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Preliminary Report:

**The Impact of Wind Turbine Developments on Surrounding Rural
Land Values in the Southern Tablelands, N.S.W.**



**Instructing Party:
Mr. Paul Vallely**

September, 2013

Introduction

I have been practicing as a Property Valuer and consultant in South East N.S.W. and the A.C.T for almost 15 years, specialising in the valuation of primarily rural land holdings ranging from small lifestyle allotments and subdivisions up to large broad acre grazing and farming properties. I have held major roles with National and International valuation firms including 'Preston Rowe Paterson', 'Megaw & Hogg' and 'Savills' prior to commencing my own business operation.

The prevalence of wind turbine development in the Southern Tablelands has been a contentious issue for many rural communities over recent years, which I have had significant experience in business with, from both private land holders and wind turbine development proponents.

Instructions

This report has been prepared under instruction from Mr. Paul Vallely for and on behalf of a number of landholders in the Southern Tablelands who have concerns as to the economic impact that wind turbine development and infrastructure can have upon surrounding land values.

Our instructions are to review various existing and proposed wind turbine developments in the Southern Tablelands, having regard to any potential impact upon values and marketability of properties in the locality, due to these developments. We note that this report has been prepared independently without any prejudice from our instructing party or wind farm proponents.

Summary - Overview

An initial report was undertaken in May 2012. At this time the report was completed having specific reference to the Proposed Golspie wind turbine development (located to the north east of Crookwell), with a small group of land holders headed by Mr. Paul Vallely having strong concerns as to the economic impact that wind turbine development could pose upon their adjoining or nearby rural land holdings in this locality. Our research at this time was inconclusive. As a result of further developments and some market evidence now becoming available, we have been asked to update and review our initial report having regard to these recent findings.

Due to the relative new age of wind infrastructure developments in Australia there has until recently been little market evidence available that conclusively determines the impact that this type of development can have economically on adjoining or nearby rural land holdings. A report prepared by Robert Dupont, Preston Rowe Paterson – 2009 on behalf of the N.S.W. Valuer General/ Department of Lands, did not detail any conclusive evidence that adjoining or nearby rural land holdings were impacted by wind turbine development. This report did leave open the recommendation that this be reviewed in the future based upon further market evidence becoming available.

Our current research and findings indicate that this market evidence is now beginning to become available in the Southern Tablelands. Upon analysis, these sales detail a detriment in market value for properties located adjoining or within nearby distance of wind turbine infrastructure. **The report has identified a detriment in property values. Discounts in value as identified of 33% & 60% in the market place cannot be ignored.**

Summary – Overview (Cont'd)

As part of our research we have also undertaken extensive communication and surveys with real estate agencies in the Southern Tablelands. The vast majority of all real estate agencies surveyed believed that the location and proximity of wind turbines can have a significant impact upon the marketability of rural land holdings especially in the form of buyer interest and extended sales periods being required. This impact alone is not something that we believe has been accurately measured neither in past studies nor by the proponents of most Wind Farm Developments.

The detrimental impact upon adjoining and/or nearby land holders appears to be beginning to be acknowledged by a number of wind turbine proponents. A notable example of this is developers in the Boorowa/ Rugby region. Enquiries have detailed that compensation deals are being offered to adjoining and nearby land holders who have a residence within 2 kilometres of wind turbines. The deals being negotiated and signed up to at this current point in time are typically \$2,500 p.a. per turbine within a 2 kilometre radius of a residence, indexed for the life of the development in a similar type of agreement to those land holders that are compensated for hosting turbines on their land.

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1.0 Southern Tablelands Location and Demographic

The Southern Tablelands is a geographic locality of the State of New South Wales, located generally west of the Great Dividing Range, from the Upper Lachlan Council area to the north extending south to the Cooma Monaro council area some 300 kilometres in distance.

The area also includes parts of the Southern Highlands, A.C.T. (Australian Capital Territory) and parts of the South West Slopes in the district that is also known as 'Capital Country'.

The area is characterised by generally scenic undulating to hilly country which in many areas has been extensively cleared and utilised for grazing and farming purposes. The area is easily accessible to the Australian federal capital city of Canberra (Pop. 411,000 including the bordering N.S.W. city of Queanbeyan), along with good access to Australia's largest capital city of Sydney (Pop. 4,467,000) especially to the northern areas of the Southern Tablelands, which in many instances are less than 200 kilometres or 2 hours travelling distance.

Many areas of the Southern Tablelands were originally settled in the early 19th Century and soon became regarded as productive rural areas being suitable for production of wool, fat lambs and beef cattle. The 'Gold Rush' in the mid-19th century also helped to increase infrastructure and population base to many locations in the Southern Tablelands.

Large grazing properties in the Southern Tablelands have been diminishing in number over the past 20-30 years, especially within closer proximity to the major cities. Extensive subdivisions have occurred in many areas of the Southern Tablelands, to cater for rural residential demand from city based parties (primarily Sydney, Wollongong, and Canberra) seeking a 'tree-change' (move from city localities) or 'retreat' (weekend, lifestyle type properties).

The subdivision of larger properties in this locality has generally occurred on areas of land with road frontage (to reduce subdivision costs) and on poorer quality land either timbered and/ or lighter soil type characteristics which have more limited agricultural potential and use. Subdivision of many rural properties has resulted in many vendors being able to achieve values typically 2-5 times greater than that, which could have potentially been achieved on a continued rural grazing use basis.

Many of these rural residential and lifestyle properties are purchased for small grazing use and recreational activities such as horse riding, motorbike riding, shooting and fishing. This type of purchaser has become the main driving force in setting values in the Southern Tablelands over recent years, and provides significant economic benefits, especially to many smaller rural communities.

