



MINISTER FOR THE ENVIRONMENT;
EMPLOYMENT AND TRAINING

Statement No.

000482

**STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED
(PURSUANT TO THE PROVISIONS OF THE
ENVIRONMENTAL PROTECTION ACT 1986)**

**SECOND OFFSHORE TRUNKLINE AND DOMGAS DEBOTTLENECKING
NORTH-WEST SHELF**

Proposal: The construction and installation of a second trunkline approximately 150 kilometres in length to carry gas/condensate from the existing offshore production platforms (situated in offshore Commonwealth waters) to the existing processing facilities on the Burrup Peninsula.

Quarrying of rock to armour the pipeline and construction of rock load-out facilities. Quarrying will be carried out on the Burrup Peninsula, inland from the existing Woodside plant.

In addition, debottlenecking of the existing onshore facilities on the Burrup Peninsula will be carried out to facilitate increased domestic gas production.

See schedule 1 for key characteristics and other details of the proposal.

Proponent: Woodside Offshore Petroleum Pty Ltd

Proponent Address: 1 Adelaide Terrace, Perth, Western Australia 6000

Assessment Number: 1105

Report of the Environmental Protection Authority: Bulletin 893

The proposal to which the above report of the Environmental Protection Authority relates may be implemented subject to the following conditions and procedures:

1 Implementation

1-1 Subject to these conditions and procedures, the proponent shall implement the proposal as documented in schedule 1 of this statement.

1-2 Where, in the course of implementing the proposal, the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

Published on

14 JUL 1998

2 Proponent Commitments

- 2-1 The proponent shall implement the consolidated environmental management commitments documented in schedule 2 of this statement.
- 2-2 The proponent shall implement subsequent environmental management commitments which the proponent makes as part of the fulfilment of conditions and procedures in this statement.

3 Environmental Management System

- 3-1 In order to manage the environmental impacts of the project, and to fulfil the requirements of the conditions and procedures in this statement, prior to ground-disturbing activities, the proponent shall demonstrate to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection that there is in place an environmental management system which includes the following elements:
 - 1. environmental policy and commitment;
 - 2. planning of environmental requirements;
 - 3. implementation and operation of environmental requirements;
 - 4. measurement and evaluation of environmental performance; and
 - 5. review and improvement of environmental outcomes.
- 3-2 The proponent shall implement the environmental management system referred to in condition 3-1.

4 Environmental Management Plan for Load-out Facilities

- 4-1 Prior to finalisation of the design for the trestle jetty and wharf extension, the proponent shall prepare an Environmental Management Plan for Load-out Facilities to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.

This plan shall address:

- 1. the design, construction, dimensions and location of the jetty;
 - 2. the design, construction, dimensions and location of the wharf extension;
 - 3. the predicted effects of these structures (if any) on long shore currents, coastal processes, shore line profile and mangrove ecology; and
 - 4. methods of managing and mitigating effects on long-shore currents, coastal processes, shore line profile and mangrove ecology.
- 4-2 The proponent shall implement the Environmental Management Plan for Load-out Facilities required by condition 4-1.
 - 4-3 The proponent shall make the Environmental Management Plan for Load-out Facilities required by condition 4-1 publicly available, to the requirements of the Environmental Protection Authority.

5 Performance Review

5-1 Each six years following the commencement of construction, the proponent shall submit a Performance Review to evaluate the environmental performance relevant to:

- 1 environmental objectives reported on in Environmental Protection Authority Bulletin 893;
- 2 proponent's consolidated environmental management commitments documented in schedule 2 of this statement and those arising from the fulfilment of conditions and procedures in this statement;
- 3 environmental management system environmental management targets;
- 4 Environmental Management Programs and Plans; and
- 5 environmental performance indicators;

to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.

Note:

- 1 The Environmental Protection Authority may recommend changes and actions to the Minister for the Environment following consideration of the Performance Review.
- 2 The Performance Review submitted will form part of the Triennial Report on Environmental Investigations required under the North West Shelf Gas (Woodside) Agreement Act 1979.

6 Proponent

6-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the Environmental Protection Act is responsible for the implementation of the proposal until such time as the Minister for the Environment has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person in respect of the proposal.

6-2 Any request for the exercise of that power of the Minister referred to in condition 6-1 shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the proposal in accordance with the conditions and procedures set out in the statement.

6-3 The proponent shall notify the Minister for the Environment of any change of proponent contact name and address within 30 days of such change.

7 Commencement

7-1 The proponent shall provide evidence to the Minister for the Environment within five years of the date of this statement that the proposal has been substantially commenced.

7-2 Where the proposal has not been substantially commenced within five years of the date of this statement, the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment will determine any question as to whether the proposal has been substantially commenced.

7-3 The proponent shall make application to the Minister for the Environment for any extension of approval for the substantial commencement of the proposal beyond five years from the date of this statement.

7-4 Where the proponent demonstrates to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority that the environmental parameters of the proposal have not changed significantly, then the Minister may grant an extension not exceeding five years for the substantial commencement of the proposal.

8 Compliance Auditing

8-1 The proponent shall submit periodic Performance and Compliance Reports, in accordance with an audit program prepared in consultation between the proponent and the Department of Environmental Protection.

8-2 Unless otherwise specified, the Department of Environmental Protection is responsible for assessing compliance with the conditions contained in this statement and for issuing formal clearance of conditions.

8-3 Where compliance with any condition or procedure is in dispute, the matter will be determined by the Minister for the Environment.

Note

1 The proponent is required to apply for a Works Approval and Licence for this project under the provisions of Part V of the Environmental Protection Act.


CHERYL EDWARDES (Mrs) MLA
MINISTER FOR THE ENVIRONMENT

13 JUL 1998

Schedule 1

Proposal:

The construction and installation of a second trunkline approximately 150 kilometres in length to carry gas/condensate from the existing offshore production platforms (located in offshore Commonwealth waters) to the existing processing facilities on the Burrup Peninsula.

Quarrying of rock will be required to armour the pipeline. The total quantity of rock required has not yet been accurately assessed, but studies to date have shown that the requirements are likely to be of the order of 0.8 to 2 million cubic metres requiring a total of up to 3 million cubic metres of rock to be quarried. To provide this volume of rock a new quarry (or quarries) is required.

Load-out of 50,000 to 80,000 tonnes of rock per week is anticipated. To support this, a large stockpile area will be required as quarrying rates will occasionally exceed demand. The location of the stockpile area has yet to be finalised, but is likely to be at Holden Point.

The existing King Bay wharf will be extended using sheeting and rock back-fill. A trestle jetty and conveyor belt will be required for smaller rock. The location of the trestle load-out facilities has yet to be finalised.

In addition, debottlenecking of the existing onshore facilities will be carried out to facilitate increased domestic gas production.

Summary of key proposal characteristics

Proposal Characteristic	Description
Construction of second trunkline	A second trunkline will be installed on the seabed between the Goodwyn/North Rankin production platforms on the North-West Shelf and the existing gas treatment plant on Burrup Peninsula.
Length of trunkline	148 to 159 km (depending on final route selected)
Location and depth	Aligned with existing trunkline, but offset up to 15 km to the North-east. Pipeline installed to a depth of 30 to 130 metres in deeper waters and 0 to 30 metres inshore.
Trunkline connections	Risers at offshore platforms and new trunkline onshore terminal (TOT) at gas treatment facilities.
Preparation of pipelengths	The pipe sections will be corrosion-treated, weighted with concrete, and stockpiled prior to pipelaying. The preferred site for these activities is the rehabilitated (previously disturbed) Hearson's Village Construction Camp.
Stabilisation and protection	Ploughed into seabed or in trench and covered with rock material as required.

