



# A Metropolis that Works





# Greater Sydney Commission Thought Leadership Series

One of the key priorities for the Greater Sydney Commission, agreed between the Premier and the Chief Commissioner, is leading community engagement, dialogue and debate on key city-making issues. This is the first of a series of Thought Leadership Papers on a range of topics that builds on the detail of the Greater Sydney Region Plan and District Plans to provoke discussion and debate in some cases and, in others, provide practical ideas on implementation across a range of challenging issues in the near, medium and long term.

This paper, *A Metropolis that Works*, will be accompanied by additional research papers by the Greater Sydney Commission to respond to the changing nature of industrial and urban services and their spatial requirements, their strategic value and the essential role they play in Greater Sydney, as set out in Objective 23 of the Greater Sydney Region Plan: 'Industrial and urban services land is planned, retained and managed'.

**DISCLAIMER:** This paper does not form part of the Greater Sydney Region Plan or the District Plans. Users are advised to seek professional advice and refer to the relevant Plans and/or legislation, as necessary, before taking action in relation to any matters covered by this paper.

## Acknowledgement of Country

The Greater Sydney Commission acknowledges the traditional owners of the lands that include Greater Sydney and the living culture of the traditional custodians of these lands. The Commission recognises that the traditional owners have occupied and cared for this Country over countless generations, and celebrates their continuing contribution to the life of Greater Sydney.

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## Executive Summary

**Great cities are more than their residential neighbourhoods.** In a fast-growing, physically constrained city, competing pressures on the use of land are understandably intense. Over the past 20 years, how our city works has changed. How the city functions, and the spaces and places where Sydneysiders work, have transformed dramatically.

Amid Greater Sydney's growth in the knowledge economy, the story and importance of our industrial and urban services activities get somewhat overlooked. Data actually tells us that the industrial and urban services sector is growing; becoming more efficient and adaptable, providing more jobs and making a key contribution to our city's economy as a critical component in a metropolis that works. In fact:

- **Greater Sydney is the manufacturing capital of Australia** with industry gross value added (GVA) of \$21.5 billion (GSRP 2018a) and contributing 22.2 per cent of national GVA in 2015–16.
- The GVA for Greater Sydney's industrial and urban services land grew by more than \$16 billion between 2011 and 2016 to \$83.7 billion **while job numbers grew by 48,633** over the same period.
- Studies indicate only 8 per cent of land across Greater Sydney is presently zoned for non-residential uses such as industrial and urban services. Despite this, **19 per cent of all jobs across Greater Sydney are classified as industrial and in some Districts the proportion on industrial land is as high as 37 per cent.** (GSC 2017 and 2018b)
- The Property Council of Australia has expressed concern to the Commission that, with take-up rates of industrial land at approximately 150 hectares per annum across Greater Sydney, **the currently available 295 hectares represents less than two years forward supply** and argues that critical shortages have led to dramatic land price increases in the Western Parkland City over the last two years.

Managing and supporting our industrial and urban services land requires a carefully considered and managed approach and, where appropriate, protection from competing land uses such as residential. Far from advocating for the status quo, this Paper identifies this land as evolving and advancing to be at the forefront of helping our cities demonstrate resilience in adapting to automation, new format logistics and the need to stimulate employment activities that lead to a more equitable and efficient metropolis.

More careful and thoughtful plans are required for these precincts, to increase the density and range of activities which can take place within them and ensure that they remain productive, affordable and economically viable locations for businesses. Cities around the world are increasingly recognising that successful commercial centres, innovation clusters and health and education precincts rely heavily on their proximity to land which offers vital support, service and interface functions.

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**The value of industrial and urban services land should not be based only on the volume and types of jobs generated, but the operational role and function it plays throughout the city.**

**This is a key consideration.**

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For Greater Sydney, alongside active management of existing employment areas and allowing for their evolution, there is also a need for a long-term, spatial approach to providing employment areas in newly developing parts of the metropolis.

Both old and new industrial and urban services activities share important characteristics central to their success, as well as the fundamentals to a functioning city: proximity to end-markets and the creation and sustaining of local networks. They also remind us that while the nature and scope of

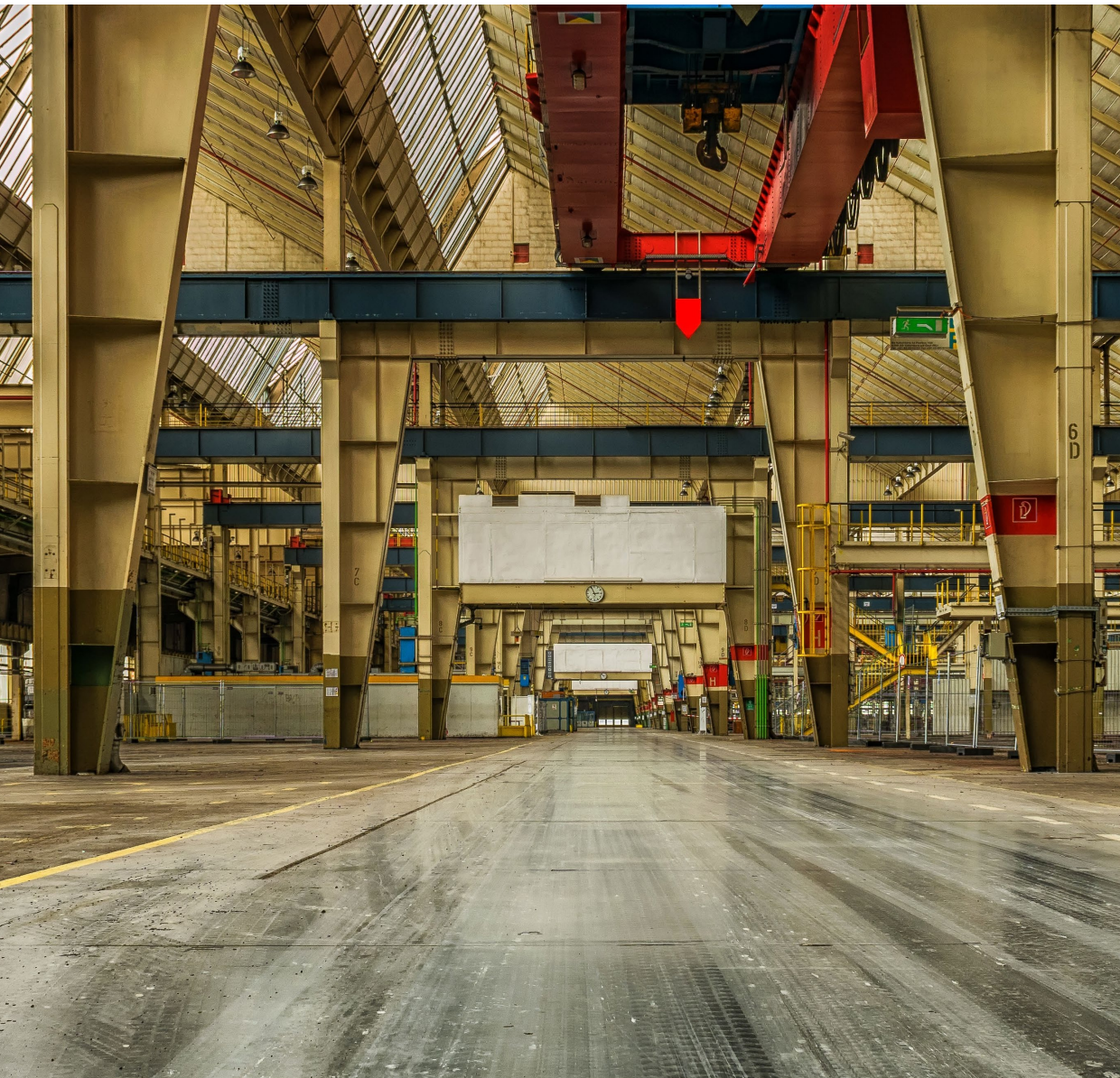
employment-generating activities will shift over time, the core drivers underpinning why productive activity succeeds in these locations remains.

