Appendix M

Protecting Environmental Cultural Values
During The Trans Territory Pipeline Project
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PROTECTING ABORIGINAL ENVIRONMENTAL CULTURAL VALUES DURING THE TRANS TERRITORY PIPELINE PROJECT

Phase 1 - Methodology

Developing a methodology for the assessment and protection of Aboriginal cultural values in environments potentially impacted by the proposed Trans Territory Pipeline

Prepared for Alcan Engineering

By Smyth and Bahrdt Consultants

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1 INTRODUCTION

1.1 Scope of this report

This report sets out a broad methodology for considering the impact of the Trans Territory Pipeline (TTP) on cultural values held by Aboriginal people with respect to environments potentially impacted by the construction and operation of the pipeline. This methodology will be subject to further development in consultations with key Indigenous organisations, Aboriginal Traditional Owners, the broader Aboriginal community, and technical experts. Application of the methodology will be aimed at protecting environmental cultural values in collaboration with Traditional Owners in the event that the pipeline project proceeds, particularly through the development and implementation of Cultural Heritage Management Plans.

This report therefore comprises the first of two phases in the development and application of a methodology to protect Aboriginal environmental cultural values potentially impacted by the TTP project:

> **Phase 1:** Development of a broad methodology for the assessment and protection of Aboriginal cultural values associated with environments potentially impacted by the TTP project;
>
> **Phase 2:** Consultation with Traditional Owners, the broader Aboriginal community and technical experts, as well as a review of relevant literature, to assess Aboriginal environmental cultural values potentially impacted by the TTP project, leading to the development and implementation of measures to protect these values through Cultural Heritage Management Plans.

1.2 Summary of the TTP proposal

The proponents, Alcan Gove Pty Ltd and the Blacktip Joint Venture (Woodside Energy Ltd and ENI Australia), propose to construct an underground gas pipeline from just south of Wadeye on the west coast of the Northern Territory to Alcan's bauxite mine and alumina refinery located near Nhulunbuy on the coast of north-east Arnhemland (see Figure 1). For a further description of construction and operation of the pipeline see Appendix 1.

The proposed TTP Project is linked to the proposed Blacktip Project, which will process the gas at the western end of the pipeline to prepare it for transport along the pipeline to Nhulunbuy.

The Blacktip Project is subject to separate approval processes for which separate Environmental and Social Impact Statements have been prepared. Smyth and Bahrdt Consultants prepared a report on the assessment of environmental cultural values at Wadeye, which forms part of the EIS for the Blacktip project proposal (Smyth and Bahrdt Consultants 2004).

1.3 Meeting Environmental Impact Assessment (EIS) Guidelines

EIS Guidelines set by the Australian and Northern Territory governments require the proponents to undertake a range of assessment studies, including baseline descriptions and assessments of the potential impact of the proposal on the biophysical and social environments along the length of the proposed pipeline. Several sections of the EIS guidelines specifically address the need to assess the potential impact of the proposal on various aspects of the relationship between Indigenous peoples and the environment through which the pipeline will pass. Taken together these aspects constitute a suite of environmental cultural values held by each Aboriginal group in relation to their own traditional Country and its resources. Relevant sections of the EIS and the associated environmental cultural values are summarised in Table 1.

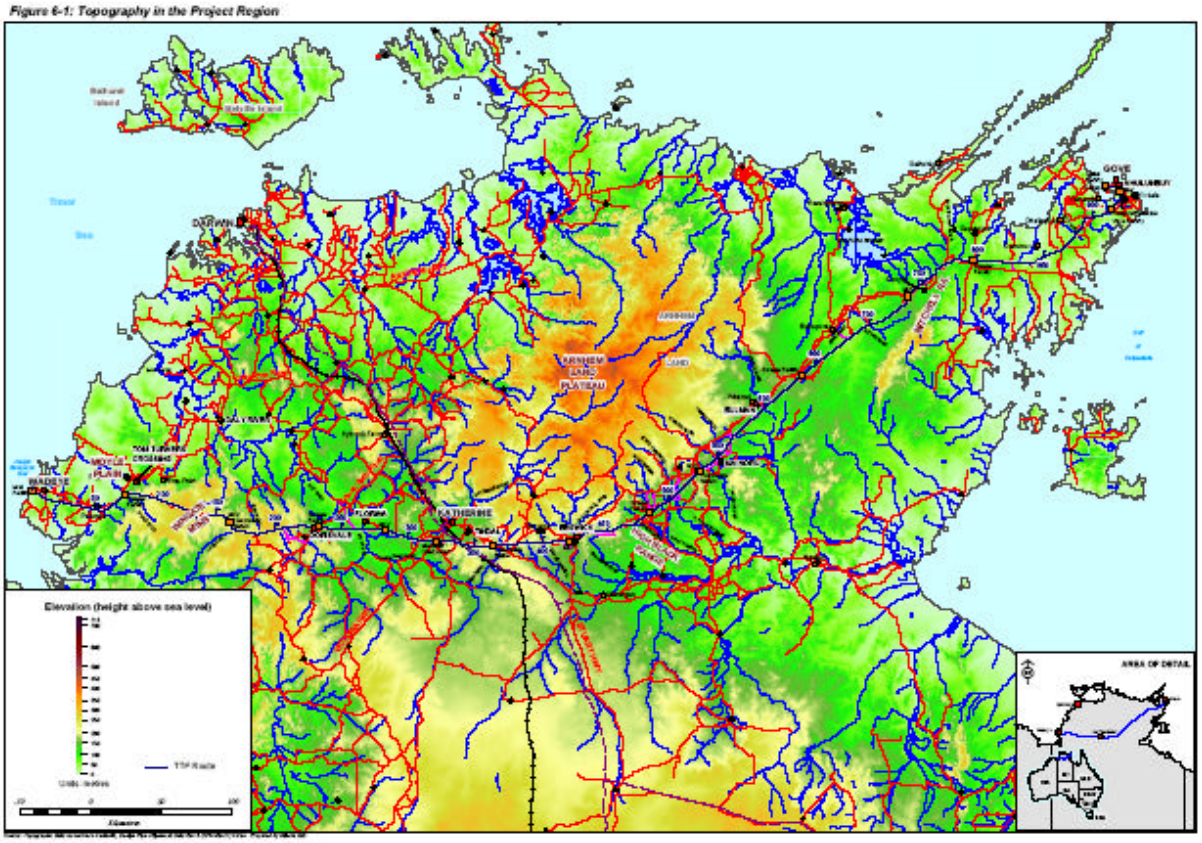

Figure 1: Map of Northern Territory Top End showing the proposed route of the Trans Territory Pipeline

