared peak parking demand.

Source: Uloth and Associates

## A.7 FUTURE TRAFFIC FLOWS AND INTERSECTION OPERATIONAL ANALYSES

- Figure A.6 shows the future Thursday PM peak hour traffic flows for the Stirling Highway intersections following the proposed development, as described above in Section 2.5.
- The traffic flows in the upper portion reflect the short term scenario based on the recommended roads and access shown in Figure 2 in Chapter 3 Recommendations, including an assumed 5 percent growth of existing traffic along Stirling Highway.
- The traffic flows in the lower portion of Figure A.6 show the long term flows based on the concept plan in Figure A.3, with a further 5 percent growth along Stirling Highway.
- Tables A.12 to A.14 show the short term future PM peak hour intersection operational characteristics for the Stirling Highway intersections with Dalkeith Road, Florence Road/Boronia Avenue, and Stanley Street, noting that the Florence Road/Boronia Avenue analysis is based on the recommended intersection modifications shown in Figure 2 in Chapter 3 Recommendations.
- Table A.15 then shows the long term future PM peak hour operational analysis for the future Stirling Highway - Stanley Street junction, in accordance with the long term concept plan shown in Figure A.3 in Chapter A.4.

TABLE A.12  
OPERATIONAL CHARACTERISTICS FOR SIGNALISED STIRLING HIGHWAY - DALKEITH ROAD INTERSECTION – SHORT TERM FUTURE THURSDAY PM PEAK HOUR

ITEMS	OPERATIONAL CHARACTERISTICS					
	Short Term PM Peak Hour					
No. of Approach Lanes: N E S W	2 2 2 2					
No. of Phases	3					
Cycle Time (sec)	110					
Max X Value	0.741					
Average Delay (sec)	24.8					
Level of Service	C					
Approach	Move-ment	X-Value	Max. Queue		Avrge Delay (sec)	Level of Serv.
			Veh.	Metres		
Dalkeith Road - north	LT	0.733	12.2	87	52.6	D
	TR	0.733	6.7	47	62.9	E
Stirling Highway - east	LT	<u>0.741</u>	32.1	227	19.3	B
	T	<u>0.741</u>	32.1	227	19.1	B
Dalkeith Road - south	LT	0.553	10.3	72	46.0	D
	R	0.725	9.6	67	43.5	D
Stirling Highway - west	LT	0.593	22.3	159	17.0	B
	T	0.593	22.3	159	16.7	B

Notes: Level of Service calculations are based on Average Delay and Degree of Saturation.  
Underlined X-values denote maximum values.

Source: Uloth and Associates



TABLE A.13  
 OPERATIONAL CHARACTERISTICS FOR UNSIGNALISED STIRLING HIGHWAY -  
 FLORENCE ROAD - BORONIA AVENUE INTERSECTION  
 SHORT TERM FUTURE THURSDAY PM PEAK HOUR

ITEMS	OPERATIONAL CHARACTERISTICS					
	Short Term PM Peak Hour					
No. of Approach Lanes: N E S W	2 3 2 3					
Approach	Move-ment	X-Value	Max. Queue		Avrge Delay (sec)	Level of Serv.
			(veh)	m		
Boronia Avenue - north	L	0.079	0.2	2	16.1	C
	R <sup>1)</sup>	-	-	-	-	-
Stirling Highway - east	LT	0.388	0.0	0	1.2	A
	T	0.388	0.0	0	0.0	A
	R	0.038	0.1	1	16.0	C
Florence Road - south	L	0.339	1.3	9	12.2	B
	R	0.161	0.4	3	133.2	F
Stirling Highway - west	LT	0.372	0.0	0	0.1	A
	T	0.372	0.0	0	0.0	A
	R	<u>0.402</u>	1.4	10	23.8	C

Notes: 1) No right turns were recorded from Boronia Avenue during the PM peak hour.  
 Level of Service calculations are based on Average Delay and Degree of Saturation.  
 Underlined X-values denote maximum values.

Source: Uloth and Associates

TABLE A.14  
 OPERATIONAL CHARACTERISTICS FOR UNSIGNALISED - STIRLING HIGHWAY -  
 STANLEY STREET JUNCTION – SHORT TERM FUTURE THURSDAY PM PEAK HOUR

ITEMS	OPERATIONAL CHARACTERISTICS					
	Short Term PM Peak Hour Future					
No. of Approach Lanes: N E S W	- 2 2 2					
Approach	Move-ment	X-Value	Max. Queue		Avrge Delay (sec)	Level of Serv.
			(veh)	m		
Stirling Highway - east	LT	0.411	0.0	0	1.4	A
	T	0.411	0.0	0	0.0	A
Stanley Street - south	L	0.115	0.3	2	11.4	B
	R	0.169	0.4	3	140.3	F
Stirling Highway - west	T	<u>0.483</u>	0.0	0.0	0.0	A
	TR	<u>0.483</u>	8.0	57	31.2	D

Notes: Level of Service calculations are based on Average Delay and Degree of Saturation.  
 Underlined X-values denote maximum values.

