

8. LEGAL, ADMINISTRATIVE AND PLANNING FRAMEWORK

This chapter describes legal and other requirements that are applicable to the project. It includes an outline of national goals and directive of PNG (Section 8.1, National Goals and Directives), the laws and regulations and guidelines of PNG (Section 8.2, PNG Legislation) and relevant international conventions and agreements to which PNG is a signatory (Section 8.3, International Conventions and Guidelines).

8.1 National Goals and Directives

The Independent State of Papua New Guinea promotes the development of its mineral resources through various policies to encourage investment. It is a priority of the government that the people of Papua New Guinea benefit from the development of their resources. The PNG constitution includes national goals and directives that outline the aspirations and principles for the development of the nation. The fourth of these national goal and directive principles states:

We declare our Fourth Goal to be for Papua New Guinea's natural resources and environment to be conserved and used for the collective benefit of us all, and be replenished for the benefit of future generations.

The constitution is supported by a legislative and policy framework that ensures that proposed developments assess, reduce and manage any residual social and environmental impacts such that they are as low as practicable.

8.2 PNG Legislation

In law, all PNG legislation and regulation applies to any person or entity within the national boundaries. Nevertheless, the two most important pieces of PNG legislation regulating the environmental and socio-economic aspects of the project are the *Oil and Gas Act 1998* (Oil and Gas Act) and the *Environment Act 2000* (Environment Act).

8.2.1 *Oil and Gas Act 1998*

The Oil and Gas Act states that petroleum resources belong to the state and that licences are required to explore for, recover or sell these resources. The Oil and Gas Act is the principal legislation governing the exploration, development, processing and transportation of petroleum in Papua New Guinea and is administered by the Department of Petroleum and Energy (DPE).

The act defines five types of licence for the petroleum industry:

- Petroleum prospecting licence (PPL).
- Petroleum retention licence (PRL).
- Petroleum development licence (PDL).
- Petroleum processing facility licence (PPFL).
- Pipeline licence (PL).

With the exception of PPLs, which are not required for the implementation of this project, a range of licences – both new, extensions and variations to existing – for project-related facilities will be required to allow construction and operation of the project. This is discussed further in Section 8.2.6, Summary of Project Approvals.

Esso's applications for the new licences, licence variations and extensions to existing development and pipeline licences will be supported by a suite of project-wide documents, together comprising the master development plan. The master development plan will provide detailed information about the development proposal, including its social and environmental implications contained in associated reports, including this EIS (incorporating the SIA), social mapping and landowner identification reports and various engineering design documents prepared to support project development thus far in project planning. When granting a petroleum development licence, the Minister must be satisfied that the project provides adequately for the protection of the environment and the welfare of the people of the area (s. 57, Oil and Gas Act). Similarly, pipeline and petroleum processing facility licence applications require environmental management particulars, including the results of environmental studies.

This environmental impact statement (EIS) will assist in fulfilling the environmental and social requirements of the Oil and Gas Act and support the licence applications.

Approval from the PNG Government to modify the existing oil field production facilities that will supply gas to the PNG LNG Project will be sought by the operators of those facilities at the same time as Esso submits its licence applications. The oil field facilities will continue to operate under their respective licences and permits.

8.2.1.1 Land Access

Access to land required for petroleum development is granted under terms and conditions of the Oil and Gas Act, by the award of a petroleum tenement (PRL, PDL, PL or PPFL). Once granted, licensees have the right to enter land and use that land to the extent reasonably necessary to conduct the operations for which the licence has been granted. Such rights of access are conditional upon providing appropriate compensation to the lawful owners and rightful occupiers of the land. PDLs are granted for an initial period of 25 years, with rights to extend for a period or consecutive periods of up to 20 years.

Before granting a PDL or PL, the Minister for Petroleum and Energy may authorise access to the land under s. 116(1) for the purposes of carrying out surveys, gathering data or other temporary operations. The Minister may also allow activities in preparation for construction under s. 116(1A). The duration of authorisation under either section is at the Minister's discretion.

In the case of a PPFL, s. 87(1)(c)(ii) requires the licence applicant to provide details of the arrangements for the legal occupation of the proposed site, upon which the facility will be constructed. This usually relates to a lease over the area and is aimed at ensuring that all issues related to occupation of that site have been addressed. Planning, land leasing and construction approval arrangements relating to the development of the upstream production, processing and pipeline facilities and to the LNG Facilities site are described below in Section 8.2.3.3, Leasing of Land.

Access to land in the upstream and LNG Facilities site project areas for the conduct of engineering and environmental surveys for FEED and the EIS have been undertaken under a

Section 116 permit received from the Minister for Petroleum and Energy under the Oil and Gas Act, initially granted in December 2007 (Rimua, pers. com., 2007). The permit has been renewed as appropriate during FEED.

8.2.1.2 Construction Approval

Grant of the licence provides the licensee with the right to build and operate the facilities described in the licence; however, construction of the facility cannot commence without the written consent of the Director of the Department of Petroleum and Energy. The application for approval to construct the facility must include all the information listed in s. 183 of the Oil and Gas Act. Once approved, a permit is issued (see Section 8.2.4.2, Physical Planning for Urban Development).

8.2.2 Environment Act 2000

8.2.2.1 Environmental Impact Statement

The legal framework for regulating the environmental effects of the PNG LNG Project is administered by the Department of Environment and Conservation (DEC) under the Environment Act.

By notice dated 18 May 2007, Esso submitted a 'Notification of Preparatory Work on Level 2 and Level 3 Activities' for the PNG LNG Project to DEC under the provisions of s. 52 of the Environment Act. These levels are significant as they define those activities that require the preparation of an EIS. As shown in Tables 8.1 and 8.2, an EIS is triggered by numerous aspects of the project classified as either Level 2 or Level 3 activities under the act.

