

Comments on the EIS for the Proposed Gas Pipeline from Young to Wellington.

Introduction

I farm in the Billimari area. The proposed pipeline route crosses my farm on a soil type known to be highly erodible in an area of shallow groundwater.

I also have a strong interest in the success of agriculture in our area and believe that as the world population grows the productivity of agriculture will be important in providing peace and prosperity for future generations. To this end I also am a Director of the not-for-profit research company Farmlink Research Ltd and an Executive Councillor of the NSW Farmers Association. I am also Captain of the Billimari Brigade of the Rural Fire Service.

The EIS and attachments fail to mention many environmental considerations or detail and correct information on other issues.

Thus is difficult to respond to proposals to prevent or control environmental damage when they are not mentioned in the EIS.

The EIS fails to cover many of the substantial “land use conflicts” of the pipeline on “land of high Agricultural Value” as specifically requested in the Director-General’s Requirements (page 3, Key assessment requirements).

This limits my ability to exercise my rights under the Environmental Planning and Assessment Act 1979 to provide comment on the EIS.

The following is not a complete list of the failings of the EIS but is provided to illustrate the skeletal nature of the study provide by ERM Power Pty Ltd.

In order to illustrate the breath of the deficiencies of this study I have divided my comments into the following groups:

1. Issues Not Covered as Per Director-General’s Requirements
2. Errors in the EIS
3. Other omissions and design errors
4. International best practise
5. Good citizenship
6. Other conditions of approval.

I conclude with suggestions of some conditions and procedures for the Planning Department to consider in the approval process.

1. Issues Not Covered as per Director-General's Requirements

General Requirements point 2

In the requirements for “infrastructure crossing methods” there is no mention of private infrastructure such as erosion control works, irrigation mains, power cables, water pipes and the Telstra copper network.

It is a concern of farmers and their neighbours that after cutting power cables and irrigation mains, the repairs do not have an expected life equivalent to the original installation. The location of the likely faults in these installations on or adjacent to the gas pipeline will limit options for economic repair. The inability to affect speedy repair will have animal welfare issues where the power supplies provide water to stock, or threaten entire crops as the failure of irrigation systems for 2 or 3 days in summer can see the loss of a substantial portion of many crops.

The telephone cable system in the area is marginal with the number of joins having a large negative impact on reliability and its ability to be used for useful internet speeds. Likewise much of the cable is extremely fragile and quickly becomes faulty if disturbed.

General Requirements point 4 & 5

Given the concern about greenhouse gases such as methane that this pipeline will carry, I would ask for extensive detail on the systems to be used to monitor the cumulative leakage. Leakage from small faults, fractures and, in later life, corrosion should be monitored, ideally section by section of the pipe line, to enable speedy repair or decommissioning. The limits on the leakage from the pipeline should be established at this planning stage with publically verifiable data on actual leakage. The greenhouse gas effects of methane have been estimated at between 6 to 20 times the effects of CO₂.

ERM Power should justify the incorporation of gas storage capacity in the sizing of this pipe line. The resultant larger pipe limits the lengths of boring operations. It limits the length of sections of the route where low-impact, narrow-disturbance techniques can be used to reduce the impact on the environment and land owners. Generally, as the width of the area affected by pipe laying operations increases, the resulting water run-off and erosion, sedimentation, and time frame for rehabilitation of the land, increases exponentially. In addition, the scale of the gas storage function planned into this pipeline was not envisaged where the Pipelines Act 1967 refers to ancillary activities.

General Requirements point 6

Many of the environmental issues listed in the draft statement of commitments to be dealt with during detailed design, construction or operation have better solutions available at this phase of the project planning.

Two examples to illustrate the advantages of modifying route selection over attempts to rectify damage are:

A.) Telstra put an optic fibre cable through high erosion risk soils in the mid 1980's.

- The resultant gullies up to 2.4m deep were stabilised at a cost of over \$100,000 in today's dollars.
- The cost of restoring to the original state could have easily have exceeded \$1million.
- This was on category 3 land. The cost to restore category 1 land would be higher.
- The land in question is still degraded by 1 or 2 categories some 25 years later.

