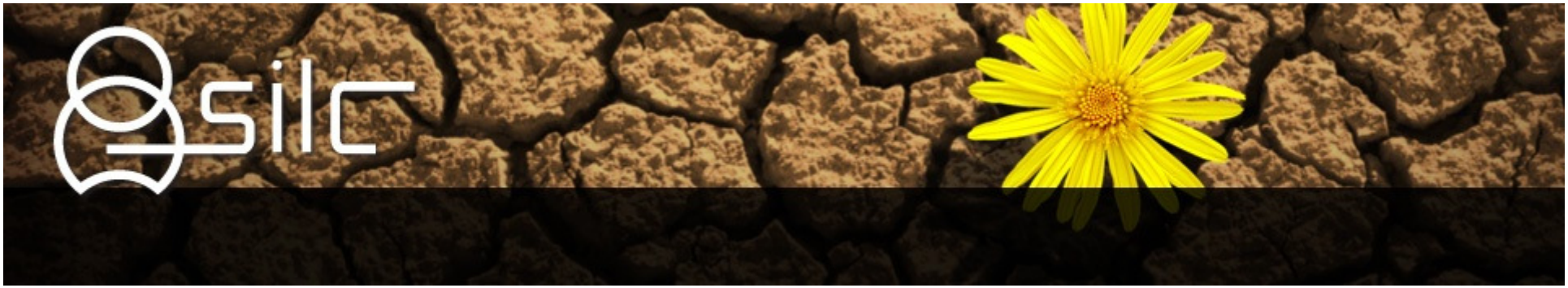


Land Condition
Skills Development Framework

2014 Version 2

iema
INSTITUTE OF ENVIRONMENTAL MANAGEMENT & ASSESSMENT

ROYAL SOCIETY OF CHEMISTRY

CIWEM

AGS

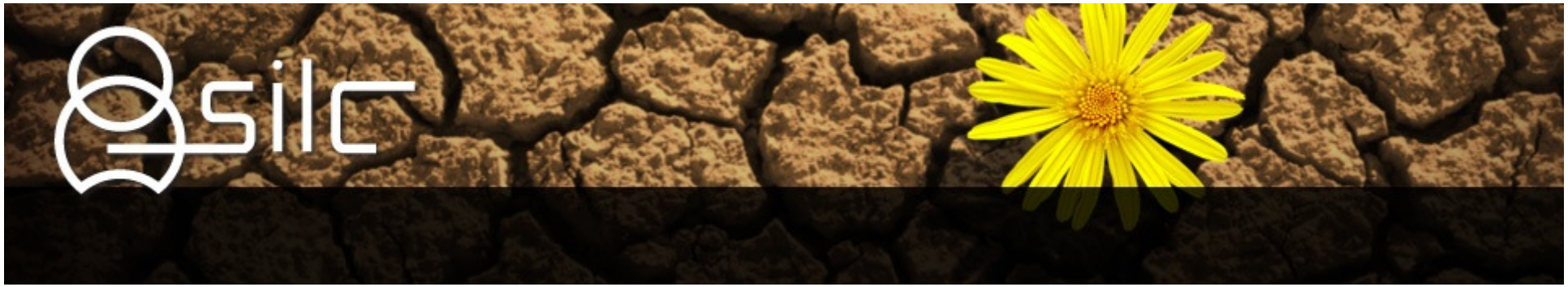
RICS

Chartered Institute of Environmental Health

ice
Institution of Civil Engineers

The Geological Society

silc
SPECIALIST IN LAND CONDITION



Recommendation 1.2.1 of the Brownfield Skills Strategy (2008):

