Ministry for the Environment
Manatū Mō Te Taiao

PO Box 10362, Wellington 6143
Website: www.mfe.govt.nz
Freephone: 0800 499 700

19-D-00268

15 MAR 2019

s 9(2)(a) [redacted]

Dear s 9(2)(a) [redacted]

Thank you for your email of 15 February 2019 requesting the following under the Official Information Act 1982 (the Act):

> *I would like to ask for a copy of the application 2015 Pacific rubber submitted to the waste minimization fund which was then name changed into waste management nz.*

The Ministry for the Environment has identified two documents in scope, as detailed in the attached document schedule. Some information within these documents has been withheld under the following sections of the Act:

9(2)(a)	to protect the privacy of natural persons, including that of deceased natural persons.
9(2)(b)(ii)	to protect information where the making available of the information would likely unreasonably to prejudice the commercial position of the person who supplied or who is the subject of the information
9(2)(ba)(i)	to protect information which is subject to an obligation of confidence, where making the information available would likely prejudice the supply of similar information, or information from the same source, and it is in the public interest that such information should continue to be supplied.

In terms of section 9(1) of the Act, I am satisfied that, in the circumstances, the withholding of this information is not outweighed by other considerations that render it desirable to make the information available in the public interest.

You have the right to seek an investigation and review by the Ombudsman of my decision to withhold information relating to this request, in accordance with section 28(3) of the Act. The relevant details can be found at: www.ombudsman.parliament.nz.

If you have any queries about this response, please feel free to contact our Executive Relations team at ministerials@mfe.govt.nz.

Please note that the Ministry for the Environment releases responses to selected requests for official information on our OIA responses page shortly after the response has been sent.

Yours sincerely

Shaun Lewis
Director, Mana Honohono – Partnerships and Investments

List of documents

Document no.	Document date	Content	Decisions	OIA sections applied
1	4 April 2016	Waste Minimisation Fund: Application Form for Project Funding 2015 – Pacific Rubber Recycling Limited – Application Form	Released in part	9(2)(a) 9(2)(b)(ii) 9(2)(ba)(i)
2	4 April 2016	Waste Minimisation Fund: Application Form for Project Funding 2015 – Pacific Rubber Recycling Limited – Business Plan	Released in part	9(2)(a) 9(2)(b)(ii) 9(2)(ba)(i)

Ministry for the Environment
Manatū Mō Te Taiao

REDUCE • REUSE • RECYCLE • RECOVER

Waste Minimisation Fund

Application Form for Project Funding

2015

For office use only	
WMF application number	WMF-XXX
Applicant name	
Project name	
Total cost of project	
Amount requested from WMF	

Introduction

This application form is for project proposals to the 2015 funding round of the Ministry for the Environment's Waste Minimisation Fund (WMF). We strongly recommend that you read the *Waste Minimisation Fund Guide for Applicants 2015* before completing this form.

Please read the *Waste Minimisation Fund Guide for Applicants 2015* (the guide) before completing this application form.

Please complete this form electronically and submit it by email. Move between fields by using the mouse, or pressing the ↑ and ↓ keys on your keyboard. Use text only; do not enter images, tables or graphs into the form.

If you need help to complete the WMF application form, refer to the guide in the first instance. For any further information, email wmf@mfe.govt.nz, or call 0800 499 700.

All applications must be completed using this application form.

When your application is complete

Completed application forms (including all supporting information) for the 2015 WMF round must be received by the Ministry for the Environment between **9.00am Friday 1 May** and **mid-day Friday 15 May 2015**. We are unable to accept late applications. We are also unable to assess incomplete applications, so it is important you provide all the required information.

Email your completed application form and supporting documentation (as required) to wmfapplication@mfe.govt.nz (with 'WMF application' and your organisation name in the subject line). Please note that we will only accept **one email per application** – documents submitted as multiple emails will not be accepted.

Official Information

Important: Information presented to the Minister for the Environment or the Ministry for the Environment is subject to disclosure under the Official Information Act 1982 (OIA). Certain information may be withheld in accordance with the grounds for withholding information under the OIA. Further information on the OIA is available at www.ombudsmen.parliament.nz.

Information held by the Minister or Ministry may have to be released under the OIA in response to a request from a member of the public (or any other body) for that information. If you wish to provide sensitive information to the Minister or Ministry which you do not want released, it is recommended you consult with the Ministry as to whether the information is necessary for the application, and whether there may be grounds in the OIA for withholding the information. For instance, if release of the information would disclose a trade secret, or be likely to unreasonably prejudice the commercial position of the person who supplied or who is the subject of the information, then there may be grounds to withhold the information. If an OIA request relating to your application is received, the Ministry will endeavour to contact you to discuss it, and what the implications of releasing your information are.

The grounds for withholding information must always be balanced against consideration of public interest that may justify release. Although the Ministry does not give any guarantees as to whether information can be withheld under the OIA, it may be helpful to discuss OIA issues with the Ministry in advance if information provided with an application is sensitive.

Eligibility criteria

Applications to the Waste Minimisation Fund must meet the eligibility criteria below. The following self-assessment checklist is based on the fund criteria, as notified under the *New Zealand Gazette*. Since notifying the criteria in the New Zealand Gazette, the Sustainable Management Fund mentioned in criteria 6 has been disestablished and the Foundation for Research, Science and Technology is now part of the Ministry of Business, Innovation and Employment.

Applicants must be able to answer 'yes' for each of the criteria below. If you cannot meet these criteria you are not eligible to apply to the Waste Minimisation Fund.

Self-assessment checklist

	Does your project meet the following criteria?	Yes / No
1	Only waste minimisation projects are eligible for funding. Projects must promote or achieve waste minimisation.* Waste minimisation covers the reduction of waste and the reuse, recycling and recovery of waste and diverted material. The scope of the fund includes educational projects that promote waste minimisation activity.	Yes
2	Projects must result in new waste minimisation activity, either by implementing new initiatives or a significant expansion in the scope or coverage of existing activities.	Yes
3	Funding is not for the ongoing financial support of existing activities, nor is it for the running costs of the existing activities of organisations, individuals, councils or firms.	Yes
4	Projects should be for a discrete timeframe of up to three years, after which the project objectives will have been achieved and, where appropriate, the initiative will become self-funding.	Yes
5	Funding can be for operational or capital expenditure required to undertake a project.	Yes
6	For projects where alternative, more suitable, Government funding streams are available (such as the Sustainable Management Fund, the Contaminated Sites Remediation Fund, or research funding from the Foundation for Research, Science and Technology), applicants should apply to these funding sources before applying to the Waste Minimisation Fund.	Yes
7	The applicant must be a legal entity.	Yes
8	The fund will not cover the entire cost of the project. Applicants will need part funding from other sources.	Yes
9	The minimum grant for feasibility studies will be $10,000. The minimum grant for other projects will be $50,000.	Yes

* Note that waste minimisation means minimising waste for disposal. Disposal means—

(a) the final (or more than short-term) deposit of waste into or onto land set apart for that purpose; or

(b) the incineration of waste.

SECTION A: Applicant details

See pages 14 and 15 of the Guide for Applicants for information on how to complete this section.

1. Organisation details

Organisation's legal name	Pacific Rubber Recycling Limited
Trading name	Pacific Rubber
Description of your organisation	Pacific Rubber (PRRL) is New Zealand's largest recycler of end-of-life tyre waste. The majority of Pacific Rubber's revenue is contractually generated from corporate clients. Revenue is generated from its business to business (B2B) waste collection service and Tyre Derived Fuel (TDF), an alternative fuel it processes out of the collected tyre waste, which is exported to Asia. s9(2)(b)(ii) [redacted] s9(2)(b)(ii) [redacted] s9(2)(b)(ii) [redacted] Pacific Rubber's equipment recycles the collected tyre waste into 50mm (or 2 inch) pieces of tyre derived fuel (TDF (ISRI TDM-2C)), which is an input in the manufacture of cement in many countries. TDF provides a similar energy output to petroleum and augments a coal-fired kilns energy output. In addition, the steel content embedded in tyres is extracted from the kiln as ferrous oxide, a raw material used to make cement clinker. The ferrous oxide embedded in TDF therefore reduces a cement company's procurement of mined iron sands. Cement kilns reduce TDF at 1450 degrees Celsius with minimal emissions due to the inert atmosphere at such high temperatures, with fly ash extracted and utilised as an additional raw material for cement clinker. s9(2)(b)(ii) [redacted] s9(2)(b)(ii) [redacted] s9(2)(b)(ii) [redacted] Pacific Rubber TDF is also sold via commodity brokers or to domestic rubber crumb manufacturers.
Physical address	273A Church Street, Onehunga, Auckland 1061, New Zealand
Postal address	PO Box 202-220, Southgate-Takanini, Auckland 2112, New Zealand
Telephone	s9(2)(a) [redacted]
Website address	www.pacificrubber.co.nz
GST number	s9(2)(b)(ii) [redacted]

Legal entity status	☐ Incorporated society	☐ Charitable trust	☐ Limited partnership	☐ Māori trust board
	☒ Limited liability or cooperative company	☐ Territorial authority	☐ Other *please specify*	

If you are applying on behalf of a territorial authority, please explain why this project:

- is not funded out of your council's baseline funding
- does not fall under your council's core responsibilities
- is not funded out of levy money received under section 31 of the Waste Minimisation Act 2008.