EIS Guidelines	Assessment of Environmental Cultural Values
Section 1.1	*Identification of areas of environmental and conservation values to Indigenous people*
Section 5.1	*Sites and species of special conservation status should be identified and described (e.g. RAMSAR wetlands; endangered, protected or migratory species; areas or artefacts with significant environmental and conservation values to indigenous people*
Section 5.4.2	*Indigenous and non-indigenous places of historic or contemporary cultural heritage significance in areas affected by the proposal should be identified.* *Identification of areas with special values to indigenous and non-indigenous people (e.g. traditional land use, landscape, visual environment, recreational, commercial, tourism, fisheries, scientific, educational, marine archaeological sites)*
Section 6.11	*The identification of indigenous cultural heritage impacts is to take place in consultation with relevant indigenous groups. This should assess the Project's effects on lifestyles, traditional fishing practices, heritage places, the impact of increased visitation and the effects on indigenous culture generally. Impacts on the traditional gathering and hunting grounds in the area for Aboriginal groups. All groups should be consulted in relation to the traditional subsistence economy, their natural resource use, and Native Title interests.* *The development of Environmental Management Plans and monitoring and reporting strategies also need to be negotiated with and agreed by the relevant indigenous people with an interest in this project. Environmental Management Plans should reference Cultural Heritage Management Plans (CHMPs) negotiated and agreed with by the relevant indigenous people and relevant agencies.* *CHMPs should include direct involvement of indigenous people in the development and implementation and ongoing protection and management of cultural values; maximise involvement in management strategies and enable proponents to meet duty of care to protect Aboriginal cultural values.*

Table 1: Summary of key sections of EIS Guidelines referring assessment of Indigenous environmental cultural values

2 DEVELOPING A METHODOLOGY

2.1 Criteria for a methodology

Based on experience gained in the Blacktip environmental cultural assessment process, previous experience in documenting Indigenous environmental cultural values (e.g. Smyth 2002), discussions with other researchers in related fields and discussions with Indigenous and non-Indigenous staff of Aboriginal land management agencies in the Northern Territory, criteria for the development of an appropriate methodology for describing Indigenous environmental cultural values along the proposed pipeline route have been developed. These criteria and the implications for the methodology are summarised in Table 2.

Criteria	Implications	Requirements
Recognition of Country as a cultural landscape	Holistic and integrative approach to all natural and cultural values	Complement existing information from other components of EIS and SIA reports and other published and unpublished sources, taking into account broad, landscape scale values
Recognition that each Traditional Owner group has values, knowledge, rights and obligations to their own clan estates and other specific areas through cultural obligations	Assessment of environmental cultural values must be undertaken at the appropriate local scale	Provide appropriate opportunities (e.g. adequate time and resources for consultation and decision-making) for each Traditional Owner group to engage with the assessment, planning and management processes
Recognition that the broader Aboriginal community (e.g. Aboriginal residents of larger communities) have an interest in their local environments whether or not they are Traditional Owners of those environments	While respecting the prime authority of Traditional Owners to speak for Country, the interests and values of other local Aboriginal people need to be considered	In collaboration with Traditional Owner groups, provide opportunities for the wider Aboriginal community to convey interests and concerns (e.g. about impacts on hunting and gathering areas, water sources, cultural resources etc.)
Recognition that impacts on environmental cultural values will depend on the specifics of the environmental disturbance caused by particular projects	Consider the environmental cultural implications of specific aspects of the construction and operation of the proposed pipeline	Ensure that Traditional Owners and others are fully informed about each stage of construction and operation of the pipeline, and the process of rehabilitation of the pipeline corridor after construction
Recognition that cultural values associated with Country (traditional knowledge, resource use practices, totemic relationships, transfer of knowledge between generations etc.) can be impacted through changed land use and associated social changes	Assess status of environmental cultural values, and develop measures to protect those values	Provide Traditional Owner groups with the opportunity be involved in the preparation and implementation of measures aimed at the protection of these values.

Table 2: Criteria for developing a methodology for assessing Indigenous environmental cultural values associated with the proposed TTP project

Each of the criteria, implications and requirements listed in Table 2 are discussed further below.

2.2 Country as a cultural landscape

For its entire length, the pipeline will traverse Aboriginal *Country,* which is an Aboriginal English word used to describe an area of land and/or sea to which a particular Aboriginal group is associated. However, *Country* refers to more than just a geographical area:

> *It is shorthand for all the values, places, resources, stories and cultural obligations associated with that geographical area* (Smyth 1994)

More recently in environmental management jargon, *Country* is referred to as a *cultural landscape*, meaning a landscape (or seascape) to which human values have been added. Originally (e.g. Sauer 1963) the term was used to describe landscapes that have been physically modified through the construction of farms, mines, towns etc. In Australia, the term *cultural landscape* now also applies to landscapes with which Aboriginal societies have been long associated, whether or not there is physical evidence of their presence.

Baker (1999) stresses the importance of recognising that a cultural landscape is the outcome of the sum of attitudes and perceptions of a landscape of those living in it, and that it is essential that these non-material aspects of culture be incorporated into a model of the cultural landscape. Williams (1986) notes that for the Yolngu of north-eastern Arnhemland the term *Country* is also appropriate for its political connotations.

