

Decom North Sea – Response to Call for Evidence on Strengthening the UK’s Offshore Oil and Gas Decommissioning Industry

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Response to Call for Evidence on Strengthening the UK's Offshore Oil and Gas Decommissioning Industry

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1 Introduction to Decom North Sea

Decom North Sea is the single topic membership organisation which connects capability with opportunity across the oil and gas decommissioning sector.

Founded in 2010, Decom North Sea has grown since its inception in to over 300 members drawn from operators, major contractors, service specialists and technology developers, plus around 25 strategic partners drawn from government development organisations, regulators, technology research and academic institutions, and other trade associations.

Decom North Sea's primary purpose is to enhance the value of the North Sea supply chain in the decommissioning sector by:

- connecting the capability of that supply chain with the opportunity presented by decommissioning operators' and senior supply chain duty holders' decommissioning programmes,
- facilitating collaboration and knowledge sharing between member organisations,
- providing access to- and the opportunity to influence regulators and policy makers,
- providing connectivity to organisations involved in decommissioning in the area of technology, academic research and industrial development.
- acting as a focal point for the collective input of other trade associations involved in the decommissioning sector.

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2 Structure of Decom North Sea's response to the Call for Evidence

The Government recently launched a call for evidence on what more needs to be done to ensure that Scotland together with the rest of the UK can become a global hub for offshore oil and gas decommissioning. The call focuses on the issues that are crucial for both operators and the supply chain. The two central themes that the call for evidence will request responses on are:

- How could the UK decommissioning industry further improve its ability to serve the UK market, support MER UK and reduce the overall costs of decommissioning; and
- What could be done to encourage the domestic industry to export its decommissioning expertise abroad and position Scotland, together with the rest of the UK, as a world leading hub for decommissioning.

Decom North Sea is in a unique position in being able to aggregate the single, largest representative sample of collective experience and expertise in decommissioning in the UK, through its access to over 300 member organisations across the operator and supply chain community as well as government and regulatory bodies, academic and technology institutions and partner trade associations.

Decom North Sea's approach to addressing these themes has been threefold:

- 1) It has actively encouraged its members to provide individual responses on their own behalf.
- 2) Through its representation on the MER UK Decommissioning Task Force it has co-authored a report from that Task Force to the Chief Executive of the Oil and Gas Authority, Dr Andy Samuel, in his capacity as Chair of the Maximising Economic Recovery (MER) UK Forum, in order to provide an integrated response focused on how this ambition aligns with our wider MER strategy, and the target to reduce UK decommissioning costs by 35%.
- 3) As the principal trade association for decommissioning it has collected comprehensive feedback from its membership in order to provide its own contribution, documented in the following pages.

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3 Explicit Answers to the Call for Evidence Questions

The following document summarises the key points raised in the collation of the Decom North Sea's member and strategic partner responses to the Call for Evidence.

1. What core strengths does the UK have in offshore decommissioning, where we might be able to build a competitive advantage?

The strength of the UK offshore decommissioning sector lies in its diversity of experience and market opportunity. The UK has had exposure to a wide variety of field types, installed infrastructure types, integrity levels, water depths and environmental conditions, and as such, the experience in the UK is relevant in virtually all other offshore regions.

There is significant experience of developing complex decommissioning programmes and successful project management in execution of those programmes. There are notable technical strengths across operations including; well services, maintenance and integrity management, brownfield engineering, maritime and logistics. The construction history and experience that is present provides a solid knowledge base for the deconstruction phase.

An established UK industry has also developed a robust regulatory environment including planning, approval, HSE, environmental and quality assurance processes, while mature industry trade bodies such as Decom North Sea and Oil & Gas UK have maintained a focus on learning and good practice guidance. The regulatory regime has progressed to produce structured and consistent processes that work in tandem with a stable and predictable fiscal regime. There are work forums present in the UK that allow collaboration between operators, the supply chain and regulators. These forums assist with driving performance improvement and the cost reduction framework in line with Maximising Economic Recovery.

The UK has a very large, diverse, mature and competitive supply chain with decommissioning capability that covers a majority of required goods and services. As the decommissioning environment in the UK has evolved over the last ten years, supply chain has adapted developing contracting models that assist with the smooth and economic delivery of these large-scale projects, adopting a mature approach to information management, effectively sharing knowledge and lessons.

