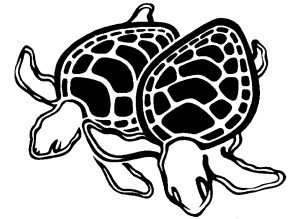


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Trans Territory Pipeline Project

A submission on the EIS by the Environment Centre NT

3 March 2005

General Comments

The Environment Centre NT is the peak non-government conservation body in the Northern Territory. We have already provided comments on the Alcan Refinery Expansion and the Blacktip Project EISs. We reiterate our position that an assessment of the cumulative impacts of the three linked projects is required before final approvals for Blacktip and the Trans Territory Pipeline (TTP) are considered. Unfortunately the NT Government has already jumped the gun with its approval for the Alcan Refinery expansion. Appendix 1 to this submission gives a brief indication of the substantial cumulative environmental impacts of these projects, even leaving aside the enormous social implications for many Aboriginal communities.

We therefore urge the NT Government to consider the need for a higher level strategic assessment. The 2003 'Nathan Dam' ruling in the Federal Court (*Queensland Conservation Council Inc v Minister for the Environment & Heritage [2003] FCA 1463*) confirmed that the environmental assessment of projects should not be treated in a piecemeal fashion. This also applies to projects assessed under bilateral agreements as in the current case of the TTP.

'The Nathan Dam ruling held that the proper approach to environmental assessment under the EPBC Act was a wide one and properly extended to considering the "whole, cumulated and continuing effect" of the activity, including the impacts of activities of third parties... The decision fundamentally improves the decisionmaking process for development approval under the Act by establishing that piecemeal decisions are unlawful. State and Territory governments performing environmental impact assessment under bilateral agreements on behalf of the Commonwealth Government under the EPBC Act will also be required to comply with the same principles' (EDO Qld Inc. Alert, 22 December 2003).

The NT and Commonwealth Governments' approach towards the environmental assessment of these three interlinked projects has been piecemeal in the extreme. It is time to assess the "whole, cumulated and continuing effect" of these projects for the sake of the Top End's ecosystems and communities.

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Specific concerns

We shall now discuss our specific concerns with the TTP Environmental Impact Statement.

Structure of document

- The EIS is a confusing and poorly structured document. The CD-Rom is difficult to use due to the lack of thumbnails. The EIS invents 4 environment settings in section 5 to describe the project. These settings are poorly described and bear no relation to conventional environment settings, such as bioregions or land systems. Of the 4 invented environmental settings only three are described and a non-existent place called “*the Arnhem Land Aboriginal Land Trust River*” is used as a boundary of one of the regions.

BOO not finalised

- The yet to be announced Builder Owner Operator Consortium (BOO) will develop the subsequent EMPs and be assigned the obligations under the EIS. The NT public, however, has had no opportunity to assess the track record of the BOO or the EMPs it may have produced in the past. Will it be up to the task? This is a major flaw in the EIS. Some important aspects of the project are, as a consequence, not finalised yet, such as the location of the 8 construction camps, each of which will have major a ecological footprint (5.5.5. Construction Camps).

Land Tenure and Access Agreements

- The EIS states that: ‘Clearance for construction will not commence until all relevant agreements are in place with landowners in accordance with NT legislation and TTP project requirements’ (10.2. Land Tenure and Land Use). What about Commonwealth legislation, such as the *Aboriginal Land Rights (NT) Act 1976* (ALRA)? We are also concerned about the implications of the following statement in the EIS (1.11. Land Tenure Approvals): ‘The proponent will ask the NT Government to commence the compulsory acquisition process of both private interests in land and any native title interests, pursuant to the *Lands Acquisitions Act*, so that in the event that agreement cannot be reached, then the land would be compulsorily acquired’. This seems to contradict the first statement that construction will not begin until ‘agreements’ are in place with landowners. This also raises serious questions about the situation that Traditional Owners who oppose the project may find themselves in. The implications of compulsory acquisition should be more clearly spelt out.

Alternatives

- The EIS does not look at the positive impacts of not proceeding, only the negative, yet Section 4.1 says they will look at both (4.2. No Development Option).

- There is an inadequate level of detail provided on alternative gas supplies. What other options were considered and why are they not feasible? (4.3 Alternative Energy Supply Options).

