

LAL LAL WIND FARM PROJECT UPDATE 2

WestWind
energy



This Project Update was first issued by WestWind Energy in June 2007

This is the second Project Update from WestWind Energy to provide you with further information about our Lal Lal Wind Farm project. You have received this update because you are on our stakeholder database.

Please contact us if we do not have your correct contact details or if you know of anyone who has not received a copy of this Project Update but would like to. (Please refer to the back page for contact details)

NEW PROJECT OFFICE OPENED IN BUNINYONG

WestWind Energy has opened a new project office in Buninyong to provide a local point of contact for the communities around our wind farm projects in the area. Staff for this office are currently being recruited and it is hoped the office will be fully operational in July. A location map is enclosed.

PLANNING PROCESS DETERMINATION

The Minister for Planning has determined that an *Environmental Effects Statement* is not required for the Lal Lal Wind Farm project and it will be assessed under the *Planning and Environment Act*.

SPECIALIST STUDIES CONTINUE

The reports on some of the specialist studies for the Lal Lal Wind Farm project are now available and the findings and recommendations are being integrated into the next revision of our wind farm design.

PLANNING PROCESS DETERMINED

The Minister for Planning (Justin Madden, MLC) has determined that an Environment Effects Statement is not required for the Lal Lal Wind Farm project.

It is stressed that this does not mean that the 'environmental effects' will be ignored in any proposal that WestWind Energy put forward. It is the Minister's view that the potential environmental effects of the project can be adequately assessed through the normal planning permit process under the *Planning and Environment Act 1987*. The set of 'rules' against which our application will be assessed is the Moorabool Planning Scheme, like any other development in the Shire. The scheme can be viewed at <http://www.dse.vic.gov.au/planningschemes/>.

WestWind Energy will still be required to undertake a significant level of investigation of the site and its surrounds during the development of its proposal. We will publish the

findings of these investigations as they become available and they will form an integral part of the planning permit application for the project.

The reasons for the Minister's decision include;

- ✦ that the project sites are mostly cleared agricultural land, with considerable scope to adjust the siting of wind turbines and associated infrastructure to avoid adverse effects on indigenous flora and Aboriginal cultural heritage (if any are found), and
- ✦ that the potential effects on avifauna, landscape values and residential amenity are likely to be of local significance only, with some potential for mitigation.

An outline of the information in some of the specialist studies that we have already undertaken is included in this project update. If there is a specific issue that is of interest to you please contact us, or visit our web site to read or download the full reports.

FLORA AND FAUNA STUDIES

WestWind Energy has commissioned *Brett Lane and Associates* to conduct a detailed flora and fauna (plant & animal) study of the project site and the surrounding area.

The findings and recommendations of this study are now available on our web site if you would like to read it in full. We are only able to provide a brief overview of the key issues in this update.

FLORA STUDIES

Experienced botanists have made a number of trips to both sections of the site to assess the flora of the site and the report sets out the implications their findings may have on the design of the wind farm layout.

The site has generally been cleared of its native vegetation. However patches of degraded forest - belonging to the Grassy Forest Ecological Vegetation Class - remain on the higher granite ridges of the Yendon Section of the site. Most of these patches of vegetation are considered to be of 'poor' or 'moderate-to-poor' quality because they generally lack intact indigenous understorey and ground cover (a result of the long history of stock grazing in the region). One particular area though, within the Yendon Section, is of higher ('moderate') quality. This small area may support the EPBC Act-listed *Slender Tick Trefoil* - a threatened native, twining pea found in woodland and open forest.

If any native vegetation removal is an unavoidable part of our design, then a further spring survey, specifically targeting the rare species, as well as a habitat-hectare assessment, would need to be undertaken before any of this vegetation could be removed. The avoidance of all native vegetation is the first key step the Victorian Native Vegetation Management Framework and is also a key design criterion for WestWind Energy.

The native vegetation areas that still remain within our site have been mapped to help us with the design of the wind farm layout. This mapping has shown it is feasible to restrict the wind turbines, access tracks and other wind farm infrastructure to the un-vegetated areas of the site. In this way, no native vegetation should need to be removed from within the site as part of our proposal.

We will also use indigenous species plantings as a part of any site beautification or remediation works that we may choose to undertake so as to help improve the quality and quantity of habitat on the site.

BIRD STUDIES

In reviewing the numerous studies of the impact of operating wind turbines on birds, the impact appears to be small, but very site-specific. The rate of impact varies between 0.04 – 3.4 birds killed per wind turbine per year. Variation among wind farms depends on

several factors, including the amount of bird use, vegetation and other physical and biological characteristics of the specific wind farm and its surrounding area.

