Director General / NSW Planning

Objection to the
Young to Wellington Gas Pipeline
ERM Power Pty Ltd

23 June 2010

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Introduction

This document has been prepared as an objection to ERM's proposed Young to Wellington gas pipeline. It documents ERM's inadequate and misleading public consultation process, general route and environmental considerations, post-abandonment implications to the environment and landholder and ERM's deferment of post-abandonment liabilities to future generations. It also documents specific objections to the proposed route through Rosehill, a small property around kilometer mark 142 in ERM's proposal.

Public Consultation

The public consultation process executed by ERM and their contracted body, Landpartners / CNC, has been tardy, contradictory and omitted much of the information that would be of concern to Landholders. In my experience, the performance of Landpartners was of such low quality that contact was made with ERM directly. While ERM was more timely in their response than Landpartners, they still refused to supply much of the requested information.

The document initially supplied to landholders (in my case, 31/7/2009) provided no information apart from the pipeline length, purpose and a contact for further information. Specifically, it did not inform the landholder of:

- The width and burial depth of the pipe
- That the proposal is rated as a “SEPP No. 33 – Hazardous and Offensive Development”
- Explain that the hazardous contents of the pipe would be held at a pressure up to 15.3Mpa (2220 psi) without any protection except 75cm of soil cover.
- Advise that the pipe would be abandoned in place to corrode at the end of its profitable life
- Discuss post-abandonment rehabilitation, procedures or liabilities.
- Explain that funding to decommission the pipe is not protected by an environmental bond.

I contend that non-disclosure of these issues has misled affected landholders and the general public, and that ERM has not met its public consultation requirements.

It is also noted that ERM's first contact representative made a point of telling us not to worry about the pipeline as it will probably never happen. I can only presume the same information was fed to other affected landholders.

My experiences with the ERM public consultation process are detailed in a letter to ERM (Appendix A). In summary:

A response to my initial contact on 3/8/2009 (apart from acknowledgement of receipt) did not come for 6 weeks. The CNC representative who delivered the response suggested, with my agreement, that most of the responses where inadequate and did not include any of the data or research I had requested.

We were then advised to meet with the Landpartners surveyor in charge of routing the pipeline. During the meeting he contradicted many of the statements made during the initial contact meeting. He also made undertakings including:

- Re-route the pipe from the initial location through our dam and down the axis of one arm of

our designated rehabilitation zone.

- Explore alternative routes around our property.
- Place our details on a contact list
- Respond to other matters I raised within 2 weeks.

He did not (and still has not) make any further contact and after another 120 days of frustration I contacted ERM (Mr Larry Kramer) directly with my concerns and requests for information (Appendix A). This was February 1st, 2010.

Mr Kramer responded immediately that he would follow up on my concerns.

I was then contacted on 13/2/2010 by CNC to request permission to come onto the property to complete an archaeological survey. It was at this time that my co-operation with ERM was withdrawn due to their poor performance and refusal to supply information. CNC contacted us the next day to advise that a letter addressing our concerns had been dispatched and again requested access for the archaeological survey. I advised that permission was refused until the letter arrived. This letter has never arrived and I believe it was held ERM.

A response was received from ERM on 4/3/2010, but in again failed to supply most of the requested information. It did however acknowledge the transgression through our dam and along one arm of our rehabilitation area, and moved the proposed location to another part of our rehabilitation area and through our open woodland area.

I have also requested on at least three occasions to be placed on their register of interested parties to be contacted of significant events. I have been advised that there is no such register. It is a stunning oversight that any proposed project affecting approximately 180 landholders over 220km does not maintain a register of interested parties as part of their public consultation process. After petitioning ERM directly, they did instruct the public consultation contractor to contact me directly upon lodgement of the EA, and this did happen. I am not aware if any of the other 180 affected landholders have been advised of the lodgement unless they monitor the Orange newspapers daily. The low turnout (eg Molong – nil) at public information meetings reflects the lack of disclosure to affected landholders and lack of publicity for the event.

Following is a subset of requested information and response:

- What is the dispute resolution process for granting of easement – refuse to comment.
- What is the process by which the easement can be dropped – refuse to comment.
- Does ERM pay legal fees – 1) No. 2) only for negotiating pipeline easement.
- Request to be notified of public meetings – ignored.
- Who is liable for infrastructure and environmental damage of corroding pipe once easement is dropped – refuse to comment.
- Who owns infrastructure once easement is dropped – refuse to comment.
- Claim to avoid stud properties in Preliminary EA, yet transgress the Rosehill Red Angus and Warmblood stud – drop statement from final EA.
- Request for incident & subsidence database – not supplied.
- Request for studies on the affect the pipeline will have on land prices, particularly small

holdings – 1) they have not done the study 2) indicated they do have some studies but refuse to supply.

- Request decommissioning rehabilitation plan – will only discussed during easement negotiation.
- Request for route as digital file due to scale and poor image registration of initial maps – supplied after 7 months.
- Why don't you utilise the extensive network of north-south roads in this area – 1) due to subsidence 2) it isn't subsidence, but because of trees.

Section 5.12.2 of the EA lists concerns raised by landholders. The many concerns I have contacted ERM about, which they have mostly refused to address, are not listed.

This proposed project has the potential to substantially reduce the value of small landholdings, particularly considering liabilities for abandoned corroding pipe . As such, all parties with financial interests in the properties affected should be consulted. To my knowledge, mortgage holders have not been included in the consultation process.

