

Managing Excess Soil in 2026: Progress made, problems persist

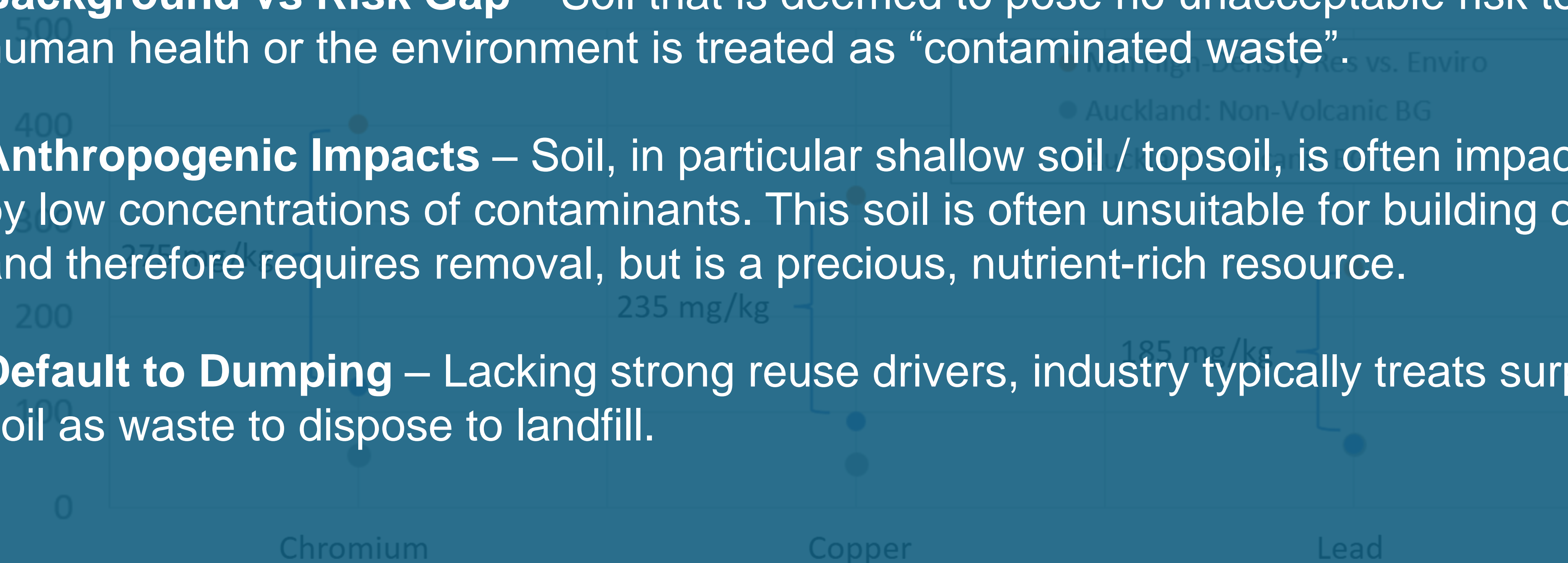
OPPORTUNITIES

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Context & Challenges

- **Background vs Risk Gap** – Soil that is deemed to pose no unacceptable risk to human health or the environment is treated as “contaminated waste”.
- **Anthropogenic Impacts** – Soil, in particular shallow soil / topsoil, is often impacted by low concentrations of contaminants. This soil is often unsuitable for building on, and therefore requires removal, but is a precious, nutrient-rich resource.
- **Default to Dumping** – Lacking strong reuse drivers, industry typically treats surplus soil as waste to dispose to landfill.

