



**STAKEHOLDER
INTRODUCTORY WORKSHOP**

12 DECEMBER 2025



**forestry, fisheries
& the environment**

Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

GREEN PROCUREMENT STRATEGY

FOR

**CONSTRUCTION AND
DEMOLITION WASTE**

novelto

AGENDA

- 🌿 Introduction and aims of the project
- 🌿 Preliminary insights
- 🌿 Expected outcomes
- 🌿 Project programme



**TOWARDS A
BETTER
ENVIRONMENT**

Introduction and aims of the project





Why the strategy?

Background

In South Africa, 5.4 – 7.8 million tons of C&D waste is generated annually

Only 10–20% of the waste is recycled, leaving 4.9 – 6.2 million tons landfilled or illegally dumped, thus causing pollution and habitat loss

Unrecycled C&D waste represents R2.4 – 3.4 billion in lost annual value (at R150–200 / ton for aggregates)

The environmental impact is 55 million tons of avoidable CO₂-e emissions and landfill space exhaustion

What is construction and demolition waste?

Waste produced during the construction, alteration, repair or demolition of any structure, including rubble, earth, rock and wood displaced during such activities, excluding hazardous waste

our focus 



Inert waste is C&D waste that does not undergo significant transformation after disposal, does not burn or react and has leachate toxicity that is insignificant

Towards zero waste

The DFFE seeks to develop a green procurement strategy to stimulate supply and demand for construction and demolition waste in the country

This is in support of the secondary materials economy and to fulfill the objectives of the National Waste Management Strategy (2020)



C&D waste impact



Noise, water, air pollution



Unsightly and expensive to remediate



Degrades environment and reduces property values

Response



Permit conditions: Require demolition waste management plans before permit issuance



Chain-of-custody: GPS-logged haulage and weighbridge slips with random inspections



Graded penalties: Repeat offenders face permit holds and tender ineligibility

C&D WASTE HAS A PROFOUND IMPACT ON THE ENVIRONMENT

Preliminary insights from literature review





POLICY LEVERS

What policy levers would encourage diversion from landfill?



TECHNICAL STANDARDS

How to harmonise standards to ensure quality materials are produced from C&D waste



GOVERNANCE AND ENFORCEMENT

Processes for demolition permitting, haulage, weighbridge requirements and defining municipality role



ECONOMIC AND FINANCE

The mechanisms and enablers to stimulate projects and offtakes to ensure that new enterprises are development



TECHNOLOGY OPTIONS

Possible technologies that would be required for sorting, reclaiming and processing



DATA AND MONITORING

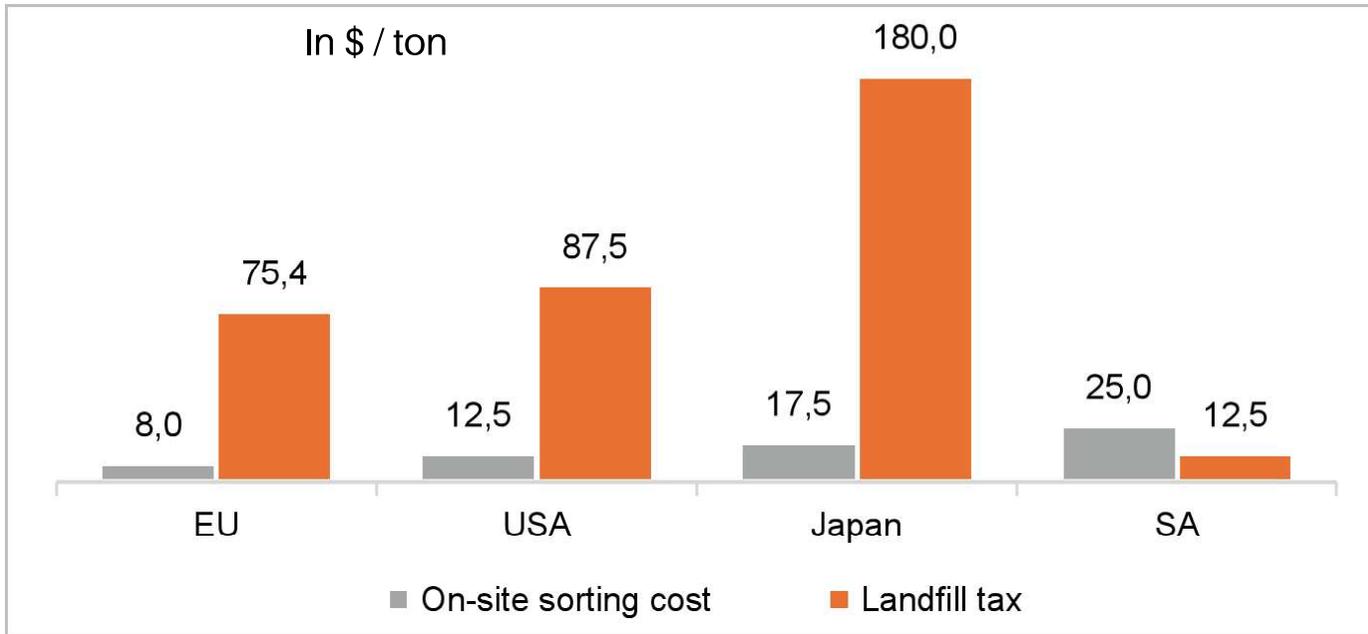
How to ensure that accurate data is recorded and maintained for monitoring and reporting

