

ATTACHMENT 1 AUTHOR CERTIFICATION

Nick Graham-Higgs and Paul McPherson of **ngh**environmental constitute the document's primary authors. The information contained in this document is neither false nor misleading. All information is considered by the authors to be correct at the time of writing.

Nicholas Graham-Higgs
nghenvironmental (Director)

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Paul McPherson
nghenvironmental (Senior Project Officer)

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Authors	Experience
<p>Nicholas Graham-Higgs Principal <i>Bachelor of Applied Science</i></p>	<p>Nick has worked as an environmental planning consultant since 1992, specialising in environmental impact assessment and natural resource management. His work demands an in-depth knowledge of current planning and environmental legislation coupled with a comprehensive understanding of development-related impacts, especially those relating to the development of sustainable power generation facilities, including hydro and wind generated electricity. Nicholas has acquired his knowledge in this field over the last 17 years, during which he has worked with a number of land management organisations within and outside Australia.</p> <p>Much of the work undertaken has been within sensitive areas, including major works for infrastructure development; the augmentation of water supplies at Perisher Range and Adaminaby, the development of mini-hydro plants at Jounama, Khancoban and Geehi and environmental assessment for a wind farm on the Snowy Plains, near Kosciuszko National Park.</p>
<p>Paul McPherson Senior Project Officer <i>Dip (Env. Control), Bachelor of Applied Science (Natural Resources)</i></p>	<p>At nghenvironmental, Paul has undertaken environmental assessments and prepared EIA reports for a wide range of proposals located in the Far South Coast, South Coast, Snowy Mountains and Southern Tablelands regions. Recent work has involved assessing the impacts of prescribed burning, roadworks, walking tracks, recreation facilities, developments in alpine environments, bridge replacement and water and sewerage pipeline construction. Paul has also undertaken vegetation surveys in a range of environments for private landowners and government authorities.</p> <p>Before commencing at nghenvironmental in 1996, Paul was employed by the Commonwealth Environment Department and the Resource Assessment Commission. He co-drafted the Commonwealth policy papers on the Regional Forest Agreement process and forest reserve criteria, wrote numerous Ministerial speeches and parliamentary statements on forest issues, and investigated coastal zone management in Australia.</p>

ATTACHMENT 2 DIRECTOR-GENERAL'S REQUIREMENTS LETTER



Contact: Rebecca Newman
Phone: (02) 9228 6340
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Email: rebecca.newman@planning.nsw.gov.au

Mr Andrew Durran
Executive Director
Taurus Energy Pty Ltd
Suite 104, 349 Pacific Highway
NORTH SYDNEY NSW 2060

Our ref: 9041055
Your ref:

Dear Mr Durran

Proposed Conroy's Gap Wind Farm, Yass Valley LGA

I refer to your correspondence received on 27 February, 2006 which requested the Director-General's requirements for the preparation of an Environmental Assessment for the above project.

The Director-General's Requirements are attached. The requirements have been developed in light of:

- the Department's draft guidelines "*Steps in the Part 3A Project Application Process*";
- the outcomes of the Planning Focus Meeting held on 11th November, 2005; and
- the Project Application received from the Proponent.

The requirements have been prepared based on the information provided by **ngh**environmental, on behalf of Taurus Energy, in relation to the proposed project.

In respect of the Environmental Assessment to be submitted by Taurus Energy, the Department should be consulted at least one week prior to the lodgement of the Environmental Assessment to confirm the:

- consultation and public exhibition arrangements that will apply; and
- number and format (hard-copy or CD-ROM) of the Environmental Assessment that will be required.

The Environmental Assessment should focus on key issues associated with the likely environmental impacts of the project and associated mitigating measures and be compliant with the attached assessment requirements.

Once you have lodged the Environmental Assessment, the Department will consult with the relevant authorities to determine the adequacy of the Environmental Assessment. Following this review period, the Environmental Assessment will be made publicly available for a minimum period of 30 days.

You should keep the contact officer for this project, Rebecca Newman ((02) 9228 6340, rebecca.newman@planning.nsw.gov.au), up to date with the progress of preparation of the Environmental Assessment, and seek clarification of any issues that may be unclear or may arise during this process.

Yours sincerely

Chris Wilson
**A/Deputy Director General
as delegate for the Director General**

CONROYS GAP WIND FARM

ENVIRONMENTAL ASSESSMENT REQUIREMENTS UNDER PART 3A OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Project	<p>The proposal consists of:</p> <ul style="list-style-type: none"> ▪ up to 16 wind turbines with a total generating capacity of up to 30 megawatts; ▪ three-bladed turbines, up to 46m long, mounted on tubular steel towers up to 80m high (total height of up to 126 m from ground to blade tip); ▪ underground and overhead cabling to connect the turbines; ▪ a sub-station and transmission connection linking the wind turbines to the existing TransGrid 132kV transmission system located adjacent to the site; ▪ access roads around the site, and upgrades to access via Black Range Road and/or Paynes Road and the Hume Highway, for installation and maintenance of wind turbines; ▪ on-site control room and equipment storage facilities.
Site	<p>Approximately 17 km west of Black Range Road consisting of various lots: Lots 183, 189 of DP 753596 owned by Andrew & Tarina Walker; Lots 207, 208 and 298 of DP 753596 owned by Kerry & James Payne; Lots 53, 60, 79, 80, 81, 82, 167 of DP 753633 owned by Donald a& Marjorie Payne; Lots 94, 99 and 104 in DP 753633 owned by John & Teresa Kaveney.</p>
Proponent	Taurus Energy
Date of Issue	Date of the letter
Date of Expiration	Two years from the date of the letter
General Requirements	<p>The Environmental Assessment must be prepared to a high technical and scientific standard and must include:</p> <ul style="list-style-type: none"> • an executive summary; • a description of the proposal, including construction, operation, and staging; • an assessment of the environmental impacts of the project, with particular focus on the key assessment requirements specified below; • justification for undertaking the project with consideration of the benefits and impacts of the proposal; • a draft Statement of Commitments detailing measures for environmental mitigation, management and monitoring for the project; and • certification by the author of the Environment Assessment that the information contained in the Assessment is neither false nor misleading. <p>The Environmental Assessment should consider the following documents:</p> <ul style="list-style-type: none"> • Draft NSW Wind Energy EIA Guidelines, Planning NSW (2002); • Draft Murrumbidgee Catchment Action Plan

Key Assessment Requirements

The Environmental Assessment must include assessment of the following key issues:

- **Project Justification** – the Environmental Assessment must include a clear demonstration of quantified and substantiated greenhouse benefits, taking into account the proposal's capacity factor and identification of sources of electricity that could be realistically replaced and the extent of the replacement.

The Environmental Assessment should also identify the socio-economic benefits of the proposal, including benefits that can be provided to the local community potentially affected by the proposal.

- **Visual Impacts** – comprehensive assessment of the landscape character/values of the affected areas and the visual impact of the proposal on this landscape and on the existing and approved residences, particularly within 2 km of the turbines. Visual assessment should include impact on the recreational users of the Hume and Hovell Walking Track and Burrinjuck Waters State Park access road, and on the Hume Highway which carries recreational and tourism traffic.

Consideration should be given to the Australian Wind Energy Association and Australian Council of National Trust's draft issues paper *Wind Farms and Landscape Values*.

The assessment must also discuss/provide:

- impact of blade "flicker" and blade "glint" on existing and approved residences and road users (including road safety matters) within 2 km of the turbines;
 - "flicker vertigo" issues;
 - proposed mitigation measures, including screening, turbine layout and location and operating protocols;
 - photomontages of the proposal taken from strategic vantage points.
- **Flora and Fauna** – the Environmental Assessment must address:
 - impact on critical habitats, threatened species, populations, ecological communities, and their habitats listed under the Threatened Species Conservation Act 1995 and the Fisheries Management Act 1997;
 - impact on birds and bats from strikes and alteration to movement patterns from the turbines and transmission lines. Assessment should consider the Australian Wind Energy Association's publication *Assessing the Impacts on Birds – Protocols and Data Set Standards*. An outline of an adaptive management program should be provided;
 - vegetation clearing during construction and maintenance.

The threatened species assessment must generally be in accordance with the DEC's *Guidelines for Threatened Species Assessment*. Where ecological offsets or compensation are proposed (eg compensatory habitat or rehabilitated areas), appropriate details of each offset option must be included in the Environmental Assessment, including implementation measures for each offset option.

