



Piece Medium Decommissioning: Experiences & Future

WILLIAM TRENCHARD
BUSINESS DEVELOPMENT MANAGER
SWIRE BLUE OCEAN



Swire Blue Ocean



Piece Medium Decommissioning: Jack-up Vessel Experiences & Future



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Agenda

Piece Medium Decommissioning: Jack-up Vessel Experiences & Future

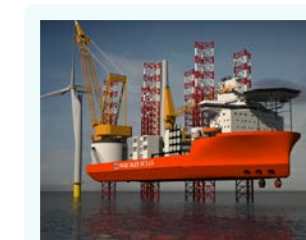
1. Swire Blue Ocean Introduction

2. B11 Video

3. Jack-up Vessel Experiences

4. Jack-up Vessel Future

5. Conclusions





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Swire Blue Ocean Introduction

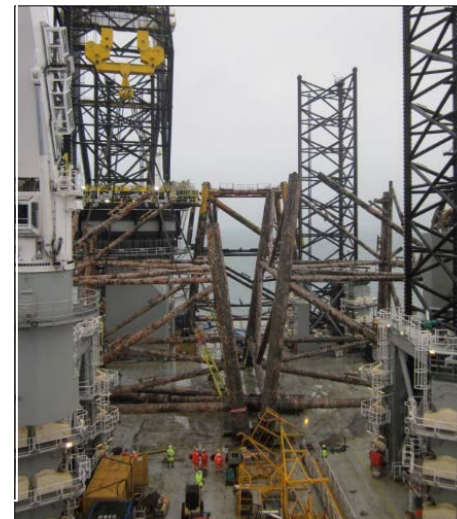
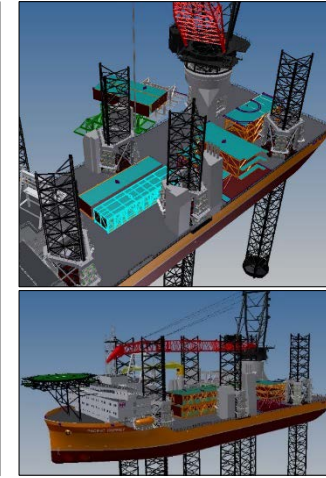
- Owned by Swire Pacific Ltd (est. 1816)
- Part of Swire Pacific Offshore (est. 1975)
- SBO est. 2010, HQ in Copenhagen
- Owns and operates industry leading jack-up vessels, Pacific Orca and Pacific Osprey
- Decommissioning project and engineering cooperation with sister company and subsea contractor Swire Seabed
- Supported main contractor, AF Decom, on Statoil's H7 (2013) and B11 (2015) piece-medium decommissioning projects

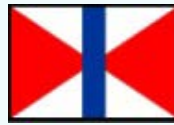




B11 Platform Decommissioning Experience

- Zero LTIs
- Mainly “piece-medium”
- Topsides - Weight of approx. 5,800MT:
11 lifts of 200 to 1000MT
- Jackets - Weight of approx. 2,700MT:
4 lifts of 600 to 800MT
- Water depth of 40m (H7) and 30m (B11)
- Reduced demolition onboard vs H7
- Seafastening of modules onto deck
- Cost effective mobilisation of subsea spread after topside removal
- Only 3 short trips to shore required

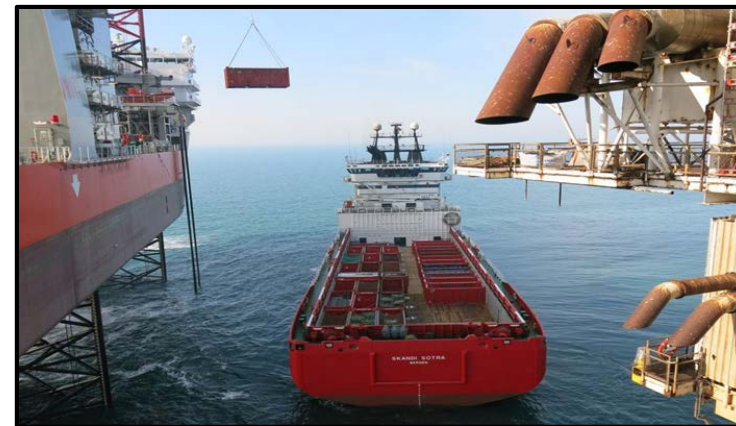




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Piece Medium Decommissioning: Jack-up Vessel Advantages

