A warm welcome to 2017’s final issue of Decom News.

It’s been an important year for our sector, with decommissioning activity firmly in the public eye as projects such as the removal of the Brent Delta topside to ABLE’s yard in Hartlepool, to the Buchan Alpha heading to Shetland’s Dales Voe decommissioning facility and the delivery of the lower section of the Murchison jacket to AF Offshore Decom at Vats.

However, this more visible side of North Sea decommissioning covers only a proportion of what we are all working to achieve. Many of you will be reading this in St Andrews, at the Offshore Decommissioning Conference 2017. Run in conjunction with Oil & Gas UK, the Conference and Exhibition is expected to attract over 450 delegates and it’s at this unmissable annual event that a comprehensive picture of the global late life and decommissioning sector will be painted.

From the keynote address onwards, this year’s Conference agenda looks at the issues we are all dealing with. These will include reflection upon the impact of OSPAR on its 20th anniversary; the continued importance of cross-sector learning; the opportunities available now and in the future, both locally and globally; how decommissioning evolves within the MER landscape; and an update on one of the sector’s ultimate aims - collaboration in action.

The latter half of 2017 has seen some major sector events take place. Offshore Europe’s inaugural Decommissioning Zone, for example, was a critical step in the late life and decommissioning marketplace. Supported by Decom North Sea, and with a technical programme which highlighted the importance of early planning in late life, potential efficiencies and innovative approaches, it provided thousands of delegates with an understanding of the opportunities within the sector - not only within the North Sea, but on a global scale.

The focus upon decommissioning at Offshore Energy in the Netherlands was also important, as the overarching theme of “one North Sea” – how we achieve collaboration between countries straddling the North Sea - is a fundamental Decom North Sea principle.

Market knowledge is critical to the success of our decommissioning sector, but only when complemented by an accurate understanding of the capability and capacity to undertake work. Therefore, I’m pleased to announce that Decom North Sea will shortly launch its Supply Chain Capacity and Capability report, which I believe will go on to become a staple of the decommissioning sector. Supported by the Oil & Gas Authority and Scottish Enterprise, it will provide an accurate annual reflection of our capacity to fulfil not only the North Sea, but global, decommissioning demand. Used in tandem with market intelligence, it will allow the supply chain to plan for the future, identify alternative contracting and commercial arrangements and ensure it is ready to optimise the opportunities that arise.

Finally, I would like to take a moment to mention Jennifer Dunbar, Decom North Sea’s Events and Marketing Manager. Jen very sadly passed away last month, following a short battle with cancer. An integral part of Decom North Sea for over four years, Jen had a genuine enthusiasm for our sector, and was passionate in ensuring our membership received the very best service there was; she will be missed by all those who knew her.

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**PROJECTS SUB-COMMITTEE UPDATE**

The projects Sub-Committee (PSC) is one of three sub-committees that support the Executive and Decom North Sea Board. The purpose of the PSC is to identify, prioritise and oversee projects executed on behalf of the membership, and the most important selection criterion is that the project should add value for them.

PSC is currently formed of both Decom North Sea Directors and executive team members. The Directors involved are Stuart Wordsworth, Andrew Sneddon, Donald Martin, and Robert McCaig. Executive team members on the PSC are Angela McKenzie, Pamela Ogilvie and Roger Eissen. Since the last newsletter in August - PSC, project stakeholders, project work groups and Decom North Sea member peer groups, have made progress with the current priority projects and pleased to report as follows:

- **Supply Chain Project** - Summary of key findings to be presented at offshore Decommissioning Conference, St Andrews 27-29 November.

**INITIATIVES**

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<thead>
<tr>
<th>PROJECT</th>
<th>OBJECTIVES</th>
<th>BENEFITS</th>
<th>STATUS</th>
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<tr>
<td><strong>Salvage and Decom Synergies</strong></td>
<td>Review experience of salvage companies and identify whether there are any transferrable lessons for the oil and gas sector.</td>
<td>Focus of three areas: cost saving, timing and transferable technologies/methods. Identify key considerations from a legal/insurance and commercial aspect.</td>
<td>Next steps: Decom North Sea will support this project (as required) and the SUT work group will drive the project forward.</td>
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<tr>
<td><strong>Re-use Implementation</strong></td>
<td>Conduct re-use implementation projects realised from the outputs of past re-use reports.</td>
<td>Potentially enable learning; lead to more effective removal and accelerated learning about removal with potential for reducing costs.</td>
<td>New SUT Project Manager has been assigned, and SUT workshop formed. Project scope currently being reduced by SUT. Next steps: Decom North Sea will co-support this project (as required) and the SUT work group will drive the project forward.</td>
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<tr>
<td><strong>Mattress Guidelines</strong></td>
<td>Redefine industry guidelines for mattresses with regards to information on waste, characterisation, disposal, re-use and handling.</td>
<td>Ensuring that process aligns with SEPA requirements.</td>
<td>Decom North Sea would like to take this opportunity to encourage you to submit your tools and lessons to the portal to share with the wider industry.</td>
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<tr>
<td><strong>Decom IT</strong></td>
<td>Common approach for asset information. Provide a clear visual of the current assets within the North Sea along with all the relevant technical data. Provide supply chain key data ahead of tendering. Allow comparative assessments to be made.</td>
<td>Transparency in the industry Repository for all information on assets to be retained in a single repository. Supply Chain can identify and plan for strategic targets. Helps with business planning and the right level of investment. Provides the supply chain the ability to know whether to tender for certain work. Provides the industry and government with all the factual information required to decommission assets effectively. Model is scalable and can be utilised globally.</td>
<td>Initiative provided by Ian Thom (Marathon). Next steps: Full scope of work document with project outline will be created by Ian Thom. He is also exploring opportunities for securing funding.</td>
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**PROJECTS**

**Decom Environmental Appraisal Guidance** (Previously EIA Roadmap)

- **Project Manager:** Angela McKenzie (Decom North Sea Programme Manager), Antonio Bacic (Acume)

**Supply Chain Capability**

- **Project Manager:** Angela McKenzie (Decom North Sea Programme Manager), Antinio Bacic (Acume)

**Member Portal** (Phase #1)

- **Project Manager:** Angela McKenzie (Decom North Sea Programme Manager)

**CURRENT PROJECTS**

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<tr>
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<tr>
<td>Decom North Sea environmental work group led by Nathan Swankie to create decommissioning environmental appraisal guidance to be approved by DBEIS &amp; referenced in the DBEIS Decom Guidelines.</td>
<td>Decom North Sea produced guidance utilised in conjunction with DBEIS. Decom Guidelines to highlight environmental requirements for Decommissioning Programmes. In particular how to conduct and report non-statutory environmental appraisals as distinct from a statutory Environmental Impact Assessment (EIA).</td>
<td>Nathan Swankie will present as part of the Environmental and Waste Management in Decommissioning Session at November Conference. Next steps: Low document will be released. Consultation workshops will be conducted to provide an overview on the guidance. The document will be live and therefore feedback is welcome as part of these workshops. The document will be reviewed prior to the final submission to DBEIS ahead of the release of the DBEIS Decom Guidance.</td>
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<tr>
<td>Element #1 - Concise report which provides a snapshot of the current Decom Supply Chain capacity with a suitable output that can be used annually to provide an accurate reflection of the current UK capacity to fulfil the decom demand.</td>
<td>Allow supply chain to plan for future e.g. identify potential contractors, iron out the supply peaks.</td>
<td>Currently working on the final working draft for both elements. Next steps: A presentation will be provided at the St Andrews conference ahead of the release of the report and matrix. Both elements will be released into the public domain.</td>
<td></td>
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<tr>
<td>Element #2 - Matrix to showcase the current UK Decom Supply Chain capability</td>
<td>Provide an overview of the current planned decom work.</td>
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**L2P2** (Late Life Planning Portal)

**Supply Chain Project**

Decom North Sea would like to thank all companies that participated in the Supply Chain project.

For further information on projects please contact info@dcnorthsea.com
ENVIRONMENTAL GUIDELINES RECOMMEND MORE FLEXIBLE APPROACH TO DECOMMISSIONING

Guidelines providing practical advice on the environmental issues surrounding the development of decommissioning programmes have been published by Decom North Sea.

Decom North Sea identifies and has oversight of a number of projects, which are intended to add value, improve efficiency and reduce costs both to its members and the decommissioning sector in general.

Produced in conjunction with Ramboll Environ and supported by Ameec Foster Wheeler, Frazer-Nash, Fugro, the Environmental Appraisal Guidelines have drawn upon the knowledge and expertise of representatives from consultancy, academia and the operator community. The project comprised a review of existing environmental legislation and guidance in relation to offshore decommissioning, as well as a comprehensive review of twelve recent environmental statements submitted alongside decommissioning programmes for North Sea (UK sector) assets.

Nathan Swanke, Principal of Ramboll Environ and project manager of the Guidelines working group said: “A key finding of the review is that the use of a more flexible and proportionate non-statutory environmental appraisal process would offer opportunities for efficiency, whilst still achieving the same outcomes in terms of protection of the environment.

“The Guidelines aim to provide practical advice and a framework for robust environmental appraisal that is proportionate to the nature of the decommissioning activities proposed and the level of detail available at the decommissioning programme submission stage.”

Decom North Sea Chief Executive, Roger Esson added: “Decom North Sea is committed to our vision that North Sea decommissioning capability becomes globally recognised for its safe, effective and value-driven performance.

