Recycling Training Manual

Environmental Affairs

Department: Environmental Affairs

REPUBLIC OF SOUTH AFRICA
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1. INTRODUCTION

The current growing population and economy, results in increased volumes of waste generated. This puts pressure on waste management facilities, which are already in short supply and cannot handle the demand for service provision. Inadequate waste services lead to unpleasant living conditions and a polluted, unhealthy environment. The current norm associated with waste management is that waste is thrown in the dustbin to await collection by the municipality for disposal at the landfill site. This practice is however having a huge impact on the landfill as the amount of recyclables not sorted and diverted from the landfill consumes the airspace resulting in the need to construct new landfill sites. The lack or absence of municipal recycling infrastructure which will enable separation of waste at source and diversion of waste streams to material recovery and buy back facilities does contribute to this.

It is noted that both waste collection and the recycling industry make meaningful contributions to job creation. The informal sector has been active in the South African waste economy for more than two decades and plays an important role in diverting recyclables away from landfill towards recycling. However, in most cities and towns in South Africa, they are marginalised and operate at the fringe of municipal solid waste management systems. Waste and recycling co-operatives and SMMEs are strongly promoted by government as a means of creating jobs. However, small businesses face numerous challenges and are failing to create sustainable jobs and income opportunities.

An improved recycling system will help to curb the key issues which South Africa faces regard to waste management, that includes large portions of the population not receiving a weekly or adequate waste collection service, the lack of available or current waste information from all sectors, illegal dumping sites, salvaging at waste disposal facilities etc. The coming into effect of the National Environmental Management: Waste Act (NEM: WA), 2008 (Act No. 59 of 2008) (hereinafter referred to as the NEMWA) on 1 July 2009 brought about a significant policy shift for waste management in South Africa. This introduced the waste management hierarchy approach which advocates for waste avoidance, reduction, reuse, recycling and recovery as priority options before treatment and disposal of waste, which is the last resort. It is through this Act that the Department will ensure that the right to the environment is protected and that it is not harmful to the health or wellbeing of the people.
2. LEGISLATIVE FRAMEWORK

As the source of all legislatures in the country, the Constitution makes specific references to the prevention of pollution and ecological degradation. The right to environmental protection and to live in an environment that is not harmful to health or well-being is set out in Section 24 of Chapter 2. In fulfilling these rights, the State, through the organs of state responsible for implementing this Act, must put in place uniform measures that seek to reduce the amount of waste that is generated and, where waste is generated, to ensure that waste is reused, recycled and recovered in an environmentally sound manner before being safely treated and disposed of.

The National Environmental Management Act, 1998 (Act 107 of 1998) sets out guiding principles governing decision making on matters affecting the environment. Prominent amongst these principles are the Polluter Pays Principles, Producer Responsibility and the Precautionary Principles. In Chapter 5 of the Act, provisions are made with regard to Integrated Environmental Management as well as placing the duty of care on any persons that may cause environmental pollution, and thus requiring them to introduce measures directed towards preventing the pollution from further occurring or to minimise the pollution.

Integrated pollution and waste management is a holistic and integrated system and process of management aimed at pollution prevention and minimisation at source, managing the impact of pollution and waste on the receiving environment and remediating damaged environments. This policy represents a paradigm shift towards pollution prevention, waste minimisation, cross-media integration, institutional horizontal and vertical integration of departments and spheres of government, and involvement of all sectors of society in pollution and waste management.

The Waste Act primarily brings about an improvement in the law governing waste management in the country and introduces a coherent and integrated approach that addresses all the steps in the waste management hierarchy.
The Waste Act advocates a systematic and hierarchical approach in waste management – covering aspects of waste avoidance, reduction, re-use, recycling, recovery and safe disposal as a last resort. In cases where uniformity is required with regard to dealing with certain aspects or provisions of the Waste Act, the development of norms and standards becomes the foundation of the regulatory system. Under the Waste Act, provinces and local municipalities are also given powers to develop their own standards, provided that such standards are not in conflict with the national standards. Objects under the NEM: WA includes the Strategy, Norms and standards and Regulations as follows:

**Strategy:** It sets out goals and objectives to be achieved by all spheres of government dealing with waste management including other stakeholders e.g. recycling industry as per the NEM: WA stipulations.

