

Papua LNG Project – Downstream

Environmental Impact Statement – Attachment 1

Reconciliation with relevant Independent State of Papua New Guinea Guidelines and CEPA-approved Environmental Inception Report

ExxonMobil PNG Antelope Limited



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1. INTRODUCTION

This attachment provides a reconciliation between the Papua LNG Project – Downstream (the Project) Environmental Inception Report (EIR) and Environmental Impact Statement (EIS), with relevant guidelines prepared by the State of Papua New Guinea. The Project's EIR and EIS have been drafted in accordance with the Conservation and Environment Protection Authority (CEPA) guidelines, previously known as the Department of Environment and Conservation (DEC) (DEC, 2004a) (DEC, 2004b). Table 2.1 and Table 3.1 detail the reconciliation between the Project's EIR and EIS, respectively, and the associated guidelines.

2. RECONCILIATION OF ENVIRONMENTAL INCEPTION REPORT WITH INDEPENDENT STATE OF PAPUA NEW GUINEA ENVIRONMENTAL INCEPTION REPORT GUIDELINES

Table 2.1 demonstrates that the Project EIR addressed the requirements set out in the *Guideline for Preparation of Environmental Inception Report DEC, January 2004* (DEC, 2004a).

The Project's EIR was submitted to CEPA for approval on 15 July 2022 and approved on 1 September 2022.

Table 2.1 Reconciliation with Independent State of Papua New Guinea Environmental Inception Report guidelines

PNG Government EIR guideline requirements (DEC, 2004a)	Papua LNG – Downstream response to EIR guidelines
1. Introduction	Section 1: Introduction
2. Purpose of the Development	Section 2: Purpose of the Development
3. Viability of the Project	Section 3: Viability of the Project
4. Description of the Proposed Development	Section 4: Description of the Proposed Development
5. Development Timetable	Section 5: Development Timetable
6. Bio-physical Environmental Issues	Section 7: Biological and Physical Environmental Setting and Issues
7. Socioeconomic Issues	Section 8: Socio-economic Setting and Issues
8. Availability of Baseline Information/Data	Section 6: Availability of Baseline Information
9. Site Selection	Section 9: Site Selection
10. Qualification of Environmental Consultants	Section 10: Qualification of Environmental Consultants

Table 2.2 details the alignment of the EIS with the environmental and social issues identified in the EIR. Some issues identified in mid-2022 for the EIR became less relevant as the Project design progressed and changed. This has resulted in some deviation between the EIR and the suite of studies and issues identified and addressed by Tetra Tech Coffey and the technical specialists for the EIS.

Table 2.2 EIS alignment with issues identified in the Environmental Inception Report

EIR studies	EIR identified issues	EIS response	Alignment with EIR
Greenhouse gas (GHG)	GHG study to identify expected GHG outputs from the Project, benchmark expected Project GHG emissions against other national and industry emissions, document current Project GHG removal and energy efficiency measures and, if required, propose mitigation measures for insufficient GHG abatement and energy efficiency.	Section 15.2: Greenhouse gas assessment Section 15.3: Greenhouse gas emissions Appendix F, J	Yes
Traffic and road use	Re-establish and update traffic and road use baseline conditions with field observational surveys. The survey will target road and commercial uses and traffic volume.	Appendix D	Yes
Groundwater	Groundwater study aims to characterise groundwater conditions prior to construction and to create a baseline to observe Project related groundwater impacts. Groundwater issues are identified in Section 7.2.3 of the EIR.	Section 7.1.4: Groundwater Section 11.3: Groundwater Appendix H	Yes
Hydrology and surface water	The Project will include activities with potential to impact on hydrology and surface water quality. Construction activities on land will be located largely within the existing disturbed areas of the LNGP's lease boundaries. Hydrology and surface water quality issues are identified in Section 7.2.2 of the EIR.	Section 11.4: Surface water Chapter 12: EIA - Marine Appendix I: Flood assessment	Yes, discharges from the LNG Plant are included in Chapter 12 Environmental Impact Assessment: Marine, and in the mangrove study reports that inform the Nearshore Marine Baseline.

