Building on CLR11: A Practitioners Framework for Remediation

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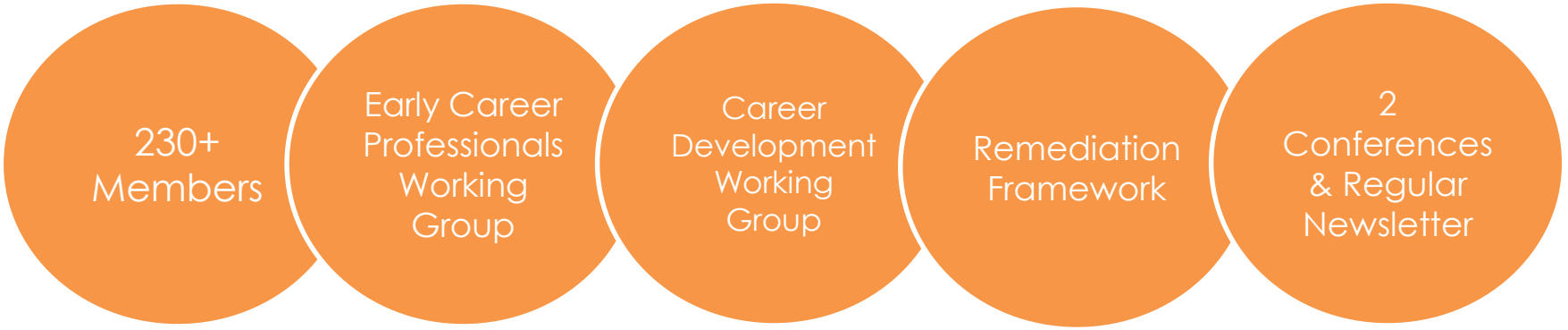
RemSoc Treasurer

To Cover

1. RemSoc
2. An introduction to the framework
3. Next steps

About RemSoc

- A forum within which people can discuss and promote good practice in Remediation
- To encourage the participation of ‘early career professionals’
- To facilitate the dissemination of knowledge
- To develop a framework for the design, implementation, optimisation and verification of works
- Promote remediation best practice – explore the good and the bad and share the learnings



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Framework Guidance

…. A practitioner's guide to remediation

Why do remediation projects fail?

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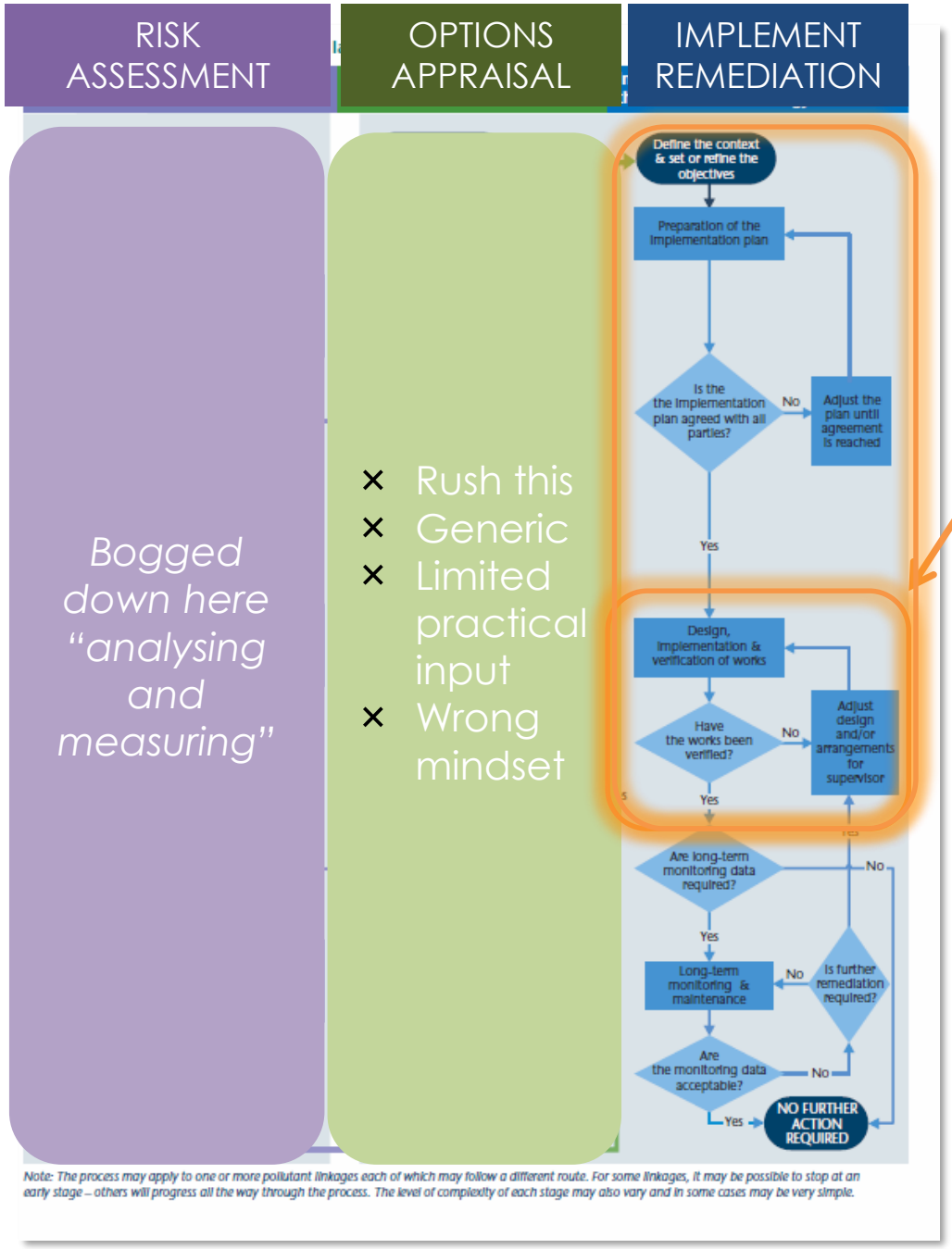
Framework Guidance – Why?

