



ESSENTIAL ECONOMICS

# Costco Auburn

## **Additional Analysis of Net Community Benefits**

Prepared for

Costco Wholesale Australia Pty Ltd

by

Essential Economics Pty Ltd

with

JBA Urban Planning Consultants Pty Ltd  
Halcrow MWT

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## **Authorship**

Report stage	Author	Date	Review	Date
Draft report v1	Matt Lee Nick Brisbane	22/01/2010	Matt Lee	25/01/2010
Draft report v2	Matt Lee	27/01/2010	John Henshall	28/01/2010
Final report			Matt Lee	09/02/2010

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## **Contact details**

For further details please contact:

Essential Economics Pty Ltd  
96 Pelham Street  
Carlton  
Victoria 3053  
Australia  
PH 61 3 9347 5255  
FAX 61 3 9347 5355  
EMAIL [mail@essentialeconomics.com](mailto:mail@essentialeconomics.com)  
WEB [www.essentialeconomics.com](http://www.essentialeconomics.com)

ABN 38 894 627 397

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## INTRODUCTION

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This report has been prepared on behalf of Costco Wholesale Australia Pty Ltd, and responds to matters raised by the Department of Planning in their letter dated 27 November 2009.

The Department of Planning has considered the Environmental Assessment prepared on behalf of Costco and the submissions received during the public exhibition of the project from 21 October 2009 to 20 November 2009, and has requested additional information in order to finalise the assessment.

The additional information requested from the Project Proponent includes – in relation to the strategic context for the development – the following item:

*“The Preferred Project Report (PPR) is to provide a cost benefit analysis of the proposal in terms of the type of jobs generated, the local or regional economy effects and any infrastructure and likely travel cost implications”.*

In responding to the Department’s request, the following additional analysis is presented in this report:

- 1 Discussion of the approach adopted in preparing an analysis of costs and benefits of the Costco proposal, in the context of the requirements identified in the Draft Centres Policy.
- 2 Review of the context for the assessment, including a summary of the proposal and the Costco business model, and the implications for the assessment of costs and benefits.
- 3 Presentation of a sequential site selection analysis that assesses the opportunity to accommodate the Costco development at alternative in-centre and edge-of-centre sites in the region.
- 4 Assessment of the benefits and costs associated with the proposed Costco development, including consideration of the local and regional economy effects and net state effects such as transport costs.
- 5 Summary of net community benefit analysis, drawing together the assessments undertaken in this report, and highlighting the cost benefit outcomes.

The analysis presented in this report builds on work already completed and presented in the *Environment Assessment Report Concept Plan and Project Application* (JBA Urban Planning) and its attachments. Of particular relevance is the assessment of retail trading impacts and local and regional economic effects presented in the *Costco Auburn Economic Impact Assessment* (Essential Economics, September 2009) which accompanied the Environment Assessment. The additional work in this report adopts the estimates and analysis already presented in the Economic Impact Assessment, and relating to matters such as the likely geographic trade area served by the Costco store, likely trading patterns, forecast turnover, employment generation generated at Costco, and construction costs associated with the Costco project.

Input to the report has been prepared by Essential Economics in association with JBA Urban Planning and Halcrow MWT. JBA have assisted in undertaking planning assessments of alternative sites as input to the sequential site selection assessment, while Halcrow have undertaken traffic modelling of alternative development scenarios and assessed implications for travel time delay and associated costs, and emissions levels.

# 1 APPROACH TO ASSESSING COSTS AND BENEFITS

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## 1.1 Introduction

The analysis of costs and benefits associated with the proposed Costco at 17-21 Parramatta Road, Auburn has been undertaken with reference to the request for further information from the Department of Planning, the comments made in submissions to the Environmental Assessment, and matters identified in Part C of the *Draft Centres Policy* (Department of Planning, April 2009).

The analysis consists of three elements which are relevant in assessing the Costco proposal and which are referred to in the documents above:

- 1 Sequential Site Assessment
- 2 Assessment of Local and Regional Economy Effects
- 3 Assessment of Net State Welfare Effects.

Aspects that relate to market feasibility are not reassessed in this report, as they are dealt with in appropriate detail in the Economic Impact Assessment (Essential Economics, Sept 2009), and have not been disputed in the submissions or in the request for further information from the Department of Planning.

The submission from the Shopping Centre Council of Australia states that the development “*fails to demonstrate a clear need for big box retailing within the trade area, rather it merely identifies a market opportunity*” (refer submission dated 20 November, page 4). The following response is made to this comment, drawing on information already presented in the Economic Impact Assessment:

- The Costco will serve a trade area with a population of 1.31m people in 2009, and this is expected to increase to 1.43m people in 2021.
- The retail expenditure market associated with this trade area population is estimated at \$15.2bn in 2009, and this is forecast to increase to \$19.8bn in 2021 (in constant 2009 dollars).
- This very substantial increase in spending capacity (an additional \$4.6bn in annual retail expenditure) generates a retail need, over time, for additional retail provision to serve the growing market.
- When converted into retail floorspace, and applying a conservatively high average turnover performance of \$6,000/m<sup>2</sup> (to reflect growth in average retail performance over time), the additional retail expenditure in the trade area will generate a need for approximately an additional 770,000m<sup>2</sup> of new retail development by 2021.
- The proposed Costco, with retail floorspace of 13,727m<sup>2</sup>, goes only a very small way in serving this identifiable retail need; for example, this level of retail floorspace represents just 1.8% of the total identifiable demand over the period 2009 to 2021.

## 1.2 Sequential Site Assessment

The *Draft Centres Policy* identifies a sequential approach as being the preferred method by which new retail development proposals should seek sites to accommodate the proposed use. The sequential approach is described in the draft policy as follows:

- 1 Firstly, demonstrate that there are no suitably-zoned sites within existing centres.
- 2 Secondly, if a suitable site is not available within an existing centre, demonstrate that there are no available sites in an edge-of-centre location.
- 3 Out-of-centre locations will generally only be supported where it can be demonstrated that there are no suitable in-centre or edge-of-centre sites and where the proposal would generate a net community benefit.

The sequential approach has been applied to the Costco development proposal and sites have been assessed in a range of alternative locations which include in-centre and edge-of-centre sites and other out-of-centre locations. This analysis, undertaken with input from JBA Urban Planning, is presented in Chapter 3.

## 1.3 Assessment of Local and Regional Economy Effects

A range of economic effects is considered to be relevant at the local and regional level. Examples of these effects include local employment generation, capital investment in the local economy, effects on neighbouring businesses (for example associated with the increase in the number of shoppers attracted to Costco), competitive trading impacts, and improved retail choice.

The view taken in presenting these local and regional economic effects is that they are relevant considerations when assessing the community outcomes associated with urban development projects. Their relevance to the local community can be measured in terms of the creation of local employment opportunities and the potential wealth effects that can eventuate; or, indeed, the potential for significant adverse trading impacts which can lead to a decline in local economic activity, with negative impacts on employment, wealth creation and property values.

To some extent this view is not supported in the Draft Centres Policy, which states that employment created by a new retail development (taking just one example) can be argued as being a 'transfer' of economic activity rather than an overall effect on net community welfare. This view reflects a theoretical approach which states that the entry of a new retail business simply redistributes a fixed amount of retail expenditure that would otherwise be directed to another business, thereby representing a geographic redistribution of employment rather than the creation of new employment.

In undertaking this additional analysis for the proposed Costco development, it is appreciated that some approaches to net community benefit seek to highlight those effects which can (indisputably) be regarded as net impacts on community welfare when measured at the state level. An attempt to identify these 'welfare' effects is therefore included in this report (refer below). Nonetheless, it is equally relevant to present local and regional effects where these can be measured and where actual outcomes (based on the current distribution of retail spending, for example) can be identified for the local community that might be affected.

The assessment of local and regional benefits and costs is presented in Chapter 4 of this report, and summarised in Chapter 5.

## 1.4 Assessment of Net State Welfare Effects

In assessing a wide range of potential benefits and costs that might derive from the proposed Costco development, an attempt has been made to identify those effects which can form part of a traditional cost benefit analysis and which therefore represent the potential net impact on the welfare of the NSW community.

This is in response to the request from the Department of Planning for *cost benefit analysis*, and also referred to in submissions to the Environmental Assessment by other parties. The Draft Centres Policy states that -

*“For larger and more complex proposals, the proponent should consider the use of more formal cost benefit analysis techniques.”* (Draft Centres Policy, p25)

The main elements of this more formal approach in undertaking cost benefit assessment relate to potential effects on road congestion and transport cost, vehicle emissions, infrastructure requirements, and price savings for consumers and wholesale businesses. These effects can be considered as net welfare effects and therefore relevant in the context of cost benefit analysis. Private costs and benefits (to Costco and other retailers) have been excluded from this analysis.

Analysis of matters relating to travel delays, travel cost and emissions generation has been undertaken by Halcrow MWT. A Technical Note from Halcrow is attached to this report as Appendix A, with the main results summarised in Section 4.8.

It is noted that the construction of a very detailed formal cost benefit analysis (for example, including a detailed examination of the whole-of-network effects on road travel) is a major piece of economic and transport modelling. In view of the margins of error involved in that type of analysis, and the relatively small-scale nature of the proposed Costco development (ie just 16,447m<sup>2</sup> GFA and a total capital investment value of \$57.9m), it is considered that a detailed cost-benefit analysis is not required.

In this report, assessments of costs and benefits are compared against the continuation of the most recent use of the site (ie a *Base Case* or ‘do nothing’ scenario), and have been prepared for a number of realistic alternative uses for the site (called ‘*Alternative Development Scenarios*’). This reflects the usual way that cost benefit analysis is undertaken, and is in keeping with the recommendations in the *Handbook of Cost Benefit Analysis* (Department of Finance and Administration, 2006). A description of the Base Case and Alternative Development Scenarios is provided in Chapter 4.

Throughout this report, assessments of future dollar values for benefits and costs are expressed in average 2009 values.

## 2 CONTEXT

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### 2.1 Introduction

This Chapter presents some broad contextual information as the basis for the subsequent analysis. The information includes an overview of the proposed Costco development, a summary of the Economic Impact Assessment that accompanied the Environmental Assessment, and a brief description of the Costco business model as it is expected to apply in Auburn and elsewhere in Australia as new sites are developed.

### 2.2 Overview of Proposed Costco Development

The proposed Costco development involves the redevelopment of land at 17-21 Parramatta Road, Auburn. The site has an area of approximately 2.522 hectares.

The redevelopment consists of the demolition of the existing buildings and the construction of the following elements:

- A retail warehouse with a total of 13,727m<sup>2</sup> GFA
- A commercial office component of 1,999m<sup>2</sup> GFA, housing the Australian corporate headquarters for Costco
- A total of 745 car parking spaces
- Provision of landscaping and other physical infrastructure (road works, utilities, stormwater measures).

The total capital investment value for the project is estimated at \$57.9m (Northcroft Australia Pty Ltd), which has been assessed in accordance with Clause 3(2)(a) of SEPP (Major Development) 2005. The figure excludes land purchase and the GST component.

The Costco development will have the effect of increasing the intensity of the use of the subject land. Most recently the site was occupied by Bev Chain and Linfox as a storage warehouse and transport depot for alcoholic beverages; the use of the site for retailing and office functions will substantially increase the on-site employment, as well as leading to a significant increase in visitation and transport movements. The increased activity has potential to generate both costs and benefits for the community, as indicated in the analysis presented in Chapter 4.

Figure 2.1 shows the proposed layout of the site, while Figure 2.2 presents the locational context for the proposed development.

Figure 2.1: Location of Subject Site



Produced by Essential Economics with MapInfo and Google Earth Pro Imagery

Figure 2.2: Locational Context



Produced by Essential Economics with MapInfo and StreetPro

## 2.3 Economics Impact Assessment, September 2009

An economic analysis was prepared by Essential Economics and included as an attachment to the Environmental Assessment.

