



The
Geological
Society

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REGISTRATION NOW OPEN

Glossop Medal:

Tony Waltham
Karst Geologist

Glossop Award:

Yung Loo
Arup

Date:

4th November 2015

Free attendance of
Glossop Medal
and Award
lectures.

*Registration
Required*

**Glossop
Reception:**

Delegate Fee
Fellows £30 / Non
Fellows £35

Venue:

**Burlington House,
Lower Library**
(Geological Society,
Burlington House,
Piccadilly, London,
W1J 0BG)

Corporate
sponsorship
opportunities
available – Contact
Event Convenor for
details.

The 16th Glossop Medal

4th November 2015

presented by the Engineering Group of the Geological Society
at the premises of the Geological Society, Burlington House,
Piccadilly, London.

Tony Waltham

BSc, DIC, PhD, Karst Geologist

‘Control the Drainage: The Gospel Accorded to Sinkholes’

Preceded by the 19th Glossop Award presentation: Yung Loo (Arup)

‘Engineering geological solutions for CERN’s underground infrastructure’

**Programme: Access to Burlington House from 17:15 for pre-lecture Tea/Coffee; 17:45
Prompt start for Glossop Award and Glossop Lecture; 20:00 Glossop Reception.**

Synopsis

Karst is a landscape that is distinguished by underground drainage normally formed on limestone or gypsum. Its impact on engineering geology is the distinctive suite of karst geohazards, which are largely related to the holes in the ground of varying size and unpredictable nature. The most widespread and frequent geohazard is the development of new sinkholes within the soil profile over a cavernous limestone developing by suffosion. New suffosion sinkholes are nearly all formed by rainstorms, new drainage inputs or water table decline; they are therefore largely avoidable if the gospel of drainage control is obeyed. Rock collapse developing new sinkholes represents a further geohazard. Most sinkholes in soil and most collapses on rock are induced, wholly or partially, by civil engineering activities, and are therefore largely avoidable. The 16th Glossop Lecture will address the challenges related to karst using examples from around the world and clearly illustrate that drainage control is the golden rule in karst.

For further information and registration, please contact:

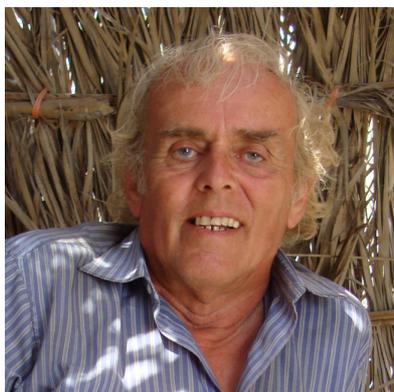
Event Convenor: Alexander Conrad

email: alex.conrad@advisian.com



The 16th Glossop Medal Lecture

Tony Waltham BSc, DIC, PhD



Tony Waltham left Imperial College, London in 1968, with a first degree in geology and a PhD in mining geology. By then he had taken up the pastime of cave exploration and had, therefore, left London for the Yorkshire Dales. He took up a lectureship in the institution now known as Nottingham-Trent University, where he taught miners until Britain's coal mining industry died. He then moved from a fading mining department into a thriving civil engineering department. Through immersion in this new profession he moved gradually into engineering geology.

Meanwhile his cave explorations continued, largely in the Yorkshire Dales, but also in distant lands of limestone. The combination of teaching engineering geology, ground engineering and a growing understanding of limestone ground from beneath led to research in the specialised field of

geo-hazards, in particular on sinkholes and rock collapse over caves.

This then evolved into a consultancy role in engineering geology, with a focus on karst, in which Tony is recognised as one of the world experts.

His long list of published works includes numerous academic papers, accounts in more popular style, and more than a dozen books. His book *Foundations of Engineering Geology*, now already in its third edition, was first published in 1994 and is extremely popular with students and professionals alike, due to its accessibility and excellent presentation. It is the course text in most universities in Britain, and has been translated into several foreign languages. It seems to find a place in a host of civil engineering offices, and has made a significant contribution to engineering geology being recognised by other disciplines.

As lead author of *Sinkholes and Subsidence: Karst and Cavernous Rocks in Engineering and Construction*, Tony compiled an in-depth review of the processes, geo-hazards, mitigation measures and potential remediation for new sinkholes, and other styles of ground failure in karst. If this has made construction engineers more aware and appreciative of holes in the ground then it will have succeeded in its aims.

Visiting engineering projects taking place on karst in many parts of the world has made Tony aware of how little is understood by many civil engineers about karst, cavernous ground and sinkhole hazards.

It is the intention of the 16th Glossop Lecture to further some of the explanations of karst processes, and to shed more light on the largely unseen world of limestone. Perhaps then the karst geo-hazard may be a little better understood, and even ameliorated, where it has an impact on construction projects.

Tony's work has made a significant contribution to communicate geo-hazards, and in particular the processes that are active beneath the ground surface of a cavernous karst, to on-site engineers all over the world. He has been awarded a Winston Churchill Fellowship (for cave exploration in the Himalayas), a Cuthbert Peek Award from the Royal Geographical Society (largely for work on the Gunung Mulu Expedition to Borneo) and a Bisat Medal from the Yorkshire Geological Society (for contributions to applied geology).

In between bouts of sinkhole assessment, Tony has pursued various lighter interests, editing the *Mercian Geologist*, sitting on the board of *Geology Today*, leading geological tours, managing his Geophotos picture library, lecturing on cruise ships, and still studying the caves of the Yorkshire Dales.