Table 8.1 highlights the main Level 3 activities listed in sub-category 18 of the Environment (Prescribed Activities) Regulation 2002 listed in the Notification of Preparatory Work project, such as construction of a gas pipeline and LNG Facilities.

Table 8.1 Notification of Level 3 Activities to DEC Under Provisions of the Environment Act (Prescribed Activities) Regulation 2002

Activity Number	Prescribed Activities
18.1	Recovery, processing, storage or transportation of petroleum products requiring the issue of a Petroleum Development Licence or a Pipeline Licence under the <i>Oil and Gas Act 1998</i> .
18.2	[...]liquefaction of natural gas requiring a Petroleum Processing Facility Licence issued under the <i>Oil and Gas Act 1998</i> .
19.2	Construction of sea ports and ship repair facilities serving ships of an individual tonnage of more than 500 tonnes.
19.3	Infrastructure construction that requires the reclamation of more than 5 hectares of land below the high water mark.

Table 8.2 summarises Level 2 activities for the purposes of s. 52 of the Environment (Prescribed Activities) Regulation 2002 that are relevant to the project:

Table 8.2 Notification of Level 2 Activities to DEC Under Provisions of the Environment Act (Prescribed Activities) Regulation 2002

Activity Number	Prescribed Activities
1.1	Drilling of oil and gas wells.
5.1	Manufacture of organic chemicals requiring a Petroleum Processing Facility Licence issued under the <i>Oil and Gas Act 1998</i> .
5.2	Pipeline transport and storage using facilities with a holding capacity of more than 0.5 million litres.
7.4	Quarrying involving the extraction of more than 100,000 tonnes per year.
10.2	Operation of fuel-burning power stations with a capacity of more than 5 megawatt but not including emergency generators.
11.4	Incineration, reprocessing, treatment or disposal of industrial waste of a capacity greater than 10 tonnes per year.
12.6	Construction of electricity transmission lines or pipelines greater than 10 km in length.
13.1	Damming or diversion of rivers or streams.

By notice dated 31 May 2007, DEC issued a Section 50 Notice To Undertake Environment Impact Assessment, which entails submission of an environmental inception report (EIR) under s. 52 and submission of an EIS under s. 53.

The EIR for this project was submitted to DEC in October 2007 and approval of the EIR was received from DEC in November 2007.

This EIS is submitted for the purposes of satisfying the requirements of the Section 50 Notice in that respect and its objectives are to describe:

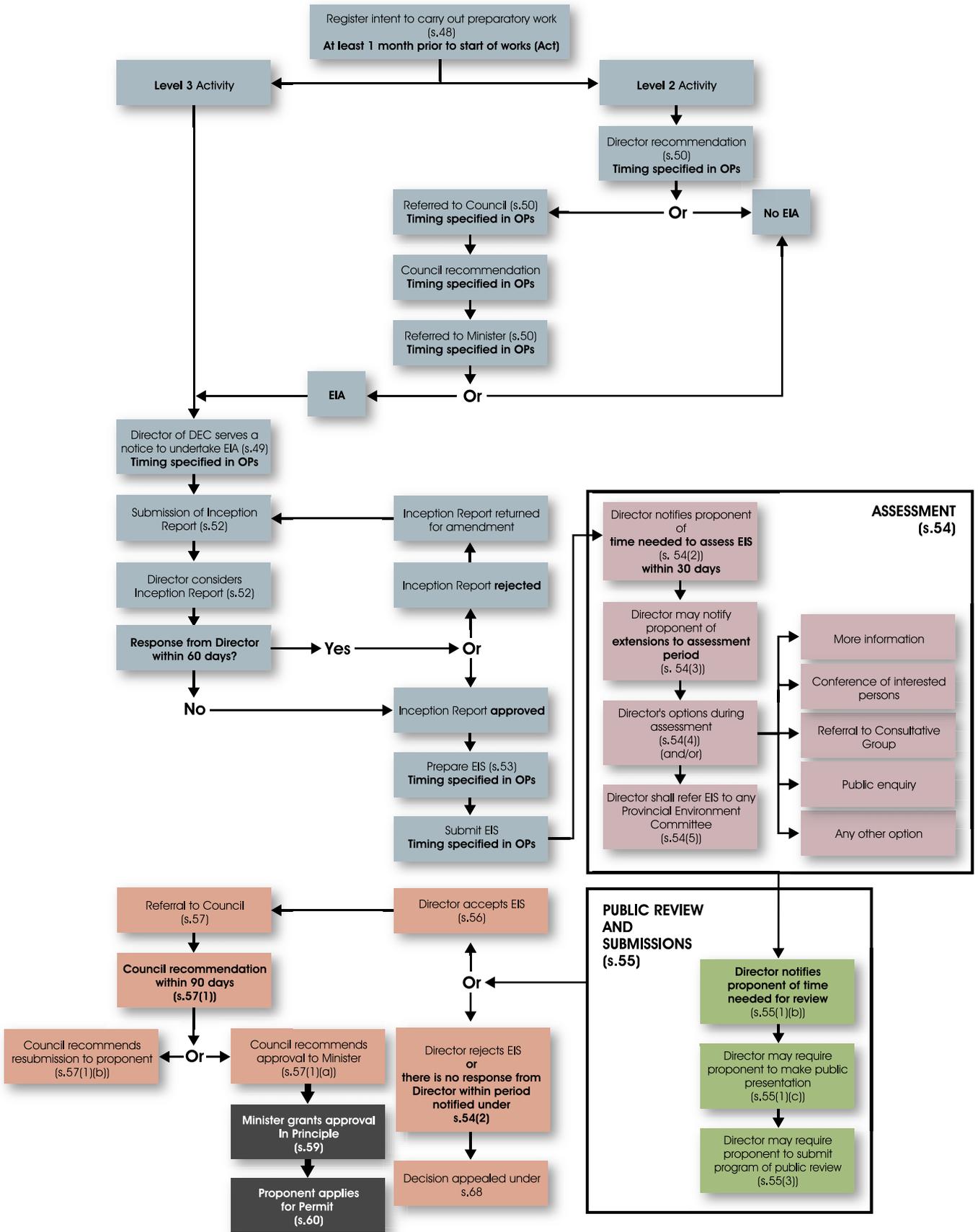
- The project and its social, cultural and environmental context.
- Potential impacts of the construction and operation of project facilities.
- Proposed management and mitigation measures.
- The environmental management framework to be implemented across the project area.