This Paper also argues that industrial and urban services also share the need to access affordable land for industrial uses.

Greater Sydney is not alone in responding to such pressures. Cities with similar demands – London, San Francisco, Vancouver and New York – are also taking a more strategic approach to ensure the economic

and employment-generating conditions provided by their industrial lands are supported and protected.

All cities need an intelligent approach to land use decisions which support a functioning city. In this, industrial and urban services land is an integral component: relinquishing it in the face of shorter-term imperatives is likely to be costly in the long term because once the land has moved to a higher value use, it is highly unlikely ever to be converted back.



## Key considerations:

- A growing city needs to be a working city. It needs spaces that allow it to function, make and create.

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- A changing city needs spaces which offer capacity for innovation, adaptability and resilience in preparing for future needs, opportunities and challenges including the digital economy and technological change.

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- The value of industrial and urban services land should not be based only on the volume and types of jobs generated, but to the operational role and function it plays throughout the city.

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- The provision of sufficient industrial land with access to markets and users across the whole metropolitan area is integral to delivering the 30-minute city.

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- A working global city needs spaces to ensure key economic uses can survive and thrive within ready access of customers and markets.

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- Industrial precincts should be identified as valuable and strategic places in Region, District and Local Environment Plans.

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- A 'no regrets' approach is required in any decisions affecting industrial and urban services land, with the ramifications of any displacement of activity fully understood and strategically managed.





## Introduction

**Great cities are more than their residential neighbourhoods.** In a fast-growing, physically-constrained city, competing pressures on the use of land are understandably intense. Greater Sydney's population growth has meant that concerns over housing supply have taken centre stage. Questions of how and where we work, particularly away from the office towers of our city centres – the employment and industrial lands where we do things, make things, mend things and move things along – have, by contrast, been neglected. Often treated as a ancillary land uses rather than integral to broader strategic directions for the city, city-makers' engagement with industrial lands – and what happens 'inside' them – has tended to be restricted to an audit of utilisation, levels of uptake and likely future need.

This Thought Leadership Paper, prepared by the Greater Sydney Commission's City Strategy team to provide further context to the Greater Sydney Region Plan – *A Metropolis of Three Cities*, seeks to shine a spotlight on the future strategic role of industrial or employment precincts across Greater Sydney. It aims to highlight their value in the contemporary city, in terms of their operational value to both local and city-wide economies and beyond simple financial calculations framed in terms of highest and best use. This Paper recognises that these spaces play a crucial role in the day-to-day function of a city, one of the most dynamic parts of urban activity; responding to and leading change in an ever-diversifying metropolitan economy; capturing the changing nature of work; and providing sites for innovation and experimentation. To fulfil such a role, they need to offer flexibility and adaptability, but need to do so in ways which ensure that fundamental facilities and services that help the city work and communities live, do not get lost along the way.

The Greater Sydney Commission has sought to further understand the state of industrial, commercial and retail activities across the metropolitan area with information sourced from the Australian Census, expert analysis and audits, as well as feedback from submissions and industry roundtables, including the Commission's Industrial Stakeholder roundtable that has met since 2016. How do we better acknowledge the value of these

key employment nodes beyond simple job density ratios, or floor space take up? Central to this task will be greater strategic consideration to these precincts as networked places, operating across and deeply embedded within, a range of spatial scales. This is particularly important for urban services and activities highly dependent upon proximity to end-users. Location for these groups is fundamental and their ongoing and future spatial requirements are therefore a vital consideration across all cities of the *Metropolis of Three Cities*.

## Do post-industrial cities need industrial land?

The extent to which post-industrial cities such as Greater Sydney need to hold on to large areas of industrial land reflects fair questions raised regarding the impacts – social, economic, environmental and spatial – of the changing nature of employment. Looking at trends over the last 20 years, a number of key observations are worth highlighting. Metropolitan employment growth has been strong between 1996–2016, with substantial increases – both in absolute and proportionate terms – seen in jobs in the knowledge and professional services (+288,000, +58 per cent) and in health and education services (+190,000, +70 per cent). Population serving sectors, such as retail, have also seen robust jobs growth (+221,000, +44 per cent) as would be expected given the more general growth of the metropolitan area (GSC 2017).

Within this wider narrative of a knowledge economy, the story of industrial sector activity gets somewhat subsumed. But the data suggests the sector is one which is evolving and continuing to make a key contribution to the economy of the city. Indeed, far from the continued hollowing-out of manufacturing and related activities witnessed in many comparator global cities, Greater Sydney has maintained a resilient, critical mass in the sector, with relatively stable jobs provision over the last two decades.

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**Greater Sydney is now the manufacturing capital of Australia with an industry gross value added<sup>1</sup> of \$21.5 billion. Far from the demise of a Greater Sydney which 'makes things', this sector is alive and well.**

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Only 8 per cent of land across Greater Sydney is presently zoned for non-residential uses such as industrial and urban services. Despite this, 19 per cent of all jobs across Greater Sydney are classified as industrial (GSC 2017). In the South, Central and Western City Districts industrial and urban services land account for 37 per cent, 35 per cent and 36 per cent respectively of all jobs (GSC, 2018b).

The Commission's research in areas such as Greater Parramatta and the Olympic Peninsula, Botany (airport and port trade gateways) and the Western Parkland City also identifies that industrial areas make a nationally significant contribution to gross domestic product and productivity through infrastructure, business and utility provision. As well as transport intermodals and logistics hubs, these lands also play a key role in supporting local urban services, the distribution and delivery of essential utilities such as energy and water including the potential for developing low-carbon precincts, renewable energy and waste management facilities, the sale of household and garden materials and childcare. These uses are an essential part of our urban system and their future use and location need to be considered to support good growth management.

Knowledge intensive activities will continue to drive Greater Sydney's employment growth over the coming decades, but many Sydneysiders will continue to work in equally important 'making', supporting and serving occupations. A large global city will remain underpinned by activities that enable those higher order jobs to function and that support the services we value in our everyday lives. The nature and scope of industrial and urban services activity will dramatically change: we are currently seeing the power of disruptive technologies and service models to reorganise how things get done and the accompanying spatial impacts. However, the need for jobs that serve and are part of the community, will still very much exist – and as the population increases – will grow.

