

Regulation of Land Remediation

Contents

- Introduction to legislation
- Site Waste Management Plans
- Definition of Waste
- Mobile Treatment Permitting
- Enforcement & Prosecution Policy
- Changes to Definition of Waste guidance

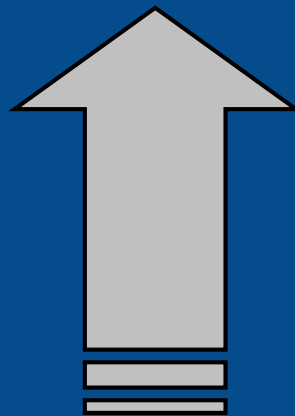
Regulation of Remediation

- Environmental Permitting (Waste)
 - Waste Operations (former WMLs)
 - Installations (former PPC)
 - Landfill regulation
 - Hazardous waste regulation
- Water Resources Act
- EU Directives and European Case Law

Sustainable use of materials

Promote sustainable waste management based on the waste hierarchy :-

- Reduction
- Reuse
- Recovery
- Disposal



Site Waste Management Plans

(Clean Neighbourhood and Environment Act 2005)

- Resource management options for these wastes (re-use, recycle, recover, dispose)
- Types of waste generated
- Use of permitted waste management contractors
- Record quantities of waste treated or removed

Definition of Waste

- Waste Framework Directive
- Contaminated soil/groundwater is waste when:
 - Treated (human intervention)
 - Excavated
 - Pumped
- It ceases to be waste when there is no reason to subject it to Waste Framework Directive controls

Not waste?

- No requirement to “discard”
- Suitable for use without treatment
- Only quantity necessary for specified works
- Certainty of use
- Lines of evidence*

Waste Treatment: Permits to Operate

- Treatment of contaminated soil and groundwater is permissible activity
- Two types of waste permit
 - Waste Operation at a fixed site
 - planning permission required
 - formal surrender procedure
 - Mobile Plant Permit
 - planning permission not a pre-requisite

Mobile Treatment Permitting System

- Permit to treat contaminated materials (soils/groundwater etc)
- One permit for each operator
- Permit applies to more than one site
- Use of a site specific Deployment Form

Mobile Treatment Permit

- It regulates emissions to air, water and land from the treatment activity
- It **does not** regulate the remediation objectives for the site
- It **does not** regulate the re-deposit/discharge of treated waste

Enforcement and Prosecution Policy

- Trials and small scale remediation schemes
- Trials for new technologies
- Remediation Position Statements

Remediation Position Statements (1/2)

- Brief description of the technology and their applicability to different types of contaminants
- Summary of the environmental permitting implications associated with each technology
- Relevant exemptions from environmental permitting and exclusions from waste management controls

Remediation Position Statements (2/2)

Civil Engineering Methods

- Cover Systems
- Containment Barriers
- Excavation and Disposal

Biological Methods

- Monitored Natural Attenuation
- Biopiles, Windrow Turning and Landfarming
- In-situ Bioremediation
- Bioventing