An established methodology was adopted as the basis for the retail-economic analysis, comprising:

- An examination of the **locational context**, including the relevance of the site for the proposed retail and wholesale use, and the relevant planning policy considerations
- A discussion of the **Costco Wholesale business model**, in terms of the underlying business concept, typical merchandise range, expected trading patterns, and employment levels.
- Assessment of the **market opportunity** for the Costco store, including identification of a relevant trade area, analysis of expenditure levels by residents in the trade area, forecast turnover levels for the Costco store, expected distribution of turnover, and analysis of market share performance.
- Analysis of the potential **competitive trading impacts**, including identification of competing centres, and assessment of expected trading losses at centres in the surrounding region (and especially including centres such as Auburn, Lidcombe and Parramatta where strong planning policy support exists for their ongoing centre roles).
- Analysis of the **economic outcomes** generated by the Costco store, including employment generation, capital investment, impact in retail choice, contribution to planning objectives, and other local and regional effects.

The main findings from the Economic Impact Analysis are as follows:

- 1 **Location:** The surrounding Parramatta Road Enterprise Corridor is increasingly important for a range of retail uses that require excellent access and exposure from extended regional catchments. Homemaker retailing and other highway-related uses have become prevalent along the corridor, with industrial uses generally located away from the Parramatta Road frontage.
- 2 **Trade area:** The proposed Costco store is expected to serve a trade area that represents approximately a 25 to 30 minute drive time, and this is based on experience overseas and the early evidence from the new Costco store at Docklands in Melbourne.
- 3 **Population and spending:** With approximately 1.31 million residents in the identified trade area in 2009, growing to 1.43 million persons by 2021, a very significant retail market is available to support the Costco development. Total retail expenditure is estimated at \$15.2bn in 2009, and is forecast to increase to \$19.8bn in 2021 (expressed in constant 2009 dollars). This significant level of expenditure growth will support new retail development across the identified trade area.
- 4 **Forecast turnover:** A new Costco store at the subject site is forecast to achieve turnover of approximately \$98m in its initial year, increasing to approximately \$144m over the subsequent 3-5 years as the store matures. Retail sales to household customers (as opposed to wholesale sales to other businesses) are expected to account for approximately 70% of total turnover (ie \$68m initially, increasing to approximately \$100m over subsequent years), and this is confirmed by Costco's initial experience at the Docklands in Melbourne. Approximately 90% of turnover (\$61m initially, increasing to \$90m over the subsequent years as the store reaches maturity) is forecast to be drawn from the identified trade area.

- 5 **Market potential:** Having regard for the expected turnover derived from retail customers in the trade area, as described above, and the total available expenditure by these residents, the Costco store is forecast to achieve a market share equivalent to 0.4% of available retail expenditure in the trade area. At maturity, with strong store growth, the market share is forecast to be 0.5% by 2016. These very low market shares are very achievable, and show the extent to which the Costco store is expected to trade very widely and thinly across an extended regional trade area.
- 6 **Competition:** The trade area contains a large number of existing shopping destinations, including traditional 'main street' or city centres, stand-alone shopping complexes, bulky goods or homemaker centres and individual homemaker stores, and factory outlet centres. The Economic Impact Assessment identifies a selection of centres that are likely to be the main competing centres for the new Costco store, and these centres have a combined 896,000m<sup>2</sup> of retail floorspace, including 160,000m<sup>2</sup> located in the City of Auburn.
- 7 **Trading impacts:** The introduction of Costco is expected to redistribute spending flows that would otherwise be directed to existing centres inside and beyond the trade area. According to the analysis in the Economic Impact Assessment, this competitive trading impact would be equivalent to a reduction in turnover of 1.2% across all competing centres. Higher impacts are forecast for centres closer to the development site, including food retailers in Auburn and non-food traders along Parramatta Road. In the EIA report, impacts on centres within the City of Auburn are estimated to be between 1.5% (base case analysis) and 2.8% (sensitivity assessment) loss of sales. For the purposes of cost benefit analysis as described in the draft Centres Policy, this competitive impact represents a *transfer effect*, as it redistributes expenditure from these retailers to the Costco store.
- 8 **Economic outcomes:** Costco is expected to generate a net community benefit associated with its positive contribution to retail choice and competition, retail and construction employment and contribution to planning objectives for the Parramatta Road Enterprise Corridor which identify large format retail uses as appropriate for the area. Direct employment creation is estimated at 340 positions (retail and office jobs), or 290 full-time equivalent jobs, when the store reaches maturity. Adverse impacts are forecast to be very limited, with potential for very small competitive trading effects on other retail centres.

## 2.4 Costco Wholesale – A New Form of Retailing

Costco Wholesale is a recent arrival on the Australian retail scene, having opened their first store in Melbourne in August 2009. The company is one of the world's largest retailers, with over 560 warehouses in the US, Canada, Mexico, UK, Taiwan, Korea, Japan and now Australia, and it employs over 147,000 people around the world.

Costco was originally set up to supply the needs of small to medium size businesses with competitively priced wholesale goods, leveraging the cost benefits associated with buying in bulk, and taking advantage of Costco's purchasing power. It now also serves a retail market, but still with an emphasis on bulk buying. Importantly, this means that retail customers use Costco for a limited range of merchandise for which bulk purchases are an option – Costco is not used as a replacement for the local store or the nearby supermarket.

The Costco business model differs markedly from the traditional retail format we have become used to in Australia. It is an example of the 'wholesale club' model, which allows Costco to use its considerable purchasing power to deliver high quality brands and products to its members at low cost. A key factor is that the company gains revenue from charging for membership, and this additional source of funds provides a contribution to Costco's ability to negotiate buying contracts with manufacturers. It also

means that margins can be kept much lower than usual in the retail industry: typically, Costco achieves sales margins of 10% or less, and this margin is against the total cost of goods sold, not just the wholesale price. By comparison, margins can be more significantly above 30-40% for some competing retailers, and often this is against the wholesale cost of the goods rather than the total cost of goods sold.

What this means for consumers is that – for a fee of \$60 per annum (or \$55 for business card holders) – high quality merchandise is available for a significantly reduced fee when compared against competing outlets. A detailed analysis of this price saving across all retail categories is presented in Chapter 4 of this report, based on the experience in Melbourne.

Another important outcome is that small businesses such as corner stores can purchase wholesale goods at low prices, with sufficient opportunity to resell those goods (typically repackaged as individual items) at prices that are competitive with supermarkets.

Costco typically has about 4,000 individual products (stock-keeping units, or SKUs) on its floor at any one time, and this is much less than the 20,000 or more SKUs typically on the shelves at a full-line supermarket, or around 40,000 SKUs on offer in a discount department store such as Kmart, BigW or Target. The range of products is also very wide, from fresh food (eggs, bread, meat, vegetables, etc) to clothing, jewellery, leisure goods (tents, BBQs, etc), whitegoods, dry groceries, frozen food, electrical equipment, wine and liquor, sheets, towels, and pet food. Thus, competition is with a very wide range of alternative shopping locations, including supermarkets, discount department stores, specialty stores, bulky goods or homemaker outlets, individual retailers, and wholesale outlets.

By bringing its unique retail model to Australia, Costco has substantially increased the level of competition in the retail market. As noted above, Costco competes against a very wide range of retail formats. The potential benefits for consumers relate to the potential price savings associated with this competition (and this has potential to encourage price reductions by other businesses as they adjust their operations to maintain market share), while there is also potential for adverse impacts on competing businesses.

The very wide regional trade area served by each Costco store means that any competitive trading impacts are distributed very widely and thinly, with individual centres and stores not impacted to a great degree. This has been the experience at Melbourne, where the membership base is spread across the whole metropolitan area, and adverse competitive impacts have not been noticeable.

While these potential adverse competitive trading impacts relate to the retail aspect of the Costco business, benefits can be identified for the wholesale market, associated with the introduction of a new wholesale supplier offering very competitive prices. This has potential to generate benefits for end consumers, as small businesses can resell their goods at lower prices.

## 2.5 Summary

In summary, the Costco development represents a significant investment for the City of Auburn, and an opportunity to attract a new form of retailing which is not yet available in New South Wales, but is proving to be very popular in Victoria (noting that already more than 50,000 household memberships have been sold).

Costco stores have a characteristic trading pattern; they serve very large regional trade areas, in which they typically achieve low market shares. That is, they can be described as trading widely and thinly across a large geographic area. It is for this reason that competitive trading impacts are identified in the Economic Impact Assessment as being very low.

## 3 SEQUENTIAL SITE SELECTION ANALYSIS

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### 3.1 Introduction

This Chapter presents an assessment of alternative sites for the Costco operation, in accordance with the sequential assessment described in the draft Centres Policy. The policy states that in-centre sites are the preferred location for new retail development and, in the absence of available land, sites on the edge of centres are the next most preferred location. Proposals that are out-of-centre must demonstrate that there are no in-centre or edge-of-centre sites available.

### 3.2 Costco Site Requirements

Costco is a retail operation with particular site requirements that are characteristic for large destination retailers. These criteria relate to factors such as the size and configuration of an available site, the ability to develop a preferred warehouse design, the potential cost of development, the exposure of the site to the regional catchment and the potential access arrangements that can be achieved, whether the site has any planning constraints (eg heritage controls), and the potential to resolve urban design issues such as the interface with adjoining uses, among others.

Of particular importance from a retail-economic perspective is whether the site is consistent with the Costco business model described in Chapter 2, in which retail shoppers and business customers are drawn from very large geographic catchments. This is important not just to ensure that each Costco store is viable in itself, but also in the context of planning for a network of (perhaps) 4 or 5 Costco stores serving the Sydney metropolitan area and its hinterland. Each site must have sufficient exposure and 'destinational appeal' to attract people from a 30 minute drive time catchment (or from an equivalent public transport catchment).

In the context of planning a new store to serve the western region of Sydney, potential sites must therefore have very good transport access, preferably with major roads or highways providing access in north-south as well as east-west directions.

A summary of the location criteria against which alternative sites have been tested is provided below:

#### **Development Opportunity**

- *Availability:* Sites can only be developed where they are available for sale or lease. Importantly, where consolidation is required (refer below in the context of size requirements), site development is more difficult and more costly (refer below).
- *Purchase cost:* The Costco model of delivering low prices to members depends on a number of factors, including the ability to secure favourable supply contracts, ensuring very efficient operating costs, and attracting large numbers of members. At the development level, Costco also have certain requirements in terms of land purchase costs, although these of course also vary according to the potential opportunity in each location. Of relevance is the fact that land prices are typically higher for sites located within centres, and as a general rule are even higher where consolidation of a number of properties is required. Another important factor is that the cost of the site is higher if existing 'economic' buildings are present on the site; alternatively, sites that contain redundant buildings can typically be purchased at lower cost.

- *Development cost:* Construction and other costs can be significantly higher for sites that are difficult to develop, for example associated with sloping land or where there are difficult interface issues to address (refer below).

#### **Site and Location Suitability**

- *Size:* This is a very important criterion having regard for the typical size of the Costco building (usually in the range 12,000-16,000m<sup>2</sup>) and the requirement for a large number of car parking spaces. The minimum site area is approximately 2.5 hectares. Critically, the site for a Costco needs to have a minimum depth in order to accommodate the normal requirements for access, store configuration, etc.
- *Strategic road access:* In order to serve a large regional trade area, Costco stores need to be easily accessible from major highways and arterial roads. Preferably, strong north-south and east-west connections should be available close to the site.
- *Public transport:* This is not normally a significant priority, as the nature of Costco (as a location for bulk purchases) means that customers mainly use private vehicles to shop at the store.

#### **Market Opportunity**

- *Accessibility from regional catchment:* As noted above, Costco stores need to have very good access from a large surrounding regional catchment in order to generate sufficient trade. In the context of serving the western region of Sydney, potential sites need to be well located to attract potential customers from throughout the trade area identified in the Economic Impact Assessment (September 2009). The identified trade area generally extends from inner Sydney in the east to the Westlink M7 motorway in the west, and from the Hills Motorway in the north to the South Western Motorway in the south.
- *Synergy with existing destination uses:* Costco is a destination retailer; that is, the store attracts people to undertake shopping visits to the local area. Where a number of destination retailers can co-locate, a critical mass can be achieved, thereby making the precinct well known as a shopping location and potentially extending the catchment it serves. This in turn makes the precinct more attractive for secondary tenants.

