

# **VEGETATION ASSESSMENT**

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## **MODIFICATION 3 (OVERHEAD TRANSMISSION LINE) – CAPITAL II CAPITAL WIND FARM SOUTHERN TABLELANDS, NSW**

*prepared by*

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**September 2014**

**14/20**

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## **Document Reference**

Kevin Mills & Associates (2014). Vegetation Assessment, Modification 3 (Overhead Transmission Line) – Capital II, Capital Wind Farm, Sothern Tablelands, NSW. Report prepared for Infigen Energy, Sydney, October.

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## 1. INTRODUCTION

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Infigen Energy is proposing a modification to the approved Capital II Wind Farm. The proposal seeks to extend the approved overhead transmission line (OHL) for Capital II Wind Farm to the north to Lot B DP370961 and Lot 45 DP754877. The extension would be constructed parallel to and in close proximity to the existing OHL for the Capital Wind Farm.

The route was previously surveyed in 2005 and a report prepared by KMA for the original Capital Wind Farm OHL, which is now constructed. A vegetation map along with a fresh assessment of the vegetation is included in this report for the proposed OHL route. Particular attention is to be given to the presence and quality of native grassland. An assessment of native fauna is also undertaken, based largely on previous work and the recent site inspection.

Kevin Mills & Associates were engaged by Infigen Energy to undertake a field survey and prepare a vegetation assessment report covering the proposed overhead transmission line route. The route of the overhead transmission line is shown on **Figure 1**.

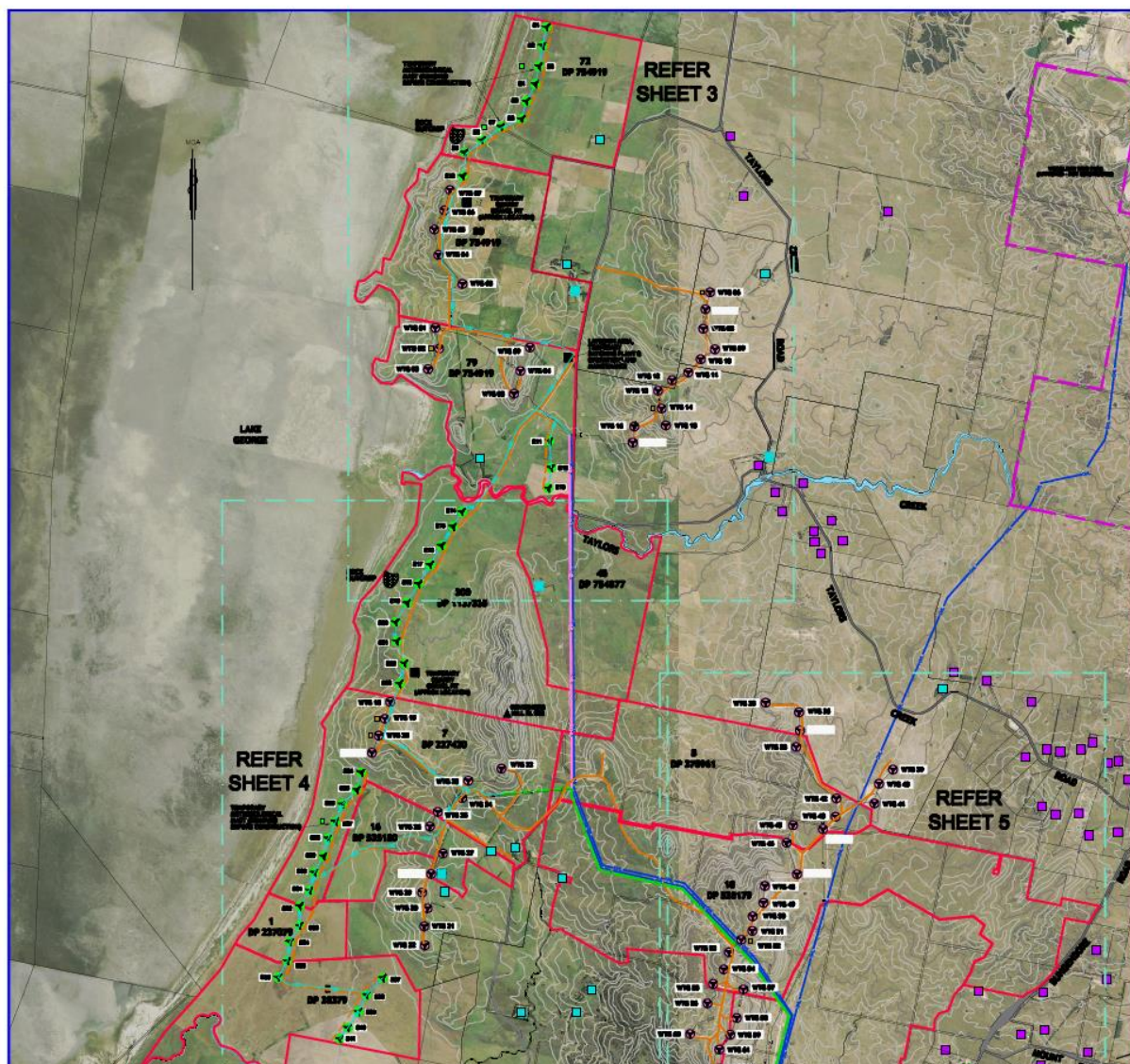
The features illustrated are the existing Capital Wind Farm and Capital II infrastructure. The primary purpose of this report is to prepare a description of the vegetation of the route, with particular attention given to identifying and mapping native grassland, should it occur on the route corridor.

