

Response ID ANON-URZ4-5FSS-P

Submitted to Fast-track approval applications
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Submitter details

Is this application for section 2a or 2b?

2A

1 Submitter name

Individual or organisation name:
MGM Modules Ltd (the plubber project)

2 Contact person

Contact person name:
Mark Molloy

3 What is your job title

Job title:
Director

4 What is your contact email address?

Email:
s 9(2)(a)

5 What is your phone number?

Phone number:
s 9(2)(a)

6 What is your postal address?

Postal address:

27 Rewi Street, Torbay, Auckland 0630

7 Is your address for service different from your postal address?

No

Organisation:
MGM Modules Ltd

Contact person:
Mark Molloy

Phone number:
s 9(2)(a)

Email address:
s 9(2)(a)

Job title:
Director

Please enter your service address:

27 Rewi Street, Torbay, Auckland 0630

Section 1: Project location

Site address or location

Add the address or describe the location:

c/- Extrutech Ltd
34 / 14 Kitemoana Drive
Marsden Industrial Park
Marsden
Northland

MGM Modules operates as a synergistic relationship with Extrutech Ltd wherein the plubber project is able to repurpose a percentage of production waste and offers support services in this respect.

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Do you have a current copy of the relevant Record(s) of Title?

No

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Who are the registered legal land owner(s)?

Please write your answer here:

Marsden Maritime Holdings
Marsden Bay Road
Marsden

Detail the nature of the applicant's legal interest (if any) in the land on which the project will occur

Please write your answer here:

MGM Modules has no legal interest in the site.
We utilise machinery and equipment at Extrutech Ltd. who are the lease holders in a synergistic manner to facilitate the R + D program aimed at product, plant and process development.

Section 2: Project details

What is the project name?

Please write your answer here:
The plubber project

What is the project summary?

Please write your answer here:

MGM Modules has developed a method using encapsulation to repurpose many varieties of waste including almost all varieties of waste plastics and rubbers converting them into solid masses we call plubber modules (i.e. plastic and rubber modules) as alternative building components and aimed at reducing concrete use where applicable so lowering CO2 emissions.

What are the project details?

Please write your answer here:

MGM Modules has developed a Patent with the assistance and support of Paul Temple @ Remarkable IP (Queenstown) that covers the solidification of tires and other waste to produce solid masses we call plubber modules
Presently granted in about 30 countries we are struggling to afford the applications via the Patent Cooperation Treaty due to cash flow issues.

Please refer to our website; plubber.org

Describe the staging of the project, including the nature and timing of the staging

Please write your answer here:

To date we are effectively still in the R + D stage due to aspects of capacity but have a sound plan to scale up production so to create saleable and economically viable products to the construction industry.
This includes an option to buy a cache of machinery situated in Auckland with 2 high output extruders, 2 heavy duty granulators and associated plant which is ideally suited to the development of further capacity for production so to further establish the economics and thereby the global potential.

The economics of production are able to be assisted by levies payable for repurposing waste plastics and tires and eventually CO2 credits after a full evaluation.

We plan to form a new company to effect production and sales while continuing to produce proof of concept modular products, R + D and further IP development including the existing patent applications in process via the Patent Cooperation Treaty.

What are the details of the regime under which approval is being sought?

Please write your answer here:

Resource Management Act 1991

resource consent

notice of requirement

certificate of compliance

N/A (coastal permit that authorises aquaculture activities to be undertaken in the coastal marine area and requires decisions under Part 9A of the Fisheries Act 1996)

If you seeking approval under the Resource Management Act, who are the relevant local authorities?

Please write your answer here:

Whangarei District Council and Northland Regional Council

What applications have you already made for approvals on the same or a similar project?

Please write your answer here:

None to date

Is approval required for the project by someone other than the applicant?

No

Please explain your answer here:

Not at this point, i.e. the operation will require suitable premises and the location is thereby unknown so resource consent could only be applied for at that stage. It is possible the operation could be in Auckland or Marsden Maritime Holdings Industrial Park and we have suggested to Channel Infrastructure there may be potential to develop a recycling innovation facility at unused parts of the Marsden Refinery.

The activity and systems we use are common to all plastics production operations including recycling so the science, engineering and risk profiles related to plant design are well understood.

If the approval(s) are granted, when do you anticipate construction activities will begin, and be completed?

Please write your answer here:

All functions would begin as soon as consents are granted and funding available to be instigated urgently and aimed at being fully functional within 6 months.

Plant design is advanced and based on common systems of plastics production.

Suitable premises would be leased and thereby no siteworks are needed.