B.) The route excises portions of paddocks.

- Agricultural practise can involve ripping operations to a depth of 1m (see research on subsoil constraint amelioration in Southern NSW).
- Unless a minimum coverage of 1.2m, or more on slopes (this EIS only envisages 600mm to 900mm coverage in these areas) is maintained on agricultural land, the need to avoid ripping over the pipeline would add extra expense.
- The resulting difference in cultivation practises and chemical needs, disease hotspots, and crop maturity results in the necessity to manage these portions separately.
- The costs of managing areas under 20ha rise quickly as the block size is reduced. With the scale of cropping operations increasing rapidly, the economic size of management units will increase thereby exacerbating the effect of a pipeline route that fails to plan for the growth in the scale of farming. This will impose constraints on future agricultural production.
- The proposed revised LEP for Cowra Shire with a minimum subdivision size with dwelling entitlement of 100ha and Industry and Investment recommendations of 200ha are further evidence of the need to plan route selection to maximise paddock block size both now and to allow for further incorporation of adjoining paddocks into a single paddock.
- If any vehicle or foot travel along the pipeline is anticipated during the pipe line's operation, for disease control reasons this also effectively excises part of the paddock.

Over 20 of the commitments in the EIS have potentially better environmental outcomes if the route planning incorporated such commitments now. Some substantial route changes may be necessary. If route changes are not implemented as a condition of approval then a system of environmental assessments should be ongoing to facilitate route changes during detailed planning.

Assessment Requirements point 2: Land Use Planning Impacts

The proposed route of the pipe line is almost all on Prime Agricultural Land as defined by Industry and Investment in 1998. The route is all “high value” agricultural land and is predominately Category 1 and 2. The agricultural land “classes” (sic) are generally called ‘categories’ in a system of classification developed by the NSW Department of Soil Conservation in the 1970’s. Since then the state agricultural soils have been mapped. The requested mapping in the Director-General’s Requirements is also missing from the EIS.

ERM Power state that the “proposed route is located almost entirely on cleared, privately owned, agricultural land” (p vii Volume 1 Environmental Assessment Young to Wellington Gas Pipeline) yet this EIS fails to assess almost all the route for environmental impact relative to agricultural pursuits and the resulting impacts on agricultural land and businesses as required under section 75F of the Environmental and Assessment Act 1979.

With this substantial section of the EIS missing the required public consultation is flawed in that responses are at best speculative on this missing section. If this section was present as specified in the Director-General’s Requirements other substantial issues may have been raised during the consultation as the act intends in specifying public consultation.

Thus this EIS substantially fails to be in *compliance with environmental assessment requirements*. This should be entirely adequate grounds to recommend rejection of the development application.

Basic Outline of Some Content that should be included in the missing section.

A description of the soils.

An extensive characterisation of the soils on the pipe line route has been published by the NSW Government. A section describing the soils for Korrawatha - Billimari is reproduced in Appendix 1. It is sourced from:

<http://www.dnr.nsw.gov.au/care/soil/ssu/pubstat/bathurst/pdfs/bathurst-ch10-3-koorawatha.pdf>

This is part of the publication:

Kovac M. & Lawrie J. A. 1989 Soil Landscapes of the Bathurst 1:250,000 Sheet. Soil Conservation Service of NSW Sydney.

A relevant description of the soil on my property on the proposed route, again from Kovac et al Ch4, is:

“Their subsoils are light sandy clay loams to sandy clay loams. These soils are susceptible to all forms of soil erosion. ‘A’ horizons are hydrophobic resulting in lateral movement of water through A2 horizon. Gullies with depth often greater than 3m are associated with these soils.”

Assessing the Extent of Highly Erodible Soils

- Local surveys would be necessary to map the boundary of the yellow solodic soils and find alternative routes to avoid these high risk areas.

The Erosion and Sediment Control Measures

- The EIS needs to include detailed plans for whenever the pipeline crosses highly erodible soils on any slope.