General Route & Environmental Considerations

Alternative Routes

The proposed route has preferred private land and therefore maximises the number of adversely affected landholders. This is despite alternative routes being available (Figure 1) utilising the extensive network of north-south road reserves throughout the area. Utilising these paths has a number of advantages:

- These are pre-existing cleared paths in the order of 25m wide.
- Use of existing paths dispenses with the need to clear and grade new paths through private land.
- The pipe is laid along one margin of the easement, this means that most construction traffic would be utilising pre-existing dirt roads, and that the trench would not be located on the formed road.
- The pipeline could be monitored without intrusion onto private lands.
- Individual landholders would not be burdened with the environmental problems associated with the abandoned and corroding infrastructure.
- Individual landholders do not have the experience or knowledge to ensure their rights, and the rights of future generations on their land, are preserved, particularly once the easements have been dropped.

In the area around Rosehill alone, 6.6km (the limit of my image) of pipe could utilise the existing infrastructure corridor, minimising the environmental impact and the impact on landholders. This can be achieved without any dwellings being located within the safety distance determined by ERM. I believe the road to the south of my image extends this by another 2.3km. This can be achieved just 400m from the route proposed by ERM. Note that this alternative does not resolve post-abandonment issues, but lessens the burden on individual landholders.

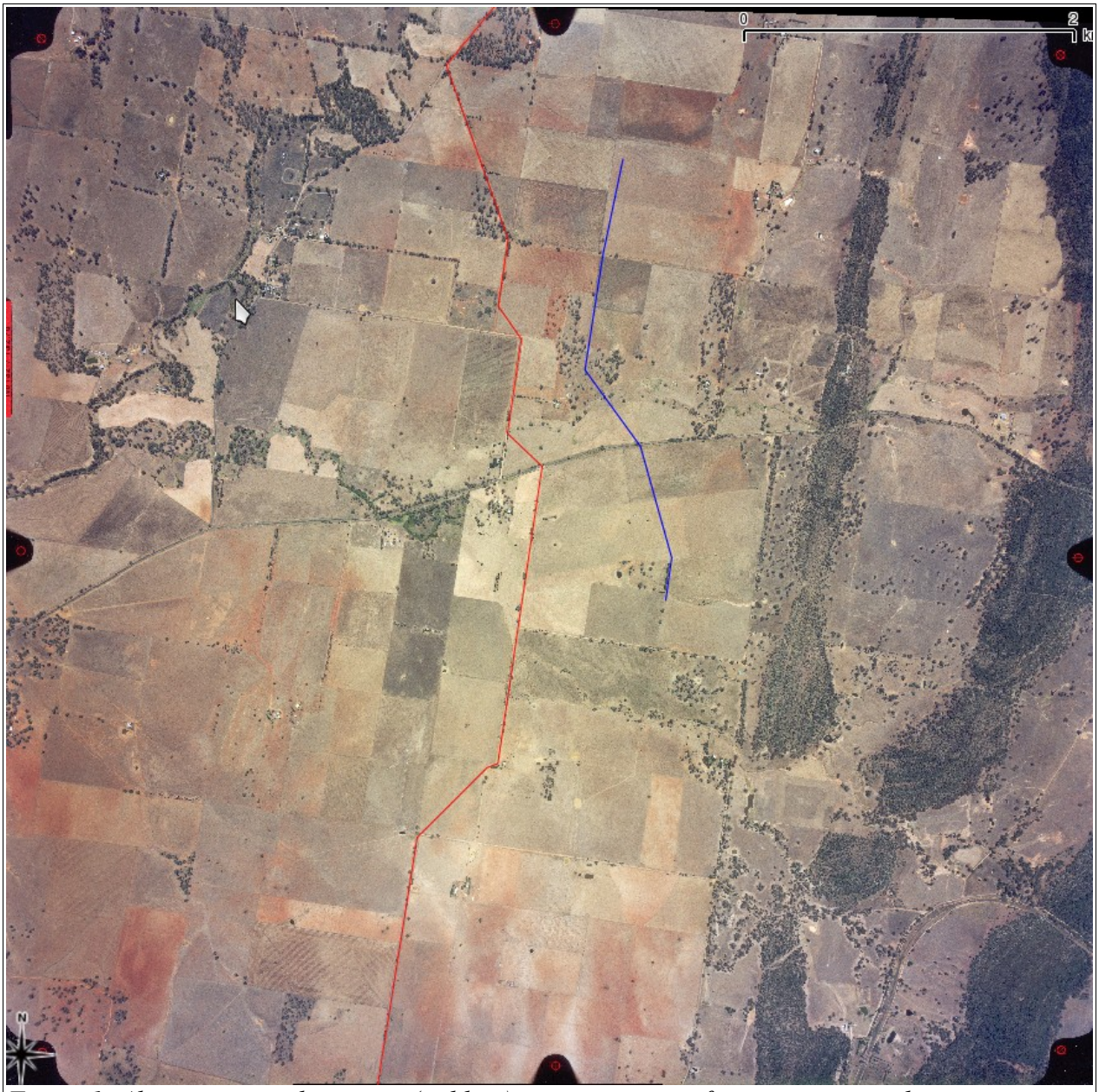

Figure 1: Alternative pipeline route (red line) using existing infrastructure corridor, minimising further environmental impact and minimising impacts on landholders. This is just 400m from ERM proposal (blue line).

Garra Formation

Approximately 24km of the proposed pipeline route is located within the Garra Formation, a dominantly fossiliferous limestone. This is a highly reactive lithology prone to voids (caves) and hosts the Wellington Caves system.

Limestone is particularly sensitive to dissolution in acid. This is of particular concern for two main reasons.

