ORDINARY MEETING

OF

WELLINGTON REGION WASTE MANAGEMENT AND MINIMISATION PLAN HEARINGS SUBCOMMITTEE

MINUTE ITEM ATTACHMENTS

Time: 10:45 am
Date: Tuesday, 6 June 2017
Venue: Committee Room 1
Ground Floor, Council Offices
101 Wakefield Street
Wellington

Business **Page No.**

2.1 Draft Waste Management and Minimisation Plan 2017-2023 Oral Hearings paper

1. Tabled information: Sub 37-Maria van der Meel 2
2. Tabled Information: Submitter 54-Bernard O'Shaughnessy 3
3. Tabled Information: Submitter 92-Stella Bridge 4
4. Tabled Information: Submitter 93-Donna Sherlock 8

Sub 37.

at all times an emergency plan. Nova will minimise as far as reasonably possible the visual impact of the Plant. The aesthetics of the Plant will be in accordance with industry standards.

2.9 Nova will exercise its rights in such a manner, having regard to the Council's obligation to run an efficient Landfill, that the Council's costs of operating the Landfill are not unreasonably increased.

3. EXCLUSIVE RIGHT

3.1 Subject to the terms of this Agreement, the Council will not itself extract, and will not permit any other party to extract gases from the Landfill or generate electricity from gas produced or extracted on the Land, except under clause 11.

3.2 The Council will not itself and will not permit any other party, including its contractors or agents, to interfere with or damage the Plant or operations of Nova. This provision will not apply in emergency situations where the Council believes on reasonable grounds the Plant is likely to cause damage to property or persons before Nova can remedy the circumstances giving rise to the Council's apprehension.

4. GAS EXTRACTION, COLLECTION AND SALE

4.1 Nova will design and construct on the Landfill at its own cost a system for the enhancement, production, extraction, collection, processing, reinjection, transportation and sale of landfill gases.

4.2 In carrying out its obligations under clause 4.1 Nova will use its best endeavours to instal the gas collection system and commission such system and the flaring units for that part of the Landfill known as Stage II no later than 30 April 1996. In respect of the vertical gas collection wells installed in the Landfill at the date of this grant Nova will commence preliminary collection and flaring of landfill gas no later than 8 weeks after the date of this grant.

4.3 Subject to clause 12.7 Nova will:

(a) Instal and implement the Plant into that part of the Landfill Site known as Stage II except for the areas used or to be used for the:

(i) area shown on the plan set out at the Second Schedule as the location of the unloading platform;

Sub. 54

In 2008/09 a number of New World store owners (under the Foodstuffs brand) put in place a 10 cents per bag price (tax) on customers using the stores plastic bags. Then because of customer feed back and protest, New World owners moved to gather that tax, and release the monies gained to local charities or good community projects. New World in Newtown release thousands of dollars over the years to local schools, kindergartens, and charities. But then they started to say it was too difficult to administer so stopped the tax. (simple put their food prices up regardless.) But as there was protest by customers in the lower North Island (mainly Taranaki area) about the 10cent tax on bags Foodstuffs stop the tax.

But interesting enough Foodstuffs supermarkets in the Lower South Island still imposed the 10 cent a bag tax, and still release all the monies in a transparent manner to local charities. Oh how these food duopoly companies move swiftly to further their interests.

In Parliament and in the newspaper and on TV news it was reported in August 2015 that NZ uses 1.6 billion plastic shopping bags in NZ, and these go into public land fills where they last for decades and not break down. So with Foodstuffs and Progressive Enterprises owning over 500 stores that's 3.2million bags each year in each shop on average. 3.2 million at 10 cents a bag is $320,000pa.

Well as Pak and Save Kilbirnie have 4200 customers each week and let's say they use 5 bags that's 50cents per customer and $2100pw or x 52 weeks is $109200 per year gained by the store in the sale of plastic bags. Or I am more inclined to think that if each customer buys 10 bags that's $4200pweek and $218400 per year. It's interesting, notwithstanding the variables that would apply, but again these figures keep pointing into the same conclusions as to the amount of customers there is at Pak & Save, the amount of bags purchased, the amount of booze purchased, and the amount of damage done to society by too much booze.