There is also a need to tackle the view that the best place for these land-hungry activities is out in Greater Sydney's west. There are of course some

sectors which are less spatially sensitive and where relocation to cheaper, larger and more accessible sites will be appropriate. For many, however, the spatial scale of operation and locational imperatives have remained firmly anchored, and indeed the importance of local proximity has heightened. Findings from the Greater Sydney Commission's recent research indicates that this increased the most in the North District, where industrial land value is almost double, the rents 50 per cent greater and job density three times the region's average.

## Confused, messy spaces?

One of the core challenges faced in positioning industrial or urban services land within the wider strategic planning of the city's needs is that an array of uses is typically found within these precincts. Such lands have traditionally been associated with 'manufacturing; transport and warehousing; service and repair trades and industries; integrated enterprises with a mix of administration, production, warehousing, research and development; and urban services and utilities' (Department of Planning, 2010, 1). Lines of definition are further blurred through the considerable diversity seen in terms of the mix of activities operating in precincts – in terms of type, size, context and connectivity – across different parts of the city. Our research finds that there is often a mismatch between business operating in the industrial and urban services areas and the standard land use definitions<sup>2</sup>, indicating a need to build in more strategic frameworks, fostering greater flexibility to better enable businesses to transition from traditional manufacturing and storage uses to higher order industrial, technology, creative and logistic uses.

The way we cut the data does not help either. We talk about the number of workers in industrial jobs across the city, and the number of jobs in industrial/ employment precincts, but the two do not necessarily align. Many jobs in that sector are located outside identified precincts; similarly, many jobs located within those precincts do not accord with the assumed range of activities taking place in those

1 **Gross value added:** The value of output at basic prices minus the value of intermediate consumption at purchasers' prices. The term is used to describe gross product by industry and by sector. Basic prices valuation of output removes the distortion caused by variations in the incidence of commodity taxes and subsidies across the output of individual industries. (Source: ABS)

2 Standard land use definitions are set out in the Standard Instrument – Principal Local Environmental Plan.

locations. This confused landscape risks detracting from their vital role and means that ensuring the appropriate strategic weight and importance of these spaces to the future sustainable growth of the city is challenging. Nevertheless, this disjointed nature of activity is neither surprising nor should it be seen as detrimental. Cities need spaces that are a bit ‘messy’ and which – in simple terms – allow them to function and have room to evolve.

Definitions aside, what we do know is that beyond the primary office concentrations of the strategic centres and the Eastern Economic Corridor in the Eastern Harbour City where much of the knowledge-intensive growth has occurred, Greater Sydney’s industrial precincts remain in demand. While strategic planning seeks to ensure the long-term requirements of Greater Sydney are met 10, 20 and 30 years into the future, immediate needs should also be acknowledged and addressed. Discussions with the Commission’s Industry Group echo studies by URBIS (2017) and Hill PDA (2015) which affirm continued strength of demand for such areas – large and small – across the wider metropolitan area. Importantly, this is not only in the Eastern Harbour City where supply has been placed under considerable pressure through rezoning, but also in the Western Parkland City where the amount of development-ready land is highly constrained.

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**The Property Council of Australia (PCA) has recently highlighted its concerns to the Commission, noting that with take-up rates of industrial land at approximately 150 hectares per annum across Greater Sydney, the currently available 295 hectares represents less than two years forward supply.**

**Western Sydney is currently the engine of growth, representing over 80 per cent of industrial land take-up, and PCA contends that critical shortages have led to dramatic land price increases in the Western Parkland City over the last two years (PCA, 2018).**

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## Activities where geography is crucial

As with residential neighbourhoods, not all industrial precincts are the same. They vary in size; in the type and composition of companies and activities; some are planned spaces, others simply remain and have evolved from earlier land use configurations. Their current distribution across the metropolitan area captures the ‘stickiness’ of development and built form – more reflective of historical growth than an idealised distribution for today’s city, perhaps, but nonetheless embedded within, and integral to, local labour markets, local distribution networks, and highly developed connections between suppliers, employees and end users.

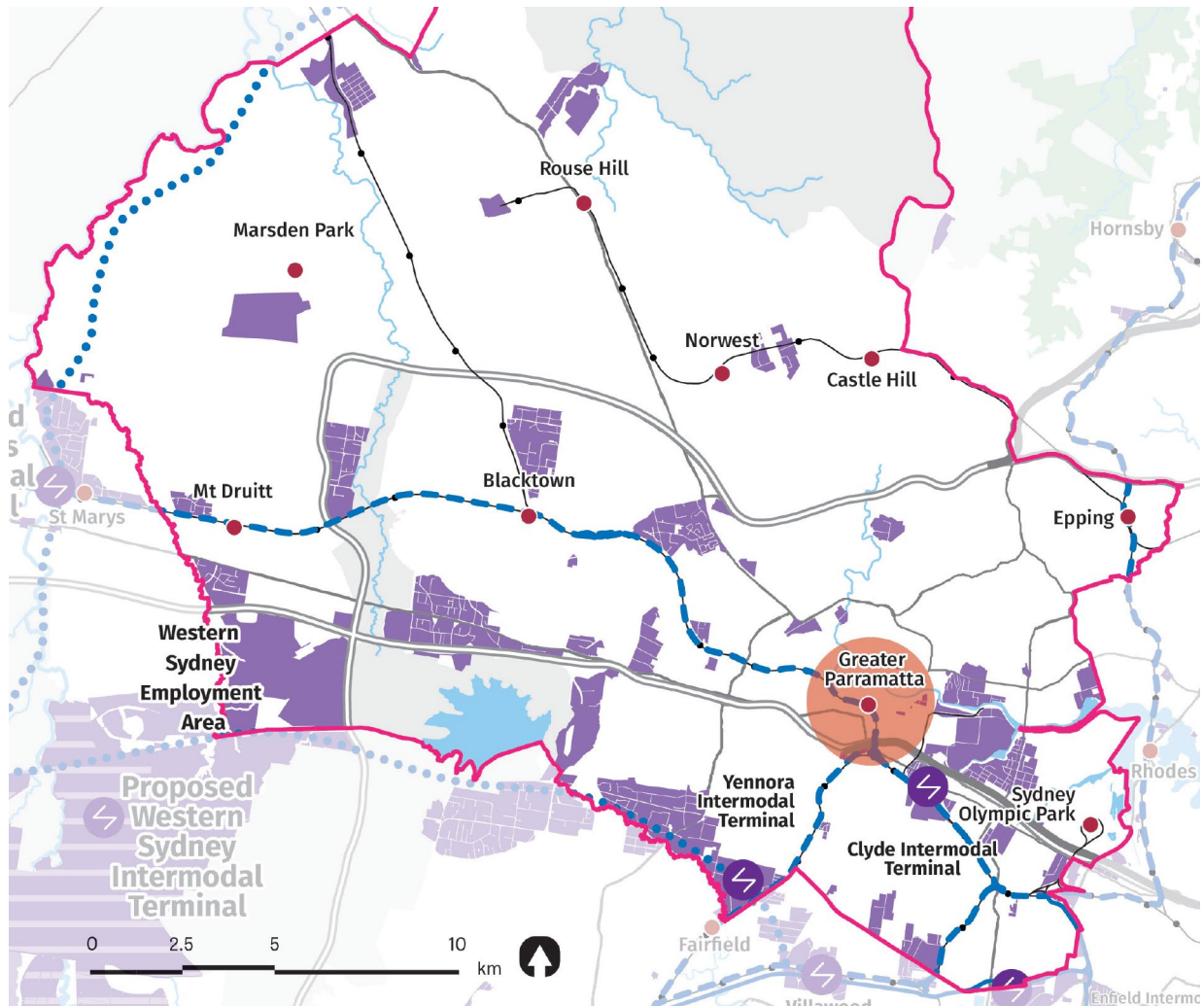
A growing Greater Sydney requires an efficient and effective road and rail freight network integrated with ports and airports. Certain freight activities are likely to find the Central River and Western Parkland cities more appropriate, particularly in the long term if more port activity moves to Wollongong/Port Kembla and when the Western Sydney Airport commences operations.

