

5.1.2 Blue Option

An overall plan of the Blue option is shown on Figure 5.3 while plans of each section are shown on Figures 5.4 (Section A) to 5.8 (Section E) inclusive.

Section A

The project starts at the northern end of the Sapphire to Woolgoolga project at Arrawarra Creek as shown on Figure 5.4.

The existing geometry in this area complies with the Pacific Highway Upgrade Program objectives. The upgrade would be a duplication to the west of the existing alignment to create an additional carriageway which would become the northbound carriageway while the existing road would be the southbound carriageway.

The existing highway would require some form of upgrade works to convert from a two-way road to a southbound carriageway. The upgrade work, for example, may include reconstruction of existing pavement, new linemarking and signage.

A duplication upgrade in this area would present some problems from a geotechnical perspective including subsidence and differential settlement of new road embankment adjacent to existing.

Consideration was given to the eventual use of the old Pacific Highway (known as Eggins Drive) as a local access road in the Class M scenario. However, the increased volume of local traffic that would ultimately use the local access road (to gain access to Mullaway and Woolgoolga) would mean that the local road in its current form would be inadequate and hence would require significant upgrading. Additionally, there may be some increased noise, and reduced amenity if used as a local access road.

Interchange options in this area include:

- ▶ The partial interchange proposed as part of the Sapphire to Woolgoolga project; or
- ▶ A full grade separated interchange in the vicinity of Corindi Beach in Section B as described below.

Section B

The existing highway from the end of Section A to the Coral Street intersection is suitable for 110 km/h design speed. A new northbound carriageway on the western side of the existing carriageway is proposed. The existing highway from Coral Street to Corindi would require realignment given the poor existing geometry and flooding history. From Corindi to the end of Section B, the vertical geometry is poor and does not achieve a 100 km/h design speed, although the horizontal alignment is suitable for 110 km/h design speed. Therefore, a new southbound carriageway is proposed on the eastern side of the existing carriageway and the existing carriageway reconstructed (to achieve 110 km/h design speed) from Corindi to the end of Section B.

The Blue option includes a possible grade separated interchange in the vicinity of Coral Street and Kangaroo Trail Road intersection at Corindi Beach. The existing cutting on the highway north of Kangaroo Trail Road would be a suitable location for such an interchange. Pedestrian / cyclist facilities would be provided across the interchange thereby minimising community segregation and providing a safe route for pedestrians (including school children).

The realignment from Coral Street to Corindi would be essential given the poor existing geometry and flooding issues in this area. This option would maximise the re-use of the existing highway as a local access road in this area. A realignment for 110 km/h design speed would continue as a projection of the existing straight alignment south of Coral Street and the RTA has previously acquired land for such realignment.

An access connection to Corindi on the northern side of the Corindi River floodplain could be at one of several possible locations depending on constraints in the area. The Blue option will have an impact on the village of Corindi, as it is a small community directly adjacent to the existing highway (east and west side). The highway widening and eventual addition of local access roads through Corindi would have an impact on this small village with the acquisition of several residential properties and the effective severance of the community.

The reconstruction of the existing highway from north of Corindi to the end of Section B (Barcoongere Way) would cause notable road user delay and construction difficulties.

Section C

The existing highway through this section requires realignment to be suitable for 110 km/h design speed and is shown on Figure 5.6. The realignment occurs on the east side and west side of the highway.

Section C includes the Dirty Creek Range. As existing and proposed road grades through the range are steep, the area presents a challenge in improving heavy vehicle performance and reducing vehicle operating / freight costs. The existing road alignment is dictated by the topography causing weaving in alignment between prominent terrain features, which forces the highway to the southwest.

The existing highway grade through Dirty Creek Range is 7% for 700 metres. A fully loaded B-double (62.4t GCM) climbing the range would have an approximate speed approaching the top of the range of 22-23 km/h. The study has investigated flatter grades of reduced length to improve operating speeds.

The minimum conforming upgrade in this area would require flattening the alignment by increasing curve radii (the existing curves are not suitable for a 110 km/h design speed) and flattening vertical curves. As a result, significant portions of the existing highway become redundant.