- Well balanced project platform
 - Crane capacity and deck space
 - High sailing speed
 - Substantial accommodation
- Simplified one asset spread
 - Limited to Jack-up and PSV
 - Subsea equipment mobilised
 - No requirement for tugs and barges
- Experienced marine crew:
 - Positioning vessel close to assets
 - Frequent medium size lifts
 - Precision cargo placement on deck



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Piece Medium Decommissioning: Jack-up Vessel Advantages

- Safe platform on congested sites:
 - O-Class built for harsh weather
 - Limited and controlled footprint
 - No anchors and mooring lines deployed above subsea assets
 - Steady platform for lifting objects above live pipelines
- Osprey crane upgrades:
 - Main Hook uprate to 1425MT @ 31m enables lifting of complete modules
 - Auxiliary Hook uprate to 700MT @ 30m enables reach to higher modules



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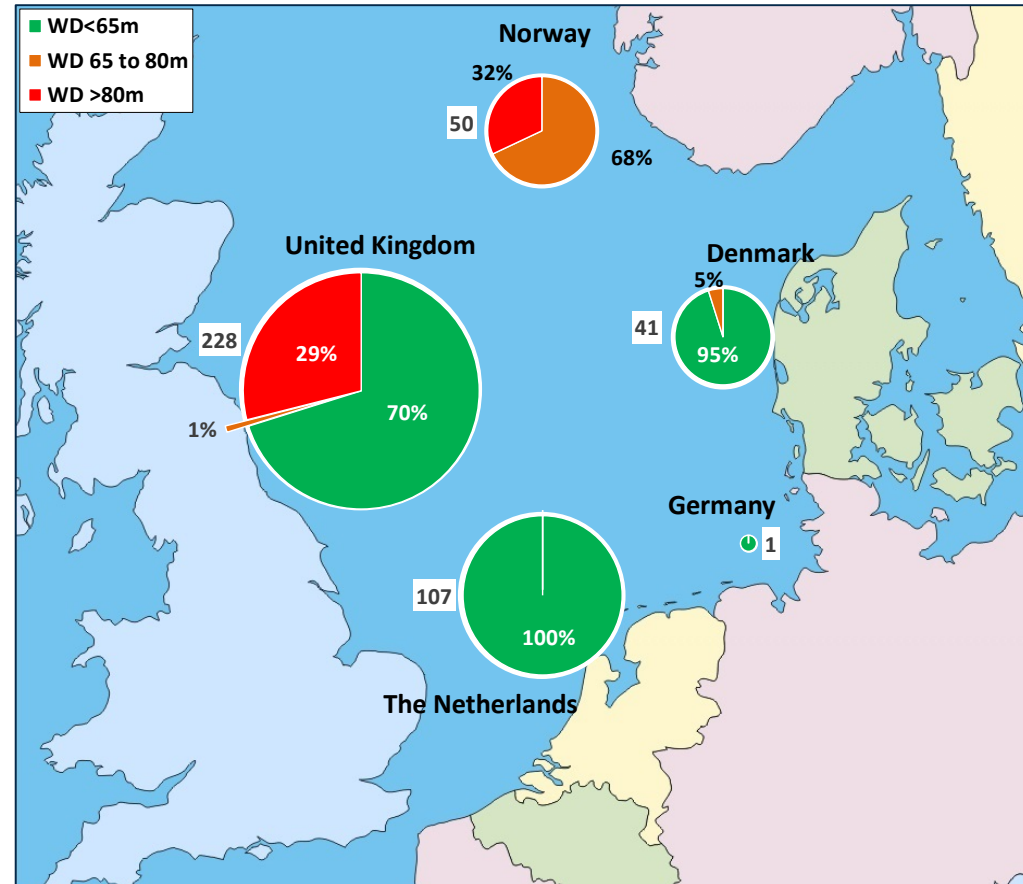