N/A

2. Contact details for this application

Primary contact name	s9(2)(a)	Back-up contact name	s9(2)(a)
Organisation	s9(2)(a)	Organisation	s9(2)(a)
Role or job title	s9(2)(a)	Role or job title	s9(2)(a)
Phone	s9(2)(a) *Landline* s9(2)(a) *Mobile*	Phone	s9(2)(a) *Landline* s9(2)(a) *Mobile*
Email address	s9(2)(a)	Email address	s9(2)(a)
Physical address	s9(2)(a)	Physical address	s9(2)(a)

SECTION B: Project details

3. Details of project

Project name	Pacific Rubber National Expansion
Project description *This should be a short and succinct description of the problem, solution and outcome your project will achieve.* *You will have the opportunity to expand on this description later in the application form. (approximately 100 words)*	An opportunity exists through recently executed contracts in s9(2)(b)(ii) to greatly expand the collection and processing of EOL tyres in NZ, and the supply of TDF to s9(2)(b)(ii) A full-scale nationwide operation would be able to process all of New Zealand's EOL tyre waste from depots situated in s9(2)(b)(ii) s9(2)(b)(ii) The current Pacific Rubber business processes s9(2)(b)(ii) of New Zealand's EOL tyres, and the opportunity exists to increase this to more than s9(2)(b)(ii) over the next three years. There is very little business competition at scale and no Pacific Rubber competitor holds commercial supply contracts with s9(2)(b)(ii) s9(2)(b)(ii) In order to execute this domestic opportunity, Pacific Rubber requires s9(2)(b)(ii) in new investment, which will establish long term infrastructure assets backed by contractual cash flows. Pacific Rubber is taking on an additional equity investor to provide its contribution to this growth opportunity, and is seeking funds from the Waste Minimisation Fund to provide the remainder of the investment required.
Project location	Auckland, Wellington, Christchurch
Are you aware of any similar waste minimisation activities in your region?	☐ Yes ☒ No *If yes, give details of the existing activity. Funding is not available for projects that displace existing activity.* No other tyre collection firm has long term nationwide contracts in place with either s9(2)(b)(ii)
Project type *Tick one project type that most closely fits your project*	☐ Feasibility or investigative ☐ Infrastructure ☐ Services ☐ Education and awareness ☒ The project is a mix of new infrastructure (new sites, new equipment, trucks) and increasing the services offered (i.e. collection of EOL tyres)
How many years are you seeking funding for?	Two
Total project cost	s9(2)(b)(ii)
WMF contribution	$3,851,005

If you are applying for a total WMF contribution of **$200,000 or more** over the duration of your project, you **must** submit a business plan in support of your application. The business plan must be submitted as one document only. Your application **will not** be assessed without this information.

If you are applying for a total WMF contribution of **less than $200,000** over the duration of your project, it is **optional** to submit a business plan in support of your application.

The business plan may include (but is not limited to) the following:

- Background information about the organisation
  (including age and history of the company, information about directors and shareholders, staffing levels etc)
- Background information on your proposal
- Feasibility of your proposal
  (including details of any feasibility studies undertaken, technical expertise required, and critical success factors)
- Financial summary
  (estimated budgets, what the funding will be used for, how much money is required to start the project and keep it running once it is established)
- Market analysis
  (including current and forecast supplier and end-user markets)
- Risk management strategy
  (risks to the successful delivery of the project and how these will be managed/mitigated)

Please provide **only one** supporting document in PDF format for this section (5MB file size limit). **Only one document for this section will be provided to the assessment panel.**

SECTION C: Project outline

See pages 18, 19 and 20 of the Guide for Applicants for information on how to complete this section.

4. What is the problem that you plan to address with the project?

Describe the nature and extent of the problem. Where applicable, include information on the harm or risk of harm that this problem creates, current waste quantities, and how the waste is managed, including method of disposal.

The project addresses the need for nationwide, permanent tyre recycling infrastructure to address the s9(2)(b)(ii) tonnes of tyre waste produced in NZ each year. The project will increase Pacific Rubber's installed TDF processing capacity from s9(2)(b)(ii) tonnes per annum (in addition there is a further s9(2)(b)(ii) tonnes of non-TDF, i.e. rubber crumb and a civil construction product).

Approximately 3.9 million passenger tyres and 1.2 million truck tyres reach the end of their life in New Zealand each year. A proportion of these are responsibly recycled or disposed in landfills, the vast majority are not. A collection and end use infrastructure has developed within NZ but the outcomes vary considerably in both quality and scale. A culture of charging for EOL tyres at retail level has developed but the attachment of those funds to the disposal of the tyre is not uniform and there is evidence of 'lowest cost' outcomes leading to tyre piles and illegal dumping.

The risks of environmental harm through pollution from fire and the leaching of toxic materials into water and soil are significant if waste tyres are not managed effectively. Whole tyres in landfills can cause stability issues by capturing gas that rises to the surface, while the stockpiling and dumping of tyres can impose costs on ratepayers and land owners as well as being an eyesore and posing a health threat from fires and insects breeding in water trapped in the whole tyres. Under the Resource Management Act EOL tyres are considered a contaminant.

Chart 1: Origins EOL Tyre Waste by Province

Approximately 75% of EOL tyre waste is produced from the North Island and 25% from the South Island. EOL tyre waste volumes reflect economic activity and population density. 50% of EOL tyres are derived from the Upper North Island reflecting the larger population centres and primary industry activity in Waikato and Bay of Plenty.

With the exception of Pacific Rubber, the majority of New Zealand's tyre waste industry is dominated by small under-funded and/or lifestyle driven operators who deliver variable outcomes, and in some cases create expensive problems through mismanaged tyre stockpiles with little or no hope of processing the stockpiles. Pacific Rubber is currently in negotiation with territorial authorities that have been the unwilling recipients of large tyre stockpiles to

remove these and process the stockpiles into TDF. This will be much easier following the planned nationwide expansion.

The proposed project is similar to mass forms of recycling of EOL tyres found in other OECD countries where EOL tyre recycling rates exceed 90%. The project will create permanent recycling infrastructure for New Zealand with recycling capacity matching the country's s9(2)(b)(ii) tonnes total of annually generated EOL tyre waste. The project will develop s9(2)(b)(ii) permanent recycling depots s9(2)(b)(ii) for collecting, processing and loading recycled EOL tyres into TDF. The s9(2)(b)(ii) depot in s9(2)(b)(ii) will have capacity to recycle s9(2)(b)(ii) of EOL tyre waste s9(2)(b)(ii) into TDF along with s9(2)(b)(ii) into downstream domestic recycling partners manufacturing rubber crumb and a civil construction product. The s9(2)(b)(ii) depot will be a collection and processing point to send EOL tyres in s9(2)(b)(ii) due to unfavourable ocean based logistics cost out of s9(2)(b)(ii) The s9(2)(b)(ii) depot will have a s9(2)(b)(ii) tonne capacity which combined could achieve recycling rates across NZ on par with OECD peers.

5. What is your proposed solution?

The problems associated with EOL tyre disposal in NZ will be solved in three ways.

Solution 1 - Feedstock Accessibility, Economic Recovery, Supply Contracts

Securing long-term, stable and economically viable access to tyre waste can be difficult. Pacific Rubber has secured exclusive supply agreements with major New Zealand corporates to ensure that EOL tyres are collected and disposed of in a commercially viable manner. These corporates include:

s9(2)(b)(ii)

Solution 2 – Securing long term commercial contracts with s9(2)(b)(ii) to supply TDF

Pacific Rubber has recently secured a long term supply contract with s9(2)(b)(ii) to supply TDF to its s9(2)(b)(ii) operations. s9(2)(b)(ii) has such significant demand for TDF that it could easily utilise s9(2)(b)(ii) of New Zealand's EOL tyre waste. This means that Pacific Rubber will be directly removing the domestic problem of tyre waste by converting EOL tyres to TDF and exporting them to s9(2)(b)(ii) business units.

It should be noted that the volume of TDF sought by s9(2)(b)(ii) is very large and Pacific Rubber's current volumes are considered small. A viable TDF supplier would be easily sell in excess of s9(2)(b)(ii) tonnes per annum.

Tyre-derived fuel (TDF) is composed of mechanically shredded EOL tyre waste. TDF may be blended with thermal coal or other fuels such as wood waste to be reduced at 1450 degrees Celcius in cement kilns, power plants, or paper mills. An EPA test programme concluded that, with the exception of zinc emissions, potential emissions from TDF are not significantly different from other conventional fossil fuels. Historically, there has not been any large volume use for EOL tyres, other than low-temperature incineration, that has been able to keep up with the volume of waste generated yearly. TDF produces the same energy as petroleum and approximately 25% more energy than coal (7.4mJ/kg). TDF begins to burn at 290- 340°C. Complete combustion is achieved with flame temperatures of 650°C. The s9(2)(b)(ii) that will be supplied TDF through the contract with Pacific Rubber is operating today with TDF supplied by Pacific Rubber (among other sources).

Supplying TDF domestically in the long term to s9(2)(b)(ii)

s9(2)(b)(ii) would be the optimal long term solution for NZs EOL tyre waste. The capital expenditure requirement and business interruption to s9(2)(b)(ii) operations would however be material so we have not yet fully scoped out this option beyond preliminary discussions.

Solution 3 – Processing at Scale

Having resolved the key issues of input feedstock accessibility at an economic volume and rate, and TDF output supply at an economic volume and rate, EOL tyres need to be physically processed in large volumes.

