High Level Review of Decommissioning Yards for ex-North Sea Facilities

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Presentation Structure

- Making use of experience from decommissioning Marine Warranty Services (MWS)
- Brief tour of presently available load in facilities (cleaning not covered)
- UK facilities covered first
- Includes facility plans for the future
- A few load in lessons learnt
- Touches on competition from renewables
- Includes update on R.P. H102 workshop
Clarification of Organisation Origin - Future Vision

Global impact for a safe and sustainable future

Safer

Smarter

Greener
Geographic Location of Existing and Potential Facilities
Existing Facilities UK – Able UK, Seaton Port

Specifications:
- Total Area: 126 acres & 25 acre Drydock
- Total of 11 Quays
- 9,000m² indoor fabrication, warehousing & storage space.
- Mobile Accommodation Unit (MAU) 3,000sq/m from North West Hutton
- Europe’s largest mobile crane (2014)

Past Jobs:
- Shell awarded Able UK Brent Field Rig Recycling Contact, 6 year contract (2014)
- One of 12 that bid for Costa Concordia scrapping (2014)
- Ghost Fleet decommissioning (2003)
Existing Facilities UK – Able UK, Seaton Port

The Future

Future:
- £20 million investment
- New quay for Pieter Schelte barge load ins with skid plates
  - 60m x 122m with 15t/m² loading capacity @ 6.7m CD
- First project Shell Brent Platform (2015)
Big Things Disappear Quickly but Reuse what you can!
Existing Facilities UK – Nigg Energy Park, Moray Firth

Specifications:
• Total area of 96.1ha
• Dry Dock load out area of 1.3ha
• Quay load out area of 1.98ha

Past Jobs:
• Famous facility which has built many facilities for the North Sea including, Forties, Magnus, Harding, etc

Future:
Under new ownership £37million investment to allow up to 1,000m of deep water quayside with 50tonne and 200 tonne bollards.
**Existing Facilities UK – Greenhead Base, Lerwick, Shetland**

**Specifications:**
- Total Area: 20,000m² concrete pad & 3,800m² with future plans of 55,000m² reclamation
- North quay = 220m @ 6m depth ACD
- South quay = 390m long (240m @ 8m ACD and 150m @ 9m ACD)
- Offshore waste handling permits

**Past Major Jobs:**
- Joint work with Veolia to decommission apx 11,500 tonnes of subsea equipment from BP’s Schiehallion & Loyal Fields (2014)
- Partners in the Frigg decommissioning taking on the TCP2-MSF Onshore Demolition (2009)
- MCP-01 Logistics and support of Offshore piece demolition (2008)

**Future:**
Expansion plans for North and South dock allowing for greater capacity. Peterson and Veolia have plans to triple the size of the Greenhead facility.
Existing/Future Expanded Facilities UK – Dales Voe, Shetland

Specifications:
• Yard area of 25,000m²
• Current quay has 12.5m water depth

Past Jobs:
• No previous history of decommissioning at this site, however, AF Decom Offshore has prior decommissioning experience.

Future:
£50m project to convert Dales Voe to UK’s largest decommissioning base with 24m water depth at quay (2015)
Project aims to lengthen quay from current 50meters to 130 meters.
Expansion to support 120 permanent new local jobs.
Existing Facilities UK – Harland & Wolff, Belfast

Specifications:
• 68,500m² drydock serviced by two 1600 tonne gantry cranes.
• 432m, 170m & 150m quay with various capabilities
• 24/7 operation period
• Asbestos handling license

Past Jobs:
• Vast experience in ship repairs and ship decommissioning.
• Dry docking and upgrade work of Blackford Dolphin (MODU) (2013)
• SeaRose FPSO dry docking for propulsion, turret and painting maintenance (2012)
Existing Facilities UK – Swan Hunter, Tyneside, Newcastle upon Tyne

Specifications:
- 40 acre yard
- Loadout quay of up to 10,000 tonnes
- 800m water frontage providing deep water berthing

