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UDIA Submission Attached

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Aerotropolis Stage 1 LUIP

UDIA NSW Response

November 2018

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ABOUT THE UDIA

Established in 1963, the Urban Development Institute of Australia (UDIA NSW) is the oldest industry group representing the property development sector. Our 500 members include developers, engineers, consultants, local government, and utilities. Our advocacy is focussed on developing liveable, connected, and affordable cities.

EXECUTIVE SUMMARY

UDIA NSW (UDIA) welcomes the release of the Stage 1 Land Use and Infrastructure Implementation Plan for the Western Sydney Aerotropolis (LUIIP). UDIA is the leading industry group representing the urban development industry. UDIA has a long-standing interest in the development of the Western Sydney Airport, aerotropolis and Western Parkland City more broadly.

We work with our members that are the landowners, designers, developers and ultimate commercial and residential residents of, not only the aerotropolis but the surrounding areas. Therefore, we welcome the opportunity to add to the development of this plan through our insights, access to members and the experience they have, both technically and on the ground.

In 2017, the UDIA NSW study tour visited leading aerotropolis in Dallas including Dallas Fort-Worth and a near-by freight airport with an innovative intermodal facility. This year, UDIA learned about the aerotropolis visions at Hong Kong, Manchester and Gatwick on our Hong Kong and UK study tours. We would be keen to share the learnings from our study tour, we have attached a copy of key initial learnings from the study tour and look forward to presenting this in more detail to add to the opportunities the aerotropolis can deliver for NSW.

UDIA is also using machine learning to model the future city around the aerotropolis through our Urban AI project in collaboration with LendLease, UNSW and Cox Architects. This project focused on the proposed North-South rail-line project in Western Sydney, applies machine learning in the construction of a predictive model which will quantify the 'economic dividend' in terms of dwelling and employment growth that will be catalysed by this city shaping infrastructure. Calibrating a predictive model from detailed and multi-layered historical data points, Urban AI will output a 3D representation of the future urban fabric of Western Sydney.

Our members deliver employment lands for NSW and we understand the aerotropolis is designed to maximise employment outcomes from the airport, leveraging the airport opportunity into a broader conurbation of connected jobs that support and are serviced by the airport. The aerotropolis must harness the power of the airport to create connected centres enabling growth in knowledge jobs, and support key industries such as logistics.

UDIA has a taskforce of industry leaders further developing the ideas raised in this submission, we welcome the opportunity to discuss how we can work collaboratively to support the release of employment lands in Western Sydney through the aerotropolis.

UDIA supports the vision of developing Western Sydney as a vibrant jobs hub with residential development supported by rail and road infrastructure. Infrastructure is critical to unlocking the aerotropolis, and we look forward to working with government to develop a plan for the supporting infrastructure that will unlock the aerotropolis and maximise employment opportunities from the airport.

Sydney has a critical shortage of employment lands¹ resolving this shortage requires close collaboration between government, industry, and UDIA to bring community and business on a journey to fulfil the enormous potential of the aerotropolis as Sydney's third city and key jobs hub.

Working collaboratively with industry will be critical to ensure the staging of the precinct can be unlocked as quickly as possible to achieve employment outcomes. Our first preference would be to rezone the entire precinct as one; however, we are keen to develop an approach to accelerating precincts, possibly similar to the Precinct Acceleration Protocol to enable jobs to be unlocked as soon as possible.

The agriculture and agribusiness precinct seem to have diverse employment uses, we encourage a flexible employment approach to zoning recognising that it has many logistics and manufacturing uses.

UDIA understands the Stage 1 Aerotropolis LUIIP (LUIIP) is a milestone as part of a broader development of the infrastructure plan for the aerotropolis. We look forward to being part of an ongoing conversation about supporting appropriate transitional uses including employment, infrastructure and parkland uses for the South Creek precinct. We look to the Stage 2 Aerotropolis LUIIP for more certainty.

Our Employment Lands Taskforce is developing a policy position paper that builds on the recommendations in this paper, to help enable future collaboration with the government on unlocking the aerotropolis precinct. UDIA NSW looks forward to working collaboratively with the government to progress the stage 2 Aerotropolis LUIIP.

SHORTAGE OF EMPLOYMENT LANDS

NSW has a critical shortage of employment lands. The UDIA NSW *Building Jobs for NSW 2017* (appendix A) report found there is an urgent need for new employment lands now:

only approximately 310ha of employment land that appears suitable for meeting immediate demand.

This means that actual zoned and serviced employment land suitable for development is barely enough to cover one year of high demand or 2 years at average take up rates – compared to a supply standard of 5-7 years.

Focussing on Western Sydney there is an even more critical employment lands shortage. The recent Colliers, *Land Supply Analysis and Forecast*, October 2018, report highlights that there is 324 ha of land available over the next three years, with only 198 able to be developed in the next year. At a take-up rate of 200 ha per annum, Western Sydney has less than two years supply of available employment lands. Therefore, it is critical that government and industry collaborate to create a medium to long term supply pipeline of vibrant employment lands. The Greater Sydney Commission

¹ UDIA NSW, *Building Jobs for NSW*, 2017

has emphasized the need for Employment Lands, stating there is “a ‘pipeline’ of only two to three years supply”².

UDIA wishes to work cooperatively with government to develop a pathway to enable the aerotropolis to create jobs for the future of the state and the NSW. The potential loss of employment land and jobs by sterilising lands leads to:

1. Higher land prices, in Sydney the value has increased by about 80% in 3 years. This has led to prices becoming unaffordable and leads to business relocating to Melbourne and Brisbane.
2. Potential job losses in constructing employment sites, and then in the direct and indirect jobs servicing employment uses, particularly with jobs moving interstate.
3. Further pressure will be placed on the critical short term land shortage that is faced in Western Sydney, which is likely to put pressure on prices.

To ensure the success of the aerotropolis, employment lands and jobs in Western Sydney it is critical that the government unlock land for urban development in the aerotropolis and ensure mid and long term supply.

SOUTH CREEK CATCHMENT – WATER AND OPEN SPACE

South Creek is critical to the aerotropolis vision and the fulfilment of the Greater Sydney Commission’s vision of a parkland city with a green spine. The LUIIP states:

The initial precincts will embrace South Creek as the central organising principle for the Aerotropolis. As the Aerotropolis’s green spine, South Creek will act as a corridor for open space, biodiversity and amenity functions.

The LUIIP mentions South Creek will support the management of water and it is important to protect this area to facilitate this purpose. There are only certain locations where this infrastructure can be located from an engineering and cost perspective, however all development within the areas surrounding South Creek is being delayed while the government (through Infrastructure NSW) is finalising this decision. This is not an efficient or logical situation, further the conversation needs to take place in the open.

We note South Creek will act as a central structural element that “will shape an open space network that combines recreation, stormwater management and biodiversity, making water an important part of the Aerotropolis’s character” (LUIIP)

The South Creek catchment, within the 1 in 100 year ARI (Annual Recurrence Interval) is comprised of 1,621ha and allows adequate green corridors to be achieved as a vegetated corridor that will provide:

1. Waterway oriented development
2. A walkable creek catchment
3. Social infrastructure and connectivity

Land outside of the 1 in 100 year ARI should not have unreasonable impositions on development.

² Greater Sydney Commission, *A Metropolis that Works*, October 2018, p 22

PROBABLE MAXIMUM FLOOD

UDIA understands the intention of the use of the Probable Maximum Flood (PMF) line was to draw an investigation area and may not actually sterilise development in the area.

The use of the PMF as a boundary for development, even if only for an investigation area is a concerning trend toward using the PMF line as a development control, which has also been suggested in the North West Priority Growth Area.

UDIA considers this is contrary to the Penrith City Council's 1 in 100 year Annual Recurrence Interval (ARI) LEP maps and DCP, contrary to Department of Planning's NSW Floodplain Development Manual, and contrary to accepted engineering practice.

The Department of Planning Circular PS 07-003 issued on 31 January 2007 clearly states that PMF should not be used as a boundary for restricting development:

The Guideline confirms that, unless there are exceptional circumstances, councils should adopt the 100-year flood as the FPL for residential development.

The Guideline also notes that, unless there are exceptional circumstances, councils should not impose flood related development controls on residential development on land above the residential FPL (low flood risk areas).

The NSW Flood Plain Development Manual states a broad approach to flood planning:

The policy promotes the use of a merit approach which balances social, economic, environmental and flood risk parameters to determine whether particular development or use of the flood plain is appropriate and sustainable.

More specifically the NSW Flood Plain Development Manual states:

As it is generally not feasible nor socially, environmentally nor economically desirable to safeguard development against the PMF, a continuing risk from rare flood remains. (K-3)

In general, the FPL (minimum floor level) for standard residential development would be the 1% Annual Exceedance Probability (AEP) flood event plus a freeboard (typically 0.5m) with minimum fill levels at the 1% AEP flood level.

Consideration should also be given to using the PMF as the FPL when siting and developing emergency response facilities such as police stations, hospitals, SES headquarters, and critical infrastructure such as major telephone exchanges, if possible.

However, with commercial and industrial development, which could be seen in some of the Aerotropolis precinct, the Flood Plain Development Manual permits development below the 1% AEP:

The decision on appropriate FPLs for commercial developments relates to economic benefits versus costs ... there is a greater potential for FPLs for these developments to be based on event more common than the 1% AEP flood.

There needs to be flood planning and evacuation strategies that enable development to proceed in an orderly fashion that considers all storm events and associated planning such as flood and evacuation. UDIA would welcome assisting in developing a holistic approach to flood management and evacuation options.

