

a) **Level of Detail:**

A greater level of detail is required by RMS for any works that are identified as being necessary and/or that will impact upon the operation of Appin Road (i.e. for all intersection upgrade works required). Specifically, **RMS requires more detailed concept designs as well as an associated swept path analysis.** Each is discussed below:

- **Concept Designs:** For works that are identified within Appin Road RMS requires concept designs that are to scale and include, but not be limited to details on, legal property boundaries (including the existing road reserve boundaries), details on existing /proposed footpaths, details on complaint pedestrian refuges (i.e. to demonstrate pedestrian connectivity) and details on proposed lane widths at a number of locations along the length of the proposed works.

RMS requires the above detail as it needs to be satisfied that the proposed design/works can fit within the existing formed road reserve as well as what works are required if it cannot. The above concept designs to demonstrate compliance with the applicable requirements in the *Austroads Guide to Road Design*, its associated supplements and be based on a design speed of 60km/h (i.e. the posted speed limit + 10km/h). RMS believes the updated concept design provided would need to form part of the draft PA; and

- **Swept Path Analysis:** A swept path analysis is required that demonstrates compliance with Austroads turning templates for the largest vehicle likely to utilise the proposed intersection treatment (i.e. 25/26m B double). This must show that it can enter and exit in a forward direction without crossing the centre line of the road into which it is accessing. The swept path analysis provided must be to scale, show legal property boundaries, (including the existing road reserve boundaries), show the centreline of each road, show existing kerb/gutter and show any new works identified as being required.

b) **Roundabout Design/Placement Concerns:**

The concept roundabout design for the intersection of Appin Road/Church Street (prepared by GTA Consultants, Drawing No. 14S1076000-06-01-P3, Sheet 1 of 1, dated 29.01.15) has been reviewed using the current RMS design reference documents. RMS notes that the roundabout design has been based on the old RTA 'Roundabouts – Geometric Design Method'. RMS raises no concerns with this in principle as it is acknowledged that the Austroads Roundabout Design Guide radii would be excessive for this location. RMS does however advise that this non-conformance will require sign off prior to construction/finalisation of the Works Authorisation Deed by the RMS Director of Engineering and as such the non-conformance cannot be signed off on at this time.

The following issues **need to be addressed in an amended design:**

- The existing intersection arrangement has part of the northeast cadastral boundary within the road reserve (e.g. the footpath is located within Lot 1 DP 507820 – refer to aerial photo below). This issue will continue to stand with the submitted concept roundabout design. The roundabout location should be adjusted to avoid the above cadastral conflict. Alternatively, if the roundabout location is to remain as shown on the concept plan the developer will need to provide details on how this cadastral property issue can be resolved;
- Sight distance Criterion 1, 2 and 3 in *Austroads Guide to Road Design Part 4B: Roundabouts* must be addressed. The submitted design does not currently address these

requirements. Refer to *Austrroads Guide to Road Design Part 4B: Roundabouts*, Section 3.3.1, 3.2.2 and 3.2.3 for additional details/guidance;

- The proposed fourth leg into “New Road” will require property dedication (refer to additional comments under the heading ‘Property Concerns’ below);
- The footpath on the western side as well as the north eastern corner (noting the first point above) will need to be reinstated into the new design. The concept design needs to detail this including design of associated refuges, crossing points/pedestrian connectivity, etc;
- The approach lane width of 6.0m even though it suits the RTA Roundabout guide is too wide, even for a 25.0m B-Double. This must be refined with a swept path analysis and/or adjustment of the entry arc. RMS’ assessment shows that there is scope to reduce those widths. Adopting a 6m wide approach lane, as shown in the concept design, will encourage two vehicles to simultaneously approach the single entry lane. If a 6.0m approach lane width is insisted on then a dual lane approach will need to be considered;
- The departure radii’s needs to be increased. RMS notes that good practice is double the entry radius;
- The splitter islands, based on the limited information provided, on the plan appear small. The Austrroads Roundabout guide should be used to assist in providing a reasonable outcome. Please refer to Guide to Road Design Part 4B: Roundabouts 4.5.4 Splitter Islands; and
- The updated concept plan provided for the roundabout in addition to addressing each of the points above needs to provide additional detail as outlined below under the heading ‘Level of Detail’.