The PNG LNG Project EIS has been prepared with regard to specific comments received from DEC (Gawi, pers. com., 2007) in response to the draft EIR and to DEC's Information Guideline for Conduct of Environmental Impact Assessment that was attached to the Section 50 Notice and the assessment procedures.

8.2.2.2 EIS Approval Process

Figure 8.1 shows the EIS approval process stipulated by s. 51 of the Environment Act. Preparation of this EIS has been guided by the DEC publication GL-Env/02/2004, Guideline for Conduct of Environmental Impact Assessment and Preparation of Environmental Impact Statement. Attachment 2, Cross-reference of DEC Guidelines and Requirements to EIS Sections, is a cross-reference guide between the relevant sections of the EIS and the DEC EIS Guideline, as well as specific environmental and social issues identified by the DEC in their approval of the EIR and various issues raised by the DEC in meetings held during the EIS studies and reporting process.

DEC - Department of Environment and Conservation
EIA - Environmental Impact Assessment
EIS - Environmental Impact Statement
OPs - Operational Policies



Job No:
1284
File Name:
1284_09_F08.01_HB

Esso Highlands Limited
PNG LNG Project

EIA process under the *Environment Act 2000*

Figure No:
8.1

In brief, the EIS is submitted to the Director of DEC who has 30 days to inform the proponent of the length of the assessment period. The Director, while assessing the EIS, may refer the EIS to a number of bodies, such as an environment consultative group or a public enquiry committee. If a provincial environment committee has been established, the Director must refer the EIS to the committee for its comments.

After this preliminary assessment period, the Director will make the EIS available for public review and, during this time, the proponent may be required to make public presentations or submit a program of public review.

Following the public review, the Director must make a decision to accept or reject the EIS. If the EIS is rejected, the decision can be appealed under s. 68 of the Environment Act. If the EIS is accepted, the Director must refer the decision to the Environment Council together with an assessment report and any public submissions. The Environment Council then has 90 days to decide whether it is satisfied with the EIS. If the council is not satisfied with the EIS, it is returned to the proponent for revision and resubmission. If the council is satisfied with the EIS, it advises the Minister to approve the proposed activity in principle. After the approval in principle the proponent can apply for a permit to carry out its project.

8.2.2.3 Environmental Permit and Management

An application for a permit for a Level 3 activity must be accompanied by an EIS (i.e., this document). Sections 65 and 66 of the Environment Act provide criteria for granting and setting conditions of permits respectively. Under s. 66, these conditions may include:

- Installation of monitoring equipment (s. 66(1)(c)).
- Preparation and conduct of an environmental management program (s. 66(1)(d)).
- Audits (s. 66(1)(g)).
- Emergency response (s. 66(1)(h)).
- Baseline studies (s. 66(1)(k)).
- Rehabilitation (s. 66(1)(l)).

Chapter 30, Environmental Management, Monitoring and Reporting, describes the proposed environmental management framework for the PNG LNG Project.

8.2.2.4 Social Impact Assessment

Consideration of the potential social and economic impacts is an integral part of the environmental impact assessment under the Environment Act and the Oil and Gas Act.

Section 51 of the Environment Act requires that the likely social impacts of a proposed activity are set out in the EIS in accordance with the issues identified in the approved environmental inception report. Two DEC guidelines apply:

- DEC publication GL-Env/02/2004, Guideline for Conduct of Environmental Impact Assessment and Preparation of Environmental Impact Statement.
- DEC publication, Social Impact Assessment Guideline.

A socio-economic and cultural assessment has been conducted as part of this EIS in accordance with these guidelines. In addition, the results of social mapping and landowner identification

surveys conducted in accordance with the Oil and Gas Act requirements have been summarised to facilitate an understanding of the project's socio-economic issues and impacts and how they are to be addressed (see Chapter 23, Project-wide Socio-economic and Cultural Impacts and Mitigation Measures).

Section 47 of the Oil and Gas Act requires social mapping and landowner identification studies for PDLs, PRLs and PPLs. Section 48 states that the applicant must also submit a socio-economic impact statement as part of an environmental impact statement. Section 48 also stipulates that, before a PDL is granted, a development forum must be convened to gather and consider the views of the stakeholders in the project. Section 49 states that the development forum will not be convened until:

- Full-scale social mapping is complete.
- The Minister is satisfied that correct landowner representatives have been identified based on information provided in the social mapping reports.
- The Director has prepared and presented a proposal for equitable distribution of equity and royalty benefits to project-area landowners.

The results of the social mapping and landholder identification studies for the PNG LNG Project appear in eight new reports, linked to specific licence areas. Broadly, the different mapped areas reflect changes in the ethnic composition across the project area. Combined with previous social mapping and landowner identification by other operators, all project licence areas are completely covered. Section 23.2, Assessment Approach, provides more information on social mapping in the project area, with further details provided in Appendix 26, Social Impact Assessment.

Likewise, fundamental to the PNG LNG Project's socio-economic impacts is the 'development agreement' which governs the sharing of project benefits between the national, provincial and local levels of government and the landowners of the project impact area (see also Chapter 15, Socio-cultural Environment: Upstream Facilities and Pipelines; Chapter 17, Socio-economic Environment: LNG and Marine Facilities, and Chapter 23, Project-wide Socio-economic and Cultural Impacts and Mitigation Measures).