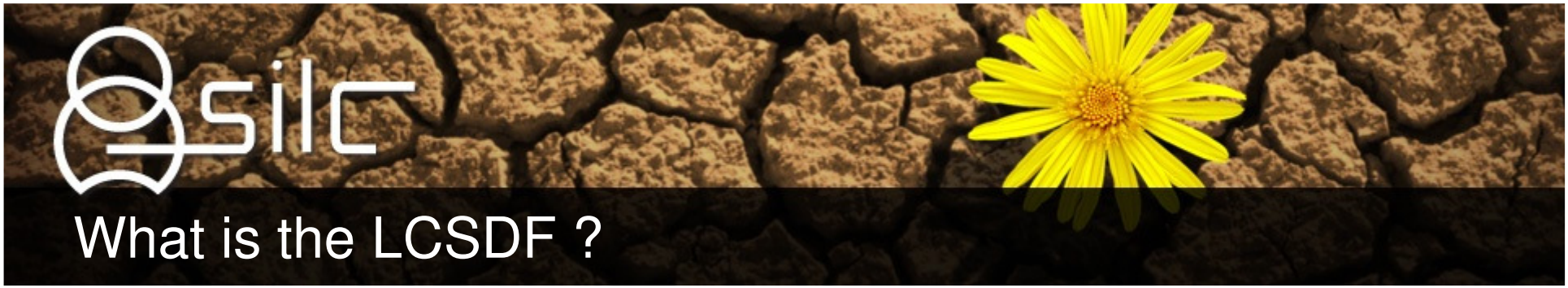
'….working with a range of partners, the Specialist in Land Condition (SiLC) Registration Scheme develop and trial a Land Condition Skills Development Framework and establish whether this will provide an effective model for other sectors/areas of expertise that make up the workforce.'

Funding provided by English Partnerships (now part of the Homes and Communities Agency)

Original version by CL:AIRE in 2009 under guidance of a Project Board

Revised and expanded version by SiLC PTP in 2014

iema INSTITUTE OF ENVIRONMENTAL MANAGEMENT & ASSESSMENT · ROYAL SOCIETY OF CHEMISTRY · CIWEM · AGS · RICS · Chartered Institute of Environmental Health · ice Institution of Civil Engineers · The Geological Society · silc SPECIALIST IN LAND CONDITION



What is the LCSDF ?

- A capability based system
- Sets out descriptions of key behaviour and skills and a combination of knowledge and experience that an individual needs in order to be effective at various tasks at a certain level of capability
- Intended to complement existing institutional frameworks
- Supports an individual's career development
- Enables the measurement of progression
- Encompasses Generic and Technical skills
- Tiered assessment to measure consistently the ability of practitioners throughout all stages of their careers
- In its present form the LCSDF is for *"all those involved in preparing brownfield land for development and/or ensuring it is suitable for its current use"*

Contents

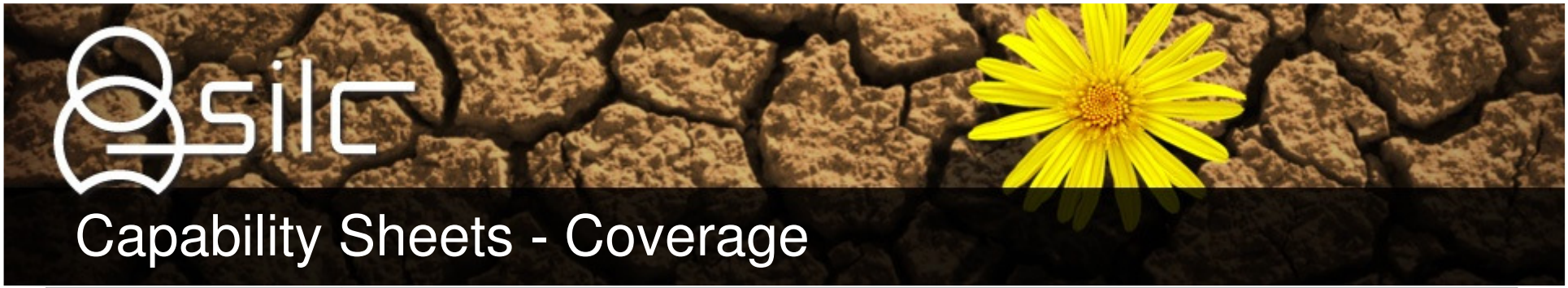
Objective: Working with a range of partners, the Specialist in Land Condition (SiLC) Registration Scheme was tasked with developing a Land Condition Skills Development Framework (SDF) to assist individuals and organisations to develop capability within the brownfield, reclamation and regeneration industry and to establish whether the SDF will provide an effective model for other sectors/areas of expertise that make up the UK workforce.

