

REFERENCE: 19/2/5/1/D6/29/WL0096/20

The Board of Directors
Rooikat Recycling (Pty) Ltd
P.O. Box 308
MOSSEL BAY
6500

Tel.: (072) 218 9196
E-mail: rooikatrecycling@gmail.com

Attention: Krizelda Human / Mark Hobbs

Dear Sir/Madam

WASTE MANAGEMENT LICENCE GRANTED IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT 2008 (ACT NO. 59 OF 2008), AS AMENDED, FOR THE CONSTRUCTION AND OPERATION OF PROPOSED DEVELOPMENT OF A PILOT DEPOLYMERISATION PROCESSING PLANT ON PORTION 21 OF THE REMAINDER OF THE FARM RHEEBOKSFONTEIN NO.142, MOSSEL BAY, WESTERN CAPE

With reference to the application for the facility, find below the outcome with respect to this application.

WASTE MANAGEMENT LICENCE

A. DECISION

I, Eddie Hanekom, in my capacity as the Director: Waste Management of the Department of Environmental Affairs and Development Planning (hereinafter referred to as 'the Department'), in terms of the National Environmental Management: Waste Act (NEM:WA), 2008 (Act No. 59 of 2008), as amended, read with the Environmental Impact Assessment (EIA) Regulations promulgated in terms of Government Notice (GN) No. R. 982 of 4 December 2014, as amended, hereby grant this Waste Management Licence to the Rooikat Recycling (Pty) Ltd (hereinafter referred to as 'the Licence Holder') to construct, establish and operate a Pilot Depolymerisation Processing Plant (hereinafter referred to as 'the Facility') on Portion 21 of the Remainder of the Farm Rheeboosfontein No.142, Mossel Bay.

B. DESCRIPTION OF THE ACTIVITY:

The proposed activities involve the construction, establishment and operation of a Pilot Depolymerisation Processing Plant. This technology will allow the treatment of domestic plastic and tyres at a large scale to produce a basket of fuels that can be successfully placed in the existing market.

The Facility will process 10 to 20 tons per day of either residential plastic or tyres, or a combination of both. The data collected during the operation of the plant will be used to develop and optimize the technology. The plastic would not have to be separated into the different types of plastic and typically non-recyclable plastics could now be converted into fuel without adding strain on the environment. The process would be a closed loop system and the generated off gasses would be used internally for energy production. Two products would be produced, oil in the form of heavy fuel oil (HFO) or diesel and minimal amounts of carbon black, which is a substitute for coal and can be used as a pigment. Plastics and tyres as an energy source alternative fuel, is fuel which is obtained in the process of recovery of waste with a calorific value. Post-consumer plastics and used tyres are among the wastes with the highest calorific values, being 40-46MJ/kg and 29.2MJ/kg respectively. These high calorific values make them an ideal feedstock for the depolymerisation process.

The Facility will store the feed to be processed by the Facility. The feed will be manually loaded into the auto feeder from where it will be loaded into the reactor. The reactor will operate on the gas and HFO produced by the process.

Thermal Depolymerisation is a process which reduces complex organic materials into light crude oil. It mimics the natural geological processes thought to be involved in the production of fossil fuels. Under pressure and heat, long chain polymers of hydrogen, oxygen, and carbon decompose into short-chain petroleum hydrocarbons.

The reactor product will be cooled and separated into three streams. The gas stream will be routed to back to the reactor for energy generation and the resulting HFO/diesel and carbon black will be sold as products. The process thus has no discernible waste streams. The depolymerization process will produce two product streams, i.e. high-carbon solids (carbon black) and a gas stream. The gas stream will pass through a condensing stage to produce heavy fuel oil (HFO), which can then be further distilled to form diesel. All non-condensable gases will be returned to the reactor to serve as heating fuel and may be supplemented with some of the HFO, should this be required. The reactor would run for approximately 10 hours to provide heating for the process. The pilot plant would, however, be run in batches throughout the day. Based on the production and loading rates, as well as the cooling steps, the facility may be operational over a 24-hour period.

The plant will consist of the following:

- Raw Material temporary storage area – approx. 96m²
- Dormitory Building – approx. 122m²
- Office Block – approx. 100m²
- Processing Plant – approx. 400m²
- Product storage area for steel wire, heavy fuel oil and carbon black – approx. 135m²

Stormwater will be collected in a stormwater sump with an oil separation weir to ensure no contaminated water runoff. All process equipment will be on concreted surfaces with sumps around them.