This EIS addresses the socio-economic assessment requirements outlined above by way of two sets of investigations: a social impact assessment (reported in the chapters listed above) and surveys of archaeological and cultural heritage (Chapter 14, Cultural Heritage Environment: Upstream Facilities and Pipelines; Chapter 16, Cultural Heritage Environment: LNG and Marine Facilities and Chapter 22, Project-wide Archaeological and Cultural Impacts and Mitigation Measures).

8.2.3 Statutory Planning Context for Project Facilities

8.2.3.1 *Physical Planning Act 1989*

The *Physical Planning Act 1989* (Physical Planning Act) incorporates a comprehensive mechanism for physical planning at national and provincial levels of government and provides powers for the planning and regulation of physical development.

The Physical Planning Act applies to towns, the National Capital District and areas declared by the Minister in the National Gazette to be physical planning areas in the national interest. The

proposed LNG Facilities site on the coast at Caution Bay occupies part of an area previously known as Portion 152. This area has recently been divided and the new names are shown in Figure 8.2. The LNG Facilities site is proposed to occupy Portions 2456, 2457 and 2458 and has been deemed a Project of National Interest (see also Section 8.2.6, Summary of Project Approvals). As Central Province has no Provincial Physical Planning Board, planning activity for the site will be administered by the National Physical Planning Board.

The Oil and Gas Act recognises the authority of the Physical Planning Act. It requires the Minister for Petroleum and Energy to have regard to physical planning considerations before granting a PPL, a PDL or a PL. Furthermore, an applicant for a PL must notify the National Physical Planning Board if the proposed pipeline passes through a physical planning area.

Within a physical planning area, a developer must apply for zoning (to 'isolated industrial' in the case of the LNG Facilities site) of land not previously categorised ('white land', as defined in the Physical Planning Regulation 1990 (s. 3(5), Physical Planning Regulation)). Such an application is treated as an application for planning permission.

An application for planning permission can either seek outline planning permission, for subsequent approval, or full planning permission (s. 7, Physical Planning Regulation). An application for full planning permission can only be made when all details of the proposed development are known. Applications are submitted to the National Physical Planning Board, which either grants or refuses planning permission.

