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**MANAGING RECLAIMED ASPHALT –
HIGHWAYS AND PAVEMENTS**

Overview:

- Who's responsible: Duty of Care
- What is road tar and why is it hazardous
- Testing
- Site Investigation
- Treatment Options

Who's responsible:

- Client must take the lead role
- Highway maintenance not waste management
- Aim is to repair pavement whilst reduce landfill and maximise reuse
- Guidance is not intended to be a guide to managing waste more of how to maintain highways containing difficult materials

What is road tar:

- Origin and history of use
 - Polycyclic Aromatic Hydrocarbons (PAH)
 - Phenols and Cresols
 - Crude tar is distilled to produce Road tar
 - Road tar was a manufactured product compliant with BS 76 used to produce asphalt and macadams to BS 594 and BS 4987

What is road tar:

- The potential hazard posed by coal tar arises from the levels of Polycyclic Aromatic Hydrocarbons (PAHs) and from the potential for leaching to occur.
- Some PAHs are known to have carcinogenic effects and levels of these are very high in the case of tar (but extremely low in bitumen)
- Materials containing tar may be classified as Special (Hazardous) Waste
- Other constituents may be harmful to the environment
- However road tar and tar are not the same but the waste catalogue does not differentiate

Testing:

- Sample preparation is crucial to outcome of testing
- Determinants testing: **we only test for some of the polymers in tar**
 - Speciated PAH Analysis (PAH16)
 - Phenols & Cresols: Speciated or Index
 - We use a marker compound BAP
- Screening:
 - PAK marker (triggers at minimum 125mg/kg)**gives false positives**
- Leachate testing -site specific
- Planings testing to classify arisings

Site investigation:

- Investigation is essential to proper re-use
- Combine structural and tar investigation:
 - Stage 1: Scheme design
 - Stage 2: Further testing to characterise arisings
- Recommended:
 - 150mm cores for bound layers; 25-50m centres; Minimum 3 per site
 - Trial pits for lower unbound

Treatment options:

- Meet engineering demands of road
- In-situ stabilisation produces **Zero waste**:
 - ❖ Presence or absence of tar is “immaterial”
 - ❖ surplus treated stabilised material is a construction product Meets SHW requirements
 - ❖ Supported by EA: “no intention to discard”
- Meets pathway to zero waste

Prevention > Re-use > Recycling > Recovery > Disposal