

#### **6 Preferred Corridor**

### 6.4 Identification of Preferred Corridor

Following the identification of the preferred components, constraints within the identified component options were analysed in detail. Based on the consultation undertaken and the environmental studies, key constraints were consolidated and combined into a Geographic Information System (GIS) package.

The GIS data was utilised in a workshop in order to determine a preferred corridor within the components. Key constraints analysed comprised: number and location of residences, property and holdings data, land use, topography, ecological and heritage constraints and potential visual impact.

The workshop was held in order to consider and analyse the balance and significance of the varying environmental, social, engineering and economic issues and constraints across different parts of the identified components.

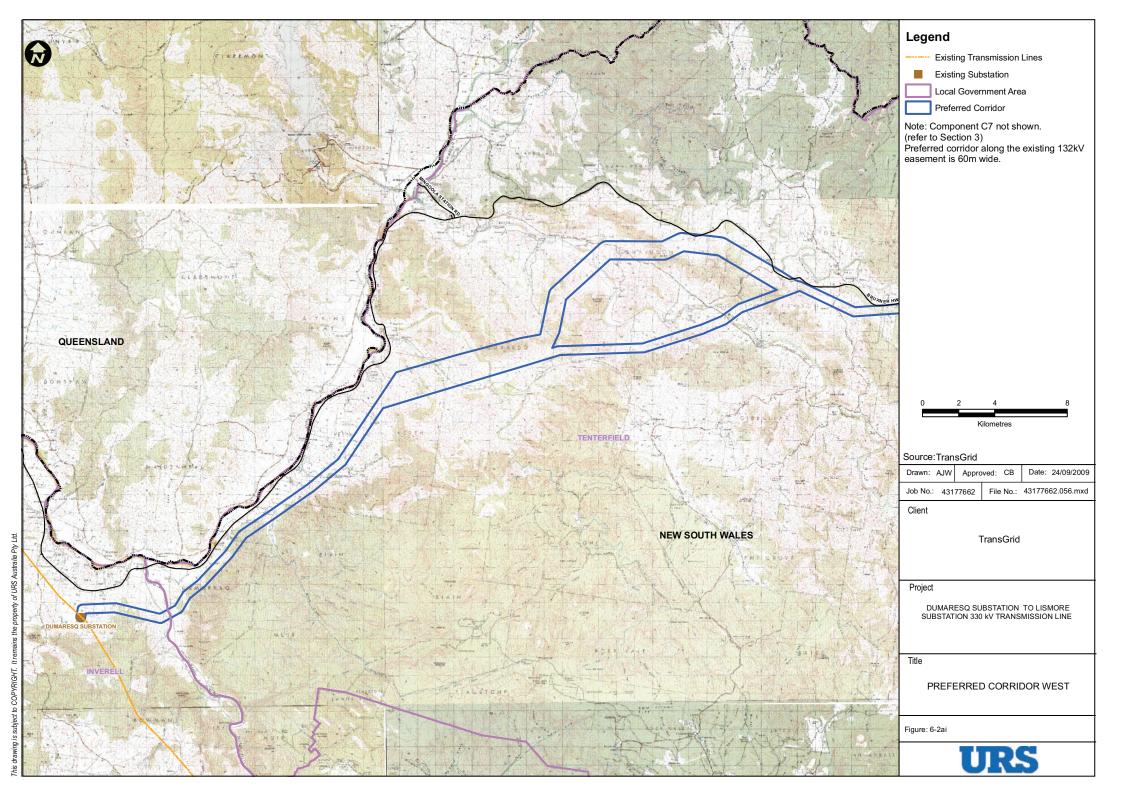
## 6.5 Preferred Corridor Selected

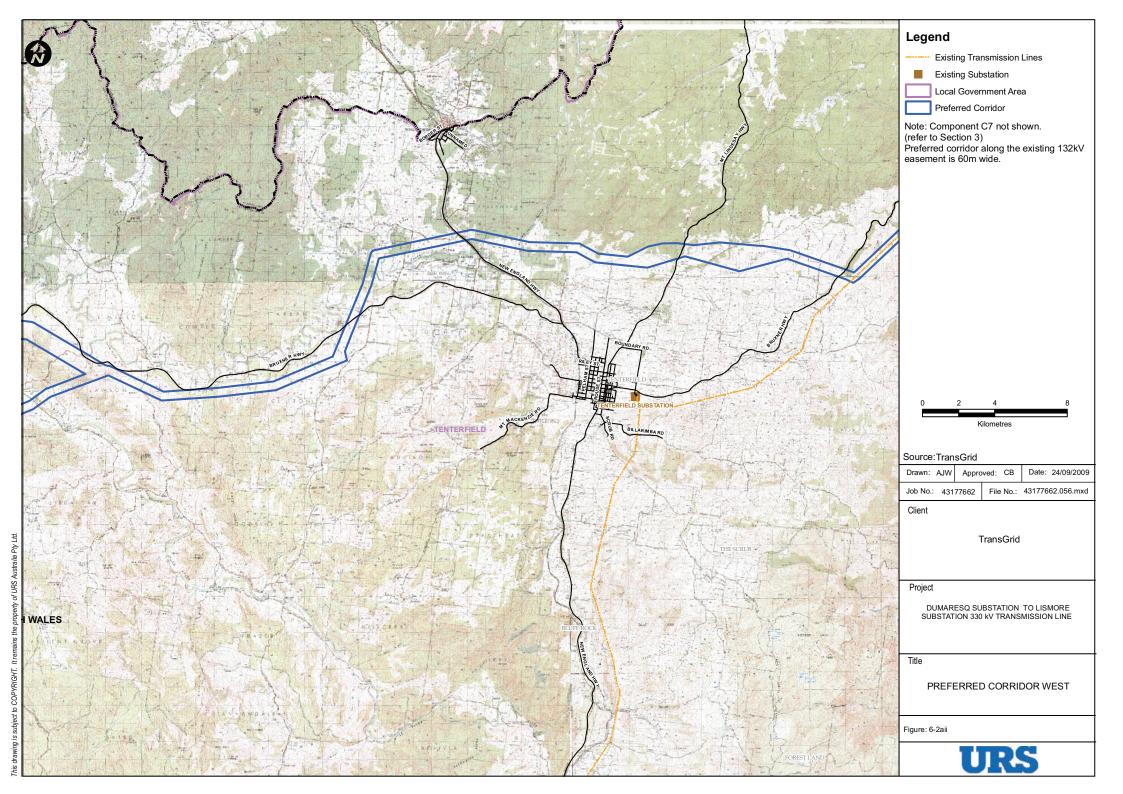
The preferred corridor identified following the workshop is shown in **Figure 6.2a and Figure 6.2b**. The corridor varies in width from 500m to 1,600m. It passes through C1, C2, C3, C4, C5, C8 and C9. The benefits of the corridor identified comprise:

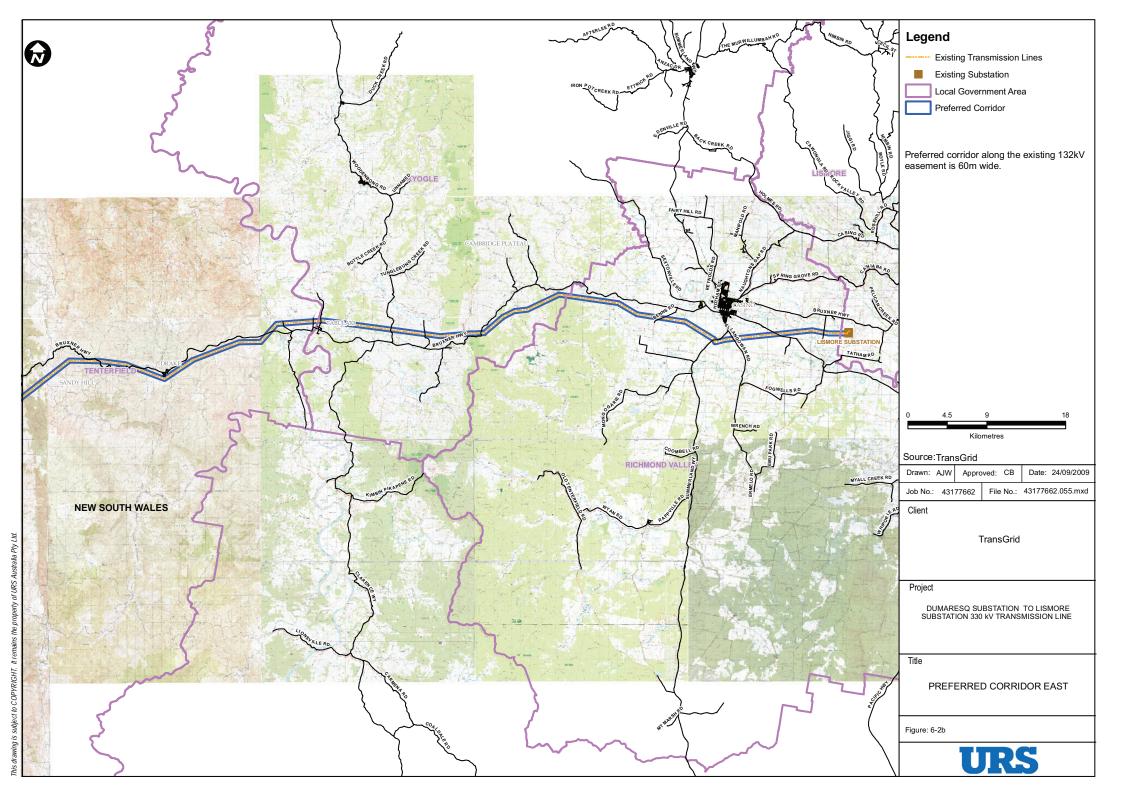
- the corridor avoids dense clusters of holdings. In a number of locations, the width of the corridor
  has been determined in order to maximise the opportunity for avoiding identified constraints
  including residential dwellings, steep topography, and small property holdings;
- the corridor location and width maximise the opportunities for paralleling lots and paddocks thereby reducing severance and minimising potential impact on the use of agricultural machinery;
- existing centre-pivot irrigation systems are avoided;
- there is a reasonable level of access from existing sealed roads to the corridor;
- the corridor is located across a limited number of land uses which are predominantly rural agricultural in nature, largely comprising cropping and pasture land. Significant areas of closed forest are avoided;
- the location and width of the corridor has been determined in order to maximise the opportunities for avoiding identified Endangered Ecological Communities;
- a number of large identified areas of threatened species habitat are avoided. This includes intact
  native vegetation which represents important habitat for native flora and fauna including threatened
  species; and
- a corridor width of 500m to 1.6km will allow for opportunities to position the alignment in order that visual impact from sensitive receptors may be taken into consideration.











# **Conclusions and Recommendations**

A preferred corridor has been identified from a range of routing options. The corridor has been identified taking into consideration the key identified constraints, namely: number and proximity of residences, land use, property and holdings data, topography, ecological and heritage constraints and potential visual impact. The preferred corridor is shown on **Figures 6.2a** and **6.2b**.

The next stage of the project is to develop an alignment within the preferred corridor and to undertake an Environmental Assessment (EA) based on that alignment. Based on the environmental and consultation work undertaken as part of this stage of the project, a number recommendations are made to inform the development of the alignment.

