Big River Plastic to Energy Project

Confidential Investor Memorandum

September 2025

SEDNA

www.sedna.earth

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1. Executive Summary

Sedna Limited is transforming South Africa's waste and energy sectors by converting non-recyclable plastics into valuable fuels and materials. Each of our plants is designed to process **60 tons per day**, producing **40.9-42 tons of paraffinic and light oils** and **17-20.8 tons of char** (varying by site feedstock mix) through proven pyrolysis technology. Modular design enables scalability to **100 tons per day** within six months of commissioning.

Our mission is to **eradicate African ocean and river plastic pollution**, while delivering measurable returns for investors. Sedna aligns with **seven UN Sustainable Development Goals**, including clean water, affordable energy, sustainable cities, responsible consumption, climate action, life below water, and zero hunger. At scale, we will divert **63,750 tons of plastic waste per year (assuming 250 operating days across sites)**, create **200 jobs** (with at least 30% reserved for women and prioritizing local hiring), and generate long-term ESG and carbon credit value.

By 2030, we expect to achieve **$44–50 million in annual revenues** at 85% utilization across our South African sites. Expansion opportunities in Kenya (Kibera), South Africa's Port Elizabeth, Sasolburg, and Mauritius are already in the pipeline, with future potential across Nigeria and Ghana, which together generate over **32 million tons of waste annually**.

We are seeking **$29.70 million*** **in venture capital funding**, allocated as follows:

- **$28.15 million capex** for plant roll-out (excluding $11.89 million Chinese vendor finance),
- **$0.82 million development costs** ($0.319 million for Atlantis; $0.125 million per additional site),
- **$0.24 million for opex runway (including working capital).**
  ***(**includes minor contingencies)

Our **Atlantis site is fully funded** ($8.28 million, including $7.962 million in Chinese vendor finance), and **Pretoria is partially funded** ($3.931 million Chinese vendor finance committed). Chinese partners / investors **Shangqiu Aotewei** (reactors) and **Mrs. Bi of Wuhan Huayu Keneng** (construction) are providing **$11.89 million in vendor finance and in-kind contributions**, anchoring our trusted supply chain.

Sedna has secured early traction:

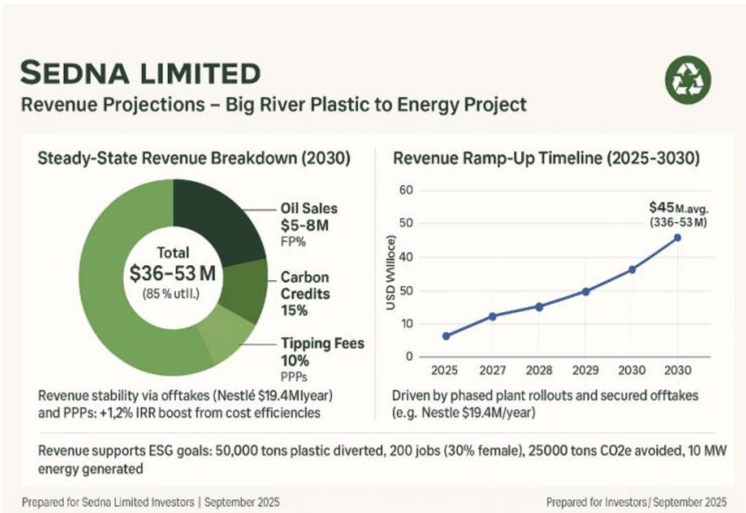
- **Environmental Impact Assessments (EIAs)** are progressing, with **Atlantis commercial operations date (COD) set for Q4 2026**.
- **Offtake agreements** include **Nestlé at $19.4 million per year**, plus additional agreements with cement and trading partners.
- **Safety and compliance**: The Atlantis project has been classified as **Low Hazard** under MHI regulations, with emergency planning under development on an ALARP basis. Public notification is underway (September 15, 2025).

Projected returns are highly attractive:

- **Unlevered IRRs (site-specific)**: Atlantis 47% (5 yrs) / 60% (10 yrs); Pretoria 34% / 50%; Johannesburg 41% / 54%; Durban 22% / 39%; Cape Town 40% / 55%.

