

Ingleside Access Review

DRAFT

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Client: Department of Planning & Environment

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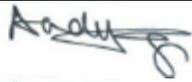
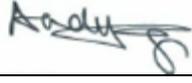
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1.0 Existing Conditions

1.1 Ingleside

The Ingleside Land Release Area is located in the Pittwater Local Government Area (LGA), approximately 30 kilometres north of the Sydney CBD by road and comprises approximately 715 hectares within the Pittwater Council Local Government Area. It lies between Terrey Hills and Mona Vale, off Mona Vale Road, the main highway linking Mona Vale to western Sydney.

The Ingleside land release area is semi-rural in nature and includes a mix of existing land uses comprising predominantly lifestyle blocks, recreational land uses, plant nurseries, the equine industry and small scale commercial agriculture. Other land uses include places of worship, a school and conference facility.

The physical geography of the local area acts as a constraint to the road network as well as public transport and active travel, where provision is currently limited. Journey to Work data for neighbouring residential suburbs (Elanora Heights and North Narrabeen) shows that approximately one third of journeys are within the Pittwater LGA, another third are south to Warringah / Manly, with the remaining third travelling to the west toward Chatswood and the Sydney CBD. A high proportion of these trips is made by private car.

1.2 Mona Vale Road

Mona Vale Road runs from Mona Vale (at the intersection of Pittwater Road and Barrenjoey Road) to the Pacific Highway at Pymble, passing through the study area at Ingleside, as well as the suburbs of Terrey Hills and St Ives. It is a classified main road under the control of Roads and Maritime Services and varies in size from two to four lanes. Adjacent to the Ingleside land release area accesses, Mona Vale Road is four lanes wide. It narrows to become two lanes east of Manor Road through the steep terrain of the Ingleside Chase Reserve and between Powderworks Road and Terrey Hills. Mona Vale Road has a speed limit of 70 km/h through Ingleside.

Mona Vale Road provides five existing accesses to Ingleside and the Wirreanda Valley via Tumburra Street, Addison Road, Powderworks Road / Bahai Temple Way, Chiltern Road and Lane Cove Road / Manor Road. The RMS has a permanent traffic counter location on Mona Vale Road 300m east of Kimbriki Road showing that daily vehicle movements are currently in the order of 18,000 per day in each direction. The key signalised intersections at Powderworks Road / Bahai Temple Way, Lane Cove Road / Manor Road, are near capacity during peak hours.

Bus stops exist in both directions on Mona Vale Road south of Powderworks Road and at Chiltern Road in the form of indented bus bays. Provision of services is low, with route 196 and 197 providing approximately four peak hour services in each direction on weekdays.

1.3 Powderworks Road

Powderworks Road is a Regional Road (Regional Roads are under the care of the council with part funding provided by RMS) running east / west through Ingleside / Elanora Heights between Garden Street and Mona Vale Road. It is two lanes wide and has a speed limit of 50 km/h east of Wilga Street and 60 km/h west of Wilga Street. Powderworks Road is identified by the Mona Vale to Macquarie Park Corridor Strategy (2009) as the only parallel route to Mona Vale Road that can act as an alternative route to Mona Vale Road. In this regard, Powderworks Road currently accommodates a portion of through traffic, particularly for those accessing Narrabeen, North Narrabeen and Elanora Heights where it provides the fastest route towards Sydney's west.

Where Powderworks Road passes through South Ingleside it is relatively unconstrained, has minimal property accesses and few traffic calming measures or pedestrian infrastructure. However within Elanora Heights, Powderworks Road is constrained by topography, has a high number of property accesses, and significant traffic calming and pedestrian islands. The Powderworks Road corridor itself is not currently constrained by traffic volumes, however delays can occur at the intersections on each end of the road corridor where Powderworks Road meets Mona Vale Road and Garden Street at signalised intersections. Sydney bus routes 183 and E83 utilise Powderworks Road (east of Kalang Road) however these services do not extend into Ingleside. Powderworks Road also accommodates a school bus route.