2.0 A Case Study of Modern Wind Turbine Development - Proposed Golspie Wind Farm, Project Overview.

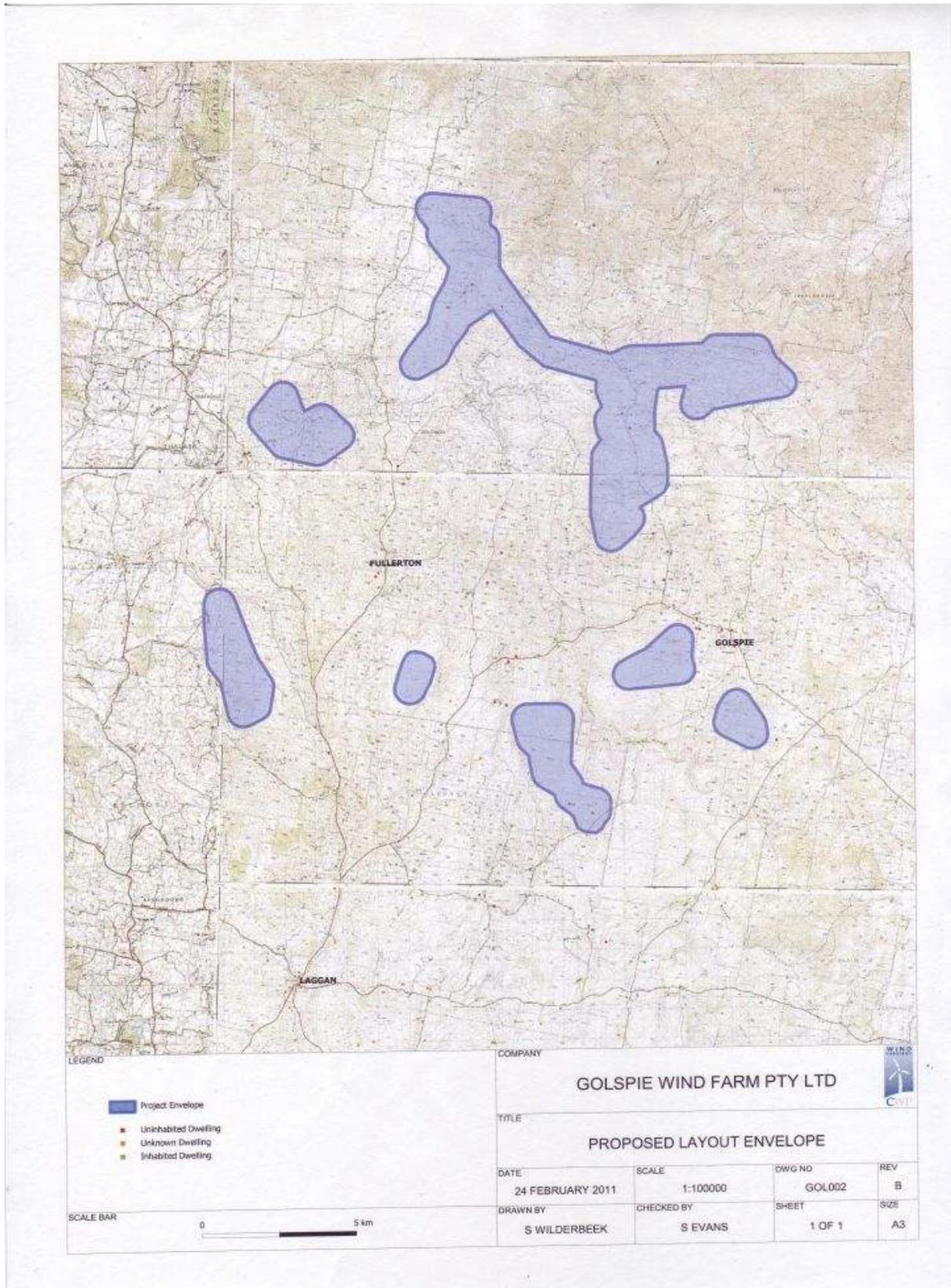
The proponents of the Golspie wind turbine development (located to the north west of the township of Crookwell) initially envisaged the potential for upwards of 100 wind turbines, ranging from 80 – 120 metres in height, with capacities of 1.5 – 3.4 MW (Mega Watts), based upon current available technology in the market place. Our communication with the wind farm proponents indicates that in all likelihood the number of turbines will be less than that initially anticipated. The following mapping information on the possible location of turbines and means of connecting the electricity back into the main grid is detailed in the following two plans, both of which are part of the ‘Preliminary Environmental Assessment’ report.

As with most other wind turbine developments, it is proposed to place turbines in the most elevated sections of the Golspie/ Fullerton districts. Based upon the above mapping information it would appear the typically elevation of the turbines will be approximately 800-900 metres ASL (Above Sea Level). Common to nearly all modern wind powered developments, this significant turbine infrastructure will be visual upon the landscape from distances of up to 50 kilometres away.

