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PETROLEUM
AUSTRALIA DEVELOPMENT TEAM

PYRENEES DEVELOPMENT

PROJECT ENVIRONMENT PLAN SUMMARY

EXECUTE PHASE

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Revision	Date	Description	Author	Checker	Drilling HSE Advisor	Drilling Superintendent
1	14/5/10	Updated with Macedon, Furness and Black Pearl well locations	RSmith	A McMullen	S Pearce	M Sessink
0	30/10/08	Final for use	JWL	BS	MS	

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SCOPE OF WORK

BHP Billiton Petroleum (BHPB) proposes to develop the ‘Pyrenees Development’, which include the Ravensworth, Crosby and Stickle hydrocarbon reserves for oil production, with Macedon as gas reinjection reservoir. A total of 17 wells will be drilled, from 9 drilling centres, including 13 production wells, 1 gas injector and 3 water injectors.

The Pyrenees Development Area is located within production permit WA-12-R and WA-155-P, approximately 15 km north-west from the Muiron Islands Marine Management Area, 11 km from the northern boundary of the Ningaloo Marine Park boundary (Commonwealth Waters) and 23 km north-west of North West Cape, Western Australia. Water depths at the site range from 170 to 250 m and the reservoir is approximately 1,200 m below the seabed.

The Pyrenees Project Phase is defined to commence with the start of development drilling activities (Q4, 2008 – Q3, 2010). Subsea installation is scheduled for Q1 – Q3, 2009, and Hook-up and Commissioning is scheduled for Q4, 2009 – Q1, 2010, following the arrival of the Pyrenees FPSO (see Table 1).

Table 1: Timing of Drilling and Subsea Installation Activities

Year	2008			2009												2010																	
Month	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12						
Pyrenees tophole drilling	"Songa Mercur"																																
Pyrenees bottomhole drilling							"Ocean Epoch"																										
Subsea installation				"Jascon 25"																													
FPSO arrival																"Pyrenees Venture"																	
HUC																																	
Operations																																	
Furness, Black Pearl & Macedon drilling																																	
	Project EP (BHPB-00PY-N950-0007)															Operations EP (PYHSE-E 0001)																	

Commissioning activities outside Australian waters, such as activities at overseas shipping yards, and onshore fabrication, construction and pre-commissioning activities prior to mobilisation to the site, are not covered in the Project EP.

Operational procedures (OMS) will apply from RFFO. A number of start-up activities will occur after first oil and are therefore **not** covered in the Project EP. These include:

- Commissioning flaring
- Disposal of flowline preservation fluids (hydrotest fluids)
- First Fill Production Chemicals

Instead these aspects shall be addressed in the Operations Environment Plan (PYHSE-E-0001), which will be issued prior to the start of operations.

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In addition to the Pyrenees Development, this EP will also be used to address environmental management associated with drilling the Black Pearl and Furness exploration wells, and the Macedon development wells. These wells will be drilled using the Ocean Epoch at the completion of the Pyrenees drilling campaign, and there are no variations to the operational details outlined in the Pyrenees Project EP. The wells are scheduled to be completed by end 2010 (Table 1), however may extend into early 2011 subject to schedule delays.

These wells are located in the vicinity of the Pyrenees wells, are at similar water depths to the Pyrenees wells and are located similar distances from sensitive environments. There are no additional risks or changes to risks associated with drilling these wells. Specific bridging documents have been developed for these wells, and these documents will be implemented in conjunction with the Pyrenees Project EP:

- Black Pearl-1 Environment Plan Bridging Document (PCD 0736) Rev 1
- Furness-1 Environment Plan Bridging Document (PCD-0857) Rev 0
- Macedon Development Drilling Environment Plan Bridging Document (PMA-BHP-EN-PLN-0002) Rev 0