#### **Planning Issues**

- *Permissible uses:* Clearly, where a retail use is a permissible development the town planning process is much easier, leading to quicker development timeframes and lower holding costs.
- *Planning constraints:* Projects can also face planning constraints associated with factors such as heritage controls, flood-prone land and other controls that either make planning approval unlikely or make development more costly.
- *Potential linkages/synergies with existing uses:* Sites are attractive where they have a good 'fit' in terms of the surrounding land uses. Similar uses help establish the precinct as a known destination for particular types of retail services. Moreover, the introduction of Costco can be beneficial for other types of retail traders, due to the large number of visitors to the store.
- *Urban design considerations:* Because of its large format, a Costco store can be an inappropriate development for some locations. For example, it is difficult to accommodate in a centre characterised by small-scale shops and a dense urban fabric. It is more suitable for locations that already have larger-scale uses. In very rare cases (such as Manhattan in New York), inner city sites have been developed as integrated developments, but this is not likely to be the case in Australia because of the smaller scale of the market opportunity.

- *Ability to resolve interface issues:* The large store format often means that interface issues can arise. These can be difficult to manage where adjoining land uses are sensitive (for example on sites abutting residential areas). Issues are more manageable if adjoining land uses are similar in nature (retail, bulky goods, industrial), or where the site adjoins roads or other features (eg a creek or water course, open space, etc).

### 3.3 Potential Alternative Locations

Having regard for the criteria listed above, the alternative site locations that are assessed as to their availability and suitability for a Costco store include the following:

#### Centre locations

- Parramatta CBD, comprising business zones where retail is permissible (refer Figure 3.2, p15).
- Auburn Shopping Centre
- Lidcombe Shopping Centre
- Rhodes
- Sydney Olympic Park precinct at Homebush

#### Out-of-centre locations

- Alternative locations involving Category 2 or Category 3 employment land in the surrounding region, including sites in the local government areas of Auburn, Bankstown, and Parramatta.

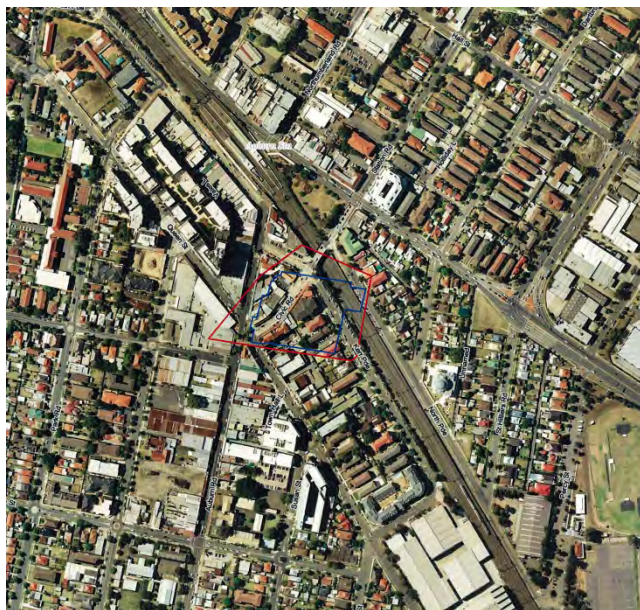
### 3.4 Assessment of Centre Locations

#### **Auburn**

Auburn is identified as a Town Centre in the West Central draft Subregional Plan, and so has policy support for ongoing retail development in keeping with its role in the retail hierarchy. Town centres are identified as generally serving residential catchments, rather than being significant employment destinations in themselves.

Auburn Town Centre is not an appropriate location for a Costco warehouse, as no sites are available that are sufficiently large to accommodate the building and car parking requirements, and the development would overwhelm the community role that the centre plays (refer Figure 3.1). In any event, Costco simply would not be able to implement its business model in a town centre location, particularly given the difficult access to the highway network.

Figure 3.1: Aerial Photo Costco and Auburn TC



## ***Lidcombe***

Lidcombe is also defined as a Town Centre in the Subregional Plan, and serves a localised community that consists of the surrounding residential neighbourhood. Few sites are available for development, and no sites are of sufficient size to accommodate Costco.

Costco would be a significant over-development for any site in Lidcombe, if such a site existed. In any event, Costco would be unable to serve a regional trade area from a site in Lidcombe Town Centre, because there is poor access to the regional highway network, and it would be unlikely that a store in Lidcombe could attract the necessary trade from the identified catchment.

## ***Parramatta***

JBA Urban Planning has undertaken an analysis of potential available sites in Parramatta, based on the following tasks:

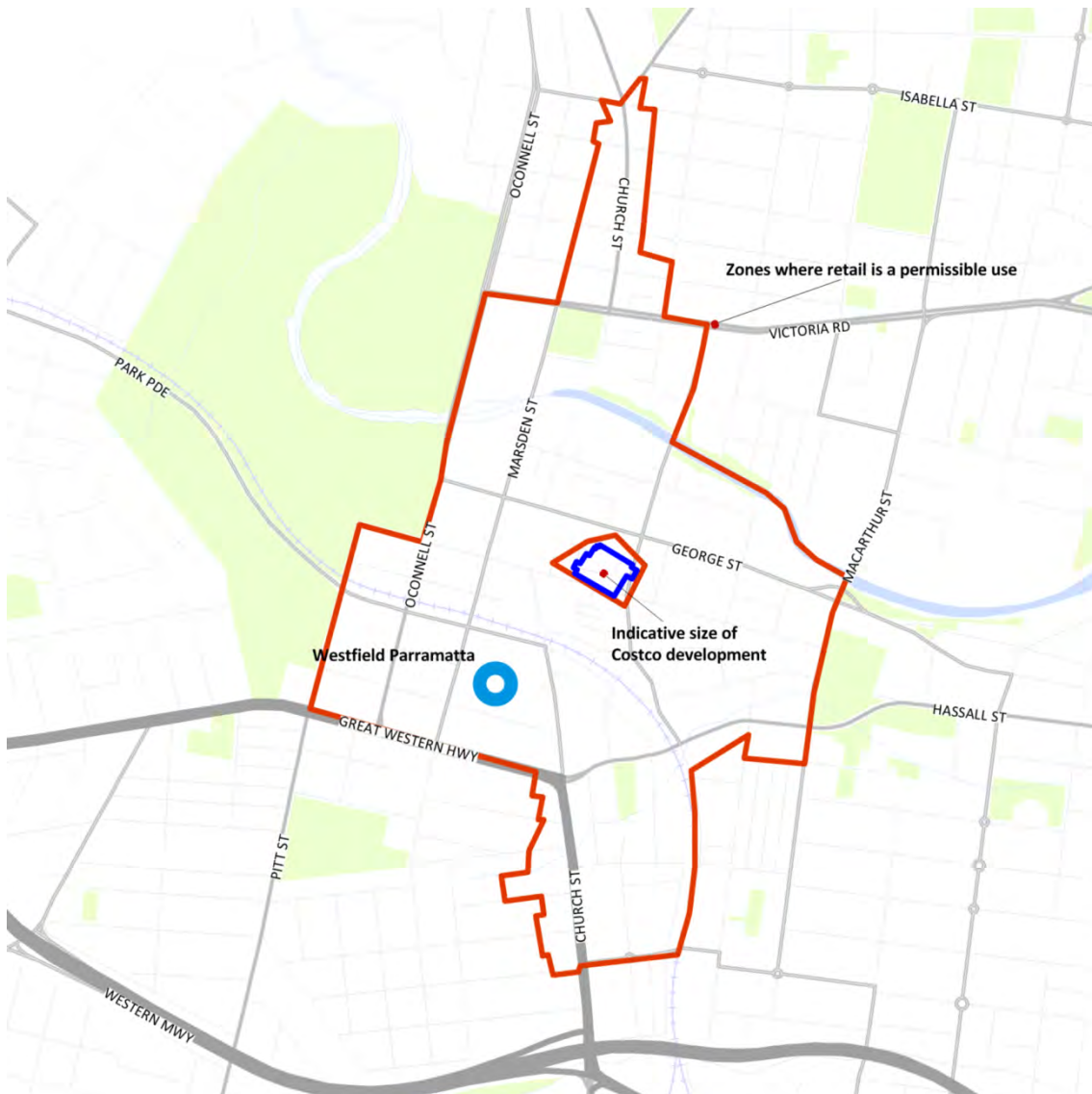
- Identification of zones in which retail activity is a permissible use (refer area identified in Figure 3.2). Relevant zones include the Commercial Core (B3), the Business Development zone (B5) and the Mixed Use zone (B4). Retail is not a permissible use outside these areas.
- Sites that contain heritage buildings are excluded from the analysis, as it is assumed that heritage controls create a significant development constraint and effectively preclude a Costco store.
- Areas of Parramatta which have strategic road access, and which therefore may be appropriate locations for a Costco store, tend to be along the main roads into Parramatta, which are Victoria Road, O'Connell Road, Pitt Street, Western Highway and Church Street. These areas have been further assessed in terms of the range of site location criteria described in section 3.3.
- A minimum site requirement for the purpose of this analysis is 2.5 hectares. In some cases smaller parcels have been assessed where potential may exist for the consolidation of land.

Overall, the analysis is not able to identify any available sites that meet the Costco selection criteria. Examples of a range of sites that have been assessed are as follows:

- Along Church Street, in the B5 zone to the south of the commercial core. This is generally a good location for Costco as it is a main entrance to the CBD and therefore generates high levels of exposure, and a number of large sites exist. However, none of the sites is currently available, and car showrooms currently occupy all of the larger sites. More particularly, it would be difficult to identify a site with the necessary depth to accommodate the typical Costco warehouse design.
- A number of development sites exist in the central core of the CBD and elsewhere in the identified zones where retail is a permissible use. However, these sites have already been planned for new developments, and in some cases construction is under-way.
- The Cumberland newspaper site, on the eastern edge of the CBD, is of sufficient size to enable a Costco development. However, this site is not currently available, and in any case is not likely to be a preferred location, as it does not have good access to major roads bringing traffic from throughout the region.

In summary, no sites have been identified in the Parramatta CBD that fit the criteria for a Costco store.

Figure 3.2: Parramatta Context



Produced by Essential Economics with MapInfo and StreetPro

## **Rhodes**

Rhodes is identified as part of the *Olympic Park – Rhodes* Specialised centre for the purposes of sub-regional planning under the Metropolitan Strategy. It currently has a retail role underpinned by the Rhodes Shopping Centre containing Target, Coles and Ikea. A Reading Cinema complex is also located in the centre.

Development at Rhodes is controlled by the *Sydney Regional Environmental Plan Number 29* (SREP 29), which identifies the overall use of land and the scale and density of development. More recently, a draft Masterplan (*Rhodes West draft Masterplan 2009*) has been prepared to provide additional guidance on matters such as scale, building design and more detailed planning and design matters.

Few sites are available that would be large enough to accommodate a Costco store. Moreover, the Costco type of use is inconsistent with the intention of future development at Rhodes, which is for the redevelopment of land for mixed-use development to the north and west of the shopping centre. The vision for these sites is for high-density development (generally 6-8 storeys and with potential for a number of high rise towers) containing a mix of residential and higher-order commercial uses. A Costco would not be viable in this area if integrated with higher density development (because of the prohibitive cost of land), and would not be consistent with the Masterplan if developed in its typical large format.

## **Sydney Olympic Park Precinct**

Development at Sydney Olympic Park is guided by the recently-released *Sydney Olympic Park Masterplan 2030*, which provides overall guidance on the expected development outcomes in each of the individual precincts that constitute the study area.

A review of the Masterplan shows that only a limited amount of retail activity is envisaged for the precinct as a whole, comprising a mix of visitor-related retailing and leisure-oriented development, and some convenience and grocery retailing to serve a local resident and workforce market.