Nationally and internationally cultural landscapes are increasingly recognised as a way of describing the significance of areas of land or sea, over and above their biodiversity, scenic, geological or other values. In 1994, for example, Uluru Kata-Tjuta National Park was registered as a World Heritage Site for its cultural landscape values, in addition to its earlier registration as a World Heritage Site for its geological values (Dept of Environment and Heritage 2004).

The term *cultural landscape* has been formally applied to an area of approximately 900 square kilometres in northeast Arnhemland through which the proposed route of the pipeline would pass. Known as “The Arafura Wetlands and Surrounds” (see Figure 2), this area was registered as a cultural landscape on the Register of the National Estates in 2001. An extract from the Register of the National Estate (Box 1) provides an indication of the natural and cultural values that combine to create cultural landscapes.

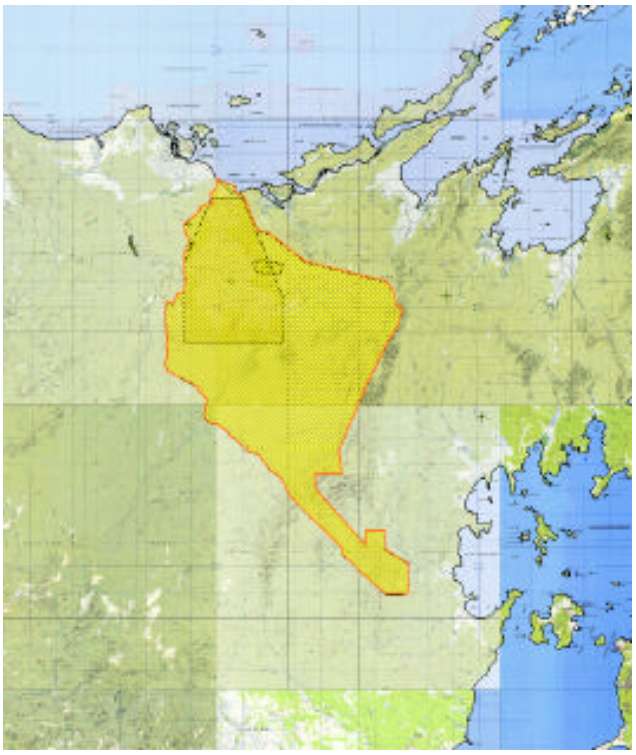

Figure 2: Location of the Arafura and Surrounds Indigenous Cultural Landscape (shaded yellow), registered on the Register of the National Estate. The two smaller areas indicated by black broken lines are the Arafura Swamp and the Arafura Jungle, registered on the Register of the National Estate for their natural values. (Source: Dept of Environment and Heritage, Canberra)

The documentation of Aboriginal values associated with the Arafura Wetlands and Surrounds occurred over a period of more than 20 years and remains incomplete, which is an indication of the scale of the task to assess Indigenous environmental cultural values along the entire length of the pipeline. A significant challenge in developing a methodology, therefore, is to attempt to do justice to this complexity while providing a timely decision-making tool to assist Traditional Owners and others to consider potential impacts of the proposed pipeline on environmental cultural values.

This challenge can be met in part by utilising existing expertise and information on natural and cultural values along the mosaic of cultural landscapes through which the pipeline will pass. Guidance will be sought from relevant Indigenous organisations and technical experts (e.g. anthropologists, ethnobiologists, and Indigenous land managers) regarding the scope of environmental cultural values to be assessed, prior to consultations with Traditional Owners.

The assessment process should also acknowledge that Aboriginal values of Country have incorporated social changes over time, resulting from interactions with other cultures, participation in pastoral, mining and other industries, and environmental changes, such as the introduction of buffalo, horse, pigs and other “feral” animals.

Box 1: Extract from Statement of cultural landscape significance of the Arafura Wetlands and Surrounds (Dept of Environment and Heritage 2004b)

The Arafura Wetlands and Surrounds is a cultural landscape defined and maintained by principally Djinang, Djinba, Ganhalpuyngu, Mandhalpuyngu, Ritharrngu, Wagilak and some Rembarrnga speaking Yolgnu people. There are a number of other groups such as the Gupapuyngu and Djambarrpuyngu who have had, and continue to have, strong links to the swamp families and as such are part of the cultural landscape. More distant groups have connections centred on religious sites called ringgitj. The Arafura wetlands and surrounds cultural landscape is the product of Yolngu interaction with their environment over time……..

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. It is also possible to observe the complex interaction between Yolngu culture and the natural environment, which archaeological evidence suggests began many generations ago. Many Yolngu people continue to use traditional hunting and foraging strategies to exploit and manage the natural resources of the place, and the area is one of very few tropical wetlands in Australia still managed by Aboriginal people using traditional land management practices, including formal burning regimes.

Over 700 sites of cultural significance to Yolngu have been recorded in the listed area so far. These include campsites, artefact scatters, quarry sites, rock art sites, fish traps, earth and shell mounds and stone arrangements, religious and named places. The named places significant to Yolngu are often topographical features, with no evidence of physical modification, but with religious and ritual meaning, much of which is known only by senior men. These sites form a network in which the movements of ancestral spirits through the landscape link places together in lines of travel. The network both validates in large part the boundaries of the listed area, and demonstrates the strong religious, social and economic links between the people of the wetlands and those of the catchment area.

Places with religious and spiritual connotations are highly significant places for the Yolngu. Ngilipitji, for instance, an important stone quarry which provided Yolngu clans with high quality stone for the manufacture of spear points, lies within the boundaries of the listed place, and is part of a complex of sites of great spiritual significance.

Many Yolngu value the diverse rock art and stone arrangements found in the listed place for their aesthetic qualities. The landscape as a whole also has aesthetic value for Yolngu and is frequently portrayed in Yolngu works of art and material culture. Examples of these works are housed in major museums and art galleries in Australia and overseas. These pieces are a concrete expression of the significance of the Country to traditional owners.

