# ATTACHMENT 11 LAND VALUE IMPACT STUDY

# Land Value Impact of Wind Farm Development

# Crookwell New South Wales

**February 2006**

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# 1. INTRODUCTION

The growing awareness of the impact of coal burning on the environment, particularly on greenhouse gas emissions, has encouraged moves to find alternative clean energy sources. This attention to greenhouse gases has lead to the development of State and Commonwealth legislation that promotes greenhouse gas reduction and renewable energy generation. This report examines energy generation from wind farming and its effect on the valuation of land. The study firstly considers the effect on the value of land suitable for wind farming and secondly considers the impact on the value of surrounding land.

## 1.1 Study Outline

This report has been prepared for Taurus Energy Pty Ltd and examines the question of the likely impact commercial wind farm developments have on surrounding land values.

In this regard research into the following key areas has been incorporated into this study:

- The nature of wind farm development
- Valuation methodology
- Wind farm installations effect of land values subject to the development and the surrounding properties.

## 1.2 Study Area

The first grid connected wind farm was opened at Crookwell New South Wales in 1998 and is the subject of this study.

## 1.3 Review of Literature

To date no valuation research has been completed in Australia on the effect wind farm developments have on subject or surrounding land values. A review of overseas research provides a single statistical analysis in the United States and a perceptual study has been undertaken in the United Kingdom.

The most extensive survey to examine the effect of wind farms on property values was undertaken in the United States and presented as Analytical Report by the Renewable Energy Policy Project. The study[1] did not model the changes in property values, rather it was an empirical review where data from 10 wind farm sites was collected and subjected to a statistical regression analysis to determine price changes in three ways:

[1] The Effect of Wind Development on Local Property Values, REPP, May 2003.

- How property values changed over the entire period of the study for the view shed and comparable region;
- How prices changed in the view shed before and after the projects came on-line; and
- How property values changed for both the view shed and comparable community but only for the period after the project came on-line.

The results identified that in thirty separate analyses (i.e. 10 wind farm sites subjected to three assessments), twenty-six property values in the affected view shed performed better than the comparable properties. This study concluded that "there is no support for the claim that wind development will harm property values" was qualified with a statement that more data will need to be analysed as it becomes available.

**Perceptual Research**

The Royal Institute of Chartered Surveyors (RICS) carried out a study[2] of its members to gauge professional property opinion about the impact wind farm development had on both residential and agricultural land values.

It received 405 responses of which 81 indicated they had dealt with residential transactions affected by wind farm development. The study did not attempt to make a quantitative assessment of the impact merely gauge the perception of its members.

The report concluded the main negative impact on property values are :

1. visual impact
2. fear of blight
3. the proximity of a property to a wind farm.

The report found that 72% of the sample believed wind farm development had no impact or a positive impact on agricultural land values. Where as 60% believed wind farms decreased residential properties where the wind farm was in view. Moreover, the negative impact continues but becomes less severe after two years post completion.

[2] Impact of wind farms on the value of residential property and agricultural land, An RICS survey, 2004.

Lastly, the Bald Hills Wind Farm Panel Inquiry in Victoria examined the issues of property devaluation for neighbouring properties in a more qualitative manner

A number of property valuers and real estate agents provided submissions and appeared before the Panel Inquiry as expert witnesses. From a review of this evidence the Panel Inquiry report concluded that:

> *All that appears to emerge from the range of submissions and evidence on valuation issues is the view that the effect of wind energy facilities on surrounding property values is inconclusive, beyond the position that the agricultural land component of value would remain unchanged. On this there appeared to be general agreement.*

**Crookwell wind farm from the viewing area on Goulburn Road**

## 2. WIND FARMING

The benefits of producing renewable energy from wind is well known and relative to fossil and non fossil fuel sources, Wind technology does not require the level of investment needed. Indeed, wind energy has the potential to enhance both on and off farm rural economies.

### 2.1 Background

The Crookwell wind farm was developed jointly by Pacific Power and Great Southern Energy and was opened in 1998. The Wind Farm is now owned and operated by Eraring Energy a State owned corporation who also own a 15 turbine, 10 MW wind farm at Blayney, New South Wales.

### 2.2 Land with High Wind Energy Potential

Land suitable for wind farm development represents just small % of land in New South Wales. Accordingly very few properties are suitable for commercial wind farming enterprises. For property valuation wind farming must now be considered in rural valuation practice as it does introduce another form of land use to the agricultural sector.

### 2.3 The Crookwell Wind Farm

The Crookwell wind farm comprises 8 x 600kW turbines. They are dispersed across a ridge line at approximately 940 metres AHD in a staggered east west axis. Each turbine is on a 45 metre tower and has three 44 metre diameter blades with a rotational speed of 28 rpm.

## 3. LOCATION

### 3.1 Location Description

The Crookwell wind farm is located on the western side of the Goulburn Road approximately 10 kilometres south east of the township of Crookwell a rural region known for the production of potatoes, wool, lambs, cattle, oats, dairy products and cold-climate fruits.

Crookwell is located within the southern table lands of New South Wales about 40 kilometres north west of Goulburn and is within the Lachlan Shire Council area

Upper Lachlan Council Area straddles the Great Dividing Range in the Southern Highlands of NSW. Situated in the headwaters of the Lachlan and Hawkesbury-Nepean Rivers, most of the council area's 708,886 hectares are undulating to hilly with an average elevation of 762 metres above sea level. The eastern part of the council area features rugged dissected plateaus at the edge of the Blue Mountains

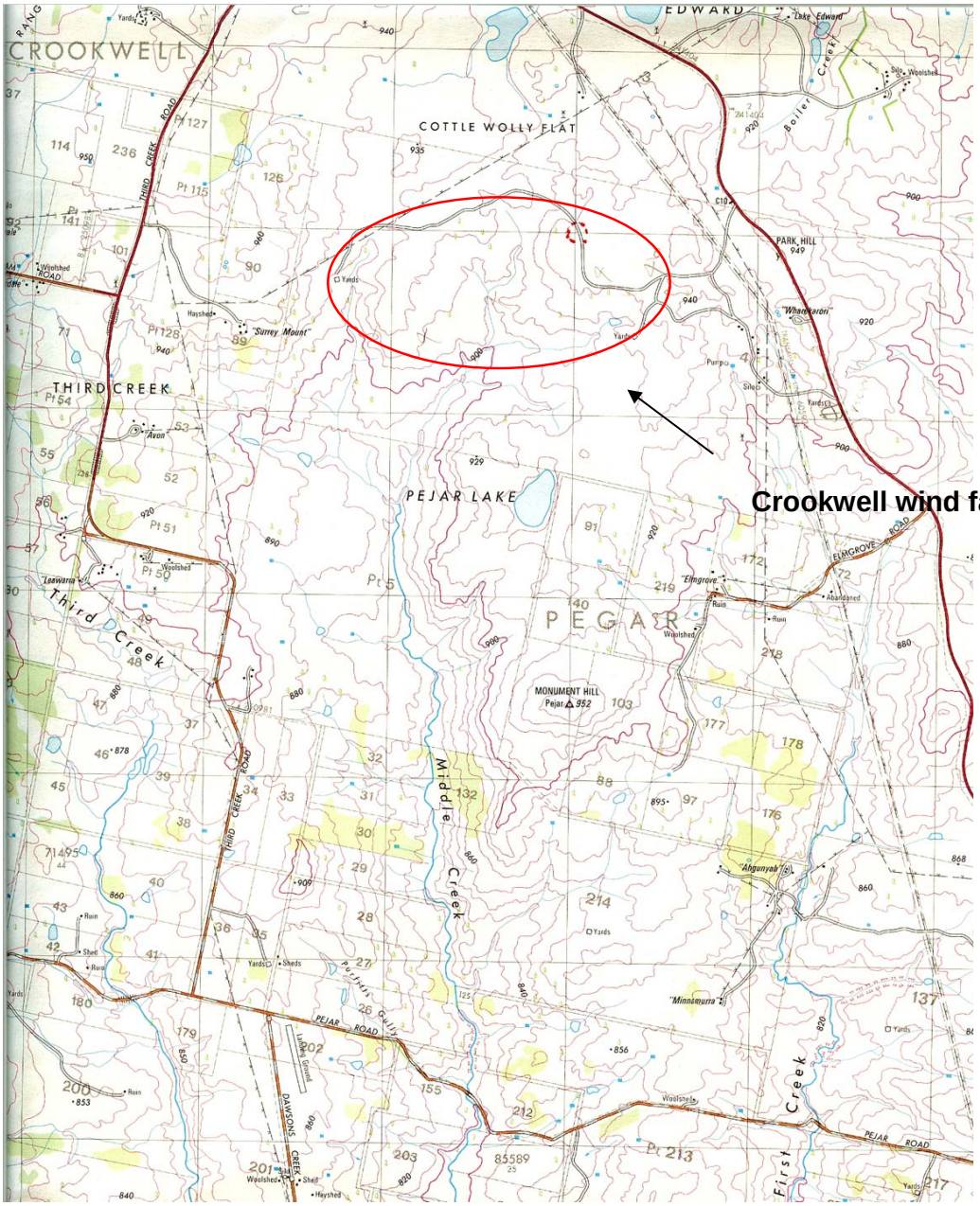
It is located 3 hours from Sydney and 1.5 hours from Canberra

There are major shifts occurring in agriculture in the region with the introduction of new farming methods and diversification of many land holdings towards new lifestyle ventures such as olive growing, alpaca fibre and horse studs.