Freight being transported from the prime Eastern Harbour City gateways at Kingsford Smith Airport and Port Botany will continue to grow and innovation, in the way we transport goods as well as investment in distribution infrastructure, will be required to maintain an efficient city. The Eastern Harbour City will continue to be the focus for efficiently distributing freight and logistics, and adapting to global trends for automation and consolidation of distribution and logistics services will be essential. Proximity to these key nodes within the wider metropolitan economy is vital: they are far from able to readily relocate without fundamentally reconfiguring logistical dependencies and connections.

This will be particularly acute for the Central River City and Western Parkland City as their industrial and urban services activities grow and, as shown in the following diagram, will be a growing focus for providing intermodal access from the Eastern Harbour City.

Some key issues include managing congestion in and around the Port Botany precinct due to truck movements and addressing how trucks carrying

## Industrial and urban services land and freight assets



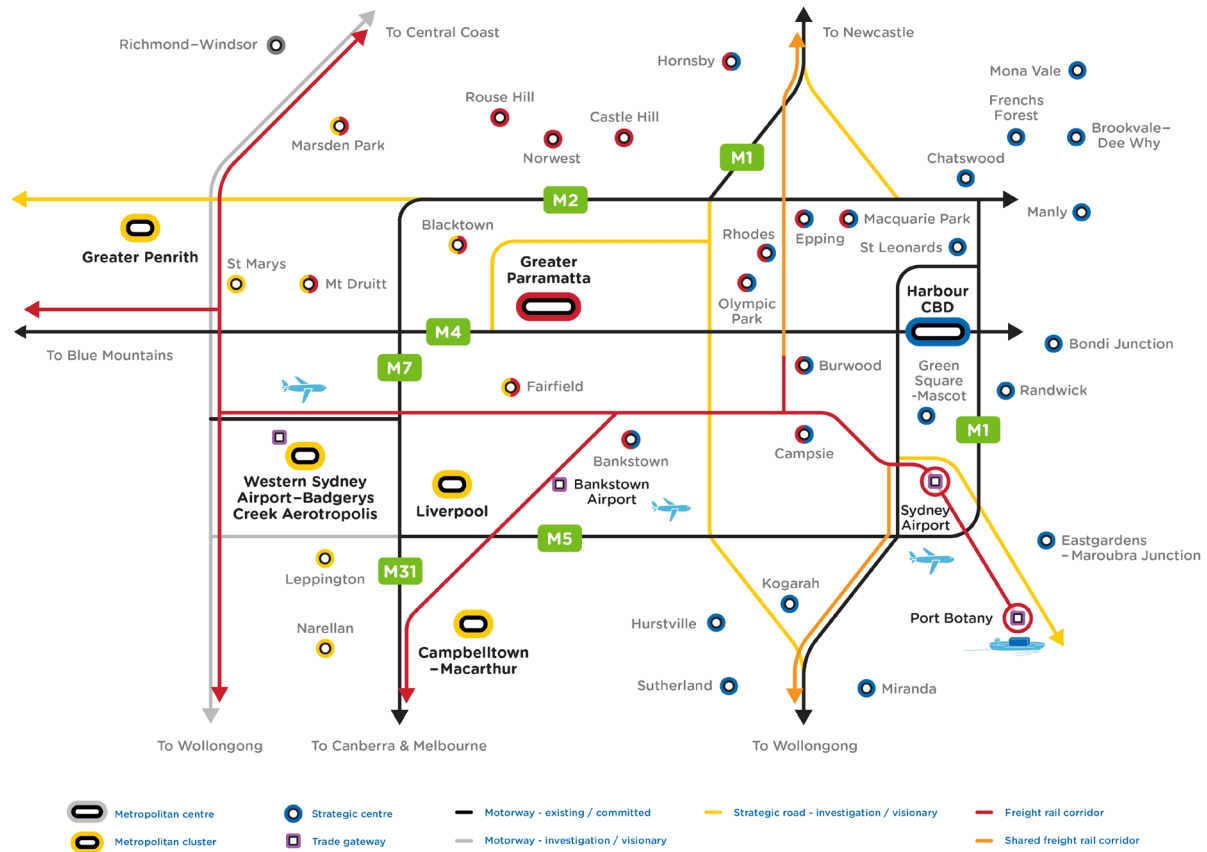
hazardous goods can be removed from roads traversing residential neighbourhoods<sup>3</sup>. Protecting the operation of Port Botany industrial precincts from encroachment by residential development and the need for buffers where residential development interfaces with industrial zoned land and freight corridors is critical to the Greater Sydney's continuing productivity.

Transport for NSW has prepared a Freight and Ports Plan that highlights the importance of NSW freight and ports to the national economy and aims

to ensure that they are well positioned to respond to emerging national and international markets and opportunities. The Plan indicates that planned residential and commercial developments are encroaching on key industrial freight-generating precincts and corridors, resulting in restricted access to key freight corridors and limited ability to meet future demand. Figure 30 in the Greater Sydney Region Plan (see over) shows both existing strategic freight corridors and intermodal terminals and those that will be required by 2056.

<sup>3</sup> The NSW Government has committed to improve aspects of road and rail infrastructure with projects such as Sydney Airport Road Upgrades, Sydney Gateway linking WestConnex at St Peters Interchanges and the airport/port precinct and duplicating the Port Botany Rail Line with Australian Government funding.

## 2056 Greater Sydney freight network vision



### Urban services

We are also particularly interested in population-facing activities located in industrial lands for which geography is equally key. The term *urban services* is used to describe a wide range of industries that enable the city to develop and its businesses and residents to operate. While they are not always high employers, on a square kilometre basis their value is not held in how many jobs they directly provide, but in the operational role and function they play throughout the city. (GSRP, 2018)

This encompasses an eclectic landscape of panel beaters, home renovation services, glass makers, small-scale manufacturing companies, redistribution centres, kids indoor play zones, food preparation and catering facilities, repair workshops, gyms and the like. Not all urban services need to be in dedicated

industrial precincts, but many clearly do – they need the same things as their neighbours: a bit of space and room for storage, the option to be noisy and smelly, and good connections to let people get to them and to help move things around.

Those tracking the emergence of disruptive technologies and business models point out that many of these everyday activities will become redundant over time. This is no doubt true, but history equally suggests that many will successfully regroup and reconfigure.