We estimate a first year budget of **s 9(2)(b)(ii)** to reach a surplus over OPEX costs

Section 3: Consultation

Who are the persons affected by the project?

Please write your answer here:

relevant local authorities

relevant iwi authorities

relevant Treaty settlement entities

protected customary rights groups

Detail all consultation undertaken with the persons referred to above. Include a statement explaining how engagement has informed the project.

Please write your answer here:

No official consultation has occurred at this point as the location of the scaled up plant is undecided and as yet unfunded.

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Describe any processes already undertaken under the Public Works Act 1981 in relation to the land or any part of the land on which the project will occur:

Please write your answer here:

None to date, refer above explanation

Section 4: Iwi authorities and Treaty settlements

What treaty settlements apply to the geographical location of the project?

Please write your answer here:

None are identified in relation to a designated final plant location

Are there any Ngā Rohe Moana o Ngā Hapū o Ngāti Porou Act 2019 principles or provisions that are relevant to the project?

No

If yes, what are they?:

Are there any identified parcels of Māori land within the project area, marae, and identified wāhi tapu?

No

If yes, what are they?:

Is the project proposed on any land returned under a Treaty settlement or any identified Māori land described in the ineligibility criteria?

No

Has the applicant has secured the relevant landowners' consent?

No

Is the project proposed in any customary marine title area, protected customary rights area, or aquaculture settlement area declared under s 12 of the Māori Commercial Aquaculture Claims Settlement Act 2004 or identified within an individual iwi settlement?

No

If yes, what are they?:

Has there been an assessment of any effects of the activity on the exercise of a protected customary right?

No

If yes, please explain:

Upload your assessment if necessary:

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Section 5: Adverse effects

What are the anticipated and known adverse effects of the project on the environment?

Please describe:

Control and processing of waste requires suitable machinery, transport and infrastructure so energy use including fuels for transport and electricity for processing. The actual production method only requires electricity so renewable sources can assist a very low carbon footprint. There are mitigating precautions in relation to air quality from fumes (volatiles) and leachates in a adequately specified closed plant system.

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Section 6: National policy statements and national environmental standards

What is the general assessment of the project in relation to any relevant national policy statement (including the New Zealand Coastal Policy Statement) and national environmental standard?

Please write your answer here:

Our own assessment is this development relates to an urgent need to solve the dastardly global issues of valuable waste materials ending up in landfill and the environment particularly related to end of life tires and all varieties of non recyclable waste plastics.

We believe the plubber project evolution is the only economically viable method than can efficiently process comingled and contaminated plastics, rubbers and other waste to produce solidified products.

The waste is converted into building products so able to assist in lowering the use of concrete (and other building materials) where applicable so potentially an important strategy for lowering CO2 emissions globally.

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Section 7: Eligibility

Will access to the fast-track process enable the project to be processed in a more timely and cost-efficient way than under normal processes?

Yes

Please explain your answer here:

Presently all attempts at securing funding are complicated by criteria and changes to the funding mechanisms. The project needs urgent support either from within NZ or from any other stakeholders.

For example presently the Plastics Innovation Fund only caters for recycling of plastics into equivalent and similar products usually related to packaging. We have expressed to the office of the MfE the criteria thereby ignores the 60% (plus) of plastics and varieties of rubbers (combinations of polymers) that are unable to be recycled due to being mixed formula sometimes with toxic additives.

Combinations of non recyclable plastics and polymer rubbers (e.g. shoes, vinyls and fabrics) often contain multiple formula in their make up and are comingled in the process of collection (so not practical to separate into the specific formula) and often too contaminated to be cleaned efficiently. Tires are a combination of plastic polymers and vulcanised rubber.

The plubber modules we produce are not hygiene sensitive and the encapsulation with molten plastic means all contaminants including contaminated soils and sand or even low grade medical waste can be encapsulated so they are contained and thereby made safe within the matrix.

What is the impact referring this project will have on the efficient operation of the fast-track process?

Please write your answer here:

The potential to initiate the first plubber plant to evolve the method and capacity as a prototype plant to illustrate this critical solution will support the rationale of engaging a system that can fully evaluate the concept and potential in relation to the severity of the problems it seek to address. This is as opposed to segmented and sequential evaluations of the progress and barriers to implementation related to securing funding. Originally we were aiming for a Project Grant via Callaghan Innovation that did not require co funding but it was disestablished sometime in 2021/22.

The potential to assist in protecting the environment is a priority for our ambitions and thereby validates high level consideration and mitigation of the unnecessary complications to effecting a variety of dynamic solutions related to efficiencies and all practical aspects of mining the waste stream.

