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Successfully incorporating sustainability parameters into a remedial options appraisal

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Presented at: New Advances and Practical Solutions to Achieve Cost-Effective, Sustainable Brownfield Remediation; Thursday 24 October, Radisson Blu Portman Hotel, London



Acknowledgements

- Disclaimer: this presentation is a personal view
- However, it is based on SuRF-UK (www.claire.co.uk/surfuk) and Steering Group members past and present who have kindly shared slides and ideas
 - Nicola Harries – CL:AIRE
 - Jonathan Smith – Shell Global Solutions / SAGTA
 - Naomi Regan / Frank Evans – National Grid / SAGTA
 - Trevor Howard / Alison Hukin – Environment Agency
 - Brian Bone - Bone Environmental Consultant Ltd
 - Paul Bardos – r3 Environmental Technology Ltd
 - Richard Boyle – Homes and Communities Agency
 - David Ellis – DuPont and SURF USA.



What I was asked to cover in 15 minutes...

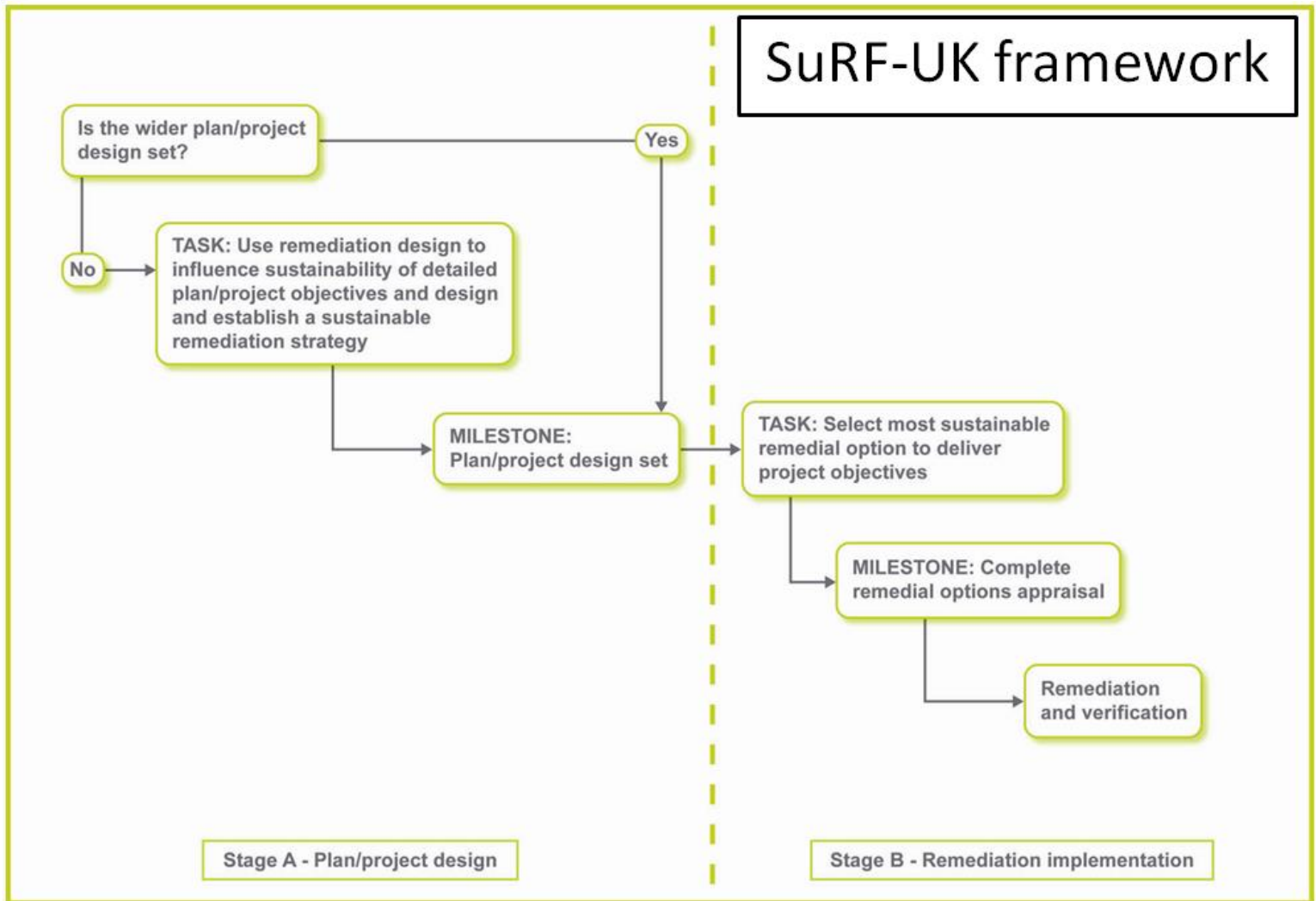
- Risk assessment vs sustainability assessment
- The SuRF-UK framework and sustainability assessment
- The process of sustainability assessment and use of indicators
- Finding a balance between subjective opinion and quantifiable results
- Considering both short & long-term and whole lifecycle issues (boundaries)
- Dealing with small sites
- Links between sustainable remediation assessment and the revised Part 2A guidance
- Tools for effective sustainable remediation practice and sustainability assessment