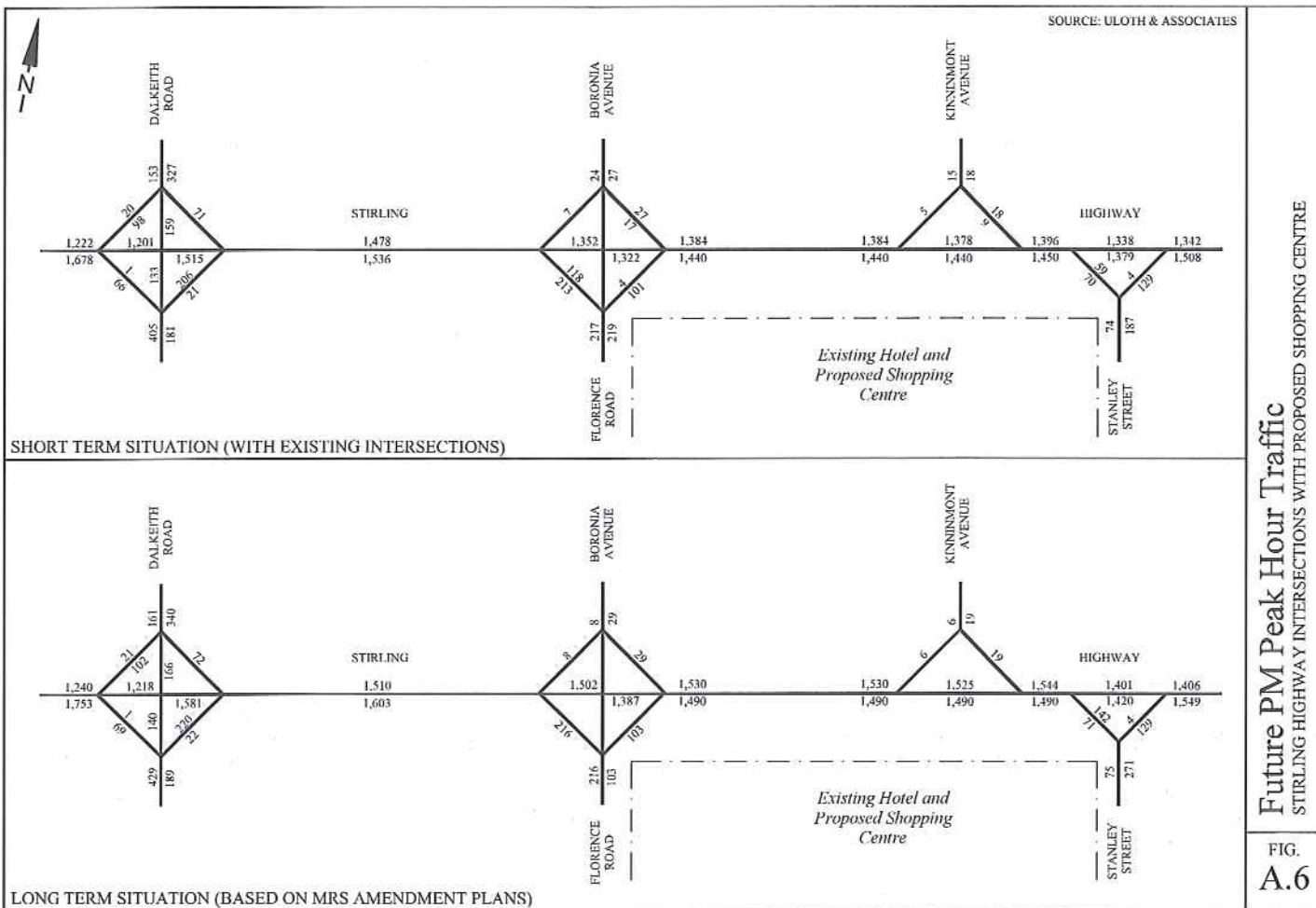
Source: Uloth and Associates

TABLE A.15  
 OPERATIONAL CHARACTERISTICS FOR UNSIGNALISED - STIRLING HIGHWAY -  
 STANLEY STREET JUNCTION – LONG TERM FUTURE THURSDAY PM PEAK HOUR

