

A Review of South African Environmental and General Legislation governing e-waste

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EXECUTIVE SUMMARY

This legal review was originally compiled in March 2007, but due to the far reaching legal developments since then, in particular the promulgation of the Waste Act, 59 of 2008, and Notice GN 718 of 3 July 2009 (*List of Waste Management Activities that have or are likely to have a Detrimental Effect on the Environment*), the repeal of relevant sections of the Environment Conservation Act, 73 of 1989, and the amendment of the EIA Regulations (insofar as waste management and activities are concerned) a review became necessary. The format and sequence of the original review was retained, although where necessary new parts were inserted.

Unlike many other countries, South Africa currently does not have any dedicated legislation dealing with e-waste. As such a whole range of environmental, as well as health and safety, laws must be examined to provide answers. Such investigation will have to cover national, provincial and local legislation. Needless to say, this is an arduous and unsatisfactory situation, and certainly does not help to clarify matters.

This does not imply that South Africa has no legislation covering hazardous substances or waste, or the management and disposal thereof. Answers are certainly found in laws governing topics like the environment, water, air, waste, hazardous substances as well as health and safety. Each of these, however, examines the issue from a different perspective, thereby confusing the problem. A further difficulty is the fact that these laws are enforced by different government departments, alternatively levels of government, so that there is no uniform approach in dealing with e-waste or for that matter hazardous waste in general.

Since waste and the management thereof is a function delegated to local authorities by-laws differ from one municipality to the other. While this, in practical terms, does not affect e-waste management per se, some by-laws theoretically would allow greater control over same. Here too, e-waste would merely fall under the broad definition of hazardous waste, and as such requiring disposal or treatment. While it is debatable to what extent e-waste should be treated in the same manner as other hazardous waste in terms of collection, storage and transport, it nonetheless poses a potential difficulty for e-waste recyclers.

With the promulgation of the Waste Act and the list of activities requiring a waste management licence the situation has now become somewhat clearer for e-waste recyclers, although not entirely since these legal developments have created a fair amount of confusion, not just for the e-waste industry but others too. At the time of this review there was still relatively little guidance from the authorities as to what exactly would be required of affected waste generators, and who exactly should deal with licence applications. This will hopefully change soon.



The Consumer Protection Act, once in force, could hold the IT industry liable for collection and extended producer responsibility, but only if separate legislation is drafted (eg. regulations in terms of the Waste Act).

The second-hand goods legislation (current and proposed) holds further restrictive implications for the e-waste sector and imposes additional administrative and regulatory burdens.

The only exception where a definite answer may be found is under air pollution legislation as this imposes fairly uniform requirements; this would be relevant for smelters processing e-waste.

Traditionally, national and provincial government only oversaw the waste management functions of local authorities in terms of their constitutional duties, but without becoming too actively involved. There is often also a rivalry and lack of cooperation between these two; this is since both share the constitutional power over pollution control (Schedule 4 Part A). The Waste Act has now brought some structure into this as it sets out part of the Minister's and MECs' powers and duties.

In terms of awareness and involvement by authorities, industry as a whole (and not only certain members of the IT industry) and the public the situation is still far from being as satisfactory as, for instance, in the EU or Switzerland. These two have detailed legislation covering e-waste, and more importantly extended producer responsibility and mandatory return systems.

This review also briefly examined legislation governing precious metals and second-hand goods as this is relevant for e-waste.

The absence of clear e-waste legislation or policies on all three levels of government is therefore seen as a definite obstacle in confronting the problem in a comprehensive and broad manner. Until such time as these are implemented the management of e-waste will continue to remain a voluntary initiative by certain organisations, NGOs or individuals.



1) INTRODUCTION

Unlike many other countries, South Africa currently does not have any dedicated legislation dealing with e-waste. As such a whole range of environmental, as well as health and safety, laws must be examined to provide answers. Such investigation will have to cover national, provincial and local legislation. Needless to say, this is an arduous and unsatisfactory situation, and certainly does not help to clarify matters.

In terms of awareness and involvement by authorities, industry as a whole (and not only certain members of the IT industry) and the public the situation is still far from being as satisfactory as in the EU, Switzerland or several other countries.

This review will examine national, provincial and particularly local legislation covering a range of legal topics from general environmental, water pollution, air and health legislation in order to extract relevant requirements.

A brief discussion of foreign legislation will also be provided.

2) NATIONAL LEGISLATION

The following is a brief overview of South African national environmental, health and safety, as well as general legislation having a relevance for e-waste purposes.

As pointed out, due to the absence of dedicated legislation a host of laws must be reviewed, each of which has relevance for waste and its management. Even the recently promulgated Waste Act, 59 of 2008, while certainly highly relevant, does not address e-waste satisfactorily in our opinion.

2.1) Constitution

Section 24 of the Constitution's Bill of Rights states that:

Everyone has the right-

- (a) to an environment that is not harmful to their health or well-being; and*
- (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that-*
 - (i) prevent pollution and ecological degradation;*
 - (ii) promote conservation; and*



secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

2.2) National Environmental Management Act, 107 of 1998

This Act (hereafter referred to as NEMA) is the framework legislation governing environmental matters and all other related legislation must be read subject to its provisions.

While NEMA does not deal much with waste management per se, it nonetheless sets out some important provisions. Thus sustainable development requires the consideration of, among other factors:

that waste is avoided, or where it cannot altogether be avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner (section 2(4)(a)(iv)).

It also defines “pollution” as

any change in the environment caused by-

- (i) substances;*
- (iii) noise, odours, dust or heat,*

emitted from any activity, including the storage or treatment of waste or substances, construction and the provision of services, whether engaged in by any person or an organ of state, where that change has an adverse effect on human health or well-being or on the composition, resilience and productivity of natural or managed ecosystems, or on materials useful to people, or will have such an effect in the future (section 1).

There is a duty on persons to take reasonable measures to prevent pollution or degradation of the environment from occurring, continuing or recurring, or in so far as such harm is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment (section 28(1)). This duty rests on, among others, the land owner, person in control or user thereof (section 28(2)).

The Act also requires the application of integrated environmental management principles and objectives set out in Chapter 5 (this deals with environmental impact assessments (EIAs)).



The requirements pertaining to the EIA Regulations dealing environmental impact assessments (EIA's) will be discussed below at 2.15 and 2.16 since the law, in so far as waste management is concerned, has changed drastically since 1 July 2009 with the promulgation of the Waste Act, 59 of 2008, and accompanying legislation.

2.3) Environment Conservation Act, 73 of 1989

Since the promulgation of the Waste Act, 59 of 2008, the Environment Conservation Act has little remaining relevance for waste management due to the repeal of the definitions of "waste" and the separate Identification of Matter as Waste Notice, GN 1986 of 24 August 1990.