“Having been developed in close liaison with BEIS (the Department of Business, Energy & Industrial Strategy) and a major North Sea operator, I am confident that the Guidelines are truly aligned to industry and stakeholder processes, and therefore invaluable to those navigating the environmental implications of decommissioning.”

The report will initially be released as a live document to allow for subsequent consultation workshops to be held in Q1, 2018.

BOARDS MEMBER SPOTLIGHT

Donald joined the Decom North Sea board last year and has subsequently also volunteered to join the Decom North Sea projects subcommittee. He believes that the most effective approach for industry to continually improve performance and benefit from the decommissioning sector, is by adopting the learning-by-doing approach, advocating the development of practitioner and technical capabilities through sanctioning and executing projects rather than deferral.

Donald offers a breadth of relevant and current knowledge of decommissioning from the perspectives of the operator, removals contractor and EDC contractor. For over a decade Donald has demonstrated passion and commitment to the sector, delivering pioneering projects including NW Hutton, the preparation and removal of seven platforms in the Greater Ekofisk Area and the Munuchin Decommissioning Programme. During this time he has had first-hand experience of the significant benefits decommissioning can bring to organisations, employees and families.

During the development and sponsorship of major decommissioning and removals services contracts, he has taken a particular interest in setting up relationships that deliver successful outcomes for all parties through aligned objectives, strong teamwork and collaboration.

Viewing successive decommissioning projects as parts of an operator’s overall portfolio, he is keen on driving improvements through programme synergies and the application of structured learning. He firmly believes that by working together, industry will deliver better than the 35% efficiencies that the OGA is targeting.

Donald holds an MSc in Major Programme Management from the University of Oxford. He is a strong advocate of developing capability and talent, and has worked regularly with academia to facilitate student placements - a number of which have led to staff recruitments into decommissioning teams in industry. He has experience and cultural awareness of Norwegian and Dutch decommissioning approaches, as well as those in UKCS that enable him to contribute to the board of a Decom North Sea which serves the whole of the North Sea.

EXCEPTIONAL OFFERING OF UNUSED OFFSHORE OIL RIG ASSETS FROM OIL PLATFORM LOCATED IN NORWAY.

RIG PROJECT WAS CANCELLED DURING COMMISSIONING AND DID NOT GO INTO PRODUCTION

ONLINE AUCTION

FEATUREING:
- FISHCONN Containerised 2500 kVA Generator Package (2008)
- CATERPILLAR ‘C-32-ACERT’ Containerised 1500 kVA Generator Package (2008) qty 2
- FISHCON 1000 kVA Diesel Generator (2007) UNUSED qty 2
- HOWDEN PROCESS COMPRESSORS ‘MK-5-S’ Hydrocarbon Flash GH8:L10as Rotary Screw Oil Injected Compressor UNUSED qty 2
- NERA ‘Pointlink MkII PL2A20-ADA29BBDA’ Dual Axis Space Antenna qty 2
- TIDELAND SIGNAL LTD ‘SeaBeacon 2’ Beacon Transponder

For more information, please contact: DUNCAN AINSCOUGH
Tel: +44 7785 221919
Email: Duncan.Ainscough@liquidityservices.com

To view and bid on the lots, visit: http://tiny.cc/go-dove_561292_2

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DECOM NORTH SEA
RAISING THE SEWOL

In the early part of 2017, the China Ocean Engineering Co (COES), incorporating Shanghai Salvage Co, successfully completed what is arguably one of most difficult offshore single lift wreck recoveries ever attempted. The raising of SEWOL, South Korea was extremely complex and sensitive, and by way of achievement it was a:

- World first - single piece, exact wreck removal 7,900 MT from 45m water depth in extreme sea and seabed conditions
- World record trailer load in operation, 17,000 MT weight
- Health, Safety & Environmental focus, with zero casualties during the operation which included 12,000 hours under water

By way of some background - the Korean registered Ro-Ro passenger vessel SEWOL was sunk off the southwest coast of Korea during its way from Incheon to Jeju Island on 16 April 2014. The water depth at the wreck site was around 45m (at the limit of normal diving capabilities without saturation). The sinking of this vessel was widely reported in the international media owing to the number of fatalities at the time.

The vessel had since been lying on the seabed with a 90-degree heel on portside and the search for bodies lasted from April to November 2014.

COES (Shanghai Salvage) was appointed by the South Korean Government Ministry of Fisheries (MOF) to recover the vessel from the seabed, transporting it to port and for ultimate onshore dismantling. Following a competitive process COES was chosen owing to its innovative proposal to raise the wreck in a single piece with optimal safety features. COES is one the world's most experienced, safe and reliable subsea construction engineering and salvage companies with the capacity and ability to undertake such a complex and difficult operation.

Critical objectives for the project were:

1. Single piece recovery
2. Prevent the loss of remains from the wreck
3. Wreck to be landed ashore at a safe Korean port
4. Certainty over final out turn cost, with COES executing the work for a fixed price all-inclusive lump sum, thereby accepting and assuming significant risk in an area renowned for its adverse weather conditions and typhoons

In terms of overall project activity, COES spent around 600 days on the work - including round the clock activity - and successfully recovered the SEWOL intact. The whole weight of SEWOL, including lifting beams and mud was in the region of 17,000 MT once recovered onto the deck of the semi-submerged vessel. 97 divers were deployed by COES working in subsea saturation. The sinking of this vessel was widely reported in the international media owing to the number of fatalities at the time.

Before commencement of the main project works it was necessary for a pre-survey side-scan sonar to be conducted to fully understand the position of the vessel on the sea bed. This was done in January 2015 and subsequently analysed. It was not until August 2015 that the mobilisation occurred.

Stage 1. Pre-survey & Mobilisation

Prior to commencement of the main project works it was necessary for a pre-survey side-scan sonar to be conducted to fully understand the position of the vessel on the sea bed. This was done in January 2015 and subsequently analysed. It was not until August 2015 that the mobilisation occurred.

Stage 2. Oil Recovery & Removal

The total recovered oil mixture was 954 cubic metres, including 131 cubic metres of fuel. Obviously, this early work was crucial to minimise contamination to the sea environment during the future refloating stage of the project.

Stage 3. Netting/Blanking of Windows & Doors

COES utilised a self-made underwater drilling machine to drill holes on the surface of the oil tanks. The advantage of this special machine was that it has a connection flange installed following the drilling of the holes. The flange can then be connected with the oil pump to pump oil away with the resultant gain of having no oil spilled. This was a significant risk with the SEWOL project, which was managed and avoided.

Stage 4. Buoyancy added

It was necessary to add further buoyancy to the wreck because not all of the tanks were found to be intact, meaning that there was a significant reduction in buoyancy available in comparison to the original plan. See diagrams below.

Stage 5. Bow lifting and 18 middle lifting beams installation

COES undertook the following measures, the objective being to significantly reduce the bow lifting force:

- Inflating the tanks
- Use inside air bags installed in vacuum tanks of the wreck
- Use outside rubber air bags
- Pontoons

Because the hull structure of the SEWOL vessel was weak, to have used traditional lifting methods would have damaged the wreck. Accordingly, COES applied 23 lifting beams with 28m x 1.8m x 0.9m each under the wreck. COES determined that the large contact area would protect the hull from deformation. The middle 18 lifting beams as a whole were installed under the wreck, immediately after the bow lift.

Stage 6. Stern lifting beams installation

The seabed was very difficult and hard at the wreck site, and under such circumstance the stern lifting beams were difficult to pass through the wreck. COES made many ploughs for dredging under the stern of SEWOL and successfully managed to install the stern lifting beams.

Stage 7. Tandem lift by two barges to surface

COES used 66 strand jacks systems to lift the wreck. COES deployed a strand-jacks system equipped with heave compensator to reduce wave or current influence, thereby minimising the risks associated with wreck recovery.

Stage 8. Final float on semi-submersible barge

COES deployed a semi-submersible barge (72146MT), sunk at main deck 13.5m under water surface. Tugs assisted the fleet (two barges with SEWOL together) move just above semi-submersible barge, while the whole weight of SEWOL transferred to the semi-submersible barge, re-flotted the semi-submersible barge with main deck finally 3.5m above water surface.

Stage 9. Load-in by SPMT trailer system - delivery onshore.

The SPMT (Self Propelled Module Transporter) trailer system was used by COES to transport the SEWOL from semi-submersible barge onto port jetty and then to support at Mokpo Port Laydown Area. The SPMT trailer system comprises four and six axels, with carrying capacity 40MT/axle trailer modules that can be mechanically linked and hydraulically coupled end for end/side-by-side to provide a supporting platform in varying lengths and widths.

Reflection & Praise

At 17.35hrs on 9 of April 2017, the ferry SEWOL slowly rolled down from semi-submersible ship deck onto the yard, successfully, dedicating entire completion of Sewol salvage project. The relatives’ wishes to “Let SEWOL go home”, had been granted and COES/Shanghai Salvage had made good on its promise to fulfill this mission.

It was truly an emotional and historic moment; COES/Shanghai Salvage was highly commended by the South Korean Government for completing one of the most difficult offshore single lift wreck recoveries ever attempted, with excellent performance feedback being achieved across the board for all project KPIs.
In 2016, Maersk Oil UK contracted Maersk Supply Service to provide decommissioning services for the Janice, James and Leardon subsea fields in the North Sea.

Removing hardware at 80-120 metre water depth, that has been on the seabed for up to 15 years, is not an easy task. In many cases, this kind of subsea infrastructure has been designed and installed without a plan for recovery at the end of its operational life.