By consolidating and scaling up the existing Pacific Rubber processing operations, plus the rollout of additional regional facilities, the business could increase TDF production to s9(2)(b)(ii) tonnes per annum although the forecast in years one and two is s9(2)(b)(ii) by 2016 growing to s9(2)(b)(ii) in 2018 on the back of s9(2)(b)(ii) volumes. Pacific Rubber proposes to utilise best-in-breed technology to minimise production downtime and ensure consistent TDF production quality and to provide scalability to meet market demand. Through the strategic location of smaller regional collection and processing facilities, Pacific Rubber will ensure that the greatest proprotion of New Zealand's EOL tyres are processed.

6. Project objectives

Objective *Objectives must be SMART (Specific, Measurable, Achievable, and Realistic within the Timeframe of the project)*	How will you monitor and evaluate the achievement of this objective? *How will you measure your progress and demonstrate that the objective has been achieved?*	Baseline information *Describe the current situation, using the data you have available.*
Create s9(2)(b)(ii) and associated infrastructure to receive EOL tyres and process them into s9(2)(b)(ii) tonnes of TDF and other recycled products within two years (growth to the s9(2)(b)(ii) tonne capacity will occur following the project completion in years 3-5).	s9(2)(b) fully operational within two years, with associated equipment and supply chain logistics in place. A third-party professional project manager will be appointed and contractually responsible for meeting project milestones. The Project Manager will be responsible for progress reporting to the Pacific Rubber project governance team.	Pacific Rubber currently operates out of a single capacity-constrained site in the Waikato with a head office in Auckland and a shared export facility. This means it is unable to meet the opportunities for removal of EOL tyres s9(2)(b)(ii) s9(2)(b)(ii) s9(2)(b)(ii) and is restricted in capacity in the s9(2)(b)(ii). Pacific Rubber has recently executed the largest of its supplier contracts with s9(2)(b)(ii). It has not yet been able to realise the potential of this supply relationship but will be able to do so following investment in infrastructure s9(2)(b)(ii). s9(2)(b)(ii) is actively encouraging Pacific Rubber to s9(2)(b)(ii).
Prevent up to s9(2)(b)(ii) tonnes of tyres from entering the New Zealand waste chain through execution of the s9(2)(b)(ii) s9(2)(b) contracts. (ii) 9(2)	The detailed project plan will include staged milestones with volume targets to be attained s9(2)(b)(ii) is operational. This will be reported through the project governance team to MFE.	Pacific Rubber currently tracks volumes of tyres received and processed from suppliers and is able to continue this business process.

Project tasks/activities – Year 1	Project tasks/activities – Year 2
• Project Mobilisation (create governance structure, engage project manager, prepare project controls – plan, financial controls, reporting framework, communications and stakeholder engagement plan, risk management processes). *Milestone = all project controls in place and operational* • Confirm project controls and overall plan / milestones with MFE and begin monthly reporting process of progress against plan. • Acquire and install environmental, health and safety compliance and reporting system CS-VUE. *Milestone = CS-VUE providing regular compliance reports for existing operations and ready to scale up for future operations* • Identify s9(2)(b)(ii) and with Pacific Rubber, undertake commercial negotiations to s9(2)(b)(ii). *Milestone =* s9(2)(b)(ii) *confirmed* • Identify s9(2)(b)(ii) and with Pacific Rubber, undertake commercial negotiations to s9(2)(b)(ii). *Milestone =* s9(2)(b)(ii) *confirmed* • Identify s9(2)(b)(ii) and with Pacific Rubber, undertake commercial negotiations to s9(2)(b)(ii). *Milestone =* s9(2)(b)(ii) *confirmed* • Confirm equipment and staffing requirements for overall project and begin commercial negotiations and acquisition processes with suppliers. *Milestone = commercial terms agreed with suppliers and equipment ordered to meet Pacific Rubber timelines* • Once s9(2)(b)(ii), undertake site works as necessary to ensure s9(2)(b)(ii) and legally compliant. *Milestone =* s9(2)(b)(ii) *with all necessary environmental and health and safety systems in place*	• Once s9(2)(b)(ii), undertake s9(2)(b)(ii) works as necessary to s9(2)(b)(ii) and legally compliant. *Milestone =* s9(2)(b)(ii) *with all necessary environmental and health and safety systems in place* • Once s9(2)(b)(ii), undertake site works as necessary to and legally compliant. *Milestone =* s9(2)(b)(ii) *with all necessary environmental and health and safety systems in place* • Complete project and hand over to Pacific Rubber for business as usual operation. *Milestone = project completion report and final progress payment received.*

s9(2)(b)(ii):

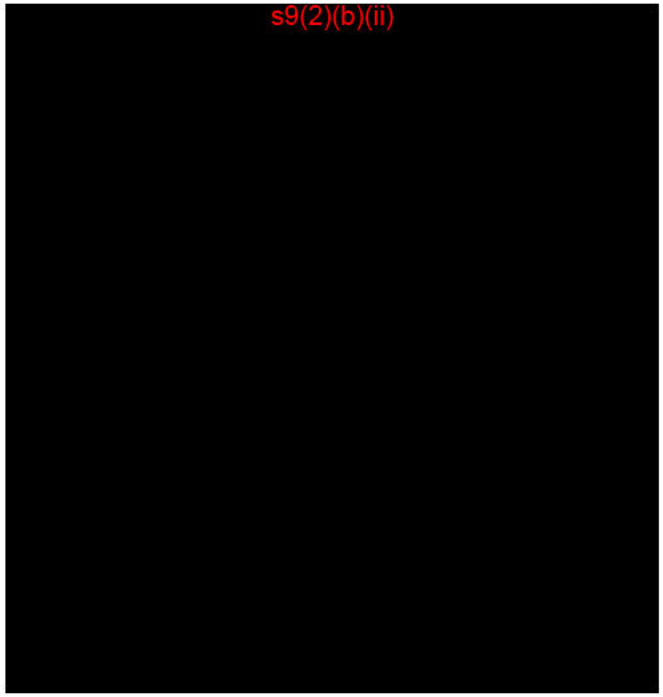
- s9(2)(b)(ii)
- s9(2)(b)(ii)

s9(2)(b)(ii)

s9(2)(b)(ii)

s9(2)(b)(ii)

s9(2)(b)(ii)



What waste stream will your project address? 7. What waste stream will your project address?			
Very high priority	☐ PCBs (polychlorinated biphenyls)	☐ Timber (treated and non-treated – not readily able to separate)	☐ Primary sector related hazardous waste *(for example, tannery, wool scouring, factory wastes)*
	☐ Manufacturing and services sector hazardous waste *(for example, aluminium processing waste)*	☐ Agrichemicals (including containers)	☐ Medical waste (excluding veterinary waste)
	☐ Asbestos	☐ Contaminated soil	
High priority	☐ Oil	☐ Refrigerants	☐ Biosolids
	☐ Primary sector related organic waste	☐ Household organic (food waste and green waste)	☐ Paint
	☒ Tyres	☐ E-waste	☐ Nappies and sanitary
	☐ Commercial green waste		
	Please specify:		

8. How much waste does your project propose to reduce, reuse, recycle or recover?

Do not double count tonnages. Please note, some projects may not divert waste (eg, feasibility studies). Enter N/A if this is the case.

	Baseline *How much waste are you currently diverting from landfill (per annum), if any?*	Forecast after project completion *Estimated diversion from landfill in the first year after project completion*
Reduce *To lessen the generation of waste, including by using products more efficiently, or by redesigning products. For a product, this includes lessening the generation of waste.*		
Reuse *To use waste or diverted material (in its existing form) further, for the original purpose of the materials or products that constitute the waste or diverted material, or for a similar purpose.*	tonnes	tonnes
Recycle *To reprocess waste or diverted material to produce new materials.*	s9(2)(b)(ii) (FY2015)	s9(2)(b)(ii) by project completion, and s9(2)(b)(ii) within five years
Recover *To extract materials or energy from waste or diverted material, for further use or processing (includes making compost).*		
Total	s9(2)(b)(ii) (FY2015)	s9(2)(b)(ii) by project completion, and s9(2)(b)(ii) within five years

Please describe the source of tonnage data detailed above. If you are unable to provide tonnage figures for your project then please explain why.

The source of tonnage data is extracted via a report generated by the company's Xero accounting system. Xero invoices customers based on tyre count by a tyre category (passenger, truck etc) on a dollar per kg basis. Tyre types have industry accepted norms for weights and cubic dimensions. Tyres have nine broad categories (with kg weights):

1) Passenger (9kg)
2) SUV or 4x4 (12kg)
3) Light Truck (25kg)
4) Truck – Less than 22R (45kg)
5) Super Single (60kg)
6) Industrial (20kg)
7) Agricultural (50kg)
8) OTRs are invoiced on a per kg basis

PRRL sends s9(2)(ba)(i) based on numbers collected by type multiplied by average weights as indicated above.

Please describe how you will measure the amount of waste your project will minimise.

As discussed above, the source of tonnage data is extracted via a report generated by the company's Xero accounting system. The project expands Pacific Rubber recycling capacity to s9(2)(b)(ii) tonnes per annum from a current capacity of s9(2)(b)(ii) tonnes (FY2015 actual tonnage processed was s9(2)(b)(ii) The application's procured processing plants (Columbus McKinnon Shredders) are widely used in North America (origin) and abroad and clearly specify tonnage capacity per day, per year. Pacific Rubber currently declines business due to being at near capacity or lacks enough collection vehicles. The company can confidently predict uplift in volumes through the following channels:

s9(2)(b)(ii)

9. What are the specific benefits that your project will deliver?

Please outline the economic, environmental, social and/or cultural benefits that will result from the completion of your project.