A Rectification Plan

- The EIS needs to incorporate a detailed response for where rectification is needed.
- Previous erosion rectification efforts have typically taken 20 and 30 years to achieve a top soil able to sustain farming without further erosion. Damage quickly spreads from the initial site and can proceed over 100m and to a depth of 1m from a single rainfall event.

How Impulse Noise can be Controlled .

- When handling large stock such as cattle and horses a single impulse noise can result in serious injury to farmers working with the stock. I personally have had lost time to injury caused by a bird scare gun firing once at a location 2Km from me.

Appropriate Depth of the Pipe Line

- Annual soil sampling is common practise using percussion driven soil sampling spears to depths from 900mm to 1.1m.
- Other soil characterisation sampling is irregularly performed at depths between 1.5m and 1.8 m using combination rotary-percussion machines.
- A 2m coverage depth is necessary across any prime agricultural land if the pipe line is not protected by a fence within 1.2m of the pipe centre line.

The Impact of the Pipeline on Fungal and Bacterial Disease Control in Crops

- Restricting water holding capacity of the soil by placing a large pipe in the crop rooting zone will result in local wilting of the crop.
- This wilting often increases the plants susceptibility to many diseases and can result in increased spore production.
- These local “hot spots” often result in faster infection of the surrounding crop reducing inspection and chemical control timeframes thereby increasing the scale of damage to the surrounding crop and crops in adjoining paddocks.

Many more impacts could be listed here but time and limited resources prevent me from addressing them all.

Key Assessment Requirements point 7: Hazard and Risk Impacts. (See Main Report and Technical report No 1)

- By ignoring surface vegetation the fire hazard calculations underestimates the risk to householders in the surrounding dwellings and to those working on the surrounding farmland which should be considered a populated workplace. Grassland fires can travel extremely quickly and cause serious injury or death when people are caught by surprise.
- The speed and scale at which a fire would establish would remove the opportunity to control the fire quickly while it is still small. Over 90% of fires are contained quickly because control efforts have commenced when the fire front is less than 100m wide. The figures from ERM Power indicate that if a significant leak is ignited a fire front would establish a fire front of half a kilometre would establish in dry grass.
- The incident frequencies used in this study do not take in account agricultural practices such as percussion soil coring, deep ripping or driving strainer posts which are placed 1.2m deep.
- The marker tape provides no protection to the pipe from these operations. The traditional 200m markers are likely to suffer from farming operations as increased reliance on satellite controlled steering and wide machinery means manual avoidance of hazards is difficult.

2. Errors in the EIS

- As outlined above, ignorance of farm cropping practise and fuel loads in summer results in estimates of fire risks which are too low.
- The hazard table in the main report appears to only take into account the costs of the operator and installing companies but not the farm businesses. For example, interruption of traffic flows for one hour during harvest operations would put at risk a loss of \$10,000per farm business affected. These costs could rapidly escalate to higher consequence category II or IV. There is a pattern of death and injury among farmers during harvest when major events outside their control, such as road closures, impacts on their business operation. The result is a substantial spike in the number and severity of workplace injuries.
- For 'survey' activities, the risk is set at II A. However, in my experience, in Cowra Shire the fire risk alone would put this in the very high risk category when operating in summer. Fires regularly are started by catalytic converters on cars when parked on dry grass. Major fires in this shire have caused loss of crop and pasture in the category III level and in cases such as the Temora fire it is consequences category IV. Similarly, any activity on the table which involves farms and vehicles should be placed in the 'very high' category. During summer, on areas with dry grass, all transport should be by appropriate company vehicle only.
- The report on farmer consultation does not reflect the issues raised by farmers. Farmers have told me of their discussions of their concerns with representatives of ERM which are not reported in the EIS. These anecdotal reports are credible as issues I raised

repeatedly with several ERM representatives are also not reported. In two phone calls I made, one to a manager of ERM Power in their Brisbane office and the second to the office of CNC Projects, I outlined my objections to the company sending a “Project Facilitator” to farmers asking them to sign a blank access authorisation when neither verbal nor written information was made available about who or when, or the competencies of the people who would be accessing my property. I also mentioned issues of erosion arising from the planned route and the necessity for protocols on biosecurity and workplace safety to be prepared with appropriate training given to personnel before entry onto any agricultural land. The Technical Report 4 – Landholder Consultation Report makes no mention of these issues or issues such as erosion control on erodible soils despite my having on hand a written précis of these issues prepared by ERM Power’s project facilitator.