A specific strength lies within well decommissioning, where extensive experience on a diverse well stock and geology skills have developed to determine optimal barrier philosophy. UK supply chain is already substantially global, with many UK organisations being local subsidiaries of global organisations.

Research and development in new technology and is also a strong aspect of the UK decommissioning sector. The creation of the Oil & Gas Technology Centre and National Decommissioning Centre have assisted with bolstering such innovation and with continued support should help with the widespread commercialisation of new technology. Furthermore,

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Academia supports this with a number of Oil and Gas Industry-specific courses, and a new dedicated decommissioning MSc at the University of Aberdeen. Availability of 'seed' funding for new technology is also considered a UK strength.

The UK possess an experienced workforce with considerable domestic and international experience. There is expertise in environmental stewardship, with a good learning culture and resulting performance improvements. Although there is limited deep-water quayside access in the UK, the licensed disposal facilities around the coast are well placed to meet demand, and there is good experience in the running of these facilities.

2. Are there any gaps or areas of weakness in UK capability, and if so, is there a need to actively seek to address them?

The UK decommissioning sector has historically specialised across certain areas of the decommissioning work cycle while focusing less intensively on others. The primary 'gaps' relate to the fact that, while the UK has focused on human capital – governance, engineering, project management and operations - it does not currently provide as many of the physical assets associated with decommissioning.

For example, the UK does not have any significant heavy lifting, transportation and removal capability. Removals activity makes up 13% of the UK's forecast decommissioning spend and is currently a segment that is not accessible to UK companies. Most of the vessels that have been used for offshore removal and transportation are owned, operated and managed by organisations outside the UK. The same is true for subsea construction and removal. While the market leaders who own vessels do have subsidiaries in the UK, the physical assets and exportable corporate expertise are outside the UK. Most of the drilling and service companies, particularly rig owners, are non-UK owned. While gradually UK players are coming to the market, the predominant rig capability resides outside the UK.

Linked to the above is the absence of deep-water facilities to receive heavy-lift vessels and deep draft vessels to offload directly onto the quayside. Again, this is an area of development, but today can be considered a gap.

In terms of indigenous capability, the largest gap is the absence of a well-defined long-term pipeline of decommissioning activity, with overall decommissioning plans remaining poorly defined and subject to deferral. This is partly attributable to the fluctuating, and more recently, rising oil price, improving operator cashflow, and continuing to delay activity, and a regulatory regime which does not mandate narrow and predictable execution time frames. New asset owners are looking to extend asset life, and the number of fields which have already ceased production but have delayed decommissioning has also increased. These factors have created uncertainty in demand, influencing operator, supply chain and regulator efficiency in achieving cost-efficient decommissioning. For most supply chain companies, it remains challenging to persuade main boards and investment supporters to expand capability in the UK by investing in tools, techniques and training when the return on any investment is

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uncertain. This creates uncertainty in the UK's future capacity to be an exporter. At worst, supply chain organisations may move people to work on projects outside UK, actually diluting indigenous capacity.

Access to skills remains an issue. Labour costs are high compared to other international countries, and, recognising an ageing workforce with very poor levels of diversity, attention must be paid on attracting new talent to the industry so that the current knowledge and experience isn't lost. In doing this, it is critical to address the negative perceptions around the fossil fuel producing nature of the industry. Additionally, the value that effective information management can bring is not widely understood and, as such, the value of data is not fully exploited.

Market consolidation will help drive change. The UK legislative requirements are prescriptive but adopting a more risk-based approach may be more appropriate for decommissioning activities and to further develop excellence across UK operators.

3. Are there any emerging technology areas that should be pursued that will support the development of a world-class domestic decommissioning industry and help UK-based companies win international business?

It has long been recognised in the UK that it is important to drive the development of new technology. Technology has a role in cost reduction and efficiency improvement but is not the sole driver in achieving improved operational excellence. New technology also has the potential to destabilise traditional approaches to traditional project approaches which can create bottleneck to innovation.

Specifically, significant progress has been made in well abandonment technologies and working practices over recent years. Since this represents nearly half of the cost of decommissioning and the challenges are similar in most oil & gas provinces, this is an obvious target for UK companies and technology developers to increase exports in future years. The subsea sector also leads the way around the world in terms of experience, innovation and technology.