In response to the complexities of the decommissioning work, tight deadlines and the harsh conditions of the North Sea, Maersk Supply Service mobilised its team and designed an innovative, robust approach to removing the Janice subsea equipment safely and cost-effectively with utmost consideration for the environment.

**A wide range of responsibilities**

The decommissioning of the Janice infrastructure in the North Sea is now two-thirds complete, with one more campaign remaining for 2018.

Recoveries from the field to date include 772 tonnes of product from the seabed which encompasses more than 31km of umbilicals and flowlines, over 100 concrete masts, 1,600 tonnes of structures and concrete mattresses. Most importantly, the Maersk Supply Service-led work has been completed without lost time incidents, on-time and under budget.

The project management is being performed by Maersk Supply Service’s Integrated Solutions business area, which is dedicated to overseeing offshore projects, such as decommissioning work-scores. The responsibilities undertaken in managing the scope of the project from start to finish include waste management, logistics, sub-contractor management, engineering, project planning and the management and execution of the offshore work-scores required in removal of the Janice subsea facilties.

What makes Maersk Supply Service effective in this area is the company’s unique ability to supply and manage the entire marine requirement for the whole project. In addition to the subsea decommissioning, this includes well severance, rig moves, and rig support duties to the onsite drilling rigs. While vessel services are the company’s core business, having the ability to supply and manage the interfaces between these different vessel operations allows for greater flexibility, optimised schedule and less risk for the client.

This is particularly relevant in decommissioning, where there is a much greater requirement to react safely to an unpredictable environment and an ever-changing schedule.

**A pragmatic approach backed by long-standing experience and diverse assets**

With more than 50 years of hands-on offshore experience in operating, building and modifying a global fleet, Maersk Supply Service is unparalleled in experience when it comes to applying its onshore and offshore expertise and assets to meet specific project requirements.

*“Both the onshore and offshore teams in Maersk Supply Service have decades of experience. This means that we can handle unforeseen events, such as discrepancies between outdated documentation and the actual conditions or even presence of the equipment or materials encountered on the seabed. We are very experienced in construction operations and know exactly what our vessels are capable of. Having both the construction and marine personnel managed by us ensures project synergies and efficient operations,” says Duncan Harris, UK Country Manager for Maersk Supply Service.*

Changing the perspective on decommissioning through better use of specialised vessels

The Janice work has been designed around the company’s experience with its vessel capabilities. With a versatile and global fleet at its fingertips, Maersk Supply Service has been able to deploy its own vessels at the right time throughout the project.

Maersk Supply Service has leveraged the diverse capabilities of eleven of its three asset types: Anchor Handling Tug Supply Vessels (AHTS), Platform Supply Vessels (PSV) and Subsea Support Vessels (SSV), including new-building assets, the Starfish AHTS series and Stingray SSV series.

Several of the company’s highly-specialised vessels allocated to the Janice work have been instrumental in pioneering a new method of decommissioning that has resulted in efficiency gains well above expectations.

Maersk Acheiver is an AHTS vessel with a 210 tonne crane allowing for large amounts of recovered infrastructure to be easily on-boarded and stored on the vessel. This capability enables Maersk Supply Service to minimise trips to port to offload recovered items. The vessel also has dual workclass ROVs mounted on a mezzanine deck and a Survey and Positioning spread onboard for performing as-left surveys of the worksites and remaining infrastructure.

Maersk Master, one of the new A-class Starfish AHTS vessels has been put to good use in its maiden commitments. Inspired by the design of the ship, M/S has developed new methods for product retrieval, simplifying and de-risking the process by removing the need to mobilise expensive reel drive systems which reduces the number of ports of call for product disposal. The vessel also has an inbuilt Workclass ROV launched via a side door hanger.

In 2018, Maersk Supply Service expects to utilize one of its Stingray SSV vessels to perform some of the remaining decommissioning work. The 400T lifting capability and 2000M2 back deck will allow recovery of the Leaon tow heads in a single lift, which is significantly more cost effective than a piece small approach to cutting complex structures.

*“We have been able to change the perspective on decommissioning and use our assets in a different way because of the depth of our maritime knowledge. Our customers value our experience and we are able to work as an integrated team, focused on the solution and end goal, and we are open to unconventional ways of doing things. The new vessels are being used to do things that others can’t,” says Jens Kirth Thomsen, Head of Decommissioning Business Development.*

Pioneering a new and innovative method for recovering subsea infrastructure

Maersk Master’s uniquely large winch is traditionally designed for anchor handling purposes. However, the Maersk Supply Service team saw an opportunity to apply this feature in an entirely new way that saves time and reduces risk to the environment.

Instead of using the traditional technique of cutting flexibles into road transportable 12-metre sections, Maersk Master used its large winch capacity to spool and store long lines of flexibles and umbilicals as one intact material - and in record time. This method greatly reduces the likelihood of dropping or spills.

Maersk Master safely and efficiently clocks the recovery and storage of piping at record speed, which is a significant advancement from previous methods.

*“It’s a completely new and revolutionary method that ultimately saves the customer time and money. We believe that our unique and patent-protected approach of applying a large state-of-the-art anchor handling winch to this type of decommissioning work is unparalleled in terms of efficiency gains, but also unprecedented in the offshore industry,” says Thomsen.*

A model that caters to the future of offshore projects

Maersk Supply Service is steadily expanding its capabilities in the area of Integrated Solutions and is actively seeking to take on more work.

Oil companies worldwide are seeking more efficiency and better value from their suppliers. The decommissioning project model for Janice and recovery method by Maersk Master led by the company’s Integrated Solutions business area is expected to become increasingly relevant in areas outside of the North Sea. Through project management capabilities and a pragmatic approach to applying vessel capabilities in new ways, Maersk Supply Service is able to take on more responsibility for customers’ projects. The company’s approach consistently prioritises safety and efficiency - which has proven to be the case in the Janice decommissioning work.

*“Building on our 50 years’ legacy and our strong assets and people skills, the expansion of Maersk Supply Service’s portfolio with Integrated Solutions is taking shape and showing its worth to customers.”* says Head of Integrated Solutions, Olivier Trouvé.

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*“Building on our 50 years’ legacy and our strong assets and people skills, the expansion of Maersk Supply Service’s portfolio with Integrated Solutions is taking shape and showing its worth to customers.”* Head of Integrated Solutions, Olivier Trouvé.
DECOMMISSIONING PLANS FOR THE PORT OF CROMARTY FIRTH REVEALED

Leading figures from the Oil and Gas Authority and Decom North Sea recently met with officials from the Scottish Government, Scottish Enterprise (SE) and Highlands and Islands Enterprise (HIE) at a special decommissioning briefing organised by the Port of Cromarty Firth.

The event included a tour of the decommissioning facilities at the Invergordon Service Base and a chance to meet with some of the Port’s decommissioning partners. The attendees also visited the new multi-purpose berth, which includes a 49,000-sqm laydown space and a 12,000 tonne heavy lifting capability over the quayside.

Speakers at the event discussed the “Upcoming Decommissioning Demand” and the Port of Cromarty Firth’s current capacity to receive decommissioning projects, as well as the existing facilities for decommissioning available at the Invergordon Service Base and at other Ports across Scotland.

Calum Slater, General Manager of the Port of Cromarty Firth, said: “We were delighted that so many representatives from the Oil and Gas Authority, Decom North Sea, Scottish Government, Enterprise Agencies and our service base partners were able to attend this special event.

“We were able to discuss the future of decommissioning in Scotland and the skills, experience and willingness of existing oil and gas supply chain companies to keep decommissioning projects on our shores.

“It is time for government and industry to work together to promote the current decommissioning infrastructure available to oil and gas operators in Scotland today. There is a lot of hype about new infrastructure, but Scotland already has the capacity and capabilities to accept the largest structures in the North Sea. Spreading the message to operators that Scotland is ready for decommissioning now will help to protect oil and gas supply chain jobs and create opportunities for exporting this knowledge in the future.”

Projected estimates show that expenditure on the onshore disposal and recycling element of decommissioning in the UKCS during the next 10 years will be around £160 million.

Calum Slater added: “These projected figures don’t represent a huge amount of money each year. Not only that, it will need to be split amongst a large number of organisations in the decommissioning supply chain. Unless Ports and their partners have already made the significant investment in readiness for decommissioning they could be left behind.

“Not only has the Port of Cromarty Firth taken the risk to invest in a new multi-purpose berth, it was the first Scottish Port to apply for Decommissioning Permits under the new legislation. These permits will be unique, as the Port isn’t aligning to a single contractor. Our open Port philosophy will allow any reputable client, partner, operator or contractor to use the Port’s decommissioning permits. The Port will work with these companies to ensure that all dismantling activities at the Invergordon Service Base are carried out to the highest standards. The aim is to achieve the highest level of recycling and environmental protection and to safeguard jobs in the sector.”

Edward Mountain MSP, is hosting an industry Parliamentary Reception on the 19 December with the Port of Cromarty Firth entitled “Are Scottish Ports Ready for Decommissioning?” Decom North Sea, the OGA, HIE and SE are partnering the event.

www.cfpa.co.uk

MINIMISING COSTS BY MINIMISING COMPLEXITY

At Baker Hughes, a GE company (BHGE), we have been working to address the growing concerns related to decommissioning for some time, identifying a number of key areas for improvement. We believe our approach can provide savings of up to 35% on the cost of well plug and abandonment (P&A).

