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London
W1H 7AL
Telephone: 020 7258 5321
Fax: 020 7258 5322
Website: www.claire.co.uk

Monday 13th October 2008

Dear Consultee,

Consultation on a Framework for Assessing Sustainable Remediation

1. I am writing to invite your views on a draft framework for reaching balanced decisions on remediation selection, which is aimed to help deliver more sustainable remediation.
2. The following documents relating to this consultation may be found on the CL:AIRE website www.claire.co.uk and are also attached to this email:

   - Consultation letter
   - List of consultee organisations
   - Consultation document
   - Glossary of Terms

3. The list of consultee organisations provides details of those organisations to whom notification of this consultation has been emailed. However, we wish the consultation to be an inclusive process, so please feel free to forward this consultation onto others who you think may wish to participate in this consultation.
4. We welcome your views and comments on this piece of work. This is solely an electronic consultation through CL:AIRE's network of contacts and those who had indicated an interest in the SuRF (UK) project.

What consultees are invited to comment on?

5. Detailed in the consultation document are a series of slides with seventeen questions which we would appreciate that you answer by inserting a tick in the relevant box ensuring that you give reasons for your answers. The document is in Microsoft Word format and therefore expandable to allow you to give as detailed answers as possible. Please feel free to use extra sheets if appropriate ensuring that you number your answer according to the question that you are answering. We have included a glossary of terms with words highlighted in "green" in the consultation document for assistance.

Responses

7. Please send your responses by email to: nicola.harries@claire.co.uk.
   Alternatively, responses can be faxed back on 0207 258 5322 marked for Nicola Harries attention or sent by post to:

   Nicola Harries
   CL:AIRE
   7th Floor
   1 Great Cumberland Place
   London, W1H 7AL
   Tel: 020 7258 5321
8. Responses should be received by **27 October 2008**.

9. A summary of responses will also be made available on the CL:AIRE website www.claire.co.uk and will be presented at the next Open Forum meeting to be held on November 18th 2008.
10. Thank you for your help in this matter. If you have any queries please contact us as above.

Yours sincerely,

Nicola Harries
CL:AIRE

LIST OF CONSULTEE ORGANISATIONS

Atkins
Brighton University
Cardiff University
Cobbetts
Delta Simons
DuPont
Edinburgh University
Environmental Industries Commission
English Partnerships
Entec
Environment Agency
Environmental Protection UK
ERM
Golders
ICI
MWH
National Grid
Olympic Delivery Authority
Oxford Brookes University
Planning Officers Society
Qinetiq
r3 Environmental
SAGTA
Shell Global Solutions
Sirius
Strathclyde University
Teeside University
URS
Waste Management
White Young and Green
Worley Parsons

CONSULTATION ON A FRAMEWORK FOR ASSESSING SUSTAINABLE REMEDIATION

The Sustainable Remediation Forum UK (SuRF-UK) is developing a framework for balanced decision-making in contaminated site management. As a Consultee who has indicated an interest in this process, please find detailed below the first stages of development of the framework which we would welcome your thoughts on. We have provided some background to the development to help you to understand how we have come to our current position and now welcome your thoughts and ideas to take it forwards.

Detailed below are a series of slides telling a story describing how the SuRF UK Steering Group have developed their thinking over the last few months. We thought it would be useful to understand how SuRF UK Steering Committee envisages the framework will work and look. Please insert your name and organisation as this will assist us to understand which sector you work in and then read each question and answer by inserting a tick in the relevant box and then give your reasons for your answer. The document is in Microsoft Word format so is expandable to enable you to give more detail where needed. Once completed please email back to Nicola Harries at CL:AIRE (nicola.harries@claire.co.uk) or fax back to CL:AIRE's office on 0207 258 5322 marked for the attention of Nicola Harries by October 27th. Results will be fedback (in anonymous and summarised form) at the Open Forum meeting on 18th November and posted on the CL:AIRE website.

NAME:

COMPANY or ORGANISATION REPRESENTING:

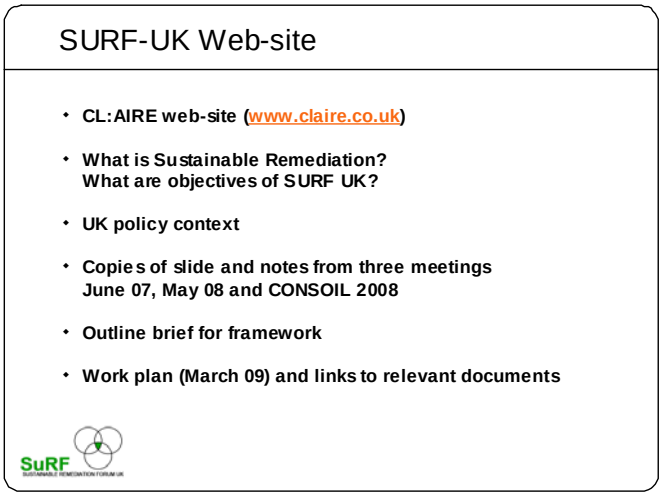

Figure 1

CL:AIRE secured funding from English Partnerships to take forward the Sustainable Remediation Forum UK (SuRF UK) in January 2008. An open forum meeting was held in May 2008 presenting the working mission statement of SuRF UK and opening the floor to ideas on how a framework, tools and case studies may link together. A website was launched in July 2008 detailing the above and outlining the brief and proposed work plan up until March 2009.