The process starts with loading the feed into the depolymerisation reactor. A furnace, which burns LPG/diesel/fuel oil heats the reactor wall. As the reactor heats up, the feed inside the reactor heats up under controlled conditions (anaerobic). The feed then produces oil, vapour and carbon black. The vapour is cooled and separated into oil (fuel oil) and gas (LPG). Some of the oil and all the gas generated by the process is re-used/consumed by gas and oil burners designed to heat the furnace. The off gas from the furnace is then scrubbed (cleaned) to remove any potential particulates and is only then released to the atmosphere. This is the only air emission from the process. This is in great contrast to the common idea of tyre, plastic or waste burning or incineration. The reactor chamber will be loaded by a hydraulic loader to ensure a firm stacking and avoid space being underutilized. Heating to approximately 350 °C will initially be by approximately 300-400 kg of imported fuel (LP gas or heavy fuel oil) until the depolymerization process generates its own gas and fuel oil. This gas and oil will then be piped to the heating chamber and used as heating fuel. Carbon black will be dumped in an underground bunker from where it will be mechanically moved to be bagged for use off site. Carbon black is removed in a closed system and stored in a hopper. The hopper is fitted with a filter on the vent to prevent carbon fines discharging to the atmosphere. Carbon Black will be briquetted and then bagged. Briquetting is done manually with a briquetting machine. Gases from the reactor will be passed to a condenser where the condensable fraction will be converted to liquid to form combustion oil. The fuel produced is a mixture of diesel and fuel oil. An additional processing step (distillation) will be added to the process to form diesel. The ultimate intention is to maximise the production of diesel, as the diesel produced is considered renewable diesel and will be blended into commercial diesel as a biodiesel. Alternatively, the diesel produced will be sold to a refinery as a biodiesel blend stock. Non-condensable gases will be returned to the reactor to serve as an energy source for heating of the reactor. The system will not use flare-off to rid the system of unwanted gases, however in emergency instances the off gases will be flared to release pressure in the system. There would be no continuous flaring. In the unlikely event that SO₂ should be formed in the combustion, acid water (measured by pH) from the scrubber will be neutralised with lime. Spent (after neutralisation) lime will be dried and sold for use in agricultural applications. After combustion in the reactor, all off-gas will pass through a wet scrubber system prior to being emitted to atmosphere. Due to the heat, steam will be formed that will be released.

Products:

1. Oil/fuel: condensable gases are passed through the condensers and form oil. These oils are sought after as industrial or heating oil. The fuel produced is a mixture of diesel and fuel oil. An additional processing step (distillation) will be added to the process to form diesel. The ultimate intention is to maximise the production of diesel, as the diesel produced is considered renewable diesel and will be blended into commercial diesel as a biodiesel. Alternatively, the diesel produced will be sold to a refinery as a biodiesel blendstock.
2. Steel: The steel would be high-quality steel rings that make up around 10% of the total make-up of tyres. Steel will be stored in skips on-site in a designated area for regular collection by a reputable scrap metal dealer.
3. Carbon Black: Carbon black will be moved from the reactor chamber into an underground bunker from where it will be mechanically lifted to be bagged/pelletized and sold off. Carbon Black is used extensively in the rubber, plastics and ink industries. It can also be sold as a coal alternative.
4. Gases: Condensable gases are passed through the condensers and are condensed into oil. The non-condensable gases are re-routed back to the heating chamber and are used to heat the process and replace the use of LPG gas. After burning, the off gas is cooled, scrubbed and released into the atmosphere. Gases will only be flared in the unlikely event of an emergency being detected by the computerised control system.

The following activities listed of *The List of Waste Management Activities that have, or are likely to have, a detrimental effect on the Environment, 2013*, as published in Government Notice No. 926 on 29 November 2013 (GN No. 921) are hereby authorised:-

Category A

- 3(3) The recycling of general waste at a facility that has an operational area in excess of 500m², excluding recycling that takes place as an integral part of an internal manufacturing process within the same premises.
- 3(5) The recovery of waste including the refining, utilisation, or co-processing of waste in excess of 10 tons but less than 100 tons of general waste per day or in excess of 500kg but less than 1 ton of hazardous waste per day, excluding recovery that takes place as an integral part of an internal manufacturing process within the same premises.
- 3(6) The treatment of general waste using any form of treatment at a facility that has the capacity to process in excess of 10 tons but less than 100 tons.
- 3(12) The construction of a facility for a waste management activity listed in Category A of this Schedule (not in isolation to associated waste management activity).

The following listed activities may only require registration with the Licensing Authority, or if the respective thresholds are triggered, require adherence to conditions of the *National Norms and Standards for the Storage of Waste, 2013*, as published in Government Notice No. 926 on 29 November 2013 and/or the *National Norms and Standards for the Sorting, Shredding, Grinding, Crushing, Screening or Baling of General Waste, 2017*, as published in Government Notice No. 1093 on 11 October 2017:-

Category C

- 5 (1) The storage of general waste at a facility that has the capacity to store in excess of 100m³ of general waste at any one time, excluding the storage of waste in lagoons or temporary storage of such waste.
- 5 (2) The storage of hazardous waste at a facility that has the capacity to store in excess of 80m³ of hazardous waste at any one time, excluding the storage of hazardous waste in lagoons or temporary storage of such waste.
- 5 (3) The storage of waste tyres in a storage area exceeding 500m².
- 5 (6) The sorting, shredding, grinding, crushing, screening or baling of general waste at a Facility that has an operational area that is 1000m² or more.

As a waste management licence holder, you are also required to be familiar with the legislation, regulations and Norms and Standards about waste management in the Republic of South Africa and the Western Cape.

In this Licence, "Director" means the Director: Waste Management of the Western Cape Department of Environmental Affairs and Development Planning, who may be contacted at the address below:

Director: Waste Management
Department of Environmental Affairs and Development Planning
Private Bag X 9086
CAPE TOWN
8000

Rooikat Recycling (Pty) Ltd appointed the following independent Environmental Assessment Practitioner (EAP) to administer the application for a Waste Management Licence:

DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

The Board of Directors

Sharples Environmental Services cc

Postal address: P.O. Box 443, Milnerton, 7435

Physical address: Unit 1 A2, The Avenues, Village Walk, Parklands, Cape Town, 7441

Contact person: Betsy-Jane Ditcham

Tel.: (021) 554 5195

Fax: (086) 575 2869

E-mail: betsy@sesc.net

The granting of this Waste Management Licence is subject to compliance with the conditions set out in section C.