Economic

Increased Revenues: Pacific Rubber will receive economic benefit through increased volumes of EOL tyres which earns a collection fee per tyre paid by the suppliers.

- **Modern loading equipment reduces costs:** The investment in modern loading equipment for TDF and EOL tyre feed will eradicate the current inefficiencies in loading mass volumes of product. The current resources are under-capitalised which creates extra cost, time and strain on the business. The loading equipment will save more than s9(2)(b)(ii) in loading costs. For example, TDF is currently processed in the Waikato, 100km south of the contracted export facility in Onehunga. This is costing the company s9(2)(b)(ii) in transport and an additional s9(2)(b)(ii) in container loading. By consolidating in a s9(2)(b)(ii) will reduce the loading costs to below s9(2)(b)(ii) with s9(2)(b)(ii).
- **Bulk freight deals:** Supplying TDF is a bulk volume business and the current levels are low. Increasing volume will enable Pacific Rubber to procure bulk container deals to s9(2)(b)(ii), reducing logistics costs.
- **Increased jobs and tax revenues:** The expansion of Pacific Rubber nationwide will create 12-15 additional jobs. Increased tax generated through GST, income tax will flow through the NZ economy.

Environmental

- **Reduced landfill:** in the long run Pacific Rubber will be capable of receiving up to s9(2)(b)(ii) tonnes of EOL tyres that will be collected and processed rather than diverted to landfill or illegally dumped as is currently occurring. This will provide an environmentally benefical outcome.
- **Benefits of substituting for coal:** TDF provides net environmental benefit through substituting for coal. This effectively means the carbon cost of the fuel in s9(2)(b)(ii) has already been accounted for when the tyres are being manufactured, leading to an overall reduction in carbon emissions when compared with burning coal as the primary fuel source.
- **Reduced global iron sand mining:** Supplying TDF to s9(2)(b)(ii) reduces their need to procure iron sand for the production of s9(2)(b)(ii). Ferrous Oxide embedded in TDF reduces the requirement.

Social

- Public perception of tyre recycling is poor. Images in the media are dominated by tyre mountains, rogue operators and disorganised rules and regulations compared to OECD peers.
- A well planned and effective business, executed in a plan and systemic way will provide social benefit through increased public confidence in the tyre recycling sector.

Cultural

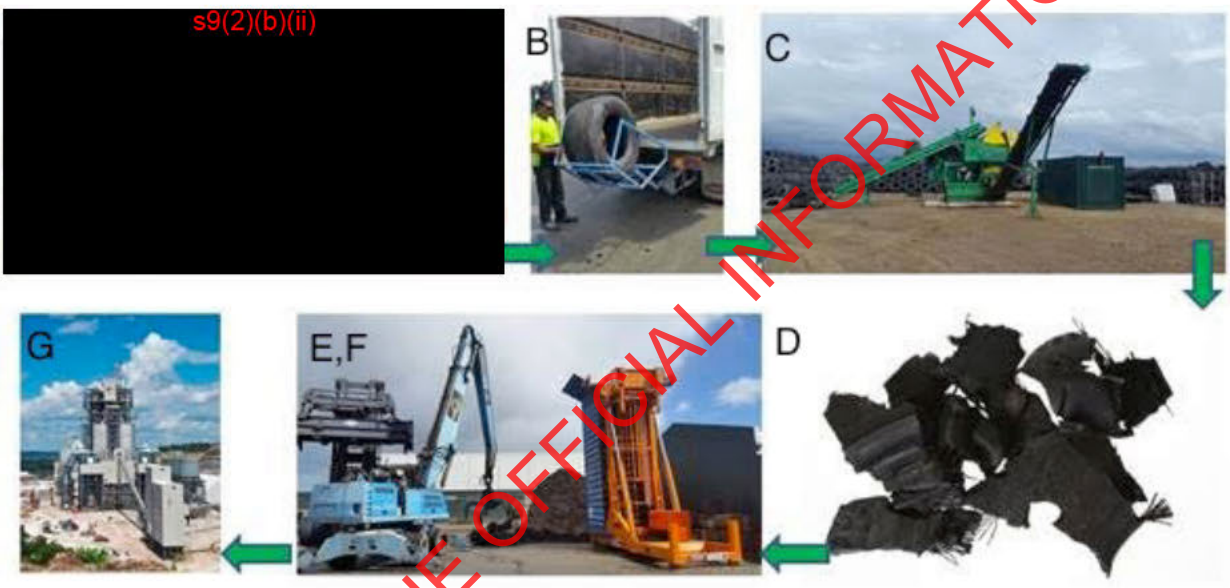
NA

10. How will you ensure the solution you are proposing endures, once WMF funding has ended?

Please describe how the project will continue after the funding ends (ie, how will the project become self-sustaining?, how will the benefits continue once your project is completed?).

Pacific Rubber already has a long and successful track record as a tyre recycling business that has undergone considerable managed growth in recent years. This project will become business as usual once it has been mobilised and all sites are fully operational. None of the business processes or equipment is new to Pacific Rubber; it will simply be operating at a larger scale and in more regions. Additional staffing and management, combined with strong governance will allow the business to scale and grow.

Leveraging off well established business processes and disciplined financial management practices, the business will increase its labour force, physical footprint, and procure new equipment. Whilst the Pacific Rubber process is relatively simple, the value of the business lies in the combination of methodological know-how of collecting, processing and selling EOL tyres, and the commercial contracts the business has negotiated with feedstock suppliers and end-users. The following is a step-wise description of Pacific Rubber EOL tyre business processes:



a. Pacific Rubber trucks visit regional tyre retailers s9(2)(b)(ii) due to logistical constraints) to collect EOL tyres that retailers have accumulated from their customers.

b. EOL tyres are driven to the Pacific Rubber processing facility in Waikato, where they are broadly categorised according to size and type.

c. At this point EOL tyres are processed into tyre-derived fuel (TDF). To create TDF, the tyres are hand-placed on a conveyor belt, which feeds into a Columbus McKinnon (CMK) Primary Shredder machine. Shredded EOL waste passes through a circular 2" classifier before being extracted. The guillotine action of the CMK creates semi-homogenised TDF with various geometries around 2" to 3" (5cm to 10cm) in size that are specified by s9(2)(b)(ii).

d. s9(2)(b)(ii)

e. Once full, the container doors are secured, ready for shipping to s9(2)(b)(ii) A full container weighs approximately s9(2)(b)(ii) tonnes, depending on the density of packing.

f. Containers are shipped directly with the assistance of a freight forwarding company to s9(2)(b)(ii) a wholly owned subsidiary of s9(2)(b)(ii). Both s9(2)(b)(ii) and Pacific Rubber are working

directly to bypass commodity brokers.

g. The end-use customer s9(2)(b)(ii) blends TDF (approximately 10% of the recipe) with s9(2)(b)(ii) s9(2)(b)(ii). TDF produces a similar energy output to petroleum and according to the U.S. EPA, producing 25% more energy output than thermal coal. Embedded steel in the passenger tyres is reduced to ferrous oxide and is a raw material for the formation of clinker in the s9(2)(b)(ii) This reduces the need for ferrous additives, thus reducing raw material input costs.

The TDF produced by Pacific Rubber's Columbus McKinnon plant is of consistent quality and geometry. End-use customers value this because they do not have to adjust their s9(2)(b)(ii) equipment to account for non-homogenised shapes or materials. Additionally Pacific Rubber tyres are relatively free from dust, mud and other unwanted substances that can affect the orderly operation of the s9(2)(b)(ii) Clean TDF may be due in part to the relatively s9(2)(b)(ii), however Pacific Rubber operational management procedures also contribute to this desirable trait. The need for relatively uncontaminated product is an important consideration for expansion with regards to having a concrete yard and seamless container loading equipment.

It should be noted that the production of two other key products is possible; s9(2)(b)(ii) both made from non-passenger EOL tyres. The markets for both products in New Zealand are very small, and non-existent respectively so the focus of Pacific Rubber growth strategies has been TDF. There is a small domestic manufacturer of s9(2)(b)(ii) that Pacific Rubber is planning to supply TDF as they ramp up production.

