

SiLC Newsletter

News update by the SiLC Champion

October 2012

Issue 8

Key Dates for 2013

- Induction Training Days
 - 15 May - Manchester
 - 2 Oct - London
- Exam dates
 - Round 1-1 February
 - Round 2 - 26 July

Events - follow the link

- [Geological Society](#)
- [RSC](#)
- [ICE](#)
- [CIWEM](#)
- [IEMA](#)
- [RICS](#)
- [CIEH](#)
- [REHIS](#)
- [AGS](#)

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Defra—SP series science and research

Since 2010 Defra has commissioned a series of [science and research projects](#) associated with the contaminated land sector and to provide technical guidance to assist in implementing the new Statutory Guidance. These include:

- Contaminated Land Remediation
- Potential health effects of contaminants in Soil
- Identification of Skills Requirements for Delivery for Contaminated Land Policy
- International Processes for Identification and Remediation of Contaminated Land
- Assessment and remediation of contaminated land through the planning system
- Options for a strategy for the economic appraisal of benefits of contaminated land remediation
- Establishing data on background levels of contamination
- Development of Category 4 Screening Levels for assessment of land affected by contamination.

Five of these projects have been completed to date, and like buses they all come at once! Well not quite although two reports have been published recently; Options for a strategy for the economic appraisal of benefits of contaminated land remediation in August 2012 (see page 3) and Establishing data on background levels of contamination in October 2012 (see page 3). Furthermore the project for the development of the Category 4 Screening Levels was awarded recently (see page 2).

National Expert Panel

Defra is facilitating the establishment of a National Experts' Panel to offer advice to Local Authority Contaminated Land Officers and to assist in the decision-making process on implementing the new [Statutory Guidance](#) of Part 2A of the Environmental Protection Act 1990. The Panel will consist of experts from the contaminated land sector and selected individuals have been invited to the panel including SiLCs.

The new Statutory Guidance sets out a legal framework for taking decisions on whether land qualifies as contaminated in the form of a category based test whereby Category 1 sites are clearly contaminated and represent a high risk and Category 4 sites are clearly identifiable as low risk and not contaminated land. It is envisaged that Local Authorities will be able to ask the Panel to provide advice and guidance about Category 2 and 3 sites which are less straightforward.

In such circumstances a greater level assessment is necessary and detailed consideration is needed before deciding whether the site meets the legal definition of contaminated land as set out in the revised Statutory Guidance (Category 2 site) or not (Category 3 site). The Panel will evaluate all the relevant information from individual cases submitted to them and advise the regulator with due regard to the overarching objectives of the Part 2A regime.

It is Defra's intention that the outputs of the work of the Panel will be used to develop case studies that will then be disseminated to the wider sector as evidence of best practice and will promote consistency and proportionality in decision-making by the regulatory authorities.



“...Considerable efforts will be made to gather opinions and achieve consensus on a final methodology from the contaminated land practitioner community...”

C4SL

The project to develop the Category 4 Screening Levels (C4SL) for Assessment of Land Affected by Contamination was awarded recently to Contaminated Land: Applications in Real Environments (CL:AIRE) who have assembled a Steering Group consisting a number of members of the Society of Brownfield Risk Assessment (SoBRA) committee, representatives from the Food and Environment Research Agency (FERA) an executive agency of Defra and a contaminated land officer from a Local Authority.

A revision to the [Statutory Guidance](#) of Part 2A of the Environmental Protection Act 1990 was published earlier this year and it introduced a new category based system for dealing with risk assessment including the assessment of the ‘significant possibility of significant harm’ (SPOSH) whereby Category 1 sites are clearly contaminated and represent a high risk and Category 4 sites are clearly identifiable as low risk and not contaminated land.

DEFRA has commissioned CL:AIRE to produce, demonstrate and communicate a methodology for developing C4SL. The C4SL will represent a new set of risk based generic screening levels which it is understood will consist of ‘cautious estimates’ of contaminant concentrations in soil that are considered to present an acceptable level of risk, within the context of Part 2A.

The C4SL will be developed by combining information on toxicology, exposure assessment and considering normal levels of exposure to these contaminants. A science and research study was published recently by the Defra which provides information on the normal background concentrations (NBC) of seven contaminants in soils (As, Cd, Cu, Hg, Pd, Ni and benzo(a)pyrene). Initially the C4SL project will include a review of six substances and a C4SL will be developed for two substances. Whilst these substances have not as yet been selected perhaps they may reflect the contaminants assessed in the NBC project.