The MGM Modules Ltd undertaking known as the plubber project is effectively an R + D developmental strategy that has been severely delayed throughout the Covid lockdowns and thereby incurred significant extra costs. These delays and costs means my private capital is effectively exhausted and while we are pursuing other sources of stakeholder participation we are unable to meet co funding requirements of all the funding options at this time.

These delays mean't we have had to start looking for international support so a coordinated approach within NZ Inc. likely has PR significance locally and internationally. This requires professional assistance (e.g. Callaghan Innovation) with evaluations and tasks related to further promotions and developmental phases and the related costs.

We continue to look for enterprises suitable to advance the evolution of products and sales in relation to aspects of the economics. It is also notable the levies and charges related to processing waste and tires supports production, sales and development as a revenue stream.

There is extensive work in the European Union to minimise the risks of recycling plastics that may contain toxins (such as PFAS posing carcinogenic risks) strictly limiting what products can be used for recycling and what products can be produced. This is a critical concern globally where we are confident we can assist to mitigate these risks so of significant importance.

Has the project been identified as a priority project in a:

Central government plan or strategy

Please explain your answer here:

Waste plastics and tires are identified as priority issues via the establishment of the PIF fund, Waste Minimisation Funding and related to the well known costs to the environment so relates to all the above strategies within each sector.

For example we are confident the plubber modules we plan to produce will be useful in all aspects of infrastructure development such as road building so lowering all the costs and environmental impacts of infrastructure projects.

Will the project deliver regionally or nationally significant infrastructure?

National significant infrastructure

Please explain your answer here:

We are confident the product potential will have positive outcomes for all construction activities while lowering CO2 emissions particularly by reducing concrete volumes in suitable applications.

Will the project:

address housing needs

Please explain your answer here:

We believe for example there is obvious potential to replace polystyrene rib raft systems to reduce concrete volumes in home building and eventually provide a modular alternative to complete modular flooring systems in housing so reducing costs and construction time. (NB polystyrene is extremely problematic in the environment and is being systematically restricted in Europe).

This is also aimed at reducing concrete volumes in industrial flooring, retaining for flood control, water management, roads, driveways and footpaths etc so effective in all aspects of housing development.

Will the project deliver significant economic benefits?

Yes

Please explain your answer here:

Converting waste into infrastructure reduces the costs and environmental impacts of concrete production including mining sand and aggregates as well as potable water use. The potential can also help to reduce the costs and impacts of landfill operations as well as lowering costs of a wide variety of developments in all respects.

Will the project support primary industries, including aquaculture?

Yes

Please explain your answer here:

Yes as described as functional in converting waste from all production activities though not specifically evolved to provide products to the aquaculture sector at this time.

Will the project support development of natural resources, including minerals and petroleum?

Yes

Please explain your answer here:

I believe mining the waste stream for all metals in appliances, electronics, vehicles, furnishings, fabrics and rubbers that come from natural resources implies we might consider classing this waste as a downstream though not technically a "natural resource"? For example one barrier to economically effective mining of the waste stream is the costs of dumping waste plastics.

The reprocessing of tires and plastics with pyrolysis and other potential for conversion into fuels or energy generation such as burning tires to make cement is limited by efficiencies and most critically in relation to their carbon footprint as well as air pollution.

Even the most recent evolution of waste burning and conversion of waste into fuels (e.g. pyrolysis requiring further refining) has many challenges and environmental risks but most specifically the documented risks of fine ash particulates escaping causing dangerous air pollution particularly related to possible failures within their smoke scrubbing and filtering systems.

Will the project support climate change mitigation, including the reduction or removal of greenhouse gas emissions?

Yes

Please explain your answer here:

In every respect of the efficiencies. We "calculate" that for every cubic meter of concrete substituted with plubber modules the CO2 reduction could be up to one tonne.

I.E. a cubic meter of concrete weighs 2 tonnes and with standard production systems produce between 1400kgs and 1800kgs of CO2 emissions whereas a cubic meter plubber modules weighs approximately 1 tonne (depending on specification and steel reinforcing components) and we believe the carbon emissions would be substantially reduced assuming efficiencies are optimised (renewable energy and heat capture). Plubber module production and systems are also effective in reducing the CO2 emissions related to transport and landfill operations while also reducing the risks of microplastic migration into the environment from both tire wear and waste spillage.

Will the project support adaptation, resilience, and recovery from natural hazards?

Yes

Please explain your answer here:

We are confident there is potential for resilience in all infrastructure adaptation.

