

Submission  
No 9

## INQUIRY INTO WESTERN SYDNEY SCIENCE PARK AND AEROTROPOLIS DEVELOPMENTS

**Organisation:** Bus NSW  
**Date Received:** 3 August 2024

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NSW Legislative Council Public Accountability and Works Committee

## Inquiry into Western Sydney Science Park and Aerotropolis Developments

### Submission by BusNSW – 2 August 2024

#### Introduction

BusNSW is the peak body for the NSW bus and coach industry. Our members provide essential services and are a key interface with the travelling public. BusNSW's mission is to foster the efficient and sustainable growth of public transport in NSW, and to promote the benefits of bus and coach travel.

Buses play a vital role in delivering public transport in NSW and during 2023, carried more than 300 million<sup>1</sup> passengers. This represents approximately 40 percent of total public transport patronage.

BusNSW members provide bus services under Transport for NSW (TfNSW) contracts in Sydney metropolitan, outer-metropolitan, and rural and regional areas. This includes bus services that operate in Western Sydney. In addition to contracted bus services, BusNSW members also provide "non-contracted" services in the *Long Distance, Tourist and Charter* (LDTC) sector.

#### Executive Summary

The areas immediately around the new *Western Sydney International Airport* (WSIA) and *Western Sydney Science Park* are some of the most transport disadvantaged in Sydney. Many areas have no access to trains or light rail, with bus services the sole public transport option. Despite this, bus services in many of these areas are infrequent, and service coverage is poor. It is imperative that this situation be rectified well in advance of the opening of the Airport and Science Park.

While buses may be the only public transport option currently open to planners in many areas of West and South-West Sydney, this can have its advantages. The provision of rail services requires extensive planning and investment and offers limited flexibility. By contrast, the provision of bus services is fast, affordable, and adaptable to changing community needs. It can fill the current needs gap and evolve as required to service a burgeoning population. In short, the ability of buses to operate at short notice along a myriad of routes and with a minimum of infrastructure spending, and their capacity to carry a variable passenger load make buses an ideal solution for the range of transport needs of the Aerotropolis and Science Park.

BusNSW recommends the development of frequent services, supported by dedicated bus lanes and transit corridors, to connect major residential and commercial hubs such as Liverpool, Campbelltown and Penrith, to the airport and Science Park. This will ensure that travellers and commuters have convenient and reliable travel options, reducing the reliance on personal vehicles and minimising traffic congestion in and around the airport and commercial hubs.

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<sup>1</sup> NSW Bus Industry Taskforce Third Report, May 2024, p.31

BusNSW further recommends the development of rapid bus services interconnected with local bus and shuttle services. This approach would provide the Science Park and Aerotropolis with efficient public transportation options, enhancing connectivity, accessibility, and mobility.

While commuter ease is clearly a priority, it is important that tourists and business travellers are not forgotten. For that reason, it is essential that the new Science Park and Aerotropolis incorporate infrastructure for buses and coaches providing long distance, tourist and charter services that provide a seamless transfer between the airport and destinations such as the Science Park, hotels, tourist attractions and regional centres. Such infrastructure should include bus and coach layover facilities with amenities such as waiting areas, restrooms, ticketing counters, and information displays. Planning for these initiatives needs to commence now.

In addition, given the move to sustainable transport technologies, infrastructure should consider the provision of charging stations to maintain the operation of zero emission vehicles. BusNSW notes that with planned new electric buses and those already in service, there will be around 1,700 zero emission buses expected to be operating on Sydney roads by the end of 2028.

More detailed information on these and other initiatives are outlined below, categorised into the impacts of the Science Park and Aerotropolis development on:

- a) Planning and Land Use
- b) Employment
- c) The Environment and
- d) Transport

In line with the Committee's Terms of Reference, we also suggest some lessons for current Government Policy in relation to these developments and Western Sydney more broadly.

#### **a) Planning and Land Use**

The *Western Parkland City* in which the new Science Park and Aerotropolis are situated will account for over 20 per cent of NSW's population growth by 2036, with nearly 1.39 million people. To keep pace with this growth, the *Western Parkland City* is likely to require 15-30 per cent of the NSW infrastructure spend – the equivalent of \$60 billion – \$120 billion in today's terms – over the next 15 years<sup>[1]</sup><sup>2</sup>.

