

# BRENTe-news



## SHELL BRENT FIELD DECOMMISSIONING PROJECT

ISSUE #20 JANUARY 2019



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# A WORD FROM DUNCAN

## WELCOME TO ISSUE #20 OF BRENT E-NEWS

THIS EDITION WILL FOCUS ON AN UPDATE OF THE PROGRESS AND STATUS OF THE BRENT DECOMMISSIONING PROGRAMMES (DP), A REVIEW OF ACTIVITIES FOR THE BRENT DECOMMISSIONING PROJECT AND A LOOK AHEAD TO 2019.

### Topside Decommissioning Programme approved for Brent Alpha, Bravo and Charlie

The Brent Decommissioning Programme (DP) describes proposals for decommissioning the facilities in the Brent field, including decommissioning the topsides of Brent Alpha, Brent Bravo and Brent Charlie. (The DP for the Brent Delta topside was previously approved in 2015). The Brent DP was subject to public consultation between 8 February and 10 April 2017 and the UK Regulator (BEIS) carried out a simultaneous consultation with other government departments.

The consultations provided the opportunity for stakeholders to comment, including on our topsides proposals. BEIS was satisfied that we had addressed comments raised by consultees and that no further consideration for the topsides was required as full removal is mandatory under OSPAR Decision 98/3. When decommissioning involves large steel jackets (over 10,000 tonnes) or concrete gravity base structures (GBS), BEIS consideration of decommissioning proposals occurs over an extended timeframe to enable a robust review. However, removal of the topsides has no bearing on identified options for decommissioning of the Brent Alpha jacket, the Brent GBS or for the management of materials in the base of the GBS legs.

BEIS agreed that our topsides decommissioning proposals for Brent Alpha, Brent Bravo and Brent Charlie could be removed from the current Brent DP and form a separate, topsides-only DP. We submitted the separate DP to BEIS and on 6 August 2018 this was approved.

### Brent Delta Interim Close Out Report

In December 2018, BEIS approved the Brent Delta Interim Decommissioning Close Out Report which was posted on both the Brent website and on the BEIS website. This Interim Close Out Report is a requirement by BEIS and describes the offshore programme of work carried out to cut, lift and remove the Brent Delta topside and install the leg caps and Aids to Navigation on top of the legs of the GBS. A final Close Out Report will be submitted within four months of the completion of all the onshore operations to dismantle and recycle all the materials from the topside, which is currently nearing completion in Hartlepool.

### Brent Field Decommissioning Programme

I am pleased to let you know that the Brent Field DP has advanced through the regulatory process to the point that BEIS has submitted the derogation documentation for the three Gravity Base Structures and the Alpha footings to OSPAR on 7 January 2019.

Our recommendations to Leave in Place the Gravity Base Structures and the Alpha footings, fall under the OSPAR Decision 98/3 for derogation. We remain confident that our recommendations for the full field are safe, technically achievable, financially and socially responsible and environmentally sound.

The OSPAR Contracting Party members (comprising 15 individual Country members plus an EU representative) will now review the derogation documentation in detail. They have an initial 16-week period to provide feedback, although the process

can take up to 32 weeks in total. The final decision on DP approval lies with the UK Secretary of State for Business, Energy and Industrial Strategy.

### Final thoughts

The Brent Decommissioning Project is now in its 13th year and I am very pleased with what we have achieved so far. 2019 promises to be very busy offshore. Following the approval of our topside DP, we are now able to move ahead with our removal preparations and execution plans.

We are working closely with our key contractors to minimise delays and meet our time schedules for the downman of Brent Bravo and Brent Alpha and the single lift of the Bravo topside in 2019. You can read about the work in this issue.

Thank you for your continuing interest and involvement in Brent. ■

**Duncan Manning**  
Brent Asset Manager

## ONE-TO-ONE ENGAGEMENT

If you would like to be briefed one-to-one on any aspect of the Brent Decommissioning Project's developments, or would like to raise any particular queries or issues with the Project team, please contact us at [www.shell.co.uk/brentdecomm](http://www.shell.co.uk/brentdecomm)

You can also get in touch with the team via the 'Contact us' link on the website.