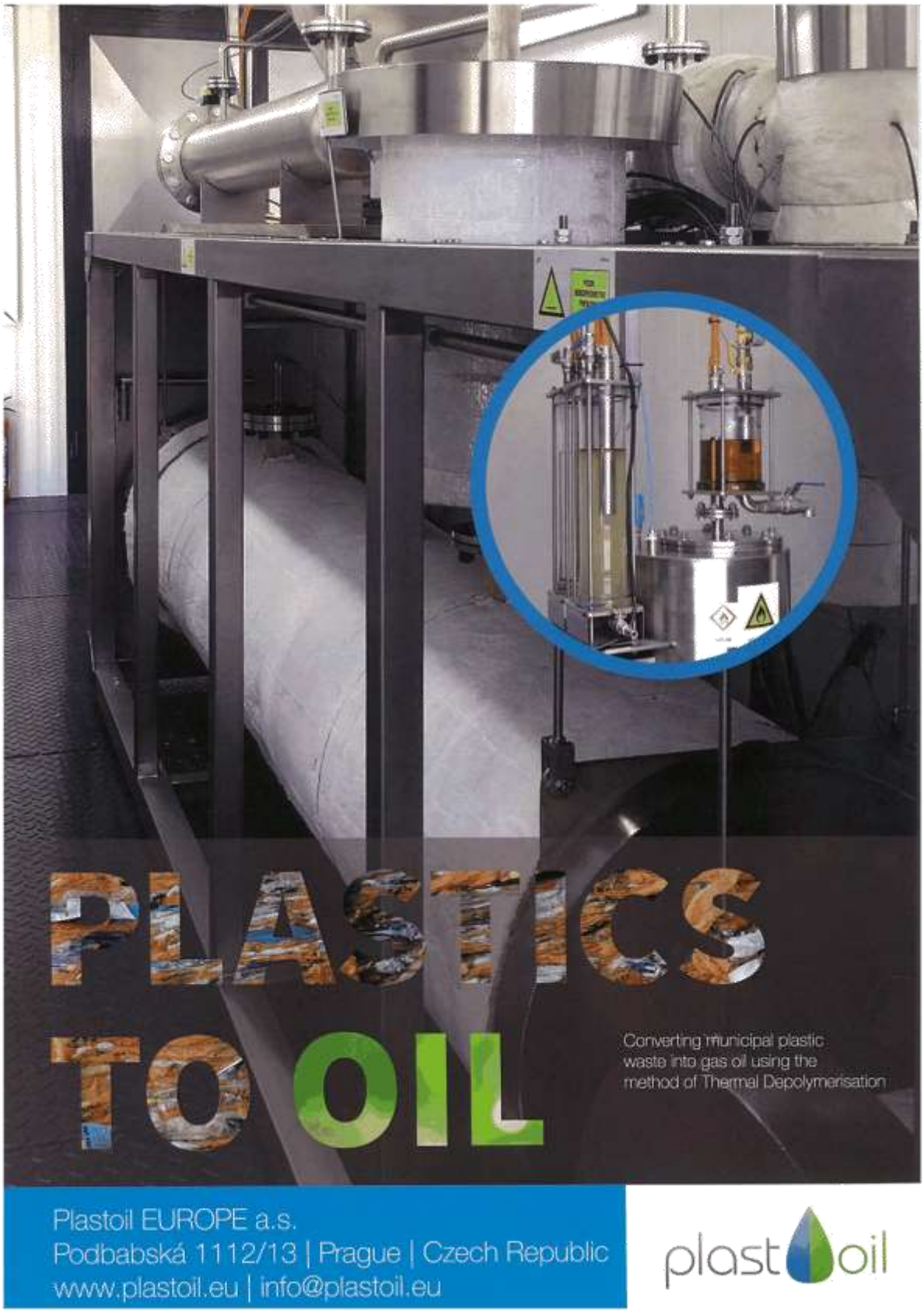
Clearly the bigger point I am making is that Pak & Save could or should donate all of the money from the 10 cent tax on plastic bags to charities such as the Eastern Suburbs Sports Trust, separate to what donations the other trust partners donate.