Existing public footpath located within Lot 1 DP 507820

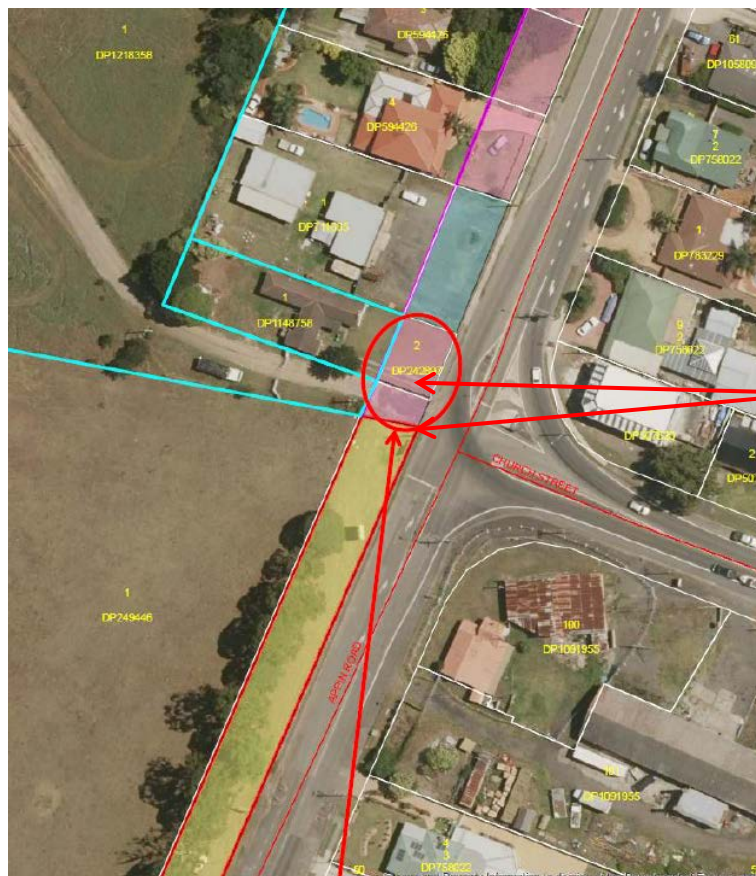
c) **Property Concerns:**

Clarification is required on who owns the two parcels of land coloured pink (refer aerial photo below) that are identified as road widening lots known as Lot 2 and Lot 3 DP 242897.

The cadastre on which the concept roundabout design for the intersection of Appin Road/Church Street is provided differs to what is shown on the RMS property records. Specifically, RMS property records show two separate parcels of land on the western side of Appin Road that adjoin the eastern boundaries of Lot 1 DP 1148758 and Lot 1 DP 1218358 that are identified as road widening lots known as Lots 2 and 3 DP 242897. The aerial below contains an extract from the RMS property records that shows a road widening strip along the western side of Appin Road which in part is:

- Dedicated as public road and owned by Council (the yellow coloured sections);
- RMS owned land that is yet to be dedicated as public road and transferred to Council (blue coloured section); and
- Land identified as road widening that has not been acquired by Council (pink coloured sections).

As such, RMS notes that the strip/portions shown by pink colour that are located in between the yellow and blue strips over which the fourth leg/new road is positioned have not been acquired by Council (i.e. Lots 2 and 3 DP 242897). RMS records show that Lot 2 and 3 DP 242897 are separate parcels to the adjoining Walker land that form part of the PP.



Lots 2 and 3
DP 242897

Land for which details on property ownership are required.

d) **Zoning Concerns:**

RMS notes that Lot 2 DP 242897, which will form part of a proposed intersection upgrade works at Church Street/Appin Road (i.e. fourth leg of a new roundabout so as to provide access to/from the southern precinct), is currently zone R2 Low Density Residential under the Wollondilly Local Environmental Plan 2011 (refer to diagram below). Lot 2 DP 242897 does not currently form part of the submitted PP and as such the zoning of Lot 2 DP 242897 will be retained as R2. RMS is of the opinion that **Lot 2 DP 242897 should be incorporated into the current PP to enable its zoning to be changed to SP2 Infrastructure** which will reflect its future intended use and align with the adjoining land zoning to the north and south.



Lot 2 DP 242897 – Currently zoned R2 under the WLEP 2011 and should be zoned SP2 as part of PP.