Relevant controls described in the Masterplan are as follows:

- *Planning principles* allow for commercial activity along Dawn Fraser and Herb Elliot avenues to establish a compact town centre, and these will be the location for the main retail activity (Masterplan, p36). The retail components are expected to be small-scale and would not accommodate a Costco store.
- *General controls* include a retail uses plan that concentrates retail and commercial activity in the Central Precinct (refer Masterplan, Figure 4.1, p73).
- The *precinct controls* for the Central precinct include the following guidance on land uses:  
“Suggested retail uses could include small supermarkets, convenience shops, pharmacies, post offices, local bank branches, restaurants and takeaway food shops, speciality stores and professional suites” (Masterplan, p119).

Overall, a Costco store is not an appropriate development for the Olympic Park Precinct, having regard for the types of uses envisaged for the precinct, and the difficulty in accommodate a large use such as Costco.

Nonetheless, it is understood that further analysis of site development opportunities has proceeded at Sydney Olympic Park. For example, some discussion has occurred for a site on Parramatta Road,




opposite the Flemington Markets. However, this site is under 2.5ha and is not of sufficient size to accommodate a Costco store.

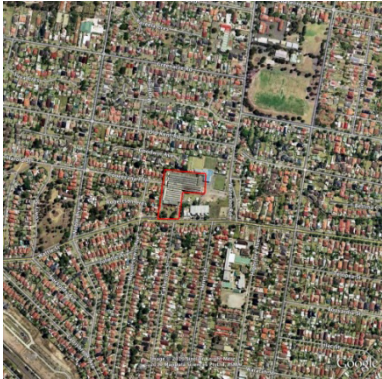



### 3.5 Assessment of Out-of-Centre Locations

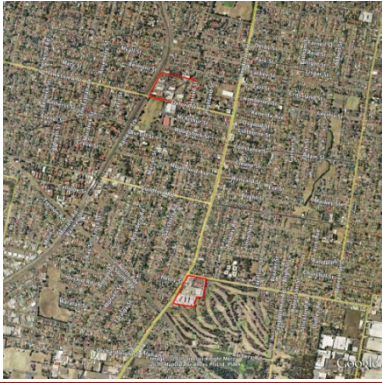


Assessments have been made of a range of other sites that would be considered 'out-of-centre' for the purposes of the draft Centres Policy. These consist of Category 2 or Category 3 employment land, as identified in the West Central draft Subregional Plan. Sites that are less than 2.5ha have been excluded from this analysis.

A summary of the analysis, undertaken in collaboration by JBA Urban Planning and Essential Economics, is presented in the following Table 3.1.

**Table 3.1: Assessment of Out-of-centre Sites**

Address	Location	Land use/planning assessment	Other issues
Marion Street, Auburn		<p>Site area approximately 5.6ha.</p> <p>Shops a prohibited use under current zone, and retail premises proposed to be prohibited under new zone.</p> <p>Residential uses to the south-west. Bounded by railway line to the east. Higher density residential to the north.</p> <p>Identified as Category 2 employment land.</p>	<p>Poor site with limited access to major roads/highways.</p> <p>Unable to serve identified trade area.</p>
East Street, Lidcombe		<p>Collection of existing blocks that may have potential for consolidation.</p> <p>Current zones prohibit retail/shop uses.</p> <p>Identified as Category 2 employment land.</p>	<p>Poor connectivity with major road network.</p> <p>Poor site to serve regional catchment.</p> <p>Significant cost involved in consolidating sites.</p>
229 Roberts Rd, Greenacre		<p>Site area of 4.2 ha sufficient for Costco. Currently used as distribution centre for smallgoods manufacturer.</p> <p>Bulky goods a permissible use under current zoning, but shops are prohibited.</p> <p>Interface issues with residential land to the south.</p> <p>Identified as Category 3 employment land.</p>	<p>Site is approximately 2.5km to Hume Highway and 4.5km to M5 Motorway.</p> <p>Provides relatively poor access to major road network compared with subject site on Parramatta Road.</p>

Address	Location	Land use/planning assessment	Other issues
105-111 Wattle Street, Punchbowl		<p>Small site of 2.8ha currently used for manufacturing.</p> <p>Some retail uses are permissible under current light industrial zone.</p> <p>Issues associated with residential uses to the north, south and west.</p> <p>Identified as Category 3 employment land.</p>	<p>Stand-alone site has poor synergy with surrounding uses.</p> <p>Poor site to serve regional catchment because of limited access to major road/highway network.</p> <p>Not an attractive location for Costco because of difficulty in serving the catchment, and issues with neighbouring uses.</p>
457 Waterloo Road, Chullora		<p>Site of 2.9ha located north of Chullora Marketplace.</p> <p>Currently used as a distribution centre for Edward Dunlop Paper.</p> <p>Bulky goods is a permissible use, but shops are prohibited.</p> <p>Some synergy with retail uses to the south (Chullora Marketplace).</p> <p>Identified as Category 2 employment land.</p>	<p>Nearby shopping centre serves a sub-regional catchment. Site has relatively good access to Hume Hwy to the west/north, but significant areas of non-residential land (cemetery, golf course etc) may create actual or perceived barriers to movement.</p> <p>Potential for Costco to compete more heavily with centre in the immediate environs (Chullora Marketplace).</p> <p>Overall, site is not well suited to serve the identified catchment, and has poorer access to major motorways (M4/M5).</p>
2 Morton Street, Parramatta		<p>Site area is 4ha, located on Category 3 employment land.</p> <p>Identified as employment land in current zone, with local-level retail permissible.</p> <p>Proposed for higher density residential and mixed use.</p> <p>Council depot to the west, Parramatta River to the south, and residential properties to the north.</p>	<p>Not well located with respect to major road access.</p> <p>Poor synergies with adjoining uses.</p>
Victoria Rd/Macarthur St, Parramatta		<p>Site area of 3.3ha, currently contains a number of properties providing a range of urban services such as automotive repair.</p> <p>Local retail is a permissible use.</p>	<p>A Costco development at this site is not supported by planning controls, and its location north of Parramatta makes it difficult to serve the extensive regional catchment.</p>

Address	Location	Land use/planning assessment	Other issues
Oxford St and Woodville Rd, Guildford		Two sites, each in excess of 3.4ha, and both currently used for a range of urban services (automotive repair, showrooms, small manufacturing, etc).  Local shops/industrial retail are permissible uses.	These sites are located on a major secondary road (Woodville Road), but without good access to the wider regional road network.  Costco would not be able to serve the regional catchment from these sites.
Parramatta Rd, Granville		Land area up to 3.5ha, currently containing a variety of local service businesses, some small scale retail showrooms, light manufacturing, etc.  Draft zone conditions (B4 Mixed use & B6 Enterprise corridor) allow for bulky goods development.  Surrounding land uses are business/industrial/retail.  Identified as Category 2 employment land	Site is located on Parramatta Rd with opportunity to access freeway network. Access is relatively good from throughout the trade area.  Fragmented land holdings mean that site purchase and development costs likely to be prohibitive.  Similar property to the subject land, but not as attractive because of fragmented ownership.
Oakes Rd and Old Windsor Road, Old Toongabbie		Large site of 9.4ha, located on Category 2 employment land, and currently containing a pharmaceutical manufacturer and automotive repair businesses.  Site is currently occupied and unlikely to become available for development.  Significant existing infrastructure means that purchase cost would be prohibitive.	Located approximately 5km to the northwest of Parramatta CBD.  Not well located to serve the identified regional catchment, particularly parts of inner western Sydney.

Source: Sites assess by JBA Urban Planning and Essential Economics

In addition to these Category 2 and Category 3 sites, Costco has also investigated other development options along Parramatta Road, including for example the purchase and redevelopment of the Redyard Centre. This particular site presented particular design difficulties, as the depth of the site was not sufficient to accommodate the normal Costco dimensions. It is also understood that the land was too costly for an agreement to be reached.

### 3.6 Conclusion

The analysis presented in this Chapter shows that no alternative sites are available in surrounding centres such as Parramatta, Auburn, and Lidcombe that are suitable to serve the identified regional catchment in western Sydney.

The lack of alternative in-centre or edge-of-centre sites reflects the normal difficulty in identifying large development sites of 2.5ha or more in the established urban area. Even where large properties can be identified, they are typically unsuitable because of other factors such as the location, poor regional transport access, unsupportive planning controls, or simply because they have a current use and are not available for redevelopment. The opportunity to consolidate land is usually not possible in centres such as Parramatta where the land costs would make a Costco development unviable.

A number of alternative out-of-centre sites have also been identified. These sites are generally unsuitable because they do not have good exposure to the regional catchment, or they require land consolidation, or have interface issues with adjoining residential land.

Overall, the analysis supports the conclusion that the subject land is an appropriate location for the proposed development, subject to analysis of its contribution to net community benefit.

## 4 ASSESSMENT OF BENEFITS AND COSTS

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### 4.1 Introduction

This chapter presents an analysis of a range of potential costs and benefits associated with the proposed construction of a Costco at Auburn. The analysis includes an assessment of local and regional economy effects and net state welfare effects, and compares the potential effects of the development of Costco with the potential effects associated with alternative use of the land.

The analysis has been undertaken for the year 2021, which has been adopted as a *Reference Year* for the purpose of the analysis of benefits and costs. This approach is not entirely consistent with a traditional cost benefit technique, which usually calculates the net present value of costs and benefits over a period of 20 years or more, depending upon the particular project. However, the use of a reference year is intended to reflect the situation of the Costco development (or any alternative development) at maturity when visitation and turnover is established, and this is considered to be a sufficiently detailed analysis for the purposes of undertaking this assessment.

### 4.2 Alternative Development Scenarios

The *draft Centres Policy* states that a net community benefit assessment should evaluate a retail development proposal against a base case, or base cases, including retaining the existing zone.

For the purpose of assessing the Costco development, alternative developments have been chosen to reflect the existing and proposed zone controls, and the market demand conditions for a range of land uses.

#### **Base Case: Most Recent Former Use (Warehouse/Distribution)**

This Base Case reflects the ongoing use of the site as a warehouse and distribution outlet. Economic impacts associated with alternative development scenarios (including the proposed Costco store) are assessed against this scenario.

#### **Development Scenario A: Costco**

This development scenario reflects the proposed use of the land for a Costco warehouse and regional office, according to the details in the Preferred Project report.

#### **Development Scenario B: Homemaker Centre**

Under Scenario B the site is developed as a homemaker centre, comprising approximately 20,000m<sup>2</sup> of floorspace over two-levels. This use would be permitted under the existing zone and reflects the development trend along Parramatta Road. A homemaker centre would accommodate large format stores selling merchandise such as furniture, bedding, electrical, whitegoods, etc.

The subject site forms part of a major homemaker and lifestyle retail node with metropolitan-wide importance, comprising in the order of 140,000m<sup>2</sup> of retail and trade floorspace. Because most of the recognised brands are already present at Parramatta Road, it is likely that a homemaker centre, if developed in coming years, would initially accommodate secondary brands, and may struggle to fill all of the tenancies (although noting that the reference year for this analysis is 2021, and additional demand will be generated in the intervening period).

### **Development Scenario C: Modern Industrial/Office Park**

Under Scenario C the site is developed as a modern industrial office park containing a mix of commercial office and industrial/warehouse space, but with an emphasis on industrial activities reflecting the market preference for the region.

An indicative development schedule comprises a total of 20,000m<sup>2</sup> of floorspace, with approximately 17,000m<sup>2</sup> industrial/warehouse floorspace (85%), and 3,000m<sup>2</sup> office or reception space (15%). The development may contain around 15-20 units, each having an office component at the front (say, 200m<sup>2</sup>), and a warehouse space at the rear (say, 1,100m<sup>2</sup> or so). Potential tenants might be IT firms, printing companies, small manufacturers, cabinet-makers, or import businesses, for example. This is a typical format for a location such as the Parramatta Road corridor, which is transitioning from industrial to commercial activities.

## **4.3 On-going Employment Generation**

### ***Base Case***

The ongoing use of the subject site as a warehouse/distribution centre would be expected to generate a total of 50 direct full-time equivalent (FTE) jobs, based on the application of an average 300m<sup>2</sup> per full-time employee.