Proposal Characteristic	Description
Land requirements	The rock storage area, load-out and new haul road will require about 5.5 hectares of "new" (previously undisturbed) land. An additional 20-30 hectares of previously undisturbed land will be required for the two quarries.
Quarries	Quarrying of rock will be required to armour the pipeline. The proponent states that the total quantity of rock required has not yet been accurately assessed, but studies to date have shown that the requirements are likely to be of the order of 0.8 to 2 million cubic metres requiring a total of up to 3 million cubic metres of rock to be quarried. The existing quarry behind Holden Point will be extended further south. This would be supplemented by an area further inland in an area proposed for inclusion in Woodside's new lease for future onshore treatment plant expansion. The total area to be quarried (from both areas) will be 20 to 30 hectares.
Rock stockpile	Load-out of 50,000 to 80,000 tonnes of rock a week is anticipated. To support this, a large stockpile area will be required as quarrying rates will occasionally outstrip demand. The location of the rock stockpile has yet to be confirmed, but is likely to be at Holden Point.
Rock load-out	Load-out facilities will be required for supplies of rock for armouring the subsea trunkline. Crushed rock will be transported by haulpak-type trucks to a stockpile area and thence loaded onto specialist rock-dumping vessels. A load-out platform for large rock will be constructed by building an extension to King Bay wharf using sheeting and rock back-fill. A trestle jetty/conveyor belt for smaller rock will also be required (location yet to be confirmed). The proponent has made a commitment to remove the trestle structures at completion of the project.
Hydrostatic pressure tests	Constructed trunkline pressure tested and hydrotest water containing corrosion inhibitors and biocides released into ocean at platforms, and, inshore, into impervious (clay lined) evaporation ponds situated within the Woodside lease area. The total volume of hydrotest water to be released into the evaporation ponds will be about 300 cubic metres. Trunkline may also be treated with glycol which would be recovered and recycled. Pickle liquors (cleaning reagents for small diameter piping) will be recycled or disposed of in a manner to be approved by the Department of Environmental Protection.
Debottlenecking onshore plant	Existing DOMGAS plant will be modified to increase design capacity by 65%. Proposal comprises piping modification, installation of metering units, a mercury absorption bed, sales gas compressors and possibly a fractionation unit as proposed in the Liquid Expansion Project (LEP). There will be no additional gas turbines required (waste heat recovery units will be installed on existing turbines).
Greenhouse gas emissions	Woodside's onshore treatment plant (OTP) currently produces approx 5 million tonnes of greenhouse gas equivalents per annum. With use of heat recovery units, the project will result in a 65% increase in plant production, but an estimated increase in annual greenhouse gas emissions of the order of 2%.

Proposal Characteristic	Description
NOx emissions	Current OTP operations produce approx 6,000 tonnes of NOx per annum. The proposal is predicted to increase annual NOx emissions by less than 4%.
Operation of pig receiver	Depressurised gas either vented, flared or recovered depending upon frequency of operation.
Operational discharges	No additional produced formation water will be generated as a result of the current proposal. Waste heat will be utilised through heat exchangers. There will be no emissions of waste heat to coastal waters.

Maps and plans

The location/layout of the project are shown in figures 1 to 5 (attached):

Figure 1 - location map.

Figure 2 - offshore trunkline route locations.

Figure 3 - trunkline route locations inshore.

Figure 4 - quarry locations and land requirements.

Figure 5 - onshore gas treatment plant layout.

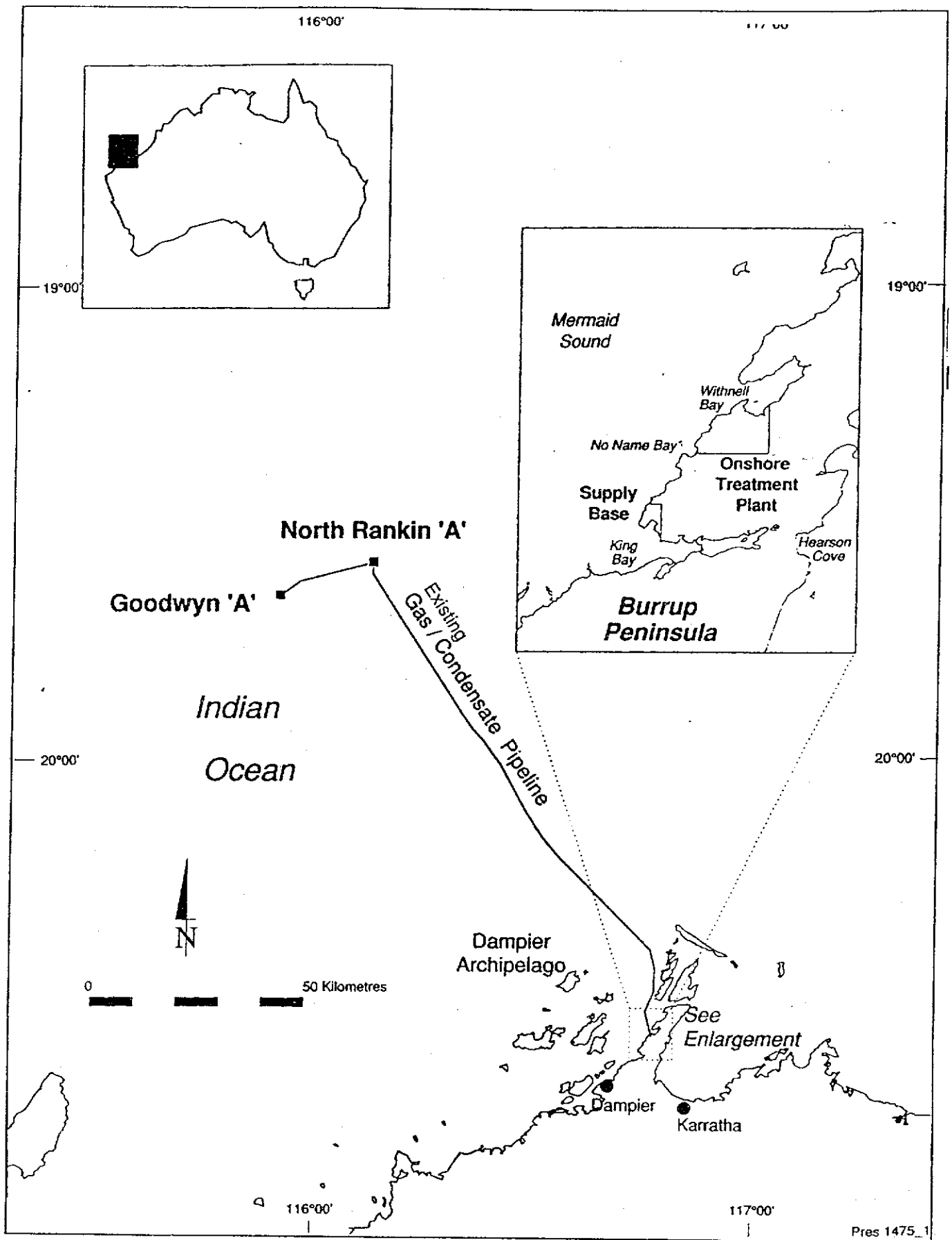


Figure 1. Location map (Source: Woodside Offshore Petroleum PER 1997).

