

Kellyville & Bella Vista  
Transit Oriented Development (TOD)

*Report in response to TOD Rezoning Proposal – August 2024*

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## 1. Project Details

### 1.1 Project Summary

**Project:** Transit Oriented Development (TOD)

**Location:** Kellyville and Bella Vista

### 1.2 Revisions

**Table 1: Revision history of the DA document**

Revision No.	Date	Description
0	016/08/2024	Report
1	22/08/2024	WK

### 1.3 Location Map

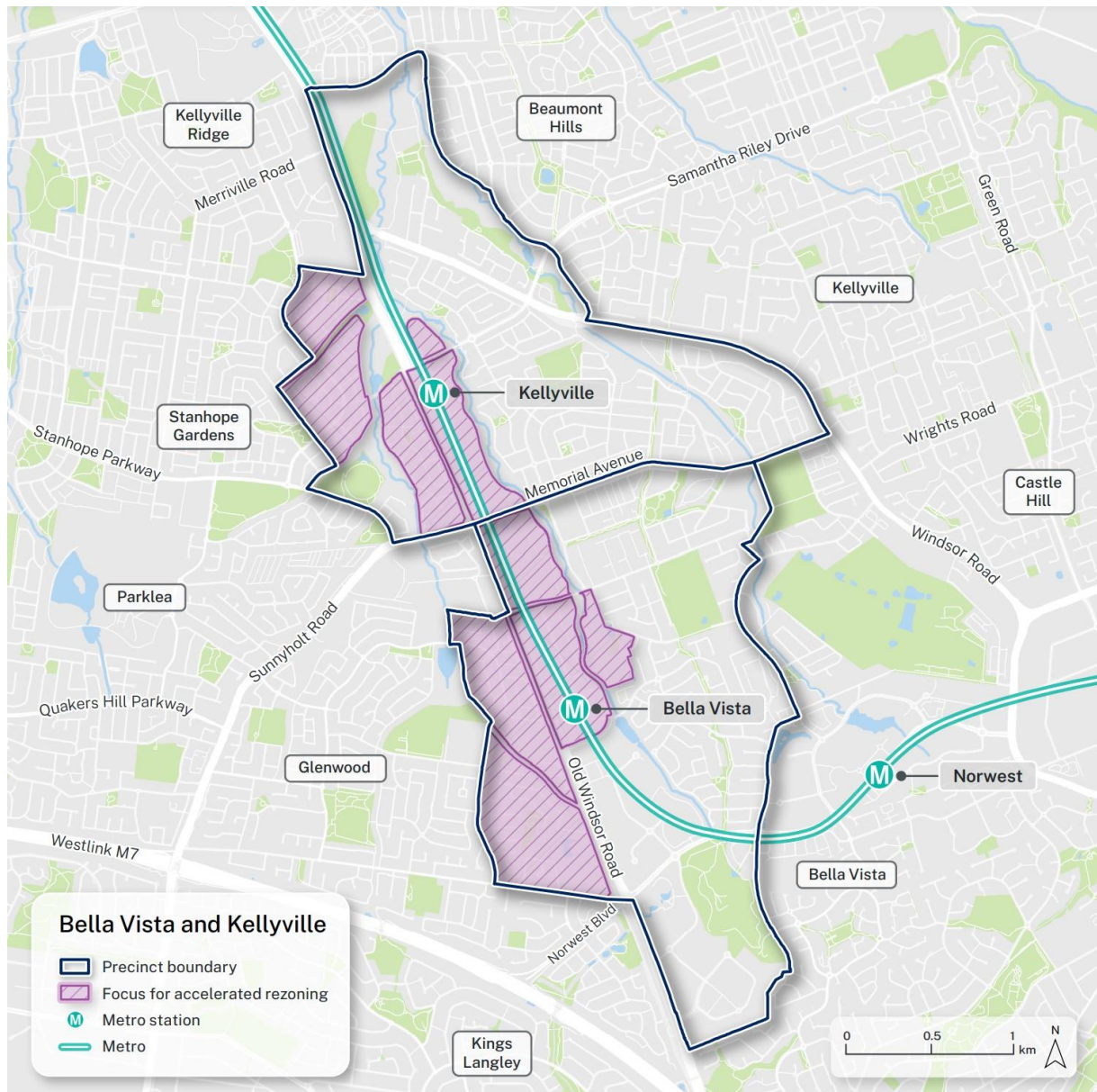


Figure 1: Location Map of the proposed rezoning.