- **National Waste Management Strategy, 2011**

**Policies:** Sets out the framework within which the handling of waste must be carried out in the country. Currently there are two policies existing

- **National Policy for the provision of Basic Refuse Removal to indigent households, 2011**

**Regulations:** Set out specific Waste Legislative requirement for the management of waste in terms of the NEM:WA

- **Plastic carrier bags and plastic flat bags regulation, 2003**
- **Regulation on the prohibition of the use, manufacturing, import and export of asbestos containing materials, 2008**
- **Waste Tyre regulation, 2009**
- **List of waste management activities, 2009**
- **Waste information regulation, 2012**
- **Waste classification and management regulation, 2013**

**Standards:** Set out the standards that waste activities have to comply to in the handling and operations activities

- **National domestic waste collection standards, 2011**
- **National standards for the extraction, flaring or recovery of landfill gas, 2013**
- **National standards for the scrapping or recovery of motor vehicles, 2013**
3. WHAT IS WASTE?

“Waste” as defined in the NEM: WA means—

(a) any substance, material or object, that is unwanted, rejected, abandoned, discarded or disposed of, or that is intended or required to be discarded or disposed of, by the holder of that substance, material or object, whether or not such substance, material or object can be re-used, recycled or recovered and includes all wastes as defined in Schedule 3 to this Act (See Annexure)

(b) any other substance, material or object that is not included in Schedule 3 that may be defined as a waste by the Minister by notice in the Gazette, but any waste or portion of waste, referred to in paragraphs (a) and (b), ceases to be a waste:

(i) once an application for its re-use, recycling or recovery has been approved or, after such approval, once it is, or has been re-used, recycled or recovered;

(ii) where approval is not required, once a waste is, or has been re-used, recycled or recovered;

(iii) where the Minister has, in terms of section 74, exempted any waste or a portion of waste generated by a particular process from the definition of waste; or (iv) where the Minister has, in the prescribed manner, excluded any waste stream or a portion of a waste stream from the definition of waste.

Waste is further classified into two main categories: General and Hazardous waste

“general waste” means waste that does not pose an immediate hazard or threat to health or to the environment, and includes—

(a) domestic waste;

(b) building and demolition waste;

(c) business waste;

(d) inert waste; or

(e) any waste classified as non-hazardous waste in terms of the regulations
made under section 69, and includes non-hazardous substances, materials or objects within business, domestic, inert, building and demolition wastes

“hazardous waste” means any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment and includes hazardous substances, materials or objects within business waste, residue deposits and residue stockpiles

4. WHAT IS RECYCLING?

Recycling in terms of the NEM: WA is defined as a process where waste is reclaimed for further use, which process involves the separation of waste from a waste stream for further use and the processing of that separated material as a product or raw material.

The process of recycling includes:

• Collecting or gathering waste material that can be re-processed
• Separating and balling the material at Material Recovery Facility or Transfer station
• Delivery to recycling plant
• Processing by means of shredding, grinding, rinsing and melting into a usable form (for example recycled glass cullet, or pelletized plastic), using the reprocessed material (instead of using virgin material) combined with other materials to manufacture new products
• Selling the new products back to the consumers.

Sources of recycling can be through separation at source at generation points i.e. households, businesses and public places this is beneficial as more clean waste can be recovered. The other option is through comingled waste collection to a place of sorting, this however pose the recyclables to be contaminated rendering a slightly decrease in the waste that could be recovered.

Below is the demonstration of the recycling process:

Two options are demonstrated for collection of waste. Waste recyclables collected through separation at source, and waste collected where there is no separation at source. Both the collected waste will undergo further sorting before taken to a recycling facility, composting facility or energy recovery facility.
The process flow diagram as shown on Figure 1 above depicts three beneficial uses of waste from household and businesses:

• Waste processed at recycling facility to make new products
• Waste taken to energy recovery facility for extraction /production of gas
• Waste taken to compost making facility

NB! Waste to energy should always be done with consideration that the resources are still preserved i.e. recyclables should be diverted from those facilities. Waste used in making compost are organic waste e.g. food waste and plant waste.

(a) Where does recycling fit in terms of Integrated Waste Management?

Integrated waste management is a comprehensive method to ensure that waste is properly managed from its generation till disposal. An effective integrated approach to waste management should consider the application of a waste management hierarchy that ensures waste is managed in ways that most effectively protect human health and the environment.

