



REGULAR NEWS AND VIEWS FROM **ROGERS GEOTECHNICAL SERVICES**

> **RESHAPING. RESPONDING.**



WELCOME, LEWIS!

GYPSUM KING!

PROTECTING YOUR SITE

GRANNY ROGERS

Welcome to RGS insite issue 65

Our regular newsletter celebrates 18 years of drilling and keeps you up to date with RGS and industry news.

Rogers Geotechnical Services Ltd are **site investigation specialists** offering ground investigation and geotechnical services to developers, builders, structural and consulting engineers, architects, insurance companies, local authorities, piling and foundation engineers, private individuals and other geotechnical consultants.



RESHAPING OUR TEAMS: WELCOME, LEWIS!

In last month's edition of Insite, we announced that we're developing a dedicated **Project Management Team**. This significant initiative will not only free up more time for our engineers but, most importantly, will also give every client a highly effective single point of contact throughout their project.

We're now delighted to welcome a new **Project Manager** to the team **Lewis Scarboro**. Since gaining a **BSc in Geology and a MSC in Geoscience at Derby University**, Lewis has accumulated several years' experience in the field, most recently in managing a large geotechnical laboratory. Armed with his impressive knowledge and skills, he's excited at the opportunity to add real value for RGS clients, and explains that RGS's friendly and collaborative team approach is a breath of fresh air.



Lewis Scarboro
PROJECT MANAGER

“Here, we all share ideas and skills to make every project the best it can be,” says Lewis. “The firm is large enough to take on projects of all sizes, but small enough to value every team member's contribution. There's a clear commitment to developing each individual's professional skills and ambitions. Right now, I'm doing the job I most wanted to do, but the prospect of being able to progress my career here at RGS is also hugely motivating.”

Lewis is already enjoying his new and busy role and looks forward to getting to know our amazing clients in the months and years ahead.

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CONSTRUCTION HAZARDS

RGS's Gypsum King!



WOW!

Scott Alexander arrived at RGS just six months ago and is already a central member of our Engineering Team.

He recently gave an impressive in-house presentation on the geology and risks of gypsum – risks which are perhaps not widely acknowledged in the construction industry, but in fact deserve close and very careful attention.

Why? Well, gypsum is actually a **significant geohazard**. A white, greyish or transparent evaporate mineral, it lies unseen beneath the soil's surface within mudstone strata, sometimes in extensive seams, and crucially, it's highly soluble in water. The dissolution rate, which increases significantly in both sulphur-poor water and in mobile water, can be up to 100 times faster than limestone.

Transparent
Crystalline Gypsum



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Under certain geological conditions, this rapid dissolution of gypsum in mobile water results in the formation of rapidly expanding cave systems which can cause catastrophic subsidence (sinkholes) at the surface. (If you're in any doubt about the gypsum under your site, our specialist geological teams can determine the risk and advise whether or not remedial action is needed).

Ripon is a particular gypsum hotspot, lying within an extensive seam that stretches from Darlington in the north and southwards to South Derbyshire and Nottinghamshire. Indeed, Ripon has a long history of sinkholes, which happen on average once a year. They occur more commonly in rural areas, but when they do strike in urban districts, the results can be devastating.

Scott's thorough presentation delved deeper into the nature of gypsum sinkholes and how to protect against the hazards they present, strategies which include Phase One Desk Studies with a Geological Hazards Risk Assessment and geophysical surveys, followed by specialist design of foundations, roads, pavements and utility infrastructure.

ARE YOU CONCERNED ABOUT POTENTIAL GYPSUM DEPOSITS OR SINKHOLE RISKS?

DON'T HESITATE TO CALL OUR EXPERT TEAM ON **01484 604354** WE'LL GIVE YOU ALL THE ADVICE AND SUPPORT YOU NEED.

SINKHOLE ALERT!

Sinkholes occur not only in **GYPSUM** deposits, but also in **CHALK** **LIMESTONE** **DOLOMITE** and above **ABANDONED COAL MINE WORKINGS**

See 'Protecting your site' below



CLIENT RESOURCES

Protecting your site from coal risks: a handy guide



Across the UK, coal mining activities past and present pose **significant risks** to construction projects. In fact, 15% of the 40 coal field areas are designated as Development High Risk Areas, indicating that there are coal mining risks to construction at or close to the surface.

What's more, mine owners were only required to log their mining plans and activities following the Coal Mines Regulation Act of 1872. Therefore, those mineworkings which predate this legislation (and indeed some which came later) remain hidden and unrecorded.

Building over unrectified or uncharted coal mines is at best, high-risk, and at worst, lethal.. But there's a simple answer: **seek expert advice!** Our specialist teams are here to solve this and many other site-related problems, and we're just one phone call away.





Charlotte Mason
GEOTECHNICAL ENGINEER



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Meanwhile, if you'd like to learn more about the widespread impact of coal workings on construction, [click here!](#)

Coal Mining and Construction: How to Manage the Risk

written by RGS **Geoenvironmental Engineer**, [Charlotte Mason](#), offers a valuable summary of information and guidance on the topic.

DO YOU HAVE CONCERNS OR QUESTIONS ABOUT THE IMPACT OF COAL WORKINGS ON YOUR SITE?

DON'T HESITATE TO CALL US FOR ADVICE ON **01484 604354**



THE ROGERS ARCHIVE

Granny Rogers' Musings: Episode 10 Sod's Second Law of Complexity



Back in the early 80s, I was working for the Department of Works in Papua New Guinea, researching **coronous**, a material that was hitherto unfamiliar to me. A country of immense biological diversity, Papua New Guinea is famed for its raised 'coronus' coral reefs.

The region suffers from a shortage of standard engineering aggregates, but the coronous material derived from old reefs can be used to create very good pavements. Indeed, during the World War 2, the US military used the coronous to construct a large airport at Momote, at the eastern end of Manus Island, which is still in use (and visible on Google Earth).

Their compacted coronous was much wetter than optimum and it appeared to self-cement, forming a concrete-like runway.





What had happened here? Despite my research, I couldn't pin down the mechanism of the apparent self-cementation for sure. However, before completing my research I returned to the UK on leave and had the chance to discuss my findings with Granny Rogers.



“ Sitting under a shady tree in her back garden, my gran listened to my theories with great interest, and when I finished speaking, she sighed. Looking at me intently over the top of her spectacles, she put her G&T down carefully on the table. **“Steve,”** she said, **“I think Sod’s Second Law of Complexity applies here!”**”

I sat for a while, hoping that she’d explain.

Rapidly picking up an Amaretti biscuit (one of her favourite treats), she said **“You see, if there’s more than one possible solution, you can bet your life that there’s an element of truth in each!”**”

We both sat quietly, watching the sunset and I realised that I should not be trying to fit a single theory into a multi-functional problem.

Over the years I’ve often considered **Sod’s Second Law of Complexity**, and it’s helped me to understand many a thorny problem!

Steve Rogers





Do you need
a coal mining
risk assessment?
[CMRA]

Contact us for help, advice
and hassle-free service

For more information about your investigation requirements
please don't hesitate to contact us.

Telephone on 01484 604 354

[Click here to email us](#)

CLIENT FEEDBACK

Talk to us

“ The RGS team has been brilliant: their service is seamless
and efficient. We'll definitely use them again! ”

We're always keen to hear **what clients think** of our service and welcome
feedback from our clients, colleagues and associates.

We're looking forward to hearing from YOU!

[Click here](#) to email us your comments.

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