## 2. Traffic generation and Impact on the proposed TOD Development.

### 2.1 Trip Generation Rates

#### 2.1.1 Land Use Traffic Generation

Traffic generation as per Guide to Traffic Generating Developments per dwelling as shown in table below.



#### Section 3 – Land Use Traffic Generation

Table 3.7  
Summary table of land use traffic generation Rates

Land Use	Traffic generation rates	
	Daily Vehicle Trips	Peak Hour Vehicle Trips
<b>Residential</b>		
hMedium density residential flat building	<u>Up to 2 bedrooms</u>	
	4-5 / dwelling	0.4-0.5 / dwelling
	<u>3 bedrooms or more</u>	
	5-6.5 / dwelling	0.5-0.65 / dwelling
High density residential flat building	<u>metropolitan regional centres</u>	
	-	0.24 / unit
	<u>metropolitan sub-regional centre</u>	
	-	0.29 / unit

## Traffic & Parking Response to Kellyville & Bella Vista Transit Oriented Development (TOD)

Land Used		Future Base Case 2041 Existing			Year 2041 TOD Rezoning			Year 2041 TOD Rezoning Capacity			Trip Generation Rates (Peak)			Trip Generation (Peak)			
		Low Density	Medium Density	High Density	Low Density	Medium Density	High Density	Low Density	Medium Density	High Density	Low Density	Medium Density	High Density	Low Density	Medium Density	High Density	Total Volume
Residential Dwelling	K1	0	0	0	0	0	0	0	0	0	0.4	0.5	0.24	0	0	0	0
	K2	279	0	0	0	0	0	279	0	0	0.4	0.5	0.24	112	0	0	112
	K3	342	0	0	0	0	0	342	0	0	0.4	0.5	0.24	137	0	0	137
	K4	0	0	0	0	0	803	0	0	803	0.4	0.5	0.24	0	0	193	193
	K5	176	0	0	0	0	621	176	0	621	0.4	0.5	0.24	70	0	149	219
	K6	273	0	0	0	0	1002	273	0	1002	0.4	0.5	0.24	109	0	240	350
	K7	53	0	0	0	0	0	53	0	0	0.4	0.5	0.24	21	0	0	21
	K8	224	0	0	0	0	221	224	0	221	0.4	0.5	0.24	90	0	53	143
	K9	0	0	0	0	0	2549	0	0	2549	0.4	0.5	0.24	0	0	612	612
	K10	463	0	0	1	0	0	464	0	0	0.4	0.5	0.24	186	0	0	186
	K11	478	0	0	0	0	0	478	0	0	0.4	0.5	0.24	191	0	0	191
	K12	57	0	0	0	0	0	57	0	0	0.4	0.5	0.24	23	0	0	23
	K13	53	0	0	0	0	0	53	0	0	0.4	0.5	0.24	21	0	0	21
	K14	394	0	0	0	0	0	394	0	0	0.4	0.5	0.24	158	0	0	158
	BV1	0	0	0	0	0	1371	0	0	1371	0.4	0.5	0.24	0	0	329	329
	BV2	0	500	0	0	0	0	0	500	0	0.4	0.5	0.24	0	250	0	250
	BV3	385	0	0	0	0	0	385	0	0	0.4	0.5	0.24	154	0	0	154
	BV4	181	0	0	0	0	0	181	0	0	0.4	0.5	0.24	72	0	0	72
	BV5	0	112	0	0	0	0	0	112	0	0.4	0.5	0.24	0	56	0	56
	BV6	122	0	0	0	0	0	122	0	0	0.4	0.5	0.24	49	0	0	49
	BV7	0	0	0	0	0	1374	0	0	1374	0.4	0.5	0.24	0	0	330	330
	BV8	0	0	0	0	0	941	0	0	941	0.4	0.5	0.24	0	0	226	226
	BV9	150	0	0	0	0	0	150	0	0	0.4	0.5	0.24	60	0	0	60
	BV10	96	0	0	0	0	0	96	0	0	0.4	0.5	0.24	38	0	0	38
	BV11	114	0	0	10	0	0	124	0	0	0.4	0.5	0.24	50	0	0	50
	BV12	309	0	0	13	0	0	322	0	0	0.4	0.5	0.24	129	0	0	129
	BV13	0	0	0	0	0	0	0	0	0	0.4	0.5	0.24	0	0	0	0
BV14	0	0	0	0	0	1371	0	0	1371	0.4	0.5	0.24	0	0	329	329	
BV15	0	0	0	0	0	0	0	0	0	0.4	0.5	0.24	0	0	0	0	
BV16	44	0	0	0	0	0	44	0	0	0.4	0.5	0.24	18	0	0	18	
BV17	354	0	0	0	0	1262	354	0	1262	0.4	0.5	0.24	142	0	303	444	
BV18	304	0	0	0	0	1722	304	0	1722	0.4	0.5	0.24	122	0	413	535	
BV19	392	0	0	0	0	0	392	0	0	0.4	0.5	0.24	157	0	0	157	
Total Trip		5,243	612	-	24	-	13,237	5,267	612	13,237	Total Trip			2,107	306	3,177	5,590