Other developing technology applications include:

- Artificial intelligence and augmented reality
- Better eco-science to enhance knowledge and technical understanding to select the right removal options for the ecosystem
- Robotics, autonomous survey vehicles and supporting software
- 5G communications onshore to offshore enabling augmented reality and virtual assistants
- High resolution survey of installed subsea infrastructure, sufficient for preparing decommissioning programmes and formulating scopes of work
- Non-traditional removal and lifting options beyond HLV and Single Lift

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- Internet of Things / Digital Platform / optimise P&A and production run-down in late life phase
- Improved access solutions for visiting and executing work on unmanned and subsea facilities
- Accelerated corrosion technology.

What is critical is that new technologies move quickly from the incubator stage, an area in which UK technology facilitators (e.g. OGTC) provide excellent support, into industrialisation. Consideration should be given to further (tax) incentives to bring innovation and new technology more quickly to market maturity.

4. What specific areas or capabilities of the decommissioning value chain have the greatest potential for export?

In defining the term 'decommissioning hub' in relation to the UK it is important to be clear on capabilities that differentiate the UK from other countries and are 'exportable' from those that are merely 'transferrable'.

'Exportable' capabilities are those goods and services that are indigenous and unique to the UK that can be sold to- or applied in an overseas market. 'Transferrable' capabilities are those goods and services that are inherent to- or learned by a global company that is present in the UK in the course of its UK operations, that it can transfer to its other global subsidiaries through its own internal networks. The former is a true export, providing value back to the UK; the latter is part of the natural cycle of learning that organisations benefit from in a mature market that they can apply in a less mature market. Although there is no direct benefit to the UK the reciprocal knowledge share and awareness created through capability transfer outwards and back to the UK has an indirect benefit.

It is important to recognise the variety of markets to which the UK could offer decommissioning related exports. The local market will differ from the regional market and the regional market which will differ again from international markets; there is no 'one size fits all' approach when it comes to decommissioning. The UK must be able to offer a suite of goods and services to the local market. Recognising that UK facilities have their own reach, a bespoke range of goods and services can then be offered to the regional and international markets.

Exportable capabilities can be divided into a number of categories, with the following examples:

Specialist equipment

- Subsea lifting equipment
- Dismantlement and hazardous waste management
- SME Specialist technologies and tools

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Specialist services

- Decommissioning programme preparation
- Decommissioning project management
- Contracting strategy and contract management
- P&A capability and expertise: platform and subsea
- Brownfield engineering
- Integrity management
- Re-activation of platform integrated drilling rigs.

Expertise

- Risk management
- Safety assessment
- Consultancy; engineering; regulatory
- Business consultancy services; tax, legal, finance
- Subsea expertise; robotics; diver-less solutions
- Marine expertise
- Niche experience/competency.
- Technical assessment experience
- Local SME technologies

Regulatory and Governance capability

- Cross-regulator knowledge sharing
- Sharing of policy governance
- In-country JVs based on contribution of knowledge and expertise
- International supply chain expertise; import/export/customs/legislative compliance
- Waste management (Environmental auditing /assessment).

Knowledge and Lessons Learned

- International corporate networks in place (transfer of UK learning).
- Fast international communication within supply chain regarding collaboration/lessons learned.
- Certification (Global use for UK standards).

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5. What are the main export markets for the UK decommissioning industry and over what timeframe?

The UK export markets for decommissioning-specific goods and services can be broadly separated into regional and international.

The primary regional market is the North Sea and includes:

Denmark

Norway

The Netherlands

The regional market differs from the international market. Regional demand is characterised by regulatory regimes, operating companies and supply chain providers that are broadly equivalent across each jurisdiction. Given the breadth of capability in the UK, there are few decommissioning projects in the North Sea that cannot be serviced from the UK. On the other hand, while UK companies can function relatively easily across the region, UK technologies and service provisions are not necessarily unique, in-country cost structures do not necessarily favour exporting organisations, and local content and other regulatory requirements may exclude exporters. In many cases companies operating in the UK have chosen to set up local subsidiaries in the Netherlands, Denmark or Norway rather than service those countries for the UK, resulting in a more general 'transfer' of capability between countries within the region rather than establishment of a significant export market from the UK. In other words, regional markets within the North Sea like Denmark, Norway and The Netherlands are already saturated with local, national capability or international capability with local operations.