- **Archaeology/Cultural Heritage** – the Environmental Assessment must address the potential impact on Aboriginal heritage values and items and must generally be in accordance with the DEC's *Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation*.
- **Operational Noise** – comprehensive assessment of the noise impacts associated with the proposal (including 'infrasound') to be undertaken in accordance with the DEC's *Industrial Noise Policy and Wind Farms – Environmental Noise Guidelines*, South Australian Environment Protection Authority (February 2003). If any Noise Agreements with residents are proposed for areas where noise criteria cannot be met, sufficient information should be provided to enable a clear understanding of what has been agreed, and what criteria have been used to frame any Agreements.
- **Bushfire Risk** – the Environmental Assessment must address the potential for

	<p>wind turbines to start/influence the pattern of bushfires, and include bushfire management strategies and measures in consultation with the Rural Fire Service and the local council.</p> <ul style="list-style-type: none"> • Traffic and Transport – the Environmental Assessment must: <ul style="list-style-type: none"> • identify transport routes to and from the project site, including details of any proposed upgrading or construction of road/access to the site; • assess the construction traffic impact of the project in terms of capacity and safety of these routes and potential damage. • Land Values/Development Potential – assessment of potential impact of the wind farm on surrounding land values, including a prediction of expected land value changes as a result of the development in the short and long term. Any consequences for future development of surrounding land. • Community consultation – strategy for community consultation to keep affected landowners and communities involved and informed about the project, including proposed measures to address community concerns. • Services and Infrastructure – assessment of potential impact on aircraft and telecommunications, roads, bridges, rail crossings and electricity infrastructure, in liaison with relevant authorities. In reference to aircraft, the assessment should consider the Civil Aviation Safety Authority Guidelines Draft Advisory Circular AC 139-18(0), December 2005, <i>Obstacle Marking and Lighting of Wind Farms</i>. • Proposed substation and grid connection – discussion of connection agreements/approvals by TransGrid, including ownership and management of the connecting transmission line following construction. The Environmental Assessment must clearly demonstrate that grid connection is achievable. If proposed, full justification must be given for the use of aboveground lines, instead of underground lines, to connect turbine groups to the substation. • Cumulative impact – assessment of the cumulative effects of the proposal having regard to existing or other proposed wind energy facilities in the area. This should include consideration of the area’s ability to accommodate additional wind energy facilities. • Commencement – the Environmental Assessment should indicate time lines, which clearly indicate when the proposal is likely to be implemented, if it is approved, and what commitment there is to such a time frame. • Decommissioning – discussion of the envisaged lifespan of the project and the Proponent’s commitment, arrangements and necessary approvals for removal of the wind turbines and associated infrastructure at the end of the project’s life.
<p>Consultation Requirements</p>	<p>You must undertake an appropriate and justified level of consultation with the following parties during the preparation of the Environmental Assessment:</p> <ul style="list-style-type: none"> • Commonwealth Department of Environment and Heritage regarding the application of the Environment Protection and Biodiversity Conservation (EPBC) Act; • NSW Department of Environment and Conservation; • NSW Roads and Traffic Authority; • Yass Valley Council; • Rural Fire Service; • TransGrid; • Department of Primary Industries; • Department of Natural Resources; • Civil Aviation Safety Authority; • Aerial Agricultural Association of Australia; • Rural Land Protection Board; • South-west Slopes Noxious Weeds Authority; and • the local community. This should include how commitments made to community members during the consultation process will be confirmed. <p>The Environmental Assessment must clearly indicate issues raised by stakeholders</p>

	during consultation, and how those matters have been addressed in the Environmental Assessment. This should include matters identified in the Planning Focus Meeting of 11 th November, 2005, as recorded in the meeting minutes.
Deemed refusal period	Under clause 8E(2) of the <i>Environmental Planning and Assessment Regulation 2000</i> , the applicable deemed refusal period is 120 days from the end of the proponent's environmental assessment period for the project.

ATTACHMENT 3 STATEMENT OF COMMITMENTS

Statement of commitments:

Environmental impact avoidance and mitigation measures

Design and planning phase

Soil and water protection	
DSW1	All bridges and culverts used will be assessed prior to works to ensure that they are able to bear the predicted loads of the laden vehicles.
Flora	
DFL1	If areas of dry shrub remnant forest on the 'Ferndale' property require clearing, the areas will first be surveyed for the Burrinjuck Spider Orchid (<i>Caladenia</i> sp Burrinjuck) during the late August-October flowering period.
DFL2	The southern turbines and access track will be sited to avoid the need to clear or trim remnant eucalypts to the west of the southern turbine sites.
DFL3	The powerline will be routed to avoid the need for clearing or trimming of the Long-leaved Box (<i>Eucalyptus goniocalyx</i>) forest remnant on the 'Ferndale' property.
DFL4	The Black Range Road crossing points for the proposed new tracks near the Ferndale residence will be sited in available gaps between mature Yellow Box and Blakely's Red Gum trees in the road reserve. The northern track crossing appears to be sited in such a gap; the southern crossing may need to be shifted slightly to the north (to AGD 658311 6141864) to avoid mature trees.
Fauna	
DFA1	Prior to the commencement of works, timbered areas within 2 kilometres of the turbines will be surveyed for the presence of Wedge-tailed Eagle nests, access permitting. Active nests will be monitored and breeding success recorded over the preceding breeding season (July-January). Both breeding success and habitat use behaviour at the subject site will be recorded to provide a baseline for operational monitoring and adaptive management.
DFA2	Where practicable, reticulation cabling between turbines will be installed underground to reduce bird collision risks and disturbance to habitat use patterns.
DFA3	Where practicable, power poles and overhead powerlines will be bird-safe using flags or marker balls, large wire size and wire and conductor spacing.
DFA4	If lights are required to be fitted to the towers (eg for aircraft safety), they will be red flashing lights to reduce attractiveness to insects and possibly night-flying birds (subject to CASA requirements). For similar reasons, turbine paint will be non-reflective if practicable.
DFA5	Where possible, guy lines will not be fitted to towers or associated structures. Any guy lines which need to be used will be indicated with marker balls or flags.
DFA6	The turbine towers and associated structures will not provide perching opportunities.
DFA7	Contractors and staff will be made aware of the significance and sensitivity of the Northern Valley/upper McCullums Creek valley area (potential threatened fauna habitat). The area will be protected from peripheral and indirect impacts and will not be used for site access or materials/equipment laydown.
DFA8	The southern turbines and access track will be sited to avoid the need to clear or trim remnant eucalypts to the west of the southern turbine sites.
DFA9	The powerline will be routed to avoid the need for clearing or trimming of the Long-leaved Box (<i>Eucalyptus goniocalyx</i>) forest remnant on the 'Ferndale' property.
DFA10	The Black Range Road crossing points for the proposed new tracks near the Ferndale residence will be sited in available gaps between mature Yellow Box and Blakely's Red Gum trees in the road reserve. The northern track crossing appears to be sited in such a gap; the southern crossing may need to be shifted slightly to the north (to AGD 658311 6141864) to avoid mature trees.
DFA1	The turbine towers will be as widely spaced as possible to reduce bird collision risks, though this must be balanced with an increased visual impact. A minimum spacing of twice the rotor diameter