In addition, the provisions dealing with the permitting of disposal sites (section 20) were repealed by the Waste Act, although currently permitted sites will retain their legal status (see sections 81 and 82 of the latter Act).

In other words, any permission issued in terms of section 20 will either remain valid until further notice, alternatively will require a licence in terms of the Waste Act, as read together with Notice GN 718 of 3 July 2009 (*List of Waste Management Activities that have or are likely to have a Detrimental Effect on the Environment*). This particular aspect will be discussed in more detail below at 2.15 and 2.16.

2.4) DWAF Minimum Requirements

In 1998 the Department of Water Affairs and Forestry ("DWAF") published detailed Minimum Requirements dealing with

- Waste Disposal by Landfill
- Handling, Classification and Disposal of Hazardous Waste
- Water Monitoring at Waste Management Facilities

Waste is categorised into various groups (domestic, industrial, commercial), while hazardous waste falls into nine different classes. Landfill sites themselves are classified differently; this defines which waste types they may receive.

For present purposes the *Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste* are more relevant.



Certain hazardous components in e-waste, like eg. mercury, cadmium, lead etc, will probably be regarded as a Class 6.1 dangerous substance in terms of SANS 10228 (*The Identification and Classification of Dangerous Substances and Goods*). Disposal of hazardous waste may only take place at an authorised landfill (ordinarily rated as H:H), although current practice certainly is different due to lack of awareness, and possibly unwillingness, by authorities and the public, as well as little or no controls at landfill sites.

Storage of hazardous waste is dealt with extensively in Section 10 of the *Minimum Requirements*, and certain precautionary measures and steps are outlined. Since e-waste is in an inert form the pollution potential insofar as storage and disassembly are concerned is probably minimal. Disposal, on the other hand, has a far greater long term effect since the hazardous components/materials may leach into the groundwater and/or soil. For this reason disposal will warrant special consideration (ie proper and safe disposal at an authorised landfill site).

The *Minimum Requirements* also set out storage times (Section 10.2) and volumes (depending on the hazard rating). If storage is in excess of ninety days a waste disposal site permit will need to be applied for by the *waste generator* in terms of section 20 of the Environment Conservation Act, although the Minister may grant an exemption from this requirement. As mentioned above, section 20 has been repealed by the Waste Act, and the *Minimum Requirements* must therefore be read subject to this Act.

Although it is doubtful whether a recycler, refurbisher or collector of e-waste will be regarded as a waste generator, as they are merely collecting and processing e-waste (cf also the definition in section 2.5 of the *Minimum Requirements*: “The Generator would be an individual, an industry or any other party whose activities result in the production of waste”), the provisions of the Waste Act and the *Notice setting out the List of Waste Management Activities that have or are likely to have a Detrimental Effect on the Environment*, now require the *Minimum Requirements* to be interpreted differently. This particular aspect will be discussed in more detail below at 2.15 and 2.16.

The Requirements are in any event in the process of being updated, although completion thereof will still take quite some time, particularly in the light of the very recent waste legislation changes.

2.5) National Water Act, 36 of 1998

The Act defines “waste” as

any solid material or material that is suspended, dissolved or transported in water (including sediment) and which is spilled or deposited on land or into a water resource in such volume,



composition or manner as to cause, or to be reasonably likely to cause, the water resource to be polluted (section 1).

The land owner, person in control, user or occupier must take all reasonable measures to prevent water pollution from occurring, continuing or recurring (section 19(1)).

This Act lists a number of actions amounting to water use. For present purposes the following is most relevant: *Disposing of waste in a manner which may detrimentally impact on a water resource* (section 21(g)).

From the above it is clear that water use has a wide definition and that waste handling and/or disposal may also amount to such use.

2.6) Health Act, 63 of 1977

This Act was substantially repealed by the National Health Act, 61 of 2003, although certain sections still remain in force.

It contains a fairly lengthy definition of “nuisance”, which, inter alia, means:

- (c) *any accumulation of refuse, offal, manure or other matter which is offensive or is injurious or dangerous to health*
- (h) *any area of land kept or permitted to remain in such a state as to be offensive* (section 1)

Local authorities must carry out all lawful, necessary and reasonably practicable measures to:

- maintain its district in a hygienic and clean condition (section 20(1)(a))
- prevent the occurrence of any nuisance, unhygienic or offensive condition, or any other condition which could be harmful or dangerous to the health of people (section 20(1)(b))
- prevent pollution of water intended for human use (section 20(1)(c))

In terms of the General Health Regulations (GN R 180 of 10 February 1967) the incorrect disposal and management of waste is prohibited unless

the dumping of any refuse, night-soil, litter, waste, manure, offensive matter or liquid [occurs] in a place specially set apart by the local authority for that purpose, in such an approved



manner as not to be offensive, or a nuisance or injurious or dangerous to health (Regulation 15(4)).

2.7) National Health Act, 61 of 2003

Very little coverage is given to waste or pollution related issues in this Act, although it does state that one of its objects is to protect, respect, promote and fulfill the rights of the people of South Africa to an environment that is not harmful to their health or well-being (section 2(c)(ii)).

2.8) Atmospheric Pollution Prevention Act, 45 of 1965

When the Air Quality Act, 39 of 2004 (see also below at 2.9), fully enters into force, this Act will be repealed. In the meantime it remains important for purposes of this review as it requires a registration certificate for certain so-called scheduled processes. For present purposes the following are potentially relevant, depending on the activity involved:

- Lead processes (No 23)
- Copper processes (No 31)
- Waste incineration processes (No 39)
- Cadmium processes (No 52)
- Metal recovery processes (No 54)
- Mercury process (No 62)
- Glass processes (No 65)

2.9) Air Quality Act, 39 of 2004

This Act only entered partially into force on 11 September 2005, and many of the core provisions, like the listing of specified activities and licences, are not yet operational or defined. The authorities now have to formulate standards and plans to control and improve air quality. It is anticipated that processes like those referred to in 2.8 above will be regarded as specified activities, thus requiring a licence, depending on the scope and nature of activities carried out.

At the very least, smelters are expected to be affected by the licensing provisions of this Act.



Various draft documents regulating emission quality and areas, as well as proposed licencing requirements, were published for comment in the not too distant past. Should these enter into force they may impose further duties on air polluters.

2.10) *Hazardous Substances Act, 15 of 1973*

This Act classifies certain types of hazardous substances into four groups and imposes detailed requirements (through the use of Regulations and Notices) dealing with the handling, selling, using, operating, applying and installation etc thereof.