A further 100 FTE jobs would be created indirectly through the employment multiplier effect. This estimate is based on application of the employment multiplier for the *Storage and road transport* industry, which is approximately 3.0 according to Input-Output analyses and National Accounts information published by the ABS (refer Cat.No.5210.0). This implies that for every 'direct' job created, another two 'indirect' (or flow-on) jobs are created in the wider economy.

### ***Assessment of Costco***

The *Economic Impact Assessment* (September 2009) included analysis of the ongoing employment effects of the Costco development. Updated estimates have now been prepared, based on the experience from the Costco store at the Docklands in Melbourne, and are summarised as follows:

- Direct employment at the Costco store is estimated at over 160 Full-Time Equivalent (FTE) jobs when the store commences trading.
- At maturity (ie in 2021), total employment is estimated at in excess of 290 employment positions, and this represents approximately 260 FTE jobs. The translation of part-time and casual positions into FTE employment is based on actual average hours worked for employees at the Docklands store in Melbourne (including, for example, a guarantee of 24 hours per week for part time employees).
- Direct employment associated with the head office component of the development is estimated at 70 FTE jobs initially, increasing to 125 FTE jobs at maturity (ie in 2021).
- At maturity, total indirect employment is estimated at 445 jobs, including 260 indirect jobs generated by the retail component, and a further 185 jobs generated by the head office component. These jobs would be located in Sydney and in other parts of NSW and interstate, thus reflecting the inter-industry links that are a feature of the national economy generated.

These estimates of indirect employment are based on information provided by Costco and analysis of ABS employment multipliers for relevant industry sectors (retail and business services).

A summary of the ongoing direct and indirect employment generated by the Costco development is presented in Table 4.1.

**Table 4.1: On-going Direct and Indirect Employment Generated by Costco at Maturity**

Component	Total Direct (FTE) jobs	Indirect Employment	Total Employment
Costco store	260	260	520
Head office	125	185	310
<b>Total Employment in Reference Year</b>	<b>385</b>	<b>445</b>	<b>830</b>
Net employment gain compared with Base Case	+335	+345	+680

Source: Costco; ABS Employment Multipliers; Essential Economics

The net increase in employment (ie compared against the Base Case) is estimated at +335 direct jobs, with a further +345 jobs indirectly generated through the employment multiplier.

Many of the direct jobs generated by the Costco development would be filled by people living in the general area of Auburn and surrounding suburbs, and this tendency for the take-up of retail jobs by people living in the general area is observed universally in the retail sector. This trend has also been observed in the employment patterns of the Costco Docklands store in Melbourne, where almost 55% of employees live within 15km of the store.

The creation of local job opportunities for Auburn residents is important having regard for the historically high unemployment levels recorded for the municipality. The City of Auburn had an unemployment rate of 9.9% for the June 2009 Quarter, compared to 7.5% for metropolitan Sydney (Department of Education, Employment and Workplace Relations, *Small Area Labour Markets*, June Quarter 2009).

According to standard cost benefit analysis techniques, the employment generated at Costco would be deemed a *transfer effect*, on the basis that it was supported by the redirection of retail spending that would otherwise support jobs elsewhere.

Our view, however, is that at least some share of the 260 new retail jobs at the Costco should be defined as a *net positive effect on State welfare*. Essentially, this reflects the fact that a new retail format introduces competition in the retail sector, and one effect of competition is the potential for more efficient business practises, thereby leading to an increase in retail employment for a given amount of retail spending. Also relevant are the following factors:

- The competitive trading impacts associated with Costco are spread widely, and individual retailers are expected to experience only a relatively small loss of turnover (on average, a loss of less than 2% of total annual turnover).
- If an individual retailer experiences a small loss of turnover, there are a variety of responses they can make. For example, the business might seek to streamline its variable costs such as advertising, marketing, power/energy use, etc, or it might attempt to renegotiate supply contracts. Both of these responses might represent an increase in business efficiency, as noted above. Alternatively, the owner might absorb a reduction in profit. A reduction in staffing levels is only one potential business response, and it is very unlikely that, say, a 2% loss of turnover would directly translate into a 2% loss of labour input.

- To the extent that the total reduction in labour at competing outlets is less than the 260 new jobs at Costco (measured as FTE jobs), then the introduction of Costco would lead to a net increase in retail employment. Indeed, this is one expression of the positive effect of retail competition, with the same volume of retail expenditure supporting a net increase in retail employment (ie a net increase in business efficiency when measured in terms of labour inputs).
- Although a detailed analysis of this net effect has not been undertaken, and is difficult to identify with accuracy, it is likely that a significant number of the 260 new jobs (in terms of FTE, and representing a total of 290 or more employees) would represent a net increase in employment as discussed above.

The office employment component of 125 FTE jobs is properly identified as a local and regional economy effect, since in the absence of the development, the national Costco team will either remain in their current offices or will find new office space elsewhere.

### ***Alternative Development Scenarios***

#### **Scenario B: Homemaker Centre**

A homemaker centre of 20,000m<sup>2</sup> would generate approximately 200 FTE direct ongoing jobs and a further 200 indirect FTE jobs. This estimate is based on an average of one FTE homemaker job per 100m<sup>2</sup> of homemaker retail floorspace, and a retail industry employment multiplier of approximately 2 (refer Cat.No.5210.0).

The net positive impact on employment, when compared against the Base Case, is approximately +150 direct jobs, with the net indirect effect approximately +100 jobs.

Using standard cost benefit techniques, this employment impact is identified as a transfer effect rather than a net increase in community benefit.

Because a homemaker centre does not represent a new form of retail competition, and typically serves a more limited trade area, adverse competitive trading effects are likely to be higher than in the Costco case. It is less likely that an increase in business efficiencies would lead to a net increase in employment, as identified for the Costco development.

#### **Scenario C: Modern Industrial/Office Park**

A modern industrial office park development at the site is estimated to generate approximately 240 FTE ongoing industrial and office related jobs, and a further 390 indirect FTE ongoing jobs elsewhere in the economy. The net gain when compared against the Base Case is +190 direct jobs, and +290 indirect jobs.

This estimate is based on the application of the following typical industry averages:

- One direct FTE office job per 30m<sup>2</sup> of office floorspace
- One direct FTE industrial job per 120m<sup>2</sup> of industrial floorspace.

An employment multiplier of 2.6 has been used to generate estimates of indirect employment and is based on employment multipliers for 'other manufacturing' and 'other business services' (refer Cat.No.5210.0).

Ongoing employment associated with an industrial and office park represents an important contribution to the local and regional economy, but is not considered to be a net state welfare effect.

## Summary

A summary of employment outcomes (compared against the Base Case) is presented in Table 4.2. The analysis shows that the Costco performs well in terms of ongoing employment generation when compared against alternative development of the site. As noted in the text, the introduction of Costco has potential to lead to an increase in overall business efficiencies, thereby potentially contributing to a net increase in retail employment. In contrast, the net employment increase under other development scenarios is likely to represent a transfer of employment, in line with standard cost benefit analysis theory.

**Table 4.2: Ongoing Employment Comparison**

Development Scenario	Direct FTE Employment	Indirect FTE Employment	Total FTE Employment	Contribution to Net State Welfare
Base Case: Existing Warehouse/ Distribution	50	100	150	-
<b>Net Effect of Development Scenarios:</b>				
A: Costco	+335	+345	+680	Potential for competition to lead to an increase in business operating efficiency, with some of the retail employment growth representing a net state welfare effect.
B: Homemaker Centre	+150	+100	+250	Does not represent a new retail format, and therefore it is unlikely that a net increase in retail employment would be generated.
C: Modern Industrial/Office Park	+190	+290	+480	-

Source: Costco; Essential Economics

## 4.4 Construction Investment and Employment

### Base Case

If the site continues to be used as a warehouse and distribution centre, it is assumed that no additional construction works are required, and no employment is therefore generated during the construction phase.

### Assessment of Costco

According to analysis by Northcroft Pty Ltd, the Costco development would involve an estimated Capital Investment Value of approximately \$57.9m (as defined in SEPP (Major Development) 2005), which includes construction costs, store fit-out and costs associated with the construction of required off-site infrastructure (ie slip lanes, signalisation, etc). This figure does not include land purchase cost or the GST component.

Construction costs of this order will generate approximately 130 direct construction-related jobs over a 12-month construction period. This estimate is based on approximately \$450,000 construction cost for one FTE jobs, which is derived from detailed analysis of National Accounts figures by Essential Economics.

In addition, an employment multiplier also applies in this instance (where the multiplier is equivalent to 2.6; ie, an additional 1.6 indirect jobs are created for every 1 direct job), with the result that another 210

or so indirect or flow-on jobs would be generated during the construction phase. These indirect jobs would be distributed across the national economy, reflecting inter-industry links.

In total, the construction of the Costco development is estimated to generate approximately 340 direct and indirect FTE construction-related jobs over a 12-month construction period.

According to the statements in the *draft Centres Policy* (refer p25), construction investment and the associated employment effects should not be viewed as an effect on net state welfare, as the private business resources invested by the proponent is offset by the private benefit derived in the form of turnover and profit, plus the benefit derived by the consumer (which can be measured as the transport cost involved in travel to the new facility).

It might be argued that the capital investment by Costco is a net state benefit because it represents foreign investment that might not otherwise occur, or at least might be delayed if Costco are required to seek an alternative site. However, this potential positive effect on net state welfare has not been measured for the purposes of this report.

## ***Alternative Development Scenarios***

### **Scenario B: Homemaker Centre**

A homemaker development at the subject site would involve an estimated \$45m in Capital Investment Value, comprising construction of the building and car parking, store fit-out and costs associated with the construction of required off-site infrastructure works. These cost estimates have been prepared at a broad level by Northcroft Pty Ltd, and exclude the GST component.

Under this scenario, off-site works would be similar to those required for the Costco store (ie signalised intersection and slip lanes, etc).

Employment generation would be an estimated 100 direct FTE construction-related jobs and a further 160 FTE indirect construction-related jobs. These calculations are based on the same inputs as those used for the Costco store (refer above).

The construction of a homemaker development at the subject site is estimated generate approximately 260 direct and indirect FTE construction-related jobs, assuming a 12-month construction period.

### **Scenario C: Modern Industrial/Office Park**

An industrial office park development at the subject site is estimated to involve approximately \$35.2m in Capital Investment Value, comprising construction costs, fit-out, and costs associated with the construction of required off-site infrastructure works (Northcroft Pty Ltd). Under this scenario, a slip lane would be required to enable left-in access for people travelling east along Parramatta Road, but signals would not be installed at Nyrang Street.

Employment generation would be an estimated 80 direct FTE construction-related jobs and a further 120 FTE indirect construction-related jobs. These estimates are based on the same assumptions relating to construction cost-to-employment ratios and the value of the employment multiplier.

The construction of an industrial office park development at the subject site would generate a total of approximately 200 direct and indirect FTE construction-related jobs over a 12-month construction period.

## Summary

Table 4.3 below summarises the construction-related employment effects for the Costco development and the alternative scenarios.

**Table 4.3: Construction-related Employment Effects**

Measure	Base Case	Costco	Scenario B: Homemaker	Scenario C: Industrial/Office
Total Construction Costs	-	\$57.9m	\$45.0m	\$35.2m
ABS construction cost per 1 FTE job	-	\$450,000	\$450,000	\$450,000
<b>Construction jobs over 12-month construction period</b>	-	<b>+130</b>	<b>+100</b>	<b>+80</b>
Employment multiplier	-	2.6	2.6	2.6
Indirect jobs	-	+210	+160	+120
Total jobs	-	+340	+260	+200

Source: ABS, National Accounts (Cat No: 5210.0); Northcroft; Pty Ltd Essential Economics

Note: Figures rounded; expressed in average 2009 dollars, and exclude GST

## 4.5 Benefits associated with Improved Consumer Choice and Competition

### Base Case

The ongoing use of the site as a warehouse and distribution centre would not contribute to any benefit associated with increased choice and competition. Although it could be argued that a warehouse and distribution centre may contribute to supply chain efficiencies, ample opportunities exist for development of this type in other locations that would efficiently serve western Sydney.

### Assessment of Costco

As described in Chapter 2 of this report, Costco represents a new format not yet seen in the Sydney context, and only recently introduced to Australia at their new site in Melbourne.