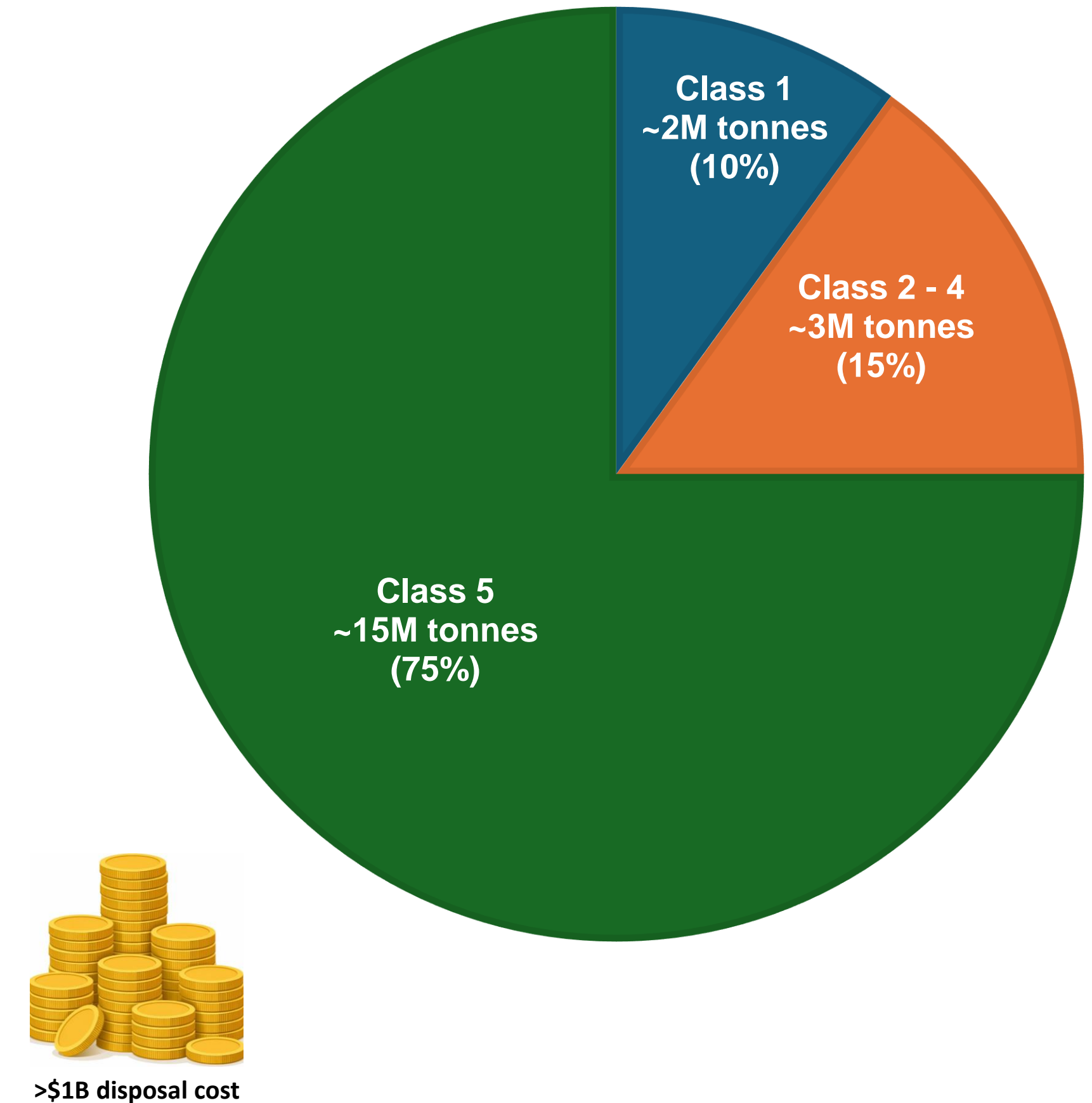
mg contaminant per kg of soil



The Scale of the Problem

- **Massive Volumes** – ~20 million tonnes of excavated soil end up in NZ landfills each year, by far our largest waste stream¹
- **High Cost** – We spend >\$1B/year
- **Mostly “Clean”** – Based on landfill classification for disposal, therefore opportunity to re-use if systems and incentives exist^{1,2}

SOIL DISPOSAL VOLUME BY LANDFILL CLASS¹



1. WasteMINZ, 2025. Reclaiming Our Resources: Optimising Soil Reuse in Infrastructure and Land Development.

2. Cavanagh et al., 2023 (consultation draft, MWLR); WasteMINZ soil reuse project (2025/26)

Known Unknowns – Data Gaps & Priorities

- **Sparse Data** – 2025 industry review identified 27 gaps & barriers in the current system¹
- **Top Issues** – Regulatory Barriers, Confusing Terminology, Perception & Liability, Lack of Guidance / Standards, Logistical & Economic Issues, Cultural and Engagement Gaps
- **5 Priority Actions** – starting with a national market analysis and beyond this focusing on regulations (targeted and national level)

