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30-Minute City

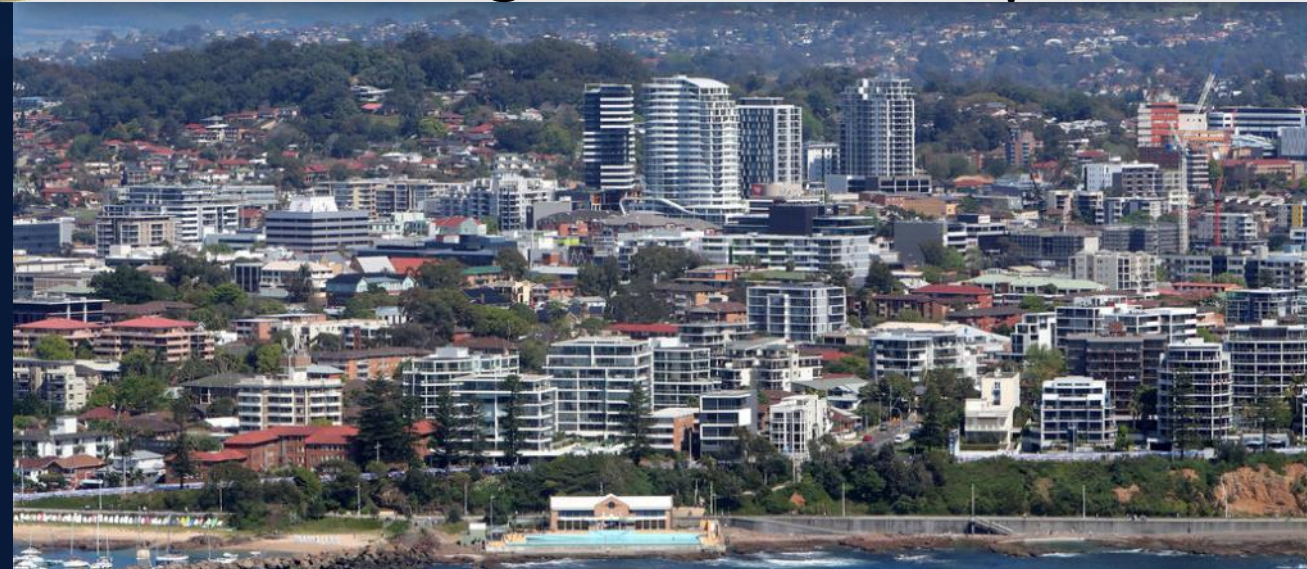
Project Report Prepared by
SMART Infrastructure Facility, UOW

