

Employment lands study: Draft Report

Prepared for UDIA (NSW)

May 2020



Contents

| <i>No</i> | <i>Item</i> | <i>Slide No.</i> |
|-----------|---|------------------|
| | Executive Summary | 3 |
| 1 | Introduction | 26 |
| 2 | Context Assessment | 36 |
| 3 | Methodology | 52 |
| 4 | Infrastructure and Urban Design Elements | 58 |
| 5 | Test Case study: Segmenting the Parramatta LGA and Camellia Industrial | 63 |
| 6 | Assessment of the five employment investigation areas | 67 |
| 7 | Conclusion and Recommendations | 94 |

Executive Summary

Purpose

Purpose of the brief

The Urban Development Institute of Australia (NSW) (UDIA) is keen to understand the impact of the sterilisation of employment and industrial lands through the Greater Sydney Commission's 'retain and manage' and 'review and manage' classifications. Specifically:

- It seeks to quantify the lost opportunity to create benefits and value for multiple beneficiaries
- The analysis will be used by the UDIA in its advocacy and what this means in terms of a lost opportunity for the future of the city.

Approach

The study focuses on five (5) selected locations in the Eastern Harbour and Central River Cities and considers two cases for each:

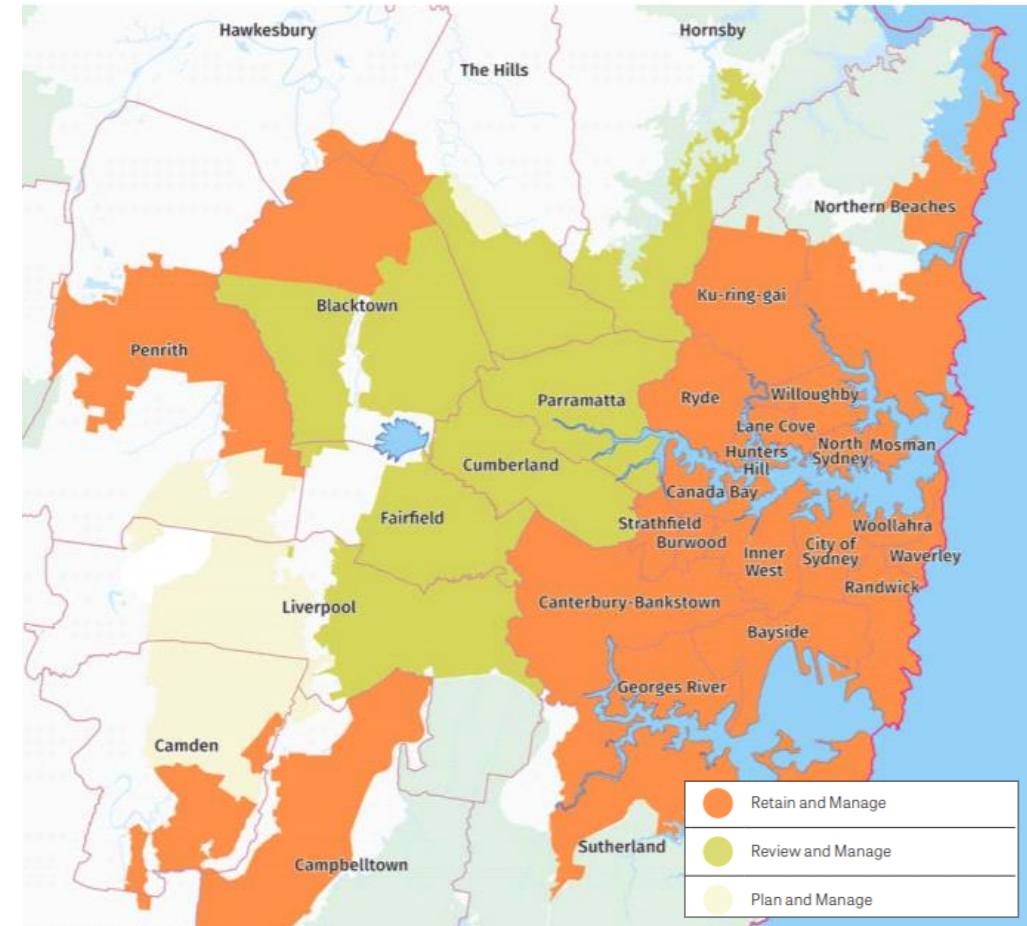
1. A base case which considers the current scenario and base conditions for employment growth in each area in line with the 'retain and manage' and 'review and manage' classifications for industrial lands.
2. A project case (Scenario 1) which considers an alternate approach for future employment growth involving a mixed-use development of the industrial lands for each area.

Greater Sydney Commission 'Employment Lands' Strategy

Different actions to employment lands across Greater Sydney (Source: Greater Sydney Commission)

| Approach | Description | Locations |
|--------------------------|---|--|
| Retain and manage | All existing industrial and urban services land should be safeguarded from competing pressures, especially residential and mixed-use zones | Across the Eastern Harbour City, the North West Growth Area and industrial land in the established urban areas of the Western Parkland City, including the existing Western Sydney Employment Area |
| Review and manage | The Greater Sydney Commission will review all industrial and urban services land to either confirm its retention or manage uses to allow sites to transition to higher-order employment activities and seek appropriate controls to maximise business and employment outcomes | The established areas of Central City District, Hornsby, Liverpool and Fairfield |
| Plan and manage | In land release areas, there is a need for additional industrial and urban services land in response to long-term projected population and development growth | Applies across the South West and Western Sydney Airport Growth Areas |

Areas within Greater Sydney and their approaches to employment land (Source: Greater Sydney Commission)



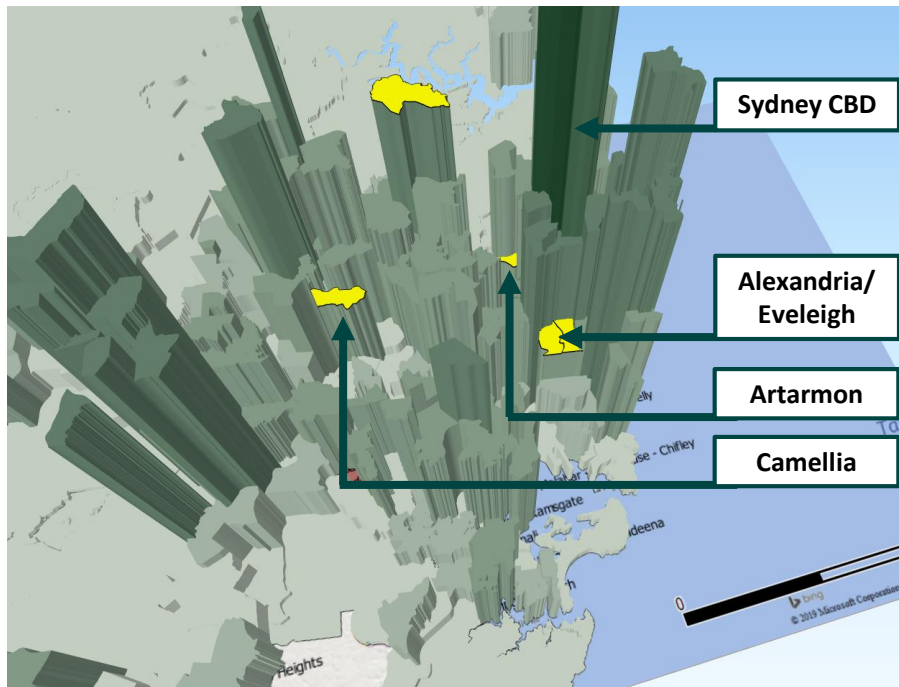
The GSC 'Employment Lands' Strategy is a 'top-down' approach that takes a broad based geographic view and has not considered localised effects.

Changing the view: Using Employment Lands as a key differentiator.

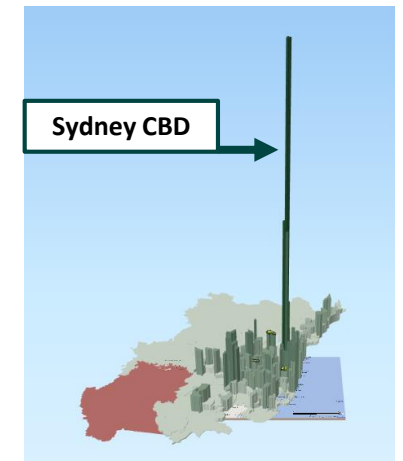
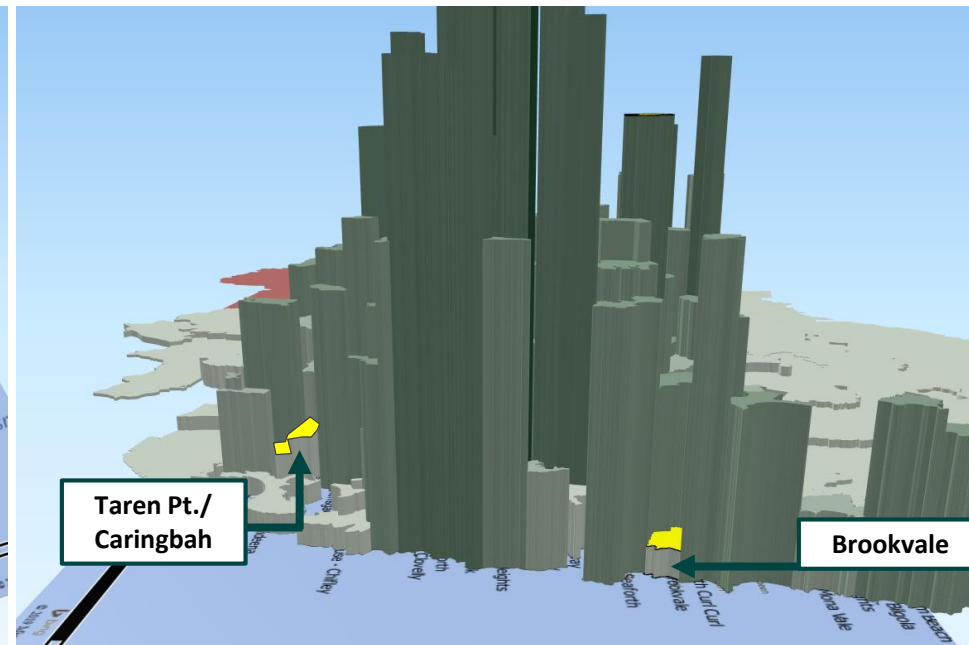
1992-2018 Change in Employment GFA

A new view of employment lands in Sydney shows that a differentiated treatment is needed at the local level (a 'bottom-up approach').

An analysis of historical ABS employment data for the period 1992 to 2018 by SA2 (as defined by the ABS) shows changes from locality to locality, often next to each other. Images from the 3D analysis of change in GFA density below show how development for the period is not uniform geographically, and specific localised solutions and interventions may be required to attain highest and best use of land.



Source: Value Advisory Partners analysis and modelling based on NIEIR sourced ABS historical data.



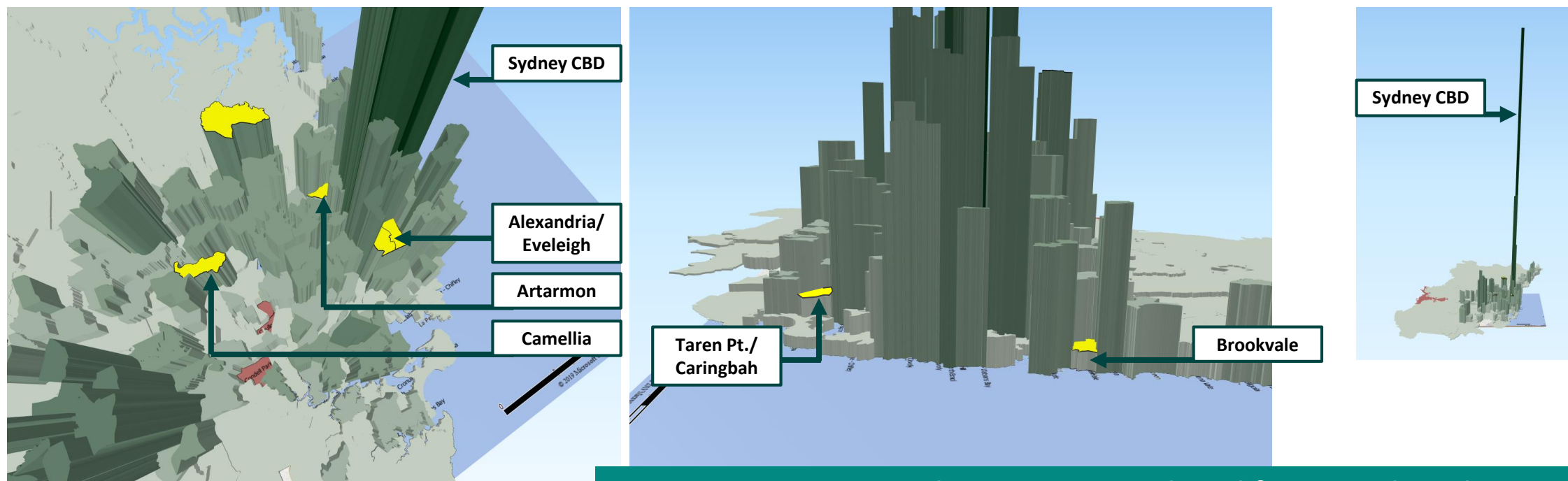
**An approach is needed that considers local and targeted,
and not only broad and general**

Changing the view: Using Employment Lands as a key differentiator.

2018-2050 projected growth in Employment GFA

The employment growth areas (by GFA) across ABS SA2 areas (approximating a suburban level) to 2050 based on a 'business as usual' scenario indicate a vastly different picture from the GSC's approach to employment lands management. That is, it assumes no particular interventions to change the current market trend in each area.

Some of the current industrial areas in the study would be amongst those with the lowest levels of growth in the Sydney metropolitan area, implying a significant market decay or failure.

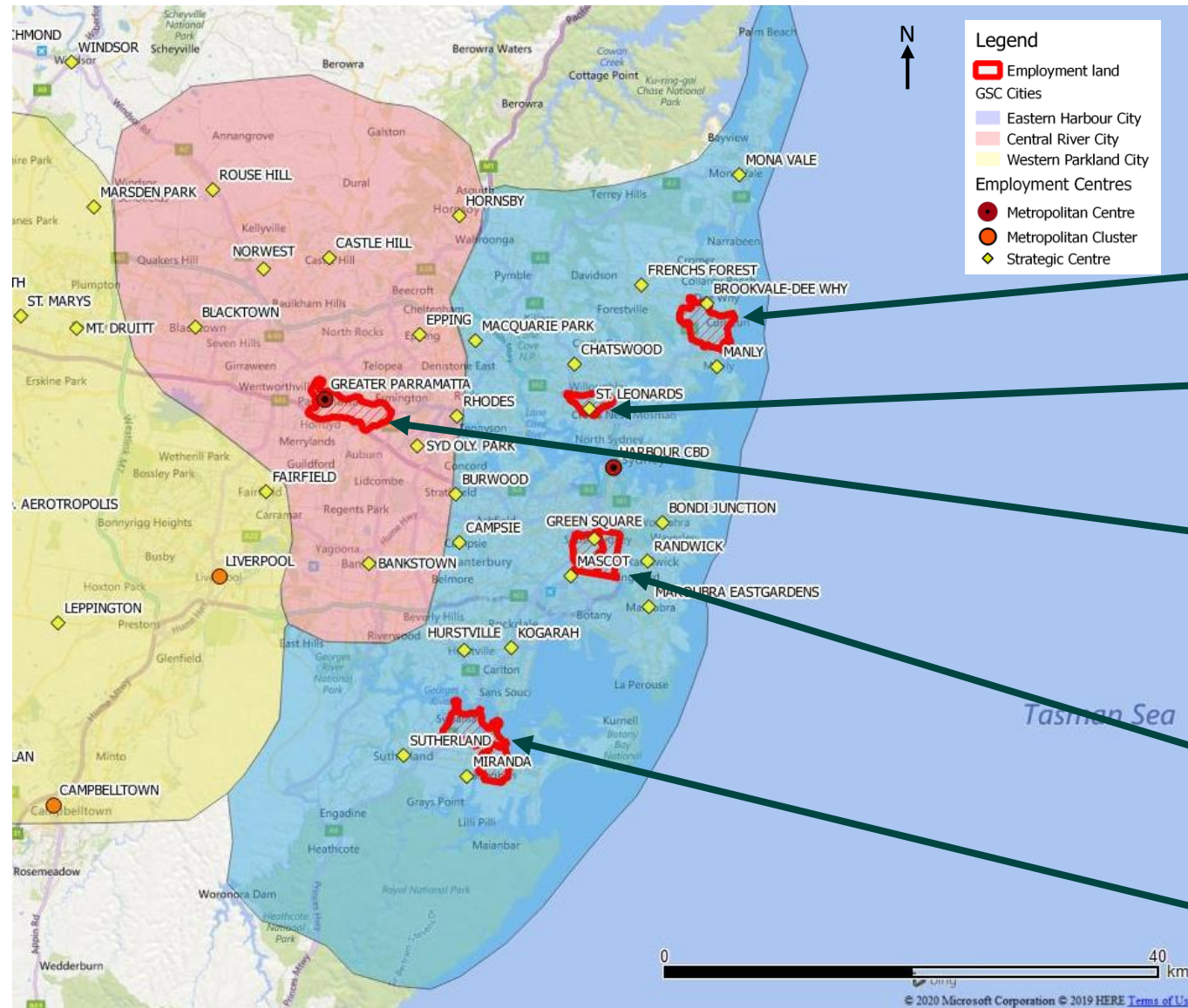


Source: Value Advisory Partners analysis and modelling based on NIEIR data of ABS.

Outcome: An alternate approach and framework to the GSC 'Employment Lands' Strategy is required to address areas where there is potential market decay or failure

Investigation areas to compare approaches: GSC and the Alternate Framework

Employment land areas of investigation within the GSC 3 Cities Model (Source: Value Advisory Partners, Greater Sydney Commission)

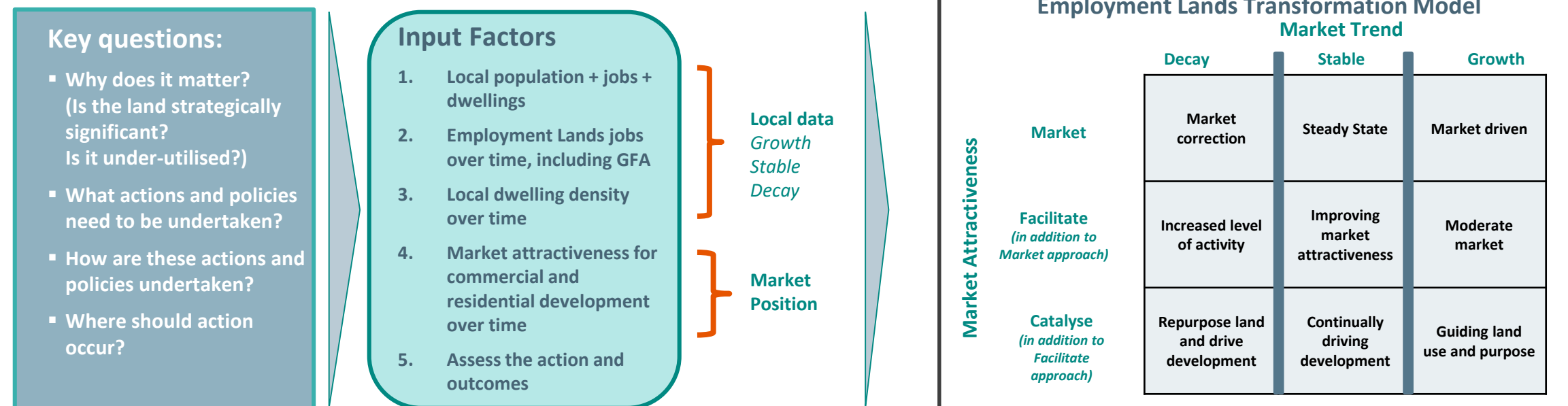


An Alternate Framework for Employment Lands

There are multiple models and approaches to land transformation where there are market trends of decay or growth. (e.g. “Forecasting Urban Vacancy Dynamics in a Shrinking City: A Land Transformation Model”, J. Lee and G. Newman, Int. J. Geo-Information, 2017, 6(4), 124; <https://doi.org/10.3390/ijgi6040124>)

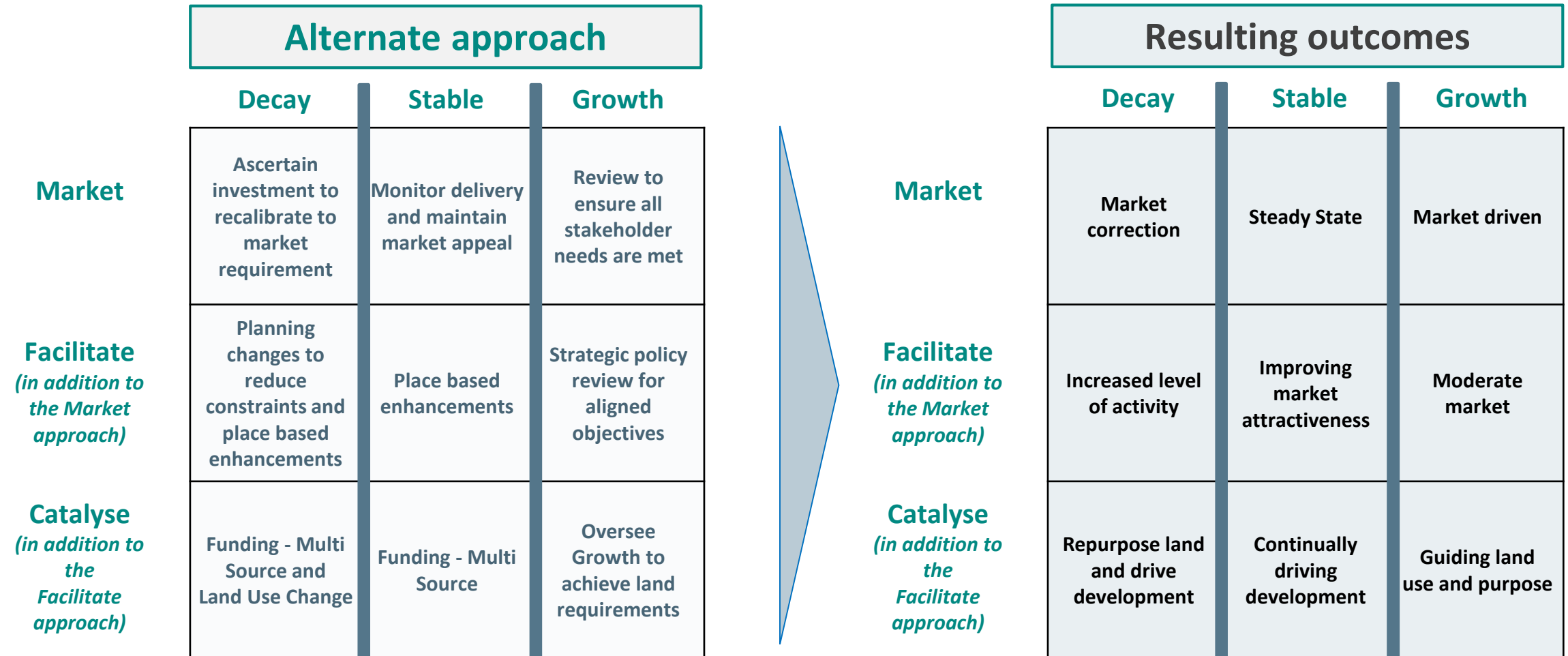
The total number of jobs would differ if a “retain and manage” approach is taken compared to facilitating “Mixed-use” development, where mixed-use would deliver a higher job density. The structure of employment would also change when facilitating mixed-uses, such as a higher proportion of high value jobs including in the innovation and the knowledge sectors when compared to retaining existing industrial land uses.

To ensure that “mixed-use” development are of high quality and represent the best use of land, key strategic interventions would be required. The aim being to improve the overall attractiveness of the precinct for employment and potentially also residential development (which has not been studied). This would facilitate growth of both employment in the area (and residential if applicable). “Safeguarded” lands with an explicit direction to not intervene would restrict change and result in employment lands not benefiting from the investment that could otherwise occur.



The Employment Lands Transformation Model provides a ‘bottom-up’ locally targeted approach that is both temporal and spatial, and integrates actions to shift market decay or failure.

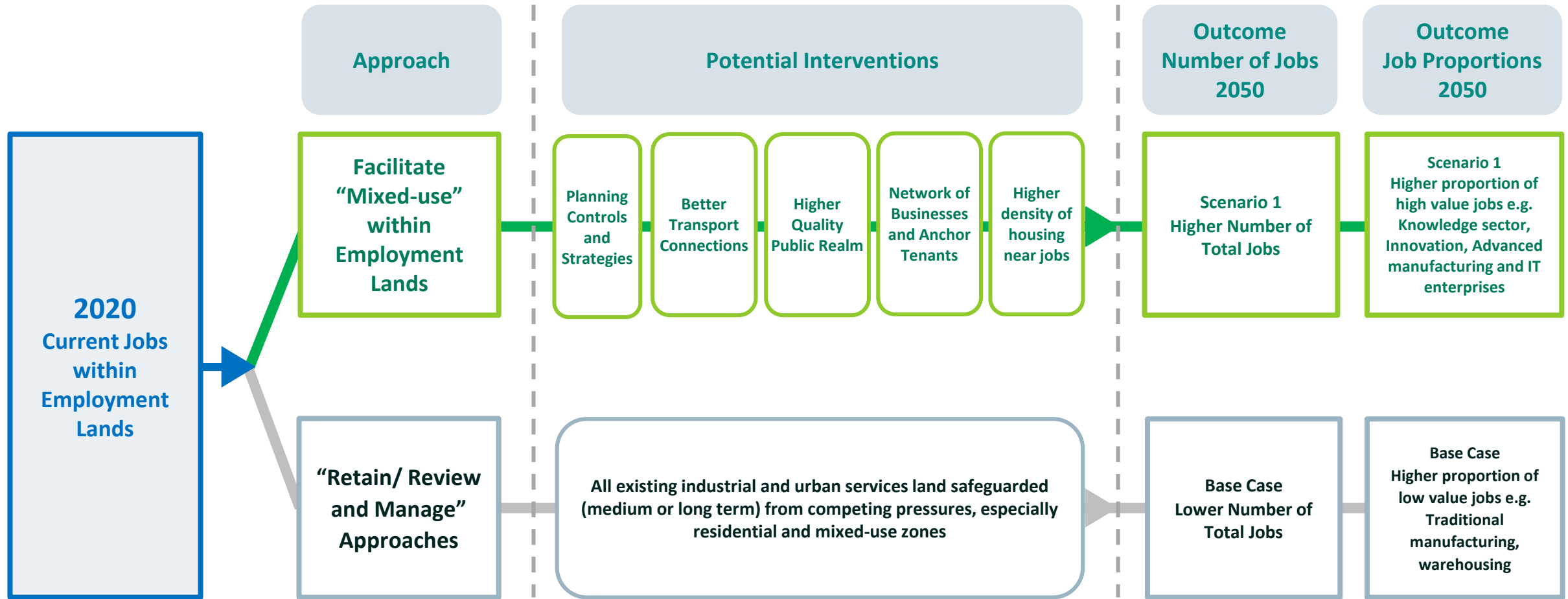
Employment Lands Transformation Model



The Employment Lands Transformation Model provides a framework to guide the interventions and desired outcomes to achieve employment growth.

Comparing the approach and interventions for employment lands (1/2)

Potential approaches, interventions and outcomes of Employment lands (Source: Value Advisory Partners)



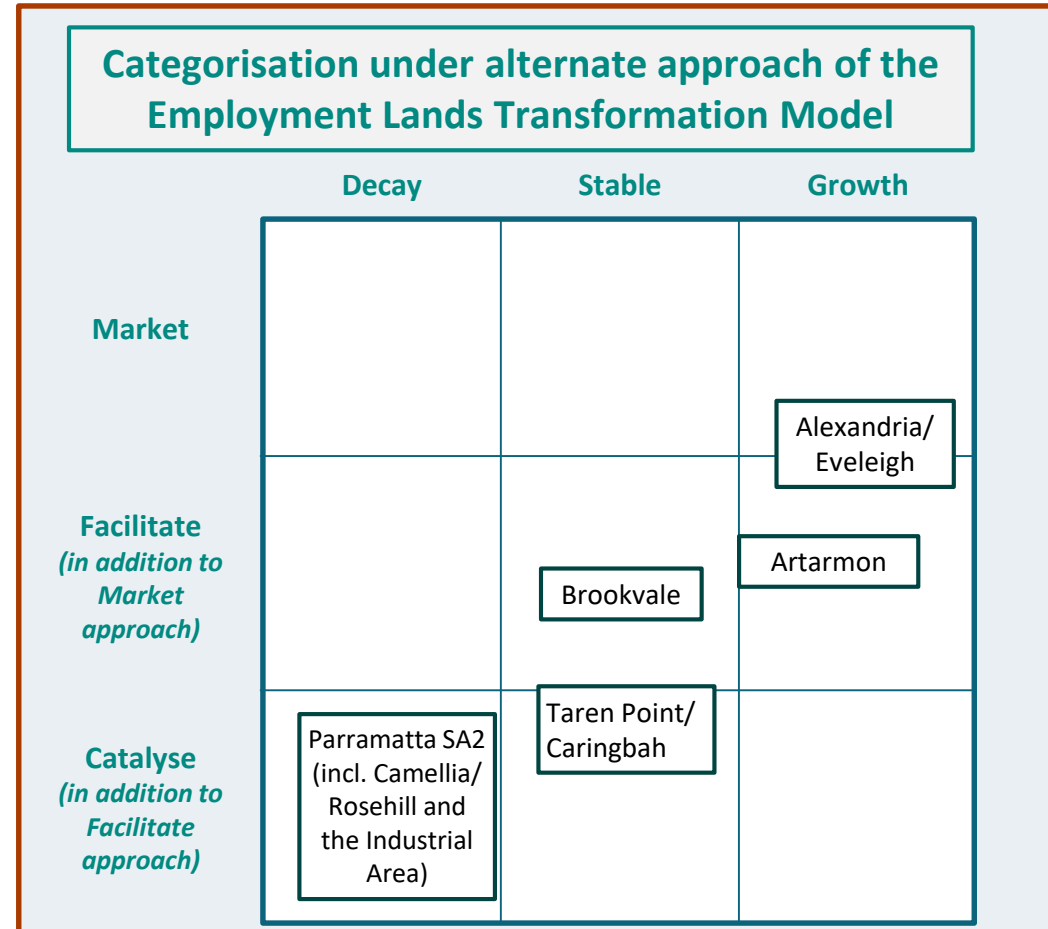
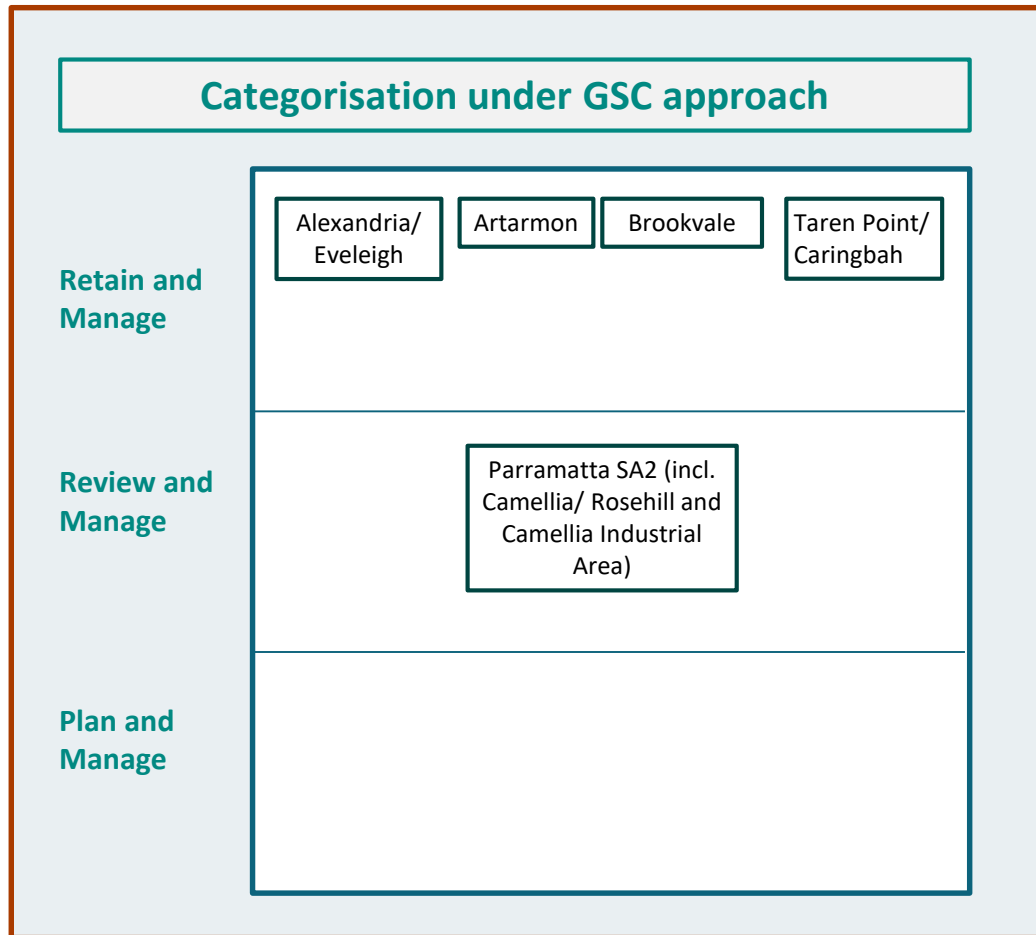
Comparing the approach and interventions to employment lands (2/2)

Examples of interventions to ensure mixed-use outcomes for employment lands

- **Planning Controls and Strategies:** Changing land use; creating development plans and targeted strategies; reviewing and amending height limits and setbacks; subdividing lots for permeability and improving local accessibility.
- **Better Transport Connections:** Linking active transport (cycling, pedestrians) to businesses; implementing public transport corridors; prioritising investments in infrastructure for active and public transport.
- **Higher Quality Public Realm:** Improving quality of streetscape; ensuring built form history and character is utilised (e.g. Heritage control); new and enhanced public open space and parklands; facilitating critical uses such as shops and community facilities accessible by employees and residents.
- **Network of businesses and anchor tenants:** Enticing large companies and institutions to anchor mixed-use development; creating a network of 'seed' or like businesses within a proximity, e.g. small-scale artisan manufacturers.
- **Higher density of housing near jobs:** Developing higher density of dwellings close to employment in targeted areas; residential dwellings located adjacent to and part of mixed-use precincts.

The detailed and locally specific Employment Lands Transformation Model contrasts with the GSC's more top-down macro approach to policy setting.

Summary Assessment of Employment Lands Models



The Employment Lands Transformation Model allows for a more comprehensive diagnostic of market conditions and the interventions needed for change.

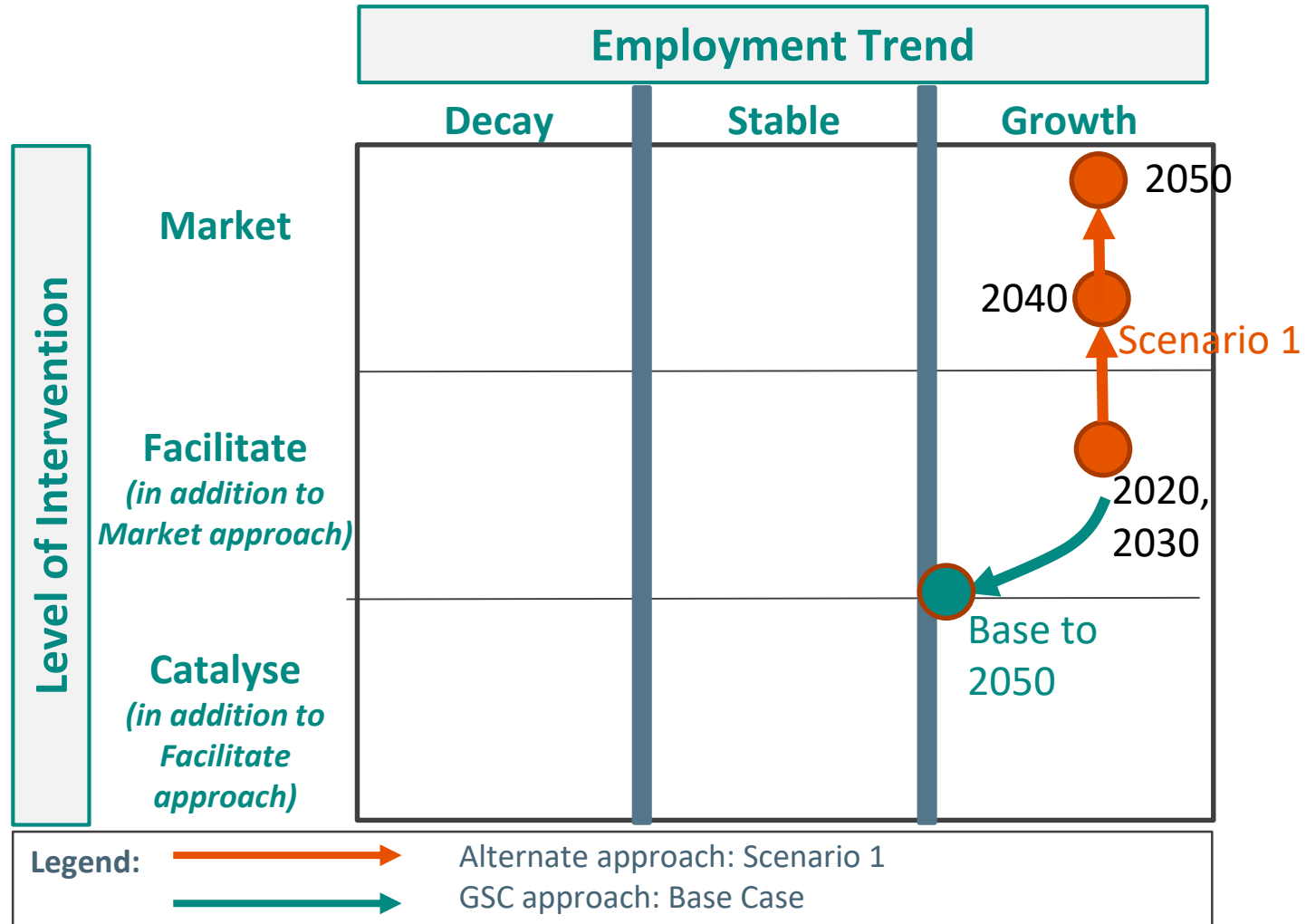
Summary Assessment of Employment Lands Models

| Areas | Current Employment Lands Transformation Model Recommended interventions: Facilitate “Mixed-use” within Employment Lands | Current GSC Approach: “Retain/ Review and Manage” |
|--|--|--|
| Alexandra/ Eveleigh | Review to ensure all stakeholder needs are met + Strategic policy review for aligned objectives. This includes: Initiatives to redress gaps in urban design and infrastructure within the precinct including Land use changes to facilitate commercial office uses and higher densities, and Enhanced public transport. | Retain and manage |
| Artarmon | Review to ensure all stakeholder needs are met + Strategic policy review for aligned objectives. This includes: Rezoning of parts of the precinct , Retain the heritage character and lower building heights for creative and cultural., Facilitate higher office towers along the Pacific Highway and motorway and closer to the railway station, and Limit residential uses. | Retain and manage |
| Brookvale | Monitor delivery and maintain market appeal + Place based enhancements. This includes: Facilitating road, pedestrian and cycling connectivity and amenity within the precinct, Improving permeability of street network. | Retain and manage |
| Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area) | Ascertain investment to recalibrate to market requirement + Planning changes to reduce constraints and place-based enhancements + Funding - Multi Source and Land Use Change. This includes: Rezoning of industrial land to allow for mixed use, New mass public transit - light rail , New road bridge connections to the peninsula, and Placemaking enhancements by developers and governments to improve the public realm and pedestrian environment. | Review and manage |
| Taren Point/ Caringbah | Monitor delivery and maintain market appeal + Place based enhancements + Multi Source Funding. This includes: Enhance the pedestrian and cycling environment, Increase permeability of the street network , New public transport infrastructure and open space, and Seed projects to foster a cluster of like businesses. | Retain and manage |

The Employment Lands Transformation Model allows for a more comprehensive diagnostic of market conditions and the interventions needed for change.

