The Coordinator-General

Draft terms of reference for an environmental impact statement:

NT Link Project

September 2015

Queensland Government

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Department of State Development, Infrastructure and Planning
PO Box 15009 City East, Queensland 4002.
100 George Street Brisbane Qld 4000 (Australia)

Phone: 13QGOV (137468)
Fax: 07 3405 1122
Email: info@dsdip.qld.gov.au
Web: www.dsdip.qld.gov.au

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Part A. About these terms of reference

1. Statutory basis

The Coordinator-General has declared the NT Link Project to be a 'coordinated project for which an environmental impact statement (EIS) is required' under section 26(1)(a) of the *State Development and Public Works Organisation Act 1971* (SDPWO Act). This declaration initiates the statutory environmental impact assessment procedure of Part 4 of the Act, which requires a proponent to prepare an EIS for the project.

These terms of reference (TOR) set out the matters the proponent must address in an EIS for the project and are approved by the Coordinator-General under section 30 of the SDPWO Act.

2. EIS guidelines

This TOR must be read in conjunction with *Preparing an environmental impact statement: Guideline for proponents*, which explains the following:

- participants in the EIS process
- consultation requirements
- EIS format and copy requirements.

In addition, subject-specific guidelines are referenced throughout this TOR; refer to Appendix 1 for a list of these policies and guidelines.

3. More information

Queensland Government environmental impact statement process

For information about the project or the EIS process conducted under the SDPWO Act, visit **www.dsdip.qld.gov.au/cg**

Northern Territory Government North East Gas Interconnector process

The Northern Territory (NT) Government is working to facilitate the development of the North East Gas Interconnector (NEGI) to meet energy demands on the eastern seaboard and to contribute to national energy security. The proponent for the NT Link Project is one of four proponents invited by the NT Government to progress to the final request for proposals stage of the competitive bid process for the NEGI.

For more information about the NEGI visit,
http://dcm.nt.gov.au/territory_economy/north_east_gas_interconnector

Northern Territory environmental impact assessment process

The Northern Territory Environment Protection Authority (NT EPA) has decided that the Northern Territory component of the NT Link Project requires assessment under the Northern Territory *Environmental Assessment Act* at the level of EIS.

The NT EPA is assessing the NT component of the project concurrently with, but under a separate process to the Queensland Government assessment of the Queensland component of the NT Link Project.

For more information about the Northern Territory environmental impact assessment process visit, http://www.ntepa.nt.gov.au.

The Queensland Coordinator-General and the NT EPA intend to work collaboratively to align assessment processes, as far as practicable, to avoid duplication of documents and to synchronise public comment periods for the purpose of assessing the NT Link Project.

Part B. Content of the EIS

1. General approach

1.1 For the purposes of the EIS process, 'environment' is defined in Schedule 2 of the SDPWO Act and includes social and economic matters.

1.2 The EIS should give priority to the critical matters associated with the project (specified in section 7 of this TOR).

1.3 The detail at which the EIS deals with matters relevant to the project should be proportional to the scale of the impacts on environmental values. When determining the scale of an impact, consider its intensity, duration, cumulative effect, irreversibility, the risk of environmental harm, management strategies and offsets provisions.

2. Mandatory requirements of an EIS

2.1 For all the relevant matters, the EIS must identify and describe the environmental values[1] that must be protected. Environmental values are specified in the *Environmental Protection Act 1994* (EP Act), the *Environmental Protection Regulation 2008* (EP Regulation), environmental protection policies (EPPs) and relevant guidelines.[2]

2.2 The assessment should cover both the short and long terms and state whether any relevant impacts are likely to be irreversible. Also discuss scenarios of unknown, unpredictable impacts.

2.3 Provide all available baseline information relevant to the environmental risks of the project. Provide details about the quality of the information provided, in particular: the source of the information; how recent the information is; how the reliability of the information was tested; and any uncertainties in the information.

2.4 Provide detailed strategies in regard to all critical matters for the protection, or enhancement as desirable, of all relevant environmental values in terms of outcomes and possible conditions that can be measured and audited. In general, the preferred hierarchy for managing likely impacts is: (a) to avoid; (b) to minimise/mitigate; and (c) if necessary, and possible, to offset. Where relevant, strategies should be described in the context of EHP 'model conditions'.