SPECIALIST IN LAND CONDITION

March 2014

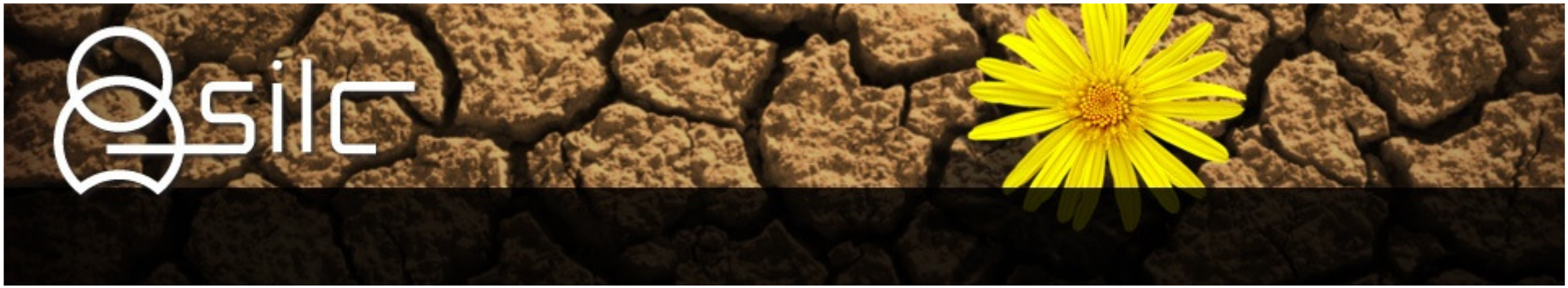
Land Condition Skills Development Framework

Contents



Capability Sheets - Coverage

CAPABILITY TYPE	CAPABILITY
Generic	Personal Effectiveness
	Communication and Interpersonal Effectiveness
	Data and Information Management
	Management and Leadership
	Finance and Commercialism
	Project and Programme Management
	Health and Safety
Technical	Environmental Management
	Legislation and Regulation
	Site Investigation
	Risk Assessment
	Options Appraisal and Design
	Remediation

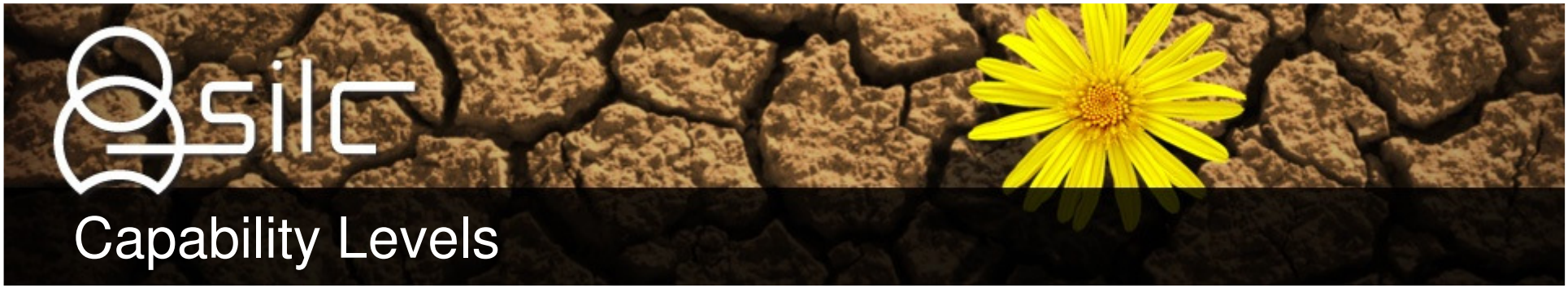


There are 13 headline capabilities split between Generic and Technical. Each capability is divided into a number of key activities.