- ERM's hazard assessment reports that **"It is unlikely that pinholes and punctures would be readily detected by remote monitoring and may depend on the operating conditions at the time of the leak. Small releases in remote locations may not be readily detected until a routine patrol of the pipeline occurs."** Any leaking sulphidic coal seam gas would react with ground water to produce sulphuric acid, rapidly dissolving the surrounding limestone. This could promote further movement of the pipe as its support changes, promote corrosion of the pipe and pollute the local environment, particularly given that any leaks could go undetected for a substantial amount of time, presumably until there was some indication of a problem on surface and those indications were noted.
- There is a significant potential for the pipe to encounter voids along its route through the limestone. Voids and future collapses into voids represent a significant threat to the integrity of the pipe. The presence of voids and caves will also amplify the environmental damage caused by any leaks during operation of the pipe, and these delicate systems will certainly be damaged once the pipe is abandoned and left to corrode. Subterranean voids are indicated on both Rosehill and the neighbouring Ubangi properties (see Rosehill section).

Deliberately locating the pipe within this 27km x 2.7km band of reactive stratigraphy unnecessarily exposes the environment to amplified consequences from leaks or incidents during operation, and the environmental damage once the pipe is abandoned to corrode.

Hazard Assessment

ERM has completed a hazard assessment up to the decommissioning stage, but not beyond. Presumably this is because the easements will be dropped after decommissioning and ERM will no longer be responsible for the abandoned infrastructure. This is particularly evident in that the certainty of the creation of a water conduit and subsidence post-abandonment of the pipeline has not been addressed.

ERM has identified inadvertent damage to the pipeline by third parties as the major risk to a buried pipeline. There is a high probability that inadvertent damage would result in the **death of the person involved**, yet this risk has been excluded from their risk assessment.

It is also noted that nowhere in the EA has the risk of deliberate damage to the pipeline been discussed. This is a 220km long, high pressure (15.3 Mpa / 2220 psi) containment vessel carrying class SEPP33 material that will be unfenced and unguarded, protected only by 750mm of soil. This could be breached in less than one minute by a drill or simple post-hole auger. On the day of writing, the Australian government has determined the current level of alert for Australia to be **Medium**. The Australian National Security website states that "***... the possibility of a terrorist attack should be considered as part of a business' risk management plan***", yet this has not be addressed at all by ERM.

The proposed pipeline directly exposes landholders to the threat of deliberate, targeted damage to

the proposed pipeline. This threat may, and is likely to, increase significantly over the life of the pipeline. ERM has not recognised or addressed this in any way.

ERM's hazard assessment looks at the probability of incidents occurring using a set of parameters such as pipe wall thickness, depth of burial etc. These are assumed to be 'as new' values for the entire life of the pipe and do not take into account the ageing infrastructure, for example, reduction of wall thickness with time due to corrosion or wear from the fluid it carries. Also not quantified is the damage caused by pressure cycling of a bi-directional pipe.

A significant environmental and social risk of the proposed project is that ERM, or the pipeline holding company, will not exist, or have the means to fund, decommissioning of the pipeline, rehabilitation of post-abandonment environmental damage (assuming they can be held liable), or clean-up operations after an incident. This is a particularly acute risk given that the business the pipe services is based of the burning of fossil fuels, an industry that governments are attempting to phase out world-wide, and that the economic viability of the pipe relies on connections to infrastructure that is arguably already past its design life. ERM does not address this risk in their assessment. I contend that an environmental bond should be held to cover the cost of removal of the pipeline and associated infrastructure, as is the case for other operations with high long term environmental risks.

ERM's documentation shows that the European failure rate is 0.37 incidents per 1000km-yr. There are 220km of pipe, so we can expect 0.0815 incidents per year, or 1 incident every 12 years, assuming only non-intentional incidents. Given the high pressure, toxic and flammable nature of the fluid and reactive stratigraphy hosting much of the pipe, this is an unacceptably high risk.

Pipeline Inspection Gauges used to inspect the pipe for damage only acquire data that then has to be interpreted. Cases have been documented in the US where misinterpretation of this data has led to high pressure pipe explosions. Pigging a pipe does not guarantee that it is free from defect.

Decommissioning & Rehabilitation

Decommissioning of any infrastructure is one of the most important aspects of it's environmental footprint. **Abandoning infrastructure to be a problem for future generations should not be an option**.

If a project cannot fund decommissioning, removal and disposal of their infrastructure, then it is not a viable project.

ERM has stated their intention that "*The pipeline is left to corrode in the ground*". They have also stated that a decommissioning plan will not be designed until it is time to decommission.

One part of the plan that has been formulated is that the pipe will be filled with concrete under road crossings, reflecting the knowledge that the ground above the corroding pipe will be subsiding once the pipe is abandoned.

This leaves the landholder to clean up the water conduit, contamination from the corroding pipe and subsidence issues at their own cost.

I have directly asked ERM about post-abandonment / post-easement liability and ownership of the pipeline and they have refused to comment.

The abandoned pipe will create a 220km long, 508mm diameter void, just 750mm below the surface. As soil and water are washed into the void a series of depressions will develop, the depth of which will depend on whether the soil falling into the pipe is washed downhill to a local low point,

but could be up to 1.2m deep.

Once a path is established, either through the pipe or along the subsidence trench, the movement of water along the path will accelerate and amplify the environmental damage.

Not only is the erosion a problem , but the constant de-watering around higher parts of the pipe and saturation of the area around lower lying areas will permanently change the local environments.