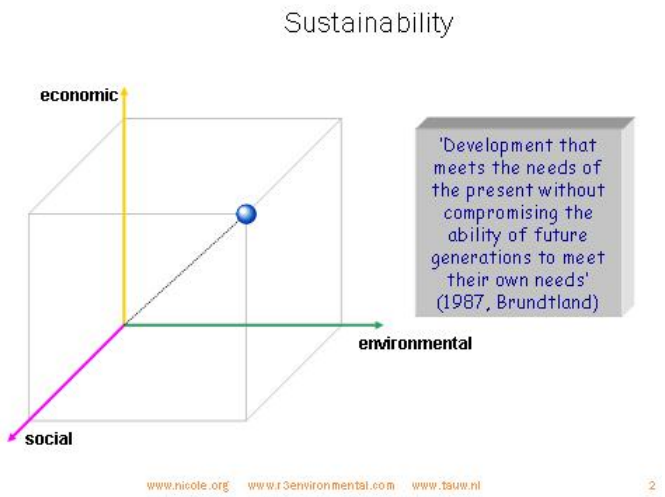

Figure 2

The most widely accepted definition of Sustainable Development is that of Brundtland 1987 as stated in figure 2. This is considered an overarching vision within which sustainable remediation fits.

There are three elements to sustainable development:

- Environment
- Economy and
- Society

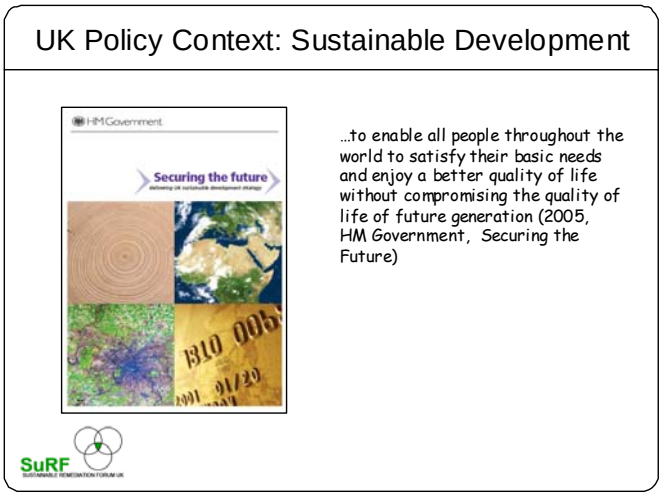

Figure 3

Ref 1: Securing the Future - http://www.defra.gov.uk/sustainable/government/publications/uk-strategy/index.htm

Building on Brundtland and previous national policy papers, the UK government launched their own policy definition on sustainable development through " Securing the Future[1]" in 2005. It was from this report that the UK developed its own broad policies on sustainable development see figure 3 for details..

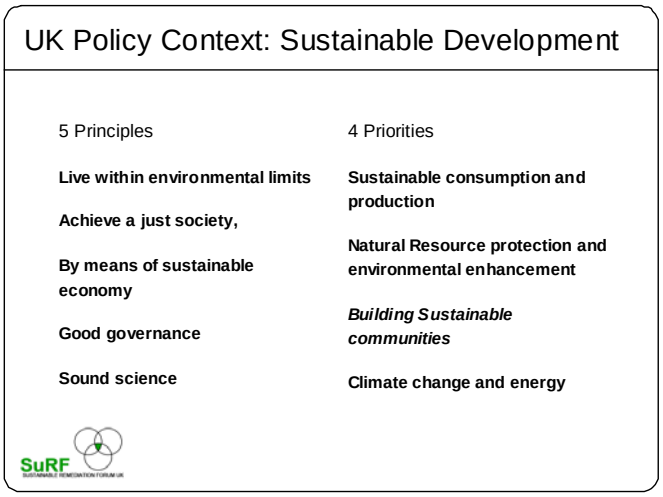

Figure 4

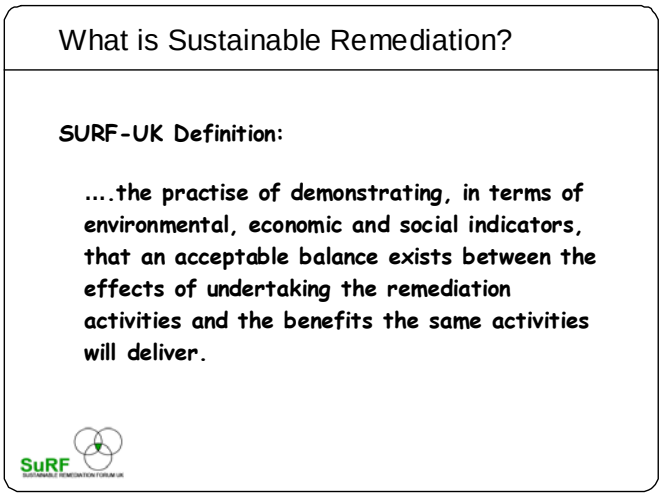

Figure 5

Using Brundtland's definition as a foundation, SuRF UK define sustainable remediation as detailed in Figure 5.