With the upgrading of the road system between Sydney and Canberra, Crookwell is becoming a popular destination for retirees and people wishing to leave large urban areas for a lifestyle change. The economic base of the Shire is also changing, with tourism becoming the third major industry in the Shire, behind the traditional agricultural industries and retail.

The Australian Bureau of Statistics has estimated resident population of the Shire as at 30 June 2004 to be 7,621 people, with about 2,000 people living in the major centre of Crookwell. The majority of the population live in small villages or on properties.

## 3.2 Location Plan

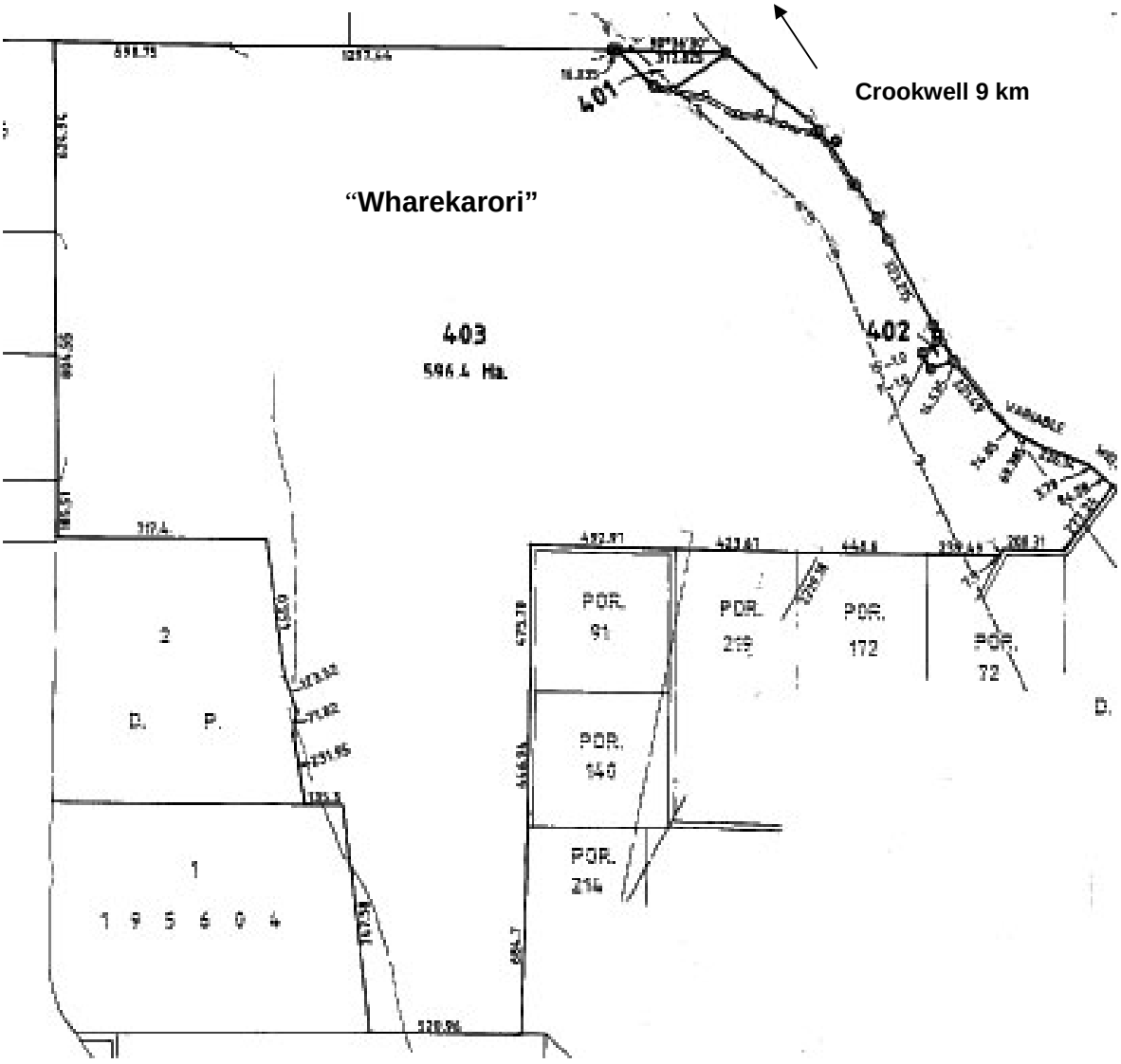



CMA Woodouselee 8828-iv-n

### 3.3 Site Details

The site is an irregular shaped block and is currently used for grazing sheep and cattle. The land has been cleared but appears to be mainly natural pastures with scatted areas of trees. A 330KV transmission line runs through the property in a north south direction following closely to the sealed Goulburn Road frontage forming the eastern boundary of the property. The road frontage is estimated to be approximately 2.2 Kilometres.

Site area is approximately 596.4 hectares by Deposited Plan.



### 3.4 Title Particulars

Folio Identifier 403/1012308 shows the land as being held under the **Real Property Act, 1900**, and more fully describing it as Lot 403 in Deposited Plan No. 1012308, Local Government Area: Upper Lachlan Shire, Parish of Pejar, County of Argyle.

### 3.5 Registered Proprietors

As shown by the Folio Identifier: -403/1012308

First Schedule

**Gokale Pty Limited**

### 3.5 Property Description

**Wharekarori**

"Wharekaron " is a grazing property, mainly cleared, it is undulating and rises from south to north from 900 metres to 935 metres and has a cross fall from east to south west . The pastures are largely native and the property provides the headwater to Middle creek. The property is well watered with a number of dams, water tanks and Pejar Lake. Improvements include stock yards, various sheds and house.

We understand the property has been leased for over 15 years and is approved to carry 2,500 sheep and 200 cattle. As the property is fairly exposed the wind farm infrastructure does provide some protection to the stock. Services roads for the wind farm also provide superior access to the property. The wind farm does not affect the grazing activity and accordingly we believe the wind farm development does not diminish the productive capacity of the subject property in its current use.

## 4. TOWN PLANNING

### 4.1 Zoning

The site is located within the Upper Lachlan Local Government Area, within the boundaries of the former Crookwell Shire Council . The subject is zoned 1(a) General Rural under the **Crookwell Local Environmental Plan 1994** (Crookwell LEP). The aim of the Crookwell LEP is to encourage the proper management, development and conservation of natural and human resources within Crookwell and to replace the existing planning controls with a single local environmental plan to help facilitate growth and development of Crookwell.

Part 2 of the Crookwell LEP sets out the zoning objectives and development requirements for 1(a) General Rural. The development is permissible with consent in Zone 1(a) General Rural. The objectives of 1(a) General Rural were considered in the assessment.

***Zone 1(a) General Rural***

***1 Objectives of the zone***

***(a)To protect, enhance and conserve the area's:***

***(i) agricultural land (particularly prime crop and pasture land) to sustain its efficient and effective agricultural production potential***

***(ii) forests of existing and potential commercial value for timber production,***

***(iii)valuable deposits of minerals, coal, petroleum and extractive minerals while allowing their efficient extraction,***

***(iv) trees and other vegetation in environmentally sensitive areas where they are significant to scenic amenity or natural wildlife habitat or are likely to control land degradation,***

***(v) water resources for use in the public interest,***

**(vi) places of significance for nature conservation, and**

***(vii) places and buildings of archaeological or heritage significance (including the protection of Aboriginal relics and places)***

**(b) To discourage further subdivision and encourage consolidation of existing agricultural landholdings.**

***(c) To control development that could:***

***(i) have an adverse impact on the rural character of the land in the zone,***

***(ii) create unreasonable or uneconomic demands for the provision or extension of public amenities and services, or***

***(iii) be subjected to physical limitations such as erosion hazard, bush fire risk and flooding.***

***(d) To provide land for future urban development, for rural residential development and for development for other non-agricultural purposes, depending on the need for such development.***

### 4.2 Surrounding Land Uses

The surrounding land is similarly zoned and used primarily for stock grazing. A concessional allotment has been created in the north east corner of the subject and a block has been created midway along the subject's road frontage and has been developed as a information bay and viewing area for the wind farm.