- **Tackling inefficiencies:** “Well abandonment procedures” and “pre-approval” – or waiting on consent – represent some of the biggest costs in this arena. We have been working to develop a suite of procedures that match industry standards, while investing in equipment that enables well P&A.
- **One stop shop:** After investigating the various supply chain models that have been used in the past, we have lined up Frame Agreements that enable risk and reward. Today, we have more than 60 Master Service Agreements (MSAs) in place with supply chain partners, including rig and vessel contractors ready to deliver well P&A solutions. That removes a significant logistics burden from the operators’ shoulders.
- **Commercial innovation:** Our suite of innovative commercial offerings challenges traditional supply chain models, allowing benefits to be realised from the efficiencies and learnings gained as campaigns progress. Synergies from executing multi-field and multi-operator campaigns provide the opportunity for our industry to further reduce the bill and embrace the collaboration mantra.

We’d like to hear your thoughts on the topic? Where should our industry put the most focus to drive down decommissioning costs; where do you see the greatest opportunities in this space and why is collaboration so important? Have your say via our latest TechTalk, developed in partnership with Decom North Sea and the OGA.

invent.gn/decomtechtalk

Andrew Livingstone, Decommissioning Director

DECOM NORTH SEA MEMBERS

HOT DESK AND MEETING ROOM FACILITIES AVAILABLE

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OUR NEW PREMISES

21 Abercrombie Court | Prospect Rd | Westhill | AB32 6FE

COMING FROM ABERDEEN ON A944 TO WESTHILL:
- VEER LEFT ON B9119 TO GARLOGIE
- AT ROUNDABOUT TAKE 2ND EXIT
- TAKE 1ST LEFT ONTO PROSPECT ROAD
- TAKE 2ND RIGHT ONTO PROSPECT ROAD
DRIVING EFFICIENCY IN DECOMMISSIONING

Delivering a decommissioning project on time and on budget is the single largest driver of the remaining value accrued from a late-life asset. Operators are faced with many challenges including the lower oil price, creating financial pressure to cease production earlier along with the complexity of global assets which are often in remote locations with limited historical information.

Decommissioning in the current economic climate requires a mindset that is open to change. What worked before isn’t always the optimum solution for today and it is important the industry is always challenging the conventional to develop alternative solutions that are more efficient, reliable and cost effective. Innovation and technology play an integral role in this.

As recognised by many of the progressive operators in our industry, decommissioning should not be a standalone activity, but a natural follow on from, and during, late life management allowing costs to be minimised while maximising oil and gas recovery. Decommissioning should be seen as a single largest driver of the remaining value accrued from a late-life asset.

An innovative approach to well abandonment

Proserv has more than 30 years’ experience in providing bespoke technology solutions and services for the removal and recovery of topsides, subsea infrastructure and wells for the global oil and gas sector. Engaging with operators early, we help eliminate risk and ensure cost efficiencies from the start. This approach to decommissioning has saved operators millions of dollars with a core of providing the most reliable and efficient solution at the lowest cost, without compromising on safety.

Proserv recently conducted a well severance campaign for a client’s asset based in the Gulf of Thailand. The global operator required three subsea tieback wells and eight dual bore wells severed across three platforms. The primary objective was to sever these wells below mudline, and recover for disposal as the final phase of the well abandonment process.

Traditionally, the client would deploy mechanical knives to cut the well after plugging which would take around two hours per well, plus equipment run in hole charges. This method was not capable of cutting below the mudline and the client was really challenging the way it approached plugging and abandonment campaigns to be as efficient as possible. Working with the customer from an early stage, it was proposed that abrasive water cutting technology was the most suitable system to carry out severance of the multi-string cuts due to the speed and reliability it offered.

Proserv’s Multi-String Cutting (MSC2.0) Tool provides complete well severance from deployment to cutting operations and tool recovery within 12 hours – a huge time saving for the operator when compared to more conventional methods. The tool is a customisable internal multi-string conductor cutting that is utilised in conjunction with our water abrasive cutting technology to provide an unrivalled cutting solution. This powerful combination is more efficient than conventional mechanical cutting methods and more environmentally friendly than explosives.

The advanced tool is configured to deploy into topside or subsea wells with inner casing sizes of 7” to 20” maximum and will cut through any number of internal (grouted or ungrouted) casing strings out to 42” conductor. The unique system also features a mechanical lock and seal functionality which ensures the tool is locked at the exact cuttings depth, guaranteeing well security for the operator.

The MSC2.0 can operate at depths up to 500m and typically reduces overall project time by 5–10%, creating further cost efficiencies. The tool also offers the ability to test and prove the cut without recovering and de-rigging the tool and deployment system. This single trip operation into the well bore means the risks associated with multiple runs in one hole are minimised.

Using this method meant once the well services provider had started plugging the well, Proserv could operate ‘offline’ and begin cutting operations simultaneously, hence off the critical path of the jack-up rig. To do this, we deployed the cutting tool utilising a modular deployment system opposed to a rig crane or derrick facilities.

As we were able to operate ‘offline’ it ensured rig time was not extended resulting in a significant time saving across the campaign.

In total, eight dual bore and three tie-back wells were successfully severed 15ft below the mudline, providing a safe and reliable solution while providing the operator crucial time efficiencies in the process.

New technology, older fields

Removing topside, platform jackets and associated substructures is also a complex aspect of decommissioning. It requires detailed pre-planning to due aging facilities and, sometimes lack of accurate information available. We were recently contracted by a global service provider to supply a cutting and recovery solution for 38 pile guides on the jacket structure of the Frigg drilling platform located in the Norwegian sector. The client required a solution which allowed them to attach four buoyancy tanks to remove the jacket structure in one piece while onshore.

Working closely with the client, we designed and fabricated a bespoke diamond wire ROV tool and associated buoyancy solution to meet the challenge.

To successfully cut and remove all 28 pile guides to the surface, the process required 280 separate diamond wire cut operations. Working with the client, we designed a bespoke buoyancy tank and lifting plug for deployment below the pile guide from where it was docked. ROVs were used to continually monitor the progress and assist with the docking procedure. The key to the operation was working so openly with the ROV operator to allow simulation operators prior to the offshore phase.

Once secured, the lifting plug was hydraulically locked in place, ensuring the ROV could attach the diamond wire cutting tool onto the mounting plate located on the lifting plug. As a result, a 360 degree rotation around the pile guide was possible, providing access to the support structures requiring severance. We also designed and provided bespoke hot stab ROV connectors. The buoyancy tank and lifting plug provided ease of docking while the diamond wire ROV tool provided the ideal cutting solution.

Conclusion

In these difficult times, it is fundamental to change the way we act and respond to a challenge. Just as there’s never been a greater need for industry collaboration, we must think smarter about technology and how we can use what already exists in different ways together. Efficiency is key in today’s market and it is innovative technology, along with a mindset open to doing things differently which will allow us to ensure operations are as quick, safe and effective as possible.

www.proserv.com

MEMBER POINT OF VIEW

Lerwick: Britain’s top port

www.lerwick-harbour.co.uk
The Industry Technology Facilitator (ITF)’s latest Innovation Network Tech Talk event brought together 120 technology developers, industry bodies, service companies and operators to discover the opportunities for efficient and cost-effective decommissioning and well abandonment.

The free event was held during the first day of SPE Offshore Europe 2017 at the Chester Hotel, Aberdeen. Companies including Wood Group, OGTC, Expro, Petrofac, Premier Oil, Lloyd’s Register, OGIC, Exxon Mobil, OGA, ConocoPhillips, BP, Marathon Oil and Techrip FMC were in attendance.

According to the latest cost estimate from the Oil & Gas Authority (OGA), the predicted price tag to decommission UKCS oil and gas infrastructure is £59.7billion. The OGA has challenged the industry to cut the cost of dismantling all current and proposed offshore facilities by at least 35% to less than £39billion.

In an interactive session supported by Decom North Sea, the Tech Talk tackled the decommissioning challenges faced by the industry as well as showcase new technologies and the latest developments in decommissioning activity. Roger Esson, Chief Executive of Decom North Sea, presented on ‘connecting capability with opportunity: an overview of decommissioning in the region and what opportunities are available for companies in the sector.

John Wiseman, Managing Director of Fairfield Energy delivered a presentation on well plug and abandonment from an operator’s perspective. He provided an update on the company’s decommissioning of its Greater Dunlin Area assets and stressed the importance of testing and validating the performance of new technologies to lower the cost of plugging and abandonment.

Proserv CEO, David Lamont stressed that ongoing development of cut verification real time monitoring is essential for efficient and reliable severance operations. He showcased case studies which demonstrated the benefits of Proserv’s ‘proof of cut’ capability as part of the company’s drive for operational excellence, through innovation.

Zero Waste Scotland revealed how it can offer its support to SMEs in terms of business development as well as investment to ensure Scotland realises the economic, environmental and social benefits of making best use of the world’s limited natural resources.

ITF launched its global online Innovation Network last year to raise the profile of oil and gas SMEs direct to its membership of operator and service companies, enabling oil and gas SMEs to promote their technologies and service companies, enabling oil and gas SMEs direct to end users and also keep up to date with the latest technology needs of the industry.

www.itfenergy.com

NEW PARTNERSHIP WITH SUT

Decom North Sea is pleased to announce that it has formalised its link with the Society for Underwater Technology (SUT).