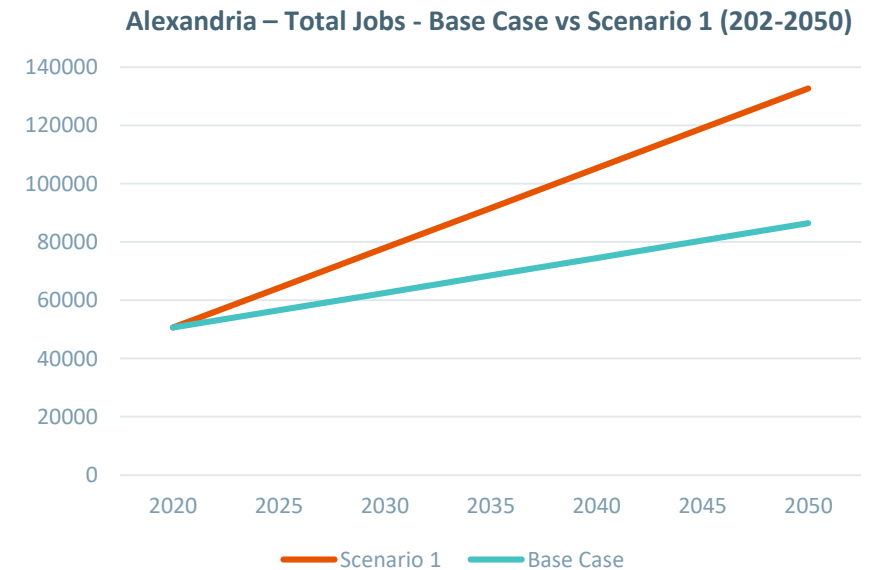
Alexandria/Eveleigh

Using the Employment Lands Transformation Model to develop recommended interventions



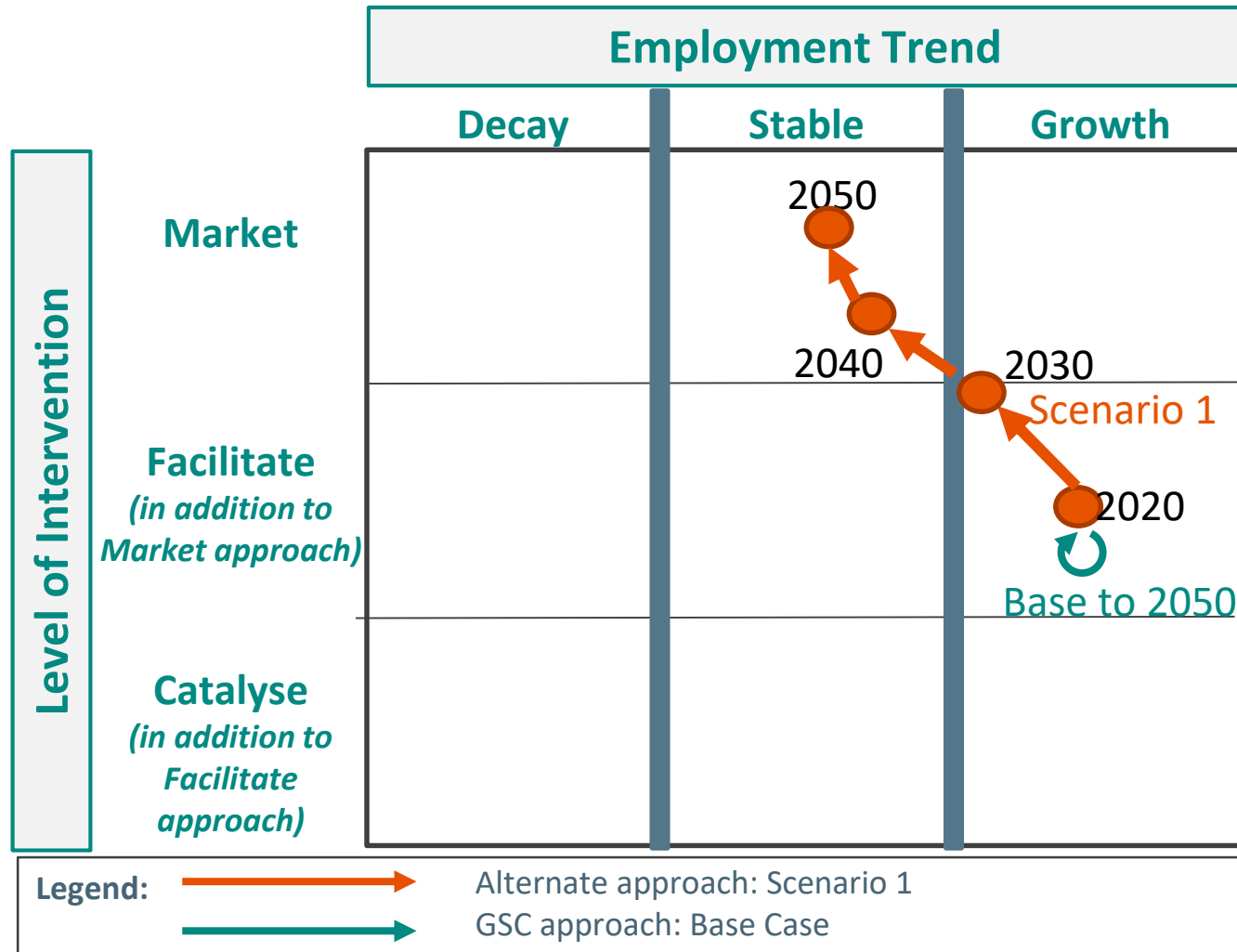
Note: The Scenario analysis presents the results of what could happen if change is initiated in the investigations areas compared to the anticipated growth in the employment lands for those precincts between 2020 and 2050 in the base case (see Section 6). It is not a forecast of what will happen, rather one of what could happen, given the particular changes and interventions identified for each of the employment in the investigation areas.

| Year | Recommended interventions |
|------|---|
| 2020 | Review to ensure all stakeholder needs are met + Strategic policy review for aligned objectives |
| 2030 | Review to ensure all stakeholder needs are met + Strategic policy review for aligned objectives |
| 2040 | Review to ensure all stakeholder needs are met |



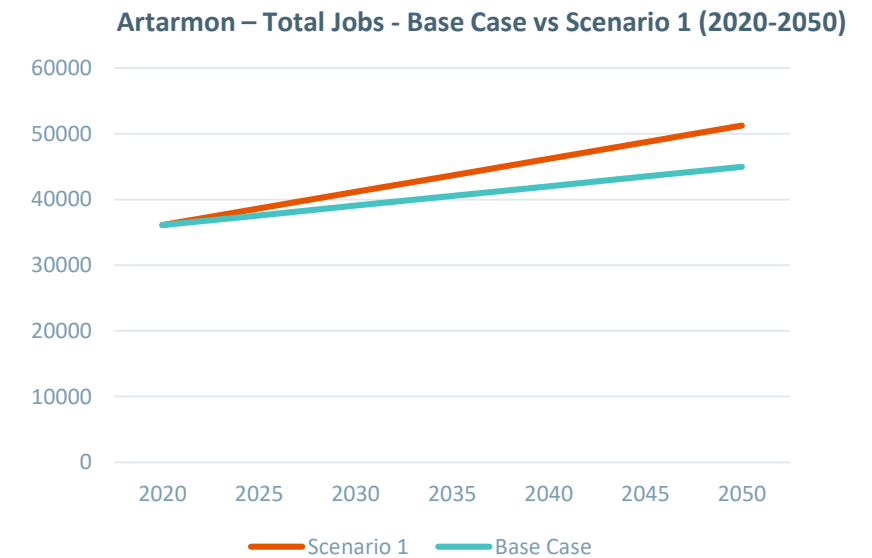
Artarmon

Using the Employment Lands Transformation Model to develop recommended interventions



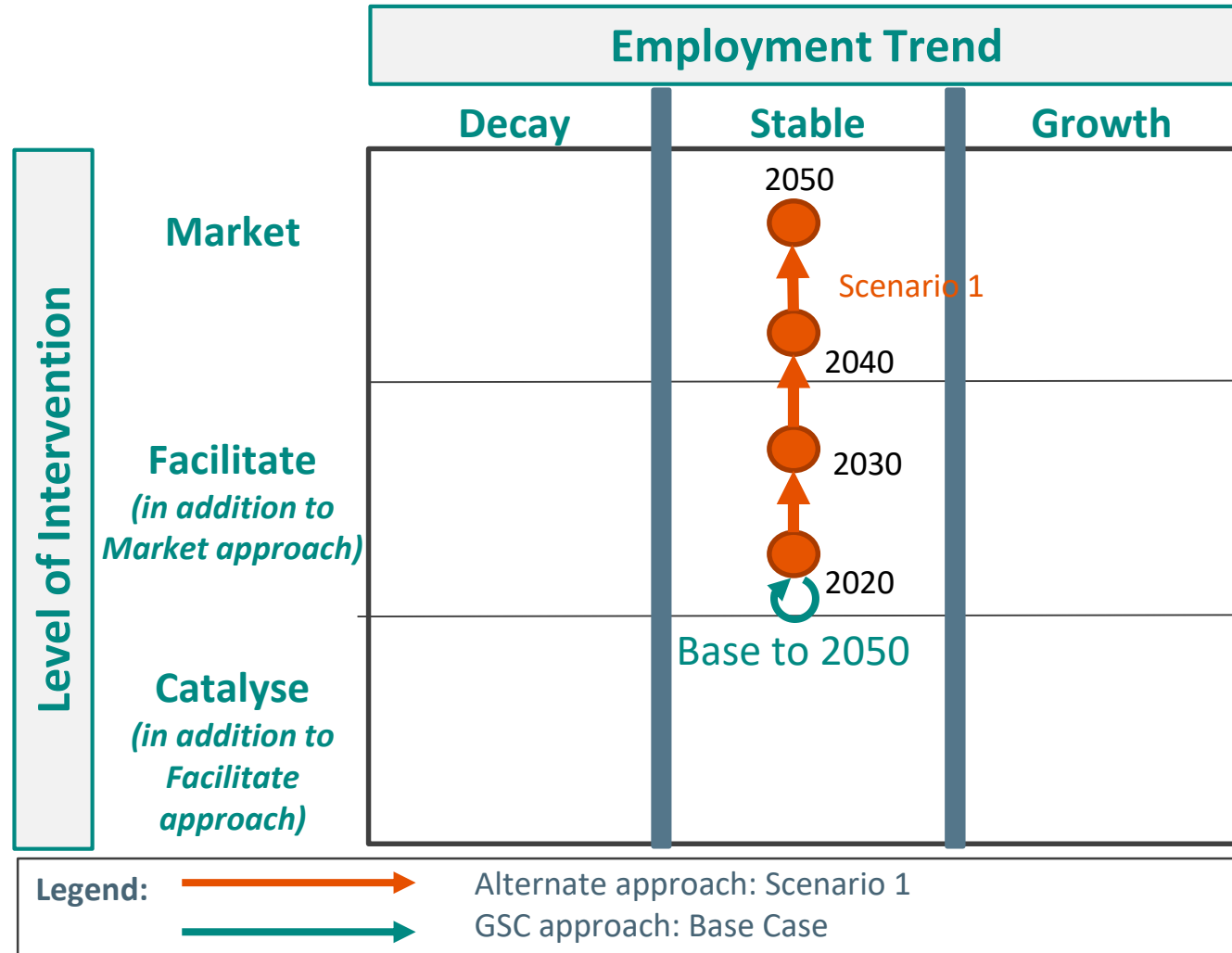
Note: The Scenario analysis presents the results of what could happen if change is initiated in the investigations areas compared to the anticipated growth in the employment lands for those precincts between 2020 and 2050 in the base case (see Section 6). It is not a forecast of what will happen, rather one of what could happen, given the particular changes and interventions identified for each of the employment in the investigation areas.

| Year | Recommended interventions |
|------|---|
| 2020 | Review to ensure all stakeholder needs are met + Strategic policy review for aligned objectives |
| 2030 | Review to ensure all stakeholder needs are met + Strategic policy review for aligned objectives |
| 2040 | Monitor delivery and maintain market appeal |



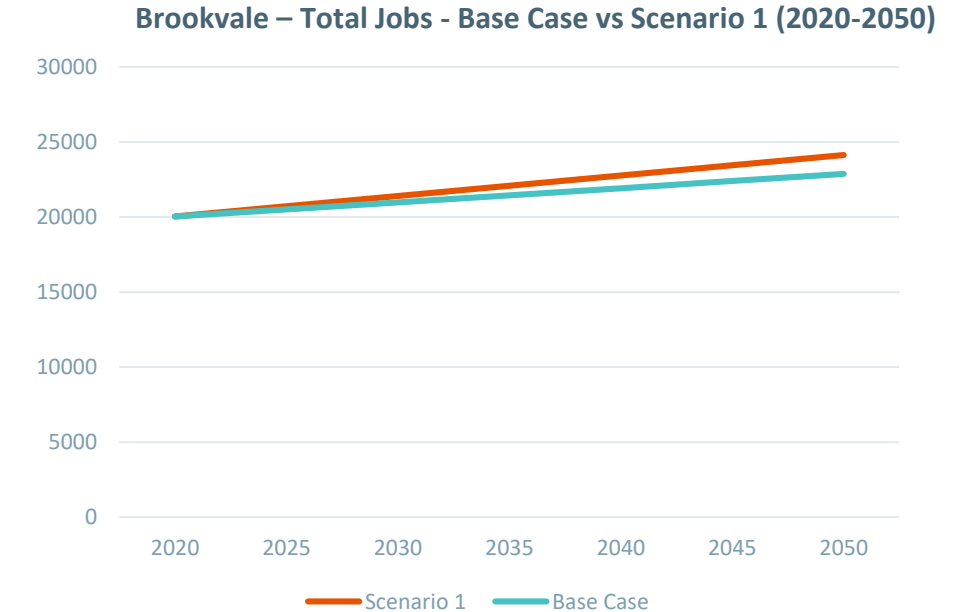
Brookvale

Using the Employment Lands Transformation Model to develop recommended interventions



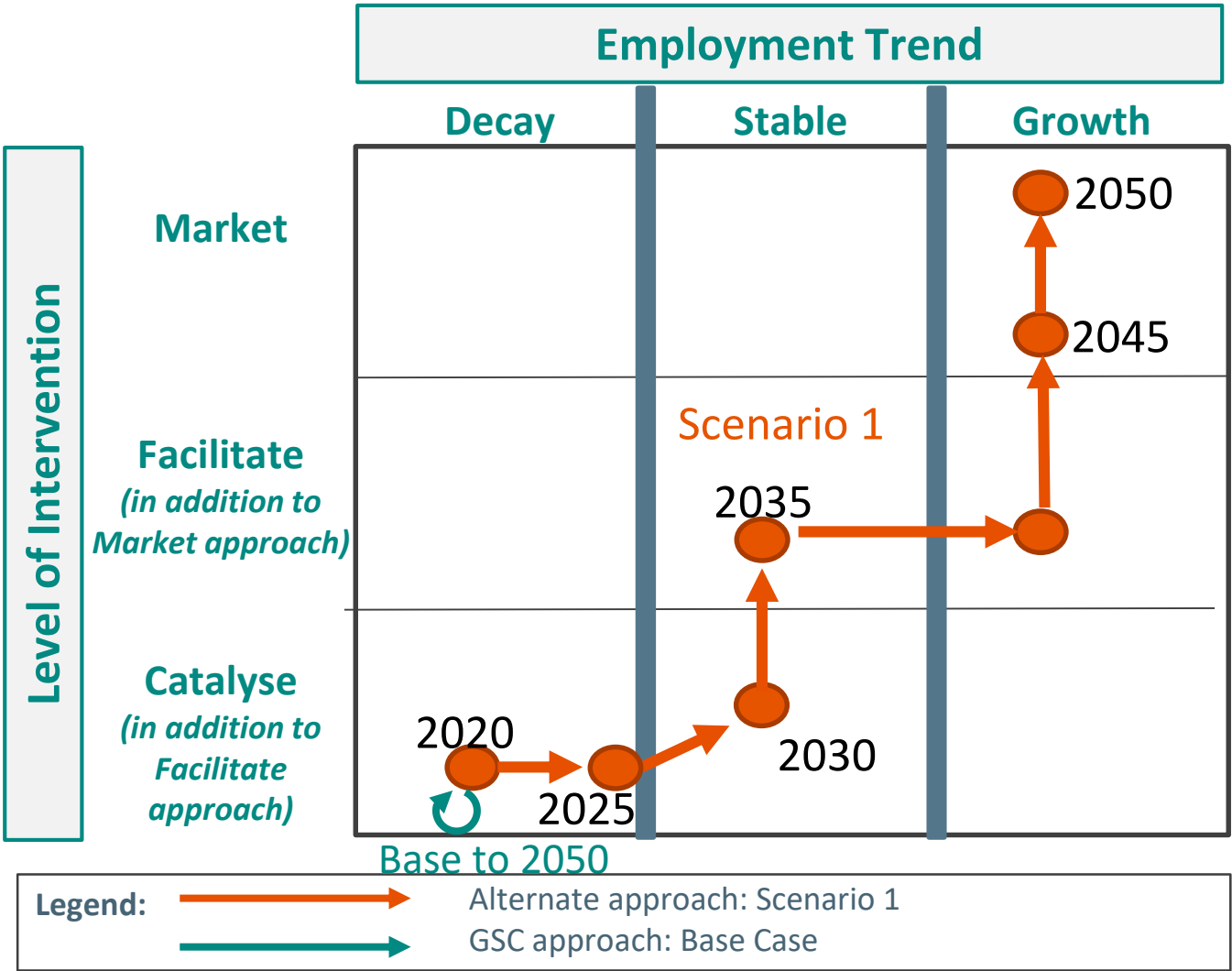
Note: The Scenario analysis presents the results of what could happen if change is initiated in the investigations areas compared to the anticipated growth in the employment lands for those precincts between 2020 and 2050 in the base case (see Section 6). It is not a forecast of what will happen, rather one of what could happen, given the particular changes and interventions identified for each of the employment in the investigation areas.

| Year | Recommended interventions |
|------|--|
| 2020 | Monitor delivery and maintain market appeal + Place based enhancements |
| 2030 | Monitor delivery and maintain market appeal+ Place based enhancements |
| 2040 | Monitor delivery and maintain market appeal |



Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area)

Using the Employment Lands Transformation Model to develop recommended interventions

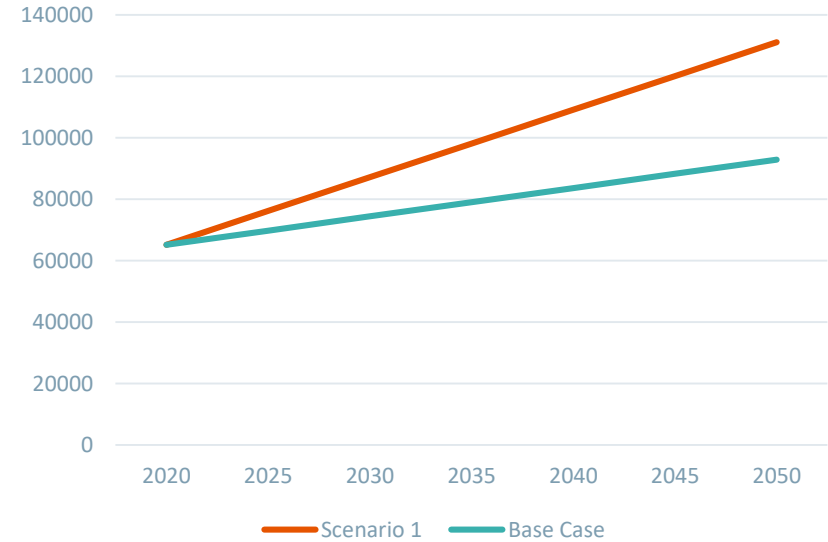


Note: The Scenario analysis presents the results of what could happen if change is initiated in the investigations areas compared to the anticipated growth in the employment lands for those precincts between 2020 and 2050 in the base case (see Section 6). It is not a forecast of what will happen, rather one of what could happen, given the particular changes and interventions identified for each of the employment in the investigation areas.

© Value Advisory Partners. 2018-2020.

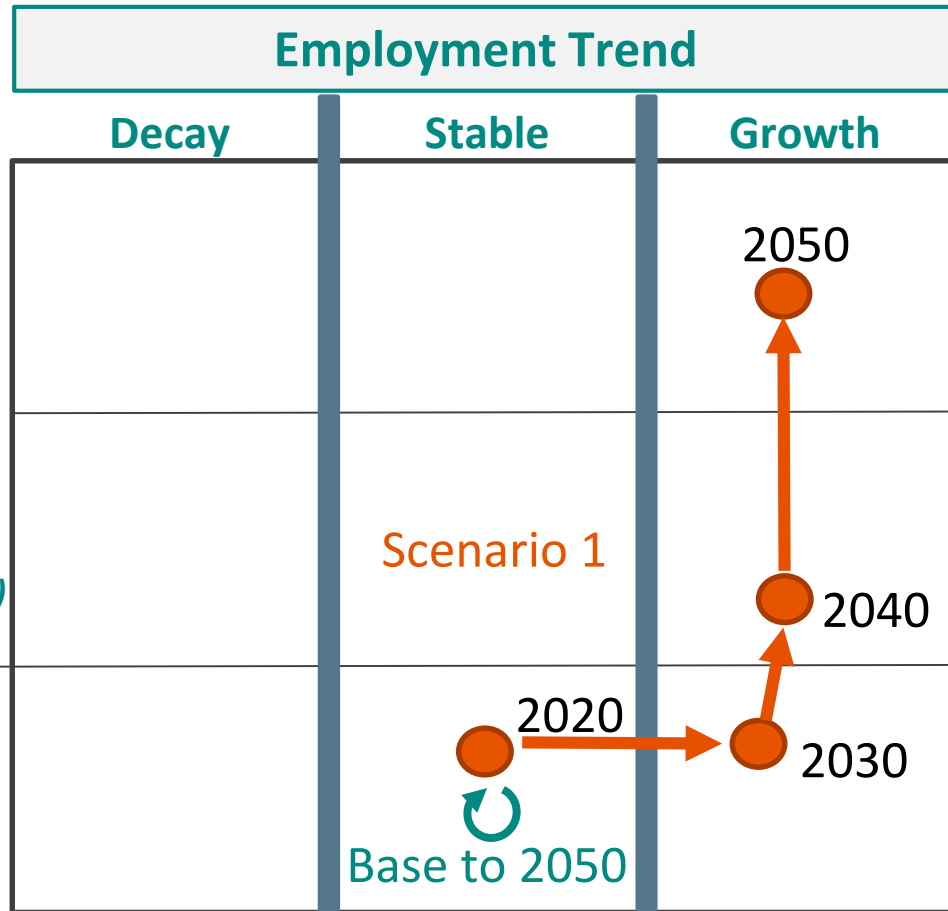
| Year | Recommended interventions |
|------|--|
| 2020 | Ascertain investment to recalibrate to market requirement + Planning changes to reduce constraints and place based enhancements + Funding - Multi Source and Land Use Change |
| 2030 | Monitor delivery and maintain market appeal Place based enhancements + Funding - Multi Source |
| 2040 | Review to ensure all stakeholder needs are met + Strategic policy review for aligned objectives |

Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area)
– Total Jobs - Base Case vs Scenario 1 (2020-2050)



Taren Point/ Caringbah

Using the Employment Lands Transformation Model to develop recommended interventions



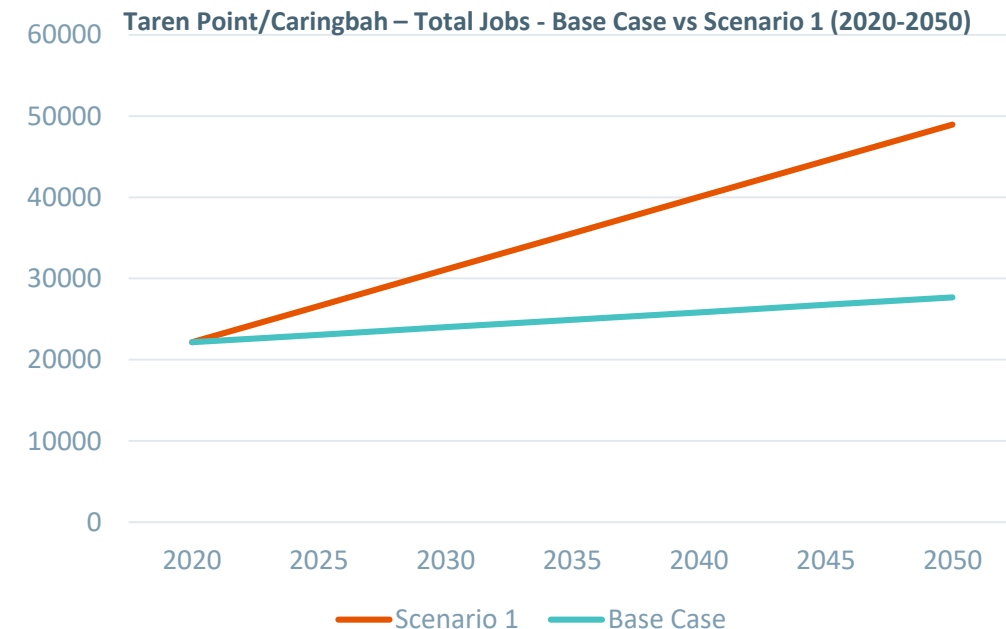
Legend:

→ Alternate approach: Scenario 1

→ GSC approach: Base Case

Note: The Scenario analysis presents the results of what could happen if change is initiated in the investigations areas compared to the anticipated growth in the employment lands for those precincts between 2020 and 2050 in the base case (see Section 6). It is not a forecast of what will happen, rather one of what could happen, given the particular changes and interventions identified for each of the employment in the investigation areas.

| Year | Recommended interventions |
|------|---|
| 2020 | Monitor delivery and maintain market appeal + Place based enhancements + Funding - Multi Source |
| 2030 | Review to ensure all stakeholder needs are met + Strategic policy review for aligned objectives + Oversee growth to achieve land requirements |
| 2040 | Review to ensure all stakeholder needs are met + Strategic policy review for aligned objectives |



Case study: Segmenting the Parramatta LGA and Camellia Industrial*

LGA annual growth

The graph ranks local government areas in Greater Sydney by employment compound annual growth rate (CAGR) over the 1981-2011 period, using ABS data.

We have identified whether the average growth rate is catalytic, facilitated or market driven.

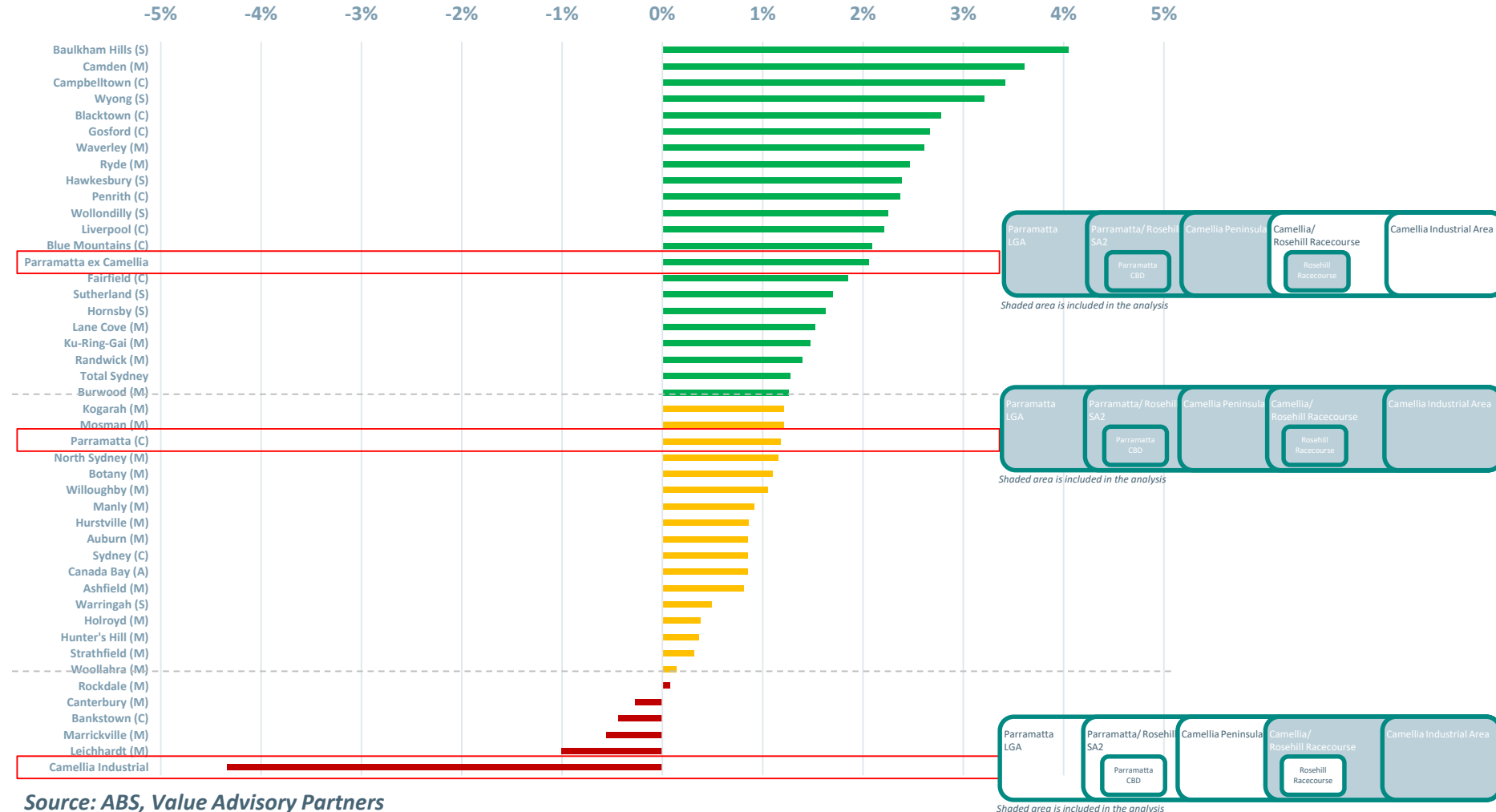
Market is defined as CAGR above 1.1%; Facilitated is CAGR between 0.1 and 1.1%; Catalytic areas as CAGR of 0.1%<.

For the purpose of this analysis we have both a Parramatta LGA as a whole and Parramatta without Camellia. The impact of having Camellia as part of Parramatta is to depress its overall growth rate. Parramatta without Camellia would have a CAGR rate of nearly one per cent higher.

Camellia on its own would have the weakest employment performance of all at -4.3% CAGR, which is a significant market failure.

Compound Annual Growth Rate (%) for Greater Sydney LGAs 1981-2011

Legend for included areas



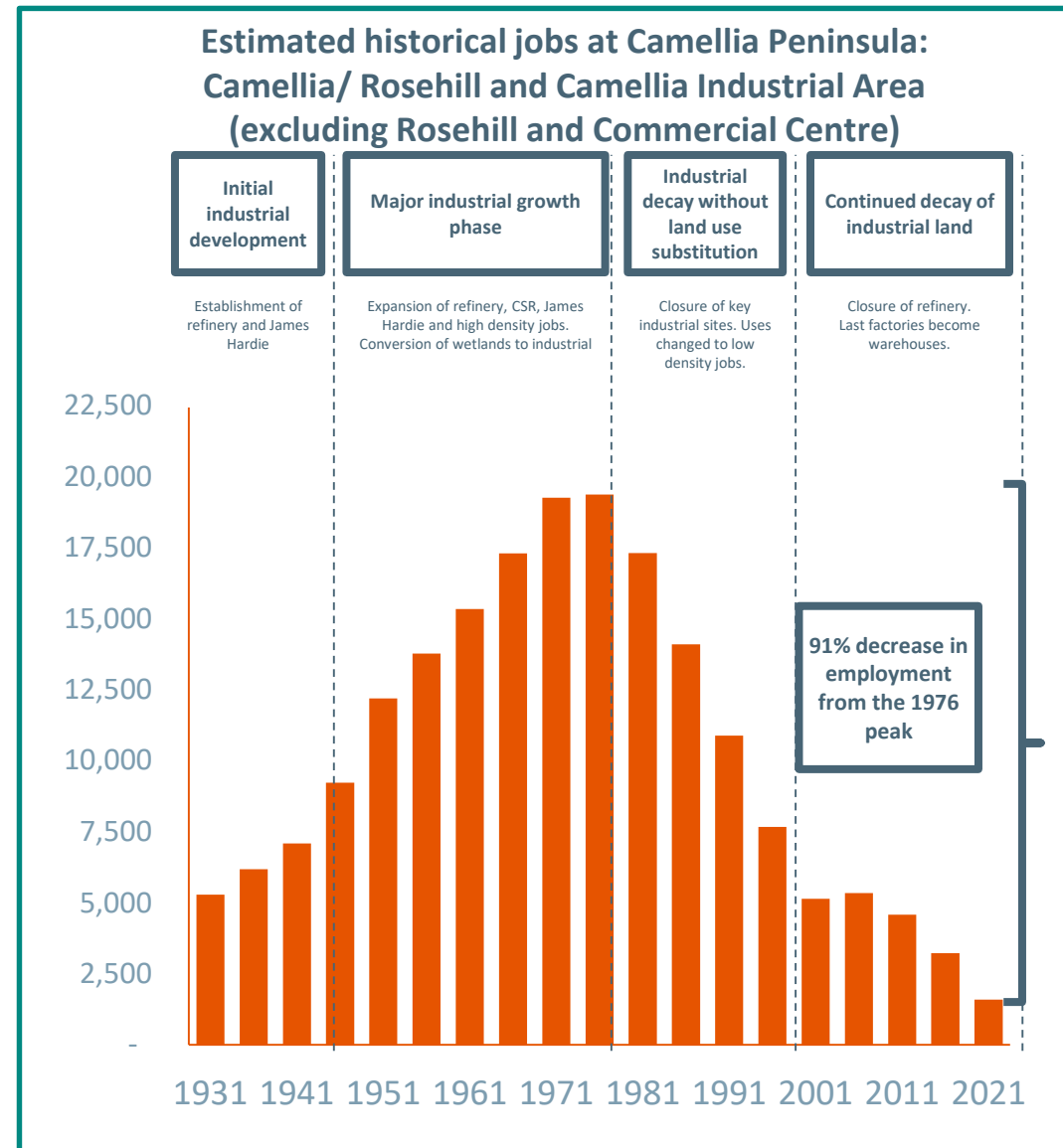
Source: ABS, Value Advisory Partners

* Camellia Industrial includes Camellia Industrial Area as defined by the GSC and Camellia/Rosehill excluding Rosehill Racecourse

Camellia on its own would have the weakest employment performance of all at -4.3% CAGR, which is a significant market failure.

Case study: Segmenting the Parramatta LGA and Camellia Industrial*

- A detailed analysis of the growth and decline of employment in Camellia over the last 90 years shows a significant market failure.
- The 92 percent decline in jobs on the peninsula from its peak in 1976, to only 1,600 jobs today, is supported by aerial photographs of industrial and commercial buildings, detailed historical records of employers, and traffic movements (including heavy vehicles) from 1931 to today.
- Detailed analyses of industrial areas are required at a level much more targeted than what is provided by the ABS. This will provide the type of detailed, bottom up analysis required to ascertain areas of market failure.



Source: Value Advisory Partners analysis, ABS, National Economics

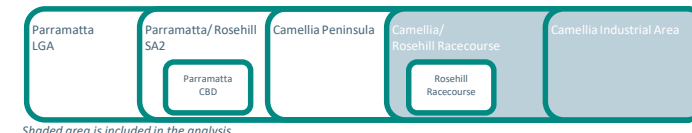
Impact of decline output and employment on buildings

Growing amounts of vacant and abandoned properties threaten neighbourhood stability.

Vacated commercial and industrial are underutilised (i.e. used for self storage which decreases jobs/ha)

The Camellia Peninsula (excluding Rosehill racecourse) is an example of abandonment and underutilisation in Sydney.

Legend for included areas



Taking a long run historical perspective provides a level of data analysis that is omitted in a top down approach.

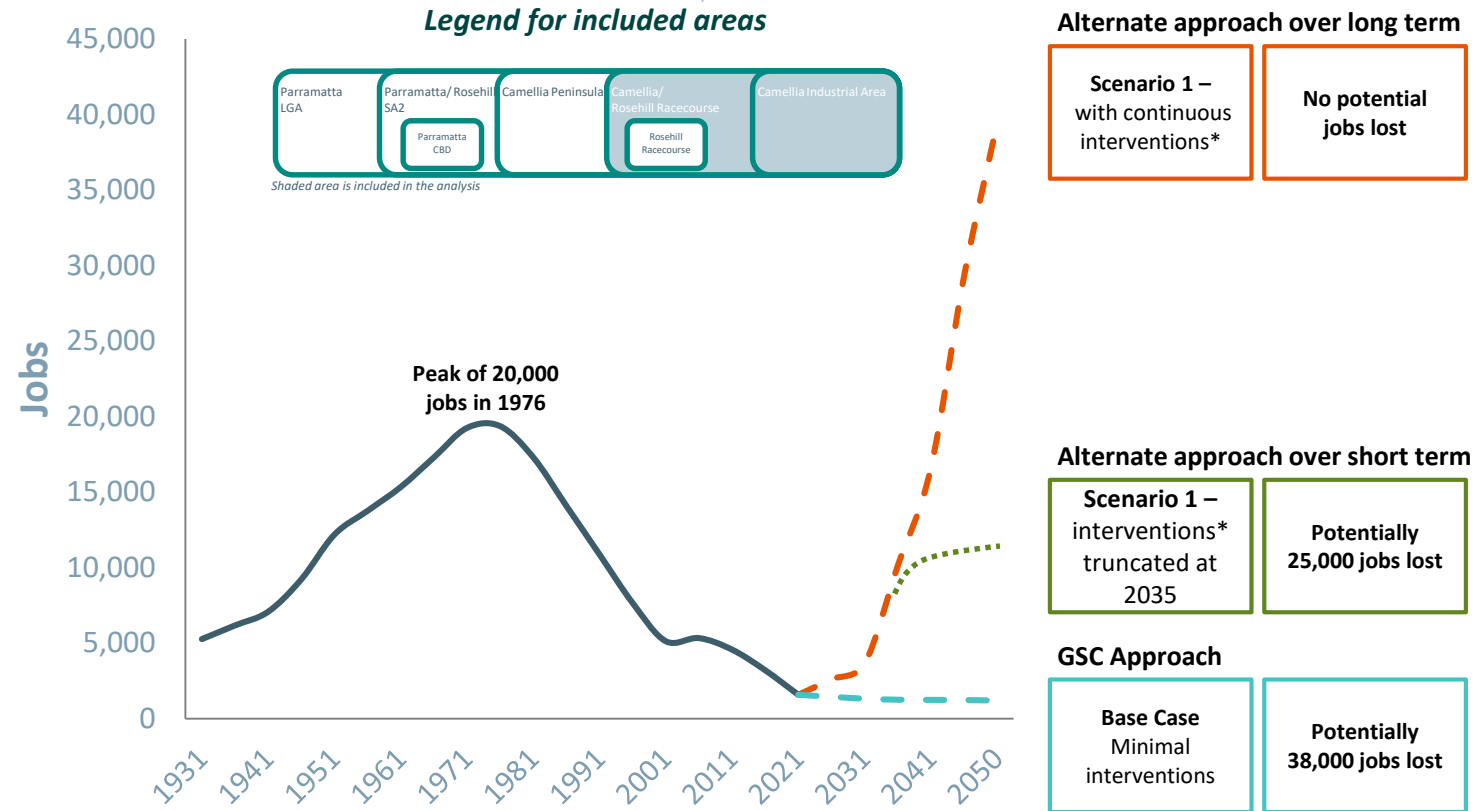
A continuous programme of interventions is needed

Case study: Segmenting the Parramatta LGA and Camellia Industrial

Comparison of employment outcomes between GSC approach and alternate approach

This chart compares the projected outcomes of an alternative approach (as per Scenario 1) with that of the GSC. The results indicate that:

- Applying the GSC approach would result in the lost opportunity of up to 29,000 jobs that could otherwise be created in the Camellia peninsula to 2050.
- Applying the Alternate approach, but truncating the programme of interventions at 2035, would break the cycle of growth and result in lost opportunity of up to 25,000 jobs.
- The employment outcomes from the Alternate approach assumes continuous interventions (market or government) through a range of actions that curates the change.



Source: Value Advisory Partners historical analysis and forecasts of ABS data

* Using the Employment Lands Transformation Model to develop recommended interventions

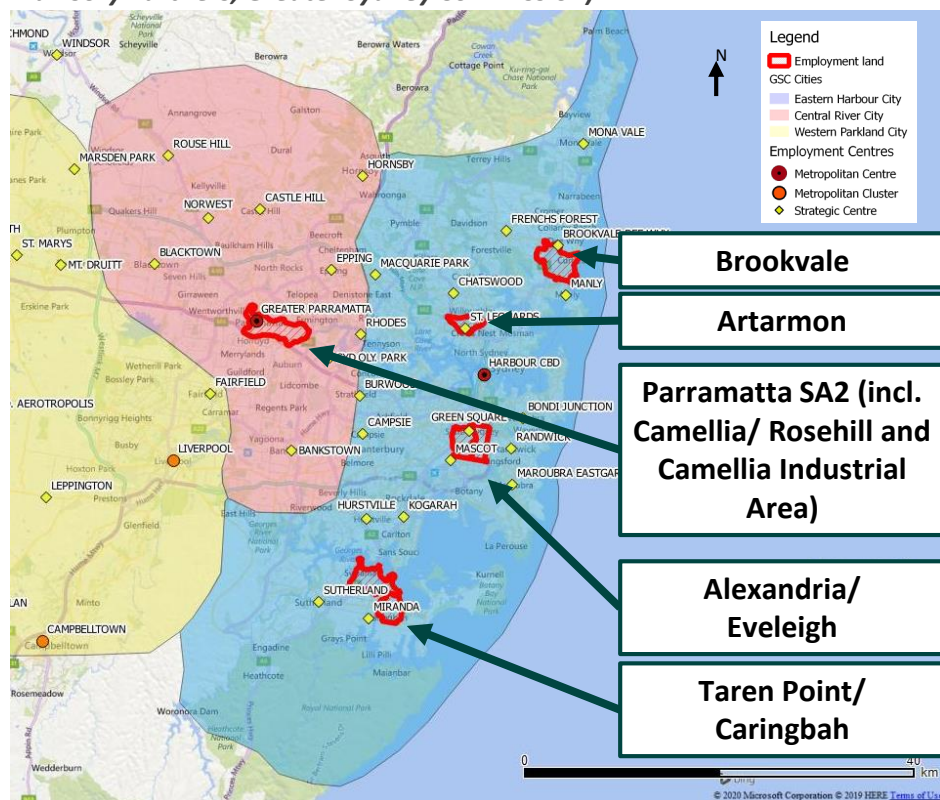
Without continuous interventions and strategies aligned to market conditions the Camellia Peninsula has entered into an extended period of decay.

Note: The Scenario analysis presents the results of what could happen if change is initiated in the investigations areas compared to the anticipated growth in the employment lands for those precincts between 2020 and 2050 in the base case (see Section 6). It is not a forecast of what will happen, rather one of what could happen, given the particular changes and interventions identified for each of the employment in the investigation areas.

Comparison between GSC and an Alternate approach – potential commercial building equivalents that could be developed under Scenario 1

Note: A comparable commercial building is 4 storeys, 1,250 m² floorplate, total GFA of 5,000 sqm.

Employment land areas of investigation within the GSC 3 Cities Model (Source: Value Advisory Partners, Greater Sydney Commission)



| Areas of investigation | Potential Job change | Potential additional employment GFA (sqm) | Equivalent commercial buildings |
|--|----------------------|---|---------------------------------|
| Alexandria/Eveleigh | 46,300 | 1,010,000 | 200 |
| Artarmon | 6,300 | 390,000 | 70 |
| Brookvale | 1,300 | 0 | 0 |
| Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area) | 38,200 | 2,860,000 | 570 |
| Taren Point/Caringbah | 21,300 | 1,420,000 | 280 |
| Total | 113,400 | 5,680,000 | 1,120 |

Implementing an alternative approach would avoid significant opportunities lost to the area in terms of employment and development (GFA).

Conclusions

Key Findings:

- Sterilising an area from normal market forces would result in lower employment growth and investment in the short term and may require higher levels of intervention and investments in the future.
- There is a need to intervene in the “employment lands” for them to develop into integrated mixed use areas. This would allow higher total employment outcomes overall at 2050, higher rates of jobs growth and a transition to the types of employment needed for the future economy.
- To attract particular higher value jobs such as office, creative and cultural, entertainment, retail and local services requires a programme of interventions and investment, including urban design and infrastructure elements.

Facilitating the market to deliver employment outcomes is more cost effective, achieves a more efficient utilisation of land and generates long term benefits for local communities.

Recommendations

The employment lands require a number of interventions

| Investigation Areas | Recommended interventions | Potential initiatives to enable the recommended approach to deliver the scenarios |
|---|--|--|
| Alexandra/ Eveleigh | Review to ensure all stakeholder needs are met + Strategic policy review for aligned objectives | Initiatives to redress gaps in urban design and infrastructure within the precinct, including: <ul style="list-style-type: none"> Land use changes to facilitate commercial office uses and higher densities Enhanced public transport |
| Artarmon | Strategic policy review for aligned objectives + Monitor delivery and maintain market appeal | <ul style="list-style-type: none"> Rezoning of parts of the precinct Retain the heritage character and lower building heights for creative and cultural. Facilitate higher office towers along the Pacific Highway and motorway and closer to the railway station, Limit residential uses. |
| Brookvale | Monitor delivery and maintain market appeal + Place based enhancements | <ul style="list-style-type: none"> Facilitating road, pedestrian and cycling connectivity and amenity within the precinct, Improving permeability of street network |
| Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area) | Ascertain investment to recalibrate to market requirement + Planning changes to reduce constraints and place based enhancements + Funding - Multi Source and Land Use Change + Review to ensure all stakeholder needs are met + Strategic policy review for aligned objectives | <ul style="list-style-type: none"> Rezoning of industrial land to allow for mixed use New mass public transit - light rail New road bridge connections to the peninsula Placemaking enhancements by developers and governments to improve the public realm and pedestrian environment. |
| Taren Point/ Caringbah | Monitor delivery and maintain market appeal + Place based enhancements + Funding - Multi Source + Review to ensure all stakeholder needs are met + Strategic policy review for aligned objectives + Oversee growth to achieve land requirements | <ul style="list-style-type: none"> Enhance the pedestrian and cycling environment Increase permeability of the street network New public transport infrastructure and open space. Seed projects to foster a cluster of like businesses |

The interventions and initiatives required would shift as market conditions change.

Introduction

1

Purpose

Purpose of the brief

The Urban Development Institute of Australia (NSW) (UDIA) is keen to understand the impact of the sterilisation of employment and industrial lands through the Greater Sydney Commission's 'retain and manage' and 'review and manage' classifications. Specifically:

- It seeks to quantify the lost opportunity to create benefits and value for multiple beneficiaries
- The analysis will be used by the UDIA in its advocacy and what this means in terms of a lost opportunity for the future of the city.

Approach

The study focuses on five (5) selected locations in the Eastern Harbour and Central River Cities and considers two cases for each:

1. A base case which considers the current scenario and base conditions for employment growth in each area in line with the 'retain and manage' and 'review and manage' classifications for industrial lands.
2. A project case (Scenario 1) which considers an alternate approach for future employment growth involving a mixed-use development of the industrial lands for each area.

1.2 Background and Context

In its Greater Sydney Region Plan: A Metropolis of Three Cities, the Greater Sydney Commission (GSC) sets out a plan to meet the needs of a growing and changing population with the transformation of Greater Sydney into a metropolis of three cities:

- the Western Parkland City
- the Central River City
- the Eastern Harbour City

Employment lands – GSC actions

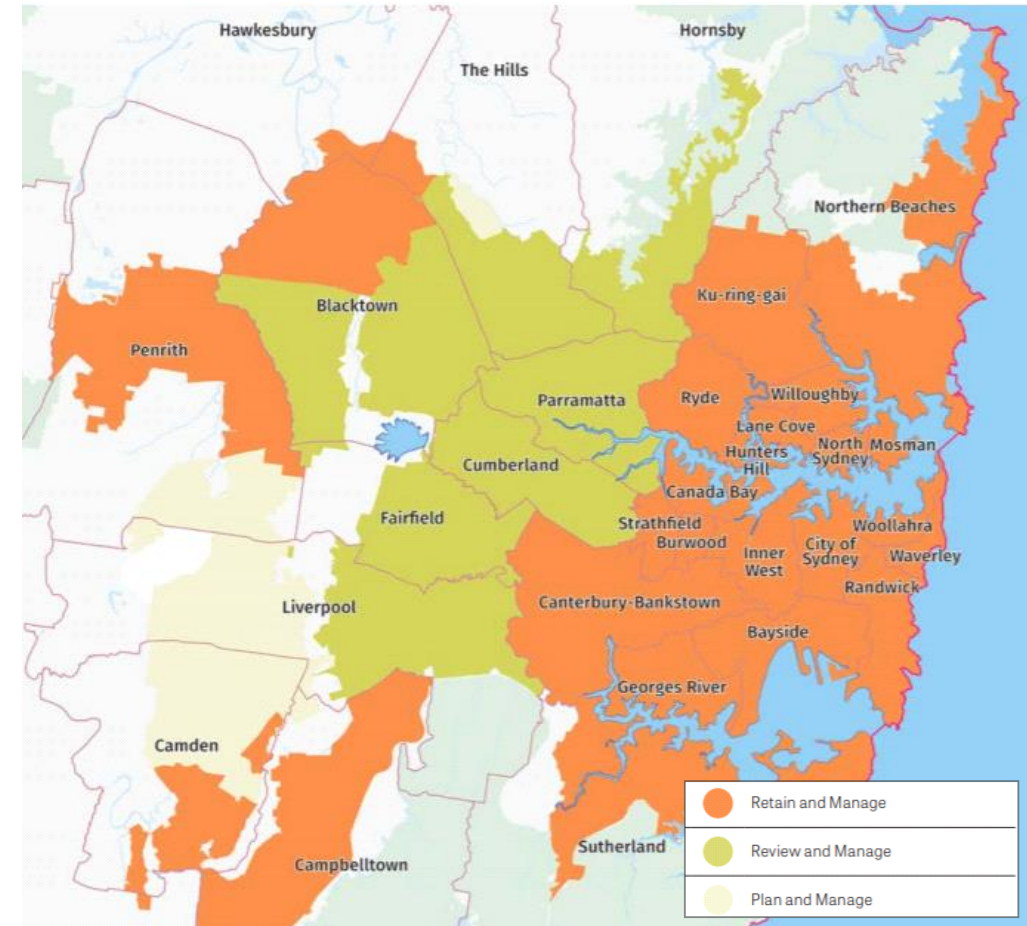
- One of ten (10) directions identified to deliver the Greater Sydney Region Plan (GSRP) is ‘Jobs and skills for the city’, the focus of which is to create the conditions for a stronger economy. One of the stated objectives to deliver the direction is - ‘Industrial and urban services land is planned, retained and managed’.
- The GSC identifies that retention, growth and enhancement of industrial and urban services land should reflect the needs of each of Greater Sydney’s three cities, and their local context. Each city should provide land for a wide range of businesses that support the city’s productivity and integrated economy. Each of the five (5) District Plans to deliver the GSRP designates that these ‘employment lands should be retain, manage or plan’ (refer to table 1 & figure 1).
- This policy to preserve employment lands would have the effect to constrain the potential to renew a number of large urban areas. At its most extreme, this would see the safe-guarding of the designated lands from conversion to residential, including to mixed use zoning.
- Step 1 (one) of this analysis provides a macro view of 26 years of employment change across the city and areas of interest, including 3D mapping.
- This study investigates 5 areas across the Eastern Harbour City and Central River City where identified employment lands have been categorised as either ‘Retain and manage’ or ‘Review and manage’ (see next page for definition of these).

