

# City-shaping transport for good in growth areas: A national agenda beyond the commuter car park

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## 1. Introduction

Australia's Federal Treasurer, the Hon Jim Chalmers MP, is expected to hand down his first budget a month on from ATRF. Minds and media will turn to what the Albanese Government has to offer people struggling with the cost-of-living pressures that took centre stage at the May 2022 election.

A sizeable group of households – the new ones forming in the greenfields release areas on the edge of Australia's fastest-growing cities – may be doing it particularly tough. Exposed to the multiple whammy of rising interest rates, housing costs and petrol prices while sitting a long way from job and service concentrations, these areas are touted as key to the success of any government wanting to hold on to hard-won power.

Although delivering urban transport infrastructure and services falls constitutionally to the States and Territories, Federal Government policy is a major indirect and direct force acting on growth area transport outcomes. *Indirectly*, urban settlement and travel decisions are guided by (to pick a few federally mandated or strongly influenced examples) fuel excise rates, access to tertiary education and health services, spending on welfare programs, and major employment-generating investment. More than this, Canberra looms increasingly large as a critical source of dollars for more junior governments' major urban transport infrastructure projects. Through this funding role, the Federal Government *directly* and strongly shapes urban form.

Assume that the Albanese Government sees a larger and louder role for itself in this space than just adding to the marginal commuter car parking capacity of a few suburban train stations. How, then, might its urban transport agenda evolve, in line with its broad commitment to clean, sustainable and socially inclusive growth? (ALP 2021)

In framing brief observations in response, the authors note the 31<sup>st</sup> Prime Minister's frequent mention of the leading role of the national advisory body Infrastructure Australia (IA), established under his earlier ministerial watch. We reference IA's two most recent national and cross-sectoral infrastructure reports – the *Australian Infrastructure Audit 2019* ('2019 Audit'; IA 2019a) and *2021 Australian Infrastructure Plan* ('2021 Plan'; IA 2021). This evidence-based policy reform agenda, and our own related work, signpost a healthy way forward.

## 2. Problem: The spreading contagion of congestion

The story behind the changing shape of Australia's growth areas is well rehearsed (IA 2018). Coastal cities that started life as port-adjacent colonial trading and governing outposts grew inland along rail and tram corridors. Post-Second World War car ownership enabled people to

live ever further away from workplaces and public transport nodes. Outer suburbs represented a freedom of movement and lifestyle compared to the busy inner city.

Inevitably, the bill paid over time for this freedom has included the costs of the congestion faced (and added to) by people wanting to access many of life’s opportunities from their outer urban home. This home may provide immediate and welcome access to nearby green space and be a short drive away from local schools and shops. To travel to a significant regional centre, however – to reach a hospital, a university or a job-rich business district – the car may be the only option.

Caught in a notorious Catch-22, people who live in outer urban areas drive in part because their patronage of public transport is not enough to support services that are frequent and reliable enough to attract them away from their car. The congestion these Australians encounter as they near older centres spreads inexorably outwards.

