Appendix B Information on options considered
Analysis of options presented by the options report (Roads and Maritime, 2015)

The key issues/potential impacts associated with each option are summarised below:

**Option 0 – no deviation**
- Does not meet proposal objectives
- Space available for the upgrade works is constrained by existing buildings, including Bringelly Public School and Bringelly Village shops
- Impacts on existing heritage items, including impacts on Bringelly Public School.

**Option 1 – western route**
- Impacts on accesses to the Bringelly Brickworks and dwellings on Greendale Road
- Impacts on Bringelly Public School and Bringelly Village shops
- Impacts on community facilities, including Bringelly Recreation Reserve/Bringelly Park and the Bringelly Community Centre
- Less visual impacts than options 2, 3 and 7 as it is located away from the geographical high point
- Impacts on Aboriginal heritage items
- Crosses Thompsons Creek
- Offers benefits in terms of construction staging and constructability, particularly in relation to impact on existing traffic flows.

**Option 2 – eastern route 1**
- Would require a roundabout or other method of control at the existing intersection due to the its close proximity
- Visual impacts associated with the need to elevate one of the roads near the geographical high point
- Impacts on Bringelly Public School, Bringelly Village shops and services associated with the substation
- Impacts on community facilities, including Bringelly Recreation Reserve/Bringelly Park and the Bringelly Community Centre
- Noise impacts during construction for properties around the existing intersection, including the school
- Requires two crossings of Thompsons Creek
- Impacts on non-Aboriginal heritage items
- Impacts on Aboriginal heritage items
- Offers benefits in terms of construction staging and constructability, particularly in relation to impact on existing traffic flows
- The least expensive option to construct and maintain (excluding option 0).
Option 3 – southern route 1

- Traffic management issues during construction as the intersection would remain on the existing alignment of The Northern Road
- Works associated with Bringelly Road to the east of the intersection would be temporary and Bringelly Road would require further upgrading in the future
- Property access along The Northern Road would also be impacted needing additional acquisition to provide a service road with limited access onto The Northern Road
- Option 3a would isolate the section of Greendale Road between The Northern Road and the new intersection with a 600 m long retaining wall. This would also require the design and construction of the new Bringelly Road and crossing of Thompsons Creek, which is likely to require a bridge. Option 3a would also have a greater visual impact.
- There would be similar impacts for options 3b and 3c
- Impacts on the Bringelly Brickworks access
- Noise impacts during construction for properties around the existing intersection, including the school
- Impacts on Bringelly Village shops
- Impacts on Aboriginal heritage items
- Impacts on non-Aboriginal heritage items
- Crosses Thompsons Creek.

Option 4 – southern route 2

- Traffic management issues during construction as the intersection would remain on the existing alignment of The Northern Road
- Works associated with Bringelly Road to the east of the intersection would be temporary and Bringelly Road would require further upgrading in the future
- Potential for impacts to the Bringelly Brickworks
- Impacts on Aboriginal heritage items
- Impacts on non-Aboriginal heritage items
- Crosses Thompsons Creek
- Less visual impacts than options 2, 3 and 7 as this option is located away from the geographical high point.

Option 5 – combination of Option 2 and 4

- Construction of the new intersection could be undertaken offline which would reduce traffic impacts and may assist in reducing the length of the period of construction
- Requires two crossings of Thompsons Creek
- Works associated with Bringelly Road to the east of the intersection would be temporary and Bringelly Road would require further upgrading in the future
- The design requirements are similar to option 3 relating to the need for a service road and a 600 m retaining wall along Bringelly Road
- Less visual impact than options 2, 3 and 7 as this option is located away from the geographical high point
- Impacts on the access to the Bringelly Brickworks
Impacts on Aboriginal heritage items.

**Option 6 – eastern route 2**
- The construction of the new intersection could be undertaken offline which would reduce traffic impacts and may assist in reducing the length of the period of construction.
- There is an opportunity to tie back into The Northern Road prior to the crossing of Thompsons Creek.
- The option allows some flexibility for future expansion of Bringelly Road/Greendale Road.
- The bridge elevation would be lower than for options 2 and 3.
- Visual impacts due to the elevation of The Northern Road. However, there would be a lower visual impact compared with options 2, 3 and 7 as this option is located further away from the geographical high point.
- Impacts on Aboriginal heritage items.
- Requires the least amount of vegetation clearing and has the lowest potential for ecological impacts.

**Option 7 – combination of Option 4 and 6**
- As the majority of the alignment is outside the existing road corridor, the impact on construction staging and constructability, particularly in relation to impact on existing traffic flows, would be limited.
- Allows for offline construction and may assist in reducing the length of the construction.
- This option would have a greater visual impact as the bridge would be about eight metres high and located on the geographical high point.
- Impacts to the access to the Bringelly Brickworks.
- Impacts on Aboriginal heritage items.
- Impacts on non-Aboriginal heritage items.
- Requires the largest amount of vegetation clearing.
- Requires two crossings of Thompsons Creek.
- The most expensive option to construct and maintain.

**Multi-criteria analysis of options - weightings** *(Roads and Maritime, 2015)*

The performance of each option against the proposal objectives and considerations detailed in section 2.4.3, were scored 0-5 (poor – excellent) with 2.5 equating to neutral (no improvement or impact). The overall purpose of the proposal is to improve the accessibility of The Northern Road and Bringelly Road to accommodate for the future traffic growth generated from the Western Sydney Priority Growth Area and South West Priority Land Release Area and minimise forecast traffic congestion within the area. All options meet this overall purpose.

A summary of the weightings applied to each option is provided in Table 11.1 below. All options met the proposal objectives, with the exception of Option 0. As such, Options 1-7 have all been allocated the same score of 5. Due to the data gaps associated with Aboriginal heritage information, the scores were divided by 2.
Table 11.1  Summary table of weightings applied to each options (taken from Table 6.17 of Roads and Maritime, 2015)

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<th>Meets objectives</th>
<th>Land use: Zoning, property, access and utilities</th>
<th>Non-Aboriginal heritage</th>
<th>Aboriginal heritage</th>
<th>Ecology/biodiversity</th>
<th>Water and hydrology</th>
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