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Proposed Development of  
**Crudine Ridge Wind Farm**  
Central New South Wales



**Environmental Assessment**

**Volume 2**

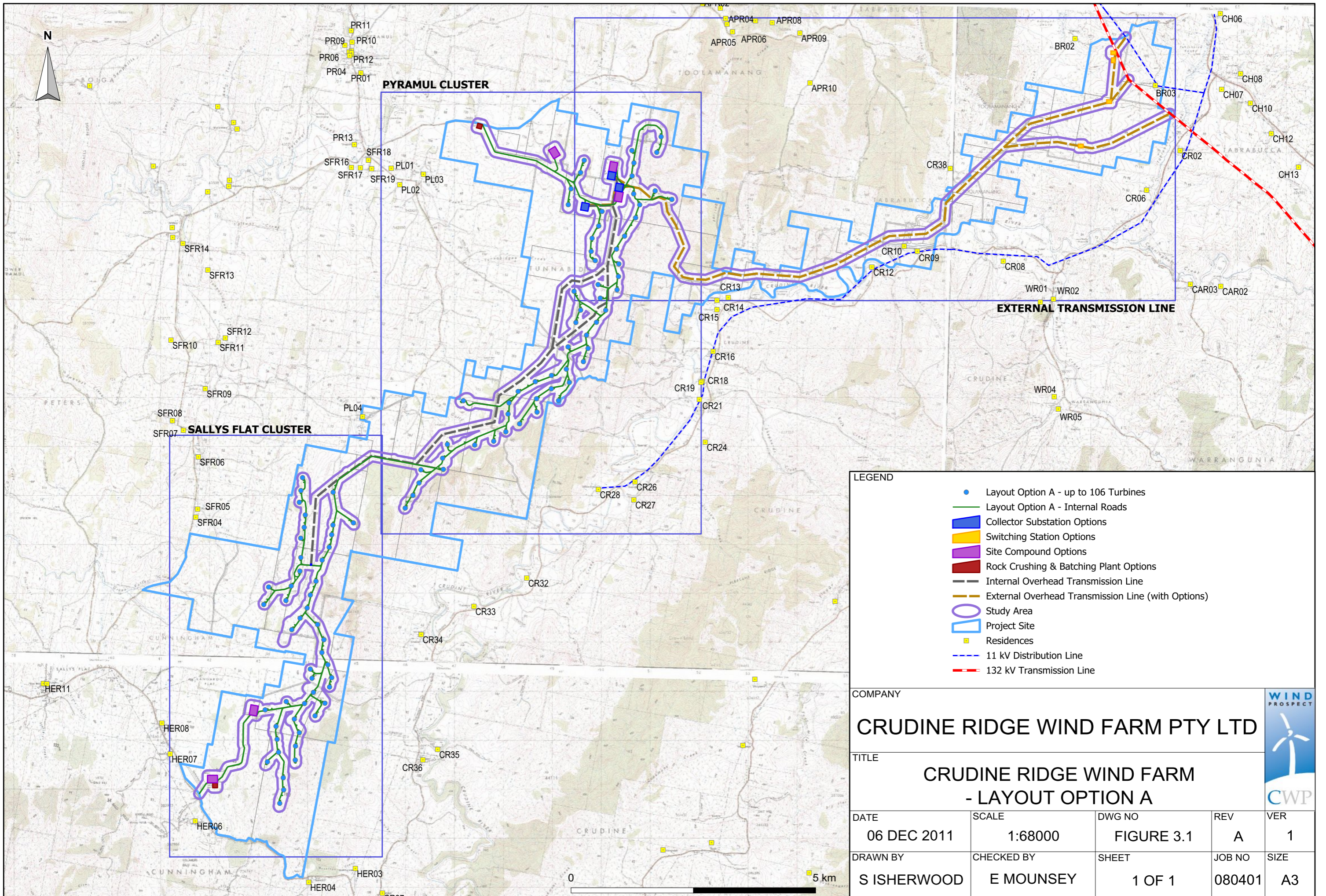
**Figures**

December 2012



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**LEGEND**

- Layout Option A - up to 106 Turbines
- Layout Option A - Internal Roads
- Collector Substation Options
- Switching Station Options
- Site Compound Options
- Rock Crushing & Batching Plant Options
- Internal Overhead Transmission Line
- External Overhead Transmission Line (with Options)
- Study Area
- Project Site
- Residences
- - - 11 kV Distribution Line
- - - 132 kV Transmission Line

COMPANY				
<b>CRUDINE RIDGE WIND FARM PTY LTD</b>				
TITLE				
<b>CRUDINE RIDGE WIND FARM - LAYOUT OPTION A</b>				
DATE	SCALE	DWG NO	REV	VER
06 DEC 2011	1:68000	FIGURE 3.1	A	1
DRAWN BY	CHECKED BY	SHEET	JOB NO	SIZE
S ISHERWOOD	E MOUNSEY	1 OF 1	080401	A3



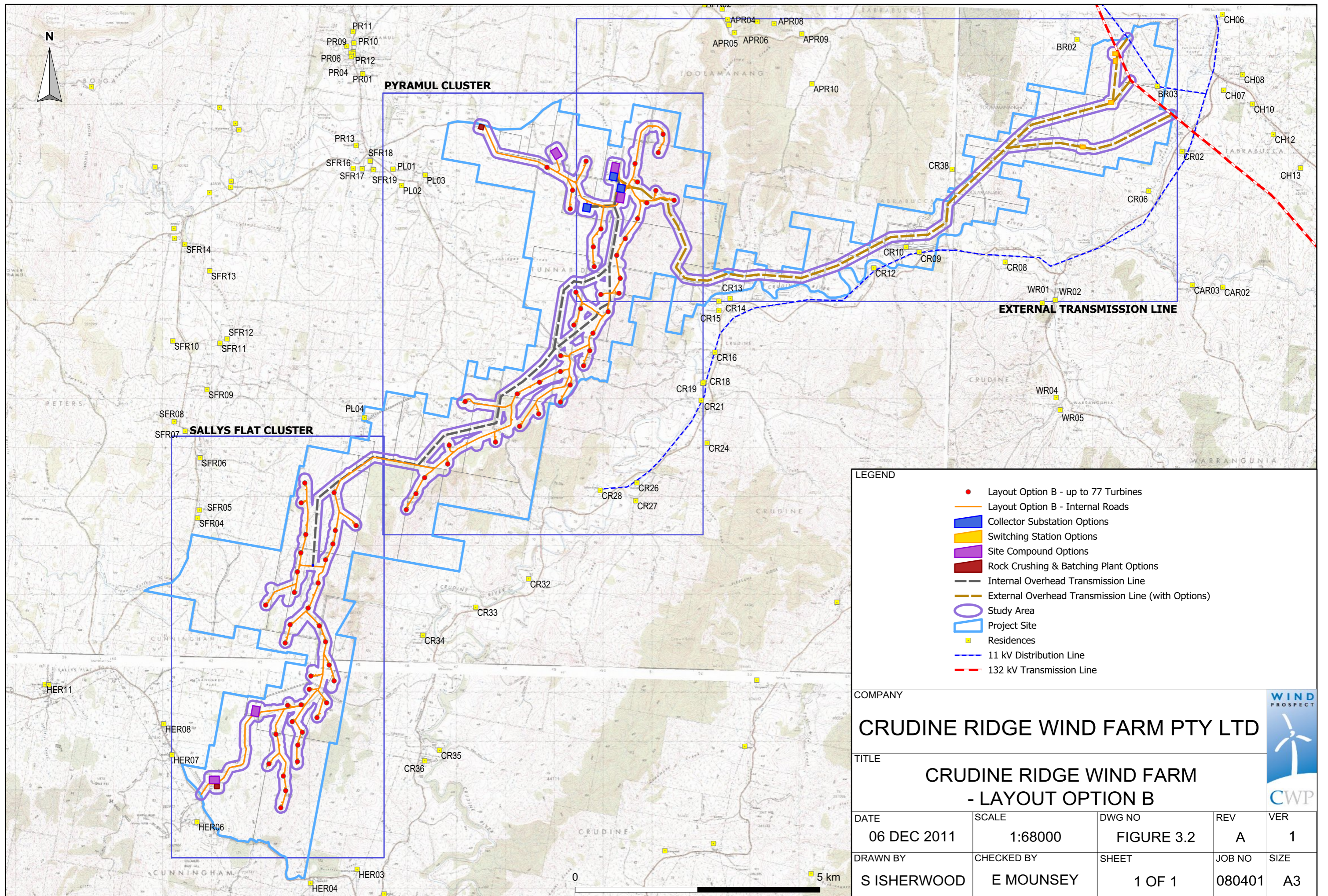
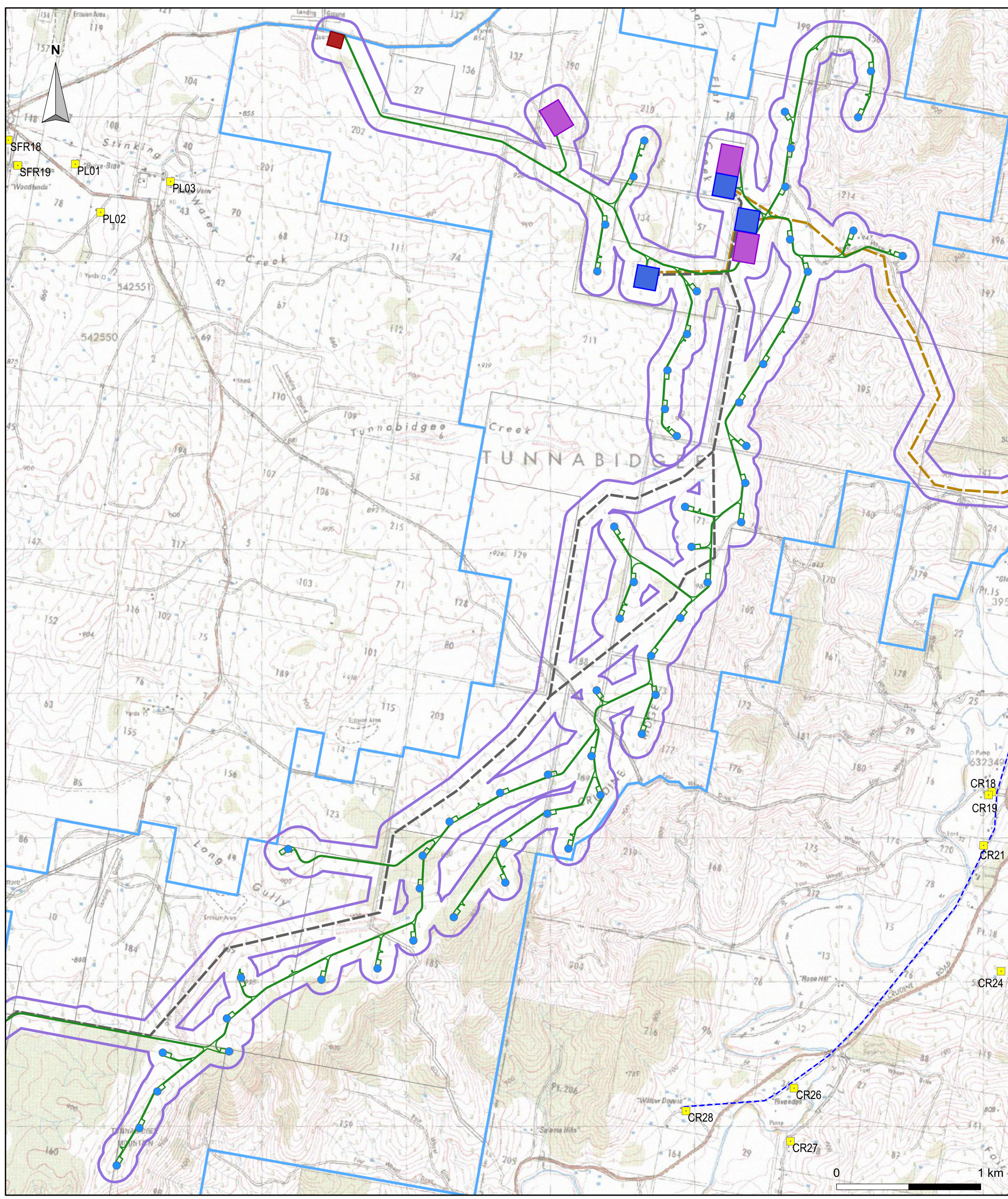