2.0 Future Conditions

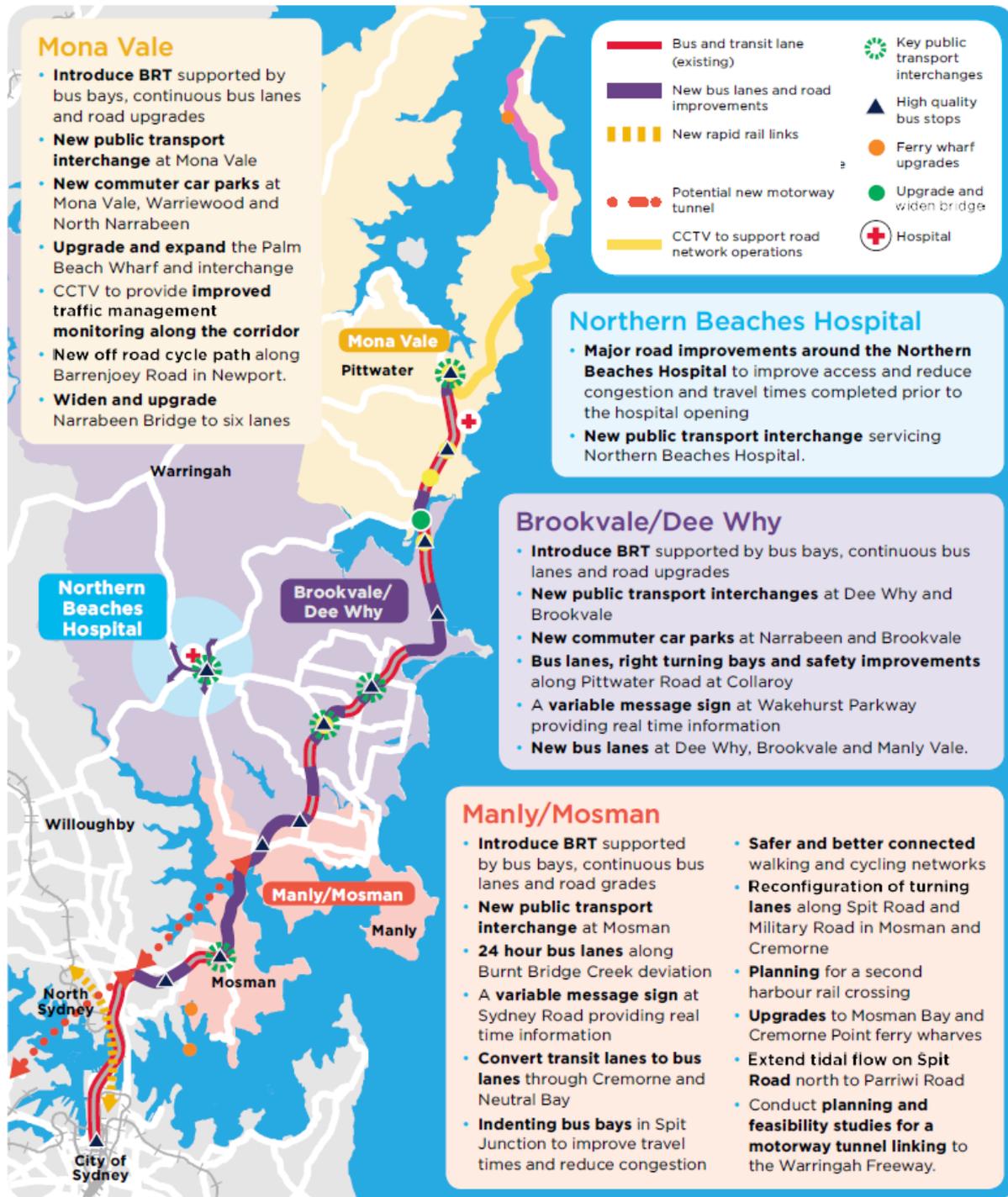
2.1 Planned State Government Infrastructure

The State Government is currently planning a number of transport infrastructure projects in the Northern Beaches area. This includes the Northern Beaches Hospital development, a public transport interchange at Mona Vale, widening of the Narrabeen Bridge to three lanes in each direction and the introduction of Bus Rapid Transit (BRT) on Pittwater Road within the next five years (as shown in **Figure 1**). Longer term planned infrastructure projects include the upgrade of Mona Vale Road to two lanes in each direction through Ingleside, the upgrade of Wakehurst Parkway and further bus network improvements along major corridors (as shown in **Figure 2**).

This improved infrastructure across the Northern Beaches will have a number of benefits to the residents of the future Ingleside Precinct, particularly with Mona Vale Road upgraded to two lanes in each direction, improved travel times along the corridor can be expected. Mona Vale Road will also become a more attractive route for through traffic, to the benefit of alternate routes such as Powderworks Road where through traffic would be likely to decrease (*however there may be an increase in overall traffic as a result of local trips*).