I think as an aside to the above matter, that Pak & Save should not sell plastic bags at all, make their recycle bags much cheaper to buy, and indeed simply have sturdy paper bags available to customers free of charge. After all in the 1970s New World Kilbirnie simple packed all of one's food purchases in free sturdy paper bags, and we as a public were never asked, nor given the choice to continue to have paper bags.

I also think Pak & Save should have a big glass recycle container placed across two of their car parks so that customers can bring back all the wine and beer bottles for recycling. A bit like the huge glass recycle container that is located at the Southern land fill (the dump). In the old days kids could get a penny, then threepence for bottle returns. Why should the ratepayer and taxpayers of the country have to pay for the glass re cycling system of green bins for the persons who want to drink to excess?

15 Sept 2015

Item 2.1 Attachment 3



PRESENTATION OF THE POL 01 DEPOLYMERISATION LINE

PlastOil presents its technology solution for environment-friendly use of plastic waste

1. Concept of the Technology

The depolymerisation line uses a considerate, nature-friendly method of processing and adding value to plastic material, in two stages. The first stage includes mechanical crushing or the use of lossless pelletisation technology that delivers no strain on the environment, but clean raw materials that are suitable for further processing and use in the low-temperature depolymerisation process. The ground plastic subsequently continues to the thermal depolymerisation process in which the long molecular chains of the plastic are broken down into short chains of oil hydrocarbons.

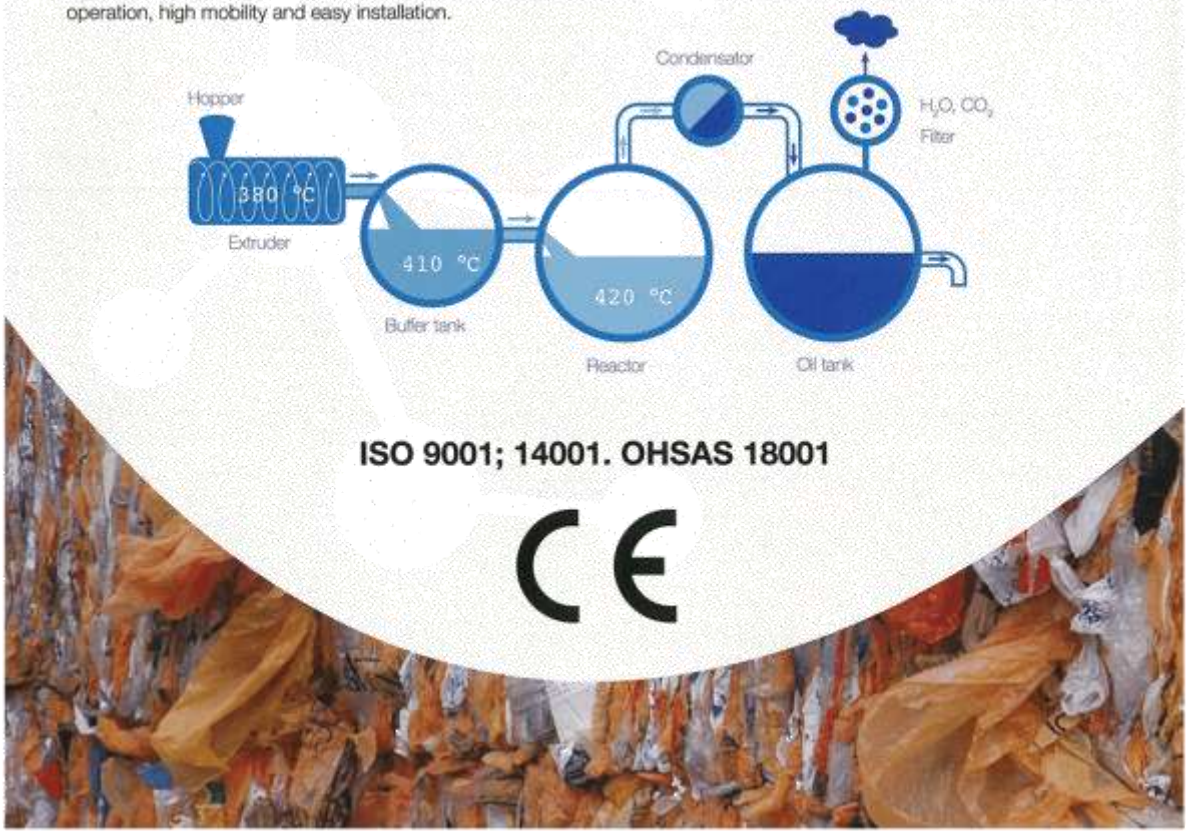
While standard pyrolysis is based on heating by flame, the depolymerisation line uses electric arc as the source of heat. This provides the best and stable conditions for depolymerisation, offering higher efficiency to the process, production of zero volume of undesired products (e.g. tar), only a minimum quantity of residual dirt and nearly no air pollutants.

