

South West Illawarra Rail Link

Essential infrastructure to facilitate the population and economic growth of the Illawarra and South Western Sydney

This research, undertaken by the SMART Infrastructure Facility, commissioned by the Illawarra Business Chamber, through its CEO leadership group Illawarra First, builds the evidence base for the South West Illawarra Rail Link (SWIRL) proposal. Wollongong City Council and Wollondilly Shire Councils have partnered with Illawarra First to deliver this research.

The SWIRL is the necessary infrastructure link to enable the future operation and growth of the economies of the Illawarra and south-western Sydney. Linked to Port Kembla, the state's next container terminal, the SWIRL presents a complete freight bypass to the congested east-west corridor of Sydney.

As a dual track line, it also links passengers from the growth centres across the Illawarra and at Wilton to new opportunities in Western Sydney.

This new research extends the evidence, and recommends that a SWIRL extends from the Port of Port Kembla, through to Western Sydney Airport, and onto St Marys; a major transport and freight hub.

Better connectivity, more local jobs

- The SWIRL, together with other road and rail improvements, will contribute to 17,500 additional jobs across the Illawarra and Wollondilly Shire:
 - Illawarra – 14,000 additional jobs
 - Wollondilly – 3,500 additional jobs
- This amounts to a \$892 million annual benefit to both regions



Key findings

- **For passengers:** the SWIRL between Wollongong, Wilton and St Marys could see 18,500 daily commuters experiencing a 15-20 minute faster journey between Wollongong and Western Sydney by 2041. This results delivers a productivity gain of \$73 million per year.
- **For freight:** the SWIRL would avoid the rail and road bottleneck developing in the Illawarra that by 2056 will result in a \$1 billion economic loss.

The SWIRL must be constructed before 2036, at which stage:

- The South Coast Line will be at capacity for passengers and freight
- The Port Kembla Container Terminal will be only five years away
- Population growth at Wilton will necessitate the construction of a station and a rail connection to the Main Southern Line, delivered most cost-effectively by the SWIRL

The challenges

Addressing population and commuter growth: By 2050, the population of the the Illawarra is expected to grow by 60,400 and the Wollondilly by 50,000. Commuters from the Illawarra to Greater Sydney will grow from 26,000 (in 2016) to 46,000 by 2041 and from the Wollondilly from 16,000 (2016) to 39,000 by 2041.

Addressing regional job deficits: Without infrastructure improvements and other measures, this population growth will see existing jobs deficits deepen across both the Illawarra and the Wollondilly Shire. The 200,000 jobs projected for Western Sydney within 20 years present nearby opportunities for residents but there are no planned passenger rail linkages between the regions.

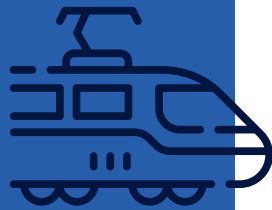
Releasing the capacity of Port Kembla: The Illawarra's rail network reaches capacity in 2036 (according to Transport for NSW) and after 2041 the planned container terminal at Port Kembla will add 9,300 additional train paths to the network and a further 1.6 million road trips.

Preventing congestion costs to our economy:

It is estimated that by 2041, freight rail constraints will cost the regional economy \$230 million annually, and the productivity loss due to commuting will cost our economy \$680 million. Key freight roads, particularly Picton Road, will reach capacity by 2025.

Prioritising cost-effective infrastructure solutions: Other regional rail solutions are either more expensive (Moss Vale-Unanderra Line upgrade) or have a lower cost-benefit ratio (South Coast Line upgrade).