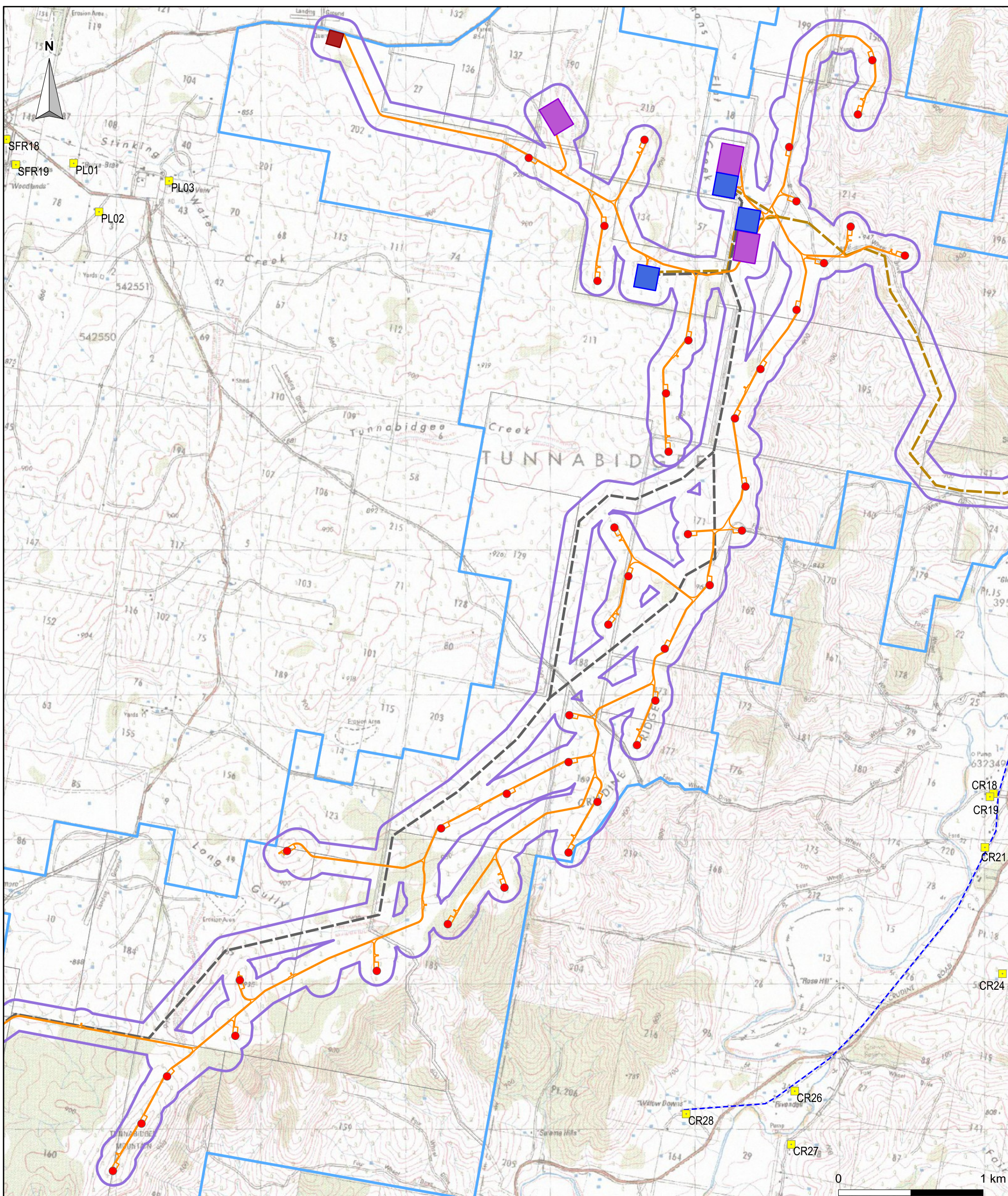


FIGURE 3.3: LAYOUT OPTION A - PYRAMUL CLUSTER



<b>LEGEND</b> <ul style="list-style-type: none"> <li><span style="color: blue;">●</span> Layout Option A - up to 106 Turbines</li> <li><span style="color: green;">—</span> Layout Option A - Internal Roads</li> <li><span style="color: blue;">■</span> Collector Substation Options</li> <li><span style="color: purple;">■</span> Site Compound Options</li> <li><span style="color: red;">■</span> Rock Crushing &amp; Batching Plant Options</li> <li><span style="color: black;">—</span> Internal Overhead Transmission Line</li> <li><span style="color: orange;">—</span> External Overhead Transmission Line (with Options)</li> <li><span style="color: purple;">○</span> Study Area</li> <li><span style="color: blue;">□</span> Project Site</li> <li><span style="color: yellow;">■</span> Residences</li> <li><span style="color: blue;">- - -</span> 11 kV Distribution Line</li> </ul>	<b>COMPANY</b>  <b>CRUDINE RIDGE WIND FARM PTY LTD</b>		  		
	<b>TITLE</b>  <b>LAYOUT OPTION A - PYRAMUL CLUSTER</b>				
<b>DATE</b> 06 DEC 2011	<b>SCALE</b> 1:26000	<b>DWG NO</b> FIGURE 3.3	<b>REV</b> A	<b>VER</b> 1	
<b>DRAWN BY</b> S ISHERWOOD	<b>CHECKED BY</b> E MOUNSEY	<b>SHEET</b> 1 OF 1	<b>JOB NO</b> 080401	<b>SIZE</b> A3	





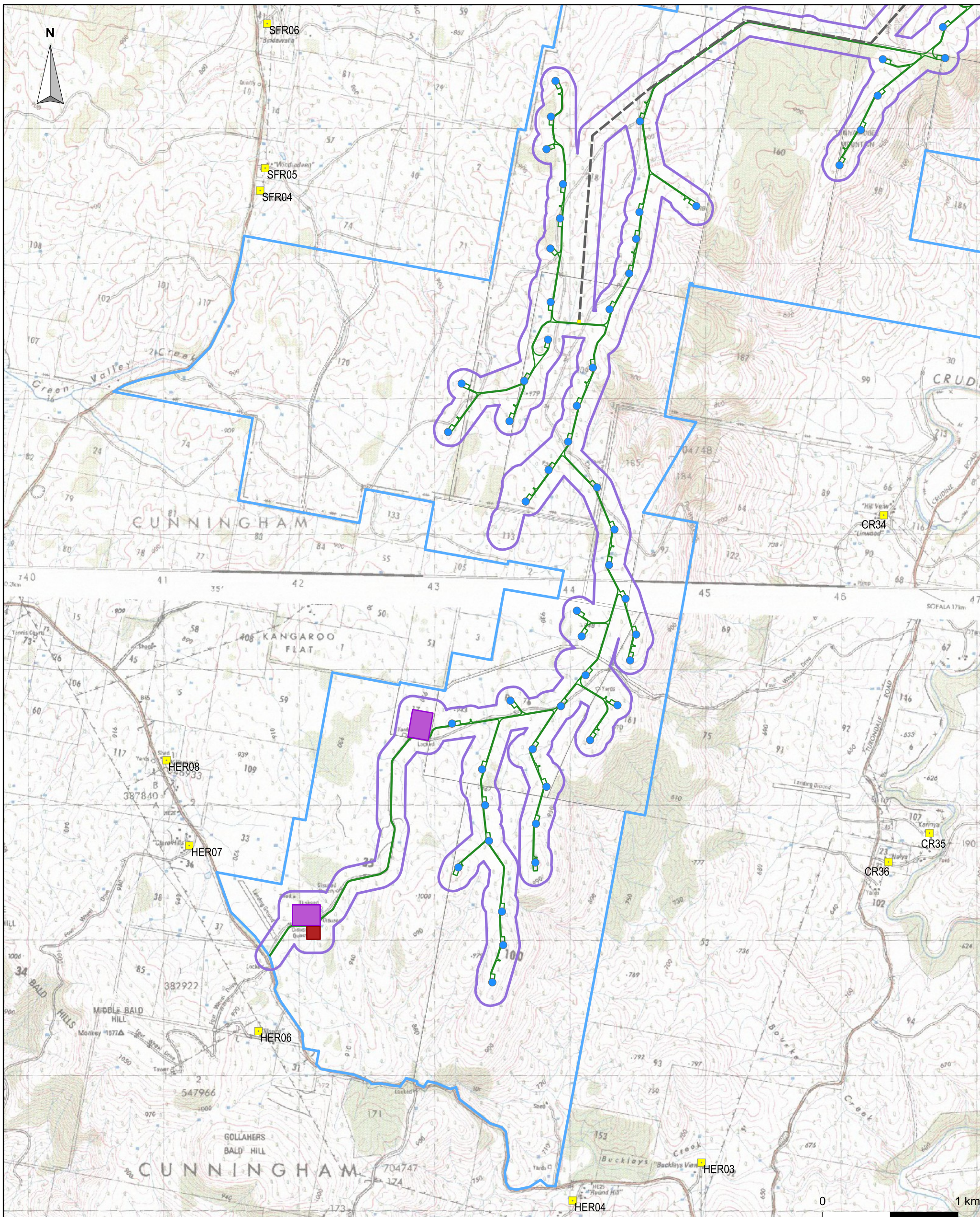
<b>LEGEND</b> <ul style="list-style-type: none"> <li><span style="color: red;">●</span> Layout Option B - up to 77 Turbines</li> <li><span style="color: orange;">—</span> Layout Option B - Internal Roads</li> <li><span style="background-color: blue; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Collector Substation Options</li> <li><span style="background-color: purple; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Site Compound Options</li> <li><span style="background-color: red; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Rock Crushing &amp; Batching Plant Options</li> <li><span style="border-bottom: 1px solid black; width: 20px; display: inline-block;"></span> Internal Overhead Transmission Line</li> <li><span style="border-bottom: 1px solid brown; width: 20px; display: inline-block;"></span> External Overhead Transmission Line (with Options)</li> <li><span style="border: 1px solid purple; border-radius: 50%; width: 15px; height: 15px; display: inline-block;"></span> Study Area</li> <li><span style="border: 1px solid blue; width: 20px; height: 10px; display: inline-block;"></span> Project Site</li> <li><span style="background-color: yellow; border: 1px solid black; width: 10px; height: 10px; display: inline-block;"></span> Residences</li> <li><span style="border-bottom: 1px dashed blue; width: 20px; display: inline-block;"></span> 11 kV Distribution Line</li> </ul>	<b>COMPANY</b> <p style="text-align: center; font-size: 1.2em;"><b>CRUDINE RIDGE WIND FARM PTY LTD</b></p>		 		
	<b>TITLE</b> <p style="text-align: center; font-size: 1.2em;"><b>LAYOUT OPTION B - PYRAMUL CLUSTER</b></p>				
<b>DATE</b> <p style="text-align: center;">06 DEC 2011</p>	<b>SCALE</b> <p style="text-align: center;">1:26000</p>	<b>DWG NO</b> <p style="text-align: center;">FIGURE 3.4</p>	<b>REV</b> <p style="text-align: center;">A</p>	<b>VER</b> <p style="text-align: center;">1</p>	
<b>DRAWN BY</b> <p style="text-align: center;">S ISHERWOOD</p>	<b>CHECKED BY</b> <p style="text-align: center;">E MOUNSEY</p>	<b>SHEET</b> <p style="text-align: center;">1 OF 1</p>	<b>JOB NO</b> <p style="text-align: center;">080401</p>	<b>SIZE</b> <p style="text-align: center;">A3</p>	

