

# Gorgon Project Update

Issue 10 - May 2006

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Operated by **Chevron Australia**  
in joint venture with

**ExxonMobil**



The Gorgon Project is a world class project, and we've put together a world class team to help protect the conservation values of Barrow Island

## Quarantine an environmental focus

Quarantine for the Gorgon Project will be amongst the most rigorous anywhere in the world, according to Gorgon Project Health, Safety and Environment Manager Russell Lagdon.

"The Gorgon Project is a world class project, and we've put together a world class team to help protect the conservation values of Barrow Island," Mr Lagdon said.

This includes recruiting the former director of South African National Parks, Johann van der Merwe, as the Gorgon Project's Quarantine Manager and the establishment of a Quarantine Advisory Committee (QAC).

Chaired by Bernard Bowen, the former chairman of Western Australia's Environmental Protection Authority, the QAC has, through its detailed advice, helped the Gorgon Project further develop its Quarantine Management System.

"Regular QAC meetings are an integral part of the Project's aim to deliver quarantine management and an unprecedented level of protection for the conservation of Barrow Island," he said.

"This is particularly important as we approach the critical milestone this year of the decision to be taken by the Minister for the Environment to grant formal environmental approval for the restricted use of Barrow Island for our LNG plant."

The approval process is based on the Gorgon Project's draft joint Commonwealth/State Environmental Impact Statement.

At more than 3000 pages, the draft document is one of the most comprehensive of its type ever produced for an Australian resources project.

The draft document includes contemporary research and contributions of Gorgon Project people together with more than 30 independent experts, including representatives from the Western Australian Department of Conservation and Land Management, the Department of Fisheries, the Department of Agriculture, the Environmental Protection Authority, the WA Museum, the CSIRO, Curtin University, the University of Western Australia and Murdoch University.

Mr Lagdon said the document was also influenced by advice received during numerous meetings and workshops with government agencies and key community groups.

He said the nine community consultation workshops and 10 quarantine technical workshops held with Government agency representatives added much confidence to the Project's approach to quarantine.

The EIS-ERMP document also draws on Chevron Australia's practical experience on Barrow Island over the last 40 years, which has directly helped to ensure the maintenance of the biodiversity of the island.

In addition to proposals to limit the impact on the immediate environment, the Gorgon Project is designed to be one of the most greenhouse gas efficient LNG projects in the world.

Since 1998, the Project design has achieved a forecast 70% improvement in greenhouse gas efficiency, reducing greenhouse gas emissions per 100 tonnes of LNG produced from 89 tonnes to 35 tonnes.



The Gorgon Project also has the potential to be the first project in Australia to significantly reduce greenhouse gas emissions by the injection of carbon dioxide (CO<sub>2</sub>) underground.

The Project's proposal to inject carbon dioxide stripped from the gas reservoirs into a formation below Barrow Island will be the biggest commercial application of its kind in the world, if proven to be commercially and technically feasible.

Following a 16 week long public comment phase on the draft environmental statement, the Environmental Protection Authority and the Federal Department of Environment and Heritage are now engaged in their assessment process prior to issuing their recommendation to the Minister in June.

## Jansz - Challenges and Opportunities

As Australia's first all subsea "mega project", the Gorgon Project will use leading edge technology to deliver safe and clean energy to the Asia Pacific region.

And while subsea developments are becoming increasingly common throughout the world, the Project presents its own series of unique engineering challenges and opportunities.

A key component of the Gorgon Project will be the development of the Jansz gas field, discovered by Gorgon Joint Venture participant ExxonMobil in 2003.

The development of the Jansz field will involve one of the longest subsea tiebacks in the world (180km), water depths of more than 1km and the crossing of Australia's Continental Shelf.

With its deepwater location, the Jansz field has been a particular focus for Upstream Contractor J P Kenny/Technip, with specialised engineering required to meet the design and installation challenges for a large diameter pipeline in these water depths.

The team is looking at an alternate route for the Jansz pipeline to reduce the length by 40 km and is paying close attention to a geological feature approximately half way along its length.

