

Presentation to the Highland Geological Society - January 15th 2008

Title: Dounreay decommissioning studies ~ BGS multidisciplinary geoscience on the north coast of Caithness

Synopsis

Modern geological data have produced an evolving picture of the complexity of the Dounreay nuclear site and the impacts that past and ongoing environmental changes have on its safe restoration. Techniques ranging from the dating diatom assemblages in present-day salt marshes, to establish past sea-levels; correlating Devonian fish fossils and spore zones in the Caithness flagstones; identifying heavy mineral suites in sandstones, and even counting the number of Orcadian lake cycles preserved in borehole cores, all help bring the picture into focus. The BGS work is part of a much wider programme that makes the Dounreay site area perhaps the most intensively studied patch of ground in the Scottish Highlands. It has informed the plans for decommissioning past disposal facilities and the design and location of new long-term storage. The decommissioning programme is taking about 30 years; the new geological perspective is needed because successful decommissioning must restore the environment at Dounreay for the next 100 000 years.