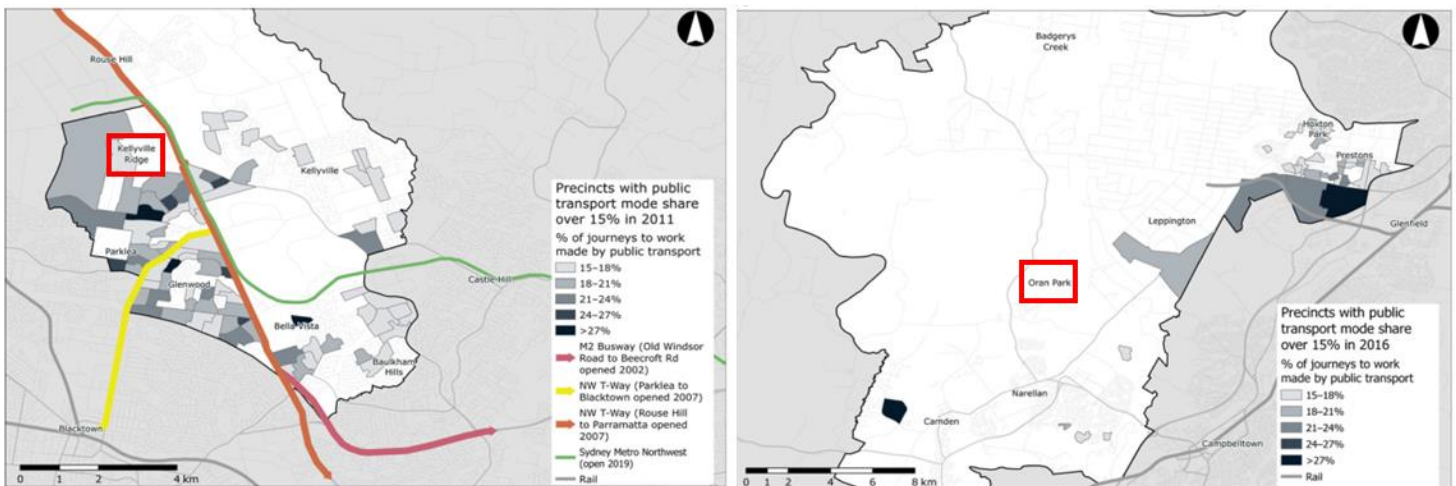
### 3. Clues to an alternative paradigm

A deep body of research, including IA’s own report on *Urban Transport Crowding and Congestion* (IA 2019b), supported the development of the 2019 Audit. This yields evidence on how different approaches to land use and transport planning shape contrasting travel outcomes.

#### 3.1. North-western vs south-western Sydney: A tale of two growth areas

As shown in Figure 1 and detailed in Table 1, two otherwise comparable Western Sydney growth areas demonstrated – in the year of the ABS Census conducted at the equivalent point in the life of each – very dissimilar levels of public transport use for commuting.

**Figure 1: Public transport commuting outcomes in the Western Sydney North West Sector and South West Growth Area at similar lifecycle stages (IA 2019b)**



Some of this variation could be accounted for by demographic factors and the greater distance of the SW Growth Area from Sydney CBD. However, given the similarities between these two areas outlined in Table 1, it is hard to go past one major difference – between the public transport offerings available in each at its point of settlement. Consider the example of one specific suburb from each growth area, as highlighted in Figure 1 and addressed below.

##### 3.1.1. Kellyville Ridge

From the day the first north-western Sydney residents of Kellyville Ridge moved in, they could catch a fast, car-competitive M2 Busway service to the North Sydney and Sydney major centres. The ‘T-way’-branded BRT links to Parramatta and Blacktown followed four years later.

Eight years on from the 2011 Census illustrated in Figure 1, with crowded M2 Busway services groaning under the weight of patronage, Sydney Metro North West opened. Today, no home in Kellyville Ridge is more than 2¼ km from a station.

**Table 1: The similarities, and one key difference, between compared Western Sydney areas**

2011: Sydney’s ‘North West Sector’	2016: Sydney’s ‘South West Growth Area’
Suburbs: Baulkham Hills west, Beaumont Hills, Bella Vista, Glenwood, Kellyville, <u>Kellyville Ridge</u> , Parklea, Rouse Hill	Suburbs: Austral, Camden, Cobbitty, Edmondson Park, Elderslie, Greendale, Harrington Park, <u>Oran Park</u> , Prestons
100,000 residents	78,000 residents
46,000 workers	34,000 workers
Kellyville Ridge: Less than 8 years old in 2011; 240 hectares; 8,000 residents; ~14 km to Westmead / Parramatta train stations	Oran Park: Less than 6 years old in 2016; <300 hectares; 5,000 residents; <14 km to Macarthur / Campbelltown train stations
(In 2011) 15% public transport JTW mode share for the NW Sector – vs 20% for all of Greater Sydney in that Census year	(In 2016) 10% public transport JTW mode share for the SW Growth area – vs 23% for all of Greater Sydney in that Census year
Concentrations of particularly high public transport use along established corridors already serviced by BRT routes	No BRT routes – one small concentration of high public transport use around Edmondson Park station
Kellyville Ridge to Westmead station: >10 BRT services / hour at peak, taking <15 minutes to reach the interchange	Oran Park to Campbelltown station: 3 local bus services / hour at peak, taking >40 minutes to reach the interchange