SANS 10228 (The Identification and Classification of Dangerous Substances and Goods) is incorporated by reference into various Regulations and Notices, and as such this standard is given legal force insofar as these Regulations and Notices are concerned.

2.11) *Chapter VIII (Transportation of Dangerous Goods and Substances by Road) of the Regulations in terms of the National Road Traffic Act, GN R 225 of 17 March 2000*

These Regulations, as their name suggests, cover road transportation of dangerous and hazardous goods. They too incorporate various SABS (now SANS) standards dealing with, for instance, the identification of hazardous substances, emergencies and design requirements for vehicles, thus giving them legal force (see Regulations 273 and 273A).

The Regulations further set out requirements for operator fitness/training, documents to be carried, the appointment of a competent person etc. The Regulations should be read subject to additional SANS standards which were incorporated in separate Notices and which deal with mandatory driver training.

It is submitted, that for present purposes, these Regulations are not relevant, since the transportation of e-waste does not pose a danger. Any hazardous incidents or emergencies resulting from the transportation or an accident are deemed highly unlikely in our opinion. Transportation of e-waste would therefore be governed by the 'ordinary' traffic rules.

2.12) *Occupational Health and Safety Act, 85 of 1993, and Regulations*

This Act has relevance for environmental matters as it governs and regulates the health and safety of employees and the public in general. Employers, self-employed persons and employees are broadly



speaking under a duty not to endanger or risk the health of others and to maintain a safe (working) environment (see e.g. sections 8, 9 and 15). Moreover, employers are obliged to carry out risk and hazard assessments on a regular basis to determine any dangers posed by the work or materials used. In certain instances periodic medical surveillance must also be done of workers exposed to harmful substances.

In addition, several Regulations promulgated in terms of the Act contain provisions dealing with the handling, use, exposure control, use of personal protective equipment, storage or disposal of hazardous substances/chemicals or waste in general. Examples are the:

- Lead Regulations, GN R 236 of 28 February 2003
- Hazardous Chemical Substances Regulations, GN R 1179 of 25 August 1995
- Environmental Regulations for Workplaces, GN R 2281 of 16 October 1987
- General Safety Regulations, GN R 1031 of 30 May 1986

The Lead Regulations as well as Hazardous Chemical Substances (“HCS”) Regulations both deal in Regulations 17 and 15 respectively with disposal, and require that an employer, as far as is reasonably practicable, should recycle lead or HCS waste, alternatively dispose of it in a safe and lawful manner.

The other two Regulations set out general requirements for employers insofar as housekeeping, ventilation/indoor air quality, illumination, personal protective equipment and other safety measures are concerned.

2.13) *Framework for the National Waste Management Strategy (2009); White Paper on Integrated Pollution and Waste Management (2000); National Waste Management Strategy and Action Plans (1999)*

All three documents advocate a shift from the present focus on waste disposal and impact control (ie end of pipe) to integrated waste management and prevention as well as minimisation.

The Framework for the National Waste Management Strategy specifically mentions e-waste (see pg 10), and states that it (as well as some other products) should be prioritised for further investigation and implementation for extended producer responsibility.



2.14) Waste Act, 50 of 2008

This Act finally entered into force on 1 July 2009 (with the exception of some sections which are not relevant for present purposes).

It requires the Minister to draft a National Waste Management Strategy (a Framework was already published in June 2009 – see point 2.13 above), as well as national norms and standards. It is unsure if this will replace the existing 1999 strategy, or if same will only be updated. Provinces must ensure that these norms and standards are put into place within their areas, although MECs are free to draw up their own norms and standards. Municipalities in turn must compile waste service standards, while certain state organs must put together integrated waste management plans.

The Act is very detailed, and for summary purposes only the most important provisions are set out below.

In terms of section 14(1)

The Minister may, by notice in the Gazette, declare a waste to be a priority waste if the Minister on reasonable grounds believes that the waste poses a threat to health, well-being or the environment because of the quantity or composition of the waste and—

- (a) that specific waste management measures are required to address the threat; or*
- (b) that the imposition of specific waste management measures in respect of the waste may improve reduction, re-use, recycling and recovery rates or reduce health and environmental impacts.*

The consequence of such declaration is that

No person may import, manufacture, process, sell or export a priority waste or a product that is likely to result in the generation of a priority waste unless that waste or product complies with—

- (a) the waste management measures contemplated in section 14(4);*
- (b) an industrial waste management plan; or*
- (c) any other requirement in terms of this Act.*

Seeing that e-waste was already clearly identified as waste stream requiring prioritisation for further investigation and implementation for extended producer responsibility (see the Framework for the National Waste Management Strategy – point 2.13 above) it is, in our opinion, quite possible that it will be declared a priority waste.



A general duty in respect of waste management is set out in section 16 which states that:

- (1) *A holder of waste must, within the holder's power, take all reasonable measures to—*
- (a) *avoid the generation of waste and where such generation cannot be avoided, to minimise the toxicity and amounts of waste that are generated;*
 - (b) *reduce, re-use, recycle and recover waste;*
 - (c) *where waste must be disposed of, ensure that the waste is treated and disposed of in an environmentally sound manner;*
 - (d) *manage the waste in such a manner that it does not endanger health or the environment or cause a nuisance through noise, odour or visual impacts;*
 - (e) *prevent any employee or any person under his or her supervision from contravening this Act; and*
 - (f) *prevent the waste from being used for an unauthorised purpose.*
- (2) *Any person who sells a product that may be used by the public and that is likely to result in the generation of hazardous waste must take reasonable steps to inform the public of the impact of that waste on health and the environment.*

This section clearly is important for consumers, suppliers, manufacturers, refurbishers and recyclers of electronic and electrical equipment.

Reduction, re-use, recycling and waste recovery are dealt with in section 17 which reads as follows:

- (1) *Unless otherwise provided for in this Act, any person who undertakes an activity involving the reduction, re-use, recycling or recovery of waste must, before undertaking that activity, ensure that the reduction, re-use, recycling or recovery of the waste—*
- (a) *uses less natural resources than disposal of such waste; and*
 - (b) *to the extent that it is possible, is less harmful to the environment than the disposal of such waste.*
- (2) *The Minister may, after consultation with the Minister of Trade and Industry and by notice in the Gazette, require any person or category of persons to—*
- (a) *provide for the reduction, re-use, recycling and recovery of products or components of a product manufactured or imported by that person; or*
 - (b) *include a determined percentage of recycled material in a product that is produced, imported or manufactured by that person or category of persons.*

This sections has relevance for suppliers and manufacturers of electronic and electrical equipment.



