



SPOSH, or just tosh?

*Soil Guideline Values (SGVs) were introduced by DEFRA in March 2002, to help us to assess the potential risks that soil chemistry may pose to human health. Their practicality has been questioned ever since, writes Darren Wilcox**

Here's something you may not know. The published SGV for arsenic in a residential garden setting is 20mg/kg. The problem with this is that in areas such as the Southwest, the Northwest and the Midlands, garden soils can naturally contain arsenic at concentrations in excess of 40mg/kg. So, the residential arsenic SGV is seen as too conservative to be practical in many cases.

In addition, DEFRA's CLEA model (used to derive SGVs), generates a value of approximately 1mg/kg for benzo(a)pyrene in a residential setting. Benzo(a)pyrene is a by-product of our fossil fuel burning legacy, and the majority of UK soils in urban areas can contain background benzo(a)pyrene concentrations in excess of 2.5mg/kg. So the CLEA approach to risk assessment is seen as too conservative to be practical in this instance.

In December 2006, DEFRA indicated that they would review the overly conservative nature of SGVs, and that the CLEA regime would be revised such that the publication of less conservative SGVs might be possible, (CLAN6/06 - the "way forward"). This provided a glint of optimism to all contaminated land

practitioners working on (often greenfield) sites proposed for residential development, where soils with 'elevated' arsenic and benzo(a)pyrene resided.

However, in July 2008, DEFRA disappointingly announced that higher SGVs would not be considered after all, citing that for DEFRA to define SPOSH (the Significant Possibility of Significant Harm as undefined in Part 2A), would cause "insuperable ... scientific and legal difficulties".

DEFRA also controversially announced that the SGVs available at the time (for 10 substances), would be withdrawn while similar numbers were derived using a revised CLEA model. The industry now awaits the publication of new SGVs before April 2009. Meanwhile, a "chemical cloud" of uncertainty and frustration enshrouds the industry. Many believe that far from finding a "Way Forward" we have stepped backwards.

I believe that for DEFRA to define SPOSH was not the outcome that most professionals expected or required. All that was hoped for, was that the low risk level at which SGVs were set could be raised slightly such that we could avoid the nonsensical situation of large numbers of gardens in the UK not meeting published 'safe' levels.

DEFRA needs to look at this issue again. Guidance values issued by DEFRA should be practical for use in this country and should not condemn many natural topsoils as 'potentially contaminated'. We instinctively know that the real risk of adverse health affects from our garden soils must be low, otherwise we would see observable side-effects today.

The natural environment in which we live, work and play has contained different soils of widely varying chemical signatures throughout geological time. Humans have lived on and alongside topsoil since time began, and any guidance issued should allow for the natural and anthropogenic variations in its composition (to which we have become perfectly accustomed). ☞

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