1	will be used between turbines (centre to centre).
DFA1 2	At all sites, the clearing or trimming of mature and hollow-bearing trees and stags will be avoided.
DFA1 3	The turbines will be sited as far back from the edge of the ridgelines as possible to minimise disturbance to the use of updrafts by raptors.
Visual impacts	
DV1	The proponent will avoid locating turbines in areas of native vegetation, and minimise the removal of native vegetation for turbine bases and access roads.
DV2	Towers will be coloured light off white/grey/light blue to help reduce visual impact.
DV3	The substation and control building will be located to minimise the visual impact from roads and surrounding properties. These facilities will be coloured grey to blend into the surrounding landscape and vegetation.
DV4	No wind turbines or other infrastructure will be located on the eastern most ridgeline on the site.
Operational noise impacts	
DON1	Noise modelling and investigation of the operational wind farm have been undertaken as part of the Environmental Assessment to ensure that the noise levels are within State prescribed guidelines and do not pose a health risk during the operation and construction phases.
DON2	The proponent will adjust turbine selection and turbine layouts to ensure noise predictions meet the SA Noise Guidelines of 35 dB(A) or background plus 5 dB(A) (whichever is higher) for all <u>non-involved</u> residential receivers.
DON3	The proponent will adjust turbine selection and turbine layouts to ensure noise predictions meet the World Health Organisation Guidelines for Community Noise requiring 45 dB(A) or background plus 5 dB(A) (whichever is higher) for all <u>involved</u> residential receivers.
DON4	Prior to construction, the proponent will prepare and submit to the Department of Planning a noise report providing final noise predictions based on the final turbine model and turbine layout selected and demonstrating compliance with these relevant guidelines for all houses.
DON5	If minor exceedances are predicted to occur for facades that include noise sensitive uses, such as bedrooms, consideration will be given to providing mechanical ventilation (to remove the requirement for open windows) or structural acoustic treatments (such as improved glazing) to the satisfaction of the relevant residents.
Health and safety	
DHS1	All EMR generating infrastructure will be sited as far as practicable from residences. Underground cabling will be used where practicable to reduce the electric component of EMR.
Aviation impacts	
DAI1	Taurus Energy will ensure aircraft warning lighting is provided that meets CASA's requirements.
Services and infrastructure	
DSI1	All bridges and culverts used will be assessed prior to works to ensure that they are able to bear the predicted loads of the laden vehicles.
DSI2	The precise location of any buried services, if present, will be determined prior to excavations using Dial Before You Dig services searches and consultation with relevant agencies and landowners.
Telecommunications impacts	
DTC1	In the design of the project, the proponent will use wherever practical, equipment complying with the Electromagnetic Emission Standard, AS/NZS 4251.2:1999 to help minimise television and radio interference.
DTC2	In order to avoid impacts to mobile phone services, Taurus Energy will implement a (turbine) set off distance for omnidirectional antennae of 100m from the tower and for panel antennae Taurus Energy propose a 100m (turbine) set-off for 30 degrees either side of the line of sight from the panel.
DTC3	In the event that any issues with additional radio communications license links are identified as a result of the wind farm, whether prior to or post construction, Taurus Energy will consult with the operator and undertake appropriate remedial measures, which may include: <ul style="list-style-type: none"> • Modifications to or relocation of the existing antennae; • Installation of a directional antennae; and/or • Installation of an amplifier to boost the signal.
DTC4	Airservices Australia will carry out an investigation for Taurus Energy to determine whether the location of the proposed wind farm could have an affect on the performance of the Mt Bobbara

	radar. The investigation is expected to be completed by the end of June 2006. The proponent will formally advise the Department of Planning of the results of this investigation prior to commencement of construction.
DTC5	Taurus Energy will continue to work closely with Airservices Australia to mitigate any issues with Mt Bobbara radar will they be identified. The proponent will implement the mitigation measures required to ensure that the proposal creates no material impact to aircraft safety.
Traffic impacts	
DT1	The traffic impacts outlined in the Traffic Impact Study will be discussed with Yass Valley Council and the Roads and Traffic Authority.
Bushfire hazard	
DB1	The substation facility will be bunded with a capacity exceeding the volume of the transformer oil to contain the oil in the event of a major leak or fire. The facility will be regularly inspected and maintained to ensure leaks do not present a fire hazard, and to ensure the bunded area is clear (including removing any rainwater).
DB2	The substation will be surrounded by a gravelled area free of vegetation to prevent the spread of fire from the substation and reduce the impact of bushfire on the structure. The substation area will also be surrounded by a security fence as a safety precaution to prevent trespassers and stock ingress.
Heritage	
DH1	Copies of the archaeological assessment report will be forwarded to Dr Phil Boot (DEC, Queanbeyan), the Buru Ngunawal Aboriginal Corporation and the Onerwal Local Aboriginal Land Council.

Construction phase

Air quality	
CA1	Nearby residences will be informed prior to any blasting taking place.
CA2	Blasting will conform to relevant safety and noise and vibration control standards.
CA3	If a project batching plant is established, it will not be located near residences. (Note: the batching plant does not form part of the current proposal).
CA4	Dust levels at stockpile sites will be visually monitored. Dust suppression (eg. water sprays) will be implemented if required.
CA5	Product stockpiles will be protected from prevailing weather conditions.
CA6	Loads of dry materials will be covered where appropriate.
CA7	Dust filters will be installed on silos.
CA8	Only machinery compliant with emission standards will be used.
CA9	Machinery and vehicles will not be left running or idling when not in use.
CA10	Will dust generation be of a high level during the transport of machinery near residences, watering of sections of the route will be undertaken to reduce dust.
CA11	The works timetable including periods of potential dust generation will be given to local residents and advertised on site signage and in the local press.
CA12	Vehicles and motorised equipment will be maintained so that emissions are minimised.
Water quality and catchment protection	
CW1	All vehicles onsite will follow established tracks or routes. Work flow will be organised to minimise the number of vehicular movements across the site and thereby minimise soil compaction and the generation of mobile sediment.
CW2	Permanent and temporary road construction will employ best practice drainage and erosion/sedimentation control measures.
CW3	Moderate-high use tracks will be upgraded and constructed in compliance with DNR Guidelines (DLWC 1994).
CW4	Sediment traps will be installed wherever there is potential for sediment to collect and enter waterways.
CW5	Excavation will only be commenced during stable, dry weather conditions, operational requirements permitting.
CW6	Where possible, excavation will be excluded from wet drainage lines.
CW7	Stockpile sites will be identified and turbid water discharged from these treated by a combination of silt fencing and temporary mulching/seeding.
CW8	Where required, formalised crossings using bound fill will be designed to allow vehicle access across rivers and wet drainage lines to minimise soil and water disturbance.
CW9	Site storage areas will be identified, and bunded to prevent loss of any pollutants.
CW10	Hydrocarbon spill kits will be stored at the site.
CW11	Machinery will be operated and maintained in a manner that minimises risk of hydrocarbon spill.
CW12	Maintenance or re-fuelling of machinery will be carried out in hard-stand areas (ie. existing or proposed road surface or hard-stand areas beneath turbines, not on areas that either contain native vegetation, or will be revegetated).
CW13	Where chemicals are utilised, their application and disposal will comply with manufacturers recommendations.
CW14	Turbines and the substation will be bunded to contain a volume greater than the total volume of pollutants in the facility. The substation transformer will be regularly inspected and maintained.
CW15	If a project concrete batching plant is established, it will not be located near residences and concrete wash will be deposited in an excavated area, below topsoil level. (Note: the batching plant does not form part of the current proposal).
Soil protection and rehabilitation	
CS1	An Erosion and Sedimentation Control Plan will be developed prior to the works, including maps of environmentally sensitive areas, parking and laydown areas, locations of environmental protection works and emergency response. The need for any permanent erosion and sedimentation control structures along roads and around hardstand areas will also be addressed.
CS2	A minimum of vegetation will be removed during excavation and construction leaving as great a

	buffer between the ridgetop works area and steep sideslopes as practicable.
CS3	Landforms will be stabilised and rehabilitated as soon as practicable after works. A site restoration plan will be prepared in advance which will set out protocols for restoration works, consistent with principles outlined in section 3.5 of the EA.
CS4	Moderate-high use tracks will be graded and drained to enhance stability. Tracks will be upgraded and constructed in compliance with DNR Guidelines (DLWC 1994).
CS5	Where practicable, grass surfaces will be retained on infrequently used vehicle routes to protect soils.
CS6	Traffic routes will be confined to already disturbed areas, where possible. The existing Paynes Road will be upgraded to access the site from the Hume Highway for construction purposes.
CS7	Excavation will only be commenced during stable, dry weather conditions, operational requirements permitting.
CS8	Subsoil will be separated from topsoil for rehabilitation purposes. All topsoil from the excavation sites will be stockpiled and replaced to its original depth for seeding and fertilising. On steep slopes, topsoil will be stabilised using, for example, jute matting. Any excess subsoil will be removed from the site and disposed of at an appropriate fill storage site.
CS9	On slopes check banks will be installed across trenchlines, 20-50 metres apart, following closure of the trench. These will discharge runoff to areas of stable vegetation.
CS10	The eroding slopes east of the northern turbines, the eroding watercourses east (McCullums Creek) and west (Stony Creek) of the northern turbines and the eroding drainage line east of the southern turbines will be protected from concentrated runoff.
CS11	Concrete wash will be deposited in an excavated area, below the level of the topsoil.
CS12	The transformer site will be securely bunded to contain any leakage of coolant.
CS13	Stabilisation and revegetation of excavated areas will occur progressively following works to stabilise soil, to reduce impact on adjacent water bodies and drainage lines.
CS14	The eroding watercourses east (McCullums Creek) and west (Stony Creek) of the northern turbines and the eroding drainage line east of the southern turbines will be protected from concentrated runoff.
CS15	Following the construction phase, track drainage will be inspected and repaired as required. Service tracks will have robust rollover drains installed (subject to vehicle access requirements), directing road runoff into vegetated areas away from watercourses.
CS16	Disturbed areas will be seeded with native grasses, where appropriate.
CS17	Stock will be excluded to prevent grazing and trampling in disturbed areas and areas being rehabilitated. Grazing will not occur following the rehabilitation works for 3-6 months.
Flora	
CFL1	Site stabilisation, rehabilitation and revegetation will be undertaken without delay, following the rehabilitation guidelines in the EA. A site restoration plan will be prepared in advance which will set out protocols for restoration works, consistent with principles outlined in section 3.5 of the EA.
CFL2	Works will avoid impacts to mature eucalypts wherever possible. Wherever practicable, excavations and vehicle/machinery movements will occur outside the canopy dripline of large eucalypts.
CFL3	As a general rule, disturbed areas will be used for vehicle and machinery access, materials laydown, stockpiling of cleared vegetation and the deposition and retrieval of spoil whenever practicable.
CFL4	Works will be avoided during, and immediately following heavy rainfall events to protect soils and vegetation at the site. Any compaction of soil resulting from vehicle access and laying of materials, particularly during saturated soil conditions, will be avoided and remediated as necessary.
CFL5	Excavated topsoil, subsoil and weathered rock will be stored separately and replaced in a manner that approximates the original profile as closely as possible.
CFL6	Where practicable, whole sods will be removed with an excavator where these areas are well-vegetated with dense root systems. Sods will be stored in moist, shaded conditions and replaced following the works. Sod storage time will be minimised and sods will be replaced in a manner that maximises the chances of re-establishment.
CFL7	Machinery and vehicles used in construction works will be washed before and after site access to reduce the introduction and spread of weeds and pathogens.
CFL8	Laydown sites for excavated spoil, equipment and construction materials will be weed-free or treated for weeds wherever practicable.
CFL9	Weed monitoring will be carried out at all sites after the completion of construction works and

