



Lichfield Science & Engineering Society

LICHFIELD **GARRICK**
Theatre & Studio

CHAIRMAN

Alan Hooper

PATRON

Mr Ian Dudson CBE, KStJ
HM Lord Lieutenant of Staffordshire

PRESIDENT

Professor Rik Bryan
MBChB PhD MRCS FAcadTM

THE SCALE OF HUMAN IMPACT DURING THE ANTHROPOCENE

Professor Colin Waters
University of Leicester

8:00 pm on Wednesday, 7th February 2024
In the Studio Theatre of the Lichfield Garrick

Colin Waters is honorary professor at the School of Geography, Geology and the Environment, University of Leicester. His first degree was in Geology and Mineralogy at Oxford University in 1984, his PhD was from University College, Cardiff in 1988. His 29-year career was as a mapping geologist at the British Geological Survey, and as Deputy Chief Geologist England before retiring in 2017. He has been Secretary of the Anthropocene Working Group of the International Commission on Stratigraphy's Quaternary Subcommission from 2011 and its Chair since 2020, becoming an international authority on the Anthropocene as a potential geological time unit. He has 165 peer-reviewed publications, with more than 12000 citations.

The geological Anthropocene records a profound shift in the Earth System caused by human impacts, evidenced by an array of physical, chemical, biological and climatic signatures. Some will prove to be short spikes in the geological record, quickly reversed through policy changes (e.g. fallout radionuclides, pesticides). Others will continue as clear markers into the near future (e.g. microplastics) and long-term (e.g. CO₂-forced climate change), irrespective of current actions. Others will represent permanent and growing changes (e.g. extinctions and species transfers), demonstrating that the Holocene world of the last 11,700 years no longer persists. This talk discusses the scale and timing of these changes and explains why the mid-20th century represents the optimal level for onset of the Anthropocene epoch.

For further information, please see our website at www.LSES.org.uk
Students and Members Free.

Visitors £8.00. Tickets are not issued in advance, please pay at the door.
Members must sign in. Those signing in before 7:50 pm will have precedence over all visitors.
This lecture is expected to finish by 9.30 pm.