The property to the northern boundary known as Lake Birubi and is superior grazing land of approximately 300 ha. This property is currently on the market for sale and has been broken up into smaller lots. A 78 ha site on the north east corner having just settled. The balance of the property being divided into two rural residential allotments of 11 ha each with frontage to Third Creek Road and the balance of the site being the main house on 198 ha of land. Lake Birubi is the most highly developed property that adjoins the subject.

The properties to the west and south include Surrey Mount, Avon, Surrey Mount II, Minnamurra, Ahgunyah and Elmgrove. They are all grazing properties with primarly sheep and cattle.

### 4.3 Highest and best use

Cattle and sheep grazing are considered the highest and best use of the subject and surrounding land under the existing statutory planning controls.

### 4.4 Land Subdivision

The LEP provides for a minimum lot size in the subject zone as follows:

New allotments proposed to be used for the purpose of agriculture in zone 1 (a) or 1 (c) must meet the following standards:
(a) where the allotment being created for the purpose of agriculture has no dwelling erected on it, the allotment may be of any size, and
(b) where there is a dwelling already built on the allotment being created for the purpose of agriculture, the allotment must have a minimum area of 80 hectares.

Part 2 of the Crookwell LEP Clause 7 Development Control Table for zone 1 (a) General Rural in :-

> ***(d) To provide land for future urban development, for rural residential development and for development for other non-agricultural purposes, depending on the need for such development.***

Clause 12 of the LEP sets out the requirements for subdivision of land for the creation of dwelling houses and states :

(1) Dwelling house lots can only be excised from land within zone 1 (a) that is, or is part of, an existing holding which has an area of not less than 40 hectares.
(2) Any such dwelling house lot must not be less than 2 hectares in area.
(3) Any such dwelling house lot must not comprise prime crop and pasture land unless:
(a) there is no land of lesser agricultural quality within the holding, or
(b) the council is satisfied that no other land within the holding could reasonably be used for dwelling house lots.
(4) Not more than one dwelling house lot can be excised from an existing holding within zone 1 (a) which has an area of 40 hectares or more but less than 80 hectares and not more than two lots can be so excised where the existing holding has an area of 80 hectares or more.
(5) The maximum number of dwelling house lots referred to in subclause (4) includes:
(a) (Repealed)
(b) any allotment of less than 40 hectares in area excised from land described in Schedule 2 as a result of an approval granted by the council for the purpose of erecting a dwelling after 1 July 1993 and prior to the appointed day, and
(c) any allotment or portion of land on which a dwelling is allowed to be erected by clause 14 (2).
(6) In this clause, ***dwelling house lot*** means an allotment proposed to be used for the purpose of a dwelling house

The subject property contains an area of approximately 596.4 hectares and is capable of further land subdivision.

## 5. VALUATION METHODOLOGY

Value in its ordinary meaning is defined as its worth, utility or importance. In relation to land, it follows as its worth, or the price at which it would reasonably be expected to sell for in the open market. In legal terms the classic definition is found in *Spencer's*[3] resumption case *"What would a man desiring to buy the land have had to pay for it on that day to a vendor willing to sell"* Griffith CJ further said *" The necessary mental process is to put yourself as far as possible in the position of persons conversant with the subject at the relevant time, and from that point of view to ascertain what, according to the then opinion of land values, a purchaser would have had to offer for the land to induce such a willing vendor to sell it, or, in other words, to inquire at what point a desirous purchaser and a not unwilling vendor would come together."*

In terms of land valuation there are a number of types of value, many of which are given statutory definitions such as improved value, unimproved value, site value, capital value, land value. The valuation profession also has its accepted definitions for market value, marriage value, fair value to name but a few.

[3] Spence v Commonwealth (1907) 5 CLR 418

In this report we are examining what effect wind farm development has on the 'market value" as defined by the Australian Property Institute as adopted the International Assets Valuation Standards Committee definition of Market Value:

*"... the estimated amount for which an asset should exchange on the date of valuation between a willing buyer and a willing seller in an arms' length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently, and without compulsion".*

A valuation is a matter opinion, or judgement by a person qualified and experienced to do so. In arriving at the opinion the valuer must have regard to all material relevant to the value such as the position of the land, its physical characteristics both natural and improved, location, neighbourhood, climate, capacity, economic conditions and comparables sales to name but a few. There is no scientific exactitude in the valuation of land, the process is more aligned to measured conjecture whereby the valuer must considered all relevant materiel relevant to the valuation and to check the opinion by as many methods of valuation available for the task.

There is no principle that can categorise all methods of valuation acceptable for a particular application as with the passage of time and innovation the practice of valuation is always evolving.

In undertaking this subject study, the following valuation methods have been considered:-

**Before and after method**
This method is used extensively where compensation is being assessed and has many supportive judicial authorities. It has particular merit where part of the land is being taken or an interest created such as an easement.

This method requires the valuer to determine the value of the tenement prior to the interest being created, the subject of the valuation and compare the result of the value after the interest has been created. The difference being the effect on value.

This method has application for this study where by we are examining sales before and after the wind farm development. The method is used in conjunction with the comparable sales method.

**Capitalisation of net rents**
The capitalisation method requires the valuer to determine the net market rental potential of the subject land and fix a capitalisation rate to apply to that rental stream. The matters to be considered in determining the rental potential and capitalisation rate are numerous.

This method is particular relevant to income producing properties particularly where they are developed to their highest and best use.

This method has application in determining the value added by the wind farm income stream. We have not researched the income derived from the subject as part of this study, however this area would merit further study.

**Capitalisation of profits**
This method is similar to the capitalisation of net rents whereby the net profits of an undertaking is determined and capitalised at an appropriate rate. The method is often used in the valuation of businesses and is also called the going concern basis.

**Comparable sales evidence**
Within this approach the subject property is compared to sales of other land similar in characteristics. The principle being that evidence of market value is best indicated by sales of similar land. The comparison approach has application in a number of valuation methods such as analysing yields, units of measure such as rate per square metre or hectare and rate $ per square metre of building area or dry sheep equivalent (DSE).

This method of valuation is considered the most appropriate method in this application. The sales data has been compared and adjustments made for time and property characteristics.

**Multiple regression analysis**
A statistical method of valuation often used to produce statutory rating valuations. Regression analysis also has application to determine market influence of views and traffic noise.

This method was used in the US study however given the limited number of sales and the number of variables when applied to the Crookwell site this method has been discounted.

## 5.1 Wind Farm Development impacts

A review of the EIS prepared for the proposed Crookwell II wind farm development provides a guide to community's concerns with wind farm development. The Development Application and EIS went on public exhibition in August 2004 and 48 submissions were received. The planning report summarised the primary issues as ;-

- visual impacts of the turbines on the broad landscape and specific properties;
- property devaluation resulting from the proposal;
- concern about turbine decommissioning;
- that wind farm development is not consistent with the rural character;
- that wind farms are an inefficient energy producer; and
- operational noise impacts.

Of these issues, visual amenity, rural character and operational noise impacts are of primary concern for negative impacts on land valuation.

The positive impacts must also be considered and would include additional revenue streams for agricultural farm land, flow on effect of infrastructure upgrades such as roads and services, increased local employment to both the service the installation and increased tourism effects.

The negative impacts have been assessed in respect to the agricultural potential of the subject and surrounding properties and it was determined these impacts do not influence agricultural potential or value as the wind farm enables agricultural land on the site to continue, alongside the operating wind farm.

## 5.2 Land Value Effects Over Time

The principle object of this report is to determine wind farm installations effect of land values subject to the development and the surrounding properties. Accordingly we have researched sale transactions in the Crookwell area over a 15 year period. We have completed a search of all sales within our study area for the period commencing 1990 to 2006. The raw data is set out in the appendix together with the detailed sales analysis of transactions considered representative of affected and not affected by the wind farm development.

Traditional valuation considerations used in rural valuation such as climate, topography, soils, improvements etc have not been measured as, has been previously considered, the wind farm development has no negative impact on the productive capacity of commercial agricultural enterprises ie the productive capacity of the subject and surrounding land as working farms are not affected by the development.

Indeed it has been suggested the wind farm infrastructure adds value to the subject property's productive capacity via improved access roads, erosion control and wind protection for stock.

Our research concentrates on those properties that surround the development and have some direct impact from a valuation perspective, principally aesthetic influences including, visual, noise and shadow effects.

These sales are deemed affected sales. Our hypotheses being these sales have been influenced by the development of the wind farm. We then researched sales again in the same location that have little or no physical and visual link to the Wind Farm. These sales are deemed not affected.