	ongoing weed control will occur where noxious or invasive species are recorded. In particular, monitoring will be undertaken during the following late spring/early summer, and remedial action taken as required.
CFL10	Only certified weed free hay bales will be used for sediment control, if available.
CFL11	Wherever practicable, the overstorey canopy in forest communities will not be disturbed to assist weed containment and suppression.
CFL12	Imported materials such as sand and gravel will be sourced from sites which do not show evidence of noxious weeds or <i>Phytophthora</i> infection.
CFL13	Contractors and staff will be made aware of the significance and sensitivity of the Northern Valley/upper McCullums Creek valley area (Box-Gum Woodland EEC and threatened Yass Daisy habitat). The area will be protected from peripheral and indirect impacts and will not be used for site access or materials/equipment laydown.
CFL14	In areas dominated by exotic groundcover species, exposed soils in the excavation corridor will be lightly mulched with chipped vegetation or sterile hay, and sown with a cover crop such as oats or millet, depending on season and seed availability, or an appropriate pasture seed mix (in consultation with landowners).
CFL15	In areas dominated by native grasses, exposed soils will be lightly mulched with chipped native vegetation or sterile hay, and sown with Weeping Grass (<i>Microlaena stipoides</i>) and/or Wallaby Grass (<i>Austrodanthonia</i> spp), or a cover crop such as oats or millet, depending on season and seed availability. In such areas, seed-bearing native pasture hay could be used for mulching, depending on availability.
CFL16	Fertiliser will not be used to promote revegetation in native grass-dominated areas of the site to reduce weed pressures.
CFL17	The development sites will be inspected for weeds prior to the commencement of works, in consultation with the Southern Slopes County Council. Noxious weeds in the vicinity of the works site (refer Table 4.2) will be treated prior to the commencement of works, subject to seasonal factors.
CFL18	Where cement is included in cable trench backfill, at least 20 centimetres of cement-free topsoil will be replaced as the top layer in the backfill.
Fauna	
CFA1	To protect aquatic habitats, the concrete batching plant will be well bunded, silt fences will be used around all excavation works, the duration of works will be minimised, and drainage line and creek crossings will be stabilised (consistent with Fisheries NSW guidelines).
CFA2	Rock and log habitat removed during the construction phase will be reinstated following the works.
CFA3	Any trench sections left open for greater than a day will be inspected daily, early in the morning and any trapped fauna removed.
Services and infrastructure	
CSI1	Roads and tracks used for the proposal will be upgraded as required and maintained to a standard of stability, drainage and driving surface appropriate to farming and wind farm maintenance use following the construction period.
CSI2	Access to private property will be maintained during the construction period.
CSI3	The precise location of any buried services, if present, will be determined prior to excavations using Dial Before You Dig services searches and consultation with relevant agencies and landowners.
CSI4	The trig station located near the proposed turbine locations in the north of the proposal site will be protected from accidental damage during the construction phase.
Visual impacts	
CV1	Access the site will be provided via Paynes Road. Black Range Road will be avoided as residences are very sensitive to changes to the existing scenic quality of the area.
Construction noise impacts	
CCN1	NSW EPA construction noise guidelines regarding work times and emission levels will be applied. Hours of work will be limited to 7am-6pm weekdays and 7am-1pm on Saturdays. No construction will occur on Sundays or Public Holidays.
CCN2	Machinery will use appropriate and effective exhaust mufflers and compressor silencers.
CCN3	Noise complaints will be responded to rapidly using monitoring equipment. If EPA criteria are exceeded, appropriate noise reduction strategies will be implemented, such as re-positioning of machinery, rescheduling works, installation of temporary noise barriers, improved vehicle noise

	control, reduced work times, 'quiet work practices' and the provision of respite periods.
CCN4	The timing, nature and need for the works will be well publicised in the local community.
Traffic impacts	
CT1	Traffic Control Plans and Oversize Vehicle Permits will be prepared and submitted to the Roads and Traffic Authority for all the operations of over size and over weight vehicles on all the public roads involved in the transport of materials to the site.
CT2	A procedure will be established to monitor the traffic impacts during construction, such as noise, dust nuisance and travel times and work methods modified to reduce the impacts.
CT3	Regular scheduled maintenance of gravel pavements such as grading, dust suppression and drainage control will take place during the construction period.
CT4	Traffic impacts will be reduced by the scheduling of high impact movements to account for varying traffic flows on the Hume Highway. These movements if possible will be scheduled for periods when heavy fogs are unlikely.
CT5	The roadside vegetation will be cleared on the verge of the Hume Highway on the southbound carriageway northeast of Paynes Road to increase the intersection sight distance.
CT6	The Roads and Traffic Authority are generally not in favour of speed restrictions on the Hume Highway because of the loss in efficiency of the route. Any use of speed controls for specific short-term activities will be included in a Traffic Control Plan.
CT7	The pavement, drainage structures and stock grids on Paynes Road require inspection and probable upgrading. The existing narrow pavement requires widening at specific locations to permit opposing traffic to pass safely.
CT8	A speed limit will be placed on the Paynes Road at least for the period of construction. The speed restriction will be included in the traffic management plans to be submitted to the Yass Council.
CT9	The clearances to objects on the inside of curves need to be checked to ensure the safe passage of long loads up to 46 metres (turbine blades).
CT10	A traffic management plan will be required for the intersection of the construction track with Black Range Road to ensure the safe crossing of construction vehicles.
CT11	A procedure will need to be established to ensure that all construction and related traffic are aware of the preferred site access route via the Hume Highway and Paynes Road.
Health and safety	
CHS1	Workplace health and safety protocols will be developed to minimise the risk of fire for workers during construction and during maintenance in the control room and amenities.
CHS2	The safety of the workforce will be managed by strict safety procedures, good design of site tracks, and regular maintenance. If an incident occurs, communications to ambulance or medical services will be via phone or radio.
CHS3	Investigations will be undertaken to ensure that roads and bridges are adequate to handle the loads required and to identify strategies to reduce the risk to other motorists during the construction and decommissioning phase.
CHS4	Site fencing will be installed where work staff consider that there is a risk to the safety of the general public (ie. when the trench is left open for extensive periods).
Bushfire hazard	
CB1	The Rural Fire Service will be consulted in regard to the adequacy of bushfire prevention measures to be implemented on site during construction, operation and decommissioning. These measures will in particular cover hot-work procedures, asset protection zones, and safety, communication, site access and response protocols in the event of a fire originating in the wind farm infrastructure, or in the event of an external wildfire threatening the wind farm.
CB2	Flammable materials and ignition sources brought onto the site, such as fuels, will be handled and stored as per manufacturer's instructions.
CB3	Appropriate fire fighting equipment will be held on site when the fire danger is very high to extreme, and a minimum of one person on site will be trained in its use.
Community and economic impacts	
CCE1	The proponent will maximise the use of local contractors and manufacturing facilities in the construction of the wind farm (refer section 8.4).
CCE2	The proponent will liaise with local industry representatives to maximise the use of local contractors and manufacturing facilities in the construction of the wind farm.
CCE3	A conflict mediation process will be established and implemented through the project EMP.