Occasionally called the "Grand Canyon", the feature is actually the edge of Australia's Continental Shelf and recent surveys suggest drops of up to 400 metres and seabed angles of up to 70 degrees.

If not addressed properly this could mean a span of more than 200 metres for the pipeline, providing further engineering challenges for the team.

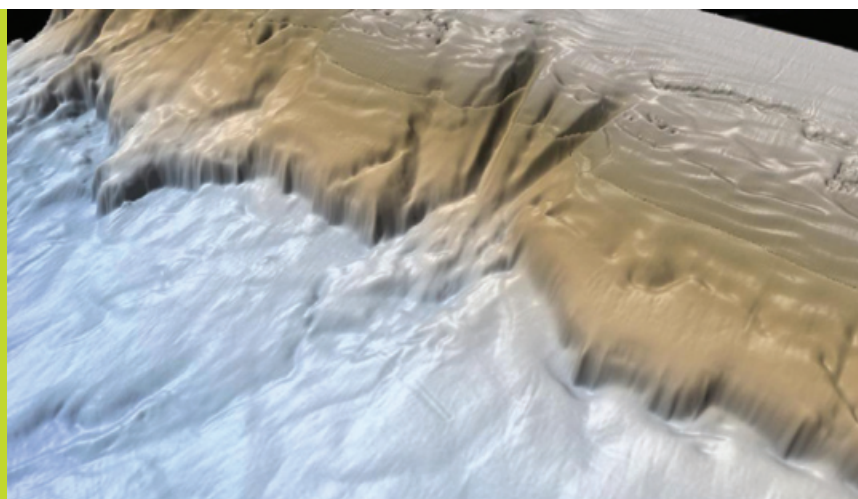
A number of geological studies are under way to learn more about the scarp, including its age and stability.

In line with other subsea developments, rock dumping will be required to stabilise the pipeline against the prevailing cyclones along its route in the near shore area.

To minimize the amount of rock required, the team is looking at alternate stabilization techniques for sections of the pipeline, such as gravity anchors.

For more information on the sub sea development of the Gorgon Project, please visit the Fact Sheets section of [www.gorgon.com.au](http://www.gorgon.com.au)

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Mr Beckett said the good working relationships the Project had with its stakeholders were due to the mutual efforts of the Gorgon Project Joint Venture participants Chevron, ExxonMobil and Shell.

## Strong partnerships key to Gorgon Project's success

Strong partnerships is a theme close to Colin Beckett's heart.

As General Manager of the Greater Gorgon Area for Chevron Australia, Mr Beckett is responsible for guiding the development of the Gorgon Project and sees partnerships as fundamental to its success.

Speaking at the International Business Council of Western Australia in February 2006, Mr Beckett said the good working relationships the Project had with its stakeholders were due to the mutual efforts of the Gorgon Project Joint Venture participants Chevron, ExxonMobil and Shell.

"I see this as the key mechanism for realising the opportunities the Gorgon Project offers and for overcoming the challenges we face this year," he said.

"The collective experience of the Joint Venturers shows us that vast resources and their accompanying benefits can only be realised through building and developing strong partnerships with all those involved - such as customers, regulators, suppliers, contractors, governments, researchers and, of course, business partners.

"We value those relationships and approach them on the basis of creating a long term rather than a one-off relationship."