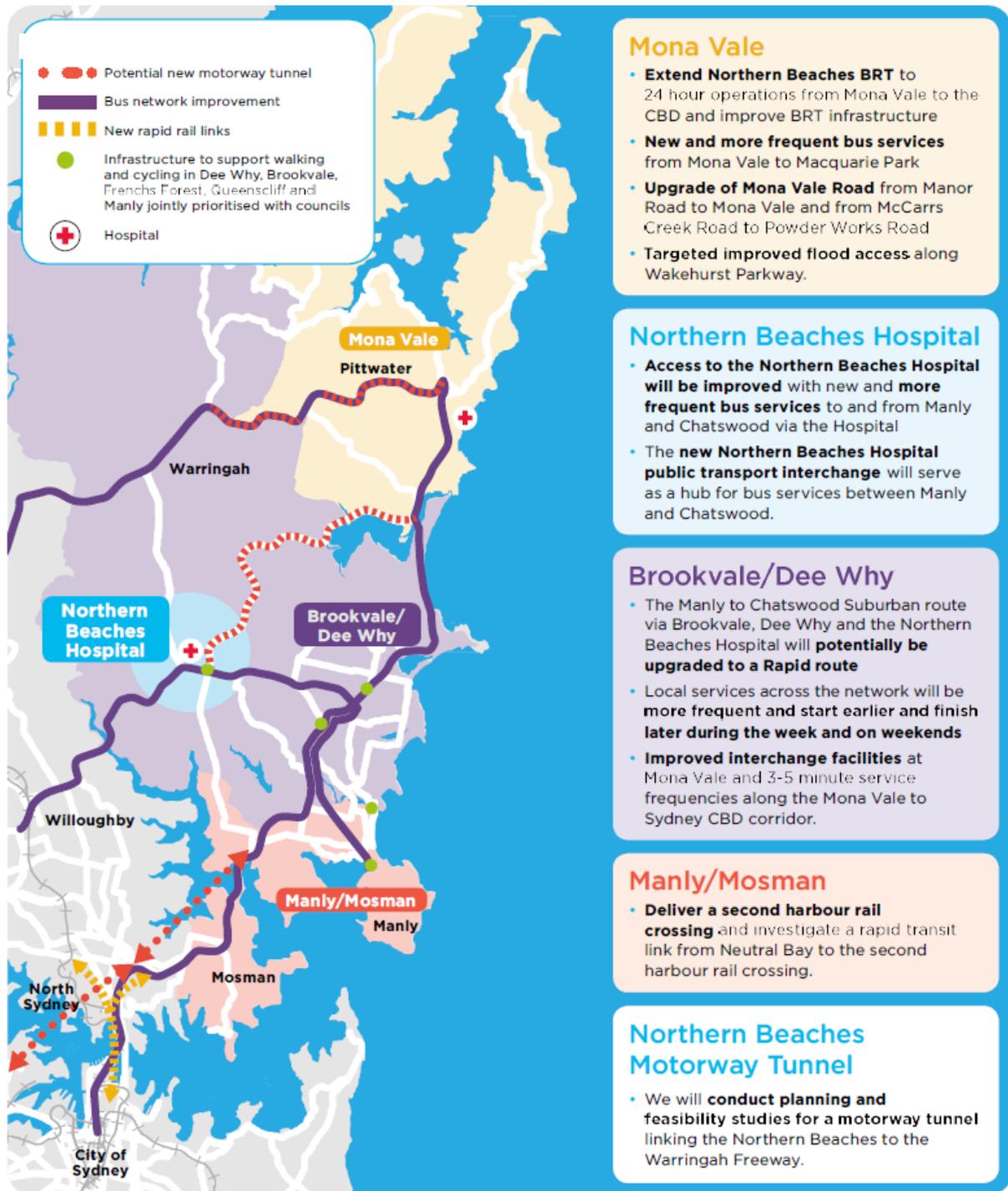
Proposed upgrades to bus infrastructure and services along Mona Vale Road and elsewhere in the area will benefit residents of Ingleside by providing considerably improved access to public transport and will act to encourage mode shift away from the private car.

Figure 1: Planned State Government Infrastructure <5 years



Source: Northern Beaches Transport Action Plan, 2014

Figure 2: Planned State Government Infrastructure >5 years



Source: Northern Beaches Transport Action Plan, 2014

3.0 Mona Vale Road Upgrade Summary

3.1 Project Summary

The proposed Mona Vale Road upgrade will result in the widening of the road corridor to two lanes in each direction for the entirety of its length (4-lane divided road). The proposed upgrade pertains to two sections of Mona Vale Road that are currently 1 lane in each direction, from McCarrs Creek Road to Powderworks Road (west) and Lane Cove Road / Manor Road to Foley Street (east). An example cross section of the proposed Mona Vale Road (west) is shown in **Figure 3**.

3.2 Benefits Particular to Ingleside

The proposed Mona Vale Road upgrade would provide the following benefits for Ingleside:

- Improved traffic capacity and efficiency for road users;
- An increased speed limit along the corridor (from 70km/hr up to 80km/hr) allowing for shorter journey times;
- Improved accessibility for local residents to Mona Vale and other destinations;
- The provision of new / improved public transport infrastructure that will allow for enhanced service provision along the corridor, including shorter journey times;
- Reduction in the impact of the gradient by allowing overtaking of slow moving Heavy Goods Vehicles (HGVs);
- Enhanced walking and cycling facilities on / adjacent to the road corridor;
- Intersection improvements;
- Improve safety for all modes.

Upgrading Mona Vale Road to two lanes in each direction would encourage through traffic to utilise the route. This is likely to reduce the appeal for through traffic to utilise Powderworks Road (which also provides an east / west connection) for some journeys. Further to this, it is expected that local and collector roads within Ingleside and neighbouring suburbs will see a reduction in through traffic.