**Table3.1:** Summary of Trip Generation Rates (Peak Hour Trips)

## 2.2 Traffic Impacts

### 2.2.2 Current Traffic Patterns

The traffic patterns around the Kellyville and Bella Vista precincts reveal significant congestion, particularly during peak hours. The performance of key intersections and travel routes has been analyzed using the Level of Service (LoS) criteria from the draft Guide to Transport Impact Assessment (TfNSW 2024). (Source: Precinct Transport Statement Kellyville & Bella Vista Precinct TOD - 4 July 2024 by Jacob)

## Intersection Performance

Most intersections in these precincts operate at or near capacity during peak times:

- Kellyville Station Precinct: Key intersections, such as Old Windsor Rd/Samantha Riley Dr and Old Windsor Rd/Memorial Ave, are heavily congested, operating at LoS E. These intersections are at or over capacity, with significant delays expected during peak periods.
- Bella Vista Station Precinct: Severe congestion is observed at critical intersections like Old Windsor Rd/Balmoral Rd and Windsor Rd/Memorial Ave, both of which are rated LoS F, indicating a critical need for additional capacity.

Precinct	Intersection	AM Peak Hour LoS	PM Peak Hour LoS	Notes
Kellyville	Old Windsor Rd / Samantha Riley Dr	E	E	At or over capacity
Bella Vista	Old Windsor Rd / Balmoral Rd / Miami St	F	F	Severe congestion, extra capacity needed

(Source: Precinct Transport Statement Kellyville & Bella Vista Precinct TOD - 4 July 2024 by Jacob)

**Table 3.2:** Key Intersection Performance Highlights

### 2.2.3 Travel Time and Average Speed

Travel times and average speeds on key routes reflect the overall strain on the road network:

- Windsor Road maintains relatively free-flowing traffic with good average speeds in both directions during peak hours.
- Old Windsor Road experiences significant congestion, particularly in the northbound direction during the evening peak, where travel speeds drop to LoS D/E. This impacts access to Kellyville and Bella Vista Stations.

