



Recyclable Oil Container with Internal Disposable Bladder



ENTRANT

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CATEGORIES ENTERED

Conceptual Design
 By a Tertiary Student

FOODSTUFFS
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SPECIAL FEATURES



At present 4 litre oil containers are able to be recycled at a cost of approximately \$1-2 per kg depending on location. This highlights a huge environmental issue as the Ministry for the Environment estimates up to 6,000 tonnes of oil container packaging p/a is used in New Zealand.



The issue with trying to recycle the package is the thin film of oil that remains on any material it comes in contact with. Contrary to popular belief, the oil does not leech into the containers.



Re-use : this is possible but the environmentally hazardous nature of removing the film, deems it currently unfeasible.



Reduce : There are viable applications to significantly reduce the volume taken up in NZ landfill.



Recovery : Incineration is unfeasible in NZ as only one burner is capable of burning the plastic - Millburn Cement Burner. The option of export for feedstock is economically viable (\$400-600 per tonne for bundled HDPE milk bottles). However oil contamination arises when compacting the containers.



Recycle : Possible, but a specialised shredder (for granulating) is required as oil contamination would likely affect other feedstock. Surface finish and mechanical properties of the resulting products would also suffer if large amounts of oil were present in the plastic granules.

Final design is a combination of the "reduce and re-use" options.