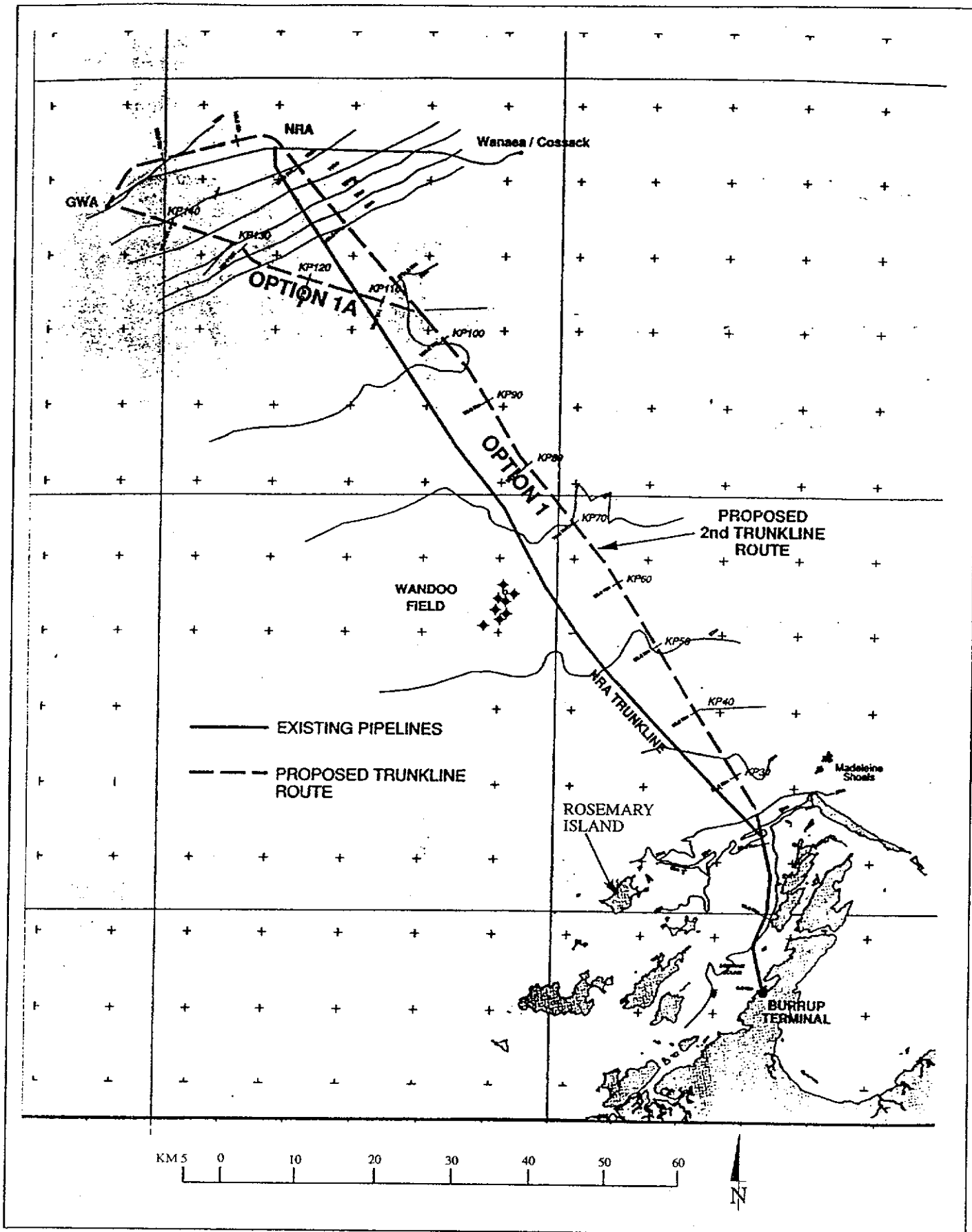


Figure 2. Trunkline route locations — offshore (Source: Woodside Offshore Petroleum PER 1997).

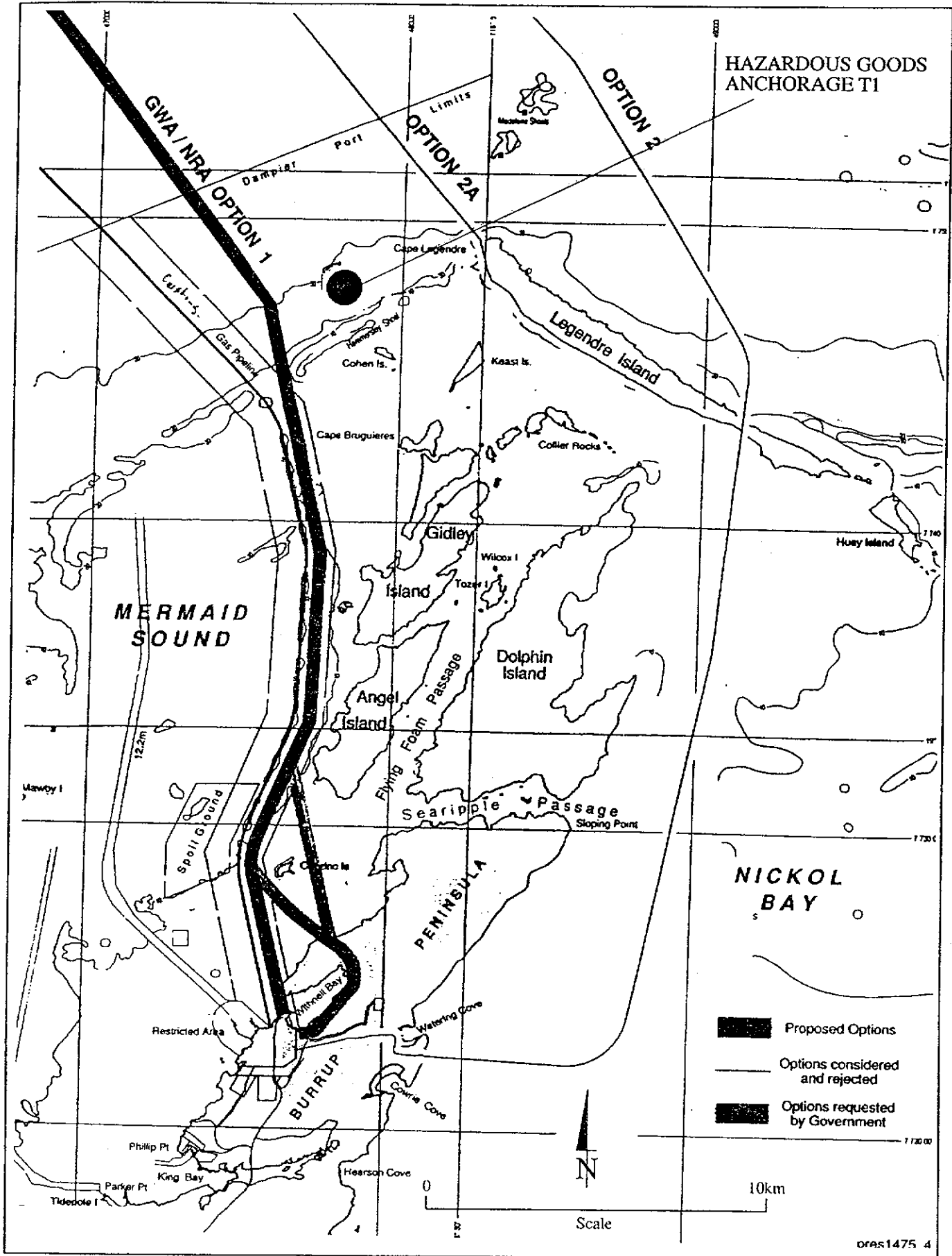


Figure 3. Trunkline route locations - inshore (Source: Woodside Offshore Petroleum PER 1997).