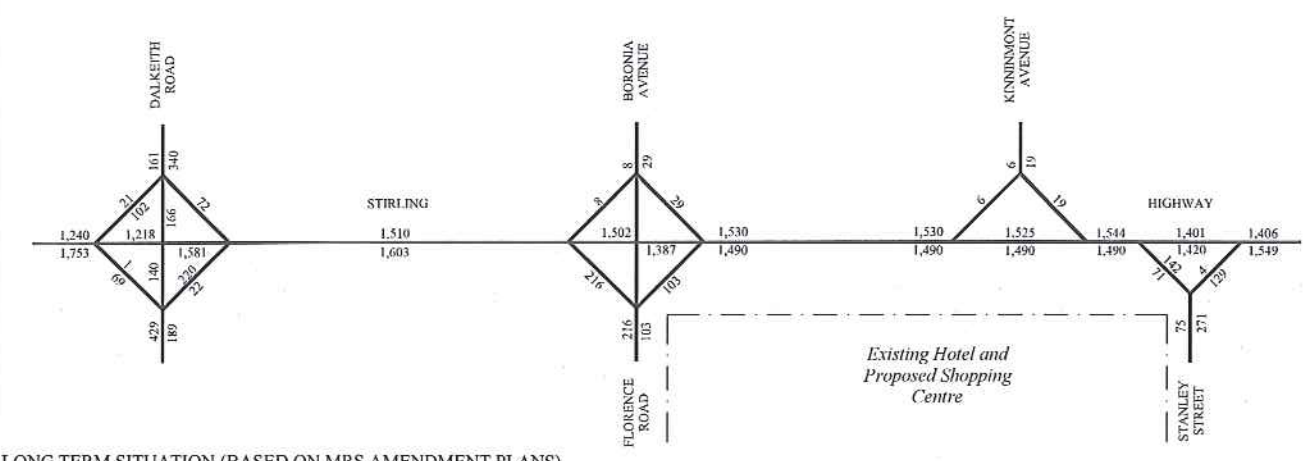
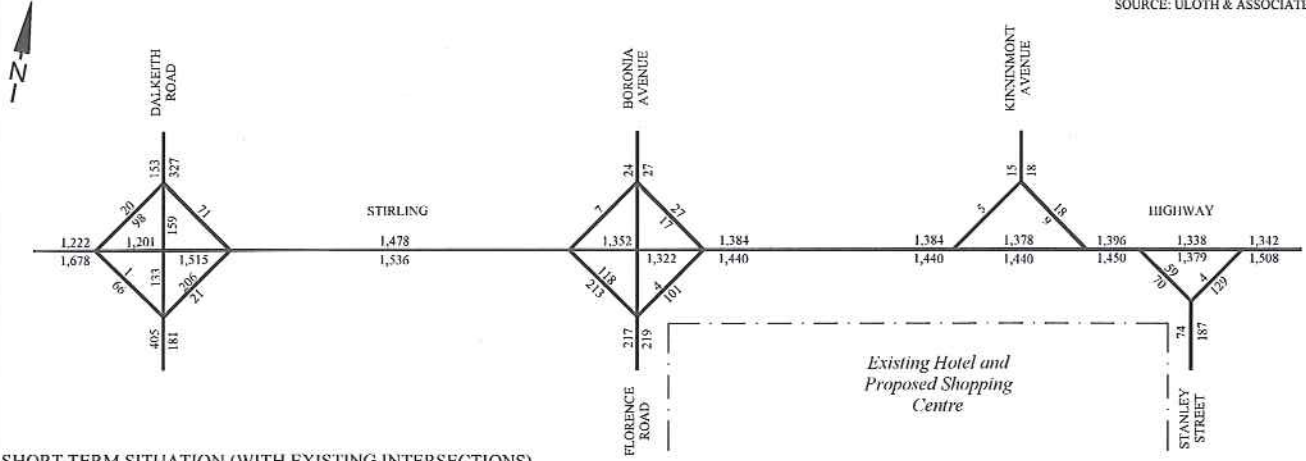
ITEMS	OPERATIONAL CHARACTERISTICS					
	Long Term PM Peak Hour Future					
No. of Approach Lanes: N E S W	- 2 2 3					
Approach	Move-ment	X-Value	Max. Queue		Avrge Delay (sec)	Level of Serv.
			(veh)	m		
Stirling Highway - east	LT	0.422	0.0	0	1.4	A
	T	0.422	0.0	0	0.0	A
Stanley Street - south	L	0.119	0.3	2	11.5	B
	R	0.014	0.0	0	29.1	D
Stirling Highway - west	T	0.383	0.0	0	0.0	A
	T	0.383	0.0	0	0.0	A
	R	<u>0.612</u>	2.5	17	33.9	D

Notes: Level of Service calculations are based on Average Delay and Degree of Saturation. Underlined X-values denote maximum values.

Source: Uloth and Associates



SOURCE: ULOTH & ASSOCIATES



**Future PM Peak Hour Traffic**  
STIRLING HIGHWAY INTERSECTIONS WITH PROPOSED SHOPPING CENTRE

**FIG. A.6**

## Applicant's Justification of proposal

Applicant's assertion	Officer Comment
<p>Purpose of amendment</p> <p><i>"The Village Hub area shown in the Precinct Plan does not identify sufficient area to accommodate the level of retail development identified as being orderly for the subject land."</i></p>	<p>Retail is not the sole factor in determining planning</p>
<p>Development concept plan Sustainability/ESD initiatives</p> <p><i>"The eastern and western facades are to be extensively softened through the use of landscaping and green wall systems. These systems are proposed to be pre-grown off site for immediate greening of the walls and will use recycled water drip irrigation systems. The plants to be chosen for these wall systems are intended to be water-wise plants"</i></p>	<p>Eastern façade should be of appropriate scale to integrate with neighbouring land uses.</p>
<p>Breaking down mass and scale through</p> <p>brise soleil, green walling, etc</p>	<p>The proposed provisions are cosmetic and are insufficient to provide a transition from single lot residential to supermarket.</p>
<p>Urban form</p> <p><i>"The urban form reflects the pattern of development desired under the Activity Centres Policy – SPP 4.2."</i></p>	<p>The proposal partially addresses the objectives of SPP 4.2 in Florence Street, but does not maximise for pedestrian movement or create an interesting, pedestrian friendly environment beyond the activation of Florence Street.</p>
<p>Vehicular and pedestrian access</p>	<p>The proposal is car oriented with limited provision for pedestrian movement other than along Florence Street, where pedestrian movement is impeded by angled parking.</p>
<p>Replacement of Existing vegetation</p>	<p>Not illustrated on the Development Concept Plan and the provisions included are not too broad to provide any assurances.</p>

