

Remediation Exit Strategy Development Tool

RES-001

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Quality information

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1. Introduction

The Remedial Exit Strategy Development Tool (RESD) has been developed to support Client PMs responsible for delivering successful land remediation projects. When done correctly, its output should enable the client to demonstrate to his / her executive board that the remedial actions and timing necessary to discharge obligations was developed from the start, refined in an informed manner as conditions changed, and represented the most cost effective means of protecting corporate brand.

It is sensitive to client profiles and risk appetites and should set the stage for the clearest and most time effective means of successful exit advocacy.

It was developed by remedial experts at AECOM, taking into consideration extensive experience working with clients and regulators to achieve timely exits that satisfy the interest of as many stakeholders as possible.

It presumes that a separate exercise has been undertaken using a site's conceptual site model to assess technological solutions for relevance cost and feasibility in an overall strategy

Most importantly, it assists the project team in developing the exit advocacy story. That is, being able to build a credible exit case as soon as possible that enables regulators to close the file on a given remediation effort.

2. Objective

This document has three main objectives:

1. To enable clients to develop exit strategies in context considering corporate risk profiles, funding, and timing of full exit.
2. To establish a review protocol that is employed
 - at regular intervals over time
 - when the client organisation experiences a relevant change to its risk profile or cash flow position

when upcoming regulatory changes could have a material effect on the success of a present strategy

3. To frame out an exit advocacy position

3. Process

In order to be effective, strategy development requires a clear and auditable process. This document lays out that process along with the tools necessary to enable informed decision making and document clear long term associated actions. It is as follows:

1. For new clients, the team establishes a client profile that includes success criteria, remedial issues competence, and risk profile through focussed interview process
2. For each project, the team establishes:
 - profile with risk register in context of local regulations,
 - relevant stakeholders, client risk appetite,
 - robustness of data and
 - conceptual site model issue identification
3. For existing projects in active remediation or long term monitoring phase, conduct initial review of the exit strategy and revise as needed or critically review the possibility of unilateral approach to regulator for early exit. (Note : It is acknowledged that some exit strategies will seek to spread costs over a longer period of time for cash flow or other reasons.)
4. Once a project profile is established, convene relevant internal stakeholders in a workshop with clear agenda and agree success criteria (remember that this can change with subsequent strategy reviews). This will require the development of an exit strategy risk register and selection tool, both of which are discussed later in this document. The team needs to clearly document outcome with explanation as to why that strategy was chosen over others at that time. As part of the workshop report, they should issue a radar plot capturing how the strategy was selected.
5. Develop an outreach programme to engage external stakeholders who possess the authority to agree that project objectives have been met and that client no longer has further remedial obligations. (Note: such absolute releases are not possible in many regulatory settings so internal expectations need to be managed as well)
6. Implement outreach and then reconvene to either validate exit strategy or revise as necessary.

7. Develop timeline of tasks to support exit strategy process to include for ongoing data gap analyses, regular regulator engagement, as needed strategy reviews, development of best advocacy position, unilateral closure proposals, etc.
8. Develop an exit advocacy story that considers potential outcomes of the remediation effort and how to use them in support of obligation discharge.
9. Regularly review the strategy to confirm it is still relevant or if there are means of accelerating exits that has arisen since the last review. Conversely, remain informed of emerging contaminants such as PFAS / PFOS and regulator sensitivity that may result in demands for assessment of same.

4. Establishing the Client Profile

This is completed via an interview with a delegated client representative and should cover the issues below:

- Corporate governance of contaminated land
- Working knowledge of global corporate contaminated land exposure
- Common themes on impacted sites
- Is dealing with land contamination part of business growth or risk/cost management?
- Who controls procurement decisions?
- Do you use deed restrictions, covenants, etc?
- How is cost managed: predictable cash flow? Close-out certainty?
- Who actually own the assets that are impacted?
- How do you develop exit agreements with others who own your contaminated land issue?
- How often does your corporate programme review relevance of site specific strategies?
- Do you maintain proactive relationships with regulators?
- How many projects does each corporate remediation PM manage at any one time?
- Does sustainability of an investment drive spend decisions?
- How would you describe the relative importance of minimising cost versus maximising certainty of exit?
- What is the client's attitude towards innovative technologies ?
- To what extent does the client asset divestiture policy drive timely remediation?

5. Establishing the Project Profile

As every project operates in a unique set of circumstances, a clear project profile must be established in order to develop a clear exit strategy. The team developing the strategy should assemble the following information below which will then be used in the next step to develop the project exit risk register.

