

# Economic Development, Local Retail & Services Review of the Waterloo Estate (South) Planning Proposal

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### 1. Introduction

The Waterloo Estate (South) Planning Proposal covers about 65% of the total Waterloo Estate and is a part of Land and Housing Corporation's largest urban renewal projects under their Communities Plus program. The Planning Proposal will generate a significant increase in retail and commercial floor space to what is currently provided on site. While this provides amenity for future residents, the impacts on existing and proposed strategic centres has not yet been addressed, and amendments to the proposed zoning, or other components of the Planning Proposal, may be required if it is determined that the quantum and spread of retail/commercial uses proposed undermines other strategic centres.

This report seeks to strategically position the precinct so as to find the threshold point at which enough retail and commercial floor space is provided under the Planning Proposal to provide future residents with high amenity and an activated village centre, but no such much as to detract from existing or proposed nearby centres that are in relatively close proximity to the precinct.

The structure of this report, and by extension the approach taken to strategically position the precinct, is provided below.

#### Section 2: Background Review

This section examines the strategic context which underpins both the Waterloo Estate and surrounding local centres and reiterates the key components of the subject Planning Proposal.

#### Section 3: Testing of Proposed Concept

This section makes an appraisal of the existing Economic Development, Local Retail & Services study that accompanies the Planning Proposal and conducts testing using SGS's retail gravity model to analyse the tipping points at which the provision of retail/commercial floor space in the precinct has impacts on the retail/commercial provision in other centres.

#### Section 4: Appraisal of Strategic Centre Impacts

This section determines the impacts of the proposed scheme, using the insights obtained in the testing above, and provides a qualitative assessment of the alignment of the potential impacts with the strategic vision and positioning of Waterloo.

#### Section 5: Summary & Recommendations

The purpose of this section is five-fold:

- To synthesise and summarise the key findings of the testing and subsequent appraisal.
- To provide targeted recommendations for the Planning Proposal which address the Gateway Determination conditions.
- To assess the proposed recommendations against the Section 9.1 Ministerial Direction.
- To provide commentary regarding the size and extent of the Local Centres Zone and/or the size and extent of the active street frontages map.
- To discuss the Department's Business Zones Reform paper and provide a high-level discussion of the Planning Proposal's alignment with this piece.

# 2. Background Review

#### 2.1 Strategic Context

#### **Greater Sydney Regional Plan**

The *Greater Sydney Regional Plan* sets a vision for the growth of Greater Sydney over the next 40 years. The plan is centred around strategies for infrastructure and collaboration, liveability, productivity and sustainability. The Waterloo Estate (South) Planning Proposal has been assessed by the Department of Planning, Industry and Environment (DPIE) against key objectives of the Regional Plan. The specific objectives relevant to assessment of proposal are as follows:

- Objective 1 Infrastructure Supports the Three Cities
- Objective 2 Growth infrastructure compact
- Objective 4 Infrastructure use is optimised
- Objective 7 Communities are healthy, resilient and socially connected
- Objective 8 Greater Sydney's communities are culturally rich with diverse neighbourhoods
- Objective 10 Greater Housing Supply
- Objective 11 Housing is more diverse and affordable
- Objective 12 Great Places that bring people together
- Objective 13 Environmental heritage is identified, conserved and enhanced
- Objective 14 A Metropolis of Three Cities integrated land use and transport creates walkable and 30-minute cities
- Objective 30 Urban Tree Canopy Cover is Increased
- Objective 31 Public open space is accessible, protected and enhanced
- Objective 33 A low-carbon city contributes to net-zero emissions by 2050 and mitigates climate change
- Objective 34 Energy and water flows are captured, used and re-used
- Objective 36 People and places adapt to climate change and future shocks and stresses
- Objective 38 Heatwaves and extreme heat are managed

Specific to this study, the Region Plan outlines the importance of alignment of retail and services land uses to appropriate provision of infrastructure. The Waterloo Estate (South) is identified within the Region Plan as being located within the Eastern Economic Corridor and in close proximity to key strategic centres. The site is also adjacent to the Waterloo metro station which is currently under construction by the NSW government.

#### Eastern City District Plan

The Eastern City District Plan is a 20-year plan aimed to manage growth in the context of economic, social and environmental matters to achieve the 40-year vision for Greater Sydney. It contains the planning priorities and actions for implementing the *Greater Sydney Region Plan*, at a district level and is a bridge between regional and local planning.

The Plan identifies Green Square and Mascot as key strategic centres within the Eastern Economic Corridor. The Eastern Economic Corridor stretches from Macquarie Park, Chatswood, St Leonards, the Harbour CBD and Randwick to Green Square. The Corridor has a significant competitive advantage due to its proximity to key transport networks providing access to jobs and services. The Waterloo Estate (South) is located in close proximity to the Green Square strategic centre, as such this strategic centre will be a consideration in the renewal of the Waterloo Estate (South).

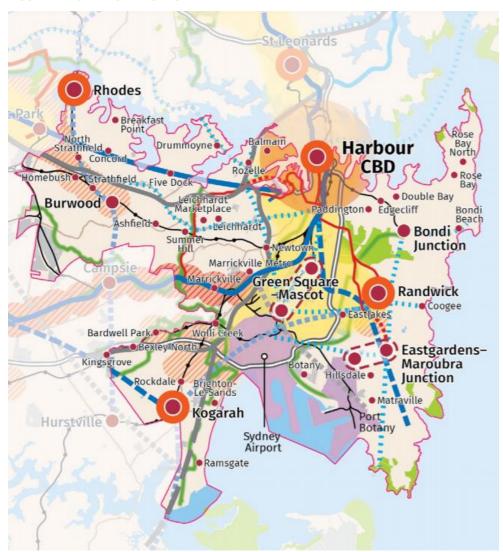


FIGURE 1: EASTERN CITY DISTRICT PLAN

Source: Greater Sydney Commission.

#### Sydney Development Control Plan 2012

The Sydney Development Control Plan 2012 (Sydney DCP 2012) includes a centres hierarchy for the City South, based on the Green Square and Southern Areas Retail Study (2008). This establishes a clear hierarchy for retail centres in the area, with Green Square Town Centre being the primary retail, commercial and community centre, local villages established in major urban renewal precincts such as Victoria Park (East Village) and Ashmore, small village centres to have some consolidation of local retail, and neighbourhood centres with a small cluster of about five shops.

The hierarchy is supported by the restricted retail premises map in *Sydney Local Environmental Plan 2012* (Sydney LEP 2012) that prohibits shops and markets (as defined in the LEP) over 1,000 sqm in areas outside the designated major centres and local villages.

#### City of Sydney Retail Action Plan

The City of Sydney developed its Retail Action Plan in 2016 as a response to major changes in the retail sector resulting from online retail and changing consumer behaviour. The Plan directs much of Council's work on supporting retail, in Central Sydney and village centres. This aims to work alongside the centres hierarchy in the planning controls, providing smaller, more concentrated areas of retail activity where the City can direct public domain works, funding for programs, activities and events and achieve outcomes for businesses efficiently. The Plan has four overarching areas of focus:

- Create great experiences for city workers, residents and visitors to Sydney to ensure they choose to shop in central Sydney and its villages;
- **Build capacity and resilience** to ensure the city has a diverse range of sustainable, innovative retail businesses;
- Remove barriers to clarify regulatory processes and assist, in particular, new retailers and small businesses to more efficiently and effectively interact with Council and other levels of government; and
- Engage with the sector to encourage closer cooperation between retailers and more efficient interaction with the regulatory processes of government.

#### City of Sydney Waterloo Estate Retail Review

In 2020, the City of Sydney produced the *Waterloo Estate Retail Review*. The review outlined four overarching principles for retail specific to the Waterloo Estate. The principles are as follows:

- affordability and flexibility, to accommodate a diverse retail offering and space for non-retail employment, community and services;
- convenience and ease of access, reflecting the convenience-focused role expected of retail in the area;
- concentration and clustering, to support economic viability and efficient use of investment; and
- room for growth, given the potential for higher demand in the future.

The review outlines that retail planning for the Waterloo Estate (South) precinct has been influenced by the Retail Action Plan, and Sydney DCP 2012, forecasts from a previous SGS study for retail floor space

demand in the Redfern Street Village, and the site-specific details provided in two LAHC commissioned studies by .id consulting and Macroplan.

#### 2.2 Planning Proposal

#### The site

The Waterloo Estate (South) is located within the City of Sydney local government area. The site is bounded by Raglan Street in the north, Cope Street in the west, McEvoy Street in the south, and Waterloo Park, Kellick Street, Gibson Street, Wellington Street and George Street to the east. It is located approximately three kilometres south of Sydney Town Hall, one kilometre north of Green Square Town Centre and adjacent the future Waterloo Metro station and Waterloo Metro Quarter development.

The site currently consists of a variety of uses, as shown in Figure 2. **Error! Not a valid bookmark self-reference.** Much of the site is public housing lots owned by the NSW Land and Housing Corporation (LAHC), as well as some private residential and commercial lots and strata apartment buildings. There are currently 749 social housing dwellings and 120 private dwellings within Waterloo Estate (South).



**FIGURE 2: EXISTING LAND USES** 

Source: City of Sydney, 2021

#### Background

The LAHC is currently seeking redevelopment of the Waterloo Estate (South) site as part of their Communities Plus program. Although the LAHC is part of the wider DPIE conglomerate, the community housing projects undertaken by LAHC are entirely self-funded. As such, the LACH must generate its own income through rents and profit from selling market units to fund development of social housing and maintain existing housing stock.

The LAHC planning proposal seeks to increase the density of development on the site. The proposal stated that "the existing planning controls would not be capable of supporting a feasible redevelopment of the entire site given the costs of demolition and construction, nor could they support the appropriate future mix of social (affordable rental) and private market housing" (LAHC Planning Proposal pg. 92).

The Strategic Planning for the renewal of the Waterloo Estate (South) has taken place over a number of years prior to submission of the current planning proposal to DPIE. The key events are summarised below.

The City of Sydney recommended for an inquiry to be held into the potential intensification of the Waterloo Estate site, following exhibition of a Draft Built Environmental Plan for the renewal of the site by the Redfern-Waterloo Authority. Council supported intensification of the site due to its proximity to a potential railway station at Waterloo.

2011

The NSW Government committed to the construction of a new metro station at Waterloo.

2015

Parts of Waterloo were determined as being of State planning significance by the Minister for Planning, and subsequently earmarked for rezoning under the State Significant Precinct Process. Following this, DPIE issued rezoning study requirements for the Waterloo Estate, stipulating a total of 26 technical studies to be completed to inform the rezoning.

2017

The LAHC undertook the 26 required technical studies and prepared 3 masterplan options for testing and consultation with the community and stakeholders in Waterloo.

2018

In January LAHC released a finalised masterplan in response to the 3 masterplan options that were tested in 2018. In March, the City of Sydney released an alternative masterplan for the Waterloo Estate. In late 2019, a number of alignment meetings were held between LAHC and Council to discuss differences in their respective masterplan concepts.

2019

In May, LAHC submitted a planning proposal (PP) to council. In June, Council presented the LAHC PP and its alternative concept to its Design Advisory Panel for advice. The Panel supported Council's alternative PP, noting that Council's proposal achieved a similar GFA to the LAHC PP. Despite some similarities between both proposals, there was still disagreement between Council and the LAHC in relation to built form, tenure mix and feasibility.

2020

On February 22, Council endorsed an alternative PP for the Waterloo Estate (South). Council resolved to approve the PP to be sent to the Minister with a request for gateway determination.

FEB 2021

On February 23, the Minister for Planning and Public Spaces wrote to the City of Sydney and the Minister for Water, Property and Housing to encourage LAHC and the City to work together to break this deadlock and find a solution by no later than 12 March 2021. Both parties were advised that if there was no resolution by this time than the Minister would appoint the Secretary of the Department as the planning proposal authority.

FEB 2021

In March, the Minister for Planning and Public Spaces appointed the Secretary of the Department as the Planning Proposal Authority (PPA) for the Waterloo Estate. On 26 April, the PPA's delegate submitted Council's planning proposal to the Department for Gateway determination. An Independent Advisory Group (IAG) was engaged by the Department to inform the Gateway Assessment required to be undertaken by The Department.

MAR 2021

#### **Submitted Planning Proposal**

The planning proposal submitted to DPIE was the result of some alterations by the City of Sydney to the original LAHC proposal. Table 1 provides a detailed comparison of proposed changes to planning controls by LAHC and the City of Sydney.

TABLE 1: COMPARISON OF NSW LAND AND HOUSING CORPORATION AND CITY OF SYDNEY PLANNING PROPOSALS

Relevant Planning Controls	LAHC	Council	
Zoning Map			
LAHC Land	B4 Mixed Use	B4 Mixed Use and B2 Local Centre	
LAHC Open Space	RE1 Public Recreation	B4 Mixed Use	
Private Land	B4 Mixed Use	B4 Mixed Use	
Height of Buildings Map			
LAHC Land	Variable RL71m to RL126.4m (concept plan comprised 9 towers (20-32 storeys) with the balance predominately 4 to 8 storeys)	Max <b>RL126.4m</b> Comprising 3 towers (30+ storeys) with the balance of buildings predominately 11-13 storeys	
Private Land	RL71 to 72m (approx. 50-55m)	Mostly 30-35m	
Floor Space Ratio Map			
LAHC Land	Variable 1.25:1 to 10.55:1 by lot	1.5:1 (+1.26:1 bonus)	
LAHC Open Space	No FSR	1.5:1 (+1.26:1 bonus)	
Private Land	3.09:1	1.75:1 (+0.25:1 bonus)	
FSR Bonus Controls			
LAHC	Nil – Max FSR in the Map and Public Benefits via a Voluntary Planning Agreement	1.26:1 bonus, if: 30% social housing GFA + 30% CHP housing GFA + 13,000m² non-residential GFA + 5,000m² community GFA + Additional Basix targets + Undefined Open Space dedication	

Total LAHC GFA (excluding design excellence)	257,000m <sup>2</sup>	226,364m²
Private Land	Nil – FSR in the map	0.25:1 bonus for additional Basix
Retail Map  (where retail development >1000m² is not permitted)	Limited prohibition area	Prohibition area extends over the B4 zoned land
Active Street Frontage Map	Not proposed	Maps required ground floor non-residential adjacent to existing streets plus in mid block locations where no existing or proposed public roads are located
Land Reservation and Acquisition Map	Identifies open space	No map
Design Excellence	+ 25,700m2 if 10% GFA	+ 22,636m2 if 10% GFA

Source: NSW Department of Planning, Industry and Environment.

#### Retail Map

The PP submitted to DPIE for Gateway Determination proposed the following Clause in relation to retail provision:

- facilitate additional FSR of 1.26 where all of the following are satisfied:
  - 30% of residential floor area proposed on land to which the clause applies is being used for social housing; and
  - 20% of residential floor area proposed on land to which the clause applies is being used for affordable housing; and
  - no less than 13,000 sqm is being used for a purpose that is not residential accommodation; and
  - no less than 5,000 sqm is being used for community facilities, health facilities and centre-based child care facilities; and
  - where BASIX-affected development exceeds the BASIX commitments for water and energy by not less than 10 points for energy and 5 points for water; and
  - arrangement for the provision of publicly accessible open space has been made, to the satisfaction of Council.