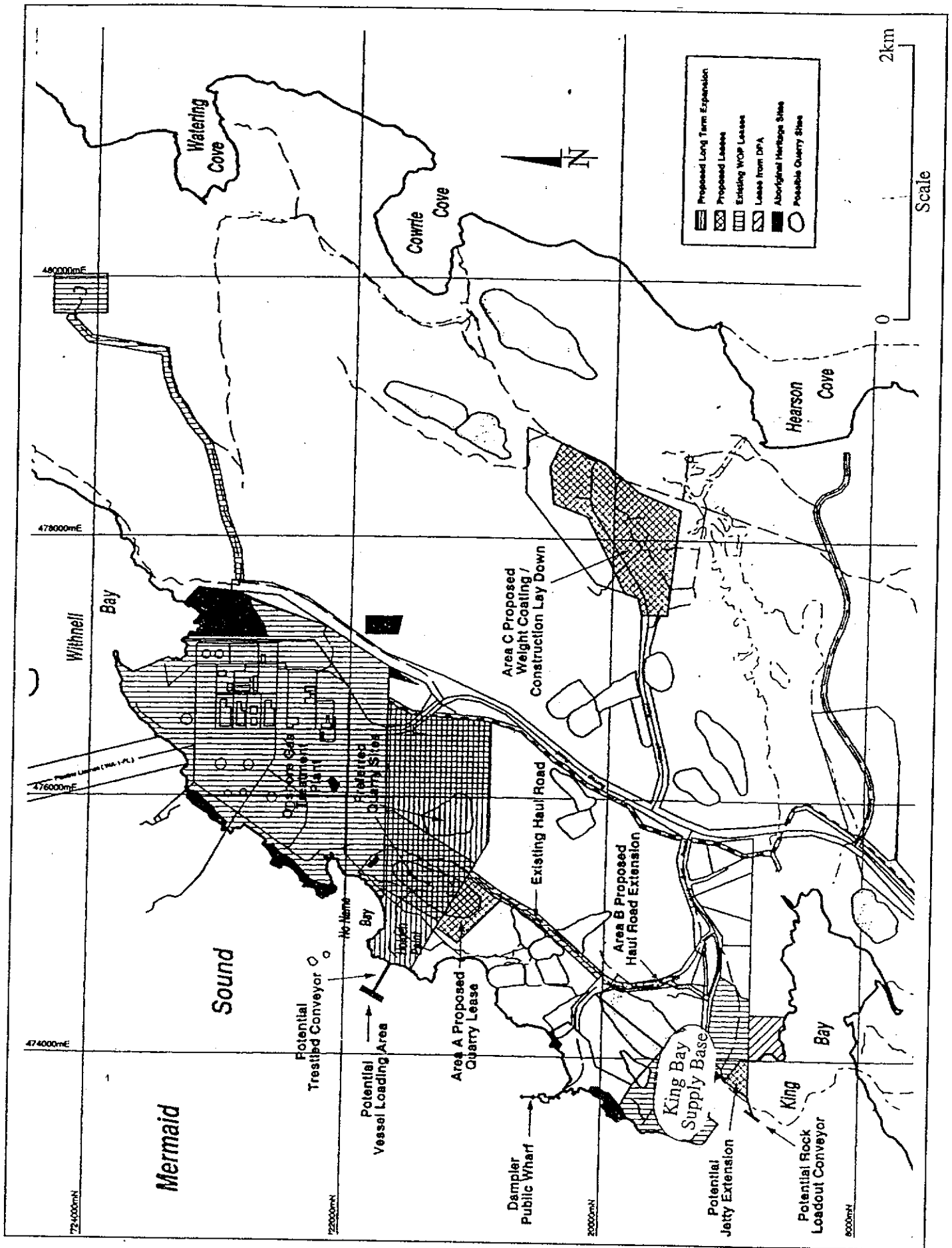


Figure 4. Quarry locations and land requirements (Source: Woodside Offshore Petroleum PER 1997).