**KEY
VARIABLES
TO CREATE
BANKABLE
MARKETS**

| Legislation / policy | Key focus | Comments |
|--|---|---|
| Policy | Policy NEM:WA (2008), NWMS (2020) | No mandatory recycling targets; weak enforcement |
| Standards | Incomplete SANS coverage for RCA | Engineers default to virgin materials |
| Infrastructure | Patchy recycling facilities (e.g. Western Cape) | Limited aggregation; high transport costs |
| South African Waste Information System | A system used by government and industry to capture routine data on the tonnages of waste generated, recycled and disposed of in South Africa | Enhancements are ongoing to address data fidelity issues for C&D waste, including under-reporting |
| | SAWIS under-reporting; inconsistent metrics | Hinders planning and investment |



Five essential variables need to be addressed



**SOUTH AFRICA MAY NEED A REVIEW
OF THE COUNTRY'S LANDFILL TAXES
AND CONSIDERATION FOR
MANDATING ON-SITE SORTING
WHICH IS CURRENTLY NOT OPTIMAL
IN COMPARISON TO OTHER
COUNTRIES**

**THE VALUE OF ON-
SITE SORTING**

AS PROCESSING COMPLEXITY INCREASES,
COSTS AND THE VALUE DERIVED INCREASE

What is feasible for South Africa?

| Attribute | Manual | Mechanical | Advanced |
|--------------|---|--|--|
| | Crushing and Screening | Advanced Processing | Emerging Technologies |
| Product | RCA for road construction (road sub-base) | High purity RCA for structural applications | Premium RCA - carbonation Custom products - 3D printing |
| Process | Primary Crushing: Jaw / impact crushers reduce concrete to coarse aggregate (20-50mm) Secondary Crushing: Cone crushers produce fine aggregate (5-20mm) Screening: Vibrating screens separate aggregate sizes | Wet Processing: Removes contaminants (dust, clay, wood) using water and hydrocyclones, leading to better sizing of aggregate Air Classification: Separates lightweight impurities | Carbonation: Injects CO ₂ into RCA to improve strength and reduce porosity 3D Printing with RCA: Uses recycled aggregate in additive manufacturing |
| Efficiency | High (100-500 tons / hour) | Moderate (50-150 tons / hour) | Emerging (lab / pilot scale) |
| Cost | Moderate - capital: \$200k-\$1M; operational: \$6-10 / ton | High - capital: \$500k-\$2M; operational: \$10-15 / ton | Very high (R&D intensive) |
| Complexity | Moderate | High | Very high |
| Output Value | High. RCA for road construction (\$50-150 / ton) | Very high. High-purity RCA for structural concrete (\$100 - 250 / ton) | Very high. Carbonated RCA replaces 100% virgin aggregate in concrete |



MANDATORY RECYCLING TARGETS

Mandatory recycling targets
create guaranteed demand for
RCA



MANDATED ON-SITE SEGREGATION

On-site segregation and pre-
demolition plans guarantee better
quality and consistent supply

**The literature review suggests
that there are two foundational
variables necessary for the
strategy to succeed**

**Expected
outcomes**



1

Mandating used aggregate

Would it be viable to mandate used aggregate in building projects? What would be the likely financial impact?

2

Diverting aggregate from landfill

What uses and incentives can discourage landfilling of used aggregate? Are current landfill taxes appropriate?

3

Economic impacts

Are there realistic positive economic impacts from increased reuse of aggregate? What are those impacts and where are they realised?