Despite these forecasts, the areas around the planned Science Park and Aerotropolis are currently among the most transport disadvantaged in Sydney, with limited or no rail connections. As noted in the First Report by the *NSW Bus Industry Taskforce*,

*"In large parts of west and south-west Sydney... buses are the only available form of public transport – and service coverage and frequency are poor."*<sup>13</sup>

Ironically, it is the areas of Sydney that are experiencing the greatest population increase, that have the poorest public transport access. In areas of Sydney's Greater West, few bus routes operate more than 45 services per day and many others have less than 12-hour coverage over the course of a day.

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<sup>2</sup> <sup>[1]</sup> Western Sydney Parkland City Blueprint, Oct 2022, p.2

<sup>3</sup> NSW Bus Industry Taskforce First Report, July 2023, p.12

This is the legacy of “traditional” planning approaches whereby new residential areas of Sydney are built before appropriate public transport is developed. This approach has led to developments lacking the infrastructure required to meet future public transport needs. With the advent of the new Aerotropolis, there is a need for a fundamental shift away from this approach.

Western Sydney Science Park represents a significant investment in the future of Western Sydney, and an opportunity to position the region as a leader in science and technology innovation. As such, integrating advanced technologies to improve the quality of life becomes increasingly significant. The role of Zero Emission Buses and even autonomous buses will be critical in this future and the need for strategic planning of the deployment of these technologies will ensure benefits in terms of employment, infrastructure, safety, mobility, and the environment.

Land use policies should encourage transit-oriented development to maximise public transport utilisation. The lack of consideration given to transport infrastructure in newly developed areas greatly increases costs once a decision is made to introduce services (for example, rapid bus services). In short, there is a need for an integrated approach to land use and public transport development across the Science Park, Aerotropolis and the wider Western Parkland City. This will improve accessibility to the jobs, housing and facilities envisaged under the government’s Western Sydney City Plan.

Guidelines and policies for the development of new streets and roads around the WSIA require bus priority measures at the outset. This includes a plan for rapid bus services to ensure people in nearby areas who work at the new airport or Science Park have viable public transport options. Liverpool and other parts of Western Sydney will simply be too far from the Metro Rail (Western Sydney Airport Line) to be able to consider it as an alternative. Rapid bus services provide a high-capacity public transportation system that combines the efficiency of light rail with the flexibility and cost-effectiveness of buses. It differs from regular bus services by featuring dedicated lanes, priority signalling, modern stations, and frequent service, offering faster and more reliable travel for passengers.

Rapid bus services are essential for a modern sustainable aerotropolis, dedicated bus lanes can separate buses from general traffic, reduce congestion and improve travel times for commuters and other passengers to and from the airport. Bus lanes and signal priority at intersections provide bus customers with quicker and more reliable journey times, greater customer satisfaction and help to increase public transport mode share.

Planning for the implementation of zero emission bus technology is important as the bus industry moves to more sustainable fleet technologies. Both electric and hydrogen fuel cell bus technologies are advancing and require robust charging/refuelling infrastructure. Enabling buses to be charged away from the depot will enhance utilisation and efficiency. Considering major electrical infrastructure can provide long-term savings for the government. Smart grid integration, where charging stations optimise energy use and manage loads effectively, should be planned to support large-scale bus charging. Additionally, investing in infrastructure to support the hydrogen supply chain, including production facilities, storage solutions, and refuelling stations, will expedite the transition to hydrogen fuel cell buses.

Other infrastructure supporting bus use, such as bus shelters, signage, and priority signalling systems support the reliability and attractiveness of bus services and help reduce reliance on private vehicles. By prioritising investments in bus infrastructure in and around the Science Park and aerotropolis, a more sustainable and accessible transportation network can be developed that serves the needs of communities across Western Sydney. Guidelines and policies for new streets and roads that include bus priority measures should be developed at the outset, rather than down the track when greater demands and more diversified needs arise.

In summary, BusNSW supports the prioritisation of long-term growth funding for underserved communities and corridors in Western Sydney. A vision of rapid bus services using zero emission buses and with connections to (heavy) rail stations where these exist, and community and business hubs when they do not, should be an integral part of the planning and development process for the new Western Sydney Parkland City, and need to be funded now.

BusNSW considers that the following actions are critical in terms of current and future planning:

- The allocation of growth bus funding for areas of Western Sydney, including around the Aerotropolis and Science Park, where public transport options are currently poor.
- A correlation between population growth / density changes and an increase in bus services.
- The development of rapid bus services, particularly in areas of Western Sydney not currently serviced by trains.