Section 18 deals with extended producer responsibility and states that:

- (1) *The Minister after consultation with the Minister of Trade and Industry may, in order to give effect to the objects of this Act, by notice in the Gazette—*
- (a) *identify a product or class of products in respect of which extended producer responsibility applies;*
 - (b) *specify the extended producer responsibility measures that must be taken in respect of that product or class of products; and*
 - (c) *identify the person or category of persons who must implement the extended producer responsibilities measures contemplated in paragraph (b).*

Section 18(2) allows the Minister to specify by notice, among others:

- (2) (a) *the requirements in respect of the implementation and operation of an extended producer responsibility programme, including the requirements for the reduction, re-use, recycling, recovery, treatment and disposal of waste;*
- (b) *the financial arrangements of a waste minimisation programme, with the concurrence of the Minister of Finance;*
- (c) *the institutional arrangements for the administration of a waste minimisation programme;*
- (d) *the percentage of products that must be recovered under a waste minimisation programme;*
- (e) *the labelling requirements in respect of waste;*
- (f) *that the producer of a product or class of products identified in that notice must carry out a life cycle assessment in relation to the product, in such manner or in accordance with such standards or procedures as may be prescribed; and*
- (g) *the requirements that must be complied with in respect of the design, composition or production of a product or packaging, including a requirement that—*
- (i) *clean production measures be implemented;*
 - (ii) *the composition, volume or weight of packaging be restricted; and*
 - (iii) *packaging be designed so that it can be reduced, re-used, recycled or recovered*

"Extended producer responsibility measures" is defined in the Act as

measures that extend a person's financial or physical responsibility for a product to the post-consumer stage of the product, and includes—



- (a) *waste minimisation programmes;*
- (b) *financial arrangements for any fund that has been established to promote the reduction, re-use, recycling and recovery of waste;*
- (c) *awareness programmes to inform the public of the impacts of waste emanating from the product on health and the environment; and*
- (d) *any other measures to reduce the potential impact of the product on health and the environment.*

It is clear that section 18 holds potentially far reaching consequences for the IT industry.

One of the measures might include the mandatory imposition of an advanced recycling fee (ARF) by way of legislation. Naturally nothing precludes the IT industry, or members thereof, to introduce such a fee, although this may lead to consumer dissatisfaction or an unfair financial advantage to those members not levying a fee. Having said that, the Consumer Protection Act, 68 of 2008, may rule out any such ARF if legislation calls for the free return of products, goods etc (see section 59). This Act is discussed below at 2.19.

See www.deat.gov.za/waste, alternatively www.wastepolicy.co.za for an excellent recent study ('Producer Responsibility and Awareness'¹) on extended producer responsibility both nationally and internationally. A log-in might be required to access these sites.

The Minister may also publish a list of waste management activities which either require a licence, alternatively must conform to certain standards (section 19). Such a list appeared in the Government Gazette of 3 July 2009 (see point 2.15 below).

Part 5 of Chapter 4 regulates the storage, collection and transportation of waste, including duties pertaining thereto, as well as the duties of persons transporting waste. Section 24 (collection of waste) provides that

No person may collect waste for removal from premises unless such person is—

- (a) *a municipality or municipal service provider;*
- (b) *authorised by law to collect that waste, where authorisation is required; or*
- (c) *not prohibited from collecting that waste.*

This would mean that collectors of e-waste would need to be authorised (or exempted) to do so. In practice this would be dealt with in terms of municipal by-laws.

¹ Zoe Lees, Damian Watson and Gugu McLaren, KPMG Services (Pty) Ltd, August 2009



Section 25 deals with the transportation of waste and requires any person engaged in the transportation of waste to take all reasonable steps to prevent any spillage of waste or littering from a vehicle used to transport waste (section 25(1)).

Section 25(4) states that

- (4) *Where hazardous waste is transported for purposes other than disposal, a person transporting the waste must, before offloading the waste from the vehicle, ensure that the facility or place to which the waste is transported, is authorised to accept such waste and must obtain written confirmation that the waste has been accepted.*

This too is problematic for e-waste recyclers as it means they have to be authorised to accept the e-waste. Similar requirements are contained in the Second-Hand Goods Act, 6 of 2009 (see below at 2.18).

Part 7 of Chapter 4 discusses industry waste management plans. This would be in respect of industries or waste generation activities affecting more than one province. A category of persons or an industry could then be required to draw up and submit such plan for approval by the Minister or MEC (if an activity is carried out in that particular province). Section 30 lists numerous factors which must be considered in the plan. To date no industries were identified by either the Minister or an MEC.

It is possible that the IT industry could be required to compile such plan, particularly if e-waste is identified as priority waste.

Chapter 5 governs the licencing of waste management activities and largely deals with issues like the application procedure, contents of licences, renewal, revoking, surrender etc. The actual activities which will (or may) require a licence are set out in a separate Notice (see 2.15 below for further details).

Chapter 6 deals with the mandatory implementation of a national waste information system by the Minister, and the voluntary implementation of a provincial waste information system by a MEC's.

Lastly, in terms of section 69 the Minister has the power to make Regulations dealing with a host of waste related topics. These include, among others:

- waste minimisation
- the obligation of producers to carry out life cycle assessments of their products
- product redesign



- waste reduction by employing different manufacturing methods and the use of alternative materials or products
- labelling requirements
- the dissemination of information to the public
- the financial arrangements of waste minimisation programmes
- requirements in respect of the funding or insuring of a waste management activity

With the entering into force of the Waste Act the following sections of the Environment Conservation Act are repealed: sections 19, 19A, 20, 24, 24A, 24B and 24C. In addition, the definitions of “disposal site” and “waste” were repealed.

2.15) *List of Waste Management Activities which have, or are likely to have a Detrimental Effect on the Environment, GN 718 of 2009*

This Notice was published on 3 July 2009. According to it no person may commence, undertake or conduct a waste management activity listed in the schedule unless a licence is issued in respect of that activity.

As part of the licence application an (environmental) assessment must be undertaken. The Notice is divided into Categories A and B.

Category A only requires a Basic Assessment (ie not a “full” EIA) as per GN R 386 of 2006 (the second of three EIA Regulations) for the following:

- Storage of waste
- Reuse, recycling and recovery
- Treatment of waste
- Disposal of waste
- Storage, treatment and processing of animal waste
- Construction, expansion or decommissioning of facilities and associated structures and infrastructure

Category B requires scoping followed by a “full” EIA as per GN R 387 (the third of three EIA Regulations) for the following:

- Storage of hazardous waste
- Reuse, recycling and recovery



- Treatment of waste
- Disposal of waste on land
- Construction of facilities and associated structures and infrastructure

Various quantities and volumes are set out with the individual activities; these should be consulted to determine if a licence is required. Since the Notice is quite detailed in this regard the requirements are not repeated here, and the Notice should be consulted for further details.