Jack-up Vessels: Future Perspectives

OSPAR Inventory Analysis

- SBO Jack-up target market:
 - Fixed steel topside installations; can extend to subsea decommissioning
 - Units 25 years+ by 2020
 - Max water depth of 65m
 - 80m water depth possible with leg extensions
 - Focus on expertise
 - Data as a starting point
- Use data strategically to identify:
 - Target markets and clients
 - Strategic vessel upgrades
 - Installation clusters and opportunities for bundling



Bubble sizes and the percentages within represent number of fixed steel topside installations at different water depths.

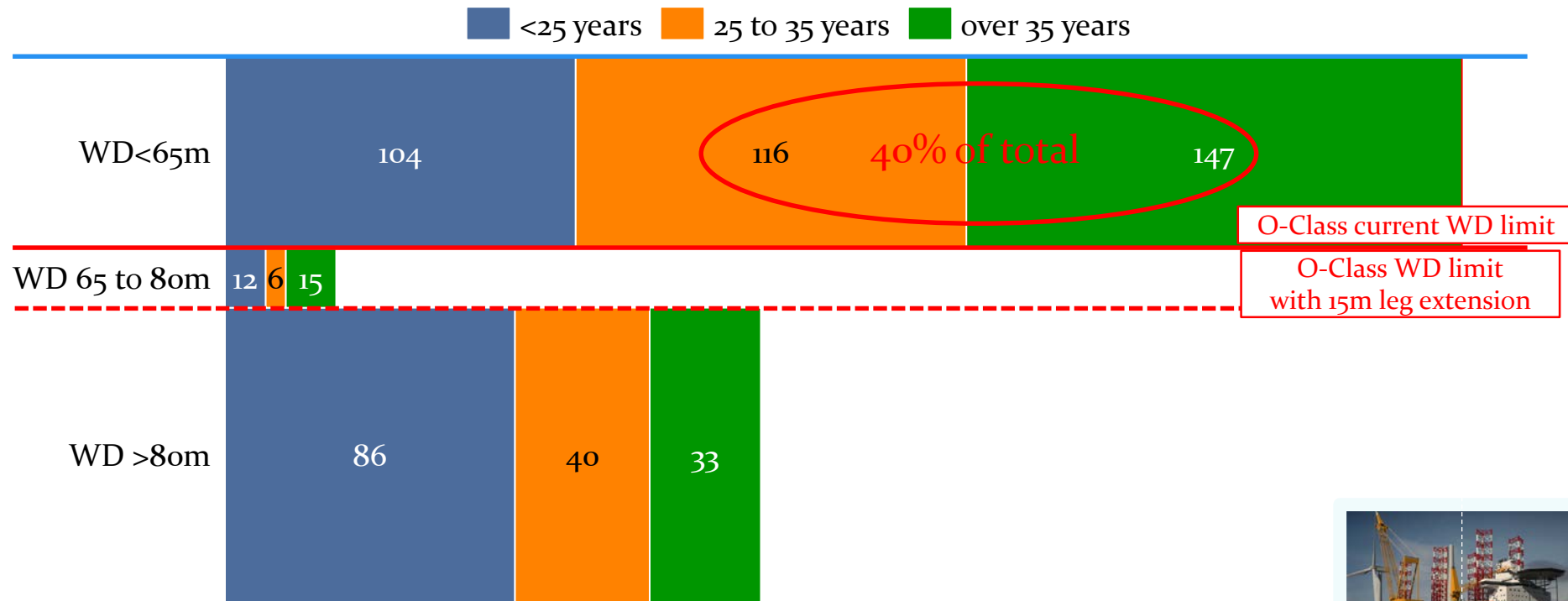




Jack-up Vessels: Future Perspectives

OSPAR Inventory Review – Water Depth vs Age

- Age of installations by 2020 vs water depths
 - 40% of fixed steel topside installations within 65m water depth and 25+ years
 - Leg extension only increases opportunity by 4% of total
 - Installations under 25 years: 54% in WD > 80m, compared to 28% in WD < 65m