This involves evaluating local needs and conditions, and then selecting and
combining the most appropriate waste management activities for those conditions in relation to the waste management hierarchy.

Figure 2: Waste management hierarchy

Recycling is also covered as a legal requirement by the National Environmental Management: Waste Act (NEM: WA). Some of the objectives of the NEM: WA are to protect health, well-being and the environment by providing reasonable measures for minimizing the consumption of natural resources, this include:

• Reducing, re-using, recycling and recovering waste
• Treating and safely disposing of waste as a last resort
• Preventing pollution and ecological degradation
• Securing ecologically sustainable development while promoting justifiable
economic and social development

• Promoting and ensuring the effective delivery of waste services
• Remediating land where contamination presents, or may present, a significant risk of harm to health or the environment, and
• Achieving integrated waste management reporting and planning

(b) The benefits of recycling

Recycling benefits contributes to the social, economy and environment status, below are the details of its benefits:

Environmental:

• Conserves natural resources by re-using the waste for the manufacturing of new items instead of using natural resources all the time. We conserve natural resources like plants, minerals and water when we use materials from products more than once. E.g. recycling paper saves trees, water and the energy needed to cut down, transport the trees, and grind them into paper pulp.
• Saves landfill airspace so that our landfill sites can last for longer and not need additional land which we can use for other things e.g. agriculture, housing etc.
• Contribute towards reducing the contributors to global warming (landfill gas).
• Recycling can reduce water and air pollution that could have resulted from the disposal of the material.

Economy:

• Recycling reduces the need for new raw materials from recycled sources as they generally cost less than virgin materials.
• Recycling saves energy. E.g. glass cullet melts at a lower temperature, so less energy is needed to melt the same quantity of new material.
• Locally produced product using recycled material reduces the need for imported products and the costs involved (like exchange rate fluctuations, transport costs and increased emissions).
• Recycling reduces waste disposal costs.

Social:

• Recycling creates formal and informal jobs. The involvement of people in the value chain creates additional job opportunities.
(i) Which waste stream can be recycled?

The list below is not limited to the recyclables that are available but shows what could be easily accessible at residential and commercial settings.

<table>
<thead>
<tr>
<th>Waste Stream</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper and cardboard:</td>
<td>Newspapers, magazines, paper packaging bags, boxes, printing paper, egg containers, etc.</td>
</tr>
<tr>
<td>Plastic:</td>
<td>Plastic bottles, glad wrap, food containers, medicine bottles, bubble wrap, cleaning agent bottles etc.</td>
</tr>
<tr>
<td>Glass:</td>
<td>Beverage bottles and food jars, etc.</td>
</tr>
<tr>
<td>Cans:</td>
<td>Beverage cans, food tins, aerosol can, etc.</td>
</tr>
<tr>
<td>Electronic and electrical waste (e waste):</td>
<td>Broken or redundant electronic equipment and electric appliances, etc.</td>
</tr>
</tbody>
</table>

Figure 3: Examples of recyclable waste streams

What can you do with collected recyclables?

There are two reasons for collecting recyclables:

- Collect to sell at recycling plants or
- Collect to re-use into making art and crafts.

Recyclables collected for the purpose of recycling is mainly driven by quantities. To have waste accumulating before it goes to recycling/processing plant, one will require having storage or infrastructure where the waste will be sorted and bailed before going to a recycling plant. Products made from recyclables as
art and craft should be useful to the buyers and also visually attractive to enter different markets.

(ii) What can be produced from different waste recyclable types?
Examples of products made from recyclables are as follows:

**Plastics**
- Beverage bottles
- Backpack
- Carpet
- Polar fleece

**Paper**
- Waste paper
- Cards
- Memory stick
- Paper bags

**Cans**
- Waste paper
- Appliances
- Bicycle
- Car parts
- Steel beams
- Rebar

*Figure 4: Examples of products that can be made from recycling materials*
5. HOW TO START OPERATIONS

Operations will include knowing what recycling options are available i.e. buy-back or drop-offs, the different types of recyclables to collect and the requirements needed to start a recycling facility. To get this, you will have to consider the following:

(c) The type of a recycling business you want to run

You first have to decide which option you will follow for your business as stipulated below:

Collector:

You can earn a source of income from collecting waste glass, cans, paper and plastic and selling this valuable packaging to recycling companies /buy-back centres. Within South Africa you can collect this recyclables from local community, schools, churches, restaurants, bars, shebeens etc.