### 3.1.2. Oran Park

It was and is a different tale for Oran Park, in Sydney’s south west. From the point of its settlement the new suburb relied on infrequent local bus services. The circuitous route of these services – visiting multiple localities in an attempt to fill seats – made the choice of public transport even less competitive with driving than it was already.

Like the North West Sector, Oran Park also features in the thinking of Sydney Metro: it is the planned location for the next station to the south of Sydney’s second international airport (of which, more below). However, while metro will be constructed as far as Badgerys Creek for day one of the new airport’s operation, no date for a southward extension has been set. Infrastructure NSW recommends nothing more than corridor preservation to protect this ‘long-term option’ (INSW 2022). In this climate, Oran Park’s low use of public transport does not add compelling weight to the idea of bringing forward massive heavy rail investment.

## 3.2. Reform directions in Infrastructure Australia’s 2021 Plan

Under 2021 Plan themes including Social Infrastructure and Sustainability and Resilience, IA has recommended a range of cross-sectoral policy reforms to address the misalignment of infrastructure delivery and population growth.

Specific to the 2021 Plan Transport theme, two recommended reforms stand out for parallel implementation. This requires leadership by the Federal Government, should it be ready to redesign its support for nation-shaping urban transport projects in line with what works and what doesn’t.

The first, top-down reform envisions Canberra rebalancing its funding away from singular ‘mega projects’. Instead, the Federal Government should be a major investor in packages of sequenced service improvements, using lower-cost modes, that progressively build both public transport patronage and the justification for capital-intensive heavy rail:

*‘Reform 4.1.3 Bring forward the benefits of transport investments, in a context of uncertain and changing user needs, by promoting and facilitating the incremental delivery of transport services, corridors and networks as separable stages.’ (p 322, IA 2021)*

The second reform speaks to bottom-up changes that state, territory and local governments should make to the way they prioritise sustainable transport investments for growth areas, so that sustainable travel choices are the result. When looking to fund nation-shaping urban transport projects in partnership with those other levels of government, this is an approach that the Federal Government should be making its support conditional on:

*‘4.3.1 Relieve congestion growth at the start of the urban development lifecycle by making active and public transport first and last mile networks the first transport projects completed in the local catchment of emerging and new centres.’ (p 345, IA 2021)*

## **4. Putting the evidence to work**

What will it take for all levels of government, led from the top, to walk the talk of IA’s 2021 Plan reform recommendations? The authors have recently been engaged in identifying what, when and how transport infrastructure should be delivered to support sustainable and active transport outcomes on possibly Sydney’s biggest-ever growth frontier: the Western Parkland City development catalysed by Western Sydney Airport.

### **4.1. The Sydney Metro Western Sydney Airport growth corridor**

The Sydney Metro Western Sydney Airport (SMWSA) project will connect the Sydney Trains Main Western Line station at St Marys with the new airport and nearby centre of Bradfield. Uniquely, the new railway is to be built ahead of demand, along what is today a largely semi-rural corridor.

This approach, made possible with Federal Government funding, subverts a traditional, demand-led paradigm for transport investment. Under that model, planning transport services and infrastructure at a large scale for Sydney has been based on identifying network gaps, desire lines and catchments associated with established land uses, road networks and travel patterns.

That would not work for the SMWSA corridor. Urban development plans for the corridor exist on paper. Arterial roads have been designated or even, where they follow pre-existing rural roads, already widened into six-lane carriageways (with the help of Federal dollars). In contrast, local movement networks have not been defined. The bus services and cycling routes that future new residents will use to access future stations, jobs and services do not exist. Unless or until they do, those people will mostly have no choice but to drive.

