# Mt Emerald Wind Farm
# *Community Newsletter*

*Issue 2 – June 2011*

***Welcome to Issue 2 of the Mt Emerald Wind Farm newsletter.***

*This newsletter will provide you with an update on the environmental and planning investigations currently underway and further information on the proposed wind farm.*

*This newsletter follows our first issue circulated in March 2011. Since that time we have undertaken a community open house on 31 March 2011 at the Mareeba Heritage Centre where information on the project was provided to approximately 60 attendees.*

*Mount Emerald Wind Farm is a Joint venture between Transfield Services and Port Bajool.*

## *Current Activities*

A range of detailed studies are currently underway, with investigations being undertaken by expert consultants engaged to perform the work.

These investigations cover areas such as;

- Flora and fauna
- Noise
- Visual
- Aeronautical
- Telecommunications
- Traffic
- Cultural Heritage

It is hoped all of these studies can be completed over the coming months. The information obtained through these reports can then be used to adjust the design of the wind farm and hence ensure the design conforms to the required guidelines.

## *Community Consultation Update*

Thank you to all who attended the Community Open House in March. Since the meeting a number of residents have taken the opportunity to contact us requesting further information or to provide additional feedback. The local community expressed a range of views about the project. This feedback has already proved invaluable with suggested changes incorporated into the layout to reduce the visual impact of the wind farm.

## *Questions and Answers*

At the recent open house and over the past months there have been a number of questions raised regarding the proposed wind farm project. Whilst some of the exact answers cannot be given at this stage as we await the completion of the detailed environmental studies we have tried to provide as best we can to some of the more common requests.

***Will aviation lighting (red lights) be required at the Mount Emerald Wind Farm?***

Preliminary advice from aviation consultants suggest there is no requirement for night time aviation lighting at Mount Emerald wind farm. However, they do advise that under a general duty of care to aviation, hazard lighting should be installed on sufficient turbines to define the extremities of the site during the period 30 minutes before and after sunrise and sunset, and during conditions of reduced visibility caused by smoke, dust or haze (i.e. lights are NOT generally on overnight). The number of turbines needed to have lights installed to meet this requirement is thought to be approximately 8.

Further work is being undertaken to determine the necessity of this requirement.

***What is the proposed construction access route to the wind farm site and how will damage to local roads be repaired?***

A traffic and transport assessment is currently being undertaken to examine potential access routes to the wind farm. Preliminary assessment suggests the preferred site access to be from the Kennedy Highway along Hansen Road and Kippin Drive. Expected planning approval conditions will require the wind farm to repair any damage caused to local roads during the construction phase.

***How will the visual impact of the wind farm be assessed?***

The wind farm will be visible from various locations in the surrounding area. The visual significance of the wind farm will vary from person to person and is largely subjective.

A comprehensive visual impact assessment will be undertaken, including a landscape character assessment, consideration of the visual impact of the wind farm on the local landscape and assessment of any cumulative effects. A series of photomontages will be prepared simulating the appearance of the wind farm from various viewpoints.

Contrary to recent media there are no residences underneath the turbines; with no houses within 1.5 kilometres of a proposed wind turbine.

*Will construction and maintenance workers be employed from the local area?*

Mount Emerald wind farm will look to recruit skilled construction and maintenance workers from the local area and involve local contractors and suppliers wherever feasible.

The project would generate employment in the local area during construction and operation. Workers required for the project would include plant operators, truck drivers mechanics, fencers, electricians, labourers and other trades typically used in civil construction. It is estimated the onsite workforce would peak at around 120 employees.

*Will property values decrease as a result of the wind farm?*

A recent study by the NSW Valuer General into the impacts of wind farms on property values concluded that in most cases wind farms do not appear to negatively affect property value.

*Who would be responsible for decommissioning the wind farm at the end of its operating life?*

The owner of the wind farm will be responsible for the removal at the end of the operating life. Conditions in lease agreements and development approval conditions require the infrastructure to be removed at the end of its life.

*How does the noise assessment demonstrate whether the noise level at neighbouring properties is at a safe level prior to installing any turbines?*

A computer model of the wind farm site is created using detailed contour data. The locations of the turbines and the residences around the wind farm are added to this model. The noise level emitted by the wind turbine is known and is guaranteed by the manufacturer. This information allows the prediction of the noise at the residences to be made. Depending on the outcome ofthe modelling the layout of the wind turbines is altered to ensure the predicted noise level at the residences is below the required noise limits.