- **Portfolio-level VC IRRs (with 20% equity sweetener):** 17% (5 yrs) / 31% (10 yrs), with downside scenarios still delivering >20% IRR
- **Equity structure includes a 20% sweetener in Sedna Limited post-preference repayment, ensuring strong upside potential for early investors in the overall business.**

Looking forward, Sedna is well-positioned to capture premium pricing via **ISCC PLUS certification (target Q4 2025)**, unlocking 50–70% greenhouse gas savings and access to the EU's sustainable aviation fuel and recycled carbon fuel markets. Combined with African expansion potential and carbon credit monetization, this positions Sedna as a **scalable, impact-driven, and commercially attractive solution** to Africa's plastic and energy crises.



2. Company Overview

Mission & Vision

Eliminate African plastic pollution via waste-to-energy. Founded in 2023 by Jean Craven; partners Sebenzana and Chinese technical partners / investors. Vision: Africa's waste-to-energy leader.

Founders & Team

- **Jean Craven (Founder/Chairman): $1.3 billion managed, 25+ African countries.**
- **Andrew Carr (Board): 25+ years energy infrastructure.**
- **Egmont Ottermann (Chief Engineer): 25+ years waste-to-energy, UNIDO advisor.**
- **Linda Sadler (Chief Growth): 15+ years capital raising, start-ups.**
- **Petrus Scholtz (Finance): 15+ years renewables.**
- **Sebenzana: 70+ engineers.**
- **Chinese technical partners / investors: Wuhan Huayu Keneng and Shangqiu Aotewei**

Entity Clarification: Sedna Limited parent (Reg: 77100089); SPVs: SEDNA WC (operator), SEDNA GP (operator), Sedna WC Development (developer)

Partnerships and Co-Investors: Shangqiu Aotewei (reactors), Wuhan Huayu Keneng (construction) for $11.89 million finance/in-kind; backups: Huayin Renewable Energy (reactors). Local SA firms for 25% materials.

Ownership: 20% equity sweetener post-preference repayment (Developer/VC/Chinese each 20%; remaining 40% operating/founders).

Team Insight: Modular units enable 20-30% capacity expansion per plant within 6 months post-COD, cutting future capex by approximately 15%.

3. Market Opportunity

SA plastic waste: 1.5 million tons (2025), 5% growth. Pyrolysis meets diesel demand ($1.18/liter). Africa: 32 million tons/year in targets. ISCC unlocks EU premiums.

4. Business Model

Products & Services

Pyrolysis Output: Oils (40.9-42 tons/day), char (17 – 20.8 tons/day). ISCC for sustainability.

Revenue Streams

- Oil: 70% ($25-37 million)

- Credits: 15% ($5-7.5 million)
- Tipping: 10% ($4-5 million)
- Char: 5% ($2-2.5 million)

Key Offtakes

- Nestlé: $19.4 million/year.
- Cement: $0.7-1.0 million/year.
- Traders: $16-32 million/year.
- Char: $0.4-1.0 million/year.

Public-Private Partnerships for Feedstock Security

Pursue PPPs with SA municipalities for 50,000 tons/year (10,000 tons/plant, 250 days), 10-15% landfill cut, non-recyclables (HDPE/LDPE/PP), aligning with waste policies/circular economy.

Objectives:

- Security: Long-term contracts reduce private reliance.
- Diversion: 50,000 tons/year (10,000 tons/plant, 250 days), 10-15% landfill cut.
- Revenue: $10/ton tipping from PPPs, $0.5 million/year; additional private feedstock tipping contributes to total $4-5 million/year (10% of revenues).
- Impact: Tie to 200 jobs (30% female), community programs.

Implementation:

- Engage Q2 2026 with DEA/municipalities, using National Treasury August 2025 webinar insights.
- Pilot: Atlantis Q4 2026, with Nestlé.
- Scale: To other sites by 2028; feasibility for Port Elizabeth/Africa post-2027.
- Mitigation: Embed in EIAs, secure contracts.

Partnerships: Treasury/GTAC for compliance; municipalities for integration; PETCO/Reclam for complements.

