

# WASTE PROJECT PHASE 0

Evidence & Operational Design - current forwardable concept note

## CURRENT STAGE

### Phase 0 - non-thermal evidence and operational design

STATUS: DEVELOPMENT

## PURPOSE

YSI Africa is developing a localized coastal waste-leakage and resource-recovery initiative for Freetown. Phase 0 is a bounded evidence and operational-design funding proposition. It is designed to determine the problem, operating requirements, legitimate recovery routes, real costs and infrastructure gaps before YSI commits to facilities, machinery or a predetermined technical solution.

## PHASE 0 BOUNDARY

### PHASE 0 IS NON-THERMAL.

It excludes RDF/SRF preparation, combustion, waste-to-energy, thermal treatment and ash handling. Any later technical recovery pathway must follow characterization, engineering, economics, regulation, environmental safeguards and a legitimate use case.

## CORE OPERATING LOGIC

|                 |               |            |               |             |             |                 |
|-----------------|---------------|------------|---------------|-------------|-------------|-----------------|
| 01<br>INTERCEPT | 02<br>MEASURE | 03<br>SORT | 04<br>RECOVER | 05<br>ROUTE | 06<br>LEARN | 07<br>REPLICATE |
|-----------------|---------------|------------|---------------|-------------|-------------|-----------------|

## WHAT PHASE 0 MUST ESTABLISH

- |    |                                                   |    |                                                         |
|----|---------------------------------------------------|----|---------------------------------------------------------|
| 01 | Leakage geography and candidate measurement sites | 02 | Quantity, composition and seasonal variation            |
| 03 | Defensible source/pathway hypotheses              | 04 | Recovery and legitimate routing options                 |
| 05 | Real interception, handling and transport costs   | 06 | Authority/provider requirements and infrastructure gaps |

## FUNDING POSITION

Costing must precede financial classification. No public amount, range or grant-size label is approved until scope, methodology, permissions, staffing, equipment, transport, data, safety, quotations and contingency are sufficiently bounded.

# PHASE 0 DELIVERY FRAMEWORK

Evidence first. Infrastructure only if the evidence supports it.

## WORKSTREAMS

### 1. Site and leakage definition

Define the bounded geography, lawful access conditions and environmental leakage questions.

### 2. Measurement and characterization

Use auditable weights, dates, sites, material categories, methods and quality-control records.

### 3. Recovery and routing analysis

Assess realistic reuse, recycling, treatment or disposal pathways using legitimate existing systems where practical.

### 4. Operating-cost evidence

Document labor, transport, handling, measurement, safety, data and provider costs at the level the evidence supports.

### 5. Authority and provider alignment

Clarify permissions, responsibilities, authorized service arrangements and regulatory requirements.

### 6. Infrastructure decision

Identify what additional YSI infrastructure, if any, is actually justified by the evidence.

## DECISION GATE

### GO

### MODIFY

### NO-GO

A later bounded pilot is supported by evidence. | More evidence or a different intervention is required. | Additional infrastructure is unnecessary, duplicative, unsafe, uneconomic or unsupported.

## MONITORING AND EVIDENCE

Phase 0 is intended to generate auditable operating evidence rather than activity counts alone. Records should connect site, date, method, weight, material category, destination, responsible staff and supporting documentation. Public claims should strengthen only when the underlying record supports them.

## INSTITUTIONAL SAFEGUARDS

- YSI is not presented as Freetown's municipal waste collector.
- Facilities, equipment, permits, partners and technical performance are claimed only when documented.

## NEXT DEVELOPMENT GATE

Finalize Phase 0 scope, methodology, permissions assumptions, duration and cost basis. Only then approve a budget and determine whether publishing an indicative funding range improves outreach.