LOCATION

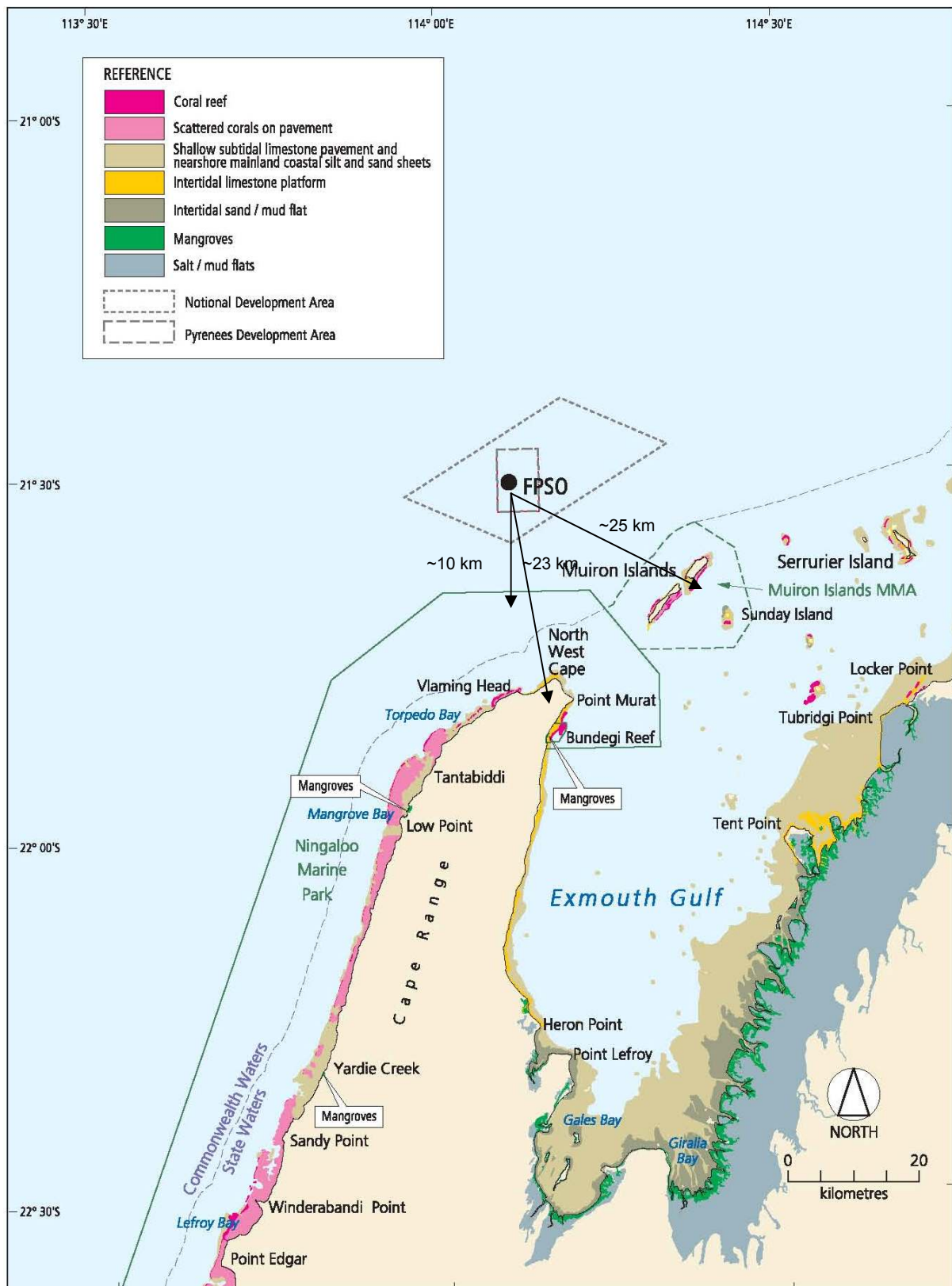
The Pyrenees Development Area off NW Cape lies within Commonwealth waters. The closest wellhead location (Macedon Gas Injection: M-DC1) is approximately 10 km from the northern boundary of the Commonwealth waters of the Ningaloo Marine Park. The nearest land (North West Cape) lies approximately 23 km from the Pyrenees Development Area, and the Muiron Islands are approximately 25 km from the FPSO "Pyrenees Venture" location (see Figure 1).

The Macedon development wells are located between 10-11 km from the Ningaloo Marine Park boundary, 11-15 km from Muiron Island Marine Management Area and 23-24 km from the North West Cape. Black Pearl exploration well is located ~12 km from the Ningaloo Marine Park boundary, ~17 km from Muiron Island Marine Management Area and ~25km from the North West Cape. Furness exploration well is located ~35 km from the Ningaloo Marine Park boundary, ~45km from Muiron Island Marine Management Area and ~55km from the North West Cape.

The drill centre coordinates for Pyrenees are provided in Table 2. Coordinates for Furness, Black Pearl and the Macedon development wells are provided in Table 3.

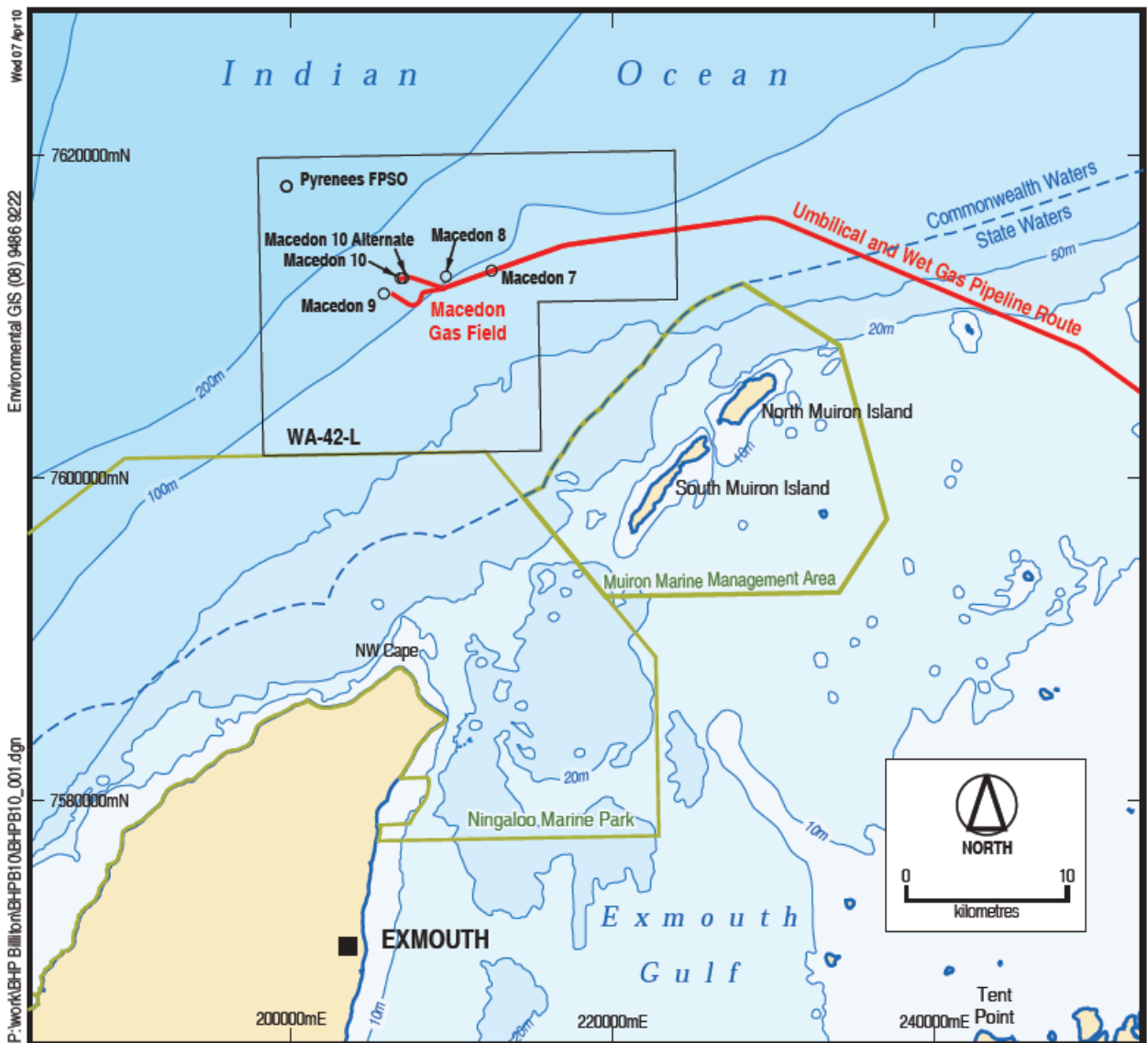
Pyrenees Development Project Environment Plan Summary