Question 1:

Do you agree that sustainable remediation decision making is about the balance of social, economic and environmental aspects?

1. Strongly Disagree	
2. Disagree	
3. No View	
4. Agree	
5. Strongly Agree	

Please give your reasons:

Ref 2:

United States Environment Protection Agency (EPA) – Green Remediation:

http://www.clu-in.org/download/remed/Green-Remediation-Primer.pdf

Question 2:

Alternatively, do you think that sustainable remediation should be synonymous with "green remediation"[2] and focus exclusively on measurement and improvement of environmental aspects/impacts?

1. Strongly Disagree	
2. Disagree	
3. No View	
4. Agree	
5. Strongly Agree	

Please give your reasons:

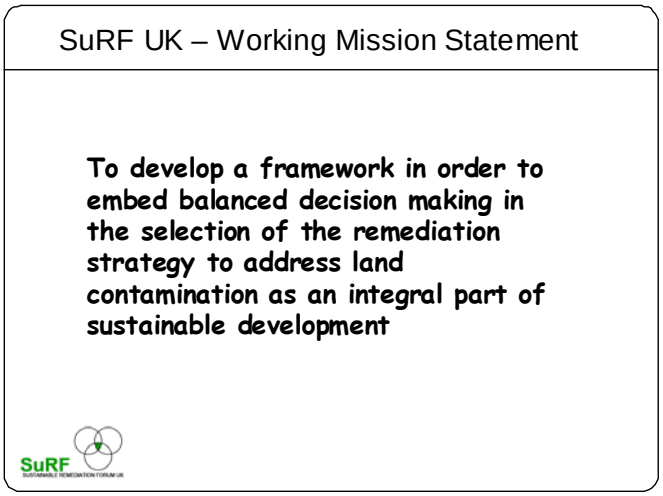

Figure 6

SuRF UK has developed a working mission statement which is detailed in Figure 6.

Framework

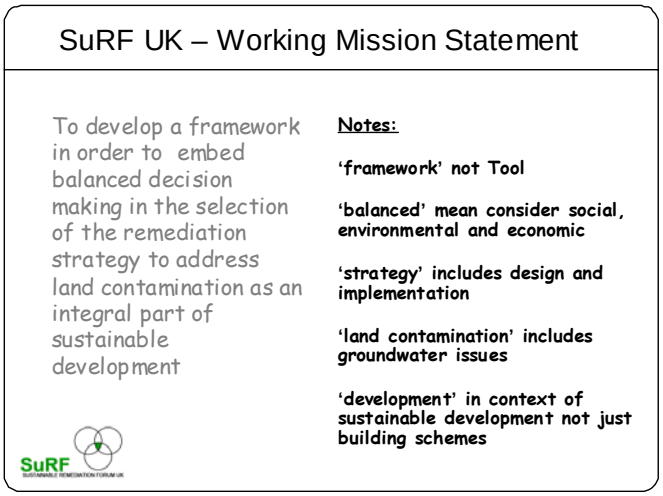

Figure 7

The working mission statement of SURF UK has its emphasis on: developing a framework, balanced decisions that consider social, economic and environmental aspects, long and short-term considerations, that is broader than just the remediation activity, and which aligns to sustainable development.

Question 3:

Do you agree with the emphasis of SuRF UK's mission statement?

1. Strongly Disagree	
2. Disagree	
3. No View	
4. Agree	
5. Strongly Agree	

Please give your reason:

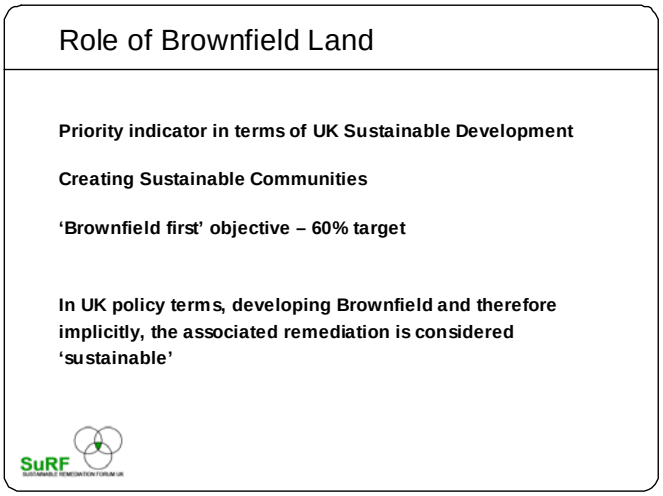

Figure 8

Within UK government policy, building sustainable communities is a priority area. It is therefore considered that brownfield redevelopment is 'sustainable' as evidenced by the 60% target for new developments on brownfield land.