### PD49.12 – Attachment 3

#### Applicants Justification of the Proposals



## Applicant's statement of merit of the proposal

Applicant's assertion	We dispute this because....
<p>City of Nedlands TPS 2</p> <ul style="list-style-type: none"> <li>The proposed rezoning is consistent with the intent of TPS2, which states in Clause 1.3 that <i>"It is proposed to maintain the existing character and density of residential land with only such non-residential uses as are necessary to serve the needs of the district's residential population, except for those uses which may be located along major transport routes within the Scheme area."</i></li> <li>The proposal reflects the strategic intent for intensification of activity on the Stirling Highway and a level of retail development identified as being orderly in the short term.</li> </ul>	<p>Clause 1.3 is not relevant, as it does not provide any guidelines for the development of uses located along major transport routes within the Scheme area.</p> <p>It has not been established whether there is a need in the district for a facility of this scale given the extent of the retail area that has been used for the retail modelling.</p> <p>The Strategic intent for this site is to create a village hub with housing diversity, not a mono-character large scale grocery store as proposed by the development concept plan.</p>
<p>Traffic and Access</p> <ul style="list-style-type: none"> <li>The development concept plans attached to this submission are demonstrated to be orderly in terms of accessibility and parking provision, subject to improvements such as the widening of Stanley and Florence Streets and Stirling Highway to accommodate painted medians and future truck movements.</li> </ul>	<p>Dismissive of the reality that the widening of Stirling Highway will not happen anytime soon, and that the widening of Stanley and Florence Streets are not proposed outside of the context his proposal.</p>
<ul style="list-style-type: none"> <li>The proposed additional 5,513m<sup>2</sup> of PLUC 5 shop/retail floor space to be established on the subject land has been identified as orderly and will not result in any significant adverse economic impact.</li> <li>No loss of facilities will impact on reasonable access to goods or services by members of the community at the local or regional level.</li> </ul>	<p>The applicant's statement is questionable Independent advice indicates that the excessive scale of the trade area distorts the probable impact of the proposed development as a result of excessive estimates for population, household expenditure, estimated retail floorspace, number of centres deemed to be impacted by the proposed development, and the estimated trade impact of the proposed development on nearby centres.</p> <p>Dominance of one use within the proposed additional floor space does not allow for activities associated with an activity centre</p>

### PD49.12 – Attachment 4

Applicants assertion that the proposal has merit and will result in orderly and proper planning

## Urban Design

- The proposed Scheme Amendment will result in an improvement to the built environment through the creation of an active street frontage at Florence Street complementing existing commercial development opposite.
- The built form will establish a high standard informing the design of future redevelopments on adjoining properties in the Village Hub.
- The proposed Neighbourhood Activity Centre will be developed in an attractive manner, ensuring adequate traffic circulation, parking and a higher level of public amenity.
- In achieving the highest and best use for the subject land and a desirable built form outcome, the proposed amendment will deliver a renewed vitality to the Village Hub, a stronger sense of place, greater security after business hours and development at the street edge having a human scale.
- The proposed development concept is sympathetic to the architectural form of the existing Captain Stirling Hotel. Further, edge treatments at the southern and western sides of the development will ensure a suitable level of visual amenity from adjoining residential development to the south and east and maintain a human scale.
- To ensure a desirable form of development emerges on preparation of subsequent development applications, development standards are attached to this amendment to guide future planning for the subject land under Schedule 5 of TPS2.

The urban design provisions of the proposed Scheme amendment are too broad to inform appropriately. From the development concept it can be identified that the urban design does not :

- take account of its potential impact on surrounding uses;
- address the vision for a Village Hub with its associated public spaces;
- maximises for pedestrian movement or create an interesting, pedestrian friendly environment beyond the activation of Florence Street;
- works only partially within the heritage values of the site, disregarding a number of existing heritage elements on the site; and
- the dominance of one land use will not guarantee vitality and a stronger sense of place.



