December 2009 : **Issue 3**

BRENT E-NEWS

Brent Decommissioning Project

Welcome to the third in the series of regular communications from the Brent Decommissioning Project Team

In this issue:

www.shell.co.uk/brentdecomm

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BRENT
Stakeholder Update

Welcome to the third in the series of regular communications from the Brent Decommissioning Project Team.
In this issue we focus on the topsides challenge, the scale and scope of work involved in engineering down (safe shutdown, hydrocarbon cleaning and disconnections) and removal of the Brent Delta topsides.

In our first two e-newsletters we explained the scope and scale for decommissioning the Brent field and how and why we, as a project team, engage with you, our stakeholders.

In this issue we talk about a more tangible aspect of the project – the topsides challenge. My colleagues Paul Smy and Darrel Shaw explain this in more detail. Shutting down the facilities and preparing the platforms for removal is a significant undertaking. We estimate this will take several years for Brent Delta alone. The technical challenge to remove the topsides and transport to shore for dismantling is nothing short of Herculean! We are pleased to say our studies on this work are going well.

Topsides decommissioning is good news for those within the contractor community who have the skills and expertise to tackle such a challenge. We have matured our contracting approach and this is also expanded upon in more detail in the newsletter.

As always I hope this communication will give you a useful insight into our current thinking and planning at this stage of the project. Please feel free to contact the project team if you have any questions or comments about Brent topsides decommissioning, or indeed any other aspect of the project.

Looking ahead to our next newsletter, we will focus on the challenges posed by the gravity-based structures and their cell contents. We will also address the various possible options for dealing with them. At previous stakeholder events and in some cases by individual correspondence, it is clear that there is a great deal of interest as to how we are approaching these challenges and what the range of possible solutions may be.

We welcome and appreciate any feedback you may have on the content of this e-newsletter.

Austin Hand
Project Director

CONTACTUS

For further information on the Project, please visit www.shell.co.uk/brentdecomm and/or get in touch with the team via the 'Contact Us' link on the website.

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The Big Picture

A project overview by Paul Smy, Brent Execution Manager

The success of Brent field decommissioning will very much depend on how well we understand the scope, then plan a logical sequence and finally develop the tools and contract strategies to execute the project safely, on time and within budget.

Our first challenge, of understanding the project scope, has been significant.

Under UK legislation, operators are required, in principle, to remove every piece of infrastructure when decommissioning a field. However, the legislation recognises that items such as concrete substructures and steel jackets weighing more than 10,000 tonnes present major removal difficulties. Should studies indicate that these structures cannot be removed, or it is not safe to remove them, operators can apply for derogation (permission to leave in place).

While it is understood that we will plug and abandon all the wells and remove all the topsides in the Brent field, we are also faced with challenges such as: Is it possible to remove three concrete gravity based structures (GBS) and one steel jacket (Brent Alpha) and if so, how? There are substantial risks to be considered before these concrete structures or steel jacket can be removed, and our efforts so far are concentrated on finding solutions to the challenges identified through various studies.

The full project scope will require agreement by the regulators and input from our stakeholders. We are making good progress in understanding the project from a management and engineering perspective. We now look to the next stage, which is planning how we are going to execute the work.

Each of the four Brent platforms will have a different date for cessation of production (CoP). In many respects this is a good thing, as we will learn and improve as we move from platform to platform. For example, by the time we have plugged and abandoned around 160 wells over the next decade or so, we will have considerably added to our skills and expertise in this specialist field.

Another challenge for execution and planning is that the Brent platforms are inter-connected. For example, Brent Charlie produces gas, which is transported over to Brent Bravo into the Brent Far North Liquids and Associated Gas System (FLAGS) pipeline and is likely to be the last platform to cease production. So how best do we decommission the Bravo platform while still accommodating gas from Brent Charlie?

The picture is even more complex on Brent Alpha, which takes on board a lot of third-party gas from other fields. FLAGS, together with the Northern Leg Gas Pipeline and the Western Leg Gas Pipeline, run under Alpha, so in order to take away the platform in its entirety we will need to re-route the gas pipelines to continue the service we provide to third parties, whilst maintaining gas supplies to the UK.

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The Big Picture....Continued

The platform with the least number of connections with other platforms is Brent Delta, and that is where decommissioning will most likely begin. The process begins with abandoning the wells and shutting down the oil and gas processing facilities.

The platform is then divided into modules, which is how it was originally built. All connections between modules may need to be disconnected to allow the removals contractor to disengage them properly. This will involve a number of inventory challenges and risks, which will need to be carefully managed from a safety and environmental perspective.