FIGURE 3.5: LAYOUT OPTION A - SALLYS FLAT CLUSTER



- LEGEND**
- Layout Option A - up to 106 Turbines
  - Layout Option A - Internal Roads
  - Secondary Collector Substation  
(Located at the southern terminal of the Internal Overhead Transmission Line)
  - Site Compound Options
  - Rock Crushing & Batching Plant Options
  - Internal Overhead Transmission Line
  - Study Area
  - Project Site
  - Residences

COMPANY

**CRUDINE RIDGE WIND FARM PTY LTD**

TITLE

**LAYOUT OPTION A - SALLYS FLAT CLUSTER**

DATE

06 DEC 2011

SCALE

1:27000

DWG NO

FIGURE 3.5

REV/VER

A1

DRAWN BY

S ISHERWOOD

CHECKED BY

E MOUNSEY

SHEET

1 OF 1

JOB NO

080401

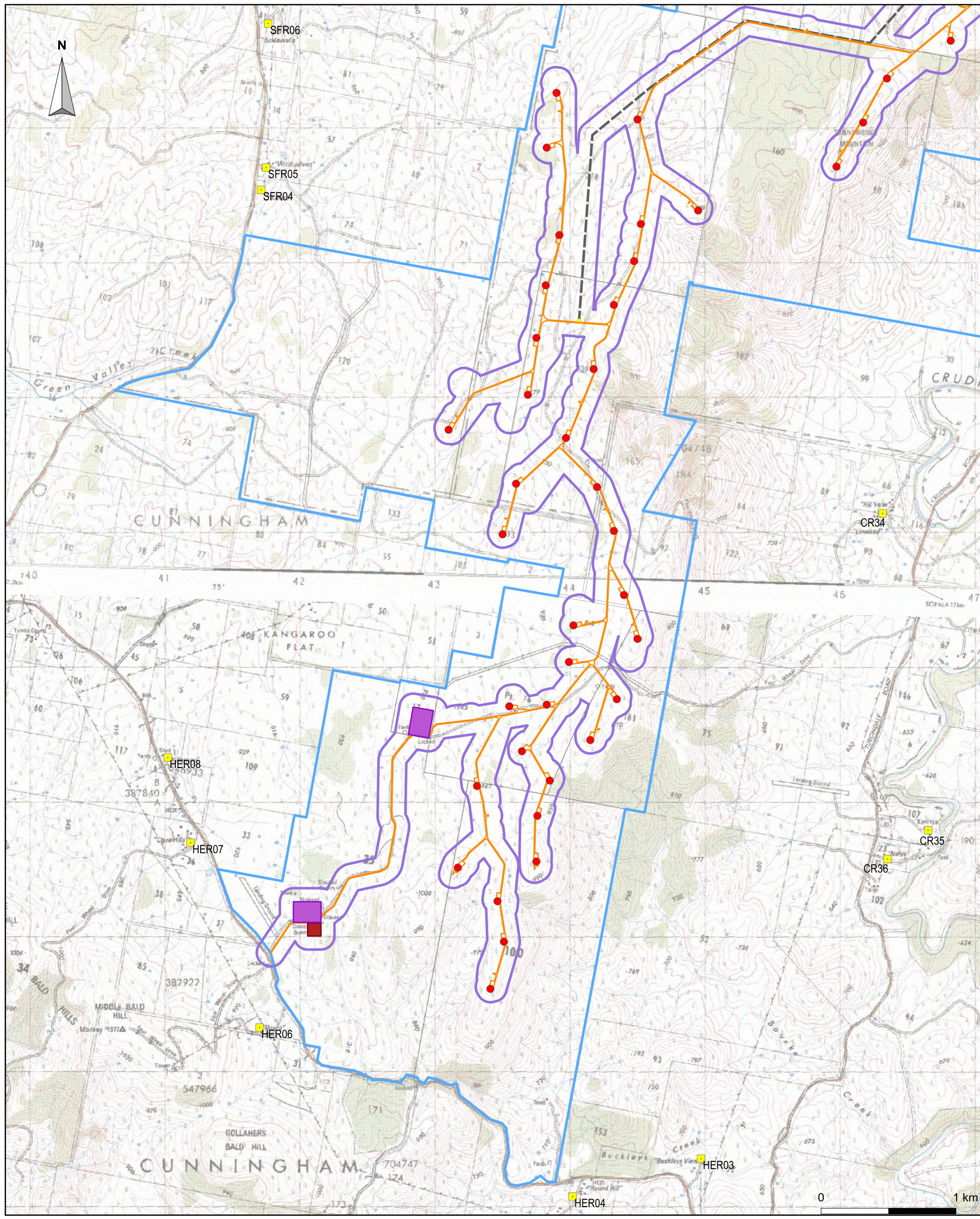
SIZE

A3





FIGURE 3.6: LAYOUT OPTION B - SALLYS FLAT CLUSTER

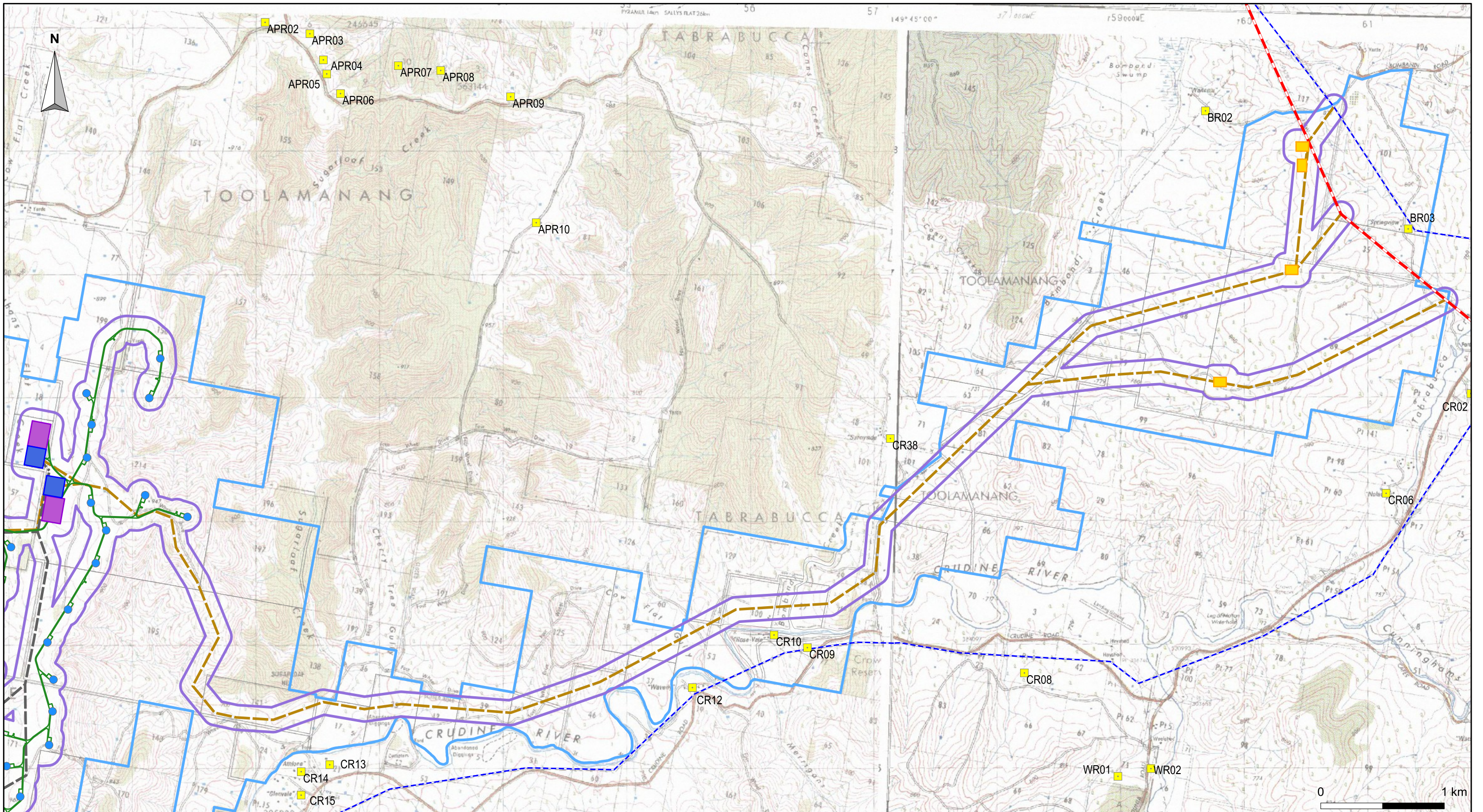


**LEGEND**

- Layout Option B - up to 77 Turbines
- Layout Option B - Internal Roads
- Secondary Collector Substation  
(Located at the southern terminal of the Internal Overhead Transmission Line)
- Site Compound Options
- Rock Crushing & Batching Plant Options
- Internal Overhead Transmission Line
- Study Area
- Project Site
- Residences