Presented by RDA Illawarra &
SMART Infrastructure Facility, UOW

11 August 2023



Enabling A 30-Minute City Through Public Transport



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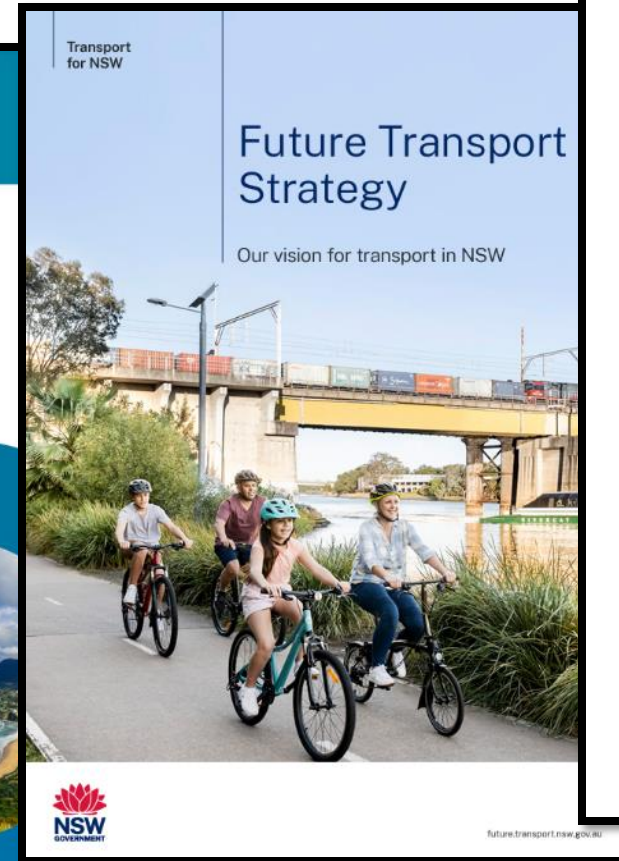
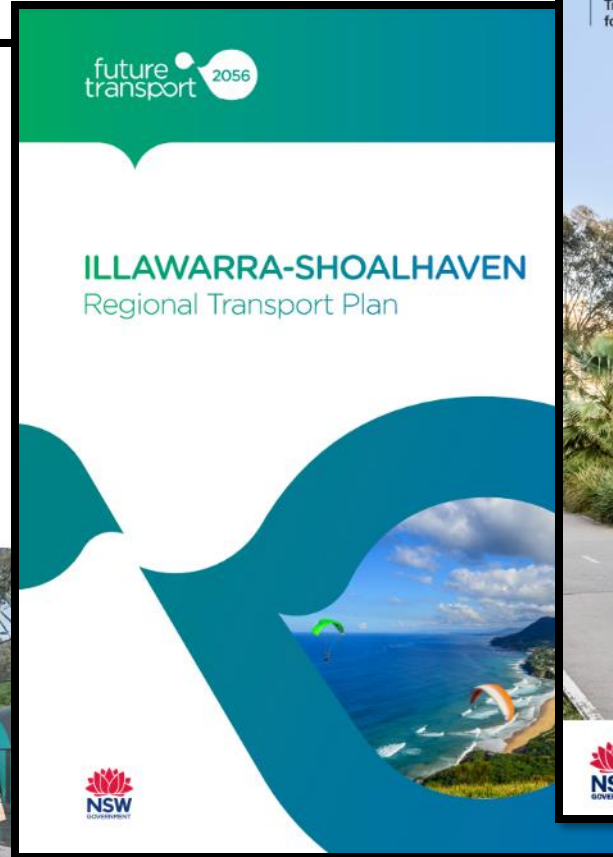
Welcome

I would like to pay my respects to the Dharawal people, the Traditional Custodians of the land on which we meet today – and to their elders past, present and emerging.

I extend that respect and welcome to any First Nations people who are with us here today.

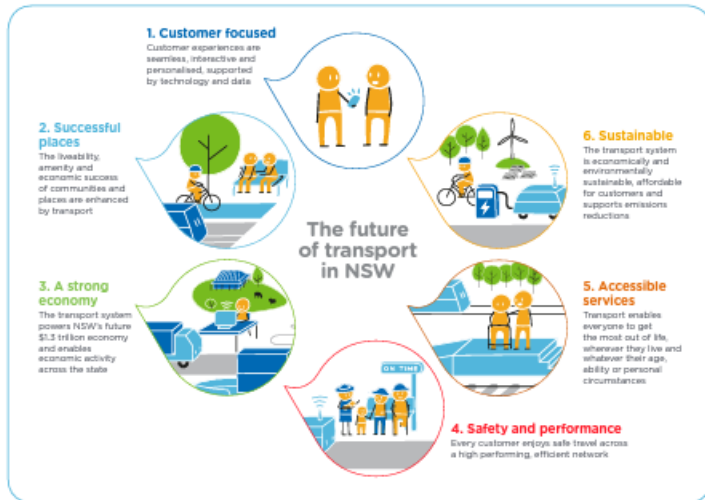
Planning Context

Several strategic plans exist for transport in NSW and the Illawarra, supported by Guidelines for the Outer Metropolitan Area.