Developments in local distribution, known as last-mile connectivity further reinforce the importance of proximity and local networks to effective city function. At the heart of business disrupters, such as Uber and other online food and home service providers, local responsiveness is key, and although



the increasing use of drones and autonomous ground vehicles (AGVs) is likely to lead to similar innovation in delivery and courier services (McKinsey, 2016), close location between supplier and consumer will remain vital. Studies have highlighted the centrality of spatial form and characteristics in determining appropriate forms of last-mile connections (Allen *et al.*, 2012; Ducret and Delaitre, 2013), and reiterate the importance of local hubs in the logistics chain – whether for final distribution or local collection.

While Amazon is most commonly associated with its massive ‘Fulfilment centres’, a crucial part of their distribution framework is smaller *Amazon Prime Now Hubs* in intra-metropolitan US city locations which enable the company to offer immediate (within two hour) delivery of their 10,000 bestselling products to key high-density markets (Purdy, 2016). Here in Australia, the logistics industry is exploring the potential for high-density, multi-level warehousing – particularly in the Eastern Harbour City – to meet the growing demand generated by online shopping. Commercial land market analysts predict that multi-level sheds up to five storeys might be brought to market over the next five years, with South Sydney experiencing significant and sustained demand. Colliers International data indicates a 19 per cent year on year increase in land values within this sub-market, with pressures coming from a combination of constrained supply and rising demand for last-mile logistics (Cheung, 2018).

Collectively, these areas act as a contributor to the city’s economy, not simply in terms of the number of jobs, but in providing support services, just-in-time delivery and complementary facilities to other key components of the global city. World class theatres, opera and museums need prop studios, catering facilities and archive space close to hand. Emerging health and education precincts need functional spaces – not too far away – where medical start-ups, back-office functions, and co-work spaces can find a bit more room to expand. And local communities will still need spaces where ‘stuff gets done’ across the city.

Alongside urban services in themselves, it is the interface and juxtaposition of activities in industrial precincts that contributes to their importance in stimulating opportunities. An ongoing government-funded study led by Professor Chris Gibson at the University of Wollongong into the important interplay between creativity and manufacturing

highlights the need to understand the role of localities such as Carrington Road in Marrickville ‘with geographic precision’ (Gibson *et al.*, 2017). A more detailed appreciation is required not only in terms of evaluating the importance of spatial proximity to end-users, but also in terms of wider social and economic implications for the city where such areas face potential displacement pressures. Mapping connections, demonstrating synergies and placing those networks within their local communities helps highlight these precincts as place assets rather than underutilised space.

### How much land?

Making an argument regarding the importance of industrial and urban services activities to a city necessarily leads to questions regarding how much space we need within each of, and across, the three cities. The Greater Sydney Commission initiated research focusing on the ACT region (plus Queanbeyan just over the border in NSW) to explore different levels of space provision for urban services. Canberra potentially offers a useful benchmark as the city is relatively self-contained and has little large scale heavy industry and logistics activities whose location requirements are more distinct.

The analysis indicates that the ACT offers around 3 square metres of urban services land per capita and highlights the particular importance of smaller industrial precincts – these smaller sites have a much higher concentration of population-facing activities. While acknowledging that every urban system displays its own distinct characteristics and requirements, transposing this figure onto the three cities suggests significant shortfalls in current provision in the Eastern City, North and South Districts. The Central City District has greater provision; however, this part of the metropolitan area is undergoing transition which is likely to place pressures on future availability.

The Western City District has good levels of urban services land in the southwest, however with substantial population growth over the next 20-30 years, it will be vital to ensure that provision remains sufficient. There is a need for a more nuanced approach to managing industrial zoned (including urban services) land, reflecting the differing circumstances, needs and typologies across the metropolitan area.

## Strategic industrial lands are integral to the 30-minute city

Understanding the spatial dynamics of the city is crucial at a variety of scales. For many organisations, the local networks and connections discussed above are particularly important. However, there is also a need to engage with the broader role key sites and spaces across the metropolitan area perform in terms of fostering and enabling development of the 30-minute city. We need to ensure the strategic role that concentrations of industrial land and gateway operations play in shaping the dynamics of the City is more fully acknowledged.

The 30-minute city is not simply dependent upon improving travel times for residents to access their closest strategic centre: it requires the metropolitan fabric to provide the spatial framework for the connected, multiple layers of those key hubs to operate. Changing supply chain dynamics and consumer demands – both existing industries and urban services adapting to change but also those newly emerging in response to opportunities arising – adds further weight to the 30-minute city concept. As the ‘maker’ economy develops, co-location of activities with similar needs, and similar markets, continues to underpin the pivotal importance of fostering, nurturing and recognising the importance of local networks.

Other cities around the world present a more explicit commitment to the strategic value in ensuring key industrial spaces are protected and enhanced across the metropolitan area. Given due recognition in their classification, *Strategic Industrial Lands (SILs)* are

‘given strategic protection because they are critical to the effective functioning of London’s economy. [They] are important in supporting strategic logistics operations serving the capital as well as providing relatively low-cost industrial space for SMEs.’ (Greater London Authority, 2017, 243). These primary locations are ‘complemented by smaller-scale provision in [Local Strategic Industrial Sites] ... including sustainable last-mile distribution close to central London’ (ibid., 244).

Compelling maps, reproduced below, prepared for the Greater Sydney Commission as part of the evidence base supporting the Greater Parramatta and the Olympic Peninsula (GPOP) vision (SGS, 2016) highlight the multiple clusters of economic activities that underpin a thriving metropolitan core.

A global city metropolitan centre is not simply defined by gleaming office towers and shopping centres but underpinned by high levels of interdependency between our city centres and **proximate** education and health precincts, sports and recreation precincts and strategic industrial lands. Such functions can be seen as ‘catalyst and enabling services’ (Deloitte, 2015, 42) which provide much of the glue to agglomeration activities.

GPOP’s Rydalmere-Camellia-Silverwater axis in the Central City performs – and will increasingly perform – a similar function to that of Mascot-Alexandria in the Eastern City. Vital to the success of the emerging Western Parkland City will be to determine and enable provision of strategic industrial lands that will provide a commensurate, integral role within the clustered metropolitan city structure envisaged.

SGS (2016, 40) Significant assets and precincts (left) Central City/GPOP Corridor (right) Eastern City



Source: SGS Economics and Planning



## ... and to a more balanced, equitable city

One of the core aims of the Greater Sydney Region Plan is to foster a more balanced, equitable city. City planners have started the conversation about the ‘missing middle’ in housing supply, observing that market mechanisms for the delivery of housing types that fall between high-density multi-unit living on the one hand and single detached dwellings on the other have been limited.

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**Post-industrial cities around the world are also experiencing another ‘missing middle’ as a result of the increased division of the employment market between higher skilled knowledge intensive and health and education sector jobs on the one hand and part time, flexible and less structured roles in the population-serving sector on the other.**

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Industrial and manufacturing jobs have historically offered an important pathway in terms of providing quality jobs and middle-income wages with low barriers to entry. Indeed, in many large cities, industrial lands strategies are intimately tied to broader social equity commitments. New York City’s 2015 Industrial Action Plan is underpinned by ‘strong advocacy for industrial jobs as engines of opportunity’ (City of New York, 2015, 2). There is recognition that ‘the sector is an important pathway to the middle class for many families, with median wages of \$50,400 a year ... 61.5 per cent ... are located outside Manhattan, 62 per cent of the workforce comes from culturally diverse backgrounds, and approximately 63 per cent of industrial and manufacturing sector jobs are available to individuals who do not have a college degree (ibid).