Early discussions amongst RemSoc members identified:

- Limited practical guidance around the design and implementation of remediation works
- Limited hands on information to support the remediation practitioner
- Different practitioners focus on different areas
- A lot of "unknown unknowns"

We challenged ourselves to explore and progress the development of a framework to support and guide the activities that should be considered in the implementation of a remediation programme.

Looking at CLR11.....



This is the area we are focused on

- Lots of detail leading up to and after remediation
- Remediation is a big and often complicated financial commitment
- But the design and delivery gets the smallest amount of attention in CLR11

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I. Protection of human health and the Environment

II. Safe Working Practices

III. Consistent, Clear & Reproducible Evidence Based Decision Making

IV. Record Keeping & Transparent Reporting

V. Good Governance and Stakeholder Involvement

VI. Sound Science

A Word on Surf UK Guiding Principles

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Framework Guidance – Objective

To develop a framework which ….

- Is applicable to a wide variety of remediation activities and scenarios
- Is flexible, and can be added to or adapted in response to the needs of practitioners and as our industry develops further
- Provides a useful point of reference and guidance for remediation practitioners at all levels
- Can be used as ‘tool’ in the implementation process

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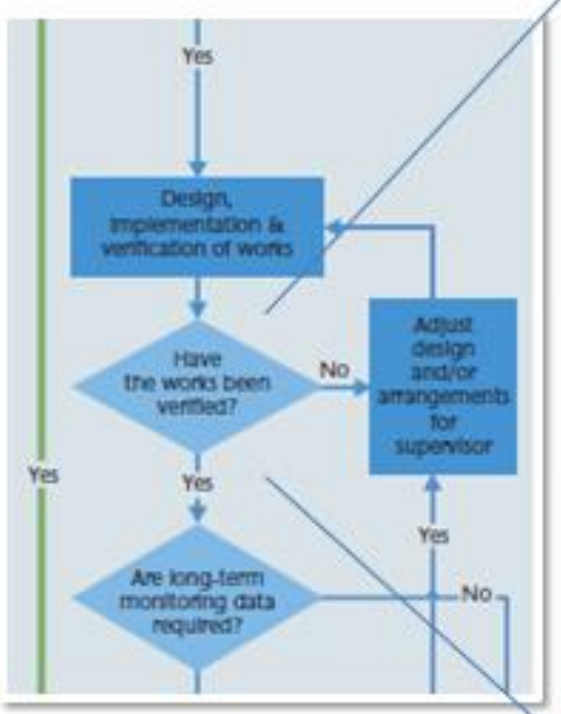
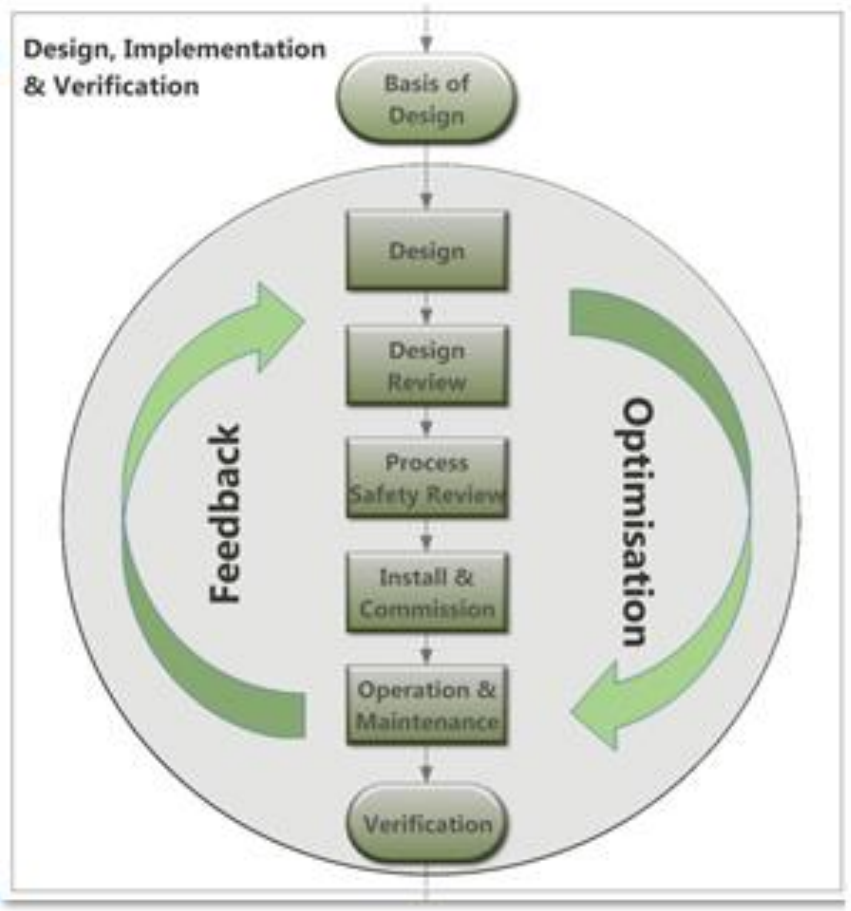
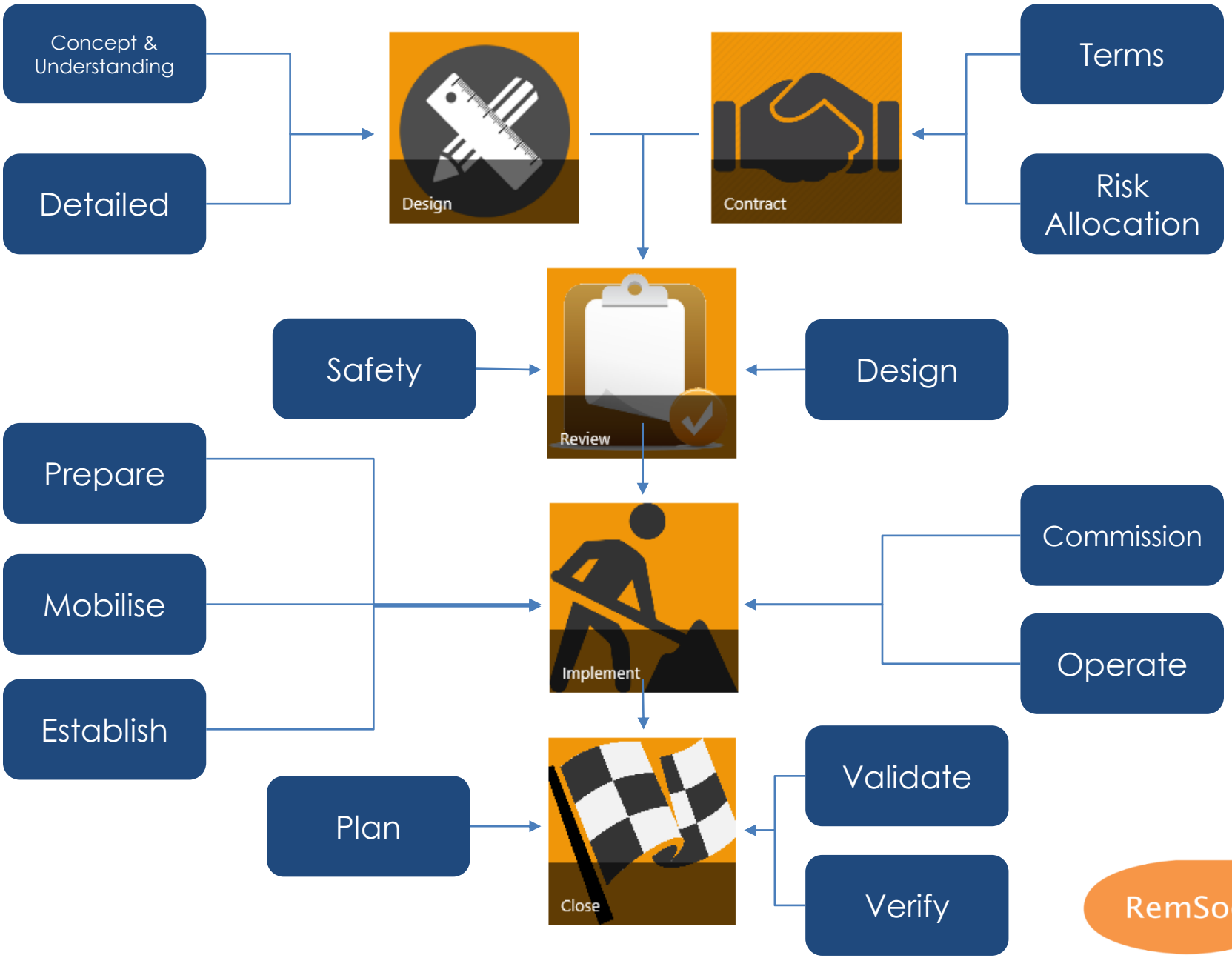
Framework Guidance – Where we were in 2016






Concept & Understanding
Detailed
Design
Contract
Terms
Risk Allocation
Safety
Review
Design
Prepare
Mobilise
Establish
Implement
Commission
Operate
Plan
Close
Validate
Verify
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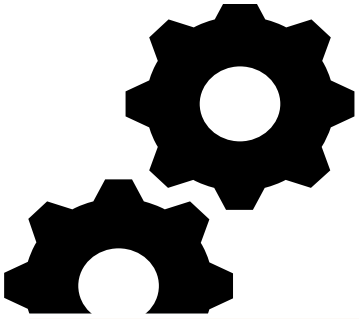
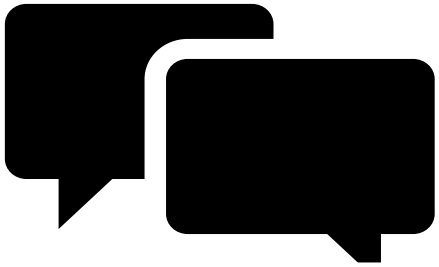
Framework Guidance Structure