The continued use of traditional land management practices means that the listed place provides a rare opportunity to examine the long term impact of Yolgnu land management on this area of tropical wetland, its catchment and its animals and plants. Research into the practice of regular low level burning, and its effect on local flora and fauna over time, is of particular interest to land management agencies, who hope to gain insights into the proper management of Australia's fragile environment.

Sources of available information on environmental cultural values will include::

- Reports prepared for the EIS and SIA for TTP and Blacktip;
- Ethnobiology publications and reports (e.g. Raymond et al 1999, Nambatu et al 2004, Scarlett et al 1982 and others);
- Academic literature in the fields of anthropology, linguistics, cultural ecology etc.;
- Unpublished "grey literature" held by Indigenous land management agencies, government departments, researchers and other organisations and individuals.

2.3 Traditional Owners and Clan Estates

The association of particular groups of people to particular areas of Country is culturally complex (see for example Williams 1986). However, it is to be expected that for every portion of the proposed pipeline route there are Traditional Owners (and possibly others with cultural obligations) who have the traditional authority to make decisions about access to and use of the resources of that area. Based on Horton's language/tribal map of Australia (Horton 1994) it is likely that the pipeline will pass through at least ten language areas (each with several dialects) and each comprising many clan estates, to which separate Traditional Owner groups are affiliated.

While the NLC and Aboriginal Land Trusts are responsible for identifying appropriate Traditional Owners to be involved in to the assessment and management of environmental cultural values, it can be anticipated that engagement with people at all of the locations visited during the SIA research may be required, namely:

- Kybrook Farm
- Kalano
- Rockhole
- Katherine
- Darwin/Palmerston
- Nauiyu (Daly River)
- Beswick
- Barunga
- Bulman
- Weemol
- Mt Catt Outstation
- Manyalluluk
- Binjarri
- Emu Point Outstation
- Peppimenarti
- Palumpa
- Wadeye
- Nhulunbuy
- Yirrakala/Beach Camp
- Gapuwiyak
- Dhalinbuy Outstation

- Mata Mata Outstation
- Bran Bran Outstation
- Ngukurr

Matters that will guide the engagement process with Traditional Owners include:

- The statutory roles of the NLC with respect to their responsibilities to Traditional Owners and Aboriginal Land under the *Aboriginal Land Rights (N.T.) Act 1976 (Cwlth)*;

- Protocols regarding the involvement of local Indigenous organisations, such as Indigenous land management agencies;

- Decisions of Traditional Owners about their level of engagement: some may wish to engage in on-ground consultations, others may choose not to engage, while others may decide that sufficient information has been provided through earlier consultation processes for the SIA and/or the on-ground identification of the pipeline route.

2.4 Involving the broader Aboriginal community

While the main effort of the assessment process should focus on Traditional Owner groups associated with Country through which the pipeline passes, the involvement of the broader Aboriginal community located at the larger settlements and towns along the route will contribute to transparency of process and enable them to consider issues of importance to them relating to environmental cultural values.

Community governance organisations, resource centres, ranger programs and Indigenous land management agencies can assist with the engagement of the broader Aboriginal community and may contribute to research, monitoring and management projects for the protection environmental cultural values. These organisations include:

- Thamarrurr Rangers
- Thamarrurr Regional Council
- Murin Association (Murin Air & Murin Outstation Resource Centre)
- Kanamkek-Yile-Ngala Museum
- Wadeye Aboriginal Language Centre
- Wadeye Library/Knowledge Centre
- Kardu Dari Kardu Family Centre
- Dirrmu Ngakumarl Art Gallery
- Nganmarriyanga Community Inc
- Barunga Manyallaluk Community Government
- Beswick Community Government
- Mardrulk Resource Centre
- Gulin Gulin Community Government Council

- Binjari Community Government Council
- Kalano Community Association
- Katherine Town Council
- Jawoyn Association Aboriginal Corporation
- Nyirranggulung Mardrulk Ngadberre Regional Council
- Wardaman Association
- Mardrulk Resource Centre
- Nauiyu Nambiyu Community Government Council
- Gapuwiyak Community Government Council
- Dhimurru Land Management Aboriginal Corporation
- Yirrkala Dhanbul Council
- Mangarr Community Government Council
- Land and Sea Management Branch, Northern Land Council

2.5 Considering specific aspects of the pipeline project

Management measures to protect environmental cultural values should take into account the specific features of the construction and operation of the underground pipeline. These features include:

- Clearing of a corridor of up to 30 metres wide for a distance of approximately 950km;
- Excavating the pipeline trench, laying the pipeline and refilling the trench;
- Transport of machinery, material and personnel;
- Construction and operation of construction camps;
- Rehabilitation of the pipeline corridor after construction;

Further details of specific construction and operation activities are provided in Appendix 1. Potential impact on environmental cultural values is likely to be greatest during the construction phase. Rehabilitation will aim to restore the existing native vegetation along the pipeline corridor, with the exception that large trees will be prevented from regrowing above the pipeline.

2.6 Supporting environmental cultural values

Because of the pervasive relationship between Aboriginal societies and their local environments, environmental values relate to all aspects of Aboriginal culture. Individual plant and animal species, ecological communities, rivers, waterholes, mountain ranges, sea currents, celestial bodies and many other features of the environment are all part of Aboriginal mythology, kinship systems, creation stories, social organisation, resource use, ceremonial life, land management, local histories and personal life stories etc. within each Traditional Owner group.

The proposed pipeline route will therefore pass through and disturb environments to which a vast array of values, knowledge, practices and belief are attached. An indication of the scope of uses and other values attached to animals and plants within the pipeline corridor are shown in Tables 3 and 4, based on information prepared for the Blacktip EIS, but applicable generally to Aboriginal Country across the Top End.