The primary international export markets are:

USA (Gulf of Mexico)

Canada

Brazil

Angola

Nigeria

Thailand

Malaysia

Indonesia

Australia

Brunei

Vietnam

India

China

The predominant export markets for good and services are where capability is immature and can benefit from North Sea experience. Currently this includes anywhere beyond the North Sea with

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the general exception of the USA which is already heavily saturated with local content and, as such, is a challenging market to enter.

There is no long-term timeframe for exporting decommissioning-related goods and services to regional and international markets. The UK expertise in decommissioning is already mature and competitive enough, and exports to regional and international markets are taking place now.

6. What is your experience in international markets and what are the main challenges/barriers you have faced?

The UK has a very well-travelled professional population with experience in every global province relating to offshore oil and gas developments and operations. This is a significant strength in that awareness of the global decommissioning market is generally high, in part underpinned by the global footprint of many companies which have subsidiaries in the UK.

However, there are challenges which fall into two significant categories:

- 1) Collective insight into export potential is underdeveloped. There is no single source of information on targeted international markets, in-country operator programmes, local supply chain capability and regulatory regimes. Knowledge is accumulated through existing in-country presence, business contacts and referrals, bespoke trade missions and delegations, and active marketing by individual organisations. There is no identified 'body' to market UK decommissioning capability or handle enquiries from external parties about UK expertise.

- 2) Local conditions, even if properly understood, may limit UK export capability by providing either specific restrictions, or a challenging working environment. Examples of the former are; prescribed local content, strong unions, unpredictable cost burdens (e.g. unacceptable contracting approaches, withholding revenues and taxes), and restrictive national regulatory regimes. Examples of the latter are; language and other cultural barriers, ethical misalignment (e.g. local standards are less stringent than national UK requirements and corporate standards), political instability, low cost rather than total value approaches driving tender processes, availability of cheap local labour, and a low demand for higher technology solutions.

7. What are the main barriers to the UK becoming a global hub for decommissioning and what could be done to address these?

As mentioned previously the perception, or bias, as to what constitutes a 'decommissioning hub' will have a significant effect on the actions resulting from this consultation. Therefore, it is important to arrive at a mutually agreed definition of what a 'hub' really is.

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Decom North Sea is aware of the diversity of opinion on the definition of a hub. Some take the view that a UK decommissioning hub revolves around indigenous UK onshore reception and dismantling capability. Others perceive there is market potential for the UK to provide assets such as heavy lift vessels, rigs and other engineering 'hardware'. The decommissioning task force, on the other hand, perceives that the UK's hub potential lies less in its provision of equipment or infrastructure (physical capability) than in its experience, expertise, knowledge acquired through execution, technological innovation, and a mature governance and regulatory regime.

Potential barriers to the UK becoming a hub are summarised as follows:

- 1) A lack of formal agreement on what actually constitutes a 'decommissioning hub'. The Decommissioning Task Force approach is suggested as an appropriate starting point, with the focus being on where the UK has a comparative advantage
- 2) Incomplete mastery of the domestic UK market, including a lack of a transparency around the domestic project portfolio timing and scope, and a comparative lack of benchmark information, to be able to service our own market effectively and efficiently. Greater openness is required in both sharing and mandating timings of Cessation of Production and commencement of decommissioning to allow the supply chain to respond more effectively to the upcoming opportunities and plan and invest accordingly. Additionally, sharing of benchmark cost performance data more widely should be considered to help the market develop cost norms and drive performance improvements on a more transparent basis.
- 3) The regulatory regime needs to keep open to innovation in decommissioning. Regulatory restrictions including "Liability in Perpetuity", which encourage a conservative approach to decommissioning liability and risk management will require ongoing review; rigorous decommissioning safety case requirements will need tested for fitness for purpose; and environmental assessment techniques will need updated in light of ongoing evidence-based approaches to optimum environmental disposal.
- 4) An ageing workforce with poor diversity and limited attraction to the industry for future generations will not meet either domestic needs or export potential.
- 5) There is an absence of a 'UK PLC' approach to gathering information on targeted international markets, in-country operator programmes, local supply chain capability, and regulatory regimes, plus a lack of a specialised UK organisation to market the UK's capability. This needs to be addressed through the formation of a UK body to gather market intelligence, coordinate and market the UK's aggregated decommissioning capability and to act as an interface with international jurisdictions in assessing and responding to demand.

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8. What can be done to enable UK industry to become more proficient in its domestic market and to enhance UK exports of decommissioning services?