EIR studies	EIR identified issues	EIS response	Alignment with EIR
Marine environment (includes water quality, sediment, marine ecology, mangrove and tidal flat ecology, intertidal mudflat ecology, Caution Bay fisheries, pipeline trenching and spoil dispersal)	Marine environment studies to build upon the existing baselines and monitoring data to characterise existing marine environment within Caution Bay in areas potentially affected by the Project. Marine environment studies will inform the impact assessment of the construction and operation phases of the Project and inform the ongoing monitoring design to validate predictions of residual impacts in Caution Bay. Marine environment issues are identified in sections 7.2.4 and 7.2.5 of the EIR.	Chapter 8 Receiving Environment: Marine Chapter 12 Environmental Impact Assessment: Marine Appendix E, L	ExxonMobil has removed the jetty expansion and pipeline trenching, shore crossing and dredging aspects from the Project scope. These issues will be addressed as part of the Papua LNG Project – Upstream EIS process. The other marine environmental issues are addressed in the EIS.
Air quality and noise	Air quality study to characterise air environment, identify and compile air emissions from existing plant and Project activities, assess their impacts on sensitive receptors and propose mitigation measures to these potential impacts. The noise impact assessment will characterise and list the noise environment of existing LNG Plant facilities and proposed expansion, assess the impacts of cumulative noise emissions on sensitive receptors, from construction and the operation of the new facilities in conjunction with existing noise emissions and to propose mitigation measures to noise related impacts. Air quality and noise issues are identified in section 7.2.6 of the EIR.	Section 7.1.8: Air quality Section 7.1.9: Noise Section 11.5: Air Quality Section 11.6: Noise Section 13.4.4: Social value 4 Appendix G	Yes

EIR studies	EIR identified issues	EIS response	Alignment with EIR
Flood assessment	Flood assessment to characterise existing flood baseline conditions at LNG Plant and nearby sensitive receptors, identify flood hazards and movement of surface waters including tides and storm surges, provide an early indication of potential design modifications and identify appropriate measures to help mitigate or avoid potential flood related impacts and residual impacts.	Section 7.1.7: Surface water Section 11.4: Surface water Appendix I	Yes
Terrestrial biodiversity (includes weed and fauna survey)	The terrestrial biodiversity study aims to assess the project activity impacts on land-based plant and animal life. The terrestrial biodiversity issues are identified in Section 7.2 of the EIR. The objective of the weed survey is to ascertain the presence or absence of species on the invasive species register that require management intervention for the Project. The fauna survey will estimate the abundance of wallabies within the site boundary fence to give an indication of population size to enable an impact assessment.	Section 7.2: Terrestrial biological environment. Section 11.7: Terrestrial biodiversity Appendix K	Yes

EIR studies	EIR identified issues	EIS response	Alignment with EIR
Socio-economic	The objectives of the socio-economic studies are to inform the impact assessment and management measures for the following social values: • Altered capacity to support livelihoods based on harvest of natural resources: • Changes in the availability of opportunities for participation in the cash economy • Altered ability to sustain cultural identity and traditions, including rights and obligations pertaining to resource use and management. • Changes to personal and family health, safety and security • Changes in the availability of services and institutions supportive of community well-being. The socio-economic issues are identified in Section 8.2 of the EIR.	Chapter 6 Stakeholder Engagement Chapter 9 Social Environment Chapter 10 Cultural Heritage Environment Chapter 13 Social Impact Assessment Chapter 18 Environmental and Social Management, Monitoring and Reporting Appendix A, B, C, D, F, G, K, L	Most socio-economic issues from the EIR are described in the EIS. Upon further consideration during the EIS study, some socio-economic issues were not assessed due to: • Lack of supporting data collected informing the social baseline. • Credibility and Project relevance.

3. RECONCILIATION OF ENVIRONMENTAL IMPACT STATEMENT WITH INDEPENDENT STATE OF PAPUA NEW GUINEA ENVIRONMENTAL IMPACT STATEMENT GUIDELINES

Table 3.1 demonstrates that the Project EIS substantially addresses the requirements set out in the *Guideline for Conduct of Environmental Impact Assessment and Preparation of Environmental Impact Statement DEC, January 2004* (DEC, 2004b).