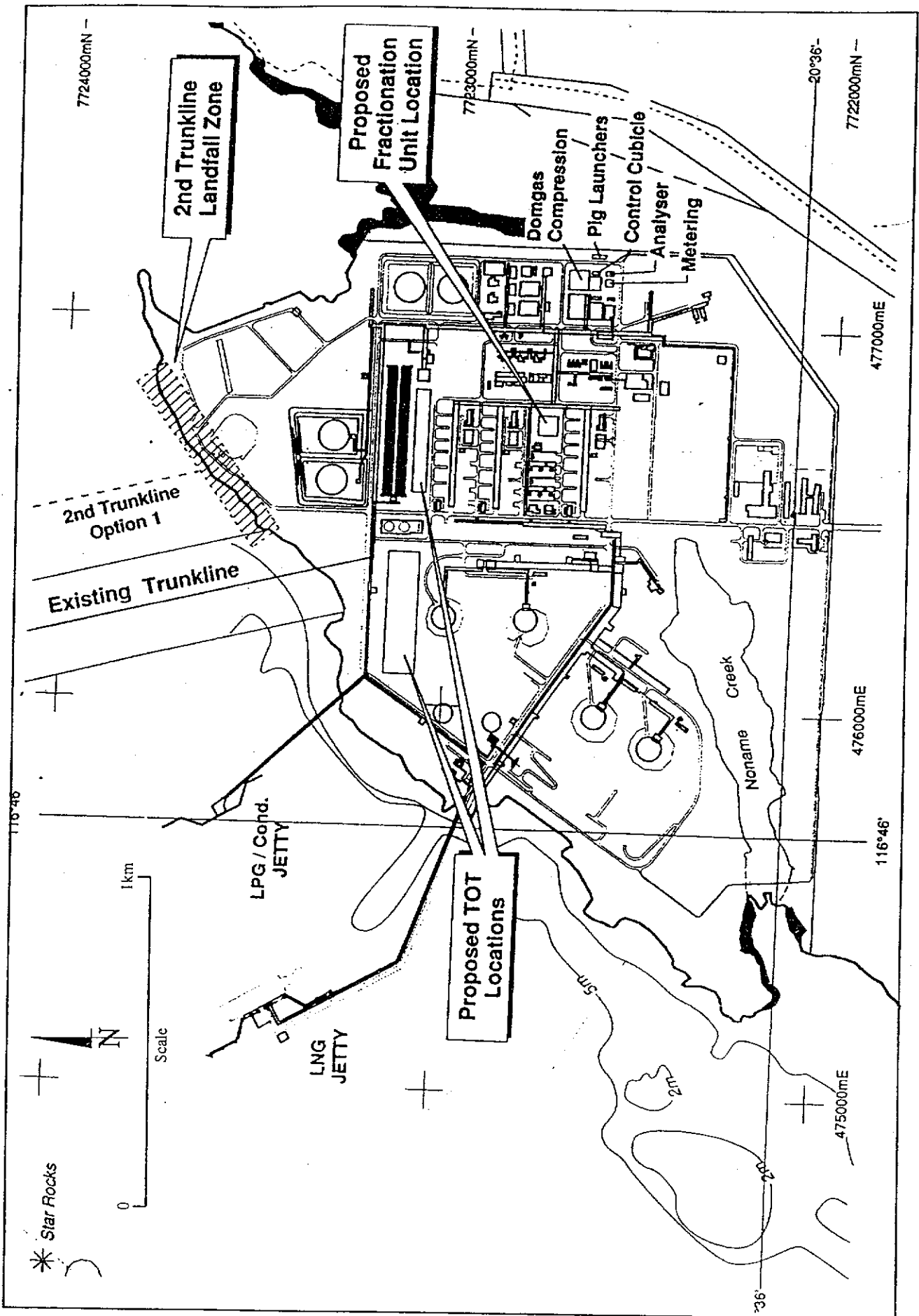


Figure 5. Onshore gas treatment plant layout (Source: Woodside Offshore Petroleum PER 1997).

**Proponent's Consolidated Environmental
Management Commitments**

July 1998

SECOND OFFSHORE TRUNKLINE AND DOMGAS
DEBOTTLENECKING
NORTH-WEST SHELF (1105)

Woodside Offshore Petroleum Pty Ltd

Schedule 2: Proponent's Environmental Management Commitments

TOPIC	COMMITMENT	OBJECTIVE	ACTION	TIMING	WHOSE ADVICE	MEASUREMENT/ COMPLIANCE CRITERIA
Pipeline Route Selection	1. Selection of trunkline route to minimise disturbance to coral reefs.	To protect existing coral reefs during trunkline installation.	Selected route to be as direct as practicable within engineering and technical restraints.	Before the start of the construction phase.	Department of Environment Protection (DEP)	Letter to DEP confirming selection of trunkline route 1 or 1A in PER. Route selection will be made with reference to DME requirements for safe blasting distances.
	2. Selection of trunkline route to minimise disruption to fishery.	To protect fishery areas during trunkline installation.	Consult with Fisheries WA, DRD, WAFIC, Environment Australia.	Before start of construction phase.	Fisheries WA, WAFIC, DRD	Not audited by DEP (fishing grounds outside EPA jurisdiction) Route selection will be made with reference to DME requirements for safe blasting distances.
	3. Selection of trunkline route to avoid crossing any listed historic shipwrecks.	To protect historic shipwrecks during trunkline installation.	Liaise with WA Maritime Museum to ensure historic wrecks are identified and avoided.	Before start of construction phase	WA Museum	Letter from WA Museum confirming consultation re route selection. Route selection will be made with reference to DME requirements for safe blasting distances.
	4. Selection of route to avoid disturbance to vegetation, landscape and Aboriginal heritage sites.	To protect terrestrial environment and Aboriginal heritage areas from significant impacts.	Trunkline route to enter OTP lease directly from Mermaid Sound.	Before start of construction phase.	DEP	Letter to DEP confirming selection of trunkline route 1 or 1A in PER. Route selection will be made with reference to DME requirements for safe blasting distances
Pipeline Installation - Dredging	5. Dredging and trenching undertaken where ploughing is not feasible or cost effective.	To protect nearby corals during trunkline installation from increased turbidity.	Dredging operations in areas where ploughing is not feasible.	Before and during installation of second trunkline.	DEP	Included in dredging Environmental Management Plan (EMP) and letter of acceptance of EMP by DEP.
	6. A substantial buffer between pipe-laying operations and significant coral areas maintained.	To protect nearby corals during trunkline installation.	Buffer zones instituted where practicable to protect significant communities.	Before and during installation of second trunkline.	DEP	Included in dredging EMP and letter of acceptance of EMP by DEP.

Schedule 2: Proponent's Environmental Management Commitments

TOPIC	COMMITMENT	OBJECTIVE	ACTION	TIMING	WHOSE ADVICE	MEASUREMENT/ COMPLIANCE CRITERIA
	7. Spoil not used for backfill removed from environmentally sensitive areas.	To protect in-situ sensitive benthic communities.	Spoil to previously used spoil ground.	Before and during installation of second trunkline.	Environment Australia and DEP	Letter of acceptance of Dredging EMP by DEP; approval from Environment Australia under Commonwealth sea dumping legislation
	8. Clamshell dredging used in King Bay Supply Base wharf extension.	To protect in-situ sensitive benthic communities.	Clamshell dredging may be used to utilise some dredged material for wharf backfill without excess turbidity.	Before and during installation of second pipeline.	Environment Australia and DEP	Letter of acceptance of Dredging EMP by DEP; approval from Environment Australia under Commonwealth sea dumping legislation
	9. Dredging Environmental Management Plan (EMP).	To protect in-situ sensitive benthic communities.	EMP prepared for dredging operations, spoil disposal and monitoring programmes.	Before start of construction phase	Environment Australia and DEP	Letter of acceptance of Dredging EMP by DEP; approval from Environment Australia under Commonwealth sea dumping legislation.
	10. Dredging operations avoided during coral spawning.	To protect in-situ sensitive benthic communities.	Dredging operations within 1000 m of corals will be avoided for a 10 day period during the coral spawning period - (nominally March/April).	During installation of the second pipeline.	Environment Australia and DEP	Letter of acceptance of Dredging EMP by DEP; approval from Environment Australia under Commonwealth sea dumping legislation

Schedule 2: Proponent's Environmental Management Commitments

TOPIC	COMMITMENT	OBJECTIVE	ACTION	TIMING	WHOSE ADVICE	MEASUREMENT/ COMPLIANCE CRITERIA
	11. Shipping and Fishing operations notified during pipelaying.	To avoid disruption to shipping and fishing operations on North West Shelf.	Close liaison will be maintained with AMSA, Professional Fishermen's Association (PFA), WA Fishing Industry Council (WAFIC) and Dept of Transport - Maritime Divn.	Before and during installation of second pipeline.	Department of Transport requirement. Not audited by DEP	Not formally audited by DEP
Pipeline Installation - Spoil Disposal	12. Permit sought to utilise dedicated spoil grounds.	To protect in -situ benthic communities	A Sea Dumping Permit will be sought to utilise spoil grounds A & B for spoil disposal.	Before and during construction phase.	Environment Australia	Issue of Permit by Environment Australia and compliance with conditions during operations.
Pipeline Installation - Blasting	13. Blasting kept to a minimum.	To protect marine fauna close to detonation point.	Routes requiring blasting will be minimised.	Before and during construction phase.	DEP and CALM	Acceptance of blasting EMP. NB: blasting is subject to DME safety requirements.
	14. Watch for marine mammals (cetaceans, dugong) and turtles.	To protect marine fauna close to detonation point.	Procedures will be developed to ensure a marine mammal (cetaceans, dugong) and turtle watch is maintained.	Before start of construction and during installation of pipeline.	DEP, CALM, Environment Australia	Acceptance of blasting EMP. NB: blasting is subject to DME safety requirements
	15. Safe distances between aquatic fauna and detonation areas.	To protect marine fauna close to detonation point.	Consultation with regulatory agencies on prescribed distances	Before start of construction and during installation of pipeline.	DEP, CALM, Environment Australia	Letter confirming that blasting carried out as required by Govt. NB: blasting is subject to DME safety requirements
	16. Strategy to minimise the release of plastic coatings after each charge	To protect seabirds and prevent pollution.	Investigate alternatives to buoyant or persistent plastic coating on explosive charges.	Before start of construction phase.	DEP and CALM	Acceptance of blasting EMP. NB: blasting is subject to DME safety requirements