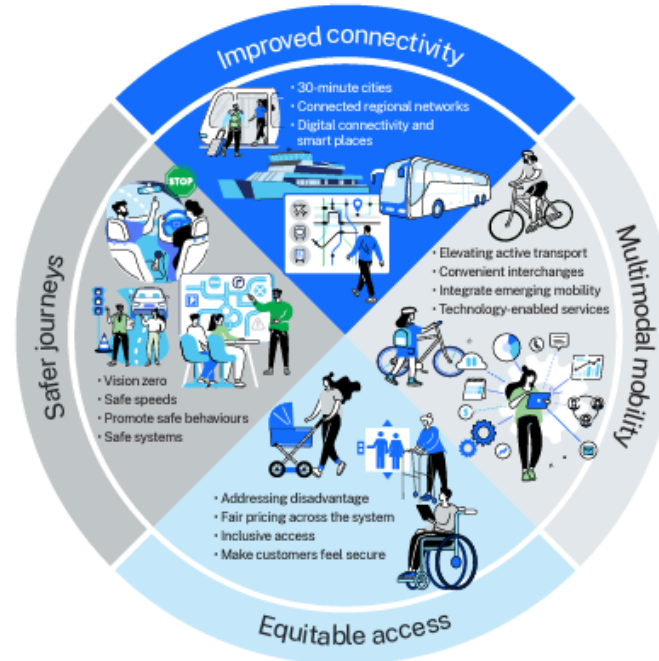
Each has a similar Vision

Themes of customer focus, efficiency, safety, resilience, access and connectivity are common to strategy and guidelines.



The transport vision for the Illawarra-Shoalhaven will be achieved through the implementation of 20 key objectives and their supporting initiatives. The objectives are categorised under the following six broad themes, and supporting initiatives will be staged over multiple time periods and in order of importance.

- ▶ **Connected** - A transport network that facilitates seamless, multi-modal connectivity between where people live, work and play
- ▶ **Safe** - A transport network that delivers a safer future for the Illawarra-Shoalhaven
- ▶ **Liveable** - A transport network that supports vibrant places while enabling the successful movement of people to access jobs, services and social opportunities regardless of age, ability and income
- ▶ **Adaptive and Sustainable** - A transport network that both contributes to, and supports, a seamless transition to a low emissions future
- ▶ **Productive** - A transport network that supports the efficient, safe and sustainable movement of freight through the principle of "moving more with less"
- ▶ **Resilient** - A transport network that is resilient to major disruptions associated with natural disasters, climate change and planned and unplanned events

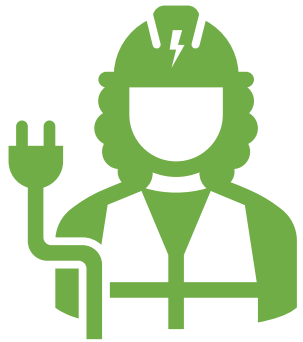


Customer Value Propositions for Public Transport	
Time	<ul style="list-style-type: none"> • Travel time • Frequency • Reliability • Convenience
Systems and efficiency	<ul style="list-style-type: none"> • Information and technology • Ticketing • Interchange
Reassurance	<ul style="list-style-type: none"> • Safety • Accessibility • Friendly and helpful staff
Comfort	<ul style="list-style-type: none"> • Environment, including temperature, space and cleanliness • Other passengers

Source: Transport for NSW, 2012(b)

Why? What's the Problem?

