

1. Introduction

1.1 Overview

TNG Limited (TNG) is proposing to develop the Mount Peake Project (the Project), 235 km north-northwest of Alice Springs and 50 km west of the Stuart Highway in the Northern Territory.

The primary objective of the Project is to produce an intermediate feedstock (concentrate) for further processing to extract high value products.

The Mount Peake Project will comprise:

- ▶ the mining of a polymetallic ore body through an open-pit truck and shovel operation;
- ▶ processing of the ore to produce a magnetite concentrate;
- ▶ road haulage of the concentrate to a new railway siding and loadout facility on the Alice Springs to Darwin railway near Adnera; and
- ▶ rail transport of the concentrate to TNG's proposed Darwin Refinery located at Middle Arm, Darwin.

The Project will mine at a rate of up to 8.4 million tonnes per annum (Mtpa) and, following processing, will produce up to 1.8 Mtpa of magnetite concentrate.

This concentrate will be processed at TNG's proposed Darwin Refinery to produce vanadium pentoxide flake, pigment grade titanium dioxide and pig iron ingots. Processing of the magnetite concentrate in Darwin does not form part of this assessment.

This Draft Environmental Impact Statement (EIS) has been prepared to support key Commonwealth and Territory Government approvals under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the Northern Territory *Environmental Assessment Act 1982* (EA Act). The Draft EIS has been written to address the following broad criteria:

- ▶ address issues raised by government and community stakeholders;
- ▶ provide decision makers, stakeholders and the public with information on the Project;
- ▶ discuss the need for, and alternatives to, the Project;
- ▶ describe and assesses potential environmental, social and economic impacts of the Project;
- ▶ identify performance criteria, legislation and standards to be met; and
- ▶ provide management, monitoring and control measures to be implemented to mitigate potential adverse impacts of the Project.

The content of the Draft EIS reflects the Terms of Reference issued in March 2014 by the Northern Territory Environment Protection Authority.



1.2 Objectives

The objectives of this Draft EIS are to allow TNG the opportunity to:

- ▶ anticipate the range of environmental and social impacts and issues that may arise in relation to the Project;
- ▶ plan, from the earliest stages of the Project, to incorporate appropriate mechanisms to avoid and minimise adverse impacts and maximise benefits for stakeholders;
- ▶ identify environmental and social issues associated with the Project, and discuss how these will be managed throughout the currently anticipated 19 year project life inclusive of construction, operation and closure;
- ▶ provide adequate information in a transparent and easily understood manner so that the full range of stakeholders have access to the information and can make submissions to decision makers in relation to the Project; and
- ▶ provide adequate information to allow a decision to be made on whether environmental and development approvals should be granted that would allow the Project to proceed.

1.3 The Proponent

The proponent for the Project is TNG Limited, an Australian resource company focussed on evaluation and development of its Mount Peake Project. Contact details for TNG are provided in Table 1-1.

Table 1-1 Proponent contact details

Company	TNG Limited
Contact	Paul Burton Managing Director
Street address	Level 1, 282 Rokeby Road, Subiaco, WA 6008
Postal address	PO Box 1126, Subiaco, WA 6904
Phone	+61 8 9327 0900
Fax	+61 8 9327 0901
Email	peb@tngltd.com.au
ABN	12 000 817 023
ASX code	TNG
Web	www.tngltd.com.au

Environmental record

TNG has been actively exploring in the Mount Peake area since 2006, and discovered the Mount Peake V-Ti-Fe mineralisation in 2007/8. Exploration activities take place on Exploration Licences approved by the NT DME. Environmental conditions are set and monitored by the NT DME through the Mining Management Plan (MMP) authorisation process, where prior to any ground disturbing work TNG submits and receives approval for programs (drilling, clearing etc). Current authorisation 0477-03 covers activities to 2016.

During June 2015 Mining Compliance officers of the NT DME audited the exploration and rehabilitation activities undertaken over the previous several years. The minor concerns raised in this audit were addressed in late 2015 and form part of the 2016 MMP which will be submitted to the DME Mining Compliance Division shortly.

Since drilling began in 2009 TNG has completed seven years of exploration having met all environmental and rehabilitation conditions across the Mount Peake tenure. There are currently no outstanding or non-compliant environment issues relating to the Mount Peake Project.

There are no environmental proceedings against TNG under any jurisdiction.

Other proposals / actions in the region

The nearest potential development in the region is Arafura Resources proposed Nolans Rare Earths Project, approximately 100 km to the south of Mount Peake.

1.4 Environmental Impact Assessment

1.4.1 Overview of the Impact Assessment Process

An overview of the Impact Assessment Process is provided in Figure 1-1.

The Mount Peake Project (the action) was referred to the Department of the Environment (DotE) on 14 October 2013 due to the potential for the action to have a significant impact on a Matter of National Environmental Significance (MNES). On 13 November 2013, DotE determined that the proposed action was a controlled action and required assessment under the EPBC Act before it could proceed (Appendix B). The controlling provision was listed threatened species and communities (sections 18 and 18A).