Greater Sydney Commission 'Employment Lands' Strategy

Different actions to employment lands across Greater Sydney (Source: Greater Sydney Commission)

| Approach | Description | Locations |
|--------------------------|---|--|
| Retain and manage | All existing industrial and urban services land should be safeguarded from competing pressures, especially residential and mixed-use zones | Across the Eastern Harbour City, the North West Growth Area and industrial land in the established urban areas of the Western Parkland City, including the existing Western Sydney Employment Area |
| Review and manage | The Greater Sydney Commission will review all industrial and urban services land to either confirm its retention or manage uses to allow sites to transition to higher-order employment activities and seek appropriate controls to maximise business and employment outcomes | The established areas of Central City District, Hornsby, Liverpool and Fairfield |
| Plan and manage | In land release areas, there is a need for additional industrial and urban services land in response to long-term projected population and development growth | Applies across the South West and Western Sydney Airport Growth Areas |

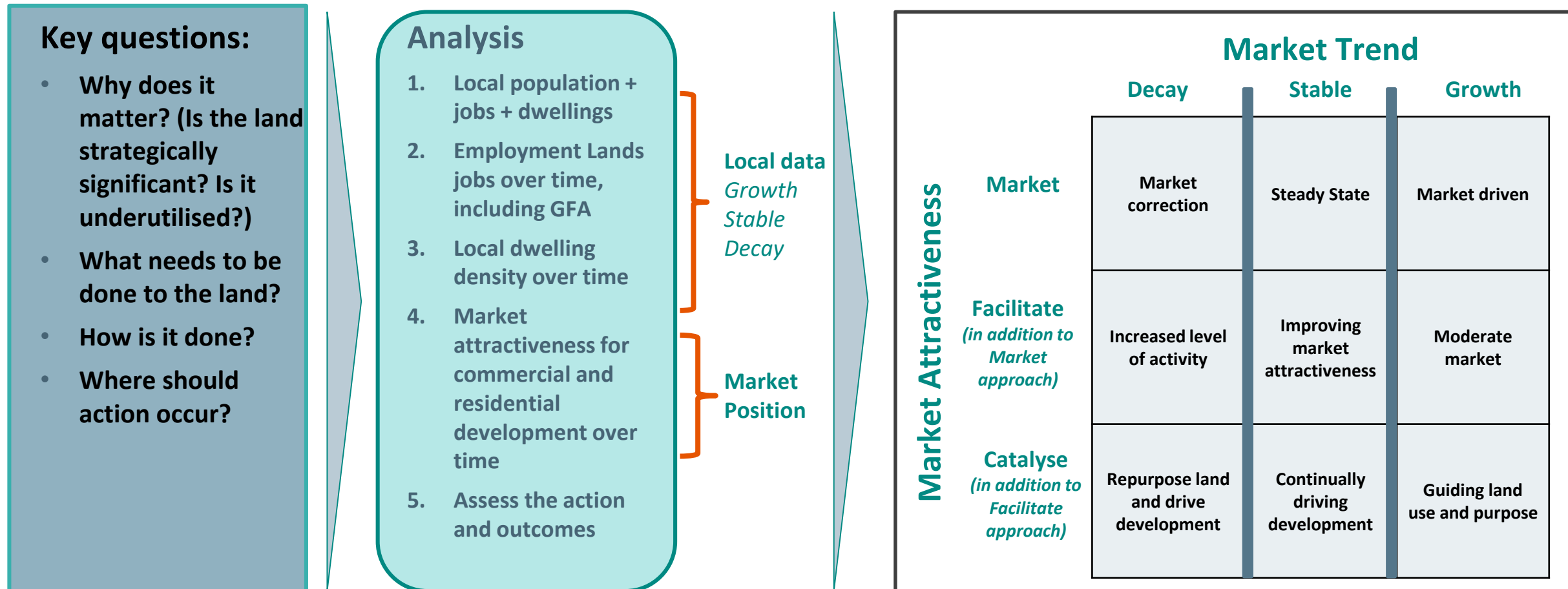
Areas within Greater Sydney and their approaches to employment land (Source: Greater Sydney Commission)



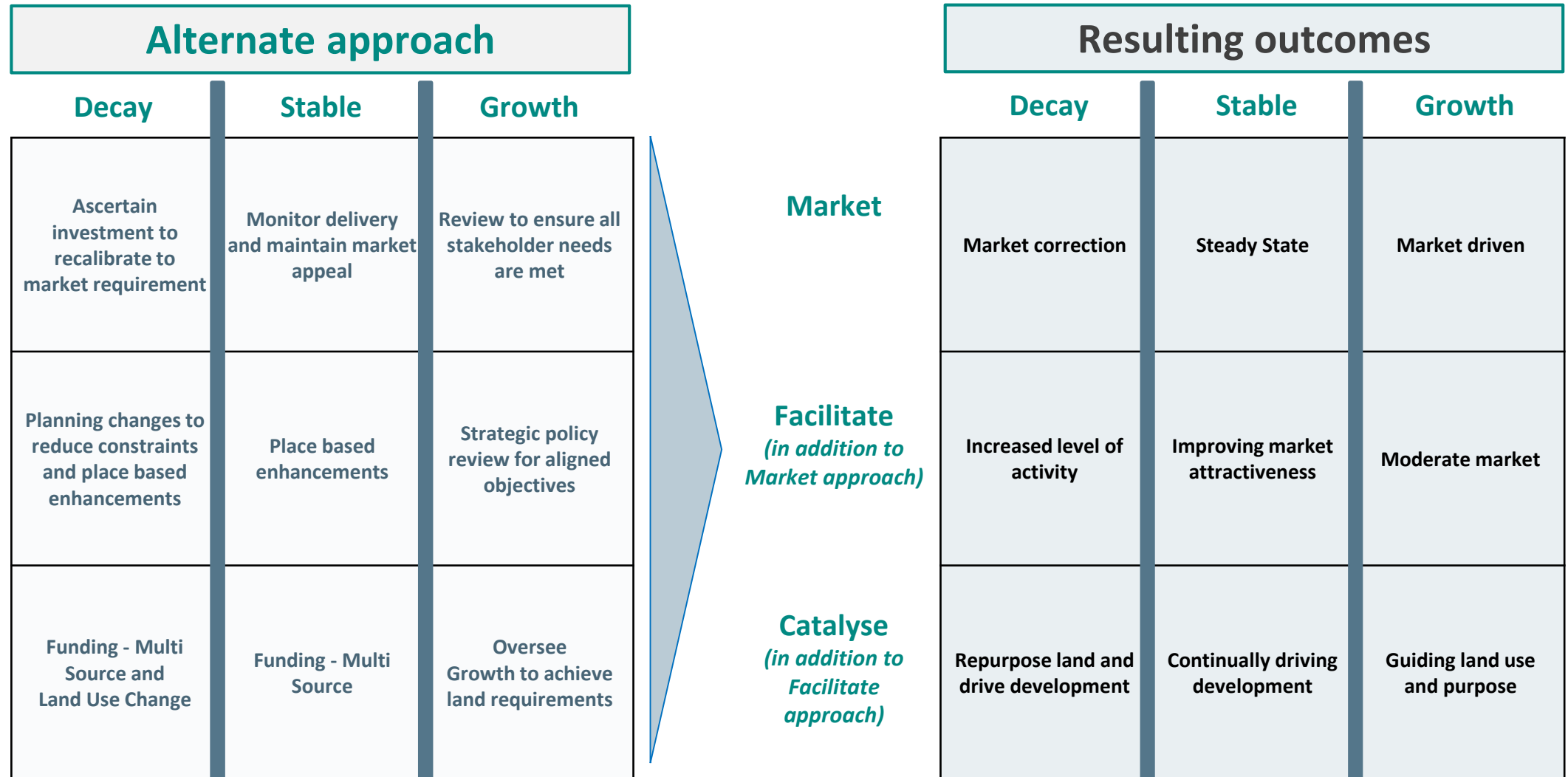
The GSC 'Employment Lands' Strategy is a 'top-down' approach that takes a broad based geographic view and has not considered localised effects.

1.4 Schema for an alternate approach (1/2)

This alternate approach focuses on the specific and local, rather than a coarse and broad approach.



1.4 Alternate approach to categorising urban land (2/2)



1.5 Scope

Cases for assessment

The scope of the assessment considers two cases:

1. A base case which considers the current scenario and base conditions for employment growth in each area in line with the 'retain and manage' and 'review and manage' classifications for industrial lands.
2. A project case (Scenario 1) which considers the future employment growth involving a mixed-use development of the industrial lands for each area.

Scope of requirements

The evidence-based approach adopted required a 'top-down' macro-economic analysis informed by, 'bottom-up' place-based considerations. Value Advisory Partners has modelled at a high level the differences in jobs, development and growth between an Alternate approach (allowing mixed-use development of the industrial lands) compared with retaining the lands in line with the GSC classifications (a Base Case scenario).

This analysis is informed by:

- State planning direction and local planning policy on land use and economic development;
- Research on historic employment trends and drivers that are likely to affect the Study Areas including an assessment of their market attractiveness;
- Identification of the types of employment sectors that are likely to be attracted to and able to be accommodated;
- Identification of essential infrastructure requirements of the identified employment types / industries (e.g. locational, built form, floor area requirements, access arrangements, traffic exposure, public transport, co-location, etc.);

- Uplift factor based on land availability - conversion of employment and urban services lands to mixed use/ residential uses;
- Employment projections by industry (to 2050);
- The use of one scenario for each of the investigation areas to project employment and model the impacts on total employment and the mix of employment;
- The value created by the scenario and how that would compare to base case outcomes in terms of development outcomes; and
- Two case studies of mixed-use buildings/precincts and how they have been achieved (e.g. planning controls, government intervention, early public transport delivery, incentives etc.)

Specifically excluded from the scope of requirements is:

- A detailed quantification of the value created from opportunities which can be used for funding;
- Quantification of any potential value capture revenues, including identification of potential value capture mechanisms;
- Analysis of broader economic impacts, such as tourism, GDP, etc.; and
- Comprehensive stakeholder consultation and engagement.

1.6 Investigation Area

Selected employment lands

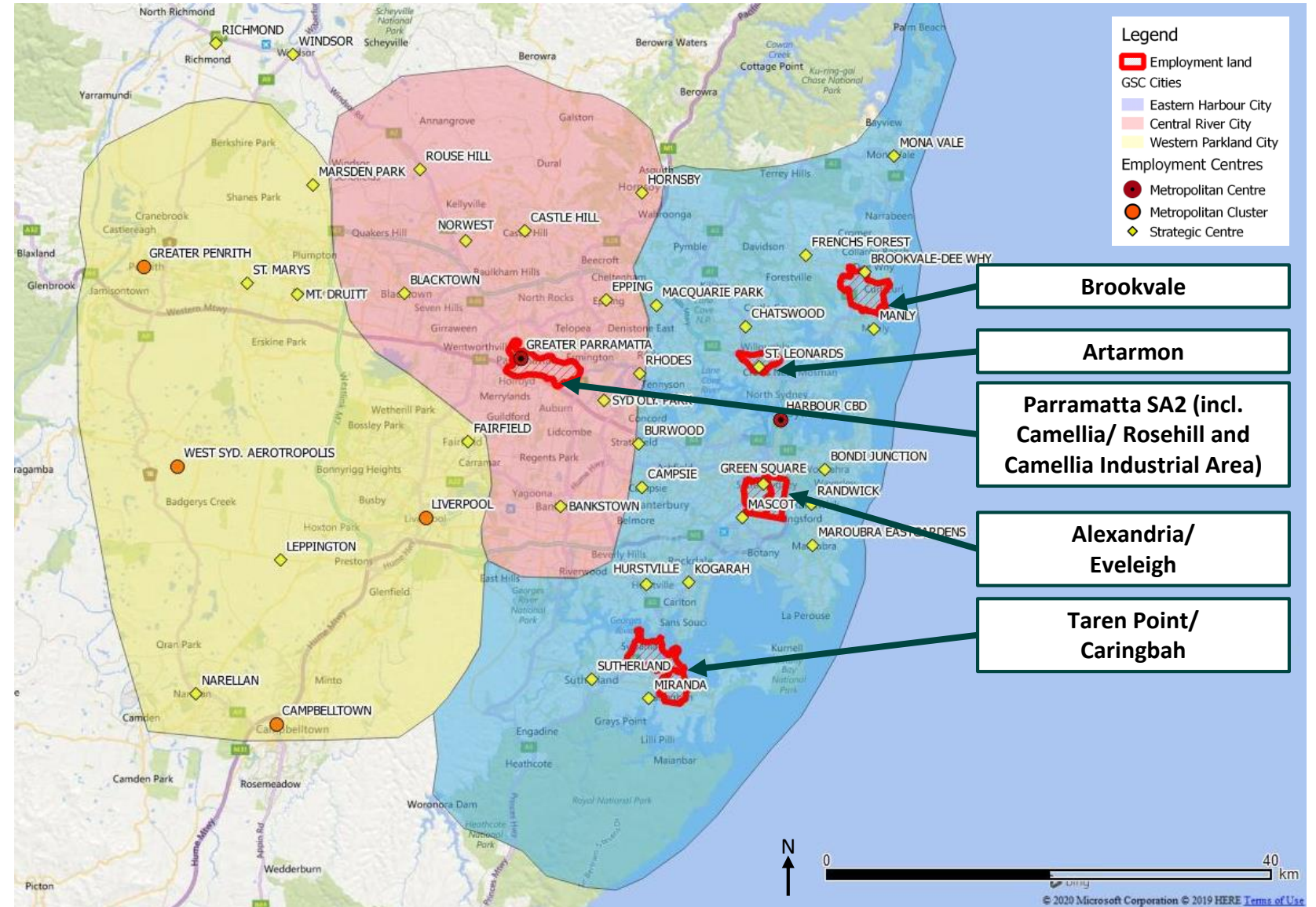
The locations for analysis were selected in collaboration with UDIA (NSW), and considered the following criteria:

- A mix of locations that are subject to the 'Retain and Manage' and 'Review and Manage' categorisations
- Locations in Sydney that have previously transitioned from employment and urban services uses, including any examples of positive or negative outcomes for jobs and communities
- Locations that are yet to transition from current employment and urban services uses

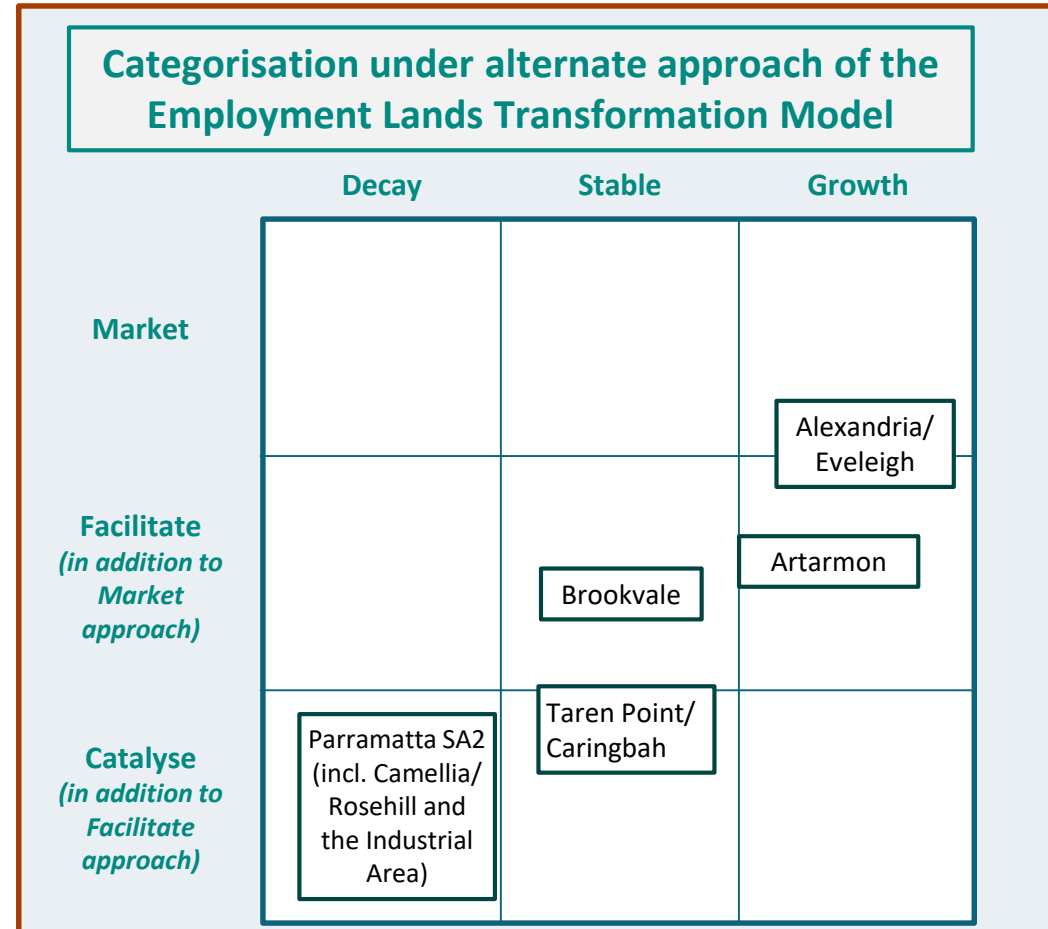
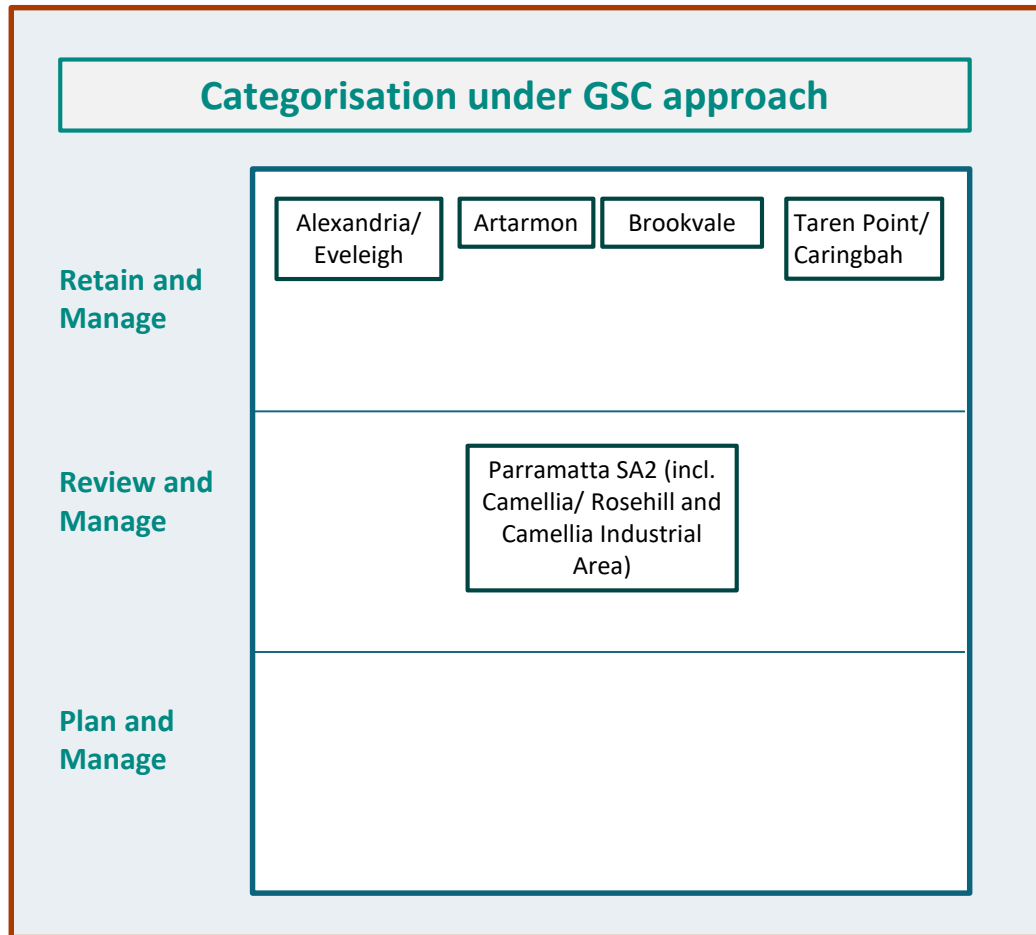
Five (5) Locations have therefore been included in the study. With reference to figure 2, the scope of assessment has been confined to locations of current employment and urban services lands across the Eastern Harbour and Central River Cities, being:

- Alexandria/Eveleigh
- Artarmon
- Brookvale
- Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area)
- Taren Point/Caringbah

Figure 2: Employment land areas of investigation within the GSC 3 Cities Model (Source: Value Advisory Partners, Greater Sydney Commission)



Summary Assessment of Employment Lands Models



The Employment Lands Transformation Model allows for a more comprehensive diagnostic of market conditions and the interventions needed for change.

Summary Assessment of Employment Lands Models

| Areas | Current Employment Lands Transformation Model Recommended interventions: Facilitate “Mixed-use” within Employment Lands | Current GSC Approach: “Retain/ Review and Manage” |
|--|--|--|
| Alexandra/ Eveleigh | Review to ensure all stakeholder needs are met + Strategic policy review for aligned objectives. This includes: Initiatives to redress gaps in urban design and infrastructure within the precinct including Land use changes to facilitate commercial office uses and higher densities, and Enhanced public transport. | Retain and manage |
| Artarmon | Review to ensure all stakeholder needs are met + Strategic policy review for aligned objectives. This includes: Rezoning of parts of the precinct , Retain the heritage character and lower building heights for creative and cultural., Facilitate higher office towers along the Pacific Highway and motorway and closer to the railway station, and Limit residential uses. | Retain and manage |
| Brookvale | Monitor delivery and maintain market appeal + Place based enhancements. This includes: Facilitating road, pedestrian and cycling connectivity and amenity within the precinct, Improving permeability of street network. | Retain and manage |
| Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area) | Ascertain investment to recalibrate to market requirement + Planning changes to reduce constraints and place-based enhancements + Funding - Multi Source and Land Use Change. This includes: Rezoning of industrial land to allow for mixed use, New mass public transit - light rail , New road bridge connections to the peninsula, and Placemaking enhancements by developers and governments to improve the public realm and pedestrian environment. | Review and manage |
| Taren Point/ Caringbah | Monitor delivery and maintain market appeal + Place based enhancements + Multi Source Funding. This includes: Enhance the pedestrian and cycling environment, Increase permeability of the street network , New public transport infrastructure and open space, and Seed projects to foster a cluster of like businesses. | Retain and manage |

The Employment Lands Transformation Model allows for a more comprehensive diagnostic of market conditions and the interventions needed for change.

Context Assessment

2

Macro view of employment change in Sydney 1992- 2018

Overall employment growth of SA2 for Sydney 1992-2018)

| Rank | SA2 | 1992 | 2018 | CAGR |
|------|-------------------------------------|---------|---------|------|
| 1 | Mount Annan - Currans Hill | 4,429 | 13,513 | 4.4% |
| 2 | Pymont - Ultimo | 16,186 | 45,940 | 4.1% |
| 3 | Surry Hills | 13,510 | 37,220 | 4.0% |
| 4 | Sydney - Haymarket - The Rocks | 157,091 | 410,336 | 3.8% |
| 5 | Darlinghurst | 6,186 | 15,830 | 3.7% |
| 6 | Newtown - Camperdown - Darlington | 10,462 | 26,561 | 3.6% |
| 7 | Redfern - Chippendale | 7,515 | 18,679 | 3.6% |
| 8 | Liverpool | 11,288 | 26,741 | 3.4% |
| 9 | Rooty Hill - Minchinbury | 6,656 | 14,286 | 3.0% |
| 10 | Waterloo - Beaconsfield | 9,132 | 18,513 | 2.8% |
| 11 | Prestons - Edmondson Park | 6,885 | 13,766 | 2.7% |
| 12 | Paddington - Moore Park | 6,193 | 12,181 | 2.6% |
| 13 | Campbelltown - Woodbine | 11,968 | 23,143 | 2.6% |
| 14 | Baulkham Hills (West) - Bella Vista | 16,280 | 30,971 | 2.5% |
| 15 | North Ryde - East Ryde | 8,105 | 14,842 | 2.4% |
| 16 | North Parramatta | 6,405 | 11,593 | 2.3% |
| 17 | Macquarie Park - Marsfield | 32,796 | 59,271 | 2.3% |
| 18 | Erina - Green Point | 6,529 | 11,592 | 2.2% |
| 19 | Kingswood - Werrington | 5,741 | 10,178 | 2.2% |
| 20 | Lalor Park - Kings Langley | 9,980 | 17,405 | 2.2% |
| 21 | Gosford - Springfield | 12,980 | 22,519 | 2.1% |
| 22 | Erskineville - Alexandria | 17,689 | 30,505 | 2.1% |
| 23 | Potts Point - Woolloomooloo | 10,423 | 17,935 | 2.1% |
| 24 | Blacktown (East) - Kings Park | 15,215 | 26,011 | 2.1% |
| 25 | Bondi Junction - Waverly | 11,513 | 19,225 | 2.0% |
| 26 | Parramatta - Rosehill | 38,956 | 63,727 | 1.9% |
| 27 | Northmead | 13,245 | 21,659 | 1.9% |
| 28 | Concord West - North Strathfield | 14,696 | 24,025 | 1.9% |
| 29 | Hurstville | 7,790 | 12,660 | 1.9% |
| 30 | Chipping Norton - Moorebank | 11,102 | 17,991 | 1.9% |

Analysis from ABS Data

Table 2 shows the top thirty SA2s (suburbs or part of a suburb) by compound annual growth rate (CAGR) equal to or above the average for Sydney as a whole over the 1992-2018 period:

- The ranking of the fastest growing SA2, (with the exception of Mount Annan, which is coming off a very low base), shows that the areas of highest employment growth have been in the Sydney CBD and its expanded central city area.
- Most of the remainder are all key activity centres with mixed use precincts, which shows that mixed use areas have out-performed purely industrial and urban services land. This is consistent with recent market research which finds that traditional policies to achieve jobs growth that relied on securing office jobs in the CBD and surrounds and manufacturing and logistics jobs in suburban locations, is unlikely to yield the jobs required to service developed economies of the future.
- Two of the study areas fall within the top ranked areas:
 - Alexandria Eveleigh, which consists of two SA2 areas – Waterloo-Beaconsfield (ranked 10) (mixed use) and Erskineville-Alexandria (ranked 22) (mainly industrial)
 - Camellia (mainly industrial), which makes up the eastern part of Parramatta-Rosehill (ranked 26). It is to be noted that nearly all of the growth was in the Parramatta part of the SA2.

Areas that have the highest job growth in Sydney are the mixed use residential and commercial urban areas and centres

Macro view of employment change in Sydney (continued)

Sydney's employment grew by 64 per cent over the past 26 years - from 1.711 million in 1992 to 2.805 million in 2018, or 1.9% per annum (CAGR).

The industries of employment that grew the most (quantitatively) over the period 1992-2018 were:

- Commercial Office
- Local Services
- Construction
- Entertainment
- Creative and Cultural

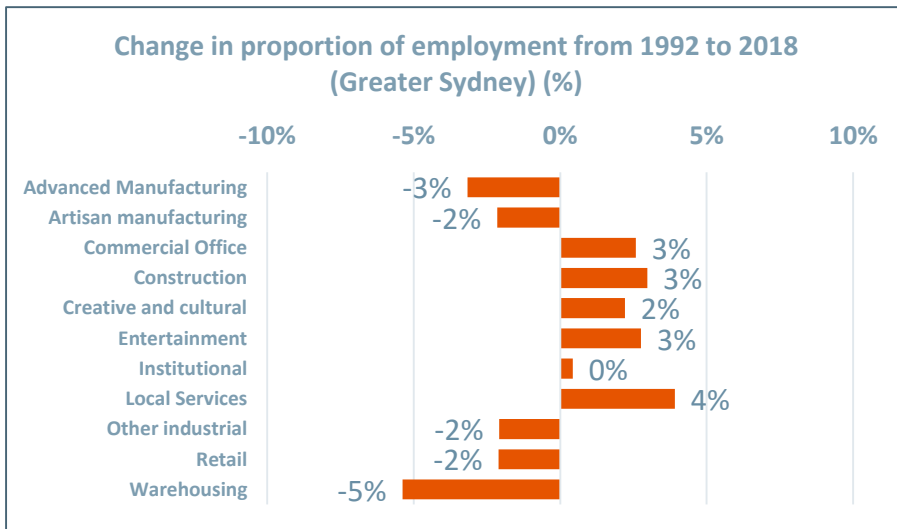
Together these five industries of employment accounted for 68% of total employment (2018) up from 55% in 1992.

Conversely, employment in advanced manufacturing, artisan manufacturing, and other industrial all fell over the same period.

Retail and warehousing (and transport) employment, fell as a proportion of total employment over the period.

Changes in employment type in Sydney 1992-2018

| Industry Types | 1992 | 2018 | Change | CAGR | Proportion 1992 | Proportion 2018 | Change in proportion |
|------------------------|------------------|------------------|------------------|-------------|-----------------|-----------------|----------------------|
| Advanced Manufacturing | 91,689 | 61,406 | -30,283 | -1.5% | 5% | 2% | -3% |
| Artisan manufacturing | 79,470 | 69,927 | -9,542 | -0.5% | 5% | 2% | -2% |
| Commercial Office | 442,406 | 797,512 | 355,106 | 2.3% | 26% | 28% | 3% |
| Construction | 111,245 | 265,666 | 154,421 | 3.4% | 6% | 9% | 3% |
| Creative and cultural | 86,027 | 203,038 | 117,006 | 4.4% | 5% | 7% | 2% |
| Entertainment | 77,736 | 204,821 | 127,089 | 4.8% | 5% | 7% | 3% |
| Institutional | 87,541 | 155,504 | 67,964 | 2.2% | 5% | 6% | 0% |
| Local Services | 220,836 | 471,781 | 250,946 | 3.0% | 13% | 17% | 4% |
| Other industrial | 70,931 | 57,983 | -12,947 | -0.8% | 4% | 2% | -2% |
| Retail | 199,837 | 268,424 | 68,587 | 1.1% | 12% | 10% | -2% |
| Warehousing | 244,072 | 248,996 | 4,923 | 0.1% | 14% | 9% | -5% |
| Total | 1,711,789 | 2,805,057 | 1,093,268 | 1.9% | | | |



The trend for employment is increasingly to be located in mixed use areas. Traditional models requiring separation of industrial from knowledge employment and the separation of employment from residential uses is no longer valid. Reliance on this approach is unlikely to deliver the quantum and range of jobs required for the future.

Macro view of employment change in Sydney (continued)

Overall number of SA2 changes in industry type for Sydney 1992-2018

The analysis shows that local services employment has increased as a proportion of total employment in more SA2s than any other employment category. Local services employment support the resident population – providing local education and health, hairdressing, gym and other services. This more dispersed pattern of growth is consistent with the growth of population – particularly in Western Sydney.

Entertainment employment (restaurants, cinemas, hotels) is partially dependent on population growth, but also partly dependent on tourism growth.

Commercial office growth has been more concentrated around particular activity centres.

SA2 with 5% or more change (increase and decrease) in proportion by industry type from 1992 to 2018

| Increase >=5% | | |
|--|--|------------|
| Job Type | 5% distribution change of job type (SA2) | Proportion |
| Advanced Manufacturing | 0 | -- |
| Artisan manufacturing | 1 | 0% |
| Commercial Office | 20 | 5% |
| Construction | 92 | 24% |
| Creative and cultural | 9 | 2% |
| Entertainment | 55 | 14% |
| Institutional | 3 | 1% |
| Local Services | 204 | 52% |
| Other industrial | 0 | -- |
| Retail | 0 | -- |
| Warehousing | 5 | 1% |
| Total with change >=5% proportion | 389 | |
| Overall number of SA2 by industry type | 3421 | |
| Proportion changed industry type by >=5% | 11% | |

| Decrease <= -5% | | |
|--|---|------------|
| Job Type | -5% distribution change of job type (SA2) | Proportion |
| Advanced Manufacturing | 49 | 15% |
| Artisan manufacturing | 23 | 7% |
| Commercial Office | 31 | 9% |
| Construction | 1 | 0% |
| Creative and cultural | 4 | 1% |
| Entertainment | 0 | -- |
| Institutional | 7 | 2% |
| Local Services | 0 | -- |
| Other industrial | 28 | 9% |
| Retail | 77 | 23% |
| Warehousing | 109 | 33% |
| Total with change <= -5% proportion | 329 | |
| Overall number of SA2 by industry type | 3421 | |
| Proportion changed industry type by <= -5% | 10% | |

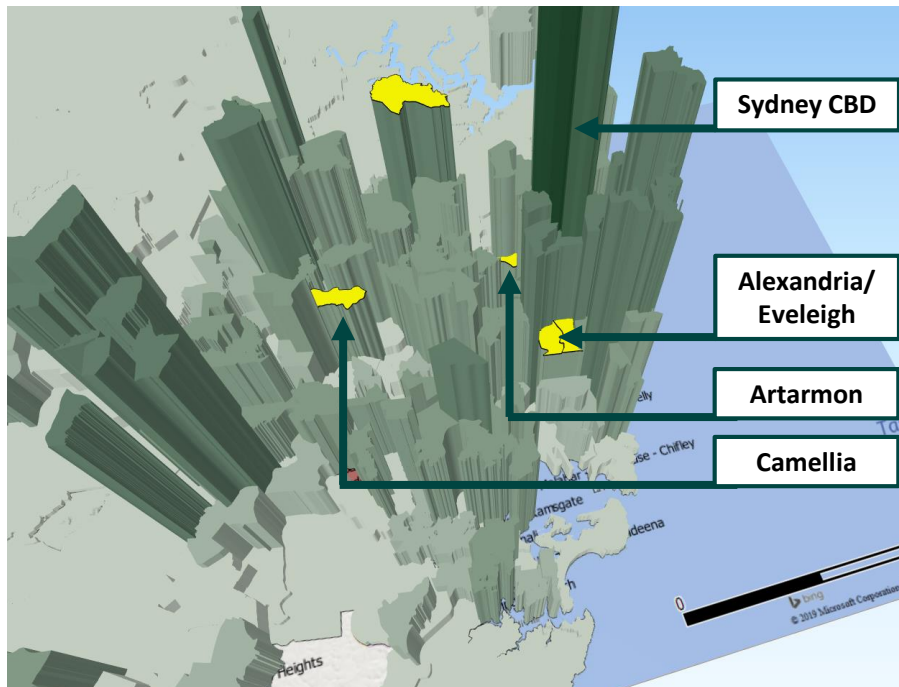
Note: an SA2 is an ABS category that approximates a suburb.

Changing the view: Using Employment Lands as a key differentiator.

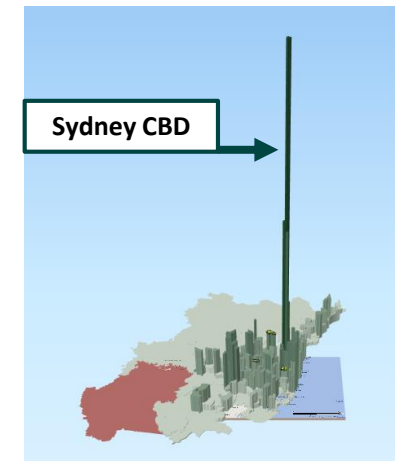
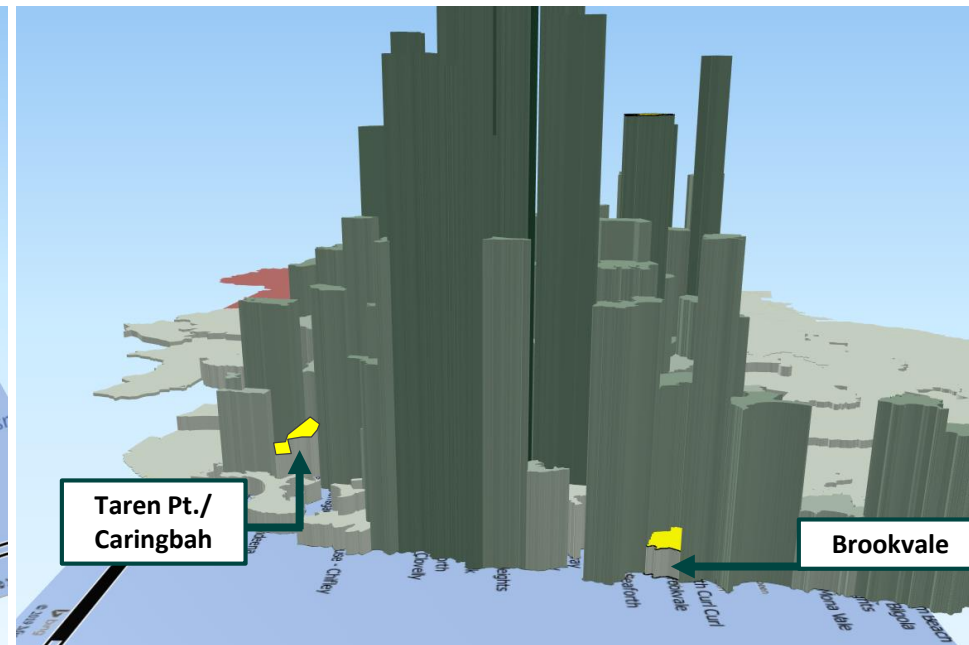
1992-2018 Change in Employment GFA

A new view of employment lands in Sydney shows that a differentiated treatment is needed at the local level (a 'bottom-up approach').

An analysis of historical ABS employment data for the period 1992 to 2018 by SA2 (as defined by the ABS) shows changes from locality to locality, often next to each other. Images from the 3D analysis of change in GFA density below show how development for the period is not uniform geographically, and specific localised solutions and interventions may be required to attain highest and best use of land.



Source: Value Advisory Partners analysis and modelling based on NIEIR sourced ABS historical data.



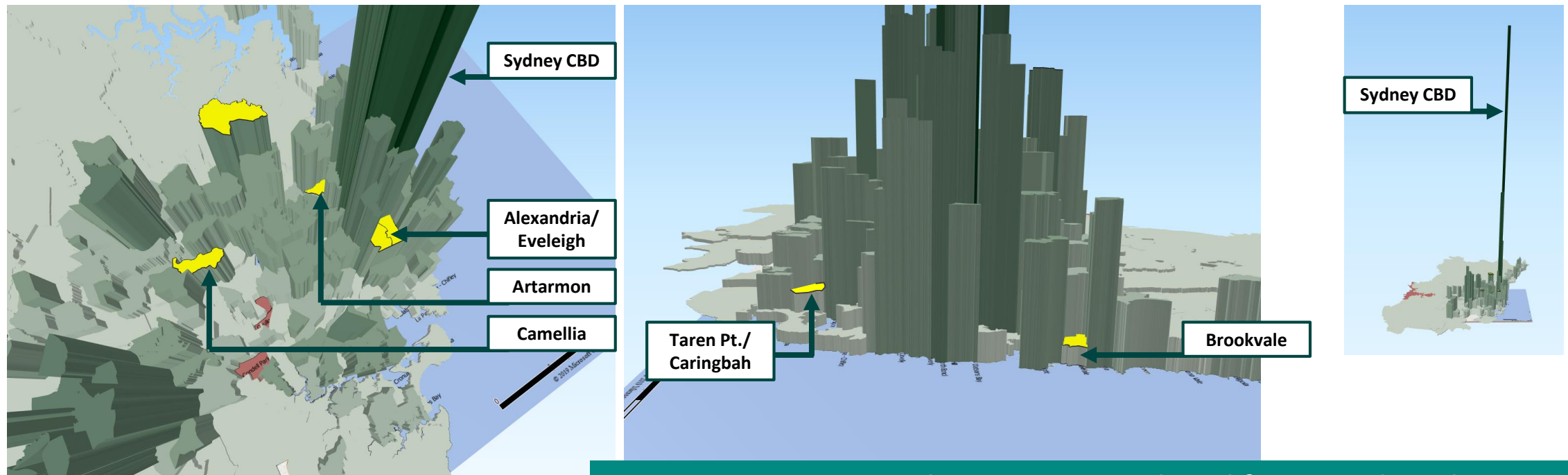
An approach is needed that considers local and targeted, and not only broad and general

Changing the view: Using Employment Lands as a key differentiator.

2018-2050 projected growth in Employment GFA

The employment growth areas (by GFA) across ABS SA2 areas (approximating a suburban level) to 2050 based on a 'business as usual' scenario indicate a vastly different picture from the GSC's approach to employment lands management. That is, it assumes no particular interventions to change the current market trend in each area.

Some of the current industrial areas in the study would be amongst those with the lowest levels of growth in the Sydney metropolitan area, implying a significant market decay or failure.



Source: Value Advisory Partners analysis and modelling based on NIEIR data of ABS.

Outcome: An alternate approach and framework to the GSC 'Employment Lands' Strategy is required to address areas where there is potential market decay or failure

Alexandria/Eveleigh

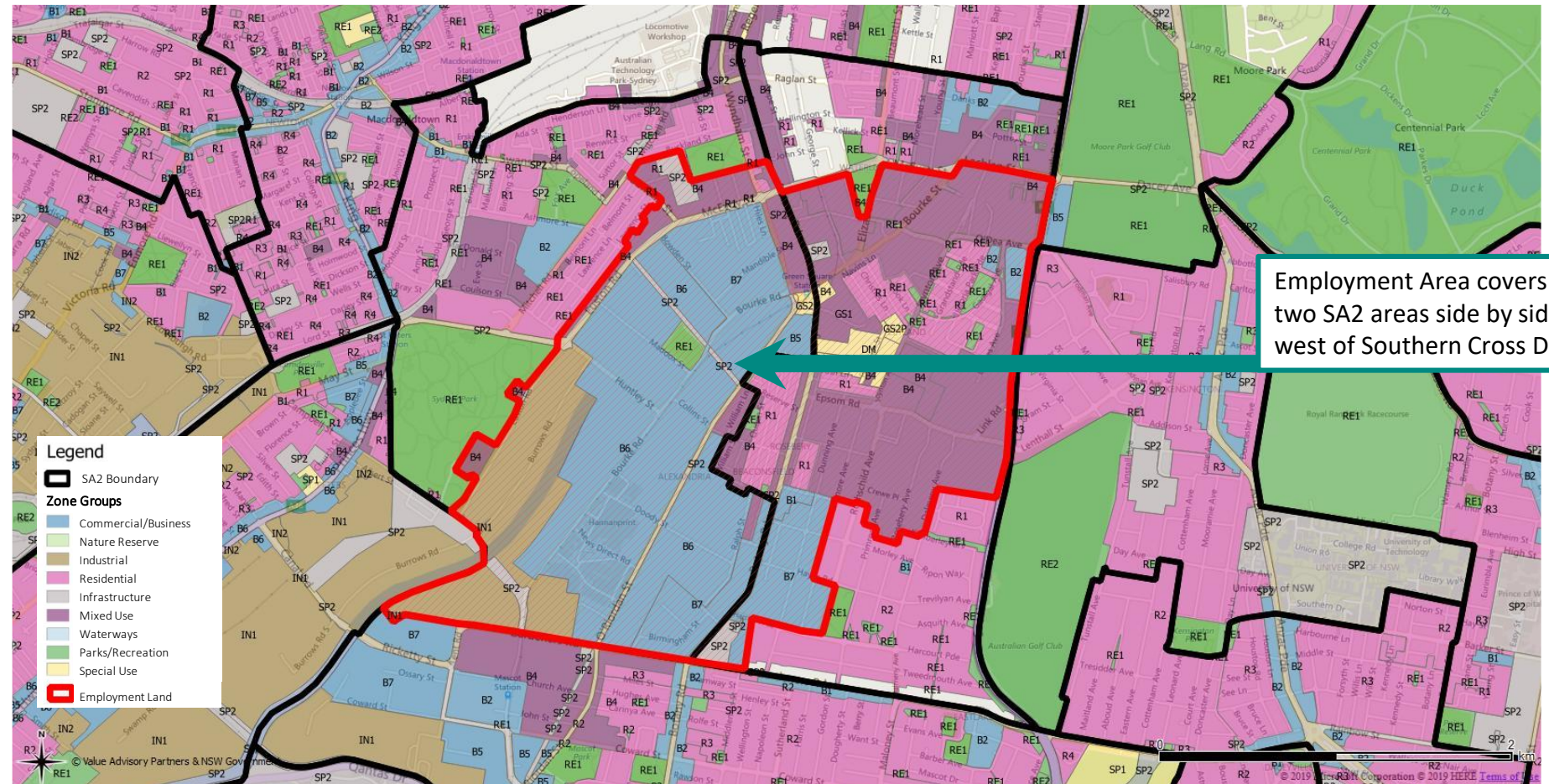
(Erskineville – Alexandria SA2; Waterloo – Beaconsfield SA2)

Overview

- The Alexandria/Eveleigh precinct includes Green Square which has been a designated urban renewal area since 1996.
- This area has experienced a number of government interventions, including the delivery of the underground station on the airport line and rezoning.
- A sizeable area has been made mixed use, while a smaller area remains industrial.
- Employment in the study area has increased from 26,822 in 1992 to more than 49,017 in 2018 or 82%.
- The main growth has been in commercial, retail, creative and cultural and construction employment, which have displaced warehousing and manufacturing.