Studies into pipeline corrosion in the cold, and commonly frozen, soils of Canada can become an issue within 13-123 years, the wide range being indicative of the dependence on local soil conditions including oxygenation, temperature, salinity, pipe diameter & coating defects. The soil conditions along the proposed pipeline route are much more conducive to corrosion than those used in the Canadian study and the proposed pipe is 180mm wider than the maximum considered in that study. The Canadian study also identifies the same problems with pipes abandoned to corrode as have been identified in this objection.

In any case, the time frame for the onset of identified environmental issues should not be of consequence. We have a responsibility to future generations, as addressed by the NSW EPA Act and NSESD (see below).

ERM's risk assessment shows risk matrix for abandonment and correctly lists 'corrosion of pipe' as causing 'soil contamination and subsidence'. The risk assessment then rates the severity as 'II' and the frequency as 'C (Possible)', producing a medium risk. Once the pipe is abandoned and the corrosion reduction procedures cease, then it is not a 'possibility' that the pipe will corrode, but exceeds the Likelihood Scale top rating of 'almost certain', to be 'certain'. The severity level of 'II' has been taken from the Consequence Scale. While the consequence of this will be long term and potentially have a serious environmental and health & safety impact, the risk to ERM is reduced as they will have rescinded the easement and will no longer have responsibility for the abandoned pipe. From the landholder perspective, the consequences rate 'IV' to 'V', particularly if the landholder then has to provide funding to rectify the situation. **The risk matrix for the post-abandonment part of this proposal should be ranked 'Very High'.**

The risk comparison between removal of the pipe and abandonment does not take into account the long term risks to the landholder. When this is taken into account it becomes a **higher risk to abandon the pipe in place than to remove it.**

It is also interesting to note that ERM's risk evaluation to remove the pipe results in a 'High' risk of loss of habitat, disturbance to soil structure and erosion, and, their use of best practice techniques does not diminish this risk. The same procedures to install the pipe also rank as 'high', but their mitigation measures reduce the risk to low. It appears that the lack of detail shown in the 'Mitigation Measures' section of the risk analysis reflects the desire of ERM to avoid the costs associated with complete rehabilitation of the proposed pipeline. Studies out of Canada also state that the ground disturbance during removal of a pipe can be less than during construction.

The Environmental Risk of every step of the process is ranked as 'medium', even after ERM has applied their mitigation measures. To willingly undertake a process that posses such a large risk to the environment, especially with the highest risk long term affects not counted, is irresponsible.

Other Issues

Other issues noted with the EA include:

- No commitment to cathodic protection, only if unexpected telluric currents are expected.

- Pipes are both bent and welded on site causing stress. ERM does not document what QC checks will be done on the pipe after these stresses are applied.
- It is not possible to determine the subdivision potential, and potential losses to the landholder, for a period of 50 years+. If landholders are made aware of this and elect to allow the pipeline then that is their prerogative. Not all landholders should be forced to carry this potential loss. Contrary to ERM's claim, the pipeline would be a major determining factor for realising subdivision potential and would exclude landholders from the economic benefits of subdivision over, or within the safe distance from, the pipeline.
- 15 dwellings are inside the distance determined by hazard evaluation to be safe. The specific dwellings in question have not been highlighted in the table showing distances to infrastructure and have not been pulled out be the author here. ERM has not declared whether the occupants have been made aware that they are within the distance determined to be safe.
- It is not clear if the landholder will need to make a declaration of toxic materials when selling a property storing SEPP 33 toxic materials. This would have a substantial impact on the value of the affected property.
- The responsibilities of the landholder are not clear under the Contaminated Land Management Amendment. As a landlord with a tenant storing SEPP 33 hazardous material, what liabilities and obligations does the landholder have under the act?

Route within Rosehill

Rosehill is a small (92ha) property located on the Garra Formation limestone 10km from Molong. It was purchased with the intention of:

- Returning a substantial portion to its natural state.
- Rehabilitating the soil to increase organic content and reduce compaction.
- Starting a small Red Angus cattle stud.
- Starting a small Warm Blood horse stud.
- Attaining Organic Status for the property.
- Creating a niche organic property to raise our children

Since moving to Rosehill in 2006 we have:

- Excised 7.72 ha from farming to pure rehabilitation (self funded), with plans for further rehabilitation areas in place.
- Eliminated the use of chemical fertilisers.
- Applied organic methods of weed control.
- Established the Red Angus stud.
- Started the warm blood stud.
- Prepared to start the transition to organic status.

Our commitment to rehabilitating Rosehill is demonstrable with significant investment in land and time, as well as a substantial financial investment. Not only is the proposed pipeline incompatible with pre-existing land use and planned land use, but we have a fundamental philosophical objection to the business it supports and the legacy it will leave for our children and future generations. The proposal will have an adverse impact on our lifestyle and the plans we have for our property. We would not have purchased this property had the pipeline been in place, nor would we have risked purchasing it had the proposal been made.

In the Preliminary EA, ERM identified the importance of planning around sensitive operations such as studs and wineries. I have raised this with ERM and rather than meet this initial commitment, they have simply dropped it from the final EA. The proposed route has not been planned to avoid studs as was the claim in the Preliminary EA.

The proposed route transgresses an area known to contain voids. As well as numerous unexplained depressions, a vertical cavity 3m deep and approximately 60cm in diameter has been located 100m from the proposed pipeline. Soil at the base of the cavity slopes to the side out of view and appears to funnel into a larger cavity underneath. The cavity has also never been observed holding water, even after heavy rain, suggesting the cavity extends further than can be observed from surface.

Further evidence of significant cavities comes from our neighbours bore, a further 250m along the same topographical feature, which is reported to terminate in a cavity.

A fencing contractor reported a deep hole near our dam, 250m from the proposed pipe in the opposite direction, however we have not yet been able to locate this in the long grass as it is within our rehabilitation zone.