This phase may take several years to complete, with around 170 people living on board the platform to carry out the work. Maintenance activities will be required to ensure the platform remains safe to live and work on and the living quarters and services will need to remain intact. The final phase of platform decommissioning involves the removal and disposal of the topsides. This is another major undertaking which requires a great deal of research, planning and preparation. Work to determine the best method of removing the topsides is already under way. We have been engaging with the market place to identify various removal options and help the contractors prepare for making their technical and commercial proposals.

To facilitate this and other key aspects of the project, we have designed a robust contract strategy that will deliver a series of fit-for-purpose contracts covering the full scope of Brent Field Decommissioning, aimed at ensuring the best possible outcome for all involved.

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The Topsides Challenge

For those who remember the iconic Brent 'float-out' photographs and TV film footage of the 1970s, it will be no surprise as to the scale of the challenge to remove the platform topsides.

When decommissioning begins on Brent Delta, the topsides steel structure, weighing some 23,000 tonnes, will be removed. Exactly how it will be removed is yet to be decided. When removed from its concrete gravity base and shipped to shore, it will be dismantled and thereafter undergo a carefully-managed waste-handling and recycling process.

"Darrel Shaw, Removals Team Leader for the Brent Decommissioning Project, explains: "We started the process early on since a lot of groundwork had to be carried out to survey, and gather detailed structural data on, all the Brent platforms. Ultimately, it makes good sense that we find a solution that fits the whole field, rather than a single platform."

The team's early studies involved 'casting the net wide' to explore the possible removal options and then focusing on understanding the key risks and technical challenges associated with each option. This included engaging with a range of conventional and newer technologies, and consulting with contractors and other operators experienced in topsides removal, to better understand the issues and challenges involved in this highly specialised work. Darrel comments: "It was a very worthwhile exercise; there's a great deal of good, ongoing co-operation and sharing of lessons learned on decommissioning across the North Sea industry."

Earlier this year, the project team began the process of commissioning the detailed Front End Engineering and Design (FEED) studies of the removal options. A number of potential contractors were pre-qualified to tender for this and FEED study contracts are in the process of being awarded.

Having several studies conducted in parallel will widen the scope for possible solutions. The project team will then have a range of safe and technically-assured removal options prior to entering the tendering phase for the removals work."

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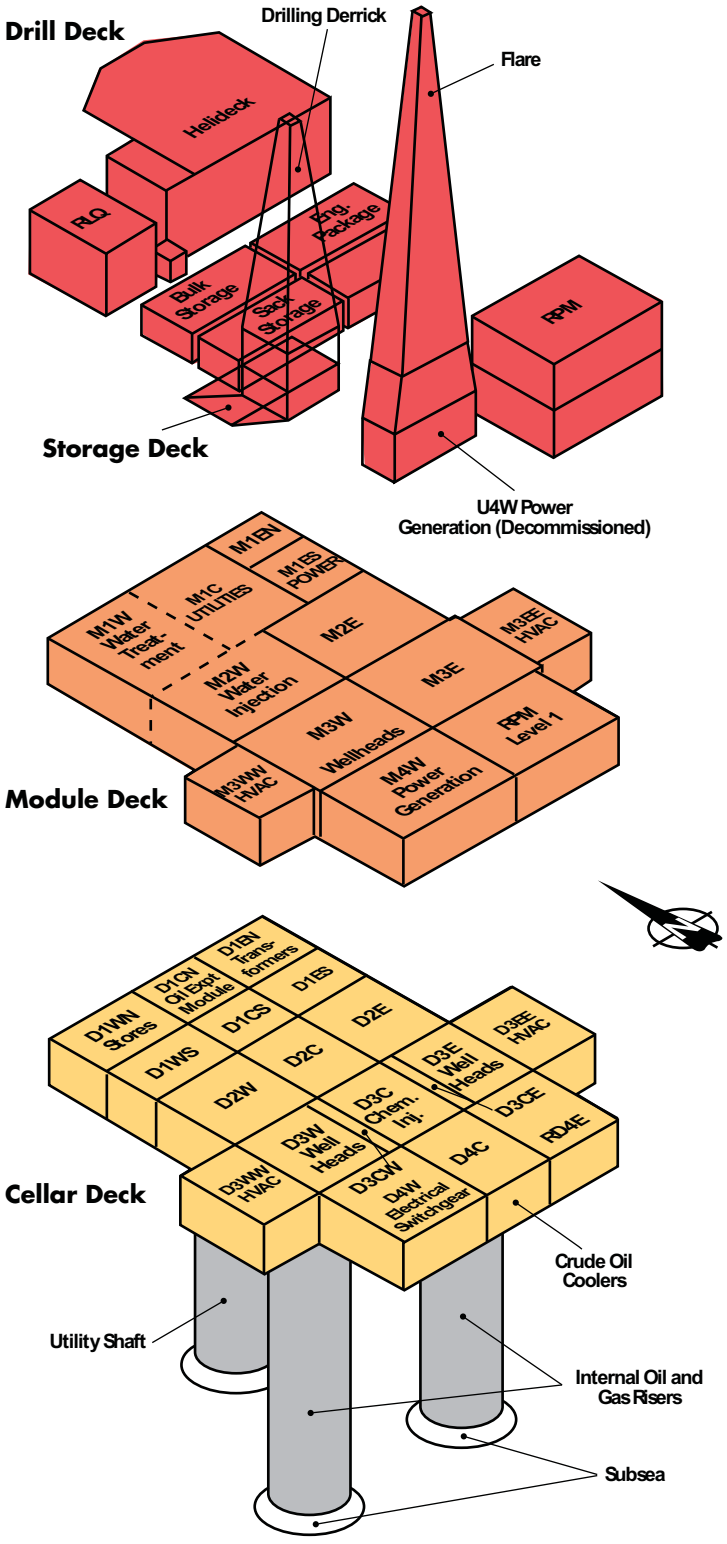
The Topsides Challenge....Continued

