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Tom Graham

GIS Consultant

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**Royal
Geographical
Society**
with IBG

Advancing geography
and geographical learning



Job title: GIS Consultant

Organisation: Mott MacDonald

Location: Cambridge, UK

How did you get to where you are now?

I attended the University of Dundee to study Environmental Science and Geography, where I was exposed to GIS for the first time and decided to use the software to analyse coastal erosion near Carnoustie.

Following my undergraduate degree, I returned home to study GIS and Cultural Heritage at Queen's University Belfast, which honed my GIS skills further and supplemented the knowledge I had gained with the use of equipment for heritage surveys.

I currently work in Cambridge as part of Mott MacDonald's Environmental Division, which supports ongoing construction, maintenance and operations work for major organisations.

What do you do as part of your role?

Within a typical week I will assist colleagues with anything from figure design and online data visualisation to task automation. As a GIS Consultant it is important to be versatile and

W: www.rgs.org/iamageographer

adaptable to a variety of real-world problems which arise during the collection and design of data. My go-to software is ArcMap or ArcGIS Pro to present information and organise data pulled from ArcGIS Online. Web-mapping and online data is now becoming increasingly popular for companies and clients alike. I have been working on web-applications for large-scale projects which helps concurrent activity and interaction for multiple users, whether use is for basic viewing or editing data from the field or office.

Fieldwork setup tends to focus on the use of applications such as Collector for ArcGIS and Survey123, which enable fieldworkers to collect and view data offline. Data can be collected and modified whilst on-site and, when returning to the office, it can be synced online for analysis and further editing. These apps provide a digital footprint which, for large-scale projects, is vital to ensure all procedure is followed accordingly for worker safety and accountability. I enjoy teaching fellow colleagues how to use and interact with these apps.

What skills and characteristics do you need for this role, apart from geographical knowledge?

A GIS Consultant is much more than designing maps. To ensure that the highest standards are met it is essential to be pragmatic when approaching problems. The ability to express ideas clearly and concisely in order to expose clients and colleagues to the potential which geo-spatial information can provide is key. The ability to present information in a logical and ordered manner is also important, as well as a desire to learn new skills. I've gone from having next to no knowledge of coding experience, to now being able to write my own python scripts for repetitive task automation.

How does geography feature in your work/

