Plastic and sustainability on site

In the war on plastic, Geoff Faro argues for geoscientists to take a more strategic approach to on-site sampling

Unless you have been living under a rock (excuse the geology pun) for the past 5 years, the war on plastic is forefront in the media with people finding alternatives to single-use plastics and other disposable items. In our household (lead dutifully by Mrs Faro), we now proudly use bamboo toothbrushes, bamboo scourers, bamboo pot brushes, solid shampoo (looks like a bar of soap), metal reusable straws and reusable coffee cups. We choose food not wrapped in plastic and our daughter is the pride of the nursery sporting her finest re-useable nappies. All in all, we're left with a warm (and yes, probably self-righteous) fuzzy feeling that we do all, or at least a lot that we can.

Ethics on site

Although many of us promote our green ethics, undertake brownfield remediation and brand ourselves as 'Environmental' companies, the application of an eco-friendly approach at work, especially when undertaking environmental investigations is tricky. Recently, Geosphere Environmental undertook a small, client-scoped investigation using the Institution of Civil Engineers specification with site-specific amendments. The number of sample containers used was considerable. Overall, for four trial pits and two windowless sample holes, we used 90 plastic tubs, 104 glass jars (all with plastic lids), 20 bulk bags, 39 small bags for head space testing, a dozen plastic liners and a plastic bailer.

So, on site, as I smugly drink my coffee from my bamboo compostable mug, I can't help but think all good work that the Faro family and many others are undertaking at home to reduce single-use plastic, pales into insignificance when a few people on site for one day can fill up a medium-sized van—and likely only a fraction of these samples will ever be tested.

Reduce, reuse, recycle

During a recent laboratory visit, we asked what happens to the samples and containers. It all goes to landfill as hazardous waste.

If this is the problem, what is the solution? We can't eliminate sampling.

Reusable containers? They don't exist as far as I'm aware and emptying and cleaning the containers isn't going to happen.

Recycling the containers? Maybe possible, but this is labour intensive, so incurs extra cost. With all the laboratories vying for business at competitive rates, recycling is unlikely to happen unless forced.

This leaves reducing. Can we reduce the number of samples we take instead of the 'shotgun' approach often taken? Reduction could be achieved with a good desk-study or by having someone on site that is able to make an informed decision as to what will be tested, rather than a recent graduate instructed to blindly sample at half-metre depth intervals. One less tub is the same as one less shampoo bottle and will assist with (but not solve) our reliance on plastic. In the end, every little helps. Of course, this approach isn't infallible—the environmental impact of returning to site if more samples were needed is significantly larger than a couple of pots—but we must at least try to reduce our industrial impacts wherever possible (so how about we stop sending out *Geoscientist* in a plastic wrapper?)

Anyway, rant over, I'm off to entice the drillers away from their single-use coffee cups.

Geoff Faro is a Principal Engineering Geologist at Geosphere Environmental; e-mail: geoff@geosphere-environmental.co.uk

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If you can write it entertainingly in **500 words**, the Editor would like to hear from you. Email your piece, and a self-portrait, to **sarah.day@geolsoc.org.uk.** Copy can only be accepted electronically. No diagrams, tables or other illustrations please.

Pictures should be of print quality – please take photographs on the largest setting on your camera, with a plain background.

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>
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