ADVANCING PFAS REMEDIATION IN A STATE OF FLUX

Adaptive, phased approach to fast-track meaningful PFAS action

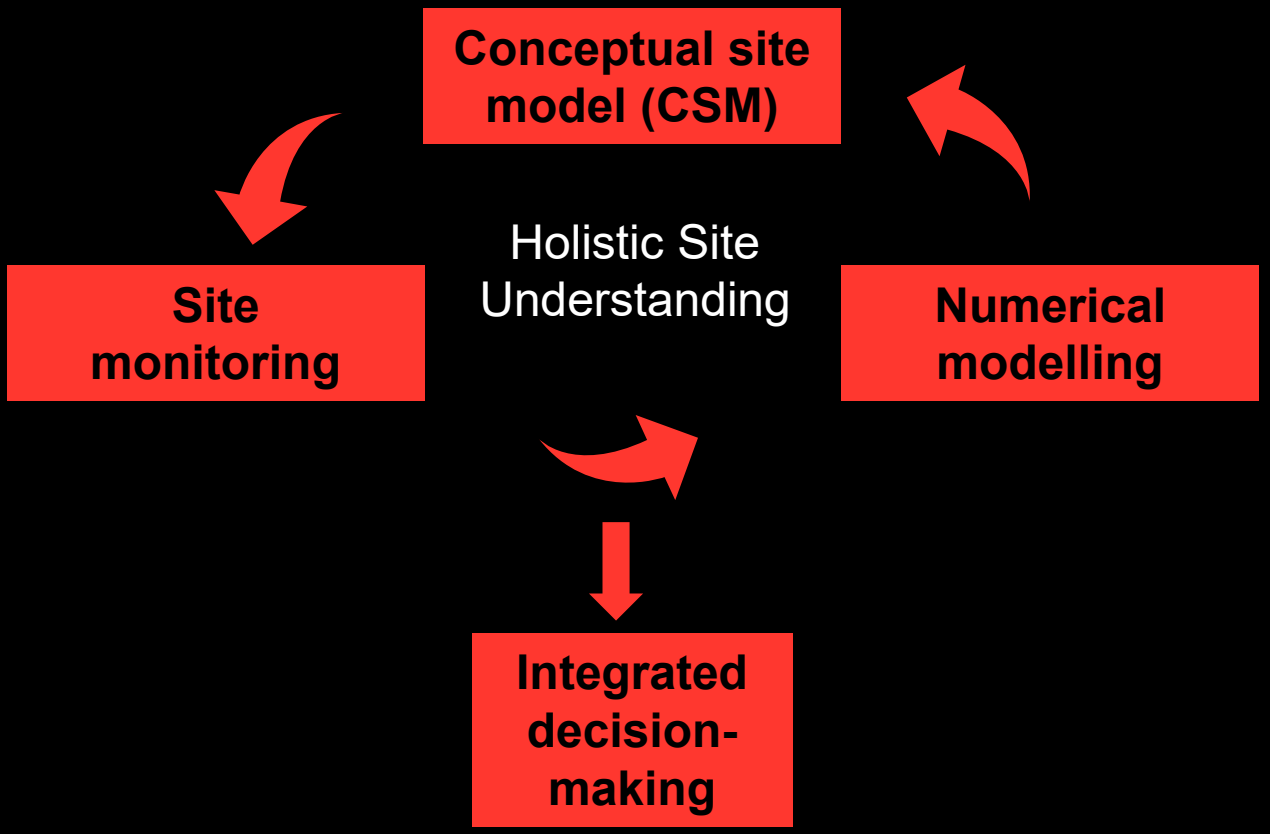
Presented by Laura Jones | April 2026

Why traditional remediation approaches often fall short?

- New data or guidance emerges
- Remedy selected without full consideration of project lifecycle
- Poorly planned allowance for future remediation needs
- Can lead to rework, delays, and inefficient use of capital

Holistic site management for PFAS remediation

Managing PFAS sites as an integrated system, not isolated tasks



Conceptual site model (CSM)