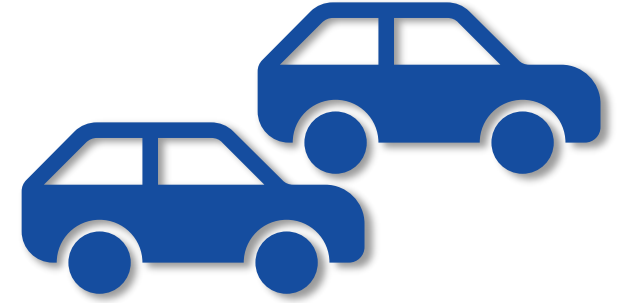
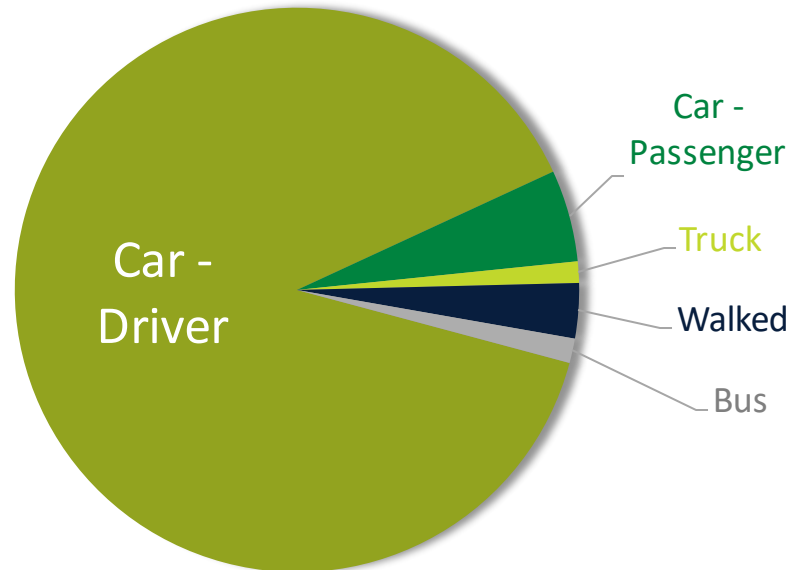
Illawarra commuters prefer to make their journey by car.