**Applicant's statement of Orderly and Proper Planning merit of the proposal**

<b>Applicant's assertion</b>	<b>We dispute this because....</b>
<p>The proposal is orderly and proper planning for the following reasons:</p> <ul style="list-style-type: none"> <li>• Vehicle access and egress may be developed in a safe and effective manner; and parking provision under a shared and reciprocal arrangement is demonstrated to be orderly.</li> <li>• The proposal will result in commercial development having an urban form and design consistent with the requirements of SPP 4.2 – Activity Centres Policy for Perth and Peel.</li> <li>• The proposal will result in a built form outcome significantly improving the physical amenity of the centre and facilitating commercial development that appropriately addresses the existing portion of the activity centre.</li> <li>• The development will pay due regard to existing heritage buildings and be designed in a sympathetic manner.</li> <li>• Consistent with the Directions 2031 strategy, the proposal will facilitate an intensification of land uses in proximity to the Stirling Highway Activity Corridor, which features high frequency public transit services and will facilitate the realisation of employment targets in a desirable location.</li> </ul>	<p>No specifics have been provided in relation to reciprocal parking arrangements.</p> <p>The proposal does not align with the principles of State Planning Policy 4.2.</p> <p>Provisions provided in the scheme amendment are too broad to guarantee a built form with improved amenity. With one dominant land use – grocery shopping – it is questionable whether the proposal facilitates commercial development appropriately addresses the existing portion of the activity centre.</p> <p>The proposal does not respect the full heritage value of the sites.</p> <p>The provisions within the scheme amendment are too broad to confirm compliance with Directions 2031. Judging by the development concept, which provides for only one dominant landuse, the proposal already no longer aligns with Directions 2031.</p>

<ul style="list-style-type: none"> <li>• The proposed additional 5,513 m<sup>2</sup> of PLUC 5 Shop/Retail floor space will result in no significant adverse economic impact on competing retail facilities at the time of development and no significant impact in terms of access to necessary goods and services by the local community.</li> </ul>	<p>The applicant's statement is questionable. Independent advice indicates that the excessive scale of the trade area distorts the probable impact of the proposed development as a result of excessive estimates for population, household expenditure, estimated retail floorspace, number of centres deemed to be impacted by the proposed development, and the estimated trade impact of the proposed development on nearby centres.</p>
<ul style="list-style-type: none"> <li>• The proposed Neighbourhood Activity Centre is orderly with respect to projected population growth and the level of impact on adjoining centres and the functional role of the activity centre is consistent with that identified under SPP 4.2 for Neighbourhood Activity Centres.</li> </ul>	<p>Without a guaranteed residential component this proposal does not address population growth.</p>
<ul style="list-style-type: none"> <li>• Existing trees will be replaced and landscaping will occur in a manner improving local streetscapes and views from the Stirling Highway.</li> </ul>	<p>The provisions within the scheme amendment are too broad to guarantee the applicant's statement, while the information on the development concept does not reflect the assertion.</p>
<ul style="list-style-type: none"> <li>• It is demonstrated that the proposal may occur in a manner that will preserve outlooks from adjoining dwellings and will maintain a desirable level of residential amenity.</li> </ul>	<p>The provisions within the scheme amendment are not focussed on minimising the impact of this development on the surrounding residential properties or improving the amenity of the residential properties.</p>



## Assessment of Proposed Schedule V provisions

The proposed Scheme text modification is not appropriate because:

1. they are focussed on delivering the original Woolworths proposal and do not capture any design requirements for other development options;
2. The provisions are very inconsistent being highly prescriptive in some instances and too generic in others respects to the extent that they cannot effectively inform a development approval process.
3. The provisions do not include adequate design criteria to minimise the impact of a proposed development that would be permitted in accordance with this proposed scheme on adjoining properties.

Specifically the following issues are of concern:

Applicant's assertion	We dispute this because....
Detailed area planning -Providing the option to waive the requirement to prepare detailed area plan.	DAPs provide a level of detail and certainty as to the likely built outcome that have not been provided in the proposed scheme amendment and therefore are appropriate, although the proposed process is questionable.
Shop/retail floor space –Providing minimum permitted retail floor area for the site.	While the proposal in terms of floor space aligns with the criteria for a Neighbourhood Activity centre it is questionable whether a large dominant use as potentially proposed will promote the character that would be expected in a Neighbourhood Activity Centre.
Inclusion of Design Objectives	While inclusion of design objectives is supported in this instance the objective that have been included are inadequate as they only address a handful of design considerations and are not sufficiently comprehensive to guide a development of this nature.
Proposed permitted building height	The proposed provisions for the proposed allowable building height are ambiguous.

## PD49.12 – Attachment 5

Assessment of proposed  
Schedule V provisions

## **Summary of the proposals misalignment with the provisions of State Planning Documents for the site**

### **State Wide documents**

The proposed scheme amendment does not align with Directions 2031, Central Metropolitan Sub-Regional Strategy and Development Control Policy 1.6 for the following reasons:

1. The proposal does not achieve one of the main aims of Directions 2031, which is to increase housing availability. The proposal results in a net loss of residential uses without providing assurance of additional future housing on the sites. The subregional strategy requires that Nedlands provides 3500 additional dwellings, and this proposal does not contribute to achieving this target.
2. While there would be an increase in local employment, the proposal does not provide an increase in the range of employment.
3. The proposal includes the enhancement of only one street, Florence Road while there are no intentions to address the streetscape of Stirling Highway and Stanley Street, which potentially stand to lose existing amenity.
4. Proposed demolition of the bottle shop is contrary to the document's aim to respect heritage values.
5. It does not support Transit Orientated Development.