Route	AM Peak Travel Speed	PM Peak Travel Speed	Notes
Windsor Road	40-45 km/h	40-44 km/h	Relatively free-flowing traffic during peak hours
Old Windsor Road	53-61 km/h	25-64 km/h	Significant northbound congestion in the evening peak
Norwest Boulevard	25-37 km/h	27-38 km/h	Operates at capacity, but less likely to impact station access

(Source: Precinct Transport Statement Kellyville & Bella Vista Precinct TOD - 4 July 2024 by Jacob)

**Table 3.3:** Travel Times and Average Speeds

The current traffic patterns in the Kellyville and Bella Vista precincts are characterized by significant congestion, especially at key intersections and along major routes like Old Windsor Road. This congestion highlights the need for capacity improvements to support better traffic flow and ensure convenient access to key areas within the precincts.

The addition of approximately 20,000 dwellings may significantly impact the level of service of major road network corridors and street parking around the Transport Oriented Development area. Our view is that the Department of Planning would need to ensure that new dwellings owners in the Transport Oriented Development area in Bella Vista & Kellyville precinct are incentivized to use public transport and discourage car ownership.

We understand that distinctive demographic travel pattern in North- West Sydney requires multiple intra trips within the region which makes a case for car ownership for future owners/renters of Transport Oriented Development in Bella Vista and Kellyville. This would cause significant traffic congestion and street parking demand on the existing road network in the North-West precinct around the proposed TOD.



### **3. Transit oriented development- Fundamental Assumption**

#### **3.1 Introduction**

Sydney Traffic Engineers is submitting comments on the specific transport impacts of the proposals, while also seizing opportunities to cement ongoing, community-wide considerations.

#### **3.2 Immediate Problem or Processes for a Changing Future?**

*Frank Ramsey (1903–1930) once published a paper about rates of saving, which John Maynard Keynes called “one of the most remarkable contributions to mathematical economics ever made.” Ramsey’s most controversial idea was that the well-being of future generations should be given the same weight as that of the present one. Discounting the interests of future generations, Ramsey argued, is “ethically indefensible and arises merely from the weakness of the imagination.”*

In a more modern context, the Local Member for Riverstone in the NSW parliament, Warren Kirby MP, has said:

*"The rights of society are more important than the rights of individuals."*

One of the greatest limitations of focusing solely on solving specific problems is the potential to lose sight of ongoing dynamics and the need for adaptability as future generations take over.

The “State-led rezoning of Kellyville and Bella Vista” must be more than just implementing additional housing and making adjustments to the current transport systems. It requires a visionary and proactive approach to adapting to an enlightened view of community living. Urban areas should be seen as spaces for living, not merely for commuting.

These comments are not intended to criticize the past, nor to define the absolute, definitive “right” solution for now and the future. Instead, they aim to raise ideas and processes that can contribute to ongoing engagement with the community.

#### **3.3 How Do We See the Problem? Anything but Average**

Austraffic, a transport data collection organization, has initiated a discussion on the theme “Anything but Average” (<https://austraffic.com.au/aba>). This theme arises from a deep concern that average figures and ideas dominate our discussions. Within averaged statistics, poor data and the nuances and details behind our transport tasks and decisions can be obscured.

Some of the reflections include looking at “Heroes of Data,” who, with credibility and honesty, used data to adapt and revolutionise activities for community well-being rather than making incremental steps on existing processes.

Several generalizations about the transport task that don’t hold up under scrutiny include:

- The belief that the great majority of trips during the weekday peak are journeys to work.
- The assumption that inbound trips are dominated by those heading to the CBD.
- The notion that rail systems are always better than other alternatives.

The beginning of the report “State-Led Rezoning Kellyville and Bella Vista” speaks of “Transport-Oriented Developments (TODs)” that “facilitate mixed-use development within walking distance of a transit node, providing a range of residential, commercial, open space, and public facilities in a way that makes it convenient and attractive to walk, cycle, or use public transport for the majority of trips.” While this is an honorable objective, it is expressed in supply-side terms rather than demand-side terms, such as “Provide accessibility.”