In addition to the observations and potential solutions to UK barriers identified in the preceding questions, the following more specific actions were identified to enhance the exportability of UK capability and services.

Workforce

- Promote decommissioning as a viable career choice
- Check that decommissioning features appropriately in academic, vocational and apprenticeship curricula across UK
- Improve diversity in teams and industry
- Incentivise students to enter industry

Fiscal

- Maintain certainty in the UK fiscal regime
- Increase incentives for technological innovation and performance improvement
- Accelerate pace and reduce barriers to asset transfer

Knowledge sharing

- Create a UK knowledge hub for international market intelligence, guidelines, contracts etc.
- Incentivise cross-industry collaboration
- Learn from outside UK and accept that certain better practices may currently exist outside the UK
- Foster tripartite collaboration between regulators, operators and supply chain
- Maintain high profile for decommissioning at established prestigious conferences (Offshore Europe etc.)
- Enable more transparent benchmarking data as a driver to enhance performance

Infrastructure

- Investment in appropriate infrastructure (deep water reception facilities)
- Stimulate UK HLV capability to domesticate that segment of cost that is currently inaccessible to UK plc enterprises

International profile

- Supply chain needs to be marketed internationally as a whole.

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- Areas of excellence in decommissioning need to be identified so UK can market those areas in a more targeted way – what is the Unique Selling Point?
- Strategic marketing with a united UK front to international markets is required.
- Better marketing of technology and its supporting teams to international markets.
- Smaller UK companies need to have a stronger international voice.
- There is a requirement for dramatically improved international market intelligence and marketing of UK capabilities.

9. With regards to decommissioning, which interventions by the OGA have you found most valuable

The following areas were identified as best practices

- Area plans
- Tripartite/collaborative leadership – all regulators engaged & present
- Stewardship surveys and resulting benchmarking analysis
- Connectivity with BEIS, OPRED and the wider joined-up Government approach.
- Creation of OGA and its cost-focus has made the rest of Government more cost-focused
- MER Forum has helped bring Government focus on industry needs
- Hub strategy reviews have stimulated integration and collaboration
- Overall encouragement and stimulation of collaborative working
- Overall push for better data governance – stewardship data, analysis and feedback
- The introduction of a case studies database (Pathfinder)

What other actions might make an impact?

- OGA doesn't currently regulate licences sufficiently to give more clarity around decommissioning schedules and to freeze decommissioning budgets/ planning boundaries.
- Provide greater transparency/ sharing benchmarking more widely
- Remove tension between transparency and market price setting, and concerns on anti-competitiveness
- Review the utility of Supply Chain Action plans with a suggested focus on open contracting strategies
- Create greater awareness across the industry of the regulatory and supervisory process
- Create greater clarity on re-use options and interfaces on energy transition needed i.e. CCS and interconnectors
- Give greater consideration to 'NEBA' and decommissioning in-situ
- Develop a centre of excellence knowledge hub to provide linkage to where to access current best practices /technical expertise

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- Promote cost reduction challenge not just with operators and supply chain but all involved parties who may contribute cost (regulators, NGOs, local government, academia etc.)
- Interface with DIT & SDI on internationalisation strategy

10. Is there anything else you want to share with us on this topic?

In addition to the direct answers to the previous questions, the following issues were identified during our consultation. Some of these fit into existing categories of answers but are provided in an unedited form as dictated by our consultees.

- Clarity/certainty on timing enables supply chain to meet demand efficiently
- In contrast, risk of loss of late-life value by optimising COP dates
- Decom is an exciting part of an exciting industry, need to attract new skills and a new generation to service it
- Risk of international companies buying business by undercutting market and accepting disproportionate share of liabilities
- Symmetry of safety case – dismantlement safety case perceived as too onerous
- The nature of the market may mean that the most efficient decom operator is not the same as the most efficient late-life operator and this may present opportunities to be addressed
- More and faster science – let's find out if removal of structures is good or bad for the marine ecosystem and not rely on politically driven doctrine (OSPAR)
- Fully transparent benchmarking to assist performance improvement
- Narrower removal windows needed (e.g. 3 years maximum).
- Forward plans around suspended wells.
- More work needed around understanding of risk (puts pressure on supply chain when they are asked to take on too much).
- International companies are buying their way into decommissioning work by accepting liabilities that UK supply chain is unwilling/unable to shoulder.