Biophysical Impacts

Erosion and Sedimentation in Watercourses

- A total of 426 surface water features are intersected by the pipeline corridor, including 16 major permanent rivers and streams, 63 seasonal/intermittent freshwater ponds and marshes, five freshwater springs, and three riverine floodplains subject to seasonal flooding. Nine wetlands of regional significance lie directly on the pipeline route (see Fig. 6.5). The potential for erosion, sedimentation and disturbance of freshwater ecosystems is therefore substantial.

For instance, ECNT is concerned that erosion and increased sedimentation in the Goyder River Catchment resulting from pipeline construction could potentially affect the Arafura Swamp Wetland of National Significance. The wetland is also listed on the Register of the National Estate for its natural values. We note blasting will occur between KP770 and KP781, which is part of this catchment. Only in Appendix I (p22) is there any discussion of this potential threat to the Arafura Swamp and the conclusions cannot be said to have a solid basis when part of the route in the Goyder River Catchment remains unsurveyed (see discussion later in this submission).

- The boundaries of designated nationally important wetlands are not clearly shown (as indicated in the key) on Fig 6.9 (6.3.4. Ecologically Sensitive Habitats).
- The EIS details some of the technical and engineering aspects of the project but contains limited information for aspects of the project that have a high potential for environmental impact. This lack of detailed information is most noticeable in the following areas:
 - Specifics with respect to the construction technique for each of the major rivers that will be crossed. For example it is not clear what problems are likely to be encountered at each of the crossings, and how the trench crossings will be stabilised. Technical investigations of sufficient detail are required so that the environmental impact of each specific river crossing can be assessed.
 - There is no specific information on the erosion potential of the soils that will be encountered on the route especially with respect to loss of organic matter, compaction and exposure of subsoils, all of which are likely consequences of construction.
 - No collation between slope, soil type, vegetative type and cover, climatic factors and inherent erosion characteristics of soil types.
 - There is no discussion, with respect to erosion, of not allowing deep rooted vegetation to be re-established on the pipeline corridor. Nor is there any discussion on the viability and localised environmental impact of solely shallow rooted vegetation communities given the extremes of the NT climate.

- No evidence is presented to demonstrate that the construction corridor can be adequately stabilised prior to each wet season, in order to prevent serious erosion with the potential to significantly degrade aquatic ecosystems.
- As mentioned, increased sedimentation in watercourses could affect sensitive habitats. There are plant communities that live in aquatic systems with a very small amount of dissolved solids so are prone to impacts of erosion. The aquatic plant, *Hanguana malayana*, was observed in the Habgood River exclusively. So why is Horizontal Directional Drilling (HDD) not being used for all watercourse crossings in order to minimise impacts on riparian vegetation and bank erosion? The EIS does not explain this. Is it simply a cost-cutting measure?

Traffic and Weeds

- There is no discussion of the use of private vehicles by people employed on the project. Consequently there is no mention of how the use of private vehicles will be controlled, whether these vehicles will be subject to the same wash-down and operating procedures as company vehicles, e.g. operating hours, right of access, rights to access locations outside of the pipeline corridor, speed limits, and recreational use.
- How many washdown pads will there be? The EIS just says it will be determined in consultation with DIPE (9.3.7. Weeds and Exotic Fauna).
- The waste contamination stream detailed in Table 5-13 does not detail how weeds washed from contaminated vehicles will be handled.
- Table 5-9 lists the expected number of truck movements per pipeline section. However, these figures have little meaning from an impact point of view unless they are compared with figures on current traffic volumes. The imposition of an 80km speed limit will have little effect if it is not enforceable or not policed. Who will monitor speed? An 80 km speed limit will not protect 'normal' road users from dust hazards or danger imposed by experiencing 'out of the ordinary' traffic conditions.
- There is no information regarding how 'normal' road users will be educated in areas where there is a significant increase in traffic volume.

Pests and Weeds

- Will the pipeline hasten the spread of cane toads, crazy ants and weeds? The Wingate Mountains and areas in NE Arnhem Land are mostly weed-free and it is vitally important that they should stay that way. The likelihood of introducing and spreading weeds is assessed in Table 9-10 as 'unlikely' with a medium residual risk level. Given the concerns we expressed earlier in this submission about traffic movements, we consider this weed risk assessment to be unsound.