Overall it is clear that birds are generally able to avoid collisions and do not blindly fly into wind turbines. Collision rates typically lie in a range of only 1 in 1,000-10,000 bird flights through a wind farm.

Worldwide, most wind farm bird mortality is attributable to migrating birds and in particular night migrating birds. The Northern Hemisphere has a large number of both species and individuals of migrating birds due to the large area of land at high latitudes that becomes unsuitable for birds during winter. This is not the case for Australia, where the high latitudes comprise the Southern Ocean rather than land masses and seasonal changes are not as extreme. Consequently we have few night-migrating bird species. For this reason, the number of birds likely to collide with operating wind farms in Australia would be significantly less than that in Europe and North America.

Experience at wind farms in Australia is informative. Monitoring results in the public domain include:

- ✦ Codrington (14 wind turbines): 3 birds (over 2.5 years with weekly, monthly or six-weekly searches);
- ✦ King Island (3 wind turbines): 1 bird (over 5 years with weekly – monthly searches);
- ✦ Woolnorth (6 wind turbines): 8 birds over <1 year, with daily to weekly searches);

Bird mortality at Australian wind farms has varied from one to more than three birds per wind turbine per year. Birds that fatally collided with wind turbines are mostly farmland birds.

Another potential impact is through the displacement of birds from an area around the wind turbines (i.e. scaring them away from an area). Numerous studies have investigated this potential problem and in many cases, no effect has been detected at all.

While birds appear to avoid flying near wind turbines, the presence of these structures does not seem to deter birds from foraging. Breeding birds also appear to have a greater tolerance to wind turbines than migrating birds.

Assessing the risk to bird populations is an important component in site selection and the development of the layout. WestWind Energy has commissioned a detailed investigation of the area to ensure that we have a good understanding of the bird life on our site.

Biologists made a number of visits to the site to conduct a variety of studies, principally to study the utilisation of the site by birds. Utilisation studies look at what bird species use the site, how they use the site and surrounding areas and in what numbers.

The bird utilisation surveys found bird use at our site to be comparable, in species and numbers, to similar agricultural wind farm sites surveyed elsewhere in Victoria. As you would expect, the most abundant species recorded were common farmland birds, known to occur in farmland areas throughout southern Victoria and southeastern South Australia.

The most abundant species at our site were:

- ▲ Australian Magpie;
- ▲ Raven;
- ▲ Common Starling; and
- ▲ Skylark.

These four bird species accounted for over 75 % of the individual birds counted during the survey.

Small numbers of birds of prey and waterbirds were also observed on the site. Special attention is paid to these species because they normally fly at heights where they may pass through the area swept by the rotor blades of the wind turbines (whereas farmland and woodland birds do not normally fly this high) and so may be at risk of collision with the wind turbines.

Small numbers of threatened duck species also occur on the larger dams in the Yendon section of the site. For this reason we have excluded these areas from consideration for wind turbines. None of these birds were seen flying over areas where we are now considering placement of the wind turbines.

A pair of Wedge-tailed Eagles also includes our site within its home range and they occasionally pass over the site. However the rate of use of our site by Wedge-tailed Eagles is comparatively low compared with many wind farm sites elsewhere in Victoria and South Australia. So the risk to this species overall is relatively low.

Some species of birds were not recorded during the on-site surveys. There comes a point where, no matter how long the ornithologists stand in the paddocks, they simply will not see the less frequent visitors to the site. To ensure a proper understanding of the birds that use the site, a review of other research done in the wider region was performed. This gives us an idea of what birds may have used the site in the past or only use it infrequently - even if they are no longer common in the area.

The Powerful Owl & Barking Owl are important examples. They have been recorded in the wider region in the past but their habitat and population size have declined (mainly due to forestry practices and clearing of forests for agricultural purposes). Both species are now threatened species within Victoria and so they were given special attention by us.

We commissioned specific investigations for these owl species to ascertain the suitability for, and likely occurrence of, these owls in the areas of remnant treed vegetation on the Yendon section of the site.

The investigations looked for the owls, for places it could nest and for the food it eats. This involved a

combination of call playback and spotlighting for the owls, nocturnal surveys for tree-dwelling mammals (the favoured food of the owls is the ring tailed possum) and qualitative estimates of the availability of large old trees with large hollows (>25 cm diameter) suitable for owl breeding nests.

For those not familiar with these birds, they are very large owls. The powerful owl stands more than 50 cm tall and has a wing span of more than 120 cm (see picture below). They live in woodlands and prey mainly on slow-moving arboreal mammals (esp. possums) and large birds which they catch as they roost. To find out more about these owls (and even hear recordings of their calls) you can visit the owl pages web site at <http://www.owlpages.com>



POWERFUL OWL
(*NINOX STRENUA*)

- PHOTO BY
TREVOR QUESTED

No owls were found, few tree-dwelling mammals were observed (with no Common Ringtail Possums at all), and few large old trees with suitable hollows were detected. The probability that these owl species occur on the site is considered to be low.