## **b) Employment**

The construction and operation of the Western Sydney Science Park and Aerotropolis will generate a substantial number of job opportunities across various sectors, including aviation, logistics, IT, hospitality, and retail. With the influx of these new businesses, industries, and workforce, it is imperative to anticipate and address the transportation needs of employees commuting to and from their workplaces.

Current demand for public transport in Western Sydney is substantial, with many commuters relying on it for daily travel. Anticipated population growth means that demand is likely to increase. Despite this and as outlined above, areas in the vicinity of the Science Park and aerotropolis are poorly serviced by public transport.

Addressing the need for reliable and efficient bus services to transport workers is crucial for reducing reliance on private car travel and parking. Careful planning is required to ensure that an effective public transport network supports the new developments (and the Western Parkland City more generally) and allows workers to take advantage of employment opportunities.

New bus routes and timetables need to align with the needs and preferences of employees, such as early morning and late-night services to accommodate shift workers and include express routes to major employment centres like the Science Park. Tailoring bus services in collaboration with local businesses and industries will enhance the efficiency, effectiveness, and uptake of public transport, ultimately contributing to a more sustainable and inclusive transportation system in Western Sydney.

Recognising the significant employment movements expected in the Western suburbs of Sydney due to the development of the Aerotropolis and Science Park is essential and needs to occur now. Public transport infrastructure associated with the new WSIA needs to consider, both regular passenger services to and from the airport and employment hubs, as well as long distance, tourist and charter services needed to provide a seamless transition for individuals and groups.

### c) Transport

A new Sydney Metro will become the transport spine for Greater Western Sydney, connecting communities and travellers with the new Western Sydney International Airport and the growing region. It is critical that the six new metro stations have infrastructure to support the operation of bus services to replace Sydney Metro services when maintenance is required or due to unplanned events. The infrastructure should allow buses to pick-up and set-down passengers near the metro stations and have parking available for standby buses to layover.

Whilst the WSIA will be connected to St Mary's by a single metro line, there is a lack of train and light rail in other areas around the airport (unlike Kingsford Smith Airport and areas in Sydney's East). However, this opens the way for more innovative uses of bus services. In particular, the introduction of rapid bus services interconnected with local bus services would provide residents in Sydney's west with improved and efficient public transportation options, enhancing connectivity, accessibility and mobility.

The need for significant bus service improvements in Western Sydney has been a specific focus of recommendations from the NSW Bus Industry taskforce, backed by subsequent NSW government budget commitments. BusNSW notes that the 2024-25 state budget allocated \$327.1 million over four years for the delivery of new bus services for Western Sydney and includes services that will connect Liverpool, Penrith & Campbelltown to the Western Sydney International Airport and Bradfield City. The Aerotropolis development should of necessity be a primary focus for sustainable development, in which fast, frequent, reliable bus services will play a key role in delivering the strategic goal of a well-connected and liveable City.

Buses stand out among mass transit options due to their inherent flexibility. Unlike fixed modes such as rail and light rail, buses can be readily redeployed to adapt to evolving land use and people movement needs. Introducing bus services from key transport interchanges, such as Campbelltown, Liverpool, and Penrith, to the airport will enhance connectivity and accessibility for passengers, reducing the reliance on personal vehicles and minimising traffic congestion. BusNSW notes that the NSW Government's 2023-24 budget included \$302.7 million to be reserved for the *Western Sydney Rapid Bus Network*. BusNSW understands that a funding gap still exists to realise the desired permanent rapid bus solution for Western Sydney Airport

BusNSW also acknowledges Liverpool Council's proposed project, the *Fifteenth Avenue Smart Transit (FAST) Corridor*, which is a visionary project to deliver a high-quality public transport link between the Liverpool CBD and WSIA. Under the *Western Sydney City Deal*, the NSW Government has committed to a rapid bus connection between the Airport, the new Aerotropolis and Liverpool's CBD in time for the airport's opening in 2026. The corridor is to include a four-lane urban road, new streetscape, including footpaths, cycleways, bus bays, signage and line marking as well as street lighting.

