

4. Further Investigations

4.1 Environmental

4.1.1 Ecological

Additional ecological investigations have been undertaken within and in the vicinity of Cairncross State Forest. The investigations comprised:

- ▶ Desktop extrapolation of previous field mapping within the Orange and refined Orange option corridors for:
 - Vegetation communities;
 - Endangered ecological communities;
 - Flora habitat values;
 - Fauna habitat values; and
- ▶ Field confirmation of all boundaries and opportunistic sightings of any threatened species.

The results of these investigations are presented in Figure 5.1 and Figure 5.2, and have been used to calculate the ecological impact areas for the adjusted Orange and modified refined Orange options (Appendix A).

No threatened species, or evidence of, were sighted during the fieldwork.

4.1.2 Noise

Further noise assessment has been undertaken for the adjusted Orange and modified refined Orange options in Section B. To determine the potential noise impact of the adjusted Orange and modified refined Orange options the weighted noise impact was calculated. This approach assesses the overall noise impacts of the options without applying mitigation measures.

The weighted noise impact results for the adjusted Orange and modified refined Orange options are presented in the criteria tables in Appendix A.



/221205704/ArGIS/Maps/PreRoute_Bill_Hill_Rd_Report/Fig4-1_Eco_Veg_EEC_150_202027.mxd 20 February 2007

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|---|---------------------------|-----------------------------------|--|---|--|--|--|----------------|---------------------------|---------------------|--------------------------|---------|---------------------|-----------------------------------|---|---------|-------------------------|------------|--|--|--------------------|----------|---------------|--|--|--|---------------|
| <p>1:20 000</p> <p>125 0 125 250</p> <p>Metres</p> <p>Map Projection: Universal Transverse Mercator Horizontal Datum: Geodetic Datum of Australia 1994 Grid: Map Grid of Australia, Zone 56</p> | | <p>GRID N</p> | | <p>Legend</p> <table border="0"> <tr> <td> Section Breaks</td> <td> Cleared - Scattered Trees</td> <td> Moist Slopes Forest</td> <td> Swamp Forest - Paperbark</td> </tr> <tr> <td> Main Rd</td> <td> Dry Ridgetop Forest</td> <td> Plantation/Cropland/Market Garden</td> <td> Swamp Forest - Swamp Mahogany/Paperbark</td> </tr> <tr> <td> Highway</td> <td> Moist Floodplain Forest</td> <td> Rainforest</td> <td> Totally Cleared/Open Pasture/WeedyFallow</td> </tr> <tr> <td></td> <td> Moist Gully Forest</td> <td> Riparian</td> <td> Confirmed EEC</td> </tr> <tr> <td></td> <td></td> <td></td> <td> Potential EEC</td> </tr> </table> | | | | Section Breaks | Cleared - Scattered Trees | Moist Slopes Forest | Swamp Forest - Paperbark | Main Rd | Dry Ridgetop Forest | Plantation/Cropland/Market Garden | Swamp Forest - Swamp Mahogany/Paperbark | Highway | Moist Floodplain Forest | Rainforest | Totally Cleared/Open Pasture/WeedyFallow | | Moist Gully Forest | Riparian | Confirmed EEC | | | | Potential EEC |
| Section Breaks | Cleared - Scattered Trees | Moist Slopes Forest | Swamp Forest - Paperbark | | | | | | | | | | | | | | | | | | | | | | | | |
| Main Rd | Dry Ridgetop Forest | Plantation/Cropland/Market Garden | Swamp Forest - Swamp Mahogany/Paperbark | | | | | | | | | | | | | | | | | | | | | | | | |
| Highway | Moist Floodplain Forest | Rainforest | Totally Cleared/Open Pasture/WeedyFallow | | | | | | | | | | | | | | | | | | | | | | | | |
| | Moist Gully Forest | Riparian | Confirmed EEC | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Potential EEC | | | | | | | | | | | | | | | | | | | | | | | | |

Spatial layers courtesy of Port Macquarie - Hastings Shire Council (2006), Kempsey Shire Council (2006), Roads & Traffic Authority, NSW Department of Lands, and Geoscience Australia.

Section B - Vegetation Communities
& Endangered Ecological Communities

Figure 4.1



/221205704/ArGIS/Maps/PreRoute_Bill_Hill_Rd_Report/Fig4-2_Eco_Veg&Habitat_L150_202027.mxd 20 February 2007

- Modified Refined Orange 150m Corridor
- Adjusted Orange 150m Corridor
- Refined Orange 150m Corridor

| | | | | |
|--|-------------------|--|---|--|
| <p>1:20 000</p> <p>Metres</p> <p>Map Projection: Universal Transverse Mercator Horizontal Datum: Geodetic Datum of Australia 1994 Grid: Map Grid of Australia, Zone 56</p> | <p>GRID N</p> | <p>Legend</p> <ul style="list-style-type: none"> Section Breaks Main Rd Highway | <p>Vegetation Ranking</p> <ul style="list-style-type: none"> high medium low | <p>Habitat Ranking</p> <ul style="list-style-type: none"> high medium low |
|--|-------------------|--|---|--|

Spatial layers courtesy of Port Macquarie - Hastings Shire Council (2006), Kempsey Shire Council (2006), Roads & Traffic Authority, NSW Department of Lands, and Geoscience Australia.

Section B - Vegetation & Habitat Rankings

Figure 4.2