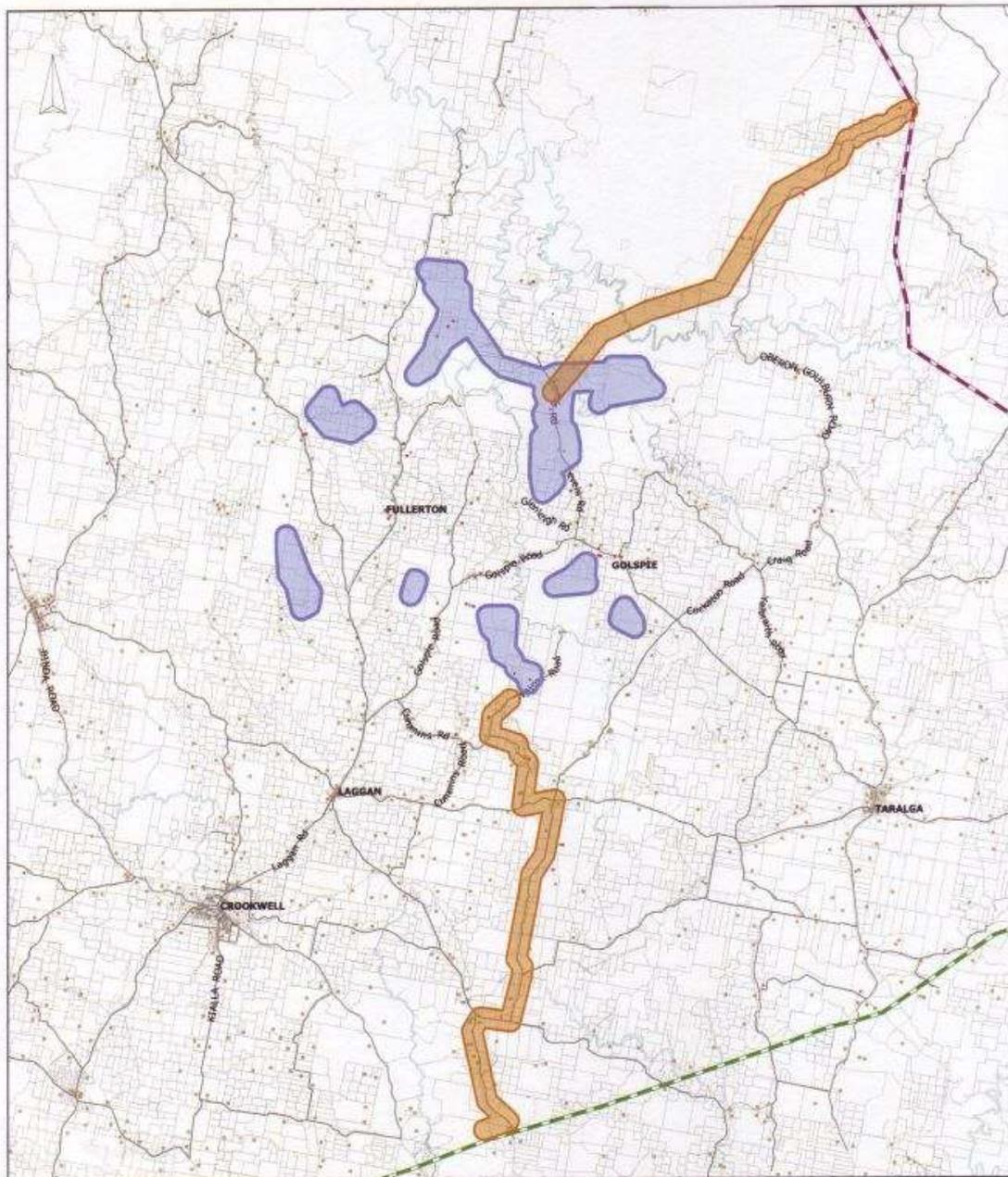
Our enquiries with some particular land holders in the Golspie locality, have indicated that they have been approached by development proponents, to have turbines positioned on their land, within close proximity to existing residences. In more than one instance that we are aware of, the developers have made approaches to compensate some land holders to relocate out of their existing dwellings so that they can position more turbines on particular properties.

A media release for this particular development as at 1 July 2013, has indicated that the development has been put on hold for the time being citing wind resource, land security and grid connection issues as the key reasoning in the decision to slow the pace of development on this project.

It would appear that many wind infrastructure developments in the planning phase have been put on hold for the time being, depending upon the outcome of the upcoming federal election and any future changes to government policy and funding.



‘Preliminary Environmental Assessment – Golspie Wind Farm, 2011’ Potential turbine locations



LEGEND		COMPANY		
	Project Envelope	GOLSPIE WIND FARM PTY LTD		
	Easement Routes	TITLE		
	Existing 330KV Power Line	PROPOSED LAYOUT AND EASEMENT ROUTES		
	Existing 500KV Power Line	DATE	SCALE	DWG NO
SCALE BAR		24 February 2011	1:180000	GOL003
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‘Preliminary Environmental Assessment – Golspie Wind Farm, 2011. Potential turbine locations and proposed connection of electricity into the Grid.

3.0 Wind Turbine Developments in New South Wales – Proposed And Existing

Two of the first wind farms developed in the Southern Tablelands, are at Crookwell (1998), and Blayney (2000). At this time there was some minor public angst and protest in regard to their construction, mainly from nearby and neighbouring land holders. Compared with recent Turbine projects both proposed and recently constructed in the Southern Tablelands and other areas of Australia, these initial developments were small, having 8 and 15 turbines respectively in each location. The turbines were also of much smaller size, being approximately 67 metres in height to the peak of the blade tip, and generating a much smaller power supply of 0.6-0.66 MW per turbine.

An Internet web page ‘Wind farms in New South Wales’, created in 2008, and updated March 2012, has identified, well over half of the N.S.W. wind farms that appear likely to be built in the near future are within a 90km radius of Goulburn. This situation, where such a large proportion of a state's wind turbines have been proposed in a single area, is unique in Australia. This is discussed further herein under - 6.0 Conclusion and 7.0 Recommended Further Research and Review.

The following list of wind turbine developments for N.S.W. has been compiled, which details the name and location of wind infrastructure, development proponents, number of turbines, and status of the development.