Site investigations indicate that shadow effects and noise were not noticeable on adjoining properties except a concessional allotment in the north eastern corner of the subject. This block is approximately 400 metres north of the nearest turbine and was created in June 1998. The 2.7 ha block was transferred for $6,856 and we understand the vendor Directors and the purchaser are a related party. Accordingly this sale has been discounted in our examination of market transactions.

The visual impact was then considered. A six kilometre threshold was selected as our site investigations indicate that although visible the impact was considered negligible. Given the topography and site flora a number of the sales deemed not visually affected were in some instants quite close to the wind farm, particularly those sales along Third Creek Road.

We then compare the affected and non affected sales over time to determine if a correlation exists between the Wind farm development and land value movements.

### 5.3 General Comments

It would appear as a general trend that larger properties were sold and broken up into smaller lots commencing in the late 1990's with very few sales occurring in the period prior to the development of the Wind Farm in 1998.

This trend of dividing larger properties is continuing with the break up of Lake Birubi into 4 smaller properties the most recent example of the changing nature of land use in the area from commercially operating grazing land to a more passive rural residential use notwithstanding the objectives of the planning controls.

Clearly market forces appear to value the rural residential amenity above that of the agricultural productive capacity of the land.

Of the sales analysed, the bulk of purchasers were either resident locals or non resident locals with adjoining property. This was particularly evident along

The Third Creek Road/ Pejar Road area. These purchasers being larger non resident owners adding to existing holdings.

Of the rural residential purchasers, again most sales were to local residents, with the poorer land south of Pejar Road being more recreational blocks.

The “Twins Well” agreed sale being the only “sea change” purchase with the buyers reportedly moving from the Bowral area to escape the urban encroachment.

Discussions with Local agents generally indicated that although topical, the existing wind farm had little or no effect on land values in Crookwell. However the perception of the proposed wind farm planned close to the existing farm could have an effect. The Lake Birubi resale best demonstrates this. The original sale occurred prior to the wind farm being installed although the approval had been granted. The most recent sale of part the Birubi property is in line with sales of similar property that are deemed not affected.

The agents were of the view that the greatest effect on property prices over the past fifteen years had been the Sydney Canberra road up grade making Crookwell within commuting distant of both centres and the driver to the rapid price escalation identified between the late 1990’s to the present day. Most agents also acknowledged the market had softened over the last 12 months which would suggest a correlation exists with the Sydney/ Canberra property cycle more so than local conditions.

The marketing agents for the Lake Birubi property indicated the existing wind farm did not have an impact on the marketing although most buyers were aware of the proposed Crookwell 2 development.

A review of the sales evidence of the deemed affected sales, i.e. those sales that did have a view of the wind farm when compared to the sales that did not have a view indicate that no detectable discount exists. That is, the market evidences suggests that having a sight view of the wind turbines did not have an effect on land value.

## 6. CONCLUSION

It is clear that the underlying agricultural productive capacity of the land subject to the wind farm and the surrounding property is not in any measured way affected by the development of the Crookwell wind farm meaning there has been no reduction in values. This would support the findings of the RICS perception survey of UK valuers, 72% of which believe that wind farm development has either no effect or had a positive impact on agricultural land values.

Indeed the property subject to the development enjoys additional revenue and has some added benefits from improved roads, erosion control and passive wind protection for stock from the sub stations and turbine tower structures.

Over that last fifteen years land use has changed in subject area from larger grazing properties to more rural residential holdings where amenity is valued more highly then the productive capacity.

The future development potential of the subject land under the existing planning controls if applied would continue as grazing land. Moreover the property has potential for more intensive agriculture in part and this potential is not lost as a result of the wind farm although some tillage would clearly be affected by underground services.

As with the adjoining Lake Birubi property the subject has potential for further sub division and given that market demand would appear to be for rural residential we can foresee the pattern of development continuing to change in this direction.

Having said this, the revenue stream from the wind farm plus the underlying agricultural production from the land may well outbid the sub division potential for the site. This is premised on the rental income from the turbines being at market value. Further research will be required to determine what value the market will place on the wind farm revenue streams however we are of the opinion the capitalisation rates will be similar to other infrastructure improvements like mobile communication towers and signage investments.

Therefore the wind farm development has the potential to slow down the process of productive agricultural land changing to rural residential uses in the short to medium term with the shift caused by the additional income generated from the wind farm making the agricultural use viable.

Up until the late 1990's land use in the area was as grazing land and few sales occurred. After the wind farm was developed a number of larger holdings were broken up and the pattern of land use changed from grazing to rural residential.

We have completed an analysis of sales surrounding the development from 1990 to January 2006. These sales were divided into two groups, those sales where the wind development is visible and those sales where the development was not visible. The perception and our hypothesis being that visual amenity off the property with a sight line to the wind farm would translate to a reduction in value.

Based on our analysis this has not occurred and we can see no measurable reduction in values for those properties that have a sight line to the development. Indeed the most recent sale of part of the Lake Birubi property that adjoins the wind farm would indicate that factors such as soils, improvements and access to services are more important drivers in determining value then the visual amenity of the wind farm.

**William J Rees AAPI**
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Director
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# APPENDIX

# Sales Evidence

## Sales Analysis - Summary

## Twin Wells – Third Creek

**Twin Wells looking east towards Third Creek Road**

| | | | |
|---|---|---|---|
| Address | **525 Gorham Road, Pejar** | | |
| Area | **42.6 ha** | **Date** | **September 2003** |
| Sale Price | **$346,590** | | |
| Location | **The subject is situated near the corner of Pejar and Gorham Road being some 9 kilometres south of Crookwell.**<br><br>**The property is approximately 2.5 kilometres west of the subject wind farm and is not visible as a wind break along Third Creek Road blocks the view.** | | |
| The Land | **The property is near level and sits on an elevation of 950 metres. The pastures are improved and the soil appears to be rich basalt. Access to the property is by sealed road from Third Creek Road and secondary access from Gorham Road** | | |
| Improvements | **Old cottage, 2 stand shearing shed, well, timber sheep yards,** | | |
| Analysis | **Land value including structures** | **$8,135 ha** | |
| Comments | **Deemed not affected** | | |

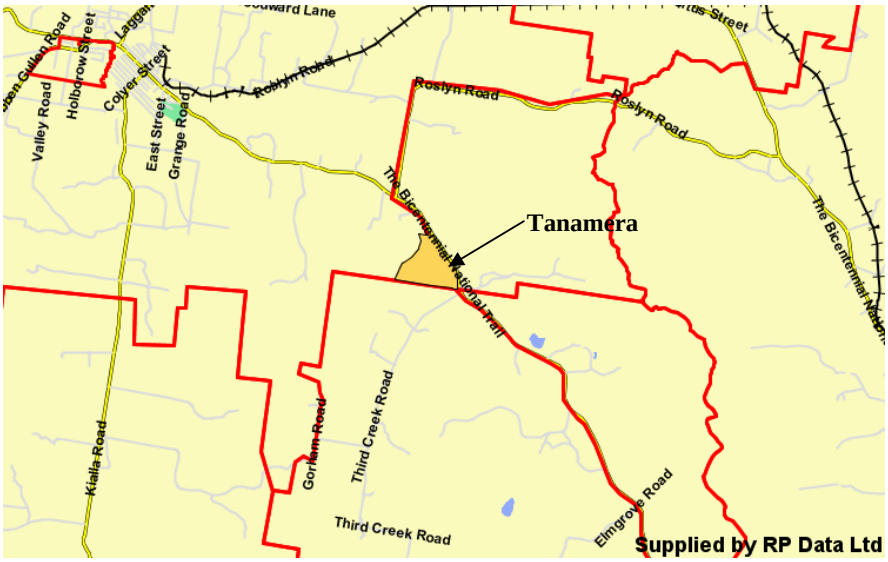
**Twin Wells looking east towards Third Creek Road**

| | | | |
|---|---|---|---|
| **Address** | **Third Creek Road, Pejar** | | |
| **Area** | **4.46 ha** | **Date** | **May 2004** |
| **Sale Price** | **$190,000** | | |
| **Location** | **As above** | | |
| **The Land** | **The property is a dwelling house allotment divided off the original Twin Wells block. Again near level and sits on an elevation of 950 metres. The property has over 200 metre frontage to the sealed Third Creek Road. The block was not serviced.** | | |
| **Improvements** | **Nil** | | |
| **Analysis** | **Land value including structures** | **$42,600 ha** | |
| **Comments** | **Rural residential, the site is good residential building land. Deemed a not affected sale.** | | |

| | | | |
|---|---|---|---|
| **Address** | **525 Gorham Road, Pejar** | | |
| **Area** | **38 ha** | **Date** | **Terms agreed February 2006** |
| **Sale Price** | **$820,000** | | |
| **Location** | **As above** | | |
| **The Land** | **As above** | | |
| **Improvements** | **2 stand shearing shed, well, timber sheep yards, New 320m2 brick cottage with metal roof, double garage and separate shed.** | | |
| **Analysis** | **Improvements allow say** | **$375,000** | |
| | **Land value excluding improvements** | **$445,000** | **$11,710 ha** |
| **Comments** | **Set back from both Third Creek Road and Gorham Road. The property is rural residential. Deemed a not affected sale.** | | |

