



# CREATING VALUE FROM WASTE

MANAGEMENT PRESENTATION  
RLC STRATEGY AND FINANCE  
COMMITTEE JUNE 15<sup>TH</sup> 2016



## MANAGEMENT PRESENTATION JUNE 2016

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Team

Statement of Intent

Terax History

Completing The Build of the First Plant

Domestic Sales

International Sales

Maximising the Value of RLC's Investment

Working Together

Questions

# Team – Board



## CEO – Brian Vass

Brian has a track record of developing and successfully exiting multi-national businesses in Europe, Asia and New Zealand with extensive business experience in the fields of energy and technology. He established Energy For Industry as a Meridian subsidiary and ultimately ran the sale to Pioneer Generation. EFI offer Waste to Energy plants including landfill gas and biosolids through Design-Build-Own-Operate contracts. Brian has an M.Sc. from the London School of Economics, BA (Hons) Business Studies. He is a Chartered IT Professional (CITP) and Certified Technologist (CTech).



## Don Atkinson

Don is the owner of private company Airflo Holdings Ltd which has substantial commercial investments in New Zealand. He was the founding chairman of EastPack Ltd which grew to become the second largest Kiwifruit post-harvest facility in the country with turnover of \$50 million. He has also held positions as Chair of both Southern Kiwi and Southlink, and as a director of ENZA Cool Ltd. Don has been involved in a voluntary capacity with Rotorua's Lake Water Quality Society, for more than a decade.



## Judith Stanway

Scion Board Member, Judith was the Managing Partner of BDO Rotorua Ltd and until recently was the Chair of BDO New Zealand Ltd, a New Zealand-wide chartered accountancy and business advisory firm. Mrs Stanway is a Fellow of the NZ Institute of Directors and a director of Scion, Te Papa Tipu Properties Ltd and a number of private companies. She has also chaired the Lakes District Health Board and has been a director of Te Puia..



## Chair – Dr Russell Burton

Russell is Scion's General Manager of Research and Investments. He has had a key role in development of a number of Scion's spin-out companies including Greenweld Technologies Ltd and Wood Hardening Technologies Ltd, He is a founder, former chair and now director of the Biopolymer Network Ltd, and several other science, innovation and commercial enterprises including a former Chair of Health Rotorua Ltd. He is a Fellow of the Institute of Professional Engineers New Zealand and the Institution of Chemical Engineers United Kingdom, and a member of the New Zealand Institute of Directors.



## Dr Ian Boddy

Ian is a consultant in technology and innovative space, working with universities, Crown Research Institutes, industry bodies and accounting firms. He is Chair of Honey Lab Limited and was previously Chair of AgResearch subsidiary Grasslanz. Dr Boddy has also held directorships of a number of other businesses including ParaCo Technology, Encoate Holdings, Orico Ltd and Com One Ltd..