This is by no means an exhaustive list of the errors in this document. As the authors have neglected to report on the impacts on agriculture and agricultural land of the pipe line route, they have missed the opportunity to learn about farming and farming practises along the route. Their ignorance of farming is the cause of many of the errors in this document.

3. Other Omissions and Design Errors

The EIS makes no mention of

- Asbestos Hazards in the district
- Old decommissioned arsenic dip sites
- Sources of extra soil to completely fill their excavation for the pipeline
- The quantity of extra soil required to back fill the trenches. Sourcing this will be a major challenge for the company and given the number of quarry sites that would be needed is a significant environmental issue for the community. I estimate the additional soil needed for back filling the trenches to original ground level after subsidence, of between 15,000 and 40,000 cubic metres. I have seen the substantial pits from which backfill soil was sourced in Canada.

5.) The proposed depth of the pipe is far too shallow for continued agricultural production to safely be carried out above the pipeline. Current practise in the US and Canada is 2.4 m deep.

6.) A route has been selected without any attempt to characterise the soils. The proposed route will increase the sediment in rivers and reduce the capacity of farm water storages. It would be ironic if this development is approved while the Commonwealth government is giving incentives for farmers to increase their water storage as a drought mitigation method.

4. Best Practise Internationally;

Recently I had an opportunity to see pipeline projects and wind farms in Alberta, Canada and Iowa, USA. These projects had in common a contribution to both the community and the agriculture sector in the form of improved infrastructure.

While installing the gas and oil pipelines In Alberta, the companies installed utilities including water, telephone and internet optic fibre, gas and power in the trench. Thus, all farm houses and all townships are connected to what Australians would see as the full range of urban utilities. The installation was carried out by the company installing the pipelines with the utility pipes, cable etc. paid for jointly by the pipeline company and the government. The roads to service the well heads and pumps are located on the quarter section boundaries and are all-weather, are maintained by the gas and oil companies and are a valuable asset to the farmers as they provide all weather access to all their fields (paddocks).

In Iowa the pipeline was a joint project with the local drainage boards. The route was selected so that the Community Drainage Board pipelines maintained falls to the existing infrastructure without pumping and the augmentation of the Community Drainage Board system was achieved at approximately 60% of the cost because of the joint project.

In recent wind farm projects developed in Iowa, the wind generators are located only in the corners of fields. Power lines are mostly underground and always follow field boundaries. To Australian eyes it is quite a sight to see the overhead power lines zigzag across the country following field boundaries. Again, the roads to the wind generators are located at field boundaries and where possible at the ends of the fields to facilitate direct unloading of the combine (header) into the haul-out bins which can be fully loaded as they don't leave the all-weather road. The roads are constructed for all weather access of heavy vehicles. Many were bitumen paved and corners are specially designed to allow the long strings of haul-out bins to stay on the roadway while negotiating corners.

In all these projects the pipeline and wind generation projects have left a legacy of valuable productivity-enhancing infrastructure on farms and in the community in addition to the main project.

5. Good Citizenship

The proposed pipe line should be built so that it leaves a legacy of useful local community infrastructure.

Ideas that may be considered for a contribution to local community infrastructure may include:

a) route selected so that the pipeline passes close to the maximum number of towns and villages near the route from Young to Wellington;

b) provision of pressure reducers and a low pressure gas pipeline to town and village boundaries. This might even be extended to providing low pressure connection points on the pipeline within easy access of farm residences.

The pipe line project to date and the EIS has established a belief that the companies associated with development have a negative attitude to the predominate industry in this area (agriculture) and this will create great difficulty in resolving issues before the project can commence.