Table 3.1 Reconciliation with Independent State of Papua New Guinea Environmental Impact Statement guidelines

PNG Government EIS Guideline Requirement (DEC, 2004b)	Papua LNG – Downstream response to EIS guidelines
Letter of transmittal or cover letter It is important that an Environmental Impact Statement on the proposal must be transmitted to DEC (now CEPA) with a cover letter signed by the responsible company official or its authorised representative (i.e., consultant - engaged by the company to act on its behalf). If an external consultant is used, the letter must also authorise the consultant to make statements and provide further information on behalf of the company in relation to the application.	• Cover letter included in EIS submission to CEPA signed by the responsible company official.
1. Executive summary or overview of proposal One of the main objectives of this section is to provide an explanation of the Project for non-technical readers. Information provided in the Executive Summary shall concisely describe: • The proposed development activity and its objectives • Anticipated bio-physical and socio-economic impacts (direct/indirect, reversible/irreversible) of the activity • Details of remedial actions that are proposed • All benefits to be derived from the project • Details of consultation program undertaken by the applicant, including degree of public interest • Rehabilitation and/or end-use plans for the development activity in relation to community needs	• EIS Executive Summary
2. Purpose of the Development The purpose of this section is to ensure that only development activities that are in the best interest of all Papua New Guineans, and therefore in line with the PNG Government's overall development strategy and planning guidelines, are considered for approval. NOTE: Demonstrate commitment to the conservation of natural ecosystems and protection of environmental values within the proposed development area. This section shall include but not be limited to the following: • Describe if the development is in line with the Fourth National Goal and Directive Principle of the National Constitution of PNG • Explain if the proposed development is compatible with National, Provincial and Local Level Government development goals and planning guidelines.	• Chapter 1 Introduction • Chapter 2 Project Description • Chapter 4 Legal, Administrative and Planning Framework

PNG Government EIS Guideline Requirement (DEC, 2004b)	Papua LNG – Downstream response to EIS guidelines
Detail the economic benefits to the Nation, Province, Local Level Governments and to the local community being impacted	
3. Viability of the Project Provide information on the viability of the proposed development activity. These details shall include but not be limited to the following: • Information on the capital cost associated with the development • Details of the proponent's technological expertise and resources • Results of any feasibility investigations that have been carried out • Information on the extent of landowner and/or resource owner support, including a copy of the formal written approval of their consent • Details of the life-span and development phases of the project	• Chapter 1 Introduction • Chapter 2 Project Description • Chapter 6 Stakeholder Engagement • It is not practical for an EIS to include “a copy of the formal written approval of their [landowner] consent” at this stage of project development so this is not included in the EIS. This is consistent with common practice for other EISs in PNG.
4. Description of the Proposed Development Activity All details on the proposed development activity required under this section should be provided where applicable to the proposal. Details to be provided under this section may include the following: • Background information to the proposal, process technologies to be employed, etc. • Detailed location maps (drawn to scale), site layout, etc. • Information on method of site selection including alternatives investigated, plant or building designs, relevant diagrams and drawings • Detailed flowcharts, mass balances (including feedstocks, products and wastes generated, etc.) • Description of nearby development activities that may contribute to background pollution levels or other baseline conditions • Information on associated infrastructure/facilities to be constructed	• Chapter 2 Project Description • Chapter 3 Assessment of Project Alternatives • Chapter 12 Cumulative Impact Assessment
5. Development Timetable Information on the development timetable provided under this section should be clear and easy for DEC [now CEPA] to understand the different phases in the development proposal. For reasons of clarity, a flow chart, Gantt or PERT chart should be used where appropriate. Information provided in this section shall include but not be limited to the following: • Information on funding arrangements for proposed activity or if availability of funds subject to this or other approvals being granted • Details of preconstruction activities • Information on consultation program with all affected parties (i.e., parties that may be directly and indirectly affected)	• Chapter 1 Introduction • Chapter 2 Project Description • The EIS does not include matters commercial in confidence (e.g., information on funding arrangements) and this can be provided to CEPA under separate confidential cover. This is consistent with common practice for other EISs in PNG.