#### Key components of the Planning Proposal related to the provision of retail floor space

The four key statutory components of the Planning Proposal which impact on the delivery of retail and commercial floorspace are:

- 1. The mapped Land Use Zoning;
- 2. The mapped Restricted Retail Development;
- 3. The mapped Active Street Frontages; and
- 4. The site-specific clauses requiring the provision of non-residential floorspace

#### Land Use Zoning

The contention between the Council and LAHC PP is the variation between land use zoning. The submitted PP includes a B2 Local Centre zone over 24,630m² of LAHC land at Waterloo South (see Figure 3), rather than a B4 Mixed Use zone as originally sought by the LAHC. Table 2 provides a comparison of the land use tables for B2 and B4 zones as stipulated by the *Sydney Local Environmental Plan 2012*. Both the B2 and B4 zones permit similar uses including centre-based childcare facilities, commercial premises, community facilities, medical centres and shops.

The key difference between the zones is that the B4 zone is typically partly mapped as a *Restricted Retail Development* area pursuant to Clause 7.23 of the Sydney LEP 2012. Conversely, B2 zoning will not impose any restriction on GFA for retail/ commercial land uses.

TABLE 2: COMPARISON OF LAND USE TABLES, B2 AND B4 ZONING

	B2 Local Centre	B4 Mixed Use
Item 1: Objective of zone	<ul> <li>To provide a range of retail, business, entertainment and community uses that serve the needs of people who live in, work in and visit the local area.</li> <li>To encourage employment opportunities in accessible locations.</li> <li>To maximise public transport patronage and encourage walking and cycling.</li> <li>To allow appropriate residential uses so as to support the vitality of local centres.</li> </ul>	<ul> <li>To provide a mixture of compatible land uses.</li> <li>To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.</li> <li>To ensure uses support the viability of centres.</li> </ul>
Item 2: Permitted without consent	Nil	Home occupations
Item 3: Permitted with consent	Boarding houses; Centre-based child care facilities; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Home industries; Information and education facilities; Medical centres; Oyster aquaculture; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Respite day care centres; Restricted premises; Roads; Service stations; Shop top housing; Tank-based aquaculture; Tourist and visitor accommodation; Any other development not specified in item 2 or 4	Boarding houses; Centre-based child care facilities; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Hotel or motel accommodation; Information and education facilities; Medical centres; Oyster aquaculture; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Respite day care centres; Restricted premises; Roads; Seniors housing; Shop top housing; Tank-based aquaculture; Any other development not specified in item 2 or 4
Item 4: Prohibited	Depots; Extractive industries; Freight transport facilities; Heavy industrial storage establishments; Industrial retail outlets; Industries; Pond-based aquaculture; Storage premises; Transport depots; Truck depots; Warehouse or distribution centres	Extractive industries; Heavy industrial storage establishments; Heavy industries; Pond-based aquaculture

Source: Sydney Local Environmental Plan 2012.

FIGURE 3: PROPOSED LAND USE ZONING



Source: Department of Planning, Industry and Environment.

#### Restricted Retail Development

Clause 7.23 of the *Sydney Local Environmental Plan 2012* stipulates controls for large retail development outside of the Green Square Town Centre and other planned centres. The key objective of the Clause is as follows:

- to promote the economic strength of Green Square Town Centre and planned local centres by limiting large-scale retail development to those centres, and
- to support the provision of community facilities and infrastructure in Green Square.

Specifically, the Clause restricts retail development, stating that development consent must not be granted for development for the purposes of shops or markets with a gross floor area of more than 1,000 square metres. The LEP maps specific land for which this Clause applies. Currently, a significant proportion of the Waterloo Estate (South) has this restriction applied.

FIGURE 4: PROPOSED LOCATION OF RETAIL RESTRICTION



**Retail Premises** 

Restricted Retail Development

Source: Department of Planning, Industry and Environment.

#### Active Street Frontage

Clause 7.27 of the *Sydney Local Environmental Plan 2012* gives effect to active street frontages. The objectives of this clause is to promote uses that attract pedestrian traffic along certain ground floor street frontages.

Where mapped, an active street frontage must ensure that all premises on ground floor that face the street (with the exception of building lobbies, access for fire services and vehicular access) will be used for the purposes of business or retail premises and have active street frontages. The proposed active street frontages map is provided below.

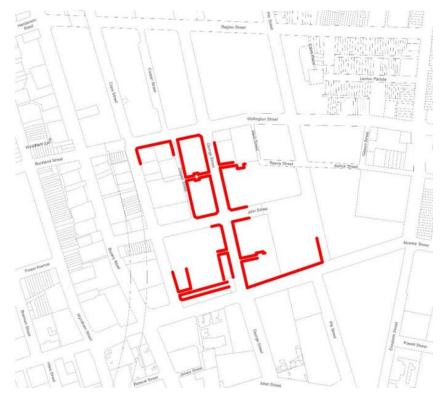


FIGURE 5: PROPOSED LOCATION OF ACTIVE STREET FRONTAGES

Source: Department of Planning, Industry and Environment.

#### **Gateway Determination and Conditions**

The PP received Gateway Determination on 23 June 2021 by the Minister and must satisfy a number of conditions to proceed. The conditions relevant to this project are as follows:

- Additional technical documentation to be prepared and considered:
  - An addendum to the existing Economic Development, Local Retail & Services report to discuss potential impacts of B2 zone on existing and planned centres. This addendum must address Ministerial Direction 1.1.
- Updates and modifications to the planning proposal prior to exhibition:
  - Amend the zoning map as follows: In consultation with Council and LAHC, consider if the proposed B2 zone needs to be modified to address Ministerial Direction 1.1 while ensuring the underlying objective to promote a high street experience along George Street is retained. For example, this may result in the B2 zone being maintained, the B2 zone being amended to only front George Street and Wellington Street, or the B4 zone being reinstated.

The Ministerial Direction 1.1 includes provisions that planning proposals are to protect existing business zones and support the viability of identified centres. New employment areas are to be consistent with an endorsed strategy or justified by a study having regard to the objectives of the ministerial direction.

Given the proximity of the Waterloo Estate (South) to the Green Square strategic centre, DPIE raised concerns in relation to the potential impact of the B2 zone particularly if developed to its full potential with an FSR of 1.5:1 or more. DPIE estimated that this could equate to a retail floorspace of 25,000m<sup>2</sup> to 40,000m<sup>2</sup>, therefore the zone has the potential to impact the viability of surrounding local and strategic centres that already exist.

#### 2.3 Economic Development, Local Retail & Services Study

An Economic Development, local retail & services study was prepared by MacroPlan to support the Planning Proposal developed by LAHC. The study seeks to ensure that the retail and ancillary non-retail offer at Waterloo South 'meets the needs of local residents and workers; both existing and future; but potentially also draw people in from across the broader region through uses that activate the precinct in the evenings and on weekends — noting the new Metro Station will help to facilitate movements for 18+ hours a day'. While this statement may begin to suggest that the study may begin to position Waterloo South as a local centre of strategic significance, subsequent sections of the report begin to moderate this language and the retail testing to be completed by SGS in Section 3 of this report will aide in determining the appropriateness of the recommendations of the MacroPlan study.

The study notes that a potential 17,900 square metres of retail and community/civic gross floor area could potentially be provided under the Waterloo South master plan (of which 11,200 square metres is provided as retail floor space). Of the 11,200 square metres of retail floorspace proposed, a mix of traditional supermarket/majors floorspace, mini-majors, specialty retail (including food catering/food and beverage floorspace) is recommended.

The study recommends an allocation of space to non-retail uses such as banks, travel, allied and community health is also recommended. Community services will encompass 5,200 square metres including child care, creative space, a library and community centre. A further 1,500 square metres will be dedicated to cultural learning and wellbeing.

A total of 190 customer car parking spaces is recommended by the study to be allocated for retail and community/cultural services customers within Waterloo South, with the recommendation being that car parking spaces are located adjacent to the proposed supermarket space.

The study also makes the following sound observations and recommendations:

- The likely trade area will be relatively contained; the surrounding higher order retail offer is very strong and will have significant bearing on the ultimate scale of mix of retail in Waterloo South.
- Specialty retail floorspace provided at Waterloo South should be delivered in the form of street/strip retail in nodes or precincts. We recommend the retail mix be convenience focused, with a strong food & beverage offer.
- Major non-food anchors like department stores or discount department stores (dds) are not recommended at the site, as the potential trade area served is relatively contained and the surrounding higher order retail offer is very strong.

# 3. Testing of Proposed Concept

#### 3.1 Analysis of study supporting current scheme

#### Summary of key inclusions

The resident trade area for Waterloo South has been defined based on the relative attraction of other retail centres, the proximity of these centres, road networks and public transport infrastructure and significant barriers. This trade area has subsequently been divided into a 'primary' and 'secondary' catchment, with the primary catchment including most of Redfern and Waterloo, and the secondary catchment including northern part of Alexandria and most of Eveleigh. A map of the retail trade area and competition, per the Economic Development, Local Retail & Services Study, is shown overleaf.

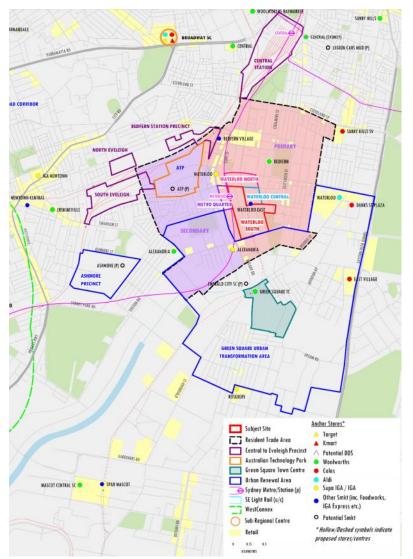


FIGURE 6: RETAIL TRADE AREA (RESIDENT) IN ECONOMIC DEVELOPMENT, LOCAL RETAIL & SERVIECS STUDY

Source: MacroPlan (2021)

Population forecasts have been based on Australian Bureau of Statistics (ABS) data, NSW Transport Performance and Analytics (TPA) population projections, .id population projections, LAHC data and investigations of future residential development approved or proposed in the retail catchment area. The forecast population and average growth (number and rate) are provided in the table below. In summary, the number of residents in the retail trade area is expected to increase from 21,490 in 2019, to 37,140 by 2036.

TABLE 3: KEY POPULATION STATISTICS FOR THE RETAIL TRADE AREA (RESIDENT AND WORKER)

	W	aterloo South w	orker trade area	oopulation, 2011	-2036*		
	Estimated	population	F	orecast populat	ion		
Trade area	2011	2016	2019	2021	2026	2031	2036
Primary	8,030	9,030	9,510	9,810	11,560	13,310	14,060
Secondary	4,330	6,930	8,430	12,430	17,430	18,430	19,180
Worker trade area	12,360	15,960	17,940	22,240	28,990	31,740	33,240
Trade area		Aver 2011-16	age annual growt 2016-19	h (no.) 2019-21	2021-26	2026-31	2031-36
Primary		200	160	150	350	350	150
Secondary		520	500	2,000	1,000	200	150
Worker trade area		720	660	2,150	1,350	550	300
			rage annual grow				
Trade area		2011-16	2016-19	2019-21	2021-26	2026-31	2031-36
Primary		2.4% 9.9%	1.7% 6.7%	1.6%	3.3% 7.0%	2.9%	1.1% 0.8%
Secondary  Worker trade area		9.9% 5.2%	4.0%	21.4% 11.3%	7.0% 5.4%	1.1% 1.8%	0.8%
Worker trade area			n trade area pop		-	1.079	0.9%
	_				_		_
Trade area sector	2011	nated population	2019	2021	2026	population 2031	2036
Primary	13,210	15,040	16,540	17,740	22,490	26,740	30,990
Secondary	3,770	4,590	4,950	<u>5,150</u>	5,650	5,900	6,150
Main trade area	16,980	19,630	21,490	22,890	28,140	32,640	37,140
				Average annua	l growth (no.)		
Trade area sector		2011-16	2016-19	2019-21	2021-26	2026-31	2031-36
Primary		366	500	600	950	850	850
Secondary		<u>164</u>	120	<u>100</u>	100	<u>50</u>	<u>50</u>
Main trade area		530	620	700	1,050	900	900
				Average annua	al growth (%)		
Trade area sector		2011-16	2016-19	2019-21	2021-26	2026-31	2031-36
Primary		2.6%	3.2%	3.6%	4.9%	3.5%	3.0%
Secondary		4.0%	2.5%	2.0%	1.9%	0.9%	0.8%
Main trade area		2.9%	3.1%	3.2%	4.2%	3.0%	2.6%

Source: MacroPlan (2021)

The estimated retail expenditure capacity for the study area has been sourced from MarketInfo and is sourced in concert with relevant demographic and socio-economic data from the ABS. Per capita retail expenditure across the trade area is higher (11%) than the average for metropolitan Sydney and is estimated at \$16,613. Intuitively, incomes and by extension, expenditure, is higher in Inner-City locations, with this variance being most apparent in the secondary trade area where the proportion of social housing is less than the primary area.

Combined with population forecasts, the study estimates that retail expenditure in the trade area will increase from \$256 million at 2036 to \$544 million by 2036, which represents an average annual rate of 4.5%. This growth rate indicates that the average retail expenditure, particularly in the primary trade area, will outpace population growth. Again, this is intuitive given that this Planning Proposal, like other developments slated for areas within the private trade area, are likely to increase the proportion of persons not living in social housing who typically have higher incomes. Complementing this, worker retail expenditure is also expected to increase from \$64 million to \$178 million between 2019 and 2036, assuming 24% of worker retail expenditure being completed near the workplace. This is a very substantial increase, particularly in a post-COVID-19 scenario which might not see estimated worker population in South Eveleigh materialise.

Next, the study estimates the total retail demand as based on population and expenditure forecasts. It concludes that the retail floor space demand of the trade area will increase from 64,330 square metres in 2019 to 110,947 square metres in 2036. This represents an increase in approximately 38,000 square metres. However, not all of this demand for retail floor space is expected to be contained within the trade area, and it is estimated that across all retail types, that only 11% of retail expenditure would take place within the trade area. The table below shows the forecast retail floor space demand, by retail category, from 2019 to 2036.

#### **Retail Turnover Density**

The following Retail Turnover Densities (RTDs) have been applied to each retail category:

- FLG: 9,000

- Food catering: 6,500

- Total food: 8,100 (7,900 for workers)

Apparel: 4,500

- Household Goods: 4,250

- Leisure: 6,000

General retail: 7,000

- Retail service: 5,500

- Total non-food retail: 5,400 (4,900 for workers)

- Total retail: 6,900 (6,400 for workers)

All values are provided as \$ per square metre in 2019

TABLE 4: RESIDENTS AND WORKERS IN THE TRADE AREA PER MACROPLAN REPORT

Waterloo South resident and worker trade area - indicative supportable floorspace by category (sq.m), 2019-2031										
Year ending June	FLG	Food catering	Total food	Apparel	H'hold goods	Leisure	General retail	Retail services	Total non-food	Total retail
% retail expenditure retained										
Primary	25.0%	15.0%	21.4%	0.0%	2.0%	10.0%	15.0%	25.0%	5.5%	13.3%
Secondary	10.0%	6.0%	8.3%	0.0%	0.0%	4.0%	6.0%	10.0%	1.8%	4.7%
Main TA	21.6%	12.4%	18.1%	0.0%	1.4%	8.4%	12.6%	20.6%	4.4%	11.0%
2019	5,430	2,183	7,610	0	207	375	759	710	2,050	9,660
2020	5,566	2,234	7,800	0	214	383	772	727	2,100	9,900
2021	5,712	2,288	8,000	0	221	392	787	745	2,140	10,140
2022	5,897	2,355	8,250	0	230	402	805	768	2,210	10,460
2023	6.122	2.435	8.560	0	242	416	828	795	2.280	10.840
2024	6,347	2,517	8,860	0	253	429	850	823	2,360	11,220
2025	6,572	2,598	9,170	0	265	442	873	850	2,430	11,600
2026	6,797	2,681	9,480	0	276	454	895	878	2,500	11,980
2027	7,010	2,759	9,770	0	287	466	916	904	2,570	12,34
2028	7,210	2,833	10,040	0	297	477	935	928	2,640	12,68
2029	7,410	2,908	10,320	0	307	488	954	952	2,700	13,02
2030	7,610	2,983	10,590	0	317	499	973	975	2,770	13,36
2031	7,811	3,059	10,870	0	327	510	992	999	2,830	13,70
2032	8,012	3,135	11,150	0	337	521	1,011	1,023	2,890	14,04
2033	8,214	3,212	11,430	0	347	532	1,030	1,047	2,960	14,39
2034	8,416	3,289	11,705	0	356	542	1,049	1,071	3,019	14,72
2035	8,618	3,367	11,986	0	366	553	1,068	1,095	3,082	15,06
2036	8,821	3,446	12,267	0	376	563	1,086	1,119	3,145	15,41

Source: MacroPlan (2021)

As previously discussed, the Waterloo South Planning Proposal seeks to implement provisions to deliver 11,200 square metres of retail floor space. This would indicate that the precinct would provide approximately 73% of the trade area's demanded retail floor space.