The boundary between Category 2 and 3 is referenced in the [Impact Assessment](#) which accompanies the Statutory Guidance as being the “...likely de facto minimum standard chosen by developers...” and for sites which fall between these two categories it will be necessary to carry out a site specific assessments of the risks.

It is possible that when the C4SL are published these will become the default soil assessment criteria for the decisions made regarding land development issues should the developer wish to take a precautionary approach. Therefore it is crucial that the methodology for C4SL is robust and pragmatic and CL:AIRE have stated that “...Considerable efforts will be made to gather opinions and achieve consensus on a final methodology from the contaminated land practitioner community...”

CL:AIRE has organised a series of three workshops the first of which will be carried out in November 2012 to engage with stakeholders in the sector and to gather opinion on the methodology and options, the choice of the six substances for the review and the two substances for which C4SL will be developed. Attendance at the workshops is by invitation only and SiLC has been selected as one of the organisations to provide a representative to contribute to this project.



IES Journal

The Institution of Environmental Sciences has published a Contaminated Land issue of their Environmental Scientist on-line journal. The articles presented provide an overview of topical issues associated with the contaminated land sector from a review of key legislation of the contaminated land regime to technical issues such as risk assessment and bioaccessibility. There are a number of articles covering remediation including sustainable remediation and supported by a number of case studies including the Olympic Park. The document can be found [here](#)

What is normal contamination?

The publication '[Establishing data on background levels of contamination](#)' prepared by the BGS on behalf of Defra provides another piece of the technical jigsaw to support the new Statutory Guidance. The intention of this research is that by understanding normal background data of the geochemistry of soil which vary across the country, this will help to more clearly define soils that are not contaminated and provide a greater understanding of the potential risk to human health and further clarity to the contaminated land regime.

The BGS has assessed data relating to six metals (As, Cd, Cu, Hg, Pd and Ni) together with benzo(a)pyrene drawing upon datasets compiled from a range of other studies including The Geochemical Baseline Survey of the Environment ([G-BASE](#)). The study looked at the spatial variability and population distributions identifying the three most important contributing factors affecting the concentration of the contaminants in soil are: the underlying parent material upon which the soil has formed; non-ferrous metalliferous mineralisation and associated mining activity; and urbanisation. A methodology was developed by the BGS to assess the statistical distributions of the concentrations of contaminants

for different domains, for example considering anthropogenic sources in an Urban Domain, geogenic sources in a Mineralisation Domain, and a Principal Domain where elevated concentrations are not expected. The methodology is set in a separate document published as part of the study. A Normal Background Concentration (NBC) for each contaminant in each domain type has been produced by applying statistical methods taking the upper 95% confidence limit of the 95th percentile.

The process for assessing each contaminant is first to consider which of the domains the site is likely to be in and if the concentration of the contaminant is at or below the NBC for the specified domain then *"...the result should not be considered to cause the land to qualify as contaminated land, unless there is a particular reason to consider otherwise..."*. If there are no reasons 'to consider otherwise' then the decision can be made that there is no evidence that the land is contaminated under Part 2A. If the results are above the NBC or there are other reasons to consider, further assessment will be necessary, for example additional site investigation and chemical testing of soil and if necessary a quantitative risk assessment.

Economic value of remediation

The '[Options for a strategy for the economic appraisal of benefits of contaminated land](#)' report published in August 2012 considers a methodology for establishing the benefits of remediating contaminated land. The report discusses the concept of Total Economic Value (TEV) which include 'use values' which are the benefits of bringing land back into general use and 'non-use values' which are the benefits derived from the knowledge that a particular resource is maintained. The reports identifies a range of benefits resulting from carrying out remediation, including site value, health benefits, environmental benefits, amenity benefits and levels of property transactions. The critical assessment methods used are those applied more widely in economic assessment while making reference to their particular use in assessing the benefits of remediation. Consequently these models are likely to be unfamiliar to those practitioners involved in the technical assessment of remediation although may be more familiar to environmental economists.

The evaluation methods are applied to three case studies to demonstrate the methodology applied in the assessment models. One of the critical assessment methods applied demonstrates that house prices in the vicinity of a site which had been remediated increased following remediation. This was noted in all three case studies, and although there are other benefits that have been established by applying the assessment models these are reported as often difficult to quantify without further study.