The use of PMF is also inconsistent with existing practice, such as that outlined in the Australian Institute for Disaster Reliance's *Flood Information to Support Land Use Planning* (2017) and councils, for example Penrith City Council's DCP and LEP uses the 1 in 100 as the flood planning level.

Table 3 shows the South Creek Precinct within the 1 in 100 year ARI comprises of 1,621ha and allows adequate green corridors to be achieved as a vegetated corridor that will provide:

1. Waterway oriented development
2. A walkable creek catchment
3. Social infrastructure and connectivity

For context, Centennial Park, which provides substantial Green Space in the Eastern City, is 189ha, so South Creek at the 1 in 100 ARI would provide 8.6 times the open space.

TABLE 3: LAND AFFECTED BY PROPOSED SOUTH CREEK PRECINCT FROM STAGE 1 LUIIP

| Description | Area (Ha) | Industrial Built Form (sqm) 50% site coverage | Industrial Built Form value \$600sqm | Job Impacts | |
|--|--|--|---|--------------|---------|
| | | | | Construction | Direct |
| South Creek Precinct 1%AEP affected land | 1633 (For comparison, Centennial Park = 189 ha) | | | x 201/Ha | x 34/Ha |
| South Creek Precinct between PMF and 1%AEP affected land | 679 | 3,395,000 sqm of built space | \$2,037,000,000 | 136,311 | 23,086 |
| | (6,790,000 sqm) | | (\$2 Billion of construction value) | | |

The sterilisation of land due to PMF will lead to the loss in the order of 136,000 construction jobs and 23,000 direct jobs in the precinct.

The PMF should only be used for planning flooding evacuation, not as an extent for defining developable land.

UDIA recommends:

- Development is permitted in the zone between the PMF and the 1:100 ARI, and development considered in the 1:100 ARI where there is economic merit.

URBAN HEAT ISLAND EFFECT

UDIA notes the Urban Heat Island Effect and understands the NSW Department of Planning intends for the South Creek Corridor to attempt to reduce this. The LUIIP states:

As one of the warmest parts of Greater Sydney, where heat can influence the health and lifestyle of residents and workers, the Aerotropolis will be planned around the network of waterways to create greater environmental, social and amenity benefits. This includes

responses to mitigate urban heat, flooding and intense storm events and locating noise sensitive land uses in areas considered acceptable to liveability outcomes to allow unencumbered airport operations. p8

The South Creek precinct and its broader catchment represents an opportunity to change the way waterways are planned for and managed in greenfield areas. Planning for the Aerotropolis will embrace natural systems as valuable assets, rather than constraints. Rehabilitation of South Creek and its associated waterways will include replanting of appropriate vegetation to provide canopy cover, as well as the creation of permanent water bodies with the potential to provide a network within the South Creek corridor. This will contribute to urban cooling and encourage the residents to use and enjoy riparian lands. p24

We note the urban heat island effect; however, it is extremely unlikely a green corridor will have an impact on the Urban Heat Island Effect. The impact of green space is localised to less than 200m from a park. The OEH, *Technical Guidelines for Urban Cover in NSW*, 2015 notes:

Studies have shown that individual green spaces can have a cooling effect on the microclimate up to 200m from the park.

Therefore, spreading trees across the precinct may have a better cooling effect on the microclimate than an isolated slab of green space. However, as the impacts of the Urban Heat island are limited mainly to the South Creek Precinct, we do not see the benefits spreading across the aerotropolis precinct. Furthermore, we consider planting to provide minimal mitigation from the Urban Heat Island effect. Table 4 from Rosenweig et al. *Mitigating New York City's Heat Island with Urban Forestry, Living Roofs, and Light Surfaces*, (below) highlights the minimal impact of urban forestry on mitigating the urban heat island effect.

Table 4: Extract from Rosenweig et al. – weighted average near surface temperature reductions from selected mitigation scenarios averaged over all times of day, at 3pm.

| Average reduction over all times of day | Open Space Planting (°F) | Curbside Planting (°F) | Living Roofs (°F) | Light Roofs (°F) | Light Surfaces (°F) | Ecological Infrastructure (°F) | Urban Forestry + Light Roofs (°F) |
|---|--------------------------|------------------------|-------------------|------------------|---------------------|--------------------------------|-----------------------------------|
| New York City | -0.1 | -0.6 | -0.4 | -0.4 | -1.3 | -1.3 | -1.2 |
| Mid-Manhattan West | 0.0 | -0.9 | -1.1 | -0.8 | -1.7 | -1.9 | -1.7 |
| Lower Manhattan East | -0.1 | -1.0 | -0.9 | -0.7 | -1.6 | -1.7 | -1.6 |
| Fordham Bronx | -0.1 | -0.7 | -0.5 | -0.4 | -1.3 | -1.6 | -1.5 |
| Maspeth Queens | -0.2 | -0.6 | -0.5 | -0.4 | -1.1 | -1.3 | -1.2 |
| Crown Heights Brooklyn | -0.1 | -0.9 | -0.7 | -0.6 | -1.4 | -1.8 | -1.6 |
| Ocean Parkway Brooklyn | -0.1 | -0.8 | -0.7 | -0.6 | -1.5 | -1.4 | -1.3 |
| Average 3 PM Reduction | | | | | | | |
| New York City | -0.3 | -1.0 | -0.8 | -0.6 | -2.2 | -1.8 | -1.6 |
| Mid-Manhattan West | 0.0 | -1.5 | -1.8 | -1.4 | -2.9 | -2.6 | -2.3 |
| Lower Manhattan East | -0.2 | -1.8 | -1.5 | -1.2 | -2.8 | -2.5 | -2.4 |
| Fordham Bronx | -0.2 | -1.2 | -0.8 | -0.7 | -2.1 | -1.9 | -1.8 |
| Maspeth Queens | -0.3 | -1.1 | -0.9 | -0.7 | -2.0 | -1.8 | -1.7 |
| Crown Heights Brooklyn | -0.2 | -1.5 | -1.2 | -1.0 | -2.5 | -2.4 | -2.2 |
| Ocean Parkway Brooklyn | -0.1 | -1.5 | -1.3 | -1.0 | -2.8 | -2.1 | -2.0 |

The Victorian Centre for Climate Change Adaptation Research's *Literature Review: Responding to the Urban heat Island: A Review of Potential Green Infrastructure* has identified there has been limited research into the effectiveness in Urban Heat Island in Australia:

No studies have been found investigating the shade and cooling benefits provided by native species commonly planted in Australia's cities, such as Lophostemon confertus, Corymbia maculata and Allocasuarina species. Compared to exotic species, sclerophyllous Australian species generally have an open crown, pendulous, fine leaves (Specht & Specht 2002) and may offer more limited insolation reductions (Gies et al 2007). As such, it should be noted that crown density models developed for deciduous trees in cool temperate zones may not be applicable to many Australian native species, or to the growth conditions in south-eastern Australia, where frequent drought and relatively low nutrient soils may lead to slower growth and crown development.

UDIA is particularly concerned about the impact of water availability, the lack of knowledge of irrigation rates to optimise cooling, and the vegetation cover rates required to optimise net cooling benefits.

UDIA recommends:

- Urban Heat Island is primarily mitigated through treatments to the built form, which are far more effective and practical measures to reduce environmental heat effects.
- Trees are spread across a precinct instead of concentrated in the PMF, sterilising development.

COMPENSATION

UDIA considers there needs to be adequate compensation of land sterilised in the LUIIP. If the South Creek Precinct is to primarily be used for a green corridor it should be acquired by Government. Otherwise, it is unlikely the green corridor could ever be achieved, as private owners should not be obliged to embellish or maintain their land for public benefit.

UDIA is further concerned about the funding of any compensation and development of South Creek, the LUIIP identifies as an action:

advising on business planning for South Creek, North-South Rail Link and innovation in value capture with the land use planning work p25

We seek clarification that value capture is not planned for South Creek, as it must be limited to infrastructure items that actually creates value.

INFRASTRUCTURE PLAN AND DELIVERY

The LUIIP provides a good high-level overview of the direction of the aerotropolis. Industry now requires information on planned infrastructure to inform roll-out and development/investment decisions.

Infrastructure is the key to unlocking new employment lands. As is often the case there is a 'chicken and egg' conflict between infrastructure provision and land release. UDIA contends that long term strategic planning which considers land use, infrastructure provision and transport servicing in a holistic approach is required to ensure the strategically identified land can be delivered efficiently and effectively. The release of strategically identified land should include an Infrastructure Delivery Strategy that:

- Provides for the delivery of trunk and lead-in services.
- Identifies major infrastructure corridors, including for roads, rail, pipelines and intermodal terminals.
- Sets out utilities grids for sewerage, water, gas and electricity.
- Provides for sequential upgrades to roads.
- Sets out a long-term framework for funding infrastructure and services.

The new Western Sydney Airport will be a major catalyst for new trunk and lead-in infrastructure. This infrastructure must be coordinated with planning for the WSEA and the WSPGA to maximise efficiencies and enable the staged delivery of the airport and serviced employment lands. To do otherwise would be a major lost opportunity that would undermine investment for employment generating development.

We consider that there needs to be greater certainty as to:

- Infrastructure commitment from government,
- The sequencing of infrastructure and timing of delivery,
- Access roads throughout the precincts, particularly to the M12. If the roads are not included outside of the airport, freight would be forced to go through the airport precinct to gain access, and
- Location and consideration of intermodal facilities. In 2017, the UDIA NSW study tour visited leading aerotropolis in Dallas including Dallas Fort-Worth and Alliance, a freight airport with an innovative wheels-based intermodal, which we would be happy to share some key learnings from for efficient plane/train/truck intermodal services, which could be a huge boon for the Western Sydney Aerotropolis precinct.