Land use and management	
CLU1	Consultation and liaison will be undertaken with involved landowners regarding site fencing, weed control and stock access during the construction period.
Resource use efficiency and waste	
CRE1	Excavated material will be used in road base construction and as aggregate for footings where possible, surplus material will be disposed of in appropriate locations on site (on agreement with the landowner), finished with topsoil, and revegetated.
CRE2	Surplus topsoil will be stockpiled on site during construction, and following construction will be spread on the site (particularly over hardstand areas and access roads) to assist in revegetation.
CRE3	Waste will be reused or recycled whenever possible. Separate recyclable materials receptacles will be provided (eg. for glass, plastics and aluminium).
CRE4	Packaging materials and general construction wastes will be disposed, with Council's approval, at Council operated waste disposal centres.
CRE5	Toilet facilities will be provided for onsite workers and sullage from contractor's pump out toilet facilities will be disposed at the local sewage treatment plants or other suitable facility agreed to by Council.
CRE6	Risk of chemical spills will be minimised and protocols will be in place to ensure prompt and effective clean up of any accidental spills.
CRE7	The contractor will implement a Spill Control Plan as part of its Erosion and Sediment Control Plan. Spill Control Plans will identify persons responsible for implementing the plan if a spill of a dangerous or hazardous waste will occur. Any spill that occurs, regardless of size or type of spill, will be reported to the Construction Manager. The event and clean up processes will be recorded and passed to the Yass Valley Council. If the spill or hazard reaches surface waters the EPA will be notified.
Heritage	
CH1	The proponent will give due consideration to the discussion in regard to management and mitigation of Aboriginal artefact locales and Survey Units as outlined in the attached Aboriginal Archaeological Assessment, Section 11.

Operational and post-operational phases

Fauna	
OFA1	Sheep may be preferable to cattle as grazing stock on the turbine ridges (farm operational requirements permitting) to reduce the incidence of insects, which could provide prey for smaller raptors, owls, insectivorous passerines and bats.
OFA2	Vegetation at the turbine sites will be kept low to allow a high level of carcasse detectability. The use of dogs to find carcasses could improve search efficiency.
OFA3	<p>The OEMP will contain details of a three-tiered monitoring program for bird and bat mortalities and habitat utilisation impacts:</p> <p>1. First six months of operation</p> <ul style="list-style-type: none"> - a more intensive period of monitoring because birds and bats are in the process of habituating to the new development, and sensitive species may experience higher levels of mortality during this period. - during this period all turbine sites will be surveyed to determine variation in impact over the study area. Surveys will include monthly dead bird and bat searches (with at least two scavenging trials), bird utilisation surveys, observation of bird avoidance/diversion behaviour and targeted surveys for species of concern. - if practicable, a reference site located between 500 metres and 1,500 metres from the turbines will also be surveyed. <p>2. First three years of operation</p> <ul style="list-style-type: none"> - an extended period of monitoring to assess mortality rates and trends over successive seasons and longer term changes to local species abundance, habitat use patterns and possibly breeding success. - the survey may be limited to representative or higher risk turbine sites, based on the results of the first six months of monitoring. - surveys will include monthly dead bird and bat searches, bird utilisation surveys, observation of bird avoidance/diversion behaviour and targeted surveys for species of concern. - dead bird and bat searches may be extended beyond three years if thresholds are exceeded and adaptive management responses are required to be implemented. - if any active Wedge-tailed Eagle nest sites are located within 2 kilometres of the turbines, these nests will be monitored during breeding seasons (July-January) for at least 5 years following the commencement of operations to determine any impacts on breeding success caused by blade-strike mortality or habitat alienation. Ideally, breeding success at a comparable reference nest site not affected by the wind farm will also be monitored concurrently. <p>3. Ongoing monitoring</p> <ul style="list-style-type: none"> - mortality inspection and reporting will be continued for the life of the wind farm. The inspection regime will be linked to turbine inspection and maintenance cycles. Mortalities of any significant species (including threatened species and Wedge-tailed Eagles) will be reported to DEC. - monitoring methods and data standards for dead bird searches, indirect disturbance impact assessment and habitat avoidance studies will be based on protocols in the Interim Standards for Assessing the Risks to Birds from Wind Farms in Australia (Brett Lane and Associates 2005).
OFA4	Given the concentration of operational and proposed wind farms in the Southern Tablelands region, monitoring of bird and bat impacts will ideally be coordinated and consistent with monitoring programs conducted at other wind farms, and the results of monitoring collected and published by AusWEA or government.
OFA5	Mortality and habitat avoidance thresholds will be developed and used to trigger specific management responses to mitigate impacts.
OFA6	Thresholds for mortality rates and habitat impacts for threatened or sensitive bird and bat species will be determined for each of the three monitoring periods during the development of the monitoring program, having regard to species reproductive potential, conservation status and

	experiences at other Australian wind farms.
OFA7	Management responses to monitoring threshold exceedances will be dependant on the cause and the impact, but could include further research, detailed risk modelling and population assessments, adjustments or enhancements to turbine and associated infrastructure, the installation of flight diversion or deterrent structures, blade painting (refer Hodos <i>et al.</i> 2001), removing local food sources or insect attracting light sources, compensatory off-site habitat protection or enhancement, nest site protection, sponsoring the care of injured birds and the periodic shutdown of one or more turbines (on a daily or seasonal basis).
Visual impacts	
OV1	The proponent will provide landscaping material to landholders where the visual impact of the wind farm is high to screen views of the wind farm from houses or outdoor entertaining areas around the site.
OV2	Plantings will be used around the substation and control building facilities to screen them from the surrounding landscape. Planting will utilise local native species.
OV3	The proponent intends to prevent shadow flicker from disrupting residences and motorists by pre-programming the wind turbine control system to automatically shut down individual wind turbines during conditions that could cause shadow flicker to residences or road users.
OV4	Taurus will monitor reports of blade glint for a period of 12 months after installation, and will consult with owners of any affected residences with a view to undertake the installation of mitigation measures such as screening. Where blade glint becomes a significant issue at a particular residence, the proponent will provide the landowner with appropriate screening to ensure that the residence is not affected. Screening using tree planting will be offered to residents affected by blade glint within 2 kilometres of the turbines.
Noise impacts	
OON1	If minor exceedances are predicted to occur for facades that include noise sensitive uses, such as bedrooms, consideration will be given to providing mechanical ventilation (to remove the requirement for open windows) or structural acoustic treatments (such as improved glazing) to the satisfaction of the relevant residents.
Community and economic impacts	
OCE1	The proponent will establish a Community Fund and contribute \$25,000 per annum during the operation period for community projects such as local Landcare and environmental projects (such as Box-Gum Woodland reserves, erosion remediation, riparian revegetation, pest and weed control, salinity mitigation), sporting and other facilities, development of recreation opportunities (such as walking tracks, horse-riding trails, picnic areas, parks), road and telecommunications improvements, Rural Fire Service support, heritage management and academic scholarships.
OCE2	A conflict mediation process will be established and implemented through the project EMP.
OCE3	The proponent will assist with the development of the wind farm as a local tourism and educational resource if there is local interest and support in the concept.
Telecommunications impacts	
OTC1	Once the wind farm is operational, the proponent will undertake a monitoring program of houses within 5km of the wind farm to determine any loss in television signal strength.
OTC2	In the event that TVI is experienced by existing receivers in the vicinity of the wind farm, the source and nature of the interference will be investigated by Taurus Energy. Will investigations determine that the cause of the interference is due to the wind farm, Taurus Energy will implement mitigation measures at each of the effected receivers in consultation and agreement with the landowners. Specific mitigation measures may include: <ul style="list-style-type: none"> • Modification to or replacement of receiving antenna; • Provision of a land line between the effected receiver and an antenna located in an area of favourable reception; • Improvement of the existing antenna system; or • In the event that interference cannot be overcome by other means, negotiating an arrangement for the installation and maintenance of a satellite receiving antenna at Taurus Energy's cost.