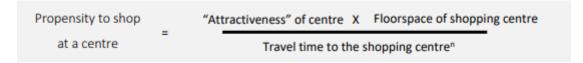
As discussed in the next section of this report, SGS will utilise a different retail model to analyse the impacts of the Waterloo Estate (South) redevelopment and as such, an appraisal of the MacroPlan report will not be made. MacroPlan has utilised a traditional retail model is based on trade area surveys and consumer/economic forecasts. While there are questions regarding the rationale behind the selection of the trade areas, particularly as they are not roughly concentric around the subject precinct, and the forecast worker population, it is not anticipated that alteration of the trade areas would substantially impact on the findings of this report. As such, the findings of the MacroPlan report are generally sound.

#### 3.2 Retail testing method

In this section, demand for retail floorspace across all of the Sydney Greater Metropolitan Area (GMA) is assessed, with particular regard to the impacts of the Waterloo Estate (South) Planning Proposal on adjacent centres. The analysis carried out below is based on a gravity modelling approach. This approach weighs centre quality, mass and accessibility against the volume and location of available expenditure in the system to estimate expenditure capture at each centre (and hence the quantity of floorspace likely to be needed) at various points in the future. It makes clear the impacts of the Waterloo Estate (South) Planning Proposal on retail.

#### SGS Gravity Model

The SGS Retail Model is built on previous research as well as the extensive experience SGS has gained conducting many retail studies. The SGS retail model takes the following approach:



This formula recognises that an individual is more likely to go to more 'attractive' and larger centres and less likely to go to small, lower-quality centres that are further away.

The 'attractiveness' of a shopping centre refers to a range of visual and functional attributes. Unlike other gravity models, the SGS model does not explicitly measure the effects of design layout or product mix. Instead, it uses the shopping centre's current turnover and the distribution of current demand as a basis to establish a 'current attractiveness value' for the centre. This current attractiveness value is then used to forecast how the shopping centre will perform in the future given changes to floorspace (in either that centre or surrounding ones) and demand.

The rate at which travel times affect propensities is calibrated to ensure realistic catchments. This is to account for consumers going to alternative shopping centres that are based along major freeways or restricted to others based on natural barriers such as bays and rivers.

#### Why use a gravity model?

Other demand approaches (such as survey-based assessments) are expensive and data intensive and only consider current population and behaviour. Simplified 'shift-share' approaches typically focus on one/a few centres and heavily rely on judgement-based primary and secondary catchments, with exaggerated market share thresholds. Gravity models, on the other hand, present the following benefits:

- All spending across the retail system is accounted for once and only once
- Catchments are generated through data analysis rather than through the judgement of consultants, and
- A gravity model captures the continuous and dynamic nature of catchments, based on changing demand, supply, and transport infrastructure.

#### **Retail Expenditure Estimates**

Retail expenditure data has been developed from resident-based expenditure accounts across 24 commodity groups at a Statistical Area 1 (SA1) level (e.g. fresh food, groceries, pharmaceuticals, restaurants, etc). These expenditure accounts are sourced from MarketInfo's Market Data Systems (MDS) for 2018. MDS are the industry benchmark in estimating small area expenditure that draws on the latest Household Expenditure Survey (HES), ABS Census and other datasets. These expenditure per capita benchmarks are then projected out for population and employment, derived from Transport for NSW's population and employment projections, and adjusted to factor in the latest retail spending trends from the ABS. The retail expenditure data also considers changing consumer spending patterns, such as the growing role of online shopping, in addition to factoring in the degree to which expenditure is influenced by work-based, education-based and tourism-based spending. These considerations help to capture overall leakage/capture for the whole system.

#### Online retail market share

The market share of online retail in the future will change the amount of retail expenditure occurring in physical stores. Online retail spending is currently growing rapidly, and there are a variety of estimates of its size and growth rate. To reflect the uncertainty in how quickly online retailing will grow in the future, three scenarios have been modelled, and are discussed below.

Online retail growth scenarios are based on experimental time-series statistics of online retail market share produced by the ABS. These time series show the market share to be growing by around 0.75 per cent per year, and as of March 2020 and to be around 7.2 per cent (noting this was pre-COVID). While they are experimental, these estimates are the most relevant to the SGS retail model, as SGS uses a similar categorisation of what is included in retail expenditure and what is not as the ABS, while some third-party retail market share estimates may be based on different categorisations.

Online retail market share was broken down into shares for each retail commodity based on reported market shares for various goods and services from a variety of third-party research sources, including NAB, IBIS World, and Australia Post. These shares are lowest for supermarkets and hospitality and highest for department stores and clothing. Shares for every commodity were assumed to grow in the future, although the highest growth is expected to occur in those commodities which have the highest current online retail market penetration (department stores, clothing and household goods).

SGS adopts a middle-ground scenario, in which online retail market share growth continues at 0.75 per cent per year in the short term before halving to 0.38 per cent per year by 2036. This is predicated on the idea that various strategies and interventions centre operators, councils, and bricks and mortar retailers themselves are able to stem the loss of retail expenditure to online retailers.

#### 3.3 Retail testing results

For the purposes of this analysis, the retail gravity model has been used to test the impacts of the Waterloo Estate redevelopment on two other centres; Green Square (per the ministerial direction which requires an appraisal of the impacts on nominated strategic centres) and Redfern (as it is valuable to analyse the impacts to a centre that the MacroPlan study included this in the primary retail trade area).

#### Aggregated floorspace supply and demand

Having identified current and future supply, and the demand for retail floorspace across the Sydney Greater Metropolitan Area (GMA), it is possible to identify the extent to which this demand and supply is aligned across centres within the City of Sydney. The floorspace gap is calculated by comparing the supply for Green Square and Redfern against the demand calculated through the gravity model. This analysis provides guidance as to whether there is a general surplus (oversupply) or shortage (undersupply) of retail floorspace. Following this, the exercise is repeated, but accounting for the retail floor space proposed under the Waterloo Estate (South) Planning Proposal.

The results shown in the table below show that by 2056, with the absence of the Waterloo, Green Square will operate with a gap in the retail provision by 5,526 square metres, while Redfern's gap will be 3,003 square metres.

TABLE 5: RETAIL SUPPLY, DEMAND, AND GAP IN GREEN SQUARE AND REDFERN FROM 2016 TO 2056 WITHOUT THE WATERLOO ESTATE PLANNING PROPOSAL (IN SQM)

Commodity	Green Square		Redfern	
	2016	2056	2016	2056
Supermarket	2,459	3,259	3,433	3,433
Other Food	509	1,317	645	746
Hospitality and Services	3,706	4,753	5,621	5,931
Clothing and Soft Goods	5,563	6,270	1,906	1,956
Household Goods	3,677	4,327	2,851	2,851
Other Retail	65	715	673	980
Department Stores	-	-	-	-
Total Supply	15,980	20,641	15,130	15,897
Supermarket	2,459	5,494	3,433	4,823
Other Food	509	1,889	645	912
Hospitality and Services	3,706	6,478	5,621	7,330
Clothing and Soft Goods	5,563	6,005	1,906	1,719
Household Goods	3,677	5,695	2,851	3,434
Other Retail	65	608	673	683
Department Stores	-	-	-	-
Total Demand	15,980	26,167	15,130	18,900
Gap	-	- 5,526	-	- 3,003

The following table then demonstrates what happens to the gap in each centre when the 11,200 square metres of retail floor space in the Waterloo Estate (South) is provided.

TABLE 6: RETAIL SUPPLY, DEMAND, AND GAP IN GREEN SQUARE AND REDFERN FROM 2016 TO 2056 WITH THE WATERLOO ESTATE PLANNING PROPOSAL (IN SQM)

Commodity	Green :	Square	Redfern		
	2016	2056	2016	2056	
Supermarket	2,459	3,259	3,433	3,433	
Other Food	509	1,317	645	746	
Hospitality and Services	3,706	4,753	5,621	5,931	
Clothing and Soft Goods	5,563	6,270	1,906	1,956	
Household Goods	3,677	4,327	2,851	2,851	
Other Retail	65	715	673	980	
Department Stores	-	-	-	-	
Total Supply	15,980	20,641	15,130	15,897	
Supermarket	2,459	5,363	3,433	4,723	
Other Food	509	1,876	645	904	
Hospitality and Services	3,706	6,469	5,621	7,322	
Clothing and Soft Goods	5,563	6,062	1,906	1,729	
Household Goods	3,677	5,748	2,851	3,451	
Other Retail	65	604	673	678	
Department Stores	-	-	-	-	
Total Demand	15,980	26,122	15,130	18,809	
Gap	-	-5,481	-	- 2,911	
Impact of Waterloo (sqm)	-	45	-	92	
Impact of Waterloo (%)	-	- 0.6%	-	- 0.8%	

As demonstrated above, the impact of the retail offering at the Waterloo Estate (South), as proposed in the Planning Proposal at 11,200 square metres, will be a reduction of 45 square metres of retail floor space in Green Square and 92 square metres of floor space in Redfern. This represents a reduction of 0.6% and 0.8% respectively when compared to the base case which does not include the Waterloo Estate (South). The reason that the gap does not increase significantly under the planning proposal scenario is that the increase in new retail floorspace in Waterloo South is offset but the significant increase in population of residents who will create demand for this new supply. As such, the overall impact on floorspace demand in the wider catchment is considered to be limited.

#### Impacts of COVID-19

It cannot be ignored that COVID-19 has had a significant impact on the retail sector and will affect the future demand for floorspace in the precinct. From a planning perspective, the most noticeable impact has been two-fold: the rise of online retail and the shift to more local consumption and spending.

As noted above, the rise of online retailing is increasingly impacting on Australia's retail sector, with market share growing by around 0.75 per cent per year. As of March 2020 (prior to COVID-19) the market share of all retail spending stood at 7.2 per cent<sup>1</sup>. By August 2020, online retail had risen significantly to be around 11.1 per cent of total retail turnover. A summary of this time-series is provided below. It illustrates that prior to COVID-19, online retail was growing steadily each year up until around March 2020, where there was a significant spike.

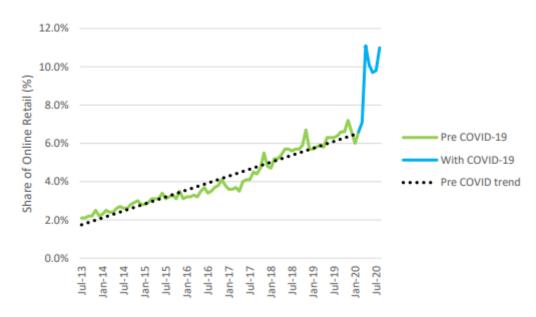


FIGURE 7: GROWTH OF ONLINE RETAIL, AUSTRALIA

Source: ABS 8501.0 Retail Trade - Table 23 | Percentage change of total Australian retail

The second noticeable shift was the increased numbers of residents working from home, instead of commuting the office. For many, this has resulted in a new local way of living. Consequently,

<sup>&</sup>lt;sup>1</sup> ABS, 2020. 8501.0 Retail Trade - Table 23 | Percentage Change of total Australian Retail. https://www.abs.gov.au/statistics/industry/retail-and-wholesale-trade/retail-trade-australia/latest-release

neighbourhood centres have experienced significant growth to accommodate residents spending their local area.

The retail model has accordingly been adjusted to utilise the high online retail penetration and the retail turnover density has been adjusted in a manner where smaller neighbourhood retail precincts are boosted but larger retail centres (such as the CBD) are revised downwards.

As shown in the table below, this adjustment sees higher take up of retail in the Waterloo Estate (South). This is intuitive as under this scenario individuals are more likely to complete their retail expenditure locally and purchases such as household goods, clothing, etc. are more likely to be fulfilled online, rather than in larger centres. This also means that the impact of providing retail floor space in the Waterloo Estate (South) is likely to have a more pronounced impact on the retail floor space demanded in other centres such as Green Square and Redfern. The results of this analysis are provided below.

TABLE 7: COVID-19 IMPACTED RETAIL SUPPLY, DEMAND, AND GAP IN GREEN SQUARE AND REDFERN FROM 2016 TO 2056 WITHOUT THE WATERLOO ESTATE PLANNING PROPOSAL (IN SQM)

Commodity	Green Square		Redfern	
	2016	2056	2016	2056
Supermarket	2,459	3,259	3,433	3,433
Other Food	509	1,317	645	746
Hospitality and Services	3,706	4,753	5,621	5,931
Clothing and Soft Goods	5,563	6,270	1,906	1,956
Household Goods	3,677	4,327	2,851	2,851
Other Retail	65	715	673	980
Department Stores	-	-	-	-
Total Supply	15,980	20,641	15,130	15,897
Supermarket	2,459	4,503	3,433	3,968
Other Food	509	1,596	645	773
Hospitality and Services	3,706	6,184	5,621	7,013
Clothing and Soft Goods	5,563	5,171	1,906	1,493
Household Goods	3,677	2,147	2,851	1,335
Other Retail	65	164	673	194
Department Stores	-	-	-	-
Total Demand	15,980	19,765	15,130	14,774
Gap	-	876	-	1,123

The above findings suggest that, with the impacts of COVID-19 considered, Green Square and Redfern will have a surplus of 876 square metres and 1,123 square metres of retail floor space by 2051, if the Waterloo Estate (South) does not proceed with a retail component. The following table then

demonstrates what happens to the gap in each centre when the 11,200 square metres of retail floor space in the Waterloo Estate (South) is provided, considering the impacts of COVID-19.