Three generic ways to remove the topsides have been identified. Developing technology may make it possible to carry out a single lift of the topsides. Alternatively, the topsides could be removed in modules, in a series of heavy lifts, more or less as they were originally installed. The third approach would involve dismantling the topsides piece by piece and shipping it ashore in containers. Given the scale and complexity of the task, the removal method may be a combination of these options. For all options the topsides will be brought ashore for dismantling and disposal of resultant waste materials. The decommissioning process will follow industry waste hierarchy principles and it is hoped that almost all the topsides materials inventory can be recycled.

"Our main priority is to ensure we undertake the entire removal and disposal process safely and with minimal environmental impact," Darrel concludes.

We'll bring you further updates as the project progresses.



A schematic illustration of the modular construction of the Brent Delta platform

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Supply Chain Management

Shell Contracts and Procurement codes of practice and procedures are designed to ensure our commercial dealings with all contractors and suppliers are conducted with honesty, integrity and fairness.

We comply with regulations such as the EU Utilities Directive (2004) and UK Utilities Contracts Regulations (2006) to ensure a fair, transparent and non-discriminatory vendor qualification and selection process. We also conduct our business affairs in accordance with the Shell General Business Principles (www.shell.com/sgbp) and expect our contractors to conform to the Principles in all aspects of their work with Shell companies, and to adopt similar ethical principles in their dealings with sub-contractors.

Brent Decommissioning Project Contracting

The contract strategy had been developed for Brent Delta initially but includes options for the other platforms as well. Currently the contracting process is under way for Brent Delta topsides removal Front End Engineering and Design (FEED) studies, as well as the Decommissioning Services Contract (DSC).

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Supply Chain Management
Topsides Removal FEED Studies

The Brent Delta topsides removal contract strategy was endorsed in September 2008.

The competitive FEED model selected involves:

Stage 1: Undertaking competitive FEED studies of the removal of the Brent Delta topsides as described in the contract scope of work. This follows a bidder pre-qualification exercise.

Stage 2: Evaluation by Shell of each contractor's FEED study deliverables to select practicable methods for the removal of the Brent Delta topsides.

Stage 3: Requiring contractors who qualify through stage 2 to tender and submit bids for the actual offshore Brent Delta topsides removals. The options to include Brent Alpha, Brent Bravo and Brent Charlie scopes at subsequent times will also be included in the above process.

Decommissioning Services Contract (DSC)

The primary aim of the DSC will be to support the topsides engineering-down (safe shutdown, hydrocarbon cleaning and disconnections) activities with the objective to shut down and make safe the platforms once they have reached Cessation of Production (CoP). The DSC scope will include maintenance, modifications and systems decommissioning activities, with modules isolation/segregation as an option. While the tender will cover all Brent platforms, the contract award will be for Brent Delta with remaining platforms as options. Tender documents were sent to qualified bidders in October with a view to submitting bids by year-end.

To find out more about Shell's code of practice and procedures please visit the Contract and Procurement page at www.shell.co.uk/brentdecomm

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