Buy-back Centre/Entrepreneur:

You can collect or buy the materials from small collectors till you have large volumes of waste that you can sell to the manufacturers. Some of the manufactures requires you to register with them as a vendor. One of the requirements for operating a buy-back centre is to have a weighing machine so that you can weigh the material that you buy from the collectors.

Drop off centre:

You operate as a facility where community can drop off their recyclables voluntarily and expect no fee to be paid for the waste they’ve brought. This usually consists of having containers that can be accessible anytime convenient to the community.

(d) The waste stream you would like to recycle

You need to identify the types of waste generated in your targeted area and decided what type of recyclables you want to focus on whether its paper, plastic, cans or glass

i) Where will the waste come from?:

Identify within your area the places that are most likely to be creating recyclables i.e.: shopping centres, offices, taverns and sports field.
ii) Who and how will the waste be transported to recycling facility?:

Decide on whether you will transport the recyclables to the recycling companies or you will need to outsource the service to an external provider, the other option is to determine whether you will request the recycling companies to come and collect the recyclables from your operation site.

iii) Where is the proposed location for recycling/sorting:

Obtain site permission from the relevant municipality for operating the recycling facility.

NB! Below is the information to help you with regards to waste recyclable type:

**Glass Recycling**

Glass unlike other recyclables, don’t always have to be sorted into colours schemes as it was required before. The technology used for sorting at the processing plant allows for that as it can separate the colours. All glass bottles and jars are acceptable for recycling.

Below are companies that can provide assistance when establishing your recycling of glass:

**The Glass Recycling Company (TGRC)**

This company does not buy or sell glass, but provide support to glass recyclers. They can help by providing collection bags or wheelie bins, gloves and goggles to protect your eyes when crushing glass. You have to apply for assistance in this regard Tel: 0861 245277 or email info@theglassrecyclingcompany.co.za.

**Consol:**

The company is the manufacture and processor of glass. To deal directly with Consol, a collector must supply more than 10 tons of waste glass a month on a regular basis. If they collect outside of Gauteng the minimum quantity required is 30 tons; own deliveries are acceptable down to around 5 tons per delivery. If you cannot supply the minimum quantities you can directly sell to a local buy-back centre or recycler who buys from the public. Tel: +27 (11) 874 0000/ 011 874 2371.
Paper and Cardboard Recycling

Paper is one of the most collected recyclable type and requires good handling and operation in terms of sorting and storage. If not handled properly it may be contaminated and not acceptable for recycling.

Tips for collecting paper:

- Get a separate reusable container for your paper waste.
- Separate your paper waste into grades and from other waste by placing it in the container.
- Keep your waste paper clean and dry – quality is important for a good end product. Buyers will not accept wet paper.
- Find out from your local recycler what paper grades should be kept separate from the rest.

Below are some of the companies that can provide assistance when establishing your recycling of paper:

**Nampak Recycling:** The company will assess your needs and tailor made the solution to the resources that you require in establishing your recycling business. Things they may provide you with are:

- Paper compactors and bailing equipment
- 30m Containers
- Confidential shredding
- Office collections
- Once-off requirements e.g. archive clear outs
- Certified document destruction
- Recycling aids
  - Assistance with recycling programmes

NB! Nampak is the recycler of all recyclable types. Their contacts are Tel: 0800 018 818 email: Recycling@za.nampak.com and www.nampak.com

**Mpact Recycling** (Formerly known as Mondi)

The support given by the company include provision of a white bag for printable paper only, Ronnie bbin and Ronnie Igloo bank. Pretoria/Centurion: Tel 012 3861381/ 011 538 8600/ 012 380 0920/ http://www.mpactrecycling.co.za

**Cans and Tins Recycling**

Sort the collected steel and aluminium cans separately (steel cans are
magnetic). You will get paid a lot more for aluminium cans. Cans don’t need to be washed, but it does help if they are rinsed and emptied. You will get paid more for cans if they are baled and not rusted.

