

SUMMER WORKSHOP 2017

Vapour Intrusion to Support Sustainable Risk-Based Decision Making

Wednesday 21 June 2017
St George's Hall, St George's Place
Liverpool, L1 1JJ

Provisional Programme

Morning session – 9:40 – 12:35

- Importance of the Conceptual Site Model in Vapour Intrusion Investigations
- What Can Go Wrong with Installed Mitigation Measures on Site?
- Common Pitfalls when Sampling for VOCs
- Case Study Demonstrating How we Model Now Including the Effect of Capillary Fringe
- Could Screening Distances and Biovapour Approaches be of Help in the UK?
- What are the Options Going Forward – What Can we Learn from Australia

Afternoon session – 13:30 – 16:30

- **Group 1:** Conceptual Site Model – what are the data gaps/uncertainties and how can they be completed?
- **Group 2:** Site Investigation – agreement on what does good look like, what stops us doing this and what are the benefits of doing it well?
- **Group 3:** Risk Assessment – current data gaps/uncertainties and how they may be completed – petroleum and chlorinated
- **Group 4:** Risk Assessment – how can we build and pragmatically consider incorrect installation of mitigation measures in our assessments?





We hope that further avenues of research and development will stem from the different focus groups to help deliver high quality risk assessment and sustainable risk-based decision making for site remediation and redevelopment. Further details available on SoBRA website at <https://sobra.org.uk/events/>

If you would like to help us write up the workshop findings by being a rapporteur, please e-mail us at info@sobra.org.uk. We look forward to seeing you there!



SAVE THE DATE

Our next Christmas Conference will be on Tuesday 5th December 2017, so please pencil this date into your calendar

SoBRA ACCREDITATION UPDATE

SoBRA has developed this registration scheme in order to recognise and reward the technical skills associated with land contamination risk assessment.

The SoBRA scheme shows that the individual possesses the critical technical, scientific and communications skills required to design, perform and/or critically evaluate land contamination risk assessments.

The scheme is focussed on the technical detail associated with such risk assessment but also requires that applicants have a broader understanding of the context and impact of risk assessment on the management of land affected by contamination and the skills to communicate the effect of the risk assessment conclusions, uncertainty and implications of these. Further details on the scheme is available on SoBRA website <https://sobra.org.uk/accreditation/>

SoBRA have set up a dedicated email for any enquiries in relation to the Accreditation process which is accreditation@sobra.org.uk



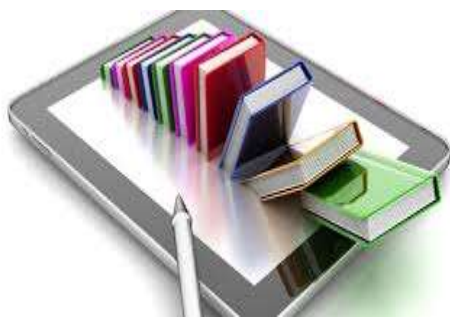
When to Apply?

- Second round of application almost done – closing date 31st May 2017
- Third application round likely to be in October/November 2017

NEW REPORT PUBLICATION

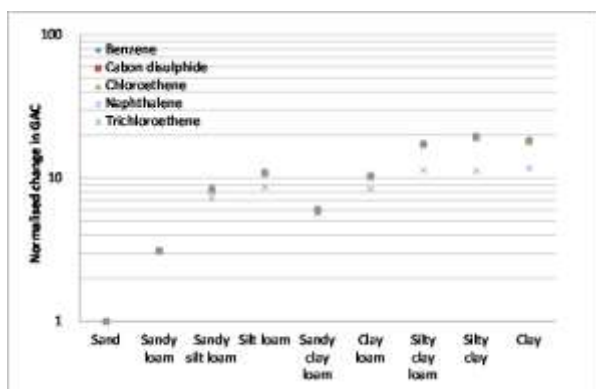
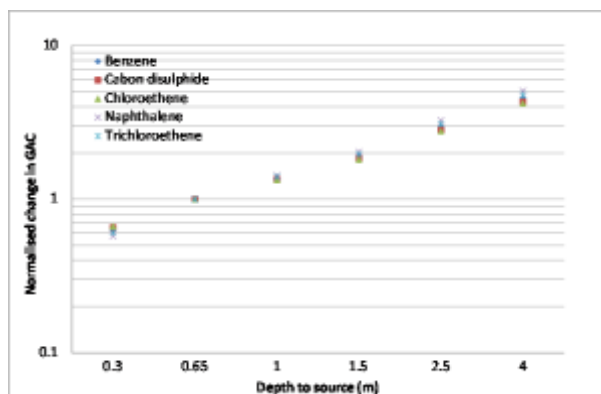
GROUNDWATER VAPOUR SUB-GROUP REPORT