### **State Planning Policy 4.2 Activity Centres**

The proposal as a neighbourhood centre does not meet the following objectives for a planned activity centre as determined in the policy:

1. To provide a wide range of retail and commercial premises and promote a competitive retail and commercial market which this proposal does with its focus on a large scale grocery retail shop.
2. To provide for a range of employment.
3. To provide for a range of housing density and diversity in and around activity centres to improve land efficiency, housing variety and support centre facilities.
4. To concentrate activities, particularly those that generate high numbers of trips, within activity centres.
5. To ensure that parking is screened by buildings and does not impact pedestrian amenity which the proposed car park along Stirling highway does not align with.
6. To provide an urban form that incorporates active street fronts and building frontages that address streets, maximising pedestrian flow and encourage natural surveillance. While the proposal does provide an activated street front along Florence Road the other streetscapes the other elements of this objective are not being satisfied.

## **PD49.12 – Attachment 6**

Summary of the proposals misalignment with the provisions of State Planning Documents for the site



**Summary of the proposal's misalignment with the Stirling Highway Design guideline provisions for the site**

<b>Applicant's assertion</b>	<b>We dispute this because....</b>
<p>The Village Hub Plan under the Final Draft Special Control Area Provisions currently identifies future residential properties in the Village Hub area, which will be taken up the proposed development. The City may therefore need to identify the additional residential development on lots surrounding the subject land in order to accommodate the targets in Table 3 of the Activity Centres Policy within 200 m of the activity centre.</p> <p>The Activity Centres Policy makes no presumption that dwellings must be built on top of retail buildings.</p>	<ul style="list-style-type: none"> <li>• The City has already identified that the housing choice is to be included as part of the Village Hub. The Village Hub Plan identifies the southern portion of the Village Hub as residential only. This proposal will not assist the City in achieving its desired outcome for the precinct as well as its housing target requirement.</li> <li>• The Activity Centres Policy does not preclude the fact that including a mix of uses in a development can result in high value benefits for the community.</li> </ul>
<p>Relevant controls within the Final Draft Special Control Area Provisions omitted include those relating to building height, as the draft provisions assume development will adjoin the Highway and do not take into consideration the slope of the subject land further to the south, which is proposed to accommodate the development.</p>	<ul style="list-style-type: none"> <li>• The Village Hub Plan specifically indicates its preference for new development adjoining the Highway at the north-east corner of the site. This encourages the activation of Stanley Street as well.</li> </ul>
<p>The Final Draft Special Control Area Provisions currently envisages a form of development that does not reflect the development potential of the subject land, based on the identified retail demand described in Section 6.0.</p>	<ul style="list-style-type: none"> <li>• Retail demand is not the only factor when considering the development potential of the subject land.</li> <li>• Long-term planning for the future redevelopment of Stirling Highway should be based on more than solely satisfying retail demand.</li> <li>• The form of development envisaged in the Final Draft Special Control Area Provisions predominately responds to the future housing needs of the local population.</li> </ul>

**PD49.12 – Attachment 7**



Our justification for this position is:

1. The 'Development Principles' of the Village Hub Provisions state:

- Satisfying retail demand is not referenced as a development principle for the Village Hub.

2. Comparing the 'Proposed Character' of Mountjoy to Smyth precinct plan with the scheme amendment proposal indicates that the proposed main focus on grocery shopping of the scheme amendment does not satisfy the desired proposed character for the area as shown below:

<b>Proposed character</b>	<b>Yes</b>	<b>Maybe</b>	<b>No</b>
Heart of the Highway			X
Main retail zone and hospitality area including existing hotel, restaurants and cafes			X
Village Hub location	?	?	?
Activation of main side streets such as Dalkeith Road, Florence Road and Stanley Street.		X	
Potential for increased activity and Community meeting place			X

The Final Draft Special Control Area Provisions indicate that a detailed area plan is required. The preparation of a detailed area plan for the subject land may be required by Council, however the Activity Centres Policy does not identify the need for a detailed area plan as being mandatory and based on the extent of guidance provided in the Scheme Text modifications and attached development concept plan, a development application can be prepared providing sufficient detail and sufficient basis for the City to waive the requirement for a detailed area plan.

A similar process is followed by other local authorities in the Perth metropolitan region.

- The Village Hub Plan provides a broad outline for developing this area as a Village Hub. Another layer of detail is needed.
- The City is not bound by what process other local authorities use.

The applicant's overall response to the above issues is that:

- The site's maximum growth potential given its location on Stirling Highway and adjacent to the existing shopping centre is to expand the retail component for the area.
- The site is not large enough to accommodate the growth potential as well as providing for the residential component and a community meeting place as envisaged by the Stirling Highway Design Guidelines.
- The Design guidelines will deliver the desirable dwelling yield within 200 m of the subject land and therefore there is no need to provide a residential component on this site.
- The community would be better served through the provision of retail facilities as proposed and enabling redevelopment of more existing residential sites adjacent to the centre.
- The village Hub plan has not been informed by appropriate retail demand studies.