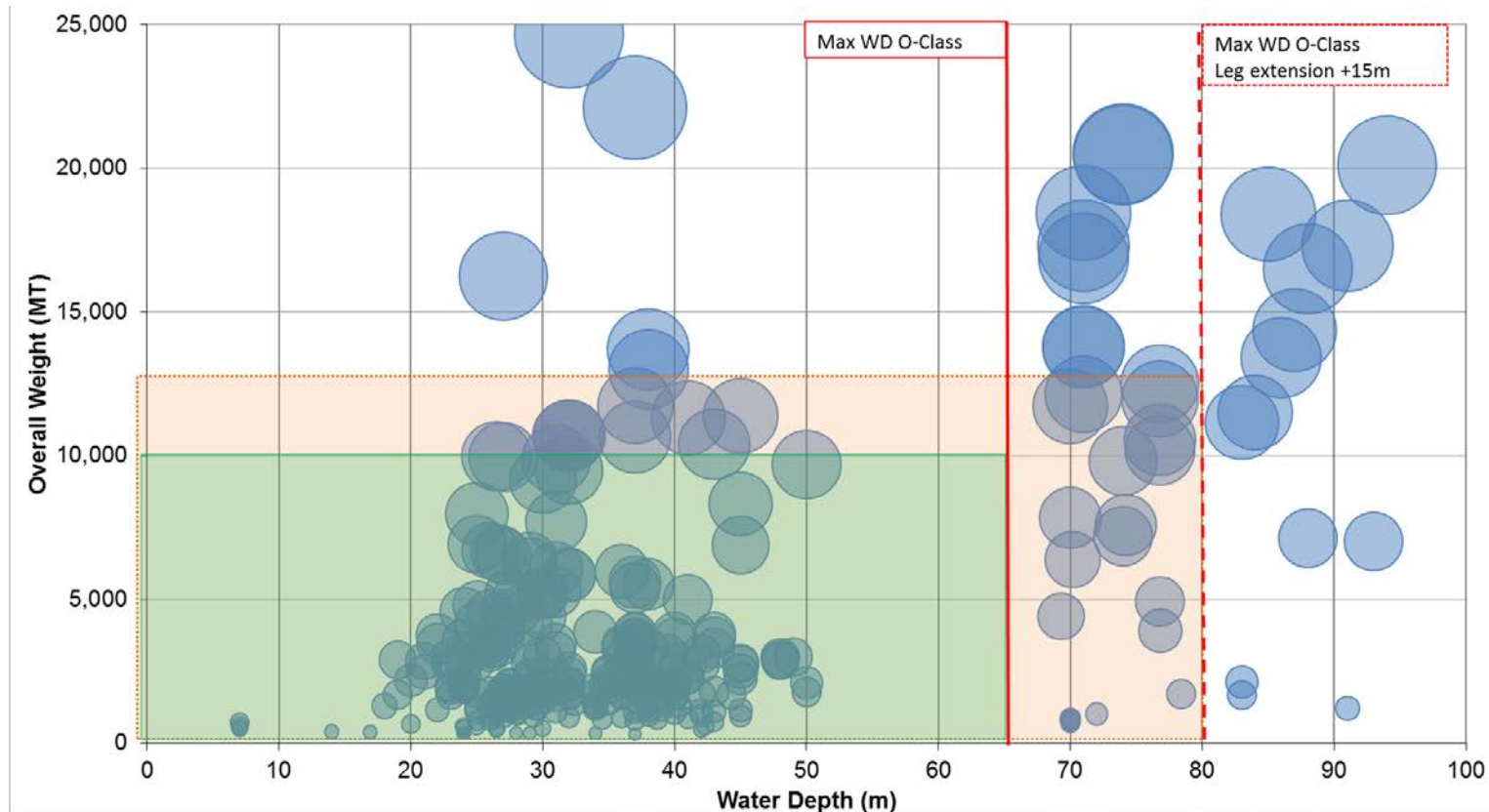


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Jack-up Vessels: Future Perspectives