Financial: 10-15% cost savings ($0.1-0.15 million/plant/year); $0.5 million tipping; +1-2% IRR boost. Enhances ESG/SDGs; track via blockchain/RFID.

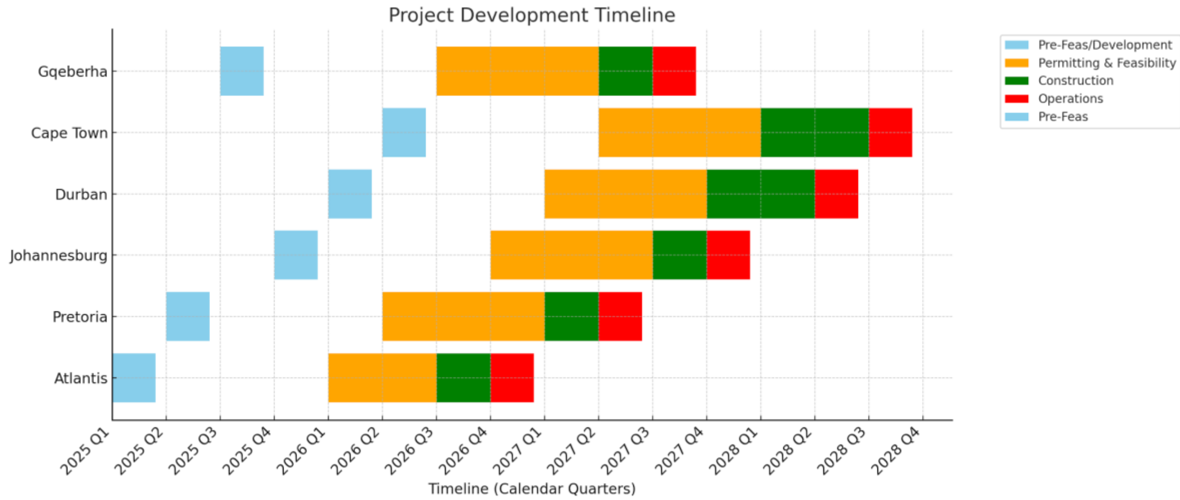
By-product Insight: Syngas capture adds $2-3 million/year/plant by 2028, cutting opex 10%.

5. Operations Timeline

2025-2028 rollout: Atlantis Q4 2026, Pretoria Q2 2027, Johannesburg Q4 2027, Cape Town Q3 2028, Durban Q2 2028. Port Elizabeth and Kibera 2029 feasibility.

Dependencies: $29.70 million VC. EIAs: Atlantis Q1 2026.

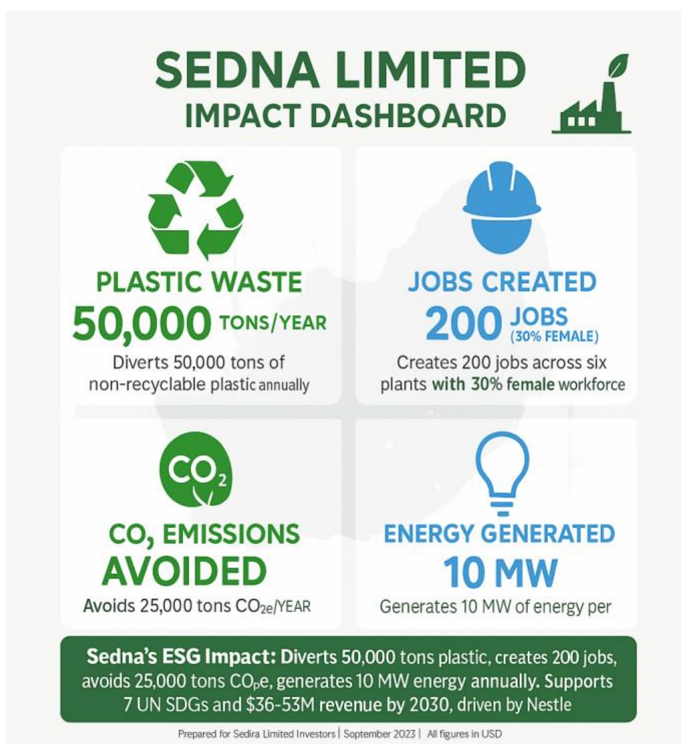
Mitigation: ZAR/USD hedging (50% capex at 18:1); backups.