Question 4:

Do you think it is a reasonable assumption to accept that (properly designed and implemented) brownfield redevelopment is fundamentally a 'sustainable' activity?

1. Strongly Disagree	
2. Disagree	
3. No View	
4. Agree	
5. Strongly Agree	

Please give your reasons:

Ref 3: Code for Sustainable Homes 2008, CLG: http://www.communities.gov.uk/publications/planningandbuilding/codesustainabilitystandards

A SuRF UK framework presents an opportunity to align with the aspirations of the Code for Sustainable Homes [3].

Question 5:

Do you agree that a SuRF UK framework should be designed to dovetail with the new Code for Sustainable Homes[3] ?

1. Strongly Disagree	
2. Disagree	
3. No View	
4. Agree	
5. Strongly Agree	

Please give your reasons:

Figure 9

With a large amount of new guidance released over the last few years with references to sustainable development or sustainable assessment or sustainable practice, it is difficult to see how land contamination management and remediation fits in.

Figure 10

Contaminated Land Management and Remediation is indirectly part of several policy areas, as the industry straddles across a number of different sectors. These include the construction/housing sector, planning sector and waste sectors. Each of these sectors is gradually being given sustainability targets to meet. Therefore SURF UK consider it is important for the land contamination management and remediation sector to define what it considers to represent 'sustainable' action.

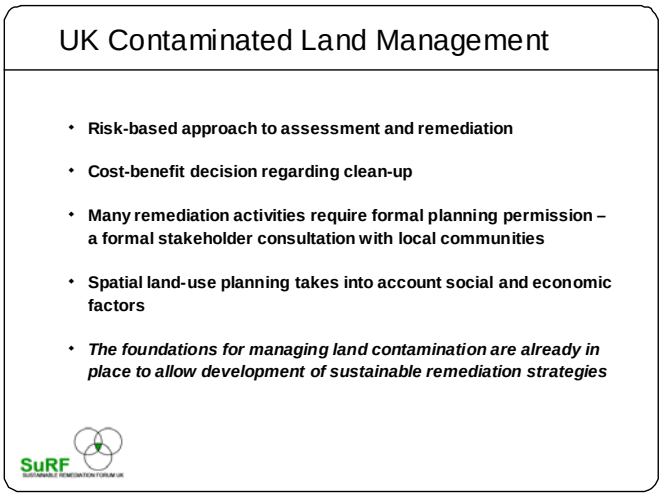

Figure 11

There are a number of aspects in the land contamination management system that already implicitly include sustainability in aspects in their appraisal systems and therefore would allow the development of sustainable remediation strategies relatively easily. Firstly, the use of risk-assessment, suitable for use and cost-benefit analysis are part of our regulatory toolkit, thus making remedial projects more sustainable by restricting the volume of soils to be managed to that which is necessary to address unacceptable risk. Secondly, much activity takes place within the UK town and country planning system that involves stakeholder consultation. Planning authorities already have to have regard to certain social issues (e.g. nuisance such as noise and traffic), environmental impact and effects of the local economy.

The Town and Country Planning process[4] represents an appropriate input to the assessment process with a SURF UK framework.

Ref 4: The Town and Country Planning Act 1990, HMSO http://www.opsi.gov.uk/ACTS/acts1990/ukpga_19900008_en_1

Question 6:

Do you agree that the framework should be aligned with the Town and Country Planning process?
(Recognising that a framework must also align with activities outside the planning processes)

1. Strongly Disagree	
2. Disagree	
3. No View	
4. Agree	
5. Strongly Agree	

Please give your reasons:

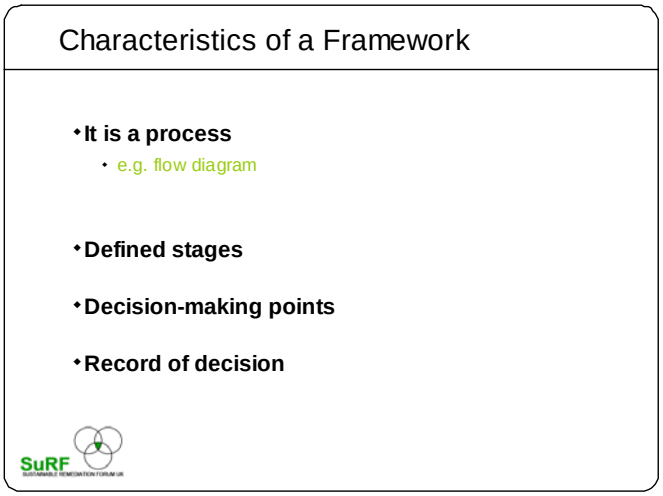

Figure 12

In line with the SuRF UK Mission Statement, we believe that the framework could be a process, with defined stages and have clear decision making points and clear records of decisions (like a flow diagram)

Question 7:

Do you agree that the framework should be defined as a process like a flow diagram, which has specific stages, decision-points, and requires decision records?