DEFINITIONS & STANDARDS **PERCEPTION & LIABILITY**
REGULATION
GUIDANCE / STANDARDS
INFRASTRUCTURE / LOGISTICS

1. WasteMINZ, 2025. Reclaiming Our Resources: Optimising Soil Reuse in Infrastructure and Land Development.



New Technical Guidelines

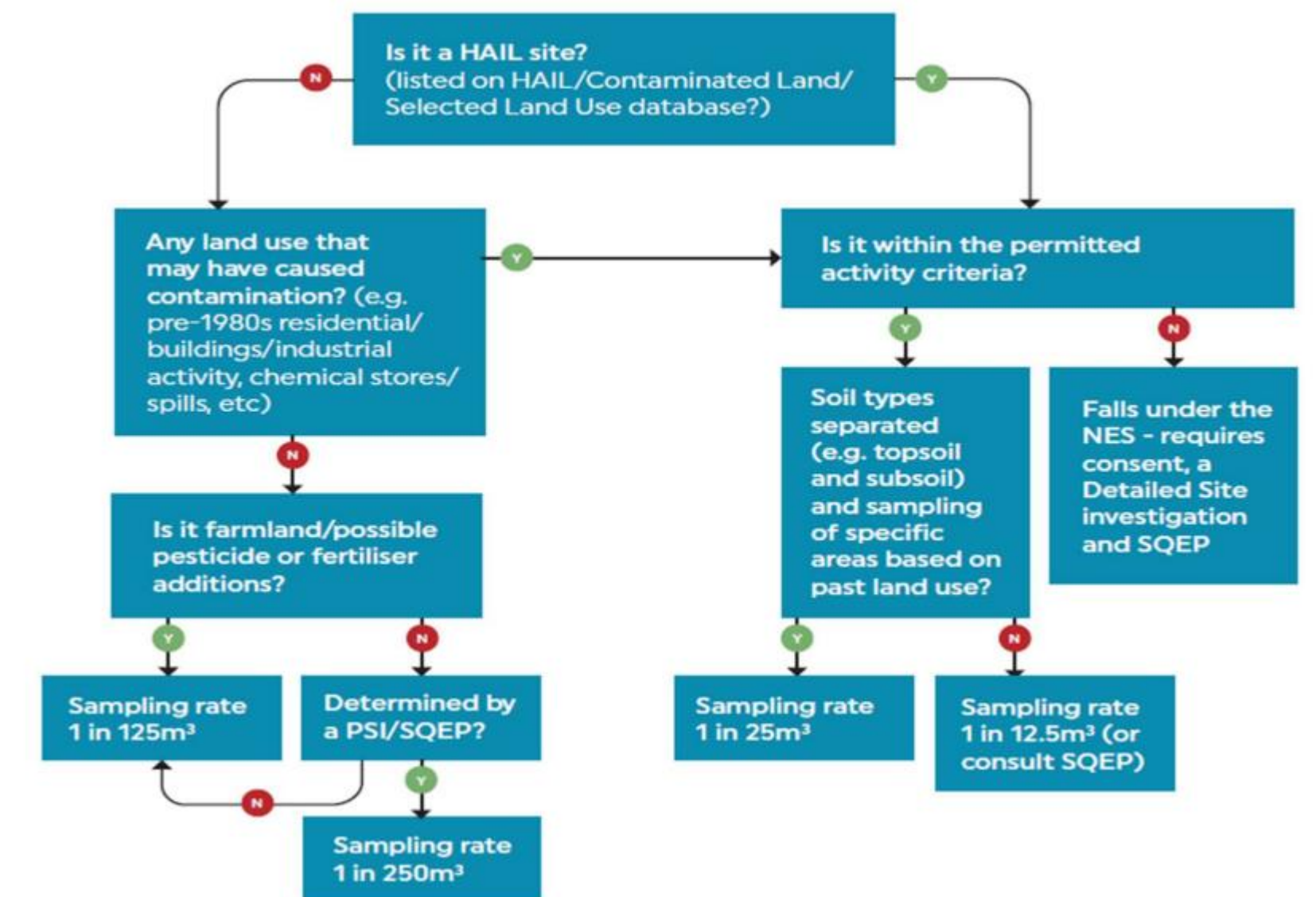
Sep '24 – WasteMINZ “Technical Guidelines: Characterising Surplus Soil for Disposal” promoting a consistent approach to sampling for reuse

Benefits	Remaining Gaps / Drawbacks
<ul style="list-style-type: none"> ✓ Recognises soil as resource ✓ Proposes reporting template 	<ul style="list-style-type: none"> ? Not formally adopted by MfE ? Advocates significantly higher sampling and analysis frequency than previous guidelines (client and / or SQEP resistance)
<ul style="list-style-type: none"> ✓ Allows for variation in sampling and analysis requirements based on source information and assessors qualifications 	<ul style="list-style-type: none"> ? Advocates SQEP engagement but doesn't require it (acceptable to Councils?)