Figure 3: Mona Vale Road Upgrade Summary



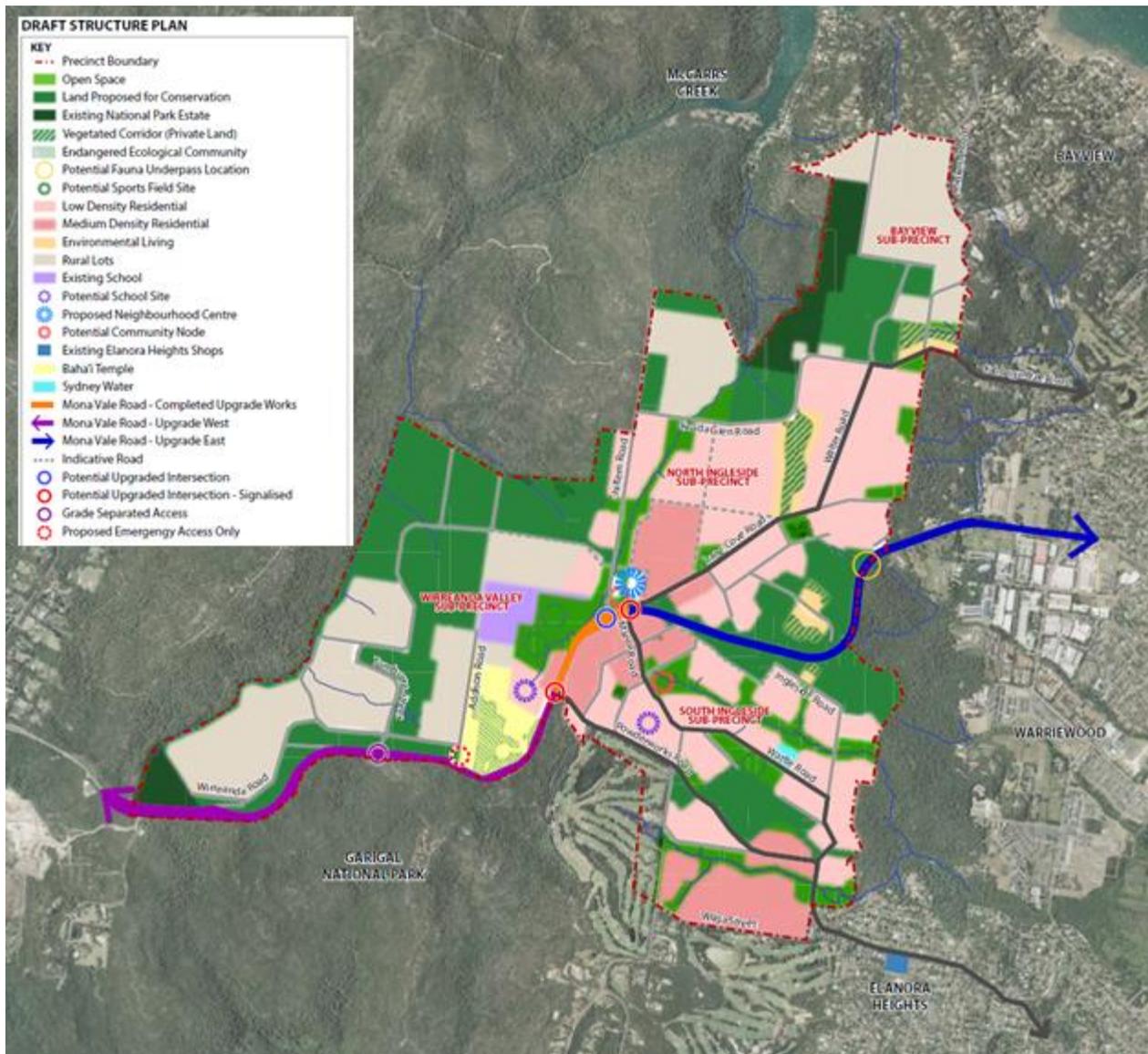
Source: RMS Mona Vale Road Upgrade Summary Map, 2014

4.0 Draft Structure Plan for Ingleside

4.1 Land Use

The Draft Structure Plan for Ingleside is shown in **Figure 4**. The majority of development will occur in both North and South Ingleside, with little development occurring in the Wirreanda Valley. The proposed development is predominantly low and medium density residential dwellings, with a neighbourhood centre to serve local residents. Current projections estimate that a total of 3518 dwellings will be provided across Ingleside with the population of the area estimated to be approximately 9528.