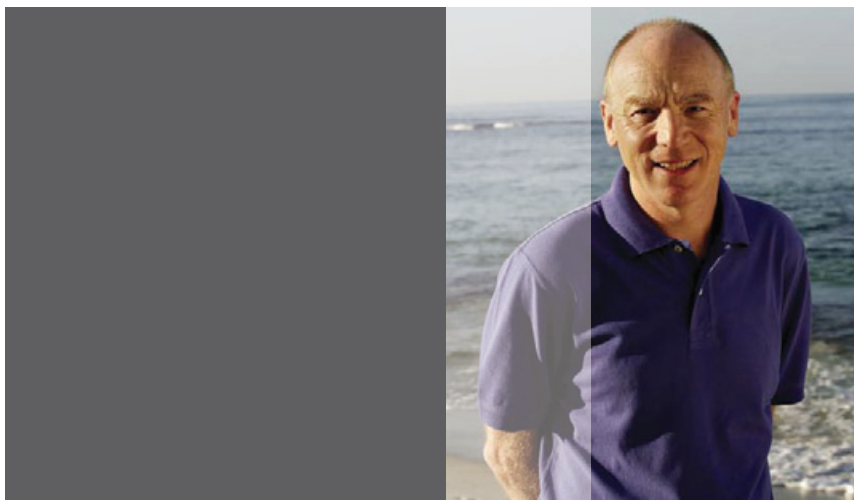
Mr Beckett said the Joint Venturers involved in the Gorgon Project possessed a wealth of international and domestic expertise in gas processing operations through all stages of the supply chain, from gas field to gas tip.

This would allow the partners to push the limits of technology to unlock huge gas resources.

The strong partnership between the Gorgon Project proponents was highlighted in 2005 when they aligned their interests in the many offshore license areas known as the Greater Gorgon Area.

At the same time, the participants agreed to market each entitlement to LNG individually rather than to sell in co-operation, which has been the standard approach to selling LNG.

This 'equity marketing' has already led to Chevron signing individual heads of agreement with three Japanese customers.



General Manager  
Greater Gorgon Area Colin Beckett

"This provides an opportunity to export more than 100 million tonnes of Australian LNG to the Asia-Pacific region over a 25 year period," he said.

"It's an exciting time and the rewards from the Gorgon Project promise to be significant, long term and far reaching. I invite you to be part of the Project and share in its success."

For a full version of Mr Beckett's speech, please visit the Latest News section of [www.gorgon.com.au](http://www.gorgon.com.au)

## Australian Industry Participation

The Gorgon Project is utilising the vendor identification services of the Industry Capability Network (ICN) of Western Australia to provide qualified information on Australian suppliers.

ICN (WA) consultants will assist the project's procurement team, FEED/EPCM contractors and project suppliers to identify competitive Australian manufacturers and service providers through all tiers of the project's supply chain.

Australian suppliers are invited to ensure they have an ICN company profile by visiting [www.icnwa.org.au](http://www.icnwa.org.au)

More than 1400 suppliers have already registered their details with the site.

The Gorgon Project will also use the ICN's Project Connect website to advertise upcoming procurement and contract opportunities.

Project Connect can be accessed at [www.projectconnect.com.au](http://www.projectconnect.com.au)

Alternatively, Project Connect can also be accessed via [www.gorgon.com.au](http://www.gorgon.com.au)

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## REGISTER FOR SUPPLY OPPORTUNITIES

### Current Projects Available for Gorgon Project

Click the sub-project of interest below

[BACK TO MAIN PROJECT >>](#)

- > [Gorgon - Downstream Contracts](#)
- > [Gorgon - Downstream Pre Assembled Units](#)
- > [Gorgon - Downstream Procurement Packages](#)
- > [Gorgon - Upstream](#)

**Project Name :** Gorgon - Downstream Procurement Packages

**Description :** The Downstream component includes the LNG facility to be located on Barrow Island that will include two LNG processing trains, each with a capacity of five million tonnes per annum (MTPA), and a domestic gas plant.

An overview of the processing facility can be obtained from the Greater Gorgon website.

The downstream contract was awarded to the Kallagg Joint Venture - Gorgon, which comprises KBR, JGC Corporation of Japan, and Australian-based partners Clough Projects Australia Pty Ltd and Hatch Associates Pty Ltd.