Chemical Methods

- Soil Flushing
- Solvent Extraction
- Transformation by chemical treatment

Physical Methods

- Soil vapour extraction
- Soil Washing
- Permeable Reactive Barriers

Solidification and Stabilisation Methods

- Solidification and Stabilisation

Thermal Methods

- Thermal Desorption

Exemptions

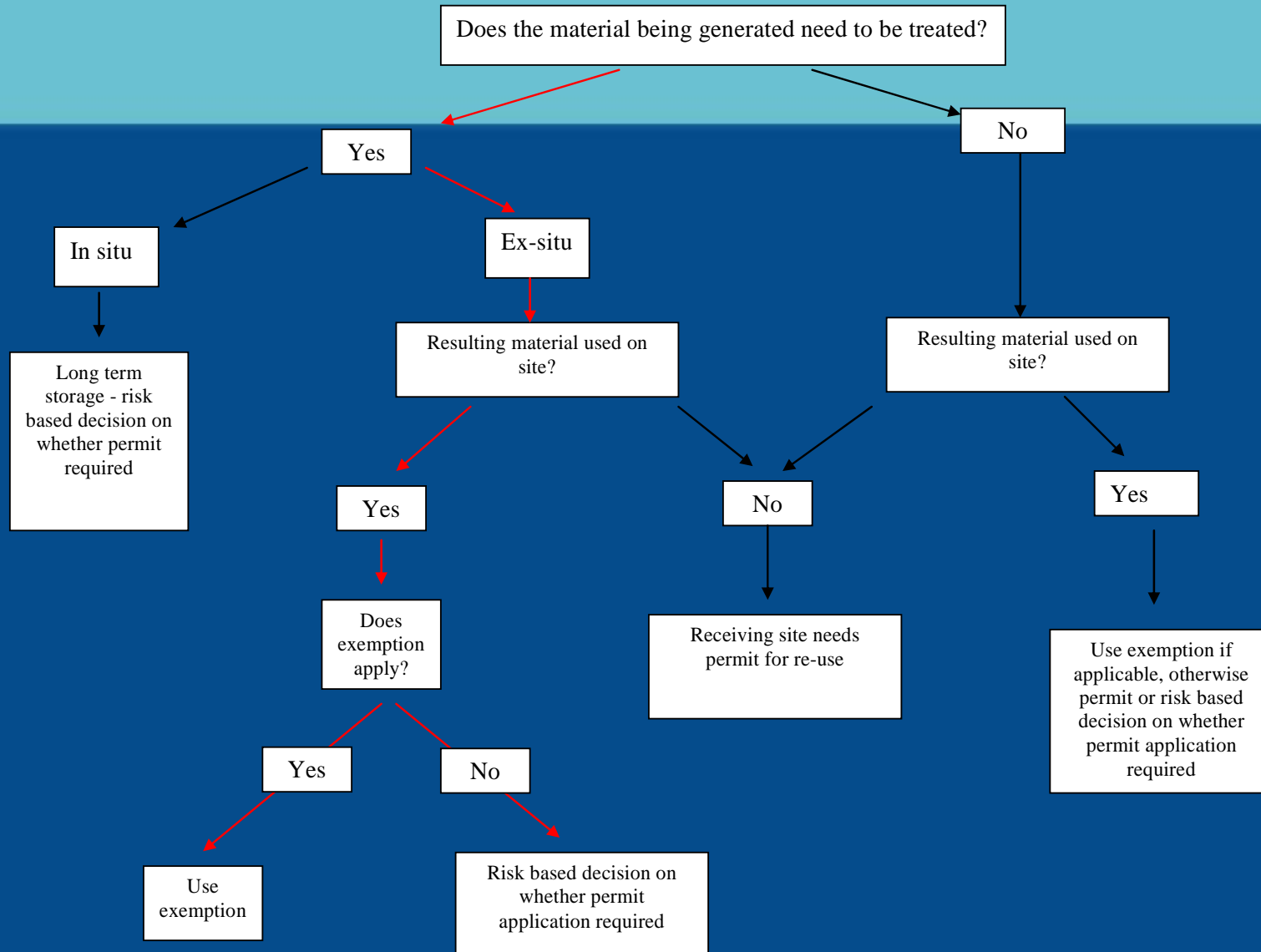
- 7 Spreading benefit for agriculture or ecological improvement
- 9 Spreading (reclamation and improvement of land)
- 13 Manufacture of soil
- 19 Use in “relevant works”
- 52 Temporary storage of waste at the site of production

Re-use of Treated Waste

- Treated contaminated soil/groundwater remains a waste unless fully recovered so....
- In-situ treatment
 - risk based decision on whether 'keeping' treated soil requires an environmental permit
- Ex-situ treatment
 - risk based decision on whether treated soil requires an environmental permit
- Verification required

Redevelopment of contaminated site

(uncontaminated material isn't waste if used on the site where it is produced)