Category	Attribute and uses
Food	Fruit flesh Pith / shoots Fruit seeds Tuber Nectar and sap Water source
Plant and animal associations	Edible animals associated with specific plants Food for animals Calendar plants (indicating seasonality or species availability)
Implements	Clap-sticks and didgeridoos Digging sticks and fighting sticks Fire carriers and fire sticks Spears and throwing sticks Tools Water craft (dugout and bark canoes) Woomeras
Material culture	Carrying baskets and water carriers Caulking compounds (for repairing leaks) Dyes Fibres Fish poisons Glues Harmful / poisonous Insect repellent Ornament / decoration Sandpaper Shelter / bedding Smoking pipes and tobacco Toys Drinking cups and straws Stone axe handles
Medicines	Respiratory ailments Skin ailments Headaches Others
Other uses	Firewood and kindling Wrapping food for cooking Ceremonies Shade

Table 3: Some attributes and uses of Aboriginal knowledge of plants
Based on information from Nambatu et al (2004) and consultations with Yak Maninh and Yak Dimininh Traditional Owners for the Blacktip EIS.

Category	Attribute / Uses
Food	Flesh of mammals, birds. Fish, reptiles, amphibians Eggs or birds and reptiles Marine and terrestrial invertebrates Bait
Spiritual	Many species are totems for particular people and groups Dreaming sites associated with particular species Particular species of spiritual importance to men Particular species of spiritual importance to women Particular species feature in creation stories
Clothing and decoration	Feathers Shells
Medicine	Some species have medicinal properties
Calendar species	Some species indicate seasonal changes and availability of particular plant foods
Other uses	Water carriers Smoking pipes Lead people to water Look after Country

Table 4: Some attributes and uses of Aboriginal knowledge of animals
Based on information from Nambatu (2004) and consultations with Yak Maninh and Yak Dimininh Traditional Owners for the Blacktip EIS.

Aboriginal languages and knowledge systems categorize species, habitats, ecological communities and the resources they contain in ways equivalent to, but different from, Western scientific classifications. Aboriginal environmental knowledge also contains a complex system of ecological and cultural indicators that are linked to environmental features (such as the flowering of particular species indicating the appropriate time for hunting or collecting another species). All these language and knowledge systems contribute to the cultural "software" that belongs to both the people and the environments through which the pipeline will pass.

While Aboriginal languages, culture and traditional environmental knowledge remain strong across the Top End, many of the environmental cultural values can be considered under threat because they are held by relatively small numbers of people within each Traditional Owner group, and because social, economic and other cultural changes may impair the application and transfer of knowledge and other values over time. The TTP project is part of this process of social, economic and cultural change that potentially threatens a range of cultural values over time.

However, some recent social changes at a regional and local level across the Top End are aimed at strengthening environmental cultural values, knowledge and practices. These changes include the establishment of the Caring for Country Unit within the NLC, Indigenous land and sea management agencies such as Dhimurru Aboriginal Corporation in Nhulunbuy, Jawoyn Association in Katherine, Yirrkala Dhanbul Landcare in Yirrkala and smaller ranger programs in many communities and outstations. These Indigenous organisations are engaging in and supporting a range of initiatives aimed at conserving natural

and cultural environmental values across the Top End. These initiatives include:

- Weed and feral animal control;
- Exotic disease monitoring;
- Revegetation and erosion control;
- Waste management and recycling;
- Monitoring turtle nesting and other biodiversity research;
- Fire management;
- Clan-based planning for managing Country;
- Enterprise development based on natural resources;
- Management of visitor access to Aboriginal land;
- Planning and management of Indigenous Protected Areas;
- Documenting cultural knowledge of Country, including traditional knowledge of animals, plants, ecological communities, hunting, gathering and other cultural practices etc.;
- Assisting in the transmission of cultural knowledge through cultural camps on Country;
- Developing partnerships with other research and management organisations to increase capacity to look after Country.

Negotiations with Traditional Owners, with appropriate support from organisations such as those listed above, will aim to develop monitoring and management programs and actions associated with the construction and operation of the pipeline that protect species and environments of cultural significance, as well as the values that give them their significance.

These programs will form part of the proposed Cultural Heritage Management Plans that are envisaged as part of the environmental management process for TTP. Key programs could include:

- Collecting baseline data on Aboriginal resource use and other cultural values relating to environments potentially impacted by the TTP project within each clan estate (particularly filling gaps in data already available);
- Devising methods to minimise the impacts on culturally significant species and environments during the construction and operational phases of the project (e.g. avoiding key habitats and resource areas of

cultural significance, building on the outcome of consultations that occurred during the corridor selection process);

- Monitoring the impact of construction and operation of the pipeline on environments and species of cultural significance, including the impact on hunting resources in the surrounding region;

- Developing and/or supporting projects to strengthen environmental cultural values, knowledge and practices in collaboration with Traditional Owners and appropriate local and regional Indigenous agencies.

It may also be possible to seek support from, other initiatives being undertaken within the Northern Territory and across northern Australia to document and transmit Aboriginal knowledge of Country, including traditional knowledge of animals, plants and ecological communities. These initiatives include the Development of a Strategy for Indigenous Knowledge Conservation and Application being undertaken by the North Australian Indigenous Land and Sea Management Alliance, hosted by the Tropical Savannah Cooperative Research Centre in Darwin, and collaboration between the NT Parks and Wildlife Commission and Traditional Owners to document Aboriginal knowledge of fauna and flora.

2.7 Implementing the methodology

While gathering sufficient information about environmental cultural values is critical to the decision-making and negotiation processes in which Traditional Owners are involved in relation to the TTP project, the implementation process should also focus on developing longer term strategies and actions for monitoring and supporting environmental cultural values. In some instances this may involve supporting new programs to involve Traditional Owner groups and other Aboriginal people in environmental monitoring and management. Elsewhere along the pipeline route the focus is likely to be on providing additional support to existing ranger programs and Indigenous land management agencies.