[1] Defined in section 125(l)(i)(A) of the EP Act.
[2] For example, the *Queensland Water Quality Guidelines* and the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (refer to Appendix 1 for details).

2.5 Impact minimisation measures should include ongoing monitoring and proposals for an adaptive management approach, as relevant, based on monitoring. The proposed measures should give confidence that, based on current technologies, the impacts can be effectively minimised over the long-term.

2.6 Each matter assessed in the EIS (as described in sections 7 and 8 of this TOR) should include a concise summary of the potential impacts of the project and the measures proposed by the proponent to avoid, minimise, mitigate and/or offset those impacts.

2.7 Present feasible alternatives of the project's configuration (including individual elements) that may improve environmental outcomes. Discuss the consequences of not proceeding with the project.

2.8 Demonstrate how the construction, operation and decommissioning (to the extent known) of the project would meet all policy, statutory and regulatory requirements of the Commonwealth, state and local governments. Demonstrate that the project and its predicted outcomes are consistent with all legislation, government plans, strategies, policies and guidelines that apply up to and until the time that the final EIS is accepted by the Coordinator-General. Subsequently, the Coordinator-General's assessment and conditions will address all government policies and regulatory frameworks applicable at that time.

3. Further requirements of an EIS

3.1 The assessment and supporting information should be sufficient for the administering authority to decide whether an approval should be granted, considering EHP's Guideline: *Application Requirements for Petroleum Activities*. Where applicable, sufficient information should be included to enable approval conditions.

3.2 To the extent of the information available, the assessment should endeavour to predict the *cumulative* impact[3] of the project on environmental values over time and in combination with impacts created by the activities of other adjacent and upstream and downstream developments and landholders—as detected by baseline monitoring. This will inform the decision on the final EIS and the setting of conditions. The absence of a comprehensive cumulative impacts analysis need not be fatal to the project. The EIS should also outline ways in which the cumulative impact assessment and management could subsequently be progressed further on a collective basis.

3.3 Include a consolidated description of all the proponent's commitments to implement management measures (including monitoring programs). Should the project proceed, these should be able to be carried over into the approval conditions as relevant.

3.4 Provide all geographical coordinates throughout the EIS in latitude and longitude against the Geocentric Datum of Australia 1994 (GDA94).

3.5 An EIS should also describe the expected benefits and opportunities associated with the project.

[3] Cumulative impact is defined as 'combined impacts from all relevant sources (developments and other activities in the area)'.

3.6 An appropriate public consultation program is essential to the impact assessment process. The proponent should consult with Local, State and Commonwealth government agencies, and potentially affected local communities.

3.7 The EIS should describe the consultation that has taken place and how the responses from the community and agencies have been incorporated into the design and outcomes of the project.

3.8 Include, as an appendix, a public consultation report detailing how the public consultation plan was implemented, and the results.

4. Executive summary

4.1 The executive summary should describe the project and convey the most important and preferred aspects and environmental management options relating to the project in a concise and readable form. It should use plain English, avoid jargon, be written as a stand-alone document and be structured to follow the EIS. It should be easy to reproduce and distribute on request to those who may not wish to read or purchase the whole EIS.

5. Introduction

5.1 Clearly explain the function of the EIS, why it has been prepared and what it sets out to achieve. Include an overview of the structure of the document.

Project proponent

5.2 Describe the proponent's experience, including:

(a) the designated proponent's full name, postal address and ABN, if relevant (including details of any joint venture partners)

(b) the nature and extent of business activities

(c) experience

(d) environmental record, including a list of any breach of relevant environmental laws during the previous ten years

(e) the proponent's environmental, health, safety and community policies.

The environmental impact assessment process

5.3 Provide an outline of the environmental impact assessment process, including the role of the EIS in the Coordinator-General's decision making process. Information on any previous or concurrent environmental assessment processes being undertaken in other jurisdictions should also be provided. The information in this section is required to ensure readers are informed of the process to be followed and are aware of any opportunities for input and participation.

5.4 Inform the reader how and when properly made public submissions on the EIS will be addressed and taken into account in the decision-making process.