Section D

The existing highway alignment in Section D has been identified as generally suitable for the 110 km/h design speed and includes the recently completed Halfway Creek duplication. A new carriageway is proposed to the west of the existing highway from Palmers Lane to the Halfway Creek duplication.

The proximity of Halfway Creek watercourse and the Yuraygir State Conservation Area (National Park) limit the opportunity for a local access road on the eastern side of the highway. A local access road in the Class M scenario would switch from one side of the highway to the other bound by the elbow of Halfway Creek watercourse next to the highway and the State Conservation Area. These constraints may force a transverse bridge / underpass at or near Grays Road.

Investigations revealed that future widening to accommodate an ultimate six lanes for the Halfway Creek duplication would be difficult because of the independently graded carriageways through the Halfway Creek duplication and also due to the limited available cross section width.

It was also found that neither carriageway on the newly completed duplication aligns with the existing highway at the southeastern tie-in which would necessitate the realignment of 500 metres of the newly completed work or reconstruction of nearly one kilometre of the existing highway (for 110 km/h design speed).

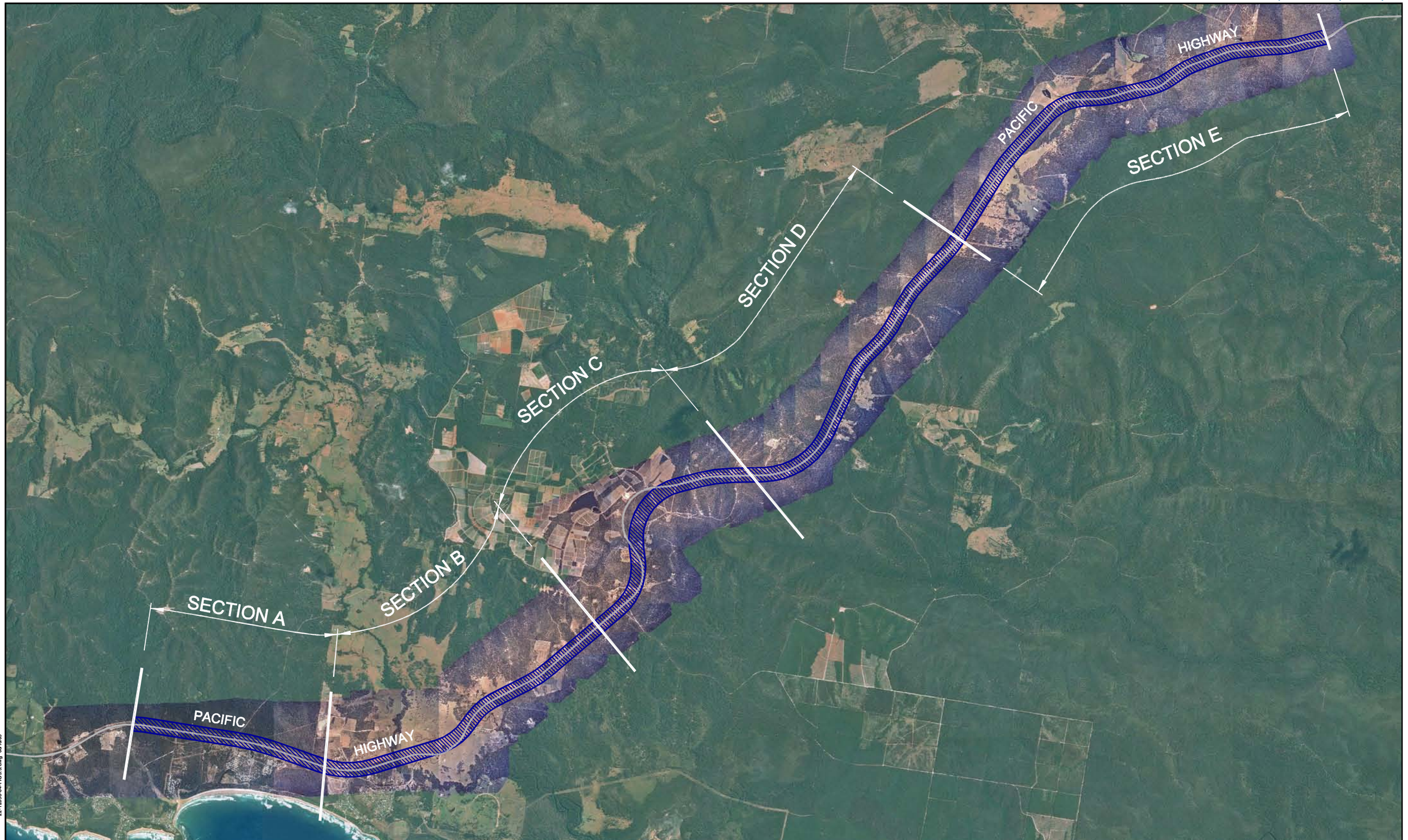
Section E

The existing alignment in Section E is shown on Figure 5.8 and has two distinct areas, the first being the section from Lemon Tree Road to Kungala Road and the second from Kungala Road to the end of the project. The Lemon Tree Road to Kungala Road section is generally suitable for 110 km/h design speed, whereas the section from Kungala Road north is poor vertically and horizontally and requires complete reconstruction or realignment to achieve 110 km/h design speed.