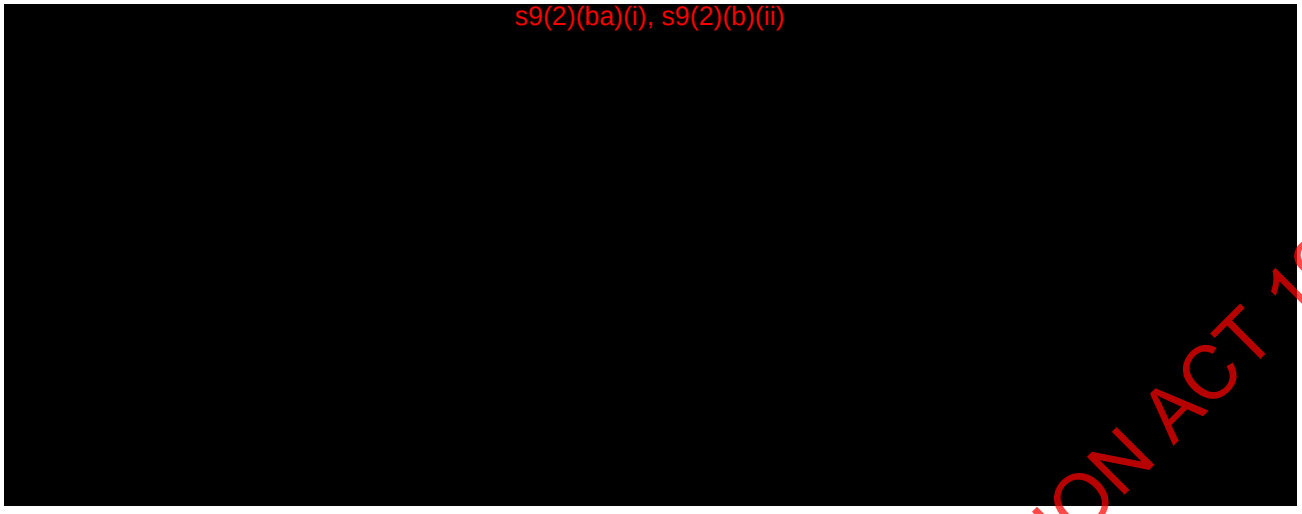
SECTION D: Funding summary

See pages 21 to 25 of the Guide for Applicants for information on how to complete this section.

11. Outline project budget*

Complete the table below with details of your estimated project costs (all costs should be GST exclusive). Project costs should reflect the tasks and activities set out in question 7. ***The total amount for all years should be equal to the 'total project cost' provided in question 3.*** *If applicants do not attach a business plan it is recommended they provide at least a detailed budget as a supporting document.*

Project cost category	**Total estimated cost – Year 1**	**Total estimated cost – Year 2** *If applicable*	**Total estimated cost – Year 3** *If applicable*
[redacted]	s9(2)(ba)(i), s9(2)(b)(ii)		



*Additional detail is provided in the business plan

12. Funding sources

Complete the table below (all figures should be GST exclusive). ***The total from all funding sources MUST equal the estimated total project costs in question 12.*** *Only include funding that you have applied for, and is either approved or still pending (ie, not declined).*

Organisation details	Contribution to project – Year 1	Contribution to project – Year 2 *If applicable*	Contribution to project – Year 3 *If applicable*
[redacted]	s9(2)(ba)(i), s9(2)(b)(ii)		

If any of the funding for your project is not yet confirmed, please provide a summary here of how much is 'pending' and when you expect this to be secured.

* The Pacific Rubber financial contribution noted above will occur following investment of [redacted] in Pacific Rubber, subject to the success of this Waste Minimisation Fund application (see attached letter). Pacific Rubber is also able to provide the financial contribution through existing shareholders and debt as a back up but increased debt provides considerably less favourable project economics.

Please note that majority of the recycling equipment purchased is denominated in [redacted] and priced at [redacted] and is subject to fluctuations.

SECTION E: Capability

See pages 26 and 27 of the Guide for Applicants for information on how to complete this section.

13. Project manager details

The project manager is the person responsible for managing major project tasks/activities, and is likely to be the person who liaises with the Ministry if the project is funded.

Name	s9(2)(a)
Organisation	s9(2)(a)
Role or job title	Project Manager
Email address	s9(2)(a)
Phone	s9(2)(a) *Landline* s9(2)(a) *Mobile*
Skills and experience (relevant to the successful delivery of this project). Include approximately how much time the project manager will spend on the project each week, and whether this is a full-time or part-time role.	s9(2)(a)

14. Governance and management structure

Project governance *Include information about how your project will be governed. Include how the governance group will monitor and manage any slippage on project progress.*	The Governance Board will comprise four members: s9(2)(a) The Governance Board will meet with the project manager monthly and will receive a project update in advance. This update will include progress against plan (and if any slippages are occuring the steps required to rectify the slippages), risks and issues (and their proposed mitigations) requiring attention from the project, financial progress against forecast, updates on stakeholder engagement and project communications. Project status reports and minutes of governance meetings will be made

	available to MFE. If slippage is occurring, clear actions will be identified to either rectify the slippage and get the project back on track, or a change management process will be undertaken to replan the project, taking into account the impact of the slippage on timelines and milestones, and project funding requirements.
Managing funds *Provide information about how you will manage the project funds if successful. Include information about how you will procure goods and services, approve payments, and monitor and address budget overspend.*	The project will set up a trust account dedicated to the project to ensure separation of project funds from day to day funds held by Pacific Rubber. A process for receiving, approving, processing and reporting payments will be used, with the Pacific Rubber accounts team receiving invoices, one of the Directors responsible for approving payment, and the Governance Group to receive a monthly summary of all transactions (including comparison between actual spend and forecast spend for the month). s9(2)(b)(ii) [redacted] Contracts will be executed with all entities that are providing goods or services. These will clearly stipulate expected deliverables, costs and timeframes.

15. Partnership and collaboration

*Provide details of organisations that you will be partnering with in the **delivery** of this project (this may include territorial authorities. Please provide a letter from each of the project partners outlining the nature of their involvement and what they will contribute to the successful delivery of the project.*

Organisation name	Contact person *Name, phone number and email*	Details of involvement
s9(2)(ba)(i) [redacted]	s9(2)(ba)(i) [redacted]	s9(2)(ba)(i) [redacted]
s9(2)(ba)(i) [redacted]	s9(2)(ba)(i) [redacted]	s9(2)(ba)(i) [redacted]
s9(2)(ba)(i) [redacted]	s9(2)(ba)(i) [redacted]	s9(2)(ba)(i) [redacted]
s9(2)(ba)(i) [redacted]	s9(2)(ba)(i) [redacted]	s9(2)(ba)(i) [redacted]

		s9(2)(ba)(i) s9(2)(ba)(i) [redacted]
s9(2) (b)(i)	s9(2)(ba) (i) [redacted]	s9(2)(ba)(i) [redacted]

16. Publicly-funded projects

In the past 5 years, have you received funding from the Ministry for the Environment (or other organisations)?

☐ *Yes* ☒ *No*

If yes, please complete the table below for each project you have received funding for.

Name of fund	**Contact person** *Name, phone number and email*	**Amount received**	**Details of project** *Project name, objectives, whether the project was successful, and other relevant information*
	Name *Phone* *Email*	$0.00	

17. Health and safety

Does your organisation have a health and safety policy?	☒ Yes ☐ No *If Yes, please state when this was last reviewed/updated.* Last reviewed August 2015. The company will utilise a comprehensive online EH&S software system (CS-Vue) which is used to identify, manage and track environmental compliance and safety hazards on an ongoing basis.
Has your organisation been issued with any notices under the Health and Safety in Employment Act 1992? *(or any replacement to this Act)*	☐ Yes ☒ No *If Yes, please provide details.*
Who will be responsible for health and safety for the project?	Pacific Rubber directors are ultimately responsible for health and safety, however various individuals will be responsible for specific health and safety requirements at various stages of the project, in accordance with the Project Plan – for example, during equipment provisioning and commissioning the Project Manager will be responsible for H&S, which will then revert to the relevant site manager, and General Manager, following commissioning. Hazards, mitigation measures and compliance will be tracked and reported through the CS-VUE EH&S system.

18. Environmental compliance

Do you require any statutory permissions to complete the project?	☒ Yes ☐ No Resource consents relating to the [redacted s9(2)(b)(ii)] Relevant consents will be acquired via the project manager and compliance will be tracked and reported through the CS-VUE EH&S system.
Has your organisation received any infringement or abatement notices or been subject to any prosecutions under the Resource Management Act 1991 during the past 5 years?	☐ Yes ☒ No *If Yes, please provide details.*

SECTION F: Additional information

See page 28 of the Guide for Applicants for information on how to complete this section.

19. Is there anything else we need to consider about your application?

Pacific Rubber is the only tyre recycler in New Zealand capable of developing and executing a large scale, commercial response to the tyre waste problem. It has demonstrated a great deal of commercial and strategic skill in securing the long term contracts in New Zealand s9(2)(b)(ii) The equity investment by s9(2)(b)(ii) in Pacific Rubber further strengthens the business relationship between s9(2)(b)(ii) and provides significant co-funding via s9(2)(b)(ii) this proposal.

We have the opportunity to reduce the tyre waste stream in NZ by up to s9(2)(b)(ii) tonnes per year if the Waste Minimisation Fund application is successful. The project is low risk and the business is viable for the long term, so this will go a long way toward solving a major waste problem.

20. Referees

The referees specified below will be contacted as part of the due diligence and reference checks undertaken if you are invited to Stage II of the WMF funding process.

First referee name *External referee for the person who will have the overall responsibility for delivering this project*	s9(2)(a)	Second referee name *External referee for the organisation. This person must have worked with your organisation before*	s9(2)(a)
Organisation	s9(2)(a)	Organisation	s9(2)(a)
Role or job title	s9(2)(a)	Role or job title	s9(2)
Phone	s9(2)(a)	Phone	s9(2)(a)
Email address	s9(2)(a)	Email address	s9(2)(a)
Physical address	s9(2)(a)	Physical address	s9(2)(a)

Declaration

This declaration must be completed by a person with the organisation's signing authority. See the guide for additional information on how to complete this question.