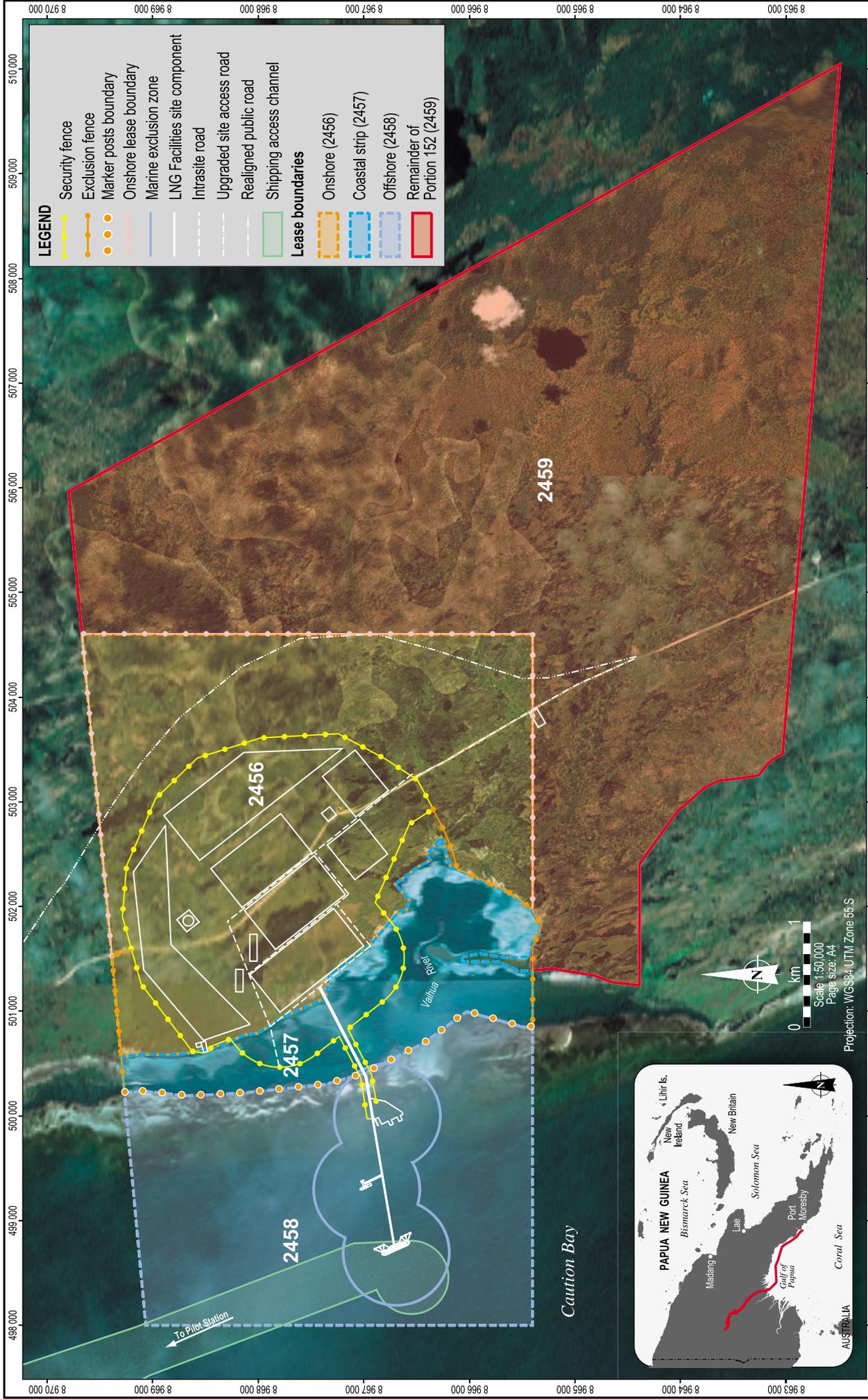
8.2.3.2 Provincial Planning

For upstream project developments, planning for, and monitoring of, expenditure of monies accruing to provincial and local-level governments as benefits from petroleum projects is conducted by the Expenditure Implementation Committee (s. 178, Oil and Gas Act). Such expenditure must accord with development plans submitted by the relevant provincial and local-level governments. The Expenditure Implementation Committee is also responsible for monitoring and approval of all tax credit expenditure pursuant to s. 219C of the *Income Tax Act 1959*. Currently, the Expenditure Implementation Committee is the responsibility of the Department of National Planning but this responsibility may, at some future date, be transferred to the DPE.

8.2.3.3 Leasing of Land

Esso proposes to lease the land required for the development of the LNG Facilities site. Customary land cannot be leased. Therefore, such land has first to be alienated by the state, in accordance with s. 5 of the *Land Act 1996* (Land Act), either by compulsory or voluntary means. Customary landowners are compensated by the state for the loss of their land.

An applicant for a lease must first ensure that the land is appropriately zoned and apply for planning permission if the land required is part of a physical planning area. The applicant then must conduct a boundary survey of the area and register the survey plans with the Office of the Surveyor General. Once the lease application is submitted, the Valuer General will assess the value of the land in order to determine an appropriate annual value for the lease. On the advice of the Land Board (s. 57(2), Land Act), the Minister may then grant the lease. Leases are normally granted for a period of 99 years.



- LEGEND**
- Security fence
 - Exclusion fence
 - Marker posts boundary
 - Onshore lease boundary
 - Marine exclusion zone
 - LNG Facilities site component
 - Intrasite road
 - Upgraded site access road
 - Realigned public road
 - Shipping access channel
- Lease boundaries**
- Onshore (2456)
 - Coastal strip (2457)
 - Offshore (2458)
 - Remainder of Portion 152 (2459)

Figure No:	8.2
Date:	26.09.2008
Scale:	1:50,000
Page size:	A4
Projection:	WGS84 UTM Zone 55 S
PNG LNG	
File Name:	1234_09_F08.02_GIS_HB
Project:	PNG LNG Project GIS.mxd
Client:	Esso Highlands Limited
Project:	PNG LNG Project
<p>Note: Layout is indicative only. Final placement of all components is contingent on pending soil and geological data.</p>	

The PNG Government has announced its intention to create the Konebada Petroleum Park, in the vicinity of Port Moresby, to facilitate petroleum developments based on the commercialisation of PNG's natural gas. The *Konebada Petroleum Park Authority Act 2008* was promulgated on 26 November 2008. Depending on the details of the act, lease arrangements for the proposed LNG Facilities site may vary from those described above.

8.2.3.4 Construction Approval

Grant of a PDL provides the licensee with the right to build and operate a production facility. Nonetheless, the licensee shall not commence the construction of a facility without the written approval of the Director (s. 182, Oil and Gas Regulation 2002). An application for approval to construct the facility must include all the information listed in s. 183 of the Oil and Gas Regulation. Once granted, this approval is provided in the form of a permit to construct.

8.2.4 Project Urban Planning Requirements: Office and Residential

8.2.4.1 Context

The PNG LNG Project is developing plans to construct long-term office and residential accommodation for its workers not directly involved in production operations at the LNG Facilities site. The office will accommodate about 300 staff and, initially, housing will be required for approximately 120 families. The office and residential buildings will be located within the National Capital District and therefore their construction will be subject to both National Capital District by-laws and national laws and regulations. Application of the National Capital District by-laws is a function of the Regulatory Services Division of the National Capital District Commission.

The extent of the planning process for construction will depend on whether or not the PNG LNG Project decides to acquire land that has already been recognised and prepared for office and residential accommodation.

8.2.4.2 Physical Planning for Urban Development

In accordance with the Physical Planning Act (Part V), the National Capital District Physical Planning Board is empowered to consider and determine all physical planning matters, which are wholly within the National Capital District.

Urban planning applications are administered similarly to other development planning applications under the Physical Planning Act with respect to outline and full planning permission as described in Section 8.2.3.1, *Physical Planning Act 1989*, above). Planning approval granted by the National Capital District Physical Planning Board is for broad developmental approval, focusing on town planning/urban planning issues.

The National Capital District Physical Planning Board is supported by the National Capital District Regulatory Services Division, which ensures that development within the National Capital District is appropriately planned and coordinated, and that infrastructure and buildings are constructed to approved, environmentally sound, standards in compliance with the *Building Act 1971* (Building Act) and the Building Regulation 1994 (Building Regulation). The National Capital District Building Authority enforces the Building Act.

Planning approval to construct buildings is granted by the National Capital District Physical Planning Board once the National Capital District Building Authority has ensured compliance with building legislation and codes.

8.2.5 Other PNG Legislation and Regulations

8.2.5.1 Other PNG Environmental Legislation and Regulation

Table 8.3 provides a summary of the other PNG acts and regulations that are applicable to the construction and implementation of the project from an environmental perspective.