1. Who are the stakeholders and what is the health of relationships with them?
2. What is the current and proposed future use of the land and of off-site land that may be affected? (eg industrial, residential, public open space)
3. Will you control the land long term?
4. How will remediation be funded?
5. What are the outstanding unknowns?
6. Is there or is there the likelihood of offsite impact?
7. What does 'exit' actually mean? Long term cost certainty? Total exit (with or without development restrictions)? Keep with deed restrictions? What are the criteria?
8. What are the Stakeholders objectives
9. What are Regulatory constraints
10. What are terms of Sales agreements where client retains liability
11. What is the latest re stakeholder access / relationships
12. How robust is the existing data set
13. Is there justification for data gaps
14. Has there been independent review (internal third party acting in lieu of regulator)
15. Is there the potential for emerging contaminants or changing regulatory requirements complicating exits

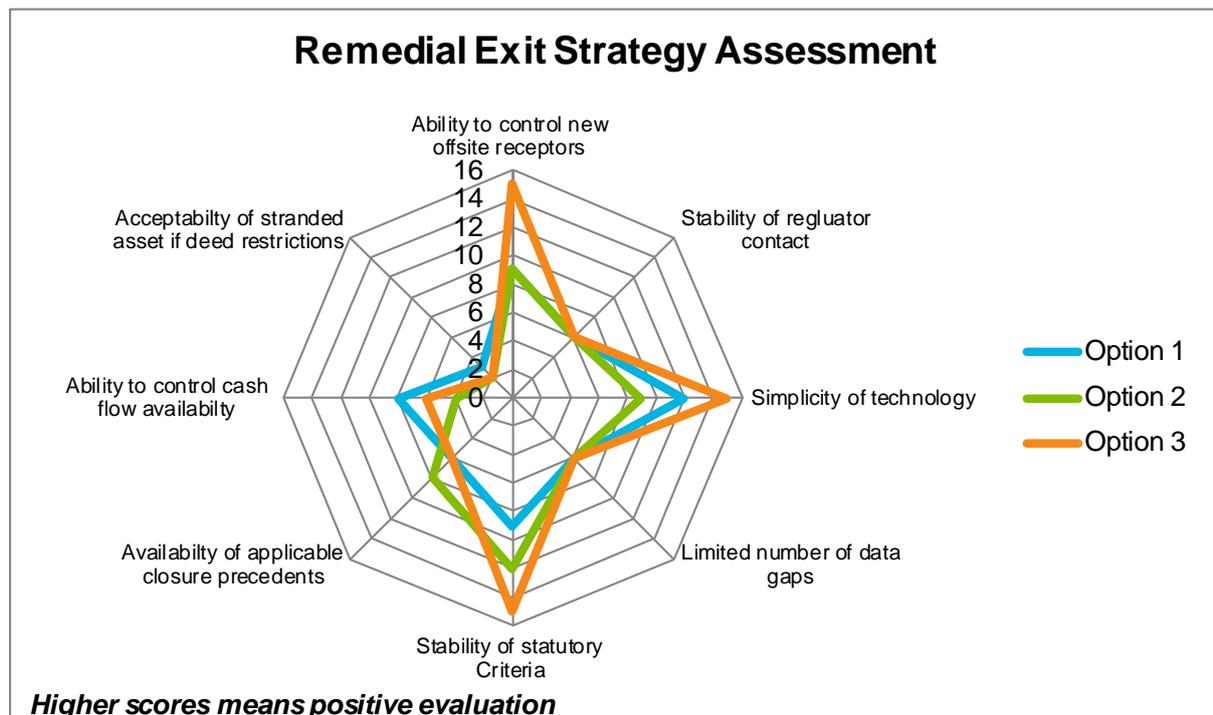
6. Developing the Project Risk Register

Once client profiles and project profiles have been developed, their information can be used to develop a risk register for a project. This register takes into account the issues that can affect the success of an exit strategy and compel the remedial strategy team to develop mitigation efforts and prioritise residual risks for consideration in the strategy selection. Table below notes the format of such a register. In this assessment, the term impact means the ability of the risk (if realised) to negatively affect the desired outcome. An expanded table with suggested example risks is found in Appendix B.

Category	Risk	likelihood	Impact	Combination	Ability to control	Mitigation	Residual risk Priority in remed exit strategy definition
<i>Reg, Tech, Cost, Safety</i>	<i>Simple definition</i>	<i>Hi=3 Med=2 Lo=1</i>	<i>Hi=3 Med=2 Lo=1</i>	<i>Likelihood x severity</i>	<i>Strong, somewhat, limited</i>	<i>Define process</i>	<i>1,2,3</i>

7. Assessing the Options Visually

As a key part of the exit strategy assessment, once remedial options themselves are developed, various criteria are weighted and scored for each and then visually compared using a radar plot technique (example below). From the radar plot, the team can better visualise the various ‘tensions’ that each option has and select the one that represents the best option for timely exit. The output example noted below is developed using the tool found in Appendix C.