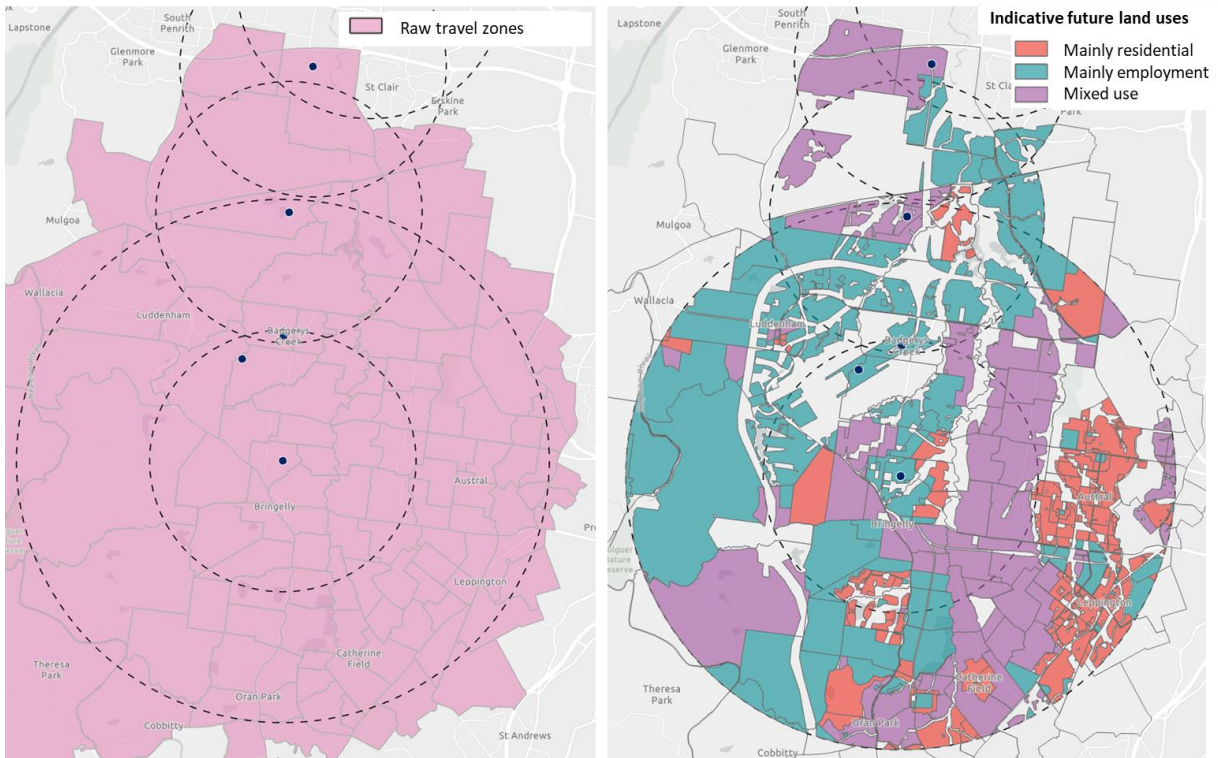
#### ***4.1.1. Creating a spatial proxy for tomorrow’s Western Parkland City***

The authors wanted to test the value of development that incorporates connected active transport networks – as well as heavy rail – in time for day one use by people moving into new suburbs. To do this we created a rough spatial proxy of part of the Western Parkland City.

As shown in Figure 2, by drawing on published strategies and precinct plans, existing zoning and other information, we have cut down existing ‘raw’ Travel Zones to align with a 5 km radial catchment around the Orchard Hills and Luddenham stations and local centres. This catchment increases to 10 km around the major ‘Aerotropolis’ centre at Bradfield. After assigning

indicative future land uses to cut-down Travel Zones we have distributed projected population and employment numbers across our study area for the 2026-2046 growth period.