Table 8.3 Other environmental legislation and regulations

Statutory Instrument	Implications for the Project
<i>Environment and Conservation</i>	
Environment (Fees and Charges) Regulation 2002	Procedures for permit fees and charges for environmental impact assessment and permit, water use, discharges to water and disturbed area runoff. Fees and charges are set by DEC.
Environment (Permits and Transitional) Regulation 2002	These define procedures for applications for, processing of, appeals against, and compliance with, environmental permits.
Environment (Prescribed Activities) Regulation 2002	The project is considered a Level 3 activity (sub-category 18.2 for the liquefaction of natural gas requiring a PPFL and sub-category 19.2 for the construction of sea ports for ships greater than 500 t) and requires an EIS.
Environment (Procedures) Regulation 2002	Procedures of the Environment Council (who will provide advice to the Minister on the EIS).
Environment (Water Quality Criteria) Regulation 2002	Permit required to set a mixing zone, the boundary at which prescribed water quality criteria are to be met.
<i>Fauna (Protection and Control) Act 1966</i>	Requires measures to prevent poaching of wildlife by the workforce.
<i>Conservation Areas Act 1978</i>	Provides for the preservation of the environment and of the natural cultural inheritance by the conservation of sites and areas having particular biological, geological, historic, scientific or social importance and the management of those sites and areas. The Minister may refer any proposals for development to the National Conservation Council (formed under the Act) to consider any development affecting, or in the vicinity of a conservation area, and to assist the Minister on the formulation of rules applicable to conservation areas.
<i>International Trade (Fauna and Flora) Act 1979</i> (Chapter 391)	Requires measures to prevent poaching of wildlife by the workforce.
The Environmental Code of Practice for Sanitary Landfill Sites PNG 2001	Code to be followed for the project landfill sites where required.
<i>Marine</i>	
<i>Dumping of Wastes at Sea Act 1979</i> ¹ (Chapter 369)	Application for permit to dump waste at sea if required.
<i>Prevention of Pollution at Sea Act 1979</i> ¹ (Chapter 371)	Standard offshore operating requirements for contractors and operators.

Table 8.3 Other environmental legislation and regulations (cont'd)

Statutory Instrument	Implications for the Project
Petroleum	
Oil and Gas Regulation 2002	<p><i>Manuals:</i></p> <ul style="list-style-type: none"> • Safety Instructions for Operations. • Emergency Response. <p><i>Approvals:</i></p> <ul style="list-style-type: none"> • To interfere with any existing pipeline or with any road, airstrip, telephone or power transmission line or cable, radio mast or other public utility or facility. • To conduct geophysical, geological and/or related operations. • To dispose of liquids. • To commence construction of a facility. • Pipeline safety, operating, commissioning and emergency procedures and start of operations. <p><i>Metering:</i></p> <ul style="list-style-type: none"> • Certification.

¹ The PNG Parliament is considering four new bills that, if adopted, will bring PNG law into line with international standards and will also result in these two acts being repealed. The new bills are Marine Pollution (Ships and Installations) Bill, Marine Pollution (Sea Dumping) Bill, Marine Pollution (Preparedness and Response) Bill and Marine Pollution (Liability and Cost Recovery) Bill. While the bills do not yet form part of PNG legislation at the time of writing, requirements and regulations contained in them, including a provision for waste reception facilities at all PNG ports, have been considered in this EIS.

8.2.5.2 Other Relevant Legislation and Regulations

Papua New Guinea has an array of legislation and regulations in force, all of which are relevant to varying degrees to the project. The most pertinent of these more general acts and regulations cover commercial, professional and health issues, such as:

- *Building Act 1971* and Building Regulation 1994.
- Customs (Prohibited Imports) Regulation.
- *Explosives Act 1953*.
- *Fire Service Act 1962* and Fire Service Regulation 1966.
- *Industrial Safety, Health and Welfare Act 1961* and Industrial Safety, Health and Welfare Regulation.
- *Inflammable Liquid Act 1953* and Inflammable Liquid Regulations.
- *Konebada Petroleum Park Authority Act 2008*.
- *Licensing of Heavy Vehicles Act 1977*.
- *Physical Planning Act 1989*.
- Public Health (Drinking Water) Regulation.
- *Road Maintenance Act 1971*.
- Water Supply and Sewerage Act 1996.

A complete list of legislation potentially applicable to the PNG LNG Project is provided in Attachment 4, Potentially Applicable Legislation.

8.2.6 Summary of Project Approvals

Tables 8.4 and 8.5 show the major approvals required for the full implementation of the project. The coordination and processing of the various project permits, licence applications and approvals for the project is a major undertaking for the PNG Government. To this end, the state has established the LNG Coordination Office, which is tasked with overseeing and facilitating the timely processing of the various project approvals through the individual government agencies. The LNG Coordination Office reports to the Ministerial Economic Committee under the PNG Department of Treasury and Planning.

The locations of the Oil and Gas Act licences (existing and to be applied for) and their relationship to one another are shown in Figure 8.3.

The various project pipeline licence applications will seek approval for a 1-km-wide corridor from within which the final ROW alignment will be pegged. This level of flexibility is required at the EIS stage of the project planning process (see Section 1.2.3, Current Status of the Project) to allow optimisation of the final route alignment to avoid potential geotechnical, biodiversity and socio-cultural constraints at the local level which could not be determined at the scale of environmental and social characterisation baseline study conducted for the EIS. As described in Section 2.4, Common Construction Activities, a multidisciplinary preconstruction survey will be undertaken to optimise pipeline routing at the local scale in the detailed design stage of the project.

The final routing of the pipeline ROW within the 1-km-wide corridor will be based on engineering, biodiversity and cultural or landowner inputs and sensitivities at the local scale. Final routing will consider the protection of health and safety of the community and the environment.

8.3 International Conventions and Guidelines

8.3.1 International Environmental Agreements

Table 8.6 summarises the international treaties, conventions and protocols to which the PNG Government is a signatory and identifies those aspects of the project to which they may be relevant.

In general, these treaties are effective in local law only after implementing legislation has been enacted in a signatory country. Elements of these agreements may relate to mitigation and management of environmental and social impacts of the project in those instances where the PNG Government has passed local laws to fulfil their statutory obligations.