Sources, pathways, receptors, uncertainty

Numerical modelling

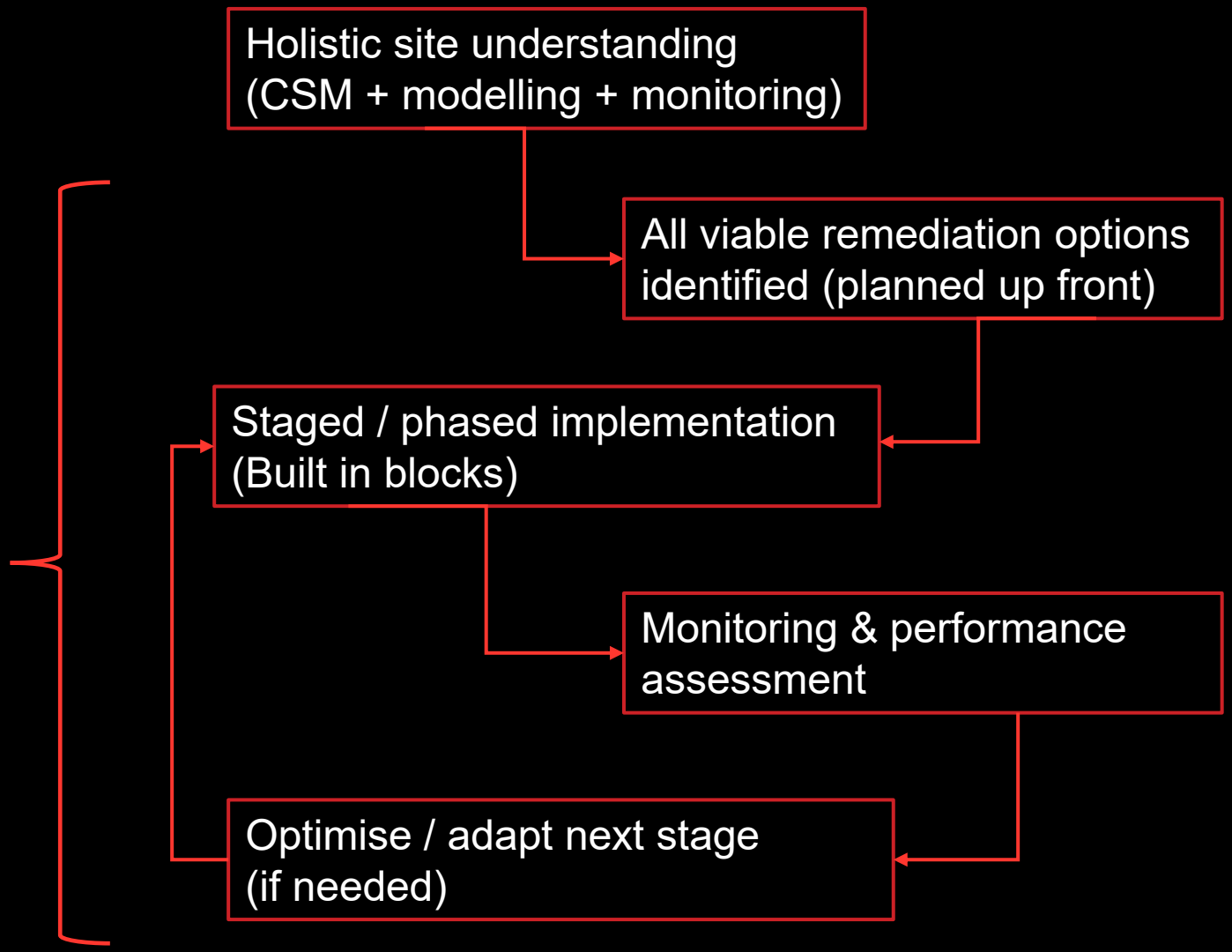
Fate and transport, predictive decision support

Site monitoring

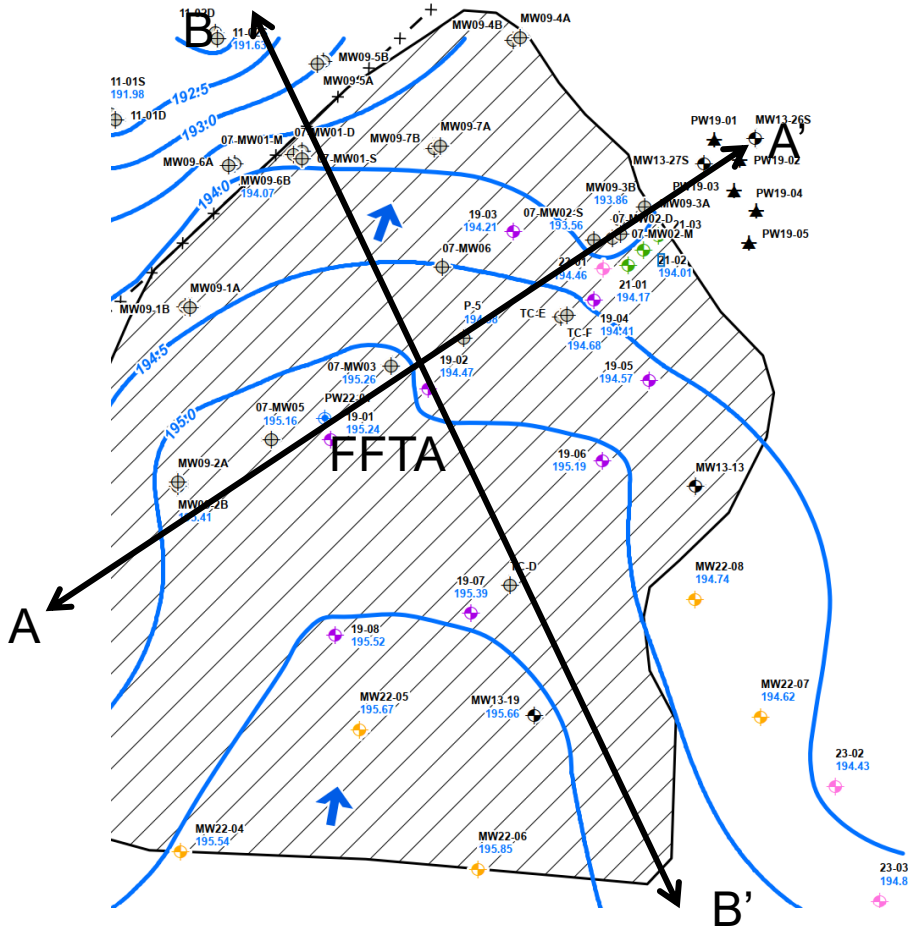
Performance feedback, uncertainty reduction, staged approach refinement