The DotE also determined that the Project will be assessed by accredited assessment at the level of Environmental Impact Statement under the Northern Territory EA Act.

In June 2013, a Notice of Intent for the Mount Peake Project was submitted to the NT Environment Protection Authority (NT EPA). On 13 November 2013 the NT EPA determined that the Mount Peake Project required assessment under the EA Act at the level of an Environmental Impact Statement (Appendix B). Terms of Reference for the Draft EIS were issued on 7 March 2014 (Appendix C).

On 9 March 2015 the NT EPA was notified that changes had been made to the Mount Peake Project. The changes removed the hydrometallurgical processing plant and a gas / slurry pipeline infrastructure corridor linking the mine site with a rail siding at Adnera, and confirm that trucking will be used to transport magnetite concentrate to the rail head and that any gas pipeline will be located within the transport corridor. In accordance with clause 14A of the Environmental Assessment Administrative Procedures, the NT EPA decided that the changes do not alter the environmental significance of the Project, that the Project will continue to be assessed at the level of an EIS, and that the Terms of Reference issued on 7 March 2014 will not be amended (Appendix B).

On 11 March 2015 a request to vary the action under section 156B of the EPBC Act was submitted to the DotE. The variation was consistent with the notification of change to the NT EPA described above. On 8 April the DotE confirmed acceptance of the variation and that the originally identified controlling provisions would still apply (Appendix B).

Magnetite concentrate will now to be supplied to TNGs proposed Darwin Refinery for processing and therefore the Mount Peake Project will not result in any port related impacts. The port aspects of the assessment have been removed.



NORTHERN TERRITORY ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Pursuant to the *NT Environmental Assessment Act* & Environmental Assessment Administrative Procedures

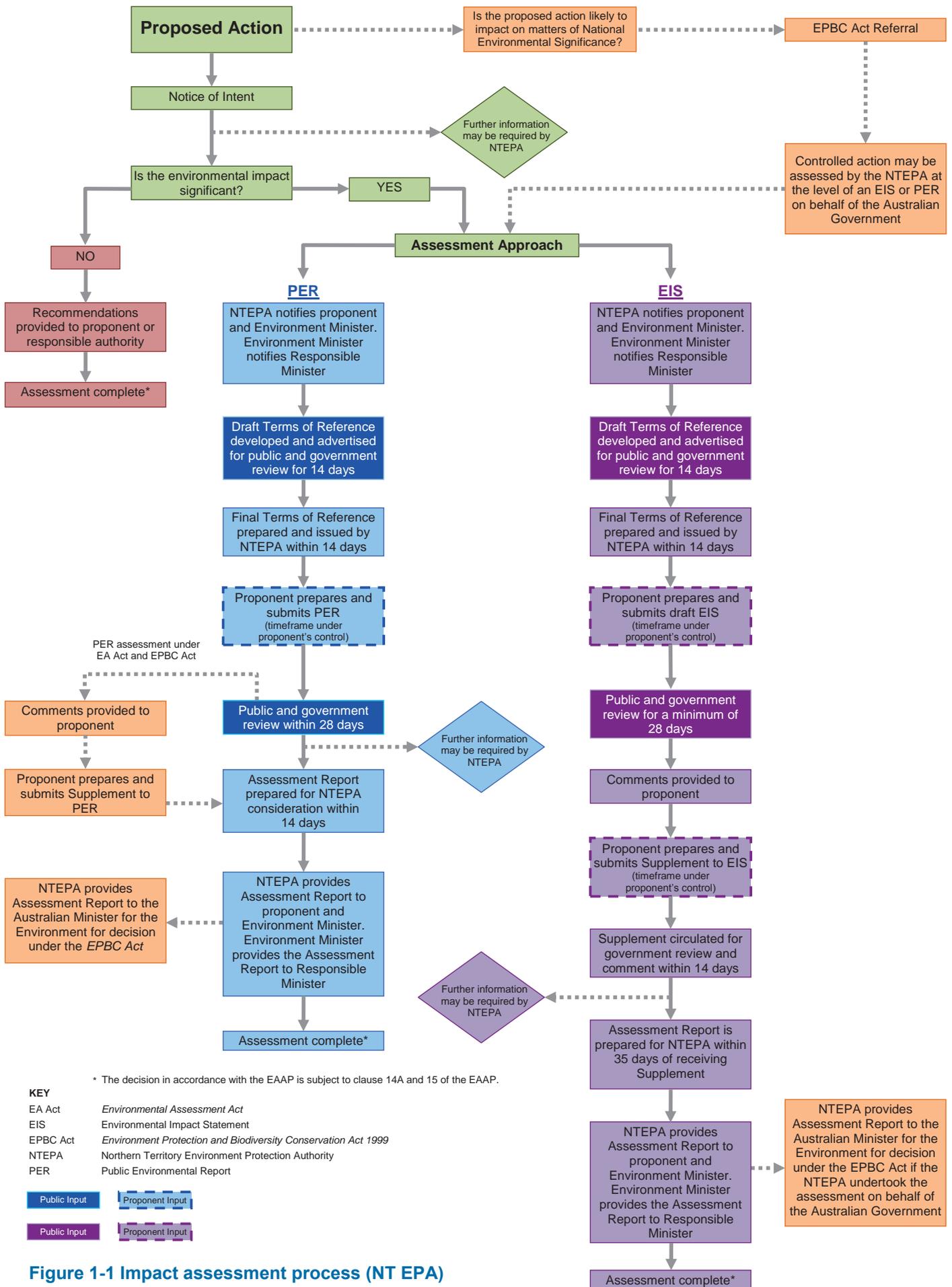


Figure 1-1 Impact assessment process (NT EPA)