- There is a possibility of introducing the dengue Mosquito and Asian Tiger Mosquito into new areas. Vegetated areas around construction camps will therefore be treated with bifenthrin. What are the impacts of this chemical treatment? (9.3.6 Biting Insects).

Fauna Capture

- There are no estimates given of likely numbers of fauna becoming entrapped in the trench or of how many of these animals will die. It is considered ‘inevitable that large numbers’ will fall in the trench as the pipeline trench could be open for four weeks in some instances (9.3.2 Fauna). Which animals, particularly which species of reptile, are most vulnerable and what sort of numbers are we looking at – hundreds, thousands or even tens of thousands of individuals? More detail is required before it can be assessed whether the listed mitigation measures are sufficient. Many Northern Australian mammal and reptile species are in decline already due to the threats of cane toads, other pests and fire. They may become even more vulnerable if they lose large numbers in the pipeline trench. Table 9-10 confirms that the residual risk of disturbance/injury and death to fauna, even after preventative measures are taken, is high.
- The only study on wildlife capture mentioned is Woinarski et al (2000), which was undertaken for a 74.2km section of the Daly Waters to Borrooloola gas pipeline. The researchers found 349 individual animals, mostly reptiles and mammals, in the trench at a rate of 4.7 per kilometre. Mortality rate was 11.1 percent, which is low compared to some other pipeline fauna capture studies where mortality rates have been recorded ranging from 25 to more than 50 percent. It is, however, hard to extrapolate fauna deaths that will result from the TTP directly from the Daly Waters to Borrooloola pipeline study as the trench was left open for a few days at most. It is noted that a study of the 792 kilometre Eastern Gas Pipeline from Longford in Victoria to Sydney, where there were daily surveys of the open trenches and escape ramps every 500 metres, resulted in a mortality rate of just 4 percent (Doody et al 2003). The chief cause of death was drowning, usually when the trench crossed saturated depressions in forested areas. But this still amounted to 224 dead animals, 29 of which were of two threatened mammal species.
- The TTP EIS does not specify at what intervals escape ramps will be placed, simply noting that they will be installed at ‘regular intervals’ (9.3.2 Fauna). Nor does it indicate how much of the trench will be left open at any one time. These preventative measures need to be made more explicit. Woinarski et al (2000) recommended escape ramps every 200-500 metres, whilst Doody et al (2003) recommended every 400-500 metres as long as there were also daily inspections in open trenches along the entire pipeline route.

The Port Hedland to Telfer Mine gas pipeline in the Pilbara region of Western Australia provides a cautionary tale for the TTP Builder Owner Operator and the NT Department of Infrastructure, Planning and Environment. Pipeline construction occurred during the wet season in early 2004 after the WA EPA had given approval for the pipeline construction company to leave 60 kilometre sections of the trench open for 10-15 days (this was after initially giving approval

for only 5 kilometres able to be left open for a week). Inspection teams were, however, inadequate for the task, escape ramps were too far apart (800 metres to 1 kilometre) and an east-west trench alignment saw temperatures in the bottom of the trench soar to around 50 degrees by 10 am. Fauna mortality rates were recorded at 57 percent in one week in February, with small reptiles (see Fig. 1) most badly affected (EPA Bulletin 1127, 18 March 2004; CALM *pers. comm*). A subsequent Ministerial directive required the builder of the pipeline to reduce the length of open trench to 30 kilometres. One or more of the companies involved, Newcrest, subsidiary McConnell Dowell and sub-contractor Gasnet, could also potentially face prosecution for breaches of environmental requirements. ECNT is very concerned that these important issues of detail are almost totally unaddressed in the TTP EIS.



Fig 1. Gecko mortality in the Telfer Pipeline Trench, WA
Photo courtesy of CALM, WA

Threatened Species

- There are threatened and vulnerable species on the pipeline route (Gouldian Finch, Wood Frog – recorded in fauna survey; Red Goshawk, Pig-nosed Turtle - both likely to occur; possibly Brush-tailed tree-rat, Northern Brush-tailed Phascogale and Northern Shrike-tit). The Freshwater sawfish, found in the Daly River, is particularly vulnerable to low dissolved oxygen levels as a result of increased sedimentation in rivers or chemical contamination (9.3.4 Flora and Fauna Species of Conservation Significance). Three migratory species under the EPBC Act were recorded during field surveys (Gouldian Finch, White-bellied sea-eagle, Rufous fantail). A further 11 are likely to occur in the project area, including saltwater and freshwater crocodiles. The known range of 26 near threatened species extends into the project area (6.3.2. Terrestrial Fauna and Habitats).