3.0 Wind Turbine Developments in New South Wales – Proposed And Existing (Cont'd)

Windfarm	Company	Location	No. Turbines	Status
Adjungbilly	CBD Energy PL	S 35.09° E 148.41°	26	Proposed
Bango	Wind prospect	Rye park to yass	120	Proposed
Bannister	Marubeni Corporation	34.595°S 149.490°E		Proposed
Ben Lomond Guyla	Allco	S 30.03° E 151.66°	98	Proposed
Bialla	Newtricity	North West of Gunning	40	Proposed
Birrema	Epuron	West of Yass	70	Proposed
Black Range	Epuron	Near Bega		Scoping
Black Springs	Wind Corporation	Oberon	9	Approved
Blayney	Eraring	Blayney	15	Operating
Boco Rock Wind Farm	Wind Prospect	Nimmitabel/ Bombala	66	Approved
Bodangora Wind Farm	Infigen	Wellington	33	Proposed
Boorowa to Murringo	Various	Boorowa to Murringo	Many - unknown	Scoping
Capital	Infigen	Bungendore	67	Operating
Capital 2	Infigen	Bungendore	41	Approved
Carroll's Ridge	Epuron	Lake Burrinjuck	34	Proposed
Collector/ Lerida	Transfield/ Ratch	Collector	68	Proposed
Conroys Gap Wind Farm	Epuron	Yass Valley	15	Approved
Cooma	Hydro pacific	36.24°S 149.125°E		Proposed
Coppabella Hills	Epuron	Yass Valley	82	Proposed
Crookwell	Eraring	Crookwell	8	Operating
Crookwell 2	UFWA	Crookwell	46	Under construction
Crookwell 3	UFWA	Crookwell	25-35	Proposed
Crudine Ridge Wind Farm	Wind Prospect	Mudgee/Bathurst	70 to 110	Proposed
Cullerin	Origin/ Epuron	Gunning	15	Operating
East of Cootamundra	Epuron	Muttama		Scoping

Eden Wind Farm	Epuron	Eden/Bega	7	DA lodged
Evandale Goulburn	Taurus Energy	Goulburn		Suspended
Flyers Creek	Infigen	Blayney	44	Proposed
Glen Innes	Infigen	Northern Highlands	25	Approved
Golspie	Wind prospect	NE of Crookwell	100	Proposed
Gullen Range	Goldwind	S of Crookwell	73	Approved
Gunning Wind Farm	Origin	Gunning	31	Operating
Gurrundah	Marubeni Corporation	34.666°S 149.418°E		Proposed
Hampton wind park	Wind Corporation	Blue Mountains	2	Operating
Jugiong	Epuron	Between Yass and Gundagai	Not specified	Proposed
Kooragang Newcastle		Newcastle	1	Operating
Kyoto Energy Park Wind Farm	Pamada	Scone / Upper Hunter	34	Approved
Liverpool Range	Epuron	Upper Hunter	550	Proposed
Marilba Hills precinct	Epuron	Yass Valley	70	Proposed
Molonglo	Acciona Energy	35.2319°S 149.446°E	Unknown	Proposed
Mt Spring	ActewAGL	33.398°S 149.152°E	Unknown	Proposed
Murringo to Binalong	Various	Murringo to Binalong	Many - unknown	Scoping
Murringo to Cowra	Various	Murringo to Cowra	Many - unknown	Scoping
Murrurundi	GHG & GREP	31.763°S 150.834°E	Unknown	Proposed
New England Wind	Starfish Enterprise Network	New England	8	Proposed
Paling Yards	UFWA	Taralga	60	DA lodged
Rock Flat Creek	Pacific Hydro	36.158°S 149.21°E	100	Feasibility
Rugby	Suzlon/ Re Power	Rugby/Rye Park	52	Proposed
Rye Park	Epuron	Rye Park	140	Proposed
Sapphire Wind Farm	Wind Prospect	Glen Innes	159	Approved
Silverton Wind Farm	Epuron	31.97°S 141.46°E	598+	Planning Approved
Snowy Plains Wind Farm (Berridale)	Taurus Energy	36.154°S 148.565°E	26	Planning Approved
Southern Highlands	ANZ Infrastructure Services	34.486°S 150.42°E	30	Project Suspended

Taralga	RES Southern Cross	Taralga	61	Approved
Uungula Wind Farm	Wind Prospect	Mudgee	249	Proposed
White Rock Wind Farm	Epuron	Glen Innes	119	Approved
Woodlawn	Infigen	Tarago	23	Operating
Yass Valley	Epuron	Yass Valley	167	Proposed/ approved

The above information outlines there to be the potential for in excess of 3,000 turbines (allowing for unspecified development turbine numbers) being located across N.S.W. As can be ascertained from the locations in the above table, there is a very heavy weighting of turbine development in the northern regions of the Southern Tablelands.

**3.0 Wind Turbine Developments in New South Wales – Proposed And Existing
(Cont'd)**



Capital Windfarm 2 – Construction at ‘Woodlawn’ Tarago, Mid 2011. The size of the turbines becomes evident compared to the size of the machinery on the ground. This wind farm is now fully operational.

**3.0 Wind Turbine Developments in New South Wales – Proposed And Existing
(Cont'd)**



Existing Turbines, “Ellendon”, Bungendore, Capital Windfarm 1

4.0 Impact Of Wind Turbines Upon Marketing And Property Sales In The Southern Tablelands

The demographics of the locality over the last 20 years has seen the continual demise of large rural grazing and farming properties (especially in less productive localities), and a strong increase in the number of permanent rural residential occupants and temporary rural lifestyle/ recreational interests, from city based areas such as Sydney, Wollongong and Canberra. Many areas of the Southern Tablelands can be readily accessed from Sydney and Wollongong within a 2-3 hour travelling time frame. Commuting times from Canberra in many instances are less than 1 hour in travelling distance. This city interest has become the main driving force in setting values for smaller areas of rural land, which can be in most instances be 2 -5 times higher than the value of larger rural holdings on a rate per hectare basis.

There are several rural real estate agencies in the Goulburn region whose primary business role is involved in selling rural land for rural grazing/ farming purposes, along with a higher predominance of rural residential and lifestyle properties. The market for properties in the Southern Tablelands and specifically within the Goulburn and Canberra localities is today typified by the demographic shift from commercial rural enterprise to small ‘lifestyle’ land holdings with a large proportion of holdings less than 100 hectares.