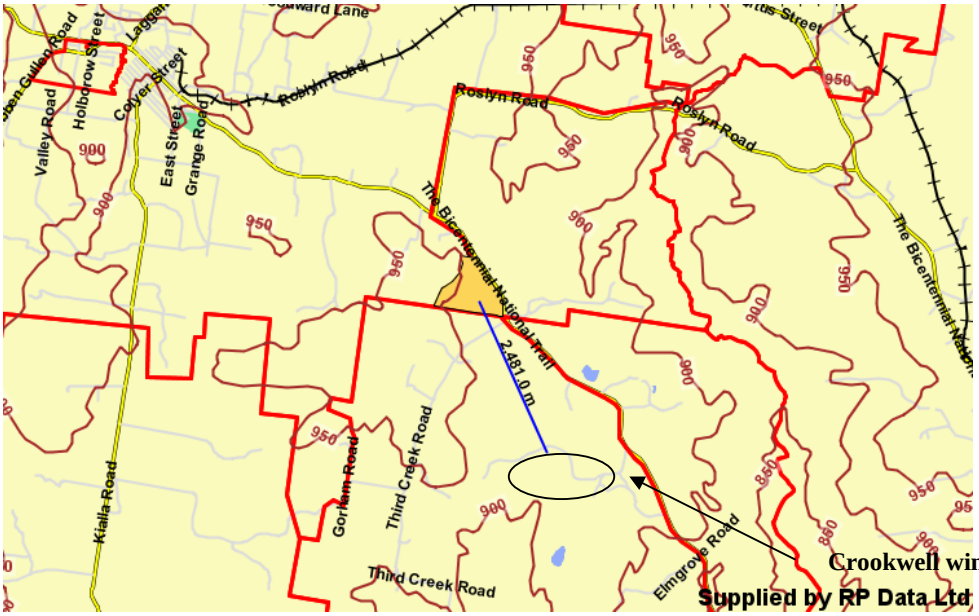
## Tanamera

**View south to Wind farms**




| | | | |
|---|---|---|---|
| **Address** | **3823 Goulburn Road, Crookwell** | | |
| **Area** | **54.6 ha** | **Date** | **November 1999** |
| **Sale Price** | **$165,000** | | |
| **Location** | **The subject is situated on the corner of Third Creek and Goulburn Road being some 7 kilometres south of Crookwell.**<br><br>**The property is approximately 2.5 kilometres north of the subject wind farm and has a direct line of sight to a number of the turbines.** | | |
| **The Land** | **The property gently rises from Goulburn Road and sits on an elevation of 960 metres. The pastures are improved and the soil appears to be rich basalt. Access to the property is by sealed road from Goulburn Road.** | | |
| **Improvements** | **Old 3 bedroom stone cottage, various sheds** | | |
| **Analysis** | **Land value including structures** | **$3,021 ha** | |
| **Comments** | **Property was in poor condition. Deemed slightly affected** | | |

| | | | |
|---|---|---|---|
| **Address** | **Tanamera Resale - 3823 Goulburn Road, Crookwell** | | |
| **Area** | **54.6 ha** | **Date** | **September 2004** |
| **Sale Price** | **$570,000** | | |
| **Location** | **As above** | | |
| **The Land** | **As above** | | |
| **Improvements** | **New fencing, bore and wind mill, trough system, renovated house, steel cattle yards** | | |
| **Analysis** | **Land value including structures** | **$10,439 ha** | |
| **Comments** | **The wind farm is directly visible from the entry of the property and from the front of the main house. Deemed slightly affected** | | |

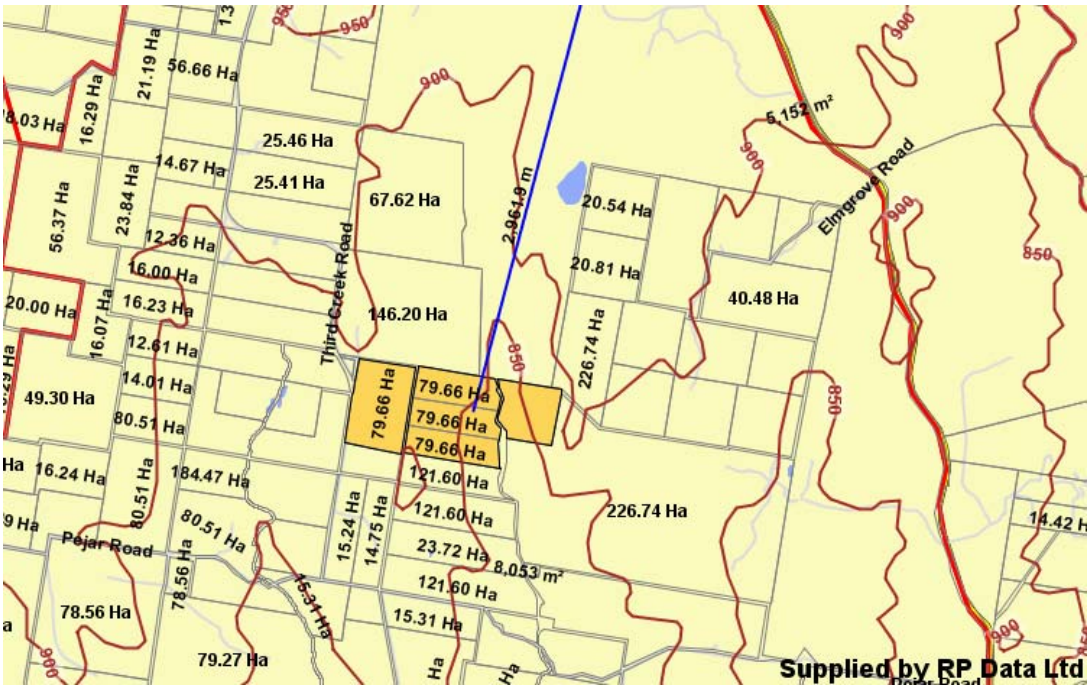



**Crookwell wind farm**

**Supplied by RP Data Ltd**

**Original cottage and a new extension**

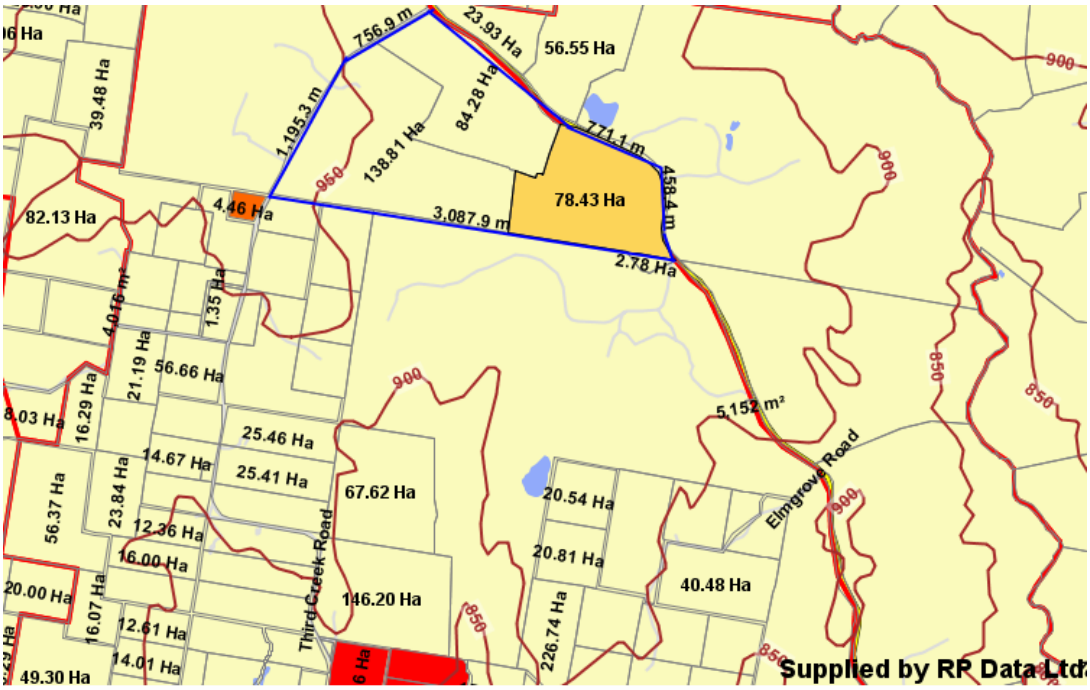

| | | | |
|---|---|---|---|
| **Address** | **629 Third Creek Road, Third Creek** | | |
| **Area** | **146.2 ha** | **Date** | **December 1993** |
| **Sale Price** | **$357,000** | | |
| **Location** | **The subject is situated near the corner of Pejar and Gorham Road being some 13 kilometres south of Crookwell.**<br><br>**The property is approximately 2.5 kilometres south of the subject wind farm that is clearly visible on the rise to the north.** | | |
| **The Land** | **The property is gently undulating grazing land and sits on an elevation of 900 metres. The pastures are improved and the soil appears to be good basalt. Access to the property is from Third Creek Road** | | |
| **Improvements** | **Old house in poor condition** | | |
| **Analysis** | **Land value including structures** | | **$2,441 ha** |
| **Comments** | **Deemed now affected** | | |