Schedule 2: Proponent's Environmental Management Commitments

TOPIC	COMMITMENT	OBJECTIVE	ACTION	TIMING	WHOSE ADVICE	MEASUREMENT/ COMPLIANCE CRITERIA
	17. Dead fish removed after each blast, if required.	To prevent marine fauna close to detonation point.	Organise collection of dead fish.	During installation of second pipeline.	DEP and CALM	Acceptance of blasting EMP. NB: blasting is subject to DME safety requirements
	18. Control of charge structure for blasting.	To protect marine fauna close to detonation point.	Overpressure effects on marine life will be minimised by optimising the charge structure for blasting.	During installation of second pipeline.	DEP and DME	Acceptance of blasting EMP. NB: blasting is subject to DME safety requirements
Pipeline Installation - Hydrotesting of pipeline.	19. Hydrotect chemicals selection based upon environmental properties.	To protect marine and terrestrial environment.	Chemicals will be used in minimum quantities and will be screened for environmental properties.	Before start of and during precommissioning phase of second pipeline.	DEP	Confirm in annual report.
	20. Target set levels of biocides and corrosion inhibitors in discharge water.	To protect marine water quality.	Target <10% LC ₅₀ for contaminant concentration value at point of discharge.	Before start of precommissioning phase of second pipeline.	DEP	Confirm in annual report
	21. Maximising dilution and aeration of contaminants.	To protect marine water quality and marine sensitive environments.	Design discharge for maximum dilution and aeration treatment at point of discharge. Appropriate modelling undertaken.	Before start of precommissioning phase of second pipeline.	DEP	Confirm in annual report
	22. Onshore discharges contained.	To protect terrestrial environment.	Any discharge to onshore will be to evaporation ponds.	Before start of and during precommissioning phase of second pipeline.	DEP	Confirm in annual report

Schedule 2: Proponent's Environmental Management Commitments

TOPIC	COMMITMENT	OBJECTIVE	ACTION	TIMING	WHOSE ADVICE	MEASUREMENT/ COMPLIANCE CRITERIA
Pipeline Installation - Line-pipe coating and pipe storage	23. Pipe storage and line pipe coating onshore with plan developed for rehabilitation and reinstatement of site.	To protect the terrestrial environment.	A previously disturbed area will preferentially be used for line-pipe coating and pipe storage. A rehabilitation plan will be developed and consideration given to the use of native species in rehabilitation.	Before disturbance of onshore area and second pipeline construction phase.	DEP	Rehabilitation plan prepared for site
	24. Coating and storage site contained and drained with proper collection and recycling/disposal of contaminated waste water.	To protect the terrestrial environment.	Chemical residues will be disposed using existing Chemical Hazard Management System (CHMS) procedures. Area with the potential for chemical spillage will be banded and drained to ensure proper collection and recycling /disposal of waste water.	Before and during installation of second pipeline.	DEP	Confirm in annual report

Schedule 2: Proponent's Environmental Management Commitments

TOPIC	COMMITMENT	OBJECTIVE	ACTION	TIMING	WHOSE ADVICE	MEASUREMENT/ COMPLIANCE CRITERIA
Vessel operations - waste management aboard vessels	25. Wastes to be disposed of into marine waters in accordance with MARPOL Annex IV or onshore according to Woodside's Waste Management System.	To protect the marine and terrestrial environment and maximise opportunity for waste minimisation.	The disposal of grey water, sewage and solid waste will not be permitted inshore or offshore unless treated in accordance with the requirements of MARPOL Annex IV. All other wastes will be brought ashore and managed through Woodside's Waste Management System.	During operation of pipe-laying vessels, support vessels and dredges within the waters of the Dampier Archipelago and offshore.	DEP	Confirm in annual report
Vessel operations - quarantine	26. Quarantine inspection of vessels entering project waters.	To protect the marine environment.	A quarantine inspection and report will be prepared to ensure vessels have a current De-ratting Exemption Certificate, are free of exotic propagules and that there is minimal residual sediment contamination from previous dredging operations.	Prior to any dredge and other project support vessels entering Pilbara marine waters.	DEP	Quarantine inspection reports for vessels included in project documentation.. Confirm in annual report.

Schedule 2: Proponent's Environmental Management Commitments

TOPIC	COMMITMENT	OBJECTIVE	ACTION	TIMING	WHOSE ADVICE	MEASUREMENT/ COMPLIANCE CRITERIA
	27. Ballast waters controlled according to relevant AQIS Notice.	To protect the marine environment.	Subject to transit safety risks, vessels arriving from overseas will be required to comply with AQIS Notice 92/2 Controls on the discharge of ballast water and sediment from ships entering Australia from overseas.	Prior to any dredge or pipe-laying vessels entering Pilbara marine waters.	DEP	Confirm in annual report
Vessel operations - oil spill	28 Cyclone procedures apply for dredging and pipelaying operations.	To protect the marine environment.	Appropriate measures will be introduced to prevent oil spills from vessels during cyclones.	During construction of second pipeline.	Not audited by DEP. DME requirement.	No formal audit by DEP
	29. Vessels will carry oil spill equipment and interface required between MARPOL requirements and Woodside's oil spill response plans.	To protect the marine environment.	Vessel will be required to carry oil spill equipment on board, appropriate for minor spills. Ship board Oil Spill Response Plans (SOSRP) as required by MARPOL will be required to interface with the Woodside's Oil Spill Contingency Plan.	During construction of second pipeline.	DME and DOT	Updated oil spill contingency plan accepted by DOT and DME.

Schedule 2: Proponent's Environmental Management Commitments

TOPIC	COMMITMENT	OBJECTIVE	ACTION	TIMING	WHOSE ADVICE	MEASUREMENT/ COMPLIANCE CRITERIA
	30. All oil spills >20L to be reported and corrective actions taken.	To protect the marine environment.	Vessel Masters will be required to report spills >20L and corrective actions taken to Woodside.	During construction of second pipeline.	DEP	Confirm in annual report
	31. Procedures prepared for oil spills during re-fuelling of vessels.	To protect the marine environment.	Refuelling procedures will be prepared for all vessels involved in pipelaying operations.	During construction of second pipeline.	DEP and DOT	Updated oil contingency plan (including refuelling procedures) accepted by DME and DOT.
Aboriginal heritage sites and cultural associations.	32 Aboriginal culture and heritage.	To protect Aboriginal heritage sites and cultural associations wherever reasonably practical.	Assessments of sites will be carried out as required by the Aboriginal Heritage Act (Section 18). The Aboriginal Affairs Dept will be consulted about cultural associations.	Prior to the start of ground disturbing activities.	Aboriginal Affairs Department (AAD)	Letter from AAD confirming acceptance of planned activities.
Quarrying and Associated Activities.	33. Potential quarry sites south of OTP plant with existing site preferred.	To protect onshore priority flora and fauna, Aboriginal heritage and landscape amenities.	Two potential sites identified within area designated for industrial development with the existing quarry site to be used preferentially.	Prior to the start up of quarrying and installation of second pipeline.	Aboriginal Affairs Department (AAD), CALM.	Letter to DEP confirming location of quarry area as proposed in PER. Clearance letters from AAD, CALM
	34. Vegetation survey undertaken over quarry sites and destruction of any priority flora only as permitted under WA legislation.	To protect onshore priority flora.	Surveys undertaken of vegetation over prospective quarry sites. Liaison between Woodside and CALM prior to the destruction of any Priority Flora.	Prior to the start up of quarrying and installation of second pipeline.	CALM	Letter from CALM confirming acceptance of planned quarrying activities.