Important: *Please contact the Ministry if you have any queries about the terms and conditions of the Deed of Funding for the Waste Minimisation Fund.*

As a duly authorised representative of the organisation as per Section A of this Waste Minimisation Fund application form:

- I declare that my project meets all of the eligibility criteria for the Waste Minimisation Fund (*see page 2 of the application form*)
- I declare that to the best of my knowledge, the information contained in all sections of this application form, or supplied by us in support of our application, is complete, true and correct.
- I declare that I have the authority to sign this application form and to provide this information.
- I declare that the application is not being made by an organisation that is in receivership or liquidation, or by an undischarged bankrupt.
- I understand that information presented to the Minister for the Environment and Ministry for the Environment is subject to disclosure under the Official Information Act 1982.
- I agree that the Ministry for the Environment may collect information about our organisation from other parties, (including but not limited to the referees named in Section F of this application), and may liaise with local and national organisations in respect of this application.
- I agree that the Ministry for the Environment can undertake a background check on the applicant(s).
- I understand that an invitation to proceed to Stage II of the funding process is not a confirmation of funding, and that the final decision is subject to the successful completion of Stage II.

Name	Andrew Christie	
Position	Director	
Signature *By typing your name in the space provided you are electronically signing this application form*	s9(2)(a)	Date 10 November 2015

Checklist

Use the following checklist to confirm you have provided all the required information in your application.

Do not include any attachments that the Ministry has not specifically requested. These will not be provided to the assessment panel.

- ☒ All sections of this application form have been completed.
- ☒ The declaration has been electronically signed and dated.
- ☒ All $ figures provided add up and are consistent throughout the application *(ie, the total estimated project costs in question 12 must equal the funding sources in questions 13).*
- ☒ Your business plan has been included as one document only with a maximum file size of 5MB *(this is **mandatory** for applications requesting WMF funding of $200,000 or more).*
- ☒ Letters to support involvement from each of the partner organisations listed in question 16 are attached.
- ☒ The application form, business plan (one document) and any letters from partners will be submitted as **one email only** (documents submitted as multiple emails will not be accepted).

Pacific Rubber Business Plan

1. Background Information about Pacific Rubber

1.1 Age and history of the company

With origins back to the 1980s, Auckland-based Pacific Rubber is New Zealand's largest and only mass recycler of end-of-life (EOL) tyre waste. The company's core business is collecting and processing EOL tyre waste into Tyre-Derived Fuel (TDF). TDF is then contractually supplied to the s9(2)(b)(ii) for use in s9(2)(b)(ii) as a coal fuel substitute and clinker additive. Pacific Rubber's annual recycling capacity is currently s9(2)(b)(ii) tonnes, with scope to increase TDF supply to s9(2)(b)(ii) to more than s9(2)(b)(ii) tonnes. Such an increase would materially reduce New Zealand's future EOL tyre stock. Pacific Rubber also supplies domestic recyclers for manufactured s9(2)(b)(ii) and tyre bales to s9(2)(b)(ii) for a civil construction product.

With operations in Auckland, Waikato and a contract depot in Wellington, the company has a long term contract to collect and recycle s9(2)(b)(ii) EOL tyre waste. In addition, the company has long standing s9(2)(b)(ii) for their EOL tyres.

s9(2)(b)(i)

Incorporated in 2009, Pacific Rubber financed, imported, built and commissioned NZ's only EOL tyre recycling crumb plant in Auckland. The original rubber crumb plant had a s9(2)(b)(ii) tonne per annum capacity for truck tyres. Pacific Rubber then acquired a series of small tyre waste companies, being NZ Tyre Recyclers (2010), Waste Tyre Solutions (2011) and Carbon Recovery (2013). The latter enabled the company to transition to a s9(2)(b)(ii) TDF production capacity, which is considered the only economically viable form of mass recycling of NZ's EOL tyre waste. Chart 1 above illustrates existing capacity (grey) which is currently TDF processing in the s9(2)(b)(ii) and bales to domestic downstream recyclers. It is envisaged that the s9(2)(b)(ii) would be

moved to s9(2)(b)(ii) s9(2)(b)(ii) Chart 1 also illustrates Pacific Rubber's historic and forecast (dashed line) utilisation rate vs capacity (currently >75%).

Table 1: Timeline

Date	Milestone
2009 (Dec.)	Pacific Rubber Recycling Limited incorporated
2010 (Feb.)	Acquired NZ Tyre Recyclers
2010 (Oct.)	Financed, imported, built and commissioned NZ's first rubber crumb recycling plant
2011 (Aug.)	Acquired Waste Tyre Solutions
2011	Sold 2000+ tonnes of rubber crumb to domestic market for synthetic sport fields
2012 (Aug.)	Won the University of Auckland Entreprenuers' $1 million Challenge
2013 (Mar.)	Acquired Carbon Recovery; Enters TDF market
2013	s9(2)(ba)(i)
2013 (Nov.)	Deloitte Fast50 company (14th)
2014 (Jul.)	Restructured rubber crumb plant into a separate entity, becomes TDF focused
2015 (May)	s9(2)(ba)(i)
2015 (Sept.)	
2015 (Oct.)	s9(2)(ba)(i)

Pacific Rubber guarantees car and truck tyre waste is recycled with destination data, and audit trail available to all stakeholders. s9(2)(ba)(i)

s9(2)(ba)(i)

s9(2)(ba)(i)

Pacific Rubber has several key advantages in the New Zealand EOL tyre waste market.

1. **End Market:** the company has successfully accessed the only market for mass recycled EOL tyre waste, s9(2)(ba)(i)

2. **Scalable:** Pacific Rubber's recycling depot can be replicated in other cities. The domestic waste collection market is dominated by fragmented, under-capitalised, small-scale operators and/or individuals engaged in stockpiling tyres rather than processing them. On the contrary, Pacific Rubber is relatively large scale and a professional operator with a corporate approach to the sector.

3. **Contractually Backed:** the company has contractually completed the supply and demand loop for EOL tyre feedstock through to TDF and remains financially viable. The business operates a clean site and is respected by its peers and regulators. For this reason Pacific Rubber has gained credibility with both major EOL tyre suppliers and end users of its recycled products, being TDF and historically, rubber crumb. This credibility has translated into contractual agreements and preferred supplier status with large corporates such as s9(2)(ba)(i) This enables ongoing access to raw feedstock of

EOL tyres, and the large volume requirements for end users of TDF. Holding these contracts means that Pacific Rubber s9(2)(ba)(i) [redacted] tyre market.

4. **Viable Model:** Pacific Rubber has developed a highly effective operational model through the implementation of innovative collection, handling, processing and shipment techniques. This operational model translates to a highly reliable and consistent end product s9(2)(ba)(i) [redacted]

Additionally it should be noted that Pacific Rubber forms part of a larger investment portfolio approach to the New Zealand waste and recycling industry s9(2)(ba)(i) [redacted]

1.2 Information about directors and shareholders

The Board and Management Team comprises:

- **Andrew Christie (Director)** s9(2)(a) [redacted]
- **Nick Hanson (Director)** s9(2)(a) [redacted]
- **David Hanson (Chairman)** s9(2)(a) [redacted]
- **Richard Linthwaite (General Manager** s9(2)(a) [redacted]

1.3 Staffing levels

The Pacific Rubber operation employs the following staff:

- s9(2)(a) [redacted]
-
-

- s9(2)(a) [redacted]

1.4 Locations

The head office and export facility is located at CMA Recycling's depot at 273a Church Street, Onehunga, Auckland. The temporary processing facility is currently located in Kerepehi, Waikato. Pacific Rubber has temporarily consolidated TDF processing at its Waikato site as its main processing location, whilst setup of the new Auckland processing facility takes place. The new site is located in Parker Street, Papakura, which was selected based on its proximity to key transport routes, access to the Port of Auckland, and possessing operational characteristics such as compacted access ways and sufficient space for additional key infrastructure. Pacific Rubber will consolidate its head office, TDF processing and export facility at the Papakura site, and decommission the Waikato yard in Q1 2016. The Wellington site is outsourced to a third party contractor.

s9(2)(b)(ii) [redacted]

2. Background Information on the Proposal

Feasibility of the Proposal

2.1 Details of any feasibility studies undertaken

No formal feasibility studies have been undertaken, because the Pacific Rubber business operates sustainably and profitably under its current contractually-back business model. Pacific Rubber's commercial feasibility is underpinned by tyre supply and TDF off-take contracts, combined with financial and operational discipline.

2.2 Technical expertise required

There are two key areas of technical expertise required to operate, maintain and scale the Pacific Rubber business:

- **Financial & Commercial Expertise:** Pacific Rubber is owned and operated by a tertiary-qualified and commercially experienced team. Implementing core financial and commercial expertise means that the business has been scaled to date via a managed growth strategy of business acquisition, and key contract negotiation with domestic and international corporate partners. The expertise of the management team has allowed Pacific Rubber to provide multiple corporate entities sufficient comfort and assurance to issue large (in New Zealand terms) multi-year supply and off-take contracts.
- **Operational Management & Transport Logistics Expertise:** Disciplined operational management is key to sustainable operation, particularly in terms of cost and compliance. Pacific Rubber prides itself of maintaining a clean, healthy site which reflects the commercial integrity of the business. Regular scheduled maintenance of equipment is essential to ensure productivity and compliance with raw material processing and product quality standards. It should be noted that one of the most compelling aspects s9(2)(ba)(i) [redacted]
  Additionally the ongoing optimisation of transport logistics to ensure that drivers are maximising waste loads and taking the most cost efficient routes with regards to fuel consumption, road-user charges and time is critical to overall profitability.