A "facility for a waste management activity" is defined as

a place, infrastructure, structure or containment of any kind, wherein, upon or at, a waste management activity takes place and includes a waste transfer station, container yard, landfill site, incinerators, lagoons, recycling and composting facilities.

It is evident that various e-waste activities are affected by this Notice, read together with the Waste Act, and that licences will, or might be, required for some operations or sites depending on the quantities and volumes involved.

Persons who *lawfully* conduct any of the above waste management activities on the date of the coming into effect of this Notice (ie. 3 July 2009) may continue with those activities until such time that the Minister by notice in the Gazette calls upon them to apply for waste management licences. Thus, if a permit in terms of section 20 of the Environment Conservation Act (this section was repealed on 1 July 2009 when the Waste Act entered into force) was issued, or if some other law authorised the activity, the carrying on of such activity is regarded as lawful. Should no such permit or other authorisation be in place, an application, either under Category A or B, must be submitted.

Naturally this has potentially drastic consequences for e-waste activities in South Africa as the majority of e-waste recyclers or handlers are not in possession of any permit or authorisation. It is understood that discussions were previously held with the environmental authorities (before the commencement of the Waste Act) regarding the absence of section 20 permits, but that these are still unresolved. As such (unless an exemption will be granted in terms of section 74 of the Waste Act) the non-compliant sites will need to conduct either Category A or B assessments.

The discussion in the next point (2.16) should also be consulted as this essentially ties in with the issues raised in the present point.



2.16) Changes to the Environmental Impact Assessment Regulations

GN R 386 and 387 (the second and third of three EIA Regulations) were amended on 3 July 2009 by GN 719 of 2009 repealing those provisions dealing with waste related activities. Thus those sites which should, or may, have required an environmental authorisation to conduct certain e-waste activities now fall outside the scope of the EIA Regulations; unless one of the other identified activities is taking place which necessitates an EIA as well as an application for a waste management licence.

However, due to the List of Waste Management Activities Notice (see above at 2.15) they will now have to apply for a waste management licence provided the stated quantities and volumes are exceeded (and possibly an environmental authorisation if other criteria apply, although probably unlikely); if not, no licence is needed.

Depending on the nature and size of the waste activities carried out either a Category A or B licence will be required (if the minimum waste volumes are in fact reached). In other words, a Basic Assessment must be performed, alternatively Scoping plus a full EIA.

Nonetheless, in our opinion, the following have potential relevance:

- Waste Act (section 74)
- Regulation 51 of GN 385 of 2009 (the first of three EIA Regulations, and which sets out the procedural steps involved)
- section 24M of the National Environmental Management Act (although this is more restrictive)

all of which allow for exemptions from the provisions of any requirement in terms of either the two Acts or the EIA Regulations.

We are of the opinion that having regard to the inert nature of e-waste, the low hazard risk posed to the environment (in the short run) and workers, as well as the beneficial effects of responsible e-waste handling/recycling/refurbishment that an exemption application would have some merit.

However, in closing, it should also be pointed out that section 24G of the National Environmental Management Act which governs the rectification of an unlawful commencement of an activity is relevant for present purposes.



Section 24G (recently amended) states that a person who has committed an offence (ie. commencing an activity without environmental authorisation) may apply to the Minister who in turn may direct the person to compile a report outlining

- (i) *an assessment of the nature, extent, duration and significance of the consequences for or impacts on the environment of the activity, including the cumulative effects;*
- (ii) *a description of mitigation measures undertaken or to be undertaken in respect of the consequences for or impacts on the environment of the activity;*
- (iii) *a description of the public participation process followed during the course of compiling the report, including all comments received from interested and affected parties and an indication of how issues raised have been addressed;*
- (iv) *an environmental management programme.*

The Minister may thereafter either order the person to cease the activity or grant an environmental authorisation. An administrative fine of up to R 1 million may, however, be imposed.

It is quite likely that the authorities will view the absence of environmental authorisations and/or section 20 permits by the sites as an unlawful activity, thus bringing section 24G into play.

2.17) Precious Metals legislation

The Precious Metals Act, 37 of 2005, entered into force on 1 July 2007.

It defines a precious metal as:

- (a) *the metal gold, any metal of the platinum group and the ores of such metals; and*
- (b) *any other metal that the Minister has declared by notice in the Gazette to be a precious metal for the purposes of this Act, and the ores of any such metal.*

The Act repeals the Mining Rights Act, 1967.

The South African Diamond and Precious Metals Regulator has now been established (albeit in terms of the Diamonds Act, 56 of 1986), and whose function is to issue licences and permits. The Regulator's functions are to implement, administer and control all matters relating to acquisition, possession, smelting, refining, fabrication, use and disposal of precious metals.



Prior permission will have to be obtained for:

- acquiring, possessing or disposing of unwrought metal
- acquiring, possessing or disposing of semi-fabricated precious metal
- refining
- precious metal beneficiation
- jewellers
- importing precious metals

Authorised dealers require a certificate from the Regulator who may only issue this in consultation with the National Treasury, in the case of gold, and the National Commissioner of the South African Police Service (section 4(4)). Dealers may only buy precious metal in any form from a person authorised to dispose of semi-fabricated or unwrought precious metal in terms of the Act after such person has shown the dealer a licence, permit, mining or prospecting right or certificate authorising that person to dispose of such precious metal (section 14(1)).

The transportation and conveyance of semi-fabricated or unwrought precious metal outside the boundaries of any mine, works or other property or place where such metal is mined, refined or worked with, is prohibited unless a person is in possession of prescribed documentation (section 13).

Every holder of a refining licence or a precious metal beneficiation licence, authorised dealer or producer who deposits for safe-keeping, receives, despatches or otherwise disposes of unwrought precious metal must keep a true and correct register in the prescribed form and for the prescribed period of all such precious metal deposited (section 15(1)(a)). A true copy in duplicate of the register must be submitted quarterly to the Regulator, together with an affirmation or a solemn declaration of the correctness thereof (section 15(2)).

Precious Metals Regulations, GN R 570 of 2007, were promulgated on 9 July 2007 (subsequently amended by GN R 387 of 2008). These set out in detail the formalities to be followed during licence or permit applications, as well as the contents and terms of such documents. For review purposes the Regulations are not relevant.

2.18) *Second-Hand Goods legislation*

The Second-Hand Goods Act, 6 of 2009, although signed by the President and published on 1 April 2009, is not yet in force at the time of writing.