The report also highlights a narrow focus by noting that in the initial eight accelerated precincts of TODs, “Rezoning around these transport hubs will create capacity for up to 47,800 new homes over 15 years, within walking distance of these key stations.” It is important not to adopt a mindset that focuses primarily on the number of people living near a railway station as the solution to the majority of our transport needs. While trains may account for a small percentage of trips, they play a more significant role when considering kilometers travelled.

However, emphasizing this can lead to the mistaken belief that maximizing kilometers travelled by train is always a great community service. Long-distance commuting is both a burden to the traveler and an expense to the taxpayer.

There is a wealth of statistics and new sources of available data, but unfortunately, data collection is often driven by one-off projects rather than measuring ongoing trends for a broader understanding. When COVID-19 hit, many surveys were cancelled because the situation was not considered “normal.” Emeritus Professor Phil Goodwin described this approach as “daft” since it represented a social experiment in a changing situation.

The collection of data to justify a project is further limited by insufficient research into the long-term impact of the thing that has been built. This needs to be far more than a quick after study; transport implications can evolve over years not just months.

## **5. A Local Example**

Warren Kirby MP reflected on the capacity of the metro railway system in the area. He noted that in the morning, trains are full at the beginning of the line in Tallawong, and people start their trips up to two hours early to secure a parking spot. However, there is some relief when a significant number of passengers disembark at Bella Vista.

There needs to be an approach that addresses the relatively short trips from Tallawong and Rouse Hill to Bella Vista (or similar trips), which could be better served by something other than a heavy rail system with stations 2-3 kilometers apart.

We are currently in a positive, perhaps even euphoric, state regarding railway infrastructure due to the opening of the Metro, but it should not be the sole focus of our attention, even within the realm of rail transport. The Metro line on the eastern boundary of the study area, focuses on trips to suburbs to the east, such as Epping and St Leonards, while the older Riverstone line (and the rapid bus corridor) provides direct access to Parramatta, a centre that planners wish to enhance.

The old Riverstone line is not as modern but its value could be built on. It has stations in locations that could greatly benefit from urban renewal, not just the provision of housing next to the railway.

The location of additional dwellings should not be solely determined by the cost-benefit analysis of construction or the ability to utilize existing infrastructure. The community benefit and the structural enhancement of the local region can be among the greatest outcomes.

Household transport surveys should push us toward understanding not just “what” trips are being made but “why” they’re being made.

## 6. Conclusion

While a specific analysis of the area's development is critical, this development also presents a vital opportunity to address long-term community growth with area-wide cost/benefit considerations. Broad conclusions should include:

- The way we collect and use data is too focused on specific projects and not enough on ongoing trends and regional impacts. (For example, development from Box Hill area's traffic flow on Old Windsor Road)
- Broad generalizations, including those about the transport task and possible improvements, often obscure the nuances and details behind the challenges we face.
- The metro rail line is modern and efficient, but the older Riverstone line, with its direct access to Parramatta and the potential for urban renewal around some of its stations, clearly suggests that this corridor should play a significant role in the area's development.
- Modern technologies such as e-bikes, e-scooters, and information technology need to be aggressively pursued, with an understanding of demand, not just supply capabilities.
- Transport within the area and to nearby activities requires a more attention (and resources) than long trips in and out of the area.
- Communication, with a focus on engagement, should be a regular and ongoing task, rather than simply informing people when an analysis has been completed or providing data focused on predetermined conclusions.
- We understand that distinctive demographic travel pattern in North-West Sydney requires multiple intra trips within the region which makes a case for car ownership for future owners/renters of Transport Oriented Development in Bella Vista and Kellyville. This would cause significant traffic congestion and street parking demand on the existing road network in the North-West precinct around the proposed TOD area.