OTC3	In the event that any issues with additional radio communications license links are identified as a result of the wind farm, whether prior to or post construction, Taurus Energy will consult with the operator and undertake appropriate remedial measures, which may include: <ul style="list-style-type: none"> • Modifications to or relocation of the existing antennae; • Installation of a directional antennae; and/or • Installation of an amplifier to boost the signal.
OTC4	Taurus Energy will continue to liaise closely with Airservices Australia in order to ensure air safety is maintained. The proponent will ensure that the requirements of Airservices Australia and CASA are met in the development of the Conroys Gap wind farm.
Traffic impacts	
OT1	The effects of 'shadow flicker' will be monitored from Black Range Road to determine the degree of impact on southbound motorists.
Health and safety	
OHS1	Start-up and shutdown (including safety shutdowns) will be fully automated, with manual interruption available via onsite control systems and remote computer.
OHS2	The substation area will be surrounded by a security fence as a safety precaution to prevent trespassers and stock ingress.
OHS3	The National Health and Medical Research Council (NHMRC) Interim guidelines on limits of exposure to 50/60 Hz electric and magnetic fields will be adhered to (24 hour exposure: 1000mG, occupational exposure: 5000mG).
OHS4	All EMR generating infrastructure will be sited at a safe distance from residences.
OHS5	If shadow flicker is found to be a nuisance to residents or motorists, conditions will be pre-programmed into the control system and individual wind turbines automatically shut down whenever these conditions are present.
OHS6	Wind turbines, substation, control building, and the associated above ground electricity infrastructure are to be removed and the site restored once the wind farm is decommissioned.
OHS7	Workplace health and safety protocols will be developed to minimise the risk of fire for workers during construction and during maintenance in the control room and amenities.
OHS8	The safety of the workforce will be managed by strict safety procedures, good design of site tracks, and regular maintenance. If an incident occurs, communications to ambulance or medical services will be via phone or radio.
Aviation impacts	
OAI1	Taurus Energy will provide the location and height of each tower to CASA and the RAAF once constructed for inclusion in relevant databases, maps and charts.
OAI2	Taurus Energy will provide the location and height of each tower to the Australian Aerial Agriculture Association.
Bushfire hazard	
OB1	Asset protection zones, based on RFS advice, will be maintained around the control room, substation and in electricity transmission easements. Workplace health and safety protocols will be developed to minimise the risk of fire for workers during construction and during maintenance in the control room and amenities.
OB2	Shut down of turbines will commence following notification of a bushfire event in the locality, in extreme fire conditions and if components reach critical temperatures.
Land use and management	
OLU1	Consultation and liaison will be undertaken with involved landowners regarding site fencing, weed control and stock access during the operational phase.
OLU2	Affected landholders and riding clubs will be consulted regarding horse-riding impacts and mitigation options, such as tree and shrub planting and the development of alternative trails.
OLU3	Depending on demand and interest, the wind farm may be promoted by Taurus Energy as a local tourist attraction using information leaflets and viewing platforms.

OLU4	Taurus Energy will liaise with landowners whose properties will not be able to be treated using aerial methods.
Heritage	
OH1	The proponent will make funds available for vegetation screening in cases where the wind farm is visible from non-indigenous heritage items and detracts from heritage values or visitor experiences.
Infrastructure removal	
OIR1	Individual wind turbines not used to generate electricity for a continuous period of 12 months will be removed unless extenuating circumstances apply.
OIR2	Prior to construction, written evidence will be provided to the Director General, that the lease agreement(s) with the site landowners have adequate provisions to meet the decommissioning requirements, that the site be restored to a similar condition as existed before the development.
Decommissioning	
OD1	Decommissioning will employ all relevant measures included for the construction phase.
OD2	Prior to decommissioning, the state of creek and drainage line crossings will be inspected and upgraded where required to minimise the impact of vehicle crossings.

ATTACHMENT 4 ENVIRONMENTAL MANAGEMENT PLAN OUTLINE

This outline is based on Guideline for the Preparation of Environmental Management Plans (DIPNR 2004), adapted to the Conroys Gap project.

1. Background

1.1 Introduction

1.2 Project description

1.3 Planning context

2. EMP objectives and policies

3. Environmental Management

3.1 Organisational structure (roles and responsibilities)

3.2 Communication and reporting protocols

3.3 Approvals and licencing requirements

3.4 Environmental induction and training

3.5 Emergency response

3.6 Conflict avoidance and dispute resolution

3.7 Non-compliance response

3.8 Records summary

4. Implementation

4.1 Site specific issues

4.2 Risk assessment

4.3 Environmental management activities and controls

Schedules would be produced presenting activities, including impact avoidance and mitigation measures, for each management issue.

Separate EMP schedules would be prepared for the Construction, Operational and Decommissioning stages of the project. The operational stage EMP would include specific activities for maintenance and monitoring.

Construction EMP management issues would include:

- Air quality
- Soil and water protection
- Flora and fauna
- Visual impact
- Noise impact
- Community services and infrastructure
- Health and safety
- Land use and management
- Heritage.

Impact avoidance and mitigation measures relevant to the Conroys Gap proposal are listed in section 3.6.

Issue-specific sub-plans would be prepared for some issues, such as Erosion and Sedimentation Control, Traffic Management, Vegetation Management and Rehabilitation, and Fauna Impact Monitoring.

An example schedule layout for the presentation of environmental management activities and implementation responsibilities is provided below. Note that an actual EMP schedules would be presented in landscape format.

Construction EMP:

Schedule 1

Activity	Responsibility	Timing	Completed (date)	Comments	Audit
Issue 1					
Activity 1.1					
Activity 1.2					
etc					

5. Environmental control plans and maps

Includes maps of environmentally sensitive areas, locations of environmental protection works, parking and laydown areas, access restrictions, fuel storage areas, locations of hazard and emergency response equipment.

6. EMP review and revision

ATTACHMENT 5 CONSULTATION

5.1 COMMUNITY FEEDBACK FORMS: RESULTS SUMMARY

Six community feed back forms issued at the Open House had been returned by 6 December 2005. The responses are summarised below.

1. WHERE WOULD YOU TAKE SOME ONE TO SHOW THEM A GOOD VIEW OF YOUR LOCAL AREA (LIST AS MANY PLACES AS YOU CAN THINK OF).

Views from a range of directions were nominated, including from private properties, major and minor roads, villages and Yass.

Viewing location	Tally
Burrinjuck National Park (via Hume and Hovell walking track/Black Range Rd)	1
Wee Jasper (Careys Caves)/Wee Jasper road	2
Bookham	1
Bowning	1
Binalong	1
On horseback along fence line where test tower is facing Black Range Road	1
On horseback through Fern(dale?) across hill to our place (1202 Black Range Rd)	1
Hatton's Corner, Yass	1
Black Range Road	2
Hume Highway	1
Graces Flat Road (quarry)	1
Road to Harden	1
Common Road	1
Yass viewing spot	1

2. WHAT DO YOU VALUE THE MOST ABOUT THE LOCAL AREA?

Respondents value visual, environmental, recreational and production aspects of the area, with a focus on views and recreation.

Values	Tally
Views	3
Cultural landscape	2
Recreation opportunities	3
Work	1
Environmental protection	1
Little Eagles, Wedge-tailed Eagles	1
Environmental impact	1
Grazing sheep and cattle	1

3. WHAT IS YOUR INTEREST IN THE LOCAL AREA (PLEASE PROVIDE DETAILS)

A large proportion of the respondents live nearby, enjoy recreation locally or are involved in commercial agriculture in the area.

Interest	Tally
Agriculture - commercial	4
Agriculture - hobby farm	1
Recreation/tourism	3
Live nearby	3
Work nearby	1
To build a horse stud	1

4. WHICH STATEMENTS DESCRIBE YOU (TICK ALL THOSE THAT APPLY)

A large proportion of respondents anticipated that they would be able to see the wind farm from their house and/or property.

Characteristic	Tally
I am a landowner on whose property the wind farm may be located	2
I would see the wind farm from my house	3
I would see the wind farm from my property	3
I am a resident of the local area in which the wind farm may be located	3
I would see the wind farm from a place of recreation.	2
(I would see the wind farm from) the hill across from 1202 Black Range Rd	1
(I would see the wind farm from) horse trails in the area	1

5. IF YOU HAVE CONCERNS ABOUT THIS WIND FARM, WHAT ASPECT WOULD HAVE THE BIGGEST IMPACT ON YOU?

Concerns were widely spread with some prominence given to visual and noise impacts.

