

SiLC Newsletter

News update by the SiLC Champion

February 2015

Issue 14

Key Dates for 2015

SiLC Introduction Day

- 5 May, RSK, Helsby
- 10 June, ERM, Edinburgh
- 10 November, London
- 1 December, Cardiff University

Exam dates 2015

- Round 1 - 16 February
- Round 2 - 7 September

Events - follow the link

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

In this issue:

National Quality Mark Scheme	1
SiLC Annual Forum	1
National Quality Mark Scheme continued	2
Land Condition Skills Development Framework Tool	2
SiLC introduction day	2
A brief history of GAC	3 – 4
Have you say	4

National Quality Mark Scheme



The Land Forum comprises representatives from a range of key government departments, public bodies and other organisations who are associated with land condition and land use issues. The Forum discusses a number of ongoing and future industry led initiatives and has continued to make progress with an initiative to develop a National Quality Mark Scheme for the assessment of land affected by contamination.

The proposed scheme will focus on activities such as site characterisation including scoping, desk studies and site investigation together with risk assessment, remediation option appraisal and the verification of remediation works. The scheme is intended to make sure that these activities are carried out in accordance with established good practice procedures for example the management of land contamination framework set out in CLR11 and to meet legislative aims.

A key feature of the scheme will be to demonstrate that the assessment work has been carried out by competent practitioners in accordance with commonly accepted technical approaches that constitute established good practice and that key elements of the work have been peer reviewed. The intention of the National Quality Mark Scheme is to provide a 'sign off product' which will provide confidence to those commissioning the work and to the regulatory authorities, that the potential risks posed by land contamination have been assessed adequately and that appropriate and proportionate actions are taken to manage or mitigate these potential risks. It is intended that the scheme will satisfy regulators (Local Authority and the relevant UK environmental agencies) particularly where the conclusions of an assessment suggest that no additional action is necessary to ensure compliance with environmental legislation for example under the Part 2A or the planning regime. The 'product' needs to be signed off by a suitably qualified and experienced practitioner referred to in the proposed scheme as a Suitably Qualified Person (SQP).

To provide confidence to the sector that the scheme is robust, the assessment process needs to be able to demonstrate that data is processed and interpreted by competent practitioners who have relevant experience and qualifications in their respective disciplines, that the work is controlled under established quality management systems, that any conclusions and recommendations need to be

substantiated by the underlying data and are based on reasonable interpretations in accordance with established approaches, guidance and advice provided by the relevant regulatory authorities. It is necessary that the limitations in the data and uncertainties in the analyses are clearly recognised where appropriate.

The Land Forum has identified that certain professional standards will be necessary for the SQP role, for example a need to be chartered, have sufficient experience in the procedures for the assessment of land affected by contamination and is aware of the requirements of the regulatory regimes.

SiLC Annual Forum



The SiLC Annual Forum will be held at the Royal Society of Chemistry on 29 April 2015. The topics of the presentation and speakers are as yet to be

confirmed. Possible topics include emerging contaminants, sustainable remediation, the National Quality Mark Scheme and a discussion regarding new soil guideline criteria. Further details of the programme and booking information will be presented on the SiLC [website](#) when available.



“The SiLC Register is well placed to have a key role in a National Quality Mark Scheme.”

“The capability information is presented automatically on a series of charts...”

National Quality Mark Scheme continued

It is important that the SQP needs to be capable of recognising their own limitations and where specialist skills and advice by other professionals are necessary. These are criteria that are assessed when applying to become a Registered SiLC. The criteria for being a SQP have not as yet been published although the SiLC Register has put forward a position statement to the Land Forum and other bodies in the sector regarding a possible scope for the scheme and suggested that practitioners who are registered under the existing SiLC scheme are suitable competent practitioners, able to provide sign off under a National Quality Mark Scheme.

SiLC has been established for over 14 years, it has an existing register of professionals from a broad background of organisations, who are suitably qualified and can demonstrate a high degree of experience and competence when advising on land condition matters, it is supported by the main professional societies associated with the environmental and land condition sector, it has its own code of practice and disciplinary procedure and has developed a Land Condition Skills Development Framework (LCSDF) a capability-based system, to record and monitor key behaviours, skills and knowledge that underpin effective performance in support of an individual’s career development. The SiLC Register is well placed to have a key role in a National Quality Mark Scheme.

The Land Forum has prepared a declaration form similar to the declaration form which is used for the CL:AIRE Definition of Waste Code of Practice (DoWCoP) scheme which has proved to be a successful scheme used widely in the sector. The National Quality Mark Scheme will be voluntary although it is hoped that Local Authorities and the UK environmental agencies will recognise the value of the scheme and promote its use when dealing with the assessment land affected by contamination. Further details of the scheme can be found at the following [link](#).