Just to give 2 examples:

- Personal Effectiveness at the top of the list is split into Organisation, Problem Solving and Decision Making, Personal Development and Training and Professionalism.
- Environmental Management is split into Environmental Awareness, Sustainability, Environmental Impact Assessment and Environmental Auditing.

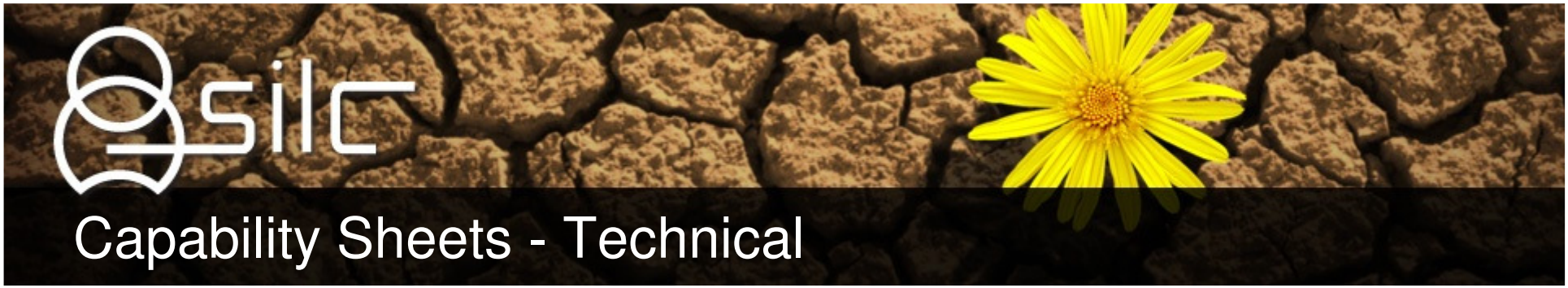
An individual would not necessarily be expected to complete every activity associated with a capability, only those pertinent to their role.



Capability Levels

LEVEL		DESCRIPTION
1	Aware	Has a knowledge of key principles. Requires instruction and close supervision to deliver on routine tasks. May only need an awareness of this area of capability.
2	Basic	Has a basic level of knowledge that allows a contribution in this area. Requires some supervision to deliver at a moderate level of capability in routine tasks.
3	Proficient	Has a level of knowledge and capability that allows delivery on routine tasks without supervision but may need assistance with more complex tasks.
4	Accomplished	Has a thorough and experiential understanding of the area and underlying principles. Copes well with both routine situations and with new or complex situations.
5	Expert	Has extensive knowledge in the subject area. Widely regarded as a leading authority from whom others can learn.

A full suite of Capability Sheets is provided in Annex 10.1 for each of Levels 2 to 5.