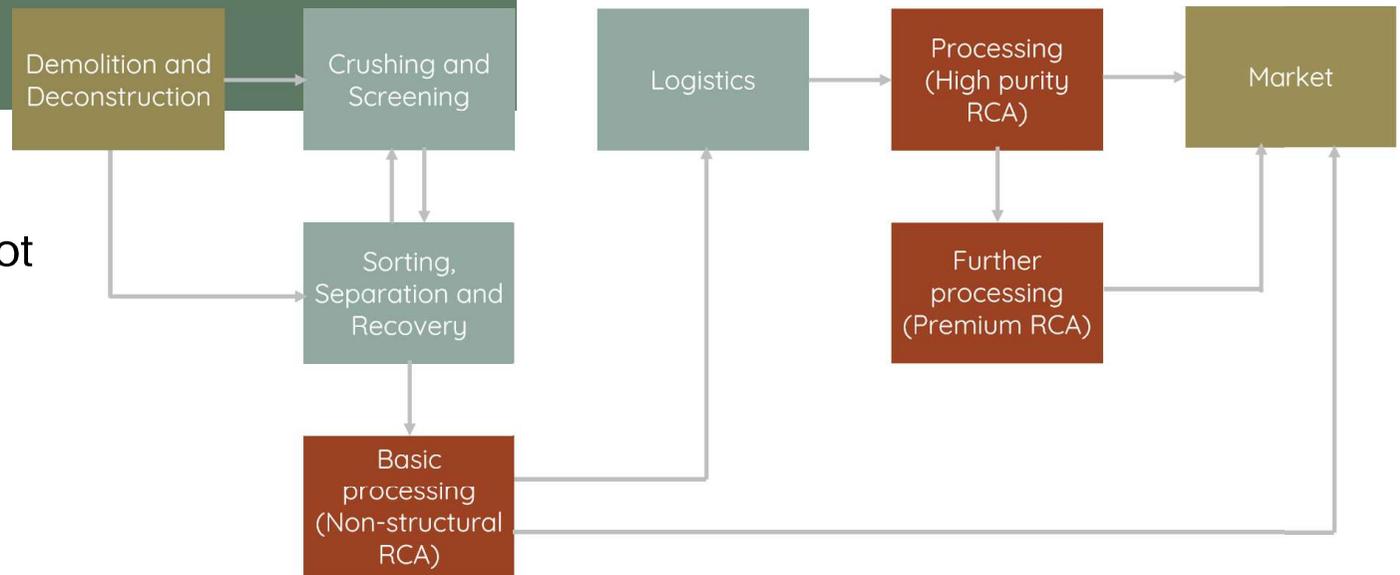
4

A coherent value chain view

What elements of the value chain are realisable in the short, medium and short term? What tools are necessary for that?

EXPECTED
OUTCOME:

A strategy to ensure that we do not forgo the benefits of a cleaner environment, job creation and enterprise development



Project programme



Strategic inputs from stakeholders

MEANINGFUL PARTICIPATION TO FOSTER DIVERSE PERSPECTIVES

Vision and Goals

- What is your vision for effective C&D waste management in South Africa? How can we collectively achieve this vision?
- Collaboratively define goals that reflect a shared vision and set measurable outcomes

Policy Recommendations

- What specific policy changes do you recommend to support improved C&D waste management in South Africa?
- Create a refined set of policy recommendations based on stakeholder input to be advocated for at the national level

Innovations and Technology

- What innovative technologies or practices have you encountered that could enhance C&D waste management in our context?
- Gather examples and case studies that stakeholders believe could be adapted for our purposes

Identification of Barriers

- What do you see as the major barriers to implementing effective recycling and waste management practices? How can these be overcome?
- Compile a prioritized list of barriers from stakeholder feedback to inform targeted interventions

Collaborative Opportunities

- What partnerships or collaborative opportunities do you envision that could amplify our efforts in C&D waste management?
- Identify key stakeholders to engage in collaborative initiatives and projects

Enterprise Development

- What enterprise development opportunities do you believe can be unlocked by C&D waste management?
- Develop a view of possible business and preferential procurement opportunities in C&D waste management



Key dates

CRITICAL STAKEHOLDER ENGAGEMENT DATES

| | |
|---|--------------------|
| Publication of Stakeholder Questionnaire | 24 November 2025 |
| Introductory Online Stakeholder Workshop | 12 December 2025 |
| Questionnaire Response Deadline | 28 February 2026 |
| Publication of Draft Strategy | 31 March 2026 |
| Regional Workshops | 10 - 25 April 2026 |
| Publication of Revised Strategy | 30 June 2026 |
| Publication of Final Strategy | 31 July 2026 |



Ours is a finite
earth

Let's be stewards
of our
environment

Thank you!

www.novelto.co.za/c-d-strategy/