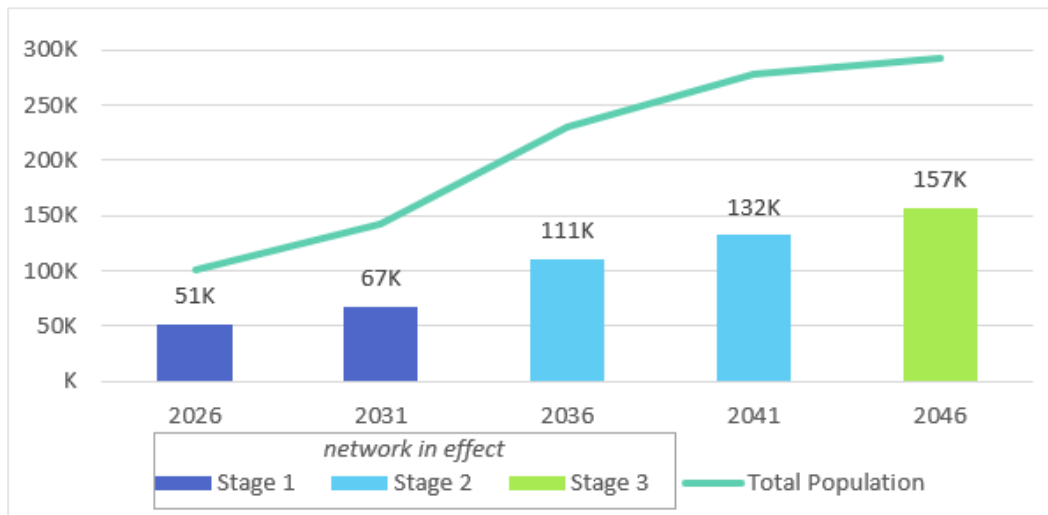
**Figure 2: Greenfields (mostly) and already developing (a few) areas within the 5-10 km local access catchment of SMWSA off-airport stations**



**4.1.2. Testing the impact of different active transport investment scenarios**

By overlaying the conceptual future city at Figure 2 with a connected cycleway network designed to access all areas, it has been possible to demonstrate the impact of various integrated transport and land use scenarios on future residents’ access to active transport opportunities. Scenarios have tested different designs or delivery timetables for the cycleway network. For example, Figure 3 shows for five future years the estimated number of SMWSA corridor residents that will live within 200m of a recommended principal cycleway route, based on the staged delivery of this infrastructure over multi-year increments.

**Figure 3: Estimated SMWSA corridor residential population with access to a proposed principal cycleway network, assuming the staged completion of infrastructure over two decades.**