The aim would be, therefore, that if the TTP project proceeds it can become a catalyst for enhancing the capacity of Traditional Owners and others to manage their cultural landscapes. This enhanced capacity could include training and employment programs, specific monitoring and management projects that are consistent with goals and objectives of existing or new Indigenous Protected Areas (see Appendix 2).

The following steps can be taken to implement the proposed methodology in Phase 2:

1. Review of relevant literature;

2. Discussions with key regional and local Indigenous organisations and technical experts;

3. Consultations with Traditional Owner groups, preferably on Country;

4. Consultations with other Aboriginal people in towns and communities;

5. Development of measures to manage and protect environmental cultural values;

6. Implementation of the management measures via Cultural Heritage Management Plans as part of the overall Environmental Management Plan for TTP

Negotiations about the time and resources to be allocated to this work should aim to ensure that Traditional Owners are in a position to make informed decisions how they wish their environmental cultural values to be protected, and should take into account the outcomes of consultations already undertaken for the SIA, site clearances and the on-ground identification of the pipeline route.

Key issues to be addressed through the literature review and consultation process may include identification of:

- The scope of cultural values relevant to this project;

- Aspects of pipeline construction and operation that are most likely to impact on these cultural values;

- Places and habitats where cultural values are most likely to be affected;

- Management actions during construction to minimise the potential impacts on cultural values;

3 SUMMARY OF KEY ISSUES

Key issues to be addressed in assessing and protecting environmental cultural values associated with environments potentially impacted by the TTP project include:

Cultural Landscapes

- The proposed TTP route passes through a mosaic of cultural landscapes, with complex environmental cultural values held by Traditional Owner groups in relation animals, plants, ecological communities and other aspects of their particular Country.

Assessing managing impacts

- Clearing of the pipeline route and associated access road corridor can be expected to impact on some Aboriginal cultural values. The extent of this impact will depend on several factors, including the cultural significance of particular habitats and species, the size of the cleared area, the ecological impact of construction and operation of the pipeline, and the long term success of environmental rehabilitation.

- The assessment of environmental cultural values, documentation of places and habitats where cultural values are most likely to be affected and the development of strategies and actions to protect those values, must be undertaken in collaboration with Traditional Owner groups, with adequate time and support to enable them to make informed decisions.

- The development of these strategies and actions should identify aspects of pipeline construction and operation that are most likely to impact on environmental cultural values, and take into account information already provided by Traditional Owners during the SIA and the on-ground identification of the pipeline route.

Opportunities

- There are opportunities for the TTP project to contribute positively to the maintenance of environmental cultural values by supporting community initiatives already underway, including projects being undertaken by Indigenous land management agencies, local ranger programs and Indigenous Protected Area managers.

- Opportunities may also arise to collaborate with Territory-wide projects to document Aboriginal knowledge of animals and plants, and other values of Country being undertaken by the North Australian Indigenous Land and Sea Management Alliance, Tropical Savannah Cooperative Research Centre and NT Parks and Wildlife Commission.

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APPENDIX 1: DESCRIPTION OF THE TTP PROPOSAL

(Extract from the TTP Notice of Intent September 2003)

TTP proposes to construct a high pressure gas pipeline, approximately 950 km in length, between Wadeye and Gove Figure 1 details the proposed pipeline corridor and a number of alternative segments of pipeline corridor currently being evaluated. The pipeline corridor may also cater for a condensate export pipeline for condensate export to potential markets in the Northern Territory and beyond.

The gas pipeline will transport treated gas from the Blacktip field to supply fuel to Alcan's alumina plant in Gove. The pipeline will consist of a buried high tensile steel pipe located in a corridor of up to 30 metres wide. Above ground facilities at intervals along the pipeline route will include a compressor station, meter station, scraper stations, mainline valves and other ancillary facilities. In the event of a condensate pipeline being laid in the gas pipeline trench there will be a need for road tanker loading facilities located at appropriate intervals along the pipeline route.

The TTP pipeline is intrinsically linked to the Blacktip offshore Field development and the proposed gasification plans for Alcan's Alumina plant at Gove. This development may also provide an alternative gas supply infrastructure to other potential gas customers in the Northern Territory. The pipeline will be constructed and operated in accordance with the requirements of Australian Standard AS2885.

The proposed gas pipeline will be designed, welded, tested, operated, maintained and decommissioned in accordance with relevant legislation, license conditions and Australian Standards.

Construction of a pipeline typically involves a number of sequential activities, collectively named a ‘spread,’ which are outlined below; the action may comprise more than one ‘spread’. Construction is undertaken within a cleared corridor, typically 30m wide.

Temporary Facilities - A range of temporary facilities are required during the pipeline construction. These include work areas for equipment and pipe delivery and storage, worker accommodation camps, offices and borrow pits to source additional fill material (if required). The location of the temporary facilities is based on logistical requirements and the objectives for the pipeline route selection.

Access - During construction, access tracks will be required to access areas such as the pipeline corridor, work areas and campsites. Existing roads, tracks and disturbed areas will be utilised as far as practicable to minimise disturbance to the surrounding areas. The selection of access track routes will be based on the objectives for the pipeline route selection.

Clearing - The pipeline corridor is cleared of heavy vegetation; root stock is left in the ground where practicable to stabilise the area and reduce erosion. Some vegetation will be stockpiled for respreading as part of the restoration process. Breaks will be left in stockpiled vegetation to allow continued access for fence lines, tracks, stock and drainage lines. Harvestable timber and crops may be removed prior to clearing. Gates will be installed where fence lines are required to be breached. Large mature trees, particularly at river crossings, will be preserved wherever practicable to do so.

Grading - The ROW is levelled to the required gradient using graders, backhoes and bulldozers. Topsoil is removed, where required, and stockpiled separately for reuse during rehabilitation.