C. **LICENCE CONDITIONS**

LICENCE NUMBER: 19/2/5/1/D6/29/WL0096/20
WASTE APPLICATION: TREATMENT, RECOVERY & RECYCLING OF PLASTICS AND TYRES
LOCATION: PORTION 21 OF THE REMAINDER OF THE FARM RHEEBOKSFONTEIN NO.142, MOSSEL BAY
LICENCE HOLDER: ROOKAT RECYCLING (PTY) LTD.
CONTACT PERSON: THE DESIGNATED WASTE MANAGER/MANAGEMENT OFFICER
ADDRESS: P.O. BOX 308, MOSSEL BAY, 6500

1. **LOCATION**

- 1.1 This Licence authorises Rookat Recycling (Pty) Ltd to construct, establish and operate the Facility, on Portion 21 of the Remainder of the Farm Rheeboksfontein No.142, Mossel Bay.
- 1.2 The location of the Facility must be according to the co-ordinates indicated on the Waste Management Licence Application Form dated 12 October 2020 and Waste Management Licence Application Additional Information Annexure, dated 29 January 2021, submitted by the Licence Holder, which is defined as follows:

Table 1-1: Footprint of the Facility.

Corner Numbers	Latitude	Longitude
1	34°2'44.45"S	22°11'8.74"E
2	34°2'43.91"S	22°11'10.77"E
3	34°2'44.95"S	22°11'11.25"E
4	34°2'45.47"S	22°11'9.13"E

- 1.3 Location of property on which the Facility is situated:

Table 1-2: Location of the Facility

Latitude	Longitude
34°2'44.47"S	22°11'10.04"E

- 1.4 The footprint of the Facility and its associated infrastructure is approximately 2000m².
- 1.5 The Surveyor General 21 Digit code of the Facility is: C03900060000056200000.

2. **PERMISSIBLE WASTE**

- 2.1 Any portion of the Facility which has been constructed or developed according to condition 4 of this Licence, may be used for the authorised activities. Only waste that is classified as general waste, according to the NEM:WA, or any current and future Norms and Standards developed by the Department, is authorised.

- 2.2 If more than 80m³ of hazardous waste is going to be stored at the Facility, registration in terms of the relevant *National Norms and Standards for the Storage of Waste, 2013*, as published in Government Notice No. 926 on 29 November 2013, must be done and the waste must be stored accordingly.
- 2.3 The Licence Holder must take all reasonable steps to ensure that:
- 2.3.1 no hazardous waste is processed and managed at the Facility; and
 - 2.3.2 no health care risk waste, including pharmaceutical waste, as defined by the Western Cape Health Care Waste Management Act, 2007, (Act No. 7 of 2007), is processed and managed at the Facility.
- 2.4 The Licence Holder must prevent the acceptance of any waste not authorised at the Facility.
- 2.5 All waste loads must be checked at the gate to prevent the acceptance and processing of waste not authorised by this Licence.

3. **APPOINTMENT OF WASTE MANAGEMENT CONTROL OFFICER/ENVIRONMENTAL CONTROL OFFICER**

- 3.1 A Waste Management Control Officer (WMCO)/Environmental Control Officer (ECO), who will monitor and ensure compliance and correct implementation of all mitigation measures and provisions as stipulated in the Licence and Environmental Management Programme (EMPr) dated 29 January 2021, must be appointed prior to any of the listed activities being undertaken on the Facility.
- 3.2 A waste management control officer must-
- 3.2.1 work towards the development and introduction of clean production technologies and practices to achieve waste minimisation;
 - 3.2.2 identify and submit potential measures in respect of waste minimisation, including the reduction, recovery, re-use and recycling of waste to the waste management licence holder and the Licensing Authority;
 - 3.2.3 take all reasonable steps to ensure compliance by the holder of the waste management licence with the licence conditions and requirements and the provisions of the NEM:WA; and
 - 3.2.4 promptly report any non-compliance with any licence conditions or requirements or provisions of the NEM:WA to the Licensing Authority through the most effective means reasonably available.
- 3.3 Condition 3.2 does not affect the liability of the Licence Holder to comply with the conditions and requirements of this licence.

4. **CONSTRUCTION**

- 4.1 The Licence Holder must submit the final signed engineering drawings for construction of the Facility, for approval by the Director, 90 days prior to construction of the Facility.
- 4.2 Construction, operations and further development within the Facility must be carried out under the supervision of a Professional Engineer, registered under the Engineering Profession of South Africa Act, 2000 (Act No. 46 of 2000).
- 4.3 Construction of the Facility must be in accordance with the Basic Assessment Report (BAR) and EMPr as prepared by Environmental Assessment Practitioner, dated 29 January 2021.
- 4.4 The Facility must be constructed in accordance with recognised civil engineering practice.
- 4.5 The Facility, or any portion thereof must be constructed and maintained in such a way that: –
- 4.5.1 the formation of pools due to rain is prevented;
 - 4.5.2 free surface runoff of stormwater is ensured; and
 - 4.5.3 contamination of stormwater is prevented;