Seamless integration of bus and coach services with existing rail and road networks is essential for creating a comprehensive and efficient transportation system that meets the diverse needs of commuters and travellers to and from the airport and Science Park developments. One approach to achieve this is through the development of integrated transportation hubs and interchanges, located at key transit points where rail, bus, and coach services intersect. These hubs should be designed to facilitate smooth transfers between modes, with amenities such as clear signage, accessible pathways, and integrated ticketing systems to streamline the passenger experience.

Prioritisation of bus lanes and infrastructure upgrades will play a pivotal role in enhancing the efficiency and reliability of bus and coach services to and from the airport and Science Park. Dedicated bus lanes along congested corridors provide priority access for public transportation, reducing travel times and improving service reliability. BusNSW acknowledges the Northern Road upgrade between the Old Northern Road, Narellan and Jamison Road, South Penrith, to meet the needs of future business and population growth in the local area and across broader western Sydney. Importantly, the upgrade included bus priority lanes at traffic lights and indented bus bays.

Infrastructure upgrades such as rapid bus systems with dedicated lanes, enhanced stations, and high-frequency services will offer fast, efficient, and high-capacity transit options. By reallocating road space and implementing traffic signal priority systems, buses and coaches can move more freely through traffic, minimising delays and improving overall travel efficiency.

Implementation of *Intelligent Transport Systems* (ITS) will further enhance the efficiency and effectiveness of traffic management and bus operations. By leveraging advanced technologies such as sensors, cameras, and predictive analytics, ITS enables real-time monitoring of traffic flow, congestion, and incidents, facilitating dynamic adjustments to traffic signals, bus priority and route planning. Dynamic routing and scheduling algorithms adjust bus routes and frequencies in response to changing road and traffic conditions, optimising resource utilisation and maximising service reliability.

### **Long Distance, Tourist and Charter Services**

In addition to infrastructure for regular passenger services, infrastructure to support a network of long distance, tourist and charter services catering to both domestic and international travellers is essential. The new WSIA will need to be serviced by buses and coaches carrying passengers to and from Central Sydney and other tourist destinations in Greater Sydney and regional NSW. Planning for these coach services needs to start now.

Providing parking for buses and coaches at the new airport is essential and requires building terminals with modern facilities for passengers and drivers. The terminals need to feature amenities like waiting areas, restrooms, ticketing counters, and information displays to improve the overall passenger experience. The infrastructure should be designed to ensure that passengers with disabilities can easily access buses and coaches, with effective wayfinding signage to assist them.

There is a need for close collaboration between the airport authorities, tourism agencies and operators (e.g. via BusNSW) to ensure that bus and coach services are integrated into airport travel packages. By partnering with coach operators and tourism agencies, bus and coach services can be incorporated into tourist itineraries, promoting the use of high-capacity vehicles and enhancing the overall visitor experience of Australia.

BusNSW notes that bus and coach tourism significantly contributes to the NSW economy, delivering \$488 million in tourist dollars to Sydney. In Regional NSW, long-distance coach travel and tours delivers a further \$292 million to the economy, \$212 million from domestic visitors and \$80 million from international tourists. This represents 9.3% of all international visitors in regional NSW. International visitors traveling by bus in NSW have the highest average spend per night among all transportation modes. In Sydney, the average spend of international bus travellers is second only to that of cruise ship passengers. These figures underscore the essential role of bus and coach travel in supporting and enhancing the tourism industry across the state.

#### **d) The Environment**

Promotion of bus services as a sustainable alternative to private car usage is crucial for the new Aerotropolis and Science Park. Marketing campaigns emphasising the environmental advantages of bus travel, along with its affordability and convenience, can raise awareness and shift attitudes toward these more sustainable modes of transportation. Additionally, providing incentives such as discounted fares, loyalty programs, and promotional offers can further incentivise individuals to choose buses as their preferred mode of travel, ultimately reducing reliance on private vehicles and mitigating the negative impacts of car dependency on the environment and public infrastructure.

The establishment of park-and-ride facilities can also act to encourage the use of public transport, particularly in areas with limited parking availability and high traffic congestion. By providing secure parking spaces at strategic locations near transit hubs and major employment centres, park-and-ride facilities enable commuters to conveniently park their cars and transfer to buses for the remainder of their journey. This not only reduces the number of cars on the road but alleviates parking pressures around the Science Park and airport terminal.