In ECNT's view there is a strong likelihood that one or more of these threatened or migratory species will be affected by a project of this magnitude. The unfortunate precedent set by the inadvertent clearing of Gouldian Finch habitat

during the construction of the Alice Springs to Darwin railway should give us pause. Monitoring and enforcement of mitigation and preventative measures will need to be highly rigorous if similar mistakes are to be averted.

For instance, what will be the impacts on Red Goshawk nests? The EIS states that nearby construction could result in failure of the nest. However, nests will be avoided where possible (and none were identified during field surveys). ECNT is concerned that there were only 36 survey sites across 6 locations along the pipeline route. There could well be more nests than the proponents anticipate and more comprehensive surveys need to take place.

Aquatic fauna

- The EIS states that the Katherine and the Daly Rivers were not surveyed because the aquatic fauna in these rivers is well known (6.3.3. Aquatic Environments). ECNT thinks otherwise and would advise the proponents to consider the knowledge gaps listed in the Draft Daly Region Community Reference Group Report. There it is stated that the information base ranges from ‘adequate to poor’ for the Daly Basin Bioregion. Current knowledge of macroinvertebrate taxa, for instance, is mostly confined to one survey in the lower Daly River.
- Fish deaths are likely with any water contamination as it will probably occur in the dry season when contaminants are more difficult to assimilate (9.3.3 Aquatic Ecosystems). What scale might this occur on?
- The estimated use of Daly surface water in 2020 is given as 102,770 ML/Year! (6.2.9. Surface Water). What is this outrageous figure based on given that current licensed extraction (including from tributaries such as the Katherine and Douglas) is under 8000 ML/Year?

Native vegetation clearing

- 2,827 ha is to be cleared for the pipeline corridor and above ground facilities. 42 ha will be cleared temporarily for construction camps. However there is no estimate of clearing for access tracks or borrow pits (9.3.1. Vegetation and Flora). One threatened plant species (*pternandra coerulea*) possibly occurs in the TTP corridor (but was not found during field surveys). It will also be left up to the, as yet unknown, BOO Consortium to conduct the final land survey to select a 30m wide construction corridor within the 100m temporary pipeline corridor (pES9).

Soils

- The risk of Acid Sulphate Soils in 10 wetland areas was only partially assessed (6.2.6. Acid Sulphate Soils). Only desktop studies were carried out (9.2.4. Acid Sulphate Soils).

- Aside from the use of Horizontal Directional Drilling on major river crossings, a further 12 crossings and six broad drainage floors are likely to have water or saturated soils present at the time of construction and therefore dewatering will be required (see Appendix F, Vol 2, Table 9). There are 25 crossings where perennial waterbodies are present (9.2.5. Hydrological Regimes and Water Quality). As we pointed out earlier in this submission, what will happen if rehabilitation of crossings and wetlands is not finished by the time the wet season arrives, thereby exacerbating the incidence of erosion? The impacts of this potential occurrence need to be more clearly spelt out.

Waste, Chemicals and Spills

- Hydrotest chemicals or their concentrations have not yet been determined. Nor have the discharge locations, discharge rates or the source of water used (9.4.2. Non-Hazardous Liquid Waste). It is not adequate to simply say that a Hydrotest Management Plan will be developed at a later date.
- The EIS does not even identify which existing landfills have enough existing capacity to take non-hazardous waste. We are told that it may also be necessary to construct a small temporary waste disposal site near the construction camps and that on-site burial of putrescible waste may be required in some instances (9.4.1. Non-Hazardous Solid Waste). This is all far too vague and completely unacceptable.
- With regards to hazardous waste we are told that: ‘The volume of waste will be variable and can not be quantified’ (9.4.3. Hazardous Solid and Liquid Waste). No EIS should be approved on such a flimsy basis as this. The EIS also says: ‘Options for the disposal of hazardous waste, that are not accepted at a licensed waste management facility, include using the services of a private waste disposal company’. What are the other options being considered? The ‘detailed information’ on dangerous goods supposedly provided in 5.5.13 is also seriously deficient.
- Chemical and hydrocarbon spills will be addressed in a Waste Management and Spill Contingency Plan (9.4.4. Chemical and Hydrocarbon Spills). The subsequent plan format laid out in Table 12-19 Spill Contingency Plan is lacking sufficient detail.