Figure 4: Draft Structure Plan for Ingleside



Source: Cox, November 2014

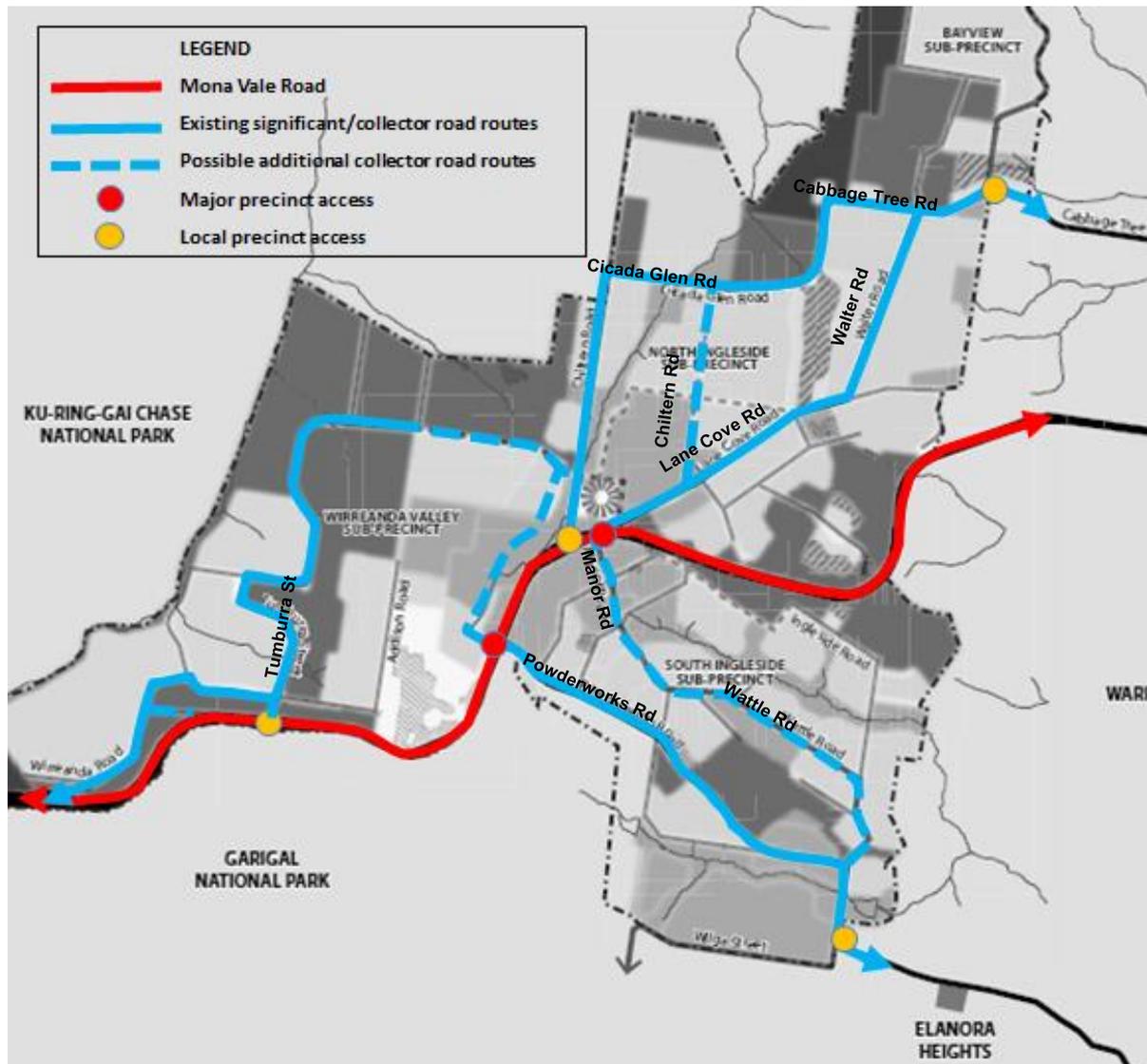
4.2 Access onto the Strategic Road Network

The proposed local road network is predominantly based on the existing road network, utilising the corridors already in place (particularly for proposed collector roads). Access to the strategic road network is provided via Mona Vale Road. There are four controlled accesses proposed from Ingleside onto Mona Vale Road (at Tumburra Street, Bahai Temple Way / Powderworks Road, Chiltern Road and Lane Cove Road / Manor Road). Precinct access is shown in **Figure 5**.

4.3 Traffic Movements

Mona Vale Road is expected to accommodate the majority of through traffic movements, while the remainder of the roads within the precinct will cater for local traffic. It is likely that Manor Road / Wattle Road and Lane Cove Road / Walter Road will operate as collector roads in South Ingleside and North Ingleside respectively, with Manor Road / Wattle Road enhanced relative to Powderworks Road (to encourage traffic away from Powderworks Road). The proposed road hierarchy is shown in Figure 5.