The Costco format emphasises high quality branded goods at the lowest prices, with sales margins much lower than typically applied in the retail industry.

The introduction of Costco contributes to choice and competition in the broader retail and wholesale markets, with benefits derived from these price savings, coupled with the ability to purchase products in bulk packaging. Costco also offer one-off sales for particular merchandise lines, and further discounts are attached to these sales.

An analysis of the potential price savings for household and business shoppers at Costco has been prepared by using the following methodology:

- 1 Obtain a list of representative products for each of the product lines in which Costco trades. Product lines are categorised as follows:
  - *Food*; which consists of product departments such as deli goods, groceries, frozen food, etc
  - *Hardlines*; which consists of product departments such as hardware, automotive, major electrical, toys, etc

- *Softlines*; which consists of product departments such as apparel, furniture, housewares, jewellery, etc
  - *Fresh food*; which consists of product departments such as meat, bakery, produce (fruit and vegetables), etc
  - *Other business sections*; which consist of the snack bar, the photo processing centre, optical dispensing, etc.
- 2 For each product department, representative merchandise has been selected upon which to undertake comparison pricing. Note that not all products are priced, as some products are not otherwise available from alternative sources (for example, own-brand items or merchandise that is imported by Costco alone). Usually the comparison items represent the most popular items in terms of total sales volume. Some very expensive products have been excluded so that they do not have an overly high influence on the results of the analysis (for example, expensive diamond rings that represent high price savings but have very low sales volumes).
  - 3 Prices for the identified representative merchandise have been collected for the Costco store in Melbourne, and are compared against prices at alternative locations. The competitor prices generally relate to major competing stores such as Coles, Woolworths, Bunnings, The Good Guys, Harvey Norman, Target, Big W, Dan Murphy's, and Howards Storage World. An attempt has not been made to search for the lowest price possible across the whole of Melbourne; instead, where prices can be obtained for multiple stores, the lowest alternative price has been chosen.
  - 4 The process of checking prices has been undertaken by Costco staff who undertake regular price checks to monitor prices at competing outlets. The prices have been obtained in January 2010, and random checks have been undertaken by Essential Economics in order to ensure current validity and to test the reported retail price of competitors.
  - 5 Once the price data has been collected for the individual merchandise items, the price savings have been collated to obtain an average price saving for each product department.
  - 6 The price savings for each product department are then weighted according to their contribution to total turnover at the Costco store in Melbourne. This calculation has been undertaken with reference to data provided by Costco.
  - 7 Separate calculations have been undertaken for household customers and business customers, applying the relevant weightings in terms of the distribution of sales by product department.

It is acknowledged that this kind of price comparison can only represent a broad indication of relative price savings for a number of reasons, including the fact that retailers change their advertised prices markedly over time; that seasonal variations in prices occur, especially with end-of-year and stocktaking sales; and that some retailers often offer reduced prices for cash purchases.

Overall, the analysis indicates that prices at Costco are in the order of 25% lower overall than the price of the same products purchased from competing retailers, and this figure is approximately the same for both household and business card holders. Of course for some products the savings are much lower, while higher savings are achievable for other products. For a very few product lines Costco was more costly than competing stores at the time that prices were collected.

Having regard for the difficulty in assessing price differences (for the reasons noted above), the price savings achieved at Costco are assessed as being in the range 10-25% lower than competing retailers.

The monetary value associated with these price savings can be calculated by comparing the total forecast turnover at Costco in the reference year, against the expenditure that would otherwise be

required to purchase the goods at an alternative location. This represents the benefit to consumers associated with the lower prices.

The value of this price benefit needs to be discounted by the annual membership fees that consumers will pay in order to access the Costco store. The approach to estimating membership fees is shown below:

- Total membership at the Auburn store is forecast at approximately 60,000 members in 2021, based on current member numbers in Docklands (approximately 52,000 in January 2010).
- Business card holders will represent 30% of the membership base, or 18,000 members, with the remaining 42,000 members holding household (or 'Gold Star') cards.
- The total membership fee is then calculated by applying the annual fee of \$55 for a business card and \$60 for a Gold Star card.

These calculations, undertaken for 2021 and adopting an average price saving of 10% to 25%, are shown in Table 4.4.

As shown in the table, the introduction of Costco has potential to deliver significant community benefits associated with net price savings. In the reference year 2021, the monetary value of this benefit is estimated to be between \$13.1 million and \$46.1 million.

**Table 4.4: Potential Price Savings in 2021 Associated with Introduction of Costco**

	Household card holders	Business card holders	Total Costco Auburn
Proportion of turnover	70%	30%	100%
Forecast turnover in 2021	\$104.1m	\$44.6m	\$148.7m
<u>Expenditure at alternative location for same goods:</u>			
Price saving @ 10%	\$115.7m	\$49.6m	\$165.3m
Price saving @ 25%	\$138.8m	\$59.5m	\$198.3m
<u>Savings on goods purchased at Costco store:</u>			
Price saving @ 10%	\$11.6m	\$5.0m	\$16.6m
Price saving @ 25%	\$34.7m	\$14.9m	\$49.6m
<u>Less membership fees:</u>			
Total number of members (2021)	42,000	18,000	60,000
Annual fee	\$60	\$55	
Total fees in 2021	\$2.5m	\$1.0m	\$3.5m
<u>Net saving:</u>			
Price saving @ 10%	\$9.1m	\$4.0m	\$13.1m
Price saving @ 25%	\$32.2m	\$13.9m	\$46.1m

Source: Essential Economics, based on data prepared by Costco Wholesale Australia.

Note: Figures presented in average 2009 dollars

These price savings make a significant positive contribution to net state welfare, and represent a tangible indication of the potential community benefits associated with increased retail competition.

Importantly, the approach adopted for this analysis does not include the potential community benefit associated with lower wholesale prices, and the potential for smaller retailers to pass on this benefit by charging lower retail prices to end consumers. The analysis therefore represents a conservatively low estimate of the consumer benefit associated with price savings at Costco.

## ***Alternative Development Scenarios***

### **Scenario B: Homemaker Centre**

The development of a homemaker centre will provide only limited benefits associated with improved choice and competition. As noted earlier, a homemaker development at the site is likely to attract lower-order tenants, and so might improve the choice of secondary homemaker/lifestyle retailers along Parramatta Road.

However, the construction of a new homemaker development at the site is unlikely to have a significant effect on consumer prices. The precinct already has a critical mass of homemaker/lifestyle retailers and the introduction of a number of new lower-order retailers to the precinct is unlikely to substantially reduce prices for furniture, electrical or other homemaker merchandise.

### **Scenario C: Modern Industrial/Office Park**

The development of an industrial and office park at the subject site would not contribute to any benefit associated with increased choice and competition.

## **4.6 Benefits Associated with Visitation to the Site**

### ***Base Case***

The continued use of the site as a warehouse and distribution centre would not generate any new visitation to the site. Benefits for nearby businesses are likely to be limited to retail facilities which provide food catering to meet the lunchtime requirements of on-site workers, and potentially convenience shopping undertaken by workers on the way home from work.

### ***Assessment of Costco***

The Parramatta Road Corridor is a significant location for homemaker and lifestyle retailing, together with other highway-related activities including car dealerships, automotive services, wholesalers and other business supplies, distribution centres, and factory outlets.

All of these businesses rely on the visual exposure of their business to customers derived from:

- Their location on a busy road; and
- Their location within a retail precinct that attracts a significant number of customers due to the critical mass of homemaker/lifestyle retailers, and the co-location of a high number of national brand retailers.

The proposed Costco store is forecast to generate some 650,000 or so visits a year to the precinct by 2021. This is a significant number of visitors, especially considering that many of these shoppers may not otherwise visit the locality. Once they do visit Costco and have enjoyed the unique shopping experience, there is potential for these customers to visit other shops on Parramatta Road, such as the bulky goods retailers and outlet stores, for example. This significant additional exposure for nearby businesses represents a potential new source of customer traffic.

Spin-off benefits may be available for nearby retailers that offer products that complement those offered at Costco. For instance, while customers may visit Costco to purchase office furniture such as

chairs and floor protectors, opportunities may exist for other nearby retailers to attract these customers with ancillary office items, such as lamps and desks. There are many examples of how this situation could occur.

If Costco's customers spend an average of 10% of their expenditure at Costco on other nearby stores that they would not otherwise have visited, this would represent a contribution to the wider precinct valued at \$14.9 million in the reference year of 2021. This provides an indication of the extent to which increased visitation to the Costco site may benefit nearby retailers.

These potential visitation effects are not considered to be net state welfare effects as described in the draft Centres Policy, because they may involve the redirection of shopping trips from other centres, associated with competitive trading impacts. However, the effect on each individual centre that competes with Costco is likely to be very small, with only marginal effect (and generally not even measurable) in terms of overall visitation numbers.

### ***Alternative Development Scenarios***

#### **Scenario B: Homemaker Centre**

A homemaker development at the subject site is unlikely to attract many people to the precinct who would otherwise not have visited Parramatta Road, as the wider area already has an established role as a regional centre for homemaker and bulky goods retailing.

Whereas a Costco store would bring a new retail operator and expand the trade area for the entire precinct, a homemaker development at the site would replicate a form of development that already exists in the precinct.

#### **Scenario C: Modern Industrial/Office Park**

This scenario generates positive effects associated with the improved employment outcomes compared with the Base Case. However, these benefits are mainly in the form of an increase in demand for lunchtime requirements of on-site workers, and potentially convenience shopping undertaken by workers on the way home from work. It is noted that Costco is estimated to have a greater level of employment on-site than an industrial office park development (refer Table 4.2).

Potential benefits may arise for nearby non-retail businesses if synergies can be created with new businesses located in a business park development at the site.

### ***Summary***

In summary, the proposed Costco development has the potential to generate a benefit for nearby businesses by bringing new customer traffic to the site. These benefits are likely to be higher than those generated under alternative development scenarios. However, these benefits are considered to be transfer effects and so, while being potentially important for the local and regional economy, they are not assessed as having a positive effect on overall net state welfare.

## 4.7 Property Value Implications

### ***Base Case***

The continued use of the subject land for a warehouse and distribution centre will not – of itself – generate any change in the underlying value of the land.

### ***Assessment of Costco***

The introduction of Costco at the subject site would be expected to lead to a significant revaluation of the subject land, as the Costco operation represents a higher land use compared with storage and distribution activities. This can be represented either in the form of an increased land valuation, or an increase in the market rental for operating the Costco store.

The increase in the land value of the subject site does not represent a net state welfare effect, as it reflects the private business revenues associated with the Costco operation. However, the introduction of Costco would also have a positive effect on the land value for adjoining landowners. This is because the increased activity at the Costco site has potential to stimulate visitation and turnover for surrounding land uses, especially where there is a significant opportunity to leverage new customer traffic. A positive impact on land values is likely to occur at the Lidcombe Power Centre on the southern side of Parramatta Road, at the Redyard retail and leisure centre, and at other nearby retailers such as Plush, Bunnings, etc.

Devaluation of property values would occur if businesses are adversely affected by the Costco development. However, the economic impact assessment shows that the average impacts on existing centres is very minor, in the range 1.5-2.8% loss of turnover for centres in Auburn, and less for more distant shopping locations. These minor changes in turnover are not likely to lead to a reduction in property values, as such minor changes in value are unlikely to be measurable in the context of a competitive property market.

An attempt to quantify the potential net property value effects for the reference year of 2021 has not been undertaken in this report.

### ***Alternative Development Scenarios***

#### **Scenario B: Homemaker Centre**

The construction of a homemaker centre is also likely to have a positive effect on land values for adjoining properties, associated with the increase in customer traffic compared with the Base Case. Positive effects are likely to be more significant for nearby retail uses.

The positive effect on land values is unlikely to be as significant as that which would occur if Costco were to be developed at the subject site, as a new homemaker centre would not bring many new customers to the precinct, and would not expand the trade area served by the precinct as a whole. Moreover, trading impacts on other homemaker traders on Parramatta Road are likely to be higher, and therefore any rise in property values near the site may be offset by a decline in property value for impacted traders.