Capability Sheets - Technical

Land Condition Skills Development Framework

silc
SPECIALIST IN LAND CONDITION

Risk Assessment – Level 4 Assessment of the probability, or frequency, of occurrence of defined hazards and the magnitude (including seriousness) of the consequences on site users or the wider environment.		
Activities	**Tasks**	**Indicators**
Chemical Assessment *Specify Receptor Type:* • **Humans** • **Waters** • **Ecological** • **Buildings & Services**	- Is able to undertake a preliminary risk assessment involving the evaluation of sources, pathways and receptors and identification of relevant pollutant linkages - Is able to develop a conceptual model encompassing contaminant fate, transport and exposure issues - Is able to evaluate site data and develop appropriate and representative risk assessment model/tool input parameters - Is able to undertake a generic or detailed quantitative risk assessment utilising the outputs from available modelling tools and techniques	***Observation by Line Manager to be documented as part of the regular performance review:*** Completion of a training course **OR** learning package that covers the fundamental areas of chemical assessments. Assessment, structured discussion or presentation used to confirm understanding of key principles **AND** provision of examples of successfully completed assessment
Radiological Assessment	- Is able to undertake a preliminary risk assessment involving the evaluation of sources, pathways and receptors and identification of relevant pollutant linkages - Is able to develop a conceptual exposure model encompassing contaminant fate, transport and exposure issues - Is able to undertake a generic quantitative risk assessment using available modelling tools and techniques - Is able to undertake detailed quantitative risk assessment involving the derivation of site specific assessment criteria	***Observation by Line Manager to be documented as part of the regular performance review:*** Completion of a training course **OR** learning package that covers the fundamental areas of radiological assessments. Assessment, structured discussion or presentation used to confirm understanding of key principles **AND** provision of examples of successfully completed assessment
Physical (Geo-Environmental) Assessment *Specify Type:* • **Subsidence/Ground Stability** • **Slope Stability** • **Flooding**	- Is able to identify relevant geo-hazards - Is able to develop conceptual ground models to predict ground behaviour and environmental interaction specific to present or future land use - Is able to undertake quantitative risk assessment utilising the outputs from available modelling tools and/or techniques	***Observation by Line Manager to be documented as part of the regular performance review:*** Completion of a training course **OR** learning package that covers the fundamental areas of physical assessments. Assessment, structured discussion or presentation used to confirm understanding of key principles **AND** provision of examples of successfully completed assessment

This is just one of the pages of the capability sheets which shows Risk Assessment at Level 4. You can see that the columns are Activities, Tasks and Indicators.

Risk Assessment – sub sets of activity

- **Chemical Assessments**
  - Humans, Waters, Ecology, Buildings & Services
- **Radiological Assessment**
- **Physical (Ge-environmental) Assessment**
  - Subsidence / Ground Stability, Slope Stability, Flooding
- **Numerical Modelling**
  - Chemical Exposure, Air Quality, Geotechnical, Groundwater, Geo-statistics
- **Toxicology**

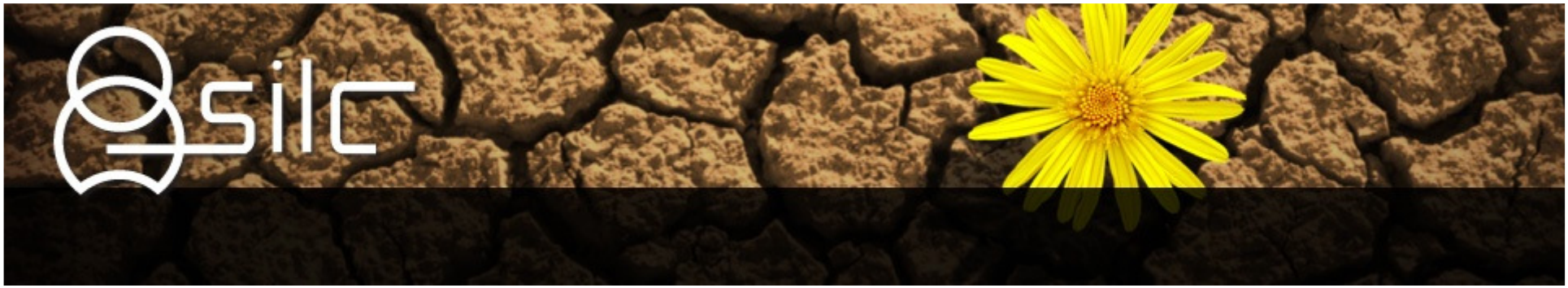
For the example of Risk Assessment, this is split into the activities that you see on the screen. All the other capabilities are likewise split.