SPECIAL INFRASTRUCTURE CONTRIBUTIONS

UDIA recognises that development must pay its fair share when it comes to infrastructure contributions. We note there are substantial benefits to NSW with creating an employment centre in the aerotropolis.

It is unreasonable and unfeasible to expect the development industry alone to be responsible for funding most public infrastructure. The development of employment lands often requires leasing parcels of land and the financial return to come over longer-term lease, therefore industry cannot afford large upfront expenditure.

Industry expects infrastructure contributions consistent to the existing WSEA SIC, otherwise it is unfeasible to develop. We also consider there needs to be a balanced approach for infrastructure as the benefit is for the whole community with appropriate government contributions.

There are significant benefits across Sydney creating a jobs and logistics hub at the Western Sydney Aerotropolis. Therefore, we consider there is a strong business case for government to invest in unlocking the aerotropolis. We consider the government contribution to the SIC could be provided upfront, to catalyse the development of the aerotropolis ahead of the commencement of airport operations. This would create an eco-system for the new airport from before day one, further capitalising on the benefits of an aerotropolis.

In many instances the urban development is not creating the need for the infrastructure outcomes that the government is pursuing, and it is largely unrelated to the urban development, such as the rehabilitation of South Creek. Therefore, we consider it is unreasonable for employment uses to contribute to these costs.

AGRIBUSINESS AND AGRICULTURE

The Agriculture and Agribusiness Precinct is on the western edge of the aerotropolis. We understand the intention of the Precinct is to

- support the long-term retention and growth of agriculture and agribusiness in the Western City, and
- provide a location of the development of an agri-port to provide for the movement and storage of agricultural commodities.

The LUIIP suggests there may be uses such as dairy and poultry farming, intensive horticulture, food processing, and food research and technology. UDIA considers that many of these uses might be best positioned as part of a flexible employment zone.

An agri-port, food processing and food research could all be completed as part of the flexible employment uses, we note the Northern Gateway would include "Food technology and research, Food production and processing, Agribusiness, Fresh food produce markets".

A flexible employment use will enable business to maximise opportunities for the short and longer-term reflecting the need to develop a vibrant aerotropolis. There is the potential for an intermodal in this precinct that would service more than just the agriculture sector.

STAGING AND OUT OF SEQUENCE DEVELOPMENT

The LUIIP must include further information about the staging that would occur in the Aerotropolis.

Our understanding is that the Department is focussing on core precincts, due to a belief that outcomes can be delivered there; however, without the infrastructure planning and schedule the staging does not make sense for industry. There needs to be a clearly defined timetable of proposed release with aligned infrastructure servicing. Otherwise, rezoning the precinct with consistent controls would best unlock the aerotropolis.

The mechanism for treating out of sequence development also remains uncertain. The proposed unsolicited proposals mechanism is not an appropriate mechanism for this, rather the Precinct Acceleration Protocols (PAP) as was adopted for the North West and South West Growth Precincts is more appropriate and practical.

Certain precincts given their location and ability to connect to existing adjacent services at no cost to Government could be fast tracked and released earlier. For example, Mamre Rd adjoins existing WSEA land and could be accelerated to help with the chronic undersupply of industrial land in Western Sydney. UDIA supports developing a clear and transparent framework for the staging of the development precincts.

CROWDING OUT

It is critical government takes a responsible approach with developing the aerotropolis, there must be recognition that the fulfilment of the aerotropolis vision will take many years.

UDIA is concerned that government may seek to accelerate this by offering unreasonable incentives to secure commitments. These incentives, such as offering free land to major tenants, will skew the market expectations for employment lands in Sydney, which would compromise the viability of the greater aerotropolis area.

Industry needs certainty that government will seek to work fairly across the entire region to ensure that the aerotropolis has a viable future by supporting the development of critical employment uses across the aerotropolis.

RESIDENTIAL LAND IS CRITICAL

UDIA supports the Greater Sydney Commission's vision of the 30-minute city. Co-locating residential land near employment land is critical to enabling a 30-minute city. Where homes are located closer to where people work with adequate infrastructure, it is more achievable for people to commute within a 30-minute timeframe.

UDIA wants to ensure and promote suitable residential uses within the aerotropolis, so it does not become a 'jobs island' that creates long commute times midweek. We consider the current LUIIP balances this well and note there is much residential land adjacent to the aerotropolis in the South. We consider this could be better promoted through a flexible Urban Development Zoning in those areas immediately to the south.

ROLE OF THE DEVELOPMENT AUTHORITY

UDIA requests further clarity as to the role of the newly established Western City and Aerotropolis Authority and planning partnership. While we understand broadly the intent of the body is to encourage and support the economic growth and development of the Aerotropolis.

We require more specific information about how it is intended to relate to council, ongoing aerotropolis planning, and delivery.

CONCLUSION

UDIA supports the development of the Western Parkland City that will be anchored by the aerotropolis and will develop as a liveable, affordable and connected conurbation. UDIA looks forward to working collaboratively with the Government and industry in resolving some of the key outstanding issues in relation to the aerotropolis precinct.

For the aerotropolis to succeed the UDIA stresses the need to develop a comprehensive infrastructure plan for the precinct. Supporting appropriate uses for South Creek is also an emerging issue that needs clarification.

UDIA looks forward to working with government to progress Stage 2 of the Aerotropolis LUIIP.

Please contact Elliott Hale, General Manager, Policy, Media and Government Relations at [REDACTED]

UDIA NSW

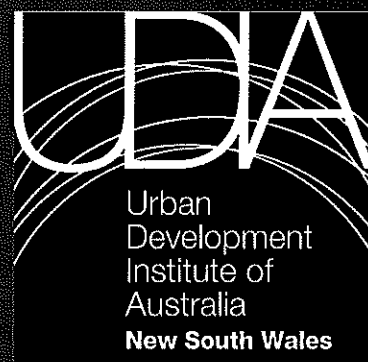
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A large, stylized map of New South Wales (NSW) is composed of numerous interlocking puzzle pieces. The map is rendered in a light gray, textured style. A significant portion of the map, particularly in the southeast, is filled with solid black puzzle pieces, creating a high-contrast area. The text is centered over the map.

BUILDING JOBS FOR NSW

THE MISSING PIECE IN NSW'S AFFORDABILITY PUZZLE

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SYDNEY HAS AN EMPLOYMENT LANDS PROBLEM

The Urban Development Institute of Australia NSW (UDIA NSW) established an Employment Lands Task Force to provide expert advice on the planning and land use needs for appropriately servicing the supply of new and affordable employment lands in Sydney.

UDIA NSW Employment Lands Task Force Members

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Craig Jones Vaughan Constructions

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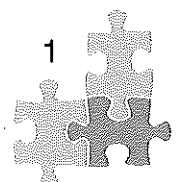
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BUILDING JOBS FOR NSW
THE MISSING PIECE IN NSW'S
AFFORDABILITY PUZZLE



01 INTRODUCTION

When a multinational company looking to establish a presence in Australia comes to Sydney to purchase land and has less than 5 sites with a lettable area more than 20,000 sqm across all Sydney industrial markets to choose from Sydney has an employment lands problem.

Employment land shortage coupled with increasing user demand have been driving up land values, resulting in higher rents – but industrial rents in NSW are already double that of Victoria making it less attractive for national distribution centres.

The NSW Government's Employment Lands Development Monitor (ELDM), which reviews the existing and future supply of employment lands, states that Sydney has 50 years of supply. The accuracy of this estimate is questioned and whilst the ELDM identifies a suitably large amount of strategy identified employment land, there is no land release policy presented which addresses a strategy for how this land is to be rezoned and serviced (specifically funding and prioritisation).

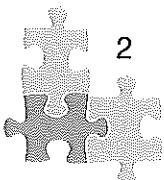
This paper aims to review demand and supply for employment lands and its drivers, employment trends and provide recommendations to make NSW an attractive market for businesses to locate and invest in.

The Sydney Metropolitan Strategy, A Plan for Growing Sydney forecasts that by 2031 Sydney's economic output will almost double to \$565 billion a year and there will be 689,000 new jobs. For this to be possible there are some major structural reforms needed, namely greater flexibility around zoning employment and land use permissibility as well as a clear and transparent land release policy and infrastructure servicing program.

The Employment Lands Development Monitor is focussed predominantly on industrially zoned lands, or land that permit a range of industrial uses, with some additional analysis in relation to business parks. Whilst the Draft District Plans have altered the label to 'employment and urban services land' they do not change which land they are referring to. UDIA NSW notes however that technology is increasingly driving new industries, meaning that actual employment lands should also consider major retail and business precincts, and that this is now reflected by the inclusion of major business parks in the ELDM since 2014 and the inclusion of B5, B6 and B7 zoned land from January 2016.

02 UNDERLYING DEMAND

Since the year 2000, across Australian capital cities over 1.5 million sqm of industrial real estate is developed annually. This is more than 25 million sqm of new industrial space since the turn of the century. Of this new supply, over 35% (8.4 million sqm) of new supply has been delivered for new facilities in NSW at an average of over 500,000 sqm per annum (peaking at approximately 1 million sqm in 2007). Working with a site efficiency assumption of 50%, this translates into a take up of 100ha per annum. The ELDM states that the take up rate is 160ha per annum.



The outer western markets have absorbed the lion's share of this new supply. The South Sydney and Inner Western Markets have reached capacity and are beginning to experience stock withdrawals for rezoning and redevelopment opportunities.