Areas of Land Use Types

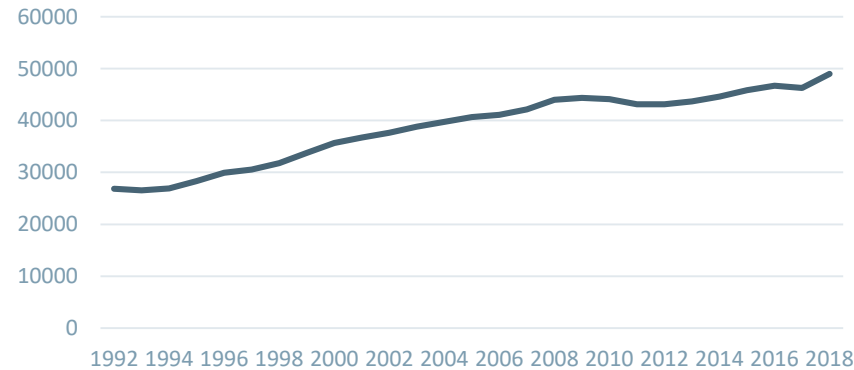
| | Area (hectares) | Area % |
|---|-----------------|--------|
| Industrial | 56 | 8 |
| Business | 186 | 28 |
| Other Employment Land (Mixed Use, Special Use etc.) | 47 | 64 |
| Total | 667 | 100 |



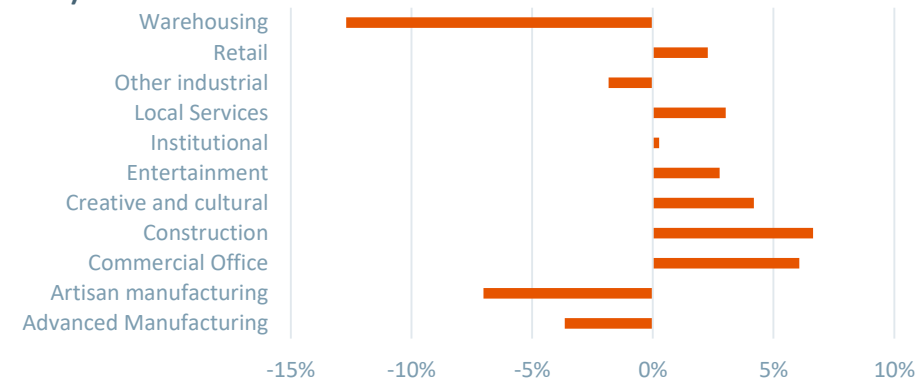
2.2 Alexandria/Eveleigh (continued)

Employment changes between 1992-2018

Alexandria/Eveleigh - Total Employment (1992-2018)

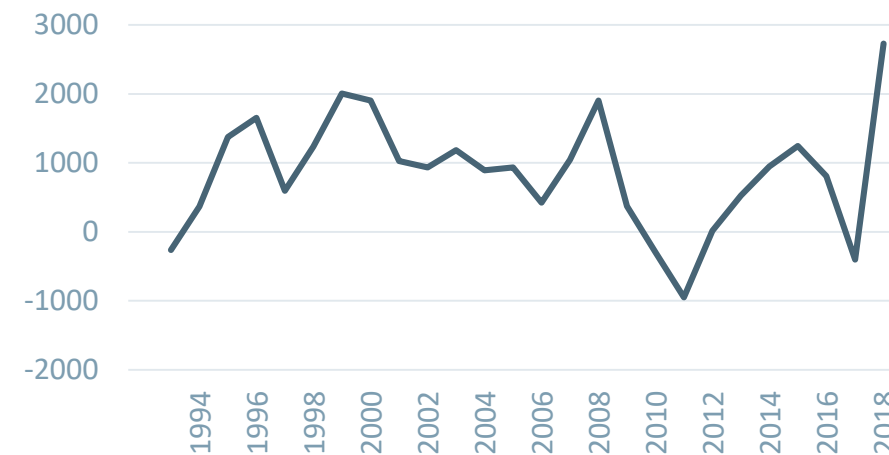


Alexandria/Eveleigh - Percentage change in employment by industry (1992-2018)



| Industry Groups | 1992 | 2018 | Diff. 1992 - 2018 |
|------------------------|--------------|--------------|----------------------|
| Advanced Manufacturing | 1528 | 1002 | (526) |
| Artisan manufacturing | 3305 | 2603 | (702) |
| Commercial Office | 2998 | 8452 | 5,454 |
| Construction | 1231 | 5501 | 4,270 |
| Creative and cultural | 1210 | 4261 | 3,051 |
| Entertainment | 665 | 2570 | 1,905 |
| Institutional | 99 | 306 | 207 |
| Local Services | 2300 | 5681 | 3,381 |
| Other industrial | 825 | 611 | (214) |
| Retail | 3366 | 7269 | 3,903 |
| Warehousing | 9294 | 10761 | 1,467 |
| Total | 26822 | 49017 | 22,195 |

Alexandria/Eveleigh - Annual change in employment (1992-2018)



- Approximately 4ha of the total 667ha of the employment lands area is undeveloped.
- Employment lands categorised as retain and manage.
- Total employment for the period is up by more than 22,000, though there has been a loss of jobs in Artisan Manufacturing (702 or 21%), Advanced Manufacturing (502, or 34%) and Other Industrial (214 or 26%).
- The mix of jobs has changed with Commercial Office, Construction, Creative and Cultural, Local Services, Entertainment and Retail each increasing as a share of all jobs by at least 2%.
- While the total number of Warehousing jobs has increased (9,294 to 10,761), as a share of total employment it has fallen by 13% over the period, with the share of Artisan Manufacturing down by some 7%.

2.3 Artarmon

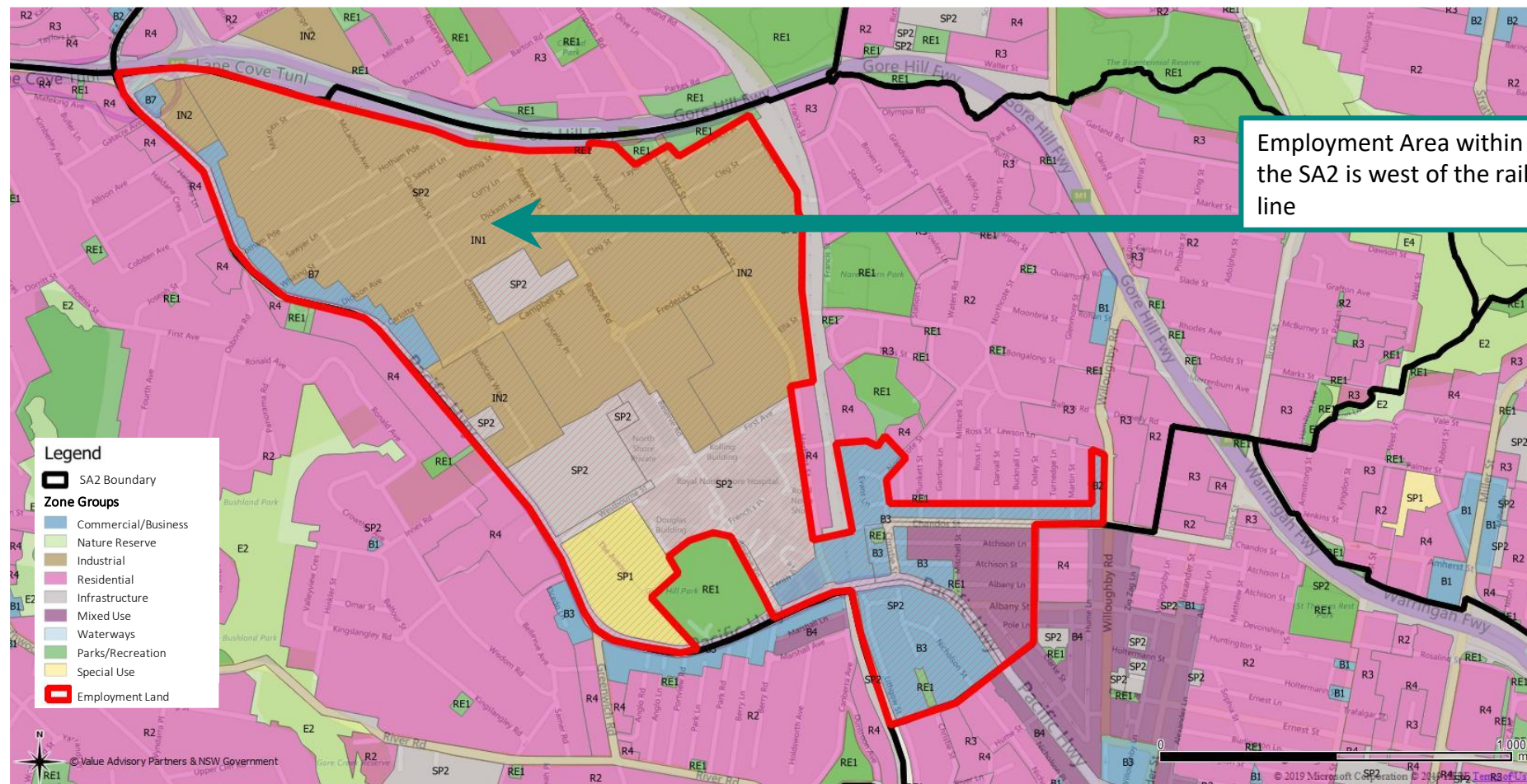
(St Leonards – Naremburn SA2)

Overview

- The Artarmon employment area is located between the North Shore rail line and the Pacific Highway.
- It includes mainly industrial zoned land and some commercial/business and special use zoned land (major hospital), as well as some mixed-use zoned land (mainly residential).
- Total employment has grown by more than 7,900 over the period 1992 to 2018 – to 35,624.
- Growth of Creative and cultural employment has characterised this precinct, both numerically and as a share of total employment. Growth of Institutional and Commercial office employment have also been significant.
- Warehousing employment has been displaced, dropping by 1,500 over the period.

Areas of Land Use Types

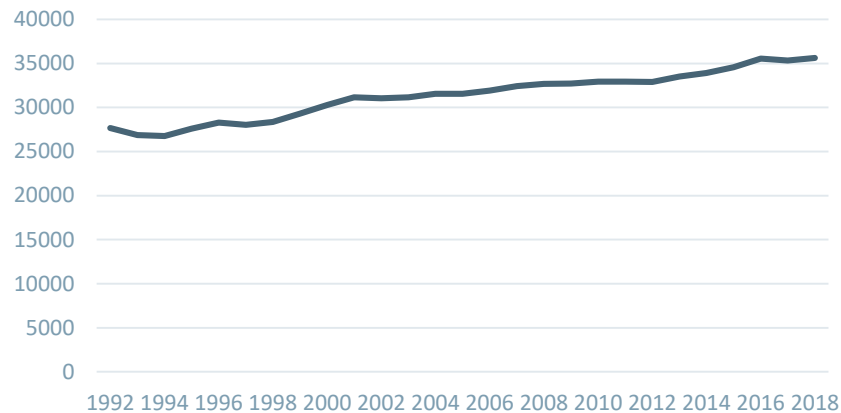
| | Area (hectares) | Area % |
|---|-----------------|--------|
| Industrial | 87 | 62 |
| Business | 22 | 16 |
| Other | | |
| Employment Land (Mixed Use, Special Use etc.) | 31 | 22 |
| Total | 140 | 100 |



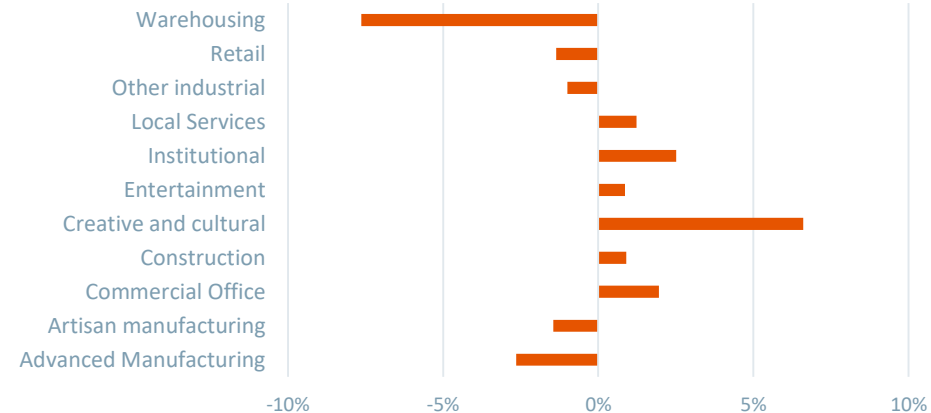
2.3 Artarmon (continued)

Employment changes between 1992-2018

Artarmon - Total Employment (1992-2018)

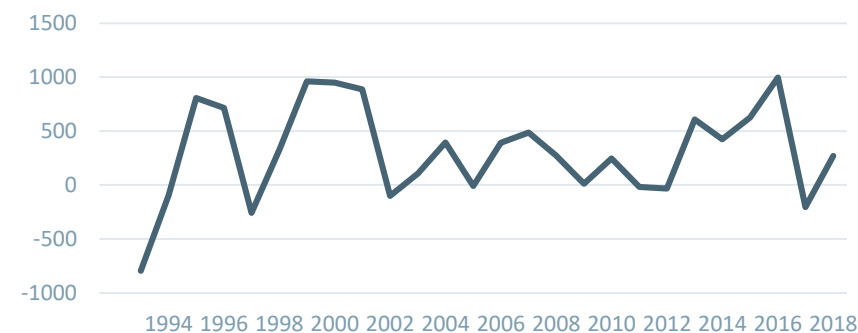


Artarmon - Percentage change in employment by industry (1992-2018)



| Industry Groups | 1992 | 2018 | Diff. 1992 - 2018 |
|------------------------|--------------|--------------|----------------------|
| Advanced Manufacturing | 1609 | 1128 | (481) |
| Artisan manufacturing | 677 | 357 | (320) |
| Commercial Office | 6404 | 8940 | 2,086 |
| Construction | 1349 | 2059 | 710 |
| Creative and cultural | 4119 | 7658 | 3,449 |
| Entertainment | 287 | 678 | 391 |
| Institutional | 4821 | 7101 | 2,280 |
| Local Services | 2020 | 3040 | 1,020 |
| Other industrial | 574 | 385 | 189 |
| Retail | 1799 | 1835 | 36 |
| Warehousing | 4009 | 2442 | (1,567) |
| Total | 27669 | 35624 | 7,955 |

Artarmon - annual change in employment (1992-2018)



- Artarmon has 4ha of undeveloped and 140 ha of developed land in the identified employment lands area.
- GSC identifies Artarmon as a strategic centre for significant metro health and education assets
- Industrial area is highly productive with low vacancy rate – categorised as retain and manage.
- Artarmon experienced overall jobs growth 1992 – 2018, by nearly 8,000.
- Some changes on the share of jobs among 11 industry types – creative and cultural up by over 6%, warehousing down by just less than 8%.
- There has been some loss of advanced manufacturing and artisan manufacturing jobs, both in number (481 and 320 respectively) and as a proportion of all jobs (> 2% for advanced and just less than 2% for artisan).

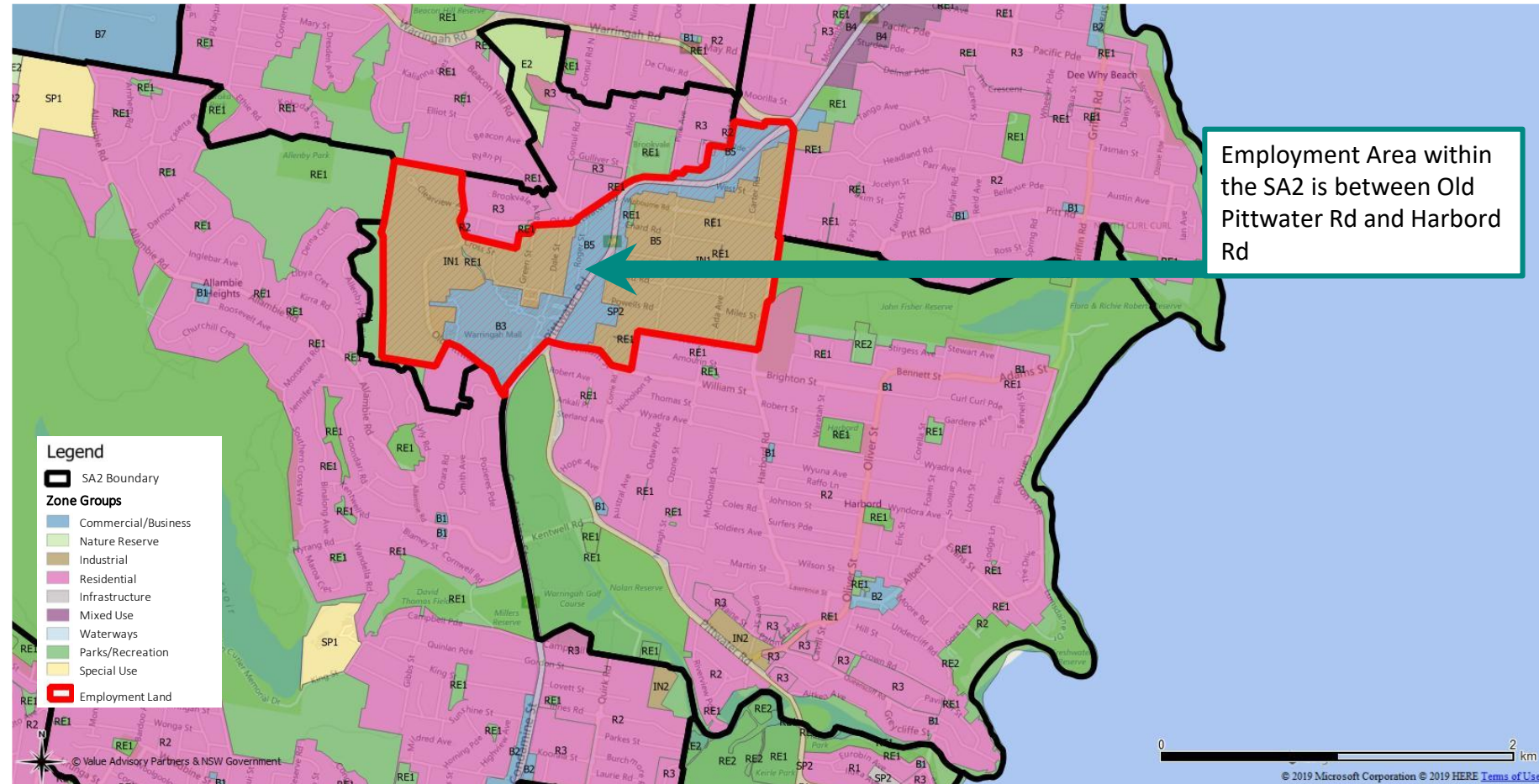
2.4 Brookvale (Freshwater-Brookvale SA2)

Overview

- Over the period 1992 to 2018 the Brookvale employment area has experienced several cycles of employment decline and growth. Overall employment has increased modestly, by 1,500, with most of the net growth occurring in the last two years.
- Warehousing and manufacturing have been in decline, while local services employment followed by commercial office, construction, entertainment and creative and cultural employment have all increased.
- The largest industry of employment, retail, has been largely stagnant over the period 1992-2018.

Areas of Land Use Types

| | Area (hectares) | Area % |
|---|-----------------|--------|
| Industrial | 118 | 72 |
| Business | 47 | 28 |
| Other Employment Land (Mixed Use, Special Use etc.) | 0 | 0 |
| Total | 165 | 100 |



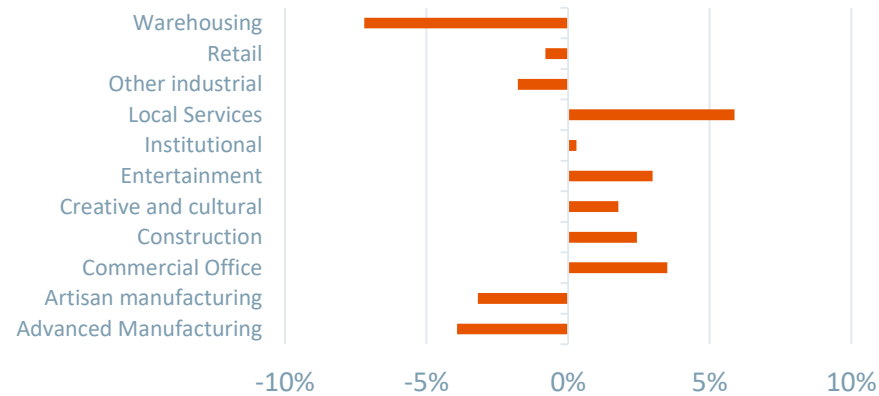
2.4 Brookvale (continued)

Employment changes between 1992-2018

Brookvale - Total Employment (1992-2018)

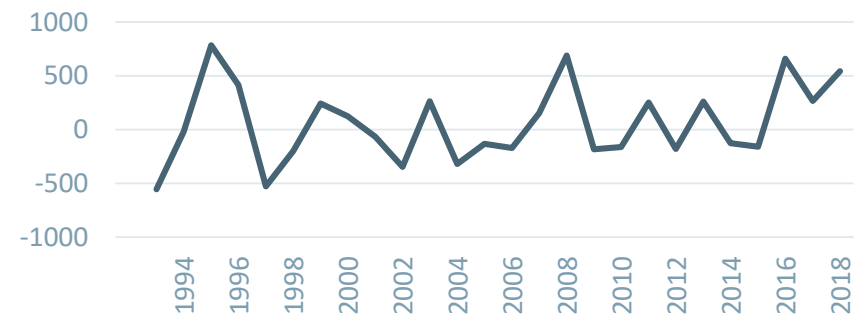


Brookvale - Percentage change in employment by industry (1992-2018)



| Industry Groups | 1992 | 2018 | Diff. 1992 – 2018 |
|------------------------|---------------|---------------|----------------------|
| Advanced Manufacturing | 1127 | 439 | (688) |
| Artisan manufacturing | 1172 | 636 | (536) |
| Commercial Office | 2428 | 3323 | 895 |
| Construction | 1270 | 1859 | 589 |
| Creative and cultural | 931 | 1360 | 429 |
| Entertainment | 608 | 1250 | 642 |
| Institutional | 288 | 369 | 81 |
| Local Services | 2261 | 3615 | 1,354 |
| Other industrial | 855 | 572 | 283 |
| Retail | 4171 | 4354 | 183 |
| Warehousing | 3273 | 2110 | (1,163) |
| Total | 18,384 | 19,887 | 1,503 |

Brookvale - annual change in employment (1992-2018)



- All 165 ha of identified employment lands area is currently developed
- Brookvale-Dee Why is a strategic centre - greatest number of jobs in the Northern Beaches, supports niche manufacturing and wholesale industries
- 2036 baseline jobs target 23,000
- The GSC North District Plan encourages the establishment of new, innovative and creative industries in the Brookvale industrial area
- Total employment grew by a little more than 1,500 from 1992 – 2018, with jobs lost in Warehousing (1,163), Advanced Manufacturing (688), Artisan Manufacturing (536)
- The shape and profile of jobs by industry profile has changed over the period; the share of total jobs in Local Services (just less than 6%), Commercial Office (just less than 4%), Entertainment and Construction have increased while all of Warehousing (~7%), Advanced Manufacturing (just less than 4%), Artisan Manufacturing (a bit over 3%) are down.
- Across the period of the 26 years there have been periods of both net job loss and net job gain on a year-to-year basis

2.5 Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area)

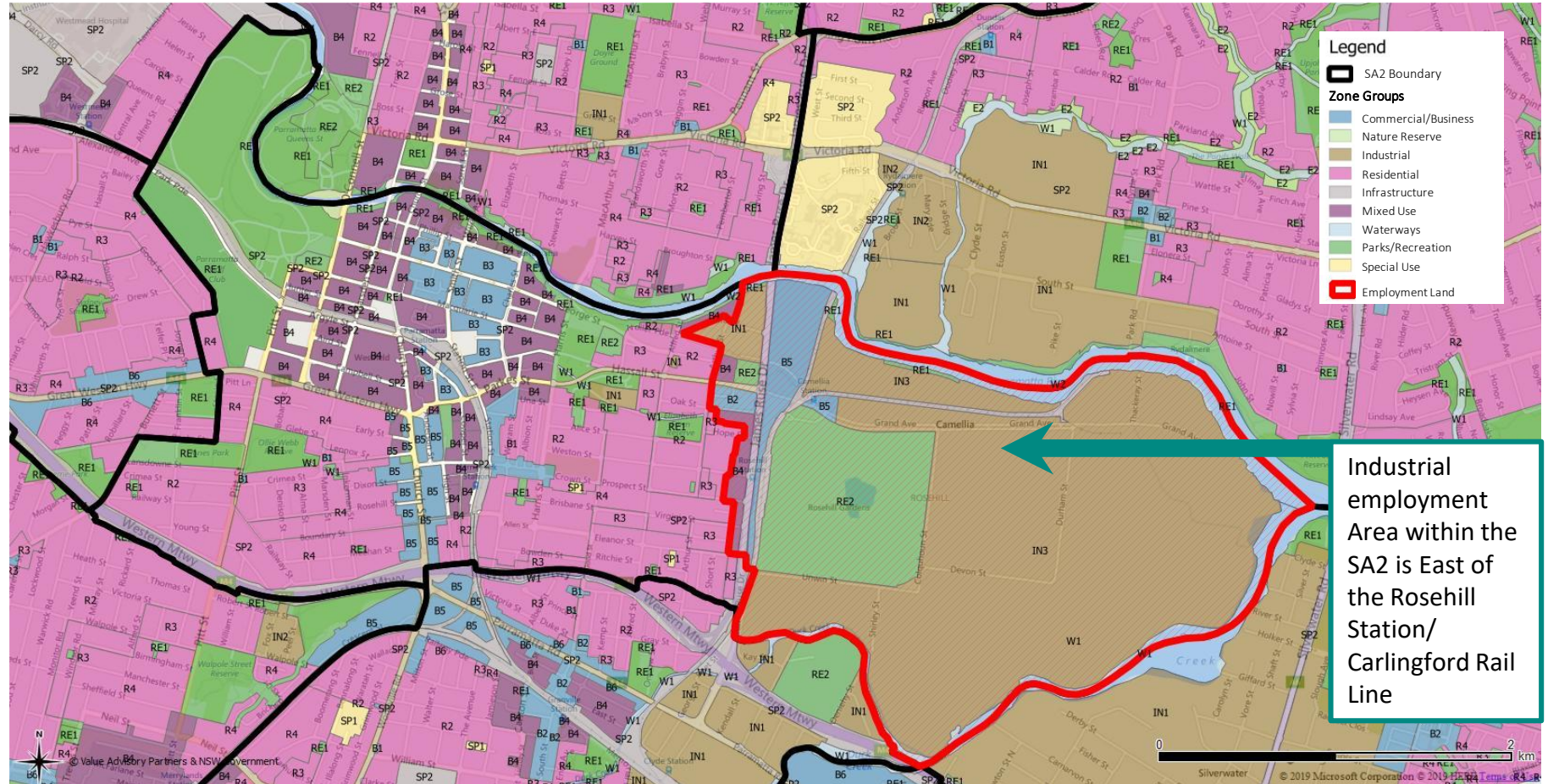
Overview

- The Camellia precinct represents the eastern half of the Parramatta Rosehill SA2. The land is currently predominantly zoned industrial with some commercial/business zoned land and some parks/recreation zoned land (Rosehill Racecourse).
- Employment for the whole SA2 in 2018 was 63,727, up 24,711 over the period (or 63%), with cycles of growth and decline between 1992 and 2018. More than 15,000 of this growth has been in commercial office employment. Warehousing employment and manufacturing in the industrial part has experienced steady decline. The exception has been construction employment.
- All the growth in employment – in terms of commercial office, creative and cultural and entertainment have been in the employment centre of Parramatta away from the industrial Camellia.

Areas of Land Use Types

| | Area (hectares) | Area % |
|---|-----------------|--------|
| Industrial | 207 | 71 |
| Business | 10 | 3 |
| Other Employment Land (Mixed Use, Special Use etc.) | 59 | 17 |
| Total | 360 | 100 |

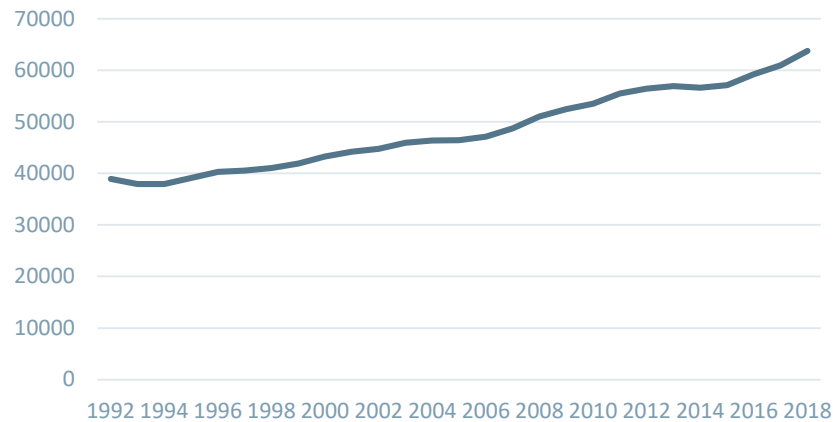
Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area)



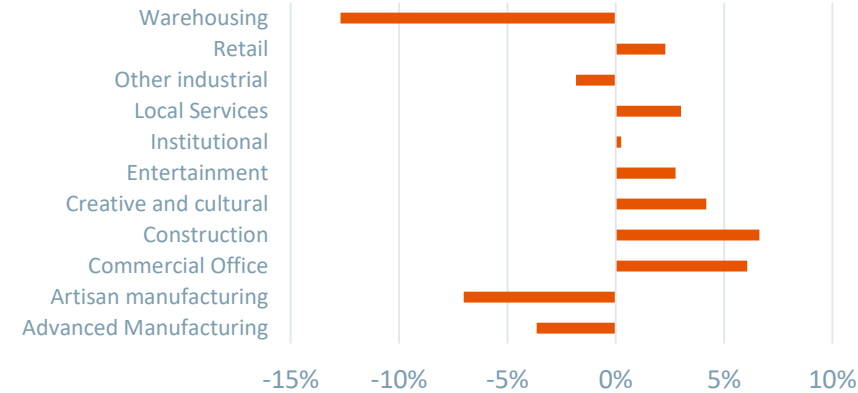
2.5 Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area)

Employment changes between 1992-2018

Parramatta –Rosehill Total Employment (1992-2018)

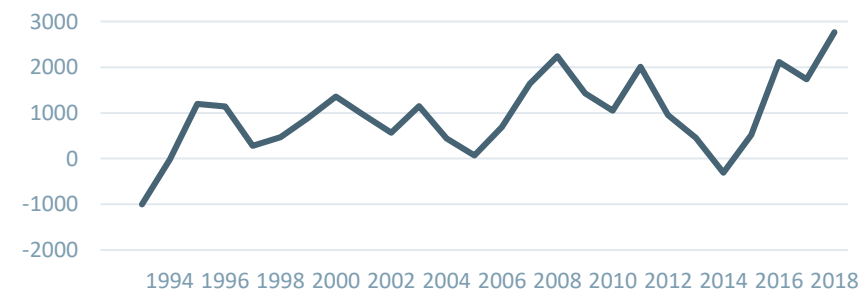


Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area) - Percentage change in employment by industry (1992-2018)



| Industry Groups | 1992 | 2018 | Diff. 1992 - 2018 |
|------------------------|--------------|--------------|----------------------|
| Advanced Manufacturing | 275 | 177 | (98) |
| Artisan manufacturing | 251 | 224 | (27) |
| Commercial Office | 21664 | 37187 | 15,523 |
| Construction | 1767 | 4473 | 2,706 |
| Creative and cultural | 736 | 1652 | 916 |
| Entertainment | 1172 | 3092 | 1,920 |
| Institutional | 477 | 938 | 461 |
| Local Services | 2870 | 6264 | 3,394 |
| Other industrial | 1812 | 2772 | 960 |
| Retail | 4430 | 4269 | (161) |
| Warehousing | 3501 | 2679 | (822) |
| Total | 38956 | 63727 | 24,711 |

Camellia - annual change in employment (1992-2018)



- The Camellia area sits in the GPOP economic corridor; the area from Camellia to Carlingford is identified for 'next generation living' while the area to the east and south east is identified for Essential Urban Services, Advanced Technology and Knowledge Centres.
- Camellia/ Rosehill and Camellia Industrial Area consists of 18ha of undeveloped and 218ha of developed employment land.
- Total employment of the whole Parramatta-Rosehill SA2 has increased by more than 24,700 jobs in the period 1992 – 2018.
- The majority of these jobs have been in the Commercial Office sector (15,000+), with the Local Services, Entertainment and Construction sectors also experiencing growth in jobs.
- There has been some loss of Advanced Manufacturing and Artisan Manufacturing jobs, albeit off a very low base.
- The Construction, Commercial Office and Creative & Cultural sectors have shown the greatest increase as a proportion of the total jobs over the period, with Warehousing, Advanced Manufacturing and Artisan
- Manufacturing shows a decline in terms of the share of total jobs. Peak periods of jobs growth have been 2007-2012 and again from 2015 to 2018.

2.6 Taren Point/Caringbah

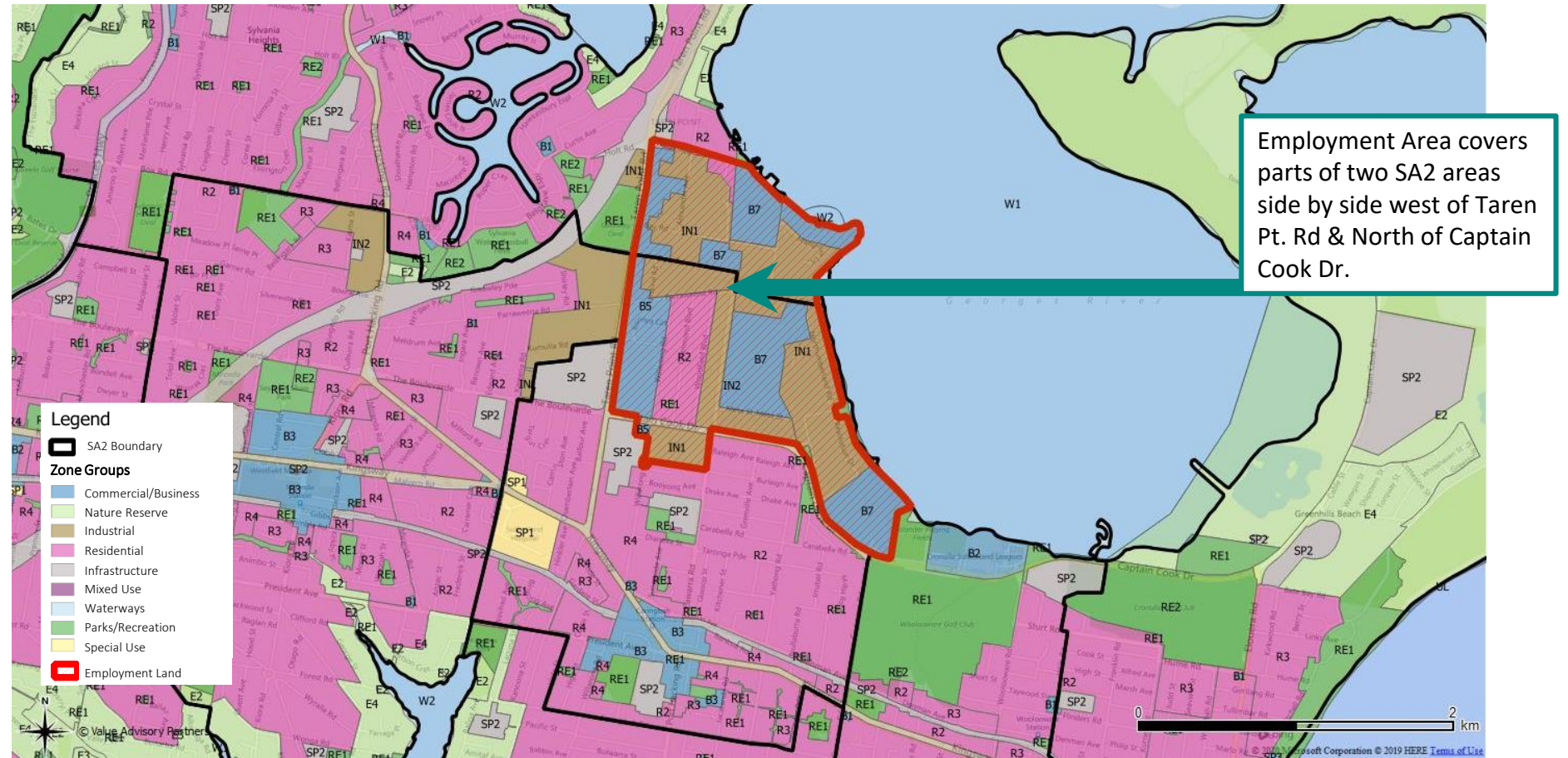
(Sylvania-Taren Point SA2; Caringbah SA2)

Overview

- The employment area of Taren Point/Caringbah covers parts of two SA2s and has a mix of industrial and commercial/business zoned land surrounding a small component of residential. A section of land has waterfront to an inlet of Botany Bay.
- Total employment in 2018 was 21,878, up 3,563 over the period (or 19%), with cycles of growth and decline between 1992 and 2018, with a continuous upswing since 2014.
- There have been significant losses in advanced manufacturing, followed by other industrial and warehousing employment. The most significant areas of employment growth have been in local services, commercial office and construction.

Areas of Land Use Types

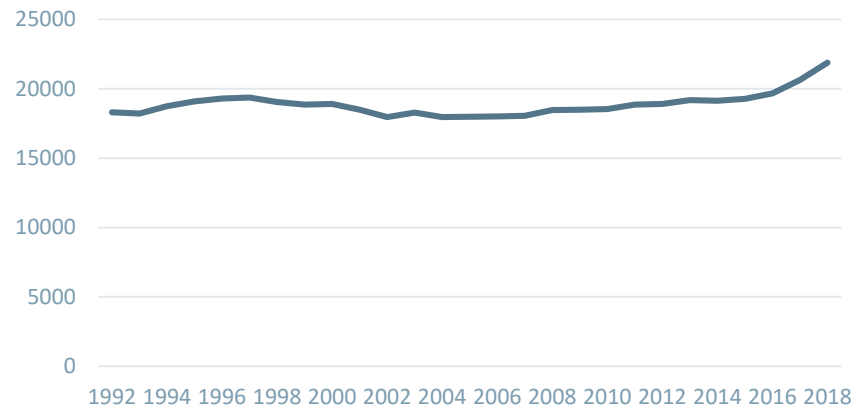
| | Area (hectares) | Area % |
|---|-----------------|--------|
| Industrial | 90 | 51 |
| Business | 73 | 42 |
| Other Employment Land (Mixed Use, Special Use etc.) | 13 | 7 |
| Total | 176 | 100 |



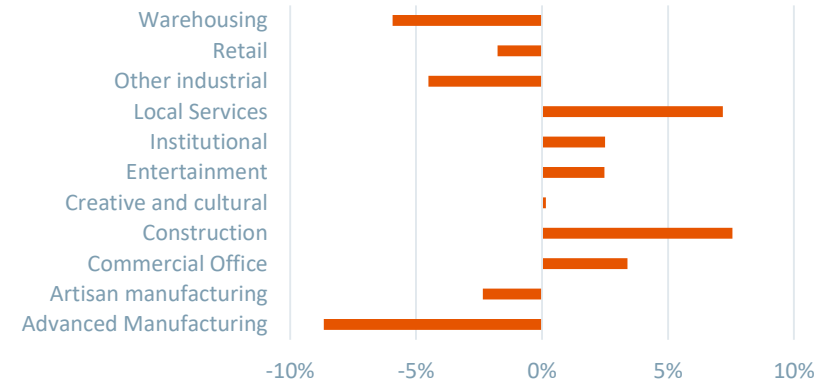
2.6 Taren Point/Caringbah (continued)

Employment changes between 1992-2018

Taren Point/Caringbah Total Employment (1992-2018)

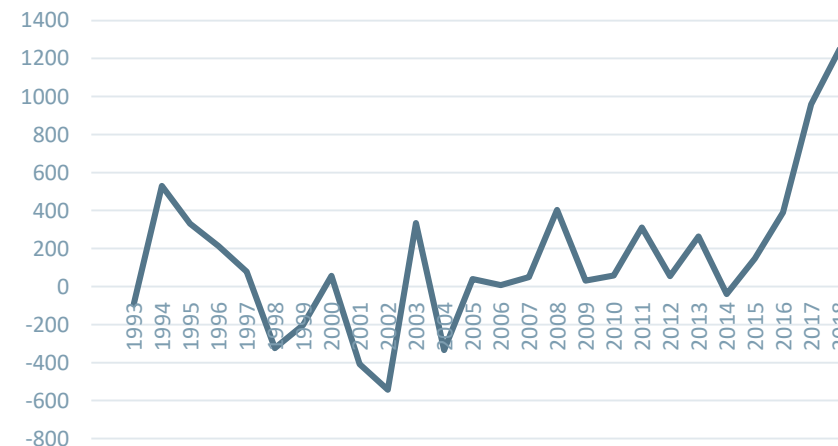


Taren Point/Caringbah - Percentage change in employment by industry (1992-2018)



| Industry Groups | 1992 | 2018 | Diff. 1992 - 2018 |
|------------------------|--------------|--------------|----------------------|
| Advanced Manufacturing | 2253 | 794 | (1458) |
| Artisan manufacturing | 1089 | 787 | (302) |
| Commercial Office | 1999 | 3129 | 1129 |
| Construction | 1312 | 3222 | 1910 |
| Creative and cultural | 378 | 484 | 106 |
| Entertainment | 702 | 1381 | 678 |
| Institutional | 1531 | 2375 | 844 |
| Local Services | 2072 | 4046 | 1974 |
| Other industrial | 1341 | 615 | (727) |
| Retail | 3257 | 3503 | 246 |
| Warehousing | 2380 | 1544 | (836) |
| Total | 18315 | 21878 | 3563 |

Taren Point/Caringbah - annual change in employment (1992-2018)



- Less than 1 ha of the total 176 ha of the employment lands area is undeveloped.
- Employment lands categorised as retain and manage
- Total employment for the period is only marginally up with by 3,500 with no growth between 1992 and 2014.
- Largest annual growth of employment occurred between 2016-2018.
- Industry groups to have decreased are in manufacturing, industrial and warehousing jobs, showing reduction in jobs typically seen in industrial employment lands.
- The mix of jobs has changed with Local services, Construction, Institutional, Entertainment and Commercial Office each increasing as a share of all jobs by at least 2%.
- Both Advanced Manufacturing and Warehousing have had significant decrease of their share of total employment (both over 5%) with both industry groups have lost considerable number of jobs (1458 loss for Advanced Manufacturing and 836 loss for Warehousing).

Methodology

3

3 Methodology

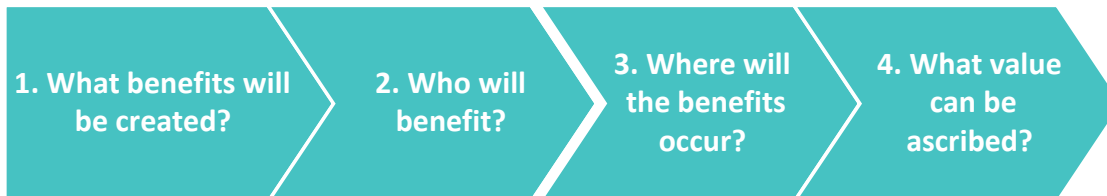
Approach to deliver scope of works

The project is dependent on an integration of top down and bottom up analyses, shown in Figure x. It establishes an evidence base for each area for commercial and residential growth, informed by an assessment of the changing market attractiveness over the past forty years, changing development and industry trends, place-based design elements and essential infrastructure.