Development of Generic Assessment Criteria for Assessing Vapour Risks to Human Health from Volatile Constituents in Groundwater



Many thanks to SoBRA's groundwater vapour sub-group who published their report that provides screening criteria to help when assessing vapours risks to health from volatile organic compounds present in groundwater. The sub-group derived GAC for two land-use scenarios for which the vapour intrusion pathway is likely to require assessment: residential and commercial.

The report details the methodology used and also includes useful information on the sensitivity of key input parameters. For example, the influence of the depth of the source and the soil type as illustrated below.



The document also references other global guidance from the US and Australia together with increasing research efforts demonstrating the effects of aerobic degradation on petroleum hydrocarbons and the difference in volatilisation risks with source characterisation, for example the difference between LNAPL and dissolved phase petroleum hydrocarbon sources at different depths.

**Should you want to know more please sign up to the SoBRA summer workshop
on 21st June in Liverpool**

SoBRA contribution



SoBRA is actively involved in wide range of initiatives, steering Group and consultations such as



- the C4SL Steering Group,
- the Standards for Soil Quality BSI EH4,
- the Land Forum,
- the National Quality Mark Scheme (NQMS) Quality



If you want to get involved please get in touch at to info@sobra.org.uk



Newcastle Allotments Biomonitoring Study (NABS) 2

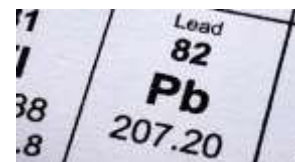
Lindsay Bramwell (Newcastle University and Newcastle City Council),
Jane Entwistle (Northumbria University) and Geraint Williams (ALS)

Urban residential gardens and allotments frequently contain raised lead concentrations in soil. This is sometimes the result of previous industrial use, but also results from years of use of coal fire ash as soil improver and ash from bonfires containing old window frames coated with lead paint.



Between 2002 and 2010 detailed quantitative risk assessments were carried out on Newcastle upon Tyne's allotment gardens including plant uptake of lead and soil lead bioaccessibility. Newcastle City Council concluded that, on balance, gardening activities and consumption of vegetables from these sites was a greater benefit than risk to health.

However, the introduction of the Category 4 screening level (C4SL) of safe lead levels in allotment soil of 80 mg/kg was 10 times lower than many allotment soils in Newcastle and other urban centres.



NABS set out to determine the relationship between concentrations of lead in garden soils and bloods, and to answer the question of whether allotment gardeners using plots with raised soil lead concentrations had blood lead levels (BLLs) of concern to health.



A steering group including specialists from Newcastle University, Newcastle City Council, Northumbria University, Public Health England (PHE), Food Standards Agency (FSA), Environment Agency (EA), Health and Safety Laboratories (HSL) and Northumbria Water Ltd (NWL) designed the study and prepared communications for potential results.

We selected a **safe blood lead concentration of 5 µg/dl for adults** in line with recommendations in California and Australia. Study participants were recruited from three Newcastle allotment sites: 44 Gardeners recruited and 29 non-allotment gardening neighbours as controls.

Participants provided blood and saliva samples and helped the team collect soil, vegetable and fruit samples from their plots. To account for confounders, participants provided tap water samples, home dust samples, atmospheric deposition samples and completed a questionnaire on potential exposure factors.

We found BLLs for gardeners (median 1.55, P95 3.7 µg/dl) were slightly higher than those of controls (median 1.3, P95 2.9 µg/dl) when taking confounders into consideration, but crucially the concentrations were not of concern to health for adults. In line with the CLEA model, we found the bioaccessibility of soil lead to be around 60%.

In **NABS 2** our focus is to provide up-to-date information for lead exposure on allotments to support the derivation of C4SLs using the UK CLEA model.