The Garra Formation limestones have proven potential to host significant cave systems and there is evidence to suggest such a delicate ecosystem may be present below Rosehill and surrounding properties.

A 940m long rehabilitation and fauna route has already been established across Rosehill. The proposed pipeline route cuts this and will prevent the completion of revegetation with native tree species along this route. It will also prevent us from planting 7 other paddock corners and 700m of fence line with trees as we have planned. This will have a significant impact on our livestock, native fauna and property management.

As well as preventing revegetation, the route as proposed will remove 8 mature trees from our property and cut through fossiliferous limestone outcrops that form a habitat for lizards on the property.

The proposed pipe route crosses a NE-SW trending fault with an estimated 1km sinstral offset (as seen in limestone ridges). The fault is indicated on air photos by a straightening of the, otherwise meandering, creek, providing for a 250m sinistral offset in the original creek path. There has either been movement along the creek since the current creek path was established, or the creek has preferentially established along the fault. The proposed pipe crosses the fault from unconsolidated soil on the SE side, directly into solid limestone on the NW side. This will ensure that **any further movement along this fault will shear the pipe causing a catastrophic failure**.

During a visit to Rosehill, the LandPartners Environmental Officer noted the presence of the endagered Superb Parrot. Since being made aware of this, we have sighted this species many times. The proposed route cuts through our western tree lot, which hosts habitat essential to the breeding of these birds and other species.

At Rosehill we have a policy of minimal vehicle movement to prevent soil compaction and weed

transfer. The majority of work on the farm is done on foot. We also have a no-till policy to preserve soil structure. The ERM proposal is completely incompatible with those principals as it will involve the removal of significant amounts of soil and compaction along the entire construction corridor.

Compensation for loss associated with the pipeline covers only the loss from farming the pipeline corridor. The financial impact on a small property undertaking significant revegetation programs and with an organic focus will be much greater than direct losses from the easement. Should we intend to sell the property at some point in the future, the entire property would attract a substantial devaluation due to the presence of infrastructure incongruous with the objectives of the property, particularly given the green-oriented demographic of potential purchasers. As previously stated, we would not have purchased the property had the pipeline proposal been made at the time.

General Project Considerations

The pipeline proposal is linked to the Wellington Power Station proposal. It is noted that the EA for Wellington Power Station did not consider viable renewable alternatives such as stored solar thermal technology (eg molten salt heat storage), instead justifying the power station through a superficial comparison with direct photovoltaic electricity generation.

The justification for the gas pipeline is based on a flawed justification for the Wellington Power Station that does not consider more environmentally acceptable alternatives.

ERM state that they need the proposed pipeline to operate the Wellington power station at peak load. This is contradiction to the initial proposal in which ERM claimed that the power station would only be used at 4% capacity. This was the basis under which they consulted the community and the basis for which they calculated their carbon emissions at 97 544t CO2 equivalent per year. It is my understanding that since consulting the community they have made application to increase utilisation to 40% capacity, increasing their carbon output to nearly 1,000,000t CO2 per year. It now seems that ERM has again been misleading the public as they are claiming to **need** the proposed pipeline to operate Wellington power stations at peak load, 25 times the capacity of their community consultation process and at a CO2 production rate of nearly 2.5 million tones per annum. If ERM have been honest about their operation of the Wellington Power Station, then this pipeline is not needed.

NSW EPA Act 1979

ERM inadequately address the principles of the NSW EPA Act 1979. The following comments use the same numbering as those in the ERM proposal.

- a) (i)promotion of social and economic welfare – significant economic cost in current and future property depreciation for small landholders. Large social impact as it contradicts our own plans for the property and reasons for purchase of the property.
- (ii) long term environmental and community problems with post-abandonment subsidence, contaminant leakage, liability for abandoned infrastructure and exclusion from participating in economic benefits of land rezoning, subdivision or a change in land use practice. No financial assurance for long term problems or decommissioning. Exposure to deliberate or inadvertent damage causing explosion and contamination.
- (v) the proposed pipeline does NOT provide the community with an alternative energy supply as claimed in the EA. It provides ERM Energy Pty Ltd with carbon based, non-

renewable fuel to burn in its power station, from where it can SELL the electricity to the community for profit.

- (vi) the proposed pipeline will prevent landholders from undertaking revegetation projects and will destroy portions of revegetation projects already completed or in progress.
- (vii) see below.
- (c) as documented elsewhere, landholders have been provided with little information, and no information about the long term issues associated with this project. Even when information has been specifically requested, it has been tardy, contradictory or refused.

(vii) Ecologically Sustainable Development

ERM's Environmental Assessment refers to two peak authorities to define 'ecologically sustainable development': Australia's National Strategy for Ecologically Sustainable Development 1992 (NSESD) which has been endorsed by Council of Australian Governments, and the EP&A Act itself.. It fails both definitions:

NSESD

The following taken from ERM's Environmental Assessment, with comments provided underneath.

The NSESD defines ecologically sustainable development as:

'using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased'.

- the proposed pipeline and power station that it feeds will be burning non-renewable carbon based fuel to produce (amongst other things) electricity, heat and 975,000t of carbon dioxide per year. There is mounting evidence to support the detrimental affects that greenhouse gases are having on the environment both locally and globally. This proposal burns the community's resources and damages the future quality of life. The proposed pipeline will also damage the environment and leave future generations with unknown liabilities once it is abandoned to corrode.

The Goal of the NSESD is:

"Development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends."

- as with the previous comment, this proposal has a damaging affect on future generations from both environmental and liability view points.