TABLE 8: COVID-19 IMPACTED RETAIL SUPPLY, DEMAND, AND GAP IN GREEN SQUARE AND REDFERN FROM 2016 TO 2056 WITH THE WATERLOO ESTATE PLANNING PROPOSAL (IN SQM)

Commodity	Green Square		Red	fern
	2016	2056	2016	2056
Supermarket	2,459	3,259	3,433	3,433
Other Food	509	1,317	645	746
Hospitality and Services	3,706	4,753	5,621	5,931
Clothing and Soft Goods	5,563	6,270	1,906	1,956
Household Goods	3,677	4,327	2,851	2,851
Other Retail	65	715	673	980
Department Stores	-	-	-	-
Total Supply	15,980	20,641	15,130	15,897
Supermarket	2,459	4,392	3,433	3,883
Other Food	509	1,584	645	765
Hospitality and Services	3,706	6,176	5,621	7,006
Clothing and Soft Goods	5,563	5,217	1,906	1,501
Household Goods	3,677	2,165	2,851	1,341
Other Retail	65	163	673	192
Department Stores	-	-	-	-
Total Demand	15,980	19,697	15,130	14,688
Gap	-	944	-	1,209
Impact of Waterloo (sqm)	-	68	-	86
Impact of Waterloo (%)	-	- 0.7%	-	- 0.8%

As demonstrated above, the impact of the retail offering at the Waterloo Estate (South), as proposed in the Planning Proposal at 11,200 square metres, and with COVID-19 considered, will see the surplus of retail floor space in Green Square expand by 68 square metres and surplus of retail floor space in Redfern expand by 86 square metres. This represents an increase in the surplus of 0.7% and 0.8% respectively when compared to the base case which does not include the Waterloo Estate (South).

#### Sensitivity testing

SGS has also used the gravity model to complete additional sensitivity testing to determine if a 'tipping point' were to be achieved if the provision of retail floor space on the Waterloo Estate (South) were to be increased. A 'tipping point' is a largely subjective threshold, but an impact of anywhere above 10% would already begin to challenge the operation of another retail centre.

The assumed retail provision at the Waterloo Estate (South) precinct was increased to just over 50% at 17,000 square metres. The results of this are shown in the tables below, noting that the 'without Waterloo' scenarios have not been replicated as these would replicate Table 5 and Table 7 above.

TABLE 9: 17,000SQM SCENARIO - RETAIL SUPPLY, DEMAND, AND GAP IN GREEN SQUARE AND REDFERN FROM 2016 TO 2056 WITH THE WATERLOO ESTATE PLANNING PROPOSAL (IN SQM)

Commodity	Green Square		Red	fern
	2016	2056	2016	2056
Supermarket	2,459	3,259	3,433	3,433
Other Food	509	1,317	645	746
Hospitality and Services	3,706	4,753	5,621	5,931
Clothing and Soft Goods	5,563	6,270	1,906	1,956
Household Goods	3,677	4,327	2,851	2,851
Other Retail	65	715	673	980
Department Stores	-	-	-	-
Total Supply	15,980	20,641	15,130	15,897
Supermarket	2,459	5,262	3,433	4,650
Other Food	509	1,842	645	892
Hospitality and Services	3,706	6,445	5,621	7,302
Clothing and Soft Goods	5,563	6,062	1,906	1,729
Household Goods	3,677	5,748	2,851	3,451
Other Retail	65	598	673	673
Department Stores	-	-	-	-
Total Demand	15,980	25,957	15,130	18,698
Gap	-	-5,316	-	-2,801
Impact of Waterloo (%)	-	-1.5%	-	-1.6%

TABLE 10: 17,000SQM SCENARIO - COVID-19 IMPACTED RETAIL SUPPLY, DEMAND, AND GAP IN GREEN SQUARE AND REDFERN FROM 2016 TO 2056 WITH THE WATERLOO ESTATE PLANNING PROPOSAL (IN SQM)

Commodity	Green Square		Redfern	
	2016	2056	2016	2056
Supermarket	2,459	3,259	3,433	3,433
Other Food	509	1,317	645	746
Hospitality and Services	3,706	4,753	5,621	5,931
Clothing and Soft Goods	5,563	6,270	1,906	1,956
Household Goods	3,677	4,327	2,851	2,851
Other Retail	65	715	673	980
Department Stores	-	-	-	-
Total Supply	15,980	20,641	15,130	15,897
Supermarket	2,459	4,309	3,433	3,823
Other Food	509	1,555	645	755
Hospitality and Services	3,706	6,153	5,621	6,987
Clothing and Soft Goods	5,563	5,217	1,906	1,501
Household Goods	3,677	2,165	2,851	1,341
Other Retail	65	161	673	191
Department Stores	-	-	-	-
Total Demand	15,980	19,560	15,130	14,597
Gap	-	1,081	-	1,300
Impact of Waterloo (%)	-	-1.6%	-	-1.6%

In summary, the inclusion of additional retail under each of the above scenarios (business-as-usual, COVID-19 impacted, and sensitivity tested) it not expected to have a significant impact on the retail trade of other centres — particularly the identified strategic centre of Green Square, but also the local centre of Redfern. This is as the redevelopment of the Waterloo Estate will generate a larger population which is likely to consume most of the provided retail on-site. Further, it should be noted that the above analysis does not assume that the attractiveness of centres is dependent on the provision of floor space alone. Amenity, accessibility, vibrancy, unique offerings are all critical considerations and centres surrounding the Waterloo Estate each have a unique identity.

# 4. Appraisal of strategic centre impacts

#### 4.1 Impacts of proposed scheme

As demonstrated by the gravity retail model, the impacts of the retail component of the Waterloo Estate (South) on approximate local and strategic centres is expected to be marginal. It is anticipated that the demand for retail floor space in Redfern local centre will reduce by 92 square metres as a result of the Waterloo Estate (South) redevelopment as proposed under the Planning Proposal. The impacts on the Green Square strategic centre are even more marginal, with a reduction of demanded retail floor space by only 45 square metres by 2051, or a reduction from the 'without Waterloo Estate' scenario of 0.6%. The application of further assumptions that give consideration to the COVID-19 pandemic only slightly exacerbate these conditions, with the eventual reduction being 0.7%. These impacts are not considered significant.

A further analysis of movements across retail commodities reveals that the redevelopment of the Waterloo Estate (South) will not equally impact on all retail types in Green Square. The model reveals that while the demand for supermarket floor space in Green Square will reduce by 2.4%, the demand for clothing & soft goods and household goods floor area in Green Square will increase by 1% each. This is telling. Strategic centres are rarely recognised by their capacity to provide everyday household goods that are attributable to supermarkets. Instead, strategic centres are characterised by an agglomeration of specialised retail offerings that as a collective have a 'pull factor' that is greater than servicing the local centre. Green Square continues will continue to do this if the Waterloo Estate (South) redevelopment proceeds as envisaged in the Planning Proposal, as demonstrated by the growth in clothing & soft goods and household goods. This stands true even under a post-COVID-19 scenario were even with a greater shift to online shopping, Green Square still stands to benefit with increases to clothing & soft goods and household goods, depending on the ultimate composition of the retail provision across both centres. The point is, no centre of this size can provide all of the retail needs for consumers, and nearby centres will continue to attract customers based on their specific retail offering.

#### 4.2 Strategic positioning of Waterloo Estate (South)

#### Role of the precinct

The City of Sydney contains a complex ecosystem of established and emerging precincts and centres. The redevelopment of the Waterloo Estate as a whole will reinvent the precinct's current contribution to this ecosystem and it is therefore necessary to actively consider what role the precinct should play in this ecosystem before finalising planning controls that may lead to an outcome not originally envisaged for the precinct.

The Greater Sydney Region Plan and the Eastern City District Plan have not designated Waterloo as a strategic centre and the City of Sydney positions the retail offering at Waterloo as one based on convenience and ease of access, reflecting the convenience-focused role expected of retail in the area. Nonetheless, the future positioning of Waterloo is impacted by two significant developments. First is the construction of the Sydney Metro with a station at Waterloo. While the construction of the

Waterloo Metro Quarter is a linked response to this new piece of public transport infrastructure, the geographic reach of the new Metro station is much broader and enhances the capacity to implement transport-orientated development blocks away from the actual station. Secondly, the Waterloo Estate redevelopment, whether triggered by the delivery of the Metro or not, will see a significant resident population influx and fundamentally change the amount of services required to cater for the new population.

The effect of the Sydney Metro and redevelopment of the Waterloo Estate call for Waterloo as a whole to operate as a more connected and denser urban community. There is a need to ensure that the precinct provides sufficient community and retail services and open to ensure future residents are provided with sufficient amenity. Further to this, there is an opportunity to utilise placemaking initiatives to create a vibrant destination that draws in people from elsewhere and provides diverse retail and leisure offerings. However, the appropriateness of this is contested. Given the proximity to the identified strategic centre of Green Square and even the Sydney CBD, an extensive retail and leisure offering would detract from these centres and position Waterloo as a competitor to Green Square.

Given the above, the most appropriate positioning of Waterloo would be that of a high-density residential neighbourhood of very high amenity. A neighbourhood where sufficient retail uses are provided to meet the day-to-day retail and leisure needs of residents, but not so far as to capture all niche retail types, big-box retail, or diverse entertainment uses.

#### Density-appropriate zoning

A review of land use zones throughout the City of Sydney LGA indicates that the B2 Local Centre zone is typically associated with low to mid-rise dwellings. Commercial and retail land uses are typically dominant in these precedents and residential floor space is typically provided in a shop-top setting. In contrast, higher densities outside of the Sydney CBD typically lend themselves towards the B4 Mixed Use zone. The area proposed to be zoned B2 Local Centre in the Waterloo Estate (South) precinct has heights predominantly in the order of 13 to 15 storeys, but also includes a tower of more than 30 storeys at its south-east. This begins to suggest that the Waterloo Estate (South) precinct would be more akin to a B4 Mixed Use zoning.

However, the Zetland and Ashmore Precinct (Erskineville) serve as precedents of newer applications of the B2 Local Centre zone where higher density and building height are provided. In this instance, the land zoned B2 Local Centre in Zetland includes buildings of up to 14 storeys, while the Ashmore Precinct has buildings up to 8 storeys. This represents a shift in what built form qualifies as a local centre and demonstrates that the proposed B2 Local Centre zone in Waterloo could be appropriate as one of the City's 'next generation' local centres.

#### Location of retail floor space

One of the distinguishing features between the City of Sydney and Land and Housing Corporation schemes is the location of retail floor space across the precinct. The City of Sydney scheme adopted a 'high street' style approach whereby retail land uses are clustered around George Street. On the other hand, the LAHC scheme proposed a scattering of retail premises throughout the precinct. There is merit in clustering retail uses. It promotes a more activated public domain, allows for synergies between different types of retail land uses and retail land uses with other community land uses, and provides for other placemaking opportunities. Given that retail land uses are permissible in both zones, it may be

intuitive to introduce the B2 Local Centre zone to further signal that the sites fronting George Street are where retail uses should be clustered.

#### 4.3 Other Insights

#### **Retail Trends**

As detailed in the Floorspace Supply and Demand Study, some of the broader trends affecting the Australian economy which may impact on how floorspace is used in high-street precincts, such as the one proposed on George Street in the Waterloo Estate (South) precinct:

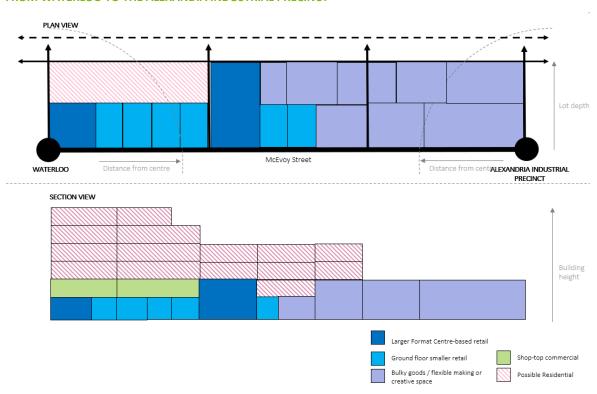
- Growth of online retailing exacerbated further by COVID-19, which poses a threat to traditional physical retail and commercial strips and shopping centres
- Emergence of café culture and experience dining
- Changes to retail trading hours relaxations to trading hours could assist the precinct's nighttime economy
- Popularity of fine-grain centres need to be planned for carefully and to be read in conjunction with the 'retail opportunities' section below
- Emergence of co-working spaces which could shift the types of office spaces needed in the precinct, though this may also evolve post-COVID
- Working from home obviously also exacerbated by COVID, with long term changes
  potentially affecting the demand for not only office space, rents, and land values, but also
  close-to-home food and beverage outlets

#### Opportunities for consideration

The Waterloo precinct is positioned in close proximity to Sydney's Central Enterprise District which spans from Alexandia to Botany. This is an opportunity to enhance the role of this precinct by implementing flexible design solutions to allow for a diverse mix of non-residential uses.

The precinct's southern boundary is along McEvoy Street, which is a key arterial connector from M8 Motorway to Waterloo and beyond. This frontage in particular can facilitate more diverse retail or urban service offerings. A conceptual diagram is provided overleaf.

FIGURE 8: CONCEPTUAL PLAN AND SECTION VIEW OF THE TRANSITION OF LAND USES AND BUILT TYPOLOGIES FROM WATERLOO TO THE ALEXANDIA INDUSTRIAL PRECINCT



Source: SGS Economics and Planning

To facilitate this, the design package associated with the Planning Proposal should consider implementing design controls that promote flexible land uses, easily-adjustable tenancies and generous floor-to-ceiling heights to accommodate a range of retail, commercial and even some light industrial uses (for instance a brewery).

## 5. Recommendation

#### 5.1 Synthesis of findings

#### Provision or non-residential floorspace

The MacroPlan retail study proposes 17,900 square metres of retail and community/civic gross floor area, of which 11,200 square metres is for retail and commercial uses. While SGS raises some questions some of the assumptions within the study, particularly the manner in which the primary and secondary retail trade catchment areas have been developed, it is maintained that the findings of the MacroPlan study are sound and that any adjustments would not substantially impact on the total quantum of retail and commercial floor space that could be supported in the precinct.

SGS's retail gravity model shows that the amount of retail floor space demanded in Green Square would only reduce by 45 square metres by 2051, which is a reduction of 0.6% when compared to the base case which does not consider the provision of retail floor space in the Waterloo Estate (South) precinct. The impacts on the Redfern local centre are slightly greater at 92 square metres, but this is still a minor 0.8% reduction from the base case.

In short, it is not expected that the proposed provision of retail floor space will adversely impact on other approximate local centres.

#### Zoning and retail restrictions

Zoning alone does not have a material impact on the provision of retail floorspace in this precinct. Both the B2 Local Centre and B4 Mixed Use zones could facilitate the construction of an entirely non-residential building. This is highly unlikely but serves to show that the implementation of either zone is more so an exercise in ensuring that the perception of a zone does not act as a catalyst to spur great amount of non-residential floorspace to the detriment of other centres such as Green Square. As demonstrated in the report, B2 Local Centre zones in the City of Sydney have previously accommodated lower-rise and predominantly commercial tenancies. However, newer precedents point to a change in the way in which the B2 Local Centre zone operates in the City of Sydney, whereby its applicability includes retail activity zones in the midst of high-density residential precincts.

More critical to the zoning is the application of the restricted retail development map. While this is generally applied to B4 Mixed Use zones, there are instances of it being applied to B2 Local Centre zones, such as the nearby Danks Street (Waterloo) local centre. Nonetheless it is acknowledged that this precinct has retail tenancies that are larger than 1,000 square metres.

Applying the retail restrictions on the B2 Local Centre zoned land would limit the capacity for the precinct to deliver a full-scale supermarket. Both the MacroPlan and SGS retail models demonstrate that there is sufficient demand generated by the Planning Proposal to facilitate the establishment on a supermarket on-site, and that the provision of the supermarket would not substantially impact on the operation and viability of retail operation in other approximate strategic or local centres such as Green Square or Redfern.

## **Active Street Frontage**

Active street frontages have been applied to sites across the precinct, and not just those to which the B2 Local Centre zone is to apply to. Generally, active street frontages apply along George Street, along proposed laneways, or surrounding the pocket park at the south western corner of the site.