Project approvals process

5.5 Provide an outline of the approvals required to enable the project to be constructed and operated. Explain how the environmental impact assessment process (and the

EIS itself) informs the issue of the leases/licences/permits/consents required by the proponent before construction can commence. Provide a flow chart indicating the key approvals and opportunities for public comment.

6. Project description

Proposed development

6.1 The EIS must describe and illustrate at least the following specific information about the proposed project:

(a) the project's title

(b) the project, its objectives, and expected capital expenditure

(c) rationale for the project

(d) the nature and scale of activities to be undertaken and whether it is a greenfield or brownfield site

(e) the regional and local context of the project's footprint (with maps at suitable scales)

(f) relationship to other coordinated projects and other major projects (of which the proponent should reasonably be aware)

(g) the workforce numbers to be employed by the project during its various phases, where personnel would be accommodated and, where relevant, the likely recruitment and rostering arrangements to be adopted

(h) the proposed construction staging and likely schedule of works.

Site description

6.2 Provide real property descriptions of the project land and adjacent properties; any easements; any underlying resource tenures; and identification number of any resource activity lease for the project land that is subject to application. Key transport, state-controlled roads, rail, air, port/sea and other infrastructure or services in the region and to the site should be described and mapped.

6.3 Describe and illustrate the topography of the project site and surrounding area, and highlight any significant features shown on the maps. Maps should have contours at suitable increments relevant to the scale, location, potential impacts and type of project, shown with respect to Australian Height Datum (AHD) and drafted to GDA94.

6.4 Where appropriate, describe and map in plan and cross-sections the geology and landforms, including catchments, of the project area. Show geological structures, such as aquifers, faults and economic resources that could have an influence on, or be influenced by, the project's activities.

6.5 Where appropriate, describe, map and illustrate soil types and profiles of the project area at a scale relevant to the proposed project. Identify soils that would require particular management due to wetness, erosivity, depth, acidity, salinity or other feature.

Climate

6.6 Describe the site's climate patterns that are relevant to the environmental assessment, with particular regard to discharges to water and air and the propagation of noise. Climate information should be presented in a statistical form including long-term averages and extreme values, as necessary.

Proposed construction and operations

6.7 Describe the following information about the proposal:

(a) existing infrastructure and easements on the potentially affected land

(b) the proposed extractive and processing methods, associated equipment and techniques

(c) the sequencing and staging of activities

(d) the capacity of high-impact plant and equipment, their chemical and physical processes, and chemicals or hazardous materials to be used

(e) the known locations of new or altered works and structures and infrastructure necessary for the project at all stages of its development, whether on or off the project leases or rights of way

(f) any activity that is a prescribed environmentally relevant activity if it were not undertaken on a mining/petroleum lease

(g) any new or expanded quarry and screening operations (for example, from off-site locations) required to service the project.

7. Assessment of critical matters

7.1 This section sets out the scope of critical matters that should be given detailed treatment in the EIS. A critical matter is an aspect of the proposal that has one or more of the following characteristics:

(a) a high or medium probability of causing serious or material environmental harm or a high probability of causing an environmental nuisance[4]

(b) considered contentious in the public domain, for example, has been the subject of extensive media coverage and/or there is a public perception that an activity has the potential to cause serious or material environmental harm or an environmental nuisance (regardless of the likelihood of occurrence)

(c) has been identified (in a referral decision) as a specific controlling provision under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth).

7.2 The final scope of critical matters will be determined by the Coordinator-General when finalising the TOR. In the course of preparing the EIS, information may become available that warrants a change of scope.

[4] 'Material environmental harm', 'serious environmental harm' and 'environmental nuisance' are defined in Part 3, sections 15, 16 and 17 of the *Environmental Protection Act 1994*.

Land, flora and fauna

Objectives and performance outcomes

The environmental objectives to be met under the EP Act are that the:

(a) activity is operated in a way that protects the environmental values of land including soils, subsoils, landforms and associated flora and fauna

(b) choice of the site, at which the activity is to be carried out, minimises serious environmental harm on areas of high conservation value and special significance and sensitive land uses at adjacent places

(c) location for the activity on a site protects all environmental values relevant to adjacent sensitive use

(d) design of the facility permits the operation of the site, at which the activity is to be carried out, in accordance with best practice environmental management.