The Core Objectives of the NSESD are:

- to enhance individual and community well-being and welfare by following a path of economic development that safeguards the welfare of future generations;

- this proposal only provides the community with the option to purchase electricity, while leaving the environmental problems and liabilities to our children once the buried infrastructure is abandoned. It also exposes landholders to risks of explosion of the 15MPa (2220psi) pipe, either caused inadvertently or deliberately.

- to provide for equity within and between generations ;and

- the proposal is highly inequitable between generations with a clear demarcation between the short term benefits of possible electricity purchase and ERM profit to current generations, versus the long term environmental and economic liabilities post-abandonment.

- to protect biological diversity and maintain essential ecological processes and life-support systems.

- as previously noted, this proposal is to produce electricity and greenhouse gases.

The Guiding Principles of the NSESD are:

- decision making processes should effectively integrate both long and short-term economic, environmental, social and equity considerations;

- there a significant long term detrimental environmental and economic considerations associated with the proposal as noted.

- where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;

- the fundamentals of the project involve documented environmental damage from greenhouse gas emission. This is coupled with ERM's stated intention to abandon the pipe to corrode at the end of its service life.

- the global dimension of environmental impacts of actions and policies should be recognised and considered;

- the global effects of greenhouse gas emission are well documented. This proposal will add to that impact.

- the need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised;

- this proposal does nothing to enhance the capacity for environmental protection. In contrast, it ensures environmental problems over the long term as the abandoned pipe corrodes.

- the need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised;

- the proposal is not environmentally sound over the long term.

- cost effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms; and
- decisions and actions should provide for broad community involvement on issues which affect them.

- as documented elsewhere, community consultation has been poor and has not communicated the long term issues associated with this proposal.

ERM's single line response to the National Strategy for Ecologically Sustainable Development is sadly inadequate, reflecting the non-compliance that this proposal has for the goal, objectives and principles contained therein.

EP&A

The EP&A Act defines ecologically sustainable development by reference to the Protection of the Environment Administration (PEA) Act. The PEA Act describes ESD as "requiring the effective integration of economic and environmental considerations in decision-making processes.

Ecologically sustainable development can be achieved through the implementation of the following principles and programs:

- The precautionary principle;

  - there is a clear long term detrimental threat to the environment and landholders, both current and especially future.

- Inter-generational equity;

  - the proposal defers many of the environmental problems and liabilities to future generations.

- Conservation of biological diversity and ecological integrity; and

  - the proposed project will have devastating effects on the biology and ecology marginal to the corroding pipeline and along subsequent erosion channels when abandoned.

- Improved valuation, pricing and incentive mechanisms."

  – the long term social, environmental and economic factors have **not** been taken into account.

Conclusions

The public consultation process executed by ERM and their contracted body, Landpartners / CNC, has been tardy, contradictory and omitted much of the information that would be of concern to Landholders. Even when landholders have undertaken their own research and specifically requested information, ERM has mostly ignored the request or refused to comment. Non-disclosure of important issues has misled affected landholders and the general public. **ERM has not met its public consultation requirements.**

ERM's proposed route places 24km of the pipe on the highly reactive Garra Formation, a 27km long by 2.7km wide band of fossiliferous limestone with proven potential to host caves (eg Wellington Caves). ERM's own hazard assessment says that small leaks may go undetected until routine patrols notice the affects of the leak at surface. There is significant potential for the pipe to be pumping acid forming chemicals into the host sequence, with the environmental effects being amplified in the reactive Garra Formation.

There is also a good probability of the pipeline intersecting caves and voids within the Garra Formation. On Rosehill alone, the proposed route passes within 100m of a 3m vertical void that funnels into a larger cavity underneath, with further evidence of cavities on neighbours properties.

ERM's hazard assessment only takes into account events up to the time when they abandon the pipeline to corrode. Post-abandonment hazards cannot be ignored as it is then that most of the environmental damage will be done, including water channelling, subsidence and contamination of the host sequence, soil and water table.

The pre-abandonment hazards have also been underestimated or neglected. The almost certain death of anyone inadvertently damaging the pipeline has not been taken into account. Nor does ERM assess the risk that it, or its holding company, will no longer exist, or not be able to meet its financial obligations to rehabilitate the pipeline or clean up environmental damage caused by the pipeline. A bond to cover full removal and rehabilitation of the pipeline is essential, particularly given:

- the life span of the operation.
- known post-abandonment environmental problems.
- reliance on the Moomba pipeline, infrastructure that is already near or past its design life, to remain viable.
- European data presented by ERM suggests we are expecting an incident every 12 years.

The risks to the landholder of deliberate damage to the pipeline has also been completely ignored, despite Australian Government advise that "***... the possibility of a terrorist attack should be considered as part of a business' risk management plan***". The landholder, now and over the next 50 years, remains exposed to the risk of a **15Mpa (2220 psi) pipe carrying flammable SEPP 33 class chemicals being damaged, protected only by 75cm of soil cover**.

ERM has stated its general decommissioning plan to be "*The pipeline is left to corrode in the ground*". This is a 508mm diameter pipe, buried 75cm under the surface, being abandoned to corrode. The result of this will be water channelling to de-water ridges and saturate low areas. Any contaminants will also be flushed out in the low lying areas, probably located in or near water courses. The soil above the pipe will also be flushed through, creating major subsidence.

Studies in Canada show that corrosion there will be an issue in 13-123 years, depending on local conditions. The warmer, more saline soils along ERM's pipeline will be more conducive to corrosion than those in the Canadian study. Regardless of the time frame, **abandoning infrastructure to be a problem for future generations should not be an option**.