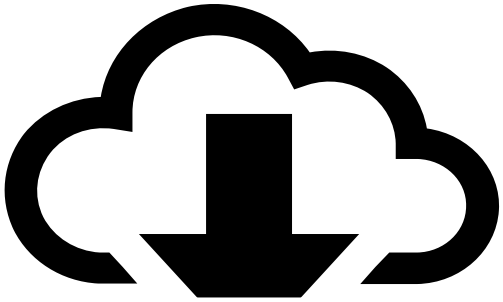
Remediation Stage

Aspect to Consider

Relevant Questions



Comments & Prompts



Guidance or References

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For Example

Feature	Example
	Review
	Design Review
	Compliance with regulations
	What acts and regulations need to be complied with? What permits are needed to complete the works? Can they be obtained within the project timescales?
	These could include Environmental permit/Mobile Plant Licence; Abstraction licence; Discharge consent; Materials Management Plan; Asbestos Management Plan; Streetworks license; Machinery Directive (CE); DSEAR / ATEX; PUWER; CDM; Pressure systems regulations; Party Wall Act; Planning Regulations; Waste Licensing Regulations; Archaeological and Ecological aspects; Petroleum Regulations and Storage of Flammable Liquids
	http://www.hse.gov.uk/fireandexplosion/atex.htm (Link to ATEX Regulations as an example)

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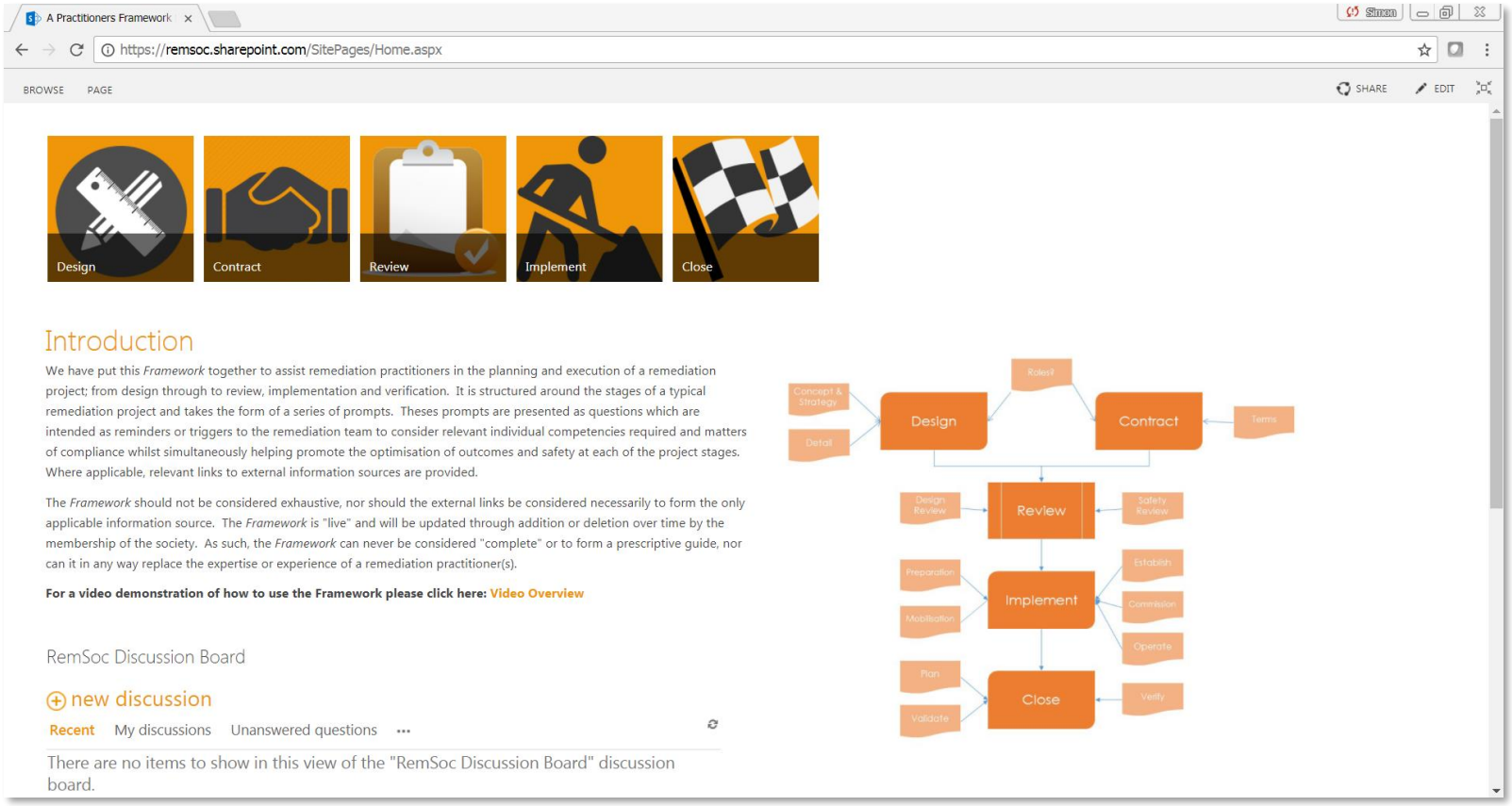
Framework Guidance