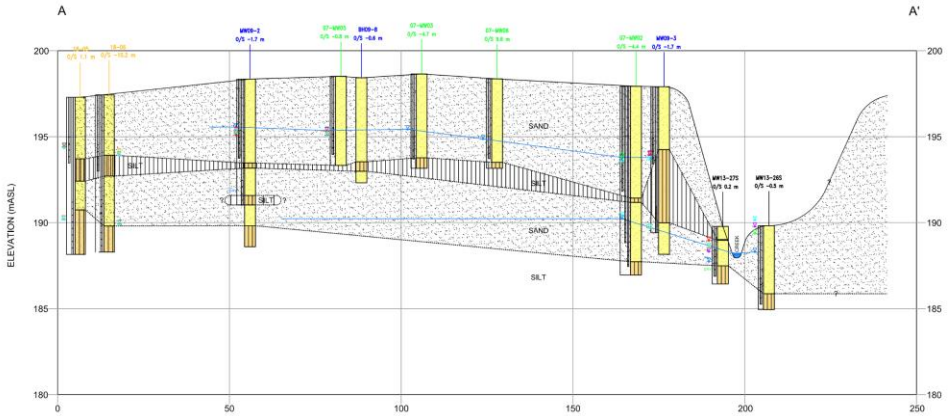
Developing a comprehensive, staged remediation approach

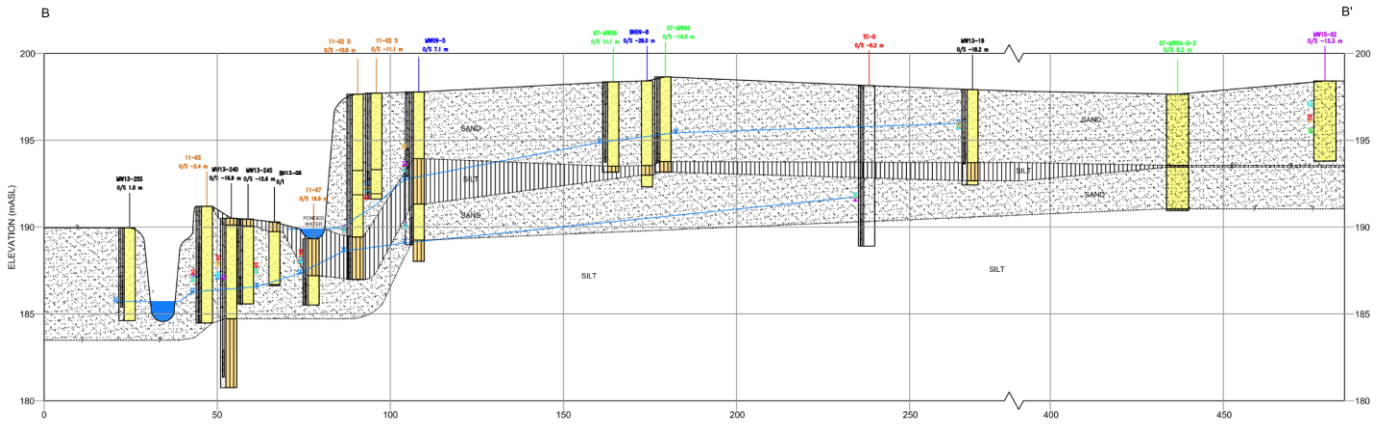
- All potential remediation options are considered from the start
- Implementation is intentional and staged
- Each stage can be refined, optimised, or accelerated
- Decisions are anchored in field data and evolving regulations