Figure 1: Pyrenees Development Area and Regional Environmental Features



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Figure 2: Location of Macedon development wells



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Figure 3: Location of Black Pearl and Furness exploration wells

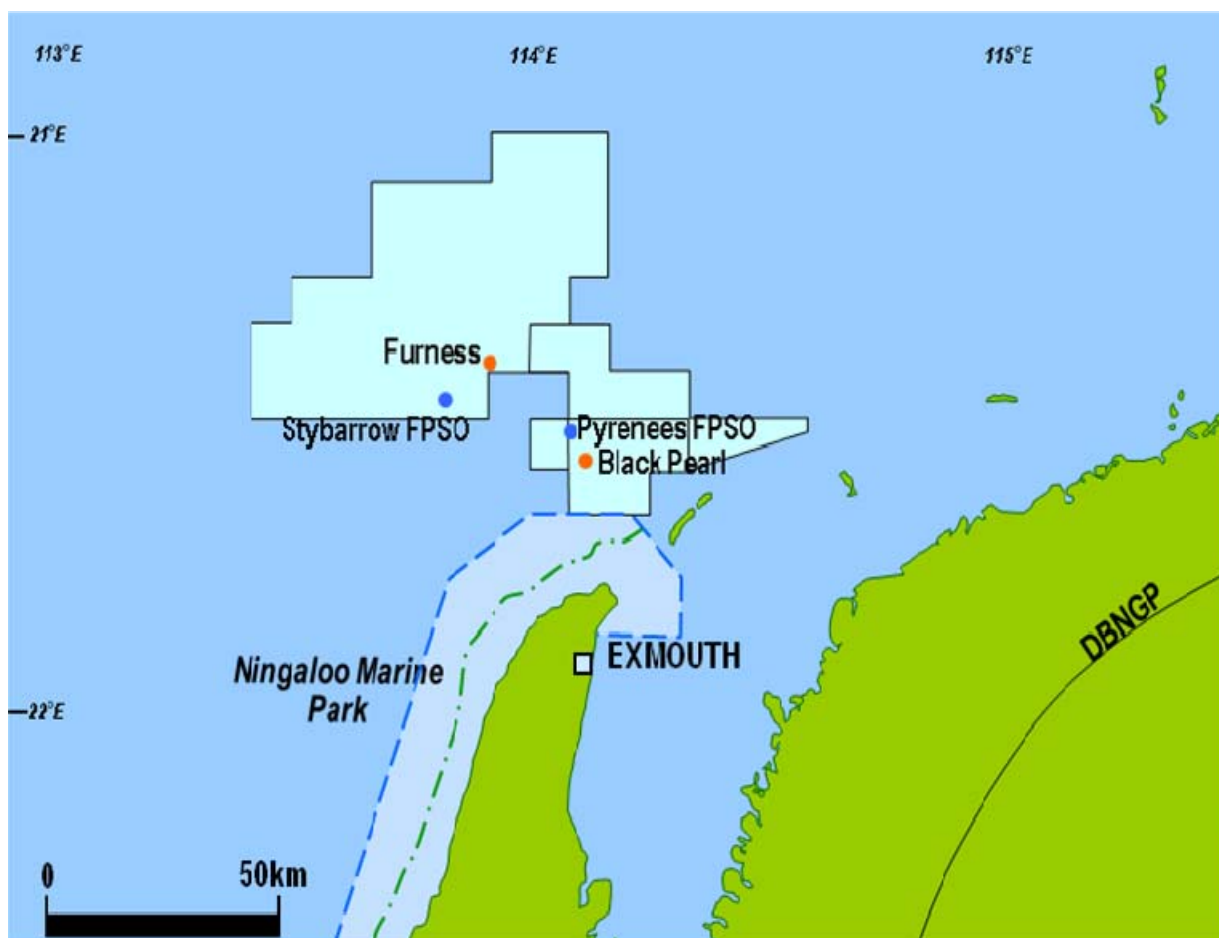


Table 2: Pyrenees well locations

Well name	Shortened	Well Centre	Well Type		Easting (m)	Northing (m)
Pyrenees Venture	FPSO	-	-	-	201 300	7 615 200
Lat / Long					21° 32' 28.08581"	114 ° 6' 58.63669"
Ravensworth - 3H1	RAV- 3H1	R-DC2	Horizontal	Producer	197 969	7 615 393
Ravensworth - 4H2	RAV- 4H2	R-DC2	Horizontal	Producer	197 979	7 615 417
Ravensworth - 5H3	RAV- 5H3	R-DC2	Horizontal	Producer	198 004	7 615 476
Ravensworth - 6H4	RAV- 6H4	R-DC2	Horizontal	Producer	198 004	7 615 492
Ravensworth - 7H5	RAV- 7H5	R-DC1	Horizontal	Producer	198 028	7 616 370
Ravensworth - 8H6	RAV- 8H6	R-DC1	Horizontal	Producer	198 062	7 616 428
Crosby - 3H1	CRO- 3H1	C-DC2	Horizontal	Producer	199 117	7 614 700
Crosby - 4H2	CRO- 4H2	C-DC2	Horizontal	Producer	199 057	7 614 700
Crosby - 5H3	CRO- 5H3	C-DC1	Horizontal	Producer	199 757	7 616 510
Crosby - 6H4	CRO- 6H4	C-DC1	Horizontal	Producer	199 696	7 616 510
Stickle - 4H1	STI- 4H1	S-DC1	Horizontal	Producer	200 590	7 617 171
Stickle - 5H2	STI- 5H2	S-DC1	Horizontal	Producer	200 544	7 617 218
Stickle - 6H3	STI- 6H3	S-DC1	Horizontal	Producer	200 527	7 617 235
Ravensworth - 9WI	RAV- 9WI	R-DC3	Vertical	Water Injector	199 047	7 619 423
Crosby - 7WI	CRO- 7WI	C-DC3	Vertical	Water Injector	202 300	7 619 850
Stickle - 7WI	STI- 7WI	S-DC2	Vertical	Water Injector	204 186	7 619 526
Macedon - 6H1*	MAC- 6H1	M-DC1	Horizontal	Gas Injector	207 137	7 612 403

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Table 3: Black Pearl, Furness and Macedon well locations

Well name	Well type	Easting (m)	Northing (m)
Black Pearl-1	Exploration	204 018.5	7 612 194.5
Furness-1	Exploration	182 000.0	7 629 925.5
Macedon-7	Producer	212 457.11	7 612 856.58
Macedon-8	Producer	209 641.0	7 611 965.0
Macedon-9	Producer	205 770.0	7 611 430.0
Macedon-10	Producer	206 823.0	7 612 393.0

Map datum is Geodetic Datum of Australia 1994 (GDA94).
Eastings & Northerlies in Universal Transverse Mercator (UTM) Projections, Zone 50, Central meridian 117 °.

REGIONAL ENVIRONMENT

The Pyrenees Development Area off NW Cape lies within Commonwealth waters. A range of habitat types, including extensive coral reefs, mangroves and sandy, muddy and rocky intertidal areas, are associated with mainland and island coasts.

The bathymetry of the region is characterised by shallow water depths on the continental shelf, rapidly increasing water depths on the continental slope, gradually lowering into deep sub-sea basins with distance offshore. The Pyrenees Development Area is located on the shelf break, the transition from continental shelf to slope, with water depths sloping seaward from 190 m at the shelf edge, to depths of 260 m.

The North West Cape area occurs in a zone of overlap between tropical and temperate regions, though the majority of species in the region are tropical, with increasing representation of temperate species in the south. The Pyrenees Environmental Impact Statement included a full description of the physical, social and biological environment around the Pyrenees Development Area off NW Cape.

