



How is the Environment Agency working with industry on challenges related to land contamination regulation and climate change?

Jonathan Atkinson, Technical Specialist Ground Water & Contaminated Land, Environment Agency

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Climate Change - Now to 2050

- More extreme events likely:
- Flooding; fluvial, coastal, groundwater
- Bush fires, waste fires; air/water pollution residues
- Long term hot weather periods; changes to contaminant behaviours in near surface soils

How do these issues affect remediation activities and regulation and how should remediation take account of sustainable development goals.

Challenges

- Changes to site assessment and modelling of contaminant fluxes (GW flow paths, infiltration changes, GW depth changes, especially in dry valleys (Bournes)
- Changes in monitoring requirements; depth, spread and timelines.(MNA)
- Changes caused by river or coastal flood effects on contamination; riverside Brownfield sites, coastal landfills, sediment movements in and out of channel.
- Construction and Remediation activities impacted by significant rainfall events – surface water controls and managing infiltration

Regulation issues

- Changes to mobile treatment permits?
- Changes to abstraction and discharge consents?
- Review of risk assessment methodologies?
- Timing of activities?
- Management systems to deal with risk during work of EWE
- Review issues around potential emissions due to heat waves
- Assess activity emissions under carbon reduction objectives
- ?Sustainable remediation options?
- Net Zero Changing the ball game?

Sustainable Development approach

- Assess land portfolios to determine present and future risks and how impacts bottom line and reputation
- Use Surf UK principles to design any remediation; reduce waste to LF, reduce vehicle movements etc.
- Allow for long term changes that may affect “current” remediation approach (MNA/stable plumes?)
- Legacy burdens on future generations?

Big Questions?

- Are past remediation schemes safe into future?
- Should past assumptions be reviewed (stable plumes/infiltration rates/volatility/viscosity).
- Future Drivers; insurance, landowner liability, consultants/contractors responsibilities/reputations?
- Net Zero commitments?
- Past assessments – new CoCs (emerging pollutants?)
- Will reviews be driven by voluntary approach or new regulatory frameworks????

Next steps?

- Review the evidence and current approaches
- Assess likely impacts and review the systems in place under regulatory frameworks
- Work with industry to agree changes to relevant regimes, model parameters and technical guidance- starting with:
 - Sobra – CC and controlled waters risk assessment
 - CIRIA – Literature review of CC impacts on land remediation
 - WSP – Regulatory considerations of CC impacts and adaptation for waste deposit, landfill and land contamination
 - BGS – Impacts of climate change and land use on groundwater quality
- And more to come!