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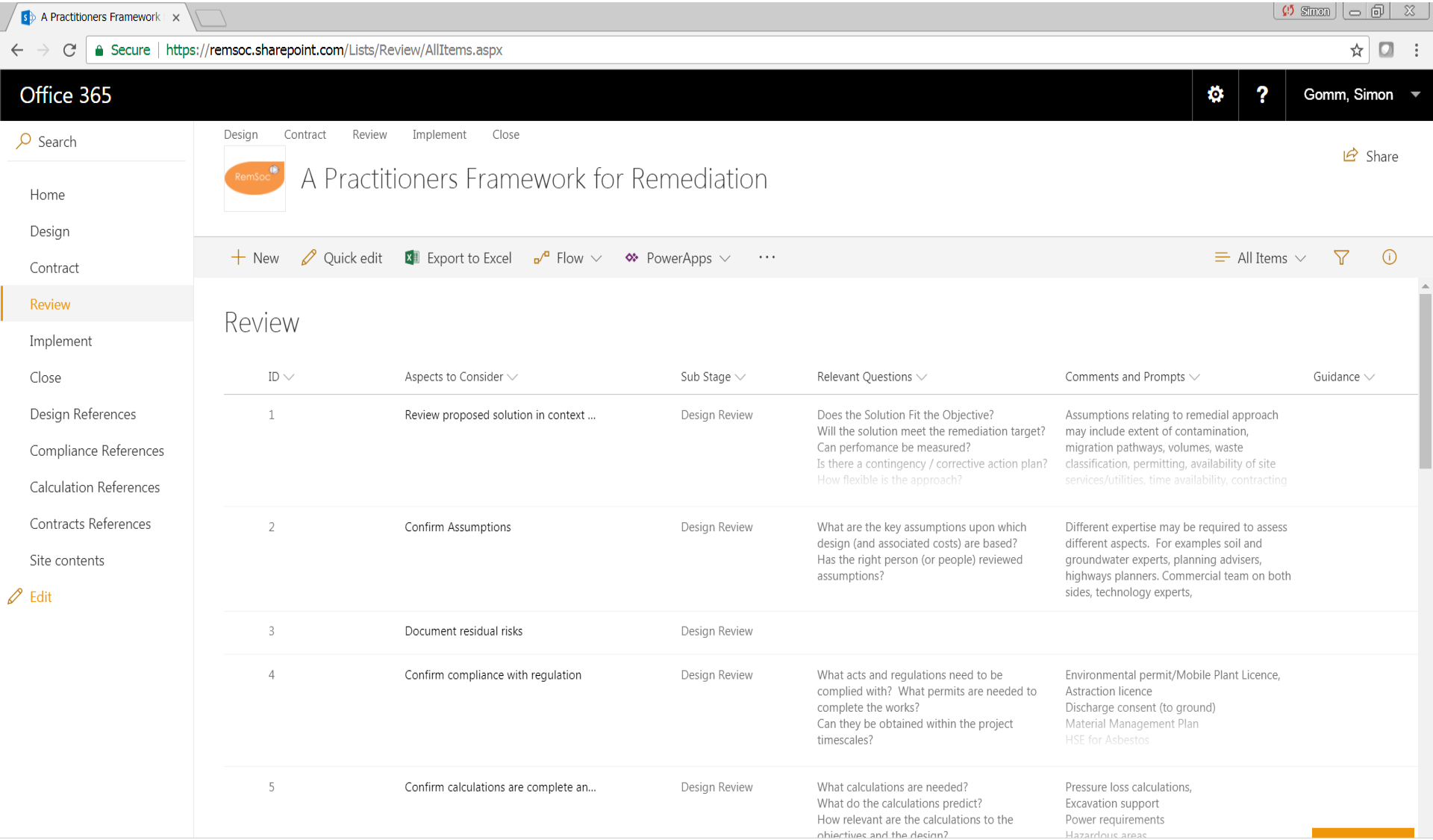
A Practitioners Framework
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Office 365
Gomm, Simon
Search
Home
Design
Contract
Review
Implement
Close
Design References
Compliance References
Calculation References
Contracts References
Site contents
Edit
Design Contract Review Implement Close
A Practitioners Framework for Remediation
Share
New
Quick edit
Export to Excel
Flow
PowerApps
All Items
Review
ID
Aspects to Consider
Sub Stage
Relevant Questions
Comments and Prompts
Guidance
1
Review proposed solution in context ...
Design Review
Does the Solution Fit the Objective?
Will the solution meet the remediation target?
Can perfomance be measured?
Is there a contingency / corrective action plan?
How flexible is the approach?
Assumptions relating to remedial approach may include extent of contamination, migration pathways, volumes, waste classification, permitting, availability of site services/utilities, time availability, contracting
2
Confirm Assumptions
Design Review
What are the key assumptions upon which design (and associated costs) are based?
Has the right person (or people) reviewed assumptions?
Different expertise may be required to assess different aspects. For examples soil and groundwater experts, planning advisers, highways planners. Commercial team on both sides, technology experts,
3
Document residual risks
Design Review
4
Confirm compliance with regulation
Design Review
What acts and regulations need to be complied with? What permits are needed to complete the works?
Can they be obtained within the project timescales?