OSPAR Inventory Review – Steel Weight vs Water Depth

- O-Class Piece-Medium decom capability: 70% of “Fixed Steel” units of 25+ years by 2020; increases to 78% with crane upgrade (1425mt) and 15m leg extensions



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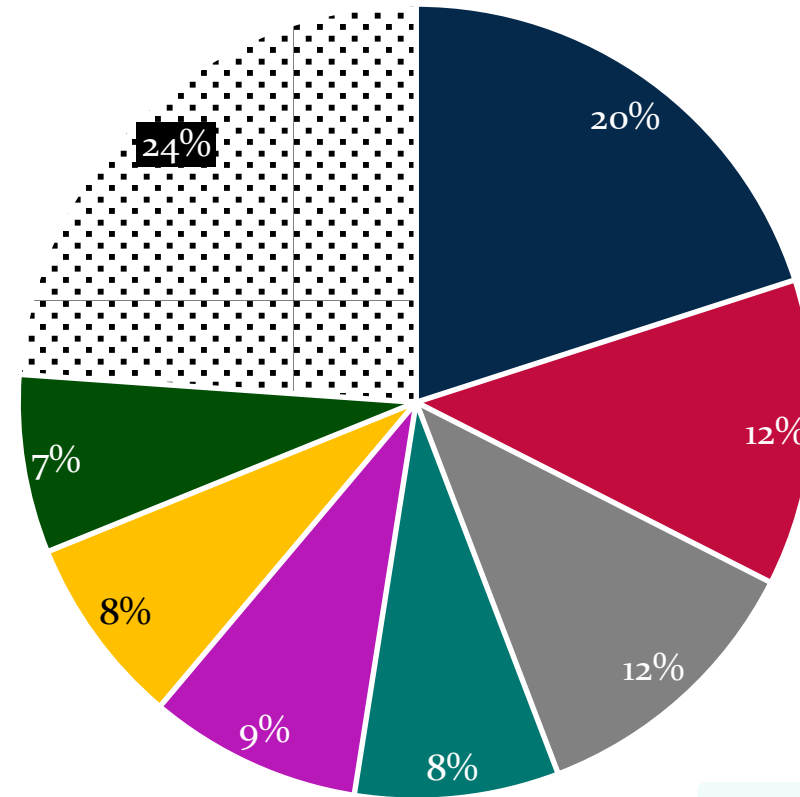
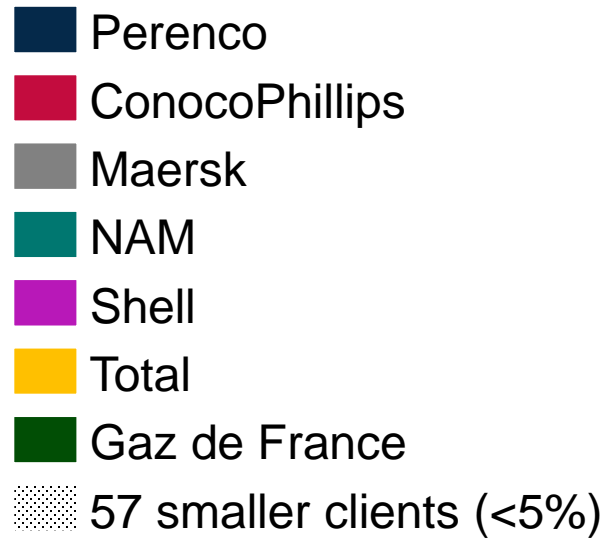


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Jack-up Vessels: Future Perspectives