Mostly applicable for <1,000m³ and non-SQEP Assessment?

Table 1. Sampling Multiplier

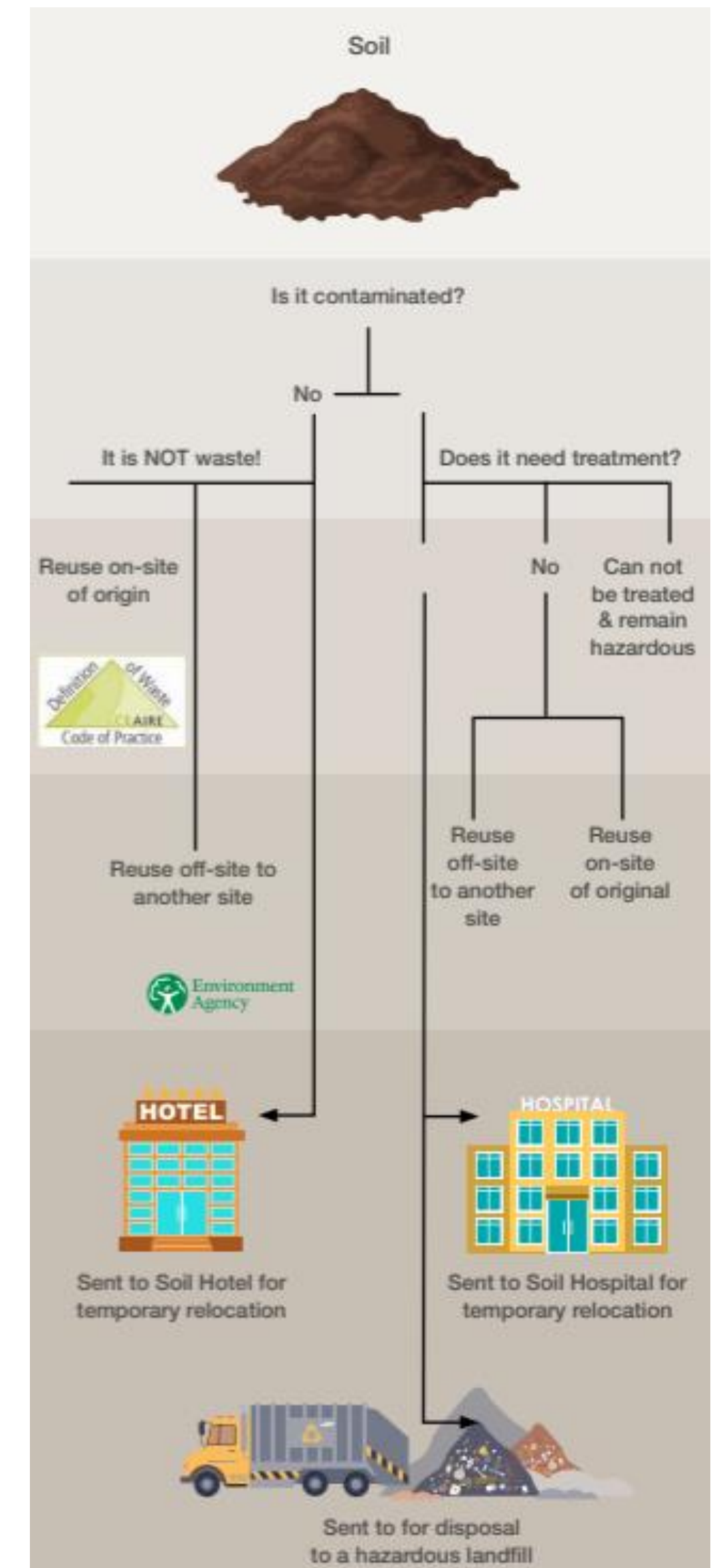
Criteria	Multiplier	Sampling Rate*
Material represents mixed geologies (e.g topsoil and subsoil, or basecourse and clay)	0.5	1 in 12.5 m ³
Contaminant concentrations are significantly heterogenous (e.g if the standard deviation for a contaminant of concern exceeds the mean for that data set) [#]	0.5	1 in 12.5 m ³
Material produced has a consistent description. No obvious contamination but long history of urban land use	1	1 in 25 m ³
No previous contaminating activity (without SQEP produced supporting evidence)	5	1 in 125 m ³
Contamination arising from diffuse sources	5	1 in 125 m ³
No previous contaminating activity, as determined by a Preliminary Site Investigation (PSI) done by a SQEP	10	1 in 250 m ³