The main company that support Can recycling in the country is Collect-a-Can. Below is the assistance you can get from them:

• Bags: Collect-a-Can can give assistance by supplying the collection bags. A typical Collect-a-Can bag will hold about 30kg (approximately 1000 loose 340ml used beverage cans).
• Baling assistance: Balers may be loaned to collectors who can supply 10 tons of cans or more per month
• Transport assistance: Please check with the nearest branch the availability of transport to have your used metal cans collected, as well as the price you will get when Collect-a-Can collects from you.: Collect a can Tel: 011 466 2939 Fax: 011 466-2926 or info@collectacan.co.za

Plastic Recycling

Plastic is one of the most complicated type to recycle as it has many different types that it should be separated in. There are 7 existing types of plastics and each has an identification code. Below are the identification codes and examples of products made with that plastic type:

<table>
<thead>
<tr>
<th>Plastic identification code</th>
<th>Plastic products</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) - PET</td>
<td>Cool drinks and water bottles, cooking oil and dish-washer liquid bottles</td>
</tr>
<tr>
<td>(2) - HDPE</td>
<td>Milk and juice bottles, household containers and bags</td>
</tr>
<tr>
<td>(3) - PVC</td>
<td>Clear trays for food and toiletries, bottles and cling film</td>
</tr>
<tr>
<td>(4) - LDPE</td>
<td>Frozen vegetable bags, milk sachets, consumer bags and soft squeezable bottles</td>
</tr>
<tr>
<td>(5) - PP</td>
<td>Yoghurt and margarine cups, ice cream containers, bottles caps and detergents bottles</td>
</tr>
<tr>
<td>(6) – PS</td>
<td>Food and meat trays, food clear packaging, CD cases</td>
</tr>
<tr>
<td>(7) - Other</td>
<td>Product made of two or more mixture of plastics</td>
</tr>
</tbody>
</table>

NB! It’s very important to separate the plastics into its types as they react differently in the recycling process e.g melting point

Below are Companies that can assist with the recycling of plastic:
PETCO

The company mainly support the recycling of PET. Support is provided to those that continuously collect PET. The support given includes equipment such as bailing machines, trolleys, cages and bins as well as educational material. The support given depends on commitment to continuously support the recycling of PET, the larger volumes you can collect, the more support you can get.

For more information on support contact 0860 147 738
<table>
<thead>
<tr>
<th>Company name</th>
<th>Description</th>
<th>Contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consol</td>
<td>Glass processors. You can call them to find out if they have agents in your area.</td>
<td>T: 011 874 0000  F: 011 827 0210  <a href="http://www.consol.co.za">www.consol.co.za</a></td>
</tr>
<tr>
<td>The Glass Recycling Company (TGRC)</td>
<td>Promotes glass recycling in the country and provide assistance to emerging entrepreneurs.</td>
<td>T: 011 803 0767  F: 086 514 6198  <a href="http://www.theglassrecyclingcompany.co.za">www.theglassrecyclingcompany.co.za</a></td>
</tr>
<tr>
<td>PETCO</td>
<td>Promotes and improves the waste management and recycling of post-consumer Polyethylene Terephthalate (PET) products on behalf of all stakeholders in the PET industry in South Africa.</td>
<td>T: 086 014 7738  F: 021 794 1724/ 011 615 8874  <a href="http://www.petco.co.za">www.petco.co.za</a></td>
</tr>
<tr>
<td>Polystyrene Packaging Council (PSPC)</td>
<td>PSPC actively demonstrates the commitment of the polystyrene sector to the environment (through collection and recycling) and the safety and health of polystyrene food packaging users.</td>
<td>T: 012 259 0554  <a href="http://www.polystyrenepackaging.co.za">www.polystyrenepackaging.co.za</a></td>
</tr>
<tr>
<td>Sappi waste paper</td>
<td>Collects and process waste paper</td>
<td>T: 011 407 8111  <a href="http://www.sappirefibre.com">www.sappirefibre.com</a></td>
</tr>
<tr>
<td>Mpact</td>
<td>Collects and process waste paper for recycling - Office paper, magazines, newspapers and cardboard</td>
<td>T: 011 994 5500  F: 011 994 5530  <a href="http://www.mpact.co.za">www.mpact.co.za</a></td>
</tr>
<tr>
<td>Nampak recycling</td>
<td>Processors of All recyclables</td>
<td>T: 011 799 7111  F: 086 584 3532  <a href="http://www.nampak.co.za">www.nampak.co.za</a></td>
</tr>
<tr>
<td>Tetrapak</td>
<td>Processors of Tetrapak/ Carton</td>
<td>T: 011 570 3000  F: 011 570 3149  <a href="http://www.tetrapak.co.za">www.tetrapak.co.za</a></td>
</tr>
<tr>
<td>The Reclamation Group</td>
<td>Collects and process Metals</td>
<td>T: 011 880 6410  F: 011 880 6222  <a href="http://www.reclam.co.za">www.reclam.co.za</a></td>
</tr>
</tbody>
</table>
(v) Things to consider when approaching recycling companies:

It’s important to know that when contacting the recycling companies for assistance, you should already have an idea of what you want to work with in terms of the recyclables you’ll be handling. Things to ask when in contact with them are:

• How can they help you get started?
• What material do they take?
• What quantities do they require for collection?
• Do you need to clean or sort the recyclables?
• Do they supply bags, drums or containers?
• Can they collect from your centre?
• Where can you deliver the waste?
• How much do they pay per kg or ton?

(e) Determine whether you will require a license?

Waste activities are regulated, therefore you will have to enquire if your activity is included under the List of waste management activities regulation in terms of NEM:WA. Should the activity you want to embark on be listed you then have to obtain a license before you commence operation.

You will also need to register on the Waste Information System if you do any activity relating to waste management. To register you must go to http://sawic.environment.gov.za/ for more information. Below are activities that need to be registered:

Waste management activities that must be registered:

• Storage and transport of waste
• Recycling and recovery of waste
• Treatment of waste
• Disposal of waste

Waste management operators that need to register:

• Waste transporters
• Waste processors
• Waste recyclers
• Waste collectors
• All those trading in waste
Documents required for registration:

• Company profile
• Certified copy of company registration
• Certified copy of tax clearance certificate
• Certified copy of roadworthiness certificate of vehicles used
• Certified copy of proof of up to date payment of municipal rates and taxes
• Certified copy of land use rights

It is important to also contact your local municipality to check if there’s any legal requirement you need to comply with to conduct your activity.

6. WHAT IS REQUIRED IN A RECYCLING BUSINESS

To have a successful recycling business, one need to consider the following:

![Diagram showing Initial Start-up capital, Infrastructure, and Transport]

**Initial start-up cost:**

Recycling is an activity that needs both financial and logistical support, especially in the early stages of an initiative, if it is to be successful and sustainable. Such support could come from the following:
• Direct cash payment in return for materials sold to a buy back facility
• Subsidies for collection and transport of materials for recycling from private or government
• Tax incentives, including tax exemption for recyclers who purchase new recycling equipment; low interest loans for purchase of recycling capital equipment; landfill charges or taxes; and raw material charges
• Enhancing market conditions for recycling by ensuring the supply of recyclable materials and simultaneously stimulating demand for products made from recycled materials.

Infrastructure

You need infrastructure to safe keep your collected material as well as to use as an operation area for your sorting. Reason for having an infrastructure is to ensure that your material is protected from rain and sun damage. You will need to look at the following to ensure the space you work on is accessible and sufficient for the quantity of waste you’ll collect.

i. Determine how much space you will need based on the following:
   • How much recyclables will be sorted and stored on the site?
   • How will material be off-loaded?
   • How many containers will be needed on the site for sorting and storage?

ii. Identify a possible site and consider the following:
   • Is it accessible to the public and other informal collectors to be able to drop off the waste?
   • Does the site need any alterations such as paving to support mud during rainy season, fence, walls, gate and what will it cost?
   • Do you need a permit/licence to operate your waste management activities from this site from the relevant Municipality?
   • Would the site require services such as water, electricity and sanitation?
   • Would the site have preventative measures for health and safety within and outside the facility—i.e. consider the possible odour, effect of insects, high traffic areas, fire risk?
   • What security measures you’ll put in place to prevent vandalism or illegal dumping?

Identify Operation equipment to use:

**Sorting Tables** – Determine the number of sorting tables to handle the volume
of waste you expect to come in. The sorting area should be covered, paved and easy to clean.

**Bail (Bulk) Bags and other containers** – You will need bulk bags and other container (skips) to store the various recyclables in before they are taken to the recycling companies.

**Protective Clothing** – Make sure that all staff have the necessary protective clothing i.e. gloves, masks.

**Special equipment** – Such as scales, baling machines, compactors etc.

**Transport**

You need to have access to transport in order to be able to transport your waste to the waste companies and for collection of your waste within your collection points.

7. **FUNDING**

Setting up and maintaining a recycling business requires some form of capital, be it to pay your collectors for their recyclables or paying of your transporters to deliver your waste to the recyclers.