1. Strongly Disagree	
2. Disagree	
3. No View	
4. Agree	
5. Strongly Agree	

Please give your reasons:

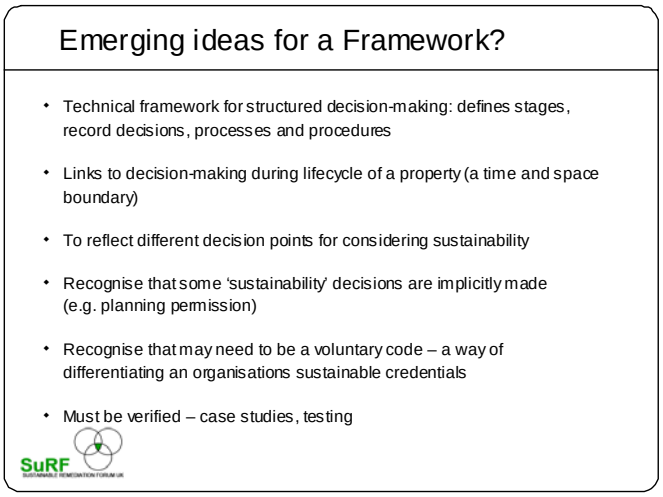

Figure 13

We believe that the framework should be a concise technical framework for structured decision making with defined stages, which enables decisions, processes and procedures to be recorded.

Question 8:

Do you agree that the framework should be in the order of 10 pages long and based around a process or flow diagram?

1. Strongly Disagree	
2. Disagree	
3. No View	
4. Agree	
5. Strongly Agree	

Please give your reasons:

Question 9:

Do you agree that a framework would best serve the sector as a voluntary best practice approach that organisations have the choice to follow?

1. Strongly Disagree	
2. Disagree	
3. No View	
4. Agree	
5. Strongly Agree	

Please give your reasons:

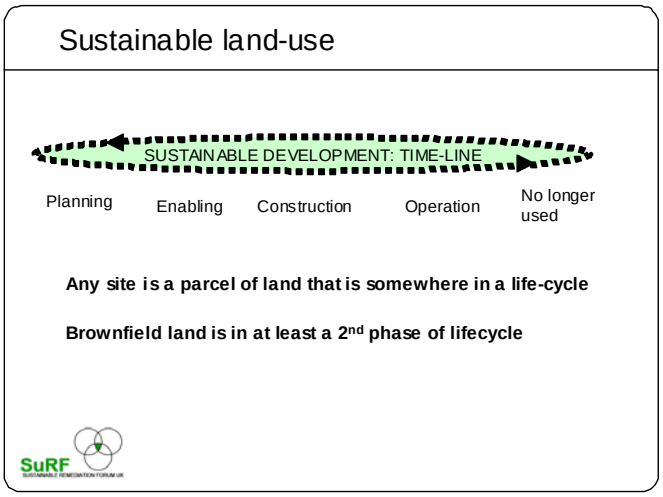

Figure 14

Building on an idea tabled at the first open forum, the time and space boundaries for sustainable decision-making could be based around the lifecycle of a piece of land, recognising that brownfield land is at least in the 2nd phase of its lifecycle.

There are several stages that a parcel of land will go through as shown on Figure 14.

These conceptual time and space boundaries dovetail well with the idea that sustainability decisions can have both core and non-core aspects.

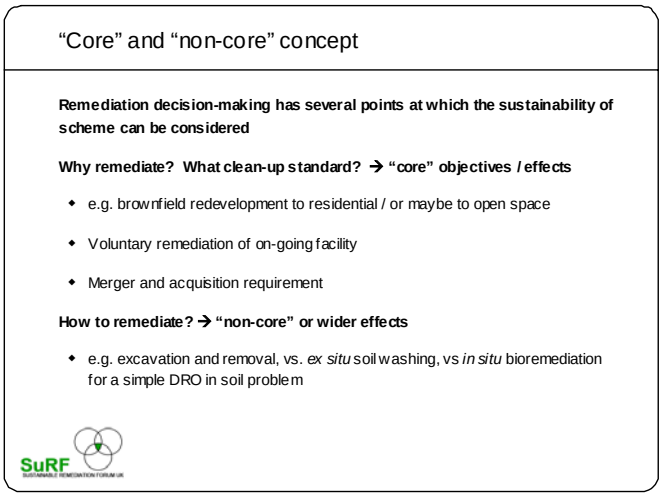

Figure 15

The concept of core and non-core objectives as presented in EA R&D Report P238[5] essentially recognises that sustainability decisions can be made at both the point of remediation design/activity (non-core) and at the point of setting the main objectives for the project such as designation of the end-use of the land in question (core).