New supply has historically been demand led, with a combination of pre-committed and speculatively built facilities. According to market analysis by Colliers, vacancy rates in Western Sydney are below 1%. There are 3 sites with a lettable area more than 20,000 sqm available to lease across all Sydney industrial markets. Of this space 60% is classed as A Grade. There is current underlying demand for over 400,000 sqm of floor space from end users (tenants and owner occupiers). This equates to land demand of 80ha – 100ha with infill locations not suitable due to the need to access major road infrastructure. There are currently 8 inquiries requiring over 20,000 sqm.

Over 50% of new leases executed since 2006 have been for buildings more than 15,000 sqm, demonstrating a trend towards larger distribution centres. More recently several distribution centres exceeding 35,000 sqm have been developed. These larger facilities require large parcels of contiguous land for development, typically exceeding 10ha per property.

The market is experiencing an increase of businesses separating their office from warehousing operations due to inadequate amenity in industrial areas to attract and retain staff.

Whilst satisfaction of demand for large facilities is critical for the efficient distribution of freight in NSW, there is also a shortage of land available to smaller scale owner occupiers with only 2 subdivisions accommodating sale of land <5,000 sqm for industrial use. Added to this is the demand being created from supply withdrawals in South Sydney with an estimated 2 million sqm expected to withdraw, as well as markets including St Leonards and the Inner Western markets of Auburn and Granville.

As the South West and Outer West are now carrying the weight of demand that is unable to be satisfied from South Sydney and the Inner West, the infrastructure and servicing program must be ready to meet this challenge.

Some key international forces driving demand include:

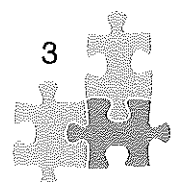
Pacific Rim Dominance – There are more people living in Asia than the rest of the world combined, consequently the Pacific Rim is dominating the world trade in terms of container freight. Australia is well positioned to benefit from this shift in global trading patterns.

International Demand on Exports and Imports – China is a significant demand driver for Australian exports and this is only expected to grow larger.

Influence on Free Trade Agreements – Recently negotiated Free Trade Agreements with Japan, Korea and China have the potential to greatly expand Australia's trade in exports and imports.

Connectivity in Asia – There is currently a huge investment in road and rail in Asia. In the next 40 years the world will build more infrastructure than it has done in its previous 400. China's One Belt One Road initiative aims to spur economic development along the overland and maritime Silk Road economic belt that connects China with Southeast Asia, Africa and Europe. This significant investment in the Asian Highway network provides Australia with improved access for markets across this region.

Significance of the Growing Chinese Middle Class – Estimates from the Australian Government are for a rapid increase in the size of the middle class in the Asia Pacific region over the coming two decades. Based on current growth trends, it is expected that as many as 500 million Chinese could enter the global middle class over the next decade.



03 EMPLOYMENT TRENDS

To understand what type of future demand might look like it is instructive to look at the changing nature of Sydney's workforce. Western Sydney is poised to shoulder much of the burden for new employment lands and centres. According to the NSW Department of Planning & Environment:

"The NSW Government established the Western Sydney Employment Area (WSEA) to provide businesses in the region with land for industry and employment, including transport and logistics, warehousing and office space. Located about 50 kilometres from the Sydney CBD, WSEA will give these businesses access to roads and utility services and is close to the planned new airport at Badgerys Creek. This will also provide people living in Western Sydney the chance to work locally so they can spend less time commuting and more time with their families."

From 2016, the area around WSEA – namely the LGAs of Blacktown, Camden, Campbelltown, Fairfield, Liverpool and Penrith – is forecast to have an increase in population of over 400,000 people by 2031. This population growth will need to provide access to a ready and skilled labour force as well as create new demand for products and services generated in WSEA.

WSEA is a logical expansion of industrial uses with a large cohort of local workers coming from the surrounding 6 local government areas. There is a need to strategically reposition this area for white-collar containment. Presently out of the 53,000 white collar workers that live in this catchment 36,000 (68%) of them travel outside of their district each day to work.

In the period 2006-2011 we have seen significant changes in job composition across the manufacturing, transport and wholesale sectors. The manufacturing sector has seen a decline of more than 10,500 jobs, with only 5 out of 16 sub-industries recording employment growth in this time. Over 5,100 new jobs have been created in the transport sector with the 3 largest contributors to this being in road transport, rail transport and warehousing and storage services. While wholesale has seen an increase of more than 2,200 jobs with continued growth expected with the provision of supporting infrastructure. From 2016-2041 transports, postal & warehousing and professional services are projected to provide the bulk of the more than 30,000 new jobs in WSEA. To plan for this demand government needs to understand the new industrial property trends and innovations redefining built form and floor space requirements.

Key employment land use innovations re-defining employment lands demand include:

Upsizing of Distribution Centres and Warehouse Facilities – This has become a defining feature of the modern industrial market. Some estimates suggest that the average floor space of new large format industrial facilities has increased by around 30% in recent years.

Consolidation of Industrial Facilities – Through an increase in shared services and reduced overheads via centralisation of stock control transport flows, consolidation works to maintain profit margins as well as boost property management efficiencies through a reduction in the numbers of facilities. WSEA represents an ideal consolidation location.

Modern Design and Construction – Examples are higher internal clearances (30+ metres), increased automation and mechanisation, concrete tilt panel construction, fully early suppression fast response sprinkler systems, all weather awning spaces, A grade office areas with complete amenities, multiple container height roller doors and loading docks, B-Double access with heavy and light duty pavement, large hardstand areas for truck turning and container handling.

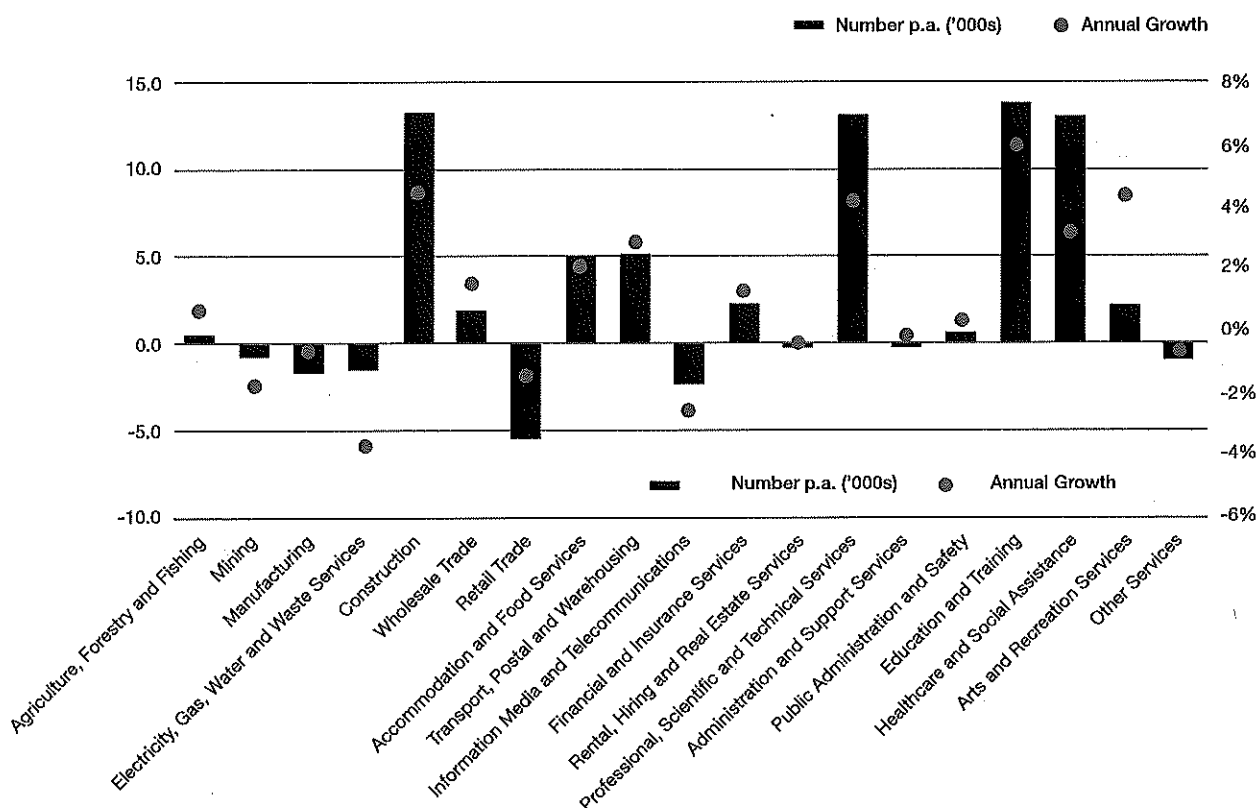
Communication Technology – Consumer expectations to rise due to improvements in information and communication technology (ICT). An increase of ICT CAPEX is required to promote improved productivity and competitiveness. The digital revolution is also enabling an increasing preference towards automation of industrial processes. This is applicable to advanced manufacturing and warehousing and storage services in WSEA.

Strategic Site Selection – Selecting the location of a site has become central to the efficient working of distribution centres at the centre of supply chains. Transport infrastructure facilitating access to markets and labour boost demand for WSEA locations.

Outsourcing of Logistic Functions – Outsourcing provides the dual benefits of devolving responsibilities to external third-party logistics (3PL) experts whilst freeing up occupiers' resources to focus on their core business. With large industrial lots available and strong locational attributes WSEA demand from 3PLs can be expected to intensify.