Applying adaptive, phased remediation: FFTA case study - CSM







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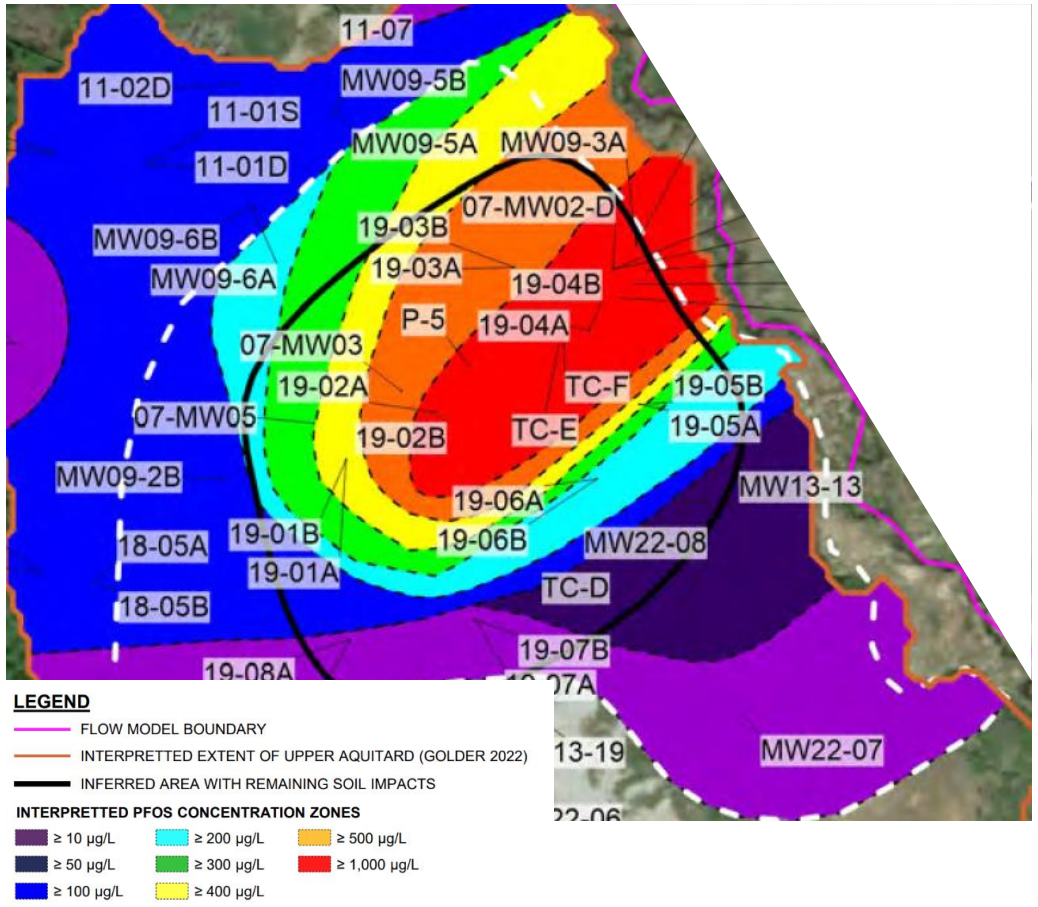
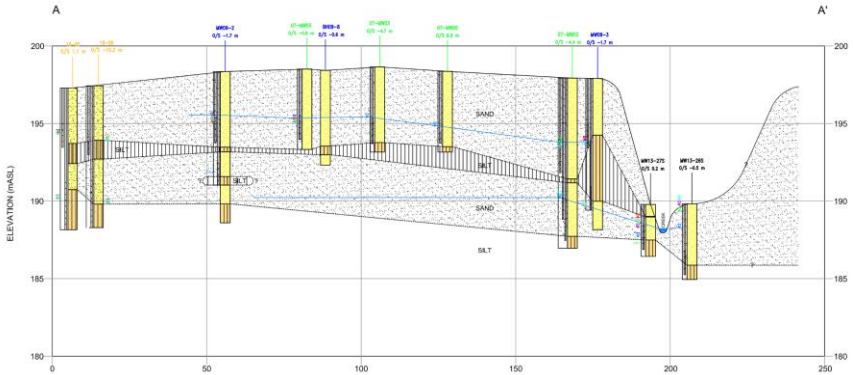
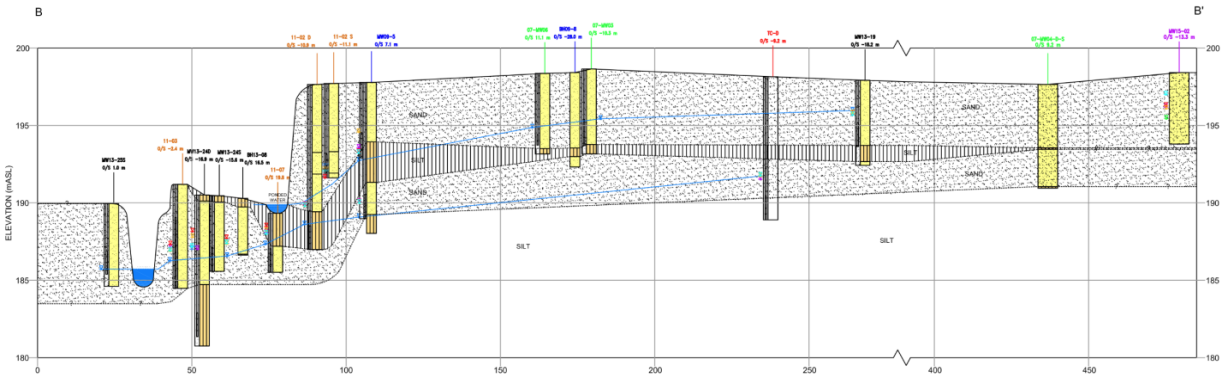
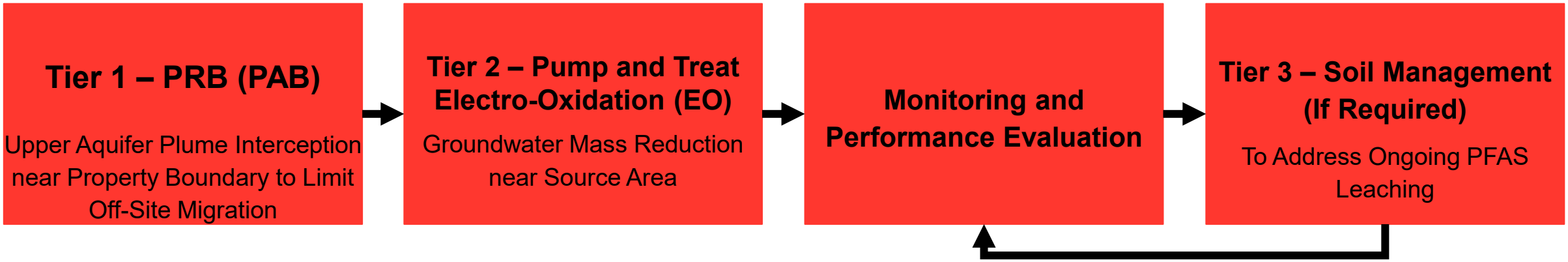