2.3 Critical success factors

1) Volume of EOL tyre tonnes collected exceeding s9(2)(ba)(i) [redacted] by 2020
2) Containerised TDF volumes dispatched matching EOL volumes in (1)
3) Lowest cost TDF handling based on owning the required in-house equipment
4) Improving s9(2)(ba)(i) [redacted] logistics and s9(2)(ba)(i) [redacted] by 2016

3. Financial summary

3.1 Estimated budgets, and what the funding will be used for

Pacific Rubber has significant scale-up opportunities as a result of the s9(2)(ba)(i) [redacted] The funding will essentially upscale Pacific Rubber's TDF recycling capacity to s9(2)(ba)(i) tonnes per annum s9(2)(ba)(i) [redacted] The project has five main expenditure categories:

1) Recycling Plant
2) Loading Equipment
3) Motor Vehicles
4) Infrastructure
5) Project Opex

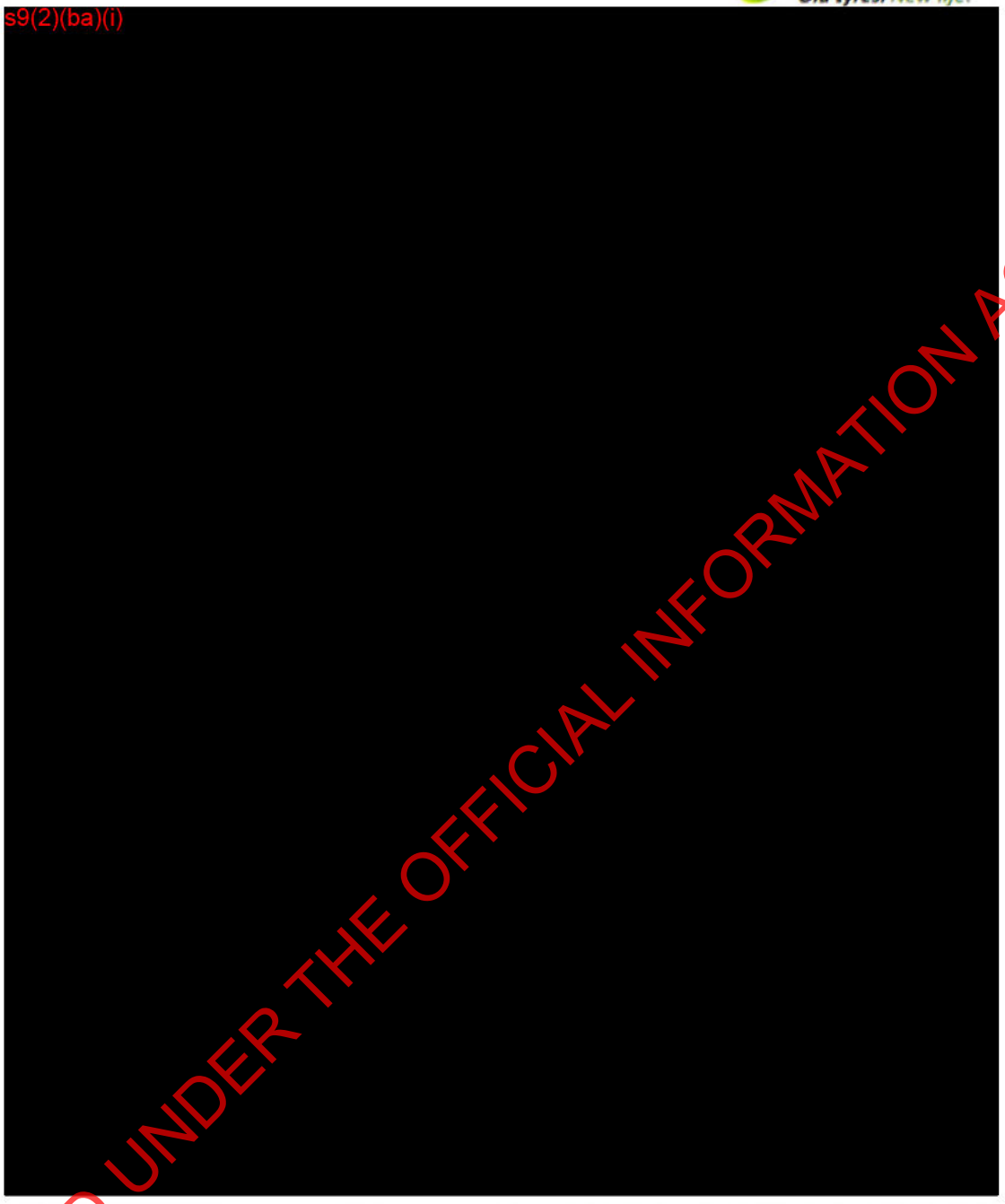
The total expenditure is split approximatel s9(2)(ba)(i) n capital assets and s9(2)(ba)(i) [redacted] n project operating costs for setup and execution over the 24 month forecast ramp-up. Capex relates to four categories: Recycling Plant, Loading Equipment, Infrastructure and Motor Vehicles. All capex items have been quoted from original equipment manufacturer suppliers or for the collection vehicles from a reputable second hand dealer. Section 4 of this Business Plan confirms long term commercial viability of the commercial solution post project completion with anticipated operational expenditures, revenues and operating profitability from 2016 to 2025.

s9(2)(ba)(i) [redacted]

s9(2)(ba)(i) [redacted]

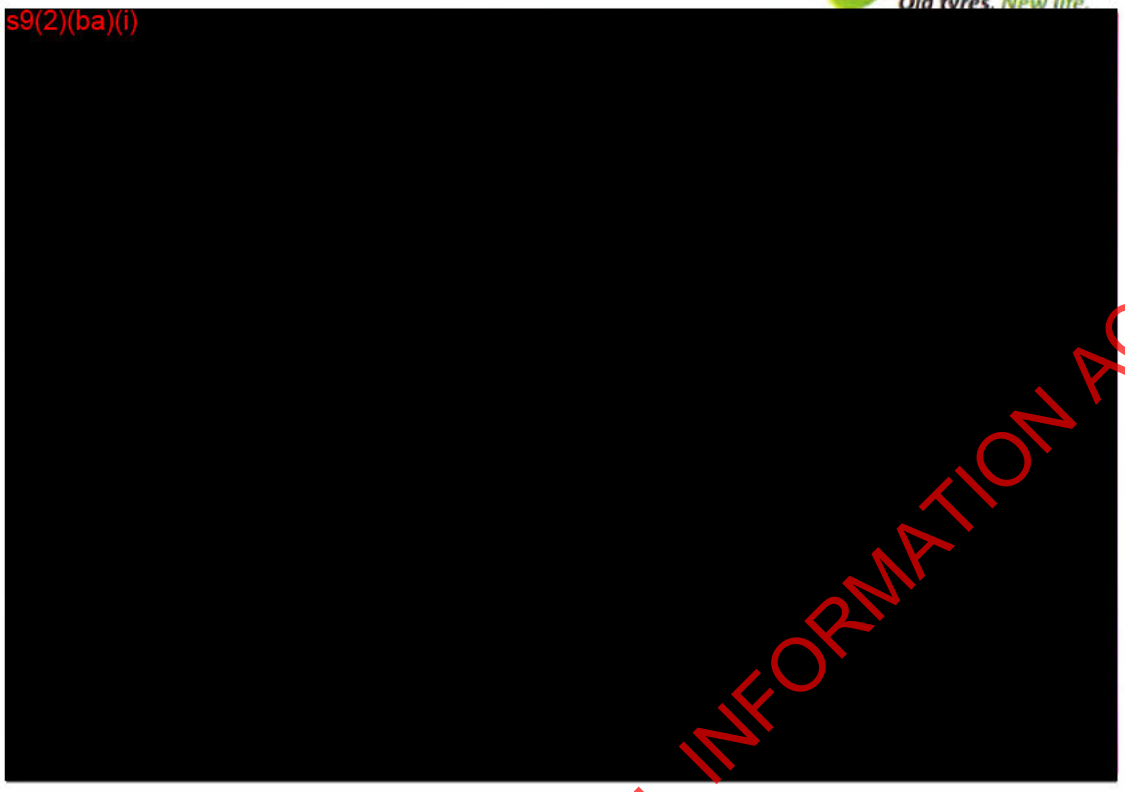
PACIFIC RUBBER
Old tyres. New life.

s9(2)(ba)(i)



s9(2)(ba)(i)

s9(2)(ba)(i)



3.2 How much money is required to start the project and keep it running once it is established?

s9(2)(ba)(i)

Following procurement and commissioning, by the end of Year Two, the operation will be cashflow-sustainable, and will not require any further Waste Minimisation Fund assistance.

Table 3 details Pacific Rubber's existing assets of s9(2)(ba)(i) and the additional project assets plus project opex to increase TDF capacity from s9(2)(ba)(i) tonnes to s9(2)(ba)(i) tonnes per annum. In addition, the company supplies a further s9(2)(ba)(i) tonnes of product that is not TDF for a civil construction product and rubber crumb production making a total c s9(2)(ba)(i) tonnes of EOL tyre recycling capacity.