The performance outcomes corresponding to these objectives are in Schedule 5, Tables 1 and 2 of the EP Regulation. The proponent should supply sufficient evidence (including through studies and proposed management measures) that show these outcomes can be achieved.

Information requirements—land use

7.3 Discuss potential impacts of the proposed land uses taking into consideration the proposed measures that would be used to avoid or minimise impacts. The impact prediction must address:

(a) landscape (including visual amenity) and land uses in and around the project area, referring to regional plans and local government planning schemes

(b) any existing mining, petroleum, geothermal and greenhouse gas storage tenures overlying or adjacent to the project site, and any to be applied for as part of this project

(c) any infrastructure proposed to be located within, or which may have impacts on, the Stock Route Network

(d) any infrastructure or works (such as clearing for additional work areas or establishment of borrow pits) proposed to be located within, or which may have impacts on, the Royton Timber Reserve

(e) any infrastructure or other works that have the potential to increase inappropriate use of the Royton Timber Reserve.

7.4 If the proposed development is located within an area of regional interest (as defined in the *Regional Planning Interests Act 2014*), address the requirements of that Act.

7.5 If the proposed development is located within a statutory regional plan, address the policies about matters of State interest that are contained within the regional plans.

7.6 For projects with activities that disturb the land surface, show how the land form during and post construction will be stable and non-eroding over time (describe how current technologies will be applied).

7.7 Detail any known or potential sources of contaminated land. Describe how any proposed land use may result in land becoming contaminated.

7.8 Identify potential native title rights and interests possibly impacted by the project and the potential for managing those impacts by an Indigenous Land Use Agreement or other measure.

Information requirements—rehabilitation

7.9 The EIS should provide information based on relevant guidelines, current best practice approaches and legislative requirements about the strategies and methods for progressive and final rehabilitation of the environment disturbed by the project and decommissioning.

7.10 Develop a preferred rehabilitation strategy that would minimise the amount of land disturbed at any one time, and minimise the residual loss of land and water bodies with ecological or productive value. Illustrate the proposed final land uses.

7.11 Describe rehabilitation success criteria that would be used to measure progress and completion.

7.12 Notwithstanding that management techniques may improve over the life of the project, and legislative requirements may change, the EIS needs to give confidence that all potential high-impact elements of the project (e.g. creek crossings) are capable of being managed and rehabilitated to achieve acceptable land use capabilities/suitability, to be stable and self-sustaining and to prevent upstream and downstream surface and groundwater contamination.

Information requirements—flora and fauna

7.13 Describe the likely impacts on the biodiversity and natural environmental values of affected areas arising from the construction, operation and eventual decommissioning of the project (where known). Take into account any proposed avoidance and/or mitigation measures. The assessment should include, but not be limited to, the following key elements:

(a) matters of state environmental significance and national environmental significance

(b) terrestrial and aquatic ecosystems (including groundwater-dependent ecosystems) and their interaction

(c) biological diversity including listed flora and fauna species and regional ecosystems

(d) the existing integrity of ecological processes, including habitats of threatened, near-threatened or special least-concern species

(e) the integrity of landscapes and places, including wilderness and similar natural places

(f) chronic, low-level exposure to contaminants or the bio-accumulation of contaminants

(g) impacts on native fauna due to wastes at the site.

7.14 Propose practical measures for protecting or enhancing natural values, and assess how the nominated quantitative indicators and standards may be achieved for

nature conservation management. In particular, address measures to protect or preserve any threatened or near-threatened species.

7.15 Assess the need for buffer zones and the retention, rehabilitation or planting of movement corridors, and propose measures that would avoid the need for waterway barriers, or propose measures to mitigate the impacts of their construction and operation. The measures proposed for the progressive rehabilitation of disturbed areas, should include rehabilitation success criteria in relation to natural values that would be used to measure the progress.

7.16 Describe how the achievement of the objectives would be monitored and audited, and how corrective actions would be managed. Proposals for the rehabilitation of disturbed areas should incorporate, where appropriate, provision of nest hollows and ground litter.