Level 4 Risk Assessment – chemical assessment

Tasks

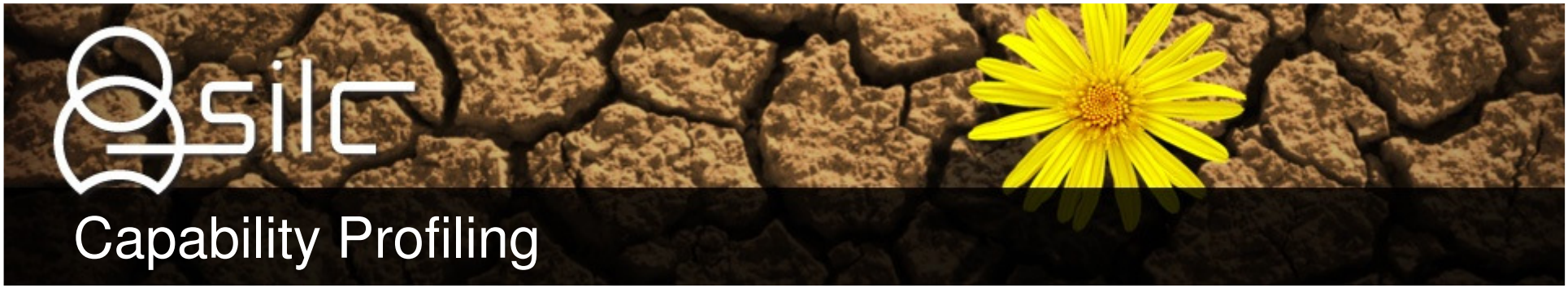
- Is able to undertake a preliminary risk assessment involving the evaluation of sources, pathways and receptors and identification of relevant pollutant linkages
- Is able to develop a conceptual model encompassing contaminant fate, transport and exposure issues
- Is able to evaluate site data and develop appropriate and representative risk assessment model/tool input parameters
- Is able to undertake a generic or detailed quantitative risk assessment utilising the outputs from available modelling tools and techniques

This shows the requirements in the Tasks column for the capability of Risk Assessment, sub activity Chemical Assessment.



- If an individual does not yet wholly meet the requirements described in these sheets it is a good indication that they are at a lower level of capability. This should not be confused with being unable to perform their duties or being "incompetent" in any way. Every post will require a mix of core and supporting capabilities with individuals required to deliver at different levels.

- Individuals who display, for example, Level 2 capability may have all of the knowledge they require to perform their duties, but have yet to put that knowledge into practice or they may still be developing their knowledge. Either way they will still be able to deliver what an organisation requires, but may need some support to be able to do so.