# Creating Value for RLC – Overview

## The Terax Waste Conversion Process:

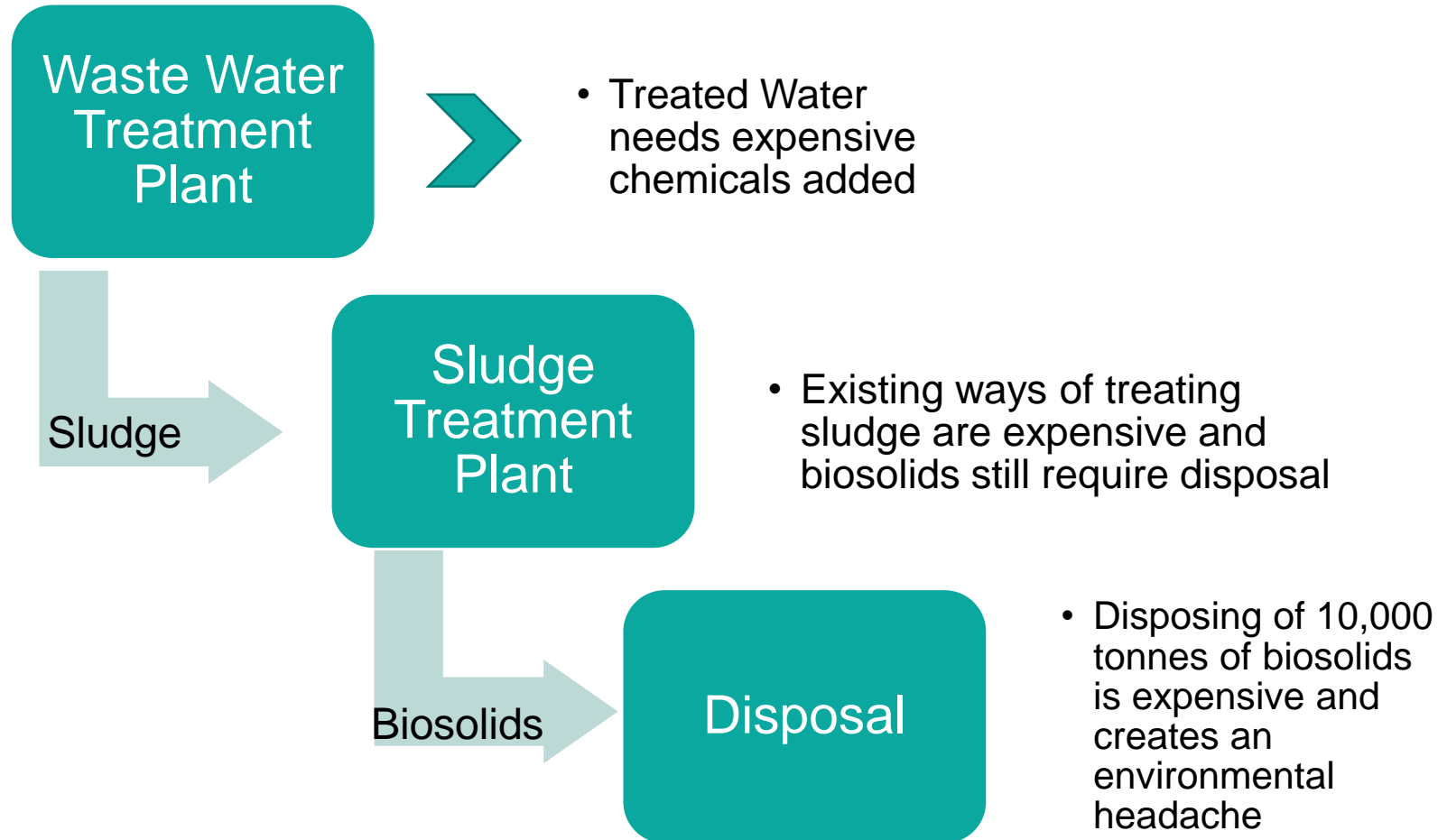
- Solves Rotorua's long term Biosolids problem in an economically efficient and environmentally sensitive way.
- Showcases Rotorua as a "Green City" with RLC leading the Government's Waste Minimisation Strategy.
- Adds value to the assets jointly owned and co-developed by RLC and Scion.
- Developing the best business model to enable a return on RLC's investment.
- Making good progress against the Statement of Intent targets.

# Statement of Intent Key Performance Indicators

| KPI  | Measure  | Timing                     | Status  |
|--|--|----------------------------|---|
| <b>The company is operating efficiently</b>  | The budget is adopted by the Board and the investors advised via the SOI of expected investment requirements over three year timeframe.              | 30 <sup>th</sup> June 2016 | The Board adopted the draft 2016 Strategic and Business Plan and Budget in February 2016 and investment requirements were presented to shareholders in March. Shareholders agreed to fund business until June 2017. |
| <b>Maximize the value of the Limited Partners' investment and minimize their on-going costs.</b> | Secure Series "B" investment from a strategic investor and operating partner that bridges medium-term operating revenue shortfalls.                  | 30 <sup>th</sup> June 2017 | Investment process underway.  |
| <b>Completion of Plant Build</b>   | First plant In operation.  | 30 June 2018               | Plant designed. Build Own Operate contract being negotiated.  |
| <b>Domestic Sales</b>  | <ul style="list-style-type: none"> <li>• 20 suspects qualified</li> <li>• 4 prospects in negotiation</li> <li>• 1 contracted sale</li> </ul>         | 30 June 2017               | Pipeline being developed. New sales dependent on reference site being built.  |
| <b>International Sales</b>   | <ul style="list-style-type: none"> <li>• Sales Channels in 3 key territories established.</li> <li>• 1 new international customer signed.</li> </ul> | 30 June 2017               | Dependent on new investment and reference site being built.   |
| <b>Compliance</b>  | The Audit of Terax 2013 Ltd. does not highlight any material issues.   | Annually                   | Audit completed annually. No material issues highlighted in 2015 audit.   |
| <b>Business operations</b>   | Effective business strategies are put in place to ensure that the Investors receive an appropriate return on their investment.                       | Reviewed annually          | SOI and highlights of Strategic and Business Plan presented to shareholders.  |

# Terax Waste Conversion Process

## Solving Rotorua's Biosolids Problem



### Terax:

1. Feeds back valuable chemicals into the existing waste water treatment plant that enhances the quality of treated water.
2. Avoids costs associated with sludge treatment.
3. Eliminates the need for biosolids disposal.