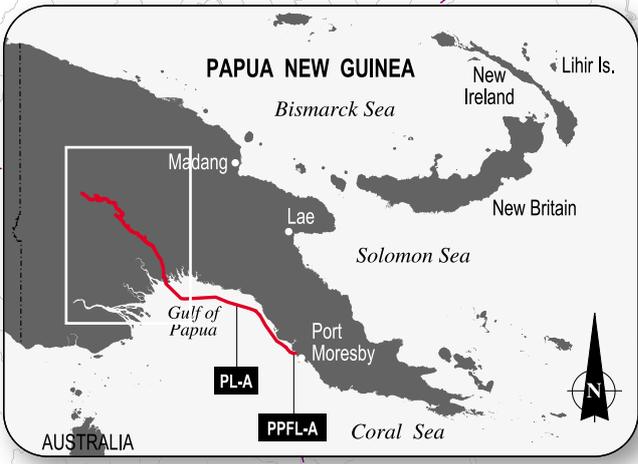
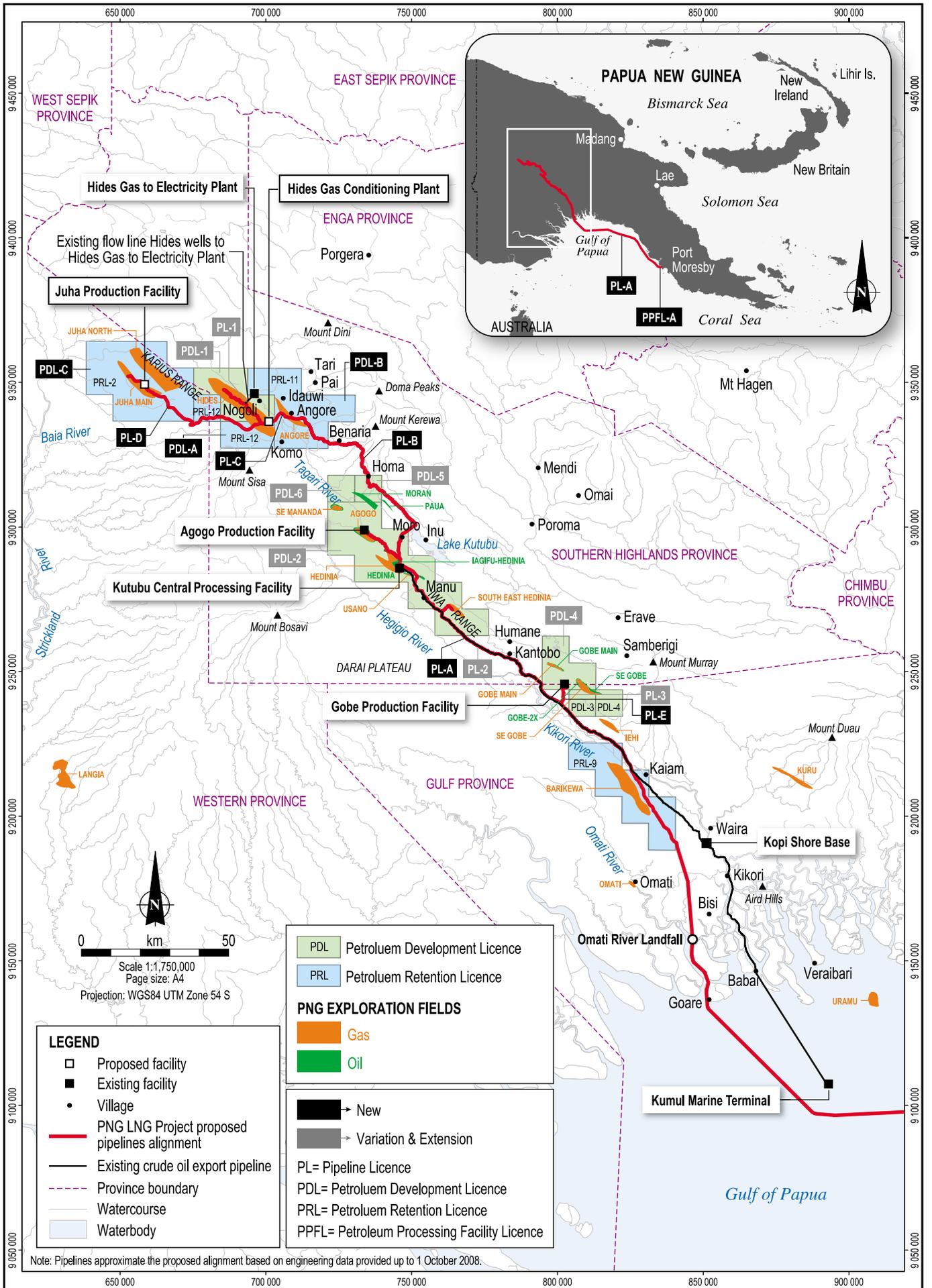
Table 8.4 Government approvals for full project implementation (licences)

Licence Type	Purpose	Licence			Location	Relevant Legislation or Regulation
		Number*	New	Varied		
Petroleum development licence	Extraction of petroleum	PDL-1		Y	Y	Various (see Figure 8.3) Oil and Gas Act
		PDL-2		Y	Y	
		PDL-4		Y	Y	
		PDL-5		Y	Y	
		PDL-6		Y	Y	
		PDL-A	Y			
		PDL-B	Y			
		PDL-C	Y			
		Pipeline licence	Pipeline licence	PL-1		
PL-2				Y	Y	
PL-3				Y	Y	
PL-A	Y					
PL-B	Y					
PL-C	Y					
Petroleum processing facility licence	LNG Facilities site	PL-D	Y			Portions 2456, 2457 and 2458 Oil and Gas Act
		PL-E	Y			
		PPFL-A	Y			

*PDL-A, PDL-B, etc. are arbitrary designations used to distinguish the licences being applied for from one another on Figure 8.3. A numeral will replace the letter if the licence is approved.