Risk assessment vs. sustainability assessment

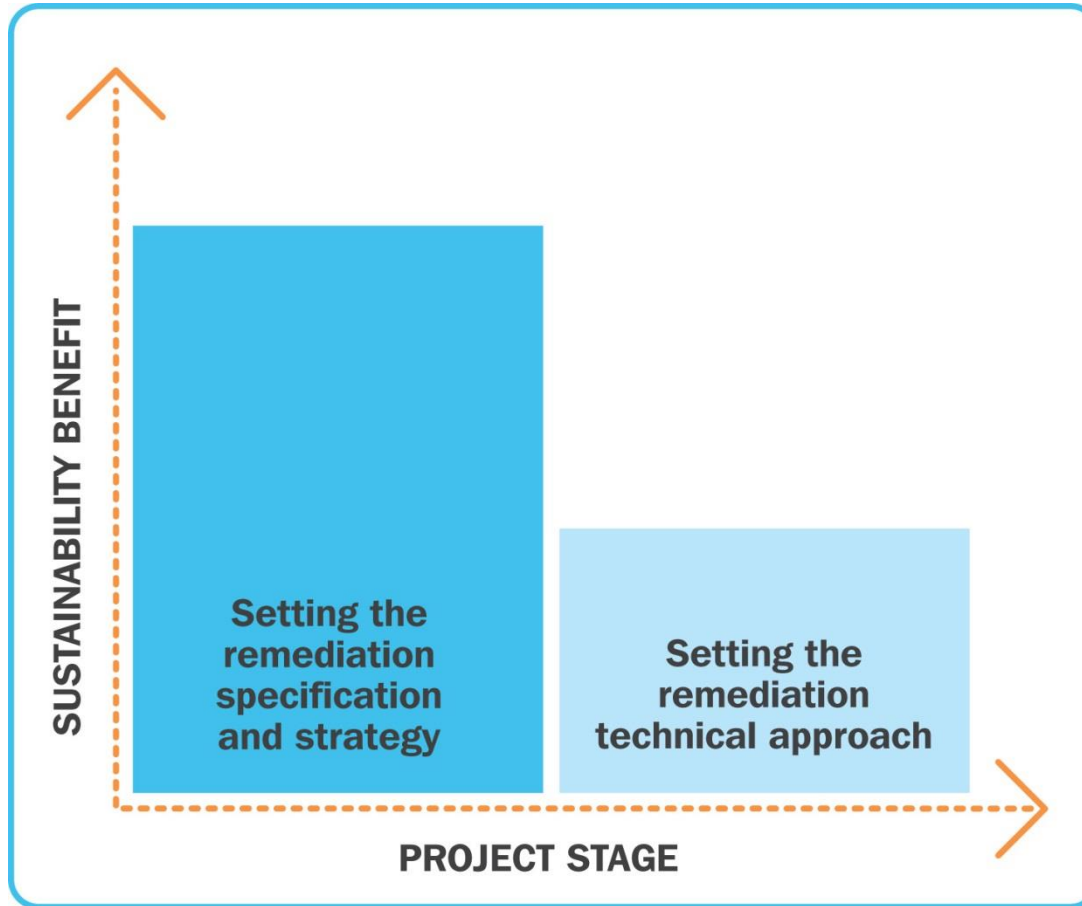
- These are not competing paradigms
- Risk management provides the rationale for remediation
- Sustainable remediation is about the optimal means of delivering the necessary risk management

- When and how should both frameworks be used instead of, or alongside, each other?
 - They are never used instead of each other
 - Risk assessment and sustainability assessment should always be used to guide remedial decision making
 - The two concepts work alongside each other