Australia's National Strategy for Ecologically Sustainable Development (NSESD) and the EP&A Act provide for the protection of the environment and community both now and for future generations. ERM's proposal fails under both of these, providing no protection for future generations, instead leaving future generations to deal with the environmental, social and financial impacts of their business.

ERM has been directly asked about the liabilities and ownership of the pipeline once they abandon it and drop the easement. ERM refused to answer the question. The landholders post-abandonment liability is unclear, although ERM's refusal to comment suggests that it is not in the landholder's favour.

The landholder will also face devaluation of their property should they wish to sell at any time in the future. Over the next 50 years they will need to declare that they have a store of SEPP 33 Hazardous & Offensive material on their property and the prospective buyer will need to factor in uncertainties over post-abandonment liabilities. Once the pipeline is abandoned then property value will need to account for the actively corroding pipe and associated environmental damage.

Such devaluation is especially acute on small landholdings, such as Rosehill, that are actively following a program of revegetation and moving towards organic farming principles. The presence of a high pressure, SEPP 33 class transmission and storage facility with major environmental problems at the end of it's profitable life will attract a major devaluation by green-oriented

purchasers if we wish to sell, if any purchaser could be found at all.

The proposed route within Rosehill has a major impact on the revegetation projects currently underway and planned for the future. We have already excised 7.7ha of our small property from farming for revegetation purposes and have plans for many smaller revegetation areas, including fence lines and paddock corners. The proposed route splits a 940m long fauna corridor and prevents us from undertaking our revegetation plans over 700m of fence line and 5 paddock corners.

The proposed route also crosses a fault, going straight into bedrock limestone on one side. This should ensure that any further movement on the fault will shear the pipe.

ERM's proposal is completely inconsistent with the current land use, future plans and philosophy already in place at Rosehill.

Alternative routes for the pipeline are available. One alternative route has been shown in this document that uses existing infrastructure pathways, avoiding the environmental damage associated with the establishment of new infrastructure paths, avoiding the long term liabilities to the landholder, avoiding restrictions on landholders revegetation and future use of land, and reducing property devaluation. This of course does not address many of the other adverse impacts of this proposal, but does address many of those directly impacting landholders.

ERM's proposal is for a non-renewable, carbon dioxide producing feeder to a power station that could be replaced with renewable technologies. Supply to the Wellington power station is not in the public interest and has a severe long term impact on current landholders, the environment and future generations.

Appendix A – Correspondence

Initial enquiry contact (3/8/2009)

Dear Mr Fraser,

Your Property Reference: 142

I am writing in regard to the proposed ERM Power Wellington pipeline route. Your contact details were provided to me by Toby Mitchell, the CNC Project Management Project Facilitator, who visited us on Friday 31/7/2009.

The proposed route of the pipeline was provided to us on a 1:20,000 image. It is immediately apparent that the proposed route transgresses our rehabilitation zone and appears to impact our main dam. Rather than address these issues now using the large scale information provided, I would like to request more detailed data as well as more general information.

Could you please provide the proposed route of the pipeline in digital form so that we may assess it in conjunction with the other GIS data we maintain for the property at a more appropriate scale. Industry standard MapInfo or Shapefile format are suitable, although most formats can be used. A layer showing the construction buffer associated with installing the pipeline and associated markers would also be convenient, although this can be generated here if it is not readily available.

Could you also confirm the size of the construction footprint. Our initial research indicates that it can range from 30m-60m in total width.

I would also like to request some information of a more general nature so that we may more accurately assess the short and long term impact this pipeline will have on our property.

- What restrictions will there be on land use in the vicinity of the pipeline? This is particularly important as it transgresses our rehabilitation zone as documented in a submission to the Lachlan Catchment Management Authority in 2007.
- What will be the ongoing inspection/maintenance traffic along the pipeline corridor?
- Will maintenance/repair work require subsequent destruction of vegetation?
- Do you maintain data on subsidence issues associated with the pipe? If so, could you please provide the details of these issues. In response to our query regarding routing of the pipeline along the extensive network of north-south trending roads in our area, Mr Mitchell repsonded that the councils will not report subsidence along the pipeline. This suggests subsidence is indeed an issue.
- Mr Mitchell also indicated in response to the above query that exposure to Native Title claim along roads was not an issue. Could you confirm whether routing along roads is subject to native title claim and possible compensation.
- Will there be any sacrificial electrodes on our property? What metals/compounds are shed into the surrounding environment by the electrodes and do you conduct any soil testing?
- Do you have any studies on the short and long term effects of the soil structure disturbance during building of the pipeline? Also, do you have studies on the short and long term effects of soil compaction? Note that we do not till the property to protect the soil structure and vehicles are not used unless absolutely necessary.
- What is your ongoing weed management plan? How do you achieve this on properties designated, or transitioning to organic status?
- Have you made any studies as to the affect on property prices of having such a pipeline and associated land use restrictions present, in particular with respect to small/niche holdings. Please provide information.
- How does the pipeline affect rezoning and subdivision potential?
- Mining regulations provide for potentially affected land owners to seek legal advice at the proposing companies expense. Are similar arrangements in place for the proposed gas pipeline and what are the details?
- What is the planned operational life of the pipeline?
- What is the structural life of the pipeline?
- How does ERM plan to decommission the pipeline at the end of its life, and are the funds for decommissioning

held in trust?

- If the pipeline is not to be removed at the end of its life, how will the issue of elemental sulphur deposition within the pipeline be handled as the pipe degrades, particularly with reference to a limestone host sequence?
- Can you please provide date and location information for public meetings on the project. If the pipeline is to have an impact on our property then I would like to attend the meetings. Do you maintain a contact list for such meetings?
- Could you also put our contact details on your register of interested parties for the Environmental Assessment and notify us at commencement of the EA.