The Blue option would duplicate the existing highway from Lemon Tree Road to Kungala Road on the southern side of the existing carriageway. The short horizontal curve midway between Lemon Tree Road and Kungala Road would need to be increased to achieve minimum curve length criteria. Increasing the curve radii to gain sufficient curve length may force the carriageway to encroach on an elbow of Halfway Creek (located very close to the existing highway on the inside of this curve). The construction of a local access road on the western side of the existing highway to Class M standard would have property and environmental impacts.

North of Kungala Road, the minimum conforming option assumes reconstruction within the existing road reserve. The reconstruction along this part of the alignment would cause property access, acquisition impacts and environmental impacts. This would lead to the consideration of alternatives that retained the existing highway as a local access road.

The highway is realigned on the east side of Halfway Creek, between Kungala Road and Luthers Road as the existing curve in the highway is not suitable for 110 km/h design speed.



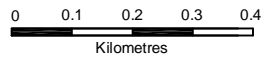
22-12058-04-FIG.5.3.dwg 06/10/05

<p>Kilometres</p> <p>Map Projection: Universal Transverse Mercator Horizontal Datum: Geoidetic Datum of Australia 1994 Grid: Map Grid of Australia, Zone 56</p>		<p>LEGEND</p> <p> Blue Option - 250m wide Corridor</p>
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Spatial layers courtesy of Coffs Harbour City Council, NSW Department of Environment and Conservation, NSW Forests, NSW Department of Lands and NSW Roads and Traffic Authority




Section Diagram



Map Projection: Universal Transverse Mercator
Horizontal Datum: Geoidetic Datum of Australia 1994
Grid: Map Grid of Australia, Zone 56