8. Developing an outreach programme

Once a remedial strategy has been selected by the project team based upon not only its technical effectiveness but also its ability to support a strongly advocated exit, outreach must be completed to confirm that all relevant stakeholders understand that the client:

1. Will fulfil its regulatory duty (as well as that of its corporate principles if beyond regulatory obligations)
2. Will only spend money wisely to do so
3. Is focussed, for this site, on exiting its obligations as soon as it can and expects stakeholders to see timely exit in their interest as well (and so expects them to be available to review exit propositions when work is complete and be pragmatic in considering level of success achieved) As noted previously in this document, there may be sites for which a client wishes

to extend the remedial timeframe. Outreach for such sites is different and depends on several factors including public or regulatory concern about remedial duration.

9. Validating the Remedial Exit Strategy Selection

The outreach plan developed needs to be discussed with relevant regulators on a frank and open way.

This goes beyond simply presenting the strategy with a strong level of confidence and clearly laid out reasons why it complies with all relevant regulations. The team must also confirm that they are presenting to a regulator representative who has full authority to agree termination as well as pragmatically consider situations where the final site CSM after remediation may not fully achieve every objective, even though all reasonable efforts have been taken. They must also confirm that if the regulator representative must secure technical review by a colleague, then that colleague is present from the start so nothing gets lost in internal summaries from the main representative.

Regulator concurrence must be documented and if there are changes agreed to the strategy, the risk register needs to be updated. In addition, regardless of outreach conclusions, the radar plot should be updated based upon input from the regulator meeting. In this way, the exit advocacy strategy remains fresh and necessary shifts in 'story' focus can be incorporated.

There will also be situations where clients who are making decisions (particularly with voluntary clean-ups or Licensed Site Professional Led sites in stated like NJ where the LSRP can take the site through closure without regulatory input) and implementing site closure without regulatory input. This introduces a level of risk that the client must consider carefully.

10. Drafting the Exit Advocacy position

A successful final exit proposition to a regulator requires thoughtful consideration so that they may be able to defend their position to any future audits. As such, the client remedial team needs to develop 'the story' for the regulator.

This story must incorporate:

1. Final validation efforts and how they reflect completed remediation
2. In the event remedial criteria have not been achieved after reasonable efforts:
 - A thoughtful discussion focussing on cost / benefit. It is important to note that some jurisdictions include guidance at treasury level that cost / benefit must be considered when implementing all regulations.
 - Consideration of precedents that involve similar site settings, compounds of concern, and project specific factors. These precedents may exist as remediation starts or may evolve over the life of a project. Therefore, the team needs to keep abreast of such developments through their advisors.

- How statistical assessments can be used to demonstrate that residual COCs are at low enough levels that natural attenuation can be considered.
 - The extent to which multiple statutory obligations have been achieved. That is, for example, if an agreed plan included source removal, groundwater betterment, and stability of plume growth, and at least two of these have been achieved with the final one not yet fully compliant, a position could possibly be taken that all reasonable efforts have been applied.
3. In those cases where full release is not possible, the responsible party’s acknowledgement that it is financially stable and so could be summoned at a later date if, for example, validation groundwater monitoring revealed a new issue genuinely related to the original source.
 4. In those cases where land is remediated to a restricted use level (for, say, industrial use only) that the responsible party will work with the buyer to confirm that such obligations are contractually secured.
 5. The context of the remediation and the collaborative nature of its implementation with the regulator. This enables both regulator and regulated to refer to the project a success story.

11. Strategy Review Schedule

As noted previously, strategies are very time dependent and their success or failure can change with changing site conditions and context, whether they are technical, political, or otherwise. For this reason, a clearly laid out schedule of regular strategy updates needs to be agreed so that changing circumstances, both positive and negative, can be taken into account as a selected strategy progresses. A format like this below needs to be agreed by the project team and pre-scheduled into all diaries so that it is not forgotten. Timing intervals should reflect the intensity or duration of the selected strategy and intervening events that have the potential to affect strategy success either way should prompt a full review as well at that time.

TASK	TIMING (MONTHS, QTRS, YEARS)									
	0	1	2	3	4	5	6	7	8	9
CSM REVIEWS										
DATA REVIEWS										
REGULATOR UPDATES										
CLIENT CASH FLOW REVIEWS										
ENHANCED ADVOCACY UPDATE										
UNILATERAL CLOSEOUT APPROACH										
REGULATION REVIEWS										

Appendix A Remedial Selection Decision Document

Appendix B Risk Register



Risk REgister
Table.xlsx

Appendix C Radar Plot Form



Remed Exit Strat
Radar Plot .xlsx

Appendix D Ongoing Strategy Review Schedule



Exit Strategy
Schedule.xlsx

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