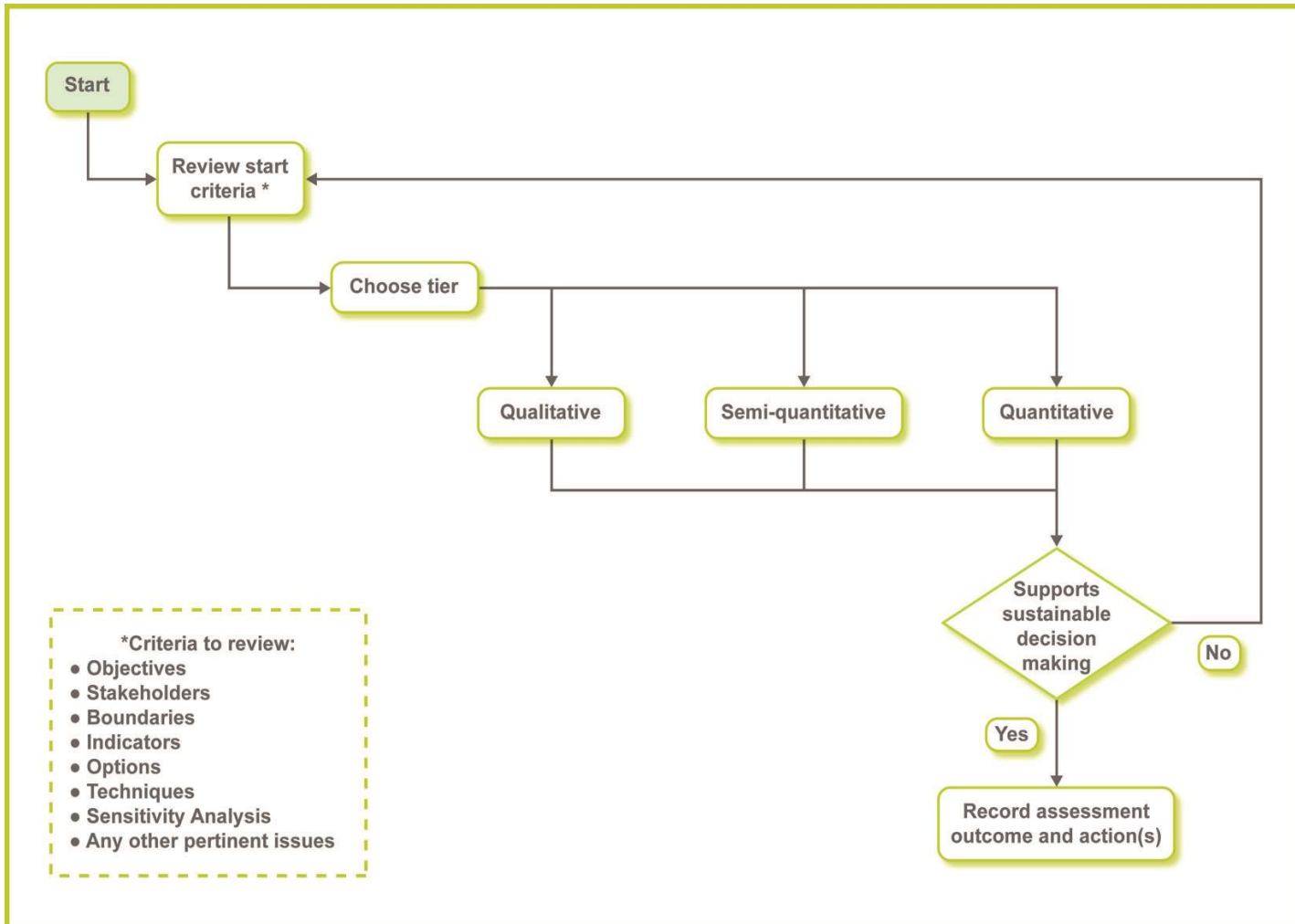


Early consideration may improve benefit



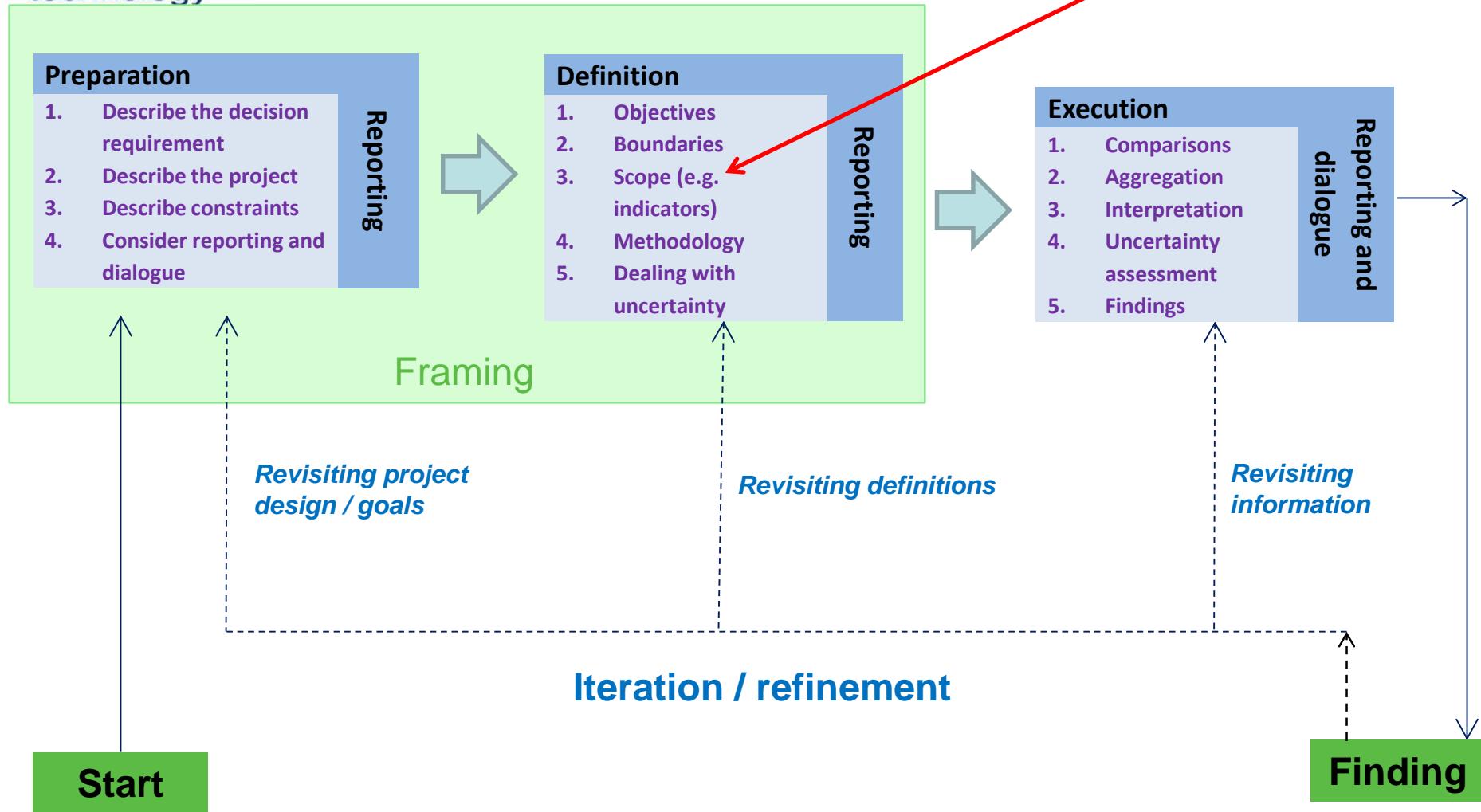


Use a tiered approach to sustainability assessment





Sustainability assessment and indicators





What do we mean by “indicator”

- Assessment of sustainability includes:
 - The methods and techniques used for sustainability assessment (the how?)
 - and the factors that need to be considered (the what?)
- Sustainability encompasses a wide range of considerations which vary for each project / site
- An “indicator” describes an observable characteristic for a specific factor that can be compared
- They can be used as:
 - Criteria in decision making
 - Performance indicators in monitoring

Basically a metric is a quantifiable indicator



The scope of “sustainability”

- The range of indicators we may consider

Environment	Social	Economic
Emissions to Air	Human health & safety	Direct economic costs & benefits
Soil and ground conditions	Ethics & equality	Indirect economic costs & benefits
Groundwater & surface water	Neighbourhoods & locality	Employment & employment capital
Ecology	Communities & community involvement	Induced economic costs & benefits
Natural resources & waste	Uncertainty & evidence	Project lifespan & flexibility

- “Annex 1” guidance from www.claire.co.uk/surfuk



Objectivity and subjectivity

- Some criteria may be capable of objective quantification, for example a direct cost or emissions to air.
- Some criteria are quantitative but contain buried assumptions which may make them more or less subjective, e.g. a carbon footprint.
- Some criteria may be solely or largely based on perceptions, for example a landscape impact.
- **Objectivity and subjectivity may have no bearing on importance.**
- Dialogue is an important tool in dealing with subjectivity and improving the reliability of sustainability assessment



A quick note on boundaries

- Any assessment or model must have a consistent approach to boundaries that is clear to all
- System boundary
 - Ensuring like is compared with like, and the assessment is complete
- Level of detail
 - Realistic and avoiding over-estimation (will every nut and bolt be considered... how do we take into account equipment that might be used multiple times)
- Proximity and temporal
 - A consideration may be temporary and local, but still important