6. Environmental & Sustainability

GHG: 11,800 tons CO_2e/year (Scope 1). Water: 2,100 liters/ton recycled. Impact: 54,750 tons diverted, 200 jobs, 25,000 tons CO_2 avoided, 10 MW energy. ISCC Q4 2025.

Regulatory Compliance: Atlantis Low Hazard under MHI Regulations (2023); 500m³ tank volume; 60m³/day oil via 8 reactors. Draft report done; final pending. Emergency: Abatement for 100% uptime. Public engagement: Meeting 12:00 September 15, 2025.



7. Financial Projections

Assumptions

Revenue: Oil: $722-833/ton. Char: $111-167/ton. Tipping: $10/ton. Credits: $5-15/ton. Margins: 30-40%

Total Capex: $40.23 million (Atlantis $8.28 million fully funded $7.96 million by Chinese investors / partners; Pretoria/Johannesburg/Durban/Cape Town $7.99 million each, Pretoria partially funded $3.93 million by Chinese investors / partners).

Development: $0.82 million. Working Capital: $0.19 million total (Atlantis only).

Pipeline: Sasolburg/Mauritius $0.28 million each (post-2027).

VC funding ask: $29.70M ($28.15M capex, $0.94M development, $0.24M opex runway). Total VC ask of $29.70M excludes $11.89M Chinese vendor finance ($7.96M Atlantis, $3.93M Pretoria).

Portfolio Unlevered IRR: 31% (5 yrs), 52% (10 yrs).

8. Investor Proposition

Investor Returns

- **VC Funding Ask**: $29.70M, staged over 2025-2028:
    - Q3-Q4 2025: $10-12M (development/EIAs, Atlantis).
    - Q1-Q2 2026: $8-10M (Atlantis/Pretoria construction).
    - Q3 2026-Q4 2027: $5-7M (Johannesburg/Durban/Cape Town).
    - Q1-Q4 2028: $3-5M (Cape Town/Durban, opex runway).
    - Disbursement tied to milestones (e.g., Atlantis EIA approval Q1 2026, Nestlé offtake confirmation).
- **Preference Shares Structure**:
    - Senior preference shares (rank 2 after developer, ahead of equity).
    - Interest: 11% annual, paid quarterly (e.g., $3.22M/year on $29.70M following 1-year grace period).
    - Payback Period: 3-4 years average (from investment date; e.g., 2.8 years Atlantis). Principal repaid from cash flows (e.g., $36-53M/year revenue by 2030).
    - Grace Period: 1 year (no principal repayments, interest accrues at 11%).
    - Reserves: DSRA $0 (cash flows cover); MRA 6 months maintenance (~$0.2M/site/year).
- **Equity Sweetener**: 20% equity stake post-pref share repayment (split equally with developer/Chinese; 40% to operating/founders), boosting returns. This 20% equity stake is in Sedna Limited (via its SPVs), providing investors with ownership across all operations, not tied to individual sites.
- **VC Returns**:
    - Base IRR (Pref Shares): 11% (matching interest rate, principal back in 3-4 years).
    - With 20% Equity Sweetener: Portfolio IRR 17% (5 years), 31% (10 years).

  - Site-Specific VC IRRs (illustrative, 5/10 years): Pretoria 22%/35%; Johannesburg 19%/28%; Cape Town 19%/28%; Durban 14%/21%; (Atlantis n/a, fully funded). These reflect individual project economics but do not affect the portfolio-wide 20% equity stake.
- **Timeline for Returns**:
  - 2025-2026: Negative outflows (investment phase).
  - Q4 2026: Positive inflows start (Atlantis COD, $5M revenue).
  - 2027-2028: Revenue ramps to $30M (all sites operational by Q4 2028).
  - 2030: Steady-state $44-50M/year; pref share repayments complete for most sites.
- **Exit Potential**: Acquisition/IPO at 5-10x EBITDA ($28-56M valuation by 2030), amplifying equity upside.
- **Protections**:
  - Pari passu with Chinese partners (equal asset claims proportional to $29.70M vs. $11.894M).
  - Governance: 1 board seat/observer per $5M invested.
  - De-Risking: $11.89M Chinese vendor finance (Shangqiu Aotewei/Wuhan Huayu Keneng); Nestlé offtake ($19.4M/year); PPPs for 50,000 tons/year feedstock at $10/ton; ISCC certification Q4 2025 for premium pricing.
- **Sensitivity**: >20% IRR in downside scenarios (20% lower oil prices at $722-833/ton, 10% higher opex).