<b>COMPANY</b>				
<b>CRUDINE RIDGE WIND FARM PTY LTD</b>				
<b>TITLE</b>				
<b>LAYOUT OPTION B - SALLYS FLAT CLUSTER</b>				
<b>DATE</b>	<b>SCALE</b>	<b>DWG NO</b>	<b>REV/VER</b>	
06 DEC 2011	1:27000	FIGURE 3.6	A1	
<b>DRAWN BY</b>	<b>CHECKED BY</b>	<b>SHEET</b>	<b>JOB NO</b>	<b>SIZE</b>
S ISHERWOOD	E MOUNSEY	1 OF 1	080401	A3





LEGEND

- Layout Option A - up to 106 Turbines
- Layout Option A - Internal Roads
- Collector Substation Options
- Switching Station Options
- Site Compound Options
- Internal Overhead Transmission Line
- External Overhead Transmission Line (with Options)
- 11 kV Distribution Line
- 132 kV Transmission Line
- Study Area
- Project Site
- Residences

COMPANY

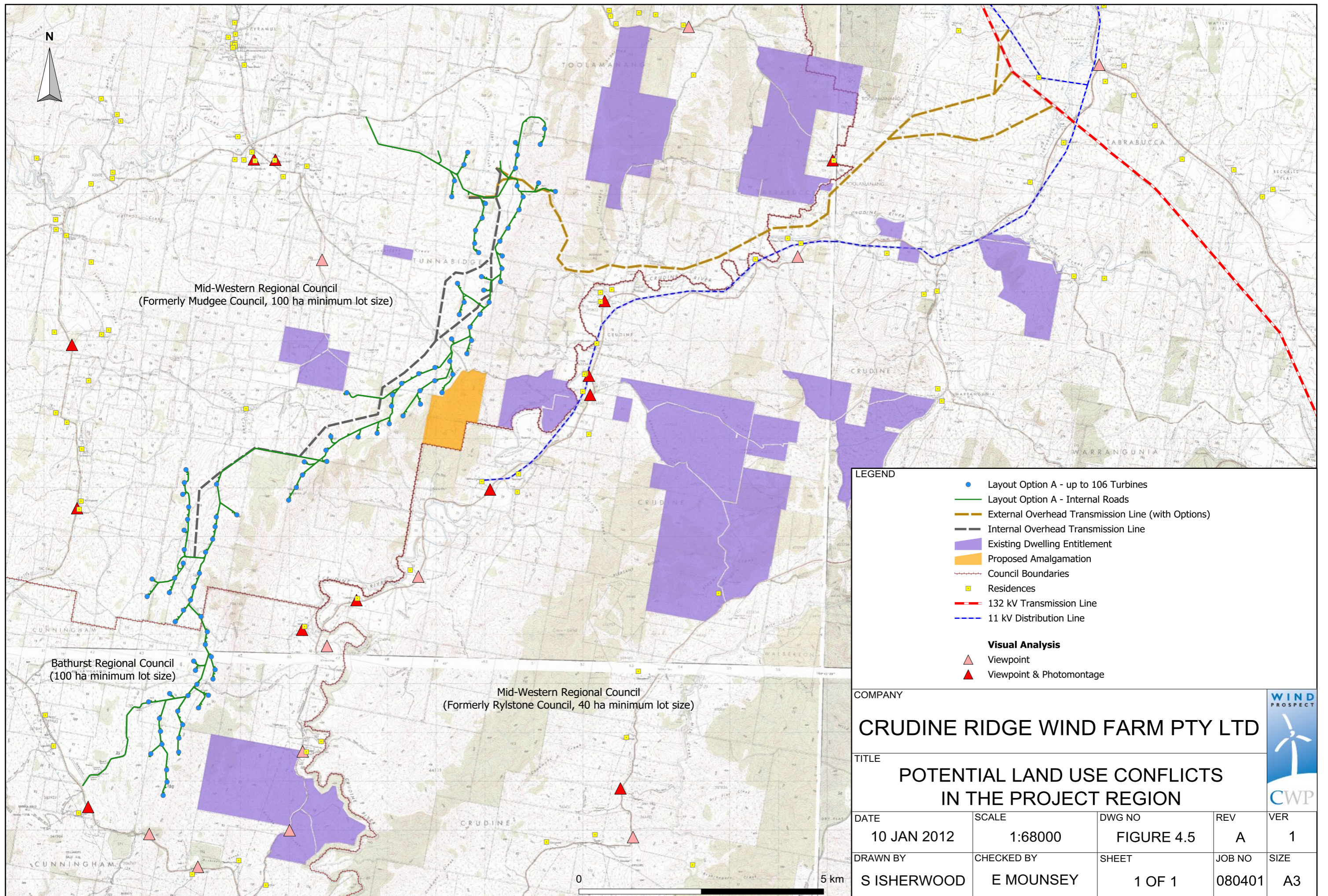
**CRUDINE RIDGE WIND FARM PTY LTD**

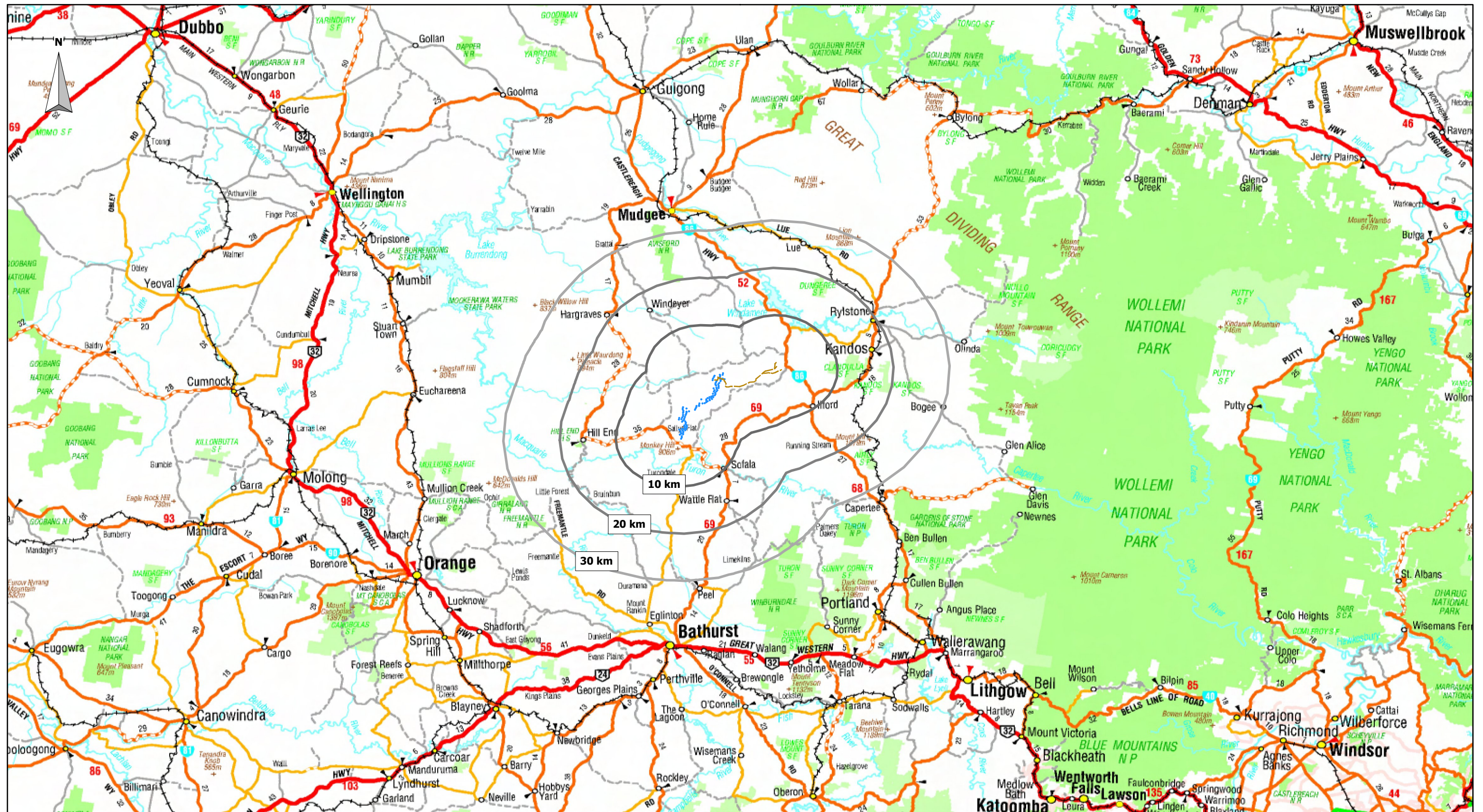
TITLE

**EXTERNAL TRANSMISSION LINE**

DATE	SCALE	DWG NO	REV	VER
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DRAWN BY	CHECKED BY	SHEET	JOB NO	SIZE
S ISHERWOOD	E MOUNSEY	1 OF 1	080401	A3