A similar balancing role is played by industrial lands across Greater Sydney. The most recent census data are instructive in this regard: **of the four employment sectors identified in the Greater Sydney Region Plan, industrial activity demonstrates the most evenly distributed growth in absolute job numbers added over the last five years.**

Gains in the knowledge intensive and health and education sectors have been a key driver in accentuating an Eastern Harbour City imbalance,

with the lion’s share added in the Harbour CBD and Eastern Economic Corridor. By contrast, growth in industrial and urban services jobs – albeit with smaller numbers overall – has been more uniform and spatially distributed across Greater Sydney.

## Strategic places worthy of a plan

Recognising that industrial and urban services lands are places rather than simply defined by their zoning code highlights the potential, and need, for strategic thinking and plans that acknowledge their value as core assets of a functioning city. While some elements that go into making great places might not immediately present themselves, these are key parts of the city and are where many of us spend a considerable amount of our working lives.

A useful model to consider is the False Creek Flats Area Plan approved by Vancouver City Council (VCC) in May 2017. The False Creek Flats (The Flats) lies just to the south east of Downtown Vancouver, and encompasses a mix of base economy activities – population serving functions that broadly align with our definition of urban services – and new knowledge and creative innovation sectors which benefit from proximity to the city centre and co-location of education and health facilities and research functions.

Vancouver is a valuable benchmark: it shares our housing affordability concerns and similar high land values place intense pressure on the viability and efficiency of non-residential uses across much of the metropolitan area. The Flats has seen property value assessments signal a dramatic revaluation in recent years, and thus the need for a proactive strategy for the area which recognises that ‘preserving adequate industrial land for the delivery of essential functions and future opportunities is critical for a healthy and sustainable city’ (VCC, 2017, 20). The Flats Plan is underpinned by a broader economic strategy led by the Vancouver Economic Commission, which seeks to balance protection of the vital role played by the Flats with stewardship towards new land uses to accommodate innovation and flexibility (VCC, 2017).

The Flats Plan identifies ten guiding principles, including: the need to protect affordability to maintain diversity; improving open space; greater



and/or help enhance connectivity and linkages between precincts and neighbouring areas. In this regard, supporting flexibility and adaptability which enhances employment-based activity, and guarding against those that risk displacing it, seems appropriate.

Similarly, localised place-based plans for key industrial lands across Greater Sydney – identifying how to accommodate a range of employment activities mindful of adjacent communities – would underpin and in turn help activate district-wide economic development strategies foreshadowed in the Greater Sydney Region Plan (GSC, 2018).

## Speculative cities need non-speculative spaces

Recognising the importance of spaces which at first sight appear somewhat underutilised, or more accurately, not fully capitalised, is an essential but difficult argument to make. Greater Sydney's planning and development frameworks have traditionally paid, and continue to pay, great heed to principles of highest and best use: underlying land value, and maximising returns to be made through the best use of that land *in financial terms*, holds significant sway. As the recent development cycle has demonstrated, few land uses can compete with high density residential in a city dealing with high population growth and a strong passion for real estate.

Economic efficiency models, when applying principles as to whether government should

intervene in industrial land (i.e. not let it simply assume its market value), typically rely upon a particular understanding of what constitutes market failure. There is a guiding logic whereby the need for intervention can be systematically unpicked through demonstrating the potential ramifications (or lack thereof) to businesses and services if protection of those lands was removed. If – as we are arguing – industrial spaces are vital to the function of cities, then it is a reasonable question to ask why the market does not value them appropriately. Zoning can be seen as subsidising those spaces, and if the rationale is market failure, then urban economists' follow-up question is: are there other ways (i.e. not through zoning) in which those failures can be corrected?

While this framework may help calculate the likely impact of business decisions, for example relocation, it is less coherent in accommodating the complexities of spatial dependencies and networks, gentrification and displacement, and the role of industrial places as strategically significant spaces and places in diversified, integrated global cities. It also assumes that market forces act to 'automatically yield an intensity or mix of land-uses that it broadly optimal' (Wolf-Powers, 2005, 379).

City planners in New York are similarly faced with negotiating the longstanding tension between its post-industrial restructuring and reinforcing its Alpha Global City credentials through strong growth of knowledge and professional employment alongside property-led economic development. In her highly influential work on 'up-zoning' through

Left: Industrial Avenue, Vancouver; Right: Carrington Road, Sydney



Source: Left; Jennifer Gauthier/For Metro. Right; GSC (2018)

mixed use focusing on inner industrial districts in Brooklyn and Queens, Laura Wolf-Powers posits a series of rhetorical questions worth restating here:

*If the public planner's function is to regulate land in the interest of the wider community, and with a comprehensive vision for urban development in mind, is his or her responsibility fulfilled in every instance by promoting the most lucrative-use for a given district or parcel? Are there instances in which planners serve the common interest by promulgating controls that effectively shield lower-yielding activities from market forces? What set of conditions triggers an intervention to protect a low-yielding use pattern from the encroachment of 'the higher and better?' (2005, 381-382).*

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**Greater Sydney faces similar development pressures, and a similar dilemma. In such circumstances, strategic planners need to reassert why we plan for the many composite layers of a functioning city. While viability-driven, developer-led speculation and risk shape much of the urban landscape, there are also significant components integral to city function – whether in terms of productivity, sustainability or liveability – where spaces need to be safeguarded from the wider pressures of land value uplift. This is not only in terms of current needs and functions but also to ensure they have capacity to respond to future shocks, technological and economic transformation and community needs.**

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### To provide creative interfaces

Post-industrial restructuring and the rise of the creative economy has fuelled interest in select, well-located employment precincts and areas with a rich mix of urban services activity. Alexandria, to the south of the Harbour CBD, acts as a poster child in terms of job sector diversification, built-form renewal, and greater blending between industrial and population-serving activity. The industrial footprint of Carrington Road Marrickville has grown to encapsulate the crucial nexus between creativity and the new 'maker' economy richly embedded within its local and subregional context.

Such precincts demonstrate why cities need flexibility, adaptability and innovative environments;

places which can act as engines helping translate and encapsulate shifts being seen in the nature and type of work that Sydneysiders do and will do. There is a need to ensure provision of areas for firms to collaborate with like-minded enterprises, to experiment, to expand, and do the sort of things that you cannot do in an office on the 40th floor of a Barangaroo tower. To foster this dynamic, these areas need to offer buildings with large spans, flexible floorplates and good access. Above all, that space needs to be affordable, and given the crucial importance of connection to local markets and end-users, means available across all parts of the city.