Table 3: Summary of existing assets and MfE application for nationwide expansion

s9(2)(ba)(i), s9(2)(b)(ii)

4.0 Market analysis

4.1 Overall market size, trends, demand etc

New Zealand EOL Tyre Collection Market

The NZ EOL tyre waste market is estimated by Pacific Rubber to be s9(2)(ba)(i) per annum based on s9(2)(ba)(i) tonnes of annual waste produced each year at s9(2)(ba)(i) average collection fee per tonne. This market is stable and grows in line with GDP. The market for collecting EOL tyre waste is concentrated in areas of population density and economic activity. Chart 4 below shows the volume by weight at major provincial centres throughout New Zealand. The North Island produces s9(2)(ba)(i) of EOL tyres vs. South Island's s9(2)(ba)(i) Around s9(2)(ba)(i) of total EOL tyres originate in the s9(2)(ba)(i) It is noteworthy that the s9(2)(ba)(i) volumes by weight are similar to s9(2)(ba)(i) reflecting a greater portion of heavier truck tyres. s9(2)(ba)(i)

s9(2)(ba)(i)

Cement & TDF Market

The USD 395 billion[1] global cement industry is one of the largest consumers of energy. Demand for fuel is a multi-billion dollar market predominantly consuming thermal coal and alternative fuels such as TDF and wood waste. Approximately 250kg of fuel is required per tonne of cement produced. With Asia producing over 3000 million tonnes per annum currently, this would consume 750 million tonnes of energy feedstock. If TDF was substituted for 10% (typical blend) of the fuel mix, then this would equate to potentially 75 million tonnes of Asian TDF demand annually. The annual demand for TDF in most major Asian countries alone far exceeds NZ's EOL tyre output of just 45,000 tonnes. EOL tyre waste to TDF processing is disorganised throughout Asia so is imported from numerous OECD countries from Europe, USA and Australasia. This market is growing rapidly due to high growth

[1] Statista, 2016 forecast

economies such as [redacted] requiring [redacted] for large scale housing and infrastructure programmes such as highway networks, metro rail, sewage, waste water and airports.

s9(2)(ba)(i)

[redacted]

4.2 Current and forecast supplier and end-user markets

Supply of EOL tyre waste from auto service retailers is stable with ongoing volumes collected reflecting population density and economic activity. As recycling capacity grows then the ability to service more tyre retailers and industrial users grow. In addition to the retail networks, there are many tyre dumps situated across predominantly rural New Zealand as a result of the sector malaise, numerous rogue operators and under-investment in tyre recycling infrastructure. Pacific Rubber estimates at least [redacted] tonnes of illegal EOL trye waste in across New Zealand. Regional councils are increasingly becoming more pro-active with issuing abatement notices and permits. This will likely lead to one-off large scale clean up contract work, which is currently under negotiation between councils and Pacific Rubber. In addition, large corporate users with public sustainability mission statements such as [redacted] will only utilise recyclers with an audit trail for end-user destination data.

s9(2)(ba)(i)

[redacted]

Arguably, the best solution for the country's EOL tyre waste would be for Pacific Rubber to supply TDF to [redacted]

s9(2)(ba)(i) The impetus to modify their s9(2)(ba)(i) to accept TDF would mean a material one-off capital expenditure plus disruption to their supply business. Pacific Rubber also forecasts supplying domestic downstream recyclers, being a crumb manufacturer and a civil construction product, s9(2)(ba)(i) s9(2)(ba)(i)

Chart 1: Recycling Capacity & Utilisation from 2009 to 2018 (from Page 1)

Chart 1 depicts Pacific Rubber's forecast volumes collected and recycled. The green histogram represents new recycling capacity assumed which will enable the company to expand utilisation rates.

s9(2)(ba)(i)

4.3 Long Term Commercial Viability

In order to ensure the long term commercial viability of Pacific Rubber beyond the MFE funded project period, we have built a commercial model which will be sustainable in the long term.

The long term financial model summarised below demonstrates the financial stability of the business. There are three key elements to this:

1. The WMF grant funding enables the initial growth and acquisition of equipment without the need for additional debt s9(2)(ba)(i) but from a return-on -assets metric may not support excessive debt funding.
2. Subject to the WMF grant funding, s9(2)(ba)(i) is intending to directly invest in Pacific Rubber and would be a major shareholder in PRRL in the long term. This has both financial and strategic benefits, as s9(2)(ba)(i) has a significant footprint in s9(2)(ba)(i) This investment comprises th s9(2)(ba)(i) co-funding from Pacific Rubber noted in the application form.
3. Existing Shareholders can provide further equity support should this be required.

Chart 6: Business Model

Pacific Rubber's long term Operating Profit margin (pre-tax, EBITDA) is aroun s9(2)(ba)(i) The major cost categories are s9(2)(ba)(i) Motor Vehicle expenses s9(2)(ba)(i) eing fuel, road user charges, motor vehicle insurance, and Repairs and Maintenanc s9(2)(ba)(i)

s9(2)(ba)(ii)

Table 4: Summary Profit & Loss Forecast to 2025

s9(2)(ba)(ii)

5. Risk management strategy

5.1 Risks to the successful delivery of the project and how these will be managed/mitigated

s9(2)(ba)(i)

Mitigation
Within broad constraints Pacific Rubber has significant leeway in choosing an appropriate location, so will have plenty of areas to choose from. The company requires low grade industrial areas in peripheral areas of a city to reduce rental costs. s9(2)(ba)(i)

Business as Usual Risk
A major work programme whilst undertaking business as usual risks being diverted from delivering to commercial expectations.

Mitigation
Engage a professional project manager and contract staff able to focus solely on the project and allow business as usual operations to remain with the existing business structure.

Contract Risk

There is a risk that any of the major contracts that underpin the Pacific Rubber business model are withdrawn, due to poor performance or a change in the Principle's business model.

Mitigation
Pacific Rubber manages the commercial terms of its contracts currently and already ensures that both input and output contract management is adhered to. The company has many years experience in delivering EOL tyre collection services. In addition Pacific Rubber has been supplying TDF for two years with globally accepted processing equipment. Pacific Rubber is wary of possible concentration risk and maintains its connections with TDF brokers and other s9(2)(ba)(i) f required.

Investment Risk
There is tangible risk associated with seeking equity investor funding, including distraction from BAU activities, legal risks associated with mismatched performance to investor expectations, and failure to achieve milestones resulting in part-funding.

Mitigation
In order to manage risk associated with identifying, negotiating and transacting external capital, which would also act as co-funding for WFM funding, Pacific Rubber has provided a mandate to professional s9(2)(ba)(i) to assist with the investment process. s9(2)(ba)(i) have ensured that the proposed investors are kept well informed about the WMF processes, and investment tranches are matched to tangible deliverables and agreed progress timelines.

Delivery Risk
Pacific Rubber has experience in commissioning recycling plants with both a crumb production line in 2010 and the TDF plant recently s9(2)(ba)(i)

Mitigation
A governance board will be formed, with the project manager reporting to it. A rigorous set of project controls will be maintained by the project manager and overseen by the governance board. Monthly reporting will be provided to the Ministry to provide assurance of delivery to time, scope and cost. The company grew from less than s9(2)(ba)(i) so has experience with ramping up growth. In addition, the company has on its owned negotiated supply contracts s9(2)(ba)(i) so it is well placed to manage increased volumes with better access to equipment.

Competitive Risk
Relatively low barriers to entry exist in the New Zealand waste collection industry. Provided that a supply of EOL tyre feedstock, and the equipment necessary to process these tyres, is secured, theoretically a competitor could begin trading.

Mitigation
Pacific Rubber is largely contract based s9(2)(ba)(i) In reality, securing both these elements is time and cost intensive, and given the fulsome market coverage and status as the largest company in the NZ market that Pacific Rubber already enjoys, s9(2)(ba)(i) However, risk still remains and it would be prudent to conduct analysis of actual and potential competitors on a six-monthly basis.

Environmental Risk
Whilst there are credible arguments for and against the use of TDF, there is risk of a backlash against operators not taking sufficient precautions to avoid potential negative externalities associated with

incomplete product combustion. The greatest supported evidence of toxicity comes from the presence of dioxins and furans in the flue gases.

Mitigation

TDF will be manufactured in New Zealand [redacted] In legal terms it is the responsibility of [redacted] to ensure that negative environmental externalities are managed effectively. [redacted] is a large and experienced [redacted] that has made the necessary modifications to [redacted] to allow the use of TDF, effectively and without damage to its good reputation or licence to operate.

No industrial activity is completely without externalities – and the use of TDF is no exception, however the [redacted] is arguably the best end-use transformation for EOL tyres, provided that the process is professionally operated and maintained. Additionally it should be noted that there is a significant CO_2 benefit in using TDF over coal. This means that in developing economies consuming large amounts of fossil fuel, having a price-comparable low-carbon alternative is highly soughtafter by global corproates.

Nonetheless, the risk of an environment-related backlash does exist. For this reason Pacific Rubber will maintain a register of scholarly articles, research and commentary regarding the positive and negative aspects of TDF use. As a minimum, this would allow the company to speak from a position of authority and knowledge, if challenged.

Additionally to mitigate the potential for contaminants entering the land via stormwater, Pacific Rubber will ensure that the processing yard is maintained at all times and stormwater diversion drainage is installed as necessary, in addition to complying with all resource consent requirements imposed by Council on an ongoing basis.

Health & Safety Risk

The processing of EOL tyres involves labour interacting with large, heavy machinery on an ongoing basis. An accident on site could be

Mitigation

Pacific Rubber will make use of the online H&S management system, CS-VUE to identify, manage and minimise hazards on all sites.