Miscellaneous

- No Fire Management Plan is in place as yet (9.3.8. Bushfire).
- There are no estimates of life cycle greenhouse emissions of the pipeline and associated projects (9.4.5.2. Greenhouse Gases). The Alcan Refinery Expansion EIS tells us that life-cycle emissions of 2.2 Megatonnes per annum will result from the supply of gas to the refinery. This should be included in the TTP EIS.

- No consideration is given to the noise impacts of construction and traffic movements on wildlife e.g. Gouldian Finch habitat (9.5. Noise). Yet the Maximum Sound Power levels during construction will be mostly 117 or 120 dB (5.9.4. Noise).
- Blasting is likely to be required near Wadeye, in the Mitchell Ranges and in other yet to be identified sites. There is no assessment of the impacts on people and wildlife in these areas (9.6. Vibration and Blasting).
- The TTP doesn't directly impinge on any National Parks, reserves or conservation areas apart from the Dhimurru IPA and the proposed Laynhapuy IPA (pES12). But there is a possibility that it could compromise the environmental values of future park proposals and other high conservation areas as outlined in the Draft Parks and Conservation Masterplan and the Draft Conservation Plan for the Daly River Nature Park as outlined in the Draft Conservation Plan for the Daly Region. These impacts should be considered.
- It is totally incorrect for the proponents to state that the project will have “a negligible effect on wilderness values...” (10.4. Wilderness areas). Areas have a high wilderness value due to the lack of obvious intrusion from modern development as set out in Section 7.4. The pipeline route will be kept devoid of deep rooted vegetation and will together with the access tracks cause a permanent scar on the landscape. Consequently the establishment of the pipeline will bring about 2 of the 3 disturbance indicators listed on page 7-16 namely:
 - Remoteness from access – remoteness from established access routes
 - Apparent naturalness – the degree to which the landscape is free from the presence of permanent structures associated with modern technological society.

Social and Cultural Impacts

- There remains unsurveyed areas through the Mitchell Ranges near Donydji and from Annie Creek to Goyder River. There is therefore little discussion of the ecological or archaeological and cultural significance of these areas.

The EIS assumes access will eventually be granted to the 40km unsurveyed area through the Mitchell Ranges (pES10). It also assumes that environmental issues will be similar in this area. All we do know from Section 6.4. (Gaps in Information) is that the Route traverses a seasonal creek line and numerous ephemeral drainage lines, a few small patches of rainforest have been identified in the sandstone hills and that there is a high potential for the presence of archaeological sites in both unsurveyed areas.

We also know, however, that the unsurveyed area through the Mitchell Ranges is part of the Arafura Wetlands and Surrounds, which is listed on the Register of the National Estate for its Indigenous Values (Fig 7.5.). According to the EIS: ‘This registration has the effect of requiring Australian Government Ministers to seek to protect these values in the exercise of their authority’ (7.7.2. Species with

Indigenous Cultural Values, p7-30). Yet this raises the question of how Ministers can possibly do this when a clan group in this area is so clearly opposed to the pipeline. ECNT believes they can not. The Indigenous values of the Arafura Wetlands and Surrounds will be undermined if the pipeline is pushed through this area contrary to the stated opposition of Traditional Owners.

The EIS Social Impact Assessment, conducted by ImpaxSIA Consulting, makes the following statement with regards to this TO opposition:

'In the TTP East region there was a small number of Traditional Owners and people with customary responsibilities for Country affected by the proposed pipeline who expressed strong opposition to the proposed TTP Project. Their present opposition stems from their beliefs that their land should not be disturbed and from their concerns about potential damage to sacred sites and significant areas. Memories of the fatal helicopter crash that occurred in the East region during survey work for the proposed Mataranka to Gove gas pipeline, remain strong in the minds of those who currently oppose the TTP Project and appears to have reinforced their opposition to the Project and the validity of their customary beliefs. This Group expressed the need to consult more widely with senior lawmakers before they could develop a final position on the Project. A small number of Indigenous informants expressed the belief that it didn't matter what they thought since the Project would proceed regardless'.