Of the four largest rural agencies surveyed in Goulburn, all displayed some concerns to varying degrees on the impact of wind farms on the marketability and value of rural real estate in this area of the Southern Tablelands. All agents surveyed concede that market conditions have been difficult in recent years, especially since the onset of the G.F.C. (Global Financial Crisis) in late 2008.

One of the larger rural agencies ‘Professionals Real Estate, Goulburn’ concluded from discussions with rural sales staff that the marketability for properties located, surrounding or nearby to proposed and existing wind turbine developments have been significantly harder to sell, to the point that some properties within very close proximity of this type of development have become virtually unsaleable.

Mr. Allan McDonald (Principal of Professionals Real Estate) stated;

“We have had a number of agreed sales fail to proceed, after purchasers had been informed of wind farm developments, nearby to properties that we have been trying to market. It would appear that many prospective purchasers consider them to be a blight on the landscape and aesthetic appeal of properties, similar to that of large transmission line easements”.

In the instance of many areas within the Fullerton and Golspie districts, there are large areas of scenic unspoilt grazing land which offers tremendous views and aesthetic appeal. Proposed development that will visually impede these scenic rural views, is already having a detriment to the marketability and sales of rural residential and lifestyle properties”.

We have also undertaken similar research with real estate agents and owners in the Boorowa and Yass regions. These enquiries also identified similar concerns to that detailed above, even though the majority of wind turbine projects in these localities are only within the planning stage.

4.0 Impact Of Wind Turbines Upon Marketing And Property Sales In The Southern Tablelands (Cont'd)

Included on the following pages are a number of photographs demonstrating the Fullerton and Golspie district scenery, views and aesthetic appeal which could be impacted upon by the 'Golspie Wind Turbine Development' should it proceed.



Northerly Views from Fullerton Road, Fullerton overlooking Phils River. Turbines could potentially be located on the top of this ridgeline if the Golspie turbine development were to proceed.

4.0 *Impact Of Wind Turbines Upon Marketing And Property Sales In The Southern Tablelands (Cont'd)*



Northerly Views from Leighwood Road, Golspie over the Burra Burra Creek catchment and hills beyond. Turbines could again potentially be located on the top of this ridgeline if the Golspie wind turbine development were to proceed.

4.0 *Impact Of Wind Turbines Upon Marketing And Property Sales In The Southern Tablelands (Cont'd)*



South Westerly outlook from the elevated hill sections of “Pine Grove” Fullerton Road, Fullerton.

5.0 Market Evidence

'Cullerin' Lots 21,22, 24, & 25 Hume Highway & Lerida Roads Gunning, Reported Sold December 2012, for \$225,000

80.9 hectare vacant rural residential and small grazing property located approximately 30 kilometres west of Goulburn. The property is located directly under the 'Cullerin' wind farm, with the closest turbine situated within approximately 100 metres of the northern boundary of the land. The property is bisected by the Hume Highway, and is also burdened by a Transmission line easement bisecting the southern portion of the land.

The selling agent reported that there has been enquiry and inspections on the property, however in most instances as soon as buyers have been informed about the proximity of the wind turbines, or have sighted them upon inspection, that there has been no further interest or offers made. This selling agent has reported that a potential sale price of between \$320,000 to \$350,000 could have been readily achieved if not for the location of the wind turbines.

The marketability of this property has been severely impacted to the point that the only genuine purchaser of the property was an adjoining owner. This property was well tested on the market for close to 2 years at an initial asking price of \$320,000, which was reduced in early 2012 to \$299,000. The analysed value of the sale price equates to \$2,781/ hectare. The sale of this property at this level is less than that of many larger grazing property sale transactions in the locality as is demonstrated from market evidence following.

Sales evidence available that offers some comparability to values for a property of this size and locality that are not impacted by wind turbines include:

- **Lot 3 DP 1159750 Collector Rd Lerida, Reported Sold September 2011 for \$300,000**

A newly developed 80.02 hectare vacant rural residential allotment. Long and narrow in shape with a mixture of cleared and timbered granite grazing land. Bisected by a semi-permanent creek to the rear boundary. Unsealed road access. Comparable location, 8 kilometres south east of the subject property. Analyses to **\$3,749/ Ha.**

Comparable property size and location. Inferior unsealed road access. Similar in value

- **Lot 26 DP 754118 Collector Rd Gunning, Reported Sold April 2012 for \$220,000.**

A 32.387 hectare vacant rural residential allotment. Mostly cleared granite grazing land with timber to the rear. Unsealed road access. Comparable location, 11 kilometres west of the subject property. Analyses to **\$6,793/ Ha.**

Comparable property location. Higher analysed rate, reflective of smaller property size. Inferior size and value.

5.0 Market Evidence (Cont'd) - 'Cullerin'

- **“South Raeburn”, 411 Cullerin Road, Breadalbane, reported sold in December, 2012 for \$2,650,000.**

632.1 Ha highly improved grazing property. Carrying capacity 6,000 DSE. Productive alluvial flats rising to low hills. Good road frontage. Improvements include a substantial 5 stand shearing shed, sheep and cattle yards, shearers quarters, machinery shed, 2 modest residences. Located approximately 25 kilometres west of Goulburn just off the Hume Highway and 5 kilometres east of the subject land. Analyses to **\$3,200/Ha** or \$337/DSE (Dry Sheep Equivalents) (ex. structures).

This sale is a good indicator of grazing values in the Cullerin/ Breadalbane localities.

The following market evidence is also available for comparison, however due to their closer proximity to Goulburn we consider them to be superior.

- **359 Painters Lane, Goulburn, reported sold in April, 2013 for \$440,000.**

76.69 Ha rural grazing property located approximately 13 kilometres south east of Goulburn. Void of improvements with the exception of steel cattle yards and windmill. Bisected by Salt Petre Creek. Analysed land value \$420,000. Unsealed road access. Reported approval for subdivision into two lots. Purchased by Chinese based owners who have other rural land in the region. The sale price analyses to **\$5,477/ Ha**.

Superior location, land quality and subdivision potential.