Estimations currently used in the CLEA model have resulted in an impracticably low lead screening concentrations for allotments, putting sites at risk of closure.

Three key areas where new data would be most helpful are:

- (1) **Soil to vegetable uptake factors,**
- (2) **Children's fruit & veg consumption rates including % home grown fraction, and**
- (3) **Children's' use of allotments**



The **SoBRA scholarship** allowance in conjunction with **support from ALS for the analysis of the vegetable samples** will enable investigation and reporting of new data for use in the CLEA model with respect to allotment garden use and soil to plant uptake factors.

Getting involved

We are looking for an independent Accounting volunteer



SoBRA is looking for an independent examiner who ideally has some experience of charity accounting to audit SoBRA's financial accounts.

It is envisaged that the prospective volunteer involvement would include a yearly overview of the annual accounts of the Society in the autumn.

If you are interested please do get in touch at info@sobra.org.uk

CONTAMINATION EXPO SERIES 2017

27-28 September, Excel London



Register for FREE TICKETS at www.contaminationexpo.com

If you plan to attend the event we'd love to hear from you as we will have a stand and be reliant on sharing the load by members helping for a couple of hours to spread the word of our good work! so please do get in touch at info@sobra.org.uk

The Contamination Expo Series is Europe's largest event designed to showcase the latest innovations that further the protection of the environment and management of contaminated land, water, and air.

The show features over 150 innovative environmental suppliers, 120 CPD-accredited seminars, interactive masterclasses, one-to-one advice from industry experts, unparalleled networking opportunities, and much more.

Guests can filter between areas dedicated to hazardous materials, land remediation, spill response, clean air technology, geotechnical solutions, nuclear decommissioning, and more, as well as the Flood Expo and M&CCE Expo next door.

To book your FREE ticket and take advantage of everything the Contamination Expo Series has to offer, register on the [Contamination Expo Series website](http://www.contaminationexpo.com).

What happened to the UK's environmental plan?

Samantha Deacon, Manager at Ramboll Environ

As our politicians ready themselves for a general election with new manifestos for a better future, what does this mean for earlier promises and, in particular, Defra's delayed 25-year Environment Plan?

The government set out its aims for the plan in its 2015 Conservative Party manifesto. The stated aim of the plan was to ensure the next generation inherits a better environment than the one we live in today, with cleaner air, water and seas, healthier wildlife, a low carbon economy and greater resource efficiency. The plan was originally due for release in December 2016. The Environmental Audit Committee stated that it was essential that the government consults on and publishes the plan "as soon as possible to inform negotiations to leave the EU", however no plan appeared. It was widely reported in the media in April 2017 that the plan may be published later this year. However, some were sceptical it would ever be published at all. Some copies of the plan were read by journalists and NGOs who commented on its admirable aspirations, but criticised the document for lacking in policies and practical solutions for environmental improvement.



It was hoped that the plan would go some way to providing environmental protection in a post-Brexit landscape. The government may be missing an opportunity to provide long-term protection to Britain's wildlife and environment as we transition from European to national regulations. We are now facing the potential dilution and loss of confidence in the plan, and the danger that the laws on nature and the environment will not be enforced with as much rigour as they should be, potentially endangering nationally important protected sites and species.



In last year's Natural England State of Nature report, the UK was described as having lost significantly more nature over the long term than the global average, and we are among the most nature-depleted countries in the world. At a more tangible local level, the London Assembly published their At Home with Nature guide for housebuilders to encourage biodiversity in development projects. One of the Assembly's ambitions is to go some way to reversing the 50% decline in London's hedgehog population since 2000. Reports such as these provide evidence for informing the plan and hopefully strengthening domestic regulation through the Brexit process.

With a general election called for 8th June, the political parties have been formulating manifestos, with the Conservatives being the last of the main parties to publish their promises on 18th May. The pledge to be "the first generation to leave the environment in a better state than we inherited it" remains in the new manifesto, although the 25-year Environment Plan is now described as a plan to "chart how we will improve our environment as we leave the European Union and take control of our environmental legislation again". This appears rather short-term, unless charting our way through Brexit really will take 25 years. There is very little of substance or reassurance behind what was originally seen as a 'once in a lifetime' opportunity for environmental improvement. Also, the pledge appears in the manifesto at the end of the promises relating to "our countryside communities", below the future of the

The Government's 25 YEP and Natural Capital Opportunities



Hunting Act and rural post offices. Aside from the demotion from the headline commitment in the 2015 manifesto, it does not appear to leave much hope for our urban environment or better management of our natural capital.