Whilst this study is commendable it is difficult to see how the methodology set out in this document will be applied to most remediation projects although it is recognised that the assessment methodology is more applicable to assessing sites attracting central government expenditure through Part 2A funding schemes. Part of the process set out in the new [Statutory Guidance](#) is for the Local Authority to begin by considering health risks alone, and if this leads the Local Authority to consider that land is clearly problematic or non-problematic the decision as to whether the site is contaminated land is taken at this point. However, if there is still uncertainty and a decision cannot be made on the risk to human health, the Local Authority needs to consider the wider socio-economic factors including the costs and the views of local people before deciding if the legal test for determining is a site is 'contaminated land'. Under these circumstances it may be applicable to consider using some of the methodologies set out in the Defra report as a basis for the decision-making process.



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SiLC Champion Feedback

Do you have something to say about SiLC or any other topics? We would welcome contributions to the Newsletter

Presentation materials about SiLC are available - contact the secretariat

Regards

Kevin Eaton
SiLC Champion

Supporting Organisations



Wanted! Competent person

The premise of the National Planning Policy Framework (NPPF) is more democracy, less bureaucracy, the consequence of which is that a range of supporting technical guidance has been withdrawn including PPS23 Planning and Pollution Control Annex 2: Development on Land Affected by Contamination. The process for assessing contaminated land as part of the planning system in the NPPF includes the policy *"...adequate site investigation information, prepared by a competent person, is presented"* and the definition of a competent person is given as *"A person with a recognised relevant qualification, sufficient experience in dealing with the type(s) of pollution or land instability, and membership of a relevant professional organisation"*.

If it is intended that the criteria of competency referred to in the NPPF is to reflect the ability of a practitioner to do their job properly and that a site assessment is managed by a person of an authoritative level then this is not what is set out in the basic criteria referred to in the NPPF. The criteria of having a 'relevant qualification' provides only a benchmark of attaining some level of knowledge in a particular subject matter, having the 'experience in dealing with types of pollution' does not address the length and breath of the experience a practitioner needs to manage the process of contaminated land assessment and having a 'membership of a relevant professional organisation' only validates that a practitioner has done nothing more than pay their annual membership subscription. When considering competency there are broader criteria which may be more important than the basic criteria set out in the NPPF, these include assessing the behaviour and attitude of the practitioner, that the practitioner can demonstrate relevant continued professional development (CPD) and training, and that they have the ability to apply these collective attributes in the performance and delivery of their duties.

There is certainly a role for the professional organisations in this process and whilst being a member of a professional organisation is a step in the right direction, when an individual has invested the time and effort to gain a professional qualification such as chartership or similar through the process of impartial assessment by their peers working in that same field, this mark of professionalism and commitment provides a more credible criterion that should form part of the overall assessment of competency.

Furthermore, chartered professionals or those with similar professional qualifications need to provide evidence of CPD and to abide by an ethical code of practice and are therefore accountable to the complaints and disciplinary procedure administered by their professional organisation.

In the UK there is no single professional organisation which represents practitioners working in the land quality sector and there is no requirement for mandatory registration or a licensed scheme for those practitioners to operate in the sector. In the USA the first Licensed Site Professionals (LSPs) experienced in the field of hazardous waste site assessment, cleanup and removal were established in Massachusetts in 1993 and similar schemes have continued to be developed. In New Jersey in 2009 the Licensed Site Remediation Professional (LSRP) scheme was introduced. This requires practitioners to have the appropriate qualifications, experience and to have completed training covering regulations concerning technical requirements. The LSRP has the responsibility for oversight of investigation and cleanup, with the specific aim that projects are completed quicker although still delivered in a safe and robust manner. In British Columbia the Contaminated Sites Approved Professionals Society is a self regulating professional organisation with two classes of approved professionals; a Standard Assessment Specialist and a Risk Assessment Specialist. Registration is gained by appropriate qualification and requisite years of experience and the need to pass an approved examination and technical evaluation. The 'Specialist' is then qualified to approve applications in compliance with regulatory requirements for the Ministry of Environment. The Government of Alberta's *Environmental Protection and Enhancement Act* requires operators to conserve and successfully reclaim specified land and obtain a reclamation certificate. Such types of schemes are not restricted to North America. Australia has a well established 'Environmental auditor' model, and there are schemes throughout Europe. Flanders has an accreditation scheme established since 1995, and even in small provinces such as the Basque region, professionals have to be accredited to investigate sites, undertake risk assessment and deliver remedial solutions. There are of course 'checks and balances' in place in these schemes together with an ethical code of practice. For example in the USA a practitioners licence can be revoked.

The frameworks for these schemes which operate overseas have a familiar ring to them. Perhaps now is the time for the SiLC scheme to be recognised as a register of 'competent persons'.