OSPAR Inventory Review

- Key client portfolio - WD less than 80m



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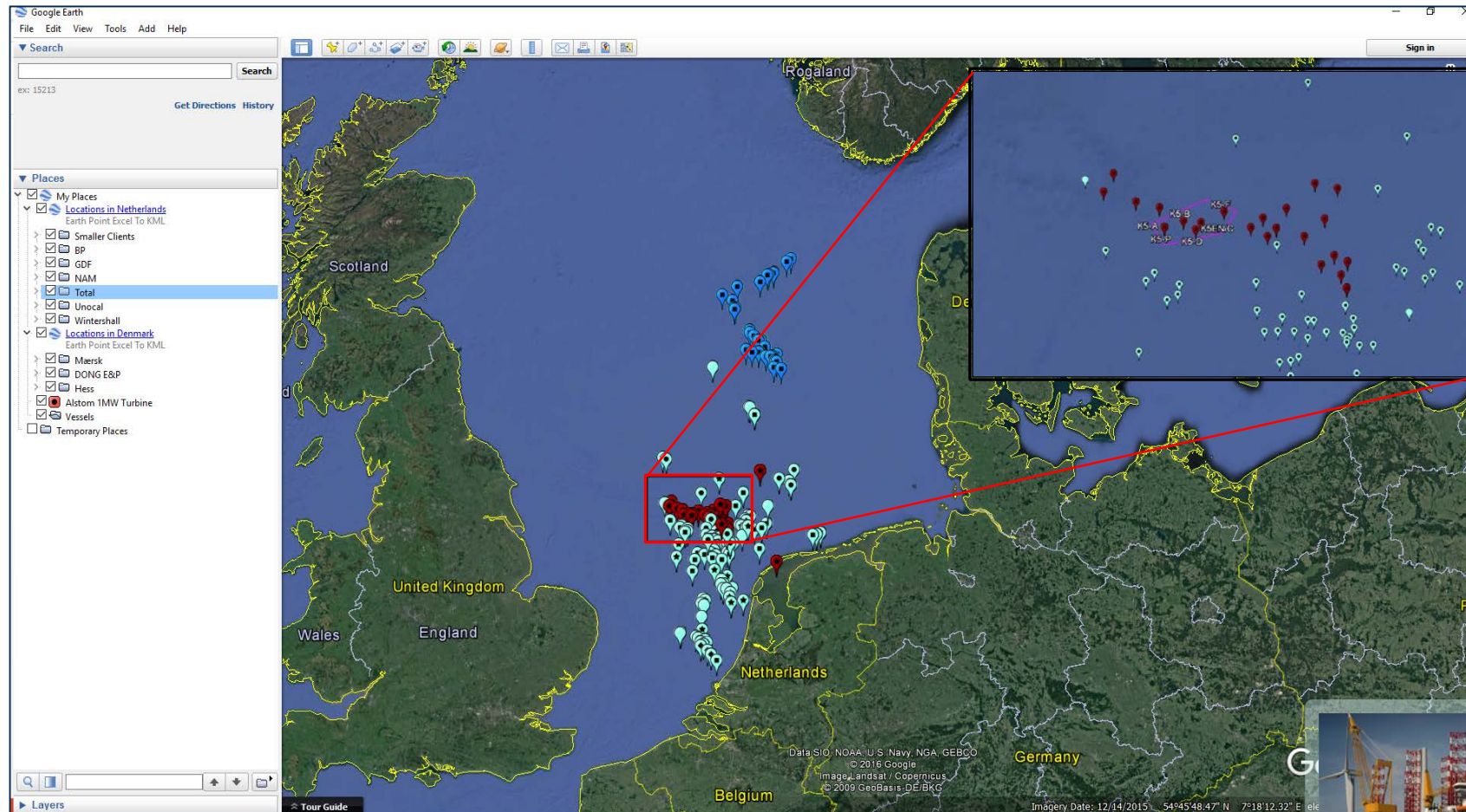




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Jack-up Vessels: Future Perspectives