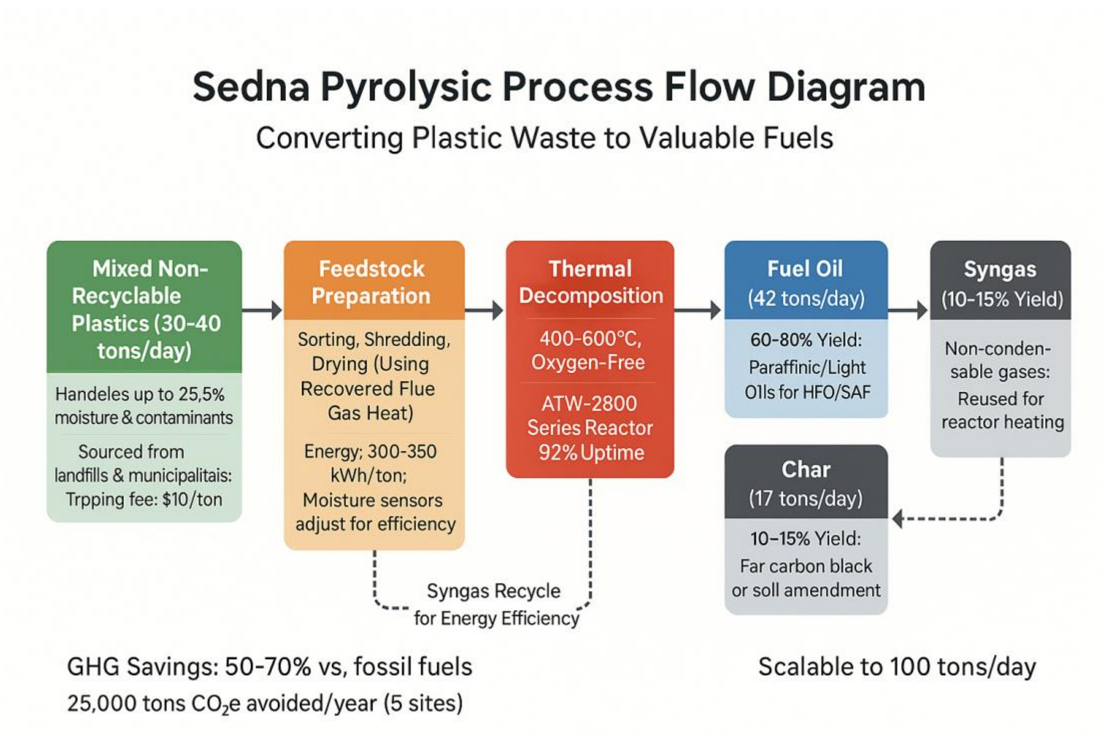
Metric	Details
VC Ask	$29.70M ($28.15M capex, $0.82M dev, $0.24M opex)
Payback	3-4 years (1-year grace, 11% interest)
Yield (Pref Shares)	11% annual interest; IRR 17% (5 yrs)/31% (10 yrs)
Timeline	2025-2028 investment; repayments 2026-2030
Equity Sweetener	20% in Sedna Limited post-repayment
Protections	Pari passu, board seat, secured offtakes

9. Team & Governance

Opco Board: Equal Founder/Sebenzana; Founder chair. VC: 1 seat/observer per $5 million. Steering: Bi-monthly, Founder control. Blockchain reporting.

10. African Expansion

Targets, besides South African pipeline of Sasolburg, Port Elizabeth; Nigeria, Ghana, Kenya (Kibera), Mauritius. Partnerships: AfDB/IFC. Timeline: Studies 2027, deployments 2029. Chinese VC Synergy: Belt and Road infrastructure ties.



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