The investigations that have been undertaken show that the proposed wind farm can be designed, constructed and operated in compliance with applicable biodiversity legislation and policies.

No bird species listed for protection (i.e. in the EPBC Act or the FFG Act) will be affected significantly by the proposed wind farm. The wind farm, like any activity of man, will cause some bird mortality. It is expected that the annual collision mortality is likely to be between 0.1 and 4 birds per wind turbine per year, based on figures for other wind farms elsewhere in southern Australia.

The birds most likely to be affected regularly are the common farmland birds (Magpie, Raven, Starling, Skylark etc). This impact is not expected to be of conservation significance.

ELECTROMAGNETIC INTERFERENCE (EMI) STUDY

WestWind Energy has commissioned *Garrad Hassan Pacific* to conduct an initial assessment of the potential for electromagnetic interference associated with the Lal Lal Wind Farm project. These initial results will feed into subsequent revisions of the wind farm layout over the next few months.

In general, VHF & UHF radio signals and digital voice based technologies, such as GSM & CDMA mobile, are essentially unaffected by a wind farm. This includes land mobile repeaters, radio, the audio component of analogue television, and mobile phones.

However, without careful design, wind farms may interfere with both analogue television broadcast signals and microwave signals. Analogue broadcast signals (generally described as point to area) are still commonly used to transmit domestic television. Microwave links (generally described as point to point) are often used for line of sight connections for data, voice and video. The interference mechanisms are different for each of these, and hence, there are different ways to avoid interference.

For broadcast signals (point to area) large scale interference can generally be avoided by keeping wind turbines away from broadcast towers. A

clearance of at least 1 km is recommended. There are no broadcast towers within 1 km of our site so it is not expected that there will be any significant interference with TV signals.

Wind turbines can also cause interference for individual receivers within or very close to the actual wind turbines - the same as if a hill or large trees are close to your house and between you and the transmitter. These sorts of problems for individual households can be easily remedied by WestWind Energy if need be. The next revision of the wind turbine layout will seek to eliminate this issue.

Wind turbines can also cause interference with point to point signals. However, it is possible to design around this issue because the signal path is generally well known. Eleven point to point signal paths cross the site. Five of them are well above the top of the wind turbines and the wind turbine layout can be adjusted to avoid interference with the remaining six. Therefore there is not expected to be any interference with any existing point to point type signal paths.

This initial EMI study will be reviewed once the Proposed Layout is confirmed, so that a final assessment of impacts, if any, can be made.

OTHER SPECIALIST STUDIES

Several other studies of the site are still underway or will commence shortly but it is not possible to present all their findings in a single project update.

The other topics covered include; landscape assessment and visual impact, noise, traffic management, cultural heritage, geology, town

planning, aviation safety, greenhouse gas emissions savings, cumulative impacts, and so on.

We will endeavour to keep you informed of the results as they come to hand but all will be incorporated into our planning permit report which will be lodged with the Minister for Planning later in 2007.

DISPELLING SOME MYTHS - YOUR INFORMED OPINION IS IMPORTANT

WestWind Energy encourages people to voice their opinions about our proposals and participate in the planning process (regardless of whether you support or oppose our project or wind farms in general). We also encourage you to discuss any concerns you may have about the wind farm with us. We believe that this will help you in developing a better informed opinion of the proposal that we will eventually put forward for assessment by the Planning Minister. It will also help us with a better understanding of your concerns while we formulate our plans.

Unfortunately we often encounter views that are distorted, out-of-date, misinformed or just plain wrong being promulgated in the community. An example is...

"WestWind Energy will leave the wind turbines to rust in paddock at the end of their operating life."

FALSE: We are contractually obliged to reinstate the site to its original condition at the end of the life of the wind farm. At the end of their lives, each wind turbine is worth several hundred thousand dollars - even just as scrap. So there is no risk of them being left derelict and rusting in the paddock!

If you have heard something that doesn't seem quite right or are just interested in learning more about wind energy in general or about our projects, please contact us so that you can get the answer straight from the source.

FURTHER INFORMATION & CONTACTING WESTWIND ENERGY

WestWind Energy posts key information, including the reports of the specialist studies, on its web site.

If you have a specific question or concern that you would like to raise with us or would simply like to be added to our mailing list please do not hesitate to contact us via our Project Manager at the Buninyong Project Office.

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