| | | | |
|---|---|---|---|
| **Address** | **Third Creek Road, Third Creek – Leary to Tynan** | | |
| **Area** | **79.6 ha** | **Date** | **August 2000** |
| **Sale Price** | **$160,000** | | |
| **Location** | **The subject is situated near the corner of Pejar and Gorham Road being some 13 kilometres south of Crookwell.**<br><br>**The property is approximately 2.9 kilometres south of the subject wind farm that is clearly visible on the rise to the north.** | | |
| **The Land** | **The property is gently undulating grazing land and sits on an elevation of 850 metres. The pastures are improved and the soil appears to be basalt. Access to the property is by unsealed road from Third Creek Road. Permanent creek, 90 % native country, grey loam soils.** | | |
| **Improvements** | **Vacant block** | | |
| **Analysis** | **Land value** | | **$2,010 ha** |
| **Comments** | **Deemed affected** | | |

| | | | |
|---|---|---|---|
| **Address** | **As above – Tynan to Gregory** | | |
| **Area** | **79.6 ha** | **Date** | **April 2005** |
| **Sale Price** | **$580,000** | | |
| **Location** | **As above** | | |
| **The Land** | **As above** | | |
| **Improvements** | **Cattle yards, pasture improved 16 ha , divided into 4 paddocks, cattle fencing, ran 80 heifers** | | |
| **Analysis** | **Land value including structures** | | **$7,286 ha** |
| **Comments** | **Deemed affected** | | |

## Lake Birubi




| | | | |
|---|---|---|---|
| **Address** | **103 Third Creek Road, Crookwell** | | |
| **Area** | **299.1 ha** | **Date** | **November 1997** |
| **Sale Price** | **$1,375,000** | | |
| **Location** | **The subject is situated the corner of Third Creek and Goulburn Road being some 8 kilometres south of Crookwell.**<br><br>**The property adjoins the subject wind farm with a direct line of sight to a number of the turbines.** | | |
| **The Land** | **The property is undulating and has seal frontage to Goulburn and Third Creek Road and sits on an elevation of 950 metres. The pastures are improved and the soil appears to be rich basalt. Access to the property is by sealed road from Third Creek Road and a secondary access from Goulburn Road.** | | |
| **Improvements** | **Two 3 bedroom houses, cattle yards, various sheds** | | |
| **Analysis** | **Land value including structures** | **$4,597 ha** | |
| **Comments** | **The property was sold before the wind farm was built however it was approved. Deemed affected** | | |

**Part sale of Lake Birubi**

| | | | | |
|---|---|---|---|---|
| **Address** | **103 Third Creek Road, Crookwell (frontage to Goulburn Road)** | | | |
| **Area** | **78.4 ha** | **Date** | **November 2005** | |
| **Sale Price** | **$800,000** | | | |
| **Location** | **As above** | | | |
| **The Land** | **Improved red and black basalt soils, water from bore and natural spring.** | | | |
| **Improvements** | **Old 3 bedroom fibro cottage with large living room extension, renovated kitchen and bathroom, established garden, trough system** | | | |
| **Capacity** | **50 cows with calves** | | | |
| **Analysis** | **Land value including structures** | | **$10,204 ha** | **$16,000/per cow** |
| **Comments** | **Part of the Lake Birubi, and adjoins the Wind farm. Deemed affected** | | | |

**For Sale Part of Lake Birubi**

2 Rural residential building blocks

| | | | |
|---|---|---|---|
| **Address** | **103 Third Creek Road, Crookwell Land For Sale** | | |
| **Area** | **11 ha** | **Asking Price** | **$190,000 each** |
| **Location** | **The subject is situated the corner of Third Creek and Goulburn Road being some 8 kilometres south of Crookwell.**<br><br>**The property adjoins the subject wind farm has a direct line of sight to a number of the turbines.** | | |
| **The Land** | | | |
| **Improvements** | **Nil** | | |
| **Analysis** | **Land value** | | **$17,272 ha** |
| **Comments** | **Rural residential sites, power running through sites but not connected. Deemed affected** | | |

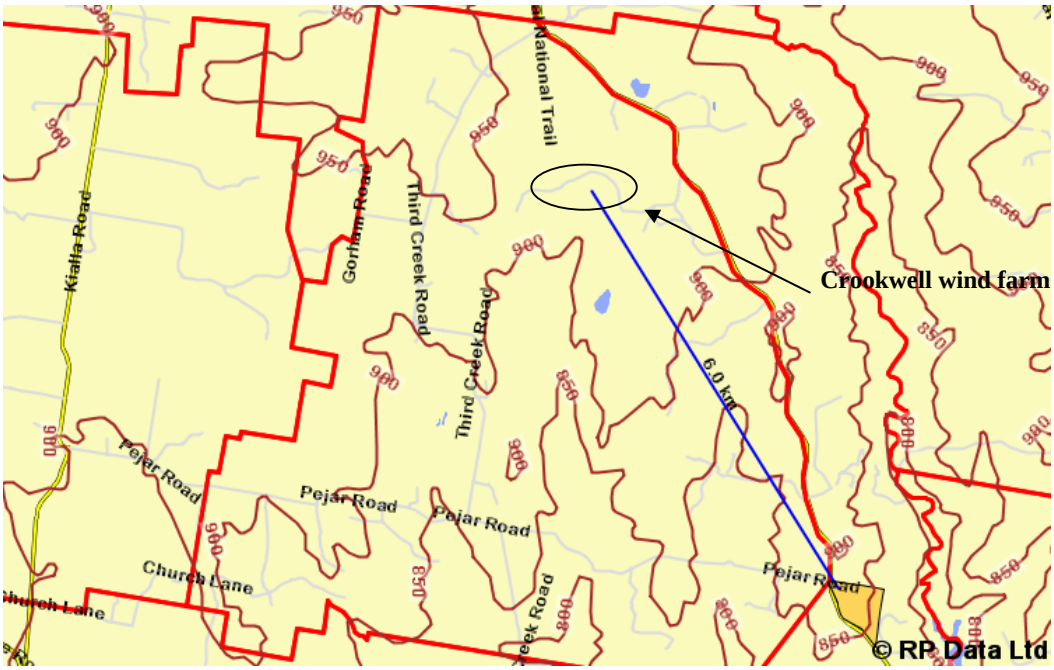
**For Sale Lake Birubi**

| | | | | |
|---|---|---|---|---|
| **Address** | **103 Third Creek Road, Crookwell** | | | |
| **Area** | **198 ha** | **Asking Price** | **$1,690,000** | |
| **Location** | **The subject is situated the corner of Third Creek and Goulburn Road being some 8 kilometres south of Crookwell.**<br><br>**The property adjoins the subject wind farm has a direct line of sight to a number of the turbines.** | | | |
| **The Land** | **The property is undulating and has seal frontage to Goulburn and Third Creek Road and sits on an elevation of 950 metres. The pastures are improved and the soil appears to be rich basalt. Access to the property is by sealed road from Goulburn Road.** | | | |
| **Improvements** | **3 bedroom brick cottage, various sheds, 6 fenced bull runs, steel cattle yards, veterinary room/office, undercover stud pens. Large machinery shed. Good cattle fencing** | | | |
| **Capacity** | **140 cows & calves** | | | |
| **Analysis** | **Land value including structures** | | **$8,535 ha** | **$12,071/per cow** |
| **Comments** | **Deemed affected** | | | |