- **40 Gunday Lane, Goulburn, reported sold in December, 2012 for \$419,000.**

40 Ha rural grazing property located approximately 12 kilometres south of Goulburn. Void of improvements with the exception of a moderate clearance 5 bay machinery shed and rundown timber and steel cattle yards. Bisected by a transmission line easement, which is considered to be a detriment. Analysed land value \$390,000 or **\$9,750/ Ha**.

Superior improvements and location. Inferior land size. Superior in value.

5.0 Market Evidence (Cont'd) - 'Cullerin'

The 'Cullerin' sale and sales evidence analysed for comparison have been summarised in the following table.



From comparable sales evidence available, the subject sale shows a **discount of 33%** based upon a **non-impacted value of \$300,000 or \$3,708/ Ha.**

5.0 Market Evidence (Cont'd)

243 Taylors Creek Road Tarago, Reported Sold May 2013, for \$250,000

119 Hectare rural residential grazing property located approximately 55 kilometres north east of Canberra. The land is gentle to moderately sloping and has reverted to predominantly native pasture base with some serrated tussock. Improvements include a rundown galvanised iron clad shearing shed and small temporary occupancy both adding nominal value only (\$20,000).

The property adjoins a larger rural grazing property to the west and south west which has a significant number of wind turbines on the land as part of the 'Capital Wind Farm'. There are 3 turbines located within 600 metres of the western boundary of the subject land. The eastern boundary of the property located just under 2 kilometres in distance from the turbines.

Similar to the property at Cullerin, this land holding was advertised for sale for approximately 2 years with two different agents, initially at an asking price of \$430,000, which was subsequently reduced down on a number of occasions until mid-2012 at an asking price of \$315,000. The selling agent indicated that the nearby wind turbines had a significant impact upon the marketability and sale of the property. The agent did note that even these properties can be saleable if the price is reduced to a point where a particular type of buyer considers that they are receiving good value for money.

*The analysed sale price equates to **\$1,932/Ha**. This is again a value below that of rural grazing rates.*

Sales evidence available that offers some comparability to values for a property of this size and locality that are not impacted by wind turbines include:

- **876 Boro Road, Boro via Tarago, reported sold in May, 2013 for \$370,000.**

*136.5 Ha rural property located 15 kilometres south-east of Tarago. Approximately 60% of the property is cleared, part pasture improved and suitable for grazing purposes, with the balance comprising heavier remnant timber and areas of regrowth. The northern boundary is formed by Boro Creek, with some permanent waterholes suitable for stock and domestic purposes. The land is bisected by Boro Road. Electricity and telephone readily available for connection. No structural improvements. Rural style fencing, fenced into 4 main paddocks with 5 excavated dams. Analyses to **\$2,711/Ha**. Approximately 9 kilometres of unsealed road access.*

Similar size. Inferior location, access, timbered land, lack of improvements and value.

5.0 Market Evidence (Cont'd) – ‘243 Taylors Creek Road Tarago’

- **2375 Collector Road, Collector, reported sold in February, 2013 for \$420,000.**

116.9 Ha rural-residential property, mostly steeply sloping land, being an escarpment overlooking Collector village, which allows for panoramic views. Void of improvements. Reasonable native pasture grazing country. Located 38 kilometres south-west of Goulburn. Analyses to **\$3,593/Ha**.

Comparable size property and commuting distance from Canberra. Slightly superior location. Inferior improvements and land quality. Slightly superior in value.

- **Lots 3 & 4, Part “Bonnie Doon”, Lumley Road, Tarago, reported sold in March, 2013 for \$530,000.**

138 Ha rural grazing property comprising predominantly level to gently undulating arable soil types. Improvements include small stables, 2 bedroom ‘fibro’ clad cottage and cattle yards. Unsealed road access. Located approximately 12 kilometres north-east of Tarago. Based upon an adjusted land value of \$475,000, the sale analyses to **\$3,442/ Ha**.

Slightly superior improvements. Inferior location and unsealed road access. Slightly superior land size, and land quality. Superior in value.

- **417 Duckfield Road, Boro, reported sold in June, 2013 for \$330,000.**

57 Ha rural residential property comprising predominantly timbered land. A feature of the property is a large 1.5 hectare dam. Improvements include a rundown 2 stand shearing shed, machinery shed and small basic uninhabitable cottage. Small stables, 2 bedroom ‘fibro’ clad cottage and cattle yards. Unsealed road access. Located approximately 50 kilometres east of Canberra. The adjusted land value after accounting for improvements and consideration of the large dam is \$260,000. The sale analyses to **\$4,561/ Ha**.

Comparable improvements. Inferior location and unsealed road access. Inferior land size. Inferior in value.

5.0 Market Evidence (Cont'd) – ‘243 Taylors Creek Road Tarago’

The ‘243 Taylors Creek Road’ sale and the sales analysed for comparison have been summarised in the following table.



From comparable sales evidence available, the subject sale shows a **discount of 60%** based upon a **non-impacted value of \$400,000 or \$3,193/ Ha.**

5.0 Market Evidence (Cont'd)

“Leighwood” 495 Leighwood Road Golspie, Reported Sold May 2013, for \$1,380,000

477.3 hectare rural grazing property situated in the Golspie locality, approximately 75 kilometres north of Goulburn. Improvements include a rundown 4 bedroom 2 bathroom main brick residence with surrounding verandah, 2 bedroom workers cottage, 4 stand unequipped shearing shed, rundown sheep yards, cattle yards and fencing. Productive basalt and shale soil types that have been well pasture improved, long frontage to the permanent Burra Burra Creek. Estimated carrying capacity of 3,200 DSE. The property was sold on a mortgagee in possession basis by public auction. The sale price analyses to \$2,365/ hectare or \$353/ DSE.