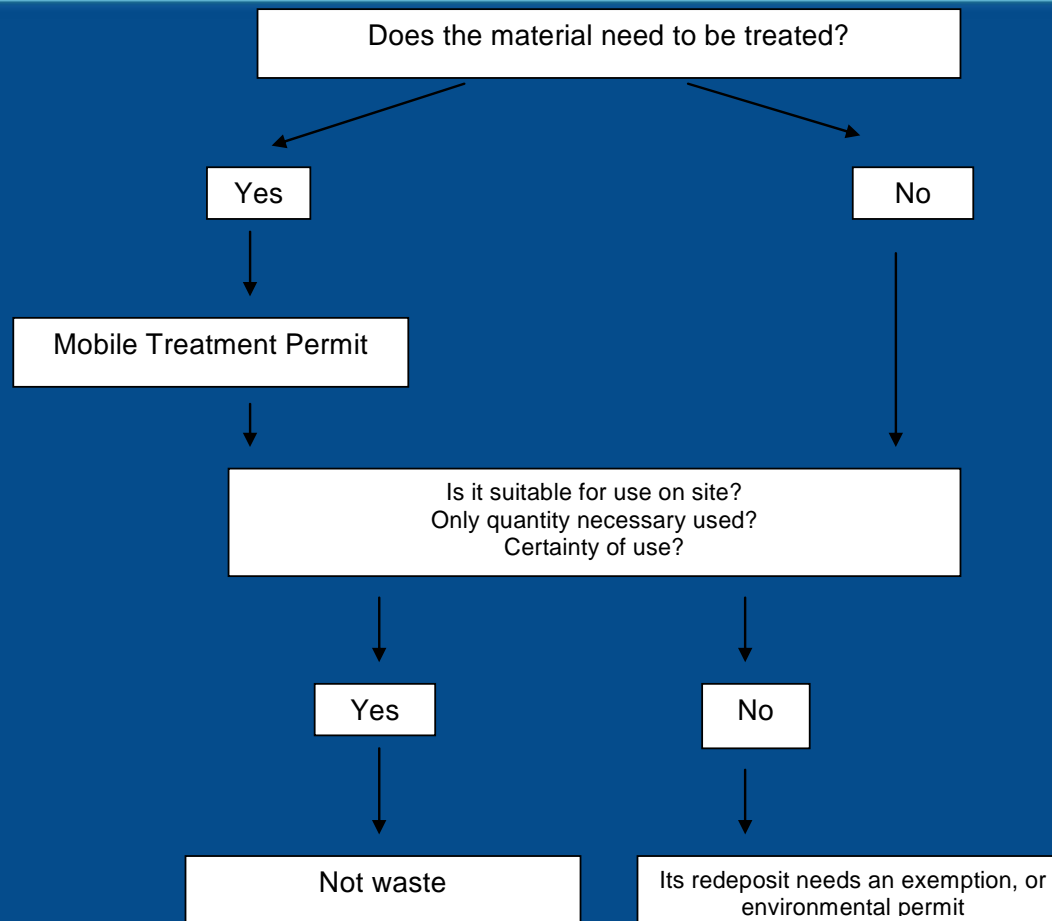
Ceasing to be waste

- Suitable for use without further treatment
- Only quantity necessary for specified works
- Certainty of use
- Aims and objectives of Waste Framework Directive
- Lines of evidence approach

Development Industry Code of Practice

- Material not waste or ceasing to be waste criteria
- On –site use of materials
 - Suitability for use
 - Certainty of use
 - Quantity of use
- Material from Hub and Cluster sites
- Protocols for aggregates

Re-use of excavated material on site of origin (proposed)



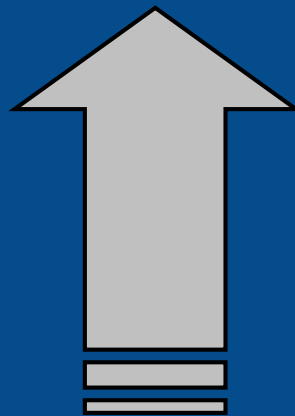
Disposal of Waste

- Material must be adequately characterised
- Duty of care applies to handling/transport
- Destinations must be authorised to accept
- It's a costly business.....

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Conclusion

- Consider materials management from the start
- Treating wastes requires a permit (s)
- Re-using treated materials needs an audit trail
- Disposal will be subject to regulation (characterisation, transport & final disposal)
- Guidance - EA position statement on the Definition of Waste: Development Industry Code of Practice.