The rise of commuting

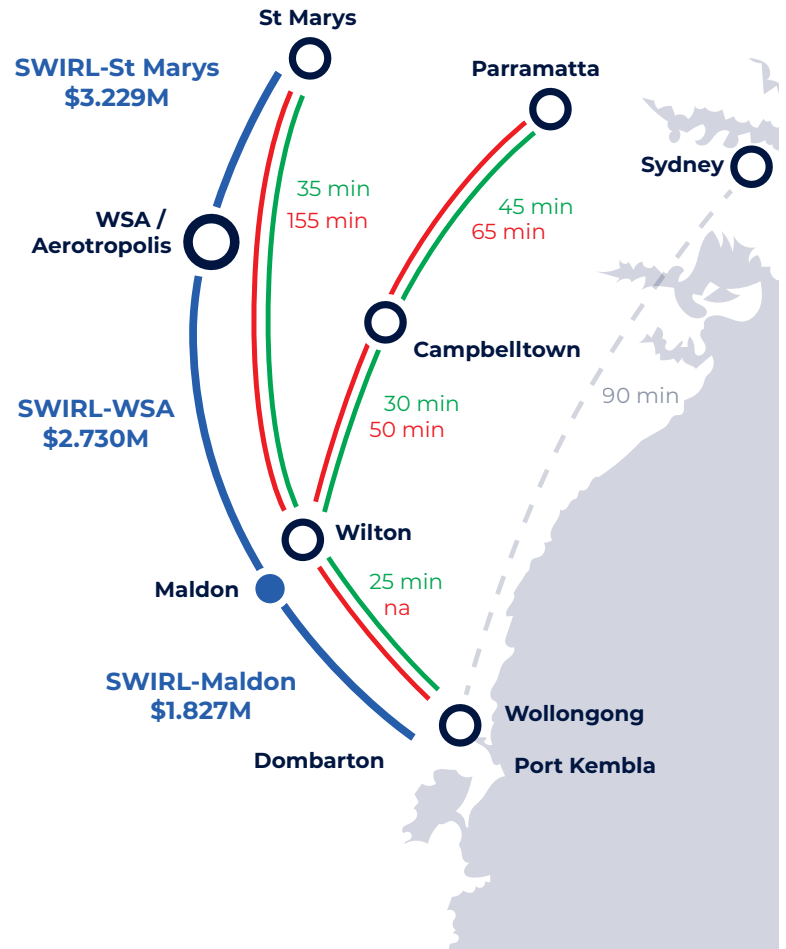


- By 2041, without the SWIRL and other economic interventions, too many Illawarra and Wollondilly residents will be commuting to Western Sydney for work via already congested roads.
- **200,000 jobs to be created in Western Sydney over the next 20 years**
- 32,000 people will commute from the Illawarra to Western Sydney, and 33,000 will commute from the Wollondilly Shire by 2041
- Almost all of these commutes will be by car - 97% for Illawarra and 94% for Wollondilly residents

Travel times

with SWIRL

without SWIRL



The SWIRL Solution and Options

SWIRL-Maldon: An electrified dual track, passenger and freight line along the pre-existing 35km-long Maldon-Dombarton rail corridor. This base option also includes the electrification of the 7km-long section of the existing Moss Vale-Unanderra Line between Dombarton and Unanderra (connection to the South Coast Line [SCL]). Passengers would travel from Wollongong station on the SCL, via the SWIRL Line, to reach Glenfield Station on the Main South Line (MSL), continuing their journey through Sydney Trains network (T2, T3, T5 or T8) and vice-versa. Freight trains would mainly travel between Port Kembla, using the SCL between Coniston and Unanderra, then bifurcating onto the SWIRL and reaching the MSL at Maldon towards intermodal terminals such as Minto or Moorebank (and vice-versa).

Subsequent policy announcements have prompted the need to explore two complementary extensions to the first proposal:

SWIRL-WSA: This option includes a 30km-long extension of SWIRL towards the future WSA, following the approximate

corridor of the future Outer Sydney Orbital (OSO-M9) from Luddenham (WSA) to the MSL, south of Camden. Unlike the proposed freight-only OSO line, the SWIRL-WSA extension would also be an electrified, dual purpose (passenger and freight) line. With a future rail station located in Wilton and a preserved corridor to cross the Nepean River near Maldon, a reasonable option for the OSO-M9 corridor would be to connect with the MSL at Maldon, rather than Douglas Park, following the Menangle Road alignment (7 km extension).

SWIRL-St Marys: This option would add an 18km-long extension of SWIRL-WSA to St Marys and the future Western Sydney Freight Terminal, which is to be located near Eastern Creek. SWIRL-St Marys would also provide a connection to the Main Western Line for passengers. Unlike the Sydney Metro - WSA, this would also be a dual purpose, dual track electrified line. The alignment would follow the approximate alignment of the northern section of the planned Sydney Metro, between St Marys and WSA.