# Terax History – The Route to Creating Future Value for RLC

RLC recognises that the Terax process could solve their biosolids problem.

Proof of concept successful.

RLC invests in a Pilot Plant

Pilot Plant successful - RLC invests in design of Commercial Plant

Commercial plant will solve Rotorua's long term biosolids problem and unlock value for RLC through new sales and capital raising.

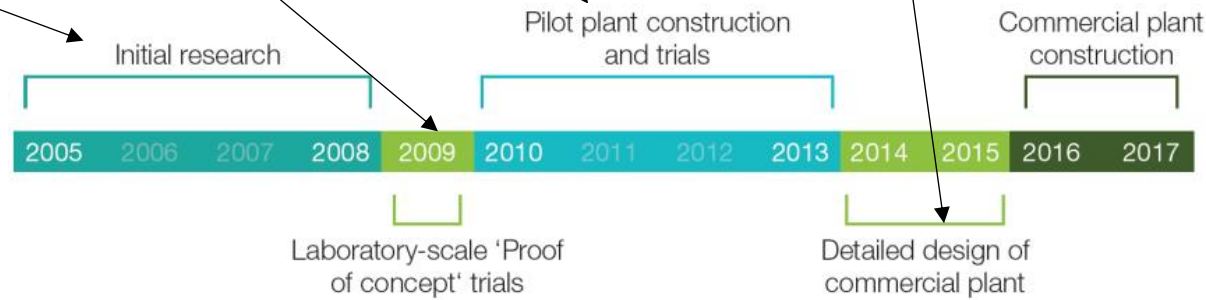


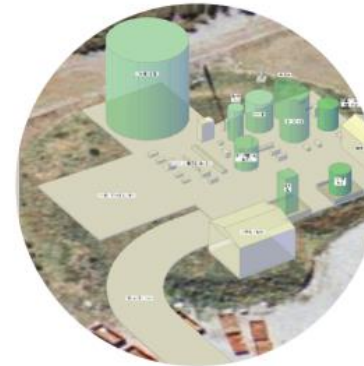
Figure 1.2: Anaerobic fermentation pilot plant



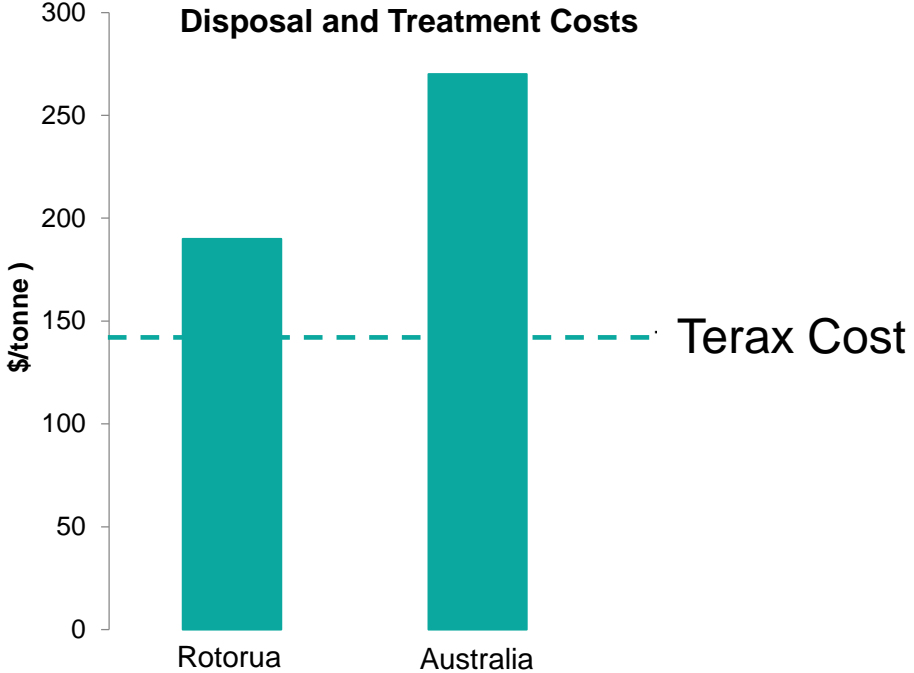
Figure 1.3: Hydrothermal reactor pilot facility



Figure 1.4: Rotorua Lakes Council commercial design



# Biosolids Disposal - Terax Saves RLC Money



Terax saves money in the long term. Terax base costs are \$140 per tonne. Long term alternatives cost Rotorua \$190. Average cost for Australia is \$270.