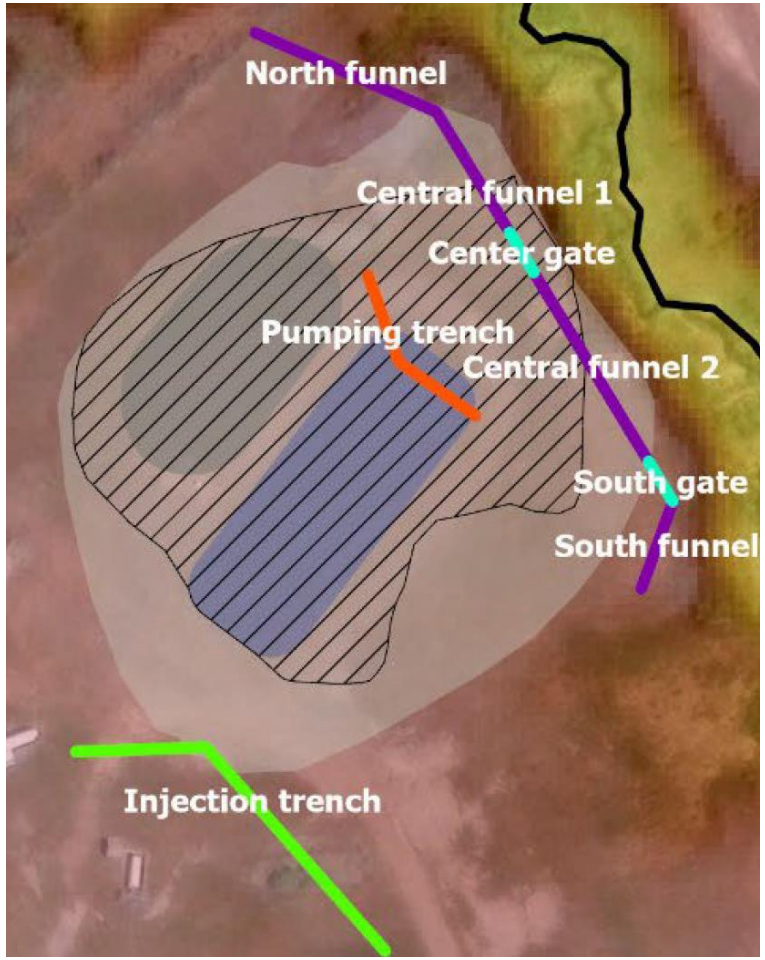


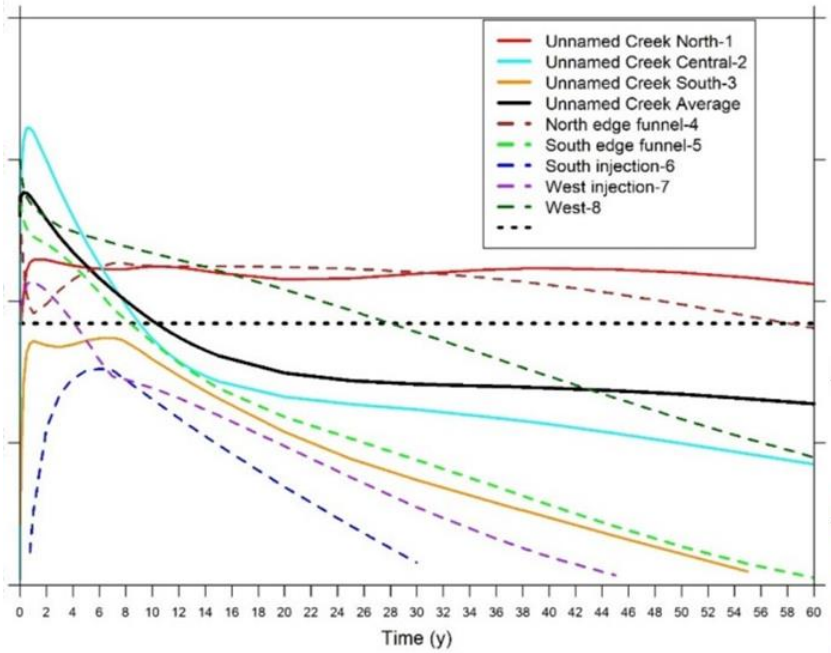


Applying adaptive, phased remediation: FFTA case study



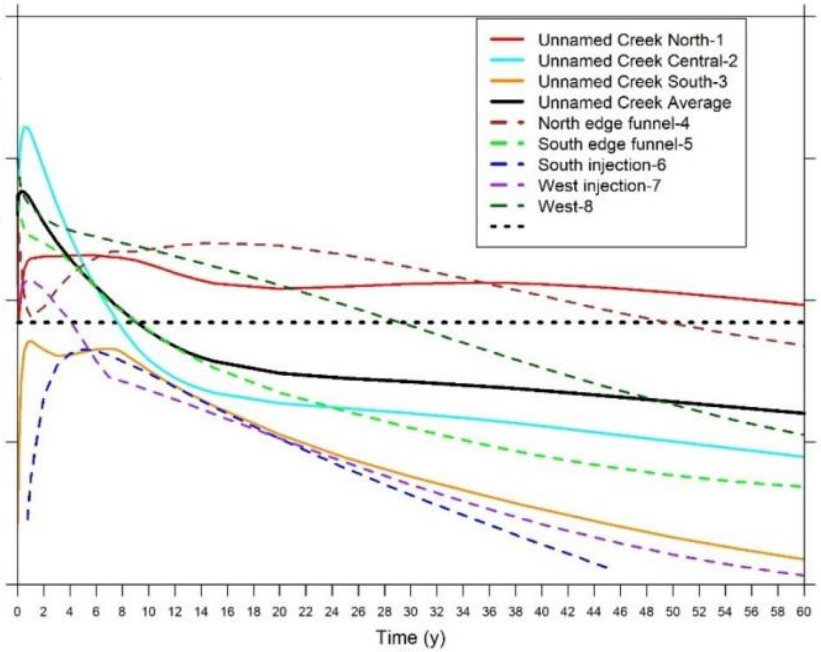
Numerical modelling to inform phased remediation





Soil cap scenario

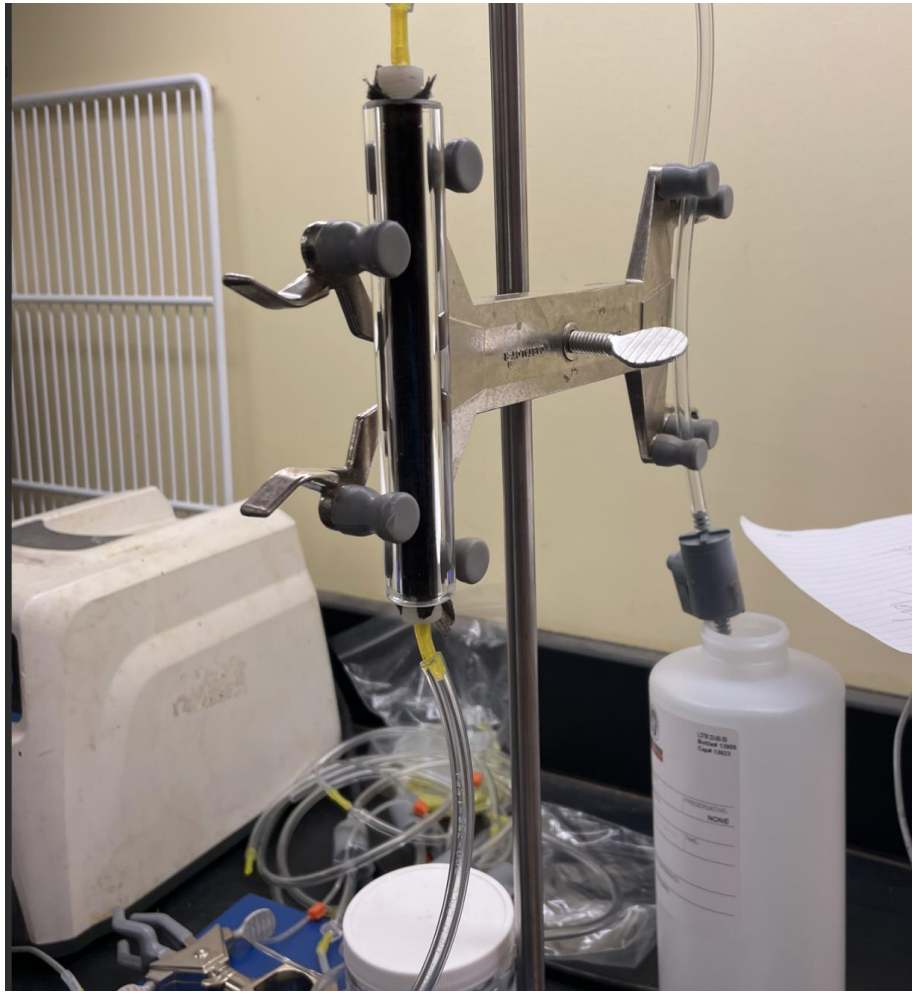
No further soil treatment scenario



Pilot scale testing

- Isotherm testing to select sorbent material
  - Biochar
  - Organo-clay
  - Combination or organo-clay and activated carbon
  - Granular Activated Carbon
- Result – GAC best reduction at all doses
- Based on expected cost for >99.5% reduction GAC selected for permeable reactive barrier