- 4.6 The Licensing Authority shall not be held responsible for any damages or losses suffered by the Applicant or its successor in title in any instance where the construction or operation subsequent to construction is temporarily or permanently stopped for reasons of non-compliance by the Applicant with the condition of approval as set out in this Licence or any other subsequent document emanating from these conditions of acceptance.
- 4.7 After construction of the Facility or further development within the Facility, the Licence Holder shall notify the Director thereof and the person referred to in condition 4.1 shall submit a certificate or alternatively a letter to the Director that the construction of the Facility or further development within the Facility, as proposed by the Licence Holder and approved by the Director, is in accordance with recognised civil engineering practice and the requirements in this Licence, before treatment, recovery and recycling listed activities may commence on the Facility. If the Director is satisfied with the construction of the Facility or any further development within the Facility and has given written permission, the Licence Holder may use the Facility or any further development within the Facility for the treatment, recovery and recycling listed activities.
- 4.8 Works shall be constructed and maintained on a continuous basis by the Licence Holder to divert and drain from the Facility in a legal manner, all runoff water arising on land adjoining and adjacent to the Facility, to reasonably prevent the stormwater from entering the Facility.
- 4.9 Works shall be constructed and maintained on a continuous basis by the Licence Holder to divert and drain from the Facility, all runoff water arising on the Facility, to prevent pollution to groundwater.
- 4.10 Any development which occurs within 1:100-year flood line and/or within 500m from the boundary of a wetland would require a water use licence in terms of section 40 of the National Water Act, 1998 (Act No. 36 of 1998).
- 4.11 This Licence must be made binding to the main contractor as well as individual contractors and should be included in tender documentation for the construction contract.
- 4.12 Should any archaeological artefacts be exposed during excavations, the construction in the vicinity of the finding must be stopped. Under no circumstances shall any artefacts be destroyed. Such an archaeological site must be marked and fenced off, and the South African Heritage Resource Agency must be contacted within 48 hours.

5. **FACILITY MANAGEMENT**

- 5.1 The EMPr and the Air Quality Impact Assessment dated 29 January 2021, submitted as part of the final Basic Assessment Report (BAR), is hereby approved and must be implemented together with all the conditions of this Licence.
- 5.2 An application for the amendment to the EMPr could be submitted to the Director if any further amendments are to be made to the EMPr and such amendments may only be implemented if the amended EMPr has been authorised by the Director.
- 5.3 The EMPr must be included in all contract documentation for all phases of implementation.
- 5.4 The Licence Holder must notify the Director immediately of any events or incidents that may cause significant environmental damage or breach the requirements of the EMPr.
- 5.5 The activities authorised by this Licence must be managed by fit and proper persons who are competent in respect of the responsibilities to be undertaken by them.
- 5.6 Any persons having duties that are or may be affected by the matters set out in this Licence must have convenient access to a copy of it, kept at or near the place where those duties will be carried out.

- 5.7 A copy of this Licence and the EMPr must be kept at the Facility where the waste listed activities will be undertaken. The Licence and EMPr must be produced to any authorised official of the Department who requests to see it for the purposes of assessing and/or monitoring compliance with the conditions contained herein, and must be made available for inspection by any employee or agent of the Licence Holder who works or undertakes work at the Facility.
- 5.8 The Licence Holder shall remain responsible for the Facility, and/or any of the impacts arising from the operations on the environment.
- 5.9 The Licence Holder shall take all reasonable steps to ensure the Facility is operated in a manner which shall prevent the creation of nuisance conditions or health hazards, such as vectors (flies and vermin), dust, windblown litter, obnoxious odours and noise.
- 5.10 The Facility must comply with the Noise Control Regulations P.N. 200/2013, as promulgated under the Environment Conservation Act, 1989 (Act No. 73 of 1989).
- 5.11 An Emergency Response Plan (ERP) must be developed, and all staff must be trained in the implementation thereof. The ERP should be regularly updated and must include fire evacuations, injury on duty, accidents, and procedures caused by unexpected hazardous waste ending up at the Facility.

6. FACILITY SECURITY AND ACCESS CONTROL

- 6.1 The Licence Holder must prevent unauthorised access to the Facility, by having the Facility enclosed within a fence and a gate, thereby providing adequate access control.
- 6.2 Weatherproof, durable and legible notices must be displayed at each entrance in at least 3 (three) official languages applicable to the area. These notices must prohibit unauthorised entry, state the hours of operation, include the types of waste permissible, the name, address and telephone number of the Licence Holder and the person responsible for the operation of the Facility.
- 6.3 The Licence Holder must prevent the acceptance of any waste not authorised at the Facility as per condition 2.
- 6.4 Waste must be screened at the entrance of the Facility to ensure compliance to condition 6.3.
- 6.5 All entrances to the Facility must be manned during operating hours and locked outside operating hours.

7. MONITORING METHODS AND PARAMETERS

- 7.1 The Licence Holder shall carry out all tests in accordance with methods prescribed by and obtainable from the South African Bureau of Standards (SABS), referred to in the Standards Act, 2008 (Act No. 8 of 2008), to analyse the samples taken under any monitoring programmes required in this Licence.
- 7.2 The Licence Holder shall only use another method of analysis if written proof that the method is at least equivalent to the SABS method, is submitted to the Licensing Authority.
- 7.3 The Licence Holder must put in place a monitoring and measurement plan that must inter alia include:-
- (a) mass (in tonnes or kilograms) received, treated, recovered, recycled and transferred;
 - (b) waste types and sources; and
 - (c) air quality monitoring as required by the Responsible Authority and/or the Air Quality Impact Assessment Report.