Offsets

7.17 Where Queensland legislation or policy requires an offset for a significant residual impact on a prescribed environmental matter, an assessment of the impacts on those matters and an offset strategy shall be presented in a form consistent with the requirements of the legislation, policy and guidelines relevant to Queensland's Environmental Offsets Framework.

7.18 The proposed offsets should be consistent with the requirements set out in any applicable legislation or specific-issue offset policies.

8. Assessment of routine matters

Water quality

Objective and performance outcomes

The environmental objective to be met under the EP Act are that the activity (project) be operated in a way that:

(a) minimises harm to the environmental values of waters

(b) protects the environmental values of wetlands

(c) protects the environmental values of groundwater and any associated surface ecological systems.

The performance outcomes corresponding to this objective are in Schedule 5, Table 3 of the EP Regulation. The proponent should supply sufficient evidence (including through studies and proposed management measures) that show these outcomes can be achieved.

Information requirements

8.1 Detail the chemical and physical characteristics of surface waters and groundwater within the area that may be affected by the project.

8.2 Identify the quantity, quality and location of all potential discharges of water and waste water by the project, whether as point sources or diffuse sources. Assess the potential impacts of any discharges on the quality and quantity of receiving waters

taking into consideration the assimilative capacity of the receiving environment and the practices and procedures that would be used to avoid or minimise impacts.

8.3 Describe how the achievement of the objectives would be monitored and audited, and how corrective actions would be managed.

8.4 The following subsections list the routine matters for resource projects, with (where applicable) a reference to the objectives defined in the EP Regulation. In some cases, not all the matters may be relevant, while in others the list may not be exhaustive. Where applicable, refer to the objective of the EP Regulation (section 3) to ensure ecologically sustainable development is achieved.

8.5 The proponent is not required to list every conceivable impact, but instead focus research and primary studies on impacts that were identified in the initial advice statement and/or scoping meetings with the Office of the Coordinator-General.

8.6 For each routine matter identified below, the level of detail should be proportional to the risk or magnitude of impacts. As a minimum, the proponent should supply sufficient information that confirms the risks/impacts are not significant

Water resources

Objectives

The construction and operation of the project should aim to meet the following objectives:

(a) equitable, sustainable and efficient use of water resources

(b) environmental flows, water quality, in-stream habitat diversity, and naturally occurring inputs from riparian zones support the long term maintenance of the ecology of aquatic biotic communities

(c) the condition and natural functions of water bodies, lakes, springs and watercourses are maintained—including the stability of beds and banks of watercourses

(d) volumes and quality of groundwater are maintained and current lawful users of water (such as entitlement holders and stock and domestic users) and other beneficial uses of water (such as spring flows and groundwater-dependent ecosystems) are not adversely impacted by the development.

Information requirements

8.7 Provide details of any proposed impoundment, extraction, discharge, injection, use or loss of surface water or groundwater. Identify any approval or allocation that would be needed under the *Water Act 2000*.

8.8 Detail any significant diversion or interception of overland flow. Include maps of suitable scale showing the location of diversions and other water-related infrastructure in relation to pipeline and supporting infrastructure.

8.9 Describe the options for supplying water to the project, and assess any potential consequential impacts in relation to the objectives of any water resource plan, resource operations plan.

8.10 Identify any quantitative standards and indicators which will be used to describe the ecological values and health of surface water environments.

8.11 Provide details on local scale impacts in a regional context including any:

(a) changes in flow regimes from diversions, water take and discharges

(b) alterations to riparian vegetation and bank and channel morphology

(c) direct and indirect impacts arising from the development.

Biosecurity

Objective

The construction and operation of the project should aim to ensure:

(a) the spread of weeds and pest animals is minimised

(b) existing weeds and pests are controlled.

Information requirements

8.12 Propose detailed measures to control and limit the spread of pests and weeds on the project site and adjacent areas, particularly declared plants under the *Plant Protection Act 1989* and the Land Protection (Pest and Stock Route Management) Regulation 2003 and weeds of national significance.

Air

Objectives and performance outcomes

The environmental objective to be met under the EP Act is that the activity will be operated in a way that protects the environmental values of air.