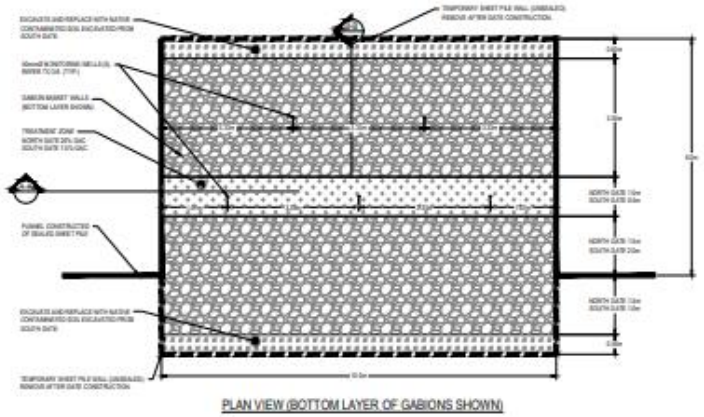
- Column testing to assess sorption capacity
  - Site specific groundwater
  - 50% GAC/100% GAC
  - Monitor for PFAS breakthrough

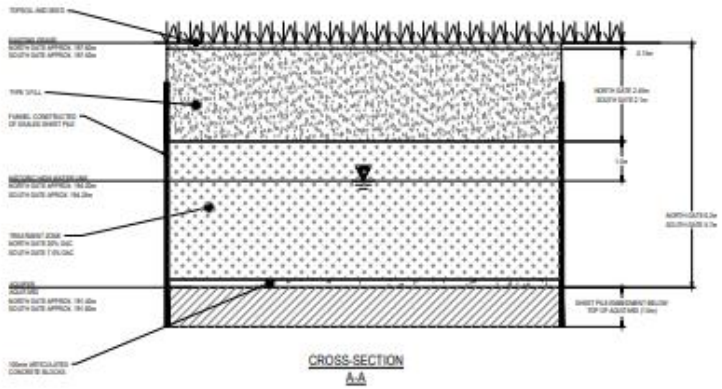


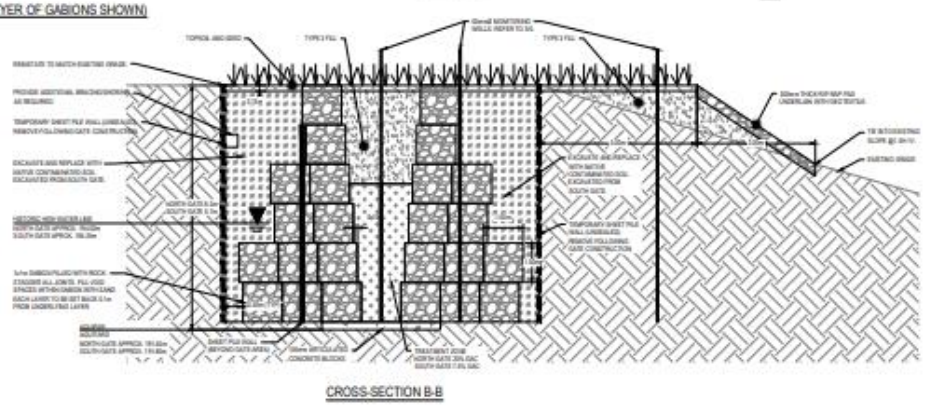
Full-scale design considerations

- Confining aquitard between upper and lower aquifer, very thin in some locations
- Depth to aquitard not well defined
- Minimal case history to assess for potential fouling of PRB post installation
  - First full-scale PFAS PAB via excavation installed in Canada
  - Need to be able to replace/refresh media if clogged
- 200 m Long Funnel and Gate design selected
  - Funnel can pierce aquitard
  - Gates designed to be easily replaceable
  - Gate excavation can be observed to ensure aquitard encountered but not pierced