“Goods” are defined as

goods specified in Schedule 1, but do not include firearms or ammunition as defined in the Firearms Control Act, 2000 (Act No. 60 of 2000) or clothing.

Schedule 1 lists the following as goods:

- *Jewellery, including unwrought precious metal as defined in the Precious Metals Act, 2005*
- *Agricultural implements, including tractors, ploughs and harvesters, irrigation equipment or any part or accessory thereof*
- *Bicycles or any part or accessory thereof*
- *Household and office equipment*
- *Factory equipment and machinery or any part or accessory thereof*
- *Tyres of any vehicle or motorcycle*
- *Communication equipment or any part or accessory thereof*
- *Photographic or optical instruments or any part or accessory thereof*
- *Any controlled metal, or any wrought article, or any article or substance consisting wholly or principally of one or more of such metals*
- *Antique goods*
- *Motor vehicle or any part or accessory thereof*
- *Vehicles or any part or accessory thereof*
- *Sporting equipment*
- *Valuables*
- *Books*
- *Shop-fitting equipment*

“Household and office equipment” includes

communication equipment, electric and electronic equipment and appliances, electronic software, furniture, gardening equipment, tools, books, valuables, clothing and works of art.

A “dealer” is

a person who carries on a business of dealing in second hand goods, and includes a scrap metal dealer and a pawnbroker.



“Recycle” means

to melt, smelt, granulate, shred, dismantle, sort, grade, cut or prepare, either by hand or by the use of specialised plant, machinery and equipment, for use by consuming works such as foundries, mills, smelters, refiners, and manufacturers.

“Second-hand goods” means

goods which have been in use by a person other than the manufacturer or producer thereof or a person dealing therewith for such manufacturer or producer in the course of business, but does not include goods with a value of less than R100.

“Scrap metal” includes

any used, broken, worn out, defaced or partly manufactured goods made wholly or partly of non-ferrous or ferrous metal, lead or zinc or any substance of metallic waste or dye made of any of the materials commonly known as hard metals or of cemented or sintered metallic carbides.

Every dealer must register with the National Commissioner of the South African Police Service (section 2), who in turn must issue a registration certificate (section 7). Should the dealer operate from more than one premises a separate certificate must be issued for each premises (section 7).

A dealer must keep a register in the prescribed form and record in it the prescribed particulars regarding every acquisition or disposal of second-hand goods (section 21(1)). Furthermore, no dealer may deliver goods acquired by him or her to a person or change the form or alter the appearance thereof for at least seven days from the date of acquisition (section 23(1)(d)).

Recyclers of controlled metals must apply to be registered as recycler (section 25(1)). This is in addition to being registered as dealer.

Controlled metals as per Schedule 2 to the Act are

Copper, aluminium, zinc, chrome, lead, white metal, nickel, tungsten, tin, ferrovanadium, ferrosilicon, ferrochrome, brass, bronze, cobalt and precious metals as defined in the Precious Metals Act, 2005 (Act No. 27 of 2005), or any article consisting wholly or principally of any of those metals.



According to section 25(4)(a)

No person may—

- (a) *have in his or her possession any apparatus which can be used for the recycling of any controlled metal or any article or substance containing any controlled metal, unless -*
 - (i) *such person is registered as a recycler; or*
 - (ii) *in the case of precious metals, such a person is authorised to possess and recycle precious metals under the Precious Metals Act, 2005 (Act No. 37 of 2005), or any other applicable legislation.*

Moreover, it is prohibited to acquire or dispose of any cable consisting of a controlled metal of which the cover has been burnt, unless the seller is able to provide a reasonable explanation for the burnt cover. The recycler must also first report this to a police official (section 25(4)(a)).

Draft Regulations were published around 2006/2007; these deal with certificate and dealer registration requirements.

In addition, separate Draft Regulations were published very recently governing dealers' associations. Their aim is to introduce greater control over certain second-hand goods sectors, and to implement a degree of self-regulation and policing. The following sectors would potentially be affected (Regulation 5(5)):

- (a) general dealers;
- (b) auctioneers;
- (c) jewellers;
- (d) motor vehicle dealers;
- (e) scrap metal dealers;
- (f) recyclers;
- (g) franchise holders; or
- (h) any other type of association that would describe the main activities of members of such an association.

Therefore should these Draft Regulations ever enter into force, e-waste recyclers or refurbishers will most likely be required to form a dealers' association.



2.19) Consumer Protection Act, 68 of 2008

Although having been signed by the President on 29 April 2009 the Act will only enter into force on 24 October 2010. No Regulations were drafted, but it is expected that this will take place shortly. As the Act is very detailed only the salient points for purposes of this review will be mentioned here.

Section 59 (Recovery and safe disposal of designated products or components) states that:

- (1) *If any national legislation prohibits the disposal or deposit of any particular goods, or any components, remnants, containers or packaging of any goods, into a common waste collection system—*
 - (a) *any person who in the ordinary course of business supplies goods of that kind to consumers, must accept the return of any such goods, components, remnants, containers or packaging from any consumer, without charge to the consumer, irrespective of whether that person supplied the particular object to that particular consumer; and*
 - (b) *any person who in the ordinary course of business produces, imports or distributes any such goods as part of the supply chain by which those goods reach the consumer, must in turn accept the return of any such goods, components, remnants, containers or packaging from any supplier contemplated in paragraph (a).*

- (2) *If any regulation or industry waste management plan approved by any other legislation for the management of a specific waste type applies, the consumer may dispose or deposit the goods to a collection facility provided for in the regulation or industry waste management plan.*

E-waste could be a product or goods covered by future legislation, which would make this Act applicable. Unless such future legislation expressly states that the return by consumers is covered by a fee or deposit it will be for free. See also point 2.14 above.

3) PROVINCIAL LEGISLATION

Currently there is very little environmental legislation on the provincial level. This generally deals with issues like conservation, land planning and development etc. and not waste management.

KwaZulu-Natal started writing its own Draft Prevention and Management of Waste Bill, but this was never finalised due to the parallel drafting of the national Waste Act.



The Western Cape has begun formulating a hazardous waste policy, but this is not yet finalised. A policy dealing with household hazardous waste was, however, completed, although it is unsure to what extent it is applied.

3.1) Gauteng Draft Standards for General Waste Management Facilities (GWMF) (March 2009)

Gauteng is currently the only province which has such Standards, even though they are still a draft. These proposed Standards are very detailed and cover various types of facilities. With the entering into force of the Waste Act, and the resultant repeal of section 20 of the Environment Conservation Act and parts of the EIA Regulations, as well as the publication of Listed Waste Management Activities requiring a licence, the Standards will, in our opinion, have to be revised in part to bring them in line with the recent legal developments.