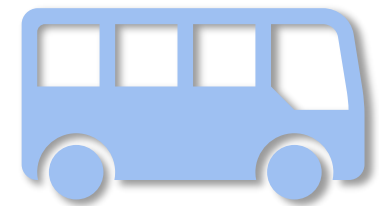
175,500 workers



77,500
commuters



1.9 cars/home

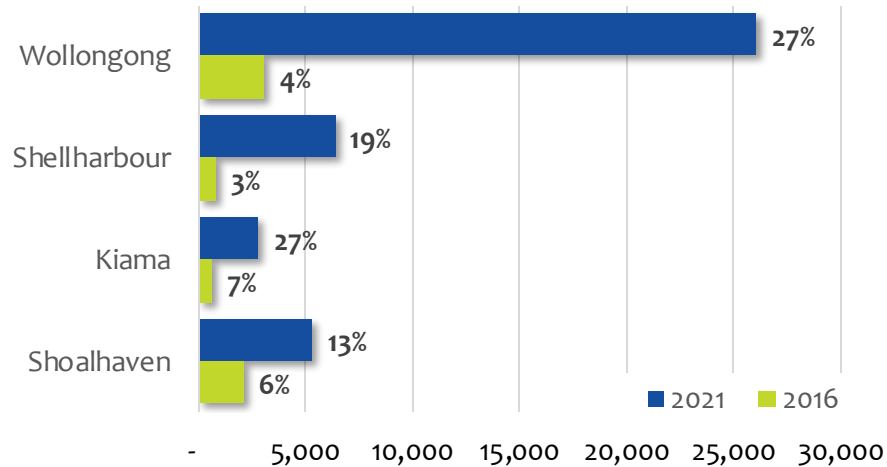


1.8% use public
transport

Commuting patterns are changing

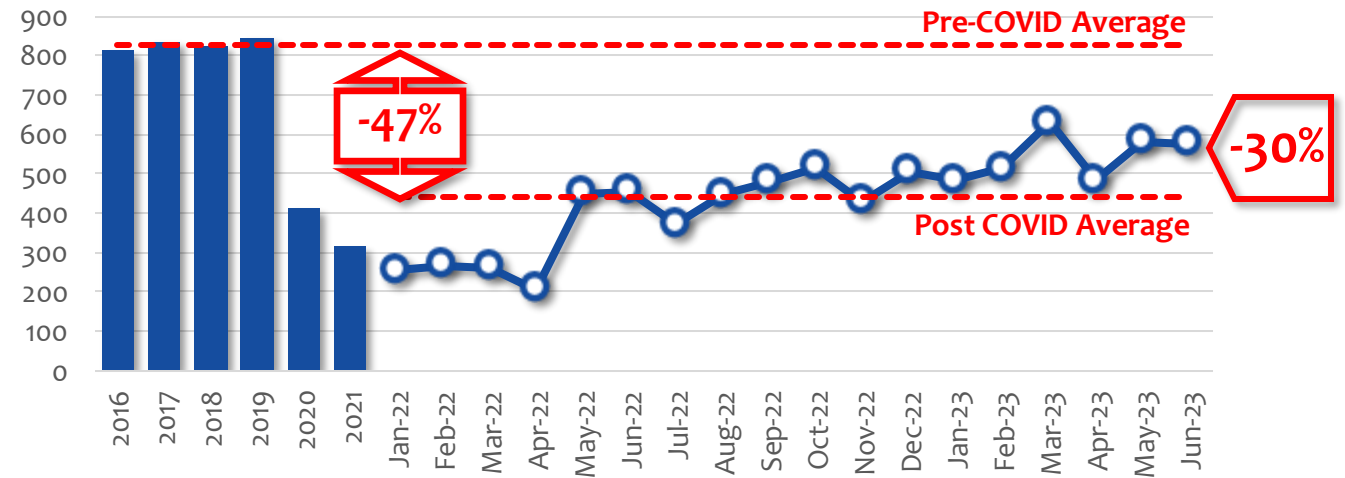
More people are working from home, fewer commute to Sydney.

Working from Home - by LGA



Rail Commuter History – South Coast Line

(Monthly Averages & Actual, 000's)



Result?

More congestion on roads, slower travel times, increased frustration, potential for more accidents and injuries on the roads

Commuters fed up with daily M1 delays

Connor Pearce

THE Swiss might set their watches to the trains, but for Illawarra commuters, congestion on the M1 between Dapto and Wollongong is more reliable.

Nearly every morning and most afternoons, the M1 turns from major arterial into a slowly moving carpark.

It's a situation that Horsley resident Romeo Cecchele encounters with increasing frequency.

The time it takes to nav-

igate the segment from the Kanahooka onramp to the West Wollongong turnoff can double compared to non-peak periods.

"On most Mondays we're travelling through Wollongong to get to southern Sydney and we hit the M1 at Kanahooka Road at very close to 7.10am and already, on some days, it's choking from that point," he said.

Mr Cecchele said the gridlock continues north until the Northcliffe Drive on-ramp, where the road

expands to three lanes and returns after the Five Islands Road on-ramp.

Average daily traffic volumes on M1 north of the Princes Highway at Figtree are around 91,000, reducing to 70,000 between Northcliffe Drive and Five Islands Road and 60,000 at Fowlers Road. A Transport for NSW spokesperson said the agency was planning for improvements to the road as part of the construction of south-facing on and offramps in Dapto.

"Transport for NSW is

investigating multiple locations for new ramps near Dapto to provide residents with improved southbound connectivity onto the motorway and, as part of this, we are looking for opportunities to improve efficiency on the motorway with infrastructure upgrades," the spokesperson said.

Mr Cecchele also noted that motorists have to interact with large trucks joining the highway at Masters Road, sometimes at dangerous speeds.

Mr Cecchele points the finger at the rapidly expanding suburbs of West Dapto and Albion Park as increasing the traffic load on the M1 at these sections.

Transport for NSW acknowledged the rapid population growth in the area.

"(Transport's investigation work) considers a whole-of-transport approach that includes improvements to public transport (trains and buses) and active transport (walking and cycling)," the spokesperson said.