In addition to these trends, there is a clear direction in the Draft District Plans for employment generating activities in primary locations (such as WSEA) to provide for higher order innovation and technology related industries – including health, medical and technology services sectors.

NSW Employment by Sector, Change between February 2012 and February 2017



Graph Source: Australian Bureau of Statistics Time Series 6291.0.55.003 - Labour Force, Australia, Detailed, Quarterly, Feb 2017

04 SUPPLY

There are three key areas where the ELDM forecasting analysis is inaccurate and potentially misleading in relation to the adequacy of employment lands supply in Sydney:

1. The ELDM includes a large amount of zoned employment land as 'undeveloped' that is either seemingly constrained or otherwise unsuitable for new industrial development, giving a false sense of the actual supply available right now for immediate new industrial development.
2. For the medium and longer-term timeframes, the ELDM indicates that there is an ample supply of 'zoned' employment land and 'Strategy Identified Lands' but this is likely a significant overestimate of the land actually available and does not consider losses that will eventuate because of environmental and infrastructure constraints, particularly in the Broader Western Sydney Employment Area.
3. The employment land supply standards by which the ELDM is measured are not explained nor justified. Other jurisdictions use different metrics and have different supply standards.

Consistent with the ELDM, this analysis focusses on industrial lands. Analysis of business park land follows the industrial land analysis.

This analysis also adopts the same terminology as the ELDM in relation to:

- **Zoned and Serviced Employment Land** – the Department of Planning & Environment ascertain serviced land based on Sydney Water sewerage and potable water services that are available for connection.
- **Zoned Land Not Yet Serviced.**
- **Strategy Identified Land** – being land that is unzoned but identified in long term strategic plans to be zoned in the future for employment lands.

SHORT TERM SUPPLY

The main shortfall is in relation to Zoned and Serviced Employment Land – where Sydney is well below the supply standard of 5-7 years based on the Department's estimates. The ELDM calculates 497ha of 'Zoned Undeveloped and Serviced Land, representing a supply of 3-4 years based on average take up rates over 2009-2016. Given the long lead-in timeframes for securing services to zoned industrial land it is likely that this shortfall will remain for several years.

This shortfall is of major concern, given the need for employment generating industries to establish in Sydney to create employment for the growing population and the fact that Sydney competes with the other capitals to attract these industries. However, whilst the ELDM identifies this shortfall it makes no recommendations in relation to addressing the shortfall.

Further, the situation is likely to be far worse than the ELDM indicates. Of the 497ha identified as being zoned and serviced – only 423ha is located within estates greater than 5ha in total. For significant new industrial or warehouse development sites would need to be larger than what could be accommodated in estates of less than 5ha. As such, the 497ha of 'zoned and serviced' industrial land over-estimates what is actually available in the market.

Table 1 cross references the available employment land identified in the ELDM against the take up of employment land between 2008-2015. In 2015, take-up activity was concentrated in the precincts of Eastern Creek (22.8 hectares), Banksmeadow (13.8 hectares), Yarunga/Prestons (6.0 hectares), Glendenning (5.8 hectares), Marsden Park (5.0 hectares) and Huntingwood West (10.2 hectares) – which provided over 60% of the take up during 2015.

Table 1 – Employment Precincts with Available Land Supply and Recent Take Up

| LGA | Precinct | Available per ELDM (Ha) ¹ | Take up (Ha, 2008-2015) ² | Comment |
|------------------------------|-----------------------------|--------------------------------------|--------------------------------------|--|
| Central Sub-Region | | | | |
| Botany Bay | Banksmeadow | 1.3 | 17.4 | Location not for large industrial users |
| North Sub-Region | | | | |
| Ryde | Macquarie Park, Wicks Road | 10.8 | - | Predominantly focussed on office market |
| South-West Sub-Region | | | | |
| Camden | Narellan | 5.3 | - | Not a location for prime user |
| | Oran Park | 18.5 | - | Not a location for prime users |
| | Smeaton Grange | 29.7 | 55.9 | Not a location for prime users |
| | Turner Road | 5.2 | - | Not a location for prime users |
| Campbelltown | Campbelltown, Blaxland Road | 8.8 | 28.9 | Secondary location |
| | Ingleburn | 12.3 | 31.4 | Smaller parcels only |
| | Minto | 14.8 | 13.2 | Smaller parcels only |
| Fairfield | Wetherill Park | 21.1 | 21.5 | |
| Liverpool | Casula, Cross Roads | 16.9 | - | |
| | Hoxton Park Airport | 2.4 | 38.1 | |
| | Moorebank | 11.6 | - | Fragmented |
| | Yarunga/Prestons | 10.5 | 65.8 | |
| West Sub-Region | | | | |
| Blue Mountains | Katoomba | 4 | - | No take up. Not in Sydney |
| | Lawson | 10.9 | - | No take up. Not in Sydney |
| Penrith | Emu Plains | 9.8 | - | No take up. Secondary location, and fragmented |
| | Erskine Park | 108.1 | 158.3 | |
| | North Penrith | 27 | 20.3 | Secondary location, and fragmented |
| | St Marys | 8 | - | No take up. Secondary location, and fragmented |

1. Per the ELDM land is only shown as available if it is within an estate that had 5ha or more of zoned and serviced land during the reporting period 2008-2014.
2. Per the ELDM take up is only shown for precincts where there was a take up of 5ha or more in 1 or more of the reporting years.

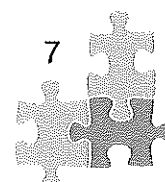


Table 1 – Employment Precincts with Available Land Supply and Recent Take Up (continued)

| LGA | Precinct | Available per ELDM (Ha) ¹ | Take up (Ha, 2008-2015) ² | Comment |
|--------------------------------|----------------------|--------------------------------------|--------------------------------------|-------------|
| West Central Sub-Region | | | | |
| Auburn | Clyburn | 6.1 | - | No take up |
| Bankstown | Chullora | 0.4 | 11.4 | No capacity |
| Blacktown | Arndell Park | 9.1 | - | Fragmented |
| | Eastern Creek | 5.9 | 137.6 | |
| | Glendenning | 9.7 | 41.9 | |
| | Greystanes | 7.4 | - | No take up |
| | Marsden Park | 22.1 | 21.7 | |
| | Minchinbury | 2 | 8.6 | |
| | Mount Druitt | 5 | - | No take up |
| | The Raceway Precinct | 1.6 | - | No take up |
| Holroyd | Greystanes | 3.7 | 51.2 | |
| | Smithfield, North | 2.6 | - | No take up |
| Parramatta | Rydalmere | 0.1 | 8.3 | No capacity |
| The Hills | Annangrove | 10.3 | 10.5 | |
| Total | | 423 | 742 | |

Of the 423ha, 12ha is in the Central and North sub-regions, which are identified in the ELDM as being effectively fully occupied and unable to meet significant future demand. A further 15ha is in the Blue Mountains, and some 85ha appears to be residual land within existing estates that is either very small in size or remains stubbornly and persistently undeveloped even though it is within well-established estates, meaning it is likely constrained, undevelopable or otherwise not suitable to meet the requirements of the market. This leaves only approximately 310ha of employment land that appears suitable for meeting immediate demand.

This means that actual zoned and serviced employment land suitable for development is barely enough to cover one year of high demand or 2 years at average take up rates – compared to a supply standard of 5-7 years.



1. Per the ELDM land is only shown as available if it is within an estate that had 5ha or more of zoned and serviced land during the reporting period 2008-2014.
2. Per the ELDM take up is only shown for precincts where there was a take up of 5ha or more in 1 or more of the reporting years.

Image: Ingleburn Distribution Centre

MEDIUM TERM SUPPLY

The ELDM calculates that there is 2,928ha of Zoned Undeveloped Land. Representing a supply of approximately 10 years at high take up rates, compared to a supply standard of 8-10 years.

However, of this – some 400ha is in the Central, North, and South sub-regions or within the Blue Mountains, Wollondilly or Hawkesbury LGAs and so does not readily contribute to meeting demand for significant new industrial development in Sydney.

Of the remaining 2,528ha – approximately 220ha remains stubbornly undeveloped in estates at Emu Plains (46ha), St Marys (50ha), Smithfield (13ha), Mt Druitt (5ha), Rosehill (18ha), North Dunheved (19ha), Arndell Park (17ha), Auburn (20ha), Bankstown (26ha) and Narellan (6ha) – likely representing land that is highly constrained or not being developed for other reasons. In addition, some 40ha is made up of many smaller areas (generally less than 2.5ha) that have not been developed in recent times and are not located in estates where recent take up has occurred. This 40ha likely reflects an accounting anomaly where lots of little amounts add up to a large number. It is suggested that this 40ha does not represent any real employment land supply. Resulting in an estimate of approximately 2,270ha of zoned employment land.

Table 2 provides the breakdown of available zoned land in key precincts extracted from the ELDM.