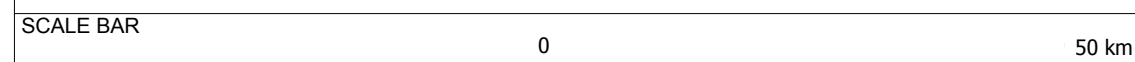






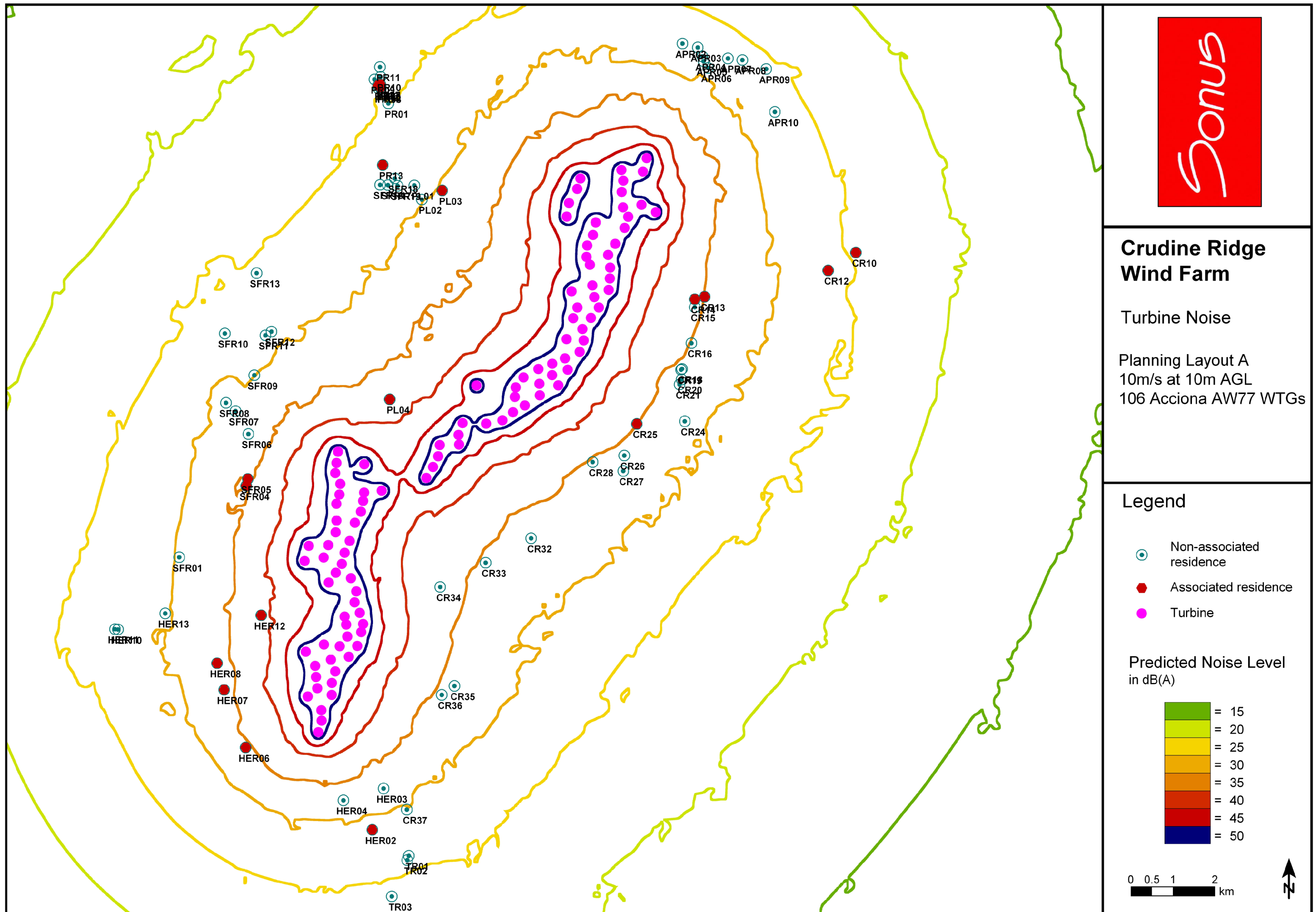


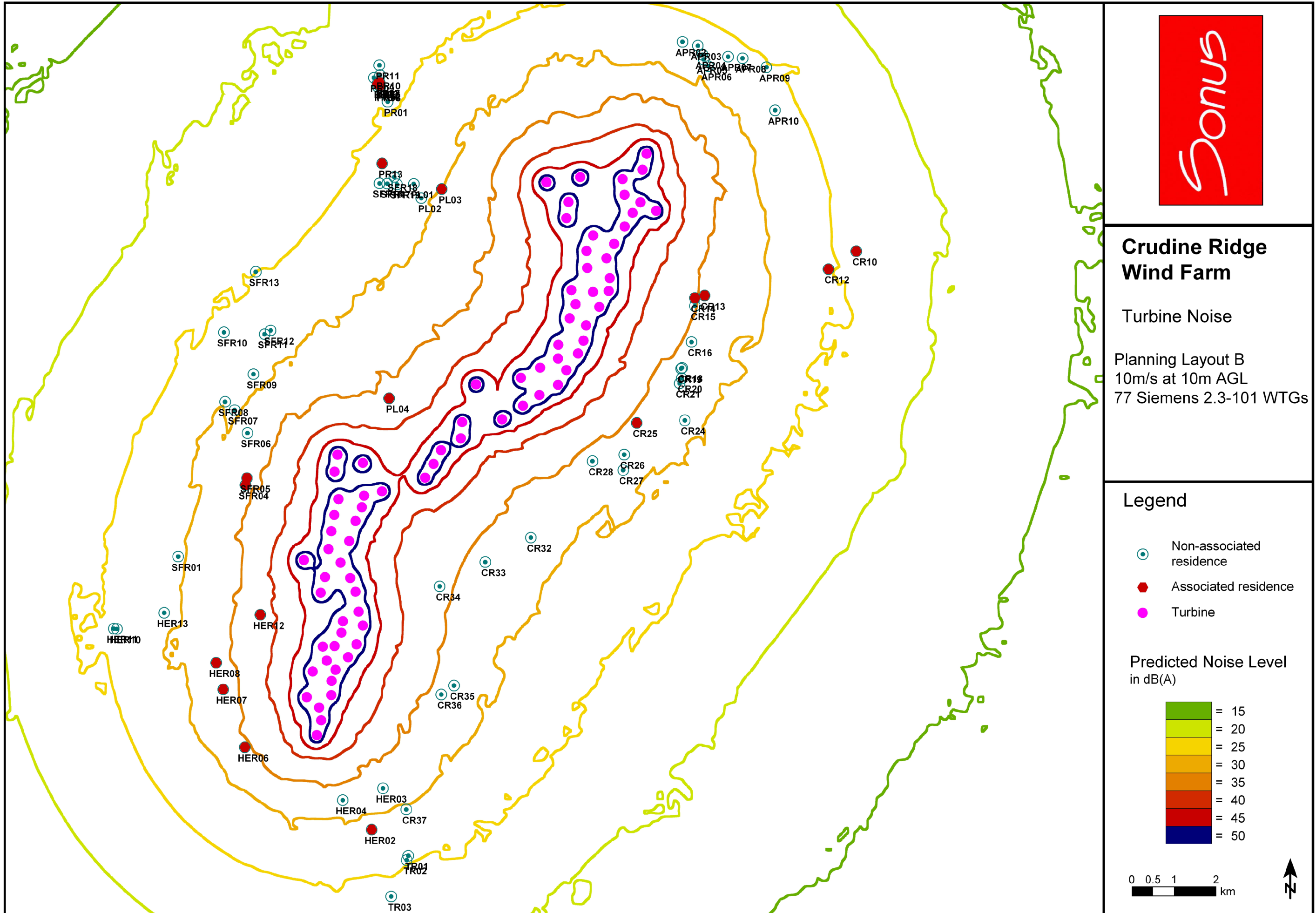
**LEGEND**

- Layout Option A - up to 106 Turbines
- External Overhead Transmission Line (with Options)

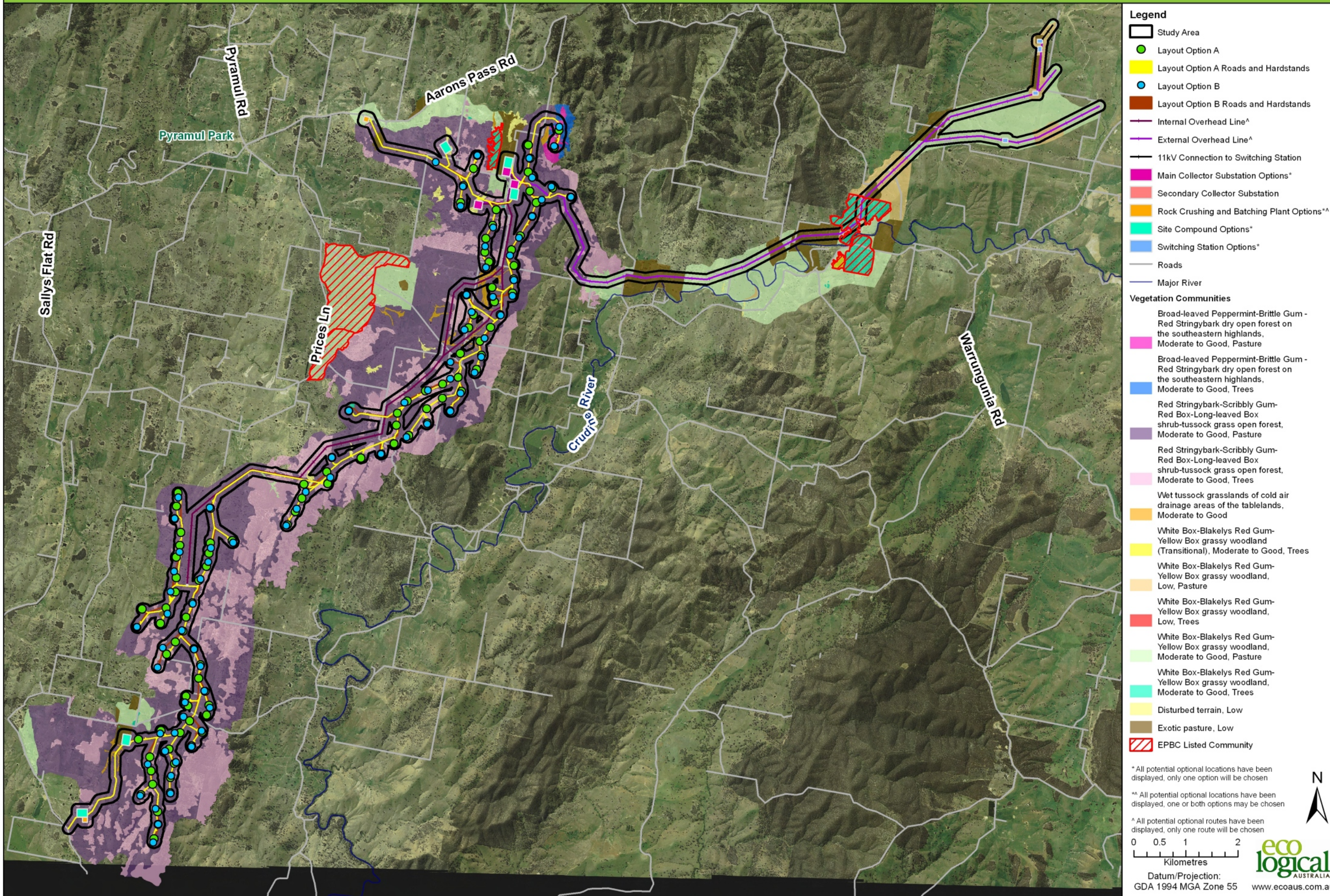


COMPANY					 
<p style="text-align: center;"><b>CRUDINE RIDGE WIND FARM PTY LTD</b></p>					
TITLE					
<p style="text-align: center;"><b>PROXIMITY OF NATURE RESERVES AND STATE FORESTS TO THE PROJECT</b></p>					
DATE	SCALE	DWG NO	REV	VER	
10 OCT 2011	1:700000	FIGURE 4.6	A	1	
DRAWN BY	CHECKED BY	SHEET	JOB NO	SIZE	
S ISHERWOOD	E MOUNSEY	1 OF 1	080401	A3	





### Vegetation Communities



**Legend**

- Study Area
- Layout Option A
- Layout Option A Roads and Hardstands
- Layout Option B
- Layout Option B Roads and Hardstands
- Internal Overhead Line<sup>^</sup>
- External Overhead Line<sup>^</sup>
- 11kV Connection to Switching Station
- Main Collector Substation Options<sup>\*</sup>
- Secondary Collector Substation
- Rock Crushing and Batching Plant Options<sup>\*\*</sup>
- Site Compound Options<sup>\*</sup>
- Switching Station Options<sup>\*</sup>
- Roads
- Major River