## 2. SURVEY METHODS

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The consultant has been working on the Capital Wind Farm site for many years, so is very familiar with the general area, but a detailed vegetation description has not been prepared for this area. A field survey specifically targeting the overhead transmission line route was undertaken on 30 September 2014. The purpose was to identify the vegetation types and the presence of native grassland, including that which could meet the criteria as an endangered ecological community, specified in either the *Threatened Species Conservation Act 1995* (NSW) (TSC Act) or the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth) (EPBC Act).

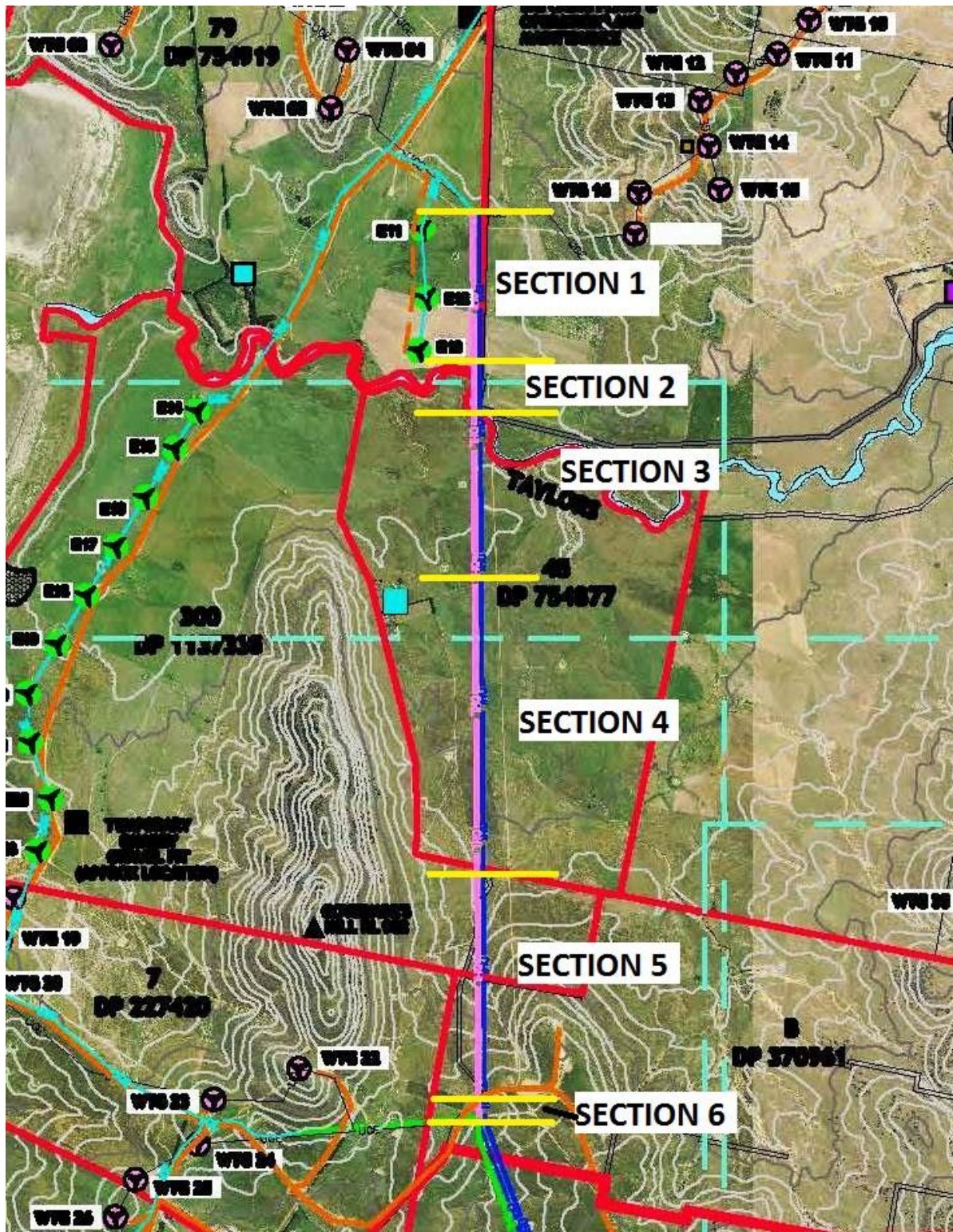
The OHL route was traversed on foot or vehicle with a copy of the colour aerial photograph in hand. The area is treeless, so that the aim was to identify and describe the grassland types traversed by the route. The key species of plant found in the grassland types were recorded and notes on the abundance of key species noted.