Schedule 2: Proponent's Environmental Management Commitments

TOPIC	COMMITMENT	OBJECTIVE	ACTION	TIMING	WHOSE ADVICE	MEASUREMENT/ COMPLIANCE CRITERIA
	35. Quarrying designed to reduce impact on landscape values.	To protect landscape amenities.	Quarrying activities will be designed to reduce the impact on landscape amenities.	Prior to the start up of quarrying and installation of second pipeline.	DEP	Acceptance of quarrying EMP.
	36. EMP prepared for quarrying activities.	To maintain airborne dust, noise, vibration and other environmental impacts at an acceptable level.	A quarrying activity EMP will be developed.	Prior to the commence of quarrying operations.	DME	Acceptance of quarrying EMP by DME and DEP.
	37. Exclusion zone during blasting	To meet OH&S duty of care requirements	The project will impose the required exclusion zone under the Mines Act during the blasting phase of quarrying activities.	Prior to the start up of quarrying and installation of second pipeline.	DME	Acceptance of quarrying EMP by DME.
Quarrying and Associated Activities - Crushing and grading.	38. Implementation of dust control procedures.	To meet hygiene requirements and maintain acceptable environmental standards for dust.	Dust levels will be monitored and control measures will be implemented, if required.	During quarrying, crushing and grading operations.	DME	Acceptance of quarrying EMP by DME and DEP.
	39. Preparation of EMP for crushing and grading.	To maintain acceptable environmental standards.	A comprehensive EMP will be prepared in consultation with WA DME.	Prior to the commencement of grading and crushing activities.	DME	Acceptance of quarrying EMP (which includes crushing and grading) by DEP and DME.

Schedule 2: Proponent's Environmental Management Commitments

TOPIC	COMMITMENT	OBJECTIVE	ACTION	TIMING	WHOSE ADVICE	MEASUREMENT/ COMPLIANCE CRITERIA
Quarry and Associated Activities - Haul Road	40. Aboriginal site clearance in accordance with legislation.	To protect Aboriginal sites on Burrup Peninsula.	Aboriginal site clearance will be undertaken in accordance with the Aboriginal Heritage Act (1972) and in particular Section 18.	Prior to the commencement of haul road operations and installation of second pipeline.	DEP AAD ACMC	Letter from AAD confirming acceptance of haul road extensions location.
	41. Disturbance to priority flora along extension to haul road will be minimised.	To protect onshore priority flora.	Vegetation survey has been done over route extension Disturbance to priority flora will be minimised	Prior to the commencement of haul road operations and installation of second pipeline.	DEP CALM	Letter from CALM confirming acceptance of haul road extension location.
	42. Crossings of the Public Wharf Road and Kings Bay Roads will be designed to operate in a safe manner.	To provide public and community safety at an acceptable level.	Crossings will be conducted in a safe manner with the approval of the appropriate authorities. The haul road will separate, as far as possible, haulage from general traffic.	Prior to the commencement of haul road operations and installation of second pipeline	DEP Main Roads WA	Letter from Main Roads WA confirming acceptance of haul road crossings.
	43. Traffic hazards on haul road will be managed.	To provide public and community safety at an acceptable level.	Procedures of total exclusion of non-essential traffic, radio control of haul traffic movements and visibility devices mounted on all vehicles using the roads,	During the operation of the haul road and installation of the second pipeline.	DME safety requirements	No formal audit by DEP

Schedule 2: Proponent's Environmental Management Commitments

TOPIC	COMMITMENT	OBJECTIVE	ACTION	TIMING	WHOSE ADVICE	MEASUREMENT/ COMPLIANCE CRITERIA
Quarry and Associated Activities - Storage and Loadout of Rock Material	44a. EMP for rock stockpiling and load-out. 44b Use of existing storage and loadout areas will be maximised.	To minimise environmental impacts from rock stockpiling and load-out. To minimise disturbance to terrestrial environment.	An environmental management plan (EMP) will be prepared for rock stock-pile and load-out facilities Maximum use will be made of the previously disturbed ground adjacent to the KBSB for rock storage and loadout.	Prior to the construction of stockpile/load-out facilities. Prior to start up of the rock storage and loadout area and installation of the second pipeline.	DEP DEP	Submission of EMP to DEP. Confirm in annual report
	45. Appropriate rehabilitation procedures applied to facility for rock storage at Holden Point.	To minimise environmental disturbance site.	Top soil will be removed and stockpiled for use in rehabilitation if required. Area will be rehabilitated consistent with subsequent land use and/or adjacent land conditions. Appropriate weed control practices will be instituted.	During the operation of the rock storage area and installation of the second pipeline.	DEP	Confirm in annual report
	46. Construction of trestle jetty.	To protect inshore marine environment.	Trestle jetty may be constructed from Holden point.	Prior to the commencement of loadout operations.	DEP	Confirm in annual report

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TOPIC	COMMITMENT	OBJECTIVE	ACTION	TIMING	WHOSE ADVICE	MEASUREMENT/ COMPLIANCE CRITERIA
Quarry and Associated Activities - Decommissioning	47. Quarry to be made safe at completion of works.	To provide public and community safety at an acceptable level	Work area cleared and loose material barred off, access to quarry sealed with large boulders and access limitation berm constructed on top of quarry in consultation with WA DME	At completion of works for the supply of rock material for the second pipeline installation.	DEP DME	Letter from DME confirming protocols and procedures for decommissioning the quarry.
	48. Trestle jetty to be decommissioned after operations cease.	To minimise inshore environmental impact.	Trestle piles sheared at seabed and top infrastructure removed from site.	At completion of works for the supply of rock material for the second pipeline installation.	DEP	Close out report
Plant Expansion - Infrastructure Layout	49. Infrastructure will be within existing plant.	To minimise terrestrial environmental impacts.	All new infrastructure will be contained within existing plant boundary.	Before start up and during plant expansion works.	DEP	Confirm in annual report.
(Commitment deleted)	50. Commitment deleted.					
Construction Issues - Laydown areas	51. Laydown area within existing plant.	To minimise terrestrial environmental impacts.	Existing plant laydown areas will be used to support plant expansion.	During plant expansion works.	DEP	Confirm in annual report