Past Jobs:
- 8 jackets and topsides from Shell’s Indefatigable decommissioned with partners Peterson SBS (2011)
- Conaco Viking A jackets, bridges and decks decommissioning

Future:
Now owned by North Tyneside Council and One NorthEast who may eventually redevelop the site
**Existing Facilities UK – AKD Engineering, Suffolk, Southern North Sea**

**Specifications:**
- 7.5 acre site
- 4000m² fabrication shop
- 90m of Quays equipped with bollards
- 25m width restriction and potential air draft restrictions.
- ISO 9001:2008 approved
- OHSAS 18001 & ISO 14001 Health Safety and Environment approved.

**Past Jobs:**
- Shell Bacton Rejuvenation project to provide 8 skid packages (2013)
- Inde field Decommissioning and piece small demolition offshore for Inde November, Mike, Kilo, Juliet and Lima for Shell UK (2008 – 2010)
Existing Facilities UK – Eastport UK, Great Yarmouth

Specifications:
• Dredged to 10 meters
• 1,000 meters of quayside
• 250 meters more of developable quay
• Significant development land available for potential storage/decommissioning

Past Jobs:
• Understood no major decommissioning projects have been undertaken yet
• Significant renewables work

Future:
With ongoing outer harbour development, Eastport UK is looking to offer its facilities to oil and gas decommissioning.
Existing Facilities Norway – AF DECOM, Raudness, VATS

Specifications:
- 68,000m² of set down area
- 60,000m² of Storage area
- Main Quay 182m long, 23m water depth
  - 125m long barge/cargo quay, 6m water depth
  - 300m long quay, 10m water depth

Past Jobs:
- Removal and disposal of Loading Buoy from Statfjord oil field for Deep Ocean (2013)
- H7 Compressor platform decommissioning from Ekofisk Field using jackup vessels “Pacific Orca” and “Pacific Osprey” (2013)
- Decommissioning of 6 Shell platforms from Infatigable Gas Field (2012)
- Ekofisk Field, Cessation Project, removal and disposal of 9 platforms including hazardous materials mapping
Existing Facilities Norway – Kvaerner Stord AS

Specifications:
• 68,000m² yard area
  • Includes Dry dock
• Total 620m shoreline
• 16m quayside water depth being increased to 26m
• 800tonne portal crane

Past Jobs:
• Shell Draugen FLP Buoy disposal (2014/2015)
• Statoil Ekofisk 2/4s disposal of jacket and tripod (2014/2015)
• Removal and disposal of Frigg Field installations, all topsides and jackets. Total E&P contract worth 3 billion NOK (2004 - 2010)
Existing Facilities Norway – Scandinavia Metal (SCANMET), Stord

Specifications:
• Concreted area of 20,000m²
• Set down area of 14,000m²
• Large array of decommissioning machinery

Past Jobs:
• Sub-contractor to Aker Stord
• Decommissioning of 6 Shell platforms from Indefatigable Gas Field (2012)

Future:
Possible acquisition by Bergen Group
Stena Recycling AS Offshore, Stavanger

- Recycling of iron, metals, EE waste, including from offshore and associated industry
- Facility 22,000 m²
  - 17,000 m² fixed decks with oil separators
  - 5,000 m² indoor halls
- Modern office facilities
- 2 docks:
  - 300 m long x 25 m deep
  - 50 m long x 8 m deep
- Able to receive units up to 8,000 tonnes from lift ships direct at the facility
- Qualified employees
- Modern vehicle fleet including large stationary cutter (1,150 tonnes)
**Other Facilities in Western Europe—Scheepssloperji Nederland BV, Rotterdam**

**Specifications:**
- 40,000m$^2$ of yard area
- 110m + 300m quay length
- 45m air draft
- Owns two barges, one equipped with 650mT Manitowoc crane
- 2 Sumitowo crawler cranes

**Past Jobs:**
- 20 years experience in ship breaking, recycling and scrap processing
- Demolition of Esmond Platform
Other Facilities in Western Europe – Hoondert, Netherlands

