

**KEM Research review, evaluation and interpretation (max. 4 pages + annex)**

**KEM-33: Review, and evaluation of Brent spar decommissioning plan and second opinions**

**KEM Quality review**

*The research team was composed of four researchers from the Danish Technical University. They had complementary expertise in various areas of the environmental impact assessments, chemical risk assessments, climate impacts, and EU environmental legislation. They were asked to review the following documents: i) Brent Decommissioning Derogation Assessment Report, which was submitted by Shell, ii) an earlier review by an Independent Review Group (IRG) (February 2017), iii) review by Scientia et Sagacitas Ltd. (2019) and the correspondence between the United Kingdom and Germany regarding the Brent Decommissioning Derogation. In their evaluation report, they addressed seven questions posed by SodM. They wrote a draft report wherein they had considered and evaluated various options carefully and provided recommendations for different scenarios. They received comments from SodM and KEM Expert panel member and submitted their final report of 47 pages.*

*Their report was very well written, the assessment was well motivated, and the recommendations were properly formed.*

**KEM Evaluation of the results**

*The research questions related to the Is the assessment of Shell report: Had Shell done enough to determine the severity of the situation? Was their recommendation in accordance with OSPAR? Did Shell consider the Best Available Technology as the basis for its investigations? What are the environmental and safety implications of leaving it in place or cleaning it up? What are uncertainties? What are recommendations or advice with respect to the Brent decommissioning?*

*The report addresses all these questions and provides a well-founded recommendation.*

**KEM interpretation of the outcome**

*KEM interpretation of the results was to accept the recommendations and advice given by the Independent Evaluation Team.*

**Closure text for the website**

*The Brent installations in the northern North Sea (Brent Alpha, Bravo, Charlie and Delta), used for oil and gas extraction since the 1970s, are being decommissioned. The topsides of all four installations and the upper half of the Brent Alpha steel jacket will be removed by Shell, as well as as much as possible of the oil left in the storage cells of the Brent Bravo, Charlie and Delta underwater structures. Based on their evaluation study, Shell has proposed to leave behind much of the underwater parts of Brent Bravo, Charlie and Delta (including lower parts of steel jackets, legs penetrating the sea floor) and part of their content (including potentially contaminated ballast sands, oily water, and some other contaminated material in the Brent Bravo and Delta legs) due to high costs, technical infeasibility of removal option, and personnel safety during such operations. The United Kingdom has the intention of accepting Shell's recommendation. The Dutch Government has asked the Independent Evaluation Team to evaluate Shell and other reports related to this matter and provide recommendations. The evaluation team has considered various factors (in particular technical feasibility, environmental impacts, and uncertainties) and have recommended the removal of much of the installations (see the report for details) and cleaning up the remaining material. Factors such as cost and personnel safety are seen as internal to Shell and the most important criterion is to avoid passing on potential problems to future generations. Intermediate alternatives have been suggested too.*

*These recommendations have been taken over by the Dutch Government.*