As discussed above, the active street frontages are an additional layer beyond the zoning which are critical in determining where retail across the precinct actually materialises. There is merit in providing active street frontages where there is a concerted desire to create high streets, implement Crime Prevention through Urban Design (CPTED) principles in alleyways, or implement other placemaking opportunities.

However, the intent to expand the active frontages across a wide area risks diluting the concentration of activity and reducing the opportunity for a particular part of the centre to be acknowledge as 'the centre'. Based on this, it cannot be determined which of the above roles the active street frontage along Cooper Street plays.

## 5.2 Recommendations

## Provision or non-residential floorspace

The minimum retail floor space provision is considered acceptable and it has been demonstrated that it does not undermine the commercial viability of approximate strategic centres. **No amendment is required to the minimum retail floor area provision**. Further this report has not sought to re-run the trade area survey retail model used by MacroPlan. Rather it seeks to determine whether the quantum of retail proposed is appropriate, suitably positions the Waterloo Estate within the ecosystem of centres within the City of Sydney, and does not detract from other strategic centres.

Further to this, the retail gravity model shows that most of the retail floor space supplied in the precinct will be consumed by the new resident and worker population in the precinct. This demonstrates that the primary purpose of the retail component of the Waterloo Estate is to provide amenity for future residents, as opposed to providing a 'destination' retail precinct.

# Zoning and retail restrictions

The implementation of a B2 Local Centre zone is considered appropriate. The Planning Proposal will significantly increase density in the precinct which will generate the need for population serving businesses and essential retail. In line with best-practise planning, the highest amenity can be achieved by providing a mix of uses on-site and establishing a retail 'focal point', whether it be in the form of a high street or shopping centre. The Planning Proposal has selected George Street as playing this role, which in SGS's opinion, also presents a unique opportunity for enhanced placemaking strategies and allows for a more vibrant public domain.

Given the selection of a retail node within the precinct, **the designation of the B2 Local Centre zone is deemed appropriate**. The area is intended to function as an amenity centre for the precinct, as opposed to a larger strategic centre, and given its proximity to emerging critical infrastructure, it is appropriate

to envision this precinct as having local importance. SGS has also considered the implementation of the B1 Neighbourhood Centre zones given that the permissibility between the zones is largely similar and 'neighbourhood centre' may not carry the same gravitas as a 'local centre' (implying that the zone is of lesser strategic importance). However, SGS does not believe that this would be a contextual fit, given the intensity of development proposed in the Waterloo Estate and that current precedent only sees the B1 Neighbourhood Centre zone being applied to low density and minor centres such as Forest Lodge and Darlington.

Further to this, the Restricted Retail Development map is deemed appropriate. It is acknowledged that it has been developed to align with the zoning across the precinct, whereby it only applies to lands proposed to be zoned B4 Mixed Use. If the proponent is of the mind to expand where the Restricted Retail development map applies to, given there is precedent of this occurring in other centres within the City of Sydney, this should only be done once urban design testing reveals the sites where a supermarket or larger format retail is most suitable. These sites should not have the Restricted Retail Development map apply to them.

# **Active Street Frontages**

The designation of active street frontages is primarily driven by sought urban design outcomes, and in this instance, is applied across lands in both the B2 Local Centre and B4 Mixed Use zones. The application of the active street frontage map is useful ensuring that the provision of retail floor space is targeted in specific locations and in the interim, should be retained as proposed. The active street frontages along the proposed through-site links should be removed from any LEP maps, but should be considered as a control in other design documentation so as to ensure that active street frontages are provided along these corridors.

However, SGS would like to alert the proponent of the spread of active street frontages across the precinct. it would be prudent for additional urban design testing to be completed to demonstrate that if retail tenancies are to be provided along all designated active street frontages, that, firstly, the resultant retail gross floor area is not a significant departure from the total quantum of retail proposed under the Planning Proposal, and secondly, that the satisfaction of all active street frontages does not dilute the retail offering and expected concentration on the high-street at George Street.

Active street frontages should be implemented carefully, so as not to dilute the retail offering across the precinct. Using a principles approach, the active street frontages along George Street serve the most critical function, and ensure that the street is established as a functioning high street. This is followed by the active street frontages surrounding the proposed parks (including on Wellington Street opposite the proposed park), followed by active street frontages along proposed through-site links [refer to active street frontages on through-site links discussuion overleaf]. The active street frontage along Cooper Street, if not justified via urban design testing, should be considered for removal as the street has not been designated as a high street and it effectively encases an entire block as an active street frontage — at least one side should be primarily used a 'breathing space' where access and loading can take place.

If the urban design testing reveals that the application of the active street frontages map, as proposed, results in a significant departure from the total quantum of retail proposed under the Planning Proposal, or draws away from the retail offering at George Street, SGS would recommend that the

designated active street frontages be rationalised, starting with the active street frontage along Cooper Street, followed by all other frontages that are outside of the proposed B2 Local Centre zone.

This consideration also extends to the sequencing of development. It is expected that the critical mass of active frontage is along George Street. Assuming this is delivered first (rather than the sites on the periphery), it will naturally create the ground floor activation and identity as the precinct develops and the risk of sites on the precinct periphery inadvertently dominating the precinct's node of activity is low. If, however, a staging plan indicates that sites away from George Street are to be delivered first, then it should be considered through site-specific planning what implication this may have on the inadvertent shifting of the town centre, by virtue of being the first developments to create an active ground plane.

## Active street frontages on through-site links

SGS acknowledges that the provision of active street frontages on through-site links, while desirable, cannot be appropriately enforced via the Planning Proposal. Active street frontages can only be applied along identified streets and it is understood that the ownership, operation and location of the through-site links has not been resolved and it is unlikely that these will operate as streets. The active street frontages along the proposed through-site links should be removed from any LEP maps. However, SGS would strongly support other design guidance requiring that any proposed through-site links, particularly those connected to George Street, be activated in some form.

# 5.3 Assessment against Section 9.1 directions

**TABLE 11: ASSESSMENT AGAINST SECTION 9.1 DIRECTIONS** 

Relevant criteria	SGS Assessment
(1) Objectives:	
(a) encourage employment growth in suitable locations	Meets objective. Retail floor space is aligned with a significant growth in the resident population and provides required amenities.
(b) protect employment land in business and industrial zones, and	Meets objective. Planning Proposal provides additional employment land in a business zone which has a negligible impact on other business or industrial zones.
(c) support the viability of identified centres.	Meets objective. Planning Proposal does not undermine the viability of the Green Square identified centre.
(4) A planning proposal must:	
(a) give effect to the objectives of this direction	Consistent. Refer to assessment against objectives above.

(b) retain the areas and locations of existing business and industrial zones,
 (c) not reduce the total potential floor space area for employment uses and related public services in business zones,
 N/A. The site of the Planning Proposal does not have any business zoning currently apply to it.

(d) not reduce the total potential floor space area for industrial uses in industrial zones, and

N/A. The site of the Planning Proposal does not have any industrial zoning currently apply to it.

(e) ensure that proposed new employment areas are in accordance with a strategy that is approved by the Secretary of the Department of Planning and Environment.

Inconsistent. Only Green Square-Mascot is identified as a strategic centre in the Eastern District Plan. To be justified in Part 5.

(5) A planning proposal may be inconsistent with the terms of this direction only if the relevant planning authority can satisfy the Secretary of the Department of Planning and Environment (or an officer of the Department nominated by the Secretary) that the provisions of the planning proposal that are inconsistent are:

(a) justified by a strategy which:

- (i) gives consideration to the objective of this direction, and
- (ii) identifies the land which is the subject of the planning proposal (if the planning proposal relates to a particular site or sites), and
- (iii) is approved by the Secretary of the Department of Planning and Environment, or

There is a need for the precinct to deliver retail floor space in order to provide amenity to the significant incoming population into the precinct. The objectives of this direction are to encourage employment growth, protect employment land, and support the viability of identified centres.

This Planning Proposal is consistent with the above as it encourages employment growth in a suitable location and identifies a new local centre to provide for the local services needs of the community.

The implementation of the B2 Local Centre zone, as opposed to a blanket B4 Mixed Use zone across the entire site does not have a material impact on the provision of non-residential floor space as both zones facilitate the delivery of non-residential uses and it is unlikely that non-residential uses will deliver a higher yield than residential uses.

In addition, the B2 Local Centre zone is typically not attributed with the Restricted Retail Development map. Retail analysis has shown that it would be beneficial for the precinct to contain a supermarket, which is typically larger than 1,000 square metres in size. The Restricted Retail Development map would not facilitate this.

(b) justified by a study (prepared in support of the planning proposal) which gives consideration to the objective of this direction, or Both the Retail study completed by MacroPlan and this addendum to the retail study completed by SGS affirm that the proposed provision of retail on the site is necessary to service the incoming community and will not detract from the viability of other identified centres.

(c) in accordance with the relevant Regional Strategy, Regional Plan or Sub- Regional Strategy prepared by the Department of Planning and Environment which gives consideration to the objective of this direction, or	Waterloo is identified as part of the Eastern Economic Corridor in the Greater Sydney Region Plan. The overarching objectives of the District Plan are to provide a liveable and productive city. This Planning Proposal aligns with these objective.
(d) of minor significance.	While the Planning Proposal will facilitate the delivery of a significant amount of retail floor space, it has been demonstrated by the retail gravity model that the impacts to surrounding centres will not have a substantial impact of other identified centres.

## 5.4 Business Zones Review

#### Overview

In May 2021 the NSW Department of Planning, Industry and Environment (DPIE) released a 'positioning paper' on proposed changes to employment zones in NSW. The objectives for these changes as stated by the paper can be summarised as follows:

- Account for economic trends and drivers impacting the character of land use demand in centres.
   These include growth in online retail, demand for housing in centres and a need to provide space for small-scale manufacturing.
- Provide greater flexibility in the type of employment uses permitted in each zone.
- Clarify the strategic intent for each zone.

Informed by these central objectives, the paper reports a series of findings related to planning for employment precincts. These have been distilled into a series of general principles as follows:

- Zoning in local centres needs to be sufficiently flexible to allow for centres to evolve the character
  of their employment profile. In other words, businesses should be able to adapt to changing
  community demands.
- Purely commercial zones should aim to support the primacy of a particular centre within its catchment. This intent should not be confused with that for mixed use zones.
- 'Mixed use' zones are prone to act as proxy residential zones and struggle to deliver a genuine diversity of use types.
- Urban service uses, such as materials wholesaling, waste services and warehousing are critically important to city function. However, these uses are often priced out of high-value locations and should be protected.
- Hazardous and offensive land uses should be clearly defined and separated from more compatible and higher value land uses.

The paper then goes on to propose a new set of employment zones for application across NSW. This consists of five employment zones, one mixed use zone and one 'special purpose zone', as opposed to the current system of eight business zones and four industrial zones.

Each of these new zones and their respective strategic intent has been summarised below:

- Local Centre zone. Provides for a range of retail, business, entertainment and community uses in locally-serving centres.
- *Commercial Centre zone.* Emphasises the employment focus of larger centres and provide for larger-scale commercial, retail, business and other compatible employment uses.
- Productivity Support zone. Provides for emerging industry sectors, such as small-scale
  manufacturing, warehousing, office and creative enterprise. This is aimed at areas which no longer
  function as pure industrial precincts.
- General Industrial zone. Provides for industrial and warehousing uses, infrastructure and utilities.
- Heavy Industrial zone. Caters for 'hazardous and offensive' industry and associated uses.
- *Mixed Use zone.* Supports a genuine use mix and an active street frontage. This may be composed of residential, retail, light industry and tourist accommodation.
- Local Enterprise Zone. Will allow a planning authority to tailor permitted uses to fulfill place-specific planning and economic development objectives in certain areas.

The proposed reforms also include new or edited definitions for several use types of increasing importance. These include 'circular economy facilities' which allow for the collection, remanufacture and distribution of household goods. A clarified definition for creative industry uses is also sought to better reflect their unique requirements.

The potential for 'out of centre' retailing and enterprise activity within the new Productivity Support zone is also recognised within the positioning paper. In responding to this concern, it states that a guideline should be prepared on balancing the dual objectives of centre prioritisation and integrated land use.

# Implications for the Waterloo Estate Planning Proposal

- Similar to previous discussions, the application of either the Local Centre or Mixed Use zone is not material towards to provision of or even location of non-residential floor space in the Waterloo Estate (South). Supplementary planning provisions such as the restricted retail development map, active street frontages map and site-specific clauses related to the provision of non-residential floor space are more critical in this instance.
- An overarching theme of the proposed reforms is making sure that zones are sufficiently accommodating for emerging uses and different formats. This links to the stated objective of accounting for trends and drivers impacting land use demand. Given the shift away from traditional retail forms, it will be important to ensure that the built form of non-residential floorspace at Waterloo is capable of supporting multiple types of non-residential uses, per the 'opportunities for consideration' section of this report.
- Another of the reform objectives is to clarify strategic intent. For Waterloo, this will mean deciding
  what the desired character of floorspace is. All documentation related to this Planning Proposal
  suggests that the desired character of the floor space is to provide amenity to the future residents
  of the precinct.

# Appendix A: Gravity Model Outputs

TABLE 12: GREEN SQUARE, NO WATERLOO, NO COVID

Supply	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
	Supermarket	2,459	2,459	3,259	3,259	3,259	3,259	3,259	3,259	3,259
	Other Food	509	509	1,317	1,317	1,317	1,317	1,317	1,317	1,317
	Hospitality and Services	3,706	3,706	4,753	4,753	4,753	4,753	4,753	4,753	4,753
	Clothing and Soft Goods	5,563	5,563	6,270	6,270	6,270	6,270	6,270	6,270	6,270
	Household Goods	3,677	3,677	4,327	4,327	4,327	4,327	4,327	4,327	4,327
	Other Retail	65	65	715	715	715	715	715	715	715
	Deparment Stores	-	-	-	-	-	-	-	-	-
	Total	15,980	15,980	20,641	20,641	20,641	20,641	20,641	20,641	20,641
Demand	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
Demand	Supermarket	2,459	2,812	3,925	4,208	4,514	4,705	5,002	5,277	5,494
	Other Food	509	567	1,478	1,543	1,629	1,679	1,759	1,833	1,889
	Hospitality and Services	3,706	3,803	5,112	5,378	5,676	5,862	6,113	6,325	6,478
	Clothing and Soft Goods	5,563	5,364	6,177	6,223	6,339	6,336	6,348	6,214	6,005
	Household Goods	3,677	3,793	4,728	4,891	5,132	5,312	5,526	5,611	5,695
	Other Retail	65	66	690	682	678	655	644	630	608
	Deparment Stores	-	-	050		-	-	044	030	008
	Total	15,980	16,405	22,109	22,925	23,968	24,549	25,393	25,890	26,167
	Total	13,380	10,403	22,103	22,923	23,500	24,343	23,393	23,630	20,107
Gap	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
	Supermarket		353 -	666 -	949 -	1,255 -	1,446 -	1,743 -	2,018 -	2,235
	Other Food	0 -	58 -	161 -	226 -	312 -	363 -	443 -	517 -	572
	Hospitality and Services		97 -	359 -	625 -	923 -	1,110 -	1,361 -	1,572 -	1,725
	Clothing and Soft Goods		199	94	48 -	69 -	65 -	77	57	266
	Household Goods		116 -	401 -	564 -	804 -	985 -	1,199 -	1,283 -	1,368
	Other Retail		1	26	33	37	60	72	85	108
	Deparment Stores	-	-	-	-	-	-	-	-	-
	Total	0 -	425 -	1,468 -	2,284 -	3,327 -	3,908 -	4,752 -	5,249 -	5,526
Francis and the same	Camanadita	2016	2024	2020	2024	2026	2041	2046	2051	2056
Expenditure	Commodity	2016	2021	<b>2026</b> 7.18	2031	<b>2036</b> 9.07	2041		2051	2056
	Supermarket	4.98	6.42		8.27		9.50	10.13	11.07	11.71
	Other Food	2.53	3.12	3.42	3.88	4.18	4.31	4.52	4.88	5.10
	Hospitality and Services	5.62	6.36	7.01	7.98	8.67	9.00	9.52	10.32	10.83
	Clothing and Soft Goods	1.40	1.54	1.64	1.81	1.92	1.93	1.96	2.03	2.02
	Household Goods	1.87	2.25	2.49	2.84	3.10	3.22	3.39	3.66	3.82
	Other Retail	2.40	2.71	2.79	2.99	3.08	3.03	3.04	3.12	3.10
	Deparment Stores	1.88	2.21	2.26	2.41	2.47	2.42	2.41	2.45	2.41
	Total	20.68	24.62	26.79	30.18	32.50	33.41	34.97	37.55	39.00
Turnover	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
	Supermarket	25.61	30.02	42.97	47.23	51.95	55.52	60.51	65.45	69.85
	Other Food	5.20	5.93	15.86	16.97	18.37	19.42	20.86	22.28	23.53
	Hospitality and Services	24.42	26.01	36.29	39.63	43.42	46.55	50.39	54.12	57.54
	Clothing and Soft Goods	23.07	23.09	27.60	28.87	30.53	31.67	32.94	33.47	33.58
	Household Goods	12.30	13.17	17.04	18.30	19.93	21.41	23.13	24.37	25.68
	Other Retail	0.39	0.42	4.51	4.63	4.78	4.79	4.89	4.97	4.97
	Deparment Stores	-	-	-	-	-	-	-	-	-
	Total	90.99	98.64	144.27	155.63	168.98	179.36	192.72	204.66	215.15