# OPERATIONAL UPDATE FROM WILLIAM

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AFTER THE RECORD-BREAKING DELTA SINGLE LIFT OF 2017, 2018 WAS A VERY BUSY, SUCCESSFUL AND PRODUCTIVE YEAR FOR THE BRENT DECOMMISSIONING PROJECT TEAM.

2018 was the year we focused on working to separate the three remaining platforms from each other and from other existing infrastructure. Engineering has progressed substantially, with innovative preparations for the Brent Bravo lift, the wells decommissioning on Brent Alpha completed, wells Plug and Make Safe on Brent Charlie is on track and topside and jacket scope preparations for Alpha are well underway. At Able UK, the Delta topside recycling is approaching completion, and planning is advanced for the arrival of the Bravo topside in 2019.

This progress could not have been achieved without a great team effort, both onshore and offshore. A significant contributing factor continues to be the collaboration with all our key contractors, and our 'One Team' approach. We are all benefitting from sharing lessons learned, improving efficiency and reducing costs across our decommissioning operations.

Looking forward to 2019, we anticipate the downmanning of both Bravo and Alpha and the single lift of Bravo topside – key milestones for the project.

In addition, we will be focusing on the plugging and making safe of the wells on Charlie and continue to develop the technology for Attic Oil Recovery.

Although we are focused on cost-effective delivery and incorporating lessons learned from our operations, our main aim at all times must be to work safely across all our decommissioning activities. ■

**William Lindsay**  
Brent Decommissioning  
Project Director



# NEW MOVEMENT RESTRAINING TECHNOLOGY PREPARES BRENT BRAVO FOR TOPSIDE LIFT IN 2019

FOLLOWING THE SUCCESSFUL SINGLE LIFT OF THE 24,000 TONNE BRENT DELTA TOPSIDE IN 2017, SHELL'S BRENT DECOMMISSIONING TEAM HAS BEEN WORKING HARD TO PREPARE THE GIANT BRENT BRAVO PLATFORM FOR ITS TOPSIDE REMOVAL, SCHEDULED FOR 2019.

Like Delta, Bravo has three massive steel-reinforced concrete legs – each around 12 metres in diameter – which need to be cut and the topside held securely in place before Allseas' Pioneering Spirit single lift vessel can remove the 24,500 tonne topside from the structure.

But where Delta employed unique 35 tonne circular steel shear restraints, attached to the inside of each platform leg to strengthen and stabilise the structure after cutting the legs, Bravo is using an innovative technique involving removing concrete cylindrical cores from the legs and fitting specially designed steel 'shear keys' into the spaces left from the coring.

Project Manager Ron Themsen explains the engineering challenge and complexity facing the team: 'We reviewed our experiences from the Delta topside removal, which was the world's heaviest offshore

single lift and have made a series of changes to the design of the lifting points, the leg cutting and the shear restraints for Bravo. Working closely with lifting partner Allseas and engineering specialist Arup, the team developed an ingenious solution for restraining the legs, involving drilling eight holes in the leg – each one 400mm in diameter and 840mm long – cutting the reinforced concrete with diamond wire through the shear key slots and inserting shear keys to hold the structures in place and avoid any lateral movement'.

Further collaboration between Shell, Allseas, Proserv and Brent engineering contract provider Wood, made sure the execution method was well prepared before carrying out the scope safely and efficiently offshore.

This new engineering solution for Bravo represents a step-change in efficiency



RON THEMSEN AND THE CORE CUT FROM THE BRENT BRAVO LEG

and execution, requiring 80% less steel and 20% less offshore manhours, which reduces the offshore safety risk exposure and reduces the cost of restraining by around 50% compared to Delta.