The low-temperature depolymerisation system uses the principle of breaking down molecules of the raw material in temperatures ranging from 270° C to 450° C into simpler polymer chains that can be used in applications in the industry, transportation, power engineering, and other fields. This is unique technology that brings a new approach to use of polymers. The process is not thermal incineration, but low-temperature decomposition of material.

The line is capable of processing all plastic materials that are based on polyethylene (PE, HDPE, LDPE), polypropylene (PP), polystyrene (PS), used motor oils and hydraulic fluid.

The depolymerisation process is friendly to the environment as well as cost effective. It represents an unlimited method for disposal of polymer materials, offering long-term success of the process.

The line is designed as a simple set of devices integrated into a container, which is a guarantee of long operating life, easy operation, high mobility and easy installation.



ISO 9001; 14001. OHSAS 18001

CE

2. Components of POL 01 mobile container technology and peripherals:

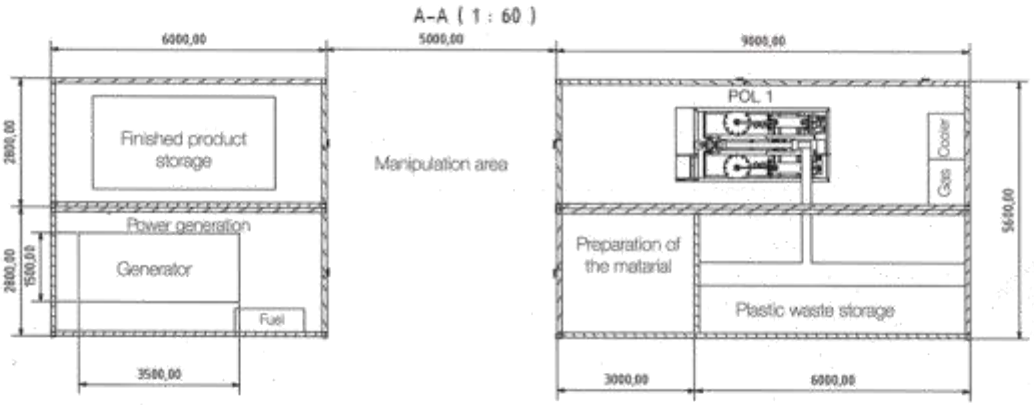
2.1. Container – peripherals – Mill, crusher, Big Bag holder, conveyor belt, distributor, dosage unit, pelletiser, form factor: 9x3x3m. Capacity 300 kg/hour – preparation of raw material – milling and pelletizing

2.2. Container – depolymerisation - POL 01: Technology for conversion of plastic waste into plastic oil, form factor 9x3x3 m. Unit with a capacity of 1000 kg (1000 l) per day – the depolymerisation unit

2.3. Container – peripherals – Pyrolytic oil tank: container 6x3x3 m, tank with a capacity of 22,000 litres – storage of plastic oil

2.4. Container – peripherals - ATG generator modified to process plastic oil, external tank 1,000 litres. Oil consumption 26 litres per hour; power 400V /230V, output 120 kW, form factor: 6x3x3m – generator set to produce electricity

3. Suggested arrangement of container set



Certified manufacturing of the technology is performed at our new production plant in Nové Mesto, Slovakia.