Our tools, knowledge and systems for this assessment involve:

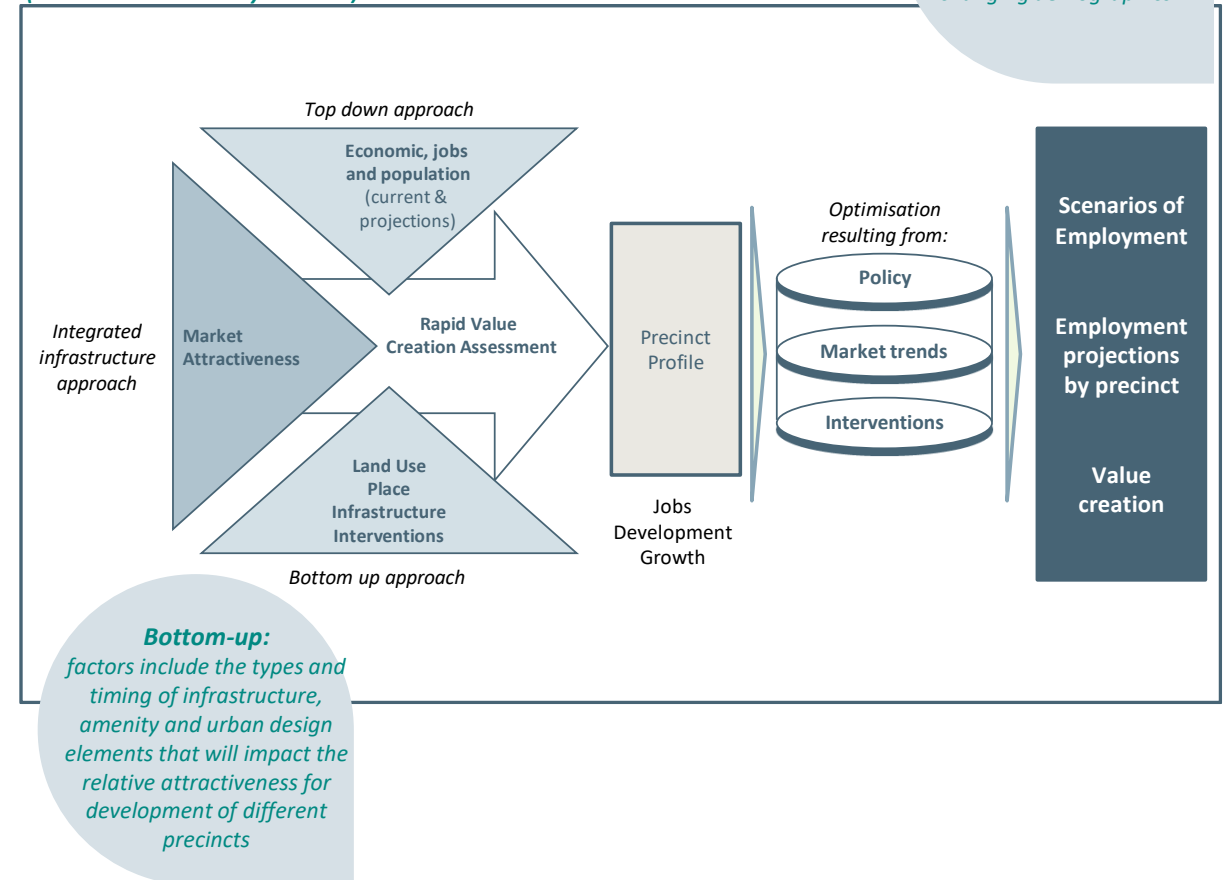
- Preparing a concrete plan for value by evaluating the appeal and enablers for development of the area;
- Identifying potential initiatives and investments that would create value, informed by four key questions (see Figure x below)

Figure x: Evidence-based models are informed by four critical questions (Source: Value Advisory Partners)



These questions are addressed through a structured program that encompasses several phases of work, each that generates outputs for each area of investigation.

Figure x: Assessment framework for the study
(Source: Value Advisory Partners)



3.1 Key steps in the process

Tasks for the analysis of employment lands

| Task | Description | Output |
|------------------------------|---|---|
| 1. Context Assessment | <p>This step initially identifies the project Investigation Area(s) (mapping) and then prepares a detailed assessment of the area characteristics, and policies:</p> <ul style="list-style-type: none"> • transport links, including public transport and the road network • property type mix (residential, retail and commercial property) mix, including development profile • Resident and employment population • planning zones and overlays • State and local policies and strategies | Geospatial mapping of the investigation area. Initial diagnosis of both the presence and gaps in amenity, services, transport, connectivity and property to inform the next step, Opportunity Mapping. |
| 2. Employment Mapping | <p>This step involves identifying and mapping the employment change in Sydney over a 26 year period. The assessment locates at an SA2 level (suburb) year on year changes in employment by employment category.</p> | <p>Three-dimensional spatial mapping (by SA2) of employment change across Sydney and within the Investigation Area, historical and projected in a Base Case scenario.</p> <p>The employment is presented at a macro level as well as by different industries of employment.</p> |
| 3. Scenario Mapping | This step identifies the positive job outcomes at a high level associated with the delivery of the Scenario considered for each precinct within the investigation areas, and the actions that would be required. | Analysis and documentation of the 'alternate approach' and initiatives and the resulting jobs that would be created. |
| 4. Jobs lost | Using the analysis in Step 3, assess the jobs that would be lost from continuing with a GSC approach compared with a UDIA approach. | Order of magnitude of value created for each opportunity and for each beneficiary group, expressed as a qualitative measure by value (high, medium and low) and time (upfront, at time of delivery, post-delivery). |
| 5. Reporting | Draft and final report and presentation | Written report and client presentation including maps, description of context, employment projections and how this could be achieved. |

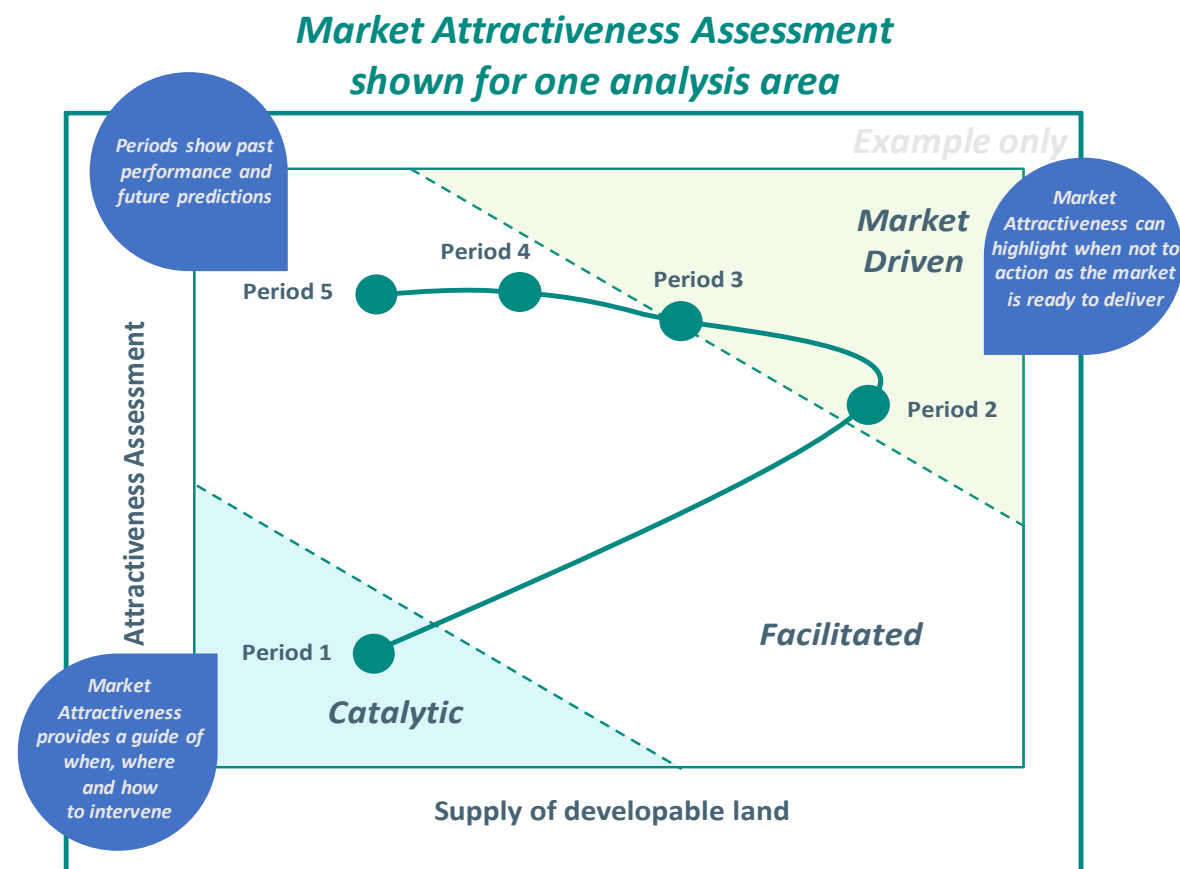
3.2 Market attractiveness

The Market Attractiveness Assessment (MAA) is an area-specific assessment of the market appeal for development. The method quantifies the qualitative considerations of market forces and developer interest and enables location-based planning analysis over time.

Outputs plot the change in relative market appeal of investigation area(s) over time resulting from a change in one or more of the component attributes (inputs). This is useful to compare and understand the extent to which catalytic or facilitated intervention would be required to achieve a drive growth, or whether the market would drive growth on its own.

The analysis (shown in Figure 1) identifies market intervention decisions as being a factor of land creation and availability (for development) against relative market attractiveness. This balance identifies three stages of markets:

- **Catalytic**, where meaningful government investment would be required to activate further developer investment (e.g. public transport infrastructure, government led redevelopment of government land, assigning a development authority to an area);
- **Facilitated**, where moderate planning or council land changes could be used to promote and assist desired development outcomes (e.g. re-zoning, improvements to existing amenity); or
- **Market-driven**, where investment by the private sector is independent and driving outcomes.

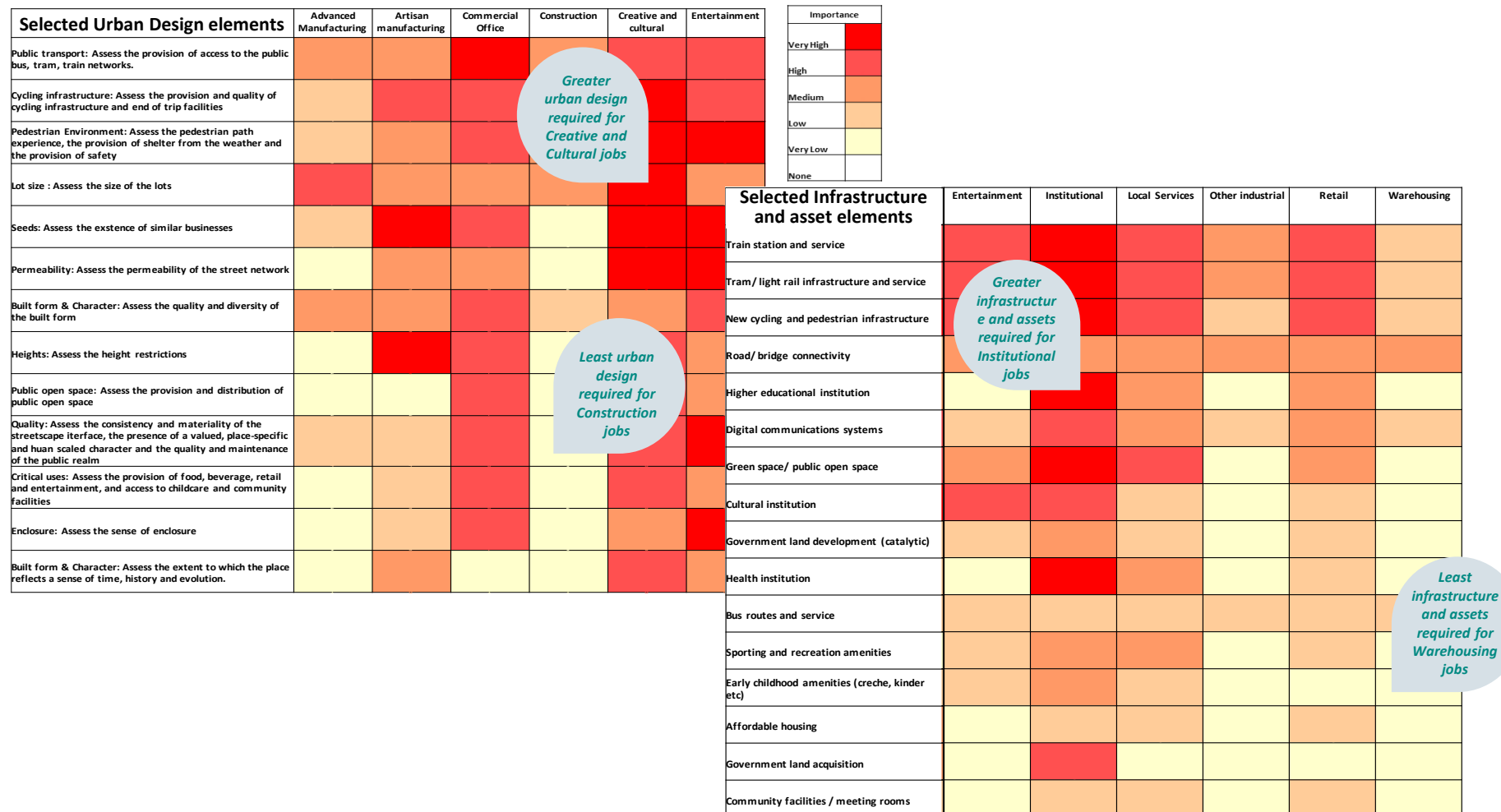


3.3 Importance of Urban Design and Infrastructure to Attract Jobs and Industries

- A qualitative assessment of a range of urban design and asset/infrastructure elements is undertaken to understand the importance or influence of each criteria to attract the desired industry and employment to an area.
- This analysis produces a typology for each employment category in terms of what is needed to attract and grow employment.
- The ratings are presented as heat maps to show which attributes are important and which are less important for the identified industry and employment groups.

Outputs from the heat maps as part of the employment projection tool

Example only



3.4 Emerging trends for the assessment: Workplace models and work-space ratios

Workplace practices

The way people work affects both the building floor plate size and the internal design of office space. Technological improvements have increased flexibility and allows people to work anywhere at anytime. However, in practice, the future of office space will not become redundant. Albeit the trend in space per employee is falling, in part because businesses moved from separate offices to open plan, and now require fewer desks than staff, and in part space per desk is also reduced. On the other hand, there is extra demand for quiet rooms, collaboration spaces and meeting rooms.

Average space per office employee has fallen from 20 sqm to nearly 15 sqm. In some modern offices this is being reduced to 10 to 12 sqm.

Recent trends include:

Activity Based Working is about enhancing collaboration - where employees have the freedom to choose the space as required for that particular task (café, meeting room, desk, collaborative space etc.). This may involve moving several times in the course of a day. It does not suit every type of industry or job role.

Agile working is about giving employees individual autonomy and flexibility to choose when, where and how they work. It requires smart technology and supporting IT infrastructure. For example, an increasing number of people are choosing to work from home – either part of the week or full-time.

Working spaces

Co-working is where workers as sole operators or from different companies share an office space. Arrangements can be made on a hourly, daily or short term basis and share common facilities (e.g. reception, printing, kitchen areas). Hot desking is a key element of this type of space.

This can be also be a good solution for firms to reduce their core office area and use co-working space as an “overflow” area or for workers travelling interstate.

Serviced office/executive suites shares some of the elements of co-working, but is based on longer term arrangements, offering office spaces of different sizes.

Hot desking is where workers do not have an allocated work station but will share work stations on a shift basis, which may be an hour or for a whole day. Typically if a worker plans to be away from their desk for two hours or longer, they would vacate it making it available for someone else.

Open plan where layout supports collaboration and there are few barriers between desks. Desks can be arranged in various configurations.

Traditional office employees have individual private offices, where the lease is on a multi-year basis. Usually where the employee requires privacy and there is little day to day change in the routine required.

Infrastructure and Urban Design Elements

(for further detail about the methodology used see Section 3)

4

4.1 Attracting office employment

Introduction

Commercial office comes in many shapes and sizes. Office buildings can be single-tenanted or multi-tenanted. It includes large floor plate buildings as per the Docklands and standard floor plates, high and medium rise buildings, business parks surrounded by at-grade car parking.

In the past people were anchored to a fixed desk. However, “the rise of portable devices, ubiquitous wireless connectivity and cloud-based storage and software mean that the office will no longer house infrastructure.” (Phillip Ross, Typology: Offices, The Architectural Review, 24 July 2012) The mobile approach will become more flexible – what he calls “real time real estate” – scaling a building to respond to average occupancy or based on “just-in-time” need. The principles guiding office design are about “connection, interaction and collaboration”. The office becomes a place for “serendipitous meetings” – a “place for people not a container for infrastructure” (or the organisation).

Features that are being more valued include: daylight, natural ventilation, access to public transport, green space, on-site parking and proximity to residential areas. The quality of working environment impacts productivity as much as attracting and retaining valued employees.

Urban design and infrastructure elements

Accessibility by public transport rates as the urban design attribute of highest importance for a major office precinct in Melbourne.

The quality and safety of the pedestrian environment is of high importance for a major commercial office precinct. This includes wide footpaths, 40km/h traffic speed and signalized pedestrian crossings, extensive sheltered areas by canopies and other structures.

An office precinct should have 8-12 per cent of the area as public open space with a variety of different spaces. 60-90 per cent of the precinct should be within 400m of such public open space.

Office accessibility to a range of critical uses that cater for daily needs such as retail, food and beverage, childcare or entertainment is of high importance.

Access to similar businesses is also of high importance. Proximity is key to this clustering of at least 1-3 similar businesses within 400 m.

4.1 Attracting office employment (Cont.)

Continuous street interface, with varied human scale and materials to create a streetscape of high appeal is critical. Well-maintained landscaping and shelter are also important elements contributing to the quality of the street character.

Access to green space/ public open space is of very high importance for office employees for relaxation and to provide relief from the office environment. It can also be combined with other amenities such as a café, bar or restaurant.

Access to fast, reliable broadband is fundamental for commercial offices. Employees need to be able to perform their basic functions, to communicate with other businesses efficiently and effectively and increasingly to access the cloud to store and access their own data and document systems.

Arterial road connectivity is also important for accessibility but not as important as mass public transit – for workers and shoppers but also goods, both materials coming into the precinct and finished and waste products leaving.

| <i>Importance</i> | <i>Urban design elements</i> | <i>Asset/ infrastructure elements</i> |
|-------------------|--|--|
| Very High | <ul style="list-style-type: none"> • <i>Public transport</i> | <ul style="list-style-type: none"> • <i>Train station and service</i> |
| High | <ul style="list-style-type: none"> • <i>Cycling infrastructure</i> • <i>Pedestrian environment</i> • <i>Existence of similar businesses (seeds)</i> • <i>Height of buildings</i> • <i>Public open space</i> • <i>Quality of streetscape interface</i> • <i>Critical uses</i> • <i>Built form and character – quality and diversity</i> | <ul style="list-style-type: none"> • <i>Tram/light rail infrastructure and service</i> • <i>New cycling and pedestrian infrastructure</i> • <i>Green space/ public open space</i> |
| Medium | <ul style="list-style-type: none"> • <i>Lot size</i> • <i>Permeability</i> | <ul style="list-style-type: none"> • <i>Digital communications systems</i> • <i>Road/bridge connectivity</i> |

4.2 Attracting creative and cultural employment

Introduction

Creative and cultural industries is an umbrella term covering a range of different employment types – from digital and multi-media, to gaming, broadcasting, film and music, advertising/marketing, performance and visual art to architecture, graphic design and fashion.

Creative industries are attracted to being in proximity to other creatives – and mostly located in inner urban, former industrial areas, being dependent also on proximity to the CBD (eg supplying stage sets, installing event equipment, studios for photography, television and film shoots, performing at corporate functions). The nature of some of the work and hours of operation (eg evening classes) means they need an industrial zoning so as not to conflict with residential neighbours.

Creative and cultural industries rated most highly in terms of urban design requirements and second in terms of infrastructure and asset requirements.

Urban design and infrastructure elements

Accessibility by public transport rates of high importance for a creative and cultural precincts, with access to trains, trams and buses.

The quality and safety of the pedestrian environment is of high importance for a major commercial office precinct. This includes wide footpaths, 40km/h traffic speed and complete pedestrian priority over vehicles, extensive sheltered areas by canopies and other structures.

Access to similar businesses is also of very high importance. Proximity is key to this clustering of at least 3 similar businesses within 400 m.

A creative and cultural precinct should have access to public open space with a variety of different spaces.

Creative and cultural accessibility to a range of critical uses that cater for daily needs such as retail, food and beverage, childcare or entertainment is of high importance.

Cycling infrastructure and connectivity and pedestrian accessibility is of very high importance for creative and cultural employment. Walkability and pedestrian permeability within the 'cluster area' to access local amenities and other businesses and services is fundamental for enabling personal interactions and creating place.

4.3 Attracting institutional employment

Proximity and accessibility to other institution(s) is of high/very high importance. Not only can there be cross-institutional relationships and sharing of personnel, but these institutions can spawn other institutions to which a collaborative relationship develops.

Government land acquisition is of high importance for the foundation and expansion of institutions. While of less importance (medium), government land development of catalytic projects can also be of significance in terms of the diversification of institutional precincts.

| Importance | Urban design elements | Asset/ infrastructure elements |
|------------|--|--|
| Very High | <ul style="list-style-type: none"> Public transport Cycling infrastructure Pedestrian environment Lot size Public open space Critical uses (like businesses, local services) | <ul style="list-style-type: none"> Train station and service Tram/light rail infrastructure and service New cycling and pedestrian infrastructure Green space/ public open space |
| High | | <ul style="list-style-type: none"> Digital communications systems Cultural institution Government land acquisition |
| Medium | <ul style="list-style-type: none"> Permeability Heights of buildings Quality of streetscape interface Sense of enclosure: street wall to road width | <ul style="list-style-type: none"> Affordable housing Government land development (catalytic) Sporting and recreation amenities Early childhood amenities |

Test Case study: Segmenting the Parramatta LGA and Camellia Industrial*

(The Parramatta LGA includes the Parramatta – Rosehill SA2 of which the Camellia Peninsula is one half. Camellia itself can be disaggregated into Camellia – Rosehill (minus the racecourse) and Camellia Industrial)

5

Case study: Segmenting the Parramatta LGA and Camellia Industrial*

LGA annual growth

The graph ranks local government areas in Greater Sydney by employment compound annual growth rate (CAGR) over the 1981-2011 period, using ABS data.

We have identified whether the average growth rate is catalytic, facilitated or market driven.

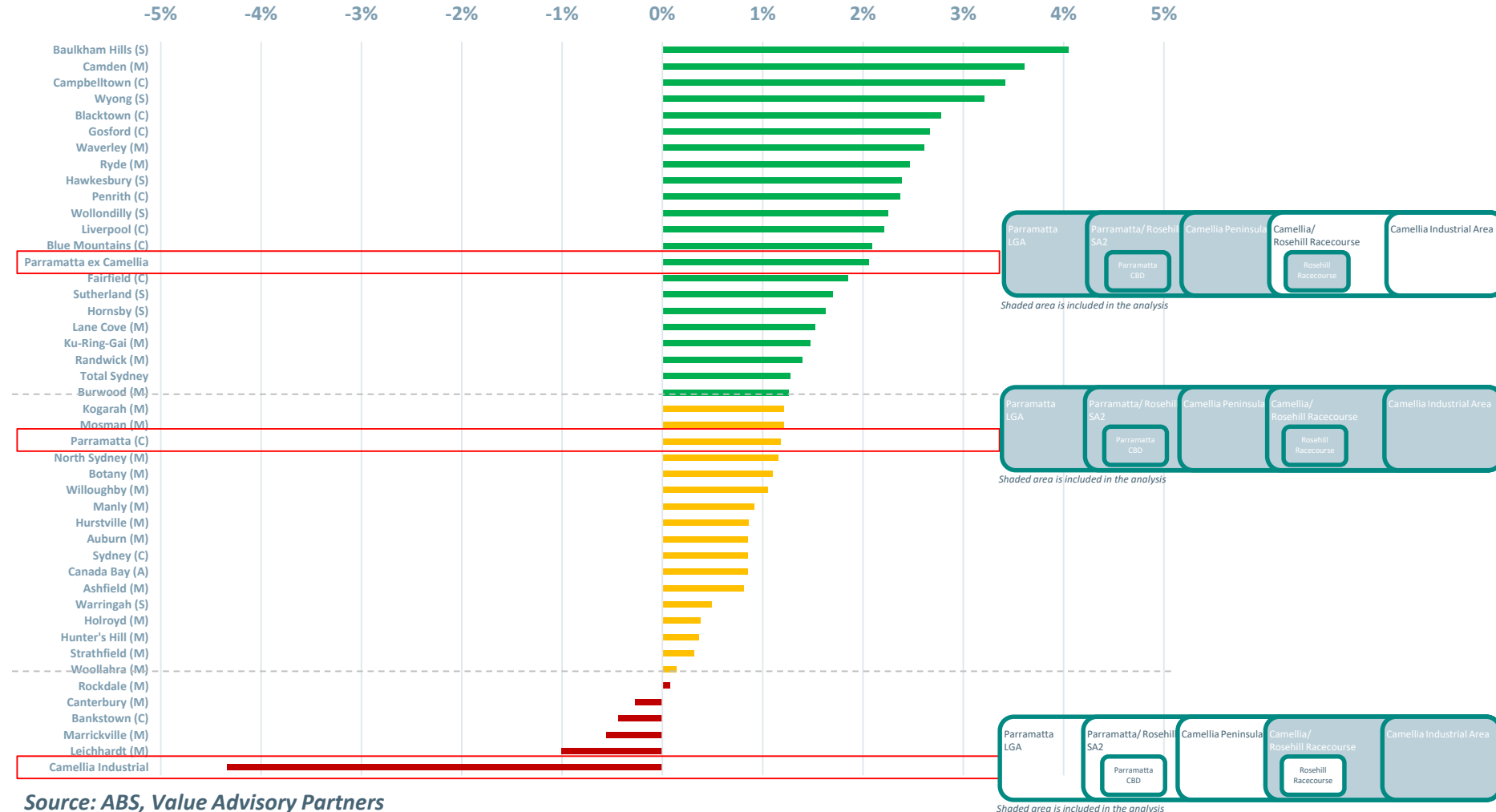
Market is defined as CAGR above 1.1%; Facilitated is CAGR between 0.1 and 1.1%; Catalytic areas as CAGR of 0.1%<.

For the purpose of this analysis we have both a Parramatta LGA as a whole and Parramatta without Camellia. The impact of having Camellia as part of Parramatta is to depress its overall growth rate. Parramatta without Camellia would have a CAGR rate of nearly one per cent higher.

Camellia on its own would have the weakest employment performance of all at -4.3% CAGR, which is a significant market failure.

Compound Annual Growth Rate (%) for Greater Sydney LGAs 1981-2011

Legend for included areas



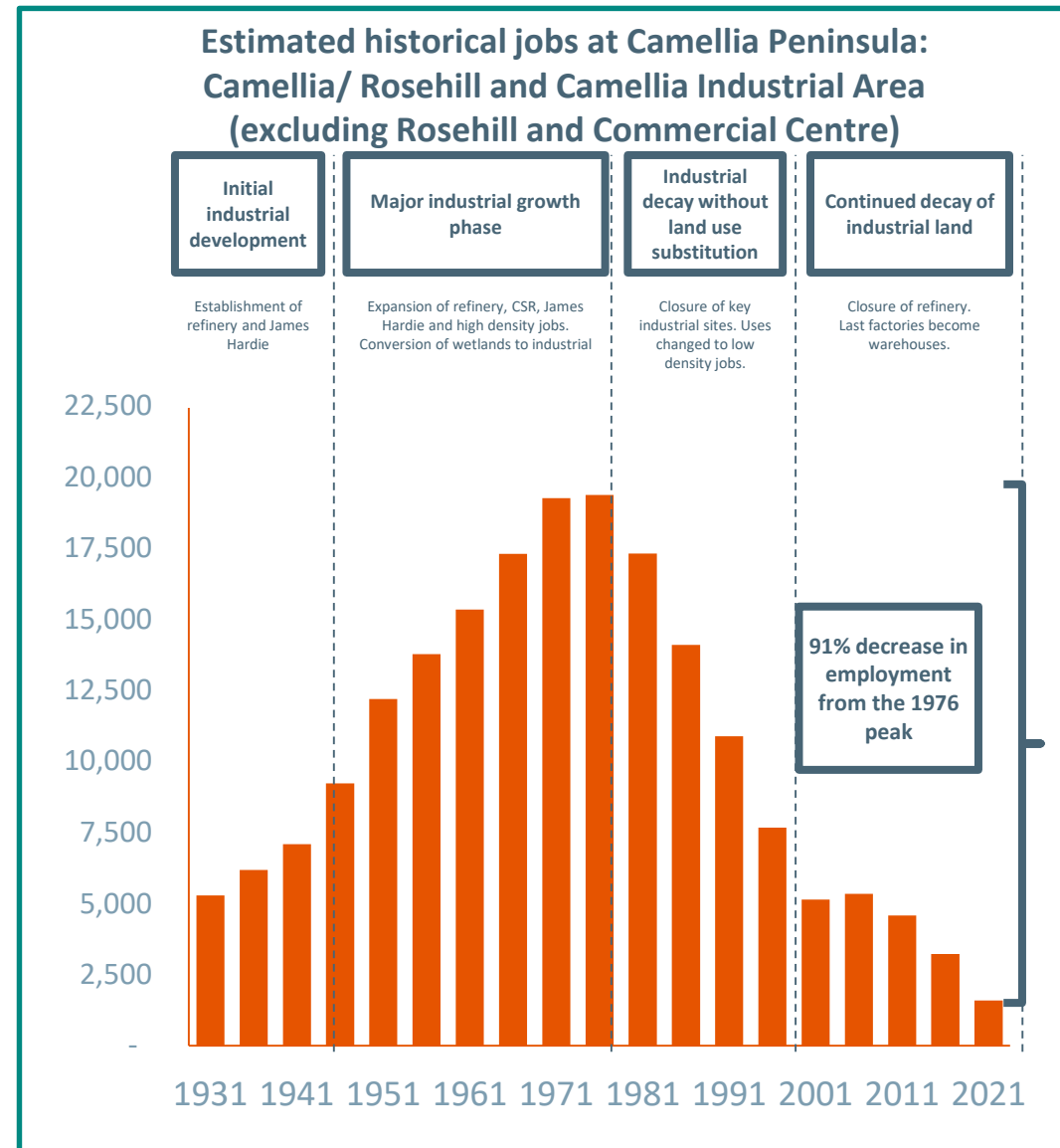
Source: ABS, Value Advisory Partners

* Camellia Industrial includes Camellia Industrial Area as defined by the GSC and Camellia/Rosehill excluding Rosehill Racecourse

Camellia on its own would have the weakest employment performance of all at -4.3% CAGR, which is a significant market

Case study: Segmenting the Parramatta LGA and Camellia Industrial*

- A detailed analysis of the growth and decline of employment in Camellia over the last 90 years shows a significant market failure.
- The 92 percent decline in jobs on the peninsula from its peak in 1976, to only 1,600 jobs today, is supported by aerial photographs of industrial and commercial buildings, detailed historical records of employers, and traffic movements (including heavy vehicles) from 1931 to today.
- Detailed analyses of industrial areas are required at a level much more targeted than what is provided by the ABS. This will provide the type of detailed, bottom up analysis required to ascertain areas of market failure.



Source: Value Advisory Partners analysis, ABS, National Economics

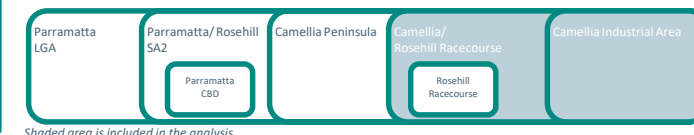
Impact of decline output and employment on buildings

Growing amounts of vacant and abandoned properties threaten neighbourhood stability.

Vacated commercial and industrial are underutilised (i.e. used for self storage which decreases jobs/ha)

The Camellia Peninsula (excluding Rosehill racecourse) is an example of abandonment and underutilisation in Sydney.

Legend for included areas



Taking a long run historical perspective provides a level of data analysis that is omitted in a top down approach.

A continuous programme of interventions is needed

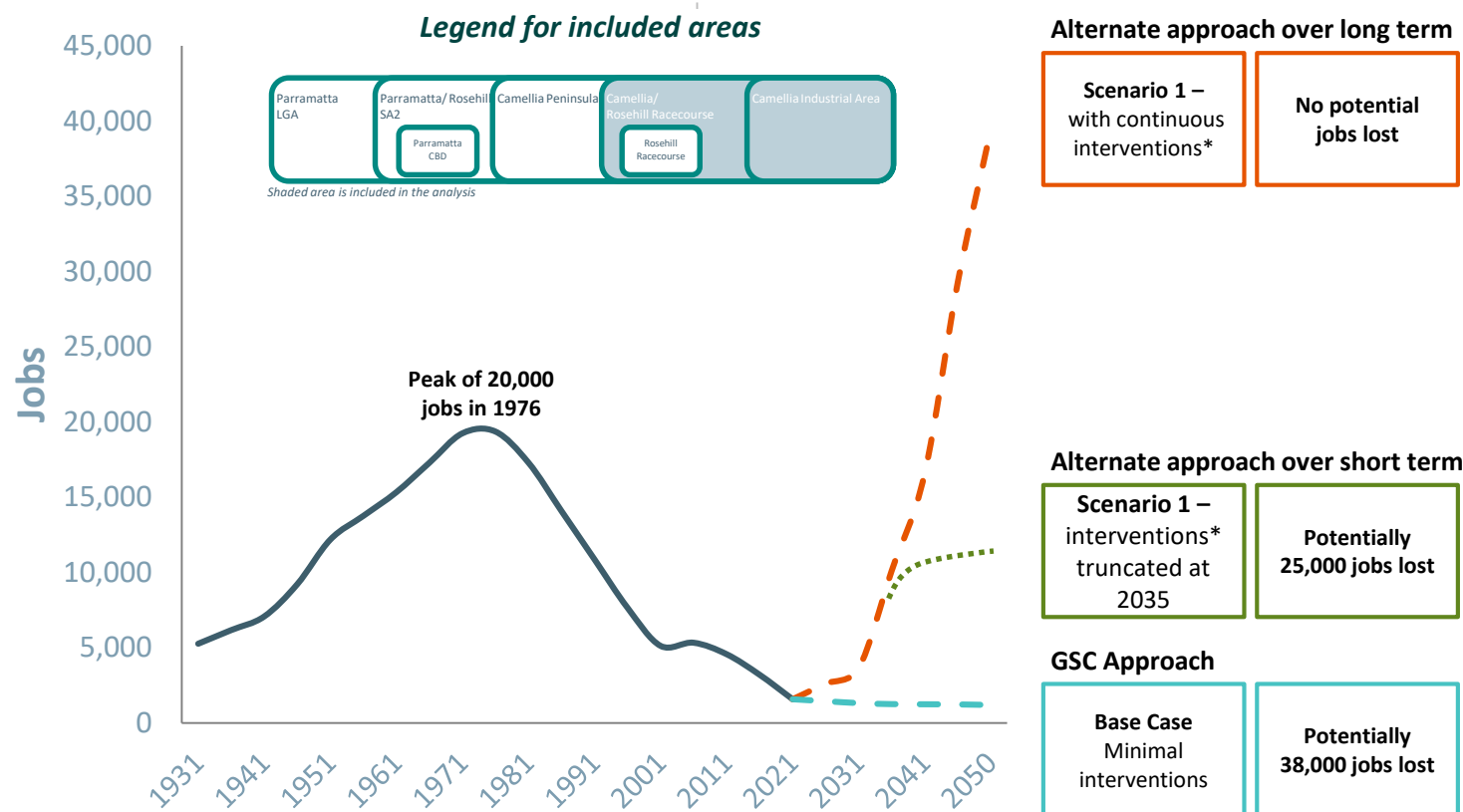
Case study: Segmenting the Parramatta LGA and Camellia Industrial

Comparison of employment outcomes between GSC approach and alternate approach

This chart compares the projected outcomes of an alternative approach (as per Scenario 1) with that of the GSC.

The results indicate that:

- Applying the GSC approach would result in the lost opportunity of up to 29,000 jobs that could otherwise be created in the Camellia peninsula to 2050.
- Applying the Alternate approach, but truncating the programme of interventions at 2035, would break the cycle of growth and result in lost opportunity of up to 25,000 jobs.
- The employment outcomes from the Alternate approach assumes continuous interventions (market or government) through a range of actions that curates the change.



Without continuous interventions and strategies aligned to market conditions the Camellia Peninsula has entered into an extended period of decay.

Note: The Scenario analysis presents the results of what could happen if change is initiated in the investigations areas compared to the anticipated growth in the employment lands for those precincts between 2020 and 2050 in the base case (see Section 6). It is not a forecast of what will happen, rather one of what could happen, given the particular changes and interventions identified for each of the employment in the investigation areas.

Assessment of the five employment investigation areas

6

Summary Market Attractiveness for Employment Lands 2020-2050

Residential Market Attractiveness for Employment Lands 2020-2050

The prospects for Alexandria, followed by Artarmon are the best in terms of residential attractiveness. Brookvale and Taren Point need greater facilitation. The Camellia precinct has no current market for residential development. Camellia would require the greatest level of intervention to catalyse growth.

| 2020-2050 Market Attractiveness | Residential | Commercial |
|--|-------------|------------|
| Alexandria/Eveleigh | Increasing | Decline |
| Artarmon | Increasing | Increasing |
| Brookvale | Increasing | Decline |
| Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area) | Static | Increasing |
| Taren Point/Caringbah | Decline | Decline |

Commercial Market Attractiveness for Employment Lands 2020-2050

Alexandria/Eveleigh is currently the most attractive precinct for commercial office. Artarmon is attractive, but some continuing facilitation would be required to drive growth compared to the institutional and industrial uses. Without interventions Brookvale and Taren Point/Caringbah would experience a decline in attractiveness. Camellia, while it has potential, would need significant interventions to turn around a declining market.

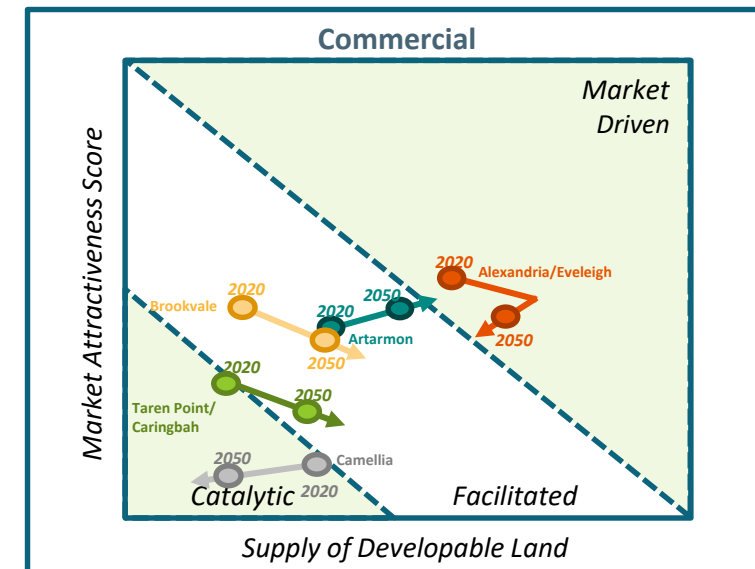
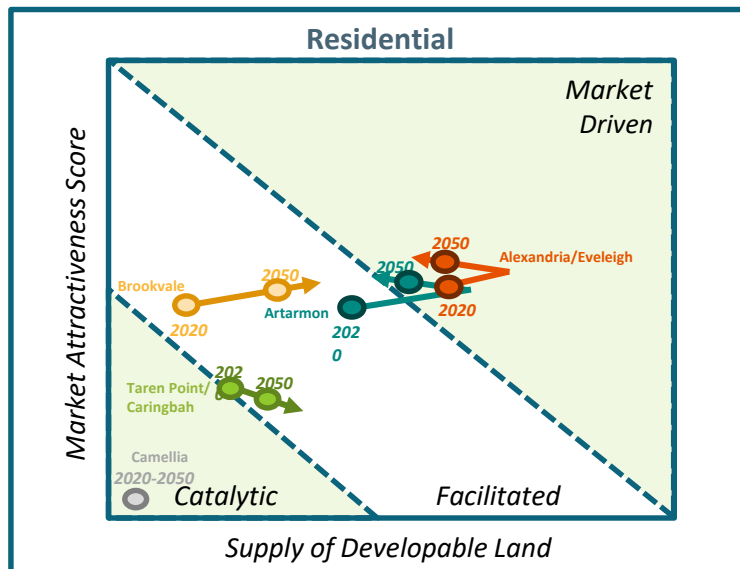
Legend:

Market Attractiveness Trend

Decline: A decrease in market attractiveness.

Static: No movement in market attractiveness.

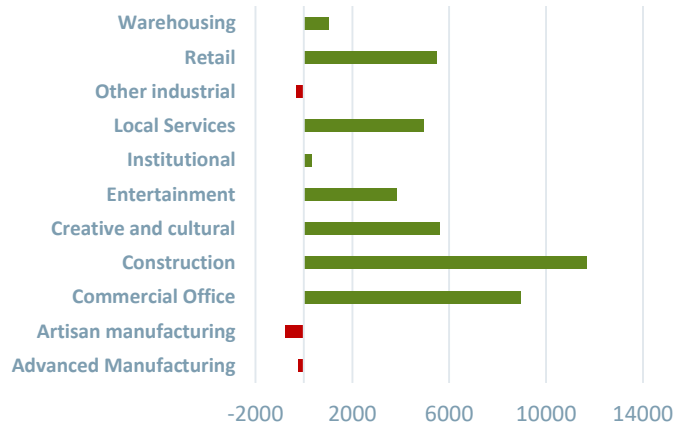
Increasing: An increase in market attractiveness.