Romeo Cecchele overlooking the M1. Picture by Sylvia Liber



Research Objectives

- ▶ Examine the 30-Minute City concept in an Illawarra context
- ▶ Develop a simple model for only three modes of transport
 - Walking
 - Train
 - Bus
- ▶ For two key neighbourhood hubs
 - Wollongong
 - Shellharbour
- ▶ One commuter hub
 - Wollongong CBD
- ▶ Focus on intra-regional commuting
- ▶ Develop recommendations for improvement

Research Team

▶ Dr Bo (Bobby) Du

- Senior Lecturer, Leader of Future Transport & Mobility
SMART Infrastructure Facility, University of Wollongong

▶ Tim Davies

- e-Research Coordinator
SMART Infrastructure Facility, University of Wollongong

What is a 30-Minute City?



The 30-minute city goal is to maximise the number of residents who can access their nearest metropolitan centre and key destination points within 30 minutes using public transport.

To achieve a 30-minute city in regional NSW, decision-makers should assess the existing public transport services and explore different strategies that have the potential to improve overall regional accessibility and connectivity.



Illawarra Public Transport Network



38 routes, 1200 stops

Bus



2 lines, 32 stations

Rail



The Illawarra public transport network connects Helensburgh in the north to Gerroa in the south



Two Neighbourhood Hubs

- ▶ Wollongong CBD
- ▶ Shellharbour City Centre.

Each hub is divided into its own neighbourhood:

- Residents of the Wollongong LGA - Wollongong CBD hub,
- Shellharbour LGA residents - Shellharbour City Centre hub.

In this simple two-city community hub model, it is assumed that:

- ▶ passengers use one mode of public transport (one mode covers 80% of all trips)
- ▶ travel on foot from their origins to their interchange points and destination.

One Commute Hub

A neighbourhood-based approach to the 30-minute city concept only works when the hub you need to reach has all the services, facilities, and jobs that the local community requires.

In the Illawarra region, 71% of commuters are to the Wollongong LGA.

A travel map to the Wollongong CBD was created showing access to the Wollongong CBD from all Illawarra origins at 30 minutes and several other time scales.

- 1) The Illawarra region's train lines, interchanges, bus routes, and bus stops were integrated in the model.
- 2) The train and bus timetables, walking distance and infrastructure were analysed to determine which routes and stops passengers could use to reach their hub destinations within 30 minutes.
- 3) Roads were examined to determine which are accessible to the bus or train stops within the 30-minute coverage zone.
- 4) Addresses were then analysed to determine the number of addresses located within this coverage.



Key Findings – Neighbourhood Hub



	Number of addresses with 30-minute public transport coverage	Total number of addresses	Percentage of addresses
Train	10,938	102,408	10.7%
Bus	47,328	102,408	46.2%
Wollongong in total	58,266	102,408	56.9%
M1 extra addresses	9,220	102,408	9.0%
Wollongong in total (enhanced)	67,486	102,408	65.9%

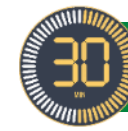
Addresses with access to the Wollongong CBD within 30 minutes



Addresses with access to the Wollongong CBD within 30 minutes (improved service/planning)