### 3. RESULTS

The map showing the sections identified in the field surveys is shown in **Figure 2**. The surveys found that almost the whole area along the route of the OHL is exotic grassland, most of which has been pasture improved. There are small areas of native grassland on the hilly land in the south of the route, these are not on the alignment of the line but are nearby.





**Figure 2. Map of survey sections along Overhead Transmission Line Route.**  
 Survey sections 1 to 6 are described in the report; see also Appendix 2.

The route was surveyed in sections, each of which exhibits different grassland characteristics. The photographs in **Appendix 1** demonstrate these differences. The notes recorded for each survey section are provided in **Appendix 2**; the following summarises the observations made along the OHL route. Note that the distances are measured from north to south and are approximate only.

to 1000 m	Heavily pasture improved, no natives present, several paddocks crossed.
to 1300 m	Taylors Creek crossing, wetland vegetation in channel, exotic grassland on banks.
to 1850 m	Heavily pasture improved, no natives present, several paddocks crossed.
to 3350 m	Broad valley floor, pasture improved, exotic grassland.
to 4300 m	Moderate to steep slopes, mostly exotic grassland, scattered natives, patches of natives in rocky areas (not on line route).
to 4380 m	Ridge crest, exotic grassland, scattered natives.

As is apparent from the above, no area of habitat is especially significant to native fauna; none of the habitat is likely to be important to listed animal species, which could only be incidental to the area traversed by the line.

#### **4. CONCLUSION AND RECOMMENDATIONS**

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The proposed modification to the approved Capital II Wind Farm to construct a section of overhead transmission line (OHL) was surveyed in the field. The proposed OHL route was traversed on foot and by motor vehicle. The type of vegetation was recorded along the route and various photographs taken of relevant features.

It was found that the entire route is treeless and that the vegetation cover is exotic grassland; that is, grassland dominated by introduced herbaceous species. None of the areas traversed represent a listed endangered ecological community or exhibits high conservation values. One area of note is the crossing of Taylors Creek in the northern part of the route (Survey Section 2). The creek channel in that area provides wetland habitat, albeit only a small area, for native plants and animals. Small patches of native grassland occur amongst rocky outcrops on the slopes in the southern part of the route (Survey Section 5), but these patches are not on the actual route of the OHL.