The selling agent for the property indicated that they believed the sale price to be reasonably strong especially given the property was still subject to a lease agreement over the rural land for a further 8 months after settlement. There may have been the potential for wind turbines on the subject land and adjoining land prior to the proponents of the Golspie wind farm, shelving the project in a media release on 1 July 2013. Communication with the purchaser has indicated that they believe that they have paid fair market value for the property on a rural grazing basis and that they did not at the time of sale perceive there to be any added value or blight to the property because of this proposal.

Sales evidence of comparability to “Leighwood” includes:

- **145 Butamaroo Road, Bungendore, reported sold in November, 2012 for \$1,775,000.**

468 Ha, light to moderately sloping rural block zoned “1(a) – Rural” (minimum 80 Ha subdivision). Located 50 kilometres east of Canberra. Improvements include a 4 bedroom 2 bathroom residence in good but slightly dated condition. 2 car garage, tennis court, attractive gardens, 2 bores, 5 stand shearing shed, sheep yards, cattle yards. Estimated carrying capacity of 2,800 DSE. Analyses to **\$2,630/ Ha** or \$440/ DSE. Unsealed road access.

Inferior land quality. Superior size, dwelling improvement accommodation and proximity to Canberra. Superior in value.

- **“Woodlands” Bannister Lane, Bannister reported sold in February, 2012 for \$1,300,000.**

291 Ha of choice, basalt, gently undulating improved grazing land. Located approximately 40 kilometres north-west of Goulburn. Well fenced and watered. Improvements include a period stone residence, good shearing shed and adequate farm buildings. Analysed value **\$2,920/Ha** (ex structures).

Considered similar land quality. Inferior Size. Superior location and residential improvements. Slightly inferior in value.

5.0 Market Evidence (Cont'd) – “Leighwood”

- **“Marathon”, Wilcox Road, Golspie reported sold in February, 2011 for \$1,010,000.**

482.89 Ha rural grazing property comprising predominantly granite grazing land running into some light shale country to the rear. Part of the rear boundary formed by the Bolong River. No living improvements. Rural improvements include a corrugated galvanised iron raised timber floor shearing shed (partly incomplete), cattle yards and sheep yards. Estimated carrying capacity 3,000 DSE. Analysed land value **\$1,988/Ha** or \$322/DSE.

Inferior land quality and living improvements. Inferior in value.

- **“Balmaringa”, 1078 Fullerton Road, Fullerton, reported sold in May, 2012 for \$1,050,000.**

404 Ha rural grazing property comprising moderate to steep granite soils rising to basalt plateau. Frontage to the permanent Phil’s River. Improvements include a derelict and virtually uninhabitable house, 3 stand shearing shed, machinery/hayshed, silo. Estimated carrying capacity 2,600 DSE. Analyses to **\$2,252/Ha** or \$350/DSE. This property was sold on a delayed 2 year settlement basis, with access and grazing use of the land until settlement.

Inferior improvements and land size. Inferior in value.

- **280 Craig Road, Taralga, reported sold in August, 2012 for \$650,000.**

250 Ha rural grazing property, irregular in shape, 7 excavated dams, some basalt soil types with the balance being grey loam. Development approval for subdivision into 8 rural-residential lots however feasibility of such a subdivision in the current market is considered limited and we do not consider this subdivision to have added any significant value to the property. Analyses to **\$2,590/Ha**.

Inferior size improvements and value.

5.0 Market Evidence (Cont'd) – “Leighwood”(Cont'd)

The “Leighwood” sale and the sales evidence analysed for comparison have been summarised in the following table.



From comparable sales evidence available, the sale of “Leighwood” does not in our opinion show any enhancement or detriment in value.

5.0 Market Evidence (Cont'd)

'Neighbouring Host' & 'Compensation Deed' Agreements

Our enquiries have revealed that some wind farm proponents are already acknowledging the detriment in value and marketability to neighbouring/ nearby land holdings impacted by this type of development. We have been made aware of several instances in the Boorowa locality that detail adjoining or nearby land holders entering into agreements with the wind turbine developers in a similar format to that being offered to those land holders who are prepared to host wind turbines and infrastructure on their land.

The agreements reported to us for the Boorowa locality have identified adjoining or nearby land holders to be entering into agreements which will compensate the owner \$2,500 p.a. per turbine located within a 2 kilometre radius of a residence. These agreements are similar to the host agreements for wind farms being for the same term (typically 25 – 30 years) and indexed to CPI adjustments.

We also have researched information from the 'Collgar' wind farm in Western Australia. Varying compensation deeds have also been entered into for this wind farm.

The occurrence and acknowledgement of the impact upon adjoining and nearby landholders appears to be a more common awareness by developers of wind farms today, even if some developers are still preferring to ignore it.

5.0 Market Evidence (Cont'd)

'Gullen Wind Farm' – Grabben Gullen & Bannister N.S.W.

This development is located 35 kilometres northwest of Goulburn. It is currently in the construction phase. As part of this development process, a court order is enforcing the development proponents to acquire a number of smaller rural residential and small rural grazing properties within close proximity (typically within 1 kilometre distance) of proposed turbines that will be impacted upon. Under this court order properties are to be acquired at market value plus fair compensation.

The development proponents intend to construct the turbines and resell the impacted properties when complete. This may provide a strong source of market evidence in the near future, as to an analysed dollar value rates due to the impact wind turbines.

We have completed valuations in several particular cases involving this development, one of which is still to be finalised. The final property to be acquired has now reached a point where a determining valuer has been appointed to calculate the final amount for market value and compensation that the owners should receive. The approach being undertaken by this valuer is that a fair market value has been assessed for the land to be acquired, however they are also assessing compensation for the residual area of land and residence that is being retained by the owners which will still be well in view of a developing ridgeline of turbines. The final outcome of this determination is expected sometime in late September 2013.