SUT is a multidisciplinary society that brings together organisations and individuals with a common interest in underwater technology, ocean science and offshore engineering. Founded in 1966 it draws members from more than 40 countries. Membership includes engineers, scientists, other professionals and students.

SUT has recently appointed Stevie Hall as Chief Executive, and this new link with Decom North Sea demonstrates the commitment both he and Decom North Sea Chief Executive, Roger Esson, have made towards a closer, mutually-beneficial relationship between the bodies.

www.sut.org

REMOVING THE RISK BARRIER TO TECHNOLOGICAL INNOVATION

The oil and gas industry is value driven, with continued commitments to cost efficiencies across the supply chain. With returns on investment for research and development (R&D) typically being realised in the longer-term, R&D budgets are often the first to be reduced or eliminated in times of economic adversity. However, without continued investment in R&D, the North Sea increases the risk of falling behind global competitors.

As the North Sea looks ahead to decommissioning, the development and application of new technologies can create opportunities to extend asset life.

Recognising the importance of investment in the North Sea, the Oil & Gas Innovation Centre (OGIC) is committed to supporting the sector to solve current innovation challenges. By providing significant grant funding and connecting companies with academic expertise within Scottish universities, OGIC is encouraging organisations to explore new technologies.

This collaborative role is helping companies to maximise opportunities for early stage research, often on unproven technologies, when there is a higher risk of the concept not working. Recent collaborative projects include the deployment of a novel material to an oil and gas application, and exploring the potential to use advanced materials, including composites, to reduce weight in products.

Whilst developing new technologies will help to maintain and attract investment in the UKCS for the foreseeable future, companies within the sector will ultimately be the catalyst for this innovation and must to be invested in driving this forward.

www.ogic.co.uk

DECOMMISSIONING ASSETS RATHER THAN WASTE - ADDING VALUE THROUGH THE CIRCULAR ECONOMY

North Sea decommissioning represents an economic opportunity for the oil and gas industry, if assets are put to higher value use. That’s the message from Zero Waste Scotland, Scotland’s circular economy expert in ensuring resources are valued and nothing is wasted. By contrast, in the current approach to decommissioning, in which assets are mostly dismantled for recycling abroad, the estimated cost in excess of £50 billion, with close to 7,800 wells and 398 platforms expected to be plugged and retired between 2016 and 2040 (https://www.ogaauthority.co.uk/news-publications/publications/2017/ukcs-decommissioning-2017-cost-estimate-report/), Zero Waste Scotland is working with the oil and gas sector to unlock the highest potential value uses of vast material streams coming from decommissioning projects.

In partnership with Decom North Sea and oil and gas businesses, Zero Waste Scotland has already uncovered many opportunities for re-use, remanufacturing and repurposing of decommissioned assets (see Figure 9). However, few firms are capitalising on the end-of-life value of these assets. Zero Waste Scotland offers dedicated business support and funding for businesses to help take advantage of these opportunities. Our £18m Circular Economy Investment Fund, backed by Scottish Government and European Regional Development Fund support, is currently open for applications from the oil and gas sector until the 4 December 2017.

For more information on how to apply, please contact scott.bryant@zerowastescotland.org.uk.

www.zerowastescotland.org.uk

www.ogic.co.uk

For more information on how to apply, please contact scott.bryant@zerowastescotland.org.uk.

www.zerowastescotland.org.uk
BRIMMOND GROUP

Since incorporation in 1996, Brimmond Group has established itself as a leading service provider within the hydraulics and engineering industry, providing specialised design, manufacturing, hydraulic engineering, refurbishment and service support to organisations around the world.

Brimmond has a purpose built 2.5 acre facility in Kintore, Aberdeenshire which contains custom built facilities including dedicated work bay areas and a large capacity external test bay. The organisation’s extensive hire fleet is one of the most modern and reliable in the industry, with Brimmond’s very own fully trained technicians and engineers designing and building these assets in-house.

Brimmond Group sees the decommissioning market as vital for the future growth of the company and has developed its rental fleet to help achieve this. Recent fleet inclusions include:

- 156kW – 400kW large diesel and electric hydraulic power units in which to provide for the decom tooling and subsea dredging markets.
- Large capacity umbilical reelers
- Marine cranes ranging from 1te at three metres to 5.5Te @ 21.5 metres including large capacity knuckle boom marine cranes that are used for projects such as subsea mattress recovery.

Brimmond Group has history and recent experience with well abandonment and casing recovery towers, from concept of hydraulic design to the provision of marine cranes and installation.

www.brimmond-group.com

CESSCON DECOM

CessConDecom provides new and bespoke, cost-effective, fit-for-purpose and environmentally responsible decommissioning services to the offshore and onshore oil and gas, pharmaceutical and chemical industries.

NorScape West at Hanøytangen in Bergen, part of the Hellik Teigen Group, is our partner for the onshore recycling phases of our projects. With over 115 years of experience in the recycling industry, our partnership with Hellik Teigen Group allows us to provide the full decommissioning lifecycle service to our clients.

The range of services provided include initial studies and surveys, offshore engineering down & cleaning (EDC), asset preparation and removal, and onshore dismantlement & recycling at the Hanøytangen facility.

CessCon provides an excellent, environmentally responsible and safe decommissioning facility for the dismantlement and recycling of assets, and the disposal of waste, and our highly experienced personnel, provide a full disposal engineering, execution and follow-up service at our facility.

From our bases in Mjøndalen near Oslo, Edinburgh in the UK, and the Hanøytangen facility in Bergen, CessCon is strategically located to provide decommissioning services to all locations across Europe.

CessCon works with all major operators, heavy lift, transportation, and engineering contractors to provide the most optimal and cost effective, project specific solutions to our clients.

The facility at Hanøytangen shall be fully operational in Q1 2019, and will be one of Europe’s most advanced decommissioning facilities. The facility is equipped with a ship slip for the dismantlement of 200m long vessels, and has one of Europe’s deepest drydocks (17m) for the safe and efficient dismantlement of fixed and floating assets.

www.cesscon.com

ONE PARTNER, WORLDWIDE SUPPORT

With over 35 years’ experience LOC has gained a long track record in decommissioning, dating back to Brent Spar and Maureen Alpha removal.

With energy specialists in more than 33 locations worldwide, LOC Group has the market-leading technical expertise to support you in every decommissioning project you have – any size, any type, and anywhere in the world.

Our collaborative approach to each project allows us to work with all the relevant parties to consider, review and approve innovative removal methods and systems. Such as Buoyancy Tank Units (BTU) used on Frigg jacket removal and weld-less sea-fastening. LOC was involved in the first use of Pioneering Spirit on the decommissioning of the Yme platform. This project typifies our approach from early marine advisory through to final MWS approval.

www.loc-group.com

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www.loc-group.com

HEAR-FORGRET, SEE-REMEMBER, DO-UNDERSTAND

The understanding, dynamics and performance of teams and individual team members can be substantially enhanced through the use of relevant physical models, technical props and visualisation tools. In decommissioning, where stakeholder interest is high, multi-discipline teams are common and technical uncertainties abound, there is great benefit to be had from tools that provide relevance, clarity and focus.

Marketec collaborate with clients to ensure that their message can be illustrated and where relevant and appropriate, demonstrated. Technical models can be used to illustrate the configuration of a facility or installation and enable a hands-on demonstration of the sequence or process for removal of decommissioned components. This is especially useful for applications involving a non-technical audience, e.g., stakeholders that may not have the awareness of the facility scale, configuration or associated challenges.

System models and mimic boards can allow more detailed procedures and “what-if scenarios” to be test-driven or investigated – with the preferred option then clearly demonstrated. Using a hands-on physical system enables a high degree of control and versatility – which are especially useful for collaboration and multi-disciplinary team operation planning.

www.marketec.co.uk
**TRITON MARINE & ENGINEERING CONSULTANTS**

Triton Marine & Engineering Consultants Ltd is under the directorship of Gary Holland, Manner with over 30 years’ experience in the oil and gas industry.

TMACE is a new business venture bringing together qualified Marine Specialties, competent managers and experienced, certified engineers. Having worked on International rig-relocation projects both onshore and offshore, Gary and the team can offer a suite of comprehensive services to clients.

Gary Holland said “The decommissioning of the UK Continental Shelf is a major engineering challenge; it will be demanding, take numerous years and will have to be carried out with great care to protect the environment. It also signifies many opportunities for companies involved within the UK industry.”

Our focus and mission is to provide a variety of top-class professional marine and engineering services, covering a range of challenging environments and situations.

**WELL-SAFE SOLUTIONS**

Well-Safe Solutions provides a ground-breaking approach to the safe and cost-efficient decommissioning of Well P&A.

Offering a specialist subscription well abandonment service that allows operators to meet the challenges and regulatory imperatives around decommissioning, while significantly reducing cost.

Bringing together a wealth of subsea oil and gas expertise and experience with dedicated marine assets and equipment, Well-Safe is the first of its kind, offering operators with complete P&A capability from front-end engineering and design to project execution.

The liability for live, non-producing assets can be reduced via well P&A operations, but the timing on the decision to make these wells safe is heavily influenced by cost and the need for a new approach. Well-Safe will work closely with operators and industry bodies while navigating the complex regulatory process, driving change, transparency and ensuring tax efficiency.

Within a highly fragmented market, Well-Safe takes away the need for contractors with multiple service providers and instead offer a “complete package” for operators’ P&A requirements. As the focal point of contact for the operator, they take care of the planning, logistics and execution via one, single contract.