**(a) Registering your business**

Registering a business affords you access to funding opportunities. You can do that by:

- Drafting a business plan and forming partnership e.g. Co-operatives

Register with the Companies Intellectual Property Commission (CIPC) previously known as CIPRO

Tel: 086 100 2472 (CIPC) / 012 394 9973

Fax: 086 517 7224/ 012 394 1015

**Things to consider when forming partnership:** Requiring partnership means that all members are in agreement and they all are after one goal. There is however some disadvantages that may result from partnership and knowing about them can help to prevent confusion when such challenges arise.
(b) Funding options available

The Department of Trade and Industry (DTI)

DTI is a government department that support new and existing entrepreneurs. There is different scale of funding available, to check the funding opportunities you can access the website: www.thedti.gov.za under Financial Assistance and find the List of incentives offered by the DTI alternatively call 0861 843 384. NB! There are Guidelines available for each scheme which will give you a better understanding and how to apply. Also to note is that most of the schemes that used to be available are now transferred to the Department of Small Business Development (DSBD) e.g. Corporative Incentives.

Below is an example of their schemes:

Isivande Women’s Fund (IWF):

Isivande Women’s Fund is an exclusive fund that aims to accelerate women’s economic empowerment by providing more affordable, usable and responsive
finance than is currently available. The IWF assists with support services to enhance the success of businesses. It pursues deals involving start-up funding, business expansion, business rehabilitation, franchising and bridging finance.

The Fund is managed by the Industrial Development Corporation (IDC) on behalf of the dti through a development fund manager.

IDF Managers is an SME financier aimed at supporting the creation of self-sustaining black and women owned businesses in South Africa by providing primarily financial and non-financial support to our investee companies.

Fund Criteria:
The women enterprises have to meet the following criteria:

• At least 6 months in operation;
• Requires early stage, expansions and growth capital;
• 50% plus one share owned and managed by women;
• Have potential for growth and commercial sustainability; and
• Improved social impact in the form of job creation.

Eligible business plans requiring funding of R30,000 to R2 million are invited to submit their applications for review by the IDF Managers.

Applications to the Isivande Women’s Fund should be made through http://www.idf.co.za or call +27 (11) 772 7910.

Application forms can be downloaded from www.idf.co.za

Department of Small Business Development (DSBD)

DSBD is a government department that support new and existing entrepreneurs.

**Co-operatives Development Financial Assistance (Incentives):** Co-operative Incentive Scheme (CIS) is a 100% grant for registered primary co-operatives (a primary co-operative consists of five or more members). The objective is to improve the viability and competitiveness of co-operative enterprises by lowering their cost of doing business through an incentive that supports Broad-Based Black Economic Empowerment.

Eligible activities through the grant:

• Business development services (e.g. feasibility studies; business, manufacturing and production systems; and production efficiency and improvement, etc)
• Technological improvements
• Machinery, equipment and tools
Who benefits / eligible criteria include that you must:

• Be incorporated and registered in South Africa in terms of the Co-operatives Act of 2005
• Be an emerging co-operative with a majority black ownership
• Have projects in any of the different economic sectors
• Adhere to co-operative principles
• Be owned by historically disadvantaged individuals (HDIs)
• Be biased towards women, youth and people with disabilities

Non-Eligible Activities:

• Activities that are already funded by other government grants or parastatals;
• Costs associated with tendering and tendering documentation;
• Liquor related activities;
• Gambling related activities;
• Cost of acquiring buildings;
• Cost of building of office structures and factories;
• Operation cost such as rent and salaries.

Please contact the Department of Small Business Development on 0861 843 384 (select option 2) or E-Mail: sbdinfo@dsbd.gov.za for more information.

National Empowerment Fund (NEF)

The NEF’s role is to support Broad-Based Black Economic Empowerment (BB-BEE). There are four funds under the NEF, but the relevant one for the start-up business in recycling is the Imbewu Fund.

This Fund is designed to support black entrepreneurs wishing to start new businesses as well support existing black-owned enterprises with expansion capital. The Fund supports these entities by offering debt, quasi-equity and equity finance products with the funding threshold ranging from a minimum of R250 000 to a maximum of R10 million. The fund has three products being Entrepreneurship finance, Procurements finance and Franchise finance. Within this products’ the relevant one for start-up in recycling will be Entrepreneurship finance. For more information on other products go to http://www.nefcorp.co.za
1. Entrepreneurship Finance

The Entrepreneurship Finance product is aimed at providing start-up and expansion capital to new and early-stage businesses that are owned and managed by black people. The Fund supports these entities by offering debt, quasi-equity and equity finance products with the funding threshold ranging from a minimum of R250 000 to a maximum of R10 million.