Table 2 – Zoned Employment Precincts Undeveloped Areas and Key Precincts

| LGA / Sub-Region | Undeveloped Zoned Land (Ha) | Key Precincts | Area (Ha) | Comment |
|------------------------------|-----------------------------|--------------------------------|-----------|--------------------|
| Central Sub-Region | 44.5 | - | | |
| North Sub-Region | 40.4 | - | | |
| South Sub-Region | 115.6 | - | | |
| South-West Sub-Region | | | | |
| Camden | 180.2 | Leppington North | 70.8 | Secondary location |
| | | Narellan | 5.7 | Secondary location |
| | | Oran Park | 18.5 | Secondary location |
| | | Smeaton Grange | 55.5 | Secondary location |
| | | Turner Road | 29.7 | Secondary location |
| Campbelltown | 58.1 | Blaxland Road | 26.4 | Secondary location |
| | | Ingleburn | 12.9 | |
| | | Leumeah | 2.5 | Secondary location |
| | | Minto | 16.3 | |
| Fairfield | 113.5 | South of Sydney Water Pipeline | 76.6 | |
| | | Wetherill Park | 33.4 | |

Table 2 – Zoned Employment Precincts Undeveloped Areas and Key Precincts (continued)

| LGA / Sub-Region | Undeveloped Zoned Land (Ha) | Key Precincts | Area (Ha) | Comment |
|-------------------------|-----------------------------|--------------------------------|-----------|--|
| Liverpool | 200.4 | Warwick Farm Racecourse | 12.8 | |
| | | Austral | 41.8 | |
| | | Cross Roads, Casula | 16.9 | |
| | | Moorebank | 11.7 | |
| | | Yarunga / Prestons | 112 | |
| Wollondilly | 125.8 | - | - | Not in Sydney |
| West Sub-Region | | | | |
| Blue Mountains | 39.4 | - | - | Not in Sydney |
| Hawkesbury | 23.9 | - | - | Not in Sydney |
| Penrith | 669.3 | Werrington Road, Werrington | 6.9 | |
| | | Emu Plains | 43.2 | No take up. Secondary location, and fragmented |
| | | Erskine Park | 122 | |
| | | North Penrith | 92.4 | Secondary location, and fragmented |
| | | South of Sydney Water Pipeline | 337.2 | |
| | | St Marys | 49.2 | No take up. Secondary location, and fragmented |
| West Central Sub-Region | | | | |
| Auburn | 17.1 | Clyburn | 6.1 | No take up |
| | | Silverwater | 9 | No take up |
| Bankstown | 25.7 | Chullora | 21.1 | |
| Blacktown | 1021.7 | Arndell Park | 16.3 | |
| | | Eastern Creek | 335.9 | |
| | | Glendenning | 21.9 | |
| | | Greystanes | 20.7 | |
| | | Huntingwood | 60.8 | |
| | | Marsden Park | 212.7 | |
| | | Minchinbury | 22.5 | |

Table 2 – Zoned Employment Precincts Undeveloped Areas and Key Precincts (continued)

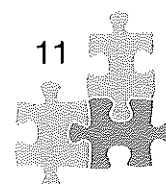
| LGA / Sub-Region | Undeveloped Zoned Land (Ha) | Key Precincts | Area (Ha) | Comment |
|------------------|-----------------------------|----------------------|----------------|------------|
| | | Mount Druitt | 5.1 | No take up |
| | | North Dunheved | 18.5 | |
| | | Riverstone | 19.9 | |
| | | Riverstone West | 87 | |
| | | Ropes Creek | 185.7 | |
| | | Seven Hills | 11.3 | |
| | | The Raceway Precinct | 1.6 | No take up |
| Holroyd | 60 | Greystanes | 44.5 | |
| | | Smithfield North | 11.5 | No take up |
| Parramatta | 21.3 | Camellia/Rosehill | 17.9 | No take up |
| The Hills | 170.6 | Annangrove | 110.7 | |
| | | Box Hill | 57.7 | |
| Total | 2,927.5 | | 2,492.8 | |

Based on an analysis of the ELDM, approximately 2,270ha of real zoned employment land in suitable industrial estates is available, comprising.

- 932ha located within WSEA.
- 377ha in the North West Priority Growth Area (NWPGA), including Marsden Park Industrial, Box Hill, Riverstone and Riverstone West precincts.
- 167ha in the South West Priority Growth Area (SWPGA), including Turner Road, Oran Park, Leppington, Austral precincts.
- 30ha in new estates such as Casula Cross Roads (17ha) and Warwick Farm Racecourse (13ha).
- 987ha remaining in the existing estates listed in Tables 1 and 2 (excluding the areas identified above).



Image: Governor Macquarie Drive, Warwick Farm



PHYSICAL CONSTRAINTS

Of the actual 2,270ha of zoned employment lands, a large amount is located within new estates, including the WSEA and the Western Sydney Priority Growth Areas – 1,476ha (or 60%). A large amount of potential employment land within these precincts will be lost to constraints (in particular vegetation and flooding in Western Sydney), services, utilities and infrastructure. Table 3 shows that the years of available supply is sensitive to the significance of the constraints. The 1,100ha of employment lands located within WSEA and SWPGA are likely to be significantly eroded by constraints, utilities, services and infrastructure.

Table 3 – Potential Loss of Employment Lands to Constraints in New Estates

| | Area (Ha) | Years of Supply (@ 200ha pa) | Supply Standard |
|---|------------------------|---------------------------------|-----------------|
| Undeveloped zoned land not serviced | 2,270 | 11 years | 8-10 years |
| 25% lost to constraints, services, utilities and infrastructure | 2,270 less 25% = 1,703 | 8.5 years | 8-10 years |
| 50% lost to constraints, services, utilities and infrastructure | 2,270 less 50% = 1,135 | 5.5 years | 8-10 years |

PLANNING CONSTRAINTS

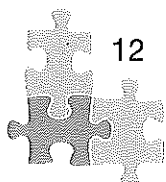
In addition to the physical and infrastructure constraints that might apply to the land, there are planning constraints that reflect the time it takes for a development site to obtain planning approval to the point where servicing required to support development can progress. Planning issues that impact on the timely and efficient development of zoned but un-serviced employment land, include:

Fragmentation – consolidation of multiple small land holdings can be a major factor in the time taken to develop a scheme for planning approval.

Negotiation of Access Arrangements – often requiring liaison with both the local Roads Authority (normally the local council) and the State Roads Authority (Roads and Maritime Services). In WSEA, the Broader WSEA and the Priority Growth Areas, there is often a complex layering of State and local road infrastructure requirements.

Boundary Issues – development of new industrial estates will generally create a new interface between existing residential or rural-residential properties and the new industrial land uses. This can create complex assessment issues and a further erosion of the development potential for the land via the need for additional set-backs and/or boundary treatments (such as noise walls and landscaped buffers).

Major Infrastructure Uncertainty – delays in the delivery of major infrastructure projects can impact on the ability for a developer to progress through the planning approvals system until the major infrastructure projects can be defined or corridors preserved. In this context, rezoning of employment land without previously (or concurrently) identifying and providing for the major infrastructure within or through a precinct can lead to the temporary quasi-sterilisation of zoned land.



MAJOR INFRASTRUCTURE UNCERTAINTY CASE STUDY: THE WSEA PRECINCT KNOWN AS SOUTH OF THE SYDNEY WATER WARRAGAMBA PIPELINE

This precinct comprises some 650ha of land zoned IN1 predominantly held in four large land holdings. The land was zoned IN1 General Industry in August 2009. Of the four major land holdings:

First Land Holding – secured a development approval and undertaken substantial industrial development as part of a 61ha site known as Oakdale Central. It is noted that this site was subject of a planning application under Part 3A submitted before the land was rezoned to industrial. It is also noted that the Oakdale Central site is the least constrained site within the precinct as it is already connected to the existing road network within WSEA and is well separated from residential land uses. The Concept Plan approval was granted in 2009 and the site is now perhaps 50% developed.

The second stage of Oakdale (Oakdale South), is currently under assessment by the Department of Planning and Environment. The 117ha Oakdale South site will generate some 70ha of developable land and 35ha of non-developable land – indicating that approximately 30% of the site has been lost to utilities, infrastructure and other physical constraints.

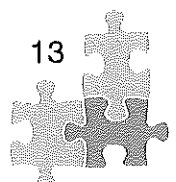
A third stage of Oakdale (Oakdale West) has just commenced the planning process.

Second Land Holding – secured a Concept Plan approval for a 100ha estate at Horsley Park. The initial application for this site was made in August 2010 and the determination was not granted until October 2013 indicating the planning constraints associated with the proximity of the site near existing residential properties. The approval for the site also established a process for addressing the boundary issues, eventually resulting in the rezoning of 35ha of IN1 zoned land to RU4 Primary Production Small Lots in June 2016. The associated project approval provided for the construction of one 27,000 sqm warehouse building on a 7ha portion of the site.

Third Land Holding – currently undergoing a development assessment process with the Department of Planning and Environment for a masterplan of a 50ha site. The initial application for the development of this site was made in May 2012 – the process has extended over 5 years long and approval time continues to remain uncertain. The delays relate predominantly to the location of the Southern Link Road on part of the site which has impacted the access arrangements resulting in complications associated with infrastructure contributions and assessment of traffic impacts.

Fourth Land Holding – is subject of a development application to Fairfield Council for subdivision, lodged in December 2013 and which remains undetermined.

With consideration of the above since the rezoning of 656ha of land south of the Sydney Water pipelines, only 126ha have benefited from in-principle planning approvals – with 68ha of development approvals (for construction). This equates to 10% of the rezoned land has secured development consent for employment generating development in the 8 years since rezoning occurred. Additionally, there have been significant access and servicing constraints in relation to delivery of these lands subsequent to the issue of development consent.



LONG-TERM STRATEGY IDENTIFIED LANDS

Additional Strategy Identified Lands (i.e. land not yet zoned) of 6,972ha is focussed almost entirely in the Broader WSEA and the SWPGA, with the remainder at the Moorebank Defence Lands and Glen Lee.