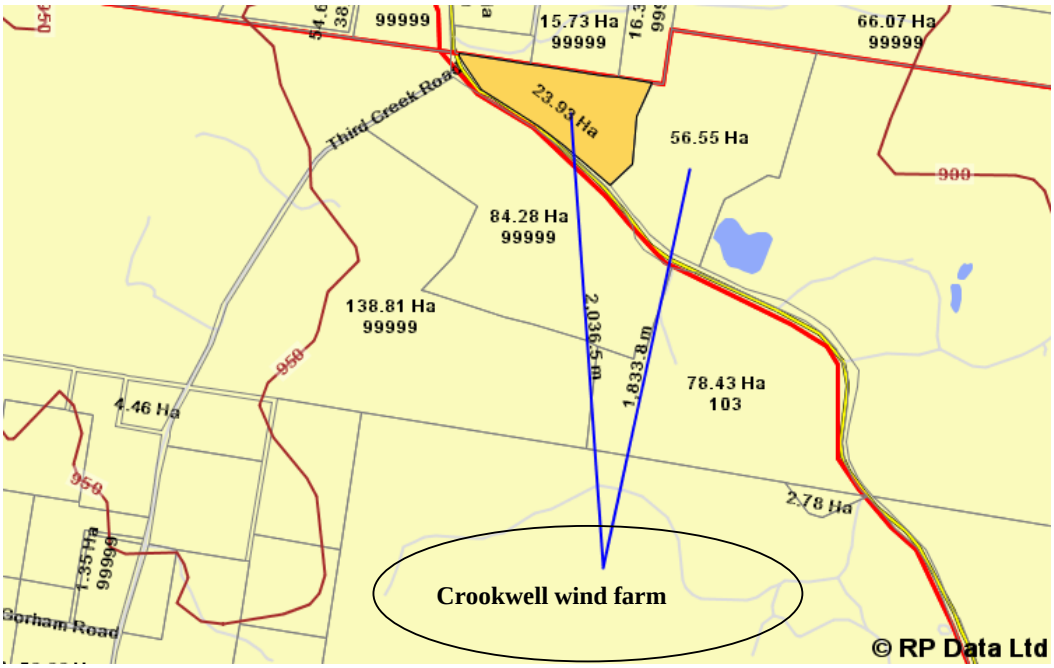
Consolidation of Lake Birubi

| **Part** | **Area Ha** | **Sale/Price** |
|---|---|---|
| Older house off Goulburn Road | 78.4 | $800,000 |
| Main property | 198 | $1,690,000 |
| Rural residential | 11 | $190,000 |
| Rural residential | 11 | $190,000 |
| **Analysis** | **$9,596 ha** | **$2,870,000** |


| | | | |
|---|---|---|---|
| **Address** | **Cnr Third Creek and Gorham Road, Crookwell** | | |
| **Area** | **56.6 ha** | **Date** | **July 2002** |
| **Sale Price** | **$280,000** | | |
| **Location** | **The subject is situated the corner of Third Creek and Goulburn Road being some 10 kilometres south of Crookwell.**<br><br>**The property is approximately 1.6 kilometres west of the subject wind farm.** | | |
| **The Land** | **The property is undulating and has un seal frontage to Gorham Road. The land sits on an elevation of 940 metres. The pastures are improved and the soil appears to be rich basalt. Access to the property is by sealed road from both Third Creek Road and from Gorham Road.** | | |
| **Improvements** | **Boundary fencing, improved pastures, 1 dam** | | |
| **Analysis** | **Land value** | | **$7,526 ha** |
| **Comments** | **The property sold to an adjoining owner and the wind farm is not visible from the street frontage as a result of wind break planting and natural trees along Third Creek Road. Deemed not affected** | | |




| | | | |
|---|---|---|---|
| **Address** | **Goulburn Road, Crookwell** | | |
| **Area** | **32.5 ha** | **Date** | **September 1997** |
| **Sale Price** | **$85,000** | | |
| **Location** | **The subject is situated opposite the corner of Pejar and Goulburn Road being some 15 kilometres south of Crookwell.**<br><br>**The property is approximately 6 kilometres south of the subject wind farm.** | | |
| **The Land** | **The property is undulating and has seal frontage to Goulburn Road. The land sits on an elevation of 895 metres. The pastures are unimproved and the soil appears to be granite. Access to the property is by sealed road Goulburn Road** | | |
| **Improvements** | **At the date of sale the property was a fenced, vacant block and did not have power.** | | |
| **Analysis** | **Land value** | | **$2,615 ha** |
| **Comments** | **The block was sold before the wind farm was build and was purchased as a rural residential block. Deemed slightly affected** | | |




| | | | |
|---|---|---|---|
| **Address** | **Goulburn Road, Crookwell** | | |
| **Area** | **23.9 ha** | **Date** | **June 2002** |
| **Sale Price** | **$120,000** | | |
| **Location** | **The subject is situated opposite the corner of Third Creek Road and Goulburn Road being some 8 kilometres south of Crookwell.**<br><br>**The property is approximately 2 kilometres north east of the subject wind farm which is clearly visible from the property.** | | |
| **The Land** | **The property is undulating and has seal frontage to Goulburn Road. The land sits on an elevation of 940 metres. The pastures are unimproved and the soil appears to be basalt. Access to the property is by sealed road Goulburn Road** | | |
| **Improvements** | **At the date of sale the property was a fenced, vacant block.** | | |
| **Analysis** | **Land value** | | **$5,020 ha** |
| **Comments** | | | |

| | | | |
|---|---|---|---|
| **Address** | **Goulburn Road, Crookwell** | | |
| **Area** | **56.5 ha** | **Date** | **March 2002** |
| **Sale Price** | **$240,000** | | |
| **Location** | **The subject adjoins to the south of the above block.**<br><br>**The property is approximately 1.8 kilometres north east of the subject wind farm which is clearly visible from the property.** | | |
| **The Land** | **The property is undulating and has seal frontage to Goulburn Road. The land sits on an elevation of 920 metres. The pastures are unimproved and the soil appears to be basalt. Access to the property is by sealed road Goulburn Road** | | |
| **Improvements** | **At the date of sale the property was a fenced, vacant block.** | | |
| **Analysis** | **Land value** | | **$4,247 ha** |
| **Comments** | **Deemed affected** | | |

## Base Sales Data 1990 to 2006

| | | | |
|---|---|---|---|
| **Suburb: BANNISTER** | | | |
| 256 DAWSONS CREEK RD, BANNISTER<br>Purchaser: DAMBROSIO<br>Vendor: NADJ | $78,000 | 24/10/01 | 10.94H |
| **Suburb: CROOKWELL** | | | |
| 1002 PEJAR RD, CROOKWELL<br>Purchaser: PERCY MARKS FINE GEMS PTY LTD<br>Vendor: A V & J J MCINNES | $450,000 | 18/02/00 | 128.6 H |
| 939 PEJAR RD, CROOKWELL<br>Purchaser: L A & K A PLUMB<br>Vendor: N M MCGAW | $50,000 | 22/09/00 | 19.9 H |
| 928 PEJAR RD, CROOKWELL<br>Purchaser: DOUGLAS<br>Vendor: MCGAW | $237,500 | 13/06/02 | 16.49 H |
| **Suburb: LAKE EDWARD** | | | |
| , LAKE EDWARD UPPER LACHLAN<br>Purchaser: WHATMAN<br>Vendor: LAKE EDWARD PTY LTD | $240,000 | 28/03/02 | 56.55 H |
| , LAKE EDWARD UPPER LACHLAN<br>Purchaser: SUNNYVIEW HOLSTEINS PTY LTD &, WHATMAN<br>Vendor: WHATMAN | $100,000 | 11/12/02 | 56.55 H |
| **Suburb: PEJAR** | | | |
| 931 DAWSONS CREEK RD, PEJAR<br>Purchaser: ANCATT PTY LTD<br>Vendor: JUDITH EDA CAUSER | $440,000 | 29/09/97 | 161.5 H |
| 103 THIRD CREEK RD, PEJAR<br>Purchaser: JASKARTO PTY LTD<br>Vendor: | $1,375,000 | 22/11/97 | 299.1 H |
| GOULBURN RD, PEJAR<br>Purchaser: G M JOHNSON<br>Vendor: GOKALE PTY LTD | $6,856 | 12/06/98 | 2.78 H |
| GOULBURN RD, PEJAR<br>Purchaser: PACIFIC POWER<br>Vendor: GOKALE PTY LTD | $5,000 | 30/06/00 | 5152 M |
| 99999 PH PEJAR, PEJAR<br>Purchaser: STAR<br>Vendor: STAR | $300,000 | 17/11/00 | 99.96 H |
| THIRD CREEK RD, PEJAR<br>Purchaser: CAMPBELL<br>Vendor: CAMPBELL | $700,000 | 27/06/01 | 184.47 H |
| GOULBURN RD, PEJAR<br>Purchaser: COUSINS<br>Vendor: LAKE EDWARD PTY LTD | $120,000 | 18/06/02 | 23.93 H |
| 99999 GORHAM RD, PEJAR<br>Purchaser: CARTER<br>Vendor: CAMPBELL | $280,000 | 11/07/02 | 56.66 H |
| 271 PEJAR RD, PEJAR | | | |