I realise that this information my take time to compile, but it is essential that it be provided to us in a timely manner so that the specific impact on our property and lifestyle can be adequately assessed, and formal objection and EA submission prepared if required. I would specifically request that the digital proposed pipeline location file be supplied as soon as possible. We can then get back to you with better defined concerns.

Thankyou for your assistance.

Regards,

Roland Hill

Letter to ERM (1/2/2010)

Mr Roland Hill
Rosehill Red Angus Stud (Four Winds Technology Pty Ltd)
'Rosehill' Manildra Rd
Molong NSW 2866

1st February 2010

Mr Larry Kramer
Development Manager
ERM Power Pty Ltd
PO Box 7152
Riverside Centre
Brisbane QLD 4000

Sent by email.

Dear Mr Kramer,

Proposed ERM Pipeline through Rosehill Stud Property.

I am writing to you directly with concerns over the proposed routing of the ERM Young to Wellington pipeline through my property, Rosehill Red Angus Stud, as the response from CNC Project Management and Landpartners has been well below the standard I would expect from professional landholder liaison groups.

Firstly, I would like to summarise our experience with CNC / Landpartners.

We have now had 3 meetings on site with CNC or Landpartners, with four different representatives. We have not had the same person appear twice and every one of them has claimed to have no specific knowledge of our case.

After the initial contact meeting with Mr Toby Mitchell of CNC, we submitted a number of questions and concerns to the contact provided at CNC. It subsequently took 42 days to receive a response to those questions. The responses where delivered by Mr John Wood of CNC, who suggested with my agreement that most of the responses where inadequate. None of the raw data or research I requested was provided.

A few days later Mr Wood contacted us to request that we meet with the Landpartners surveyor in charge of routing the pipeline. We agreed to meet him on October 4th 2009. The surveyor did not leave his contact details, but his colleague (Mr Ian Colvin) gave me his card on request. I have since requested the surveyor's details through Mr Colvin, but despite receiving a read receipt the email has gone unanswered.

At the meeting Landpartners agreed:

- Not to attempt to route the pipeline through our dam and down the centre of our main rehabilitation area as originally proposed.
- To address the questions and concerns we initially raised within 2 weeks, or provide a reason and time frame in which information could be provided if not able to do so within the agreed 2 weeks.
- To investigate alternative routes around our property.
- To place our details on a contact list, as per our previous request to be notified of significant events such as public meetings. The surveyor specifically stated that he had previously developed a database for this purpose.
- ERM would reimburse legal fees to assist in assessment of the proposal. This is in contradiction to the earlier reply to this question from CNC.

Many of the responses at this meeting were in direct contradiction to those provided earlier by CNC. I will not detail them all here.

The end result of that meeting is that:

- We have received no written (or otherwise) notification of a change in the proposed pipeline route.
- No additional information or data was received after 14 days, and still has not been received 120 days later.
- No notification has been received regarding alternative routes.
- We have had no contact regarding significant events or public meetings, apart from a form letter dated 21/1/2010 stating that "*a number of public meetings have been held with local communities*".
- We received no written confirmation on the issue of legal expenses.

I will leave you to your own conclusions on the competence of these companies. I have taken a considerable amount of time out of my geophysics consultancy to address these issues with CNC / Landpartners as this proposal will have a significant impact on our property and stud business.

Dealing with these companies has been expensive and due to their tardy/non response, has been detrimental to our ability to respond to the ERM proposal in a timely fashion.

We have a number of direct concerns with the proposal to build a pipeline through our property. These were documented to CNC and I include them again here as an Appendix and request that you supply detailed answers with supporting data and research papers to enable an adequate assessment of the proposal. Chiefly these concerns are:

- We are a registered Red Angus stud and a producing warm blood stud. I believe you are aware of the implications of your proposal on stud businesses as you have specifically claimed in section 5.2.5 of your Preliminary Environmental Assessment that "Vineyards, stud farms and orchards have been avoided". This is despite our stud pre-dating your report by several years.
- We have been actively working to rehabilitate our farm since we purchased it. The proposed pipeline will restrict our ability to revegetate the property as we had planned.
- This is a small holding that we aim to develop into an organic, niche stud business. Should we come to sell the property, the proposed pipeline would be perceived by the target demographic (which includes us) as inconsistent with that goal and will severely impact the value of the entire property, not just the easement. Not only will it impact the value, but it will be very difficult to find a purchaser within the target demographic to consider a purchase.
- We are very concerned at the lack of documented and funded rehabilitation planning. Particularly concerning is the plan to abandon the pipe in place to corrode within limestone stratigraphy when it has been carrying a sulphidic substance.

Should you indicate (or fail to respond) that you intend to continue with the proposed plan for this pipeline across our property then we would like more certainty over the rehabilitation plan and funding. As such, we would be petitioning the Director General to include rehabilitation procedures in the Environmental Assessment document and be requesting that adequate funds be held in trust to complete the work. We would also be requesting that independent research into the long term aspects of pipeline rehabilitation be included in the EA, or that these studies be commissioned.

As we feel that the proposed pipeline will have a major impact on our business, lifestyle and future plans for the property, we do not intend to grant an easement. Could you please detail the dispute resolution process in these matters.

Due to the poor response previously experienced in relation to this proposal, I ask that you make some response within seven days (Monday February 8th 2010).

Regards,

Roland Hill
Rosehill Stud (Four Winds Technology Pty Ltd)
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