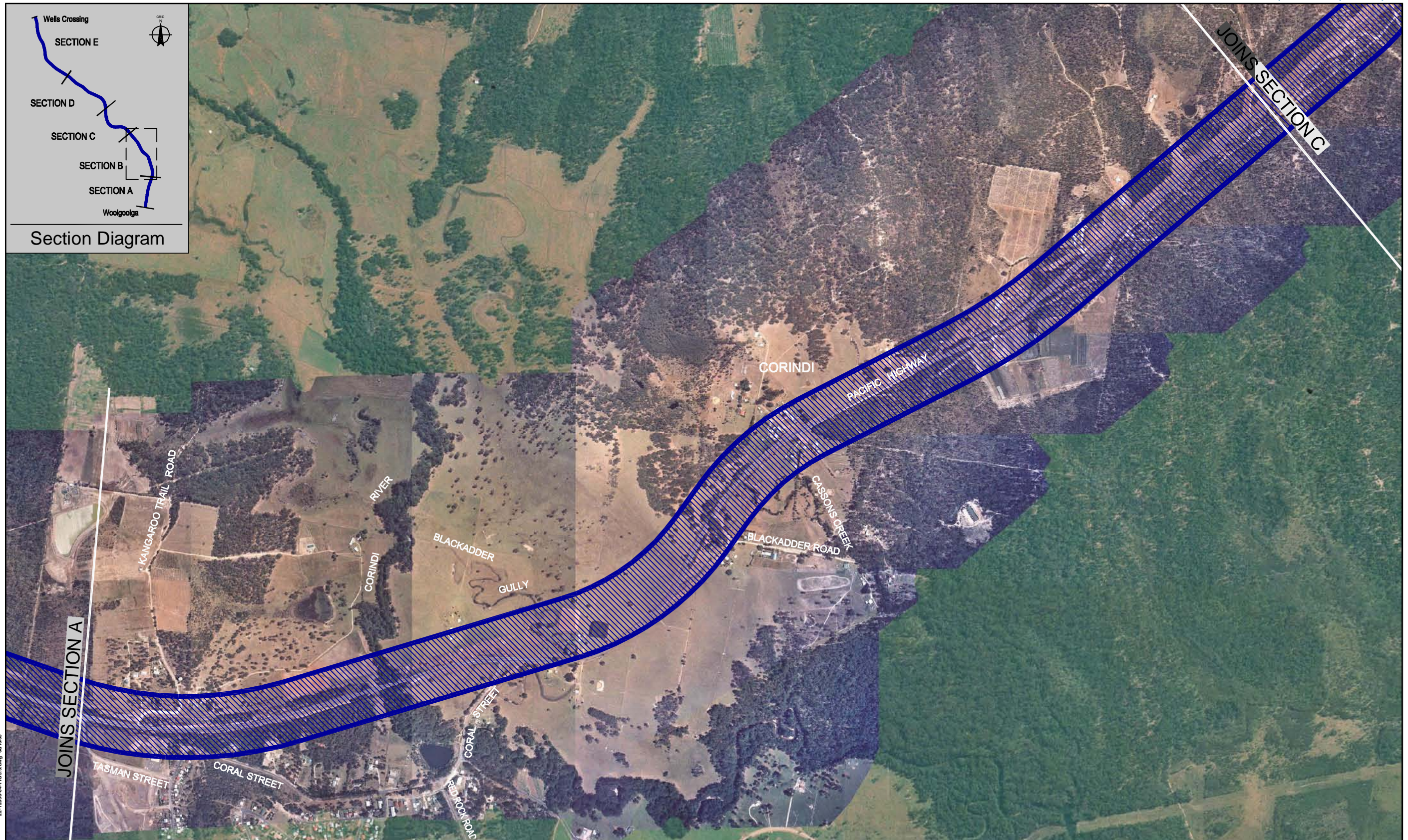


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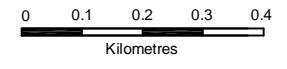
 Blue Option - 250m wide Corridor

22-12058-04-FIG 5.4.dwg 06/10/05

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22-12058-04-FIG.5.5.dwg 06/10/05



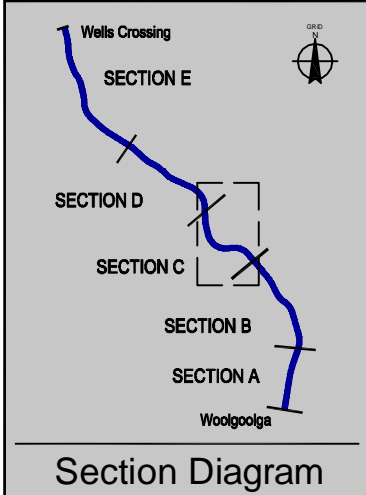
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LEGEND

Blue Option - 250m wide Corridor

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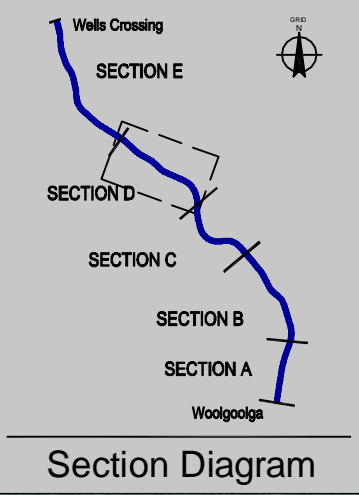