Criteria for selection includes:

- BEE applicants should be actively involved in the day-to-day management of the business
- Minimum black ownership of 50.1% is a requirement
- Business and/or industry experience by black entrepreneurs is also considered
- The NEF reserves the right to oblige applicants to participate in the NEF mentorship programme where there is lack of business and/or industry experience
- The business should be able to repay NEF’s investment
- Funding Instruments include term-loans, shares and other structures with ordinary share characteristics
- NEF funding is charged at prime linked interest rates
- Business must have a clear value-add with a sound business case
- Maximum NEF funding is R10 million
- The NEF will exit from the investment in 5 to 7 years

2. Procurement Finance

The Procurement Finance product is aimed at assisting black-owned SMEs that have been awarded tenders or contracts by public and private sector entities. The product’s main objective is to ensure that qualifying SMEs have the capacity to carry out the contracts.

3. Franchise Finance

The Franchise Finance product is aimed at assisting black entrepreneurs who wish to acquire a franchise license. The product is aimed at entrepreneurs who wish to start their own businesses by buying a franchise linked to a particular brand to reduce risks associated with start-up businesses lacking a track record.

(c) How to compile a Business Plan

Annexure: business plan template
A business plan should include the following information:

General Information:
• Name of the business
• Legal entity (ie. closed corporation, partnership)
• Proof of registration
• Physical and postal address
• Contact persons
• Contact numbers
• Organisational structure

The business information:
• Describe your business in terms of what you do, what you collect and what your vision is.
• Who owns the business?
• What is the goal of the business?
• In what area do you operate?
• What markets do you service?
• What makes your business unique?
• Who supports your business? (ie. the local municipality)

Finance details:
• How much start-up capital do you have?
• How much will it cost to acquire a site, containers, tables and other infrastructure items?
• How much will signage, fencing and other security items cost?
• How much cash float will you need to pay informal collectors?
• How much will you pay for recyclables?
• What income do you expect to get?

The people working with/for you:
• How many people will work/ work for you?
• How much will you pay them?
Targets:
• What are your recycling targets for the first three months, six months, year?
• How many clients do you want to acquire in the first three months, six months, year?

Record keeping:
• Keep daily records of all recyclables collected and sold
• Keep monthly records of all income and expenses

Legal stuff:
• Do you need a provincial or EIA approval?
• What license do you require?
• What license have you applied for?
• Can you operate the business while you wait for the license approval?

Marketing:
• How will you market your business to your target market?
• What type of communication will you use to market your business?
• Who are your competitors?

(d) Marketing your business
Marketing is an important part of starting and running a business. It does not matter how good your product or service is, if you do not market it in the right way only few people will buy it. Advertising and public education should be done at all times and you need to identify – where you will do your business and which approach you will use to achieve more clients

(e) Basic financial management
Managing your finances properly from the first day of running a business is very important. If you loose control over the money going in and out of your business in the beginning, it will be very painful to regain that control later. Without proper management of your finances, the risk of business failure increases.

• As a business starter, to properly manage your finances you should:
  • Maintain a record book:
    o The record book is where you write down all the transactions in your
business. A transaction is any exchange of money for a product or service. For example, a customer paying a hairdresser for a haircut is transacting money against a service. Money comes in and goes out of the business through transactions. Money come in mainly through the sales of goods or services. Money goes out of a business to meet material costs, labour costs and indirect costs. In your record book you write down how much money your business received and how much money was paid out.

- Make a monthly profit and loss statement
- Compare your profit and loss statement with your sales and cost plan

NB! Accurate records help you to find out if your business is doing well or bad, this include:

If doing badly, your records will tell you why and assist you to solve the problem. E.g. your records will indicate to you if one of your customers has failed to pay their account in time. Having specified the problem you can work on it.

If doing well, your records will tell you. They assist you in finding ways of doing even better. E.g. if your records tell you that a particular good is selling very well, you can stock it in higher quantity to have it always on ready supply. Your customers will appreciate it.