Well-Safe is acquiring high quality marine assets to carry out well abandonment work, including semi-submersibles, jack-up rigs and light-weight intervention vessels. As owners of these bespoke P&A marine assets, they can guarantee they will not be diverted to any drilling operations but used and mobilized exclusively for P&A activity. With this certainty over availability, they can secure long-term commitments from operators and have full control over scheduling of long-term well P&A campaigns.

www.wellsafesolutions.com

**VISUALISING YOUR ASSET THROUGHOUT THE DECOMMISSIONING PROCESS**

Using innovative visualisation technologies, Zynq 360 delivers Virtual Asset Management (VAM) solutions across multiple industry sectors with a focus on decommissioning.

Zynq 360’s world-leading VAM software and highly experienced capture team create a digital twin of your asset. Using the highest resolution 360° spherical images, photogrammetry and interactive plans, Zynq 360 create an accurate ‘pre-referenced’ virtual environment that can be seamlessly integrated with your current systems and digital data.

Zynq 360’s team pioneered the introduction of VAM into the global oil and gas sector. With over 20 years’ experience, Zynq 360 has developed a VAM solution that allows clients to manage and develop their core business activities safely and efficiently around the world.

Zynq 360’s truly web-based solution allows for enhanced global collaboration and customisable integration. This industry leading visualisation solution allows all stakeholders to make informed operational decisions that result in significant cost savings.

Through visualisation, Zynq 360 deliver a cost effective solution, understating the integrity of an asset whilst enhancing the safety of the environment for all personnel. Through Zynq 360’s secure web based platform, you can interact with anyone, from anywhere at any time.

Decommissioning Applications:

- Stakeholder Collaboration
- Work Activity Planning
- Identifying Hazard Work Areas
- Equipment Tagging
- Identification of SCE’s
- Document Management
- Reporting Incidents
- Tendering process
- Training and Induction

How you will benefit:

- Create a Safe Operational Environment
- Protection of People & Assets
- Identify, Manage & Minimise Risk
- Reduction in POM & Mobilisations
- Significant reduction in Pre-job Surveys & Site visits
- Operational & Cost Efficiency
- Improved Communication & Enhanced Collaboration
- Ensures Compliance
- Integration with Existing Data Systems

www.zynq360.com

**NEW SAFETY CASE DECOMMISSIONING GUIDANCE FOR OFFSHORE**

A major project which enables offshore duty holders to better plan and manage offshore safety cases and major accident hazards in the decommissioning and dismantling of platforms, has been overseen by ABB’s Engineering and Consulting group.

The firm led a Joint Industry Project (JIP) to develop safety case guidance and technology solutions during End of Life, decommissioning and dismantling. Guidance for UK Safety Case Management during End of Life, Decommissioning and Dismantling was launched at the industry event Offshore Europe in September. It has since been shortlisted as a finalist in the “Team” category of the iChemE Global Awards 2017, which celebrate excellence and achievement in the chemical, biochemical and process engineering sectors. Winners will be announced on 2 November.

Meanwhile, the JIP will continue to investigate opportunities to develop technology aimed at reducing facility running costs with a target of between 90 and 50 per cent. Operators and industry trade bodies contributed to the new guidance, which is based on experience from current and recently completed decommissioning projects.

**GA DRILLING**

GA Drilling, the Slovenian technology firm, continues to develop its PLASMABIT technology for oil and gas milling and drilling.

Providing High-Tech Products to Mainstream O&G Customers (or simply Crossing the Chasm) is an exciting challenge.

To this end GA have recently successfully completed significant milestones for the first application of PLASMABIT technology, Well Plug & Abandonment. The milling application can deliver 25%-80% cost savings compared to conventional solutions. These milestones were delivered on time, within budget and included:

- Detailed analysis of the cuttings produced. In conventional Oil&Gas well tubular section milling, large volumes of swarf are generated as part of the well abandonment process. This swarf is usually circulated out of the well causing various efficiency and safety issues.
- PLASMABIT milling produces no such swarf, it produces small curtings instead of the swarf
- Tubing Joint and Control Cable Milling confirmed the ability of PLASMABIT technology to create sufficient radial reach for complete removal of steel material within the tubing strings
- PLASMABIT Deployment System preparation of all necessary equipment for our test well and training of GA Drilling operational staff to be ready for the first test
- Section milling of increasingly long lengths of tubular
- Innovate UK Grant award for control systems development.

GA Drilling has also recently appointed new experts to its Advisory Board. Jules Schoenmakers and Ted Halstead, as well as moving to a new, larger R&D campus and Technological Centre.

In addition, the British investment platform, InfraPartners Management (IPM), has Invested in GA Drilling. IPM consider GA Drilling to be a worldwide class global technology company and the best choice for their first investment in the region.

The leading certification authority for oil and gas industry technologies, DNV GL, finished the first round of assessment of PLASMABIT Milling Technology to DNV-RP-A203. DNV GL considers the technology feasible for its designated use and therefore suited for further development and verification. In September 2017, GA Drilling received another positive independent assessment of the technology by the Inspection Verification Bureau (IVB) certification authority. IVB assessed legal, compliance, quality, performance, environmental and health and safety factors and obligations.

The progress is significant and we are ready to “cross the chasm” with further industry support.

www.gadrilling.com
ACN SUCCESSFULLY COMPLETES SUPPORTING THE DECOMMISSIONING OF THE BP MILLER PLATFORM

ACN Offshore has successfully completed supporting Saipem in the decommissioning of the BP Miller platform. ACN safely managed and executed Scaffolding, Rope Access, Welding, Cutting, Rigging and NDT Inspection.

The platform is one of the largest to be decommissioned to date in the North Sea, the topside equalling 28,700 tonnes. This being approximately 366 times larger than the NGL Home and Wen platform ACN decommissioned in 2016.

Working in a challenging environment approximately 150 miles from land out into the Central North Sea, ACN is pleased to report that from nearly 50,000 manhours executed there were no accidents during the project and safety remained paramount.

EASY ACCESS TO OFFSHORE DECOMMISSIONING SITES BY AMPELMANN

Decommissioning offshore structures is hard and complex work. Getting access to these structures has long been similarly complex. Ampelmann solved that aspect, by developing our motion compensated gangway systems that made us the global leader in our industry. For the Leman platform decommissioning project in the southern North Sea – a project awarded to Boskalis - Ampelmann was relied on to ensure safe access for all staff members involved.

To ensure safety and efficiency while accessing the platform, Boskalis and Ampelmann closely collaborated during each state of this project. Beforehand, a mutual understanding was created for people transfers to the platform. During the actual operation, relevant information was continuously exchanged to maintain the highest safety standards and safeguard efficiency. On multiple occasions, Ampelmann needed to adapt, for instance by having an Ampelmann A-type on stand-by while the final cut was being carried out, to offer staff members a safe escape route during this critical operation.

An open and intense collaboration, combined with Ampelmann solutions that were built for safety and efficiency, proved to be a crucial part of the successful execution of this decommissioning project.

Ampelmann is always open to combining forces with offshore contractors in the decommissioning industry, to jointly devise new ways of getting things done and tackle challenges whenever they arise.

www.ampelmann.nl

BOSKALIS SOUTHERN NORTH SEA UPDATE

Early 2016, Boskalis and NAM signed a contract for the decommissioning of the LEMAN BH platform in the UK Southern North Sea sector. Prior to signing, a thorough process was followed, starting many years earlier with concept- and feasibility studies followed by a formal tender process. Since then, the Boskalis project team has planned and engineered a scope of work entailing: management, engineering, surveying, cutting, lifting and transportation of the BH topside and jacket and further dismantling operations onboard.

The focus of Boskalis is always to present the “safest, best technical and most economical” solution towards a client.

This summer (2017) the LEMAN BH platform was successfully decommissioned and brought to Great Yarmouth for dismantling and possible re-use of components. Boskalis and Shell UK representatives have been monitoring the progress, while Boskalis has been the dismantling to subcontractor Peterson-Veolia. Peterson-Veolia developed the Great Yarmouth area in line with their other UK and European facilities. LEMAN BH is the “first” to be landed in Great Yarmouth. Under similar arrangement more assets may be brought here in the future.

APOLLO AND OIL & GAS TECHNOLOGY CENTRE PARTNER ON DATA MANAGEMENT PROJECT

Apollo, the Aberdeen headquartered, engineering and project service provider, has been backed by the Oil & Gas Technology Centre to introduce technology that will unlock the potential of the North Sea.

Apollo KnowHow™ is a cloud-based data management solution that allows operators to plan, inspect and report/review all integrity and associated data. The Centre’s investment allows rapid development of the existing tool into other areas of asset integrity management, allowing operators to break down barriers and overcome legacy data issues.

Jonathan White, Business Development Director, Apollo, said: “Apollo has been working closely with the Centre for a number of months to further understand the challenges in overcoming data silos and non-useable data within industry. We’re developing the road map for KnowHow™ which will allow operators to have better visibility of their assets, in real time and allow them to future-proof their data collection and management. 2017 has been our best year so far for Apollo and coupled with the project backing, this really allows KnowHow™ to take off!”

Douglas Sinclair, Technical Software Manager, Apollo, said “Apollo KnowHow™ is designed to help clients manage their asset integrity efficiently by allowing operators to inspect and maintain all equipment types from one data source. The Centre understood the antiquated methods of managing data in different silos whether topside, subsea or pressure systems. Apollo KnowHow™ manages them all and then some. We have already deployed KnowHow™ to three clients in the UKCS with significant interest from other major operators.”