Trenching – A trench will be dug in which the pipe will lie. This trench will be prepared using excavators, trenching machines, rock saws or by drilling and blasting as required by the nature of the ground. The distance of trench will be left open, controlled and kept to a practicable minimum. Wherever the trench is easily accessed by the public reserve, it will be clearly marked by bunting and hazard lights. Breaks in the trench are left to facilitate stock and wildlife crossing, and methods will be adopted to prevent fauna entrapment. Typical top of pipe depths in all areas are 750 mm; road crossings 1200 mm; and rivers 1500 mm.

Stringing - Pipe will be transported to site on trucks. The pipe is laid out adjacent to the trench, bent as required and set on skids which protect the pipe coating from damage.

Line-Up and Welding - Once the pipe is strung, a line-up crew will position the pipe using side boom tractors and line-up clamps. The pipes are then welded together.

Radiography - Each weld is subjected to an inspection to test for compliance to specification, thus ensuring the integrity of each weld.

Lowering In and Backfilling – Graded material is placed in the bottom of the trench and the pipe is lifted off the skids and lowered into the trench using side-boom tractors. The pipeline is then covered with more graded material. This material may be screened excavation material or it may imported. The trench is then filled by returning the remaining excavated material.

Testing - The pipeline will be hydrostatically tested for strength and potential leaks by being filled with water and pressurised to a pressure greater than its normal operating pressure.

Crossings - Several different methods are used when crossing rivers, roads, and major infrastructure corridors. The method used will be dependent on environmental factors and geotechnical constraints, which will be identified during the environmental studies. Typical methods used include open trenching, boring and directional drilling.

Clean up and Rehabilitation - Clean up and rehabilitation measures will be applied to the pipeline corridor, access tracks and camp sites in consultation with the relevant land holder/owner. Generally clean up and rehabilitation will involve removal of foreign material (construction material and waste), surface contouring, respreading topsoil, respreading vegetation and reseeding. In certain areas a low 'formed camber' of material may be allowed to remain over the trench line to allow for possible subsidence. The formed camber is broken at regular intervals to prevent disruption to surface waters.

Given that the pipeline will be underground, land users are able to resume previous land use activities on top of the pipeline provided that this does not include excavation activities.

APPENDIX 2: INDIGENOUS PROTECTED AREAS

The following information about Indigenous Protected Areas (IPAs) originates from the Department of Environment and Heritage website (http://www.deh.gov.au/indigenous/ipa/index.html). Additional information on IPAs can be found in Szabo and Smyth (2003), Smyth and Sutherland 1996 and Smyth (2001).

WHAT IS AN INDIGENOUS PROTECTED AREA?

An indigenous protected area is an area of land (and sea) in relation to which traditional aboriginal owners have entered into a voluntary agreement for the purposes of promoting biodiversity and cultural resource conservation.

The IPA Program is part of a broader national objective, the establishment of a comprehensive, adequate and representative National Reserve System. State, Territory and Australian Government agencies concerned with biodiversity conservation are working to identify good samples of Australia's ecosystems which can be conserved and managed effectively in a National Reserve System.

A scientific approach is being used to identify priorities for the establishment and management of new protected areas across Australia. The scientific approach has identified major gaps in the existing system of protected areas across Australia. It has shown many types of landscapes and ecosystems across Australia are poorly represented in the existing National Reserve System and that some such areas occur only on indigenous owned lands.

The declaration of an indigenous protected area over indigenous owned lands results in that land being considered as part of the National Reserve System. The Department of the Environment and Heritage believes that the IPA Program can accommodate the cultural priorities of indigenous people with the biodiversity conservation objectives of the nature conservation agencies and so contribute to the National Reserve System as well as meeting the land management aspirations of indigenous landowners.

ESTABLISHMENT OF INDIGENOUS PROTECTED AREAS

Indigenous protected area projects across Australia are at different stages of development. A number of projects have resulted in IPA declaration while others are in the process of developing management plans and consulting with the Indigenous community and other organisations which may provide assistance.

IPA program funding is available to indigenous organisations to enable them to carry out the following activities;

CONSIDERATION OF POSSIBLE IPA DECLARATION.

Support can be provided for the indigenous landowners to consider the implications of establishing an indigenous protected area on their land. This may include seeking advice on the legal, cultural heritage or conservation aspects of the proposed IPA to inform the decision making by the landowners.

DEVELOPMENT OF A MANAGEMENT PLAN FOR THE PROPERTY.

Landowners prepare a management plan for the area they propose to declare as an indigenous protected area. This may include holding discussions with the relevant State/Territory conservation agencies and other agencies that may be able to support

the project and incorporating expert advice on the values of the IPA and how these should be managed and protected.

IPA projects usually combine these activities during an initial phase culminating in a draft management plan and decision as to whether an IPA declaration will proceed.