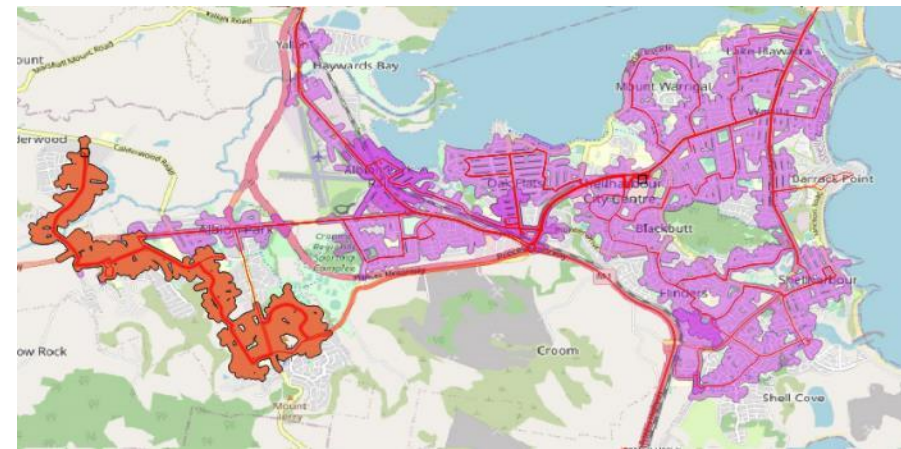
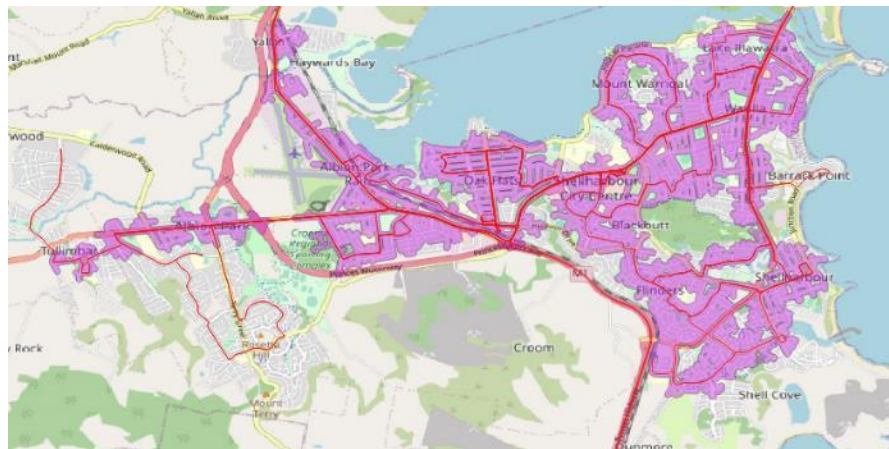


Key Finding – Neighbourhood Hub



	The number of addresses with 30-minute public transport coverage	Total number of addresses	Percentage
Train	2,820	35,764	7.8
Bus	22,916	35,764	64.1
Shellharbour in total	25,736	35,764	72.0
East West Link extra addresses	4,016	35,764	11.2
Shellharbour in total (enhanced)	29,779	35,764	83.3

Addresses with access to the Shellharbour City Centre within 30 minutes



Addresses with access to Shellharbour City Centre within 30 minutes (improved service/planning)

X-minutes	The number of addresses with x-minute public transport coverage	Total number of addresses	Percentage
25 minutes	37,700	151,603	24.9%
30 minutes	58,266	151,603	38.4%
40 minutes	69,768	151,603	46.0%
50 minutes	79,489	151,603	52.4%
60 minutes	86,285	151,603	56.9%

- Residents living reasonably close to the CBD cannot commute to the CBD within an hour by walking and one mode of transport (bus or train)
- Some areas have no access to the Wollongong CBD via public transport
- Services not prioritising Illawarra commuters
- Commute map accessible at <https://visionillawarra.org.au/30-minute-city/>

The Integrated Public Transport Service Planning Guideline for the Outer Metropolitan Area

- ▶ Was developed 7 years ago
- ▶ Could be tailored to the unique characteristics and needs of the Illawarra region.