TABLE 13: GREEN SQUARE, WITH WATERLOO, NO COVID

Supply	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
	Supermarket	2,459	2,459	3,259	3,259	3,259	3,259	3,259	3,259	3,259
	Other Food	509	509	1,317	1,317	1,317	1,317	1,317	1,317	1,317
	Hospitality and Services	3,706	3,706	4,753	4,753	4,753	4,753	4,753	4,753	4,753
	Clothing and Soft Goods	5,563	5,563	6,270	6,270	6,270	6,270	6,270	6,270	6,270
	Household Goods	3,677	3,677	4,327	4,327	4,327	4,327	4,327	4,327	4,327
	Other Retail	65	65	715	715	715	715	715	715	715
	Deparment Stores	-	-	-	-	-	-	-	-	-
	Total	15,980	15,980	20,641	20,641	20,641	20,641	20,641	20,641	20,641
Demand	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
	Supermarket	2,459	2,812	3,822	4,120	4,366	4,587	4,892	5,156	5,363
	Other Food	509	567	1,448	1,523	1,606	1,665	1,752	1,823	1,876
	Hospitality and Services	3,706	3,803	5,107	5,372	5,668	5,852	6,108	6,318	6,469
	Clothing and Soft Goods	5,563	5,364	6,178	6,238	6,368	6,391	6,413	6,275	6,062
	Household Goods	3,677	3,793	4,729	4,903	5,154	5,358	5,582	5,665	5,748
	Other Retail	65	66	685	677	672	650	641	627	604
	Deparment Stores	-	-	-	-	-	-	-	-	-
	Total	15,980	16,405	21,968	22,833	23,835	24,504	25,388	25,864	26,122
Gap	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
	Supermarket		353 -	563 -	861 -	1,107 -	1,328 -	1,633 -	1,897 -	2,104
	Other Food -	0 -	58 -	131 -	207 -	290 -	348 -	435 -	506 -	559
	Hospitality and Services	0 -	97 -	354 -	619 -	916 -	1,100 -	1,356 -	1,565 -	1,716
	Clothing and Soft Goods		199	93	33 -	97 -	121 -	142 -	5	208
	Household Goods		116 -	401 -	576 -	827 -	1,030 -	1,255 -	1,338 -	1,421
	Other Retail		1	30	38	43	65	74	88	111
	Deparment Stores	-	-	-	-	-	-	-	-	-
	Total	0 -	425 -	1,327 -	2,193 -	3,194 -	3,863 -	4,747 -	5,223 -	5,481
Expenditure	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
	Supermarket	4.98	6.42	7.18	8.27	9.07	9.50	10.13	11.07	11.71
	Other Food	2.53	3.12	3.42	3.88	4.18	4.31	4.52	4.88	5.10
	Hospitality and Services	5.62	6.36	7.01	7.98	8.67	9.00	9.52	10.32	10.83
	Clothing and Soft Goods	1.40	1.54	1.64	1.81	1.92	1.93	1.96	2.03	2.02
	Household Goods	1.87	2.25	2.49	2.84	3.10	3.22	3.39	3.66	3.82
	Other Retail	2.40	2.71	2.79	2.99	3.08	3.03	3.04	3.12	3.10
	Deparment Stores	1.88	2.21	2.26	2.41	2.47	2.42	2.41	2.45	2.41
	Total	20.68	24.62	26.79	30.18	32.50	33.41	34.97	37.55	39.00
Turnover	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
	Supermarket	25.61	30.02	41.85	46.25	50.25	54.12	59.17	63.94	68.19
	Other Food	5.20	5.93	15.53	16.76	18.12	19.25	20.77	22.16	23.37
	Hospitality and Services	24.42	26.01	36.25	39.59	43.36	46.47	50.35	54.06	57.46
	Clothing and Soft Goods	23.07	23.09	27.61	28.94	30.66	31.95	33.28	33.80	33.90
	Household Goods	12.30	13.17	17.04	18.34	20.02	21.60	23.36	24.61	25.92
	Other Retail	0.39	0.42	4.48	4.60	4.74	4.76	4.87	4.95	4.95
	Deparment Stores	-	-	-	-	-	-	-	-	-
	Total	90.99	98.64	142.77	154.47	167.15	178.15	191.80	203.52	213.79
Impact	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
	Supermarket	0.0%	0.0%	-2.6%	-2.1%	-3.3%	-2.5%	-2.2%	-2.3%	-2.4%
		0.0%	0.0%	-2.0%	-1.2%	-1.4%	-0.9%	-0.4%	-0.6%	-0.7%
	Other Food						-0.2%	-0.1%	-0.1%	-0.1%
	Other Food Hospitality and Services	0.0%	0.0%	-0.1%	-0.1%	-0.1%	-0.2/0	0.1/0	-0.170	-0.1/0
				-0.1% 0.0%	-0.1% 0.2%	0.5%	0.9%	1.0%	1.0%	
	Hospitality and Services	0.0%	0.0%							1.0%
	Hospitality and Services Clothing and Soft Goods	0.0% 0.0%	0.0% 0.0%	0.0%	0.2%	0.5%	0.9%	1.0%	1.0%	1.0% 0.9%
	Hospitality and Services Clothing and Soft Goods Household Goods	0.0% 0.0% 0.0%	0.0% 0.0% 0.0%	0.0% 0.0%	0.2% 0.2%	0.5% 0.4%	0.9% 0.9%	1.0% 1.0%	1.0% 1.0%	1.0% 0.9% -0.5% 0.0%

TABLE 14: GREEN SQUARE, NO WATERLOO, WITH COVID

Supply	2016	2021	2026	2031	2036	2041	2046	2051	2056
	2,459	2,459	3,259	3,259	3,259	3,259	3,259	3,259	3,259
	509	509	1,317	1,317	1,317	1,317	1,317	1,317	1,317
	3,706	3,706	4,753	4,753	4,753	4,753	4,753	4,753	4,753
	5,563	5,563	6,270	6,270	6,270	6,270	6,270	6,270	6,270
	3,677	3,677	4,327	4,327	4,327	4,327	4,327	4,327	4,327
	65	65	715	715	715	715	715	715	715
	-	-	-	-	-	-	-	-	-
	15,980	15,980	20,641	20,641	20,641	20,641	20,641	20,641	20,641
Demand	2016	2021	2026	2031	2036	2041	2046	2051	2056
	2,459	2,786	3,833	4,032	4,216	4,267	4,400	4,485	4,503
	509	563	1,448	1,486	1,536	1,544	1,577	1,596	1,596
	3,706	3,829	5,160	5,409	5,661	5,791	5,978	6,112	6,184
	5,563	5,110	5,557	5,247	4,996	4,792	4,823	5,009	5,171
	3,677	3,699	4,371	4,222	4,029	3,695	3,319	2,764	2,147
	65	64	632	584	531	464	374	273	164
	-	-	-	-	-	-	-	-	_
	15,980	16,051	21,001	20,981	20,969	20,553	20,470	20,239	19,765
	,		,	,	,	,	,		
Gap	2016	2021	2026	2031	2036	2041	2046	2051	2056
		327 -	574 -	773 -	957 -	1,008 -	1,141 -	1,226 -	1,244
		53 -	131 -	170 -	219 -	228 -	260 -	280 -	279
		123 -	407 -	657 -	909 -	1,038 -	1,225 -	1,359 -	1,431
	-	453	713	1,023	1,274	1,478	1,448	1,261	1,099
		22 -	44	106	298	632	1,008	1,563	2,180
	-	1	84	131	184	251	341	442	551
_	-	-	-	-	-	-	-	-	-
-		71 -	360 -	340 -	329	88	171	402	876
Expenditure	2016	2021	2026	2031	2036	2041	2046	2051	2056
Experiareare	4.98	6.37	7.02	7.93	8.47	8.62	8.91	9.40	9.59
	2.53	3.10	3.36	3.74	3.95	3.97	4.06	4.26	4.32
	5.62	6.41	7.07	8.02	8.64	8.88	9.29	9.95	10.31
	1.40	1.47	1.49	1.54	1.53	1.47	1.51	1.66	1.76
	1.87	2.20	2.32	2.49	2.47	2.27	2.07	1.84	1.47
	2.40	2.63	2.59	2.59	2.45	2.18	1.79	1.37	0.85
	1.88	2.13	2.06	2.03	1.88	1.66	1.49	1.38	1.21
	20.68	24.30	25.90	28.34	29.39	29.04	29.12	29.86	29.52
Turnover	2016	2021	2026	2031	2036	2041	2046	2051	2056
	24.88	28.90	40.77	43.96	47.13	48.90	51.70	54.03	55.62
	5.14	5.83	15.38	16.19	17.14	17.67	18.50	19.21	19.69
	24.83	26.63	37.24	40.53	44.03	46.76	50.10	53.18	55.85
	25.50	24.31	27.44	26.90	26.59	26.47	27.66	29.82	31.96
	13.34	13.93	17.09	17.13	16.97	16.16	15.07	13.03	10.51
	0.39	0.40	4.08	3.92	3.70	3.36	2.81	2.13	1.33
	-	-	-	-	-	-	-	-	-
	94.08	99.99	142.01	148.64	155.57	159.32	165.84	171.39	174.94

TABLE 15: REDFERN, NO WATERLOO, NO COVID

Supply	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
	Supermarket	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433
	Other Food	645	696	746	746	746	746	746	746	746
	Hospitality and Services	5,621	5,821	5,931	5,931	5,931	5,931	5,931	5,931	5,931
	Clothing and Soft Goods	1,906	1,906	1,956	1,956	1,956	1,956	1,956	1,956	1,956
	Household Goods	2,851	2,851	2,851	2,851	2,851	2,851	2,851	2,851	2,851
	Other Retail	673	823	980	980	980	980	980	980	980
	Deparment Stores	-	-	-	-	-	-	-	-	-
	Total	15,130	15,531	15,897	15,897	15,897	15,897	15,897	15,897	15,897
Demand	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
	Supermarket	3,433	3,629	3,597	3,816	4,054	4,239	4,527	4,632	4,823
	Other Food	645	717	740	770	807	833	876	886	912
	Hospitality and Services	5,621	5,652	5,938	6,186	6,492	6,731	7,039	7,155	7,330
	Clothing and Soft Goods	1,906	1,786	1,782	1,805	1,835	1,835	1,845	1,776	1,719
	Household Goods	2,851	2,869	2,859	2,998	3,139	3,242	3,384	3,381	3,434
	Other Retail	673	760	804	789	778	754	748	707	683
	Deparment Stores	-	-	-	-	-	-	-	-	-
	Total	15,130	15,412	15,721	16,365	17,104	17,633	18,419	18,537	18,900
Gap	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
Cup	Supermarket	2010	196 -	164 -	383 -	621 -	806 -	1,094 -	1,199 -	1,390
	Other Food -	0 -	21	6 -	24 -	60 -	86 -	130 -	140 -	166
	Hospitality and Services		170 -	7 -	255 -	561 -	800 -	1,108 -	1,225 -	1,399
	Clothing and Soft Goods		120	174	151	122	122	111	181	238
	Household Goods		18 -	8 -	147 -	288 -	391 -	532 -	530 -	583
	Other Retail	_	63	175	190	202	225	232	273	297
	Deparment Stores	_	-	-	-	-	-	-	-	-
	Total -	0	119	176 -	468 -	1,207 -	1,736 -	2,521 -	2,640 -	3,003
		-		270	.00	2,207	2,7.00	2,522	2,0.0	5,555
Expenditure	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
	Supermarket	6.52	7.01	7.03	7.86	8.60	9.19	10.15	10.34	11.03
	Other Food	3.03	3.11	3.05	3.34	3.59	3.77	4.10	4.12	4.33
	Hospitality and Services	5.66	5.39	5.37	5.94	6.45	6.85	7.50	7.62	8.08
	Clothing and Soft Goods	1.81	1.66	1.58	1.69	1.79	1.84	1.93	1.87	1.88
	Household Goods	2.65	2.66	2.63	2.91	3.16	3.35	3.66	3.68	3.87
	Other Retail	3.97	3.72	3.42	3.55	3.65	3.66	3.80	3.63	3.64
	Deparment Stores	2.40	2.34	2.14	2.21	2.26	2.26	2.33	2.21	2.20
	Total	26.04	25.88	25.22	27.50	29.50	30.93	33.47	33.46	35.03
Turnover	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
	Supermarket	33.39	36.19	36.78	40.00	43.57	46.70	51.14	53.65	57.27
	Other Food	6.15	7.00	7.42	7.91	8.49	8.99	9.70	10.05	10.62
	Hospitality and Services	34.58	36.09	39.36	42.57	46.37	49.91	54.18	57.18	60.80
	Clothing and Soft Goods	7.38	7.18	7.44	7.82	8.25	8.56	8.94	8.93	8.97
	Household Goods	8.90	9.30	9.62	10.48	11.38	12.20	13.22	13.72	14.46
	Other Retail	3.82	4.47	4.91	5.01	5.12	5.15	5.30	5.20	5.22
	Deparment Stores	-	-	-	-	-	-	-	-	-
	Total	94.22	100.23	105.53	113.78	123.19	131.53	142.49	148.73	157.34