Environmental permit/Mobile Plant Licence,
Astraction licence
Discharge consent (to ground)
Material Management Plan
HSE for Asbestos
5
Confirm calculations are complete an...
Design Review
What calculations are needed?
What do the calculations predict?
How relevant are the calculations to the objectives and the design?
Pressure loss calculations,
Excavation support
Power requirements
Hazardous areas
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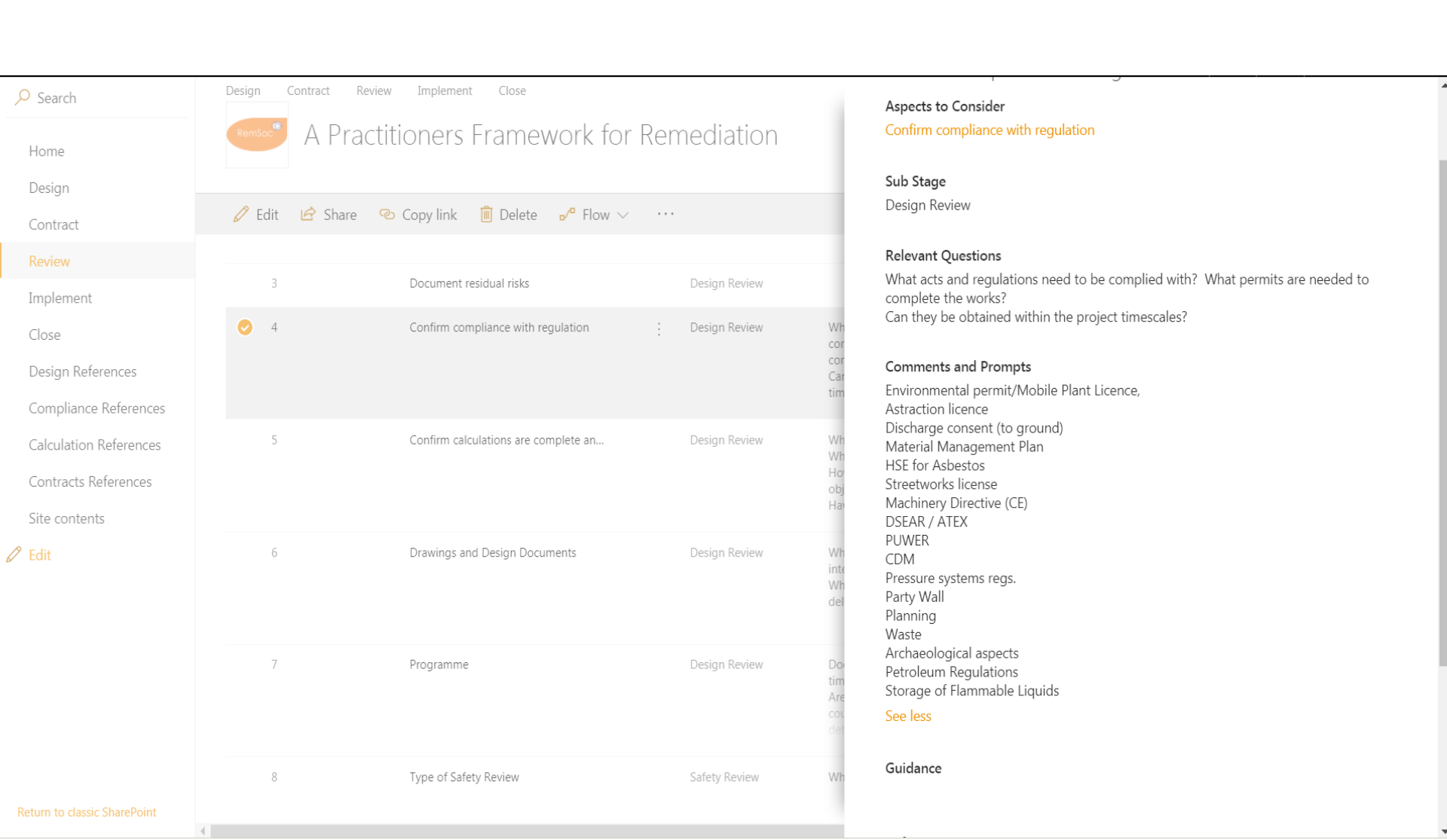
Search
Home
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Design References
Compliance References
Calculation References
Contracts References
Site contents
Edit
Return to classic SharePoint
Design
Contract
Review
Implement
Close
A Practitioners Framework for Remediation
Edit
Share
Copy link
Delete
Flow
3 Document residual risks Design Review
4 Confirm compliance with regulation Design Review
5 Confirm calculations are complete an... Design Review
6 Drawings and Design Documents Design Review
7 Programme Design Review
8 Type of Safety Review Safety Review
Aspects to Consider
Confirm compliance with regulation
Sub Stage
Design Review
Relevant Questions
What acts and regulations need to be complied with? What permits are needed to complete the works?
Can they be obtained within the project timescales?
Comments and Prompts
Environmental permit/Mobile Plant Licence,
Astraction licence
Discharge consent (to ground)
Material Management Plan
HSE for Asbestos
Streetworks license
Machinery Directive (CE)
DSEAR / ATEX
PUWER
CDM
Pressure systems regs.
Party Wall
Planning
Waste
Archaeological aspects
Petroleum Regulations
Storage of Flammable Liquids
See less
Guidance