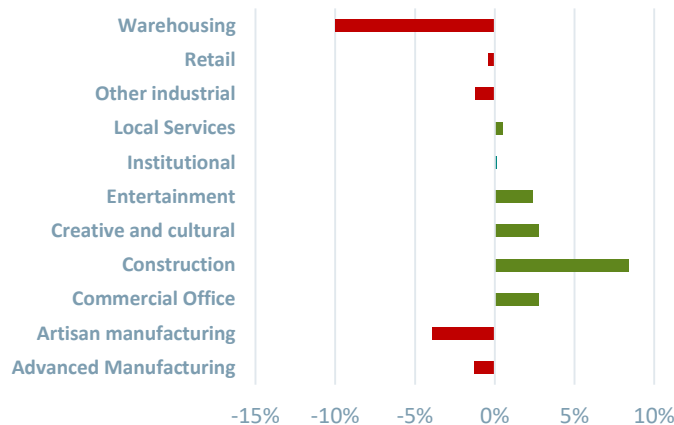
6.1 Alexandria/ Eveleigh

6.1 Alexandria/Eveleigh – Base Case - Job outcomes and Employment projections to 2050

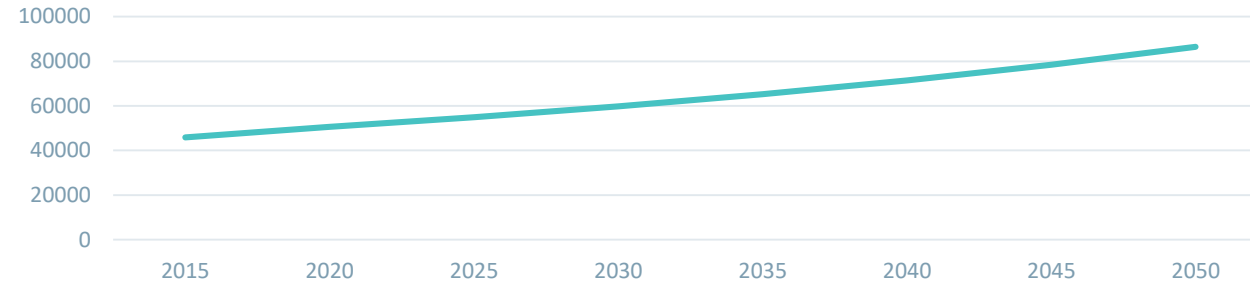
Alexandria/Eveleigh – Job Change by Industry Group (2015-2050)



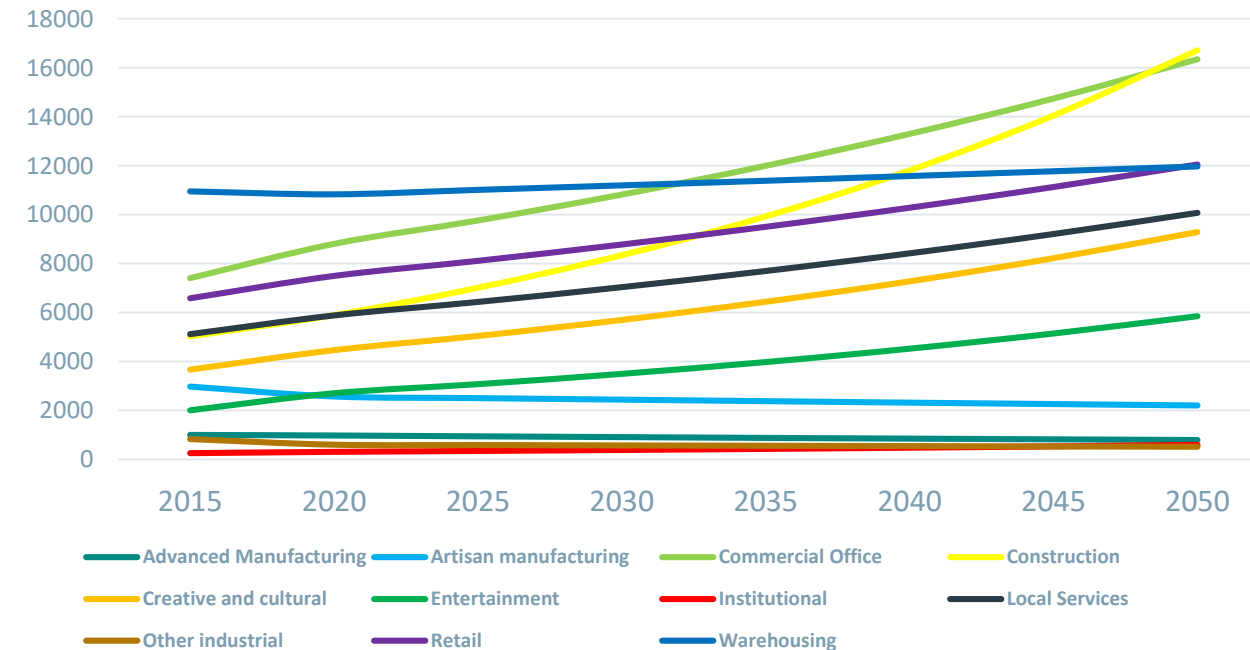
Alexandria/Eveleigh – change in proportion of total employment by industry (2015-2050)



Alexandria/Eveleigh - Total Employment (2015-2050)



Alexandria/Eveleigh – Jobs by Industry Group (2015-2050)

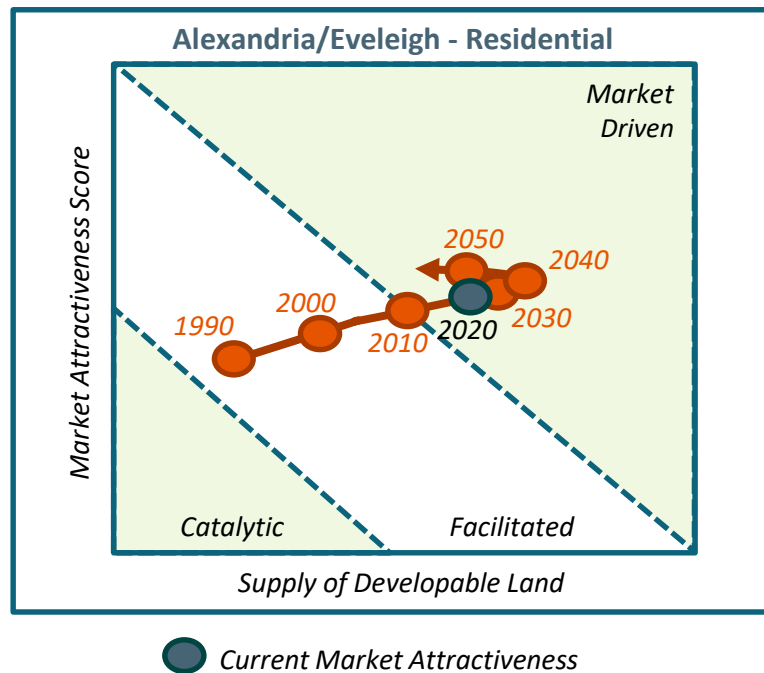


- Between 2015 and 2050, total employment in Alexandria/Eveleigh is forecast to almost double from 45,884 jobs to 86,454.
- Artisan and advanced manufacturing will have the most significant decrease in the number of jobs.
- Construction, Commercial Office, Creative and Cultural, and Entertainment industries are projected to all have large growth in employment. Construction will have an 8% increase in the share of total jobs, with Commercial Office and Creative and Cultural both increasing by 3%.
- Warehousing employment would remain static while its share of total employment would drop by 10%. Retail and Other Industrial also have minor decreases.

6.1 Base Case - Alexandria/Eveleigh - Market Attractiveness Assessment

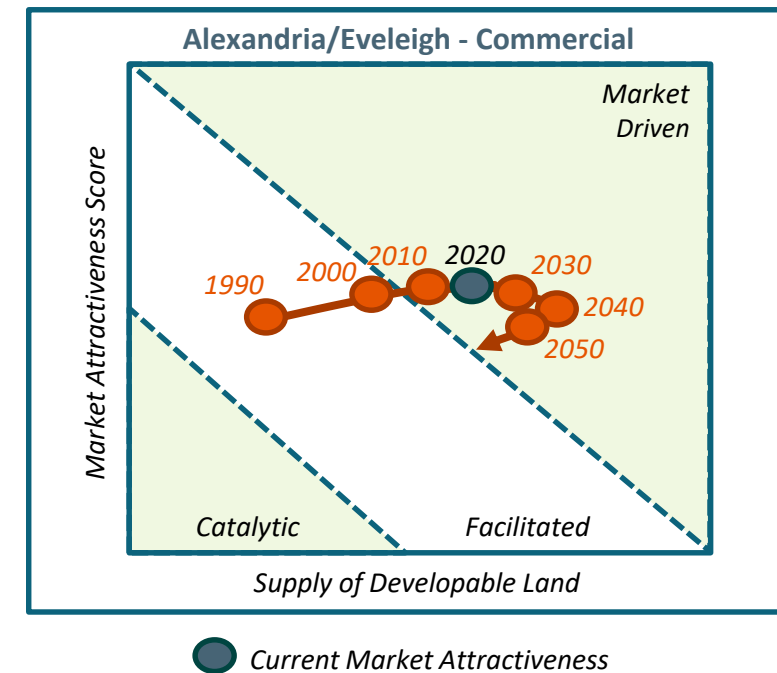
Residential Market Attractiveness – past and projected (1990 to 2050)

Without further interventions the Alexandria/Eveleigh area is forecast to progressively increase in attractiveness for residential development up until 2040 albeit at a slower rate than historically, followed by a decrease in the supply of developable land. Market growth has required facilitation by government for much of the past 30 years but more recently has reached a stage where the market is now driving growth.

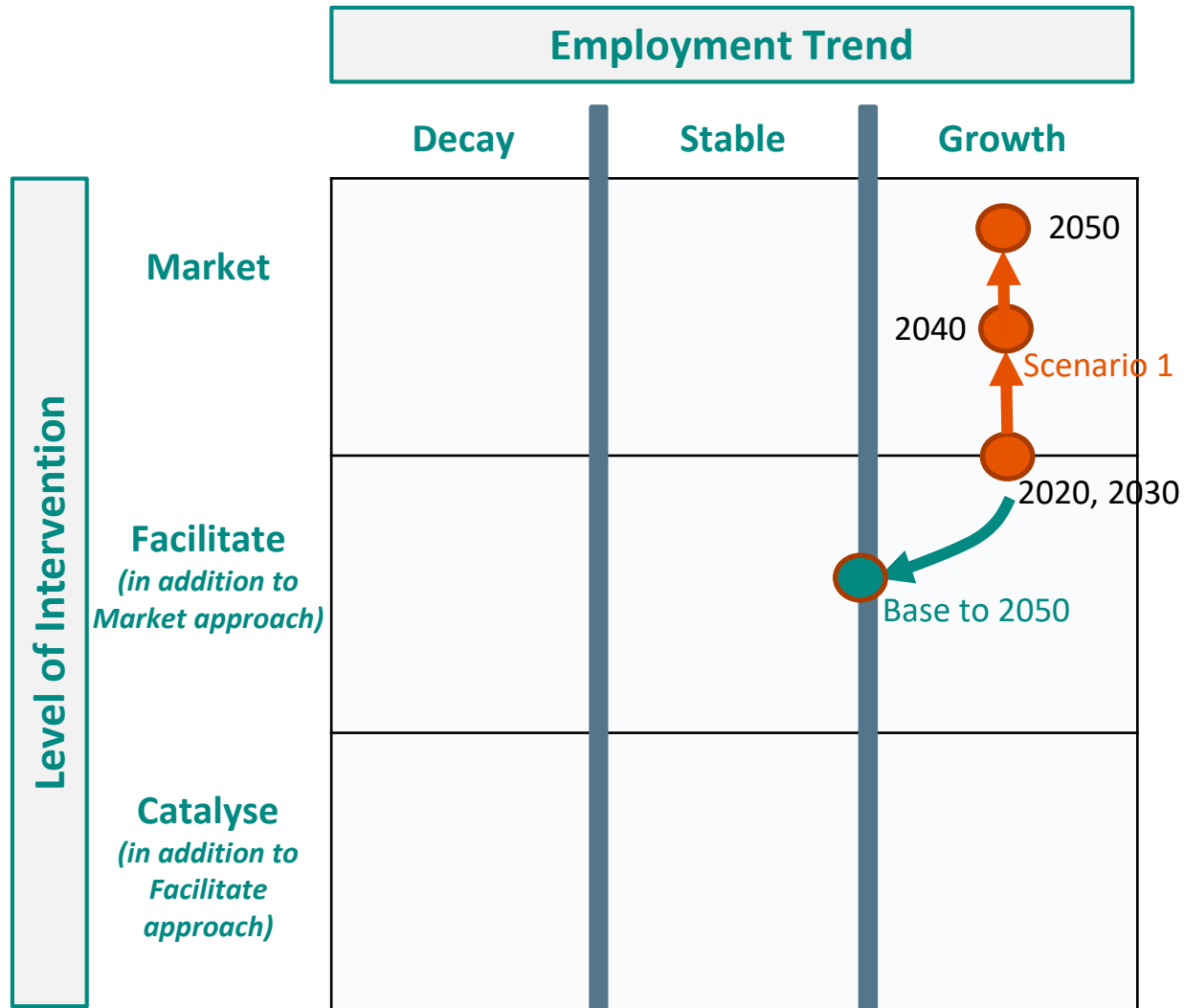


Commercial Market Attractiveness – past and projected (1990 to 2050)

The attractiveness of Alexandria/Eveleigh for commercial development was in a facilitated economic phase from 1990 to 2005, but has now entered a self-sufficient market driven stage. However, the attractiveness is forecast to begin to decline from 2020 until 2050 particularly after 2040 as the supply of developable land decreases and would be approaching a stage where some facilitated action by government would be required to drive future commercial growth.



6.1 Actions to achieve employment outcomes – Alexandria/Eveleigh Scenario 1



To achieve market driven growth to 2050 Alexandria/Eveleigh would require interventions over time:

| Year | Recommended interventions | Outcome |
|------|--|------------------------|
| 2020 | Review to ensure all stakeholder needs are met Strategic policy review for aligned objectives | Moderate market growth |
| 2030 | Review to ensure all stakeholder needs are met Strategic policy review for aligned objectives | Moderate market growth |
| 2040 | Review to ensure all stakeholder needs are met | Market driven |

Assumption: That 65 per cent or more of the land is used for employment. If residential takes more than 35 per cent of the land then Alexandria/Eveleigh could move into a 'market stable phase', where employment growth moves into a steady state.

6.1 Alexandria/Eveleigh – Scenario 1 - projections 2020 to 2050

Role for Alexandria/Eveleigh as an employment centre under Scenario 1

Under this scenario Alexandria/Eveleigh would be well placed to develop as part of an expanded central Sydney. It has potential to develop as a high-density major office hub which functions as a secondary office location to the CBD.

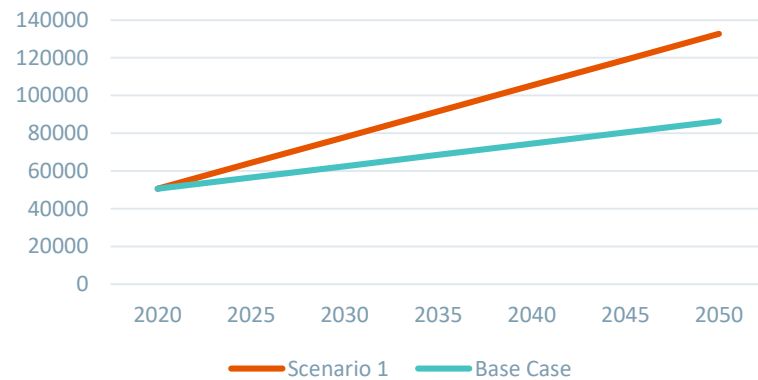
While Alexandria/Eveleigh could experience some displacement of warehousing and construction jobs, the main impact would be in the structure of employment and in a greater utilisation of land through higher densities.

Specific Interventions required for Scenario 1 to occur

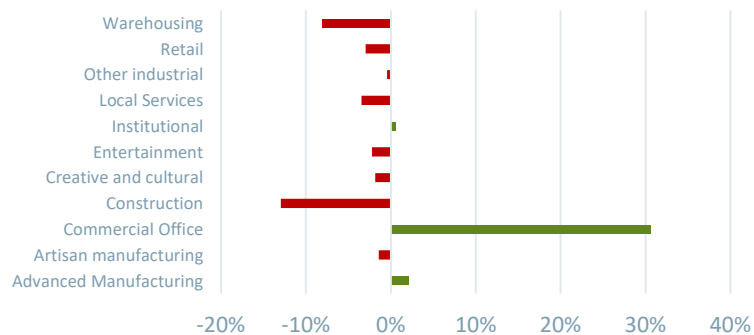
To achieve the projected employment change and growth localised interventions would be required to redress gaps in urban design and infrastructure within the precinct. These could include:

- Land use changes to facilitate commercial office uses and higher densities
- Enhanced public transport

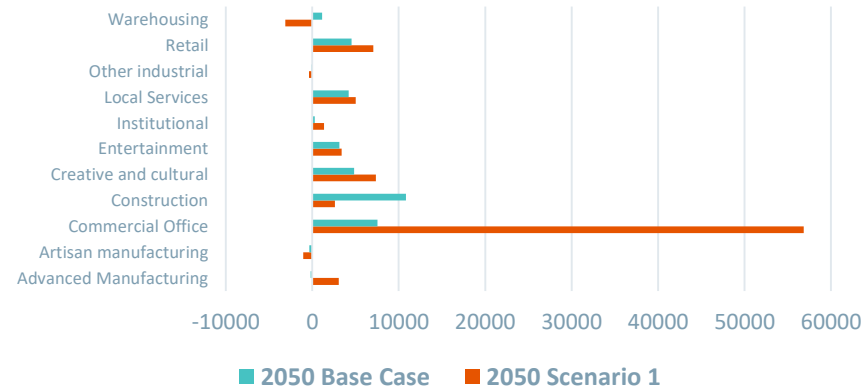
Alexandria – Total Jobs - Base Case vs Scenario 1 (2020-2050)



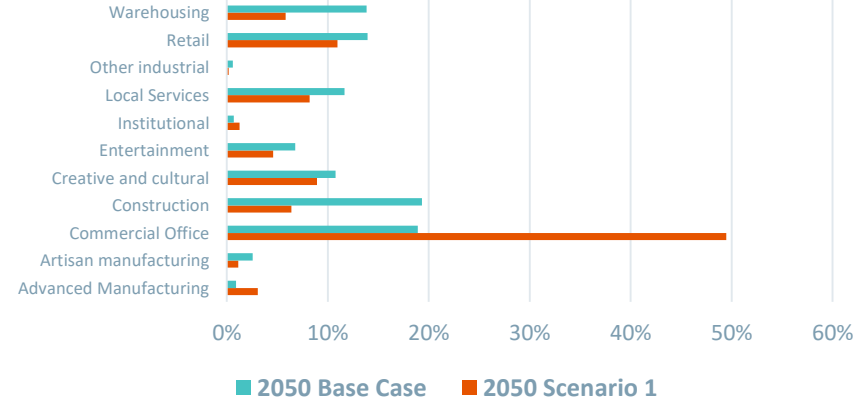
Change in Job Proportion - Base Case vs Scenario 1 (2020-2050)



Change in Industry (2020-2050)



Industry Job Percentage of Market

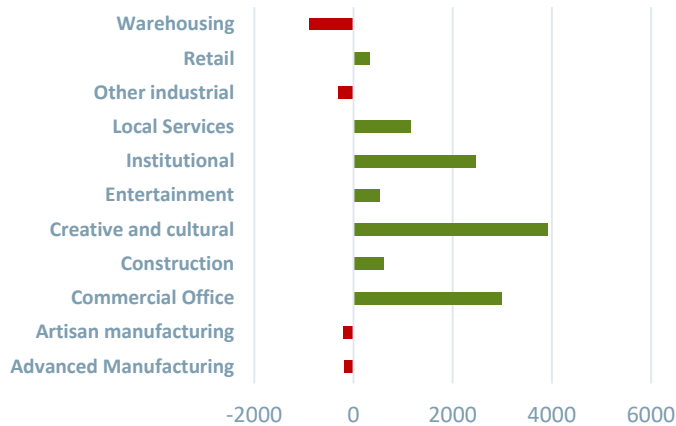


- In Alexandria/Eveleigh a large increase total jobs in 2050 is projected: increasing from around 87,000 in the Base Case to 133,000 in Scenario 1.
- The project case would result in an increase in total employment of 52 per cent over the base case.
- In scenario 1, the Commercial Office industry of employment would lead the growth with around 66,000 jobs, 50,000 more than the base case. Retail, creative and cultural, local services and advanced manufacturing employment would also increase.
- Whilst Construction and Warehousing will have in around 8,000 and 4,000 less jobs respectively when comparing the scenario 1 with the base case.
- Change in job mix: Commercial office would increase from 19 per cent to 49 per cent of total employment; while industrial type employment would fall from a projected 37 per cent to 10 per cent by 2050.

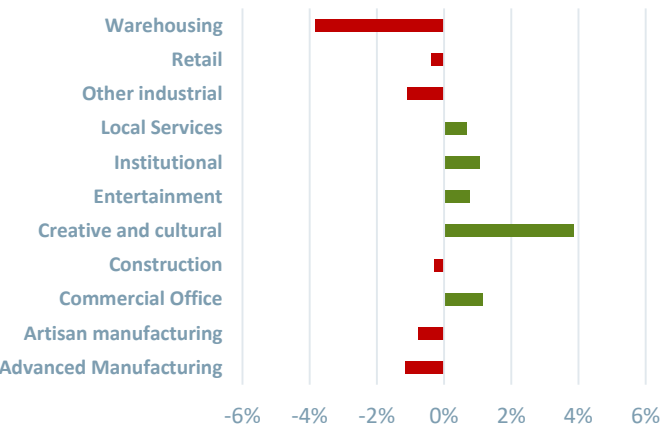
6.2 Artarmon

6.2 Artarmon – Base Case- Job outcomes and Employment projections to 2050

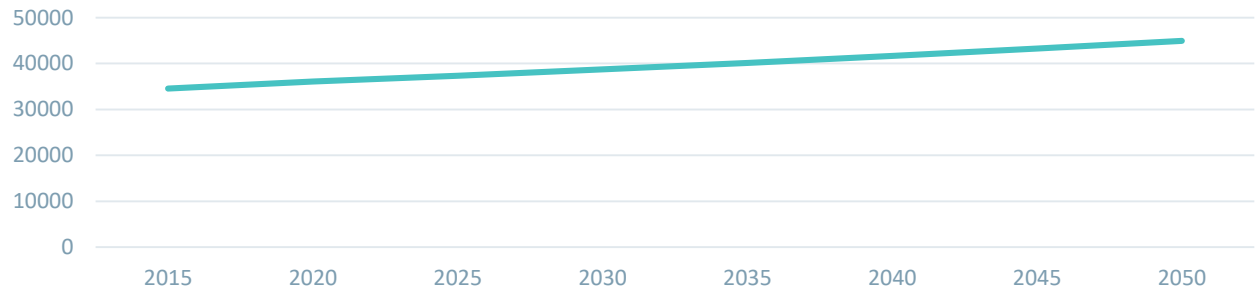
Artarmon – Job Change by Industry Group (2015-2050)



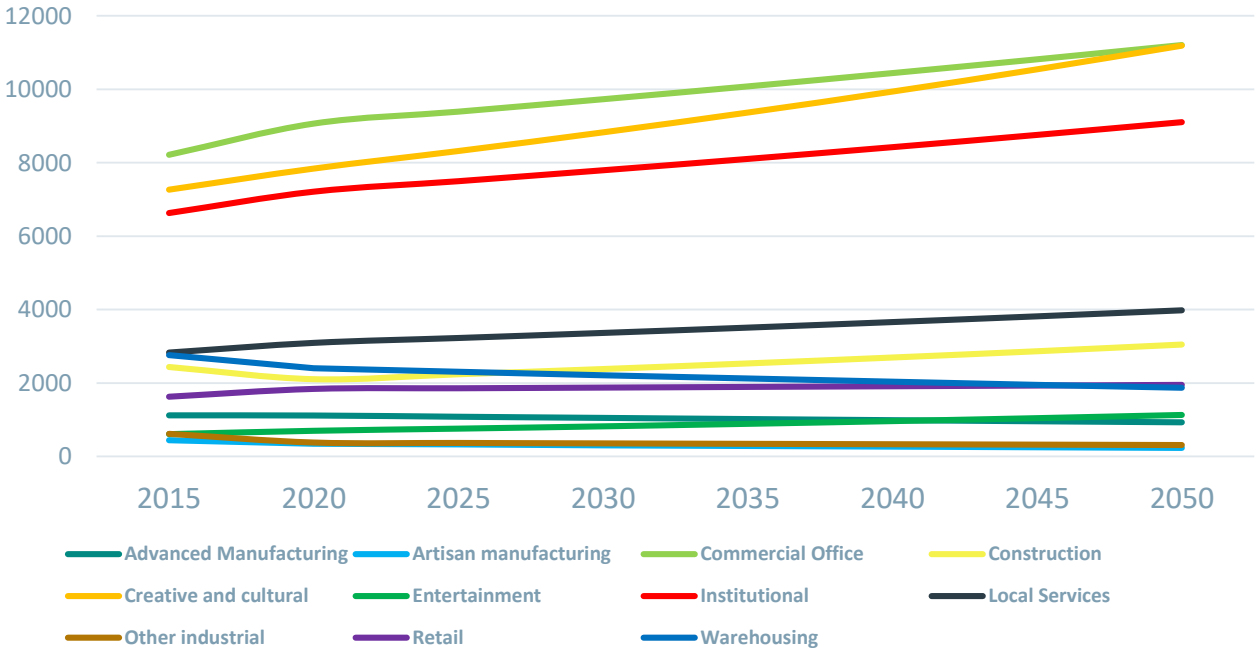
Artarmon – change in proportion of total employment by industry (2015-2050)



Artarmon - Total Employment (2015-2050)



Artarmon – Jobs by Industry Group (2015-2050)

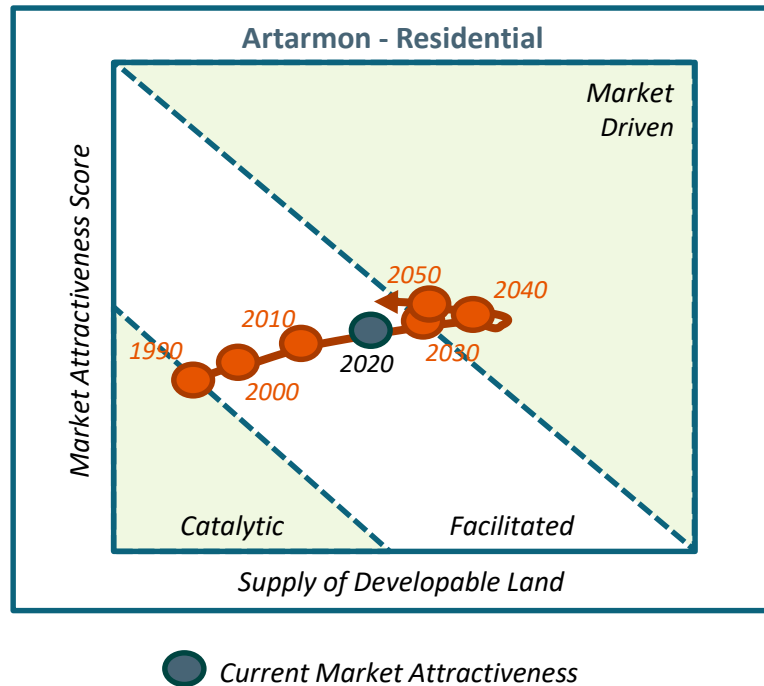


- Between 2015 to 2050 total jobs in the Artarmon employment precinct is projected to increase from 34,563 jobs to 45,000.
- Warehousing will have the most significant decrease of 4% in its job numbers and Artisan and Advanced Manufacturing, and Other Industrial would all have minor decreases in job numbers.
- Whilst the Creative and Cultural, Commercial Office, Institutional, and Local Services industries will all have large growth in employment with 4% for Creative and Cultural to 1% for the rest.
- Warehousing employment drop its share of total employment by almost 4%, whilst Retail, Other Industrial Artisan and Advanced Manufacturing and Construction also have minor decreases.
- There is still a large gap between Commercial Office, Creative and Cultural and Institutional projected employment growth and the remaining industries of employment.

6.2 Base Case - Artarmon - Market Attractiveness Assessment

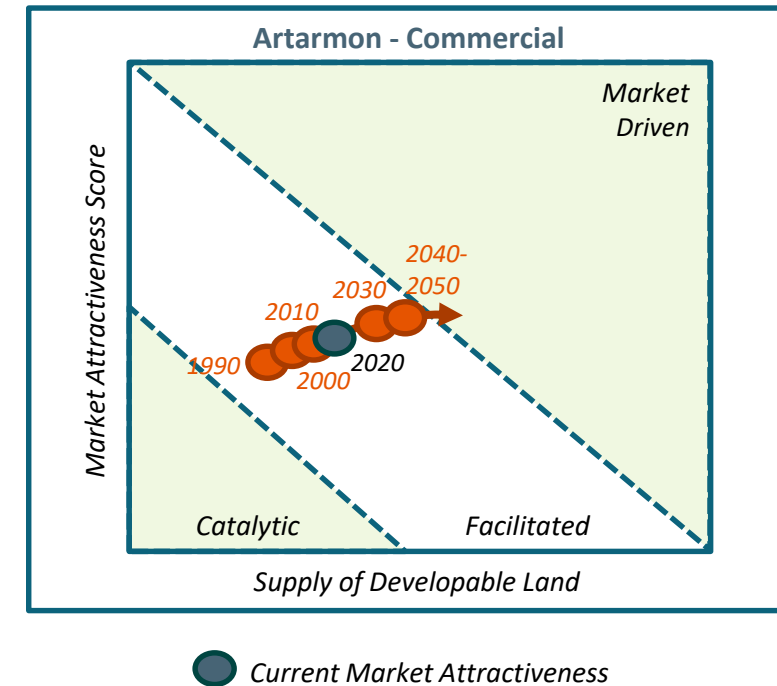
Residential Market Attractiveness – past and projected (1990 to 2050)

The residential market in Artarmon is forecast to increase in attractiveness for residential development up until 2035 at a steady rate. After 2035 the supply of developable land is expected to decrease without further government intervention. Artarmon will continue to remain attractive as a residential market until 2050.

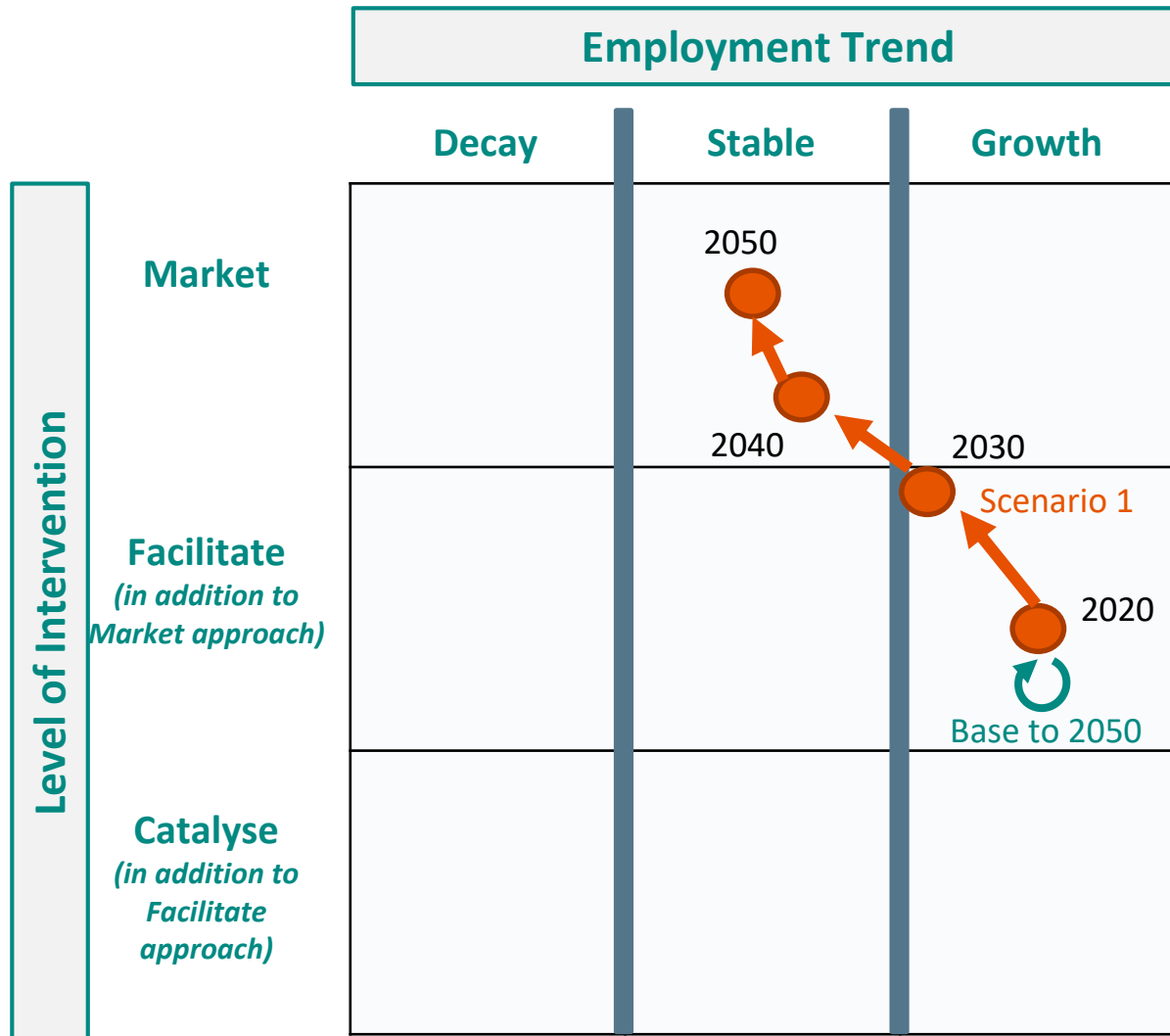


Commercial Market Attractiveness – past and projected (1990 to 2050)

The attractiveness of Artarmon for commercial is forecast to slowly increase up until 2050 with a steady increase in the supply of developable land. Since 1990 the precinct has been in phase requiring government facilitation to support commercial employment growth, which is expected to continue until around 2030. Thereafter the Artarmon employment area would enter a self-sufficient market driven stage.



6.2 Actions to achieve employment outcomes – Artarmon Scenario 1



To achieve market driven growth to 2050 Artarmon would require interventions over time:

| Year | Recommended interventions | Outcome |
|------|--|------------------------|
| 2020 | Review to ensure all stakeholder needs are met Strategic policy review for aligned objectives | Moderate market growth |
| 2030 | Review to ensure all stakeholder needs are met Strategic policy review for aligned objectives | Moderate market growth |
| 2040 | Monitor delivery and maintain market appeal | Steady state |

Assumption: The appeal of the area for residential means that between 35 and 65 per cent of the land would be used for employment. If residential takes more than 65 per cent of the land then Artarmon could move into a 'market decay phase' where employment moves into a slow decline.

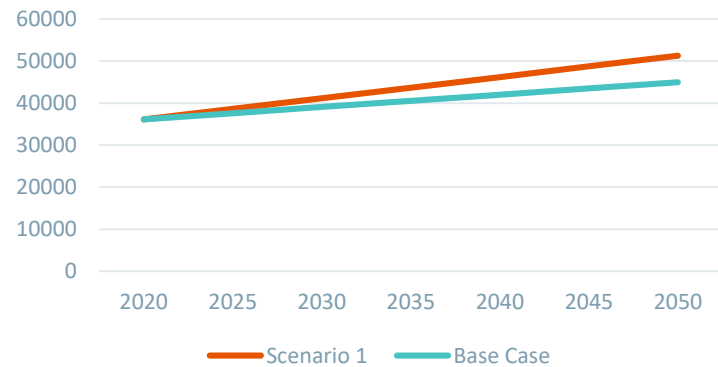
6.2 Artarmon – Scenario 1 - projections 2020 to 2050

Role for Artarmon as an employment centre under Scenario 1

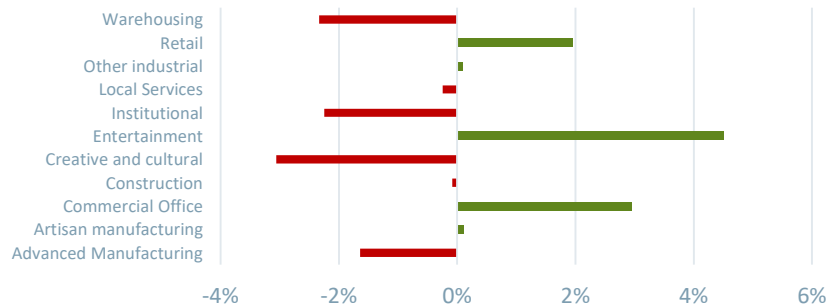
Under this scenario Artarmon, with its proximity to Chatswood and North Sydney employment hubs and its transport connectivity, would be an attractive location for employment and mixed uses.

It would leverage from the existing foundation in institutional and creative and cultural employment and future residential population to attract new retail and entertainment employment, broadening its employment base.

Artarmon – Total Jobs - Base Case vs Scenario 1 (2020-2050)



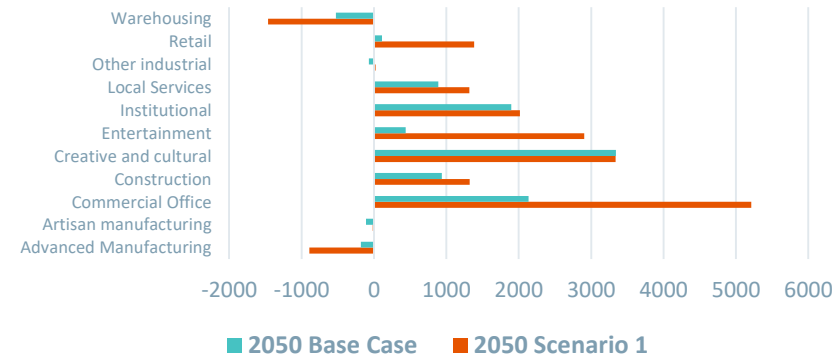
Change in Job Proportion - Base Case vs Scenario 1 (2020-2050)



Interventions that would support Scenario 1 to occur

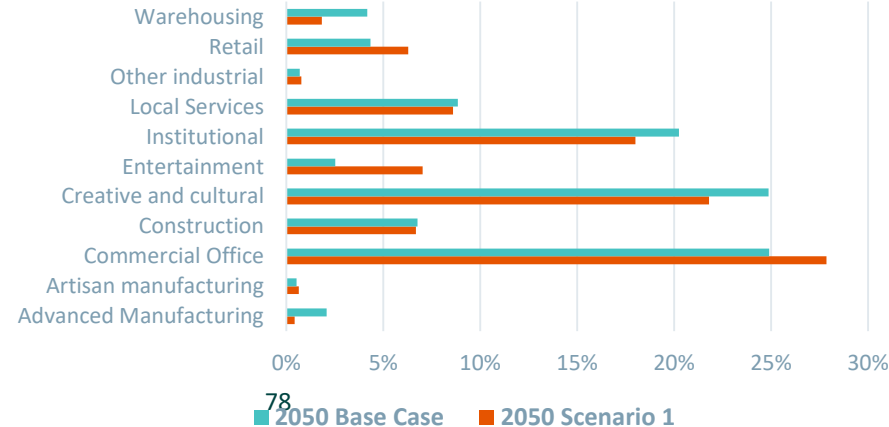
Realising this Scenario would require a level of facilitation supporting the growth and development of investment and employment. Rezoning of parts of the precinct would be required. However, to retain creatives it would be important to keep the character and lower prevailing building heights and preserve some of the older buildings. Higher office towers could be facilitated along the Pacific Highway and motorway and closer to the station, encouraging entertainment and retail uses at ground level. It would also be important to contain residential uses.

Change in Industry (2020-2050)



■ 2050 Base Case ■ 2050 Scenario 1

Industry Job Percentage of Market



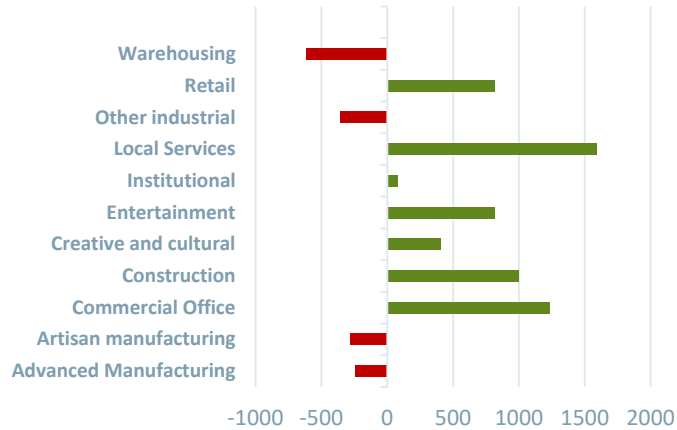
■ 2050 Base Case ■ 2050 Scenario 1

- In Artarmon there will be a small increase in the projection of total jobs by 2050; increasing from around 45,000 for the base case to 51,000 for Scenario 1.
- Under this scenario, employment in Commercial Office, Entertainment and Retail industries group will lead growth with around 3,000, 2500 and 1300 more jobs, respectively, over the base case. Whilst Warehousing and Advanced Manufacturing are projected to have around 900 and 700 less jobs respectively when compared to the base case.
- The increase in proportion of retail and entertainment employment, as well as commercial office would show that the precinct is becoming more mixed use as well as servicing an increasing residential population.

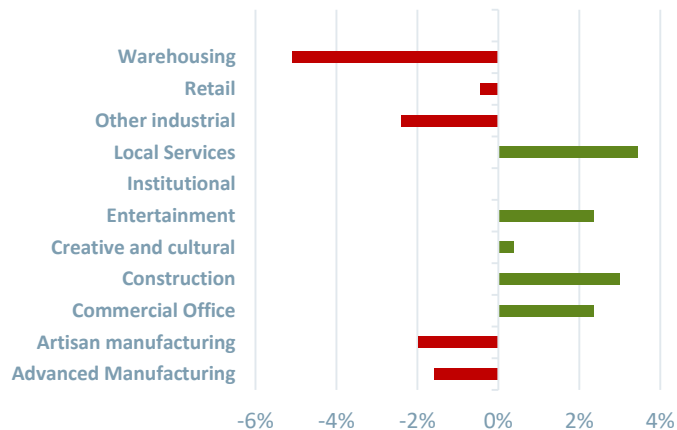
6.3 Brookvale

6.3 Brookvale – Base Case - Job outcomes and Employment projections to 2050

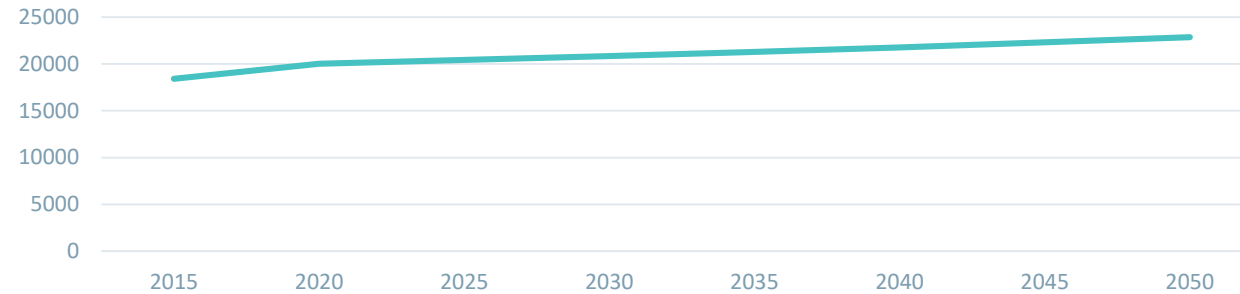
Brookvale – Job Change by Industry Group (2015-2050)



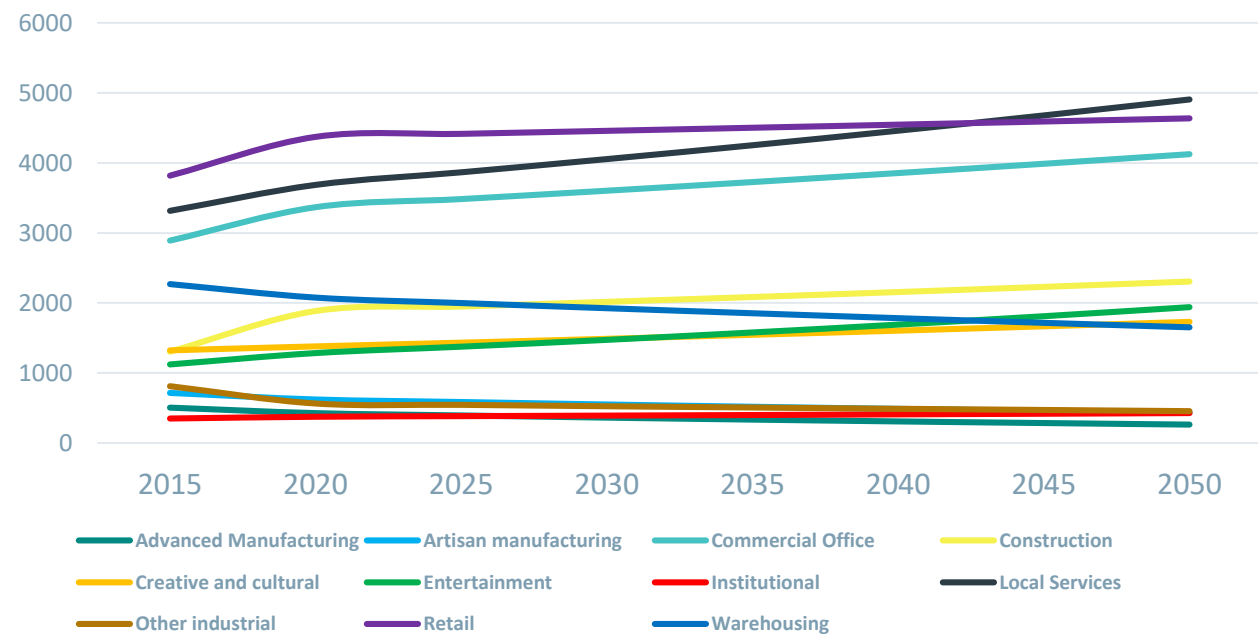
Brookvale – change in proportion of employment by industry (2015-2050)



Brookvale - Total Employment (2015-2050)



Brookvale – Jobs by Industry Group (2015-2050)

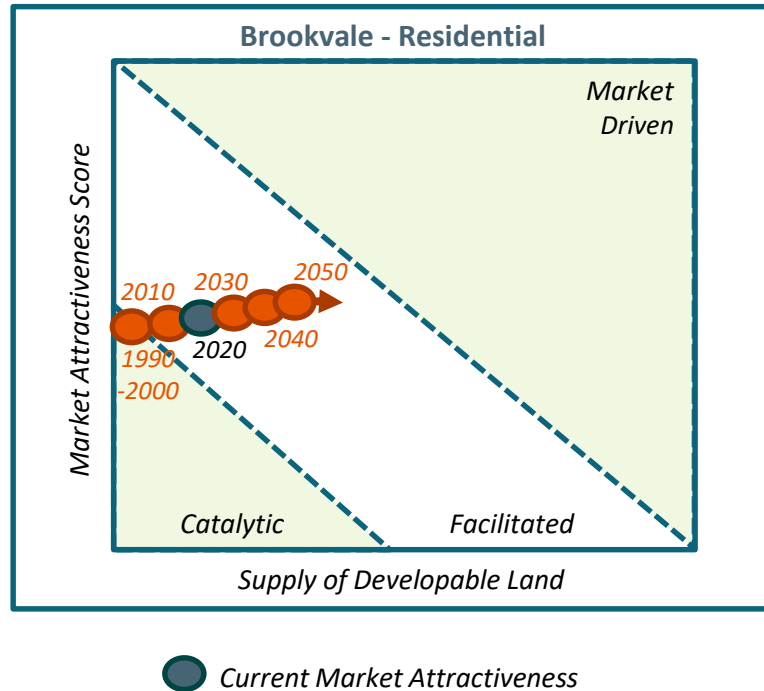


- Between 2015 to 2050, in the precinct of Brookvale, total employment is projected to increase from 18,416 in 2015 to an estimated 22,871 jobs in 2050.
- The warehousing, Other Industrial industries will have the most significant decrease in job numbers and Artisan and Advanced Manufacturing will have minor decreases in job numbers.
- Whilst the Local Services, Commercial Office, Construction, Retail, Entertainment, Creative and Cultural, and Institutional industries will all have growth in employment from 2-3%.
- Warehousing employment drop its share of total employment by 5%, whilst Retail, Other Industrial, Artisan and Advanced Manufacturing and Construction also have minor decreases.