A quick note on small sites

- For all sites start simple
- Use the minimum level of effort that provides reliable decision making information
- Hopefully for a small site this will be a qualitative Tier 1 assessment
- As a general starting point when planning any operations from site investigation onwards, always consider SuRF-UK Sustainable Management Practices to minimise sustainability “impacts”



Sustainable remediation and guidance

- Directly supports option appraisal in CLR 11 “Model Procedures”
- Potentially in line with tests of “reasonableness” in the revised Part IIA guidance
- SuRF-UK Framework is supported by key agencies
- SuRF-UK framework and approaches are consistent with (and often adopted by) other international sustainable remediation initiatives

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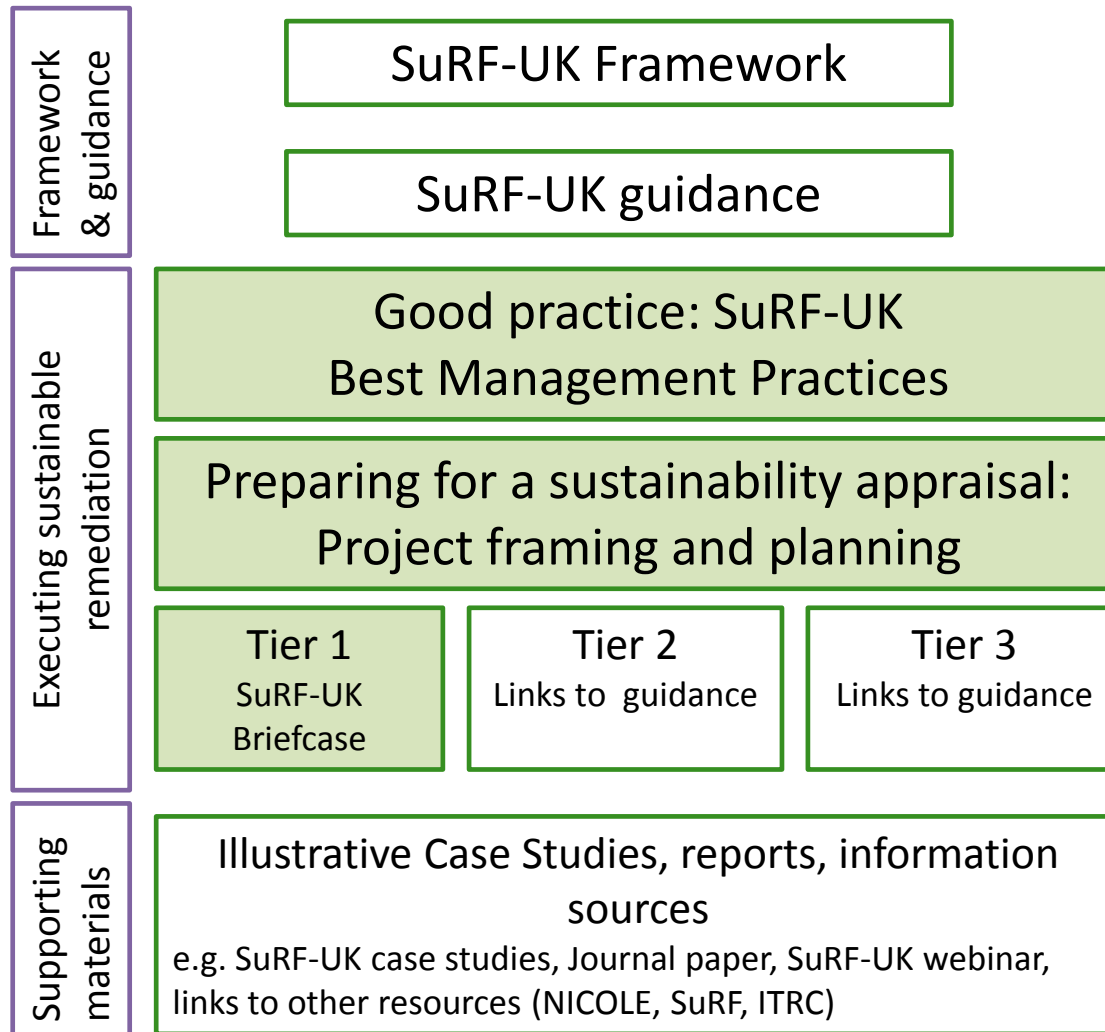
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Toolkit: SuRF-UK Road-Map





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Thank You

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