* General Note: in cases where a consignment is > 1,000 m³, a conversation between producer and receiver should be held with a view to reducing sampling frequency

International Example – UK³

- **Soils Dominate Waste** – 58.5 million tonnes to landfills each year
- **Mostly “Clean”** – Only ~1.5% identified as hazardous waste
- **Pro-Reuse Policy** – The UK’s “Definition of Waste: Code of Practice” allows for reuse of soil without considering it “waste”
- **New Concepts** – Researchers propose “Soil Hotels” (temporary clean soil banks) and “Soil Hospitals” (locations for soil remediation)



3. UK Research and Innovation, 2024. UKRI Interdisciplinary Circular Economy Centre for Mineral-Based Construction Materials (Policy Briefing)

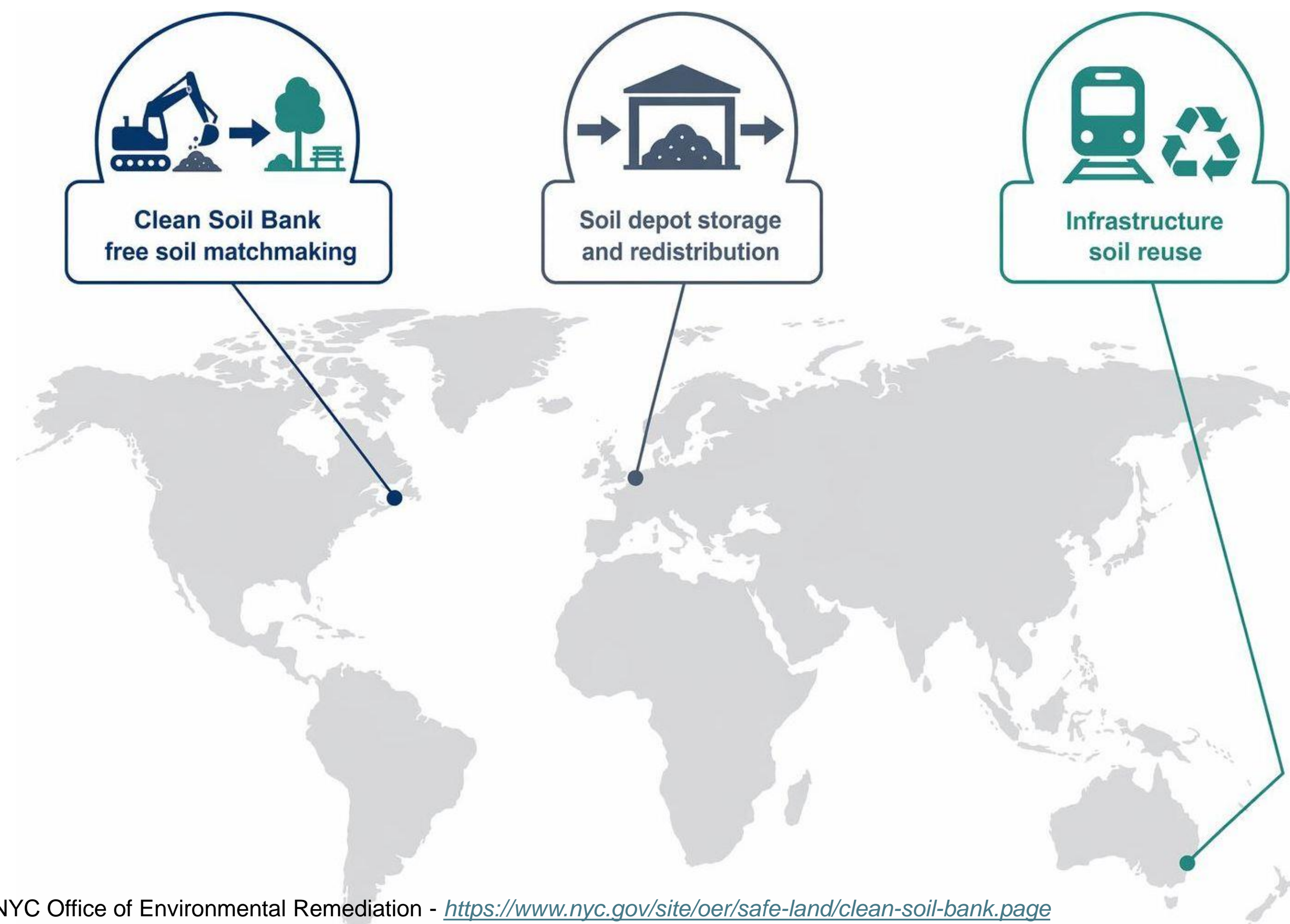
International Example – The Netherlands

- **National Framework** – Dutch Soil Quality Decree (2008) provides a unified, risk-based system for soil reuse
- **100 million tonnes of soil excavated every year...** after much work **~90% is reused** as is (almost all of the rest is remediated then reused)⁴
- **Risk Grading** – Sites accepting soil must match its quality
- **“Soil Passport”** – Every consignment gets an environmental quality certificate documenting its contaminant class, which supports traceability and accountability
- **Reused soil is FREE** (primary soil is not)



4. ALGA Webinar, 2026. Soil Reuse & Logistics in Urban Environments

International Example – Other Notable Initiatives



- **NYC Clean Soil Bank** – A city-run exchange matches projects with surplus clean soil to those needing fill, **free of charge**⁵
- **Flanders (Belgium)** – Operates licensed soil banks to temporarily stockpile (and remediate) excess soil and redirect to other projects – smooths timing and encourages reuse⁶
- **Australia (Victoria)** – Major infrastructure projects have piloted large-scale soil reuse. Some state guidelines now emphasise reusing spoil as standard practice.⁷

5. NYC Office of Environmental Remediation - <https://www.nyc.gov/site/oer/safe-land/clean-soil-bank.page>

6. Den Ouden - <https://denoudengroep.com/en/den-ouden-brabob/grondbanken>

7. Victoria's Big Build - <https://bigbuild.vic.gov.au/about/ecologia/recycled-first-policy>

Local Leadership – Auckland Council’s Changes

□ Clarity on LIMs