Whales and dolphins are commonly observed in the region, especially in the shallower waters of the Dirk Hartog and Rowley Shelves and in Exmouth Gulf. Humpback whales (*Megaptera novaeangliae*) migrate seasonally through the region in relatively high numbers, while other whale species including pygmy blue whales (*Balaenoptera musculus brevicauda*), minke whales (*Balaenoptera acutorostrata*) and short-finned pilot whales (*Globicephala macrorhynchus*) are thought to be present throughout the year in low numbers, or to transit occasionally through the region.

Whale shark aggregations off Ningaloo Reef generally occur between April and June and encounters mainly take place within a few kilometres of the reef. The pattern of movement away from the shallower (more easily observed) areas is not yet understood. One whale shark that was tracked using a satellite tracking device did pass by the proposed development area before travelling north-west into international waters.

A broad variety of seabirds are known to occur in the region with many also breeding in the region. One of the most common species is the wedge-tailed shearwater which breeds mainly on offshore islands (including the Muiron Islands and Serrurier Island) from October to May. Other species may also travel some distance from shore to forage for food, though the distribution of seabirds in deeper offshore waters in the region tends to be very patchy except near islands.

There are five species of marine turtle known to occur in the region (Flatback turtle, Green turtle, Hawksbill turtle, Leatherback turtle, Loggerhead turtle). Green turtles are by far the most common turtle seen in near-shore waters. Hawksbill turtles are more often found in deeper waters, seaward of Ningaloo Reef. Green, flatback and loggerhead turtles all breed from September to March, while the hawksbill turtle breeds from July to March, however only the green and loggerhead turtles are known to breed on sandy beaches along the coastline and offshore islands in the region. Leatherback turtles occur in tropical and temperate waters of Australia. Relatively large numbers of leatherback turtles feed off Western Australia's coast, south of Geraldton. They are less abundant in the tropical waters of the northern Australian continental shelf. Breeding in Australia occurs mostly during December and January.

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The results of high-resolution geophysical surveys, video surveys and seabed sampling indicate that the seafloor at the well locations is predominantly featureless and consists of soft fine sediments (clay/silts). About 95 different species were recorded, including several that were new to Australia and possibly several new species. Limited patches of outcropping rock can be found at a range of depths, although mainly along scarp and canyon features in water depths greater than 500m. This hard substrate supports a locally diverse accumulation of species. While some unusual species were recorded, the same general collection of species is widespread and well represented along the continental shelf and upper slope in this region.

The Ningaloo Reef tract extends southwards from North West Cape for approximately 260km and is known to support a highly diverse and abundant marine community (eg 200 coral species, 500 fish species, 600 mollusc species). Exmouth Gulf supports extensive mangrove communities, particularly on its eastern shore, some 80km from the Notional Development Area.