4. Operation Costs

The production of 1 litre of plastic oil requires 1 kg of plastic waste and 1 kWh of electricity.
Other operating costs and calculation of fixed costs:

- Personnel requirements – 1 FTE per shift. Feedstock preparation (no qualification required)
- Service and maintenance costs – 170 man hours / year
- Each machine has a capacity of 1,000 kg (1,000 l) per day
- Assumed annual number of operation days: 348

5. Business Model

Our intention is to sell the electrical energy as well as the entire solution from processing of plastic waste to generation of electrical energy under the PlastOil trade mark. The solution contains:

Design of optimum setup and selection of PlastOil technology based on customer's specific needs and characteristics of the location
Supply of the PlastOil technology as a modular, mobile container set
Installation of PlastOil technology and adjustment of the production process
Employee training
Monitoring and servicing with remote management
Consultancy on the business strategy, support in communication with business partners
Frame contracts for the sale of plastic oil
Frame contracts for project financing

6. Social Benefits

The only environment-friendly and quick solution for disposal of plastic waste with subsequent production and use of plastic oil.
Highly ecological method of disposal that produces no pollutants and only a minimum quantity of residual waste.
Synergies for municipalities, cities and companies – addresses some issues in waste management, offers an efficient, environment-friendly method in the future.
Possible uses include the automotive and engineering industries.
Mobile depolymerisation unit that can be used in disposal or removal of landfills.
Suitable for singular culture, social and sports events.

The very foundation of the concept was to create or find true value in plastic waste, which has been a threatening topic of the current era.

And we are proud to have achieved it...

plastoil

Sub 93.

Waste issues for Wellington City

Sort out barriers to wheelie bin utilisation

Plastic bags might be quicker to collect (financial benefit), but they are inferior in all other areas.

1 WCC supplied recycling bin, for kerbside collection - with a black rubbish bin liner provided by contractor.

Black bag put into a mixed waste truck (eg rubbish and recyclable streams unseparated).

2 WCC Council bag blown across the road and down the bank

3 Example of plastic bag inferiority - rips and wastes time, frustrates users and has less capacity.

Suggestion to WCC, do not embark on any further kerbside collection additions (eg organic waste diversion), until you prioritise simplicity for user in conjunction with Health & Safety (focus on clean stream and reduced manual handling).

Do this by investment without compromise:

- Buy bins with magnetic lockable lids to manage the wind risk. Costs for the wheelie bin roll out in 2011 were $15 lock unit. A bin was valued at $30 at this time.
- Upgrade the fleet collection vehicles for suitably sized vehicles complete with bin lifter. Do away with 'ute runs'.
- Look at regionalization for shared service delivery with the two Hutt councils and Porirua. Maximise recovery and simplify collection.

Construction and demolition waste

Construction costs have risen across the board, but waste practices in this field have remain largely unchanged. Council should be taking control of this market, leading with innovation and diversion projects. Critical mass can be obtained, and creative reuse should be the goal with a regional approach.

Close down the 'clean fill' operators and capture these materials for beneficial reuse, where possible. If costs are the economic barrier (eg $10m3 market rate for disposal at clean fill) then the true construction cost is not being realized and our environment is compromised.

Tyres and Ewaste

Lobby further for legislation of producer responsibility and look at other ways to ensure these are not disposed of without regard to the environment and public safety.

Thank you for your time, Donna Sherlock 021 162 9704 / 04 4788917 / okar09@gmail.com