Rebecca Allison, Asset Integrity Solution Centre Manager, the Oil & Gas Technology Centre, said “This project is the first step in digitising the offshore worker and we’re confident it can deliver significant efficiency improvements. We look forward to working with Apollo to develop KnowHow™ further and getting it deployed in the field.”

www.apollo-oce.com

www.boskalis.com/offshore

Under similar arrangement more assets may be brought here in the future.
**ADRIENT COMPLETES ANOTHER CHALLENGING DECOM PROJECT IN BAUSFORT SEA**

Adrington has recently completed the final decommissioning of a drilling island in the Beaufort Sea, NW Canada for a major oil company. The project was another successful delivery from Adrington in a hostile and challenging environment, on a day rate basis, coming in under budget, ahead of schedule, no environmental impact and zero LTOs.

The Tarsuit Island, in the Yukon territory, consisting of reinforced concrete caissons, was installed in the 80s as an artificial drilling pad and designed to withstand the harsh arctic environment. The decommissioning has taken several expeditions to complete and the final element was the re-floating of the caissons and load onto a heavy lift vessel for onward transport to the disposal yard.

Adrington undertook the pre-engineering and execution of the project including site clearance. Detailed and dynamic planning with the client and supply chain was undertaken to take account of the ice and inconstant weather. Surveys were required to plan the logistical elements of the project as the equipment and services were required to be trucked on the challenging road to and from Inuvik. To mitigate the risks involved in shipping kit from Adrington’s Houston facilities, establishing localised supply chain became imperative with the added benefit of providing work and revenue for local communities. Seven truckloads of salvage equipment, the mooring spread, high performance pumps and diving equipment made their way across country to enable the project.

Robert Wesselink, Project Manager was quoted as saying the key to the project being positively delivered was, “open, direct communications with the Operators project lead and the dedication and experience of Adrington’s versatile offshore team.”

www.adringtonglobal.com

**BABCOCK SECURES OIL AND GAS DECOMMISSIONING CONTRACT**

Babcock, the engineering services business, is working with Centrica Storage Limited to plan for decommissioning of the Rough 47/8A platforms and infrastructure in the southern North Sea.

Utilising Babcock’s innovative asset responsibility transfer process, planning for the safe and efficient decommissioning of Centrica’s assets – which comprises two bridge linked platforms currently shut in ahead of decommissioning – is well underway.

This initial decommissioning contract for Babcock will provide all aspects of governance and compliance prior to decommissioning operations commencing. This initial project phase is anticipated to take up to 12 months.

Ian Lindsay, Managing Director Energy and Marine Technology, Babcock said: “Babcock is delighted to support Centrica as its Rough infrastructure nears decommissioning. With our expertise in project delivery reinforced by our experience across the decommissioning sector – including all aspects of verification, compliance and governance – we are trusted to deliver. We look forward to working together in this new collaboration.”

Managing Director at Centrica Storage, Greg McKenna said: “With 47/8A now shut in and no longer operational, this is the right time for us to decommission and remove the two bridge linked platforms and associated infrastructure. We look forward to working closely with Babcock as we ensure the planning is in place ahead of decommissioning Rough safely and in an environmentally responsible way.”

The UK’s Oil and Gas Authority has estimated that the decommissioning of North Sea infrastructure could cost £9.8 Billion. It has challenged the industry to complete the work for less than £3.9 Billion, commenting that “significant change” would be needed if the lower figure is to be achieved.

www.babcockinternational.com

**CDC SCOTLAND FINALISTS FOR THE SECOND YEAR RUNNING IN THE WORLD OIL AWARDS**

CDC Scotland is announced as finalist in the category for the World Oil Awards, Best Production Technology. The engineering design house, is being recognised again for its innovative offshore vessel designs.

On this occasion CDC’s design for a stand-alone mobile production and storage platform (INDU/MOPSISU) has reached the final stages in the category of Best Production Technology, alongside Schlumberger, Weatherford and Saudi Aramco/Baker Hughes.

Iain Steven, Managing Director says: “To have reached the finalist stages two years running, and to be competing on a par with industry giants when there are only four of us on the ground, is an honour itself. It reflects well not only on CDC but on the quality and innovativeness that can be found within the Scottish engineering sector.”

The MOPSISU design depicts a stand-alone platform with a unique storage mat. The platform tows into position, sets up in around three days and requires little in the way of infrastructure. It can store up to 160,000 bbls and at the end of life it leaves the seabed as it found it. It was designed specifically for small pools/marginal fields and to work alongside CDC’s multi activity vessel, providing the full range of lifecycle activities.

Iain adds: “Our philosophy has always been to challenge the attitude of ‘doing it the way it has always been done’ and just making things bigger. Sometimes that’s hard feeling as though you’re banging your head against a brick wall. But things are beginning to change; a number of clients are taking a greater interest in our designs. I’d like to thank not only the team but also business partners and Scottish Enterprise who have provided support along the way.”

www.cdcscotland.co.uk

**JOHN LAWRIE GROUP SHORTLISTED IN ENVIRONMENTAL AWARDS**

The John Lawrie Group is among 38 Scottish companies chosen as finalists for the 2017 VIBES – Scottish Environment Business Awards.

The 18th annual award scheme recognises the commitment, actions and achievements of Scottish businesses working hard to reduce their impact on the environment.

The finalists have been selected across nine individual award categories. Judges were looking for evidence of broader commitments to sustainable development, such as an environmental management system, and a demonstration that the company has an existing commitment to reducing environmental impacts through a Circular Economy approach.

Further evidence was sought of the importance placed at John Lawrie Group to the principles of Circular Economy with the company’s overall operations.

Gillian Bruce, chair of the VIBES Awards, said: “Congratulations to this year’s finalists, each of which has impressed judges with their commitment and innovation in environmental and business best practice.

“VIBES is dedicated to recognising companies which have taken significant steps to reducing their environmental impact.”

www.johnlawrie.com

Ray Grant, John Lawrie Group’s Environmental Director, has welcomed the news. “Here at John Lawrie, we are fully committed to the Circular Economy model which is being actively driven across the UK and Europe with Scotland at the very forefront.

“Each year, we reuse tens of thousands of tonnes of various redundant items from the oil and gas industry which would otherwise be scrapped and recycled. By establishing sustainable reuse markets, we not only help our customers to be more environmentally efficient but also deliver enhanced financial value.

“By choosing to reuse redundant oilfield pipe and tubulars to the construction sector rather than sell them for scrap, for example, the John Lawrie Group is conducting business in a more economical and sustainable way.”

www.johnlawrie.com
KPL ON TRACK TO REGAIN FORMER PROVEN POTENTIAL

KPL is suitable for all energy sectors including the merging decommissioning market. All types of equipment can be trialled and constructed in low risk conditions within one of Europe’s largest dry docks. The dry dock gates are 166m in length and there is up to 13m of water available at high tide. Due to its size, KPL can hold large structures for trials and testing than most of its port competitors – making it one of the best sites in Europe in terms of capacity and deep water.

At its peak, Kishorn Port & Dry Dock employed 1,000 people, which was necessitated by the construction and fabrication of the Ninian Central Platform. At the time the Ninian Central Platform was the largest man-made object to ever be moved across the face of the Earth. Today with master planning permission already established, KPL is again a tremendous opportunity for potential developers who are after a “shovel ready” site – with a fully operational dry dock with access ramp, deep water and 3 deep water berths.

www.kishornport.co.uk

SUBSEA ENVIRONMENTAL TOP PLUG JUST GOT EASIER

The Gator Perforator is revolutionary technology for P&A. It replaces the need for explosives or chemical cutters. Unlike an explosive charge, the Gator provides multiple large perforations providing a significantly greater flow area than that of which conventional systems are capable.

A global operator recognised the advantages of the Gator, and utilized it on three wells in the North Sea for their environmental top plug abandonment.

Running the Gator Perforator with a mechanical set bridge plug in the 9-5/8” production casing, the client was able to isolate the lower abandonment zone and perform 2 activations creating 8 perforations at +/-1000ft. The tool was then moved 8 ft below the subsea wellhead for a single activation resulting in 4 perforations. The squeeze packer was set +/- 30 ft above the lower perforated zone. Clean-up of the B-annulus was then completed followed by full cement displacement.

With such large perforations available, a pump rate of 9 bpm with 320 psi was easily achieved at surface. The high flow rate coupled with large perforations created high velocity turbulent flow allowing for optimal displacement and clean-up of the B-annulus.

Since explosives were eliminated, the client could get within 8 ft of the subsea wellhead without the risk of branching well integrity. This allowed for the best possible displacement and B-annular contaminants resulting in a safer and much more effective environmental plug. Overall, the Gator resulted in a time saving of more than 12 hours per well.

www.leeenergysystems.com

CENTRICA ENERGY AND CONOCOPHILLIPS TEAM UP TO MAKE EFFICIENCIES

During 2017, Centrica Energy commenced the abandonment of the A fields subsea wells in the Southern North Sea, using the Paragon B391. Jack Up. As part of this campaign, Centrica Energy’s 49/11a B3 well, which sits within the Alison Subsea Manifold was planned to be abandoned. The ConocoPhillips operated Alison 49/11a B2z/05 (KK) well was also within the Alison manifold.