The nearest town to the proposed development is Exmouth. The Shire of Exmouth has a resident population of approximately 3,000 people, though there are large short-term fluctuations in population due to the high number of tourists that visit the area. The main commercial activities associated with Exmouth include prawn fisheries, tourism and defence-related activities. Other significant socio-cultural features include the Ningaloo Marine Park (Commonwealth and State Waters), the Muiron Island Marine Management Area and Cape Range National Park

BHPB has consulted with the Exmouth Community over a number of years, as BHPB has been active in the region for some time. The consultation has predominantly centred around BHPB's projects in the region, however has also included other activities such as drilling and seismic surveys. The consultation programme has included:

- Face-to-face briefings and discussions;
- Periodic written newsletter updates posted to stakeholders;
- A 1800 toll-free telephone number;
- Community Reference Groups (CRGs) established in Exmouth and Perth; and
- Advertising of public comment opportunities in newspapers for activities undergoing EPBC Act processes.

Ongoing consultation activities will include:

- Continued use of CRGs established in Exmouth and Perth;
- Periodic written newsletter updates posted to stakeholders; and
- A 1800 toll-free telephone number.

ENVIRONMENTAL RISK ASSESSMENT AND MANAGEMENT

The Pyrenees Project activities follow the Pyrenees Development HSE Management System and Implementation Plan (HSEC MSIP), which in turn is in accordance with BHP Billiton HSEC Management Standards (including the BHP Billiton Environmental Management Standards). These systems are consistent with ISO14001 series Environmental Management Systems and OHSAS 18 001 Safety Management System requirements. A systematic approach is taken to the management of hazards and risk through the identification and assessment of hazards and risk, the identification of mitigation and control measures, the establishment of objectives, plans and performance standards, and the development of specific documentation.

Table 4 summarises the key environmental aspects and the offshore hook-up and commissioning related activities that may lead to these aspects being adversely affected.

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Table 4: Environmental Aspects and Project Activity Interactions

Activity	Aspect										
	Physical Presence	Light	Noise	Sediment impacts	Water quality	Nutrient addition	Marine discharges	Solid Waste Disposal	Greenhouse gas emissions	Hydrocarbon Contamination	Biodiversity
Routine Events											
Mobilisation to site	✓	✓						✓			
Vessel anchoring (FPSO, MODU, ISV etc)	✓	✓	✓	✓							
Setting risers											
Drilling		✓	✓								✓
Drill Cuttings Discharge	✓			✓	✓						
Drill Mud Discharge / disposal											✓
Completions	✓	✓	✓								
Well test & Well cleanup	✓	✓	✓						✓		
Power generation			✓						✓		
Hydrotest dewatering - See Ops EP					✓		✓				
Flowline dewatering – See Ops EP					✓		✓				
FPSO Start-up – See Ops EP		✓	✓		✓				✓	✓	
MODU, ISV Demobilisation	✓	✓	✓					✓			
Supply vessel and helicopter operations	✓	✓	✓					✓			
Sewage and greywater						✓					
Discharge of foodscraps						✓					
Deck drainage					✓					✓	
FPSO Flaring -- See Ops EP		✓							✓		
Accidental Events											
Hydrocarbon Spill				✓			✓	✓		✓	✓
Chemical Spill							✓	✓		✓	
Introduced species											✓

Objectives and performance standards for environmental management have been established based on consideration of:

- BHPB Sustainable Development Policy requirements
- BHPB HSEC Management Standards
- Legal requirements
- Community comments received during consultation
- Technology options and feasibility.

Table 5 provides a summary of environmental objectives, standards and performance criteria. All staff and contractors taking part in the Pyrenees offshore drilling, installation and hook-up and commissioning program will be advised of their responsibilities prior to commencement of activities. This will occur through meetings with key contractor personnel and an induction and awareness presentation that will be given to all crew.

Further information may be obtained from BHPB's external affairs 1800 036 247 or by writing to:

External Affairs Advisor
 BHP Billiton Petroleum Pty Ltd
 Central Park 152-158 St Georges Terrace
 PERTH WA, 6000.

Table 5: Summary of Environmental Objectives, Standards and Performance Criteria

Aspect	Objective	Standards	MODU	ISV	Support	FPSO	Performance Criteria
Physical Presence	<ul style="list-style-type: none"> No significant impact to seabed habitat No significant impact to seabed biological communities Minimise adverse effects to marine biota No significant impact on fishing or shipping activities in the region No collisions or near misses 	<ul style="list-style-type: none"> Offshore Petroleum Act 2006 (OPA 2006), s.119, 124, 140A P(SL)(MoE) Regulations 1999, r.13 and 14 APPEA Code of Environmental Practice BHPB Sustainable Development Policy BHPB HSEC Management Standards HSEC Guideline No. T07 Risk Criteria/ALARP Principle 	●	●	●	●	<ul style="list-style-type: none"> Information on MODU, J25 ISV and FPSO location and activities forwarded to AMSA for inclusion into Marine Notices Pyrenees project location is offshore in deep water, away from areas commonly used by fishing or recreational vessels Activities will not commence unless accepted Safety Management Plans are in place Navigation lights will be in place Standard marine communications systems will be in place 500m safety exclusion zone requested Seabed habitat type has been reviewed and no sensitive habit or rock outcrops will be affected Vessel-Whale interaction procedures will be implemented to avoid interference with whales FPSO mooring has minimal footprint on seabed. OSV will not anchor in Pyrenees area Ongoing consultation with local users
Light	<ul style="list-style-type: none"> No significant adverse effect on marine biota No significant impact on visual amenity for coastal communities or island visitors 	<ul style="list-style-type: none"> P(SL)(MoE) Regulations 1999, r.13 and 14 APPEA Code of Environmental Practice BHPB Sustainable Development Policy BHPB HSEC Management Standards HSEC Guideline No. T07 Risk Criteria/ALARP Principle 	●	●	●	●	<ul style="list-style-type: none"> Activities will not commence unless accepted Safety Management Plans are in place Lighting on MODU, ISV, FPSO and OSV will be at levels required for safe working practices Flaring during well testing will be minimised Commissioning flaring to be addressed in Operations Environment Plan (PYHSE-E-0001) Pyrenees project location is significant distance offshore from turtle and seabird nesting areas Equipment designed to normal oilfield practice, which includes specifications for safe levels of lighting
Noise	<ul style="list-style-type: none"> No significant adverse effect on marine biota No significant impact on 	<ul style="list-style-type: none"> EPBC Act Regulations Pt 8 P(SL)(MoE) Regulations 1999, r.13 and 14 	●	●	●	●	<ul style="list-style-type: none"> Helicopter flights will be routed to avoid flying over identified sensitive seabird nesting areas at Muiron Islands and Exmouth township except if required during emergencies