A Practitioners Framework for Remediation

Share

New | Quick edit | Export to Excel | Flow | PowerApps | ... | All Items

Compliance References

Title	Link	Modified	Modified By
Abstraction Licence	Abstraction Licence	January 16	Quentin Hulm
Archaeological aspects	Archaeological aspects	January 16	Quentin Hulm
Asbestos	Asbestos	January 16	Quentin Hulm
ATEX	ATEX	January 16	Quentin Hulm
CDM - Construction Design Manage...	CDM	January 16	Quentin Hulm
CDM - Construction Phase Plan	Construction Phase Plan	January 16	Quentin Hulm
CDM - Construction Quality Assuranc...	CQA	January 16	Quentin Hulm
COSHH - What is it?	ROSPA COSHH Guide	January 16	Quentin Hulm
Dangerous Substances and Explosive ...	DSEAR Regulations	January 16	Quentin Hulm
Discharge consent (to ground)	Discharge consent (to ...	January 16	Quentin Hulm

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www.hse.gov.uk/fireandexplosion/atex.htm
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Related content

- REACH
- Exemption certificates
- COMAH
- Chemicals
- Risk

ATEX and explosive atmospheres

Explosive atmospheres in the workplace can be caused by flammable gases, mists or vapours or by combustible dusts. Explosions can cause loss of life and serious injuries as well as significant damage.