### **Ecological Recommendations**

As identified in **Section 5.2.3**, two woodland communities are present in the Study Area: box gum woodland and inland grey box woodland. A third community, fuzzy box woodland is possibly present. Original intact stands of these EECs are very limited in distribution and mostly occur as linear strips along road corridors and waterways. These areas have high conservation significance both as EECs and as habitat for a number of threatened species. The alignment should aim to avoid impacts, both direct and indirect on these EECs wherever practicable. Small patches or linear strips running perpendicular to the Study Area can potentially be spanned by the transmission line with minimal impact. Larger patches or strips parallel to the Study Area present a significant constraint and should be avoided.

In areas that were ground truthed during the preliminary field survey, several clear trends were found to occur, namely that the majority of EECs in the western section of the Study Area, occurred on low-lying areas, often where vegetation appeared to be patchy. This is likely to be a result of previous clearing of EECs such as the various grassy woodlands that occur in the area. While the alignment is likely to traverse through such areas, it should be possible during the detailed design process to minimise the amount of clearing needed by selecting the most appropriate route through these remnants.

Alignment selection should follow the general principle of 'avoid, mitigate then offset' impacts upon biodiversity values, particularly native vegetation and threatened biota. Detailed design should ensure that the transmission line spans the majority of the high constraint areas and that clearing for structures and access roads is restricted to low constraint areas.

If the preferred alignment avoids areas of high biodiversity constraint, as defined above, then construction of the proposed transmission line is not 'likely' to have 'a significant effect' on threatened biota. It is likely that some clearing of native vegetation will be required and there is the potential for secondary impacts such as increased erosion, sedimentation or weed invasion. Appropriate mitigation measures should minimise negative impacts. 'Residual impacts' are negative environmental impacts arising from a development after all practicable means to avoid or mitigate impacts have been exhausted. These residual impacts would be addressed in a suitable biodiversity offsets package accompanying the Environmental Assessment. Avoidance of biodiversity constraints, as outlined in this report, will also serve to minimise the scale of biodiversity offsets package required.





#### 7 Conclusions and Recommendations

### Heritage Recommendations

Sensitive area avoidance for Study Area West: within 200m of major waterways including Beardy River, Dumaresq River, Mole River, Reedy Creek, Tenterfield Creek and 100m of minor waterways is considered to be sensitive in terms of Aboriginal site location. Such areas should be spanned where possible, not paralleled by the proposed easement.

#### Visual Recommendations

Skyline views – during detailed design, the transmission line structures should be located to minimise potential visibility against the sky, or above the skyline, from scenic vantage points, including road corridors or public lookouts. The avoidance of skyline views should also take into account the locations at which the preferred alignment would need to cross ridgelines, and the orientation of the alignment in relation to surrounding receptor locations.

Visual clutter – where possible avoid views from receptor locations toward the proposed transmission line that also include views toward existing electrical infrastructure to reduce potential cumulative visual impact.

Background – where possible make use of landscape backgrounds (principally topographic features and vegetation) to visually accommodate elements of the proposed transmission line. The identification of the preferred alignment should also consider potential visual impacts associated with the removal of vegetation for the provision of easements and maintenance access tracks.

Screening – where necessary introduce appropriate planting strategies to mitigate the visual impact of the proposed transmission line, either between a receptor location and the preferred alignment (to screen a view), or beyond the alignment to provide a background against which elements of the transmission line may be accommodated or absorbed.





# **Limitations**

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The methodology adopted and sources of information used by URS are outlined in this report. URS has made no independent verification of this information beyond the agreed scope of works and URS assumes no responsibility for any inaccuracies or omissions. No indications were found during our investigations that information contained in this report as provided to URS was false.

This report was prepared between February and September 2009 and is based on the conditions encountered and information reviewed at the time of preparation. URS disclaims responsibility for any changes that may have occurred after this time.

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No Appendices have been included in this Report.

All Appendices are available on TransGrid's website:

http://www.transgrid.com.au/projects/projects/dumaresq\_lismore/Pages/default.aspx











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