Capability Profiling

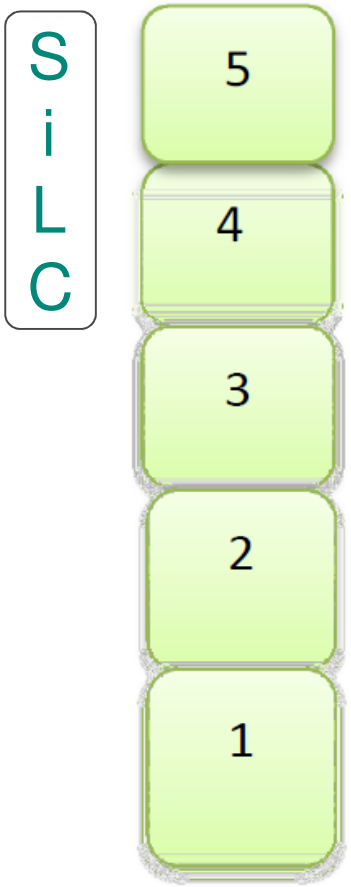
Geo-Environmental Team	Job Role 1		Job Role 2		Job Role 3		Job Role 4		Job Role 5		Job Role 6	
	Technician		Consultant		Senior Consultant		Principal Consultant		Technical Director		Non-Technical Director	
Capability Requirements (Entry/Expected)												
Personal Effectiveness	2	3	3	3	3	3	3	4	4	4	4	4
Communication and Interpersonal Skills	2	3	3	3	3	3	3	4	4	4	4	4
Data and Information Management	2	3	2	3	3	3	3	3	3	3	1	3
Management and Leadership	-	-	-	-	2	3	3	3	4	4	4	4
Finance and Commercialism	-	-	-	-	2	3	3	3	3	4	4	4
Project and Programme Management	2	3	3	3	3	4	3	4	3	4	3	4
Environmental Management	-	-	2	3	2	3	2	3	2	4	1	2
Health and Safety	1	3	2	3	3	3	3	3	3	3	3	3
Legislation and Regulation	1	1	1	2	2	3	3	3	3	4	2	3
Site Investigation	2	3	2	3	3	3	3	3	3	4	1	1
Risk Assessment	-	-	2	3	3	4	3	4	3	4	1	1
Options Appraisal	-	-	2	3	3	4	4	4	4	4	1	1
Remediation	2	3	2	3	3	3	3	4	4	4	1	1

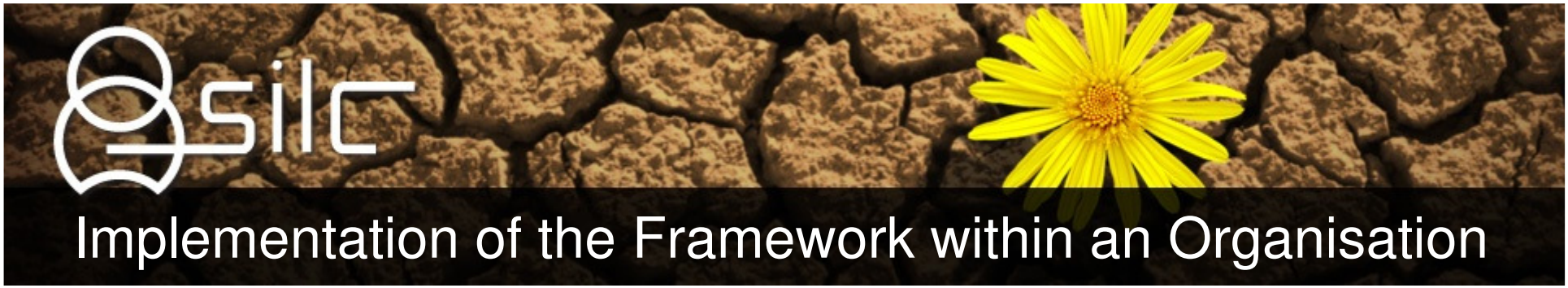
- As there are upwards of 50 activities making up the thirteen core capabilities, the table has been greatly simplified.
- The levels of capability attributed to each post are for illustration only.
- It is a matter for each organisation to dictate what the level of capability should be for each of its employees.

Chartership and SiLC

It is expected that ;

- At Level 1 a practitioner would still be in the early learning stages of their career following graduation.
- A practitioner with the skills and experience necessary for Levels 3 or 4 (depending on Institution) would be capable of applying for Chartership.
- A practitioner operating at Level 4 would be expected to be capable of applying to become a registered SiLC.





Implementation of the Framework within an Organisation

Options for the use of the LCSDF within both public and private sector organisations

- An organisation will adopt this framework as their own and use this to develop those in appropriate roles. It may be that additional capability tables are developed to broaden the applicability to other roles or teams within the organisation.

OR

- An organisation will choose to align or adapt their own existing frameworks with this framework in mind. The key to this happening is the process of benchmarking. It is very important that the concept of capability is adopted (knowledge and practice), the same standards are applied and that the audit trail (evidencing of capability) is the equivalent or better than that of this framework.