Aspect	Tally
Environmental change	1
Weather pattern interference	1
Proximity to dwellings	1
Noise	2
Visual	2
Shadow flicker	1
TV interruption	1
Loss of eagles	1
Nothing	1
Social – splitting the community	1
Horse losses due to change in noise levels	1

6. WHAT DO YOU LIKE ABOUT WIND FARMS, IN GENERAL?

Respondents to this question largely indicated a support for wind power on environmental grounds (greenhouse, climate change, renewable energy).

Positives about wind farms	Tally
Global warming hence less water for our power generating dams	1
Potential to reduce greenhouse gases/clean power	2
Nothing	1
Something new I would like to know more about	1
Renewable energy	1

7. WHAT DO YOU DISLIKE ABOUT WIND FARMS, IN GENERAL?

Respondent concerns were widely spread, with some prominence given to visual impact, the potential for land devaluation and noise.

Negatives about wind farms	Tally
Visual impact, becoming too numerous/prevalent	2
Unknown long term impacts	1
Devalued land	2
Noise	2
Visual	1
Shadow flicker	1
TV interruption	1
Loss of eagles	1
Nothing	1
Social – splitting the community	1
Horse losses through change in noise levels	1

8. DO THE FOLLOWING ISSUES CONCERN YOU?

Asked to nominate issues of concern under broad headings, the following results were obtained.

Issues	Tally
Environmental	
Full impact not known (overseas studies not applicable to Australia)	1
Loss of Little Eagles and Wedge-tailed eagles that use the hill for nesting and survival and other birds in the area	1
Pollution of any kind	1
Soil erosion	1
Visual	
Visually invasive (particularly when becoming numerous)	1
If the towers were moved off the hill closest to Black Range Road, you would lose 99% of objections	1
Unsightly	2
Shadow flicker	1
Will cause horses to bolt	1
Heritage	
Existing walking trails across hills and in area	2
This is a rural community	1
Noise	
Concerned if less than 4 km from site	1
Proposal will cause constant noise in a place that has little to no noise at present	1
Highway's noise against wind turbines	1
Levels and amount, not being able to get away from it, what effect on horses and humans?	1
Recreation	
Horse trails along hills to dam	1
Walking trails to observe eagles and other wildlife	1
No peace and quiet anymore	1
Health	
Long term radiation effects	1
Some of the kids that ride our horses have disabilities and would no longer be able to use the hills	1
Hearing	1
Stress on family with this project worrying about the change to the environment and social effects	1
Other	
Restrictions on agricultural activity and farm forestry	1
Effect on animal and human reproduction	1
There is too much subdivision on Black Range Road for this not to become a major fight	1
Land values will drop, no resale value	1
Social effects	1

5.2 HANDOUT MATERIAL DISTRIBUTED AT THE SECOND OPEN HOUSE

Conroys Gap Wind Farm Proposal

Some main points from the Draft Environmental Assessment Report

What is proposed?

- A wind farm comprising 15 turbines, each with a three-bladed rotor on a tower up to 80 metres high. Tracks, a powerline and a substation would also be built. The development would occupy about 5 hectares.
- The wind farm would operate for up to 30 years.
- Construction traffic would reach the site via the Hume Highway and Paynes Road.



Where is it?

- The wind turbines would be spaced along ridges north and south of Black Range Road, on private farmland about 17 kilometres west of Yass.

What's there?

- The site covers four properties and is used for sheep and cattle grazing.
- It has largely been cleared of trees. The pastures are a mix of native and exotic grasses.
- There are no significant environmental or heritage values at the proposal site.

What are the impacts?

- During construction, the proposal would impact local roads from heavy traffic, residences from noise and soils and vegetation from works.
- The main impacts of the operating wind farm are noise (within 1 kilometre), visual impacts (within around 15 kilometres), possible interference to TV reception, and potential risks to local birds and bats.
- The wind farm would not affect agricultural land uses at the site. Fire risks from the wind farm are considered to be low. The wind farm is not expected to adversely affect local land values.



How will Taurus manage the impacts?

- Taurus Energy would use best practice to protect soils, water values and vegetation at the site during construction. Roads and access tracks would be upgraded and maintained as required.
- Taurus would manage TV interference on a case by case basis; any interference caused by the wind farm would be rectified at the company's expense.
- Noise impacts may affect a few houses; more assessment is required. Several mitigation options are available, including adjusting turbine locations, improved sound insulation and screening.
- Taurus would fund tree planting and other screening works as required to mitigate visual impacts to surrounding properties. Any problems with flickering close to the turbines could be handled by turning the particular turbine off at certain times.
- Impacts to birds and bats are not expected to be significant. Taurus would establish an ongoing monitoring program to record any impacts from blade strike or disturbance to habitat use.
- An adaptive and flexible approach would be used to manage the wind farm. If monitoring shows that impacts greater than anticipated, responses could include more detailed studies, infrastructure refinements, blade painting, habitat alteration or protection, or periodic turbine shutdown.

What are the benefits to the community?

- The greatest benefit to the community from the proposal is in reducing the reliance on coal for electricity generation, and so reducing greenhouse gas emissions. Climate change caused by greenhouse gases is one of the most significant and difficult environmental issues, and a major driver of species extinctions and destructive weather events in Australia and around the world.
 - The wind farm would also help to meet an emerging shortfall in electricity generation capacity in NSW.
 - More locally, the project would inject over \$10 million into the local economy, an estimated 50 jobs during construction and 5 jobs during the operation of the wind farm. The wind farm would also provide an opportunity to increase local tourism.
 - Taurus Energy would contribute \$25,000 per annum to a Community Fund which would be available to finance a range of community activities and facilities.
-

Conroys Gap Wind Farm Proposal

How has the proposal changed since the first Open House?

Since the first Open House held in Yass in November 2005, we have completed a wide range of assessments covering wind resources, visual impacts, noise impacts, biodiversity impacts and other issues.

We have also had the opportunity to consider the comments from participants at the first Open House, and comments from Commonwealth, State and Local Government.

This input has been invaluable in refining the project and minimising impacts. It has resulted in a better proposal. The main changes that have been made to the project are outlined below.

1. Removal of the 'east ridge' turbines

- These turbines would have had relatively high visual impacts for residents to the east of the site. This change will move the wind turbines a further 1.5 kilometres from properties to the east. Accessing the 'east ridge' site would also have impacted on remnant Box-Gum Woodland understorey, an Endangered Ecological Community.

2. Adjustment of other turbine positions

- Other turbine locations have been adjusted to minimise noise impacts on surrounding residences and to ensure that the relevant noise limits are achieved at all residences.

3. Construction access route to site

- Access to the site for the construction of the wind farm would be from the north via the Hume Highway and Paynes Road.
- This would avoid high levels of traffic and disturbance to residents on Black Range Road and possible disturbance to threatened species habitat along this road.

4. Substation and powerline locations

- The substation location has been selected in the south of the site, in a low visibility area. The powerline would be routed down a valley through the south of the site to reduce visual impacts.

5. Extension of commitments to reduce impacts

- The proponent has extended the commitments to rectify and reduce impacts of the wind farm. In particular, the proponent would offer visual screening to affected landowners in the vicinity of the wind farm.
- The proponent would also assess and rectify any problems with television or radio reception caused by the wind farm on a case by case basis.

6. Community Fund

- The Community Fund has been incorporated into the proposal to broaden the benefits of the project within the local community. The proponent would contribute \$25,000 per annum into the Fund during the period of operation of the wind farm.
- The Fund could be used to support projects such as landcare and environmental protection, sport and recreation facilities, RFS equipment, event sponsorship, road improvements and academic scholarships.
- The structure of the fund is to be determined, and could involve joint management with the local Council and/or local community representatives.

Conroys Gap Wind Farm Proposal

The Part 3A approval process

- The *Environmental Planning and Assessment Act 1979* (EP&A Act) applies a duty to approving authorities to consider 'to the fullest extent possible all matters affecting or likely to affect the environment'.
- Part 3A of the EP&A Act provides a coordinated assessment and approval process for Major Projects that require the approval of the Minister for Planning. Major Projects include wind power developments with a capital cost of \$30 million dollars or more.
- Projects approved under Part 3A do not require separate authorisations under legislation such as the *National Parks and Wildlife Act 1974* and the *Native Vegetation Act 2003*.