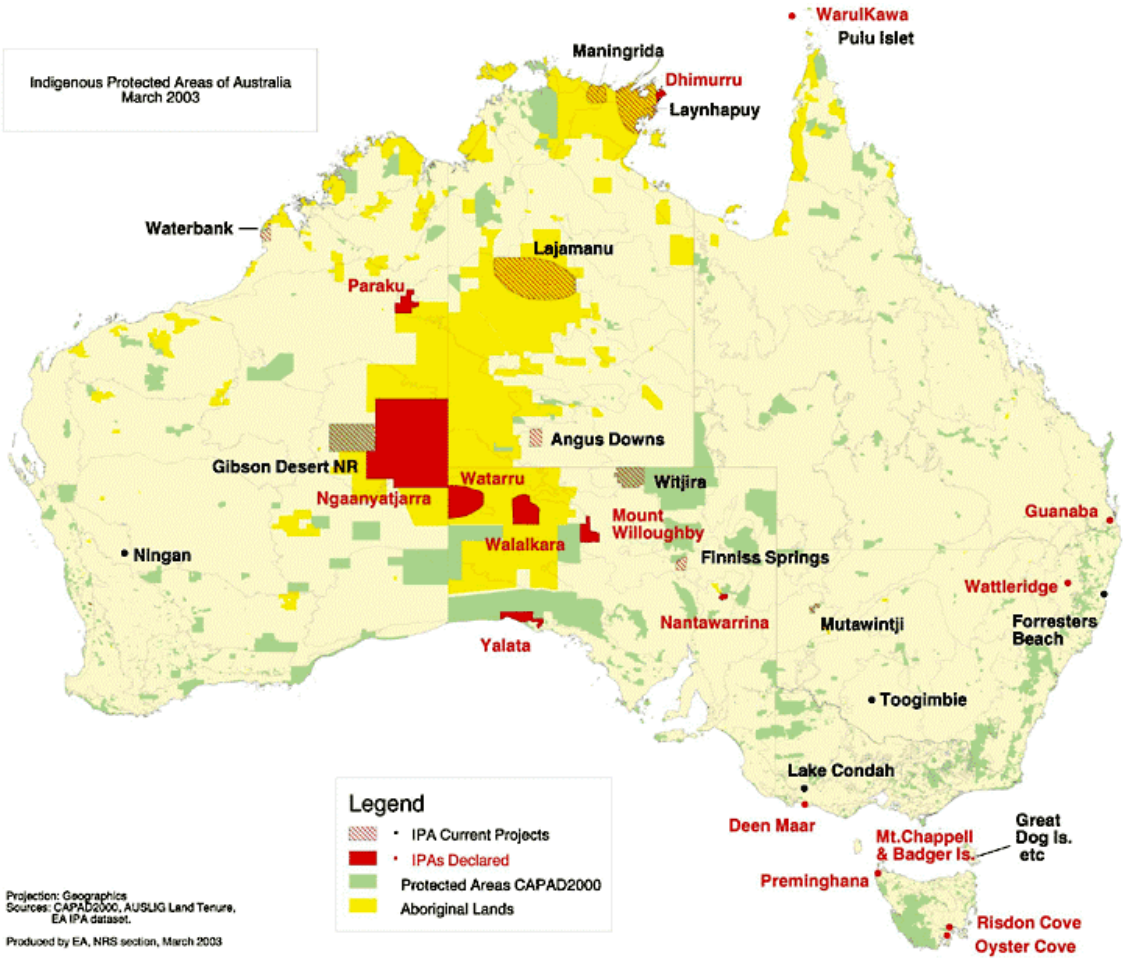
DECLARATION OF AN IPA.
Declaration takes the form of a formal and public announcement of the intention to manage land as an indigenous protected area according the prepared management plan. The management plan for an IPA will identify the on ground management activities and the decision making structure which will govern management decisions. The plan will also identify the relevant IUCN (World Conservation Union) Categories for conservation management which apply to the IPA.

IMPLEMENTATION OF THE MANAGEMENT PLAN
The management plan is implemented through on ground works as specified in the plan, such as putting into place weed and feral animal controls, cultural and natural heritage conservation activities or the establishment of infrastructure to control visitor access.

MONITORING
The landowner in consultation with other agencies will monitor the implementation of activities under the management plan and the effectiveness of the on ground works in achieving the desired outcomes. The results of this monitoring will be used to adjust management activities to increase their efficiency and to contribute towards the development of future management plans.

EXISTING IPAs

The map on the following page shows the location of IPAs declared throughout Australia, as well as those currently under consideration. The map shows that the proposed pipeline corridor traverses one declared IPA (Dhimurru) and one IPA under consideration (Laynhapuy) located in northeast Arnhemland. Information about the declared Dhimirru IPA is presented below.



Map of declared IPAs, current IPA projects, other protected areas and Aboriginal Lands. Source: http://www.deh.gov.au/indigenous/ipa/map.html

DHIMURRU - INDIGENOUS PROTECTED AREA

The Dhimurru indigenous protected area is located in Eastern Arnhem Land in the Northern Territory. This IPA was declared in November 2000 and covers an area of approximately 100,000 hectares within the Arnhem Coast Bioregion, with significant natural and cultural features and strong and continuing aboriginal culture and land management practices.

The major land management issues involve managing visitor pressure on a number of "recreation areas', rehabilitating damage from past uncontrolled access, and wildlife protection and research including monitoring the impact of marine debris on threatened turtle populations. Dhimurru employs traditional owners as rangers to undertake activities on the ground and engages in participatory planning with senior community members to develop and implement management strategies.

Gorruro Beach

On ground management activities specified in the plan of management for Dhimurru include: weed and feral animal control; revegetation programmes, interpretation activities for visitors, visitor management and maintenance of visitor facilities.

New weed control legislation in the Northern Territory has prompted moves to establish a regional weeds committee. The new committee assists in coordinating weed identification and control measures in the region. Dhimurru has been actively involved in this initiative and in conjunction with the Yirrkala Dhanbul Landcare group several days were spent clearing undergrowth and repairing signage on a walking track between Daliwuy and Lombuy

Dhimurru rangers have assisted the Parks and Wildlife Commission of the Northern Territory to clear Crocodile traps set in the vicinity of Nhulunbuy. In conjunction with Parks and Wildlife, Dhimurru Rangers have assisted in a crocodile survey at Biranybirany outstation and at Banambarrnga. Dhimurru Rangers also undertake turtle recovery surveys to assist in monitoring turtle numbers and increasing turtle populations.

Turtle monitoring at Dhimurru

Dhimurru Rangers have provided a presentation to the local Scouts Group on marine turtle work and coastal issues as part of their communications activities. Dhimurru recently embarked on a joint turtle project involving two classes from Nhulunbuy Primary and one class from Yirrkala Primary. The classes have provided presentations to the Nhulunbuy and Yirrkala communities. Dhimurru Rangers have also provided interpretive walks in the local area to a number of school classes to promote cultural awareness.

Dhimurru has participated in a number of ship inspections in conjunction with the local Quarantine officer. The inspections provide valuable experience to rangers and enable feedback to the community regarding the adequacy of measures undertaken to regulate importation of feral pathogens, plants, and animals. Dhimurru rangers are also assisting Quarantine with monthly midge trapping in remote areas of the IPA.