These pages will tell you more about explosive atmospheres and ATEX:

Background

Explosive atmospheres can be caused by flammable gases, mists or vapours or by combustible dusts. If there is enough of the substance, mixed with air, then

Resources


Dangerous su and explosive atmospheres L138 (Second


Controlling fir explosion risk workplace

More resources

See also

- Dept for Business Innovation and Sk
- Energy Institute
- Association for Pe and Explosives Administration (A
- Petroleum Enforc

A Practitioners Framework for Remediation

8	Type of Safety Review	Safety Review	Wh
9	Safety Review Attendees	Safety Review	Wh
10	Safety Review Location	Safety Review	Wh
11	Safety Review Duration	Safety Review	Ho rev
12	Safety Review Output(s)	Safety Review	Ho inc
13	Process Safety Considerations	Safety Review	To

Type of Safety Review

Aspects to Consider

Type of Safety Review

Sub Stage

Safety Review

Relevant Questions

What form should safety review take?

Comments and Prompts

Procedure should be proportionate to the proposed activity. For complex process system otr system with mulitiple tie in points to site process infrastructure, formal HAZOP procedure may be appropriate.A HAZID type procedure is typically adequate for process remediation systems.
Systematic safety reviews may also be appropriate for other types of remedial work programmes (including injection programmes, excavation programmes, on site treatment plant.

See less

Guidance

Examples of HAZID templates can be found in HAZOP : Guide to Best Practice, 2nd Edition. Author(s): Brian Tyler, Frank Crawley and Malcolm Preston. Publisher: IChemE. Clients may often have similar processes and procedures.

Guidance on appropriate types of review can be found in IChemE guidance.

See less

Reference List

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8	Type of Safety Review	Safety Review	What form should safety review take?	Procedure should be proportionate to the proposed activity. For complex process system otr system with mulitiple tie in points to site process infrastructure, formal HAZOP procedure may be appropriate.A HAZID type	Examples of HAZID te HAZOP : Guide to Bes Author(s): Brian Tyler, Malcolm Preston. Pub may often have simil
9	Safety Review Attendees	Safety Review	Who should participate in safety review?	Design engineer, health and safety representative, project manager, other specialists, chairperson, someone to record process. It may also be useful to include personnel who are not part of the main project	
10	Safety Review Location	Safety Review	Where should safety review be undertaken?	Is it necessary to go to the site? - In some instances in order to gain an adequate appreciation of site conditions features and constraints, it may be appropriate for the review team to visit the site	
11	Safety Review Duration	Safety Review	How much time should be allowed for safety review?	This depends. It may a couple of hours (rarely less), or it may be multiple days. Whoever is chairing the review should consider how long is required and schedule partcipants and manage process accordingly	
12	Safety Review Output(s)	Safety Review	How are outputs from safety review to be incorporated into design?	Procedings of safety review should be recorded. This is likely to include a series of actions. Actions could take many alternative forms ranging from a requirement for further study or review to implementation of specific	
13	Process Safety Considerations	Safety Review	Too much contaminant? Unexpected	Too much contaminant may lead to an	

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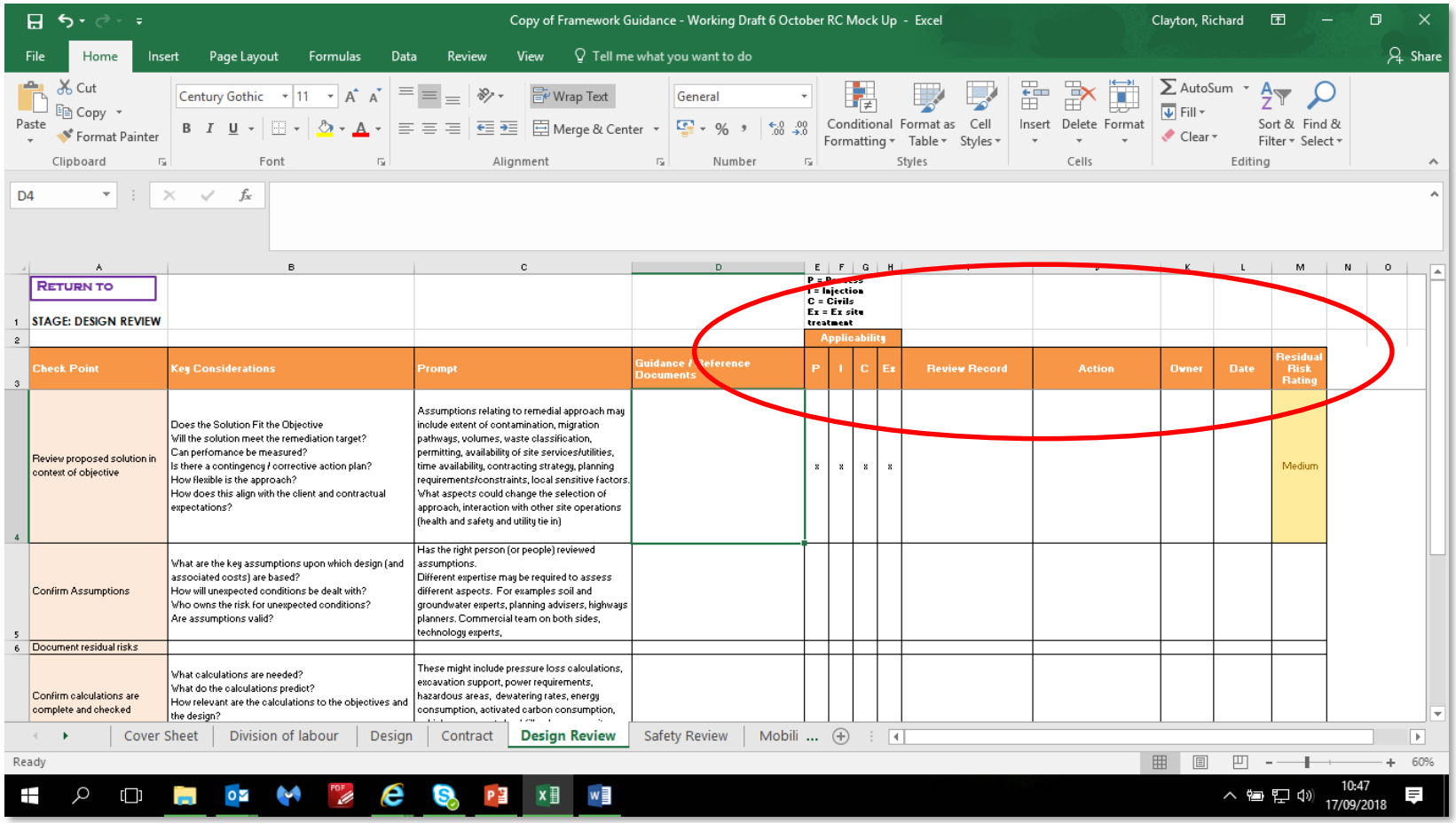
Using the framework – Free Tool