Figure 5: Road Hierarchy



Access Options

Source: AECOM, 2014

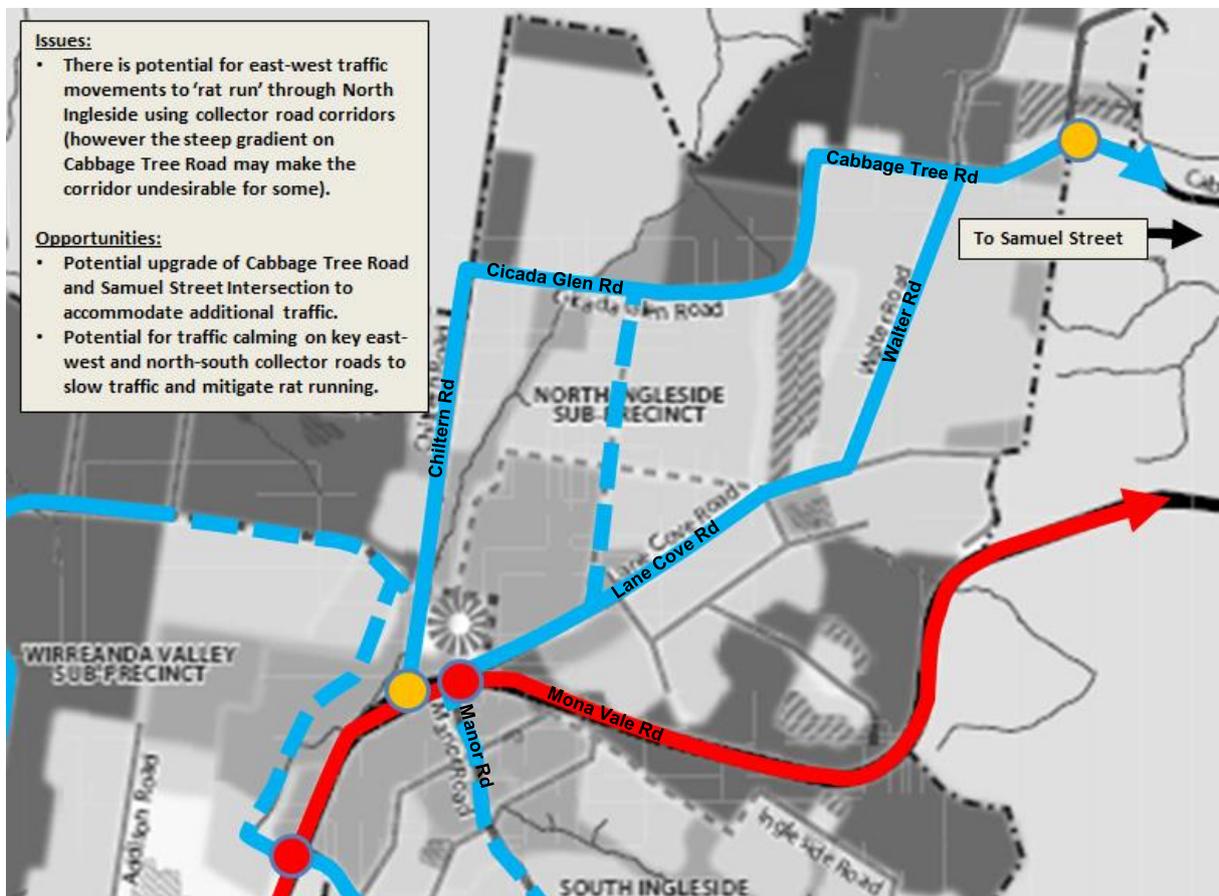
5.0 Local Traffic Access Options

5.1 North Ingleside

As discussed, Mona Vale Road is designed to provide the main access to North Ingleside (at Chiltern Road and Lane Cove Road). However, with Cicada Glen Road / Cabbage Tree Road and Lane Cove Road / Walter Road becoming main internal collector road routes, they could potentially carry some additional traffic to access Mona Vale Town Centre and other areas to the east (as highlighted in **Figure 6**). As such, development of North Ingleside is likely to necessitate improvements to Cabbage Tree Road and its intersection with Samuel Street.

There are options for the internal road network to mitigate against the potential over-use of collector roads in North Ingleside through the use of traffic calming measures to slow the speed through the precinct. These could include roundabouts, pedestrian crossings, speed humps, traffic islands, or 's-curves' along straight sections of road to slow traffic. The appropriate treatments will be determined as part of the traffic assessment.

Figure 6: North Ingleside Road Network Options



Source: AECOM, 2014

5.2 South Ingleside

Powderworks Road currently accommodates a portion of regional east-west through traffic, particularly as it is the fastest route for residents of North Narrabeen and Narrabeen to access the west. With the development of Ingleside, Powderworks Road would carry some additional traffic that would increasingly constrain the corridor if traffic movements were not managed properly. As such, it is considered that measures to dissuade through traffic from using Powderworks Road should inform the development of the South Ingleside local road network. Potential options include:

- 1) Traffic calming along Powderworks Road;
- 2) Re-directing the collector road corridor to make it more circuitous;
- 3) Closing Powderworks Road to through traffic in favour of using Manor Road and Wattle Street as the primary collector route in South Ingleside.

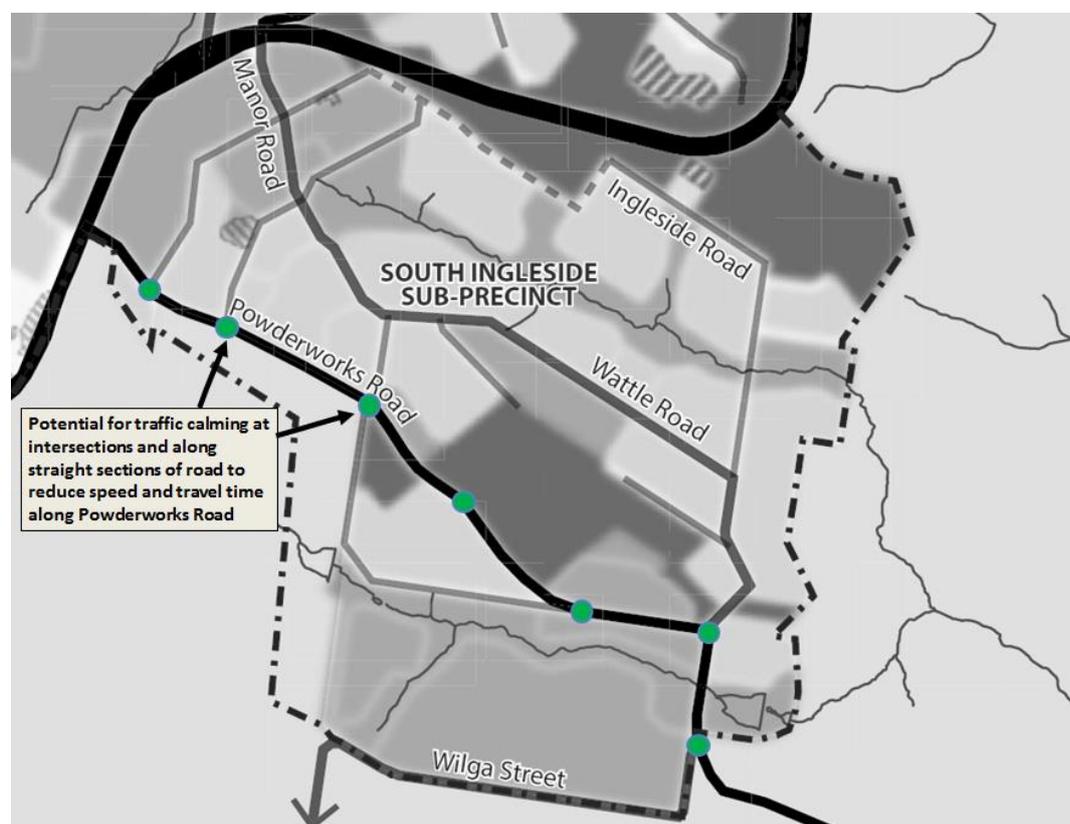
1) Traffic calming along Powderworks Road