**Vegetation Communities**

- Broad-leaved Peppermint-Brittle Gum - Red Stringybark dry open forest on the southeastern highlands, Moderate to Good, Pasture
- Broad-leaved Peppermint-Brittle Gum - Red Stringybark dry open forest on the southeastern highlands, Moderate to Good, Trees
- Red Stringybark-Scribbly Gum- Red Box-Long-leaved Box shrub-tussock grass open forest, Moderate to Good, Pasture
- Red Stringybark-Scribbly Gum- Red Box-Long-leaved Box shrub-tussock grass open forest, Moderate to Good, Trees
- Wet tussock grasslands of cold air drainage areas of the tablelands, Moderate to Good
- White Box-Blakelys Red Gum- Yellow Box grassy woodland (Transitional), Moderate to Good, Trees
- White Box-Blakelys Red Gum- Yellow Box grassy woodland, Low, Pasture
- White Box-Blakelys Red Gum- Yellow Box grassy woodland, Low, Trees
- White Box-Blakelys Red Gum- Yellow Box grassy woodland, Moderate to Good, Pasture
- White Box-Blakelys Red Gum- Yellow Box grassy woodland, Moderate to Good, Trees
- Disturbed terrain, Low
- Exotic pasture, Low
- EPBC Listed Community

<sup>\*</sup> All potential optional locations have been displayed, only one option will be chosen

<sup>\*\*</sup> All potential optional locations have been displayed, one or both options may be chosen

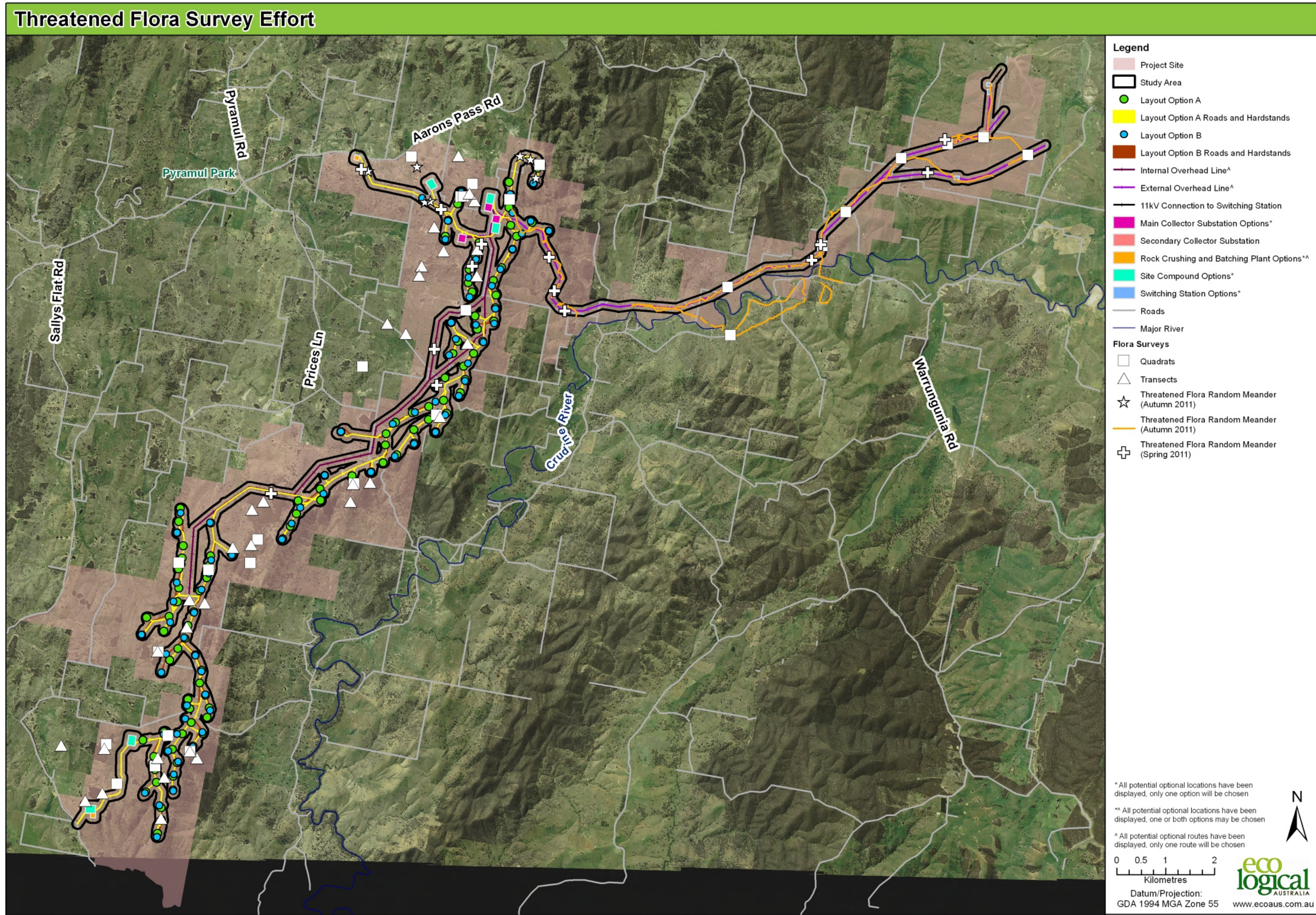
<sup>^</sup> All potential optional routes have been displayed, only one route will be chosen

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Kilometres

Datum/Projection:  
GDA 1994 MGA Zone 55

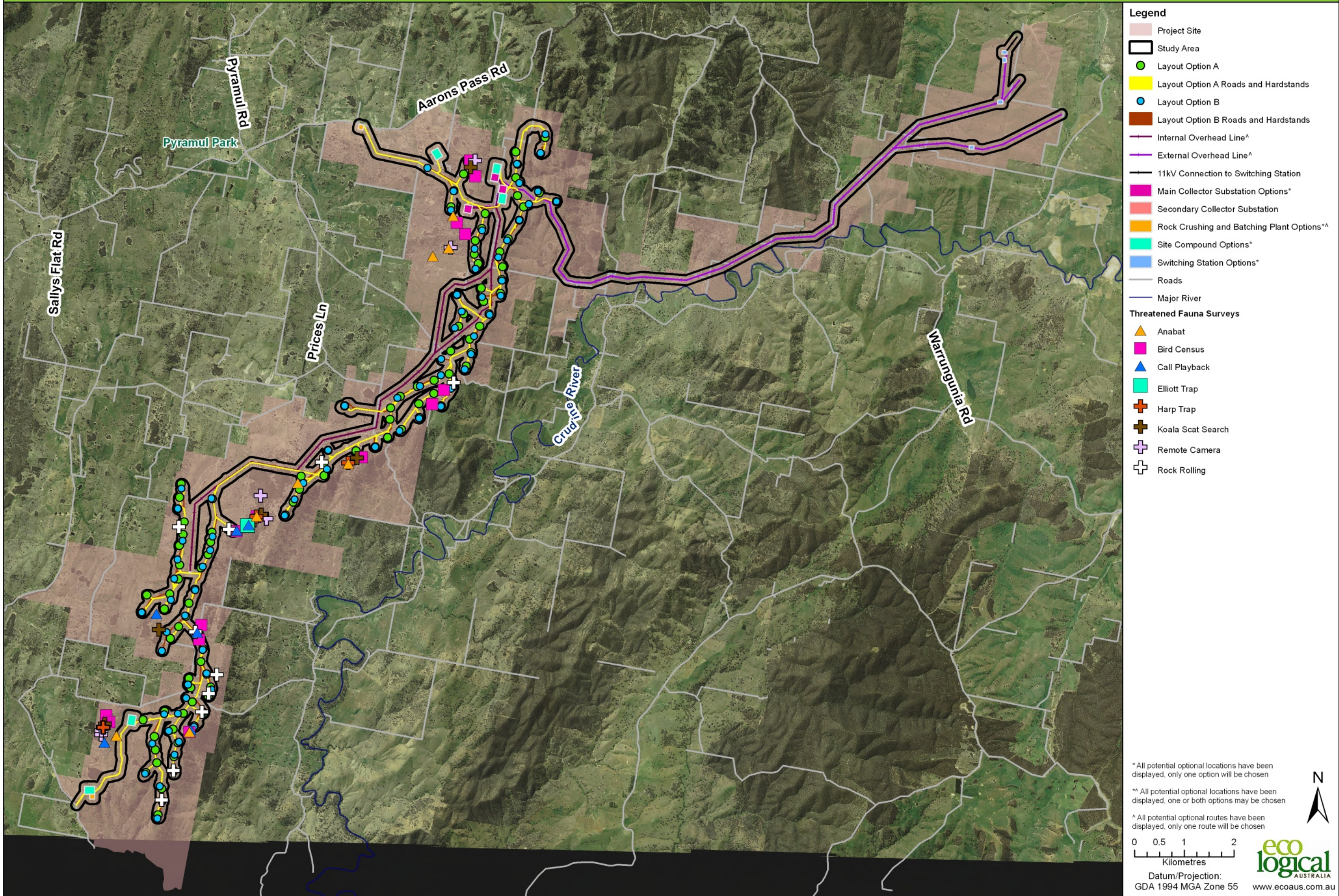
eco logical AUSTRALIA  
www.ecoaus.com.au

Prepared by: VH  
Approved by: ECS  
Date: 08/02/2012





### Threatened Fauna Survey Effort



- Legend**
- Project Site
  - Study Area
  - Layout Option A
  - Layout Option A Roads and Hardstands
  - Layout Option B
  - Layout Option B Roads and Hardstands
  - Internal Overhead Line<sup>^</sup>
  - External Overhead Line<sup>^</sup>
  - 11kV Connection to Switching Station
  - Main Collector Substation Options<sup>\*</sup>
  - Secondary Collector Substation
  - Rock Crushing and Batching Plant Options<sup>\*\*</sup>
  - Site Compound Options<sup>\*</sup>
  - Switching Station Options<sup>\*</sup>
  - Roads
  - Major River
- Threatened Fauna Surveys**
- Anabat
  - Bird Census
  - Call Playback
  - Elliott Trap
  - Harp Trap
  - Koala Scat Search
  - Remote Camera
  - Rock Rolling

\* All potential optional locations have been displayed, only one option will be chosen

\*\* All potential optional locations have been displayed, one or both options may be chosen