Aspect	Objective	Standards	MODU	ISV	Support	FPSO	Performance Criteria
	coastal or island communities	<ul style="list-style-type: none"> • APPEA Code of Environmental Practice • BHPB Sustainable Development Policy • BHPB HSEC Management Standards • HSEC Guideline No. T07 Risk Criteria/ALARP Principle 					<ul style="list-style-type: none"> • Helicopter flights will be carried out during daylight hours only, except if required during emergencies or for training purposes • EPBC Regulations 200 Part 8 Vessel-Whale interaction procedures to be implemented to avoid interference with whales (see Appendix C) • Helicopters to maintain height of more than 1,650 feet or within a horizontal radius of 500 m of any observed whales (except for landing and takeoff from FPSO) • Activities will not commence unless accepted Safety Management Plans are in place • Equipment designed to normal oilfield standards including specifications for noise levels. • Cetacean and whale shark sightings will be recorded and forwarded to DEWHA
Seabed Disturbance: Sediment Quality	<ul style="list-style-type: none"> • No significant alteration of sediment characteristics • No contamination of sediments • No adverse effect on marine biota 	<ul style="list-style-type: none"> • P(SL)(MoE) Regulations 1999, r.13 and 14 • APPEA Code of Environmental Practice • ANZECC Water Quality Guidelines • BHPB Sustainable Development Policy • BHPB HSEC Management Standards • HSEC Guideline No. G09 Hazardous/Non-Hazardous Wastes and Emissions 	•	•		•	<ul style="list-style-type: none"> • At its closest point, the Pyrenees Development Area is approximately 15 km northwest from the boundary of the Muiron Islands Marine Management Area and 23 km north northwest of North West Cape Western Australia. • The distance from the FPSO location to the northern Boundary of the Commonwealth Waters of the Ningaloo Marine Park is at least 12 km, with the nearest drill-centre (Macedon) approximately 22 km from the Muiron Islands
Seabed Disturbance: Footprint	<ul style="list-style-type: none"> • No significant impact to seabed habitat • No significant impact to seabed biological communities • No adverse effects to marine biota 	<ul style="list-style-type: none"> • Offshore Petroleum Act 2006 (OPA 2006), s.124 • P(SL)(MoE) Regulations 1999, r.13 and 14 • APPEA Code of Environmental Practice • BHPB Sustainable Development Policy 	•	•		•	<ul style="list-style-type: none"> • Final mooring patterns shall be reviewed to ensure that anchoring impacts will not affect sensitive habitats • MODU and FPSO Anchoring with minimal footprint on seabed • OSV is DP and will not normally anchor in Pyrenees area

Aspect	Objective	Standards	MODU	ISV	Support	FPSO	Performance Criteria
		<ul style="list-style-type: none"> BHPB HSEC Management Standards HSEC Guideline No. T07 Risk Criteria/ALARP Principle 					
Water Quality: Foodscraps	<ul style="list-style-type: none"> No significant adverse effect on water quality No adverse effects on marine biota Maximise efficient resource utilisation Minimise incremental increase to environmental impact associated with onshore disposal as far as possible 	<ul style="list-style-type: none"> Offshore Petroleum Act 2006 (OPA 2006), Schedule c. 222 (4) P(SL)(MoE) Regulations 1999, r.29 (1) Protection of the Sea (Prevention of Pollution From Ships) Act 1993 Division 2 MARPOL 73/78 Annexe IV APPEA Code of Environmental Practice ANZECC Guideline for Fresh and Marine Water Quality BHPB Sustainable Development Policy BHPB HSEC Management Standards HSEC Guideline No. T07 Risk Criteria/ALARP Principle 	●	●	●	●	<ul style="list-style-type: none"> Wastage will be limited where possible Non-food material will be segregated and stored on board for onshore disposal Food scraps and other putrescible wastes such as food oils and grease will be disposed of in accordance with MARPOL 73/78 Annex IV, and Clauses 222 and 616 of the Schedule of the Offshore Petroleum Act 2006 (OPA 2006). Between 3 -12 NM from the nearest shore, MARPOL 73 / 78 Annex V, Regulation 3 (c) shall apply. All food scraps will be macerated to less than 25 millimetres
Water Quality: Sewage	<ul style="list-style-type: none"> No reduction in ambient water quality No adverse effects on marine biota No adverse aesthetic effects. 	<ul style="list-style-type: none"> Offshore Petroleum Act 2006 (OPA 2006), Schedule c. 222 (4) P(SL)(MoE) Regulations 1999, r.29 (1) Protection of the Sea (Prevention of Pollution From Ships) Act 1993, Division 2 APPEA Code of Environmental Practice ANZECC Guideline for Fresh and Marine Water Quality BHPB Sustainable Development Policy 	●	●	●	●	<ul style="list-style-type: none"> Sewage treatment plant or sewage treatment facilities on MODUs, ISV, OSV, FPSO & support vessels shall comply with MARPOL 73 / 78 Annex IV requirements. No untreated sewage shall be discharged within 12 nm from the nearest land, in accordance with MARPOL 73 / 78, Between 3 -12 NM from the nearest shore, MARPOL 73 / 78 Annex IV, Regulation 11 shall apply. Sewage shall be treated with a facility that meets MARPOL Annex IV, Regulation 9.1.2 (approved sewage and disinfecting system) Sewage and greywater will be disposed of in accordance with MARPOL 73/78 Annex IV and Clauses 222 and 616 of the Schedule of the Offshore Petroleum Act 2006 (OPA 2006)

