

Pipelines, Umbilicals, Bundles: Decommissioning Requirements

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Whirlwind Tour...

1. The context
2. The kit: pipelines, bundles, umbilicals
3. What does the decom guidance say?
4. What does the future hold?

The Context



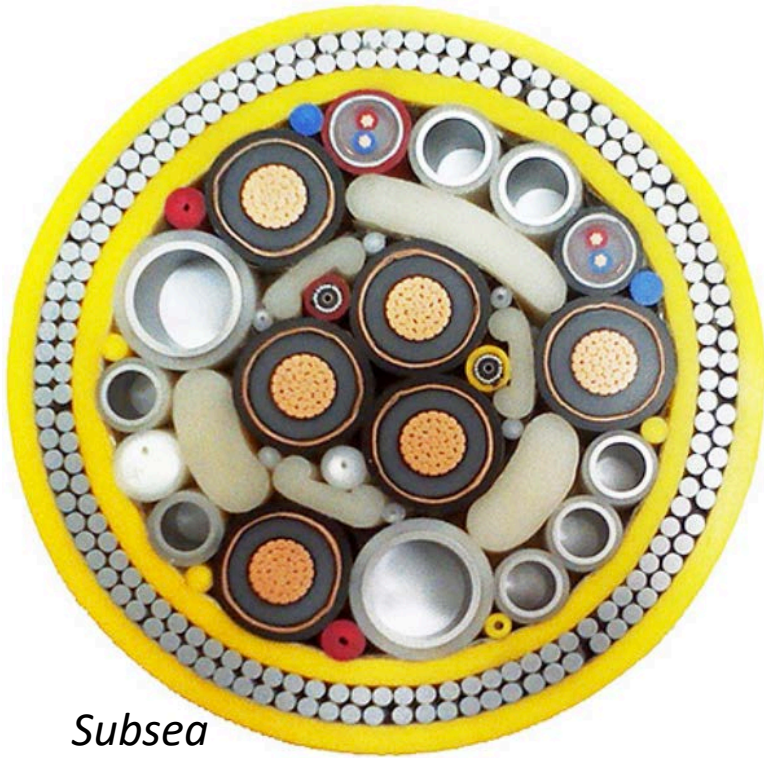
No UN or OSPAR rules...

...instead, the UK government framework applies:

- Pipeline Safety Regs 1996
- Petroleum Act 1998 (as amended)



Examples of Kit



*Subsea
Control umbilical cross-section*



Trenched pipelines during rock burial

Large diameter pipeline bundle



Submarine cable

Decom Guidance: Expectations



Guidance Notes

Decommissioning of Offshore Oil and Gas Installations and Pipelines under the Petroleum Act 1998

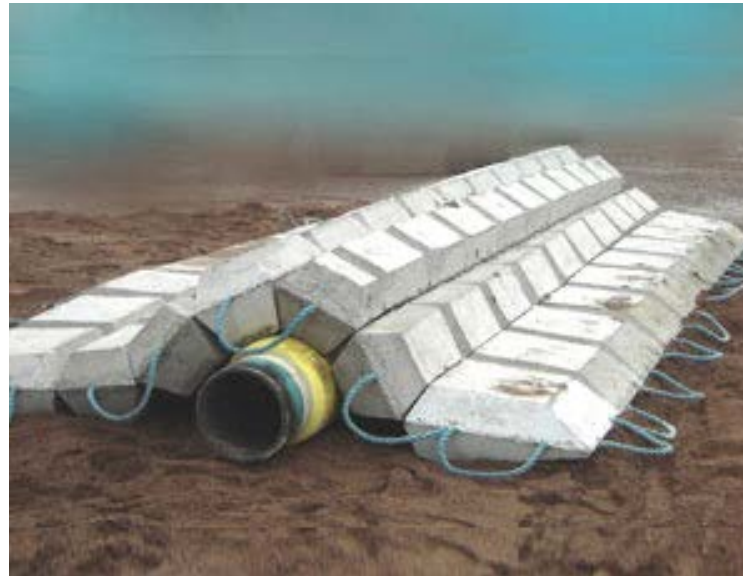
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Full removal (normally) of:

- Surface laid small diameter pipelines
- Flexible flowlines and umbilicals
- Mattresses and grout bags



Decom Guidance: Regulatory Approach

1. Individual circumstances
2. Potential reuse
3. Comparative assessment
(all feasible options – 5 criteria)
4. No 'significant adverse effects'
on marine environment
5. Legacy consideration
6. Other users of the sea



Department for
Business, Energy
& Industrial Strategy

Leave in Place Candidates

5 Questions to be considered:

- Are they adequately trenched or buried – and stable?
- Will they self-bury?
- Will trench/burying solutions be permanent?
- CA results for trunklines?
- Structural/safety concerns?

Key Requirements

Evidence-based proposals (for decom programme):

- Surveys and studies to establish history/trend
- Scientific assessment of marine impacts

Legacy Monitoring (if programme approved)

- Post-decommissioning surveys x 2
- Subject to ongoing monitoring regime
- In perpetuity liability for anything left

What does the future hold?

New and less-disturbing technologies for removal?

Improved post-decom monitoring – e.g. Automatic Underwater Vehicles?

Adaptation of trunklines – e.g. fish havens, PipeFISH?

Improved safety technology for other sea users – e.g. FishSAFE?

...other?