### To acknowledge the importance of the everyday and 'ordinary' functions of our city

Exemplars tend to crowd out a more nuanced landscape and there is a risk that the drivers and outcomes seen in areas such as Carrington Road are idealistically transposed more generally across the city. This risks reinforcing a simplistic take on the evolving economy and nature of work and expectations that the old economy is making way – spatially as much as functionally – for the new. In reality, not all urban services are as exciting, and not all precincts offer the prospect of transforming into the next Carrington Road. There is a need to accommodate utilities, household maintenance and waste services. However, these services share the same need for low rents – they need space, and it needs to be affordable.

### To provide space for servicing future population growth and spaces for resilience

A fast growing and changing city also needs space which can accommodate all forms of land use tied to that growth. Existing neighbourhood areas seeing an uplift in residential densities will also require an uplift in the infrastructure required to support those new homes: enhanced sewerage and wastewater treatment plants, improved utility substations and depots for improved public transit. The nature of some of these facilities is likely to change, for example cities are likely to see a shift towards more circular systems and economies. Indeed, more integrated systems such as trigeneration are inherently local, underpinning the importance of ensuring the availability of land for non-speculative

purposes across each of the three cities and throughout the metropolitan area. Regardless of the format those changes take, spaces to accommodate these new directions will be required.

## Meeting future needs through retention and growth

'Retention' sounds limiting, inappropriate and hardly strategic in the context of a fast-growing city seeing a transformation in how we work. Crucially, protection does not, and should not, translate

into freezing current frameworks in time. Rather, by acknowledging the vital importance of these localities, they can be placed centre-stage in the wider strategic direction of the city.

Urban change will be accompanied by a requirement for spaces enabling experimentation and testing – whether establishing ecological resilience 'safety valves', fully embracing shifts towards a circular economy, or local models of trigeneration. Traditional manufacturing may continue its decline, but advanced manufacturing in a 'Made in Greater Sydney' environment will need somewhere to evolve.

## Case Study: Central City, 'Quarter 3' Greater Parramatta and the Olympic Peninsula (GPOP)

GPOP is the jobs engine of the Central City. Crucially, its strategic weight and forward role underpinning growth in Greater Parramatta comes from recognition that a balanced, sustainable and productive city includes and fosters employment generation across all sectors and seeks to facilitate synergies across them. While encompassing the Westmead health and education precinct, Parramatta CBD and Sydney Olympic Park, strategic consideration of the industrial and urban service agglomeration stretching from Rydalmere through Camellia to Silverwater is given equal weight in the GPOP vision. Collectively, these areas in – Quarter 3 in the GPOP corridor – generate almost 40,000 jobs, ranging from more traditional manufacturing and distribution activity to technical and skilled jobs in pharmaceuticals, electrical and heating/cooling technologies.

At its heart, Camellia captures the competing demands to be worked through in a holistic way: divestment of refinery operations on part of the VIVA Energy site south of Grand Avenue frees up land for redevelopment for a compatible use as fuel distribution continues, and proximity to the riverfront north of Grand Avenue makes a shift to mixed use attractive. However, the precinct embodies crucial, hard-to-replicate existing infrastructure – such as the oil pipeline – and offers the foundations for creating a spatial hub for growing the circular economy – thinking sustainably about water, waste and associated resource use – as this part of the metropolis witnesses considerable growth in the coming decades. Camellia will also stable light rail as part of the Parramatta Light Rail Project. The challenge is to concurrently acknowledge the ongoing importance of existing functions, future functions and help build complementary economic and service activities.



Left: Circular Economy, <http://www.iatecowaste.com/en/circular-economy/>; Right: T-park, Hong Kong <https://www.veolia.com/en/veolia-group/media/news/sludge-treatment-plant-hong-kong>

This may include industry at higher densities and building heights via multi-storey facilities and high bay automation supporting new technologies and advanced manufacturing.

In a growing city, we also need to apply a more strategic, spatial approach to future provision. As the Western Parkland City emerges, this metropolitan cluster evolves, ensuring appropriate spaces for essential urban functions and services must be integral to land use decisions.

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**Place-based strategies for industrial and urban services land should therefore have a temporal as well as spatial appreciation of the precinct within which they operate, offering more effective support for transitional and ‘meanwhile’ uses as part of the ever-evolving landscape, and indeed help identify thresholds of use when changes to land use might be considered.**

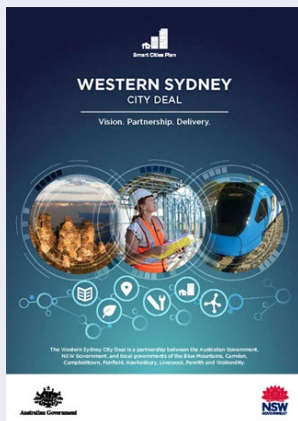
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## Case Study: Space for innovation in the Western Parkland City

As we develop a new city the size of Adelaide in the next 20 years to the west of the M7 Motorway, we will require a mix of uses to support the function of the Western Parkland City, including industrial and urban services land. While there is undeveloped land zoned for industrial purposes in the Western City District, a significant proportion of it is not serviced, leaving a ‘pipeline’ of only two to three years supply.

There is, therefore, a need for both short term action in terms of ensuring adequate land is brought forward as well as a longer-term plan-led strategic approach as the Western Parkland City and Aerotropolis emerges. The Western Sydney City Deal prioritises the creation of employment in sectors which bring together existing strengths of the region and maximise the benefits that development of Greater Sydney’s second airport will bring. This includes a significant focus on logistics and advanced manufacturing – particularly tied to defence and aerospace – and agribusiness. With investment in education and training to ensure local communities are best placed to access these opportunities, the City Deal will play a vital role in addressing the current jobs imbalance between the three cities.

A strategic planning commitment to meeting future demand, for appropriate land to support these growth areas, recognises that Western Sydney is, and has the prospect of, cementing its role as the industrial heartland of Australia. As Deloitte (2015,43) observe: ‘sectors such as advanced manufacturing, which are both traditionally strong in Western Sydney and globally emerging industries, are where our greatest focus should be’.



Left: Western Sydney City Deal, Commonwealth of Australia and NSW Government; Right: Image source: Nordic Office of Architecture. Source: <https://blueswandaily.com/oslo-aims-to-develop-a-sustainable-airport-city/>

## But competing pressures on industrial lands will remain...

The nature of Greater Sydney's land values and the NSW planning system will always mean that challenges will be made to current land use zoning regulations. Having a solid policy position regarding the need to retain these vital city spaces does not negate the speculative play upon them – not least as strategic plans themselves can undermine a clear and steadfast position. How we balance and work through these pressures acts to underpin the need for strong strategic planning directions.

### 'No regrets' decision making and displacement strategies in place

Once industrial lands are lost in high land-value cities, they are hard to get back. In such circumstances, it makes good sense to retain, manage and plan for those lands. Where lands are placed under pressure, or strategic arguments can be upheld in support of rezoning, then the 'no regrets' principle needs to drive all levels of decision-making. Having place-based strategies offers a framework within which the wider implications of potential industrial land loss can be fully assessed. Given the vital interface between many urban services and their end-users, those strategies would highlight the crucial role these precincts play in the context of their immediate localities and district.