Land Condition Skills Development Framework Tool

Following the publication of version 2 of the Land Condition Skills Development Framework (LCSDF) in 2014, which can be downloaded from the following [link](#), SiLC is preparing currently the LCSDF Tool. The LCSDF is a capability based system which is intended to complement existing institutional frameworks in supporting an individual’s career development; from graduate entry level in an organisation through to chartered status and similar senior level membership of a professional body. Key to this framework is the concept of capabilities and the levels of capability that an individual is measured against. Capabilities are high level descriptions of key behaviours, skills and knowledge that underpin effective performance. Generic capabilities generally relate to the transferable skills that a professional would expect to demonstrate when undertaking their duties. The technical capabilities relate more to the application of specialist technical knowledge and for the purpose of the LCSDF are relevant to the management of land condition/quality and previously developed land.

The capability of an individual in relation to specific and generic activities is measured at five different levels – from Level 1 which demonstrates an awareness of an issue through to Level 5 whereby

the practitioner is regarded as an expert in their field. These levels of capability do not necessarily have any direct correlation to factors such as job level or grade, job title or responsibilities, tenure and experience, although generally a more senior role will demand a higher level of capability in specific aspects of their delivery. The benefits of using this framework include providing a structure for objective decisions to be made in training and recruitment within an organisation, the integration of the framework into a personal development plan and to assist in continuing to raise standards in the sector.

The LCSDF tool is developed in Excel format for simple use. For each of the generic and technical activities a task relevant to the individual’s capability level is selected from a series of drop down menus and a capability level allocated. The capability information is presented automatically on a series of charts for the individual together with a number of other practitioners for example to record information of employees capabilities in a regional office or a department. This information can be used to assist in identifying which generic and technical activities need improvement within the organisation.

Once the LCSDF tool is complete it will be available for download from the SiLC website.

SiLC introduction day

In 2015 there are four provisional dates for the SiLC introduction day. The location for the events have been chosen to provide a wider geographical coverage and include venues in Wales and Scotland.

Many SiLCs are senior individuals in the organisations in which they work and they play an active role advising on a range of aspects associated with land condition matters across the sector. For example there are registered SiLCs



who are representatives on the Land Forum, the National Expert Panel, the C4SL steering group and stakeholder group, there are registered SiLCs on the committees of AGS, SAGTA, SoBRA, EIC, and many SiLCs are involved in the specialist groups of the professional bodies, for example the Toxicology Group of the RSC.



Further details of the introduction day can be found at the following [link](#).

The SiLC Register...
—is your name on it?

A brief history of GAC

A brief history of the development of soil guideline criteria was presented in the SiLC newsletter No 11 November 2013 which summarised the history of the 'trigger' guideline values which had first appeared in the document ICRC 59/80 published in 1983 and which had their origins in guidance documents dating from 1976 and were not withdrawn formally until December 2002 as they were considered to be incompatible with the risk based approach set out in the Part 2A of the Environmental Protection Act 1990 which was established in 2000. Following the publication of the Category 4 Screening Levels (C4SLs) in December 2014 and the most recent generic assessment criteria (GAC) published by Land Quality Management (LQM) in 2015, the following presents a brief history of the development of the 'modern' GAC.

Risk based values for the assessment potential contaminants in soil which may pose a risk to human health were first introduced by the Environment Agency (EA) as Soil Guideline Values (SGVs) in 2002. The SGVs were developed as part of the Contaminated Land Exposure Assessment (CLEA) a series of technical and toxicity assessment reports together with the development of the software model - CLEA 2002. The process of assessing land contamination and the methodology is an iterative process and the EA and Defra set up the Soil Guideline Taskforce to continue research into the underlying technical guidance, toxicity data and the risk assessment model software and at the end of 2006 the CLEA UK beta model was released.

The number of SGVs published by the EA was modest and consequently this led to a number of

consultancies preparing their own set of guideline criteria. To provide some consistency Land Quality Management (LQM) together with the support of the Chartered Institute of Environmental Health (CIEH) published the first edition of the document entitled 'Generic Assessment Criteria for Human Health Risk Assessment' at the end of 2006. GACs were derived for four metals, four polycyclic aromatic hydrocarbons, nine chlorinated solvents, one pesticide and a number of carbon banding groups for petroleum hydrocarbons, in total 31 GACs for potential contaminants. Also in 2006, Defra issued a discussion paper entitled 'Soil Guideline Values: The Way Forward', which sought views on the application of non-statutory technical guidance for risk assessments and further clarification of the definition of 'contaminated land' under Part 2A. This exercise eventually culminated in the publication by Defra in 2008 of a document entitled 'Improvements to contaminated land guidance. Outcome of the "Way Forward" exercise on Soil Guideline Values' and 'Guidance on the legal definition of contaminated land'. This new guidance did not, as was hoped for by Contaminated Land Officers, provide a set of soil guideline criteria that would represent the threshold of the 'significant possibility of significant harm' (SPOSH) when assessing land contamination.