### **Scenario C: Modern Industrial/Office Park**

The construction of an industrial/office park would be expected to have some positive effect on adjoining land values, but this effect is likely to be small.

## **4.8 Travel Costs**

Halcrow MWT has prepared an analysis of the implications for travel times and costs associated with the development of the Costco store and other alternative development scenarios. Their report is provided as a Technical Note at Appendix A.

The Halcrow report assesses travel time delays for a study network that consists of six intersections in proximity to the subject site. More distant network effects are considered to be negligible, having regard for the pattern of traffic dispersal.

The Base Case represents the existing or background traffic that would occur in 2021 with the continuation of current travel patterns, and the inclusion of known traffic upgrades that would be necessary whether the Costco development proceeds or not.

Each of the development scenarios is assessed against the Base Case for 2021, using a common methodology that predicts the additional traffic movements that would need to be accommodated on the system, and the implications in terms of travel times compared against the Base Case. These travel time outcomes are translated into monetary values that represent the operating costs of the vehicle and the time cost for vehicle occupants.

A key factor in terms of the travel delay outcomes is the requirement for the Costco development and the homemaker centre to signalise the intersection of Nyrang Street and Parramatta Road.

A summary of the outcomes associated with each scenario is presented in Table 4.4 below, and shows that the Costco development would generate a travel cost of \$3.68m in 2021 when compared against the Base Case. This cost is more significant than the costs associated with the alternative development scenarios – for example, the Costco development is \$0.71m more costly than a homemaker centre, and \$2.59m more costly than an industrial/office park.

These travel costs are presented in Table 4.6 as positive numbers by comparison against the Base Case; however, as costs they represent negative values when assessing the net effect on state welfare (refer Chapter 5).

**Table 4.5: Travel Cost Assessment**

Development Scenario	Travel cost (effect on Base Case, 2021)	Travel cost compared with Costco
Costco development	+\$3.68m	-
Scenario B: Homemaker centre	+\$2.97m	-\$0.71m
Scenario C: Industrial/office park	+\$1.09m	-\$2.59m
Source: Halcrow MWT		

The costs assessed in Table 4.5 only relate to the externalities associated with road congestion in the vicinity of the subject site, in accordance with the *draft Centres Policy*. They do not include, for example, the private costs associated with changes in travel behaviour by people shopping at Costco, or the supply efficiencies associated with bulk purchase and the large volume of sales at a single destination.

It is acknowledged that some externalities (either positive or negative) may be generated by changes in travel behaviour. These might be in terms of higher or lower vehicle emissions associated with travel to Costco (often a single large trip) rather than alternative shopping destinations (typically many trips to a local store), or the potential changes in the distribution network as large pallets of goods are transported to Costco rather than multiple trips to smaller sales outlets.

The outcomes associated with these factors are difficult to model with any certainty, and would require significant resources in terms of setting up a network model with which to predict changes in vehicle emissions. It is considered that the main external effects are captured in the analysis undertaken by Halcrow above and in section 4.9 below.

## 4.9 Vehicle Emissions

Halcrow have used the SIDRA intersection analysis model to extract the predicted impact on three main types of vehicle emissions, consisting of carbon dioxide, carbon monoxide, and nitrogen oxides. This data has then been combined with industry standard measures of the dollar value of impact associated with changes in emissions levels, as shown below:

- Carbon dioxide – cost of \$20/tonne
- Carbon monoxide – cost of \$3/tonne
- Nitrogen oxides – cost of \$1,750/tonne

A summary is shown in Table 4.5. Note that these calculations are meant to provide a *comparative analysis* of the identified emissions, as they do not include the costs associated with emissions of particulates, hydrocarbons and other potentially harmful materials. Moreover, the dollar values of these impacts have potential to change over time, and in some cases have not been updated from the original source.

**Table 4.6: Assessment of Emissions Costs**

Development scenario	Carbon dioxide CO <sub>2</sub>	Carbon monoxide CO	Nitrogen oxides NO <sub>x</sub>	Total cost
Costco development	834.7 t \$16,690	85.2 t \$256	1.9 t \$3,375	\$20,320
Scenario B: Homemaker centre	719.6 t \$14,390	78.8 t \$237	1.8 t \$3,090	\$17,720
Scenario C: Industrial/office park	217.7 t \$4,350	16.8 t \$50	0.4 t \$720	\$5,120

Sources: Halcrow MWT; Watkiss, P (2002) Fuel Taxation Inquiry: the Air Pollution Costs of Transport in Australia

## 4.10 Loss of Industrial Land

### Base Case

The ongoing use of the subject site as a warehouse and distribution centre would not represent a loss of land available for industry.

### Assessment of Costco

In assessing the potential local and regional effects associated with the loss of industrial land if the proposed Costco store were to be developed, the following factors have been considered:

- Land area: The subject site comprises approximately 2.5 ha of industrial zoned land.
- The subject site is located in one of the largest industrial precincts in Sydney: Total industrial land stocks in the West Central Region are estimated at approximately 4,031ha in 2006 (*Employment Lands for Sydney Action Plan*, NSW Government, March 2007), representing the second largest concentration of industrial land in the metropolitan area. The Auburn LGA has an estimated 542ha of industrial zoned land.

Industrial businesses (ie. manufacturing, transport and storage, wholesale, construction, etc) are currently the major employing industries in Auburn, accounting for 47% of jobs in Auburn (2006).

- Non-industrial business development in industrial zoned land: An established trend within this large industrial area, and industrial areas throughout Australia, is for non-industrial businesses that require high levels of exposure to passing vehicular traffic to locate within industrial zones on sites with main road frontage. This has already occurred along Parramatta Road where there is a significant presence of destination retailing, car yards, factory outlets, etc.
- Industrial employment forecasts: Employment forecasts prepared by the Transport Data Centre and presented in the Auburn Employment Lands Study (June 2008) indicate total employment in Auburn is forecast to increase by approximately 13,030 jobs between 2006 and 2031.

However, industrial employment in Auburn is forecast to decline by approximately 3,300 jobs over this period. The largest loss of employment is forecast to occur in the manufacturing and transport and logistics sub-sectors. Modest growth in employment is forecast to occur in the construction and wholesale sub-sectors.

Commercial employment is forecast to increase by approximately 11,960 jobs.

- Industrial floorspace forecast for Auburn: The Auburn Employment Lands Study found that demand for industrial floorspace in Auburn was equivalent to approximately 1.36 million square metres in 2006; however, demand is forecast to decline by approximately 20% by 2031, representing a reduction of 275,000 square metres.
- Relevant trends for industrial land demand: Trends which are forecast to have an effect on the overall demand for industrial land in Auburn, and the type of industrial activities likely to be attracted to the precinct, include the following:
  - A continuation of the decline of the manufacturing activity in Australia.
  - An ongoing shift in the spatial distribution of industry in Greater Sydney, in which industries which require large tracts of land are attracted to lower-cost areas on the urban periphery. In addition, the development of major transport linkages is also expected to attract certain types of industry to these areas.

- The continued development of business and technology parks which consolidate the office, warehousing and research departments of businesses in the one location.

The development of Costco will lead to a reduction of approximately 2.5ha of land that could otherwise be used for industrial purposes, and this represents less than 0.5% of industrial zoned land in Auburn, and an insignificant proportion - just 0.06% - of the total industrial land stock in the West Central Region. The loss of this land for industrial activities will not have a significant impact on the wider industrial market in Auburn and the wider region.

Although the loss of the subject site for industrial activities will reduce opportunities for industrial employment that could be accommodated in Auburn, it will contribute to an increase in the total level of local employment, as shown in Section 4.3. It also reflects the trend for employment to shift from manufacturing and other industrial activities to commercial and retail uses, as identified in the Auburn Employment Lands Study.

The Costco development will represent a continuation of a current trend of destination retailing moving into sites on industrial zoned land that have good exposure to traffic along Parramatta Road.

### ***Alternative Development Scenarios***

#### **Scenario B: Homemaker Centre**

Similar to the proposed development of a Costco store, the development of a homemaker centre at the subject site will represent a loss of land for industrial activities in Auburn, but an increase in overall employment levels.

#### **Scenario C: Modern Industrial Office Park**

Although the development of a business park at the subject site would not represent a loss of land available for industry, it will provide a mix of employment to the site.

### ***Summary***

In summary, the development of a Costco store and a homemaker centre will represent a loss of approximately 2.5ha of land that could be used for industrial activities in Auburn; however, this represents less than 0.5% of industrial zoned land in the municipality, and an insignificant fraction of the total industrial land stock in the wider region. The use of the land as a distribution centre or industrial/business park will not represent a loss of land for industrial activities.

With the decline in industrial floorspace demand forecast in the Auburn Employment Land Study, there will be pressure on existing industrial land to turn over to higher-order land uses. This is particularly likely for land that is attractive for other types of employment generating uses, and including the subject site and many sites along the Parramatta Road frontage. With continued competition in industrial land markets, particularly from locations on the city fringe, it is important that employment opportunities in Auburn remain relevant to existing and future trends. The development of a Costco store at the subject site represents an appropriate form of development having regard for these forecasts trends in employment and land demand.

The sheer scale of industrial activity in Auburn and the surrounding region will ensure that industrial land uses continue to be an integral part of the local economy.

## 5 SUMMARY OF NET ECONOMIC EFFECTS

### 5.1 Introduction

This Chapter brings together the analysis of the benefits and costs associated with the Costco development and alternative uses for the subject land, and presents this information as a summary of the potential economic outcomes. Section 5.3 then identifies those benefits and costs that can be considered to represent net state welfare effects.

The analysis is presented in tabular form for ease of comparison.

### 5.2 Economic Outcomes

Table 5.1 presents a summary of the identified economic effects arising from the Costco and the alternative development scenarios. These impacts are measured where possible, and expressed as the likely change in conditions compared with the continued use of the subject site as a warehouse and distribution centre.

Impacts are assessed for the Reference Year 2021, and where monetary values are presented they are quoted in average 2009 dollars.

**Table 5.1: Summary of Economic Effects compared with Base Case in Reference Year 2021**

Indicator/measure	Costco	Scenario B: Homemaker	Scenario C: Industrial/office
Ongoing employment generation	+335 direct jobs +345 indirect jobs	+150 direct jobs +100 indirect jobs	+190 direct jobs +290 indirect jobs
Construction investment (assessed for 2011)	\$57.9m	\$45.0m	\$35.2m
Construction employment (assessed for 2011)	+130 direct +210 indirect	+100 direct +160 indirect	+80 direct +120 indirect
Competition effects on prices	Total price savings in the range \$13.1m to \$46.1m	Unlikely to have a significant effect on price savings because homemaker retailing already well represented.	No identifiable effect on price for end users.
Benefits from visitation	Significant benefit to nearby businesses due to new visitors to the precinct who might not otherwise have travelled to Parramatta Rd. Benefit may be as high as 10% of turnover, or \$14.9m in 2021.	Unlikely to be significant measurable benefit as the precinct already has an established role as a destination for homemaker retailing.	Small increase in demand for lunchtime retailing and potential for additional shopping undertaken after business hours. May be potential for benefits associated with supply-chain relationships with businesses in the region.
Property value effects	Potential for increased property values for nearby properties due to positive effect on their turnover. This effect strongest for retail properties.	Some positive effect, but likely to be relatively low because development is unlikely to lead to a substantial increase in the customer base, and some adverse property effects may be generated for other homemaker businesses.	May be a small positive effect on property values associated with the introduction of a higher order land use.
Travel costs	Additional travel cost estimated at \$3.68m.	Additional travel cost estimated at \$2.97m.	Additional travel cost estimated at \$1.09m.

Indicator/measure	Costco	Scenario B: Homemaker	Scenario C: Industrial/office
Vehicle emissions	Annual value (2021) for selected emissions estimated at \$20,320.	Annual value (2021) for selected emissions estimated at \$17,720.	Annual value (2021) for selected emissions estimated at \$5,120.
Loss of industrial land	Loss of 0.5% of industrial land resource in Auburn. Not assessed as having a significant economic effect.	Loss of 0.5% of industrial land resource in Auburn. Not assessed as having a significant economic effect.	Introduction of an industrial use. No effect on loss of industrial land.