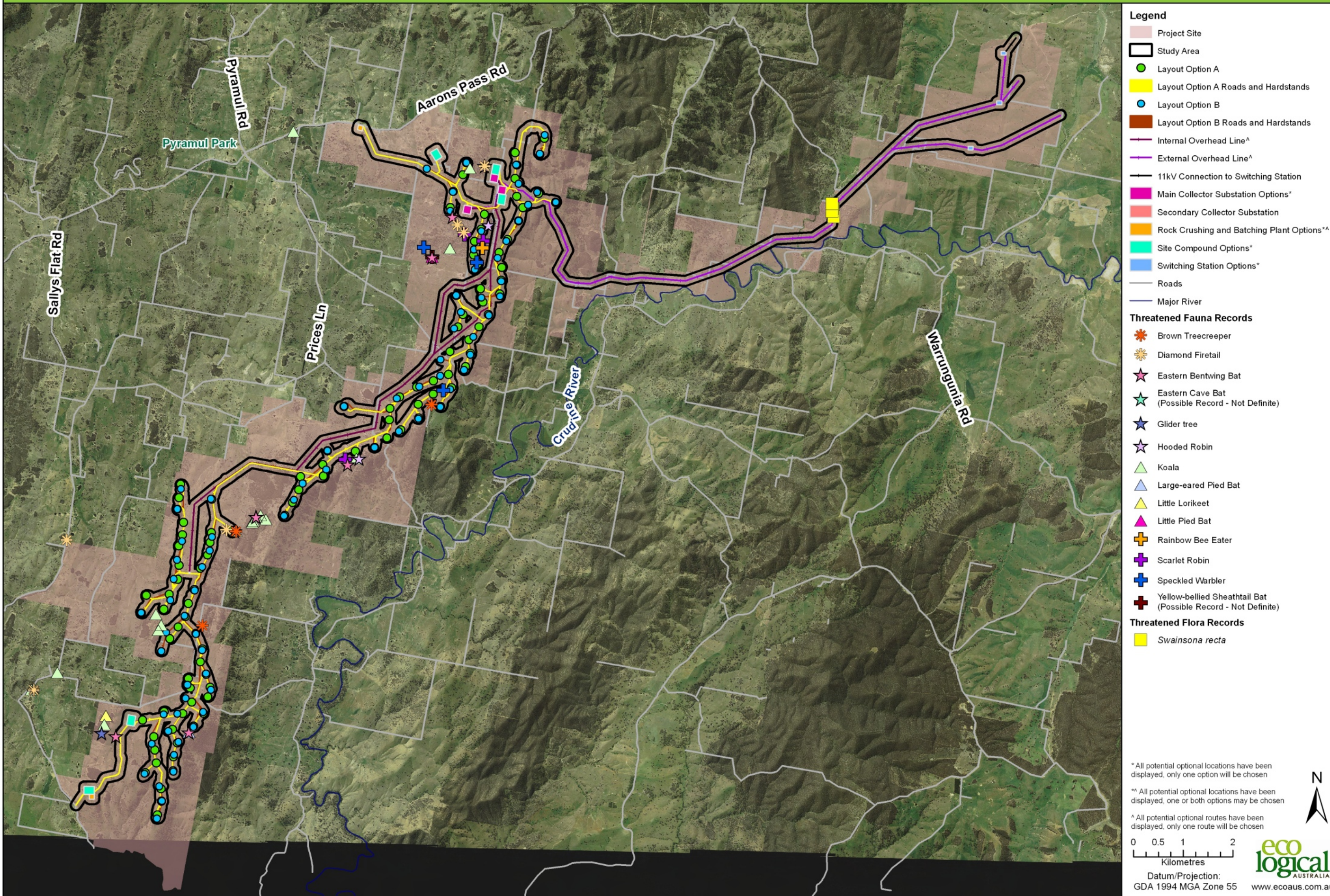
<sup>^</sup> All potential optional routes have been displayed, only one route will be chosen

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Kilometres

Datum/Projection:  
GDA 1994 MGA Zone 55

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### Threatened Species Records



- Legend**
- Project Site
  - Study Area
  - Layout Option A
  - Layout Option A Roads and Hardstands
  - Layout Option B
  - Layout Option B Roads and Hardstands
  - Internal Overhead Line<sup>^</sup>
  - External Overhead Line<sup>^</sup>
  - 11kV Connection to Switching Station
  - Main Collector Substation Options<sup>\*</sup>
  - Secondary Collector Substation
  - Rock Crushing and Batching Plant Options<sup>^\*</sup>
  - Site Compound Options<sup>\*</sup>
  - Switching Station Options<sup>\*</sup>
  - Roads
  - Major River
- Threatened Fauna Records**
- Brown Treecreeper
  - Diamond Firetail
  - Eastern Bentwing Bat
  - Eastern Cave Bat (Possible Record - Not Definite)
  - Glider tree
  - Hooded Robin
  - Koala
  - Large-eared Pied Bat
  - Little Lorikeet
  - Little Pied Bat
  - Rainbow Bee Eater
  - Scarlet Robin
  - Speckled Warbler
  - Yellow-bellied Sheath-tail Bat (Possible Record - Not Definite)
- Threatened Flora Records**
- Swainsona recta*

\* All potential optional locations have been displayed, only one option will be chosen

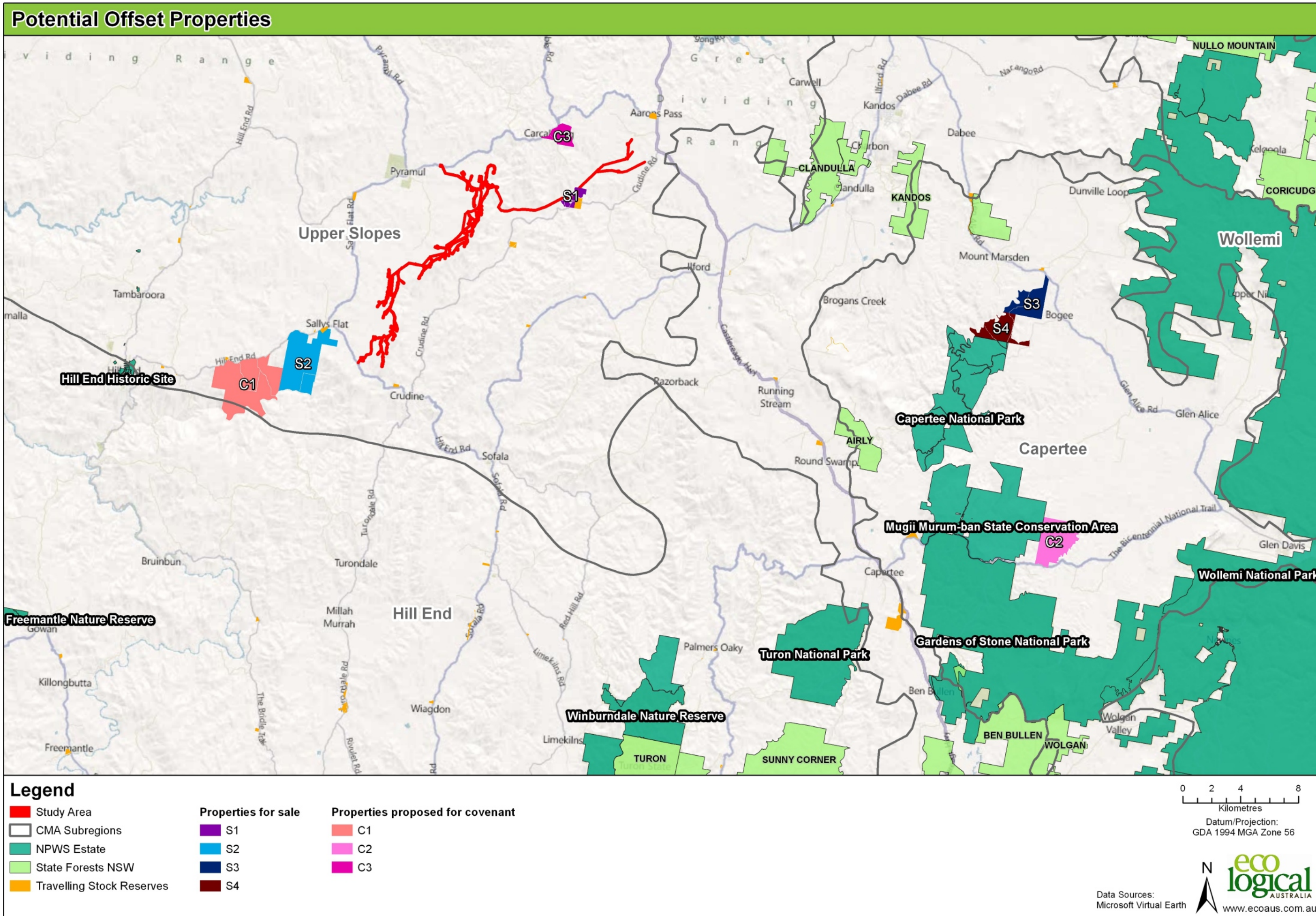
\*\* All potential optional locations have been displayed, one or both options may be chosen

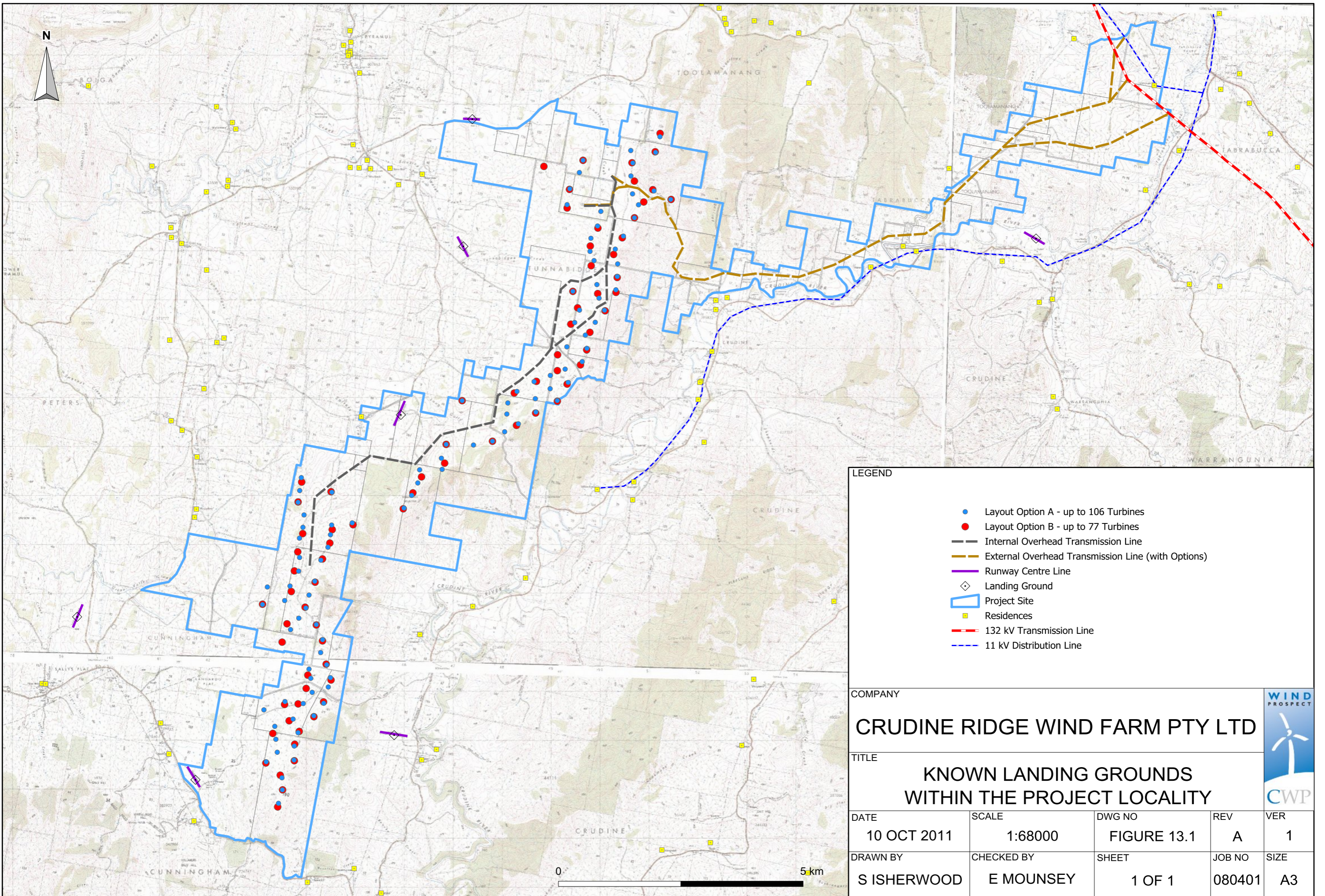
<sup>^</sup> All potential optional routes have been displayed, only one route will be chosen