Question 10:

Do you agree the "core" / "non core" concept, as presented in the previous EA report, is a useful model for underpinning UK ideas on the how, when, what and why of assessing sustainable remediation?

1. Strongly Disagree	
2. Disagree	
3. No View	
4. Agree	
5. Strongly Agree	

Please give your reasons:

Ref 5: Environment Agency R&D Technical Report P238 http://publications.environment-agency.gov.uk/pdf/STRP238-e-p.pdf

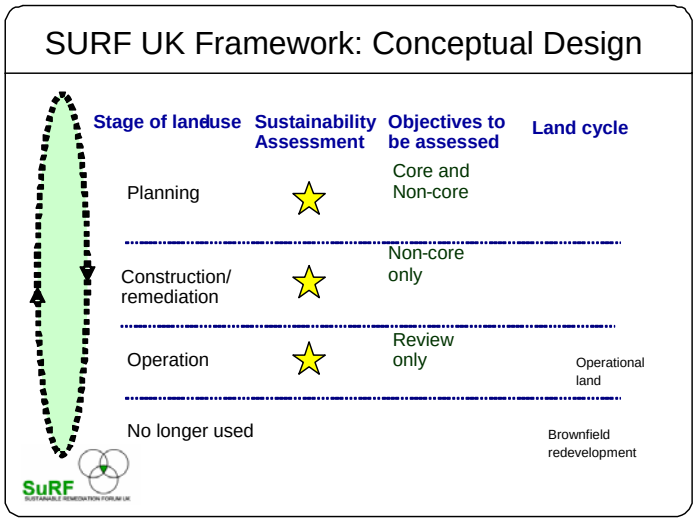

Figure 16

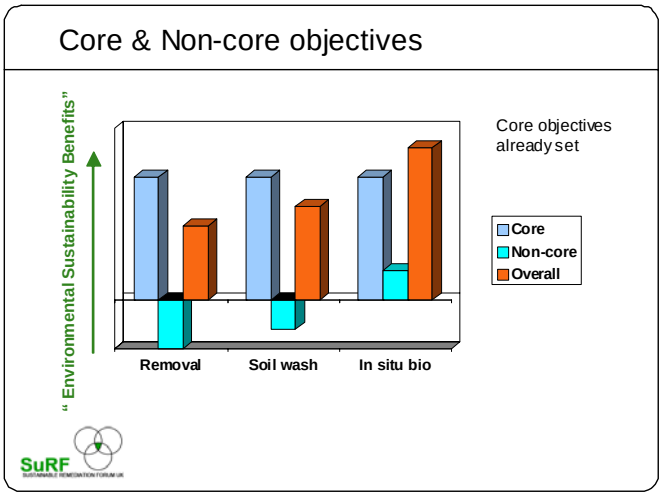

Figure 17. Note: technology selection and relative weightings are completely arbitrary and are used only to schematically illustrate a concept.

Following on from the core and non-core concept, Figure 15 demonstrates how sustainability assessments can be carried out throughout the life cycle of a site depending on the stage of land use the site is at.

The top two stars on Figure 16 show the potential points when sustainability decision-making can be made and whether core and non-core objectives can be established. The lowest star is a post-project verification.

The 'Landcycle' concept was suggesting that within this parcel of land, lifecycle of Brownfield land follows the entire cycle, whereas Operational land is already established so does not have a planning component or a decommissioning period, in the context of remediation-decision making (however it may be counter-argued that sustainable decision regarding operational land may be most effectively made at point of decommissioning).

Question 11:

Do you agree that a framework should apply to both brownfield redevelopment and operational land?

1. Strongly Disagree	
2. Disagree	
3. No View	
4. Agree	
5. Strongly Agree	

Please give your reasons:

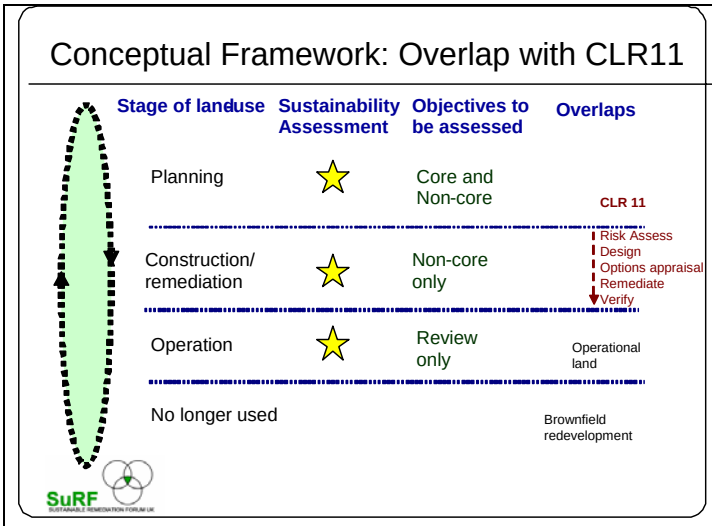

Figure 18

Within this same land life-cycle concept for sustainability decisions it is suggested that the stages of CLR11 are essentially a sub-set of the SURF framework since CLR11 process does not commence at the land-use planning stage.