Specifications:
- 200m sheltered quay
- Total area of 35,000m²
- 10 tons/m² load capacity
- Environmental licences for all offshore related projects including recycling, dismantling & disposal

Past Jobs:
- Wreck removal of 38 objects, including two ocean-going vessels
- Jackets (Seaway Heavy Lifting, Gaz de France)
- Jacket and platform Meetpost Noordwijk - formerly REM island
- Dozens of inland vessels (various clients)
- Dredging engines (Boskalis)
Other Facilities in Western Europe—Kishorn Port, Scotland

Specifications:

• Unrestricted access with 80m main channel
• 26 hectare site with development opportunities up to 19 further hectares.
• 280m of quayside min 3.5m water depth (LT)
• 160m wide dry dock
• 10-25t/m² weight bearing

Past Jobs:

• Ninian Central Platform (1970s)
• Skye Bridge caissons (1992)

Future:

Plans to expand quayside and strong marketing in offshore wind and marine renewables. Site also has strong plans for emerging decommissioning sector.
Existing/Potential UK Facility – Ardersier, Moray Firth

Specifications:
• 1150m of quayside
• 816 acre site
• Deep water approach in strategically located position for servicing the North Sea

Past Jobs:
• Famous McDermott fabrication yard
• Yard closed down in 2002 due to lack of new orders

Future:
Planning permission granted in 2014 (January) for development as a proposed Offshore Renewables manufacturing facility.
Plans have also been submitted in previous years to develop the site into a 500berth marina, housing and pleasure complex.
Existing Facilities UK – Ardyne Point, Loch Striven

Past Jobs:
- 3 concrete gravity platforms between 1974 and 1978 including Cormorant ‘A’
- Yard closed down in 1978

Future:
Planning permission granted for marina, restaurants & luxury dwellings - construction not yet started. Unclear if will be used for industrial purposes again.
Lyness Pier, Hoy, Orkney, ex Royal Navy Base

- £2.98 million development, pier and shoreside development provides:
  - 260m of refurbished quay edge with up to 10m at LAT
  - an ideal location for device assembly, maintenance and storage for Pentland Firth and West of Orkney
  - designated enterprise areas of 7 hectares within 22 hectares of development land
  - national logistics and support company on site
Projects Lessons Learnt – Have Everything Ready on Time

- Major civil engineering operations take a long time
- You do not want to keep your heavy lift contractor waiting!
Load In General Lessons Learnt

- Nominated contractor’s management should be informed of the role of the warranty surveyor & importance (C. of A. needed & consequences if not obtained).
- Audits should be carried out on all subcontractors to ensure that they are experienced and capable of carrying out their work, conforming to the latest standards & Guidelines.
- Ensure ALL personnel involved in operations have any in-depth experience of the potential hazards involved.
- Generate required documentation in good time to ensure thorough review process – reduce risk. Help may be needed to ensure the documentation is of the required standard.
Proactive MWS can Reduce Risk & Improve Project Control

Same principles apply for Self Insured
Decommissioning of offshore renewable energy installations under the Energy Act 2004
UPDATE OF RP H102 – PROPOSED INDUSTRY CONSULTATION WORKSHOP FOR STANDARD IMPROVEMENT

- RP-H102 is now over 10 years old.
- Since then a number of major decommissioning projects have taken place.
- When codes and standards are applied to live projects inconsistencies, possible ambiguities and lack of clarity can be discovered.
- Vital that Recommended Practices should be regularly reviewed taking into account industry feedback.
- New technology coming along – e.g. Pieter Schelte. Hence H102 should be reviewed to assess its suitability for one piece removal methods.
- Drop me an email if you are interested in attending the workshop.
Conclusions

• Plan your yard arrival with a major project well in advance
• Yards will be constantly looking for new sources of revenue and you could be competing with new oil and gas facilities or wind, wave or tidal devices
• Apologies for any significant omissions or inaccuracies in the yard survey
Thanks to Alex Blake for presentation preparation work

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