6.3 Base Case - Brookvale - Market Attractiveness Assessment

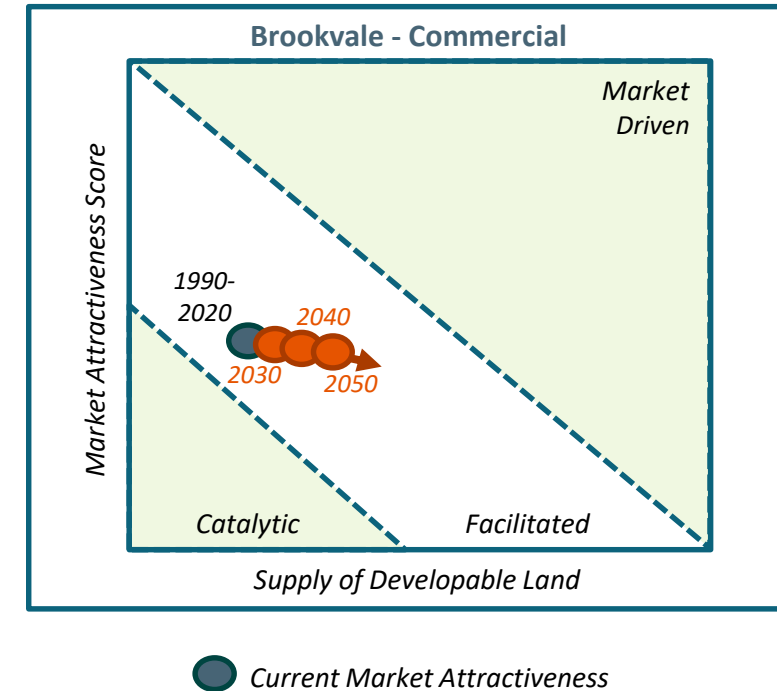
Residential Market Attractiveness – past and projected (1990 to 2050)

The Brookvale residential market has moved from being in a stage requiring catalytic interventions to one requiring government facilitation to drive growth. This is expected to continue until 2050 to deliver an increase in developable land and increase its market attractiveness.

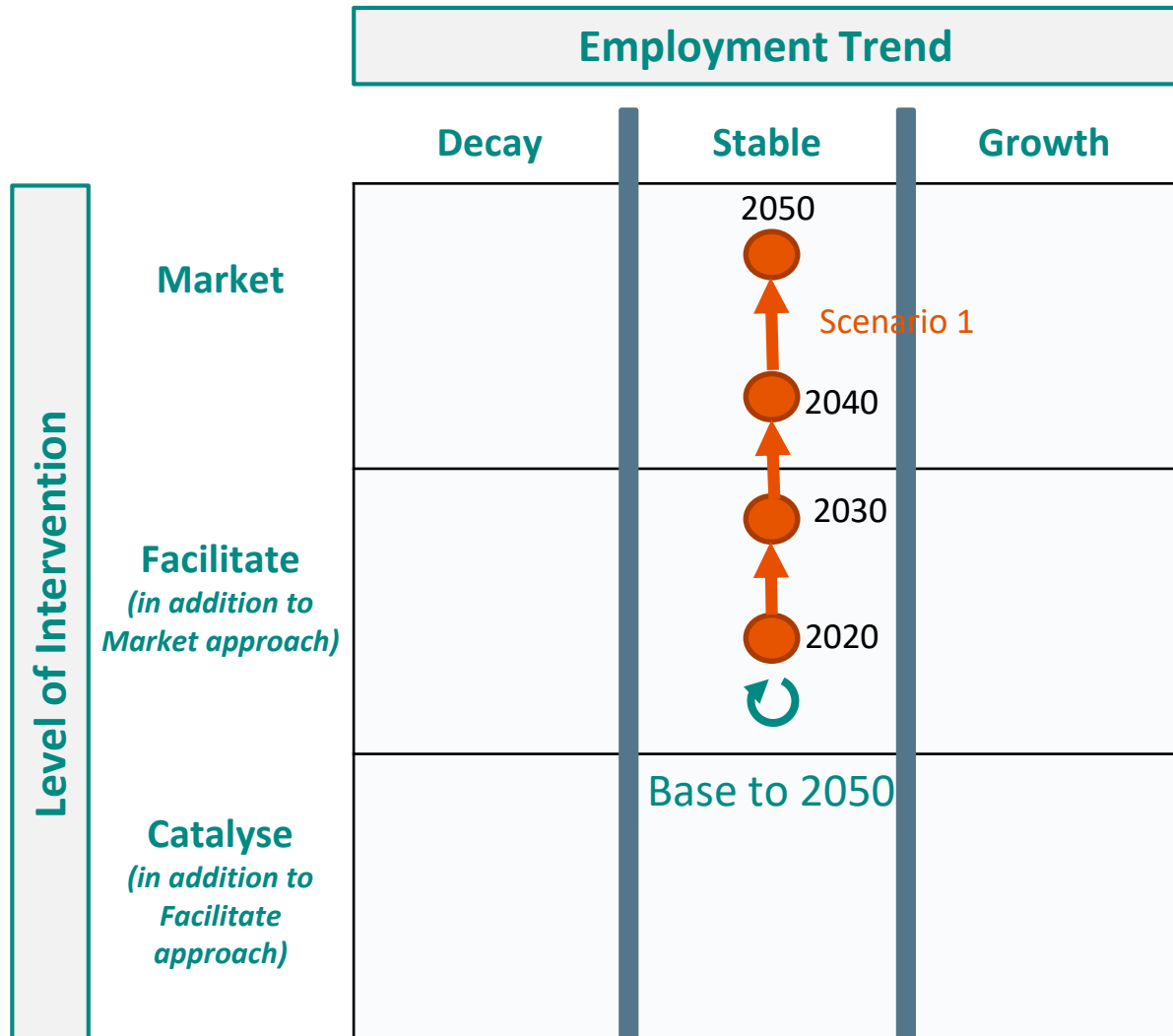


Commercial Market Attractiveness – past and projected (1990 to 2050)

Without intervention the commercial market in Brookvale is forecast to slowly decline in attractiveness and would require government facilitation over multiple years to generate employment outcomes and increase the supply of developable land, up until 2050.



6.3 Actions to achieve employment outcomes – Brookvale Scenario 1



To achieve Scenario 1 growth at 2050 Brookvale would require interventions over time:

| Year | Recommended intervention | Outcome |
|------|---|---------------------------------|
| 2020 | Monitor delivery and maintain market appeal Place based enhancements | Improving market attractiveness |
| 2030 | Monitor delivery and maintain market appeal Place based enhancements | Improving market attractiveness |
| 2040 | Monitor delivery and maintain market appeal | Steady state |

Assumption: The land is more attractive for residential than commercial. That between 35 and 65 per cent of the land is used for employment. If residential takes more than 65 per cent of the land then Brookvale would move into a 'decay phase', where employment moves into a slow decline.

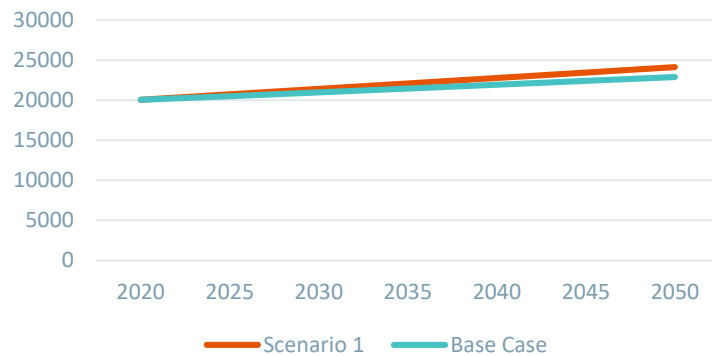
6.3 Brookvale – Scenario 1 - projections 2020 to 2050

Role for Brookvale as an employment centre under Scenario 1

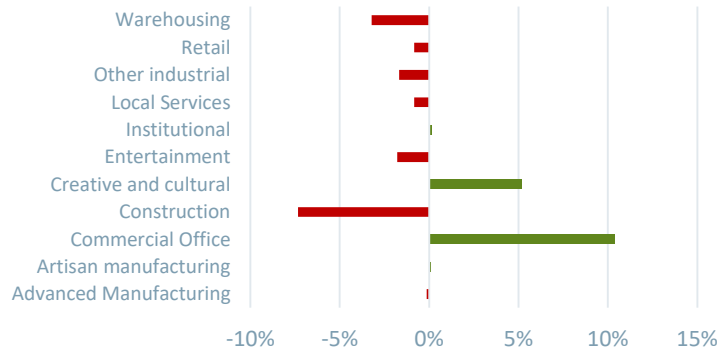
Under this scenario Brookvale would develop as a mainly residential, mixed use precinct with the lowest residential and employment densities of the five precincts. Brookvale would have a neighbourhood centre, anchored by commercial office employment supported by local services, retail and creative and cultural employment as the largest employment groupings in the precinct at 2050.

Construction and warehousing would be the employment that would be dislocated as the precinct continues its transitions from its industrial character.

Brookvale – Total Jobs - Base Case vs Scenario 1 (2020-2050)



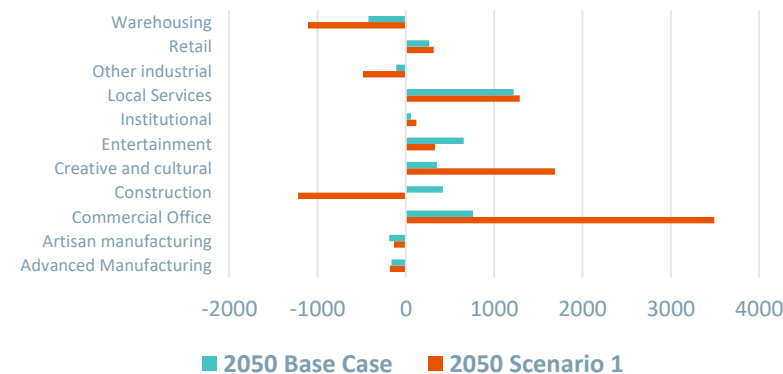
Change in Job Proportion - Base Case vs Scenario 1 (2020-2050)



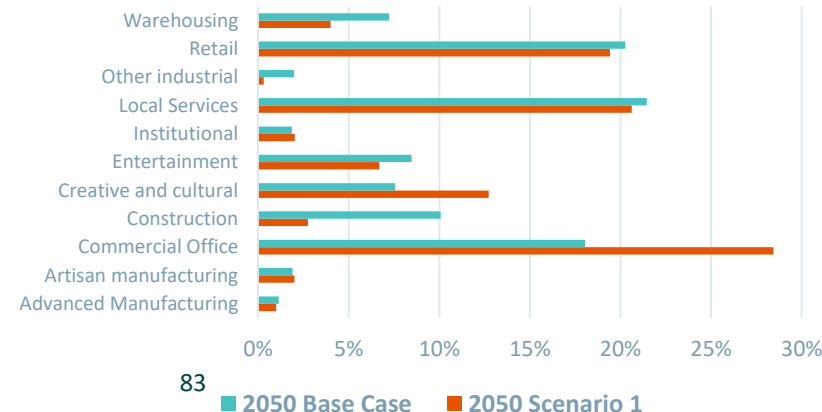
Specific Interventions to facilitate Scenario 1 to occur

Facilitating road, pedestrian and cycling connectivity and amenity within the precinct would improve the integration between it and the surrounding residential community, by improving permeability of streets and improving the quality of the pedestrian environment.

Change in Industry (2020-2050)



Industry Job Percentage of Market

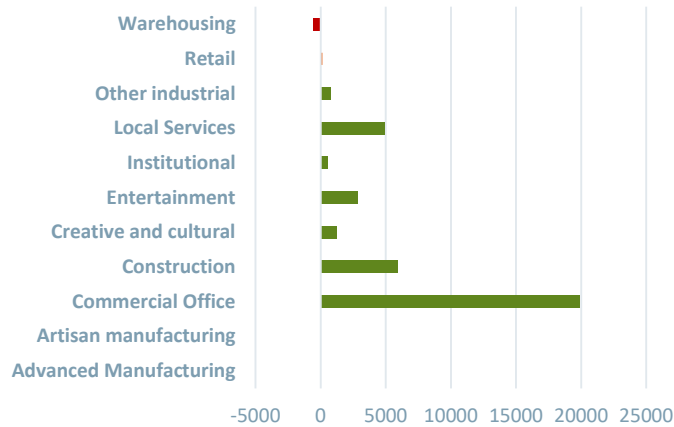


- In Brookvale there will be a small increase in the projection of total jobs at 2050; moving from around 22,900 for the base case to 24,100 for scenario 1.
- This shows that allowing for mixed use development would not result in net job losses. Whilst construction and warehousing would be projected to experience around 1600 and 700 job losses, respectively, this would be more than compensated by increases in commercial office and creative and cultural industries of employment (2,700 and 3,300 respectively).
- This change would have implications for the structure of employment and the character of the area.

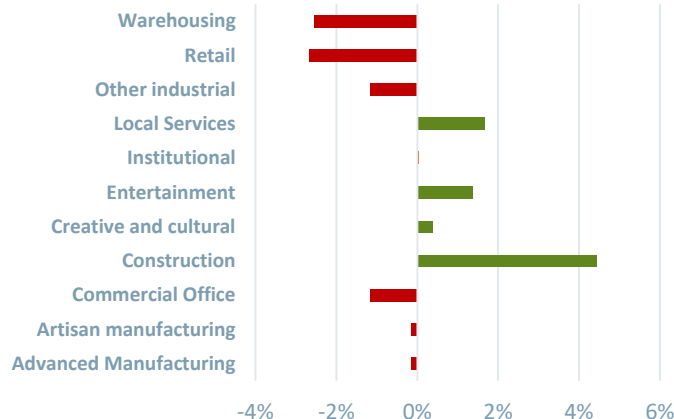
6.4 Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area)

6.4 Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area) – Base Case - Job outcomes and Employment projections to 2050

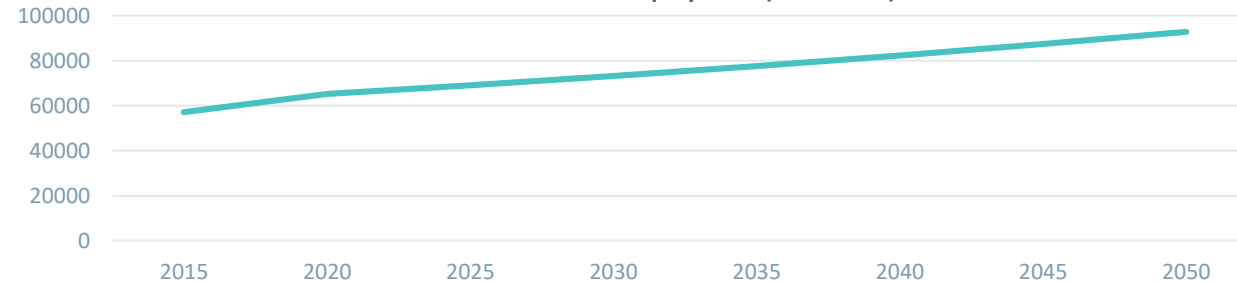
Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area) – Job Change by Industry Group (2015-2050)



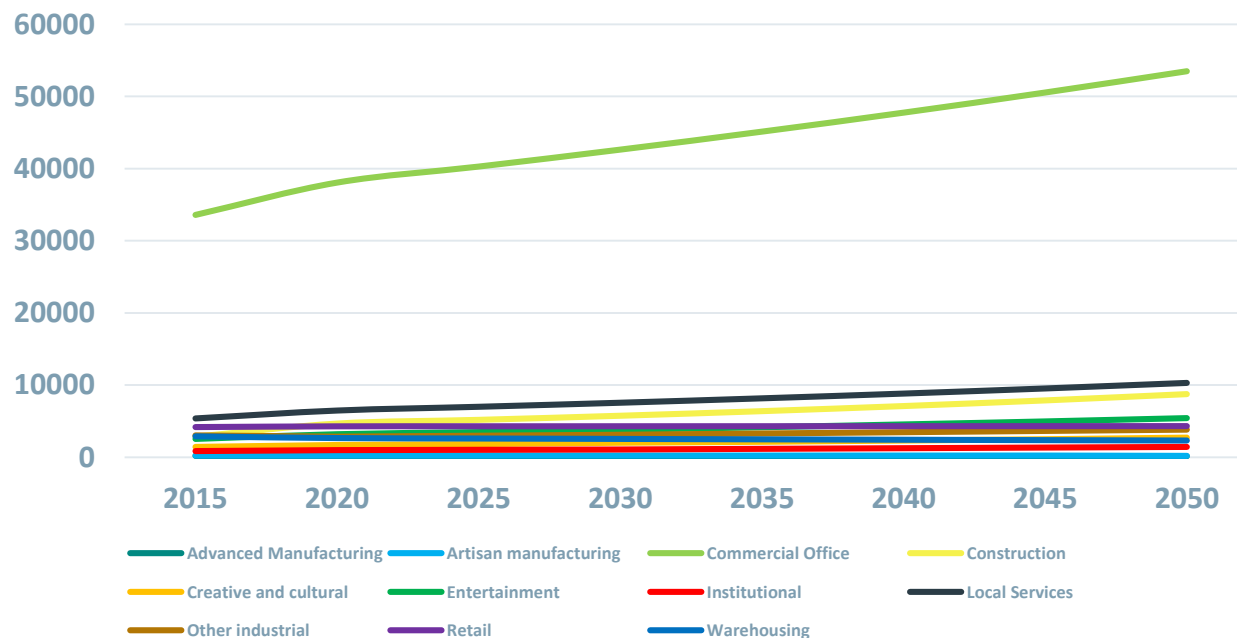
Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area) – change in proportion of total employment by industry (2015-2050)



Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area)
– Total Employment (2015-2050)



Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area)
– Jobs by Industry Group (2015-2050)

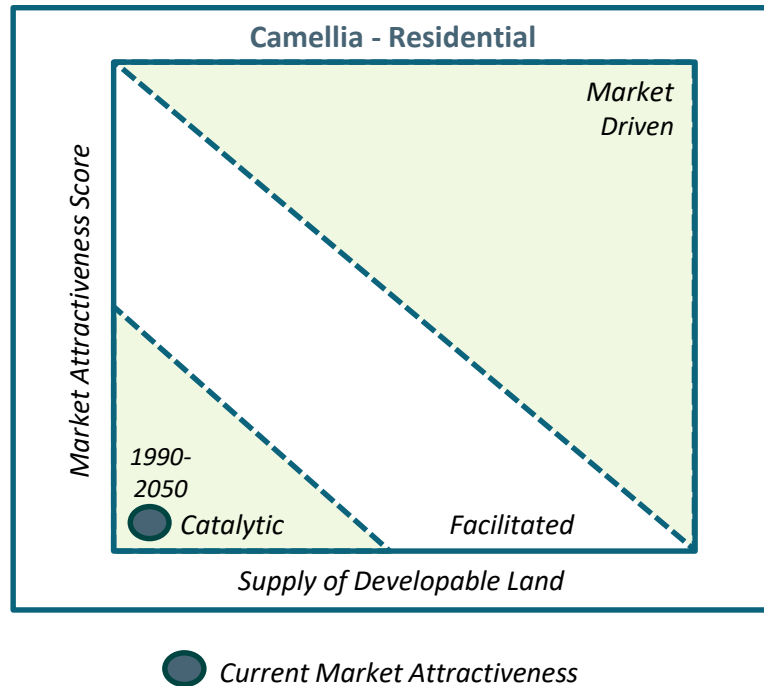


- While the Parramatta – Camellia precinct is projected to continue to increase in employment to 2050, nearly all that employment growth is expected to occur outside the Camellia peninsula. Industries of employment associated with Camellia – warehousing (and transport) and manufacturing – would continue to decline both numerically and as a proportion of total employment within the SA2.
- This is best illustrated by the the adjacent chart showing projected growth by industry of employment. The main growth would occur in commercial office employment which would occur in the Parramatta CBD, along with the increase in local services employment.
- The growth in construction employment would support the growth of GFA in the CBD.

6.4 Base Case Camellia Industrial Precinct - Market Attractiveness Assessment

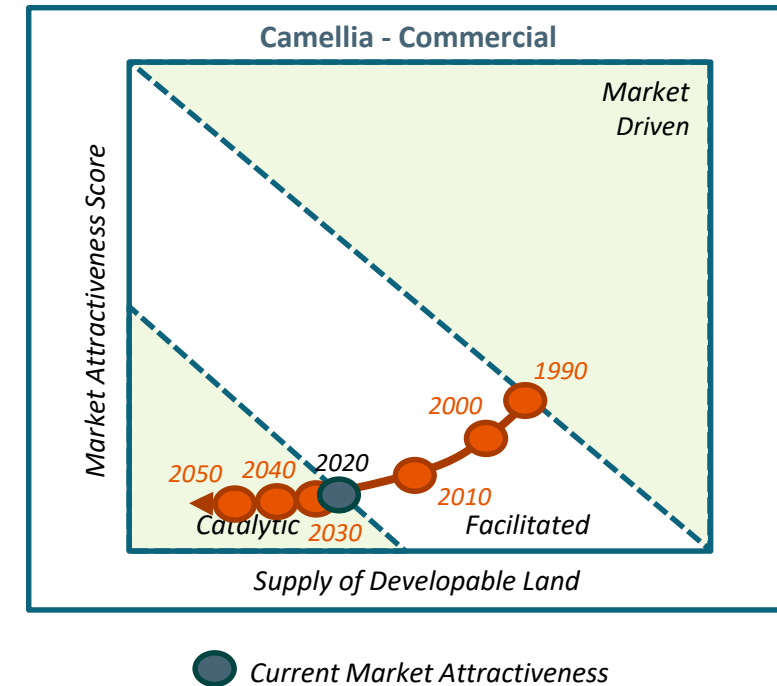
Residential Market Attractiveness – past and projected (1990 to 2050)

The market attractiveness of Camellia Industrial Precinct for residential has remained static and very low for the whole period since 1990, and without catalytic government intervention this situation would remain unchanged between now and 2050.

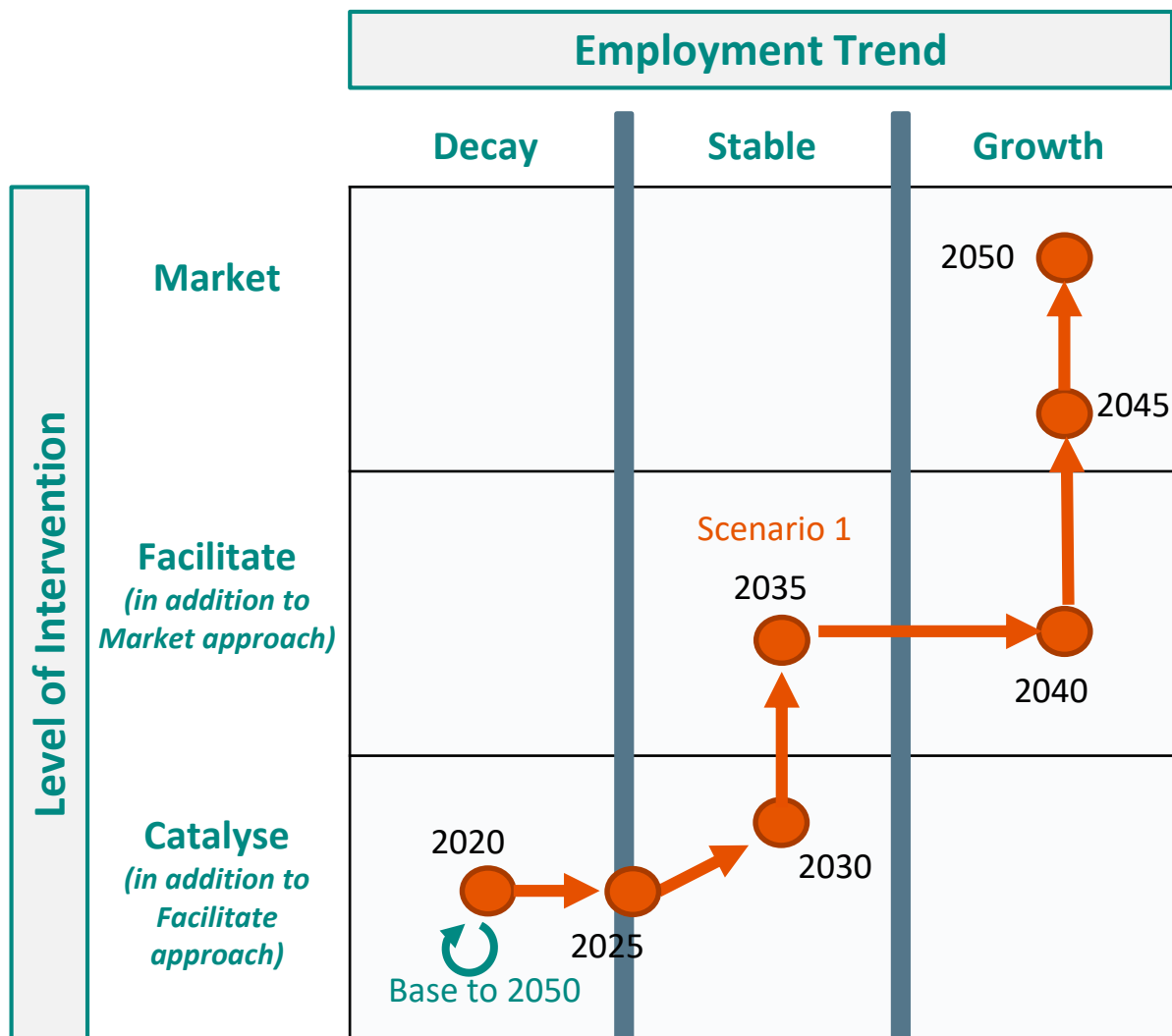


Commercial Market Attractiveness – past and projected (1990 to 2050)

The market attractiveness of Camellia for commercial has been in decline for the period since 1990 and this is forecast to continue without facilitated intervention by government. If left unattended the attractiveness of the area would decline further to a point which required catalytic interventions.



6.4 Actions to achieve employment outcomes – Camellia/ Rosehill ex racecourse and Camellia Industrial Precinct - Scenario 1



Assumption: That 65 per cent or more of the land is used for employment. If residential takes more than 35 per cent of the land then Camellia would move into a 'stable market phase', where employment steadies.

To achieve market driven growth to 2050, the Camellia/ Rosehill area and Camellia Industrial Precinct would require interventions over time:

| Year | Recommended interventions | Outcome |
|------|--|--------------------------------------|
| 2020 | Ascertain investment to recalibrate to market requirement Planning changes to reduce constraints and place based enhancements Funding - Multi Source and Land Use Change | Repurpose land and drive development |
| 2025 | Ascertain investment to recalibrate to market requirement Planning changes to reduce constraints and place based enhancements Funding - Multi Source and Land Use Change | Repurpose land and drive development |
| 2030 | Monitor delivery and maintain market appeal Place based enhancements Funding - Multi Source | Continually driving development |
| 2035 | Monitor delivery and maintain market appeal Place based enhancements | Improving market attractiveness |
| 2040 | Review to ensure all stakeholder needs are met Strategic policy review for aligned objectives | Moderate market growth |
| 2045 | Review to ensure all stakeholder needs are met | Market driven growth |

6.4 Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area)

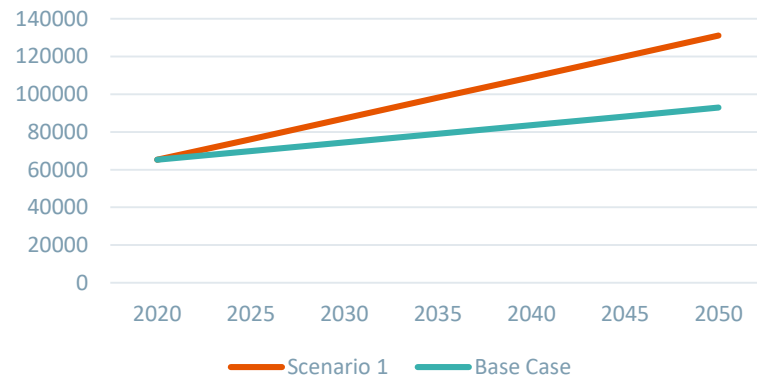
– Scenario 1 - projections 2020 to 2050

Role for Camellia as an employment centre under Scenario 1

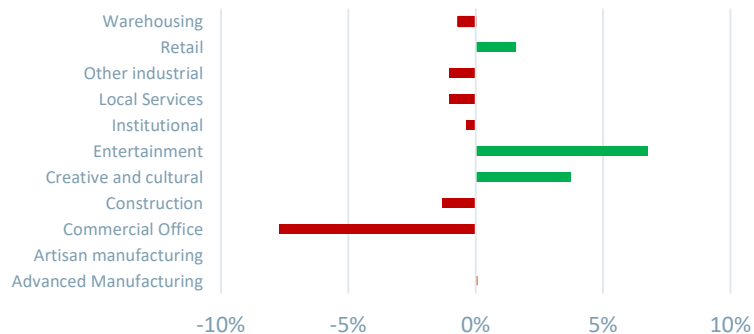
Under this scenario, the Camellia employment lands north and immediately east of the Rosehill Racecourse would be rezoned. This would broaden its economic base and transition into a more mixed use employment and residential area, with a high density core of commercial office and other employment in Camellia acting as a secondary office location to the Parramatta CBD.

There would be minimal dislocation to industrial employment.

Camellia/Parramatta – Total Jobs - Base Case vs Scenario 1 (2020-2050)



Change in Job Proportion - Base Case vs Scenario 1 (2020-2050)

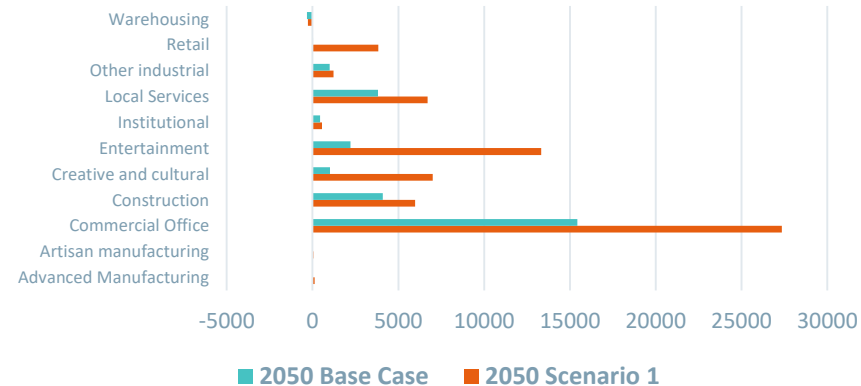


Specific Interventions required for Scenario 1 to occur

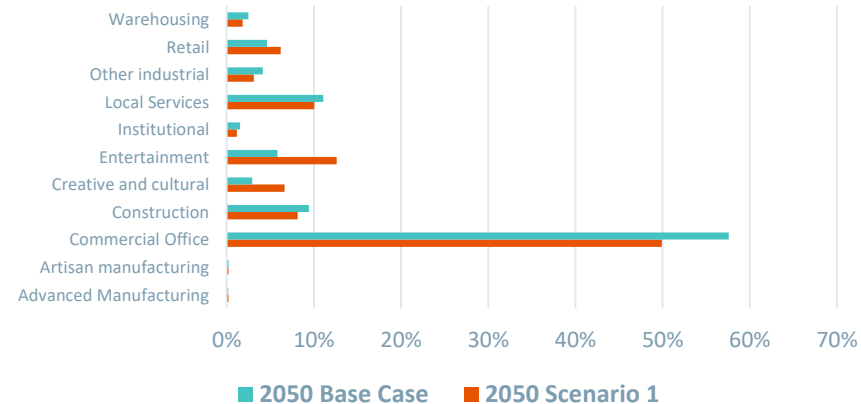
To achieve this the current Camellia industrial area requires a higher level of catalytic interventions and strategies before the market would drive outcomes to realise the projected commercial, entertainment, local services and retail development and growth. In particular it assumes the delivery of:

- Mass public transit by way of a light rail and road bridge connections
- Placemaking enhancements by developers and governments to improve the public realm and pedestrian environment.

Change in Industry (2020-2050)



Industry Job Percentage of Market

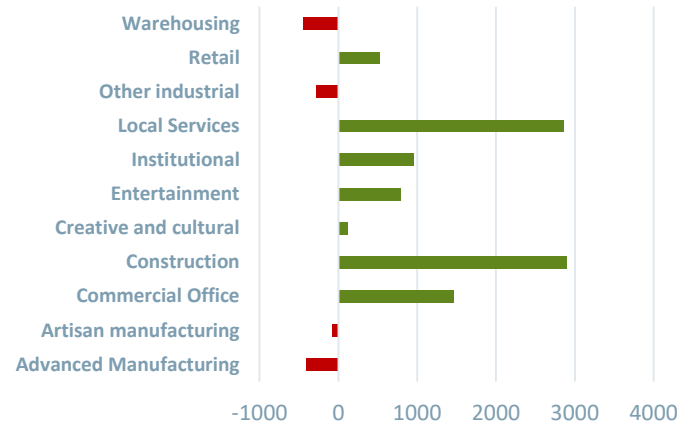


- In Parramatta (Camellia/Rosehill) a large increase total jobs in 2050 is projected: increasing from around 65,000 in the Base Case to 131,000 in Scenario 1.
- The project case would result in an increase in total employment of 41 per cent over the base case.
- In scenario 1, the Commercial Office industry of employment would lead the growth with around 27,300 jobs, 11,900 more than the base case. Entertainment employment would follow next with 13,300 jobs, 11,100 above the Base Case. Retail, creative and cultural, local services and construction employment would also increase.
- Notably there would be no net loss of industrial employment when comparing the scenario 1 with the Base Case.
- Change in job mix: In contrast to other areas commercial office would decrease from 58 per cent to 50 per cent of total employment, while entertainment increases from 6 to 13 percent; the share of Industrial type employment would fall by six per cent by 2050.

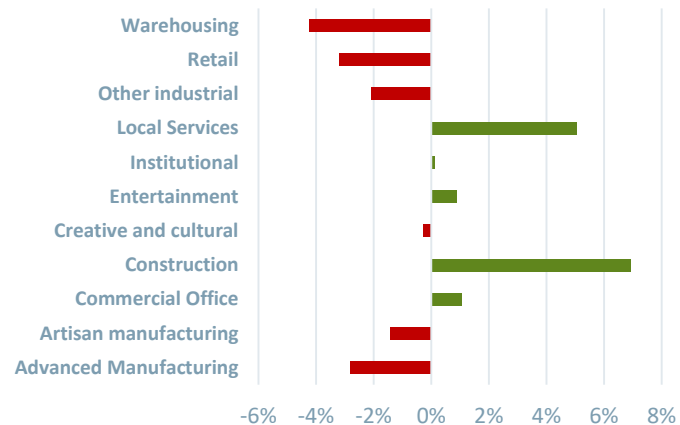
6.5 Taren Point/ Caringbah

6.5 Taren Point/Caringbah – Base Case - Job outcomes and Employment projections to 2050

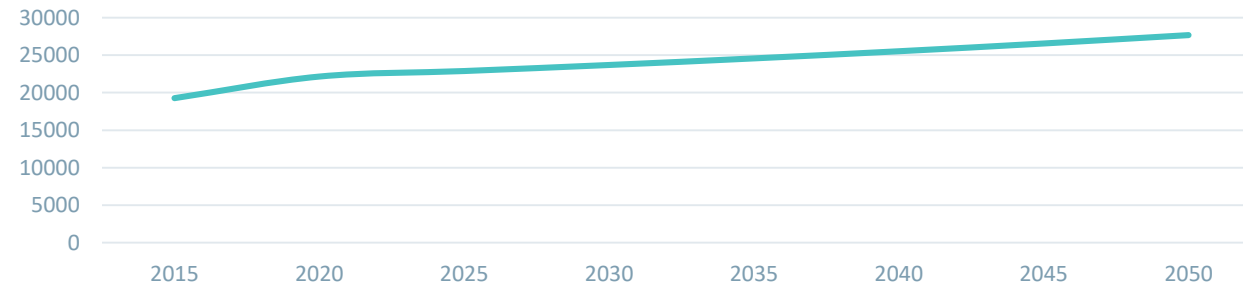
Taren Pt/Caringbah – Job Change by Industry Group (2015-2050)



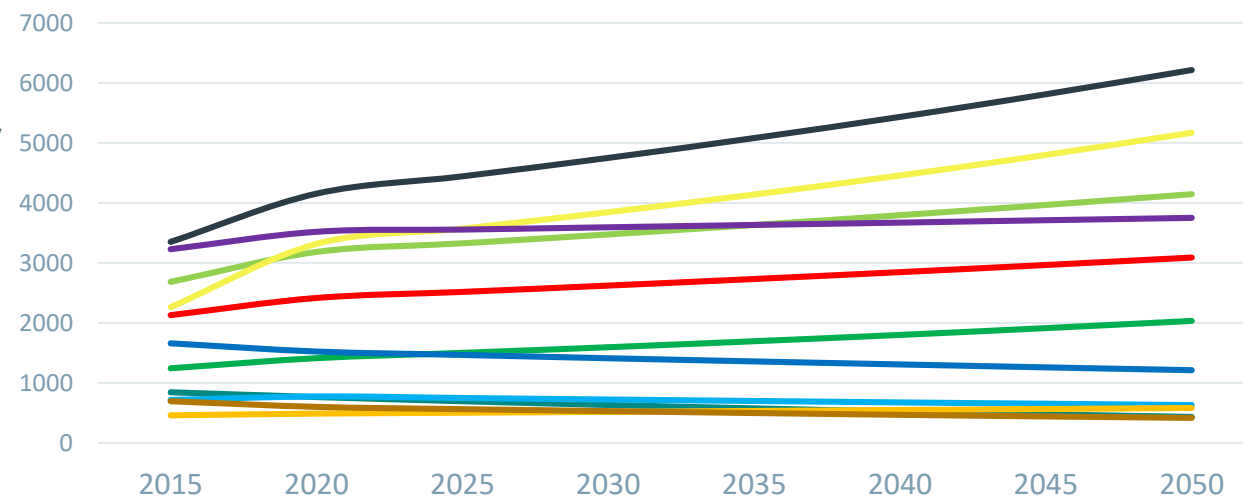
Taren Pt/Caringbah – change in proportion of employment by industry (2015-2050)



Taren Pt/Caringbah - Total Employment (2015-2050)



Taren Pt/Caringbah – Jobs by Industry Group (2015-2050)



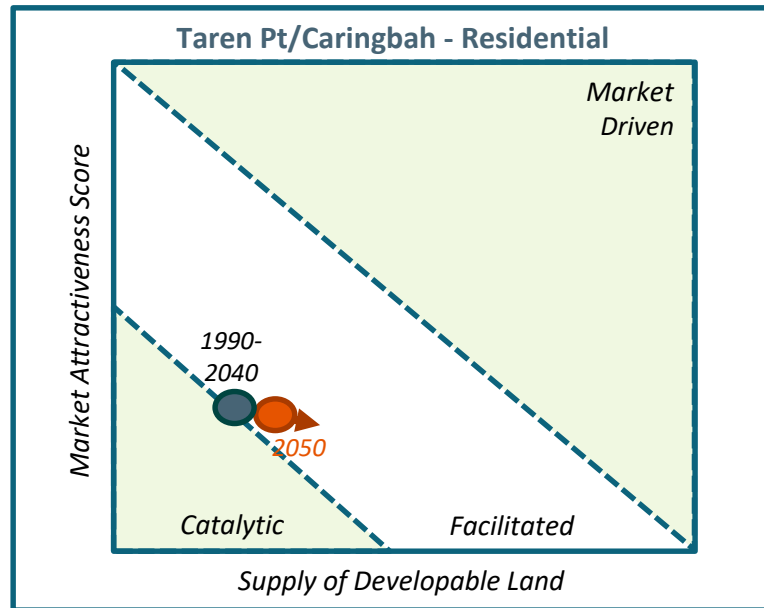
Advanced Manufacturing Artisan manufacturing Commercial Office Construction
 Creative and cultural Entertainment Institutional Local Services
 Other industrial Retail Warehousing

- Between 2015 to 2050, total employment in the Taren Point and Caringbah areas, are forecast to increase from 19,281 jobs to 27,673.
- Warehousing (and transport), Other Industrial, Artisan and Advanced Manufacturing industries all have minor decreases in job numbers.
- Highest employment growth would be in the Local services, and Construction, followed by growth in Commercial Office, Institutional, Entertainment, and Retail.
- Warehousing employment would drop its share of total employment by just over 4%, whilst Retail, Other Industrial Artisan and Advanced Manufacturing, and Creative and Cultural also have minor decreases of 1-3%. Whilst Construction and Local Services have the biggest growth in proportion of employment by industry.

6.5 Base Case - Taren Point/Caringbah - Market Attractiveness Assessment

Residential Market Attractiveness – 1990 to 2050

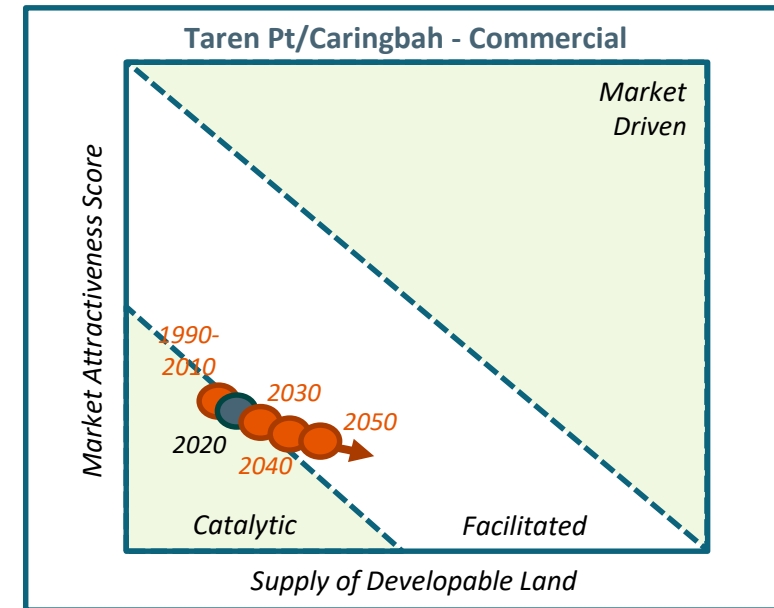
The attractiveness of Taren Point/Caringbah for residential is forecast to remain unchanged through to 2050 requiring ongoing facilitated intervention by government. This suggests that without active government involvement to facilitate change the residential market would remain challenging.