# Completion of Plant

## Constructing the first Build Own Operate Plant

### Advantages to Council

- Disposal costs lower than landfilling or other waste disposal alternatives
- Reduces technical and operational risk
- Provides performance guarantees
- Provides flexibility of capital spend
- Provides an option for Council to fund under a design, build, operate model.
- Provides options for treatment of other solid waste streams
- Enhances Council's reputation as environmentally conscious and boosts Rotorua's reputation as a "Green" city
- WMF funding reduces cost to Council

### Advantages to Terax Limited Partnership

- Provides reference site
- Strengthens sales proposition
- Provides cashflow back to the Partnership
- Increases the Partnership's Intellectual Property
- Collectively increases the Partnership's asset value

# Target Markets

|             | <b>Tonnes of Biosolids</b> | <b>Total Cost Per Tonne</b> |
|-------------|----------------------------|-----------------------------|
| Rotorua     | 10,000                     | \$190                       |
| New Zealand | 500,000                    | \$225                       |
| Australia   | 1,500,000                  | \$270                       |
| China       | 30,000,000                 |                             |

- Rotorua has a relatively low cost of disposal
- The average for New Zealand is higher
- Australia is much higher again
- But the big market is in China

# Domestic Sales

- The key to creating significant future value to RLC is getting the first reference plant built.
- Our key targets are Rotorua and two other councils who together treat 135,000 tonnes of biosolids.
- One has much higher disposal cost and numerous complaints about odour being caused by landfilled sludge.
- \$6m Waste Minimisation Fund investment allows lower capital cost for the first plant.

Other Councils have a bigger problem.....  
But they want to see the plant working before they  
commit to Terax

# International Sales

- The Chinese Market is immense producing over 30 million tonnes of biosolids from 4,000 waste water treatment plants that have been built in the last 5 years. Another 4,000 plants will be built over the next 5 years.
- We have 10 Chinese investors interested in the technology.

An investment by any of these Chinese investors will lead to significant international sales and increase the value of RLC's investment ten fold.

# Maximize the Value of RLC's Investment and Minimize On-going Costs

- **Management Team**

- CEO in place
- Business Development GM being recruited
- Operations GM seconded

- **Relationships Scion/RLC/Govt.**

- **Product**

- Patented
- Piloted
- Commercial Plant Designed.

Investors invest in Management Teams, Market and Product.

We now have all three in place.

New investors will maximise the value of RLC's investment to date and minimise on-going costs....but building the first plant is key to success.

## Market

- 60 Cities the size of Rotorua or bigger in Australasia
  - Creating 2million tonnes of biosolids
- 20 in pipeline
- 2 being actively worked on.
  - 10,000 and 125,000 tonnes of biosolids
- 200 cities in China 200,000+ (150 1m+)
  - Create 30million tonnes of biosolids
- 350 cities in Europe 200,000+ (36 1m+)
- Terax cost competitive to existing landfilling and incineration options.

# Working Together

## Partnership

- RLC brings credibility in environmental stewardship and build of initial reference site – key value step to increasing
  - Valuation of company
  - Possibility of investment
  - Future sales.
- Scion brings research and development capability and track record.
- New investor brings cash and market development capability
  - Creates future value for all Partners.
  - Reduces/Monetises equity investment from partners.

We have 4 Investors from New Zealand evaluating the technology. They recognise RLC's and Scion's credibility in this area and long term commitment to bringing Terax to the brink of commercial success.

# Recent Milestones

- New CEO appointed in November 2015.
- Terax Waste Conversion Process named New Zealand Clean Technology Innovation of the Year in December 2015.
- Biowaste patent granted in New Zealand and under examination in 9 other countries.
- New Intellectual Property for application to municipal solid waste has been developed.
- Design work for commercial plant complete.
- Procurement and construction tender documents being drawn up.
- \$6m WMF funding applied for.
- In discussion with 14 Investors.

**We are ready to build the plant which will add significant value**

**THANK YOU**