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Kilometres

Datum/Projection:  
GDA 1994 MGA Zone 55

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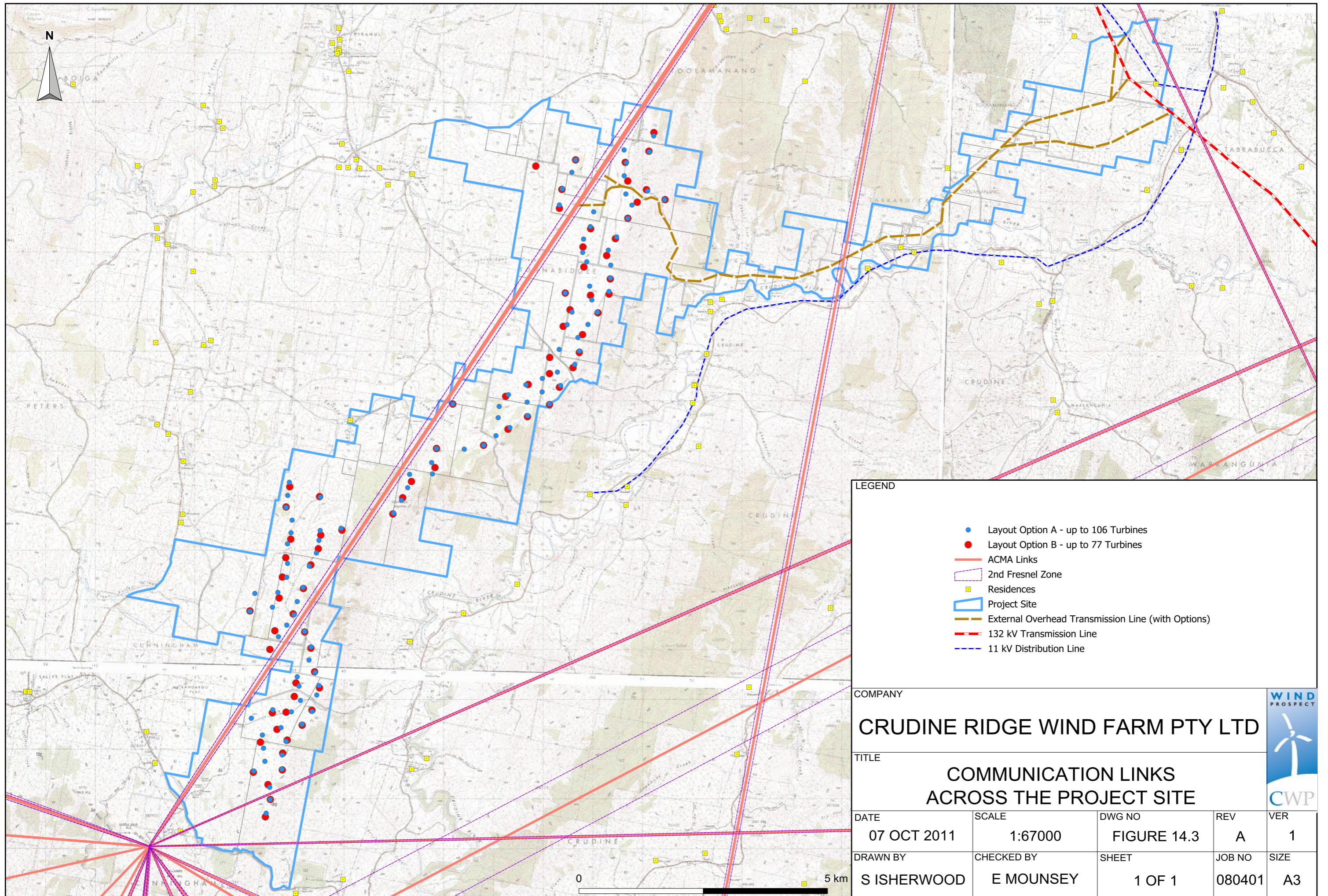


**LEGEND**

- Layout Option A - up to 106 Turbines
- Layout Option B - up to 77 Turbines
- Internal Overhead Transmission Line
- External Overhead Transmission Line (with Options)
- Runway Centre Line
- ◇ Landing Ground
- ▭ Project Site
- Residences
- 132 kV Transmission Line
- 11 kV Distribution Line



COMPANY				
<b>CRUDINE RIDGE WIND FARM PTY LTD</b>				
TITLE				
<b>KNOWN LANDING GROUNDS WITHIN THE PROJECT LOCALITY</b>				
DATE	SCALE	DWG NO	REV	VER
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DRAWN BY	CHECKED BY	SHEET	JOB NO	SIZE
S ISHERWOOD	E MOUNSEY	1 OF 1	080401	A3



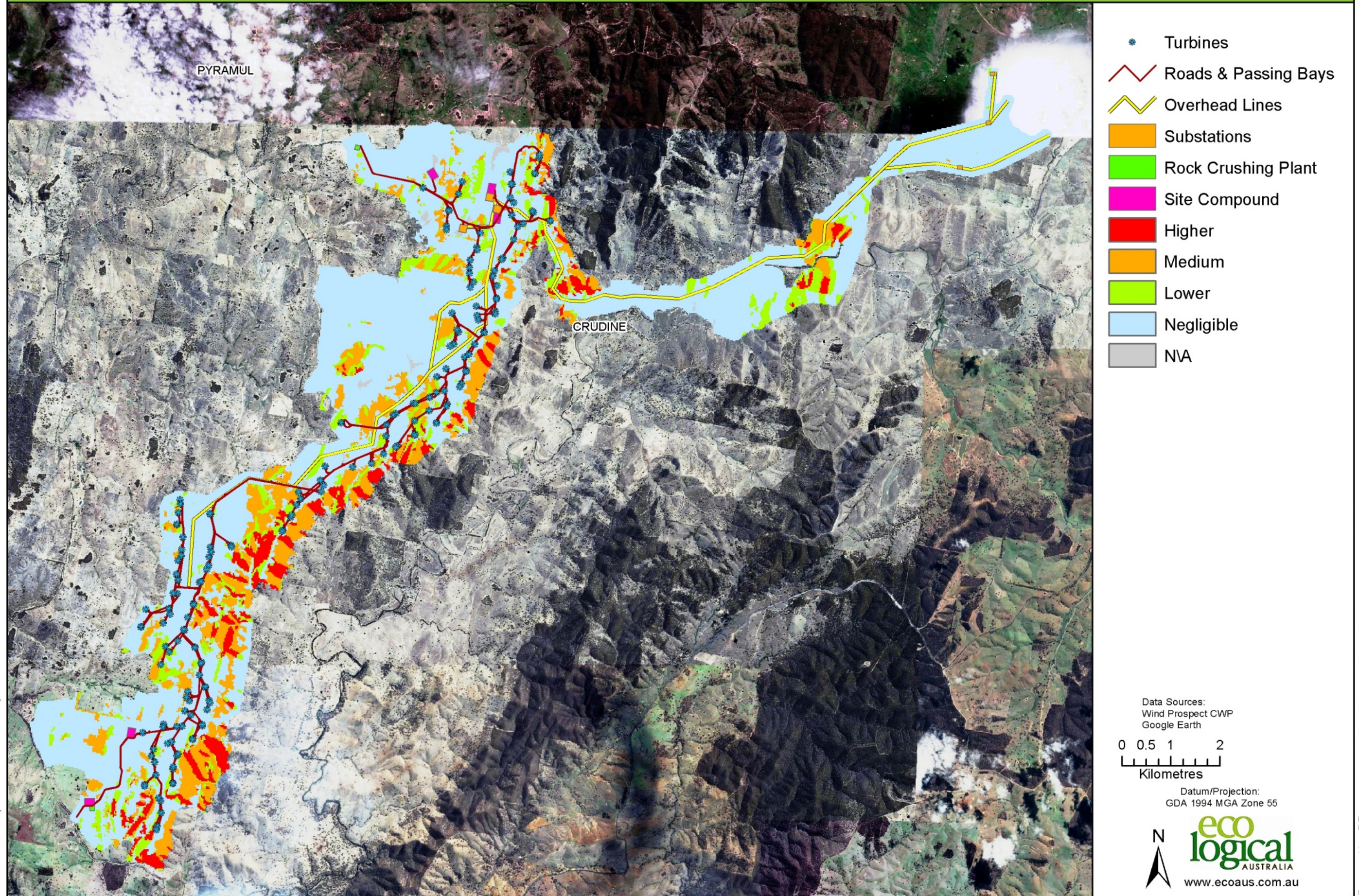


**LEGEND**

- Layout Option A - up to 106 Turbines
- Layout Option B - up to 77 Turbines
- ACMA Links
- - - 2nd Fresnel Zone
- Residences
- ▭ Project Site
- - - External Overhead Transmission Line (with Options)
- - - 132 kV Transmission Line
- - - 11 kV Distribution Line

COMPANY					
<b>CRUDINE RIDGE WIND FARM PTY LTD</b>				 	
TITLE					
<b>COMMUNICATION LINKS ACROSS THE PROJECT SITE</b>					
DATE	SCALE	DWG NO	REV	VER	
07 OCT 2011	1:67000	FIGURE 14.3	A	1	
DRAWN BY	CHECKED BY	SHEET	JOB NO	SIZE	
S ISHERWOOD	E MOUNSEY	1 OF 1	080401	A3	

**Figure 5: Bushfire Behaviour Potential**



Client: Wind Prospect CWP  
Project Number: 11ARMPLA-0011

Prepared by: DE  
Approved by: DC  
Status: Draft  
Date: 22/08/11

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