TABLE 16: REDFERN, WITH WATERLOO, NO COVID

Supply	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
	Supermarket	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433
	Other Food	645	696	746	746	746	746	746	746	746
	Hospitality and Services	5,621	5,821	5,931	5,931	5,931	5,931	5,931	5,931	5,931
	Clothing and Soft Goods	1,906	1,906	1,956	1,956	1,956	1,956	1,956	1,956	1,956
	Household Goods	2,851	2,851	2,851	2,851	2,851	2,851	2,851	2,851	2,851
	Other Retail	673	823	980	980	980	980	980	980	980
	Deparment Stores	-	-	-	-	-	-	-	-	-
	Total	15,130	15,531	15,897	15,897	15,897	15,897	15,897	15,897	15,897
Demand	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
	Supermarket	3,433	3,629	3,526	3,755	3,948	4,149	4,439	4,538	4,723
	Other Food	645	717	729	762	797	824	870	879	904
	Hospitality and Services	5,621	5,652	5,934	6,181	6,485	6,722	7,034	7,149	7,322
	Clothing and Soft Goods	1,906	1,786	1,782	1,808	1,840	1,845	1,857	1,787	1,729
	Household Goods	2,851	2,869	2,859	3,002	3,146	3,257	3,402	3,399	3,451
	Other Retail	673	760	800	785	772	749	744	703	678
	Deparment Stores	- 45 420	- 45 442	45.624	46.202	-	- 47.546	- 40.246	- 40.455	-
	Total	15,130	15,412	15,631	16,293	16,988	17,546	18,346	18,455	18,809
Gap	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
Сар	Supermarket	2010	196 -	93 -	322 -	515 -	716 -	1,006 -	1,105 -	1,290
	Other Food		21	17 -	16 -	51 -	78 -	124 -	133 -	158
	Hospitality and Services	-	170 -	3 -	250 -	555 -	792 -	1,103 -	1,218 -	1,392
	Clothing and Soft Goods	-	120	174	148	117	112	100	169	227
	Household Goods		18 -	8 -	151 -	295 -	406 -	551 -	548 -	600
	Other Retail	-	63	179	195	207	230	236	277	301
	Deparment Stores	-	-	-	-	-	-	-	-	-
	Total	-	119	266 -	396 -	1,091 -	1,649 -	2,449 -	2,558 -	2,911
Expenditure	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
	Supermarket	6.52	7.01	7.03	7.86	8.60	9.19	10.15	10.34	11.03
	Other Food	3.03	3.11	3.05	3.34	3.59	3.77	4.10	4.12	4.33
	Hospitality and Services	5.66	5.39	5.37	5.94	6.45	6.85	7.50	7.62	8.08
	Clothing and Soft Goods	1.81	1.66	1.58	1.69	1.79	1.84	1.93	1.87	1.88
	Household Goods	2.65	2.66	2.63	2.91	3.16	3.35	3.66	3.68	3.87
	Other Retail	3.97	3.72	3.42	3.55	3.65	3.66	3.80	3.63	3.64
	Deparment Stores	2.40	2.34	2.14	2.21	2.26	2.26	2.33	2.21	2.20
	Total	26.04	25.88	25.22	27.50	29.50	30.93	33.47	33.46	35.03
Turnover	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
Turriover	Supermarket	33.39	36.19	36.05	39.36	42.42	45.71	50.15	52.56	56.08
	Other Food	6.15	7.00	7.31	7.83	8.39	8.90	9.63	9.97	10.52
	Hospitality and Services	34.58	36.09	39.33	42.53	46.33	49.85	54.15	57.13	60.74
	Clothing and Soft Goods	7.38	7.18	7.44	7.83	8.27	8.61	9.00	8.99	9.03
	Household Goods	8.90	9.30	9.62	10.49	11.41	12.26	13.29	13.79	14.53
	Other Retail	3.82	4.47	4.89	4.98	5.08	5.12	5.28	5.18	5.19
	Deparment Stores	-	-	-	-	-	-	-	-	-
	Total	94.22	100.23	104.64	113.02	121.91	130.45	141.49	147.61	156.09
Impact	Commodity	2016	2021	2026	2031	2036	2041	2046	2051	2056
	Supermarket	0.0%	0.0%	-2.0%	-1.6%	-2.6%	-2.1%	-1.9%	-2.0%	-2.1%
	Other Food	0.0%	0.0%	-1.5%	-1.0%	-1.2%	-1.0%	-0.7%	-0.8%	-0.9%
	Hospitality and Services	0.0%	0.0%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%
	Clothing and Soft Goods	0.0%	0.0%	0.0%	0.2%	0.3%	0.6%	0.6%	0.6%	0.6%
	Household Goods	0.0%	0.0%	0.0%	0.1%	0.2%	0.5%	0.5%	0.5%	0.5%
	Other Retail	0.0%	0.0%	-0.5%	-0.6%	-0.8%	-0.7%	-0.5%	-0.6%	-0.6%
	Deparment Stores	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Total	0.0%	0.0%	-0.8%	-0.7%	-1.0%	-0.8%	-0.7%	-0.8%	-0.8%

TABLE 17: REDFERN, NO WATERLOO, WITH COVID

Supply	2016	2021	2026	2031	2036	2041	2046	2051	2056
	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433
	645	696	746	746	746	746	746	746	746
	5,621	5,821	5,931	5,931	5,931	5,931	5,931	5,931	5,931
	1,906	1,906	1,956	1,956	1,956	1,956	1,956	1,956	1,956
	2,851	2,851	2,851	2,851	2,851	2,851	2,851	2,851	2,851
	673	823	980	980	980	980	980	980	980
	-	-	-	-	-	-	-	-	-
	15,130	15,531	15,897	15,897	15,897	15,897	15,897	15,897	15,897
Demand	2016	2021	2026	2031	2036	2041	2046	2051	2056
Demand	3,433	3,594	3,512	3,656	3,787	3,847	3,988	3,947	3,968
	645	711	725	742	761	766	786	773	773
	5,621	5,695			6,484			6,928	
	-	-	5,999	6,229	-	6,658	6,892	-	7,013
	1,906	1,705	1,613	1,533	1,457	1,399	1,413	1,445	1,493
	2,851	2,801	2,658	2,605	2,484	2,278	2,059	1,700	1,335
	673	736	740	680	614	540	441	314	194
	15 120	15 242	-	_	15 506	15 490			
	15,130	15,243	15,248	15,444	15,586	15,489	15,580	15,106	14,774
Gap	2016	2021	2026	2031	2036	2041	2046	2051	2056
		161 -	79 -	223 -	354 -	414 -	555 -	514 -	535
		15	21	4 -	14 -	20 -	40 -	26 -	26
	-	126 -	68 -	298 -	553 -	727 -	962 -	997 -	1,082
	-	201	343	424	499	557	543	512	464
	-	50	193	247	367	573	792	1,151	1,517
	-	87	240	300	366	440	539	666	786
	-	-	-	-	-	-	-	-	-
	-	288	649	453	311	408	317	791	1,123
Expenditure	2016	2021	2026	2031	2036	2041	2046	2051	2056
	6.52	6.95	6.88	7.54	8.04	8.35	8.94	8.81	9.07
	3.03	3.09	2.99	3.22	3.39	3.48	3.68	3.59	3.68
	5.66	5.43	5.41	5.97	6.43	6.76	7.33	7.36	7.72
							4 40	1.53	1.64
	1.81	1.59	1.43	1.44	1.43	1.41	1.49	1.55	
	1.81 2.65	1.59 2.59	1.43 2.46	1.44 2.55	1.43 2.52	1.41 2.37	2.25	1.87	1.53
	2.65	2.59	2.46	2.55	2.52	2.37	2.25	1.87	1.53
	2.65 3.97	2.59 3.60	2.46 3.17	2.55 3.08	2.52 2.89	2.37 2.63	2.25 2.24	1.87 1.61	1.53 1.02
Turnover	2.65 3.97 2.40 26.04	2.59 3.60 2.25 25.49	2.46 3.17 1.95 24.28	2.55 3.08 1.86 25.66	2.52 2.89 1.73 26.43	2.37 2.63 1.55 26.55	2.25 2.24 1.45 27.38	1.87 1.61 1.26 26.03	1.53 1.02 1.12 25.78
Turnover	2.65 3.97 2.40 26.04 2016	2.59 3.60 2.25 25.49 2021	2.46 3.17 1.95 24.28	2.55 3.08 1.86 25.66	2.52 2.89 1.73 26.43	2.37 2.63 1.55 26.55	2.25 2.24 1.45 27.38	1.87 1.61 1.26 26.03	1.53 1.02 1.12 25.78
Turnover	2.65 3.97 2.40 26.04 2016 32.43	2.59 3.60 2.25 25.49 2021 34.81	2.46 3.17 1.95 24.28 2026 34.88	2.55 3.08 1.86 25.66 2031 37.22	2.52 2.89 1.73 26.43 2036 39.53	2.37 2.63 1.55 26.55 2041 41.18	2.25 2.24 1.45 27.38 2046 43.76	1.87 1.61 1.26 26.03 2051 44.40	1.53 1.02 1.12 25.78 <b>2056</b> 45.76
Turnover	2.65 3.97 2.40 26.04 2016 32.43 6.09	2.59 3.60 2.25 25.49 <b>2021</b> 34.81 6.88	2.46 3.17 1.95 24.28 2026 34.88 7.19	2.55 3.08 1.86 25.66 <b>2031</b> 37.22 7.54	2.52 2.89 1.73 26.43 2036 39.53 7.93	2.37 2.63 1.55 26.55 <b>2041</b> 41.18 8.19	2.25 2.24 1.45 27.38 <b>2046</b> 43.76 8.61	1.87 1.61 1.26 26.03 <b>2051</b> 44.40 8.68	1.53 1.02 1.12 25.78 2056 45.76 8.90
Turnover	2.65 3.97 2.40 26.04 2016 32.43 6.09 35.16	2.59 3.60 2.25 25.49 <b>2021</b> 34.81 6.88 36.98	2.46 3.17 1.95 24.28 2026 34.88 7.19 40.44	2.55 3.08 1.86 25.66 2031 37.22 7.54 43.59	2.52 2.89 1.73 26.43 2036 39.53 7.93 47.09	2.37 2.63 1.55 26.55 2041 41.18 8.19 50.20	2.25 2.24 1.45 27.38 2046 43.76 8.61 53.95	1.87 1.61 1.26 26.03 <b>2051</b> 44.40 8.68 56.29	1.53 1.02 1.12 25.78 2056 45.76 8.90 59.15
Turnover	2.65 3.97 2.40 26.04 2016 32.43 6.09 35.16 8.16	2.59 3.60 2.25 25.49 <b>2021</b> 34.81 6.88 36.98 7.58	2.46 3.17 1.95 24.28 2026 34.88 7.19 40.44 7.44	2.55 3.08 1.86 25.66 2031 37.22 7.54 43.59 7.34	2.52 2.89 1.73 26.43 2036 39.53 7.93 47.09 7.24	2.37 2.63 1.55 26.55 2041 41.18 8.19 50.20 7.22	2.25 2.24 1.45 27.38 2046 43.76 8.61 53.95 7.57	1.87 1.61 1.26 26.03 <b>2051</b> 44.40 8.68 56.29 8.03	1.53 1.02 1.12 25.78 2056 45.76 8.90 59.15 8.61
Turnover	2.65 3.97 2.40 26.04 2016 32.43 6.09 35.16 8.16 9.66	2.59 3.60 2.25 25.49 2021 34.81 6.88 36.98 7.58 9.85	2.46 3.17 1.95 24.28 2026 34.88 7.19 40.44 7.44 9.70	2.55 3.08 1.86 25.66 2031 37.22 7.54 43.59 7.34 9.87	2.52 2.89 1.73 26.43 2036 39.53 7.93 47.09 7.24 9.77	2.37 2.63 1.55 26.55 2041 41.18 8.19 50.20 7.22 9.30	2.25 2.24 1.45 27.38 2046 43.76 8.61 53.95 7.57 8.73	1.87 1.61 1.26 26.03 2051 44.40 8.68 56.29 8.03 7.48	1.53 1.02 1.12 25.78 2056 45.76 8.90 59.15 8.61 6.10
Turnover	2.65 3.97 2.40 26.04 2016 32.43 6.09 35.16 8.16	2.59 3.60 2.25 25.49 <b>2021</b> 34.81 6.88 36.98 7.58	2.46 3.17 1.95 24.28 2026 34.88 7.19 40.44 7.44	2.55 3.08 1.86 25.66 2031 37.22 7.54 43.59 7.34	2.52 2.89 1.73 26.43 2036 39.53 7.93 47.09 7.24	2.37 2.63 1.55 26.55 2041 41.18 8.19 50.20 7.22	2.25 2.24 1.45 27.38 2046 43.76 8.61 53.95 7.57	1.87 1.61 1.26 26.03 <b>2051</b> 44.40 8.68 56.29 8.03	1.53 1.02 1.12 25.78 2056 45.76 8.90 59.15 8.61

