

Institution of Structural Engineers, IGS UK Chapter & Institution of Royal Engineers

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Bituminous geomembranes: their use in military contexts, historical perspectives

Speakers: Eugene Gallagher, Coffey Geotechnics,

Dr. Bill Craig, Manchester University &

Cpl. Sam Hunt, 23 Parachute Engineer Regiment

Date:	Tuesday, 14 May 2019
Location:	Institution of Structural Engineers' Headquarters, 47-58 Bastwick Street, London, EC1V 3PS
Arrival / Start Time:	17.30 for 18:00
Refreshments:	Yes

Synopsis:

The presentation will explore the history of bituminous geomembranes from its origins in the 1930s and subsequent development during World War II for the rapid construction of military roads and runways right up to the current day. These materials were manufactured in large quantities in support of the Allied air and land forces and were to play a significant role in battles of the Burma campaign and in the immediate aftermath of the Normandy landings. In Asia they were used to create airfields and all-weather roads, keeping supply lines open and enabling fast movement of troops, particularly during the monsoon season.



In northern France and Belgium in 1944/45 they allowed rapid surfacing of temporary or expedient airfields by sealing the ground and maintaining the existing soil's bearing capacity, thereby enabling close tactical air support to be maintained with rapidly advancing ground forces. They are currently under consideration for rapid repairs of airfield crater damage.

About the Speakers:

Eugene is an associate geotechnical engineer with Coffey Geotechnics where he acts a focus for geosynthetics and containment engineering and consults internationally. Bill is now a visiting academic, formerly Reader in geotechnical engineering at Manchester University and past chair of the British Geotechnical Society; he and Eugene will discuss the historical aspects of bituminous geomembranes based on their research into its wartime use. Sam currently serves as corporal and plant section commander in 23 Parachute Engineer Regiment and has been instrumental in exploring the practicalities of modern commercial variants of bituminous geomembrane being used for rapid airfield repairs. In 2018 he coordinated a field trial on the use of bituminous geomembranes for temporary surfacing of runway crater repairs at Keevil Airfield, Wiltshire as part of the annual regimental exercise, so Sam will bring this historical presentation on the subject right up to date with his perspective as a practicing military engineer.

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