The publication of these documents effectively announced a revision in the UK policy on deriving criteria for assessing contaminated land and which resulted in the technical guidance documents, (CLR7-CLR10), the CLEA model and the SGVs being withdrawn in 2008 as they were no longer deemed compatible with the revised assessment methodology.

"...Defra set up the Soil Guideline Taskforce to continue research into the underlying technical guidance, toxicity data and the risk assessment model software..."



News update by the SiLC Champion

Secretariat
The SiLC Register
c/o CIRIA
Griffin Court
15 Long Lane
London EC1A 9PN

Tel: +44 (0) 20 7549 3300
E-mail: info@silc.org.uk

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



A brief history of GAC continued

Updated draft technical documents on human health toxicological assessment and a new version of the CLEA V1.03 software model were published by the EA in August 2008 for consultation. A report was published in November 2008 to support the revised framework for identifying the physical/chemical properties of 66 organic compounds and entitled 'Compilation of Data for Priority Organic Pollutants for Derivation of Soil Guideline Values' (SR7 Environment Agency 2008).

Following a Government-led review of the approach to methodology for developing SGVs, in January 2009 the EA published the revised CLEA technical guidance Science Report SR2: Human health toxicological and in March 2009 the first of the contaminant specific toxicological reports and new SGVs generated using CLEA v1.04 model were released. The CLEA v1.05 software was released later in 2009 to correct for lifetime exposure and was replaced shortly afterwards with v1.06 to correct for a password protection issue.

The publication of new guidance and in particular the release of the deterministic CLEA model in 2009 led LQM/CIEH to publish the second edition of the document 'Generic Assessment Criteria for Human Health Assessment' in July 2009 expanding the number GACs to 82 substances and these have been used widely among practitioners in the public and private sectors. In December 2009 the Environmental Industries Commission (EIC) published the document entitled 'The Soil Generic Assessment Criteria for Human Health Risk Assessment' which include GACs for 35 potential contaminants using the CLEA v1.06 model and intended to compliment the EA SGVs and LQM GACs.

In April 2012 a revision to the Statutory Guidance of Part 2A was published which introduced a category based system for dealing with risk assessment of contaminated land 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 commissioned a project (SPI010) to develop C4SLs for six contaminants and the report was published in December 2013. The development of C4SLs was achieved by considering modifications to the toxicological and exposure scenarios used within the CLEA model. One of the most significant modifications in the development of C4SLs was to apply a

toxicological threshold for contaminants referred to as having a 'Low Level Toxicology Concern' (LLTC) based on the principle of 'low risk' rather than applying the toxicological data which had been used to determine the Health Criteria Value (HCV) which is the approach used to develop the EA SGVs, LQM GACs and EIC GACs and which is regarded as the principle of 'minimal risk'. A similar 'low risk' approach was taken with the assessment of the carcinogen contaminants when considering the Excess Lifetime Cancer Risk (ELCR) exposure whereby a risk estimate of 1 in 50,000 was applied rather than a risk estimate of 1 in 100,000 or lower which had been applied in previous soil risk assessment models as 'minimal risk'.

The underlying principle using HCVs specific for use in contaminated land assessment for a range of soil contaminants using the minimal risk interpretation of the underlying toxicological evaluation which is the approach which was applied in developing the SGVs and the GACs developed previously by LQM and EIC, has been applied in preparing the most recent GACs presented in the document entitled 'The LQM/CIEH S4ULs for Human Health Risk Assessment' published in 2015. The document includes soil guideline criteria for 89 potential contaminants developed by applying the exposure modelling methodology presented in the SPI010 project and the GACs are referred to as 'Suitable for use levels' (S4ULs). The S4ULs have been prepared for generic land uses including residential with and without home grown produce, allotment, commercial and public open space.

Most recently the *Soil and Groundwater Technology Association (SAGTA)* whose members include the Homes and Community Agency, National Grid and Shell announced that they are supporting the next phase of C4SL development by inviting industry professionals to join a Steering Group to provide the oversight for the development of the project and using the skills of these specialist to derive C4SLs for approximately 50 substances.

Have your say

SiLC has established a group on Linked In. It is open to all SiLCs on the register and there are 113 members currently. So if you are a registered SiLC and want to raise any issues, start a debate or flag up what's happening in the sector why not submit a post. All views are welcome on this and how best we can use the group as a means of meaningful communication. Or why not submit an article to the SiLC newsletter

For any formal communication regarding the SiLC scheme please use the e-mail info@silc.org.uk