For review purposes the following proposed sections are relevant:

- Hazardous waste, other than insignificant amounts of domestic hazardous waste forming part of the general waste stream, should not be accepted at GWMF's (7.1.3)
- A GWMF shall not intentionally accept or store hazardous wastes, including batteries, oil, paint, florescent tubes and health care risk waste, unless it has been approved by GDACE to handle the particular waste. Such approvals shall form part of the operating permit. Hazardous waste must be collected and stored in an appropriate manner before being transported and disposed of at a hazardous waste disposal site to prevent pollution of the environment (7.1.3).
- E-waste containing ozone-depleting substances may not be accepted or treated at GWMF's (7.1.3).
- For new and existing facilities GDACE, following a site visit, will advise the applicant:
 - In the case of a *proposed* site, whether it is feasible for the development of a GWMF. If the site is considered feasible, the applicant may proceed with the next phase, which involves drawing up the Permit Application Report. If the site is not feasible, the next best candidate site should be considered.



- In the case of an *existing* GWMF, whether the applicant should apply for a Permit for continued operation, or whether the GWMF must be closed and hence requires to be permitted with a view to closure (10.5)
- In the case of an existing GWMF that is to be permitted, the Feasibility Study will determine whether the site should be permitted for ongoing operation or for closure. The interested and affected parties must be consulted during the study, to obtain their input regarding the future of the GWMF (10.5)

As part of the application process, irrespective of which type of GWMF, detailed site assessments must be conducted, and the EIA Regulations would come into play.

Various layout and building requirements are also proposed in the draft Standards.

4) LOCAL LEGISLATION

For present purposes only by-laws from the following municipalities will be discussed, as this is where e-waste channels or activities are currently mainly operational:

- Cape Town
- Johannesburg
- Durban (eThekweni)
- Pretoria (Tshwane)
- Ekurhuleni

The by-law discussion will be more detailed than that covering national legislation as

- waste management
- water and sanitation services limited to potable water supply systems and domestic waste-water and sewage disposal systems
- refuse removal, refuse dumps and solid waste disposal
- air pollution

have been, and still are, a responsibility delegated to local authorities by the Constitution (Schedules 4 and 5). National legislation, with the exception of the Waste Act, is therefore purposely more general. The actual practicalities are thus normally dealt with in terms of by-laws. It is also for this reason that there are local differences in waste management and enforcement.



When reading all the by-laws dealing with waste the provisions of the Waste Act and subordinate legislation in terms thereof should be kept in mind. Several by-laws would need to be amended to remain in line with the Act.

4.1) Cape Town

4.1.1) Integrated Waste Management By-law, PG 6651 of 21 August 2009

Cape Town's Integrated Waste Management By-law was finally published in the Gazette on 21 August 2009 after already having been approved by the City a few months ago.

E-waste is not mentioned and as such it would fall under the definition and treatment of hazardous waste.

The Waste Act was passed before the by-law, and as such the latter will need to be read subject to the Act.

The By-law incorporates the waste management hierarchy. Certain waste may also be declared as priority waste.

Section 10 requires that the waste generators of the following classes of waste must submit an integrated waste management plan:

- (a) business waste;
- (b) industrial waste;
- (c) building waste;
- (d) event waste;
- (e) priority waste;
- (f) hazardous waste;
- (g) those applying for special dispensation in terms of section 9;
- (h) those who sort waste or undertake a recycling, re-use or waste recovery activity including but not limited to scrap dealers, recycling groups and buy back centres;
- (i) any other person who is given notice to do so by the Director; or
- (j) those persons carrying out the activities listed in paragraph (h).

An exemption from having to submit a plan may be applied for. E-waste is affected by the above list, so too are recyclers.



Section 13(3) requires that

Any person who undertakes a recycling, re-use, processing, treatment or recovery activity or who sorts waste, including scrap dealers, buy back centres and formalised recycling groups, must register for accreditation with the City that will entitle them to perform such activities.

Persons and entities that handle, transport, process, treat and dispose of waste for recycling purposes must provide the waste management officer with a written report on or before the 7th of each month in a format to be determined by the director (Section 13(4)). Here too an exemption from having to report can be applied for.

Section 16 deals with licences and requires that

Any person who, or entity which, requires a license in terms of national, provincial or municipal legislation will have to prove on request, to the waste management officer that such person or entity has obtained the appropriate license within 30 days or such lesser period as specified by such officer.

4.1.2) Water By-law, LA 18366 of 1 September 2006

- Section 59 (Prevention of Pollution of Water):

(1) An owner must provide and maintain measures approved by the Director: Water to prevent the entry of a substance which may be a danger to health or adversely affect the potability of water into-

- (a) the water supply system, and*
- (b) any part of the water installation on his or her premises.*

(2) The Director: Water must approve the appropriate level of backflow prevention required in each instance.

4.1.3) Wastewater and Industrial Effluent By-law, LA 18367 of 1 September 2006

- Section 3 (Protection of municipal sewers):

This section sets out detailed and lengthy requirements for effluent quality. Discharge of hazardous substances from e-waste or related activities would fall under this. This would only really be relevant where effluent is actually generated and as such would probably be limited to heavier industry (eg. smelters).



4.1.4) Stormwater Management By-law, PG 6300 of 23 September 2005

- Section 3 (Prohibited discharges):

No person may, except with the written consent of the Council and subject to any conditions it may impose, discharge, permit to enter or place anything other than stormwater into the stormwater system.

- Section 4 (Protection of stormwater system):

No person may, except with the written consent of the Council and subject to any condition it may impose-

- (b) *discharge from any place, or place onto any surface, any substance other than stormwater, where that substance could reasonably be expected to find its way into the stormwater system;*
- (c) *discharge, permit to enter or place anything likely to damage the stormwater system or interfere with the operation thereof or contaminate or pollute the water therein;*

- Section 7 (Water pollution incidents):

In the event of an incident contemplated in Section 3 or Section 4(b) and (c)-

- (a) *the owner of the property on which the incident took place, or is still in the process of taking place, or*
- (b) *the person responsible for the incident, if the incident is not the result of natural causes,*

shall immediately report the incident to the council, and at own cost, take all reasonable measures which, in the opinion of the Council, will contain and minimise the effects of the pollution, by undertaking cleaning up procedures, including the rehabilitation of the environment, as required by the Council.

This section is, in our opinion, aimed at larger spills into stormwater drains, as it is unlikely that pollution from e-waste recycling activities would be so drastic as to require cleaning up or rehabilitation measures. Having said that, this provision should be borne in mind.