6.0 Conclusion

Contrary to published reports to date on the issue of impact of wind turbine developments on land values to adjoining or nearby properties, this report provides clear evidence that this type of development has resulted in a negative impact on marketability and the value of properties to varying degrees. **Discounts in value as identified of 33% & 60% in the market place cannot be ignored.**

The acknowledgement of this detriment has also been realised by the proponents of the Rugby wind farm proposal near Boorowa N.S.W. We have information indicating that 'Neighbouring Host Agreements' or 'Compensation Deeds' have been agreed to and signed that compensate owners who have a residence within 2 kilometres distance of proposed future wind turbine developments.

The commentary from key real estate agents who deal in these impacted areas on a daily basis cannot be ignored.

There are a vast array of property types, sizes, topography, aspects, and improvements. In our professional opinion there is no 'blanket rule' as to the percentage of detriment that can be attributed to any particular property impacted by wind turbines. As a generalisation we consider that the greater the distance, and out of sight position of wind turbines to a residence, the lower the reduced marketability and impact upon value to a property will be. Each property therefore needs to be assessed more on a 'case by case' basis rather than an individual 'blanket rule'.

Our initial findings detail that the marketability of certain properties (especially those with lifestyle appeal and/or residential improvements) to be the most severely impacted upon by wind turbine developments. This detriment appears to occur from the initial time that a proposal has been advertised within a locality. The public knowledge of the potential for this type of development appears to create some uncertainty in the market place as to the impact that these potential future developments will have. There is therefore reluctance by purchasers to invest into an area where this uncertainty exists not only from the potential of any future financial loss, but also the blight on many property views and aesthetic appeal, which is a strong consideration by many city based purchasers who acquire properties in the Southern Tablelands.

Given the number of developments existing, under construction and proposed in the Southern Tablelands, we consider further market evidence will eventuate in the near future.

7.0 Recommended Further Research and Review

The strongest potential for future market evidence may come from the ‘Gullen Range’ wind turbine development to the north west of Goulburn. There are a number of circumstances with this proposed wind farm that have required the wind farm developers to acquire properties at a market rate plus fair compensation. The proponents of this development are proposing to resell these properties after the construction of the wind farm is complete. Taking into account any difference in market conditions between each transaction date, these sales should be able to be analysed in a similar approach to the existing market evidence analysed herein to determine the impact of wind turbine infrastructure.

Larger rural grazing properties nearby or adjoining wind turbine developments, from evidence available are less likely to be impacted upon, if residential improvements are located significant distances away and/ or out of sight and sound from turbines. Future research and consideration needs to be given to larger properties with subdivision approval and/or potential for future subdivision. Many land holders of larger grazing/ farming properties, often view the future subdivision potential of their land to offer a good form of future superannuation when they reach retirement age. Strong consideration and future research needs to be undertaken to determine how this particular type of land holder is impacted upon.

There are also certain rural localities within the Southern Tablelands that have very high (bordering on prestige) land values underpinned by wealthy city based interests. One such example is the ‘Roslyn’ rural locality to the south east of Crookwell. Many smaller rural residential properties in this locality have present values in excess of \$1,000,000, and many large grazing properties in this area have sold for between \$2,000,000 - \$15,000,000. If wind infrastructure projects are undertaken in or nearby to these localities in our opinion these areas have the potential to show the largest falls in market value. The type of purchaser, who pays a premium for land in this locality are very particular in their requirements. This type of purchaser will not simply accept a discount in value for the negative impacts of such developments, rather they will simply choose not to purchase land in this locality. If such developments proceed in or nearby to these localities, this may cause land values to revert back to rural grazing rates. Again further research needs to be undertaken in the future to this regard.

Of greater concern is perhaps the overall ‘blight’ that may occur in certain rural localities due to the the large number of turbine infrastructure developments and high densities. The significant wind turbine developments that are proposed to be located within a 90 kilometre radius of Goulburn could have a more significant total bearing and blanketing impact upon the entire rural residential and lifestyle market in this northern section of the Southern Tablelands. We consider that a similar situation could arise in the Jugiong, Yass, Rye Park, Boorowa and Rugby localities with a similar high density of turbines proposed in these adjoining regions. Prospective purchasers of rural residential and lifestyle properties could look to other localities outside of the Southern Tablelands for this reason.

7.0 *Recommended Further Research and Review (Cont'd)*

Further research outside of neighbouring or nearby property values needs to be undertaken on the economic advantages and disadvantages of this type of development. Further studies are needed on the economic benefit to regions, towns, and city's that go ahead with this type of large scale development. The initial construction stage of a wind turbine development creates employment and economic benefits to communities, however after this initial construction phase, what are the future economic benefits to these stakeholders? There are minimal future capital expenditure requirements by these developments. Only a small number of host farmers/ landholders receive any future income or benefit into the future. Is it therefore worthwhile locking large land areas into this type of long term agreement when perhaps rural residential/ lifestyle development may provide for a larger continual stimulus and growth for the economy in these rural locations.

We would recommend further research be carried out and this report be updated when future market evidence is available regarding the impact of wind turbine developments on property values in this locality given the Southern Tablelands close proximity to major urban centres and large population bases.

8.0 Copyright & Disclaimer

This report has been prepared as at the date stated. The comments contained herein may change as a result of further information and more conclusive evidence if and when it becomes available in the future. We reserve the right to update this report in the future if and when relevant information becomes available.

Our report has been prepared on reliance from 'Red Square' sales data base of N.S.W. property transactions. Should there be any discrepancy where appropriate in sales data we have relied upon, we reserve the right to alter and reconsider our report and findings accordingly.

This report has been produced at the express request of the stated client and is prepared solely for the use of the stated client and shall not be utilized, relied upon or reproduced by any other party other than the stated client, without the written authorization of this firm.

Our report has been prepared objectively based upon a broad analysis of market evidence available within the Southern Tablelands. We do not accept liability for any losses, financial or otherwise.

Neither the writer of this report nor the firm has any interest, financial or otherwise from our instructing party, or the proponents of any wind turbine developments.