- ✗ Old: The site has been remediated to background concentrations OR the site has been remediated such that it does not pose a risk to human health or the environment
- ✓ New: Soil does not pose a risk to human health or the environment

□ Consent Condition Reform

- ✗ Old – must meet the definition of ‘Cleanfill material’ in the Auckland Unitary Plan (i.e. non-detect organics and < background inorganics)
- ✓ New – Imported soil / fill must be certified by a SQEP as being highly unlikely to pose a risk to human health (based on intended land use) or the environment

□ Accept Class 5 WAC as “Cleanfill” Criteria

- ✗ Only a small number of organics and still << risk-based criteria

□ Encourage Global Consents

- ✓ Kāinga Ora Example: Allows for Excavation → Temporary Storage on KO Sites → Reuse on KO Sites

□ Encourage Managed Fill Consent Applications

- ✓ Allowing for importation of soil with higher levels of contamination with appropriate management and controls in place

Local Government Can Act Now



Change in Action

Two recent Auckland-based examples:

1. **October 2025:** 50,000 m³ of excess soil generated during redevelopment of an aged care facility redirected to a commercial / industrial earthworks site requiring fill
2. **April 2026:** 20,000 m³ of excess topsoil being blended to achieve cleanfill concentrations for off-site re-use

Achieved through:

- ✓ Site-specific CSMs → Informed Testing Programmes
- ✓ SQEP Oversight and Certification
- ✓ Early Council Engagement
- ✓ Clear Documentation and Agreed Conditions
- ✓ Communicating Obligations to Client & Contractors

Drone photograph of stockpiles during blending



What can WE do as an industry?

IMMEDIATE

Now • Reframe & Influence

- ❑ Use “surplus fill management” instead of “soil disposal”
- ❑ Push for soil re-use as an RMA objective (Resource Management Act reform)

MEDIUM TERM

1–3 Years • Enable & Incentivise

- ❑ Advocate for regional/national “soil hotels” (temporary soil storage hubs)
- ❑ Promote financial incentives for soil re-use

SHORT TERM

Next ~1 Year • Collaborate & Encourage

- ❑ Coordinate site-to-site soil transfers for projects/clients
- ❑ Encourage local councils to adopt soil re-use initiatives

LONG TERM

3+ Years • Innovate & Expand

- ❑ Advocate for regional/national “soil hospitals” (soil treatment facilities)



Thank you!



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