UK Remediation Ltd

Topsoil Recovery: Process Description

Exeter Fixed Soil Treatment Facility

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DOCUMENT CONTROL SHEET

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1. SUMMARY OF THE DOCUMENT

This document sets out a process description for producing a recycled topsoil substitute that meets the BS3882:2015 British Standard for topsoil.

Topsoil recovery addresses a growing national problem: the UK is losing millions of tonnes of soil every year through construction, civil engineering, and poor agricultural management. Coincidently, large volumes of material from road sweepings and are being sent to landfill while much of it could be recovered and reused. This creates unnecessary environmental damage through the requirement of the extraction of fresh, natural topsoil to replace it.

The proposed solution is to recover, and reprocess these waste materials into a safe, and sustainable topsoil substitute. This substitute would provide the same functions as natural topsoil but without the environmental and economic costs of landfill disposal and virgin soil extraction. It is specifically intended for use in municipal landscaping, construction projects, and land reclamation schemes, where large quantities of topsoil are needed.

2. PRE-TREATMENT

Road sweepings and gully waste are collected under local authority contracts. On arrival, the material is inspected and weighed, then quarantined in separate storage bays to avoid cross-contamination.

Next, the waste undergoes a series of treatment steps to remove unwanted materials and contaminants:

- **Coarse and medium screening** to take out stones, plastics, timber, and other debris.
- **Air or vacuum extraction** to pull out light materials like leaves, wood, and plastic fragments.
- **Soil washing** (for gully waste) to separate the material into different size and density fractions.
- **Biological treatment** if contamination such as hydrocarbons is present.

The remaining fine to medium soil-like material is reclassified as a remediated soil (no longer "waste"), and stored in controlled batches.

3. TESTING & MIXING

Once treated, the recovered soil is tested for its physical and chemical properties. Samples are analysed for nutrient levels, organic matter content, and possible contaminants. Compliance is confirmed against BS3882:2015. If required, organic amendments (such as composts) or other additives are introduced to balance the soil geochemically.

The material is then mixed in batches. Typically, this is done by layering and mixing with excavator-mounted rotary buckets and then passing the mixture through a trommel screener for even mixing.

If a batch does not meet the required standard, it may be reprocessed with further amendments, diverted to another suitable use, or rejected entirely.

4. QUALITY ASSURANCE AND SITE-SPECIFIC CHECKS

Every batch of recycled topsoil goes through verification testing to confirm compliance with BS3882:2015. Each batch also goes through geochemical characterisation testing which is subsequently screened against human health criteria. Results are stored in a digital tracking system and linked to batch numbers for full traceability.

Before the product is delivered to a customer, a site-specific risk assessment is completed. The intended use of the soil, the location (for example, proximity to water or sensitive habitats), and intended land use are assessed as suitability criteria. Only when the soil is proven to be suitable for its destination site is it dispatched.

5. BENEFITS

This method delivers multiple environmental and economic benefits. It diverts large volumes of material from landfill, reduces demand for natural topsoil extraction. This method also reduces the carbon footprint of soil supply by providing recovered topsoil for local supply. It also ensures a reliable, safe, and sustainable product for the

construction and landscaping sectors, backed by strict quality control and regulatory compliance.