Aspect	Objective	Standards	MODU	ISV	Support	FPSO	Performance Criteria
		<ul style="list-style-type: none"> BHPB HSEC Management Standards HSEC Guideline No. T07 Risk Criteria/ALARP Principle 					
Water Quality: Drilling Muds	<ul style="list-style-type: none"> No significant alteration of sediment characteristics No contamination of sediments No adverse effect on marine biota. 	<ul style="list-style-type: none"> Offshore Petroleum Act 2006 (OPA 2006), s.124 Clause 516, issued as a schedule to the Offshore Petroleum Act 2006 (OPA 2006) P(SL)(MoE) Regulations 2000, r.13 and 14 APPEA Code of Environmental Practice ANZECC Water Quality Guidelines DoIR Petroleum Information Series – Guidelines Sheet 3: The use and management of drilling fluids and cuttings BHPB Sustainable Development Policy BHPB HSEC Management Standards HSEC Guideline No. 9 Hazardous/Non-hazardous Wastes and Emissions 	●				<ul style="list-style-type: none"> Oil-based drilling muds will not be used in the proposed development Water-based muds to be used as preference whenever possible and practicable while meeting technical constraints Wells designed to minimise volumes of drill muds required while meeting technical constraints Independent 3rd Party spill containment audit carried out to identify any potential sources of spillage SBMs recovered and returned to shore for recycling or disposal Selection of mud type with least potential for environmental effects while meeting technical requirements SBMs will not be routinely discharged to the marine environment (except for small amounts that may adhere to drill cuttings)
Water Quality: Hydrotest Discharges	<ul style="list-style-type: none"> No significant alteration of sediment characteristics No contamination of sediments No adverse effect on marine biota. 	<ul style="list-style-type: none"> Offshore Petroleum Act 2006 (OPA 2006), s.124 Clause 516, issued as a schedule to the Offshore Petroleum Act 2006 (OPA 2006) P(SL)(MoE) Regulations 1999, r.13 and 14 APPEA Code of Environmental Practice ANZECC Water Quality Guidelines 		●		●	<ul style="list-style-type: none"> Maximise hydrotest of systems prior to arrival on-site (pre-commissioning) Avoid chemical treatments where practicable Chemical selection process has preference for chemicals with least potential for environmental harm Hydrotest discharges as part of hook-up and commissioning activities to meet legal requirements and the commitments made in this Project EP. Disposal Plan to be developed as part of commissioning procedures (to be addressed in Pyrenees Development

Aspect	Objective	Standards	MODU	ISV	Support	FPSO	Performance Criteria
		<ul style="list-style-type: none"> BHPB Sustainable Development Policy BHPB HSEC Management Standards HSEC Guideline No. 9 Hazardous/Non-hazardous Wastes and Emissions 					Operations Environment Plan).
Water Quality: Deck Wash-Down; hydrocarbon & chemicals handling, storage, loading and offloading	<ul style="list-style-type: none"> No significant adverse effect on water quality No adverse effects on marine biota Minimise incremental increase to environmental impact associated with onshore disposal as far as possible 	<ul style="list-style-type: none"> Offshore Petroleum Act 2006 (OPA 2006), Schedule c.285 and 616 P(SL)(MoE) Regulations 1999, r.13 and 14 APPEA Code of Environmental Practice ANZECC Guidelines for Fresh and Marine Water Quality BHPB Sustainable Development Policy BHPB HSEC Management Standards HSEC Guideline No. T07 Risk Criteria/ALARP Principle 	●	●	●	●	<ul style="list-style-type: none"> All Chemicals & fuel storage areas will be banded / contained An approved chemicals handling, storage & disposal procedure, as well as a refuelling and bulk transfer procedure shall be in place before the MODUs, J25 ISV and FPSO arrive onsite and refuelling & resupply commences No fuel bunkering shall commence after dark FPSO and support vessels will have current MARPOL compliant Shipboard Oil Pollution Emergency Plan (SOPEP) No wastes will be routinely discharged via deck washdown Utility equipment integrity to restrict leakages and small spills Operating and maintenance procedures to restrict leakages and small spills Equipment onboard MODUs, J25 ISV, FPSO and support vessels for responding to, and cleaning up, small spills of oils and other chemicals as per SOPEP requirements Slops water will be monitored for oil-in-water content, The oil content of the effluent without dilution shall not exceed 15 PPM as per MARPOL Reg 15 & 39, except produced formation water discharges (or comingled slops discharges from the FPSO), which shall comply with PSLMoE Regulation 29 (30mg/L 24 hr average) •Slops water will be monitored for oil-in-water content, Small deck spills contained and cleaned up as soon as possible Drainage from utility areas where leaks are likely will be collected and processed by oily water separator system such as slops tanks Chemical selection process has preference for chemicals with