8. **IMPACT MANAGEMENT**

- 8.1 All waste storage and sorting activities, as well as the products from the authorised activities, must be managed on hardened surfaces with waterproof bases, drainage system with bund walls and must be roofed.
- 8.2 Windblown litter must be contained on Facility by any practical means.
- 8.3 All staff and visitors' occupational health and safety risks must be identified and managed. Protective clothing must be worn on the Facility and the provisions of the Occupational Health and Safety Act, 1993 (Act No. 85 OF 1993) must be complied with.
- 8.4 Spill kits which include hydrocarbon absorbent material must be stored at the Facility and staff must be trained to use these spill kits.
- 8.5 Any complaint from the public must be attended to by the Licence Holder, who must take all reasonable and practical steps to alleviate the cause of the complaint within a reasonable timeframe to the satisfaction of the Director and record it in terms of conditions 12 and 13.
- 8.6 The Director must be notified immediately of events or incidents that may cause significant environmental damage or breach the requirements of the EMPr.

9. **ENVIRONMENTAL POLLUTION INVESTIGATIONS**

- 9.1 If, in the opinion of the Director, any environmental pollution, nuisances or health risks may be or is occurring on the Facility, the Licence Holder must investigate the cause of the problem and take reasonable steps to alleviate the problem in consultation with the Director.
- 9.2 Should the investigation carried out as per condition 9.1 above reveal any unacceptable levels of pollution, the Licence Holder must submit a report with mitigation measures to the satisfaction of the Director.

10. **AUDITING**

10.1 **Internal Audits**

- 10.1.1 Internal audits must be conducted quarterly (four times per year) by the Licence Holder and on each audit occasion an official report must be compiled by the relevant auditor in the format specified by the Director as per condition 10.3 to report the findings of the audits, which must be made available to the external auditor specified in condition 10.2.1 and the Department (if requested), according to condition 10.4.2.

10.2 **External Audits**

- 10.2.1 The Licence Holder must appoint an independent external auditor to audit the Facility annually (once per year) and this auditor must compile an audit report in the format specified by the Director as per condition 10.3 documenting the findings of the audit, which must be submitted to the Department.
- 10.2.2 The audit report must specifically state whether conditions of this Licence are adhered to and must include an interpretation of all available data and test results regarding the operation of the Facility and all its impacts on the environment.

- 10.2.3 The audit report must contain recommendations regarding non-compliance or potential non-compliance with the Licence conditions and must specify target dates for the implementation of the recommendations by the Licence Holder.
- 10.2.4 The external audit report must be submitted to Environmental Monitoring Committee (hereinafter referred to as the 'Monitoring Committee'), provided in condition 11.1 below, within 3 (three) months, from the date on which the external auditor finalised the report.
- 10.2.5 Each external audit must be submitted to the Director within 30 (thirty) days, from the date on which the external auditor finalised the report.
- 10.3 Both the internal and external audit reports must be in accordance with the format as prescribed by the Department.
- 10.4 **Departmental Audits and Inspections**
- 10.4.1 The Department reserves the right to audit and/or inspect the Facility at any time and at such a frequency as the Director may decide, or to have the Facility audited or inspected.
- 10.4.2 The Licence Holder must make any records or documentation available to the Director upon request, as well as any other information the Director may require.
- 10.4.3 The findings of these audits or inspections shall be made available to the Licence Holder within 60 (sixty) days of the end of the audit or inspection and shall not be treated as confidential.

11. **MONITORING COMMITTEE**

- 11.1 The Licence Holder must establish a Monitoring Committee for the normal operative lifetime of the Facility.
- 11.2 The Licence Holder must take the necessary steps to establish, maintain and ensure the continued functioning of a Monitoring Committee for the normal operative lifetime of the Facility and for a period of at least two years after the closure of the Facility, or such longer period as may be determined by the Director.
- 11.3 The Monitoring Committee shall be representative of relevant interested and affected persons and may consist of at least 3 (three) of the following representatives:
- 11.3.1 Licence Holder and/or his/her appointed consultant(s) or advisor(s);
- 11.3.2 representative(s) of the Health, Environment and/or Waste Departments of the relevant local authority;
- 11.3.3 representative(s) of this Department; and
- 11.3.4 at least 3 (three) persons/parties, their representatives elected by the local residents, or proof of notification of the Monitoring Committee to interested and affected parties of each meeting.
- 11.4 The Monitoring Committee must meet annually (once per year) and no later than 3 (three) months after the finalisation of the external audit report was finalised in terms of condition **Error! Reference source not found.**, and submitted in terms of condition 10.2.4.
- 11.5 The Licence Holder must keep minutes of all meetings of the Monitoring Committee and distribute these minutes to all members of the Monitoring Committee within 30 (thirty) days after the meeting.

12. **RECORD KEEPING**

- 12.1 The Licence Holder must keep records of all monitoring results, nuisances and complaints at the Facility.
- 12.2 Accurate records of waste volumes or masses received and recovered must be kept at the Facility and reported to the Department as per condition 13.7.
- 12.3 All records required or resulting from activities required by this Licence must:
- 12.3.1 be legible;
 - 12.3.2 be made available and should form part of any audit report;
 - 12.3.3 if amended, be amended in such a way that the original and any subsequent amendments remain legible and are easily retrievable;
 - 12.3.4 be retained in accordance with documented procedures which are approved by the department; and
 - 12.3.5 be made available upon the request of the director.