Section Diagram

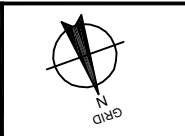
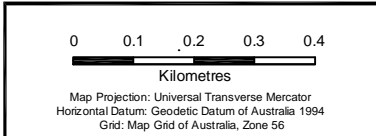
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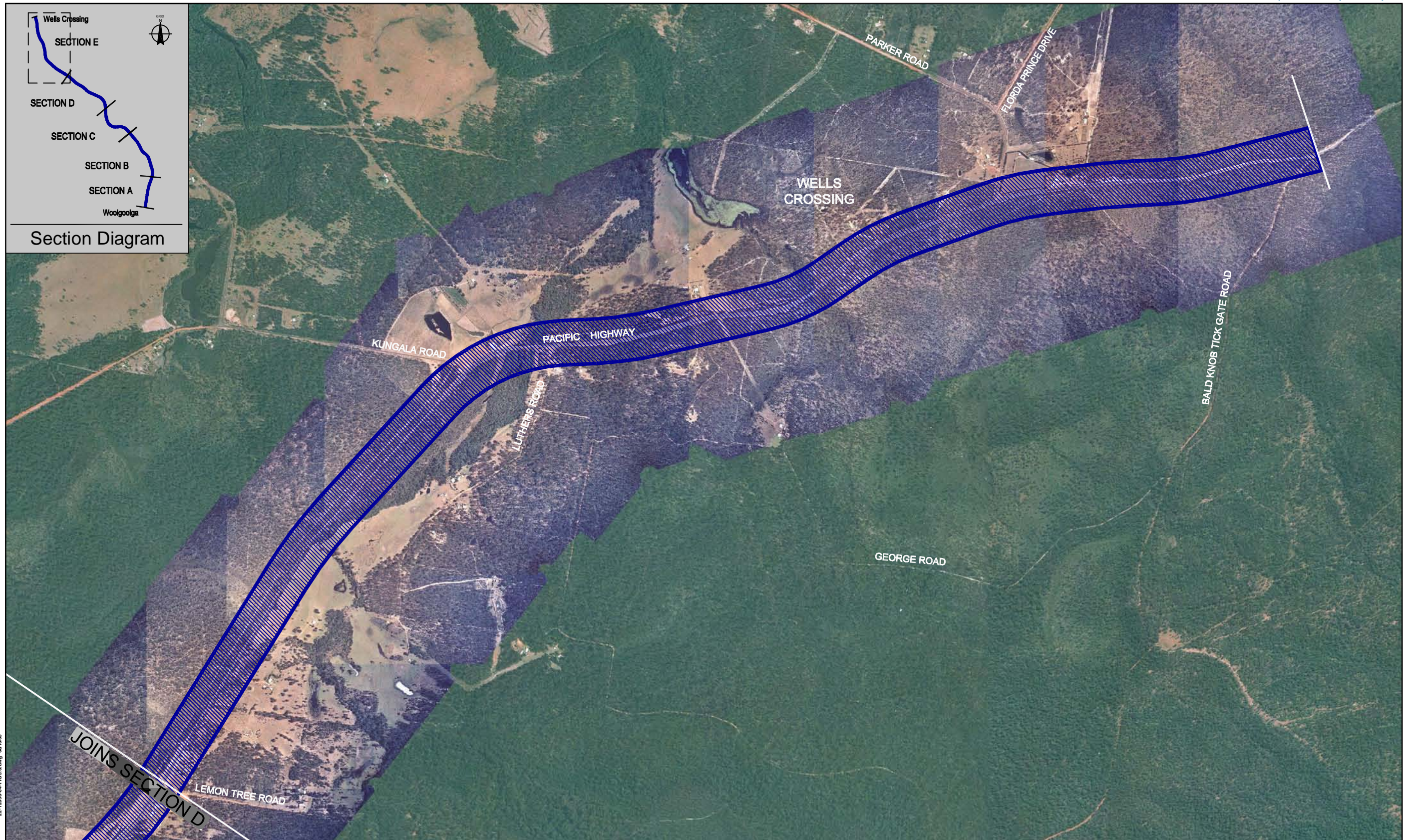


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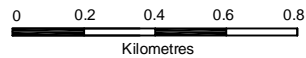
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 Blue Option - 250m wide Corridor

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Section Diagram

22-12058-04-FIG.5.8.dwg 06/10/05



Map Projection: Universal Transverse Mercator
Horizontal Datum: Geoidic Datum of Australia 1994
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LEGEND

Blue Option - 250m wide Corridor

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