The introduction of recharging and refuelling stations for zero emission vehicles, can provide substantial benefits for the environment. By supporting the use of zero emission vehicles, recharging and refuelling stations reduce the WSIA environmental impact and ensures that passengers do not experience any unexpected interruptions to services due to battery depletion. This will allow buses and coaches travelling long distances to pick up passengers to charge batteries prior to a return journey. In the planning phase, it is also prudent to contemplate future prospects for operators using buses and coaches powered by hydrogen fuel cells to access hydrogen at the WSIA or near the Science Park.

Collaboration with local authorities to develop strategies for reducing road congestion around the airport and surrounding areas will be essential for improving overall traffic flow and enhancing the efficiency of transport networks. This collaboration should involve the development of a comprehensive traffic management plan that addresses congestion hotspots, optimises road infrastructure, and prioritises the movement of buses and other public transit vehicles.

By implementing measures such as traffic signal synchronisation, lane management strategies, and intelligent transportation systems, Transport for NSW can streamline traffic flow and minimise delays for both commuters and freight traffic. Additionally, promoting transportation modes such as rapid bus systems and pedestrian-friendly infrastructure can reduce dependence on private cars and alleviate pressure on road networks. By collaborating closely with stakeholders and leveraging data-driven approaches, authorities can develop tailored solutions to address specific congestion challenges around the airport and Science Park, improving mobility and accessibility for residents and visitors alike.

#### **e) Lessons for Future Government Policy**

For many decades, the reigning philosophy in development, planning and land use seems to have been on providing communities with residential housing before public transport is available. This is certainly the case in Western and South-Western Sydney. In these areas, public transport is poor. This has led to housing developments lacking the infrastructure required to meet future public transport needs.



There is a need for a fundamental shift away from this approach, with infrastructure, including for future public transport, built before or concurrently with new housing. There is a need for an integrated approach to land use and public transport development across the Aerotropolis and the wider Western Parkland City. Strategic planning is essential to take advantage of the innovative technologies provided by integrating ZEB and autonomous buses into Western Sydney Science Park and WSIA frameworks. This planning must encompass comprehensive plans for the use of buses in and around the precincts, consider rapid bus links, and integrate with other modes of transport. This will improve accessibility to the jobs, housing and facilities envisaged under the government's Western Sydney City Plan.

A vision of rapid bus services using zero emission buses and with connections to rail stations where these exist, and community and business hubs when they do not, should be an integral part of the planning and development process, and need to be funded at the outset. High quality public transport routes and infrastructure are needed now as housing, amenity and community are beginning to be developed.

While BusNSW recognises the logic of "scaling up" in line with changes in land use and increasing demand for public transport, there is a need to avoid any lag that may result in service levels not meeting demand. Instead, BusNSW supports the provision of transport infrastructure and services in Western Sydney ahead of the significant demand that will be generated by the Aerotropolis and Science Park once established. It will be critical for Transport for NSW to consult with the relevant contracted bus operators in relation to the services. BusNSW understands this will involve Greater Sydney Bus Contracts for Regions 1 (Busways) and 2 (Transit Systems).

## **Conclusion**

The demand for buses and coaches in and around the Aerotropolis is paramount, especially considering that buses currently represent the primary mode of public transportation across significant parts of Western Sydney. Given this context, buses emerge as not only the most expedient but also the most efficient means of establishing public transport to bolster the new Aerotropolis.

Buses and coaches can serve as essential conduits for diverse travel needs in Western Sydney. Their versatility and accessibility render them vital components in facilitating seamless connectivity and enhancing the overall transport experience for residents, commuters, and visitors alike.

There is a need for significant bus service improvements in Western Sydney. The Aerotropolis development should of necessity be a primary focus for sustainable development, in which fast, frequent, reliable bus services will play a key role in delivering the strategic goal of a well-connected and liveable City. There is also a need for this on street public transport to be supported by customer focussed infrastructure improvements including bus priority measures and public information

Recognising the pivotal role of transport infrastructure in the success of the Western Sydney International Airport, Science Park and accompanying Aerotropolis, proactive investment in critical transport networks becomes imperative. Early commitment to developing the necessary infrastructure for a well-connected and accessible transportation system will not only accommodate the area's anticipated growth but also elevate the quality of travel for residents, commuters and tourists, fostering sustainable development and economic prosperity in the region.

Should you wish to discuss the submission, please contact BusNSW on (02) 8839 9500 or via [info@busnsw.com.au](mailto:info@busnsw.com.au)