Aspect	Objective	Standards	MODU	ISV	Support	FPSO	Performance Criteria
							least potential for environmental harm
Water Quality: Antifouling Leachate	<ul style="list-style-type: none"> No significant adverse effect on water quality No adverse effects on marine biota 	<ul style="list-style-type: none"> Protection of the Sea (Prevention of Pollution From Ships) Act 1993 Division 2 MARPOL 73/78 Annexe IV and V Navigation Act 1908 P(SL)(MoE) Regulations 1999, r.29 (1) APPEA Code of Environmental Practice ANZECC Guideline for Fresh and Marine Water Quality BHPB Sustainable Development Policy BHPB HSEC Management Standards HSEC Guideline No. T07 Risk Criteria/ALARP Principle 	•	•	•	•	<ul style="list-style-type: none"> Only legally permitted antifouling paints will be used
Waste Disposal: General Non-Hazardous Waste	<ul style="list-style-type: none"> Minimise incremental increase to environmental impact associated with onshore disposal as far as possible Maximise efficient resource utilisation 	<ul style="list-style-type: none"> EPBC Act 1999 Environmental Protection Act 1986 (WA) APPEA Code of Environmental Practice ICCM Framework BHPB Sustainable Development Policy BHPB HSEC Management Standards HSEC Guideline No G09 Non-hazardous Wastes, Hazardous Wastes and Emissions HSEC Guideline No. T07 Risk Criteria/ALARP Principle 	•	•	•	•	<ul style="list-style-type: none"> An approved Waste Management Plan shall be in place before the MODUs, J25 ISV and FPSO arrive on-site No solid wastes to be discharged overboard Limit waste creation at site by application of the waste management hierarchy MODUs, J25 ISV, FPSO and support vessels to have waste management plan in place that has been reviewed by BHPB and found to, at least, meet all of MARPOL requirements for waste management (including recording of amounts) Skips provided for waste containment are to have covers to prevent material being blown overboard Segregation of all waste at site, onshore disposal, recycling where practicable (note 'practicable' in this context includes a consideration of the net benefit of recycling compared to disposal for the particular waste stream in question) Waste disposed of to licensed receival facilities.

Aspect	Objective	Standards	MODU	ISV	Support	FPSO	Performance Criteria
Waste Disposal: Hazardous Waste	<ul style="list-style-type: none"> • Avoid contamination of the marine and terrestrial environment • Minimise incremental increase to environmental impact associated with onshore disposal • Maximise efficient resource utilisation 	<ul style="list-style-type: none"> • P(SL)(MoE) Regulations 1999, r.13 and 14 • APPEA Code of Environmental Practice • BHPB Sustainable Development Policy • BHPB HSEC Management Standards • HSEC Guideline No G09 Non-Hazardous Wastes, Hazardous Wastes and Emissions • HSEC Guideline No. T07 Risk Criteria/ALARP Principle 	•	•	•	•	<ul style="list-style-type: none"> • An approved Waste Management Plan shall be in place before the MODUs, J25 ISV and FPSO arrive onsite • Storage areas for hazardous liquid waste shall be banded / contained • No discharge of hazardous materials to sea • Limit creation of hazardous waste through tendering and contracting process, e.g. chemical selection process has preference for chemicals with least potential for environmental harm • MODUs, J25 ISV, FPSO and support vessels to have waste management plan in place that has been reviewed by BHPB and found to, at least, meet all of MARPOL requirements for waste management (including recording of amounts) • Containers clearly marked, stored in secure areas designed to prevent and contain spills • Material Safety Data Sheets (MSDSs) will be available for all chemical materials onboard of MODUs, J25 ISV, FPSO and OSVs • Hazardous waste segregated offshore for onshore recycling or disposal to approved onshore facility (note that waste transport operators and waste disposal facility operators will be required to demonstrate compliance with relevant government regulatory requirements) • Defined facility procedures for transfers • Procedures to track hazardous wastes until final disposal
Greenhouse Gas Emissions	<ul style="list-style-type: none"> • Minimise contribution of greenhouse gases to atmosphere • Comply with requirements BHPB's Greenhouse Gas Agreement • Efficient use of resources 	<ul style="list-style-type: none"> • APPEA Code of Environmental Practice • BHPB Sustainable Development Policy • BHPB HSEC Management Standard • HSEC Guideline No G17 Energy and Greenhouse • HSEC Guideline No G20 Energy and 	•	•	•	•	<ul style="list-style-type: none"> • Appropriate maintenance of equipment to ensure efficient operation

Aspect	Objective	Standards	MODU	ISV	Support	FPSO	Performance Criteria
		<ul style="list-style-type: none"> Greenhouse Gas Management Plan Pyrenees Development Greenhouse Gas Management Plan 					
Accidental Release of Oil or Chemicals	<ul style="list-style-type: none"> No spill of oil or chemicals No significant adverse effect on water quality No adverse effects on marine biota 	<ul style="list-style-type: none"> EPBC Act 1999 P(SL)(MoE) Regulations r.14(7) P(SL)(MoSoOF) Regulations r. 24.(1) Environmental Protection Act 1986 (WA) APPEA Code of Environmental Practice ICCM Framework BHPB Sustainable Development Policy BHPB HSEC Management Standards 	●	●	●	●	<ul style="list-style-type: none"> All hazardous chemicals & fuel storage areas will be banded / contained An approved chemicals handling, storage & disposal procedure, as well as a refuelling and bulk transfer procedure shall be in place before the FPSO arrives onsite No fuel bunkering shall commence after dark Risk assessment and hazard identification studies completed prior to mobilisation to identify potential sources of spills Implementation of good oilfield practise for prevention of accidental release An accepted Emergency Response Plan, which includes an Oil Spill Contingency Plan (OSCP [21]) must be in place before any subsea project activities commence. The Project OSCP shall be tested before the start of subsea project activities. In addition, adequate allowances shall be in place for the training of staff in oil spill response measures
Accidental Introduction of Marine Pest Species	<ul style="list-style-type: none"> No introduction of exotic marine species 	<ul style="list-style-type: none"> Quarantine Act 1908 (Cth). Australian Ballast Water Management Requirements Australian Biofouling Management Requirements Draft National Biofouling Guidelines for the Petroleum Industry 	●	●	●	●	<ul style="list-style-type: none"> Ballast Water Management Plan in accordance with AQIS requirements shall be in place for all vessels involved in Project activities. Ballast water assessed as being 'high risk' must not be discharged into Australian ports or waters. A hull fouling risk assessment will be undertaken for vessels entering Exmouth Gulf; high risk vessels will not be allowed to enter Exmouth Gulf