The performance outcomes corresponding to this objective are in Schedule 5, Table 1 of the EP Regulation. The proponent should supply sufficient evidence (including through studies and proposed management measures) that show these outcomes can be achieved.

Information requirements

8.13 Fully describe the characteristics of the contaminants or materials released when carrying out the activity (point source and fugitive emissions). Emissions (point source and fugitive) during construction, commissioning, operation and closure should be described.

8.14 Predict the impacts of the releases from the activity on environmental values of the receiving environment using recognised quality assured methods. The description of impacts should take into consideration the assimilative capacity of the receiving environment and the practices and procedures that would be used to avoid or minimise impacts. The impact prediction must:

(a) address residual impacts on the environmental values (including appropriate indicators and air quality objectives) of the air receiving environment, with reference to sensitive receptors,[5] using recognised quality assured methods.

[5] For example, the locations of existing residences, places of work, schools, etc., agricultural or ecologically significant areas/species that could be impacted.

This should include all relevant values potentially impacted by the activity, under the EP Act, EP Regulation and Environmental Protection (Air) Policy 2008 (EPP (Air)).

(b) address the cumulative impact of the release with other known releases of contaminants, materials or wastes associated with existing development and possible future development (as described by approved plans and existing project approvals).

(c) quantify the human health risk and amenity impacts associated with emissions from the project for all contaminants whether or not they are covered by the National Environmental Protection (Ambient Air Quality) Measure or the EPP (Air).

8.15 Describe the proposed mitigation measures and how the proposed activity will be consistent with best practice environmental management. Where a government plan is relevant to the activity or site where the activity is proposed, describe the activity's consistency with that plan.

8.16 Describe how the achievement of the objectives would be monitored, audited and reported, and how corrective actions would be managed.

Noise and vibration

Objective and performance outcomes

The environmental objective to be met under the EP Act is that the activity will be operated in a way that protects the environmental values of the acoustic environment.

The performance outcomes corresponding to this objectives are in Schedule 5, Table 3 of the EP Regulation. The proponent should supply sufficient evidence (including through studies and proposed management measures) that show these outcomes can be achieved.

Information requirements

8.17 Fully describe the characteristics of the noise and vibration sources that would be emitted when carrying out the activity (point source and general emissions). Noise and vibration emissions (including fugitive sources) that may occur during construction, commissioning, operation and closure should be described.

8.18 Predict the impacts of the noise emissions from the activity on the environmental values of the receiving environment, with reference to sensitive receptors[5], using recognised quality assured methods. Taking into account the practices and procedures that would be used to avoid or minimise impacts, the impact prediction must address the:

(a) activity's consistency with the objectives

(b) cumulative impact of the noise with other known emissions of noise associated with existing development and possible future development (as described by approved plans)

(c) potential impacts of any low-frequency (<200 Hz) noise emissions.

8.19 Describe how the proposed activity would be managed to be consistent with best practice environmental management for the activity. Where a government plan is

relevant to the activity, or the site where the activity is proposed, describe the activity's consistency with that plan.

8.20 Describe how the achievement of the objectives would be monitored and audited, and how corrective actions would be managed.

Waste management

Objective and performance outcomes

The environmental objective to be met under the EP Act is that any waste transported, generated, or received as part of carrying out the activity is managed in a way that protects all environmental values.

The performance outcomes corresponding to this objectives are in Schedule 5, Table 1 of the EP Regulation. The proponent should supply sufficient evidence (including through studies and proposed management measures) that show these outcomes can be achieved.

Information requirements

8.21 Describe all the expected significant waste streams[6] from the proposed project activities (typically these would include soil, rock and water), during the construction, operational and decommissioning phases of the project.

8.22 Describe the quantity, form (liquid, solid, gas), hazard, and toxicity of each significant waste, as well as any attributes that may affect its likelihood of dispersal in the environment, as well the associated risk of causing environmental harm.

8.23 Define and describe the objectives and practical measures for protecting or enhancing environmental values from impacts by wastes.

8.24 Assess the proposed management measures against the preferred waste management hierarchy, namely: avoid waste generation; cleaner production; recycle; reuse; reprocess and reclaim; waste to energy; treatment; disposal. This includes the generation and storage of waste.