13. **REPORTING**

- 13.1 The Licence Holder must, within 24 (twenty-four) hours, notify the Director of the occurrence or detection of any incident on the Facility which has the potential to cause, or has caused any pollution.
- 13.2 The Licence Holder must, within 14 (fourteen) days, or as specified by the Director from the occurrence or detection of any incident referred to in condition 13.1, submit an action plan, which must include a detailed time schedule, and resource allocation signed off by management, to the satisfaction of the Director, of measures taken to:-
- 13.2.1 correct the impact resulting from the incident;
 - 13.2.2 prevent the incident from causing any further impact; and
 - 13.2.3 prevent a recurrence of a similar incident.
- 13.3 In the event that measures have not been implemented within 21 (twenty one) days of the incident, to address impacts caused by the incident referred to in condition 13.1, or measures which have been implemented are inadequate, the Director may implement the necessary measures at the cost and risk of the Licence Holder.
- 13.4 The Licence Holder must keep and maintain an incident and complaints register, which must be kept at the Facility and be made available at the request of the Director.
- 13.5 The Department must be notified within 7 (seven) days of any changes to the management of the Facility including the name of the incoming person together with evidence that such person has the required technical competence.
- 13.6 The Department must be notified within 14 (fourteen) days of the following changes:
- 13.6.1 licence holder's trading name, registered name or registered office address;
 - 13.6.2 particulars of the licence holder's ultimate holding company (including details of an ultimate holding where a licence holder has become a subsidiary); and
 - 13.6.3 steps taken with a view to the licence holder going into bankruptcy, entering composition or arrangement with creditors.
- 13.7 The Licence Holder must register and report all waste volumes or masses received, recovered, disposed of or stored to the Department's Integrated Pollutant and Waste Information System (IPWIS) which can be accessed on the URL: <http://ipwis.pgwc.gov.za/ipwis3/public>, as required by the Department.

- 13.8 The Department must be notified without delay in the case of the following:
- 13.8.1 any malfunction, breakdown of failure of equipment or techniques, accident or fugitive emission which has caused, is causing or may cause significant pollution;
 - 13.8.2 the breach of conditions of this licence; and
 - 13.8.3 any significant adverse environmental and health effects.
- 13.9 Prior written notification must be given to the Director of the following events and within the specified timeframes:
- 13.9.1 as soon as practicable prior to the permanent cessation of any operational activities;
 - 13.9.2 full or partial cessation of the operational activities for a period likely to exceed 3 (three) months; and
 - 13.9.3 full or partial resumption of the operation of all or part of the activities after a cessation notified under 13.9.2 above.

14. **LEASING AND ALIENATION OF THE FACILITY**

- 14.1 Should the Licence Holder want to alienate or lease the Facility, he/she must notify the Director in writing of such an intention at least 120 (one hundred and twenty) days prior to the said transaction. Should the approval be granted, the subsequent Licence Holder shall remain liable to compliance with all Licence conditions.

15. **TRANSFER OF LICENCE**

- 15.1 Should the Licence Holder want to transfer holder-ship of this Licence, he/she must apply in terms of section 52 of the NEM: WA. Should the transfer be approved, the subsequent Licence Holder shall remain liable to compliance with all Licence conditions.

16. **COMMENCEMENT**

- 16.1 The activities hereby Licenced may not commence within 20 (twenty) days of the date of signature of this Licence.
- 16.2 Should the Licence Holder be notified by the Director of a suspension of the Licence pending any appeals decision on the authorized activities, he/she may not commence with the activities until authorised by the Director in writing.
- 16.3 After the 20 (twenty) day appeal period has expired and no good cause to extend the appeal period has been submitted, a written notice must be given to the Department that the activity will commence.
- 16.4 This activity must commence within a period of 5 (five) years from the date of issue. If commencement of the activity does not occur within that period, the validity of this Licence lapses and a new application for waste management licence must be made in order for the activity to be undertaken.
- 16.5 If the proponent anticipates that commencement of the activity would not occur within 5 (five) year period, he/she must apply and show good cause for an extension of the Licence 6 (six) months prior to its expiry date.

17. **GENERAL**

- 17.1 This Licence shall not be transferable unless such transfer is subject to condition 15 above.
- 17.2 This Licence shall not be construed as exempting the Licence Holder from compliance with the provisions of any National and Provincial Legislation and relevant Ordinance, Regulation, By-laws and relevant National Norms and Standards.
- 17.3 Transgression of any condition of this Licence could result in the suspension of the Licence by this Director.
- 17.4 This Licence is valid for a period of 10 (ten) years from the date of issue of this Licence.
- 17.5 The licence may be reviewed any time after commencement. Based on the results of the review, especially compliance to Licence conditions or recommendations from the audit reports and/or changing legislation, the Licence can be amended or withdrawn, or the validity thereof be extended.
- 17.6 Non-compliance with a condition of this Licence may result in criminal prosecution or other actions provided for in section 67(1) of the NEM:WA.
- 17.7 In terms of Sections 28 and 30 of the NEMA, and sections 19 and 20 of the National Water Act, 1998 (Act No. 36 of 1998), any costs incurred to remedy environmental damage must be borne by the person responsible for the damage. It is therefore imperative that the Licence Holder reads through and understand the legislative requirements pertaining to the project. It is the Licence Holder's responsibility to take reasonable measures which include informing and educating contractors and employees about environmental risks of their work and training them to operate in an environmentally acceptable manner.