Commuter benefits

Delivery of the SWIRL-St Marys will drastically reduce commuting time between Wollongong, Wilton and Western Sydney. By enabling the growth of local jobs, through greater connectivity and reduced congestion, it will also reduce the proportion of commuters from the growing Illawarra and Wollondilly regions to Greater Sydney. For those that do commute, it will reduce travel times via both rail (by creating a direct connection) and road (through reduced congestion).

Economic benefits

Busting congestion: The SWIRL-St Marys option will relieve rail and road congestion through the east-west Sydney corridor by providing a freight bypass to the South West. Regionally, SWIRL-St Marys would relieve congested major roads connecting the Illawarra and south-western Sydney: Picton Road, Appin Road and Heathcote Road.

Reduced time travel cost for commuters: A passenger rail link between Wollongong, Wilton and St Marys delivers an annual productivity gain of \$75 million by 2041 due to faster travel times for commuters. More time with family delivers benefits that cannot be measured.

Best return on investment: SWIRL-St Marys returns a Cost Benefit Ratio of 1.05 at a 7% discount rate, and 1.67 at a 4% discount rate over a 50 year asset life (arguably Treasury should employ a 4% discount rate). The SWIRL to Maldon proposal alone delivers a net economic benefit of \$2.8 billion in net present value terms by 2036 (SWIRL extensions cannot yet be ascertained due to unresolved planning decisions).

Freight benefits

SWIRL-St Marys will address the Illawarra's 2036 freight capacity peak, when the movement of inbound coal, grains and goods and outbound steel, vehicles and construction materials will reach the maximum number of rail paths available on the South Coast Line.

With a container terminal developed at Port Kembla from 2041, it is expected the Port will progressively capture 530,000 TEU p.a. and add 9,300 train paths and 1.6 million road trips to annual freight demand. This is a 49% increase in rail demand and a 21% increase in road trips.

Without intervention by 2036, freight capacity constraints will cost the economy \$230 million p.a. in 2041.

Comparisons with other projects

	Cost benefit ratio	Cost	Planned timeframe
South Coast Line upgrade	0.48	\$2 billion	n/a
Moss Vale Unanderra Line upgrade	n/a (expected to be similar to SWIRL)	\$2 billion	n/a
Outer Sydney Orbital	n/a	\$1.9-10 billion	2056
Sydney Metro – WSA Stage 1 (formerly North-South Rail link)	n/a	\$11 billion	2026 (Stage 1)
Western Sydney Freight Line	n/a	\$5-10 billion (corridor acquisition only)	2030
SWIRL-St Marys	1.05	\$3.2 billion	Required by 2036

Recommendations

1. Infrastructure Australia to update its priority list to acknowledge the SWIRL-Maldon corridor as a future "alternative rail alignment to the port."
2. The NSW Government to commission a detailed engineering feasibility study and a business case analysis, including land value uplift, of the SWIRL-St Marys option.
3. Planning and design work for the SWIRL-Maldon section to commence immediately in order for the line to be operational by 2036, including the Wilton rail station and the connection to the Main South Line at Maldon.
4. Current planning for the Outer Sydney Orbital to take into consideration the concept of a dual freight-passenger alignment up to St Marys (SWIRL-St Marys)
5. SWIRL-St Marys to be operational by 2041 in order to enable the dispatching of containers from Port Kembla to Western Sydney and beyond.
6. 'Corridor preservation for Outer Sydney Orbital road and rail/M9' should be brought forward as a high priority project (0-5 years) in order to make significant land acquisition savings.



The economic benefit of SWIRL-St Marys is on the basis that it is delivered as soon as possible.

About Illawarra First

Illawarra First is the peak business leadership group for the region, comprising the heads of its leading organisations as part of a dialogue that incorporates senior decision-makers from across government and the private sector. Backed by a significant research fund, Illawarra First advances the region's economic development through powerful advocacy that is supported by a rigorous evidence base.

Enhanced transport connectivity is key to the region's economic growth, and previous Illawarra First research has built a clear case for greater investment in key road and rail projects.

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