It is proposed for the noise assessment to be undertaken in accordance with the SA Environmental Protection Authority – Wind Farms Environmental Noise Guidelines (2009). Under these guidelines the noise from the wind farm must be below a noise limit that is the greater of 40dBA or background noise plus 5dB.

Background noise is a measure of the existing noise in the environment. Background noise levels are obtained from actual measurements undertaken at residences in the closest proximity to the wind farm.

It should be noted that the above noise limits apply to the area outside of the residence. In Queensland, the Environmental Protection Agency (EPA) implements a policy to protect the noise levels within a residence. This policy must also be conformed to.

*Do noise levels change with wind speed?*

Yes, both the noise emitted by the wind turbine and the background noise change with wind speed. If there is no wind then the wind turbine will not operate and hence make no noise. As the wind speed increases the sound level of the operating wind turbine will also increase. However, the background noise also increases with wind speed and normally at a rate faster than the noise of the wind turbine.

*How will noise levels be monitored during the operational phase of the wind farm and what enforcement is there if levels are exceeded?*

The conditions of approval for the development will require the preparation of a Noise Compliance Plan for the operational phase of the project. This would require monitoring of noise levels at nearby residences in the first months of operation to confirm the results of the pre-construction modelling are not exceeded. If noise limits are exceeded, the wind farm is required to take steps to reduce noise levels to comply with the limits. If noise compliance cannot be achieved in a reasonable timeframe then the offending turbines will be removed from operation, under certain conditons.

*What studies are being conducted into the health impacts on the community?*

A review in July 2010 by the National Health and Medical Research council (NHMRC) concluded that;

> *“There is currently no published scientific evidence to positively link wind turbines with adverse health effects.”*

They further recommended that authorities in determining their approval of wind farm projects comply with standards relating to wind turbine design, manufacture and site evaluation to minimise any potential impacts on surrounding areas.

For example, the SA Environmental Protection Authority – Wind Farms Environmental Noise Guidelines (2009) should be used as a relevant standard for assessing noise impacts.

*At what wind speeds are the turbines activated or stopped?*

Wind turbines commence generating electricity at wind speeds of around 10 km/h and will continue to do so until the wind reaches a speed of 100 km/h. For wind speeds above this, the turbines will cease operation and go into lock-down mode. In this mode the turbines are designed to withstand cyclone force wind speeds.

*How often will the turbines be inspected and what is the proposed maintenance regime?*

Turbines are subject to regular scheduled maintenance activities on a six-monthly cycle. Turbine operation is monitored 24 hours a day either remotely or via the wind farm control room.

*Are overheating problems a risk to wind turbine operation?*

Modern wind turbines are able to operate through a large temperature range; generally between -20$^{O}$C and 50$^{O}$C. Turbines are fitted with sophisticated electronic controllers which monitor each turbine's operating conditions. If the potential for overheating is detected an emergency stop would be activated.

*The wind farm has the potential to supply electricity equivalent to the needs of 75,000 homes. Is this amount of electricity produced at all times?*

The figure of 75,000 homes is an average figure based on the expected annual energy generated by the wind farm. Energy generation has been calculated using the data gathered from wind monitoring at the site. When wind speeds are too low to generate energy (below 10 km/h – approx. 5% of the time) no power will be generated. On the other hand, when wind speeds allow maximum generation (above 50km/h – approx. 15% of the time) the wind farm could supply the electricity needs of around 250,000 homes.

*Is there a risk of bushfire associated with wind turbines?*

There have been a small number of wind turbine fires in Australia; however the over all risk is considered to be low according to organisations such as Victorian Country Fire Authority (CFA). The wind turbines are all connected to a control centre which continuously monitors the operation of each turbine and alerts the operator to any issues.

Each turbine has an in-built lightning protection system to safely dissipate any strike to the ground.

In some ways the wind farm can actually provide benefits to combat bushfire in the area; such as providing road access to areas previously unavailable to vehicles and personnel acting as early detection observers.

## *For more information*

Please contact Mt Emerald Wind Farm Project Manager, Terry Johannesen on **(07) 3248 8765** or **johannesent@transfieldservices.com** with any questions.

Information about wind energy is available at **www.windfarms.net.au**