- The farm and community consultation began poorly with public meetings scheduled during the day time when farmers are working. They were advertised through local papers which did not cover most of the route of the pipeline. The only farmer that I know who knew that a public meeting was being held was also a local councillor. All other farmers I have asked were unaware that a meeting was held, as was I, until I read about it in the EIS. Surely a letter to the affected farmers could have been sent.
- The project facilitators sent to meet with farmers were poorly briefed so had few if any answers to farmers' questions and never followed up with answers. They possibly had little more than the hand out sheets they were given, or that was the impression gained when they were pressed for additional detail.
- On farm surveys were permitted by the company without ensuring protocols for safety, biosecurity and notification were in place.
- The EIS omits reporting on land use conflicts with agriculture.
- The few mentions of Agriculture in the EIS are negative such as this selective quote (EIS Main Report page 47)
 - "Agricultural production is the mainstay of the Shire's industry, however it is under threat from increasing costs, varying commodity prices, water shortages etc.;"
 - Which is actually selected from a larger more positive quote, from the (Cowra Land Use Strategy page 58) which stated:
 - **"Agricultural production will likely continue to be the mainstay of the local economy as well as play an important part in the region's ability to produce agriculture based products for domestic and export markets. The Issues Paper Workshops identified that the local agricultural industry is under pressure from a myriad of threats, including varying commodity prices and market changes, increases in farm running costs, seasonal/global climate changes and limitations on water supply. For the most part, the local agricultural industry is resilient and continues to cope with land management challenges. "**

ERM Power Pty Ltd has poorly managed community and farmer relations to date. It may be better if and when this project is approved that the government impose conditions similar to those included in the recent amendments to the Mining Act relating to access agreements.

6 Conditions of Approval

I recommend that:

- a new and complete EIS be prepared with further community consultation meetings. The EIS be again put on exhibition and public comment called again. This may be best achieved by a refusal of approval of the project due to an inadequate EIS and inadequate consultation with the local community and particularly affected land holders. Alternatively, some way may be found to provisionally approve the project dependent on the findings of a supplementary EIS and public comment;
- the route should be revised substantially to avoid category 1 & 2 agricultural land;
- the route be modified to pass close by nearby towns and villages with low pressure access points installed during construction or alternatively low pressure pipe work be installed to the town boundary;
- where the route has no alternatives to Category 1 or 2 lands, that it be sited so as to avoid excising parts of crop management units (i.e. generally the route should be alongside fence lines) but prospective future amalgamations of paddocks should also be allowed for;
- the pipeline should not cross highly erodible soil types on Category 1,2 and 3 lands when any alternate route is available;
- the designed minimum cover of the pipe line during its expected life is 2m on all category 1,2 and 3 land;
- the easement compensation is by way of an annual lease payment subject to periodic review;
- that ERM prepare a report on the demand for low pressure access points on the pipeline for rural resident access with the view of providing these access points;
- the pipeline company develop proposals with utility companies to co-locate facilities. The National Broadband Network is currently in development and this may be an opportunity for fibre to the home or local radio systems such as the CSIRO technology linked to hubs by Optic fibre along the pipe line;
- normal commercial arrangements be made for access to land where the pipeline is sited to provide a storage facility;
- an arbitration system be established, or the Land Court, used with a majority of arbiters having farm management expertise similar to farming on the pipeline route;
- a bond be posted of sufficient size to meet any obligations for restitution of damage resulting from the pipe line; and
- a work program be developed so that no obstacles or delays occur to travel by machinery or vehicles during peak periods for local agricultural businesses.

Conclusion

While it has not been possible to cover all land use conflicts between agriculture and the pipeline project that I am aware of, I hope the examples used will allow you to consult with appropriate people in the agricultural industry and become aware of issue and conflicts that have been omitted.

The EIS is inadequate. Compared to EIS's of feed-lots and piggeries I have read, this EIS does not address many issues and is far less science-based. It does not appear to be the result of even a basic literature search on agriculture.

The flaws of the EIS should be immediately addressed as it does not provide a sound basis for public consultation or decision making.

Many more route options need to be assessed as alternate routes can provide advantages for the local community and less risk of environmental damage.

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