- **BWSEA = 4,537ha.** Currently occupied by Kemps Creek landfill, and will be substantially eroded by transport infrastructure for airport (including the M9 and M12 road/freight corridors, and a possible future passenger railway line) as well as flooding and vegetation constraints.
- **SWPGA = 1,950ha.** Part of these lands are already occupied by Ingham's, Boral and other existing uses, and will be eroded by transport infrastructure for airport (including the M9 and M12 road/freight corridors, and a possible future passenger railway line), as well as other utilities and services.
- **Moorebank = 336ha.** It is expected that this will contain the Commonwealth Intermodal Terminal.
- **Glen Lee = 150ha.**

A large amount of future employment land within the BWSEA and new industrial precincts of the SWPGA will be lost to constraints – vegetation, flooding, riparian corridors, and major utilities and infrastructure. A strategic constraints analysis has been carried out on the strategy identified land located within the Western Sydney Priority Growth Area (comprising land formally part of the BWSEA and the South West Growth Centre). It is foreseeable that almost 40% of the strategy identified land within the BWSEA and SWPGA will be lost to constraints (vegetation, riparian corridors and flooding) and major infrastructure. These constraints have been overlayed in the map opposite.

Table 4 shows the impact on the ability of developable employment land to meet the strategy identified supply standard after losses to constraints are factored in, clearly indicating that these losses drastically reduce the long-term forecast supply.

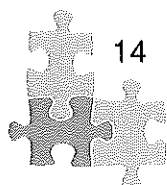
Table 4 – Potential Loss of Employment Lands to Constraints in New Estates

| | Area (Ha) | Years of Supply (@ 200ha pa)* | Supply Standard |
|---|--------------------------------|----------------------------------|-----------------|
| Strategy Identified Lands | 6,285 | 31 years | 20 years |
| 25% lost to constraints, services, utilities and infrastructure | 6,285 – 1,571 (25%) = 4,714 | 23 years | 20 years |
| 50% lost to constraints, services, utilities and infrastructure | 6,285 – 3,142 (50%) = 3,143 | 15 years | 20 years |

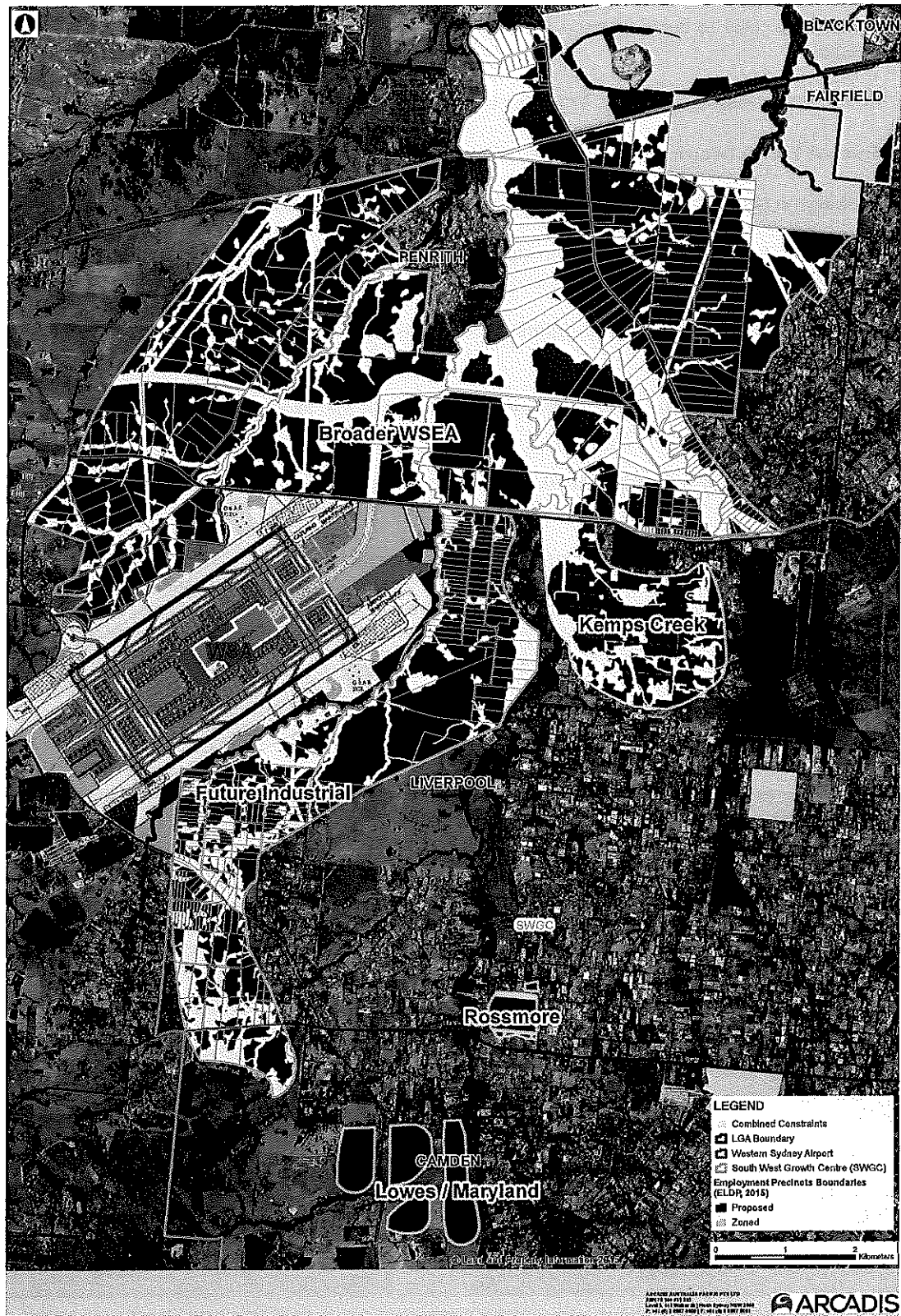


* Excludes fragmentation.

Image: Ingleburn Distribution Centre



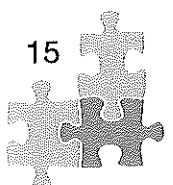
Map: Sydney Employment Lands Analysis



Map Source: Arcadis Australia Pacific Pty Ltd

BUILDING JOBS FOR NSW
THE MISSING PIECE IN NSW'S
AFFORDABILITY PUZZLE

15



BUSINESS PARKS

The ELDM identifies 15 business parks with a total area of over 10ha, seven of which are greater than 50ha.

- **Box Hill (The Hills LGA) – 69ha:** Emerging business park not currently serviced.
- **Frenchs Forest (Warringah LGA) – 56ha:** Mature business park that is fully developed.
- **Leppington North (Camden LGA) – 92ha:** Emerging business park not currently serviced.
- **Macquarie Park (Ryde LGA) – 160ha:** Mature business park with minimal undeveloped land available (14ha). Take up reliant on intensification and refurbishment of existing developed areas.
- **Marsden Park (Blacktown LGA) – 123ha:** Emerging business park with no currently undeveloped serviced land available.
- **Norwest (The Hills LGA) – 157ha:** Maturing business park with minimal undeveloped land available (7ha).
- **Sydney Olympic Park/Rhodes (Auburn and Canada Bay LGAs) – 79ha:** Mature business park that is fully developed.

Whilst there is no established supply standard for business parks, as can be seen in the list above, there is a substantial shortfall in the short-term supply of business park land. Analysis of the historical data indicates an underlying demand for business parks of at least 10ha per annum, meaning that currently available zoned and serviced land within Norwest and Macquarie Park would can meet this demand for only 2 years.

As with industrial employment lands, the delivery of business parks from zoned to zoned and serviced appears to be a fundamental constraint to employment land supply.



Image: Optus Centre Sydney - 1 Lyonpark Road, Macquarie Park

MACQUARIE PARK CASE STUDY: EMPLOYMENT LANDS IN TRANSITION

Macquarie Park is the fourth largest business park in Australia. Development has capitalised on the site's proximity to the central business district, the size of the land available, transaction cost advantages and association with Macquarie University. Macquarie Park has built a reputation as a technology and biomedical precinct, attracting large multinational organisations.

Macquarie University was founded in 1964, triggering development of surrounding land as the Macquarie Park Employment Area. Used initially for warehouse and light industrial uses, an objective for Macquarie Park was to provide opportunities for interaction between industry and the university with a view that a hi-tech industrial area could be developed. Planning policies encouraged technology and biotechnology businesses to the precinct requiring businesses to demonstrate their contribution to research and development.

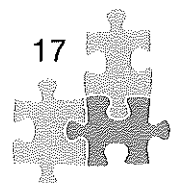
By the late 1970s, the availability of land, proximity to the central business district and Macquarie University and access to professional labour markets in Sydney's northern suburbs had attracted national and international companies to establish headquarters at Macquarie Park.

Macquarie Park was subsequently connected to the M2 Hills Motorway in 1997 and the Epping to Chatswood Rail Link in 2009.

The task of delivering a future business park like Macquarie Park is too big for a local government. It requires a joint three level government approach with Commonwealth funding, State planning and local government management.



Image: Aerial of Macquarie Park



05 RECOMMENDATIONS

1. Take Up Rates

The ELDM refers to an average rate of employment land take-up across the last 6 years of 162ha per year – prior to this land take-up was between 200ha and 300ha per annum – however, this includes several years of below average growth at a time when domestic manufacturing has been decimated (in part by the unfriendly terms of trade) and when the NSW Government has had a non-existent program to encourage investment in Western Sydney.

The Government has re-focussed in Western Sydney in A Plan for Growing Sydney and substantial catalyst infrastructure development in and around Western Sydney is being planned with significant financial assistance from the Federal Government – including the Western Sydney Airport, the Western Sydney City Deal and associated railway and motorway development.