Traffic calming along Powderworks Road (west of Elanora Heights) would complement the changed nature of the corridor (to reflect the more urbanised, lower speed environment) and include:

- Roundabouts along Powderworks Road that provide access to South Ingleside;
- Pedestrian crossing facilities adjacent to some intersections and at some mid-block locations;
- A potential increase in direct property access from Powderworks Road (any property access would be subject to RMS sight distance and safe stopping distance controls).

In combination with a reduction in the posted limit to 50km/hr to reflect the more urbanised environment (similar to Elanora Heights), these traffic calming measures would result in increased travel time along the corridor, dissuading through traffic from using the route. Potential locations for traffic calming are shown in **Figure 7**.

Figure 7: Possible Traffic Calming on Powderworks Road



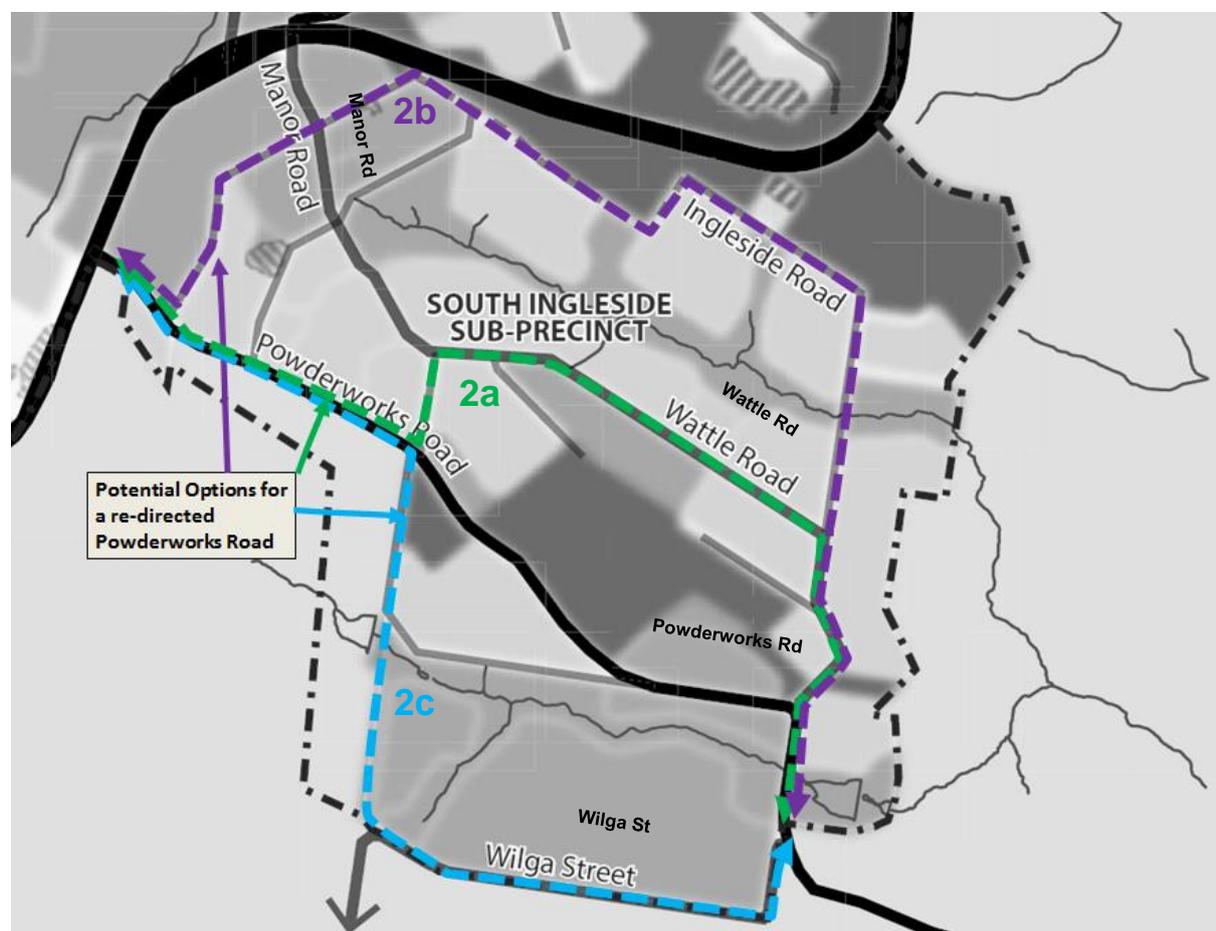
Source: Cox, September 2014

2) Re-directing the collector road corridor to make it more circuitous

Through the precinct planning of South Ingleside, it is possible to plan and provide a less direct alternative collector road between Mona Vale Road and Elanora Road to reduce the attractiveness of the Powderworks Road corridor and reduce its use by through traffic. The options for alternative routes (as shown in **Figure 8**) could be:

- 2a – This option shows the collector road route deviating north from Powderworks Road at Wattle Road before re-joining Powderworks Road at Ingleside Road.
- 2b - The collector road route deviates north from Powderworks Road at Waratah Road and continues around the northern perimeter of South Ingleside before re-joining Powderworks Road at Ingleside Road. This represents the most significant increase in vehicle kilometres travelled (VKT) and travel time.
- 2c – This option shows the collector road deviating south from Powderworks Road at Wattle Road before re-joining Powderworks Road at Wilga Street

Figure 8: Possible alternate corridors for a collector road

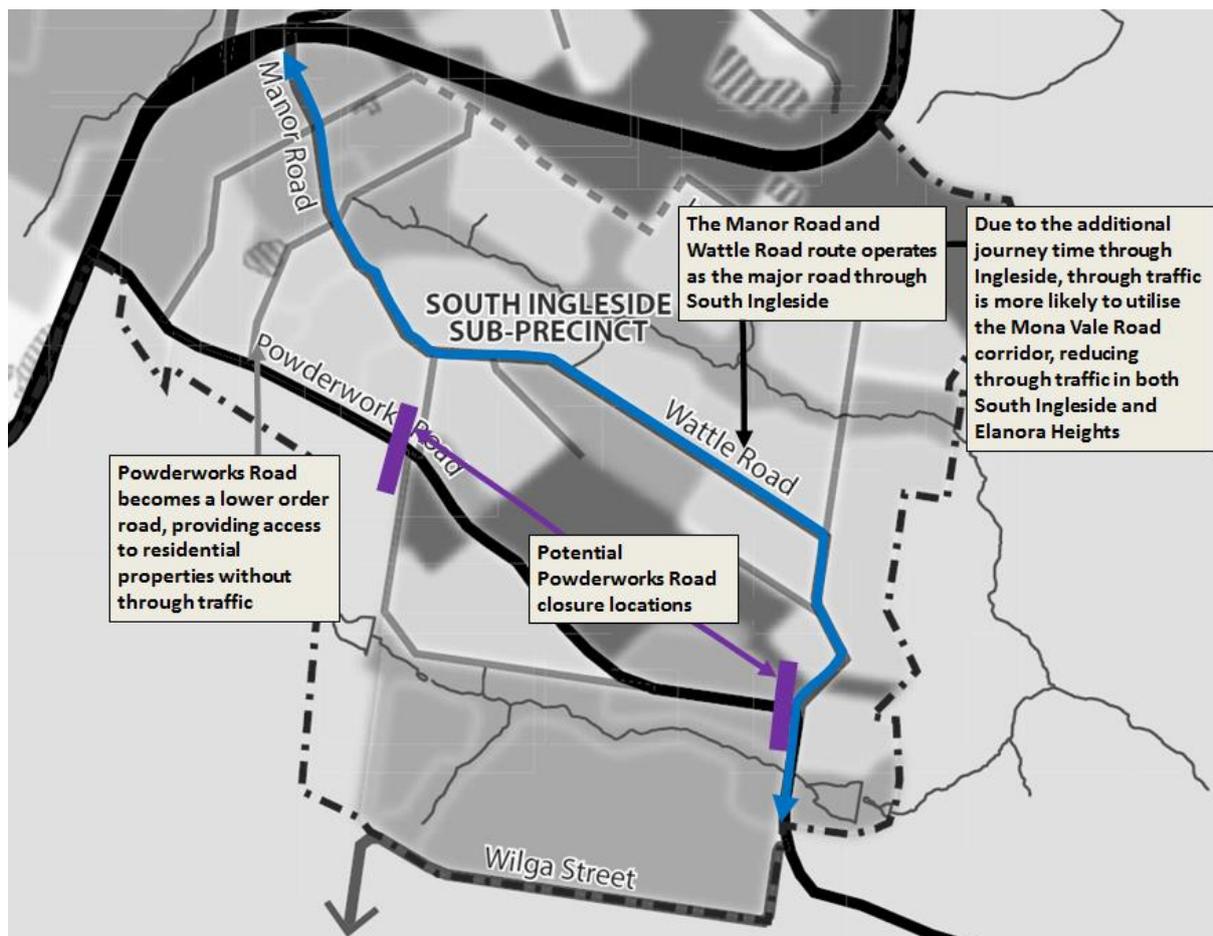


Source: Cox, September 2014

3) Closing Powderworks Road to through traffic

Another option is that the major collector road through South Ingleside becomes Manor Road / Wattle Road as shown in **Figure 9**. This would provide a more central route through the precinct and a strong connection to North Ingleside. The majority of local traffic would access Mona Vale Road via the signalised intersection located at Lane Cove Road / Manor Road. This new route would add extra time and distance between Garden Street and Mona Vale Road, dissuading through traffic from utilising the route. Some traffic would still be expected to utilise Powderworks Road, however this would generally be for local trips. In addition to this option, Powderworks Road could be closed at a point on the network (to be determined).

Figure 9: Alternate collector road corridor



Source: Cox, September 2014