Question 12:

Do you agree that the CLR11 process is a framework related to the risk assessment, remedial design, remediation and verification process and is consistent with the non-core aspects of sustainable remediation decisions?

1. Strongly Disagree	
2. Disagree	
3. No View	
4. Agree	
5. Strongly Agree	

Please give your reasons:

Question 13:

Do you agree that if a SURF UK framework is to capture both core and non-core aspects then it needs to serve a wider timescale than CLR11. Consequently, CLR 11 is a compatible sub-process within SuRF UK?

1. Strongly Disagree	
2. Disagree	
3. No View	
4. Agree	
5. Strongly Agree	

Please give your reasons:

Question 14:

Do you agree there appear to be 2 main points at which a sustainability assessment can be made: 1) At point of planning/site strategy development (i.e. core objectives) and 2) At point of remediation (non-core objectives ?

1. Strongly Disagree	
2. Disagree	
3. No View	
4. Agree	
5. Strongly Agree	

Please give your reason:

Question 15:
There are a range of key reports published by the Environment Agency that relate to sustainable remediation: CLR11, R&D reports P238 (Assessing the wider environmental values of land contamination), P278 (Groundwater (GW) remediation cost benefit analysis (CBA) review), P279 (GW remediation CBA framework) and P316 (CBA of land contamination) . Are there any other key sources that you feel should be used. Please state the source and its availability and explain why you think it is important?

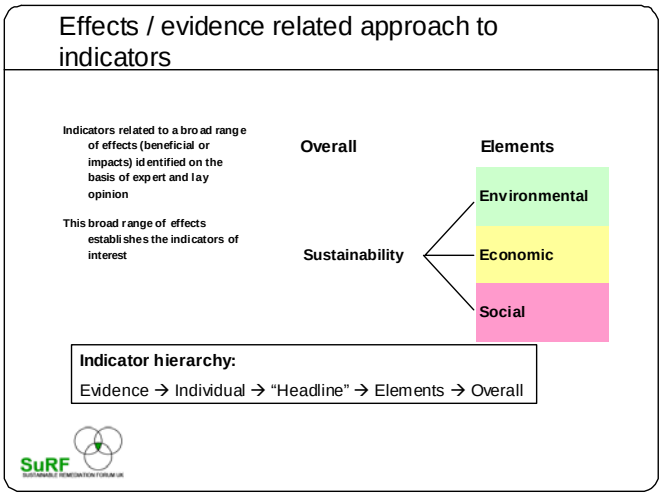

Figure 19

Following on from Figure 13 and emerging ideas for the framework it is envisaged that evidence will need to be gathered under the three main elements environmental, economic and social. Each of these could be drawn from a series of aggregated "headline" indicators, in turn derived from assessments of individual indicators supported by an evidence base. This would provide a structured approach.

Question 16:
Do you agree that, in terms of understanding sustainable remediation, the "when" is defined by a framework, the "what" are the indicators and the "how" is the tools?

1. Strongly Disagree	
2. Disagree	
3. No View	
4. Agree	
5. Strongly Agree	

Please give your reasons:

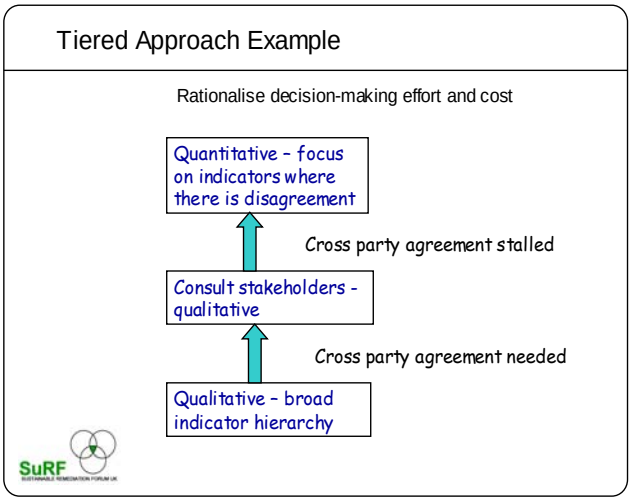

Figure 20

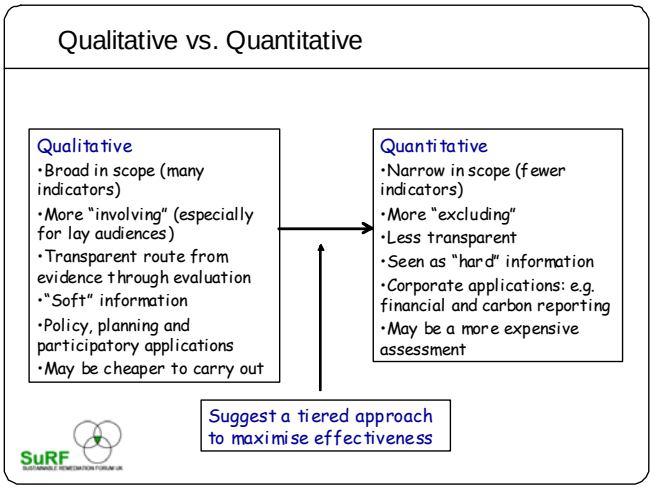

Figure 21

Early conceptual thinking on how the SURF framework develops is suggesting a tiered approach can be taken at each point decision-making point progressing from simpler qualitative methods of assessment to quantitative methods.