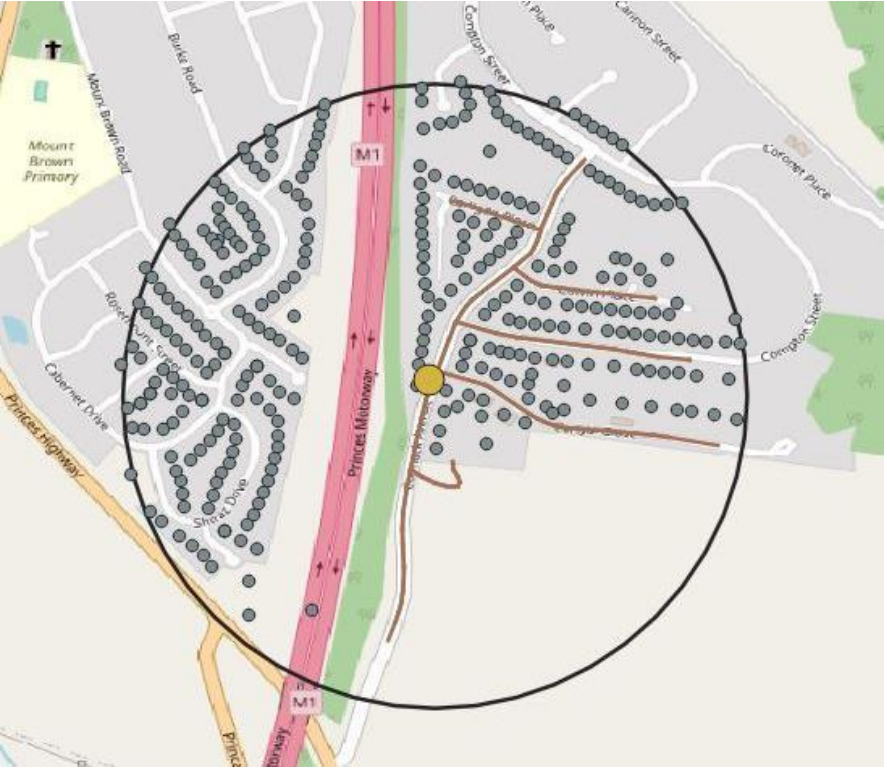
EXAMPLE

Guidelines emphasise the importance of service coverage:

- 90% of households should be within 400 meters of a transport stop – a target the Illawarra meets **on paper**

BUT

- Barriers like freeways and the roads, footpaths, and cycleways used to access a transport stop mean **only 73%** of the addresses within the Illawarra study area are within 400 meters.



In this example we see all the address (the grey dots) that fit within the guidelines however only the addresses along the brown road lines are within a 400-meter walk of the bus stop.

- ▶ Service Levels differ between Sydney and Illawarra Commuters. For example, at the Dapto Rail interchange:
 - Bus drops commuters travelling to Sydney at the train stationbut
 - Commuters bound for Wollongong get dropped off down the road at the Leagues Club.
- ▶ Travel times to Wollongong via public transport are faster for commuters coming from Sutherland than they are for commuters travelling from parts of Albion Park and Calderwood.
- ▶ It costs the same to regularly commute to Sydney from the Illawarra as it does to commute to Wollongong from most of the Illawarra.

The Top 5 recommendations from our findings of the study are as follows:

1. Development of an **Integrated Multi-Modal Services Plan for the Illawarra** that includes **seamless interchange** between modes
2. **Customer-centred design** thinking utilised to develop the Integrated Multi-Modal Services Plan, which prioritizes an intra-regional Illawarra commuter focus
3. **Implementation of the Illawarra Integrated Multi-Modal Services Plan**, including changes to current operator service plan
4. Provision of **Service-driven infrastructure improvements** to support the Illawarra Integrated Multi-Modal Services Plan implementation, such as:
 - a. Additional East West Link for Shellharbour City Centre Hub (extending 30-minute access from 72% of residents in Shellharbour to 83%, or an additional 4,016 homes)
 - b. Additional M1 alignment in Services Plan for Wollongong CBD Commute Hub (extending the 30-minute access from 57% Wollongong homes to 66%, or an additional 9,220 homes)
5. **Integrated ticketing system across all transport modes**, utilising Opal-enabled services.



Thank you

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Alex Spillett (RDA Illawarra)

Tim Davies (SMART Facility, UOW)

11 August 2023