Source: refer analysis in Chapter 4

### 5.3 Net State Welfare Effects

A number of the effects summarised in Table 5.1 are identified as representing net state welfare effects for the purposes of cost benefit analysis. These effects are summarised in Table 5.2 for each development scenario.

Overall, the analysis identifies total costs of approximately \$3.70m in 2021 associated with the introduction of Costco at the subject site (note: these costs are represented as negative values in the table for comparison against the identified benefits).

The identified benefits are assessed at between \$13.1m and \$46.1m.

On this basis, the net benefit is between \$9.4m and \$42.4m.

**Table 5.2: Summary of Net State Welfare Effects – Cost Benefit Analysis**

Indicator/measure	Costco	Scenario B: Homemaker	Scenario C: Industrial/office
<b>Costs:</b>			
Travel delay	-\$3.68m	-\$2.97m	-\$1.09m
Emissions	-\$0.020m	-\$0.018m	-\$0.005m
<b>Total measured costs:</b>	<b>-\$3.7m</b>	<b>-\$3.0m</b>	<b>-\$1.1m</b>
<b>Benefits:</b>			
Competition (price savings)	\$13.1m - \$46.1m	Not valued. Limited positive effect.	Not valued. Opportunity for supply-chain efficiencies.
Property values	Positive net effect.	Marginal positive net effect.	Small positive net effect.
Ongoing employment	Potential for competition to lead to an increase in business operating efficiency, with some of the retail employment growth representing a net state welfare effect.	Does not represent a new retail format, and therefore unlikely to generate a net increase in retail employment.	Potential positive effect on business efficiencies, but depending upon actual businesses accommodated at the site, and supply chain outcomes.
<b>Total measured benefits</b>	<b>+\$13.1m to +\$46.1m</b>	<b>None measured</b>	<b>None measured</b>
<b>Net benefit (Costco)</b>	<b>\$9.4m to \$42.4m</b>	<b>Not calculated</b>	<b>Not calculated</b>

Source: refer analysis in Chapter 4

## 5.4 Summary of Cost Benefit Analysis

The analysis presented in this report, and summarised in Table 5.2, shows that the Costco development has potential to generate a ***significant positive effect on net community benefit***. Identified and measurable costs total \$3.7m, but significant economic benefits are identified with a value of \$13.1m to \$46.1m in 2021. The net benefit is calculated as being between \$9.4m and \$42.4m in 2021.

Although not all benefits associated with alternative development of the site have been assessed on monetary terms, it is likely that the benefits associated with these outcomes also outweigh the identified costs associated with travel delays and vehicle emissions. That is, development of the site for homemaker retailing or an industrial/office park is also likely to generate a positive effect on net state welfare.

Overall, the analysis indicates that the Costco development is likely to have a greater positive impact on net state welfare than the alternative development scenarios.

## APPENDIX: TRAFFIC ANALYSIS TECHNICAL NOTE

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## Technical Note

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<b>To</b>	Matt Lee – Essential Economics	<b>Project</b>	Costco development, Linfox site 19-21 Parramatta Road, Auburn
<b>From</b>	Bruce Masson		
<b>Date</b>	5 February 2010	<b>Ref</b>	CTLCHKtn08
<b>Copy</b>	Andrew Duggan – JBA Urban Planning Patrick Noone – Costco Wholesale		Derek Waddington – Costco Wholesale

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### INTRODUCTION

#### Background

This Technical Note (TN) has been prepared to provide input to a Cost Benefit Analysis report being prepared by Essential Economics for the proposed Costco Development at 19-21 Parramatta Road, Auburn. Halcrow has also prepared the Transport Assessment (TA) that supports the Costco Project Application.

#### Objective

This TN summarises the work and findings of traffic analysis that has been undertaken to identify the potential travel time implications and emissions associated with any potential increases in travel time for existing users of Parramatta Road. The analysis also considers traffic implications arising from a realistic alternative use for the site.

### STUDY METHOD

#### Study Network

The study network assessed consists of the following six intersections on Parramatta Road:

- Parramatta Road-Silverwater Road/St Hilliers Road;
- Parramatta Road-Alan Street;
- Parramatta Road-Day Street;
- Parramatta Road-Nyrang Street;
- Parramatta Road-John Street;
- Parramatta Road-Hill Road/Bombay Street.

The study network contains the two intersections within proximity of the site that could be considered sensitive in terms of operating capacity. These are the intersections of Parramatta

Road with Silverwater/St. Hilliers Road and Hill Road/ Bombay Street. Existing capacity issues at these intersections are to be addressed as part of the State Government's "Action For Transport 2010 – An Integrated Transport Plan for New South Wales", which recommends a \$70 million Parramatta Road upgrade, involving major intersection improvements. The improvements recommended by the Plan have been included in the assessment.

From the TA work undertaken by Halcrow, it was determined that as a result of the dispersion of development traffic at the boundary of the study network, the impact of the development on intersections external to the network would be negligible.

Further, the majority of traffic generated by this type of retail development is drawn from a range of shoppers that in absence of a Costco store would instead shop at another location. In other words, future traffic to the proposed Costco retail store would consist predominantly of redirected and differently focussed existing traffic rather than new traffic. The affect of this is the study network local to the site would become the focus of this diverted traffic. Therefore, analysis of the study network provides us with a conservative assessment of the potential costs/emissions associated with the development as it does not include the cost/emission benefits experienced by the wider road network.

### **Development Scenarios Investigated**

Firstly, the analysis has been undertaken for a 2021 Design Year and involved determination of the 2021 Base (background or existing) traffic flows and addition of the predicted development traffic for each of the development scenarios. The analysis was based on the Thursday PM peak hour as this represents a peak hour that is significant for each of the development scenarios.

The analysis assessed the Costco development on the site as well as three potential alternative developments for the site. Through discussion between Halcrow, Essential Economics and JBA Urban Planning Consultants, the following development scenarios were chosen for assessment:

- Scenario A – 2021 Base situation;
- Scenario B – Costco + 2021 Base (654veh/hr);
- Scenario C – Homemaker Centre (Bulky Goods) of 20,000m<sup>2</sup> + 2021 Base (420veh/hr);
- Scenario D – Modern Industrial Office Park of 20,000m<sup>2</sup> GFA + 2021 Base (400veh/hr).

The figures in brackets represent the evening peak hour traffic generation of potential developments on the site and these give an indication of the transport impact relativities of those development types against the Costco proposal.

### **Analysis Methodology**

The following summarises the methodology employed to determine the comparative impacts of Scenarios B, C and D against existing base case. It is worth noting that the traffic analysis of Scenario B is consistent with that undertaken for the project application TA; therefore, the majority of the following steps refer only to alternative development Scenarios C and D:

1. ***Traffic Generation*** – RTA trip rates have been used to determine the likely traffic generation for each scenario.
2. ***Access Arrangements*** – The Scenario C (Homemaker Centre) access arrangement has been assumed to be consistent with that proposed for the Costco proposal (i.e. Primary signalised intersection at Nyrang Street, secondary left-in midblock access and modification to the John Street intersection with Parramatta Road). The access arrangement for Scenario D (Industrial/Office Park) assumes a midblock left-in, left-out access with no modifications to any of the existing intersections within the study network.
3. ***Trip Distribution and Assignment*** – The trip distribution of the Homemaker Centre scenario has been based on the trip distribution used to assess the Costco development. A new trip distribution has been developed for the Industrial/Office Park scenario to account for the limited accessibility resulting from the lack of a signalised access intersection. By applying the trip distribution for each scenario to their relevant traffic generation, development traffic flows for Scenarios C and D were calculated.
4. ***With Development Design Year Traffic*** – By combining the development traffic flows with the 2021 Base year traffic flows, Design (Base + Development) traffic flows were calculated for each scenario.
5. ***SIDRA Intersection Analysis*** – SIDRA models for each of the six intersections have been run for each of the scenarios 2021 design flows. The following performance measures were extracted from the resulting SIDRA outputs:
  - Operating cost (\$) – this includes an estimate of the direct operating cost of the vehicle and the time cost to driver and passengers;
  - Fuel consumption (L);
  - Carbon Dioxide emissions (kg);
  - Hydrocarbons (kg);
  - Carbon Monoxide (kg);
  - NO<sub>x</sub> (kg).

The SIDRA program analyses traffic delays and stops at intersections. These in turn allow calculations of the above performance measures using accepted factors for the value of time, vehicle operating costs, fuel consumption and consequential gaseous emissions.

The program is widely used in Australia and throughout the world. The program uses factors that have regard to:

- Fuel costs;
- Fuel resource costs factors;

- Values of time;
- Vehicle occupancies, and
- The vehicle mix.

It estimates fuel consumption, operating cost and pollutant emissions using a complex four-mode elemental model.

In calculating delays and stops the program has regard to the intersection “green time” available to conflicting movements, the capacity of the traffic lanes which serve those movements and the beneficial effects of traffic signal co-ordination.

6. ***Impact to 2021 Base Traffic*** – By comparing the total intersection costs/emissions, movement by movement costs/emissions and base and development traffic flows, the impact of each development scenario on base traffic has been calculated for the Thursday PM peak hour. In doing so delays, cost and emissions relating to the Costco traffic generation were separated out so that reported effects were only those across to the pre-existing base traffic.
7. ***Annual Impacts*** – By investigating daily, weekly and annual profile/trend data for each development scenario combined with RTA daily, weekly and annual profile/trend data for Parramatta Road, average daily factors, average weekly factors and finally combined annual factors were calculated to convert the Thursday PM peak hour results for each scenario to annual results.

In determining annual impacts regard was had to the times that Costco would be open, the amount of traffic likely to be generated during each of those hours and the amount of background traffic that would be travelling along Parramatta Road at those times.

## RESULTS OF ANALYSIS

The following table reports the annual results of the analysis set out above. The results are divided in to two columns, the first column presenting the total costs and emissions experienced by the base traffic anticipated to be on the study network in 2021. The second column compares the Homemaker Centre Scenario C and the Industrial/Office Park Scenario D against the Costco proposal. The positive values in this column represent the additional costs/emissions generated by the Costco proposal above that predicted for each of the alternative scenarios.

**Table 1 – Annual Impact of Costs/Emissions on 2021 Base Traffic**

IMPACT TO 2021 BACKGROUND TRAFFIC		COMPARISON WITH COSTCO	
<u>SCENARIO (B) COSTCO</u>			
Total network			
Cost (\$)	\$3,681,896		
Fuel Consumption (L)	335,017.2		
Carbon Dioxide (kg)	834,722.7		
Hydrocarbons (kg)	1,872.2		
Carbon Monoxide (kg)	85,224.5		
NOx (kg)	1,928.8		
<u>SCENARIO (C) HOMEMAKER CENTRE</u>			
Total network		versus Scenario (B) Costco	
Cost (\$)	\$2,967,815	Cost (\$)	\$714,081
Fuel Consumption (L)	288,472.4	Fuel Consumption (L)	46,544.8
Carbon Dioxide (kg)	719,633.8	Carbon Dioxide (kg)	115,088.9
Hydrocarbons (kg)	1,613.2	Hydrocarbons (kg)	259.0
Carbon Monoxide (kg)	78,887.1	Carbon Monoxide (kg)	6,337.4
NOx (kg)	1,763.8	NOx (kg)	165.0
<u>SCENARIO (D) INDUSTRIAL/OFFICE PARK</u>			
Total network		versus Scenario (B) Costco	
Cost (\$)	\$1,089,254	Cost (\$)	\$2,592,642
Fuel Consumption (L)	87,185.3	Fuel Consumption (L)	247,832.0
Carbon Dioxide (kg)	217,690.9	Carbon Dioxide (kg)	617,031.8
Hydrocarbons (kg)	472.4	Hydrocarbons (kg)	1,399.8
Carbon Monoxide (kg)	16,763.0	Carbon Monoxide (kg)	68,461.5
NOx (kg)	410.5	NOx (kg)	1,518.4

**Halcrow****January 2010**