Once submitted to the NT EPA, the Draft EIS will be advertised for public comment and circulated to relevant government advisory bodies for review for a minimum of 28 days. Submitted comments will be forwarded by the NT EPA to the proponent. The proponent will be required to prepare a Supplement to the Draft EIS addressing these comments. The Supplement will be submitted to the NT EPA and then circulated to government advisory bodies for review and comment within 14 days. During the first 21 days from the receipt of the Supplement, the NT EPA may call for further information from the proponent.

Assuming no further information is requested, an Assessment Report based on the Draft EIS and the Supplement is prepared by NT EPA for the Responsible Minister within 35 days of receiving the Supplement.

The NT EPA also provides a copy of the Assessment Report to the Commonwealth Minister for the Environment for a decision under the EPBC Act on MNES.

1.4.2 Key Issues Identified by the NT EPA

The key risks identified by the NT EPA as part of the Terms of Reference for the Mount Peake Project (Appendix C), and reflecting the Project changes in Section 1.4.1, were:

Ground and surface water resources

- ▶ potential for Acidic and/or Metalliferous Drainage (AMD) from the waste rock dump, tailings storage facility and other mine infrastructure, to contaminate shared water resources;
- ▶ surface water quality may be impacted by spills to surface water and runoff containing hazardous substances or elevated sediment concentrations;
- ▶ contamination of groundwater could occur through leaks from storages or pipelines and spills during handling of contaminants, chemicals and toxicants; and
- ▶ practically available water sources will not be sufficient to supply the needs of the proposed Project configuration; or will not be sufficient without causing environmental or social impacts.

Biodiversity

- ▶ biodiversity values, conservation status, diversity, geographic distribution or productivity of local native flora or fauna species or ecosystems may be degraded by Project actions;
- ▶ the Project may result in one or more of the following significant impacts to species or communities listed as threatened under the EPBC Act and / or Territory Parks and Wildlife Conservation Act:
 - long-term decrease in the size of an important population of a listed threatened species or community;
 - adverse effects on habitat critical to the survival of a species or community;
 - fragmentation of an existing important population into two or more populations;
 - reduced area of occupancy of an important population or community; and / or
 - modification, destruction, removal or isolation of the availability or quality of habitat, to the extent that a threatened species or community is likely to decline.
- ▶ degradation of the environment may occur through the introduction and spread of weeds and / or pest fauna species within and adjacent to the Project area;



- ▶ Project inputs of environmental pollutants may result in reduced water quality (offsite) and impacts on sensitive ecosystems supporting higher biodiversity values, such as aquatic, riparian or wetland habitats; and
- ▶ wildlife may be exposed to metals and / or pollutants from the Project that will result in ongoing impacts, especially to long-lived species that accumulate toxicants and metals.

Historic or cultural heritage

- ▶ construction of the Project has the potential to damage areas or degrade values of sites or items which have historic and / or cultural heritage significance;
- ▶ operations associated with the life of the Project and increased human activities in the vicinity have the potential to disturb or damage areas of historic and / or cultural heritage; and
- ▶ the Project has potential to disturb sites of Aboriginal heritage significance.

Socio-economic

- ▶ operations associated with the life of the Project and increased human activities in the Project area have the potential to change the social demographic, culture and economies; and
- ▶ potential economic and social benefits may not be optimised and costs may not be fully understood and taken into consideration.

Rehabilitation and mine closure

- ▶ following closure and rehabilitation, potential for the mine to negatively impact the environment and / or associated communities; and
- ▶ risk that the Project will create an ongoing environmental, social and / or economic legacy if operations are required to cease ahead of schedule due to unforeseen circumstances, prior to the planned closure and rehabilitation of the site.

Human health and safety

- ▶ risks of health impacts to workers from exposure to hazardous, toxic or radioactive substances, associated with the Project;
- ▶ traffic or rail accidents;
- ▶ contamination of a shared potable aquifer accessed by workers or a local community;
- ▶ spread of mosquito-borne disease due to creation of mosquito breeding sites;
- ▶ sunburn, environmental exposure, heat exhaustion etc; and
- ▶ risks to workers from animal attacks / bites.

Air emissions

Potential risks to air quality for sensitive receptors from:

- ▶ drilling, blasting and materials handling;
- ▶ crushing and beneficiation plant;
- ▶ general site movements over unsealed surfaces; and
- ▶ wind erosion mobilising dust from exposed surfaces, such as from waste dumps, laydown areas, stockpiles, and sites of vegetation clearing.