## **Evaluation of the Retail Sustainability Assessment provided by the applicant**

An independent assessment by SGS Economics and Planning of the retail modelling has provided the following advice:

- The identified trade area appears to be excessive for evaluation of the viability of a neighbourhood centre and does not reflect an appropriate trade area for a neighbourhood centre;
- The excessive scale of the trade area distorts the probable impact of the proposed development including population, household expenditure, estimated retail floorspace, number of centres deemed to be impacted by the proposed development, and the estimate trade impact of the proposed development on nearby centres.
- The Retail Sustainability Assessment (RSA) does not establish retail demand for the trade area.
- The quantum of existing centres that are considered to be impacted by the proposal by the RSA is considered excessive and is likely to dilute the trade impact on centres more significantly impacted by the proposal.
- The RSA does not provide a logical progression of the modelling methodology with which a reader could verify the stated conclusions. Greater detail regarding their modelling processes that includes a step by step explanation as to how the findings and conclusions have been deduced (even in simple terms) would improve the credibility of the report.
- The RSA does not adequately convey the assumptions and data used in a transparent and verifiable way. The RSA should be amended to include explicit declaration of the household expenditure data by retail type for the trade area; a clear conversion of this into demand for retail floorspace; appropriate criteria for selection of competing centres; and population projections to compliment the household projections provided.

The amount of grocery retail and the size of the dominant tenancy (Woolworths) does not appear to be appropriate for a neighbourhood centre.

### **PD49.12 – Attachment 8**

Evaluation of the Retail Sustainability  
Assessment provided by the applicant



## **Assessment of Traffic Analysis and comments in relation to Alternative Transport**

### **Traffic Assessment:**

The following shortcomings have been identified:

1. No objectives are provided for within the Transport Assessment (TA) for identifying pedestrian, cyclist or disabled access. The TA only identifies access for vehicles and service trucks.
2. No objectives are provided for safety (i.e. vehicle sightlines when accessing the site, crash locations and types - for midblock road sections and key intersections identified to be effected by the proposed development, pedestrian walkways, cyclist routes etc.). From the Western Australian Planning Commission Guidelines ' Transport Assessment Guidelines for Developments' (August 2006) it states that a transport assessment should determine whether the development generating traffic could potentially raise any road safety issues
3. In relation to evaluating the existing situation only the PM peak period has been reviewed and no review has been undertaken for the AM or inter-peak peak period scenarios. A PM peak may take into consideration after work trips to the supermarket. Within the assessment it is considered that only the worst case scenario has been assessed. Also, as the type of development being proposed is a shopping centre, usually the weekend peak periods would also be taken into consideration (usually mid-afternoon). These other peak periods could cause delays along Stirling Highway and at the key intersections.
4. The applicant has suggested a possible treatment could be to create a signalised 4-way intersection at Florence Road / Boronia Avenue, directly linked with the existing signals at Dalkeith Road. If this intersection was signalised, it is considered it would be too close to the Dalkeith Road / Stirling Highway intersection. Two signalised intersections in such close proximity will cause a buildup in queue lengths and cause unnecessary vehicle delays. Should this option be proposed, further traffic modelling will require to be undertaken.
5. The vehicular access explanation for the car parks minus the service vehicles entry and exit needs further explanation. It is unclear how vehicles will be exiting each of the driveways (i.e. is it a one way in or one way out formation).
6. Future Traffic flows have been estimated in using typical rates for the type of development in question extracted from published land use traffic generating databases including: Guide to Traffic Generating Developments, Version 2.2, October 2002 - Roads and Traffic Authority, New South Wales. According to the Department of Planning WA this is the most common and potentially the least accurate method.

### **PD49.12 – Attachment 9**

This database provides general rates for a range of land uses expressed in terms of daily and/or peak hour trips per floor space or number of dwellings. These rates should be used with caution as they are based on surveys in NSW, SA and the USA. Much of the data is old and may not be particularly relevant to WA. The rates also tend to be averages implying that, even if they are appropriate, 50% of that type of development is likely to generate at a higher rate.

For the purposes of this report, the basis of Transport Assessment for Woolworths Limited, it is assumed that Uloth and Associates have modelled land use traffic generation on the Guide to Traffic Generating Developments as detailed above. It must be noted that in that guide a trip is defined as "a one way vehicular movement from one point to another excluding the return journey. Therefore, a return trip to/from a land use is counted as two trips".

7. The applicant proposes the widening of Stirling Highway at Florence Road by 2 m to extend the existing painted median (to 3.5 m in width). This will assist with right hand entry to and from the development at the intersection of Florence Road and Stirling Highway. This is a temporary measure that does not align with the long term MRS amendment, however does provide relief from the through lane travelling east along Stirling Highway which is currently undesirable given the current 1.5m painted median width.
8. Whilst it will be safer for right turning vehicles at the traffic signals on Dalkeith Road/Stirling Highway, the impact of this will further necessitate vehicles to travel south and disperse through the predominantly residential streets.
9. In regards to the driveway access, the applicant has not investigated nor discussed any traffic delays caused from vehicles queuing to get into the shopping centre which could back up onto Stirling Highway
10. Within the report and technical appendix there are no details provided for the source of the traffic distribution analysis, growth of the existing traffic flows or assumptions for the proposal to be adequately reviewed. Additionally, the side roads north of Stirling Highway including Boronia Avenue and Kinninmont Avenue have not been considered within the analysis.
11. The report discusses future traffic flows and there is no available capacity for vehicles exiting the site to turn right onto Stirling Highway. It details re-routing of traffic south of the development to Broadway. This re-routing of traffic is almost double the length of distance than that of exiting from Stanley Street onto Stirling Highway. Dalkeith Road would be a more desirable side street to enter Stirling Highway given the Level of Service it is currently and proposed to operate at.
12. For the future traffic flows it is not clear which design year has been assumed for modelling the short term and long term scenarios. It is not easy to perceive what growth rate has been applied for each year within the model period (i.e. year 1, year 2 etc.).