Table 8.5 Government approvals for full project implementation (other)

Instrument or Authority	Purpose	Location	Relevant Legislation or Regulation
Notice of intention to carry out preparatory work	Notification to Government of intention to carry out level 2 and level 3 activities	Project area	s. 48, Environment Act
Environment permit	Authority to carry out level 2 and level 3 activities	Project area	s. 65, Environment Act
Ministerial authorisation	Authority to enter land for surveying, testing, temporary operations	Project area	s. 116(1), Oil and Gas Act
Ministerial authorisation	Authority to enter land for construction works	Project area	s. 116(1A), Oil and Gas Act
Full planning permission	Zoned to 'Isolation Industrial'	Portions 2456, 2457 and 2458	Physical Planning Act
Outline planning permission	LNG Facilities site	Portions 2456, 2457 and 2458	Physical Planning Act
Full planning permission	LNG Facilities site	Portions 2456, 2457 and 2458	Physical Planning Act



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 Projection: WGS84 UTM Zone 54 S

LEGEND

- Proposed facility
- Existing facility
- Village
- PNG LNG Project proposed pipelines alignment
- Existing crude oil export pipeline
- - - Province boundary
- Watercourse
- Waterbody

PNG EXPLORATION FIELDS

- Gas
- Oil

■ → New
 ■ → Variation & Extension
 PL= Pipeline Licence
 PDL= Petroleum Development Licence
 PRL= Petroleum Retention Licence
 PPFL= Petroleum Processing Facility Licence

Note: Pipelines approximate the proposed alignment based on engineering data provided up to 1 October 2008.

Table 8.6 Relevant international agreements to which PNG is a signatory

Title	Objective	Relevance to the Project
International Plant Protection Convention (1976)	Promotes international cooperation to control pests and diseases of plants and plant products.	Construction hygiene.
Convention on Biological Diversity (1992)	Preserving and sustaining biological diversity.	Biodiversity studies and management.
Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973)	To ensure that international trade in specimens of wild animals and plants does not threaten their survival.	Biodiversity studies and management.
Convention for the Protection of the Natural Resources and Environment of the South Pacific Region (1990)	Protection, development and management of the South Pacific marine and coastal environment.	Biodiversity studies and management.
Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention) (1993)	An international regime for the 'conservation and wise use' of wetlands and waterfowl populations.	Construction works and operations in the catchment of Ramsar-listed Lake Kutubu.
Convention on the Conservation of Migratory Species of Wild Animals (1979)	An international regime for the protection of migratory animals and their habitats, and the prevention, reduction and control of factors that endanger them.	Biodiversity studies and management of migratory species of terrestrial, marine and avian species of wild animals.
Convention Concerning the Protection of World Cultural Heritage and Natural Heritage (1972)	An international regime for the protection of indigenous cultural and environmental heritage.	Management and protection of cultural heritage sites, traditions and natural features during construction and operations.
United Nations Framework Convention on Climate Change (1992)	The reduction of negative changes to the earth's climate, with a particular focus on greenhouse gases. Places onus on industrialised countries (Annex 1 countries) to reduce emissions. Developing countries like Papua New Guinea are currently exempt from the reduction requirement; however, this may change.	Greenhouse gas emissions to be reported to the Office of Climate Change.
Vienna Convention for the Protection of the Ozone Layer (the Vienna Convention) (1993)	Protection of the ozone layer.	Compliance with standards and protocols.
International Convention for the Prevention of Pollution from Ships 1973 (as modified by the London Protocol of 1978) (MARPOL) (1994)	The convention requires member states to minimise the risk of marine pollution from ships, in particular, oil tankers.	Marine pipe laying vessel operations, ballast water disposal, shipping pollution, emergency plans for LNG carriers.
The Convention of the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention)(1972)	To limit the discharge of wastes at sea.	Dredging. Also applies if overburden is discharged into the sea for development of LNG Facilities.

Table 8.6 Relevant international agreements to which PNG is a signatory (cont'd)

Title	Objective	Relevance to the Project
United Nations Convention on the Law of the Sea (UNCLOS) (1994)	Multilateral agreement on the law of the sea, in particular the protection and preservation of the marine environment.	Marine biodiversity studies and management.
Convention to Ban the Importation into Forum Island Countries of Hazardous Wastes and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region (Waigani Convention) (2001)	Prescription of international trade in hazardous waste and notification procedures, monitoring mechanisms and cooperative authorities.	Plant and materials selection for construction and operations.
Stockholm Convention on Persistent Organic Pollutants (POPs) (2004)	A legally binding, international ban on the use and production of a range of persistent organic pollutants (POPs) includes eight organo-chlorine pesticides, two industrial chemicals and two groups of industrial by-products: dioxins and furans.	Many of the POPs are products of combustion.

8.3.2 Equator Principles

The Equator Principles (EPFI, 2006) were developed by private sector banks and have become the de facto standard for banks and financial institutions on how to assess major development projects around the world. They are based on the environmental and social performance standards of the International Finance Corporation, the organisation of the World Bank Group responsible for providing private sector investment in developing countries. Esso will consider relevant environmental, health and safety standards of the International Finance Corporation or other appropriate standards where suitable PNG criteria do not exist. The environmental and social performance standards adopted for the project will be guided by the performance criteria used to assess environmental and social impacts of the project and reported in this EIS (Part III, Environmental and Social Impact Assessment and Management), the project's proposed environmental and social management and mitigation commitments (see Chapter 29, Summary of Mitigation and Management Commitments), the PNG Government's conditions of approvals of the EIS, and the performance requirements of possible financiers of the project. The project's adopted environmental and social performance standards will be documented in an environmental and social performance standards compliance plan that will be used by the project's environmental management plans to monitor the impacts of the project through construction and operations (see Chapter 30, Environmental Management, Monitoring and Reporting).