Steps in the Part 3A process

1. Preparing the Environmental Assessment Report

- The proponent introduces the project to the Department of Planning (DoP) by submitting a preliminary Project Application. A Project Application identifying and prioritising issues relating to the Conroys Gap project was submitted to DoP earlier this year.
- A Planning Focus Meeting involving state agencies and local government is held to identify issues and assessment requirements. A Planning Focus Meeting was held at the Conroys Gap proposal site on 11 November 2005.
- DoP issues the proponent with a series of Director-General's Requirements for the Environmental Assessment Report. These requirements have been received for the Conroys Gap project.
- The proponent implements a community consultation program. Consultation for the Conroys Gap project has involved media releases, website information, direct meetings and two Open House community consultation sessions at Yass. **Opportunity for public comment**
- The proponent completes the required assessments and consultations and submits an Environmental Assessment Report (EA). The EA contains a Statement of Commitments detailing how the proponent will manage environmental issues.

2. Consideration of the Environmental Assessment Report

- DoP evaluates the EA and seeks advice from state agencies and local government regarding the adequacy of the assessment. DoP may use an independent peer review of parts of the assessment.

3. Public exhibition and project review

- Following acceptance by DoP, the EA is placed on public exhibition for at least 30 days. Submissions and comments are invited from the public and from state agencies and local government. The EA would be advertised in the press and available from DoP website and offices. **Opportunity for public comment**
- The Planning Minister may convene an Independent Hearing and Assessment Panel to advise on aspects of the EA. For complex projects, the Minister may establish a Commission of Inquiry.
- Following the statutory consultation period, a submissions summary is presented to the proponent and the proponent may be required to respond to comments, revise the proposal or revise the Statement of Commitments.
- If the project is modified, the proponent submits a Preferred Project Report, which is publicly exhibited.

4. Final assessment and determination

- A draft assessment report is prepared by DoP and circulated to councils and state agencies for comment.
 - Following the final determination, both the determination and the assessment report are posted on the DoP website.
-

Conroys Gap Wind Farm Proposal

Have your say

1. Have we missed anything?

We have tried to make the assessments as comprehensive as possible. Are there any impacts or issues we haven't covered properly?

2. Have we got anything wrong?

Is any of the information in the assessment reports incorrect or incomplete? Do you disagree with any of our conclusions?

3. Can you think of any specific ways that we could improve the project or reduce environmental impacts?

4. Do you have any suggestions for projects that could be considered under the Community Fund?

5. Would you like us to send you more information?

Please indicate what you would like and provide your contact details (phone, email or postal address).

5.3 COMMUNITY UPDATE NEWSLETTER (NOVEMBER 2005)



CONROY'S GAP WIND FARM

Community Update - November 2005

Background

This newsletter is to inform you of the wind farm project being investigated in the Black Range / Conroy's Gap area west of Yass.

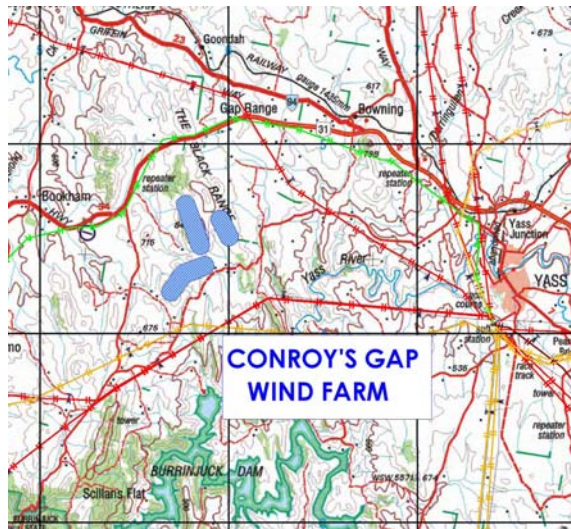
Wind monitoring commenced in the area in October 2003 and has demonstrated that there is sufficient wind resource to develop a small to medium scale wind farm at the proposed site.

The **Conroy's Gap Wind Farm** would contribute to the generation of renewable energy in NSW. It would reduce greenhouse gas emissions from existing coal fired power stations, and help to fix the shortfall in power generation capacity in the state. In an average year, it could supply renewable electricity for up to 10,000 average NSW homes.

Conroy's Gap Wind Farm

Where would it be located?

Conroy's Gap Wind Farm will be located around 15km west of Yass, in an area known as The Black Range.



Why a wind farm at Conroy's Gap?

Conroy's Gap has all the right conditions for a wind farm:

- ▶ High wind speeds, among highest in NSW
- ▶ Remote from neighbouring houses
- ▶ Existing powerlines near site
- ▶ Good road access
- ▶ Supportive local landowners

With careful planning, the wind farm can be built with positive impacts on the environment, and provide benefits to the local region.

What is proposed?

In a typical year the wind farm would be able to generate as much power as used in up to 10,000 average NSW homes.

This would involve:

- ▶ up to 16 wind turbines, each with three blades up to 46m long mounted on a tubular steel tower up to 80m high;
- ▶ electrical connections between turbines using a combination of underground cable and overhead concrete pole power lines;
- ▶ access roads around the site, and minor upgrades to access via Black Range Rd, for installation and maintenance of wind turbines;
- ▶ a substation linking the turbines to the existing Transgrid transmission line located near site;
- ▶ an on-site control room and equipment storage facilities.

Conroy's Gap Wind Farm will connect to the national electricity network, with electricity primarily sent towards Yass.

Who is proposing the wind farm?

The wind farm is being proposed by specialist wind farm developer **Taurus Energy Pty Ltd**. Taurus Energy focuses on appropriately sized wind farms in regional communities, and is currently investigating small wind farms in NSW at Snowy Plains, Evandale, Cullerin Range and Conroy's Gap.

nghenvironmental, based in south-eastern NSW, is assisting Taurus Energy in the wind farm planning, including the preparation of the Statement of Environmental Effects.



Benefits of wind energy

NSW needs more electricity generation to meet growing customer needs, and to avoid power outages and blackouts.

Wind energy provides:

- ▶ clean, renewable energy
- ▶ reduced use of fossil fuels (i.e. coal) for electricity generation
- ▶ as a result, better outcomes for the environment through reduced pollution and greenhouse gas emissions, factors which lead to global warming
- ▶ income and employment opportunities in regional NSW
- ▶ reliable, dependable electricity production

The Application process

What is the process?

Taurus Energy is currently preparing a Environmental Assessment to be lodged with the Development Application (DA) to the NSW Department of Planning (the consent authority).

Our plans for the site are not yet firm, and will be developed taking into account the results of specialist studies as well as the input from the local community.

What investigations are being undertaken?

The studies to be incorporated in the Environmental Assessment include:

- ▶ Biodiversity (flora and fauna)
- ▶ Heritage (European and Aboriginal)
- ▶ Visual Impacts
- ▶ Noise Impacts
- ▶ Telecommunications Impacts
- ▶ Other impacts

Indicative timeframe

Nov 05 - Jan 06	Specialist studies & site assessment Community consultation including two public Open-Houses for community input Government consultation
Feb 06 - Mar 06	Environmental Assessment complete Development Application lodged Public exhibition & final public comment
Mar 06 -	Assessment by Department of Planning
Dec 06 -	Proposed construction commencing during summer 2006

How can you find out more?

We will hold two open houses to discuss the project with the community, and of course you will have an opportunity to submit comments on the proposal to the Department of Planning.

At **first open house** in November Taurus Energy and ngenvironmental will be on hand to introduce the project and answer any questions, as well as to gain feedback from the community to help improve the proposal.

DATE: Wednesday 16th November 2005

WHEN : between 2pm & 7pm, drop in any time

WHERE: Yass Soldiers Club, 86 Meehan St, Yass

A **second open house** will be held in February to present the results of our specialist studies and receive final feedback prior to submitting our application.

Project updates

This is the first project newsletter describing the status of the project. Updates will be available on our website www.taurusenergy.com.au or register for further updates below.

Media releases and advertising

Taurus will provide details of updates, open houses, and public exhibition periods to the local media, please watch your local papers.

Having your say on the project

Taurus Energy is keen to incorporate comments and feedback from the local community in planning the Conroy's Gap Wind Farm.

Email us: ConroysGap@taurusenergy.com.au

Write to us: Conroy's Gap Wind Farm
c/o ngenvironmental
PO Box 470
BEGA NSW 2550

Fax us: Conroy's Gap Wind Farm
Fax 02 6494 7773

Phone us: ngenvironmental
Contact: Brooke Marshall
Ph 02 6494 7771

Taurus Energy
Contact: Anthony Micallef
Ph 02 9922 7771

Register on our database

If you would like to be kept up to date on the project, provide us your name, address, contact phone number, and email address via one of the methods above and we will contact you as new updates are available.