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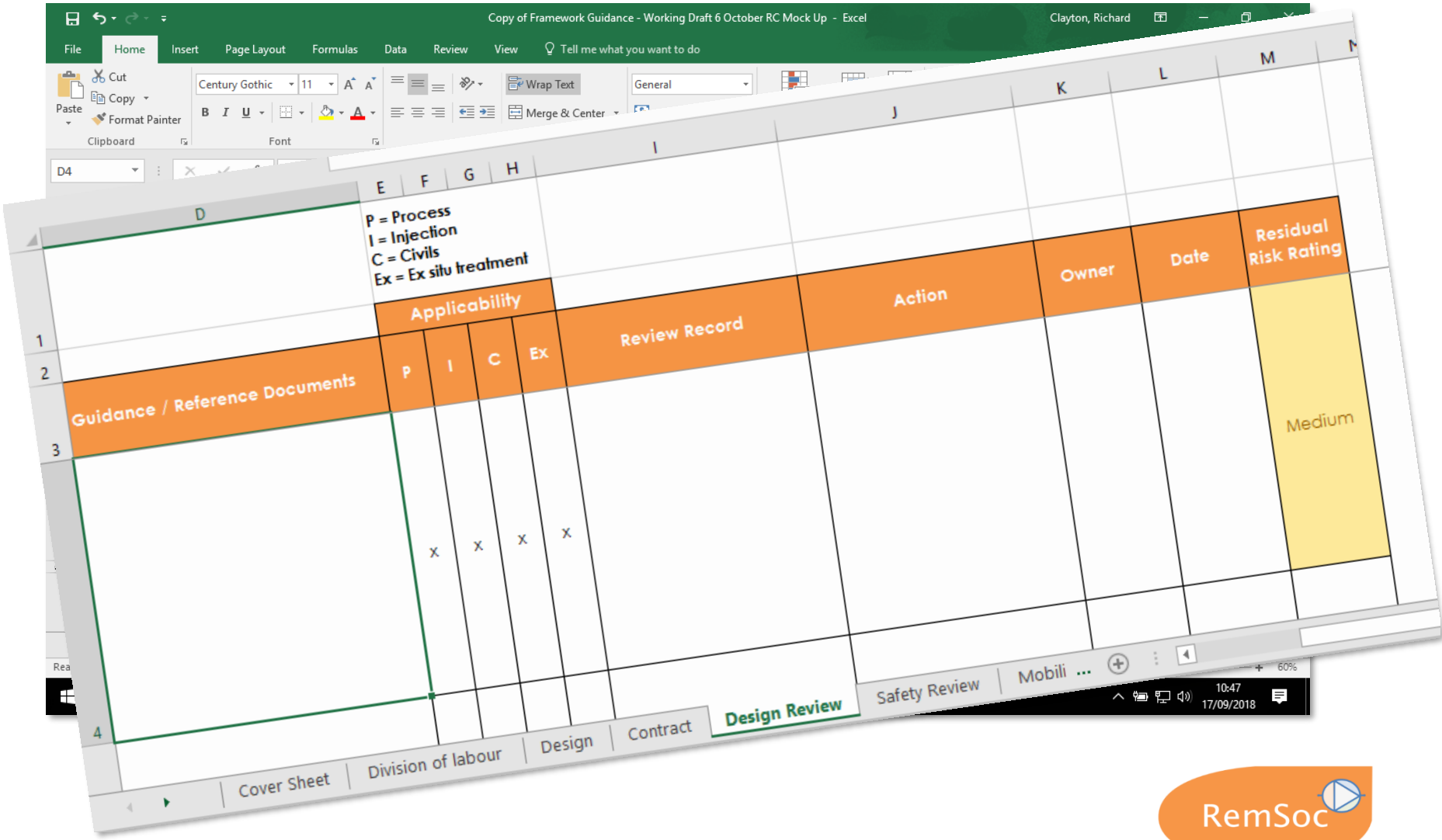
Using the framework – Free Tool



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Framework Guidance – Next Steps

1. Promotion through conferences and engaging with regulators and clients
2. If there is enthusiasm – develop the free tool
3. Keep the sharepoint resource for the membership
4. Develop case studies
5. Continue to populate, streamline and improve useability

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Thank you for listening….