TABLE 18: REDFERN, WITH WATERLOO, WITH COVID

Supply	2016	2021	2026	2031	2036	2041	2046	2051	205
	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433
	645	696	746	746	746	746	746	746	746
	5,621	5,821	5,931	5,931	5,931	5,931	5,931	5,931	5,931
	1,906	1,906	1,956	1,956	1,956	1,956	1,956	1,956	1,956
	2,851	2,851	2,851	2,851	2,851	2,851	2,851	2,851	2,851
	673	823	980	980	980	980	980	980	980
	- 45 420	- 45 524	- 45.007	45.007	- 45.007	45.007	45.007	45.007	45.007
_	15,130	15,531	15,897	15,897	15,897	15,897	15,897	15,897	15,897
Demand	2016	2021	2026	2031	2036	2041	2046	2051	2050
20	3,433	3,594	3,442	3,595	3,685	3,763	3,909	3,865	3,883
	645	711	714	734	751	758	780	766	765
	5,621	5,695	5,995	6,224	6,478	6,650	6,888	6,922	7,006
	1,906	1,705	1,613	1,535	1,461	1,407	1,422	1,453	1,501
	2,851	2,801	2,658	2,608	2,490	2,288	2,069	1,708	1,341
	673	736	736	675	609	535	438	312	192
	-	-	-	-	-	-	-	-	-
	15,130	15,243	15,158	15,372	15,474	15,401	15,505	15,026	14,688
Gap	2016	2021	2026	2031	2036	2041	2046	2051	205
		161 -		162 -	252 -	330 -	476 -	432 -	450
		15	32	12 -	5 -		34 -	20 -	19
	-	126 -		293 -	547 -	719 -	957 -	991 -	1,075
	-	201 50	343 193	421 243	495	550	535 782	503	455
	-	87	244	304	361 371	563 444	542	1,143 668	1,510 787
	-	-	-	504	-	-	-	-	-
	-	288	739	525	423	497	392	871	1,209
Expenditure	2016	2021	2026	2031	2036	2041	2046	2051	205
	6.52	6.95	6.88	7.54	8.04	8.35	8.94	8.81	9.07
	3.03	3.09	2.99	3.22	3.39	3.48	3.68	3.59	3.68
	5.66	5.43	5.41	5.97	6.43	6.76	7.33	7.36	7.72
	1.81	1.59	1.43	1.44	1.43	1.41	1.49	1.53	1.64
	2.65	2 50	2.46	2.55	2.52	2.37	2.25	1.87	1.53
		2.59							
	3.97	3.60	3.17	3.08	2.89	2.63	2.24	1.61	
	3.97 2.40	3.60 2.25	3.17 1.95	1.86	1.73	1.55	1.45	1.26	1.12
	3.97	3.60	3.17						1.12
Turnover	3.97 2.40 26.04	3.60 2.25 25.49	3.17 1.95 24.28	1.86 25.66	1.73 26.43	1.55 26.55	1.45 27.38	1.26 26.03	1.12 25.78
Turnover	3.97 2.40 26.04 <b>2016</b>	3.60 2.25 25.49 <b>2021</b>	3.17 1.95 24.28 <b>2026</b>	1.86 25.66 <b>2031</b>	1.73 26.43 <b>2036</b>	1.55 26.55 <b>2041</b>	1.45 27.38 <b>2046</b>	1.26 26.03 <b>2051</b>	1.12 25.78 <b>205</b>
Turnover	3.97 2.40 26.04 <b>2016</b> 32.43	3.60 2.25 25.49 <b>2021</b> 34.81	3.17 1.95 24.28 2026 34.18	1.86 25.66 <b>2031</b> 36.61	1.73 26.43 <b>2036</b> 38.47	1.55 26.55 <b>2041</b> 40.27	1.45 27.38 <b>2046</b> 42.89	1.26 26.03 <b>2051</b> 43.48	1.12 25.78 <b>205</b> 44.79
Turnover	3.97 2.40 26.04 2016 32.43 6.09	3.60 2.25 25.49 2021 34.81 6.88	3.17 1.95 24.28 2026 34.18 7.08	1.86 25.66 <b>2031</b> 36.61 7.47	1.73 26.43 2036 38.47 7.83	1.55 26.55 <b>2041</b> 40.27 8.10	1.45 27.38 <b>2046</b> 42.89 8.55	1.26 26.03 <b>2051</b> 43.48 8.60	1.12 25.78 <b>205</b> 44.79 8.82
Turnover	3.97 2.40 26.04 2016 32.43 6.09 35.16	3.60 2.25 25.49 <b>2021</b> 34.81 6.88 36.98	3.17 1.95 24.28 2026 34.18 7.08 40.41	1.86 25.66 2031 36.61 7.47 43.55	1.73 26.43 2036 38.47 7.83 47.05	1.55 26.55 2041 40.27 8.10 50.14	1.45 27.38 2046 42.89 8.55 53.91	1.26 26.03 2051 43.48 8.60 56.24	1.12 25.78 <b>205</b> 44.79 8.82 59.09
Turnover	3.97 2.40 26.04 2016 32.43 6.09 35.16 8.16	3.60 2.25 25.49 2021 34.81 6.88 36.98 7.58	3.17 1.95 24.28 2026 34.18 7.08 40.41 7.44	1.86 25.66 2031 36.61 7.47 43.55 7.35	1.73 26.43 2036 38.47 7.83 47.05 7.26	1.55 26.55 2041 40.27 8.10 50.14 7.26	1.45 27.38 2046 42.89 8.55 53.91 7.61	1.26 26.03 2051 43.48 8.60 56.24 8.08	205 205 44.79 8.82 59.09 8.66
Turnover	3.97 2.40 26.04 2016 32.43 6.09 35.16 8.16 9.66	3.60 2.25 25.49 2021 34.81 6.88 36.98 7.58 9.85	3.17 1.95 24.28 2026 34.18 7.08 40.41 7.44 9.71	1.86 25.66 2031 36.61 7.47 43.55 7.35 9.88	1.73 26.43 2036 38.47 7.83 47.05 7.26 9.80	1.55 26.55 2041 40.27 8.10 50.14 7.26 9.35	1.45 27.38 2046 42.89 8.55 53.91 7.61 8.77	1.26 26.03 2051 43.48 8.60 56.24 8.08 7.52	205 205 44.79 8.82 59.09 8.66 6.13
Turnover	3.97 2.40 26.04 2016 32.43 6.09 35.16 8.16	3.60 2.25 25.49 2021 34.81 6.88 36.98 7.58	3.17 1.95 24.28 2026 34.18 7.08 40.41 7.44	1.86 25.66 2031 36.61 7.47 43.55 7.35	1.73 26.43 2036 38.47 7.83 47.05 7.26	1.55 26.55 2041 40.27 8.10 50.14 7.26 9.35 3.62	1.45 27.38 2046 42.89 8.55 53.91 7.61	1.26 26.03 2051 43.48 8.60 56.24 8.08	205 205 44.79 8.82 59.09 8.66 6.13
Turnover	3.97 2.40 26.04 2016 32.43 6.09 35.16 8.16 9.66 3.77	3.60 2.25 25.49 2021 34.81 6.88 36.98 7.58 9.85 4.28	3.17 1.95 24.28 2026 34.18 7.08 40.41 7.44 9.71 4.44	1.86 25.66 2031 36.61 7.47 43.55 7.35 9.88 4.23	1.73 26.43 2036 38.47 7.83 47.05 7.26 9.80 3.96	1.55 26.55 2041 40.27 8.10 50.14 7.26 9.35	1.45 27.38 2046 42.89 8.55 53.91 7.61 8.77 3.07	1.26 26.03 2051 43.48 8.60 56.24 8.08 7.52 2.27	1.12 25.78 205 44.79 8.82 59.09 8.66 6.13 1.45
Turnover	3.97 2.40 26.04 2016 32.43 6.09 35.16 8.16 9.66 3.77	3.60 2.25 25.49 2021 34.81 6.88 36.98 7.58 9.85 4.28	3.17 1.95 24.28 2026 34.18 7.08 40.41 7.44 9.71 4.44	1.86 25.66 2031 36.61 7.47 43.55 7.35 9.88 4.23	1.73 26.43 2036 38.47 7.83 47.05 7.26 9.80 3.96	1.55 26.55 2041 40.27 8.10 50.14 7.26 9.35 3.62	1.45 27.38 2046 42.89 8.55 53.91 7.61 8.77 3.07	1.26 26.03 2051 43.48 8.60 56.24 8.08 7.52 2.27	1.12 25.78 205 44.79 8.82 59.09 8.66 6.13 1.45
Turnover	3.97 2.40 26.04 2016 32.43 6.09 35.16 8.16 9.66 3.77	3.60 2.25 25.49 2021 34.81 6.88 36.98 7.58 9.85 4.28 - 100.38	3.17 1.95 24.28 2026 34.18 7.08 40.41 7.44 9.71 4.44	1.86 25.66 2031 36.61 7.47 43.55 7.35 9.88 4.23	1.73 26.43 2036 38.47 7.83 47.05 7.26 9.80 3.96	1.55 26.55 2041 40.27 8.10 50.14 7.26 9.35 3.62	1.45 27.38 2046 42.89 8.55 53.91 7.61 8.77 3.07	1.26 26.03 2051 43.48 8.60 56.24 8.08 7.52 2.27	1.12 25.78 205 44.79 8.82 59.09 8.66 6.13 1.45
	3.97 2.40 26.04 2016 32.43 6.09 35.16 8.16 9.66 3.77 - 95.27 2016 0.0%	3.60 2.25 25.49 2021 34.81 6.88 36.98 7.58 9.85 4.28 - 100.38	3.17 1.95 24.28 2026 34.18 7.08 40.41 7.44 9.71 4.44 - 103.26	1.86 25.66 2031 36.61 7.47 43.55 7.35 9.88 4.23 - 109.09 2031 -1.6%	1.73 26.43 2036 38.47 7.83 47.05 7.26 9.80 3.96 - 114.37	1.55 26.55 2041 40.27 8.10 50.14 7.26 9.35 3.62 - 118.73 2041 -2.2%	1.45 27.38 2046 42.89 8.55 53.91 7.61 8.77 3.07 - 124.80 2046 -2.0%	1.26 26.03 2051 43.48 8.60 56.24 8.08 7.52 2.27 - 126.19 2051 -2.1%	1.12 25.78 205 44.79 8.82 59.09 8.66 6.13 1.45 
	3.97 2.40 26.04 2016 32.43 6.09 35.16 8.16 9.66 3.77 - 95.27 2016 0.0% 0.0%	3.60 2.25 25.49 2021 34.81 6.88 36.98 7.58 9.85 4.28 - 100.38 2021 0.0% 0.0%	3.17 1.95 24.28 2026 34.18 7.08 40.41 7.44 9.71 4.44 - 103.26 2026 -2.0% -1.5%	1.86 25.66 2031 36.61 7.47 43.55 7.35 9.88 4.23 - 109.09 2031 -1.6% -1.0%	1.73 26.43 2036 38.47 7.83 47.05 7.26 9.80 3.96 - 114.37 2036 -2.7% -1.2%	1.55 26.55 2041 40.27 8.10 50.14 7.26 9.35 3.62 - 118.73 2041 -2.2% -1.0%	1.45 27.38 2046 42.89 8.55 53.91 7.61 8.77 3.07 - 124.80 2046 -2.0% -0.8%	1.26 26.03 2051 43.48 8.60 56.24 8.08 7.52 2.27 - 126.19 2051 -2.1% -0.9%	1.12 25.78 205 44.79 8.82 59.09 8.66 6.13 1.45 
	3.97 2.40 26.04 2016 32.43 6.09 35.16 8.16 9.66 3.77 - 95.27 2016 0.0% 0.0%	3.60 2.25 25.49 2021 34.81 6.88 36.98 7.58 9.85 4.28 - 100.38 2021 0.0% 0.0%	3.17 1.95 24.28 2026 34.18 7.08 40.41 7.44 9.71 4.44 - 103.26 2026 -2.0% -1.5% -0.1%	1.86 25.66 2031 36.61 7.47 43.55 7.35 9.88 4.23 - 109.09 2031 -1.6% -1.0% -0.1%	1.73 26.43 2036 38.47 7.83 47.05 7.26 9.80 3.96 - 114.37 2036 -2.7% -1.2% -0.1%	1.55 26.55 2041 40.27 8.10 50.14 7.26 9.35 3.62 - 118.73 2041 -2.2% -1.0% -0.1%	1.45 27.38 2046 42.89 8.55 53.91 7.61 8.77 3.07 - 124.80 2046 -2.0% -0.8% -0.1%	1.26 26.03 2051 43.48 8.60 56.24 8.08 7.52 2.27 - 126.19 2051 -2.1% -0.9% -0.1%	1.12 25.78 205 44.79 8.82 59.09 6.13 1.45 
	3.97 2.40 26.04 2016 32.43 6.09 35.16 8.16 9.66 3.77 - 95.27 2016 0.0% 0.0% 0.0%	3.60 2.25 25.49 2021 34.81 6.88 36.98 7.58 9.85 4.28 - 100.38 2021 0.0% 0.0% 0.0%	3.17 1.95 24.28 2026 34.18 7.08 40.41 7.44 9.71 4.44 - 103.26 2026 -2.0% -1.5% -0.1% 0.0%	1.86 25.66 2031 36.61 7.47 43.55 7.35 9.88 4.23 - 109.09 2031 -1.6% -1.0% -0.1%	1.73 26.43 2036 38.47 7.83 47.05 7.26 9.80 3.96 - 114.37 2036 -2.7% -1.2% -0.1% 0.3%	1.55 26.55 2041 40.27 8.10 50.14 7.26 9.35 3.62 - 118.73 2041 -2.2% -1.0% -0.1% 0.5%	1.45 27.38 2046 42.89 8.55 53.91 7.61 8.77 3.07 - 124.80 2046 -2.0% -0.8% -0.1% 0.6%	1.26 26.03 2051 43.48 8.60 56.24 8.08 7.52 2.27 - 126.19 2051 -2.1% -0.9% -0.1% 0.6%	1.12 25.78 205 44.79 8.82 59.09 8.66 6.13 1.45 
	3.97 2.40 26.04 2016 32.43 6.09 35.16 8.16 9.66 3.77 - 95.27 2016 0.0% 0.0% 0.0% 0.0%	3.60 2.25 25.49 2021 34.81 6.88 36.98 7.58 9.85 4.28 - 100.38 2021 0.0% 0.0% 0.0% 0.0%	3.17 1.95 24.28 2026 34.18 7.08 40.41 7.44 9.71 4.44 - 103.26 2026 -2.0% -1.5% -0.1% 0.0%	1.86 25.66 2031 36.61 7.47 43.55 7.35 9.88 4.23 - 109.09 2031 -1.6% -1.0% -0.1% 0.1%	1.73 26.43 2036 38.47 7.83 47.05 7.26 9.80 3.96 - 114.37 2036 -2.7% -1.2% -0.1% 0.3% 0.2%	1.55 26.55 2041 40.27 8.10 50.14 7.26 9.35 3.62 - 118.73 2041 -2.2% -1.0% -0.1% 0.5% 0.4%	1.45 27.38 2046 42.89 8.55 53.91 7.61 8.77 3.07 - 124.80 2046 -2.0% -0.8% -0.1% 0.6% 0.5%	1.26 26.03 2051 43.48 8.60 56.24 8.08 7.52 2.27 - 126.19 2051 -2.1% -0.9% -0.1% 0.6% 0.5%	1.12 25.78 205 44.79 8.82 59.09 8.66 6.13 1.45 
	3.97 2.40 26.04 2016 32.43 6.09 35.16 8.16 9.66 3.77 - 95.27 2016 0.0% 0.0% 0.0% 0.0% 0.0%	3.60 2.25 25.49 2021 34.81 6.88 36.98 7.58 9.85 4.28 - 100.38 2021 0.0% 0.0% 0.0% 0.0% 0.0%	3.17 1.95 24.28 2026 34.18 7.08 40.41 7.44 9.71 4.44 - 103.26 2026 -2.0% -1.5% -0.1% 0.0% -0.5%	1.86 25.66 2031 36.61 7.47 43.55 7.35 9.88 4.23 - 109.09 2031 -1.6% -1.0% -0.1% 0.1% 0.1% -0.7%	1.73 26.43 2036 38.47 7.83 47.05 7.26 9.80 3.96 114.37 2036 -2.7% -1.2% -0.1% 0.3% 0.2% -0.8%	1.55 26.55 2041 40.27 8.10 50.14 7.26 9.35 3.62 - 118.73 2041 -2.2% -1.0% -0.1% 0.5% 0.4% -0.8%	1.45 27.38 2046 42.89 8.55 53.91 7.61 8.77 3.07 	1.26 26.03  2051 43.48 8.60 56.24 8.08 7.52 2.27 126.19  2051 -2.1% -0.9% -0.1% 0.6% 0.5% -0.7%	1.12 25.78 205: 44.79 8.82 59.09 8.66 6.13 1.45 
	3.97 2.40 26.04 2016 32.43 6.09 35.16 8.16 9.66 3.77 - 95.27 2016 0.0% 0.0% 0.0% 0.0%	3.60 2.25 25.49 2021 34.81 6.88 36.98 7.58 9.85 4.28 - 100.38 2021 0.0% 0.0% 0.0% 0.0%	3.17 1.95 24.28 2026 34.18 7.08 40.41 7.44 9.71 4.44 - 103.26 2026 -2.0% -1.5% -0.1% 0.0%	1.86 25.66 2031 36.61 7.47 43.55 7.35 9.88 4.23 - 109.09 2031 -1.6% -1.0% -0.1% 0.1%	1.73 26.43 2036 38.47 7.83 47.05 7.26 9.80 3.96 - 114.37 2036 -2.7% -1.2% -0.1% 0.3% 0.2%	1.55 26.55 2041 40.27 8.10 50.14 7.26 9.35 3.62 - 118.73 2041 -2.2% -1.0% -0.1% 0.5% 0.4%	1.45 27.38 2046 42.89 8.55 53.91 7.61 8.77 3.07 - 124.80 2046 -2.0% -0.8% -0.1% 0.6% 0.5%	1.26 26.03 2051 43.48 8.60 56.24 8.08 7.52 2.27 - 126.19 2051 -2.1% -0.9% -0.1% 0.6% 0.5%	1.02 1.12 25.78 205( 44.79 8.82 59.09 8.66 6.13 1.45 - 128.93 205( -2.19 -0.19 0.65 0.59 0.79 0.09

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