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in joint venture with



### Goods & Services required for this project.

\* Items underlined and shown in blue provide additional information on packages, tenders or the successful supplier

PDF icons provide additional information on packages. To view information click on the PDF icon. If required you can download Acrobat Reader by [Clicking Here](#)

REF NO.	DESCRIPTION	REGISTRATION CLOSES	FULL PACKAGE	PART PACKAGE	TENDERS / SUPPLIER
<u>A8551</u>	<u>MV Substations</u>	TBA			
<u>E3101</u>	<u>T&amp;I Cable</u>	TBA			
<u>E3151</u>	<u>Offplot Utility Power and Control Cable</u>	TBA			
<u>E441-3</u>	<u>Pre-Fabricated Electrical Buildings</u>	TBA			

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## Gorgon Sea Turtle Research to have Long Term Benefits

A three-year sea turtle study is expected to yield important information for the Gorgon Project, as well as helping wider research into the elusive species.

The study, involving the first use of turtle satellite tracking in Western Australia, began on Barrow Island in late 2005 with a flatback and green turtle monitoring program.

Gorgon Project Health Safety and Environment Manager Russell Lagdon said the study would aid the development of environmental management measures to minimize the impact of the Project on the turtles.

“The results of this study are not only important to the Gorgon Project but will provide valuable data for wider research into sea turtles.” he said.

This includes the size and distribution of the turtle population, as well as nesting habits.

Mr Lagdon said the turtles would be studied by sea turtle biologists, aided by volunteer turtle taggers, during their October to May nesting period each year.

The study, developed by Pendoly Environmental Pty Ltd, encompasses four separate survey programs.

### Satellite Tracking

Four turtles have been fitted with a specialized harness system containing a satellite transmitter allowing them to be tracked via the Argos satellite system.

The usual method of cementing a transmitter to the shell of a turtle cannot be used for flatbacks as they have a layer of skin covering their carapace which should not be damaged.

The turtles, named Karli, Yagoo, Yarra Yarra and Yanagee have been tracked during the last few months of their most recent nesting season. The tracking data is available on the Internet at [www.seaturtle.org](http://www.seaturtle.org)\*

### Track and Nest Counting

Seven west coast beaches and six east coast beaches are surveyed for six days every month during nesting to observe the number of new overnight nests and tracks left by different turtle species and the number of hatchlings emerging each day.

### Flipper Tagging

Carried out by experienced tagging team leaders and volunteers on the island’s four main nesting beaches, the flatback turtle tagging program involves attaching numbered metal tags to both of the turtle’s front flippers with specialized pliers.

At tagging, the turtle’s measurements, special features and nesting location are logged and if sighted again, new measurements are recorded.

### Beach Light Study

A study is underway on one of the island’s nesting beaches to determine how disruptive light glow is to hatchling orientation.

It is known that light disrupts turtle hatchling orientation, potentially causing them to head away from the waters edge, and into harms way.



This study will help the project determine what lighting to use in order to cause the least disruption to the turtle hatchlings.

The Project has already opted to shield its main flare on the ground instead of using a more traditional tower flare to reduce the amount of light on the hatchlings.

### About the turtles:

Female sea turtles usually come ashore to nest at night. After a female turtle crawls ashore, she uses her front flippers to dig out a "body pit".

Then using her hind flippers, she digs an egg cavity where she lays eggs the size of golf balls. Flatback turtles nest up to four times per season at 13 to 18 day intervals, laying an average of 50 eggs at a time.

After the last egg is laid, the turtle covers all the eggs with sand and then compacts it with her flippers and body. She then flings more sand about with her flippers to erase any signs of the nest.

The incubation period for most sea turtle species is 45 to 70 days. Hatchlings usually wait until night to emerge from the nest, reducing exposure to daytime predators and dehydration. They leave the nest in groups and head toward the sea. It is thought that the moonlight reflected off the water guides them to the sea.

Scientists theorise that small sea turtles spend several years floating in the seaweed, eating and growing. Once large enough, the young turtles return to coastal waters to forage and continue growing.

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\* Once on the homepage of [www.seaturtle.org](http://www.seaturtle.org) click on Satellite Tracking; then click Barrow Island (Flatbacks); then click 'I Accept' and you will have access to the tracking maps.



## Contact Details

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