18. **REHABILITATION AND CLOSURE OF THE FACILITY**

- 18.1 In accordance with *The List of Waste Management Activities that have, or are likely to have, a detrimental effect on the Environment, 2013*, as published in Government Notice No. 926 on 29 November 2013 (GN No. 921) or any amendment thereto, a waste management licence is required for the decommissioning of the Facility. The Licence Holder must therefore submit a waste management licence application to the Director, prior to the intended decommissioning of the Facility. Once the Director has granted such a waste management licence, the decommissioning of the Facility may be undertaken.
- 18.2 The Licence Holder shall remain responsible for the site and the impacts on the environment, even after the operations have ceased and after the decommissioning of the Facility.

D. APPEAL OF LICENCE

1. Appeals must comply with the provisions contained in the National Environmental Management Act, 1998 (Act No. 107 of 1998) National Appeal Regulations, 2014, as published in Government Notice No. R. 993 on 8 December 2014, as amended.
2. An appellant (if the Licence Holder) must, within 20 (twenty) calendar days from the date that the notification of the decision was sent to the holder by the Competent Authority:
 - 2.1 submit an appeal in accordance with Regulation 4 of the National Appeal Regulations, 2014, as amended, to the Appeal Administrator; and
 - 2.2 submit a copy of the appeal to any registered I&APs, any Organ of State with interest in the matter and the decision-maker i.e. the Competent Authority that issued the decision.
3. An appellant (if NOT the Licence Holder) must, within 20 (twenty) calendar days from the date that the notification of the decision was sent to the registered I&APs by the holder:
 - 3.1 submit an appeal in accordance with Regulation 4 of the National Appeal Regulations, 2014, as amended to the Appeal Administrator; and
 - 3.2 submit a copy of the appeal to the holder of the decision, any registered I&AP, any Organ of State with interest in the matter and the decision-maker i.e. the Competent Authority that issued the decision.
4. The Licence Holder (if not the appellant), the decision-maker that issued the decision, the registered I&AP and the Organ of State must submit their responding statements, if any, to the appeal authority and the appellant within 20 (twenty) calendar days from the date of receipt of the appeal submission.
5. The appeal and the responding statement must be submitted to the address listed below:

By post: Western Cape Ministry of Local Government, Environmental Affairs and
Development Planning
Private Bag X9186
CAPE TOWN
8000

By facsimile: (021) 483 4174;

By hand: Attention: Mr Marius Venter (Tel.: 021 483 3721)
Room 809, 8th Floor Utilitas Building, 1 Dorp Street, Cape Town, 8001; or

By email: DEADP.Appeals@westerncape.gov.za

Note: A prescribed appeal form as well as assistance regarding the appeal processes is obtainable from the office of the Minister at: Tel. (021) 483 3721, E-mail Marius.Venter@westerncape.gov.za or URL <http://www.westerncape.gov.za/eadp>.

E. DISCLAIMER

The Western Cape Government, the Local Authority, committees or any other public authority or organisation appointed in terms of the conditions of the Licence shall not be responsible for any damages or losses suffered by the holder, developer or his/her successor in any instance where construction or operation subsequent to construction is temporarily or permanently stopped for reasons of non-compliance with the conditions as set out herein or any other subsequent document or legal action emanating from this decision.

Your interest in the future of our environment is greatly appreciated.

Yours faithfully,

DIRECTOR: WASTE MANAGEMENT

CC: (1) Betsy-Jane Ditcham (Sharples Environmental Services cc)

E-mail: betsy@sescs.net

ANNEXURE I
REASONS FOR THE DECISION

The reasons for the Licence decision and factors affecting the broader development that were considered to ensure the effective implementation of this Licence are explained below:

- (a) The information contained in the Application Form for a Waste Management Licence dated 12 October 2020;
- (b) The Basic Assessment Report (BAR) dated 29 January 2021, compiled by *Sharples Environmental Services cc*, including the Waste Management Licence Application Additional Information Annexure;
- (c) Comments raised by I&APs throughout the Public Participation Process (PPP), the Applicant and the Environmental Assessment Practitioner's responses thereto;
- (d) Inspections done by officials of this Department on the 18 May 2021;
- (e) Relevant information contained in the Department's information base; and
- (f) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998).

A summary of the issues, which in the Department's view were of the most significance, are set out below.

Environment

According to CapeFarmMapper, the proposed development is above a minor aquifer, with moderate vulnerability and the depth to groundwater at the development site is 23.17 metres below ground level (mbgl). There are no watercourses or wetlands present on the proposed site and the development is further than 32m from the nearest watercourse.

The presence of a mapped Critical Biodiversity Area to the north east of the property, has been confirmed. As such, the development footprint was moved to the south-western corner in order to avoid impacting on the Critical Biodiversity Area. The site is in a transformed state. The proposed development would not impact on the site-specific features of the Biodiversity Spatial Plan. The proposed development is not within a protected area. Due to the transformed state of the site, there are no fauna present or directly adjacent to the proposed development, despite being mapped on the Department of Forestry, Fisheries and the Environment's Screening Tool.