The Conservative Party manifesto also reiterates the intent to enact the Great Repeal Bill, which will automatically transfer European legislation into UK law “at the point at which we leave the EU”. The bill will also give powers to “correct the laws that do not operate appropriately”. This may also pass to the devolved administrations.

Of the other party’s manifestos, Labour has pledged to drop the Great Repeal Bill, replacing it with an EU Rights and Protections Bill and an assurance that there is no detrimental change to environmental protection. However, there is equally a lack of substance or detail behind their term ‘environmental protection’ and absence of a long-term view. The Green Party is pledging a new Environmental Protection Act to safeguard and enhance everybody’s right to a safe environment, as currently guaranteed through our membership of the EU.



The Liberal Democrats appears to have the only manifesto that specifically mentions natural capital, which was at the heart of the 25-year Environment Plan. The pledge is to “pass a Nature Act to put the Natural Capital Committee (NCC) on a statutory footing, set legally binding natural capital targets, including on biodiversity, clean air and water, and empower the NCC to recommend actions to meet these targets”.

The long-term view promised in the 25-year Environment Plan was new and refreshing and would have embedded natural capital approaches, a means of accounting for the value of environmental benefits, including protected species and habitats. It would have laid down a marker for environmental protection and helped to guide future statute. The delay and a passing mention in the Conservative manifesto could potentially damage momentum and investment that has already been gained in embedding natural capital approaches into environmental management. It is a concept that is useful for corporates (accounting), and in urban and rural resource management. Similar concepts are behind biodiversity offsetting in planning and development. We have environmental economic tools that can help predict social, economic and environmental benefits (or unintended consequences), and the governance is currently in place through the NCC to bridge the gap between the plan and practical environmental improvement.

What is Natural Capital?



While we await the outcome of the general election on 8th June, any major landowner, developer or industry that is dependent upon natural resources should be getting to grips with natural capital as a matter of urgency.

Even without the government's plan, landowners and corporates may soon have to be able to speak the language of natural capital to allow them access to funding, demonstrate their value to the public, reduce impacts and realise efficiencies. It may yet underpin future agricultural stewardship schemes and allow publicly funded bodies to demonstrate their value to government and the public for investment.

SoBRA's photography competition

The SoBRA's photography competition is a new addition, aiming to celebrate the artistic, unusual and often extraordinary characteristics of brownfield sites. The competition is opened to all SoBRA members and all abilities.



We want to get your creative juices flowing and invite you to submit a photograph fitting the description of unexpected and inspiring brownfield site.

The winning photo will be judged on impact as well as its ability to illustrate Pathways to Regenerative Sustainability of Brownfield sites. The winner will be announced at the AGM ceremony in December at the Royal Society of Chemistry, Burlington House, London, and will receive a prize of one year's SoBRA membership. Subject to the popularity of the contest, a shortlist of images will be picked for inclusion in a 2018 calendar.

You should submit your photographs to info@sobra.org.uk with the subject heading 'SoBRA's Brownfields photo competition' **Entry is free and you may submit up to five images.**

Joining the Society – how, when?



We welcome applications for membership from individuals that have an interest in risk assessment. You can join at any time of the year and at any stage of your career. For further please visit our website at <http://www.sobra.org.uk/membership>

Membership renewal

SoBRA is intending to change the way in which membership renewals are processed as we are aware that many of the reminder emails end up in spam folders and unfortunately people don't end up renewing their membership. Having to renew manually every year, we think, causes more work for you the subscriber and also for SoBRA. The plan is to setup an automated PayPal payment for the £10 or £25 membership costs every year when you next renew your membership. You should receive an alert email from PayPal before this goes out and you can cancel it through PayPal anytime. We think this will work a lot better but if you have any comments please can you email them to info@sobra.org.uk





If you have an idea for an article or would like to include an event listing in the next SoBRA newsletter, or on our website at please contact us at info@sobra.org.uk



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