This is really all that is written in the whole EIS about issues surrounding the lack of access to the area near Donydji. There is nothing specifically about the concerns that the people there have with the negotiation and consent processes that have occurred. It downplays the level of opposition by saying that it originates from 'a small number' of TOs and that they haven't come to a final decision yet. Nor is there any discussion of the consequences for the project should the clan group continue to say 'No'. ECNT is also aware that serious questions are currently being raised about whether particular provisions of the Aboriginal Land Rights Act, which require the Northern Land Council to get informed consent from TOs as a group, are being adequately followed.

ECNT also notes that blasting will be required on the current route through the Mitchell Ranges between KP770 and KP790 (5.5.9. Construction Methodology). Part of this area identified for blasting activity is unsurveyed and also lies in the Arafura Wetlands and Surrounds nationally listed site. Again we ask whether the Indigenous Values of this area can be protected if the pipeline is pushed through regardless of TO opposition. ECNT also is of the view that insufficient detail is provided about possible alternative routes through the Mitchell Ranges.

There is no discussion in the EIS of the fact that there are unsurveyed areas that hold high Indigenous values and archaeological and art sites of great significance (10.6. Archaeology and Historic Heritage). The research of anthropologist Neville White – see the entry for 'Arafura Wetlands and Surrounds' on the Australian Heritage database <http://www.deh.gov.au/cgi-bin/ahdb/search.pl> - has highlighted the importance of maintaining traditional land management and cultural practices by Aboriginal people in the area. As the Statement of Significance on the Australian Heritage Database says: 'The continuing management of Arafura

Wetlands and Surrounds by Yolngu people in an area comparatively undisturbed by introduced animals and plants, or outside economic interests, provides an important insight into the history of the human occupation of Australia’.

The EIS also appears to have completely ignored one of the most important aspects of the Social Impact Assessment (SIA) report presented in Appendix N Volume 2. The SIA found that individual Traditional Owner groups have only a limited understanding of the project and strongly recommended that one-on-one consultations with each of the Traditional Owner groups would be required. It also stated that it was important to ensure that the people who had the right to speak for the land covered by the route must be present. However on page 11-7, Stage 2 of the Social Impact Management planning is only contemplating workshops in Katherine and Nhulunbuy. There is insufficient detail on how ongoing consultation will be held with landholders.

- The EIS purports in Appendix M Volume 2 to have made an assessment of species with Indigenous conservation values and related environmental cultural values. However Appendix M is only an outline of a methodology. Consequently the EIS presents no information on the environmental impact of the pipeline from the perspective of Indigenous people. Given the extent to which the pipeline encroaches on Aboriginal land and the extent to which its construction may affect Native Title, this is a serious deficiency in the EIS.
- It is noted that Phase 2 of the Aboriginal Environmental Cultural Values assessment will be undertaken in 2005. The main mechanism will be the Cultural Heritage Management Plan. ECNT argues that pipeline construction should not be approved until this is in place for all affected groups. Construction of the Jabiluka mine was effectively halted in 1999 due to the Commonwealth insistence that there be a Cultural Heritage Management Plan in place. The cultural concerns of traditional owners are equally valid here.
- The EIS text purports that the SIA Consultants conducted interviews with a vast range of organisations, including ECNT (11.3. Methodology Adopted – Phase 1). Our organisation, for one, has no knowledge of such an interview on SIA matters. We attended a general briefing on the TTP and Blacktip projects by Alcan and Woodside representatives, but this was not an SIA consultation.
- There is no explanation in section 10-5 on what constitutes “controlled recreation”. Who will control it? Who will it be made available to? What areas will it access? Why is the concept of controlled recreation not discussed in the section dealing with workforce management?