OSPAR Inventory Analysis – Total Netherlands Map Projection

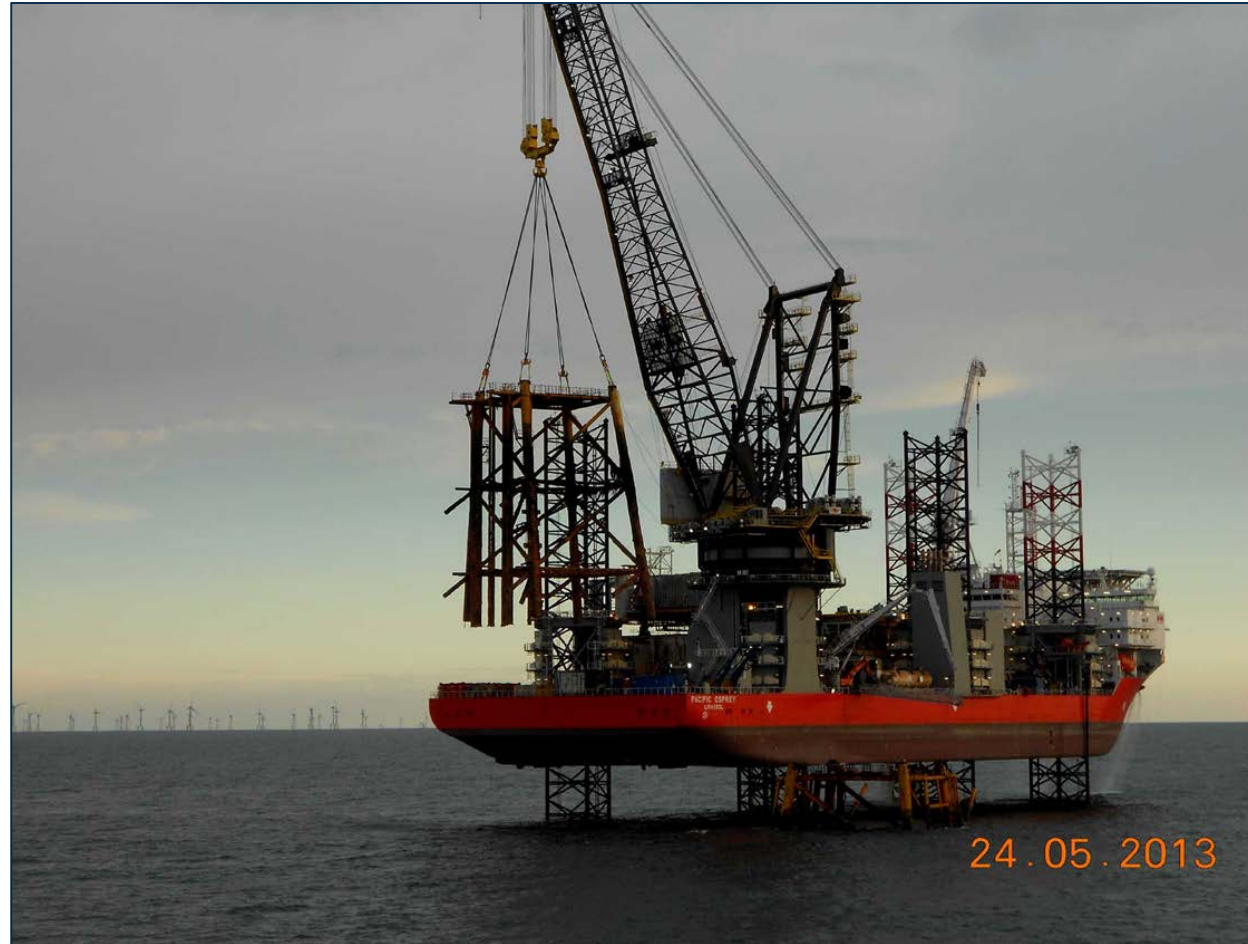


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Swire Blue Ocean Conclusions



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