The impact upon the habitat of native flora and fauna is regarded as minimal, based on the following:

- the route is almost totally exotic grassland and is treeless;
- installation of the poles results in very minor soil disturbance (see Photograph 6 in Appendix 2;
- there is no need to construct a vehicle track to construct the line;

- the line can be constructed across Taylors Creek without interfering with the creek channel, as was previously done with the existing line.

The following recommendations are made to minimise the impact on the environment:

- works should not be undertaken in very wet weather, as the soils in the local area are highly erosion prone and vehicle movements can easily initiate erosion;
- care is required in constructing the line across Taylors Creek; construction activities should be excluded from the channel area.

## 5. REFERENCES

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Commonwealth of Australia (1999). *Environment Protection and Biodiversity Conservation Act 1999*. Commonwealth Government, Canberra.

Kevin Mills & Associates (2011). Flora and Fauna Assessment, Proposed Overhead Transmission Line, Capital Wind Farm, Southern Tablelands, NSW. Prepared for Infigen Energy, Sydney, October.

New South Wales (1995). *Threatened Species Conservation Act 1995*. NSW Government, Sydney.

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## **APPENDIX 1**

### **Photographs of the Overhead Transmission Line Route**

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**Photograph 1. View looking south along Survey Section 1.**



**Photograph 2. View looking north along Survey Section 5**





**Photograph 3. Much of Survey Section 5 is invested with Serrated Tussock.**



**Photograph 4. Improved pasture, Survey Section 1; this exotic grassland is similar to Survey Section 3.**





**Photograph 5. Survey Section 2 is across Taylors Creek; the tall grass is the native Common Reed, which is beginning to resprout after winter die-back.**



**Photograph 6. A pole on the existing parallel OHL, showing minimal disturbance during pole installation.**

## APPENDIX 2

### Description of the Vegetation, Overhead Transmission Line Route

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Notes are from north to south along the 4.38 kilometre route.

#### Section

#### Distance                      Notes

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##### Section 1

0 - 1000 m                      Heavily pasture improved, sown exotic grasses, no natives present, several paddocks crossed. Obvious exotics: Barley Grass *Hordeum* sp., Scotch Thistle *Onopordium acanthium*, Clovers *Trifolium* spp., Rye Grass *Lolium* sp., Sheep Sorell *Acetosella vulgaris*. Photographs in Appendix 2 - 1 and 4.

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##### Section 2

1000 - 1300 m                      Taylors Creek crossing, wetland habitat in channel, exotic grassland on banks. Stands of Common Reed *Phragmites australis* and a few other wetland plants in channel. Photograph in Appendix 2 - 5.

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##### Section 3

1300 - 1850 m                      Heavily pasture improved, sown exotic grasses, no natives present, several paddocks crossed.

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##### Section 4

1850 - 3350 m                      Broad valley floor, pasture improved, exotic grassland, occasional natives including tussocks of Spear-grasses *Austrostipa*. Serrated tussock *Nassella trichotoma* common.

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##### Section 5

3350 - 4300 m                      Moderate to steep slopes, mostly exotic grassland, scattered natives and patches of natives in rocky areas (not on line route). Serrated tussock *Nassella trichotoma* common. Natives noted: Spear-grasses *Austrostipa*, Common Everlasting *Chrysocephalum apiculatum*, Austral Sunray *Triptilodiscus pygmaeus*. Some pasture improvement, e.g. Subterranean Clover *Trifolium subterranean*. Photographs in Appendix 2 - 2 and 3.

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##### Section 6

4300 - 4380 m                      Ridge crest, improved pasture, exotic grassland, scattered natives. Obvious exotics: Capeweed *Arctotheca calendula*, Stork's Bill *Erodium* sp., Subterranean Clover *Trifolium subterranean*. Natives noted: Spear-grasses *Austrostipa* spp., Common Everlasting *Chrysocephalum apiculatum*, Wheatgrass *Elymus scaber*.