



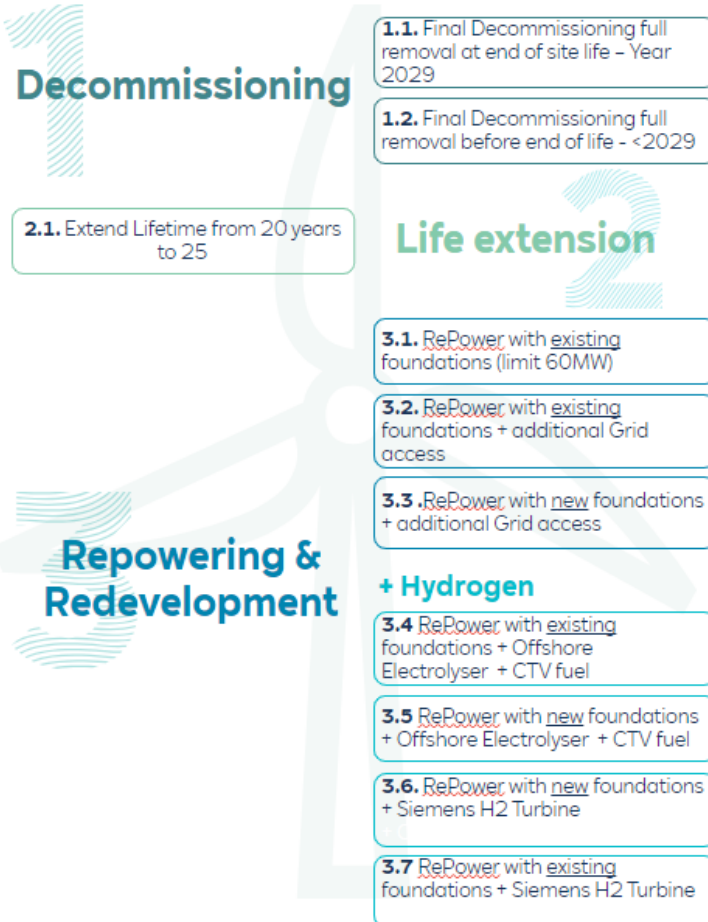
Alpha Ventus: options for further asset use

DOTI – Alpha Ventus

RAVE | March 2024

7 different End-of-Life Options have been evaluated

Possible Future life options for Alpha Ventus



From 7 possible Options we explored at Alpha Ventus only 4 were feasible

1. Decommissioning at the end of planned Service life
2. Early Decommissioning
3. Full RePowering
4. Partly RePowering



Foundation Reinforcement

To RePower Alpha Ventus, reinforcing current foundations is necessary. This strategic measure capitalises on the established infrastructure, ensuring prolonged utilisation of the site and assets. It plays a pivotal role in driving down the Levelized Cost of Energy (LCOE), enhancing the overall economic viability of the project.

Key information

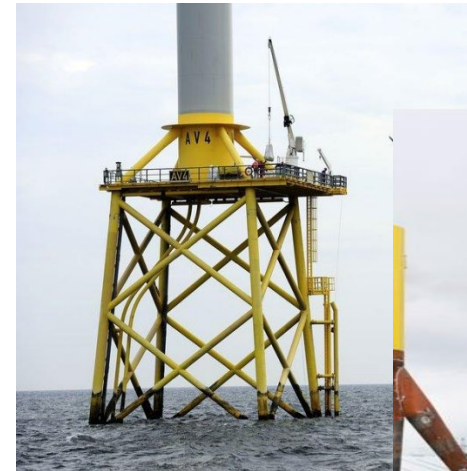
Foundation type: Tripod & Jackets

Reinforcement Concept:

- Jacket Foundation Reinforcement:
 - Tower design is optimized by replacing a T Flange with an L Flange
 - Nodes and beams are filled with grout
- Tripod Foundation Reinforcement:
 - A three-legged steel structure is created including adapter and tower connection
 - The steel structure is installed inside the tripod
 - Weak parts are filled with grout

18.03.2024

Tripods & Jackets



Jacket



Tripod



Reinforcement of Jacket Foundations

Process overview

1 Reinforcing the nodes with grout

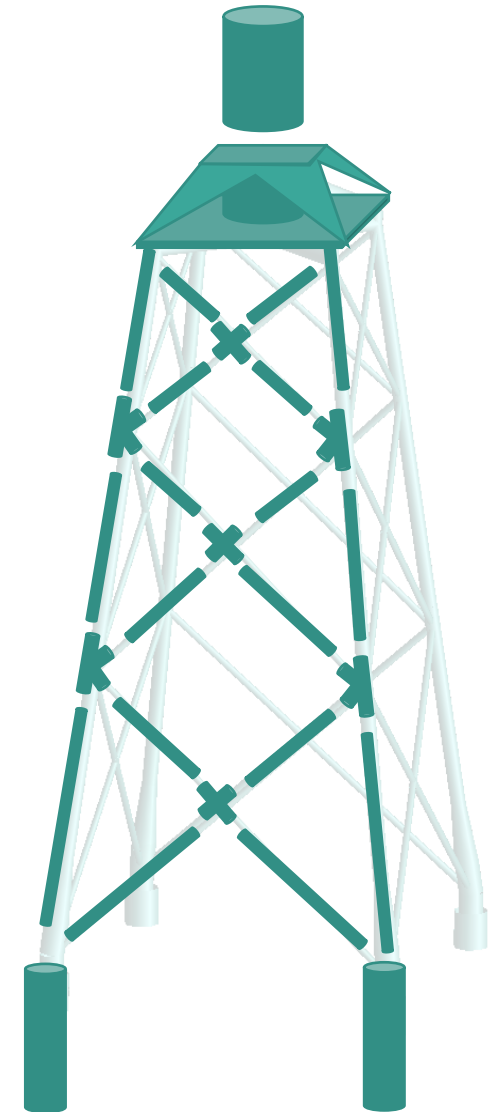
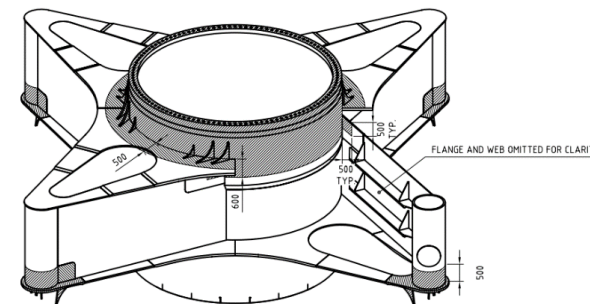
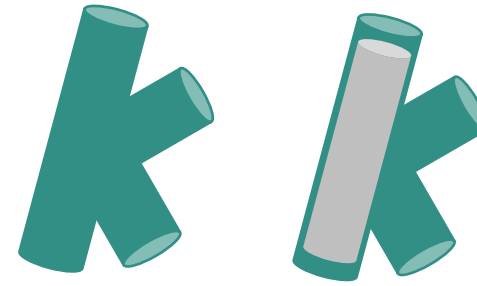
- Nodes can be reinforced using CTV

2 Filling the beams with grout

- Beams can be reinforced using CTV

3 Final change of the tower design

- Replacing a T Flange with an L Flange
- Design of an adapter





Reinforcement of Tripod Foundations

Process overview

1 Creation of a three-legged steel structure including adapter and tower connection

2 Installation of the steel structure inside the tripod

3 Filling weak points with grout, especially strengthening the weld seams

