CessCon Decom

‘We do decommissioning differently’
Introduction

**CessCon Decom** provide bespoke, cost effective, fit-for-purpose and environmentally responsible decommissioning services to our clients.

We provide a vast range of services across the full decommissioning lifecycle including initial studies and surveys, offshore preparation of assets for removal, Engineering Down and Cleaning, and onshore dismantlement, reuse and recycling.

From our bases at The Energy Park Fife and The Port of Aberdeen Decommissioning Facilities on the east coast of the UK, and Pulau Muara Besar in Brunei, we provide decommissioning services to the onshore and offshore oil and gas industries.
Subsea Structures Recycling

Full dismantlement, reuse, repurposing and recycling of all subsea structures and equipment

- Umbilicals
- Risers & Conductors
- Pipelines
- Flowlines
- Well Heads
- Concrete Mattresses
- Anchors & Chain
- Subsea Modules
- Manifolds
- Subsea Protection Structures
Reuse and Recycling

- Grout, Cement and Stone for Filling
- Reuse & Recycling of WEEE
- Equipment for Reuse or Remanufacture
- Marine Growth Reuse
- Metals Recycling
Over 99% Reuse and Recycling

Reusable Equipment
- e.g. Pumps, turbines, motors etc.

Equipment Reused or Repurposed (contributing to the circular economy)

Disposable Waste
- Non-reusable, non-recyclable materials

Transported to a Licensed Facility for Disposal
- Energy recovery

Hazardous Materials
- e.g. hydrocarbons, Asbestos, heavy metals etc.

Transported to a Licensed Facility for disposal
- Energy recovery

Waste Electrical and Electronic Equipment (WEEE)
- e.g. light fittings, smoke detectors

Transported to a Licensed Facility for Disposal
- Recycling of materials

Metals
- e.g. steel, copper, aluminium, bronze

Transported to Steel Receivers for Smelting
- Recycling

Marine Growth
- Remaining seaweed, kelp, algae, coral & mussels on jackets and structures

Separation & Reuse
- Composting, water purification, scientific research

Topsides
Platform topside structure including module, process plant, helideck, flare/vent booms, drilling derrick etc.

Jacket
Steel substructure
A circular economy is an economic system aimed at eliminating waste and the continual use of resources.

Circular systems employ reuse, sharing, repair, refurbishment, remanufacturing and recycling to create a closed-loop system, minimising the use of resource inputs and the creation of waste, pollution and carbon emissions.

The circular economy aims to keep products, equipment and infrastructure in use for longer, thus improving the productivity of these resources.

All "waste" should become "food" for another process: either a by-product or recovered resource for another industrial process or regenerated as a resource for nature (e.g., compost). This regeneration approach is in contrast to the traditional linear economy, which has a "take, make, dispose" model of production.
1 Hunting and fishing  
2 Can take both post-harvest and post-consumer waste as an input

SOURCE: Ellen MacArthur Foundation  
Circular economy systems diagram (February 2019)  
www.ellennmacarthurfoundation.org  
Drawing based on Braungart & McDonough, Cradle to Cradle (C2C)
Real World CE Challenges
Topside Removal
Transport to Shore
Mooring at EPF
Offload to Quayside
Set-Down & Make Safe
Soft Strip & Recovery
Equipment Storage & Packaging
Dismantlement
Reverse Installation
Reverse Installation
Piece Small

Dismantlement
Preparation for Pulldown
Controlled Pulldown
Maximum Material Recovery
12,000t = 99.4% Reused & Recycled
<table>
<thead>
<tr>
<th>No.</th>
<th>Task</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Equipment Identification &amp; cataloguing offshore, Cost / Benefit Analysis</td>
</tr>
<tr>
<td>2.</td>
<td>Potential resale route (purchaser) identification and marketing</td>
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<tr>
<td>3.</td>
<td>Host site visits / surveys to inspect equipment</td>
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<td>4.</td>
<td>Planning of equipment removal</td>
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<td>5.</td>
<td>Engineering for removal</td>
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<td>6.</td>
<td>Removal preparation (permit to work, toolbox talk, risk assessment, lift plan, job cards, isolate, drain, flush, make-safe etc.)</td>
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<td>7.</td>
<td>Removal execution (crane, rigging, hand tools, Lift Supervisor, Riggers, Banksman, Operators/Technicians, Deck Crew, forklift)</td>
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<td>8.</td>
<td>Storage and maintenance</td>
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<td>9.</td>
<td>Packaging / securing</td>
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<td>10.</td>
<td>Transport to purchaser</td>
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<td>Task</td>
<td>Cost</td>
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<tr>
<td>Equipment Identification &amp; Cataloguing Offshore, Cost / Benefit Analysis</td>
<td>£350</td>
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<td>Potential resale route (purchaser) identification and marketing</td>
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<td>Planning of equipment removal (3 personnel x 1 day)</td>
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<td>Engineering for removal (2 personnel x 2 days)</td>
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<tr>
<td>Removal preparation (PTW, toolbox talk, risk assessment, lift plan, job card, isolate, drain, flush, make-safe) 3 personnel x 3 days</td>
<td>£1,440</td>
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<td>Removal execution (crane, rigging, hand tools, Lift Supervisor, Riggers, Banksman, Operators/Technicians, Deck Crew, forklift)</td>
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<td>Warehousing / storage and maintenance (1 month)</td>
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<td>Packaging / securing</td>
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<td>Lorry transport to purchaser</td>
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<tr>
<td><strong>Cost to remove item</strong></td>
<td><strong>£7,740</strong></td>
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Resale Revenue?

- 1 tonne fire water pump cost new £80,000
- Cost to remove for resale £7,740
- 1 tonne fire water pump used sale price with no maintenance history, no certification and no calibration records £8,000
- Net revenue for substantial planning, engineering, removal, storage, transportation, onward sale & ‘RISK’ £260
Cost Benefit Analysis

- 16 Days duration from initial planning to onward sale
- 15 Personnel directly involved throughout task lifecycle
- 11 Task Risk Assessments completed
- 9 Permits to Work compiled and issued
- 3 Engineering Job Cards compiled
- 1 Lift Plan completed
- Risk of injury to 15 personnel
- Risk to project timeline

£260 Profit
1 Tonne of Scrap Steel = £260
Challenge?

What’s the point?...
I can get the same for scrap!

The risk outweighs the benefit gained...

Why take on the liability?

Do Operators really care if we achieve 95% or 99% Reuse & Recycling?

The client just wants it off the balance sheet...
CessCon Decom

“Delivering successful decommissioning projects through collaboration and teamwork”
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