

Design Report for Options for Formalising Access Track at Taylors Reserve, Lugarno 16-November2018

OPTION A - RIGHT OF WAY (ROW)

The proposal for a Right Of Way (R.O.W.) requires a sealed surface for the passing of vehicles. No provision for a formal footway, drainage would be required.

Width of seal recommended 3.75m with passing bays 5.5m wide every 30m for a two way operation. It is therefore recommended that access track be classified as a "Local Road Class 9" with a minimum single-lane two way seal width of 3.75m in accordance with the National Road Classification 2001.

It is noted that Service vehicles over 6.6m in length cannot negotiate the turn at Woodlands avenue into Taylors Reserve access track without costly road widening, property acquisition, service relocations and substantial structural infrastructure to support the road way. Further detailed design for feasibility would be required. It is recommended to sign post this entry as "NO ENTRY VEHICLES OVER 6.6m" In Woodlands Ave, and for the access track, as shown on the attached plans. This would be the case for all options to be considered

Service vehicles will require two way access provided by access from Lime Kiln Road entry. Provision will also need to be made for a turning area to facilitate the turning movements of service vehicles as shown on the attached plans. The proposal encroaches onto the existing park by 17m² net (variable width including fence).

Cost of Construction of a new sealed access would be approximately **\$344,000** subject to detailed design and investigation.

OPTION B - FORMAL PUBLIC ROAD

The proposal for a two-way, two lane service road with parking on one side requires a recommended minimum width of 6.0m. This is in accordance with Austroads Guidelines, (Austroads (2016). Guide to Road Design Part 3: Geometric Design - Table 4.3: page 45).

Table 4.3: Urban arterial road widths

Element	Lane width (m)	Comments
General traffic lane	3.5	General traffic lane widths to be used for all roads
	3.0–3.4	For use on low speed roads with low truck volumes
Service road lane	3.4–5.5	Range of lane widths on service roads (refer to Section 4.11)
Wide kerbside lane	4.2	Locations where there are high truck volumes (additional width provided for trucks)
	4.2–4.5	Locations where motorists and cyclists use the same lane (refer Section 4.8.11 and Commentary 6)
HOV lane	3.5–4.5	Bus lane (refer Section 4.9.2)
	3.3	Tram/light rail vehicle lane (refer Section 4.9.3)
Minimum width between kerb and channel (to provide for passing of broken down vehicles)	5.0 ⁽¹⁾ –6.5 ⁽²⁾	Width of a single lane suitable for use in a left turn slip lane, or two lane, two way divided road with a raised median
	2 × 4.0 (8.0)	Width of two lanes that provide for two lines of traffic to (slowly) pass a broken down vehicle.

- 1 Generally, a minimum width of 5.0 m should be provided. However, at the discretion of the road agency a lesser width may be considered on urban roads where the site is constrained and traffic using the facility is comprised of cars and small commercial vehicles, or where the length of treatment is short (e.g. channelised left-turn roadway).
- 2 Depending on the classification of the road, the design vehicle to be accommodated and space available at the site, the road agency may consider the provision of a width up to 6.5 m. However, where this width is likely to result in operational issues (e.g. two lines of cars in a left-turn roadway that is intended to operate as a single lane) measures should be undertaken to delineate the expected path for cars and other small vehicles.

The Guidelines suggest a range of 5.0 – 6.5m, the recommended 6.0m width also facilitates the entry and exit onto Lime Kiln Rd and the vehicle swept paths for access (as per note 2 table 4.3). The geometric location of kerbing has been influenced by the location of existing trees, and existing utility serves such as Telstra pits and light poles.

The light poles are at suitable locations. However upgrading to luminaries may be required.

Drainage exists via an existing stormwater line at the north western corner of Taylors Reserve with sufficient capacity to drain the area via additional kerb inlet pits and 40m of drainage line as shown on the plan.

The boundary for the public road would be limited to the location as shown on the attached plans adjacent to the turning area as proposed. This is due to insufficient carriage way width available (3.8m existing) at the Woodlands Avenue end. This linkage to woodland Avenue should be created as a formal Right Of Way as per option A.

As previously mentioned, Service vehicles over 6.6m in length cannot negotiate the turn at Woodlands avenue into the access track within Taylors Reserve without costly road widening , property acquisition and substantial structural infrastructure to support the road way. Further detailed design for feasibility would be required. It is recommended to sign post this entry as “No Entry VEHICLES OVER 6.6m “ In Woodlands Ave, and in Taylor Reserve, as shown on the attached plans. This would be the case for all options chosen. Service Vehicles would require two way access via Lime Kiln Road entry.

The formalised option would require the provision of 6.0m wide pavement, kerbing, drainage, formal pedestrian access and improvements to street lighting to meet Australian Standards. The proposal encroaches onto the existing park by 323m² net (variable width including fence).

The proposal requires modification to the adjoining property access on Lime Kiln Road and the removal of 5 mature trees.

Cost of Construction of this Public Road as a formal access has been estimated at approximately **\$700,000** subject to detailed design and investigation.

OPTION C - INFORMAL PUBLIC ROAD

An informal option of providing a sealed access of 6.0m wide excluding the provision of kerbing, pathway as described in OPTION B has been estimated at **\$550,000** subject to detailed design and investigation. Drainage would still need to be provided to ensure serviceability of the constructed pavement. The location would be the same as the formal Option B.

Photos for information



Pic 1-Entry at Lime Kiln Road



Pic 2 -Entry to adjoining property at Lime Kiln Rd



Pic 3 - Clearance to playground



Pic 4 – Lower Woodlands Ave



Pic 5- Bend at Woodlands Ave



Pic 6 – Entry off Woodlands Ave



Pic 7- Drop at Intersection of Woodlands Ave and Taylor Ave



Pic 8 -Services along access