| | | | |
|---|---|---|---|
| Purchaser: WARD<br>Vendor: COSGROVE &, MEDWAY | $335,000 | 25/02/03 | 60.7 H |
| 525 GORHAM RD, PEJAR<br>Purchaser: COSGROVE<br>Vendor: EVANS | $346,590 | 15/09/03 | 42.6 H |
| THIRD CREEK RD, PEJAR<br>Purchaser: BURBAGE<br>Vendor: CAMPBELL | $1,175,000 | 29/01/04 | 184.47 H |
| THIRD CREEK RD, PEJAR<br>Purchaser: DAVIES<br>Vendor: COSGROVE | $190,000 | 30/03/04 | 4.46 H |
| PEJAR RD, PEJAR<br>Purchaser: STAR<br>Vendor: STAR | $170,000 | 03/06/05 | 80.51 H |
| **Suburb: POMEROY** | | | |
| , POMEROY<br>Purchaser: DARRYL A & C E PAGE<br>Vendor: | $95,000 | 29/07/93 | approx. 42.69 H |
| , POMEROY<br>Purchaser: S & K R PERKINS<br>Vendor: | $126,000 | 15/10/93 | 49.95 H |
| POMEROY, POMEROY<br>Purchaser: HEATHER THORNTON & PHILIP STANLEY TOMPKINS<br>Vendor: | $110,000 | 30/11/94 | 5.94 H |
| POMEROY, POMEROY<br>Purchaser: PAUL G & R J STORRIER<br>Vendor: MICHAEL H & T M ALLEN | $75,000 | 17/01/96 | 13.99 H |
| POMEROY, POMEROY<br>Purchaser: JASON JOHN WALES & JO-ANNE PICKER<br>Vendor: HEATHER THORNTON & PHILIP STANLEY TOMPKINS | $116,000 | 05/05/96 | 5.94 H |
| POMEROY, POMEROY<br>Purchaser: D'AMBROSIO<br>Vendor:<br>NADJ | $78,000 | 24/10/01 | 10.94 H |
| POMEROY, POMEROY<br>Purchaser: BELL<br>Vendor: MADDEN | $85,000 | 19/11/01 | 7.71 H |
| POMEROY, POMEROY<br>Purchaser: GOESCH<br>Vendor: FLETCHER | $225,000 | 20/12/01 | 13.99 H |
| POMEROY, POMEROY<br>Purchaser: ALBERTHSEN<br>Vendor: FRANCO & CO PTY LTD | $286,310 | 10/05/02 | 42.79 H |
| POMEROY, POMEROY<br>Purchaser: ARCADI<br>Vendor: TRAZOY PTY LTD | $1,105,000 | 06/08/02 | 194.92 H |
| POMEROY, POMEROY<br>Purchaser: BROWN | $130,000 | 27/08/02 | 38.97 H |

| | | | |
|---|---|---|---|
| Vendor: MOSS | | | |
| POMEROY, POMEROY<br>Purchaser: CIAMPA<br>Vendor: GREGORY &, HAEUSLER | $200,000 | 31/07/03 | 12.45 H |
| POMEROY, POMEROY<br>Purchaser: ANDERSON<br>Vendor: ALBERTHSEN | $325,000 | 17/02/04 | 42.79 H |
| POMEROY, POMEROY<br>Purchaser: SEARL<br>Vendor: ALBERTHSEN | $252,500 | 18/02/04 | 40.04 H |
| POMEROY, POMEROY<br>Purchaser: CAPOGRECO &, MEDINA &, SEPPELT<br>Vendor: BARRY | $1,050,000 | 31/03/04 | 133.14 H |
| **Suburb :ROSLYN** | | | |
| PH PEGAR, ROSLYN<br>Purchaser: DELEJU PTY LTD<br>Vendor: | $131,000 | 12/11/91 | 68.87 H |
| PH PEGAR, ROSLYN<br>Purchaser: LAKE EDWARD PTY LTD<br>Vendor: J E CARTER | $217,500 | 28/07/92 | 58.62 H |
| PH PEGAR, ROSLYN<br>Purchaser: ANIKA BENNETT<br>Vendor: | $35,000 | 03/12/92 | 2.99 H |
| PH PEGAR, ROSLYN<br>Purchaser: PATRICK JAMES STAR<br>Vendor: | $250,000 | 09/11/93 | 211.7 H |
| PH PEGAR, ROSLYN<br>Purchaser: DALLINGA HOLDINGS PTY LTD<br>Vendor: MICHAEL JAMES WOODS | $357,000 | 10/12/93 | 145.5 H |
| PH PEGAR, ROSLYN<br>Purchaser: DENNIS PAUL WILSON<br>Vendor: GRAHAM PATRICK WOODS | $80,000 | 23/12/94 | 18.11 H |
| PH PEGAR, ROSLYN<br>Purchaser: C P D D R A R H PATRICK DOOLEY TENACY S<br>Vendor: D R & W J & C W ANABLE & COLIN PATRICK DOOLEY & ANNE CHRISTINA SAVILLE & ROY HENRY DOOLEY | $28,063 | 21/09/95 | 235.3 H |
| PH PEGAR, ROSLYN<br>Purchaser: NORBERT B & M P WILLIAMS<br>Vendor: WILFRED JOSEPH DOOLEY | $85,000 | 04/09/97 | 32.5 H |
| PH PEGAR, ROSLYN<br>Purchaser: BRIAN D & J A GRAY | $210,000 | 23/11/98 | 63.94 H |

| | | | |
|---|---|---|---|
| Vendor: KAY A & B D GRAY | | | |
| PH PEGAR, ROSLYN<br>Purchaser: BRIAN D & J A GRAY<br>Vendor: BRIAN D & K A GRAY | $210,000 | 23/11/98 | 170 H |
| PH PEGAR, ROSLYN<br>Purchaser: DEREK D & J J MANSON<br>Vendor: S W LEARY | $50,000 | 19/07/99 | 14.67 H |
| PH PEGAR, ROSLYN<br>Purchaser: WILLIAM J SEARL<br>Vendor: DONALD J & O P CAMPBELL | $66,000 | 15/11/99 | 16.59 H |
| PH PEGAR, ROSLYN<br>Purchaser: TERRY & JULIE M YALLOURIS<br>Vendor: DONALD J & O P CAMPBELL | $63,000 | 16/12/99 | 14.18 H |
| PH PEGAR, ROSLYN<br>Purchaser: PETER T & J R SUTHERLAND<br>Vendor: ASTRESS PTY LTD | $350,000 | 14/03/00 | 88.62 H |
| PH PEJAR, ROSLYN<br>Purchaser: DALLINGA HOLDINGS PTY LTD<br>Vendor: S W LEARY | $185,000 | 17/03/00 | 72.95 H |
| PH PEGAR, ROSLYN<br>Purchaser: D R ANABLE &, C P & R H DOOLEY<br>Vendor: R H & C P DOOLEY &, D R ANABLE &, W J DOOLEY | $9,280 | 18/04/00 | 235.3 H |
| PH PEJAR, ROSLYN<br>Purchaser: S W LEARY<br>Vendor: S W LEARY | $27,837 | 30/06/00 | 79.66 H |
| PH PEGAR, ROSLYN<br>Purchaser: O P & D J CAMPBELL<br>Vendor: D J & O P CAMPBELL | $8,694 | 30/06/00 | 387.1 H |
| PH PEJAR, ROSLYN<br>Purchaser: M T & M A TYNAN<br>Vendor: S W LEARY | $160,000 | 11/08/00 | 79.66 H |
| PH PEGAR, ROSLYN<br>Purchaser: R S BARRETT<br>Vendor: O P & D J CAMPBELL | $185,000 | 27/09/00 | 80.51 H |
| PH PEGAR, ROSLYN<br>Purchaser: S J C GREGORY<br>Vendor: O P & D J CAMPBELL | $296,000 | 23/10/00 | 121.6 H |
| PH PEGAR, ROSLYN<br>Purchaser: PERUSIC<br>Vendor: DOOLEY &, SAVILLE | $184,000 | 05/07/02 | 99.02 H |
| PH PEGAR, ROSLYN | | | |

| | | | |
|---|---|---|---|
| Purchaser: SUTHERLAND<br>Vendor: WILSON | $160,000 | 04/07/03 | 18.11 H |
| PH PEJAR, ROSLYN<br>Purchaser: GREGORY<br>Vendor: TYNAN | $580,000 | 04/04/05 | 79.66 H |