Centrica Energy agreed to abandon the KK well on behalf of KK owners, ConocoPhillips and BP. For the purposes of the abandonment, Centrica Energy was the nominated Operator of the KK well. Centrica Energy abandoned the KK well based on Centrica Energy Standards and Procedures and in line with the ConocoPhillips SNS Abandonment Philosophy. Additionally, ConocoPhillips reviewed and verified the results of the CBL / Isolation Scanner Log of the 9-5/8” casing cement bond. During abandonment operations, operational control remained solely with Centrica Energy.

This arrangement had great benefits for all owners. Rig mobilisation costs were shared, dive support costs were shared (the S5P Pelican removed both subsea trees). Batching operations were possible, slickline rig up times were reduced, the 16” High Pressure riser was only run once and ‘hopped’ between wellheads.

In addition, the KK well owners benefited from the wells being the 5th and 6th in the campaign and the learning curve that the Paragon B391 and Centrica had been through. Centrica benefitted from ConocoPhillips’ huge experience with abandonments.

Both wells were abandoned for approximately 50% below AFE.

www.paragonoffshore.com

RGU WELL-PLACED TO OFFER STATE-OF-THE-ART TRAINING

Aberdeen’s Robert Gordon University (RGU) has developed a state-of-the-art decommissioning simulator which will support its training and teaching offering for the burgeoning sector.

RGU, along with industry partners Drilling Systems, OGTC, KCA Deutag and Baker Hughes, has established the simulator to focus on well-plugging and abandoning (P&A).

The purpose of the decommissioning simulator focuses specifically on well decommissioning and it will be pre-programmed with specific well conditions to build competence, prepare and update crews for performance improvement.

The simulator and supporting software enables new ways of downhole modelling with a programmable range of conditions and defects.

RGU has worked closely with Drilling Systems Ltd, which develop and build simulators, to create the software for P&A downhole tools, well environments and techniques on a wide range of installations. Baker Hughes is also involved as a leading P&A downhole tool technology supplier.

The University also offers a suite of decommissioning short courses, developed in collaboration with the UK Regulatory Authorities, OGSA, BIS and HSE.

These are designed to give an overview of the fundamentals of decommissioning an oilfield using a North Sea platform as an example.

The courses are built around a project plan which takes students through the seven phases of decommissioning, giving them an insight into late life and cessation of production, through to disposal. The University is keen to work with organisations involved in decommissioning.

www.rgusandgasinstitute.com

SCOTOIL SERVICES LTD SECURES £2.5M OF CONTRACTS FOR DECOMMISSIONING SERVICES

Scotoil Services Ltd, a specialist oil and gas service company in the UK has been awarded a number of contracts worth over £2.5m for onshore waste management services.

The Aberdeen-based company will provide the transportation, dismantling, recycling and disposal of over 5000 tonnes of subsea infrastructure recovered from decommissioning campaigns within the UKCS during 2017.

The recovered subsea equipment ranging from flexible risers, umbilicals, spools, manifolds, mattresses to mud water arches shall be offloaded at Aberdeen & Peterhead Ports.

Scotoil Services has permits and licences in place at these strategic quayside locations to allow the acceptance and handling of structures, including NORM contaminated equipment and wastes.

At Peterhead Port, Scotoil Services has formed an alliance with NoraSea Group (UK) at their deep-water decommissioning facility located at Smith Quay. Both being leading service companies in the onshore decommissioning sector, they have joined forces to become NickDecom.

Scotoil Services Managing Director Craig Smith said: “We are delighted to have been awarded these significant contracts. Our quayside locations, licences and extensive range of services are ideal for subsea decommissioning campaigns.”

“Scotoil has been providing specialist decontamination and waste management services to the UK oil and gas sector for over 35 years so we understand the level of expertise required to successfully deliver this type of project.

“NickDecom offers a bespoke range of services meaning that we can deliver the entire onshore work scope for our client thus reducing the need for multiple supplier contracts.”

www.scotoil.co.uk

www.scotoil.co.uk
XODUS SHOWCASES NEW DECOM CHALLENGE

Xodus Group will present its Decom Challenge to delegates at the Offshore Decommissioning Conference 2017 in St Andrews.

The Decom Challenge, which launched at SPE Offshore Europe, is a strategic decision-making scenario tool that helps teams to make the best decommissioning decisions possible.

Four experts with regulatory, operator, supply chain and stakeholder perspectives will join the Xodus Decom team for an interactive session based on mission command military decision-making techniques, using a unique approach designed to promote collaboration and smart thinking.

The challenge will explore how using interactive tools can help teams assess the multi-faceted decisions in decommissioning, consider the data and resources required and evaluate the options available. There will also be opportunities to share best practice with fellow industry figures and discuss what has worked in real-life projects.

Dorothy Burke, Decommissioning Consultant at Xodus said: “We wanted to demonstrate how all parties involved in decommissioning make the best decision based on complex factors, ensuring a strategic view and expert planning. For instance, if you are an operator, how do you decide the best way and time to decommission the assets in your portfolio? Will you be competing for vessels, disposal yards and resources when the time comes? If you are a supply chain company, how do you work with potential clients to optimise decom effectiveness, while making a return on your time and expertise? How does the regulator ensure that decommissioning is carried out efficiently? Or from a stakeholder perspective, what gives you confidence that decisions are being approached correctly? “It always makes for an interesting debate and we look forward to welcoming new participants at the conference.”

www.xodusgroup.com/decom

TEXO DRONE SURVEY AND INSPECTION DEPLOYS WORLD’S FIRST UT INTEGRATED UAV SYSTEM

Texo Drone Survey and Inspection (UKCS), the dedicated Oil and Gas services division of Texo DSI - owner-operator of the world’s most comprehensive and dynamic fleet of unmanned aerial vehicles is pleased to announce the deployment of the world’s first UT integrated UAV system.

The system has been designed to undertake a wide range of thickness measurement applications and is able to ascertain precise measurements on both flat and curved surfaces. The system also has the added advantage of having the ability to ‘hot swap’ its power sources in any live atmosphere. This drastically reduces down time, due to not having to leave the inspection site for, what may be, a distant designated “safe zone.”

This UAV integrated UT payload has been deployed across a wide range of sectors, including both offshore and onshore wind turbine structures, telecoms and maritime assets.

With the ability to indicate, via a unique spot identification system, all UT surveys are precise in acquisition and instantaneous in capture and delivery.

All UT UAV operations are overseen by Texo’s experienced NDT technicians, ensuring accurate data set capture and validation of acquired measurements. Inspection data is combined with a precise photogrammetrical, visual overlay of the completed survey, pinpointing exact measurement locations on the structure/surface to an accuracy of sub 10mm – therefore providing clients with verified inspection data.

John Wood, Chief Operations Officer, Texo Drone Survey and Inspection Ltd said: “This is a major development in the field of inspection engineering. Client feedback has been indicating that this is an area of huge demand and we have worked tirelessly to bring this to the market.”

www.texodroneservices.co.uk

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This is an excellent opportunity to raise your company's profile to key players within the decommissioning sector. “Bitesize Decom” events will continue to provide the opportunity for members to maximise their networking. Members of Decom North Sea are encouraged to contact the Decom North Sea Executive Team to discuss.

For full details, please visit www.decomnorthsea.com or contact events@decomnorthsea.com

Decom North Sea is implementing a series of workshops focused upon key topics surrounding the late life and decommissioning sector, right now for all levels of the supply chain.

Workshops

Decom North Sea is implementing a series of workshops focused upon key topics surrounding the late life and decommissioning sector.

Get Involved with Future Decom North Sea Events

Members of Decom North Sea are encouraged to contact the Decom North Sea Executive Team to discuss the various opportunities available to get involved with our events programme.

- Present case studies at our Bitesize Decom events
- Host a “Member Spotlight” event within Decom North Sea's Westhill office to communicate your company's capabilities in the decommissioning sector

This is an excellent opportunity to raise your company’s profile to key players within the decommissioning sector. Please contact events@decomnorthsea.com for details.

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Further details to follow. For information about the events, please contact events@decomnorthsea.com

Events

6 December 2017
Supply Chain Engagement Event – presentations from Shell UK Limited and Total E&P UK Limited at The Village Hotel, Kingswells.

Bitesize Decom Events

Held in Aberdeen, these lunchtime events will focus on the latest decommissioning sector updates, learnings and opportunities:

- Updates and opportunities from decommissioning projects
- Overview of Decom North Sea led projects and initiatives
- Case Studies from Decom North Sea members
- Operator up dates
- An opportunity to ask questions about the sector

“Bitesize Decom” events will continue to provide the opportunity for members to maximise their networking with key players across the decommissioning sector and Decom North Sea will continue to organise the popular facilitated introductions for our member companies.

UPCOMING EVENTS

MEMBERS LIST

To find out more about the benefits of becoming a Decom North Sea member, please contact info@decomnorthsea.com

MEMBER LIST

For full details, please visit www.decomnorthsea.com or contact events@decomnorthsea.com

Decom Offshore 2018

Wednesday 23 May 2018
Aberdeen Exhibition and Conference Centre, Bridge of Don, Aberdeen, AB23 8BL

Decom North Sea’s flagship conference will return to the AECC in May 2018. Regularly attracting a global audience of over 400 key representatives from the late life and decommissioning sector, this event provides a real focus on what opportunities are in the late life and decommissioning sector, now for all levels of the supply chain.

MEMBER LIST

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The website is live so please visit www.decomnorthsea.com for the most up to date details of all our events.
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bhge.com/abandonment