No geographical aspects would be affected by the proposed development. Due to the size and transformed state of the site, there are no sensitive heritage resources present on the proposed development site.

A plant to convert plastic to fuel will serve as a catalyst for waste segregation in the area as it will provide an outlet for plastic waste, which is currently not available. Waste segregation could employ persons in temporary and permanent positions. Additional persons will be employed during construction and in support services. Significantly more job opportunities will be created on completion of the pilot plant phase should the commercial plant be commissioned.

During operations, the proposed development would have a negligible impact on people's health and well-being. The site is within an existing Industrial area and therefore the development would not affect the visual character and sense of place of the area.

The proposed Pilot Depolymerisation Processing Plant would not produce excessive noise in comparison to other industries in the area, nor would there be odour impacts. The source materials (plastics and tyres) do not have the usual odour impacts of general mixed waste and, as the plant would be a closed system, there would be negligible emissions. Anticipated emissions include CO₂, water and traces of CO, which inherently do not emit offensive odours. According to the Air Quality Impact Assessment (2020), the impact of the proposed development's emissions on air quality in the area is negligible as all estimated ground-level concentrations are well below the official air quality standards published in *National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004, National Ambient Air Quality Standards, 2009* as published in Government Notice No. 1210 on 24 December 2009.

ALTERNATIVES

The following **Activity, Facility, Layout and Design Alternatives** were considered:-

The preferred site is located on portion 12 of the farm Rheeboksfontein No. 142, Groot Brak. The site is located directly northwest of the existing Groot Brak township. The preferred site is on the existing Mobicast land, bordered to the north by a sawmill / pole yard and the south by the Rheebokstene brick factory. The landfill site is north of the pole yard.

An Industrial Zone 2 area was considered as an alternative location, in the Mossdustria area. Based on verbal recommendations of officials from both Mossel Bay Local and Eden District Municipalities, it was decided to focus on an Industrial Zone 3 site as the preferred site. As such, the preferred site was identified as being preferable as it is already zoned as Industrial Zone 3. This preferred site is also in an industrial where, where such industrial activities have already been established.

It was originally proposed to include oil sludge as an input, however, due to this triggering a full Environmental Impact Assessment Process for the treatment of hazardous waste of more than 500kg per day, and the associated longer and more expensive process, it was decided to exclude it for this piloting project.

No alternative layouts were investigated. The proposed layout has been designed for optimal processing capability, allowing for natural flow of resources into and out of the plant. The proposed layout was designed based on research of similar facilities worldwide. This layout considers the existing access as well as the environmental sensitivities to the north east of the site.

The proposed activity would assist with the minimisation of waste to landfill in the area, while providing an alternative fuel to existing industries in the area. This would aid the reduction of use of non-renewable energy and fossil fuel sources.

PUBLIC PARTICIPATION PROCESS

The PPP comprised of the following:

Pre-Application Phase

- (a) Site notice placed at the Facility from 28 February 2020 to 30 March 2020 (30 days period);
- (b) Advertisement of the public participation process in "The Mossel Bay Advertiser" on 28 February 2020;
- (c) Delivery of the draft BAR to:
 - CapeNature, George,
 - Garden Route District Municipality: Air Quality Control,
 - Ellen van Rensburg Public Library,
 - This Department's Directorate: Waste Management,
 - This Department's Directorate: Air Quality Management,

- This Department's Directorate: Pollution and Chemicals Management,
- (d) The BAR was made available to I&APs from 28 February 2020 to 30 June 2020 (122 days).
- (e) Notification letters accompanied by the draft BAR, sent to authorities and Interested and Affected Parties including neighbouring landowners;
- (f) All comments on the draft Basic Assessment Report were collated into the Comments and Response Report.

Post-Application Phase

- (g) The BAR was made available to I&APs from 28 October 2020 to 27 November 2020;
- (h) An electronic version of the BAR was placed on the EAP's website;
- (i) A virtual meeting held on 23 November 2020, hosted by Resident Associations;
- (j) A virtual meeting held on 10 December 2020, hosted by Rooikat Recycling (Pty) Ltd, to provide feedback on the main comments and concerns raised during the public participation process;
- (k) Direct notification (via email) of the following:
- Commenting authorities, including the Mossel Bay Local Municipality and the Garden Route District Municipality, as in the Pre-Application Phase,
 - Ward Councillor – Ward 4,
 - Garden Route Environmental Forum,
 - Midbrak Ratepayers Association,
 - Adjacent landowners,
 - Great Brak River Conservancy,
- (l) The final BAR was submitted to the Department of Environmental Affairs and Development Planning on 29 January 2021.

Authorities consulted:

- (a) Cape Nature;
- (b) Breede-Gouritz Catchment Management Agency;
- (c) Heritage Western Cape;
- (d) Department of Health;
- (e) Mossel Bay Municipality;
- (f) Garden Route District Municipality: Air Quality Control; and
- (g) This Department's Directorate: Air Quality Management.

Comments and recommendations provided by the other relevant authorities have been considered in the evaluation of this application. Some concerns about this Facility were raised. The EAP responded to the comments and concerns raised during the public meetings and in the public participation process reports and documentation. Where possible and relevant, the conditions imposed by Cape Nature, Garden Route District Municipality: Air Quality Control and this Department's Directorate: Air Quality Management have been included in the Waste Management Licence.

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