PNG Government EIS Guideline Requirement (DEC, 2004b)	Papua LNG – Downstream response to EIS guidelines
• Details of construction schedule, staging, etc. • Details of commissioning and operational schedules • Details of infrastructure development schedule • Details of closure and rehabilitation schedule	
6. Characteristics of the Receiving Environment • Available Environmental Studies & Investigations: • Historic or current baseline data on physical, biological and social systems • Written estimate of research and/or study time already expended and to be undertaken	• Chapter 7 Receiving Environment: Onshore • Chapter 8 Receiving Environment: Marine • Chapter 9 Social Environment • Chapter 10 Cultural Heritage Environment
<u>Physical Environment</u> • Geomorphological, topographical, and geological characteristics • Any natural or induced hazard in the area (e.g., flood, earthquake, volcanic zone etc.) • Climatic regime (e.g., rainfall, temperature) • Air quality and meteorological data set for air dispersion modelling, etc. • Seasonal surface water quality and hydrological information • Seasonal ground water quality and flow regime • Noise levels <u>Biological environment</u> • Presence of a protected area Conservation Area or Wildlife Management Area, if any • Details of any special purpose areas (e.g., wetland area, etc.) • Aquatic and terrestrial ecology of the area • Information on vulnerable (endangered) species • Other relevant biological information <u>Social environment</u> • Demographic information • Information on existing infrastructure • Information on public health issues (if applicable) • Information on present economic status of the project area • Description of existing social services ◦ Details of archaeological, historical, cultural or religious features of the project area	• Chapter 7 Receiving Environment: Onshore • Chapter 8 Receiving Environment: Marine • Chapter 9 Social Environment • Chapter 10 Cultural Heritage Environment • Appendices: A, B, C, D, E, F, G, H, I, J, K
7. Potential impacts of the proposal • Details of predicted impacts of the proposal on the physical, biological and social environment • Details of ambient and emission standards used to assess project effects against, and later to be met in any discharge permit issued for the proposal	• Chapter 11 Environmental Impact Assessment: Onshore • Chapter 12 Environmental Impact Assessment: Marine • Chapter 13 Social Impact Assessment

PNG Government EIS Guideline Requirement (DEC, 2004b)	Papua LNG – Downstream response to EIS guidelines
• An assessment of resilience of the environment to cope with the expected changes ◦ In assessing predicted impacts the applicant must cover aspects such as - worst case scenarios, potential risks, emergency situations, confidence of prediction of impact, etc.	• Chapter 14 Cumulative and Associated Impact Assessment • Appendices: A, D, F, G, I, J
8. Waste minimisation, cleaner production and energy balance • Details of other alternative “cleaner production” technologies or processes that has been considered • Information on the basis for choosing the proposed technology or process • Available technical background on the process chosen • Details of the Waste Minimisation Strategy developed for the proposal ◦ Details of an “energy balance” for the proposal	• Chapter 15 Greenhouse Gases and Climate Change • Chapter 16 Waste Management
9. Environmental management, monitoring and reporting • Details of information on plant operating conditions, including management and monitoring strategy • Information on socio-economic management and monitoring strategy • Mechanism and frequency for reporting monitoring results to DEC and other stakeholders, especially to directly affected stakeholder groups • Availability of contingency and/or emergency plans drawn up for the proposal • Details of Environment Improvement Plan • Details of Waste Minimisation and/or Management Plans ◦ Information on potential rehabilitation issues and its strategies including Rehabilitation Plan	• Chapter 17 Environmental Hazard and Risk Management • Chapter 18 Environmental and Social Management, Monitoring and Reporting • Attachment 3
10. Other statutory decisions ◦ Provide the draft or finalised Project Development Contract, Memorandum of Agreements or other similar legal decisions that are relevant to the proposal	• Commercial in confidence
11. Confidential information	• Noted
12. References	• All EIS chapters are appropriately referenced. • Chapter 20 Bibliography
13. Acknowledgements	• Chapter 21 Study team
14. Study team ◦ Information on persons involved should be the same as those approved in the EIR	• Chapter 21 Study team • Some Tetra Tech Coffey personnel have changed to accommodate staff changes and EIS requirements.