Environmental Management Plans

- The constant referral to management plans that will be produced at a later date is totally unacceptable. The so-called framework documents in Section 12 are by-and-large a reiteration of the points made earlier in the corresponding sections. Yet Section 10 constantly refers to Section 12 in an attempt to make it appear that detailed management plans have been developed. They have not.

- The management frameworks do not adequately address how specific environmental impacts will be dealt with. Additionally the frameworks do not identify what level of ongoing responsibility the operators will have for maintaining the environment of the pipeline corridor. For example 12-12 states that infestation of weeds will be reported to the statutory authority but contains no information on the role of the operators in the management of the infestation. A similar deficiency occurs in table 12-15 with respect to erosion and sediment control.
- The frameworks should clearly indicate the ongoing responsibility of the operators to maintain environmental health of the pipeline until such time as the corridor has been returned to its pre-construction condition.
- The Final EIS Guidelines (5.3. Environmental Management Plan) clearly stipulate that : ‘The EMP commitments should include clear timelines for key commitments, especially in relation to stabilisation and rehabilitation of the corridor and other disturbed areas’ (p14). Neither Table 12-13 (Framework Rehabilitation Management Plan) nor Table 12-15 (Framework Erosion and Sediment Control Management Plan) does this. Instead Table 12-13 says that a site specific strategy will be developed which will include a rehabilitation timetable. This is undoubtedly a contravention of the EIS guidelines. Given that erosion is acknowledged to be a high residual risk in the EIS (see Table 9-10) it is inexcusable that the Framework Management Plans are so non-specific.
- The Guidelines also say that a Social Impact Management Plan should be included in the EIS (p11). Table 12-18 is not an SIMP. It is a framework for an SIMP, that is all.

Summary

It would be indefensible for the NT Government to approve this project on the basis of the current EIS. There are too many outstanding issues that remain substantially unaddressed. In particular there is a high risk, in ECNT’s opinion, that the pipeline route could end up as a weed infested erosion gully. The EIS does not give a full and accurate account of the environmental or social impacts of the proposed pipeline. In our view this full and accurate account can only be achieved through a higher level strategic review of the combined impacts of Blacktip, TTP and the Alcan Refinery expansion. We therefore recommend that the current assessment process be suspended pending preparation of a strategic review, and pending the compilation of all the information absent from this TTP EIS.

References

Doody, S. et al 2003. Fauna by-catch in pipeline trenches: conservation, animal ethics, and current practices in Australia. *Australian Zoologist*, Vol 32 (3), p410-419.

Woinarski, J. et al 2000. A different fauna?: captures of vertebrates in a pipeline trench, compared with conventional survey techniques; and a consideration of mortality patterns in a pipeline trench. *Australian Zoologist*, Vol. 31 (3), p421-431.

Appendix 1

Examples of the Cumulative Impacts of the TTP, Blacktip and Alcan Refinery Expansion Projects

	TTP	Blacktip	Alcan Refinery
Greenhouse Emissions	13,300 – 14500 tonnes per annum (plus 24,800 tonnes during construction)	90,000 tonnes per annum. Blacktip EIS notes life cycle emissions of 4.5 MT per annum (incl. condensate export)	595,000 tonnes per annum increase
Water Use	145,000 litres per day during construction. 33,175 cubic metres for hydrotesting	6000 cubic metres of hydrotest water. Otherwise insufficient information is provided in the EIS.	25% increase in water consumption
Waste	12 tonnes per week of non-hazardous solid waste during construction. Most to go to landfills (e.g. Wadeye, Nhulunbuy) if capacity sufficient. Hazardous waste will probably go to Nhulunbuy and Katherine Transfer Stations.	7800 bpd of produced water discharged to sea. 5764 cu m of mud and 689 cu m of drill cuttings onto seafloor. Non-hazardous solid waste to Wadeye landfill if capacity sufficient.	1,017,000 tonnes pa of red mud waste. Vanadium and other metals in water discharges to Melville Bay. Increased pressure on Nhulunbuy landfill.
Native Vegetation Clearing	2827 hecatres. Potential impacts on riparian zones.	74 hectares	Clearing is likely to occur in the future as additional residue storage areas will be needed outside existing lease area
Threatened Species potentially affected	Gouldian Finch, Wood Frog, Red Goshawk, Pig-nosed turtle	False Water Rat, Olive Ridley Turtle	Marine turtles