● Current Market Attractiveness

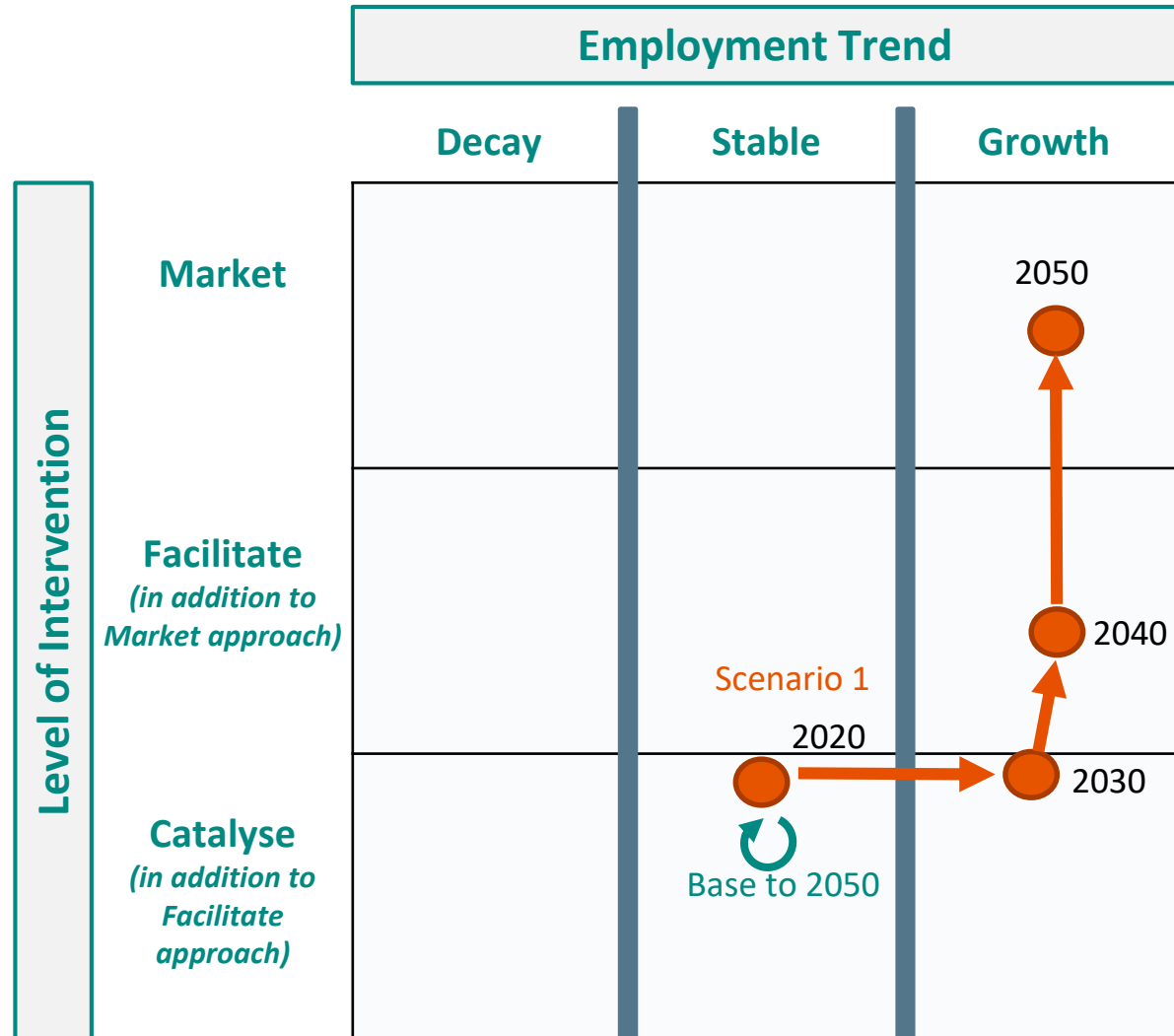
Commercial Market Attractiveness – 1990 to 2050

In contrast, without action by government the commercial market in Taren Point/Caringbah is forecast to continue along a trajectory of declining market attractiveness through to 2050. The market began in a catalytic phase in 1990 and has since moved into the next phase, where government facilitation would be required to drive commercial employment outcomes.



● Current Market Attractiveness

6.5 Actions to achieve employment outcomes – Taren Point/ Caringbah Scenario 1



To achieve market driven growth to 2050 Taren Point/Caringbah would require interventions over time:

| Year | Recommended interventions | Outcome |
|------|---|---------------------------------|
| 2020 | Monitor delivery and maintain market appeal Place based enhancements Funding - Multi Source | Continually driving development |
| 2030 | Review to ensure all stakeholder needs are met Strategic policy review for aligned objectives Oversee growth to achieve land requirements | Guiding land use and purpose |
| 2040 | Review to ensure all stakeholder needs are met Strategic policy review for aligned objectives | Moderate market growth |

Assumption: That 65 per cent or more of the land is used for employment. If residential takes more than 35 per cent of the land then Taren Point/Caringbah would move into a 'stable market phase', where employment steadies.

6.5 Taren Point/Caringbah – Scenario 1 -projections 2020 to 2050

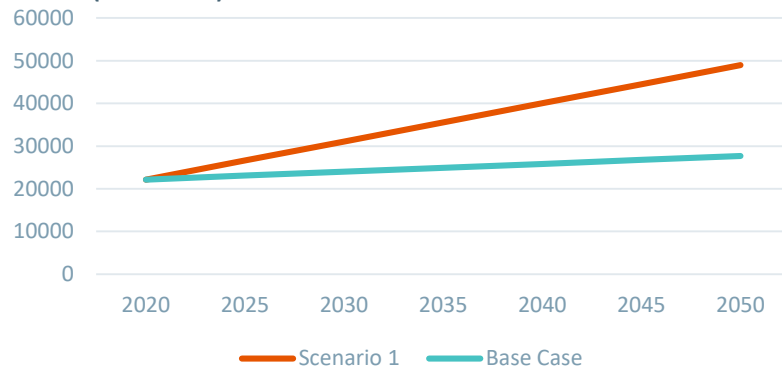
Role for Taren Pt/Caringbah as an employment centre under Scenario 1

Under this scenario Taren Point/Caringbah's employment role would transition to that of a third tier office and service location for its sub-region. Taren Point Road is a major spine through this whole region providing links between Kogarah in the north and Caringbah on the Cronulla train line in the south. Its waterfront location would also be attractive to increased entertainment and creative and cultural employment.

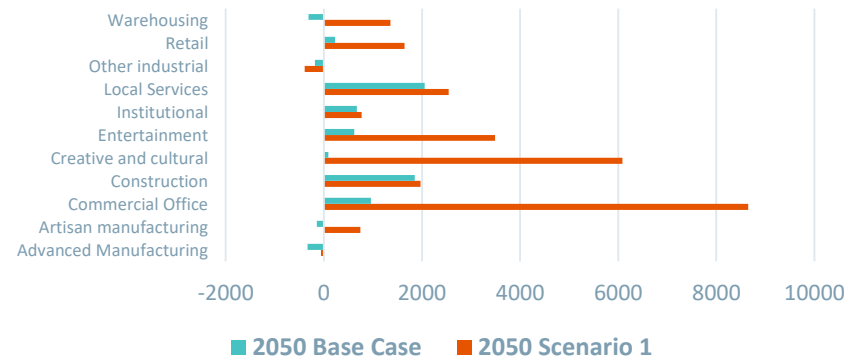
Specific Interventions required for Scenario 1 to occur

To leverage this outcome would require investments to enhance the pedestrian and cycling environment, increase its permeability to make the precinct more walkable and new public transport infrastructure and open space. Initiating one or two seed projects to foster a cluster of like businesses would also help facilitate the desired outcomes. Currently, the market is expecting the government to catalyse development outcomes through the delivery of these elements.

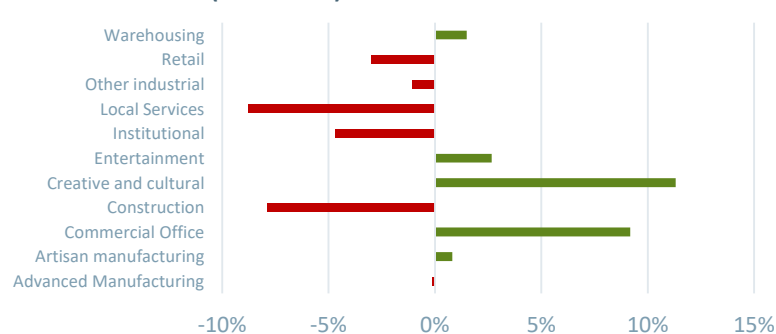
Taren Point/Caringbah – Total Jobs - Base Case vs Scenario 1 (2020-2050)



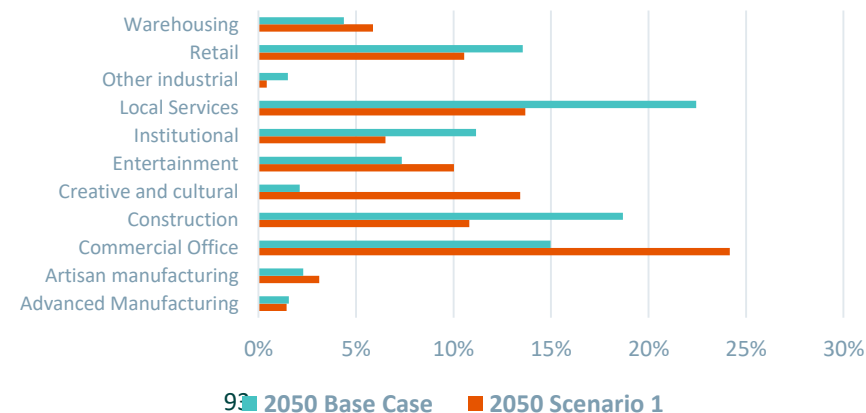
Change in Industry (2020-2050)



Change in Job Proportion - Base Case vs Scenario 1 (2020-2050)



Industry Job Percentage of Market



- In Taren Point/Caringbah there will be a small increase in the projected total jobs at 2050, increasing from around 28,000 in the base case to 49,000 for scenario 1. This represents an increase of 75 per cent in total employment
- More significantly would be the types of jobs increasing - commercial office and creative and cultural industry groups would be the leading industries with around 7,700 and 6,000 more jobs, respectively. Entertainment employment would also be a major area of employment growth. Importantly, there would not be significant displacement of existing jobs in traditional industries.
- Parallel to the change in the number of jobs would be the change in the relative distribution of employment, with commercial office and creative and cultural and entertainment accounting for 37 per cent in Scenario 1, up from 24 per cent in the Base Case.

Conclusion and Recommendations

7

Summary of identified themes on the selected employment lands

Patterns of employment changes and growth when left to market are similar

- The selected employment lands in the study area exhibit similar traits when projecting Base Case employment growth. Industries of employment associated with the knowledge and innovation economy – commercial office, creative and cultural and institutional employment - are increasing, while employment associated with the industrial past of these lands – warehousing and manufacturing - would stagnate or continue to decline. These trends are consistent across all precincts.

The structure of employment of each precinct will influence its role

Projected changes to the structure of employment of each precinct have implications for their future role:

- **Alexandria – Eveleigh** is projected to retain a high number of warehousing jobs, with office and construction employment exceeding warehousing around 2035. Retail employment would reach warehousing employment by 2050. Proximity to the CBD and airport mean that demand for warehousing (and transport) employment would be high. The area would also experience spillover demand for commercial office.
- **Artarmon** already displays the characteristics of a ‘knowledge economy’ with much higher levels of employment in commercial office, creative and cultural industries and institutional employment. These are projected to increase even further, with local services being the next most significant industry of employment, at 2050 being less than half the size of the others. Access to heavy rail and the anchor role of the hospital and SBS would ensure that it continues as an important regional employment destination on the North Shore.
- **Brookvale** – Retail, local services and commercial office are the leading industries of employment and this is projected to remain unchanged over the forecast period. Future employment growth would take its direction from the surrounding residential areas and be largely dependent on local population growth.
- **Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area)** Future employment growth in the SA2 is predominantly about commercial office. Local services and construction employment would make some contribution to growth, but other categories would remain stagnant or decline. Employment growth would be due entirely to the impact and contribution of the Parramatta CBD and not Camellia.
- **Taren Point/ Caringbah** – Employment growth in the SA2s is projected to be more mixed than the other areas, led by local services, construction and commercial office employment. It would have a local employment role where jobs service the resident population.

Quantum of future employment growth show the strength of the market

- **Alexandria – Eveleigh** – is projected to increase employment in the base case by 40,600 over the period to 2050.
- **Artarmon** - is projected to increase employment in the base case by 10,500 over the period to 2050
- **Brookvale** – is projected to increase employment in the base case by 4,400 over the period to 2050
- **Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area)** - is projected to increase employment in the base case by 35,700 over the period to 2050
- **Taren Point/ Caringbah** - is projected to increase employment in the base case by 8,400 over the period to 2050

Overall changes in employment in selected precincts

Comparison between overall employment growth with addition of positive interventions

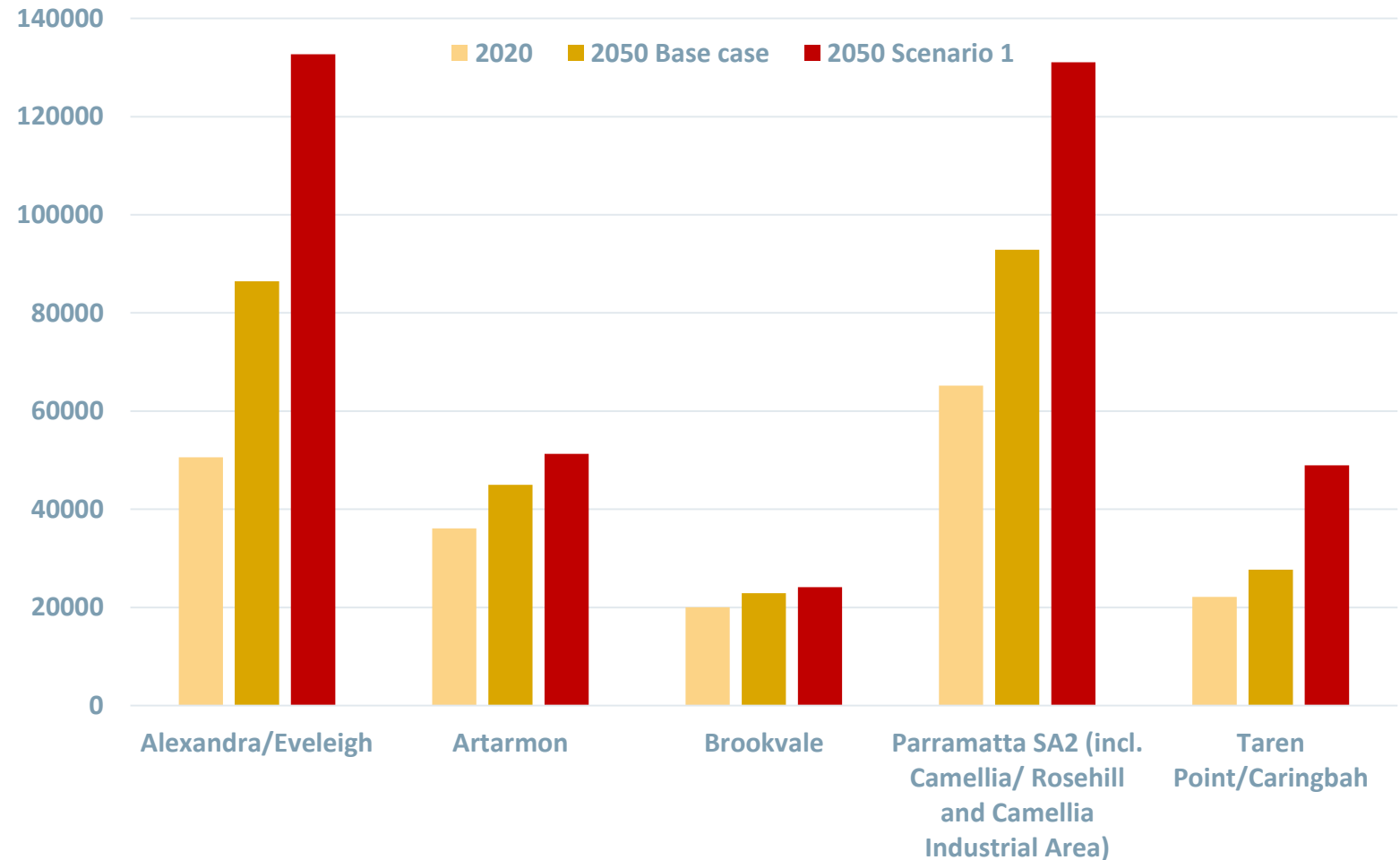
The Scenario analysis shows the result what could happen if change is initiated in the investigations areas compared to the growth of employment lands for those precincts between 2020 and 2050 in the base case (see Section 6).

It is not a forecast of what will happen, rather one of what could happen, given the particular changes and interventions. It is a useful exercise because it gives an indication of the impact of pursuing “business as usual”, not just in terms of potential difference in job outcomes within a precinct, but just as important, in terms of the change in the job mix.

The projections in the chart here show, at a gross level, the different employment outcomes that could be expected across the different areas from an Alternate approach (Scenario 1) to the ‘retain and manage’ or ‘review and manage’ of the GSC. The change in the mix of employment is provided in the detailed precinct slides following.

While population increases follow particular trends based on birth rates and net migration, employment growth is far less predictable. Investment opportunities lost in one area would not necessarily be created in another area. The other consideration is about creating more jobs closer to where people live, to achieve a 30 minute city as described in Sydney’s strategic plan.

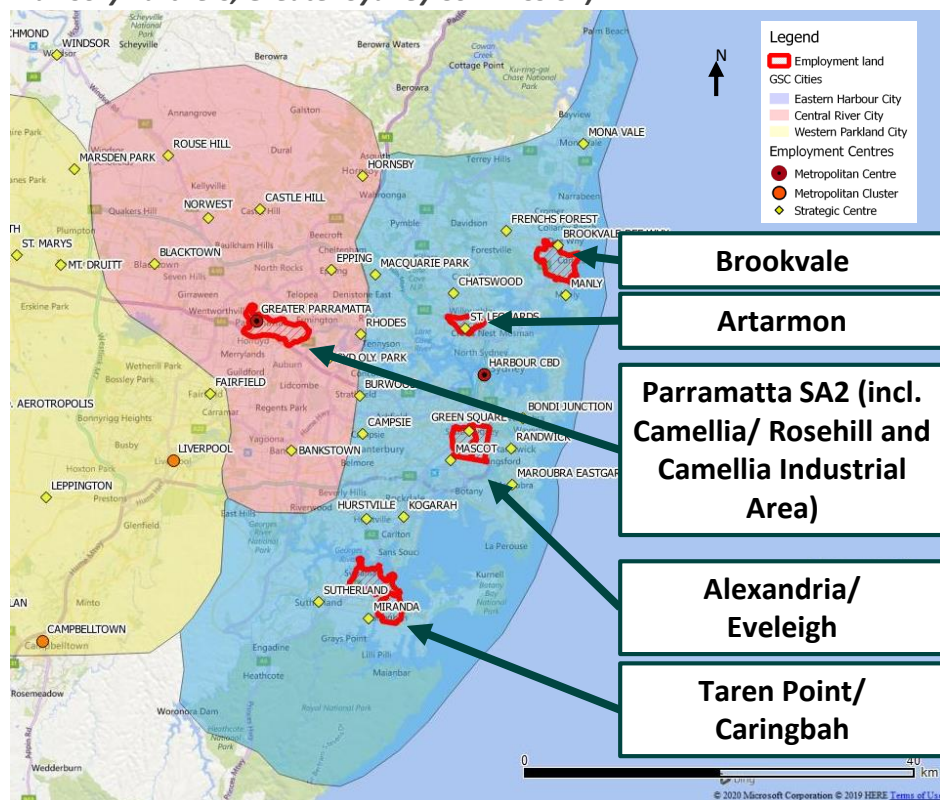
Population of Employment Lands - Base Case vs Scenario 1



Comparison between GSC and an Alternate approach – potential commercial building equivalents that could be developed under Scenario 1

Note: A comparable commercial building is 4 storeys, 1,250 m² floorplate, total GFA of 5,000 sqm.

Employment land areas of investigation within the GSC 3 Cities Model (Source: Value Advisory Partners, Greater Sydney Commission)



| Areas of investigation | Potential Job change | Potential additional employment GFA (sqm) | Equivalent commercial buildings |
|--|----------------------|---|---------------------------------|
| Alexandria/Eveleigh | 46,300 | 1,010,000 | 200 |
| Artarmon | 6,300 | 390,000 | 70 |
| Brookvale | 1,300 | 0 | 0 |
| Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area) | 38,200 | 2,860,000 | 570 |
| Taren Point/Caringbah | 21,300 | 1,420,000 | 280 |
| Total | 113,400 | 5,680,000 | 1,120 |

Implementing an alternative approach would avoid significant opportunities lost to the area in terms of employment and development (GFA).

Conclusions

Key Findings:

- Sterilising an area from normal market forces would result in lower employment growth and investment in the short term and may require higher levels of intervention and investments in the future.
- There is a need to intervene in the “employment lands” for them to develop into integrated mixed use areas. This would allow higher total employment outcomes overall at 2050, higher rates of jobs growth and a transition to the types of employment needed for the future economy.
- To attract particular higher value jobs such as office, creative and cultural, entertainment, retail and local services requires a programme of interventions and investment, including urban design and infrastructure elements.

Facilitating the market to deliver employment outcomes is more cost effective, achieves a more efficient utilisation of land and generates long term benefits for local communities.

Key pillars for achieving employment growth

- An economic and land use strategy is needed that is relevant to the specific (and relative) market attractiveness for development of each precinct, considered in conjunction with other surrounding employment precincts and areas.
- An integrated strategy for the employment areas, with investments in infrastructure and place making (and appropriate economic and training policy and incentive support) would result in a better utilisation of land, yielding higher employment outcomes, and would provide greater certainty in achieving the employment growth targets.
- The sooner planning changes are implemented and investments made the more rapid the transition and the greater would be the impact on employment in the period to 2050.
- Under Scenario 1, the employment precincts within Artarmon, Brookvale, Erskinvile/Eveleigh, Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area), and Taren Point/ Caringbah would require continuous programme of interventions and investment, including urban design and infrastructure elements.
- Demand for construction, warehouse, transport and manufacturing employment would not be greatly dislocated as the functioning and servicing of employment and residential areas requires ongoing jobs in these industries. However, it would form a much lower proportion of total employment than currently.

Recommendations

The employment lands require a number of interventions

| Investigation Areas | Recommended interventions | Potential initiatives |
|--|--|--|
| Alexandria/Eveleigh | Review to ensure all stakeholder needs are met + Strategic policy review for aligned objectives | Initiatives to redress gaps in urban design and infrastructure within the precinct, including: <ul style="list-style-type: none"> Land use changes to facilitate commercial office uses and higher densities Enhanced public transport |
| Artarmon | Strategic policy review for aligned objectives + Monitor delivery and maintain market appeal | <ul style="list-style-type: none"> Rezoning of parts of the precinct Retain the heritage character and lower building heights for creative and cultural. Facilitate higher office towers along the Pacific Highway and motorway and closer to the railway station, Limit residential uses. |
| Brookvale | Monitor delivery and maintain market appeal + Place based enhancements | <ul style="list-style-type: none"> Facilitating road, pedestrian and cycling connectivity and amenity within the precinct, Improving permeability of street network |
| Camellia Peninsula: Camellia/ Rosehill (excluding Rosehill) | Ascertain investment to recalibrate to market requirement + Planning changes to reduce constraints and place based enhancements + Funding - Multi Source and Land Use Change + Review to ensure all stakeholder needs are met + Strategic policy review for aligned objectives | <ul style="list-style-type: none"> Rezoning of industrial land to allow for mixed use New mass public transit - light rail New road bridge connections to the peninsula Placemaking enhancements by developers and governments to improve the public realm and pedestrian environment. |
| Taren Point/ Caringbah | Monitor delivery and maintain market appeal + Place based enhancements + Funding - Multi Source + Review to ensure all stakeholder needs are met + Strategic policy review for aligned objectives + Oversee growth to achieve land requirements | <ul style="list-style-type: none"> Enhance the pedestrian and cycling environment Increase permeability of the street network New public transport infrastructure and open space. Seed projects to foster a cluster of like businesses |

The interventions and initiatives required would shift as market conditions change.

Appendix A – Employment tables for precincts

A

Alexandria Eveleigh – Total employment (1992-2018) (SA2)

| Industry Groups (11) | 1992 | 1995 | 2000 | 2005 | 2010 | 2015 | 2018 | Difference 1992 - 2018 |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------------------|
| Advanced Manufacturing | 1528 | 1413 | 1675 | 1780 | 1533 | 1012 | 1002 | (526) |
| Artisan manufacturing | 3305 | 3654 | 3979 | 3593 | 3342 | 2977 | 2603 | (702) |
| Commercial Office | 2998 | 3475 | 4681 | 5507 | 6418 | 7409 | 8452 | 5,454 |
| Construction | 1231 | 828 | 2286 | 3152 | 4334 | 5029 | 5501 | 4,270 |
| Creative and cultural | 1210 | 1505 | 2219 | 2524 | 3115 | 3678 | 4261 | 3,051 |
| Entertainment | 665 | 905 | 1231 | 1451 | 1579 | 2011 | 2570 | 1,905 |
| Institutional | 99 | 126 | 150 | 173 | 208 | 266 | 306 | 207 |
| Local Services | 2300 | 2723 | 3623 | 4054 | 4364 | 5125 | 5681 | 3,381 |
| Other industrial | 825 | 774 | 1002 | 1173 | 963 | 836 | 611 | (214) |
| Retail | 3366 | 3474 | 4315 | 4995 | 5441 | 6590 | 7269 | 3,903 |
| Warehousing | 9294 | 9424 | 10530 | 12256 | 12806 | 10953 | 10761 | 1,467 |
| Total | 26822 | 28301 | 35691 | 40657 | 44102 | 45884 | 49017 | 22,195 |

Artarmon – Total employment (1992-2018) (SA2)

| Industry Groups (11) | 1992 | 1995 | 2000 | 2005 | 2010 | 2015 | 2018 | Difference 1992 - 2018 |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------------------|
| Advanced Manufacturing | 1609 | 1412 | 1453 | 1453 | 1416 | 1119 | 1128 | (481) |
| Artisan manufacturing | 677 | 701 | 693 | 677 | 604 | 445 | 357 | (320) |
| Commercial Office | 6404 | 6501 | 7278 | 7712 | 7765 | 8218 | 8940 | 2,086 |
| Construction | 1349 | 1241 | 1699 | 1569 | 2519 | 2439 | 2059 | 710 |
| Creative and cultural | 4119 | 4722 | 6383 | 6606 | 6934 | 7267 | 7658 | 3,449 |
| Entertainment | 287 | 358 | 425 | 482 | 505 | 607 | 678 | 391 |
| Institutional | 4821 | 5066 | 4737 | 5028 | 5446 | 6629 | 7101 | 2,280 |
| Local Services | 2020 | 2192 | 2575 | 2724 | 2644 | 2828 | 3040 | 1,020 |
| Other industrial | 574 | 515 | 626 | 683 | 719 | 618 | 385 | 189 |
| Retail | 1799 | 1517 | 1484 | 1635 | 1513 | 1629 | 1835 | 36 |
| Warehousing | 4009 | 3361 | 2921 | 2981 | 2893 | 2763 | 2442 | (1,567) |
| Total | 27669 | 27585 | 30274 | 31550 | 32959 | 34563 | 35624 | 7,955 |

Brookvale – Total employment (1992-2018) (SA2)

| Industry Groups (11) | 1992 | 1995 | 2000 | 2005 | 2010 | 2015 | 2018 | Difference 1992 - 2018 |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------------------|
| Advanced Manufacturing | 1127 | 824 | 652 | 603 | 527 | 503 | 439 | (688) |
| Artisan manufacturing | 1172 | 1207 | 1067 | 967 | 982 | 714 | 636 | (536) |
| Commercial Office | 2428 | 2488 | 2485 | 2529 | 2625 | 2889 | 3323 | 895 |
| Construction | 1270 | 1778 | 1836 | 1785 | 1759 | 1303 | 1859 | 589 |
| Creative and cultural | 931 | 1005 | 1124 | 1146 | 1220 | 1324 | 1360 | 429 |
| Entertainment | 608 | 744 | 808 | 836 | 913 | 1123 | 1250 | 642 |
| Institutional | 288 | 322 | 311 | 292 | 321 | 346 | 369 | 81 |
| Local Services | 2261 | 2497 | 2863 | 2733 | 2962 | 3314 | 3615 | 1,354 |
| Other industrial | 855 | 829 | 960 | 939 | 821 | 810 | 572 | 283 |
| Retail | 4171 | 3862 | 3860 | 3725 | 3707 | 3818 | 4354 | 183 |
| Warehousing | 3273 | 3040 | 2679 | 2486 | 2530 | 2271 | 2110 | (1,163) |
| Total | 18384 | 18594 | 18645 | 18041 | 18368 | 18416 | 19887 | 1,503 |

Parramatta SA2 (incl. Camellia/ Rosehill and Camellia Industrial Area)
– Total employment (1992-2018) (SA2)

| Industry Groups (11) | 1992 | 1995 | 2000 | 2005 | 2010 | 2015 | 2018 | Difference 1992 - 2018 |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------------------|
| Advanced Manufacturing | 275 | 228 | 226 | 221 | 200 | 176 | 177 | (98) |
| Artisan manufacturing | 251 | 274 | 276 | 261 | 247 | 221 | 224 | (27) |
| Commercial Office | 21664 | 21683 | 23414 | 25294 | 30774 | 33560 | 37187 | 15,523 |
| Construction | 1767 | 1623 | 2169 | 2329 | 2467 | 2846 | 4473 | 2,706 |
| Creative and cultural | 736 | 856 | 1201 | 1282 | 1322 | 1439 | 1652 | 916 |
| Entertainment | 1172 | 1631 | 2128 | 2303 | 2329 | 2556 | 3092 | 1,920 |
| Institutional | 477 | 553 | 576 | 604 | 726 | 850 | 938 | 461 |
| Local Services | 2870 | 3241 | 3831 | 4018 | 4534 | 5370 | 6264 | 3,394 |
| Other industrial | 1812 | 1651 | 1857 | 2051 | 3069 | 3029 | 2772 | 960 |
| Retail | 4430 | 4087 | 4296 | 4563 | 4273 | 4173 | 4269 | (161) |
| Warehousing | 3501 | 3304 | 3283 | 3508 | 3548 | 2890 | 2679 | (822) |
| Total | 38956 | 39130 | 44212 | 46434 | 53489 | 57109 | 63727 | 24,711 |

Taren Point/Caringbah – Total employment (1992-2018) (SA2)

| Industry Groups (11) | 1992 | 1995 | 2000 | 2005 | 2010 | 2015 | 2018 | Difference 1992 - 2018 |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------------------|
| Advanced Manufacturing | 2253 | 1953 | 1731 | 1445 | 1184 | 845 | 794 | (1458) |
| Artisan manufacturing | 1089 | 1162 | 1055 | 861 | 822 | 718 | 787 | (302) |
| Commercial Office | 1999 | 2183 | 2337 | 2176 | 2447 | 2685 | 3129 | 1129 |
| Construction | 1312 | 1926 | 1876 | 1974 | 1598 | 2265 | 3222 | 1910 |
| Creative and cultural | 378 | 377 | 454 | 434 | 484 | 461 | 484 | 106 |
| Entertainment | 702 | 914 | 1080 | 1090 | 1170 | 1246 | 1381 | 678 |
| Institutional | 1531 | 1726 | 1539 | 1636 | 1883 | 2129 | 2375 | 844 |
| Local Services | 2072 | 2294 | 2534 | 2516 | 2882 | 3353 | 4046 | 1974 |
| Other industrial | 1341 | 1179 | 1009 | 865 | 840 | 693 | 615 | (727) |
| Retail | 3257 | 3153 | 3315 | 3102 | 3177 | 3227 | 3503 | 246 |
| Warehousing | 2380 | 2216 | 1974 | 1895 | 2059 | 1658 | 1544 | (836) |
| Total | 18315 | 19082 | 44212 | 46434 | 53489 | 57109 | 63727 | 24,711 |

Appendix B – Industry translation table

B

Industry translation table

These industry groupings are based on the translation from ANZSIC industry one and two-digit codes to better prioritise areas of employment.

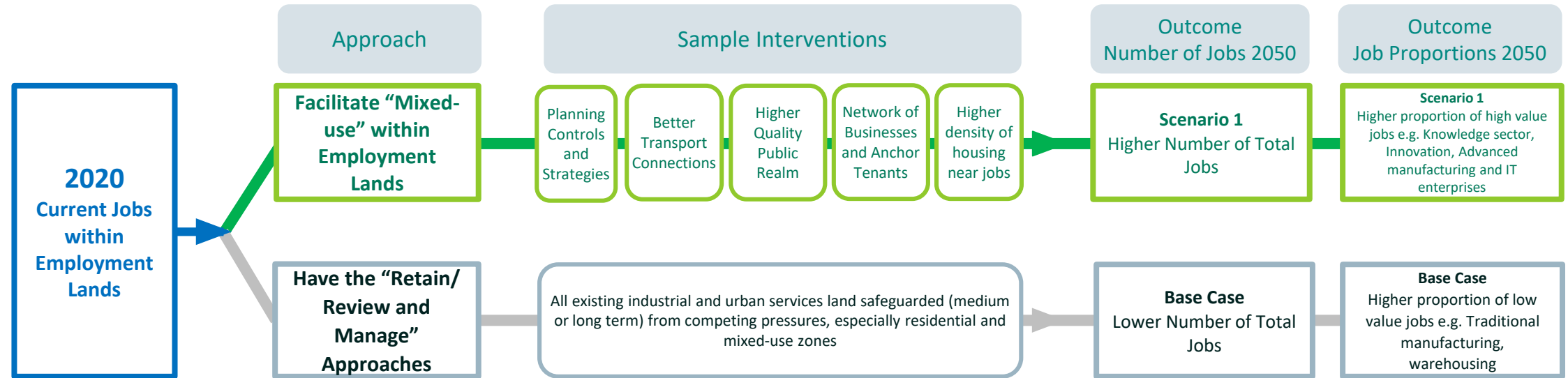
| Industry category | Description |
|------------------------|---|
| Advanced Manufacturing | Basic Chemical and Chemical Product Manufacturing Polymer Product and Rubber Product Manufacturing; Transport Equipment Manufacturing, Machinery and Equipment Manufacturing |
| Artisan manufacturing | Food Product Manufacturing, Textile, Leather, Clothing and Footwear Manufacturing, Printing (including the Reproduction of Recorded Media); Furniture and other manufacturing |
| Commercial Office | Professional services (most), finance and insurance, property and real estate services, public administration and emergency services, medical and health services, telecommunications services, gas and electricity supply, primary industry and mining industry. |
| Construction | Building Construction, Heavy and Civil Engineering Construction and Construction Services |
| Creative and cultural | Disciplines as diverse as broadcasting, internet development, game development and graphic design, fashion and filmmaking, performing arts and publishing, architecture and advertising, media and music, library services, comedy and craft. |
| Entertainment | Accommodation and Food and Beverage Services; gaming |
| Institutional | Hospitals, tertiary education institutions |
| Local Services | Cleaning and other services, preschool and school education, adult and community education, residential care and social assistance services, repair and maintenance and personal services. |
| Other industrial | Wood, paper, petroleum and coal, metal manufacturing, |
| Retail | Motor Vehicle and Motor Vehicle Parts Retailing, Fuel Retailing, Food Retailing, store and non-store based retailing |
| Warehousing | Storage, machinery, vehicle, all transport and wholesaling |

Appendix C – Summary of approaches and method for developing the uplift for employment

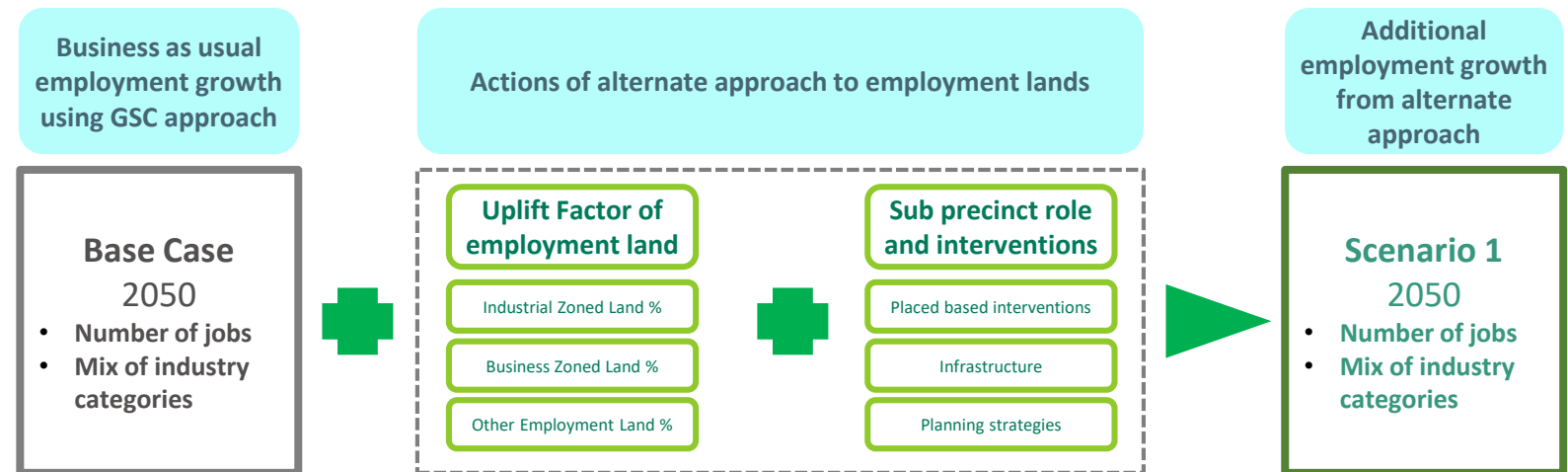
C

Summary of approaches and method for developing the uplift for employment under Scenario 1 (@ 2050)

Potential approaches, interventions and outcomes of Employment lands (Source: Value Advisory Partners)



Projected employment in Scenario 1 is a factor of land availability and zoning and the mix of actions and interventions that would be required to deliver the employment outcomes



Comparing the approach and interventions to employment lands (2/2)

Examples of interventions to ensure mixed-use outcomes for employment lands

- **Planning Controls and Strategies:** Changing land use; creating development plans and targeted strategies; reviewing and amending height limits and setbacks; subdividing lots for permeability and improving local accessibility.
- **Better Transport Connections:** Linking active transport (cycling, pedestrians) to businesses; implementing public transport corridors; prioritising investments in infrastructure for active and public transport.
- **Higher Quality Public Realm:** Improving quality of streetscape; ensuring built form history and character is utilised (e.g. Heritage control); new and enhanced public open space and parklands; facilitating critical uses such as shops and community facilities accessible by employees and residents.
- **Network of businesses and anchor tenants:** Enticing large companies and institutions to anchor mixed-use development; creating a network of 'seed' or like businesses within a proximity, e.g. small-scale artisan manufacturers.
- **Higher density of housing near jobs:** Developing higher density of dwellings close to employment in targeted areas; residential dwellings located adjacent to and part of mixed-use precincts.

The detailed and locally specific Employment Lands Transformation Model contrasts with the GSC's more top-down macro approach to policy setting.

Appendix D – References

D

References

- Bäing, A. S., & Wong, C. (2018). The impact of brownfield regeneration on neighbourhood dynamics: the case of Salford Quays in England. *TPR: Town Planning Review*, 89(5), 513.
- Hollander, J., Kirkwood, N., & Gold, J. (2010). *Principles of brownfield regeneration : Cleanup, design, and reuse of derelict land*. Retrieved from <https://ebookcentral.proquest.com>
- Lee, J., Newman, G., & Park, Y. (n.d.). (2018) A Comparison of Vacancy Dynamics between Growing and Shrinking Cities Using the Land Transformation Model. *SUSTAINABILITY*, 10(5). <https://doi.org/10.3390/su10051513>

Appendix E – Case Studies

E

Fishermans Bend Urban Renewal Area, Melbourne

Background

The Fishermans Bend area is located to the immediate southwest of Melbourne's CBD and is identified in the metropolitan strategic plan as a major urban renewal area (*Plan Melbourne 2017-2050*). Its total area is 480 hectares. Fishermans Bend consists of five precincts: the largest (230 ha) is the Employment Precinct in the northwest and is retained as a purely industrial and commercial employment area. The other four precincts: Montague, Lorimer, Sandridge and Wirraway are to be transformed into high density mixed use residential and employment precincts and were rezoned accordingly in 2012.

The *Fishermans Bend Framework Plan* was completed in 2018 after extensive community consultation and stakeholder input and will guide the development of the precincts for the next 30 years. The Framework Plan identifies new employment and activity centres supported by public open space, the location of new schools and community facilities, pedestrian and bike paths, public transport (light rail and potentially underground heavy rail) and new streets and laneways. The Framework Plan was introduced alongside new planning controls amending height limits and building floor space ratios and targets around affordable housing.

Economic and demographic transition

In contrast to other urban renewal areas, Fishermans Bend was not one experiencing economic decline, but had been growing steadily. Currently there are around 35,000 jobs across the precincts and less than 1,000 residents. By 2050, Fishermans Bend is planned to be a community of 80,000 residents with 80,000 jobs, with half the jobs to be delivered in the Employment Precinct and the other half across the remainder of the mixed use precinct.

The Employment Precinct is identified as a National Employment and Innovation Cluster and will become an innovation and advanced manufacturing precinct, anchored by tertiary institutions like Melbourne University and research agencies such as Defence Science and Technology Agency, as well as existing international advanced manufacturing organisations like Boeing.

While the role and economic profile of the mixed use areas is expected to change, with a decrease in the proportion of industrial uses (manufacturing, warehousing, construction), in absolute terms the loss in employment in these traditional industries would not be significant. On the other hand the main industries of employment expected to grow in the mixed use precincts are commercial office, cultural and creative, entertainment, retail and local services.

The mixed use precincts would be able to sustain both employment and residential growth outcomes through a higher and more intensive utilisation of land, underpinned by the delivery of appropriate infrastructure and urban design elements to support the resident population and attract the targeted industries of employment.



Implications

Changing the land use from employment to mixed use does not have to result in a net loss in employment. Done well with sound planning and curation, it can result in much higher levels of employment and increased economic outputs. What is important is to define the role of each area and ensure that government decisions about public investments support the desired change and allows the market to drive outcomes in terms of jobs and private sector investment.

The market attractiveness of an area is an important consideration that underpins its potential for growth and/or change and needs to be understood relative to other surrounding areas, as government or market interventions elsewhere will have an impact.

Traditional approaches to economic policies around jobs have geographically separated manufacturing and logistic jobs from office and knowledge jobs. However, technological innovation and digitisation are transforming the way these come together at a precinct level, requiring an evolved approach that considers not only economics, but also place. A mix of land uses combined with high amenity and accessibility are the key factors, where collaboration and interactions between people are facilitated.

Macquarie Park, Sydney

Background

Macquarie Park was established in the 1960s. It is located next to Macquarie University and transitioned from an industrial precinct to a business and office park in through the 1960s, 1970s, 1980s and 1990s. It has gone through several stages of development, but in 2013 overtook North Sydney as the second largest office market in Sydney with more than 850,000 sqm of office space. As a result the precinct has broadened its range of industries of employment which include: Property and business services, Information, Media and telecommunications, health and education.

Drivers of growth include: proximity to the university, affordable rents, proximity to workforce and the North Shore executives, availability of car parking, proximity to other businesses and ability to develop buildings with larger floor plates (1,800 to 2,000sqm), and the delivery of the rail station on the Epping to Chatswood line and more recently its extension as part of the Northwest Metro Line. Accessibility to the M2 provides excellent connectivity to the motorway network of Sydney, including the CBD and Western Sydney.

The office workforce is estimated at about 61,000 people and is projected to grow to more than 79,000 by 2036 (or around 3.6 million sqm). The University Campus has higher density and capacity than Macquarie Park, which is still to transition to a high density office centre. However, the potential is there as other office precincts approach capacity from the late 2020s and early 2030s, such as the CBD and North Sydney.

Economic and demographic transition

Issues identified include a lack of retail and hotel amenity, traffic congestion in the broader area, the need to improve pedestrian and cycling links through the precinct and public open spaces, the need to improve street activation and night time activity. There is also potential for future residential development to occur if parts are rezoned into a mixed use precinct.

Key priorities for Macquarie park identified in *A Plan for Growing Sydney* are to:

- Retain a commercial core to support long-term employment growth
- Look at opportunities to cluster additional mixed-use development encompassing residential, commercial and cultural facilities around train stations
- Investigate potential future opportunities for housing in areas within walking distance of train stations
- Investigate opportunities to deliver better connectivity

Strategic planning is being led by the Dept of Planning working closely with the City of Ryde.

Implications

Macquarie Park has experienced major growth and change as a commercial businesses precinct from its initial transition from Industrial Park during the 1960s, 1970s and 1980s. Positive government interventions have facilitated market growth in office and commercial space. Some of these include:

Map of Macquarie Park Urban Renewal Area



(Sources: City of Ryde Strategic Plan 2028; NSW Planning Macquarie Park Investigation Area; Greater Sydney Commission North District Plan; BIS Shrapnel, Strategic Employment Review: Macquarie Park (2015) prepared for the NSW Dept of Planning and Environment.)

- Establishing a connection to Macquarie University
- Specifying land as commercial and facilitating development of commercial buildings
- Concentrating businesses of similar type together e.g. Education, Property

Additional investment into Macquarie Park between 1990-2020 has allowed continued growth of the area whilst retaining its attractiveness for commercial business. Transport improvements have played a major role. A new underground rail and the M2 Freeway have allowed for better connection to Sydney CBD and suburban areas.

In the next 30 years Macquarie Park will continue to be attractive with steady employment growth. However without ongoing government facilitation the area will see less developable land available for commercial development. Further land use changes have been mooted to allow higher rise commercial development (a 30-37 metre height limit applies to most of the area). The NSW Government has an ongoing interest in the precinct and designated Macquarie Park as an urban renewal area.

While significant investments in transport infrastructure have been made, further investments would be required to maintain the growth projections in employment. Congestion is a growing concern in the area.

Disclaimer

This study is not intended to be read or used by anyone other than the intended user, namely Urban Development Institute of Australia (NSW).

We prepared this study solely for the Urban Development Institute of Australia (NSW) in accordance with and for the purpose set out in our engagement letter.

In doing so, we acted exclusively for the Urban Development Institute of Australia (NSW) and considered no-one else's interests.

We accept no responsibility, duty or liability to:

- anyone other than the intended user in connection with this preliminary assessment
- the intended user for the consequences of using or relying on it for a purpose other than that referred to above.

We make no representation concerning the appropriateness of this study for anyone other than the Urban Development Institute of Australia (NSW). If anyone other than the intended user chooses to use or rely on it they do so at their own risk.

This disclaimer applies to the maximum extent permitted by law and, without limitation, to liability arising in negligence or under statute and even if we consent to anyone other than the intended user receiving or using this preliminary assessment.

Appendix F – Disclaimer

E