The potential for reducing risks and costs of flood control is significant. E.G. using plubber modules as footings and low cost plinths for raising homes above flood levels or retaining systems to divert or contain rainfall events will potentially out perform existing systems so economically securing effective risk reductions. For example reservoirs or even cheap swimming pools that can be emptied in preparation for a flood event to divert rain from such an event from roofs sometimes known as storm water retention or alternatively held as local sources for fire fighting in dry conditions.

Will the project address significant environmental issues?

Yes

Please explain your answer here:

Yes in every respect mentioned in this application particularly in offering the public a option to ensure all plastic waste is repurposed so reducing microplastic migration and extending to comprehensive strategies to filter flows of rainfall so to intervene in microplastics entering waterways. Also as mentioned substantial potential to reduce CO2 emissions.

Is the project consistent with local or regional planning documents, including spatial strategies?

Yes

Please explain your answer here:

Once again the potential for lowering the costs of infrastructure and reducing the risks and costs of flood control is significant. As noted above using plubber modules as footings and low cost plinths for raising homes above flood levels or retaining sytems to divert or contain rainfall events (e.g. reservoirs and swimming pools for controlled release or even fire fighting in high risk scenarios) will potentially out perform existing systems so economically securing effective risk reductions.

Anything else?

Please write your answer here:

Ultimately any further challenges to be solved that may be unknowns and risk around developments of other strategies in these arenas (processing waste etc) are outweighed in terms of the substantial and rational potential to protect the environment. There is no other method as far as I can establish from my extensive research that can produce products on this scale with the potentially high economic efficiencies that can lower emissions from concrete use and all environmental risk factors related to waste as mentioned above. There are operations producing different types of plastic building blocks and some using granulated tires such as in roading (at low volumes and high costs which are often dangerously exposed to UV degradation) but only plubber modules are able to encapsulate tires and other unrecyclable waste. The method is able to scale up to products of almost any practical dimensions and thereby high volumes of the most difficult waste that is presently unable to be reused and potentially dangerous to be reprocessed into products that come into contact with humans, animals and the environment. All plubber products can be made safe to be deployed in the environment by suitable outer wall lining systems including HDPE (as used in underground pipes and landfill lining systems) steel or alloys, fibreglass reinforced concrete or waste glass and concrete as a outer wall. I.E. the plubber modules can function as core sections of any concrete edifice to reduce the volumes of concrete to be poured. The initial capital requirements we have calculated are quite modest and while it may be somewhat optimistic in relation to unknowns such as the RMA and Consents we estimate initiating finance to be between **s 9(2)(b)(ii)** to achieve revenue over OPEX in the first year of operations. We have a MOU with G + A Plastics (NZ) to purchase 2 high quality and high capacity extrusion machines and related plant equipment capable of extruding up to 500kgs per hour (max **s 9(2)(b)(ii)** being literally a gift of substantial importance). This includes 2 high capacity granulating machines and other production accessories. This plant operation is aimed at initially encapsulating waste plastics so has potential for at least 60 tonne (sixty cubic meters) of product per week. Development of the methods, plant and economics to solidify tires we believe could lift the output by 2 to 3 times. We estimate the installation of this plant to scale up to economically efficient product sales and as a further R + D facility would be around **s 9(2)(b)(ii)** to complete the plant so allowing between **s 9(2)(b)(ii)** for leasing premises, permits and staffing ideally with a further back up contingency of **s 9(2)(b)(ii)** to reach the surplus over OPEX. We are intending to enrol one of a number of engineering groups to take the lead in this development and possibly a wider group of potential stakeholders including Govt in all its machinations to expedite the results.

Does the project includes an activity which would make it ineligible?

No

If yes, please explain:

The final location is unknown but would be chosen in relation to all requirements so suitably sited so to conform with all regulations. Plastic extrusion operations are a common 24/7 industry so there may be potential partners in any of the related industries with suitable premises and complimentary equipment and systems. We are actively seeking any variety of stakeholders.

Section 8: Climate change and natural hazards

Will the project be affected by climate change and natural hazards?

No

If yes, please explain:

Section 9: Track record

Please add a summary of all compliance and/or enforcement actions taken against the applicant by any entity with enforcement powers under the Acts referred to in the Bill, and the outcome of those actions.

Please write your answer here:

As we operate as a synergistic relationship with Extrutech Ltd situated in the Marsden Maritime Holdings industrial park compliance is already established. The new development and location will be chosen based on the requirements.

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Declaration

Do you acknowledge your submission will be published on environment.govt.nz if required

Yes

By typing your name in the field below you are electronically signing this application form and certifying the information given in this application is true and correct.

Please write your name here:

Mark G Molloy

Important notes