Before any work was conducted offshore there was an extensive programme of trials and preparation which included: developing the internal and external leg clearance scopes, onshore coring and cutting trials, identifying the core locations and cutting and shear key installation trials. This was essential to ensure the team could safely and successfully execute the work offshore.

Ron is very pleased with the progress to date: 'We have successfully completed all coring as well as the cutting of the east leg on Brent Bravo and proved that this new methodology for coring and cutting the legs offshore paves the way for safe, efficient and cost-effective execution of the remaining two legs. This is a great achievement which was due to the meticulous planning and excellent collaboration with our partners Allseas, Arup, Proserv and Wood'. ■



BRENT BRAVO

# ALPHA MILESTONE – WELLS PLUG AND MAKE SAFE CAMPAIGN COMPLETED

BRENT ALPHA ACHIEVED A SIGNIFICANT MILESTONE WHEN THE WELL'S PLUG AND MAKE SAFE CAMPAIGN WAS SUCCESSFULLY COMPLETED ON 25TH NOVEMBER 2018. WORK STARTED ON 6TH SEPTEMBER 2016 AND THE CAMPAIGN INVOLVED 26 WELLS IN TOTAL.

Completing the wells scope is an essential critical path requirement ahead of the downmanning and eventually the topside lift. The work involved around 58 people offshore at any one time plus a supporting team of people in the office from Shell, Archer and Schlumberger.

Overall we maintained a good safety record throughout the campaign which was completed with no Lost Time Incidents, no Well Control incidents and no High Potential Incidents. The major success factors included the 'One Team' approach and collaboration across the wider platform team as well as the preparations put in place ahead of the execution which set the campaign up for success. These preparations included plug and lubrication of all the wells, changing out one of the cranes and increasing the deck space.

The Brent Wells Team continue to apply the lessons learned from the previous well activity on Brent Delta and Brent Bravo to ensure they are captured and incorporated into an evergreen improvement plan.



BRENT ALPHA

With the successful completion of the work on Brent Alpha, they will be transferring and applying this knowledge to the ongoing wells campaign on Brent Charlie.

The team is also in demand to speak at specialist industry conferences and seminars, sharing their technical knowledge on how to improve performance and efficiency and incorporate advances in technology whilst maintaining a focus on safety. ■



THE LAST TUBING ON DECK FROM THE LAST WELL (BA07)



THE BRENT ALPHA TEAM

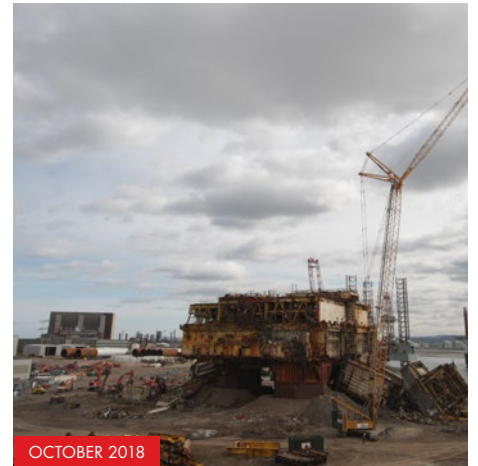
# BRENT DELTA

## BRENT DELTA TOPSIDE RECYCLING

The dismantlement and recycling of Brent Delta topside at Able UK is almost complete. Able has made significant progress as the photos taken in April and October 2018 show. Delta will be making way for the arrival of the Brent Bravo topside in 2019 and the start of the next chapter in the Brent Topsides Decommissioning story. ■



APRIL 2018



OCTOBER 2018

## UPGRADE OF THE AID TO NAVIGATION ON THE DELTA CAPPED LEGS

When the Delta topside was removed from the Brent field in 2017, the team installed essential safety Aids to Navigation on top of the exposed, capped legs.

This was reinstalled in November 2018 and the picture shows the upgraded solar power unit. ■



DELTA NAVIGATION AID REPLACEMENT

### CONTACT US

For further information on the Project, please visit [www.shell.co.uk/brentdecomm](http://www.shell.co.uk/brentdecomm)

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