Within the technical appendix A7, the tables demonstrating the intersection operational analysis are provided, however there are no details given on the intersection improvements modelled.

### **Alternative Transport:**

The document displays the following gaps:

1. Lack of detail relating to bicycle parking and end of trip facilities when car parking has been addressed in such detail.
2. There is lack of consideration as to how public transport users will safely travel between bus stops and the development as all public transport users accessing the site will have to cross a road (Stirling Hwy, Florence Road or Stanley Street);
3. There is no consideration of the impact of the proposed widening of Florence Rd and Stanley St, plus the increased vehicle movements which will potentially make these roads more difficult to cross. Proposed painted medians do not offer good refuge for pedestrians.
4. No consideration has been given to addressing the potential conflict point for pedestrians at the northern end of Florence Rd, where there will be vehicle movement into the existing centre, an entrance to the proposed centre and a loading entrance to the new centre all within approximately 100m of the Stirling Hwy intersection, as well as angled parking bays on the eastern side of the road in this area.
5. The statements that:
  - a. 'vehicle usage will become less viable as the price of oil continues to increase';
  - b. the proposed changes in road design of Stirling Hwy (which includes changes to increase priority of public transport); and
  - c. are not relevant to inform current decisions as it are too difficult to predict when and if they would happen.



**Summary of the proposal's shortcomings in regards to existing Heritage values on the site**

While the scheme amendment provides for the retention of heritage buildings on the site, the heritage report attached to the proposal justifies the demolition of the existing drive through bottle shop. The City has been advised that the bottle shop should be preserved and restored.

The heritage assessment provided by the applicant's heritage consultant was evaluated by a heritage consultant independently appointed by the City. His findings were also corroborated by the findings of Palassis Architects while revising the city's existing Heritage List in 2011.

<b>Applicant's assertion</b>	<b>We dispute this because...</b>
Only the Captain Stirling Hotel is worthy of retention	<p>The MHI refers to entire site as does the proposal to include the site in the State register – includes the vegetation and bottle shop.</p> <p>The bottle shop is worthy of retention as</p> <ul style="list-style-type: none"> <li>• the butterfly roof and openings and timber frame remain relatively intact.</li> <li>• The fabric comprising the original north elevation remains intact and should be restored.</li> </ul>
<ul style="list-style-type: none"> <li>• The hotel is an example of interwar Spanish Mission style architecture.</li> <li>• Much of Clifton's work was Inter-war Spanish Mission Style.</li> <li>• Marshal Clifton was not responsible for the design of the bottle shop.</li> </ul>	<ul style="list-style-type: none"> <li>• The hotel also contains indicators of being a Mediterranean Style.</li> <li>• Only very few of his buildings were in that style.</li> <li>• When in fact every project from his office had his approval.</li> </ul>
The revised road widening for Stirling Highway under MRS Amendment 1210/41 will result in the demolition of the bottle shop.	Only approximately 1 m of the northern elevation of the built structure will require demolition with the revised road widening of Stirling Highway.
The bottle shop is of 'limited (heritage) value.	The concept of "limited (heritage) significance" is not a usual category in the levels of significance. The building either has significance or it does not have significance, and given that the entire site is earmarked for inclusion in the State Register, the argument exists that the building has heritage value.

**PD49.12 – Attachment 10**

Summary of the proposal's shortcomings in regards to existing Heritage values on the site

<p>That Demolition of the bottle shop will not have an impact on the streetscape.</p>	<p>The bottle shop is part of a number of buildings extending from the Council's Library to Peace memorial Rose Garden of heritage value</p> <p>Demolition of the bottle shop would :</p> <ul style="list-style-type: none"> <li>• Not have a positive impact on the streetscape.</li> <li>• Given that the bottle shop and trees have heritage value; their loss would be extensive and permanent.</li> <li>• Be unable to be assessed as the report ignores that the bottle shop is part of a streetscape of old and new buildings.</li> <li>• Needless demolition of the bottle shop may well have a negative impact on public views, vistas, landmarks, landscape features.</li> <li>• Demolition will result in permanent and irreversible loss of heritage significance.</li> </ul> <p>A visually and sensitively restored bottle shop has the potential to be highly compatible with local architectural patterns, and demolition would lose this opportunity.</p>
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The applicant's subsequent response to the issues raised above are:

- The heritage value of the bottleshop is a matter of opinion