Question 17:

Does the idea of a tiered approach to decision-making methodology represent the right way to progress the SuRF framework?

1. Strongly Disagree	
2. Disagree	
3. No View	
4. Agree	
5. Strongly Agree	

Please give your reasons:

On behalf of the SuRF UK Steering Committee we would like to thank you for your time in completing this questionnaire. Please email your response back to Nicola Harries (nicola.harries@claire.co.uk) by 27th October 2008 or fax back to the CL:AIRE offices on 0207 258 5322 marked for the attention of Nicola Harries.

SURF Glossary – Consultation Specific

This glossary is not intended to be a set of formal definitions, nor to supplant terms defined by organisations such as ISO. Rather it is intended to convey the meaning of terms as they have been used in this consultation. See also: http://www.sustainabilitydictionary.com.

Term	Contemporary Usage
Code for Sustainable Homes	To improve the overall sustainability of new homes by setting a single national standard within which the home building industry can design and construct homes to higher environmental standards and offers a tool for developers to differentiate themselves within the market.
Contaminated Land Management (CLM)	The process of managing the legacy of past and continuing industrial activities that have contaminated areas, which may present a hazard to the environment and human health to greater or lesser extents.
Core aspect	Describes the activities and their outcomes that are a result of the core objectives and project specific factors and constraints.
Core objectives	Those remediation objectives that need to be achieved in order to enable redevelopment; to reduce risks to human health, surface and groundwaters, ecosystems and construction; to reduce liabilities, or some combination of the preceding, reached after consideration of site specific factors / constraints and taking into account the views of the stakeholders for that site.
Flow diagram	A diagrammatic representation of a procedure or protocol or series of procedures / protocols
Framework	A skeletal and fundamental structure, as for a written work, outlining a set of assumptions, concepts, values, and practices that constitutes a way of viewing reality.
Green remediation	United States Environmental Protection Agency (US EPA) definition of “The practice of considering all environmental effects of remedy implementation and incorporating options to maximize net environmental benefit of cleanup actions.”
Headline indicator	Some indicators may be selected as headline indicators – usually because they describe key issues. They are often supported by a subset of indicators. Usually they form a quick guide or overview and can be used to engage public awareness and focus attention. For instance, the UK sustainable development project has 15 headline indicators which are used to make up a quality-of-life barometer. In this case the “headline” indicator can perhaps be seen as “an indicator of indicators”. Aggregated or composite indicators may also be used as headline indicators to provide an overarching view of several individual indicators.
Indicator	An indicator is a single characteristic that can be compared between options to evaluate their relative performance towards specific sustainable development concerns. Indicators need to be

Term	Contemporary Usage
	measurable or comparable is some way that is sufficient to allow this evaluation.
Land Cycle	The life cycle of a particular piece of land, to encompass its full history of operations, present setting, future aspirations and what is required to achieve those aspirations.
Life Cycle	The life cycle of a product encompasses its manufacture, its use and its disposal / fate.
Non-core aspect	Describes the effects of and/or desires for a project not addressed by its core aspects. See also core aspect.
Non-core objectives	Those secondary remediation objectives that need to be achieved after the core objectives have been set. For example, increasing the retail value of the site.
Remediation	(a) The doing of anything for the purpose of assessing the condition of – (i) the contaminated land in question; (ii) any controlled waters affected by that land; or (iii) any land adjoining or adjacent to that land; (b) the doing of any works, the carrying out of any operations or the taking of any steps in relation to any such land or waters for the purpose-(i) of preventing or minimising, or remedying or mitigating the effects of, any significant harm, or any pollution of controlled waters, by reason of which the contaminated land is such land; or (ii) of restoring the land or waters to their former state; or (c) the making of subsequent inspections from time to time for the purpose of keeping under review the condition of the land or waters. (DETR, 2000)
Risk assessment	The process of assessing the likelihood and magnitude of harm associated with exposure to defined hazards.
Site / project specific	Pertaining to an individual site or project / dependent on individual site or project characteristics.
Sustainability assessment / appraisal	A system intended to determine the contribution of a particular project or action to achieving sustainable development.
Sustainable development:	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Brundtland 1987).
Sustainable remediation	SuRF UK definition: “The practice of demonstrating, in terms of environmental, economic and social indicators, that an acceptable balance exists between the effects of undertaking the remediation activities and the benefits of the same activities will deliver.”
System	Collection of materially and energetically connected unit processes which performs one or more defined functions