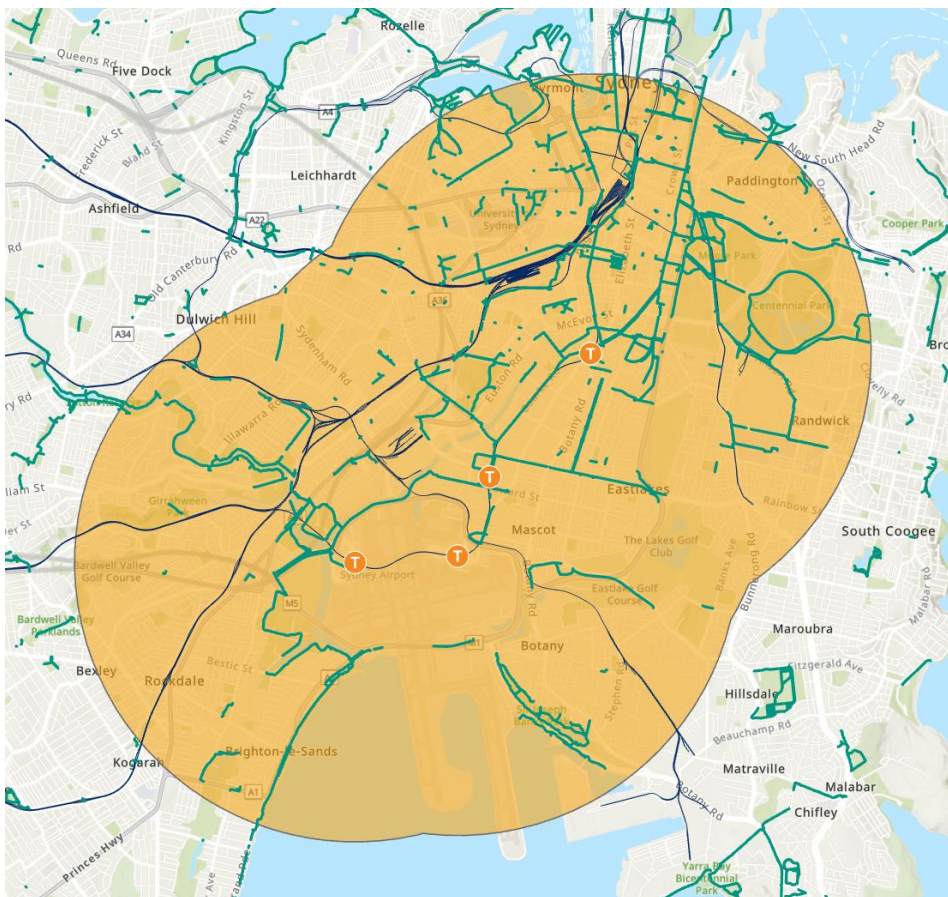


Principal cycleways are the highest-quality, centre-linking strategic routes. They are potentially suitable for NSW – and even Federal – Government funding, in the same way that senior levels of government typically fund arterial roads while councils are responsible for local streets.

With the background population of the SMWSA corridor increasing over the period to 2046, the projected share with access to an appealing cross-district cycleway network (as shown by Figure 3) hovers around 50% for all years. To increase this share, principal cycleway investment stages should be brought forward. At the same time, councils will need to accelerate the development of local links that extend the reach of principal routes and fill whole-network gaps.

Of course, the challenges facing the delivery of an extensive connected cycleway network should not be underplayed in a strapped-for-funding urban growth setting. Three years on from the opening of Sydney Metro North West, only 45% of the population living within 5 km of the stations west of Epping is within 200m of a high-standard cycleway. As shown by Figure 4, even in the much longer-established urban catchments around eastern Sydney’s existing Airport Rail Link, many residents have access to a fragmentary cycleway network at best.

**Figure 4: Designated principal and local cycleways (including separated bicycle paths, shared paths and on-road lanes) within 5 km of the Sydney Airport Rail Link**



Compared with squeezing retrofitted cycleways onto congested roads in built-up areas, however, governments planning new suburbs have the advantage of being able to design facilities from first principles. Where the cycleways needed by a greenfield area’s first new residents follow rural roads that are not going to be fully upgraded until urban development nears completion, low-cost and temporary ‘pop-up’ infrastructure may be the solution. Ironically, quick-to-deliver designs (City of Sydney example at Figure 5) that provided active transport access during COVID-19 lockdowns in some of Australia’s oldest urban areas could find their next best use in some much newer ones.

**Figure 5: City of Sydney tactical cycleway along Henderson Road, Eveleigh**



## **5. In conclusion**

The Federal Government has the means, motive and opportunity to action the transport recommendations of its peak infrastructure adviser for the edges of our fastest-growing cities.

Funding from Canberra will be the go / no-go difference for the next suite of nation-shaping projects. Jostling for attention are fast rail proposals that pass through outer urban suburbs on their way from a historic CBD to regional centres. Under a dis-integrated planning approach, such generational projects risk leaving greenfields area stations as glorified car parks which the residents of new estates pass through on their way to somewhere more interesting.

By more actively engaging with how its investment is anticipated, added to and applied by other governments and sectors, the Federal Government will leverage the most productive outcomes possible. Under a rejuvenated City Deals model, it can oversee the coordinated and staged delivery of ‘pre-rail’ trunk public transport, and rich networks of local first and last-mile active transport links and demand-responsive bus services across emerging centres. Then, the arrival of heavy rail will be greeted by new suburbs that are ready to make the most of this transformative mode, not waiting sadly to be rescued by it.

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