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TOPIC	COMMITMENT	OBJECTIVE	ACTION	TIMING	WHOSE ADVICE	MEASUREMENT/ COMPLIANCE CRITERIA
Construction Issues - Waste Disposal	52. Waste management will comply with the Woodside waste management system.	To protect the terrestrial environment and maximise opportunity for waste minimisation.	No waste will be disposed of on Burrup Peninsula. Wastes will be disposed of in accordance with the Woodside waste management system and to Shire of Roebourne requirements.	During construction of plant expansion.	DEP Shire of Roebourne.	Compliance reporting for DEP licence on waste discharges.
	53. Existing sewage system used with portable units, if necessary.	To minimise impact on the terrestrial environment.	The capacity of the existing OTP sewage system will be assessed to service the construction workforce. Portable sanitation units will be provided if required.	Prior to start up of plant expansion and ongoing during works.	DEP	Compliance reporting on DEP licence on waste discharges.
Construction Issues - Workforce	54. Existing facilities used to accommodate workforce with limited increase in operational workforce expected.	To minimise impact on the terrestrial environment.	Accommodation requirement of construction workforce under investigation.	Prior to start up and ongoing during works.	DEP	Confirm in annual report
Construction Issues - Pickle liquor	55. Pickle liquor recycled or disposed of in an acceptable manner.	To maximise recycling and minimise pollution impacts on the environment.	Pickle liquor will be recycled, or disposed of in an approved manner.	Prior to start up and ongoing during works.	DEP	Compliance reporting on DEP licence on waste discharges.

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TOPIC	COMMITMENT	OBJECTIVE	ACTION	TIMING	WHOSE ADVICE	MEASUREMENT/ COMPLIANCE CRITERIA
Operational Issues - Atmospheric emissions	56. Energy recovery systems installed and atmospheric emissions quantified and reported. Increase in emissions of approximately 5%.	To minimise Greenhouse gas emissions.	Waste heat recovery will be installed in the new power generation units to increase energy efficiency. Atmospheric emissions will be reported as per existing OTP licence requirements.	During plant expansion works and ongoing for plant operation.	DEP	Compliance reporting on DEP licence on air emissions.
	57. Low emission burners specified for gas burners. NO _x emissions expected to increase by 4-5%.	To minimise Greenhouse gas emissions and photochemical smog.	Best practicable low emission burners will be specified in gas turbines during detailed design stage.	During design stage and operation of plant.	DEP	Compliance monitoring on DEP licence for air emissions.
	58. Seal systems specified with lowest practicable hydrocarbon emissions.	To minimise Greenhouse gas emissions.	To minimise fugitive gas emissions seal systems with lowest leakage of gas will be specified for the DOMGAS compressors.	During design stage of plant expansion.	DEP	Confirm in annual report
	59. Depressurised gas will be re-directed to process or flared.	To minimise Greenhouse gas emissions.	Gas from the depressuring of the pig receiver will be re-directed to the process or sent to flare.	During plant design and ongoing during operation.	DEP	Confirm in annual report

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TOPIC	COMMITMENT	OBJECTIVE	ACTION	TIMING	WHOSE ADVICE	MEASUREMENT/ COMPLIANCE CRITERIA
	60. Participation in joint DEP/industry air quality study for Burrup Peninsula.	To characterise atmospheric processes in region.	Woodside will participate in the atmospheric study to better characterise air quality meteorology on the Burrup Peninsula.	Ongoing independently of project.	DEP	Confirm in annual report
Operational Issues - Effluents	61. No new liquid wastes expected to be produced from proposed expansion.	To minimise pollution streams requiring disposal.	Contaminant concentrations and loads will be reported as per the existing operating plant licence.	Ongoing during operation of new plant.	DEP	Compliance reporting of DEP licence for effluents.
Operational Issues - Contaminated drainage	62. New infrastructure will be banded to contain hydrocarbon spills.	To minimise potential for uncontrolled drainage.	Bunding will be emplaced around new infrastructure where potentially spills could occur. Drainage will be directed to existing oily contaminated water (OCW) system.	During plant design and ongoing during plant operation.	DEP	Approval under licensing/Works Approval requirements.
Operational Issues - Risk	63. Risks from storms capable of moving and rupturing trunkline will be investigated.	To determine level of risk of trunkline failure and stabilisation requirements.	Risks from cyclone damage will be investigated over trunkline length and design stabilisation methods to ALARP principles.	Prior to detailed design of trunkline stabilisation methods.	DME requirement.	No formal audit by DEP

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TOPIC	COMMITMENT	OBJECTIVE	ACTION	TIMING	WHOSE ADVICE	MEASUREMENT/ COMPLIANCE CRITERIA
	64 Risks posed by plant expansion to human life has been assessed and will be utilised during the updating of the Safety Cases.	To determine level of risks to human life and management strategy requirements.	Preliminary hazard assessments have been undertaken for the new plant. This assessment will be expanded during the updating of the facility Safety Cases and Management Syst.	Prior to construction of new plant and ongoing.	DME	Acceptance of updated Safety Cases and Management System by DME.
	65. Hazard identification during plant design.	To ensure risk levels for the workforce and community are acceptable.	Hazard identification activities will proceed throughout detailed design to ensure acceptable risk levels from process facilities.	During detailed plant design stage of project.	DME	Acceptance of updated Safety Cases and Management System by DME.
Operational Issues - Oil spill contingency	66. Risk posed by second pipeline will be assessed and existing oil spill contingency plan (OSCP) reviewed and updated.	To ensure an adequate response capability is maintained.	An assessment will be taken of the additional risk associated with the second pipeline. The design integrity of the trunkline will be assessed during the detailed design phase.	During detailed design phase and prior to construction of trunkline.	DME and DOT	Acceptance of updated OSCP by DME and DOT
Operational Issues - Increased shipping frequency	67. Existing monitoring programme will assess impact of increased shipping movements on coral in vicinity of product loading jetties.	To assess impacts associated with increased shipping	The existing ChEMMS monitoring programme will continue to monitor for effects on corals in the vicinity of the product loadout jetties.	Ongoing during construction and operation of expanded facilities.	DEP	Performance and compliance reporting of ChEMMS

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	68. Monitoring for TBT loads in sediments.	To assess impacts associated with increased shipping	TBT sediment and biota loads will continue to be monitored in Mermaid Sound.	Ongoing during construction and operation of expanded facilities.	DEP	Performance and compliance reporting of ChEMMS
	69. Investigate occurrence and frequency of imposex.	To assess impacts associated with increased shipping	Study to determine the occurrence and frequency of imposex in a suitable marine gastropod has commenced.	Ongoing during construction and operation of expanded facilities.	DEP	Performance and compliance reporting of ChEMMS
	70. Annual auditing of cargo offtake vessel compliance against AQIS notice 92/2.	To assess impacts associated with increased shipping	Audit of compliance against Controls on the Discharges of Ballast Water and Sediment from Ships Entering Australia from Overseas.	Ongoing annually.	DEP	Annual audit reporting for vessels.
Operational Issues - Decommissioning and Abandonment.	71. Trunkline will be decommissioned according to Govt requirements.	To minimise adverse environmental impacts on marine environment.	Trunkline will be cleared of residual hydrocarbons. If intended for further use it will be pressurised with inert gas. If no further use, proponent's preferred position is that it be flooded with sea water and left in-situ.	At end of trunkline operation.	DEP DME	Decommissioning plan prepared to requirements of DEP and DME
	72. Facilities decommissioned as per existing plant.	To minimise adverse environmental impacts on terrestrial environment.	Decommissioning plans will be developed.	At least 3 years prior to plant closure.	DEP	Acceptance of decommissioning plan by DEP and DME and rehabilitation according to agreed criteria.