Where change does occur, there is a need to retain ownership of the terms on which those changes are made. Determinations should have recourse to displacement policies which would instil a requirement for no net loss of land and businesses (and not just jobs) and indeed additional allocations relative to city population growth. Uplift enabled through rezoning should be aligned to the principles and goals of the strategy – for example, if a good case can be made for height and density bonuses, then this can be tied to providing additional affordable 'maker' spaces, innovation showrooms and business start-up centres.

### Innovative zoning, but beware mixed use

Mixed-use certainly has an important contribution to make in terms of revitalising city neighbourhoods, but the risks of starting to allow residential development to infiltrate industrial lands are high. Although there may be fair compatibility between some urban services and higher density residential, this is not universal. Heavy industry needs to be separated from residential uses to enable potential hazards, noise, traffic and emergency management procedures that impact on residents to be managed. There may also be limitations on rezoning industrial lands away from employment uses due to contamination including potential impacts on adjoining lands.

More significantly perhaps, introducing residential uses to the city's 'working spaces' brings with it a change in land pricing signals which will undermine retention of employment uses over time. As soon as those residential land-use values are signalled, employment uses struggle to compete. Only in exceptional cases would mixed use zones with residential be on this precious and scarce resource, as the residential component would undermine the affordability and development capacity of these sites for businesses and, in turn, Greater Sydney's productivity.

New zoning classifications can also provide an explicit steer in terms of what kind of uses are to be fostered. In The Flats, Vancouver City Council has introduced zoning for 'Digital Entertainment and ICT' and 'Creative Products Manufacturing' while at the same time ensuring that key sections remain protected for population-serving activities.

The Victoria Road industrial precinct in Marrickville has come under significant pressure in recent years from landowners to allow residential development on the grounds that small lot sizes, increased congestion and relocation of traditional industries meant that the area was no longer suitable for modern industrial uses. The former Marrickville Council and the Department of Planning and Environment undertook a five-year strategic review of the precinct and, counter to prevailing arguments regarding the site's ongoing suitability, the study determined that the large majority of the land was highly valued for its employment purposes and pivotal role it played in servicing the Harbour CBD, Sydney Airport and Port Botany.

Wanting to support the artistic and creative industries for which Marrickville is known, the Council and the Department of Planning and Environment supported more flexible planning controls and increased densities to allow the precinct to evolve to support emerging industries like the creative arts, microbreweries and populating-service activities. While this has in many regards helped cement the ‘maker’ credentials of the precinct, caution should be noted here. **Seemingly minor tweaks – such as adding artisan premises or small scale live/work as permissible uses – or more pervasive actions such as rezoning to B4 Mixed Use and allowing cafes and restaurants, recasts expectations and can act as a Trojan Horse or stepping-stone to uses which in the longer term are not in the best interests of maintaining a productive industrial and urban services area.**

Getting a better understanding of this nuance – how to support evolving uses which benefit from, and support, local networks yet which risk ‘creative-led’ gentrification – will necessarily underpin forward strategic thinking. In some circumstances, helping consolidate organically-emerging creative enterprises will be an important planning function; however, it is certainly not a silver bullet for all localities.

We need to better plan and manage these lands while also being responsive to the market and community needs. Future papers in this series will explore innovative ways to evolve our industrial and urban services land and look at frameworks for protecting, enhancing and transitioning them to other uses, including public benefits.

## Key considerations

A fast-growing city needs to make sure it has room to grow and respond to future opportunities and challenges. Our industrial precincts might not be front and centre of mind in discussions of city liveability or feature heavily in the narrative of global Sydney, but these spaces are a crucial part of a metropolis that works. They offer opportunities for the invisible glue to cast its magic and act as gateways and interfaces between knowledge, creativity and making things. As the population increases across the three cities in coming decades, the importance of these spaces, and the employment opportunities that

they represent, will remain. Their function will adapt to changing needs and demands, but these localities offer important sites for flexibility, adaptability and resilience as the city evolves. We need spaces ‘in the tank’ – patient spaces – so that Greater Sydney is best placed to respond to those shifts.

Other ‘high-demand’ cities internationally which face similar challenges including Vancouver and New York City, where strong population growth and land markets risk crowding out all but residential use, are taking a more concerted, strategic approach to protect industrial lands and help them thrive into the future. For Greater Sydney, alongside proactive management of existing areas there is a parallel need for a long-term, spatial approach to the provision of appropriate spaces in newly developing parts of the metropolitan area.

Although there are many competing pressures for land across the city, once the land has moved to a higher value use, it is highly unlikely to be converted back. Industrial and urban services are an integral component to a healthy, functioning and productive urban system. Industrial and urban services are an integral component of a healthy, functioning and productive urban system. They are where we make, build, fix and repairs things – and supply the goods required for all these activities as locally as possible. We need to hold onto them.

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**Rather than seeing the protection of old industries and the transition to more jobs-intensive, knowledge driven activities as competing tensions, place-based strategic frameworks can ensure these activities co-exist. Both are dependent upon proximity to end-markets and rich local networks. Both also benefit through agglomeration. The diversity of jobs found in our industrial lands are also those which often offer well-paid middle-income employment which remains a central element of a diverse and equitable city. Physically, they also both contribute to helping shape their localities – providing a bit of depth, a bit of colour, and a bit of grit.**

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## Key considerations:

- A growing city needs to be a working city. It needs spaces that allow it to function, make and create.

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- A changing city needs spaces which offer capacity for innovation, adaptability and resilience in preparing for future needs, opportunities and challenges including the digital economy and technological change.

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- The value of industrial and urban services land should not be based only on the volume and types of jobs generated, but to the operational role and function it plays throughout the city.

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- The provision of sufficient industrial land with access to markets and users across the whole metropolitan area is integral to delivering the 30-minute city.

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- A working global city needs spaces to ensure key economic uses can survive and thrive within ready access of customers and markets.

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- Industrial precincts should be identified as valuable and strategic places in Region, District and Local Environment Plans.

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- A 'no regrets' approach is required in any decisions affecting industrial and urban services land, with the ramifications of any displacement of activity fully understood and strategically managed.

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## Greater Sydney Commission research

The Greater Sydney Commission's approach to managing industrial and urban services land across Greater Sydney has been informed by a number of studies undertaken over the past two years, several of which were commissioned by the Department of Planning and Environment in 2014-15. They include:

- *Sydney's Urban Services Land-Establishing a Baseline Provision* – SGS Economics & Planning, July 2017
- *NSW Office Market Research Report* – Colliers International, June 2017 (Unpublished)
- *Sydney CBD-Differentiating its Economic Strengths* – Charter Keck Cramer, June 2017
- *Industrial Land Detailed Audit and Suitability Assessment* – Urbis, January 2017 (Unpublished)
- *Sydney retail demand and supply* – Deep End Services, May 2016
- *Macro-economic and Demographic Factors Shaping Jobs Growth* – SGS Economics & Planning, February 2016
- *Employment Centres Analysis* – SGS Economics & Planning, February 2016
- *Sydney Strategic Centres Barriers to Growth* – Urbis, February 2016
- *Forecasting the Distribution of Stand-Alone Office Employment across Sydney to 2035* – BIS Shrapnel, August 2015
- *Strategic Centres: Enabling Economic Growth and Productivity* – Hill PDA, August 2015
- *Industrial Precinct Review* – Hill PDA, August 2015

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