

SPACE EXPLORATION SYMPOSIUM (A3)
Interactive Presentations (IP)

Author: Dr. Alice Gorman
Flinders University, Australia, Alice.Gorman@finders.edu.au

LUNAR MINING AND CULTURAL HERITAGE MANAGEMENT: WHAT ARE THE ISSUES?

Abstract

Lunar mining may be feasible within a few decades, and will pose new threats to the survival of heritage places on the Moon. These include the Luna, Ranger, Surveyor and Apollo mission landing sites. Studies of previous missions indicate that a serious problem both for industrial operations and for the condition of historic spacecraft is likely to be the movement of lunar dust, which is highly adhesive and abrasive. In an industrial context, the magnitude of potential damage is much greater than during small-scale scientific exploration of the Moon. Mining operations could also impact on the cultural significance of the entire celestial body, particularly if it causes scars which are visible from Earth either through the naked eye, telescopes and satellite imagery. In the absence of a clear legal framework for environmental and heritage management, lunar mining industry could adopt processes from terrestrial mining. Environmental Impact Assessments typically include consideration of impacts to cultural heritage. However, terrestrial mining industry is increasingly adopting the principles of the Social Licence to Operate (SLO). SLO provides some guidance in managing public expectations around impacts on both the historic sites and the body of the Moon, while dust mitigation will provide practical outcomes for both mining and heritage.