Designing an adaptable funnel-and-gate PAB

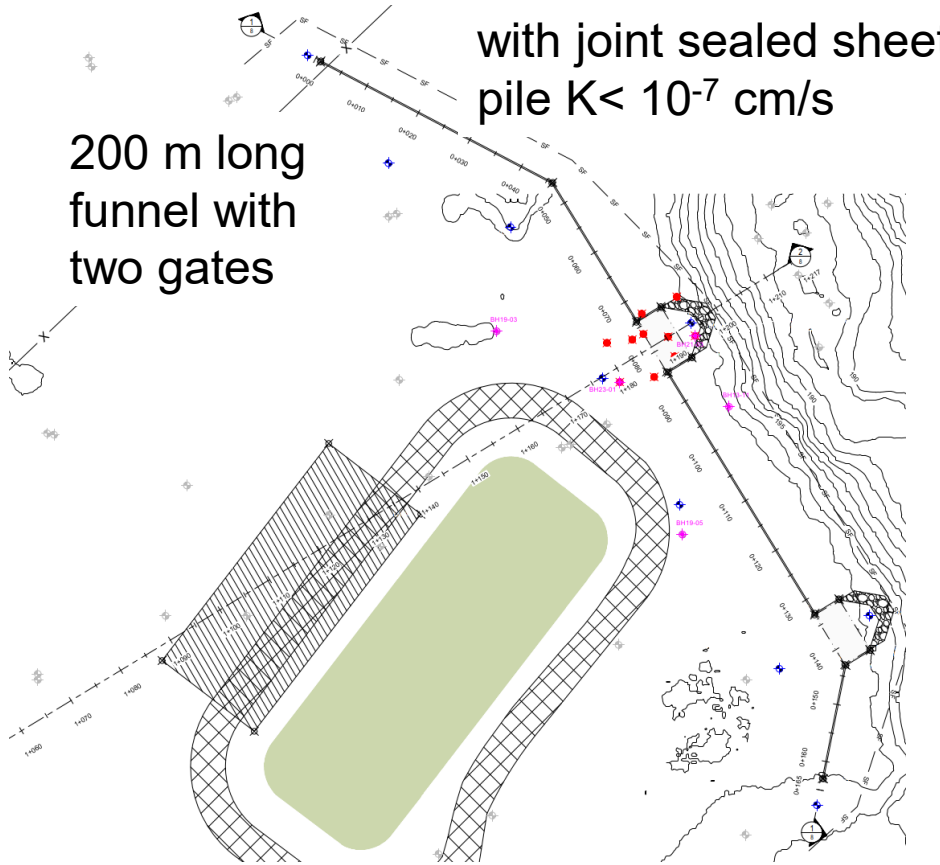






Funnel constructed with joint sealed sheet pile K< 10^{-7} cm/s

200 m long funnel with two gates

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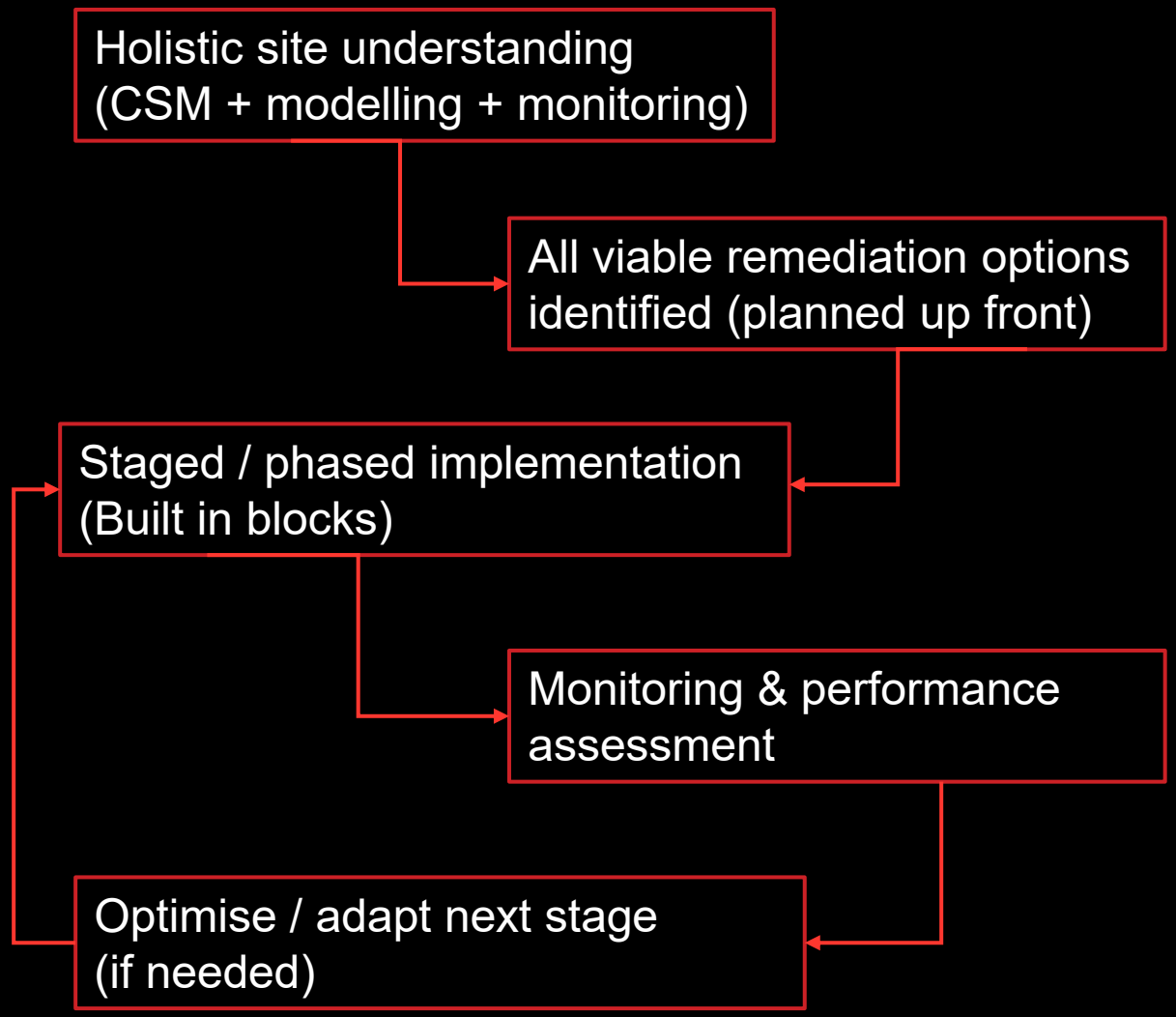
Next steps being considered

- Installation of Source Area pump and treat system as Tier 2
- PAB/P&T performance monitoring
- Evaluate need for Tier 3 remediation – address ongoing PFAS leaching from source area



WHY ADAPTIVE, HOLISTIC SITE MANAGEMENT IS BEST FOR PFAS?

- Fast-tracks meaningful actions
- Reduces long-term cost and liability
- Builds confidence with regulators and stakeholders

THANK YOU