8.25 Describe how nominated quantitative standards and indicators may be achieved for waste management, and how the achievement of the objectives would be monitored, audited and managed.

8.26 Detail waste management planning for the proposed project especially how these concepts have been applied to prevent or minimise environmental impacts due to waste at each stage of the project.

8.27 Provide details on natural resource use efficiency (such as energy and water), integrated processing design, and any co-generation of power and by-product reuse as shown in a material/energy flow analysis.

[6] Waste includes overburden, tailings and any materials (liquid, solid or gaseous) generated by the project that is not product.

Cultural heritage

Objective

The construction and operation of the project should aim to ensure that the nature and scale of the project does not compromise the cultural heritage significance of a heritage place or heritage area.

Information requirements

8.28 Unless section 86 of the *Aboriginal Cultural Heritage Act 2003* (ACH Act) applies, the proponent must develop a Cultural Heritage Management Plan in accordance with the requirements of Part 7 of the ACH Act.

8.29 For non-Indigenous historical heritage, undertake a study of, and describe, the known and potential historical cultural and landscape heritage values of the area potentially affected by the project. Any such study should be conducted by an appropriately qualified cultural heritage practitioner. Provide strategies to mitigate and manage any negative impacts on non-Indigenous cultural heritage values and enhance any positive impacts.

Social and economic

Objectives

The construction and operation of the project should aim to:

(a) avoid or mitigate adverse social and economic impacts arising from the project

(b) capitalise on opportunities potentially available for capable local industries and communities where this does not have a significant negative impact on the project or reduce net economic benefits to the State.

Information requirements

8.30 In accordance with the Coordinator-General's *Social impact assessment guideline*, describe the likely social impacts (positive and negative) on affected communities, taking into account proposed mitigation measures.

8.31 Develop workforce arrangements for the project considering the Coordinator-General's workforce management principles where relevant to the project, listed below:

(a) anyone must be able to apply for a job, regardless of where they live

(b) provided they can meet the requirements of the job, people must have choice where they live and be able to apply for jobs related to the project

(c) the percentage of fly-in, fly-out workers must be less than 100 per cent

(d) a thorough audit of existing housing capacity must be undertaken before the project starts. To support those who wish to live locally, the proponent will ensure availability of accommodation that is fit for purpose and will make optimal use of existing housing capacity

(e) the proponent must thoroughly assess workforce requirements and plan to accommodate the likely number of workers who may live locally

(f) social impacts associated with the local workforce, in relation to local housing, services and infrastructure must be identified and mitigated in consultation with relevant local and state government service providers

(g) the proponent's social impact mitigation measures should support regional towns in pursuing opportunities to ensure communities are strong and sustainable and they are attractive places to live and work.

8.32 Describe the local and regional economies likely to be impacted by the project and identify the relevant stakeholders.

8.33 Proponents should use a robust methodology to quantify the direct and indirect economic impacts on local, regional and state economies arising from each stage of the project, and estimate the changes in key indicators including:

(a) gross regional product (GRP)

(b) gross state product (GSP)

(c) employment outcomes

(d) value added to the economy by the project by sector or industry.

8.34 The economic impact analysis should consider but is not limited to potential impacts the project may have on:

(a) labour demand, including the ability for labour to be drawn from the existing local workforce, and the potential effects this may have on local businesses.

(b) transport and infrastructure networks along with other essential services and facilities

(c) relevant local and regional prices including wages, housing market costs, project input costs and household goods and services

(d) local business and supply chain opportunities.

8.35 Identify the significant economic benefits and costs arising from all stages of the project, or different project options if applicable. Potential benefits and costs along with any relevant positive or negative externalities should be valued where reasonable, otherwise they should be described using quantitative and qualitative information. The results of this assessment should be presented as the 'net present value' of the project.

Transport

Objectives

The construction and operation of the project should aim to:

(a) maintain the safety and efficiency of all affected transport modes for the project workforce and other transport system users

(b) avoid or mitigate impacts on the condition of transport infrastructure

(c) ensure any required works are compatible with existing infrastructure and future transport corridors.

Information requirements

8.36 Proponents should make appropriate modal choices to ensure transport efficiency and minimise impacts on the community. The EIS should include a clear summary of the total transport task for the project, including workforce, inputs and outputs, during the construction and operational phases.

