

# “Soil erosion control and soil conservation using geosynthetics”

**Speaker:**

R Jane Rickson\*, Professor of Soil Erosion and Conservation, Cranfield University.

<b>Date:</b>	Wednesday, 30 May 2018
<b>Location:</b>	UTC Oxfordshire – Didcot OX11 6BZ
<b>Arrival / Start Time:</b>	18.00 for 18:30
<b>Refreshments:</b>	Yes

**Synopsis:**

The talk will first consider the problem of soil erosion, defined as the detachment and transport of soil or other slope forming materials at the ground surface. It will cover the causes, extent, severity and consequences of soil erosion in the UK, and why soil erosion control is so important for environmental and regulatory reasons. Knowing why slope-forming materials erode at different rates helps target the application of erosion control measures such as the use of vegetation and geosynthetics.

Geosynthetics (including synthetic and natural products) are used in surface erosion control “to prevent or limit soil or other particle movements at the surface of, for example, a slope” (ISO 10318). Whilst the use of geosynthetics has expanded, scientific understanding of how these products affect the hydrological and hydraulic processes operating on a slope is limited. Cranfield University has undertaken geosynthetic product evaluation for over 30 years, using a range of environmental scenarios. The aim is to find the salient properties of cost-effective geosynthetics for short-term and long-term erosion control, including their ability to support vegetation cover. This information can inform a) site managers and contractors in selecting appropriate products and b) product designers and manufacturers in creating innovative erosion control products.



*Use of a natural geosynthetic to control erosion and enhance vegetation*



*Laboratory testing of geosynthetics using simulated rainfall*

**About the Speaker:**

\*Jane Rickson is Professor of Soil Erosion and Conservation in the School of Water, Energy and Environment, Cranfield University. Trained as a physical geographer, she specialised in land resource engineering and management at MSc and PhD. She has over 30 years’ experience of research, consultancy and teaching in soil and water engineering, specialising in soil degradation processes (such as soil erosion), and sustainable land management. Her work is directed at industry and policy makers at the local, national and international level. She has published widely in international, peer reviewed journals, conference proceedings and trade articles. She is a Fellow and President of the Institution of Agricultural Engineers, a Chartered Environmentalist, Fellow of the Higher Education Academy and member of the Institute of Professional Soil Scientists.

<p><b>Next IGS UK Event...</b>  <b>Title / Speaker:</b> BGA/IGS Lecture by Professor Jie Han (Kansas University)  <b>Date / Time:</b> 18:30 on Wednesday 17<sup>th</sup> October  <b>Venue:</b> Godfrey Mitchell Theater, Institution Civil Engineers (ICE) London</p>
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