Recommendation: The Government should aim to be able to accommodate an annual take-up rate of 200ha – 300ha and set a minimum target take-up rate for serviced employment land in NSW of 200ha per annum should be adopted for calculating adequacy of supply.

Further, the NSW Government should investigate programs that encourage the development of employment generating development in Sydney, thereby increasing the competitiveness of Sydney with Melbourne and Brisbane and improving the (existing and future predicted) jobs imbalance in Western Sydney.

2. Infrastructure and Utilities

Infrastructure is the key to unlocking new employment lands. As is often the case there is a chicken and the egg conflict between infrastructure provision and land release. UDIA NSW contends that long term strategic planning which considers land use, infrastructure provision and transport servicing in a holistic approach is required to ensure the strategy identified land can be delivered efficiently and effectively. The release of strategy identified land should include an Infrastructure Delivery Strategy that:

- Provides for the delivery of trunk and lead-in services.
- Identifies major infrastructure corridors, including for roads, rail, pipelines and intermodal terminals.
- Sets out utilities grids for sewerage, water, gas and electricity.
- Provides for sequential upgrades to roads.
- Sets out a long-term framework for funding infrastructure and services.

The new Western Sydney Airport will be a major catalyst for new major trunk and lead-in infrastructure. This infrastructure must be coordinated with planning for the WSEA and the WSPGA to maximise efficiencies and enable the staged delivery of the airport and serviced employment lands. To do otherwise would be a major lost opportunity that would undermine investment for employment generating development.

Delivery of infrastructure in the short to middle term supply of already zoned but un-serviced employment land needs particular attention. The creation of the Housing Acceleration Fund by the NSW Government has played a critical role in boosting the delivery of new homes. UDIA NSW contends that a similar fund targeting employment lands could have the same type of impact on supply.

Recommendation: The Government should establish an Employment Lands Acceleration Fund with \$500 million that finances catalyst trunk and lead-in infrastructure aimed at unlocking employment land in Greater Sydney.

3. Land Release Program

Currently, there is no have a system in place where a short fall of employment land can be properly identified and once identified new zoned and serviced employment lands appropriately delivered.

The ELDM identifies a suitably large amount of 'strategy identified' employment land however, there is no related Government policy for the release (i.e. re-zoning) of this land or the servicing of this land. This is particularly important given the immediate short-term supply shortfall and the long lead terms evidenced in relation to the development of land following its rezoning.

The current land release process is unclear and lacks certainty. This makes it difficult for the private sector to invest and government agencies and infrastructure providers to arrange their capital works programs to effectively provide, prioritise and fund required infrastructure to release and unlock land.

The employment lands release program should focus on the following objectives:

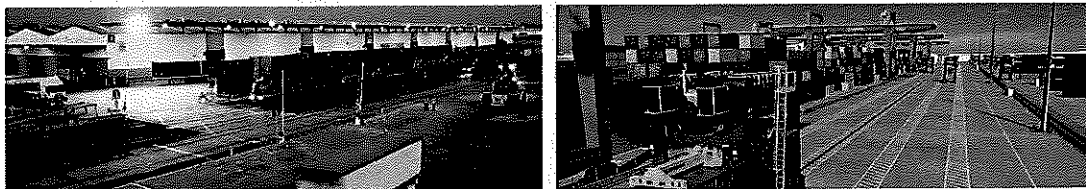
- Employment Attraction
- Management and coordination of infrastructure delivery
- Timely, transparent and affordable land release

Recommendation: The Government should establish a Land Release Program to provide clarity, transparency and investment certainty for industry and delivery agencies.

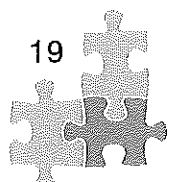
4. A Western Sydney Champion

Western Sydney needs a champion. Western Sydney is the fastest growing region in the country, within 30 years it will grow to be a city the size of Adelaide. UDIA NSW contends that in order for Western Sydney to responsibly manage its growth there needs to be a dedicated delivery authority which is responsible and accountable for this growth.

Recommendation: Establish a Western Sydney Delivery Authority to handle the growth and prosperity of the region.



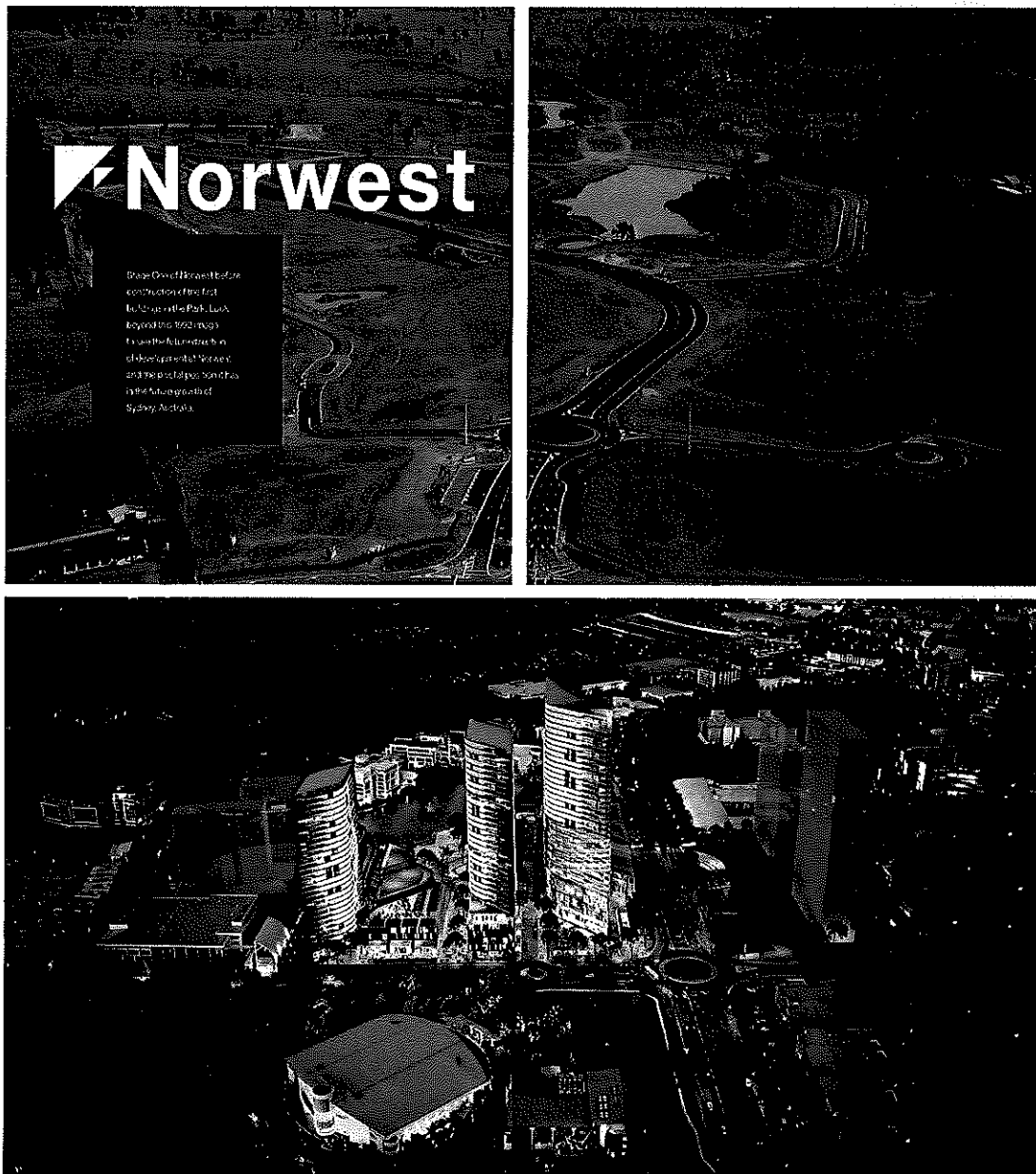
Images: Yennora Distribution Centre



5. Land Use Flexibility

It is important that land use is not too prescriptive as it tends to bring about limitations and a focus on what cannot be done with land. Norwest Business Park is a case study which should be followed when planning for employment lands in Western Sydney. The flexibility in Norwest Business Park's zoning allowed for the evolving market demands and the impact global trends have had on land use and density requirements to be accommodated. Updating and renewal of Norwest Business Park would have been considerably more difficult had it been subject to a rigid, traditional zoning control.

Recommendation: Land in and around WSEA should be subject to a flexible zoning arrangement to allow for multiple and mixed uses to improve amenity outcomes, optimise the employment generating potential and increase delivery efficiencies.



Images: Norwest Business Park circa 1992 & The Future of Norwest Business Park (Marketown Planning Proposal)

06 ABOUT UDIA

Officially established in 1963, UDIA NSW has grown to become the leading industry body representing the interest of the NSW property development sector.

UDIA NSW aims to secure the viability and sustainability of the urban development industry for the benefit of our members and the communities they create by advocating for more liveable, affordable and connected cities.

We represent the leading participants in the industry and have more than 500 member companies across the entire spectrum of the industry including developers, institutional investors, third party logistics providers, financiers, builders, suppliers, architects, engineers, lawyers, town planners, academics and state and local government bodies. A quarter of these members are based in regional NSW.

UDIA NSW members are represented by an elected Council of 13 leading industry practitioners who are responsible for the strategic direction of the Institute. UDIA NSW also has an extensive committee and regional chapter structure that involves more than 300 of the development industry's key stakeholders in policy formulation.

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