8.37 Present the transport assessment in separate sections for each project-affected mode (road, rail, air and sea) as appropriate for each phase of the project. Provide sufficient information to allow an independent assessment of how existing transport infrastructure will be affected by project transport at the local and regional level (e.g. local roads and state-controlled roads).

8.38 Include details of the adopted assessment methodology:

(a) for impacts on roads: the road impact assessment report in accordance with the *Guidelines for Assessment of Road Impacts of Development*

(b) for impacts on rail level crossings: the Australian Level Crossing Assessment Model

(c) for impacts on maritime operations: the Maritime Safety Queensland *Guidelines for major development proposals*.

8.39 Discuss and recommend how identified impacts will be mitigated so as to meet the above objectives for each transport mode. Mitigation strategies may include works, contributions or management plans and are to be prepared in close consultation with relevant transport authorities (including Local Government), should consider those authorities' works program and forward planning, and be in accordance with the relevant transport authorities' methodologies, guidelines and design manuals.

Hazards, health and safety

Objectives

The construction and operation of the project should aim to ensure:

(a) the risk of, and the adverse impacts from, natural and man-made hazards are avoided, minimised or mitigated to protect people and property

(b) the community's resilience to natural hazards is enhanced

(c) developments involving the storage and handling of hazardous materials are appropriately located, designed and constructed to minimise health and safety risks to communities and individuals and adverse effects on the environment.

Information requirements

8.40 Describe the potential risks to people and property that may be associated with the project in the form of a preliminary risk assessment for all components of the project and in accordance with relevant standards. The assessment should include:

(a) potential hazards, accidents, spillages, fire and abnormal events that may occur during all stages of the project, including estimated probabilities of occurrence

(b) identifying all hazardous substances to be used, stored, processed or produced and the rate of usage

(c) potential wildlife hazards, natural events (for example, cyclone, storm tide inundation, flooding, bushfire) and implications related to climate change.

(d) how the project may potentially affect hazards away from the project site (e.g. changing flooding characteristics)

8.41 Provide details on the safeguards that would reduce the likelihood and severity of hazards, consequences and risks to persons, within and adjacent to the project area(s). Identify the residual risk following application of mitigation measures. Present an assessment of the overall acceptability of the impacts of the project in light of the residual uncertainties and risk profile.

8.42 Provide an outline of the proposed integrated emergency management planning procedures (including evacuation plans, if required) for the range of situations identified in the risk assessment developed in this section.

8.43 Outline any consultation undertaken with the relevant emergency management authorities, including the Local Disaster Management Group.

8.44 Describe current flood risk for a range of annual exceedence probabilities for potentially affected waterways, and assess how the project may potentially change flooding characteristics. The assessment should consider all infrastructure associated with the project including levees, roads and linear infrastructure and all proposed measures to avoid or minimise impacts.

9. Appendices to the EIS

9.1 Appendices should provide the complete technical evidence used to develop assertions and findings in the main text of the EIS.

9.2 No significant issue or matter should be mentioned for the first time in an appendix—it must be addressed in the main text of the EIS.

9.3 Include a table listing the section of the EIS where each requirement of the TOR is addressed.

9.4 Include a glossary of terms and a list of acronyms and abbreviations.

Acronyms and abbreviations

The following acronyms and abbreviations have been used in this document.

Acronym/abbreviation	Definition
AHD	Australian Height Datum
EIS	environmental impact statement
EP Act	*Environmental Protection Act 1994*
EP Regulation	Environmental Protection Regulation 2008
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cwlth)
EPP	Environmental Protection Policy (under the EP Act)
GDA94	Geocentric Datum of Australia 1994
MNES	matters of national environmental significance (under the EPBC Act)
SDPWO Act	*State Development and Public Works Organisation Act 1971*
TOR	terms of reference
VMA	*Vegetation Management Act 1999*

Appendix 1. Policies and guidelines

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The Coordinator-General
PO Box 15517, City East Qld 4002
tel 13 QGOV (13 74 68)
fax +61 7 3225 8282
info@dsd.qld.gov.au

www.statedevelopment.qld.gov.au