4.1.5) Environmental Health By-law, LA 13333 of 30 June 2003

- Section 1 (Definitions):

“objectionable material” means garden litter, rubbish, waste material, rubble, scrap metal, article or thing, disused machinery, motor cars or other vehicles, as well as the disused parts thereof, refuse from any building operations, or any refuse capable of being deposited on any land or premises, including new or used building materials not necessarily required in connection with bona fide building operations actually in



progress on any land, and includes any solid, liquid or gas which is or may become a nuisance or which materially interferes with the ordinary comfort or convenience of the public.

“health nuisance” means any activity, condition, premises or thing which, on account of effluent, vapours, chemical effluvia, odours, noise, vibration, radiation, refuse, waste products, dirt, chemical or biochemical material, microbial infection, vermin, vegetation, overcrowding, lack of proper general hygiene, ventilation, lighting, design, situation or on account of any other cause or practice whatsoever, is/are in the opinion of the Director: Health Service or a duly authorised council employee potentially injurious or dangerous to health or which is/are offensive, including, without affecting the generality of the foregoing, any facility for the storage, distribution or handling of water that is likely to be used by man for domestic purposes or consumption, including such water itself, which is contaminated or polluted.

- Section 2:

...no person shall-

(7) Cause or permit any foul or polluted water or any foul liquid or objectionable material to run or flow from any premises to that owned or occupied by another person, whether occupied for trade, business, manufacturing, dwelling or other purposes, onto any land or into any stormwater, river or canal system.

(8) Commit, cause or permit to be committed any act which may pollute any water to which inhabitants of the area of jurisdiction of the council have the right of use or access.

These two subsections have relevance insofar as storm and groundwater pollution are concerned.

- Section 8:

No person shall keep, cause or suffer to be kept on any premises any accumulation or deposit of filth, rubbish, refuse, manure, other offensive matter, or objectionable material or thing so as to be a health nuisance.

It is submitted, that this section will not apply to e-waste recyclers since it is questionable whether old or dismantled equipment would qualify as filth, rubbish or refuse (none of these are in any event defined in the by-law, and as such the ordinary meaning should be applied to them). Having said that, should the premises be untidy, unsightly and housekeeping be poor then section 8 may well be relevant.



4.1.6) Air Pollution Control By-law, LA 12649 of 4 February 2003

Section 2 requires the avoidance of air pollution, and if that is not possible, the minimisation thereof. Section 3 imposes a duty of care on significant air polluters to prevent or mitigate such emissions. Section 19 makes it an offence to create a nuisance.

4.1.7) Draft Air Quality Management By-law

This draft by-law was recently published for comment and as such is not yet in force. While its provisions are fairly similar to those of the current Air Pollution Control By-law (see above) the following are worth noting in the interim:

Local emission standards may be declared (section 7), so too norms and standards (section 8). Air pollution control zones may be identified in terms of section 10.

Chapter V deals with fuel burning equipment (ie. burners and boilers) and requires same to be approved by the City. Chapter VII regulates dust emissions, open burning and burning of material all of which need the City's prior written permission. The burning of rubber and other material for the recovery of metal also requires the City's prior written permission (section 21). Activities which result in nuisances are not permitted (section 31).

Once the List of Activities resulting in atmospheric emissions is published by the Minister in terms of section 21 of the Air Quality Act an emission licence will be required. Section 37 of the Draft By-law states that

No person shall undertake a listed activity, as published...without an atmospheric emission license.

The licence application will be processed by the City.

4.1.8) Policies

Some inroads have been made on a policy level with the City of Cape Town supporting the Green e-waste Channel and also providing or supporting drop-off facilities. Moreover, the City has adopted an Integrated Waste Management Policy in May 2006. This identified e-waste as well, albeit in passing, or under the general discussion of recyclable or hazardous waste. The Draft Integrated Waste Management By-law is a result of the Policy.



4.2) Johannesburg

4.2.1) Waste Management By-laws, 2003

The following provisions of the City of Johannesburg's Waste Management By-laws are relevant.

- Section 1 (Definitions):

“hazardous waste” means waste containing, or contaminated by, poison, any corrosive agent, any flammable substance having an open flash-point of less than 90 deg C, an explosive, radioactive material, any chemical or any other waste that has the potential even in low concentrations to have a significant adverse effect on public health or the environment because of its inherent toxicological, chemical and physical characteristics;

“recyclable waste” means waste which has been separated from the waste stream, and set aside for purposes of recycling;

“recycling” means the use, re-use or reclamation of material so that it re-enters an industrial process rather than becoming waste;

“waste” means any undesirable or superfluous matter, material, by-product or residue of any process or activity that has been discarded, accumulated or stored for the purpose of treatment, discarding or recycling and may be liquid or solid, may include products that contain a gaseous component and may originate from domestic, commercial, medical or industrial activities, but does not include any gas or gaseous product which may be regulated by national or Gauteng provincial legislation;

“waste handling facility” means any facility on or in which waste is accepted, accumulated, handled, recycled, sorted, stored or treated prior to its transfer for treatment by way of incineration or for final disposal;

Note the mention of recycling activities in the last two definitions. Oddly enough, despite it being defined, there is almost no mention of waste handling facilities in the By-law itself.

- Section 2 (Principles):

(2) The underlying principle of these By-laws is to establish a waste management hierarchy in the following order of priority:



- (a) *avoidance, waste minimisation and waste reduction;*
 - (b) *re-use;*
 - (c) *recycling, reprocessing and treatment; and*
 - (d) *disposal.*
- Section 3 (Main objects) (extract):
 - (2) *In pursuing the main objects of these By-laws, and in particular the object set out in subsection (1) the Council must –*
 - (a) *endeavour to minimise the consumption of natural resources;*
 - (b) *promote the re-use and recycling of waste;*
 - (c) *encourage waste separation to facilitate re-use and recycling.*
 - Section 19 (Generation of special industrial, hazardous or health care risk waste):
 - (1) *No person may carry on an activity which will generate special industrial, hazardous or health care risk waste, without notifying the Council in writing, prior to the generation of such waste, of the composition of such waste, the estimated quantity to be generated, the method of storage, the proposed duration of storage, the manner in which it will be collected and disposed of, and the identity of the licensee who will remove such waste: Provided that if such waste is being generated as a result of activities which commenced prior to the commencement of these By-laws, the generator must notify the Council as contemplated in this subsection within 180 days of the commencement of these By-laws.*

This is probably not that relevant for e-waste recyclers, collectors or refurbishers, unless hazardous waste is being created, although it perhaps has potential importance for smelters.

- Section 20 (Storage of special industrial, hazardous or health care risk waste):
 - (1) *Any person carrying on an activity which generates special industrial, hazardous or health care risk waste, must ensure that such waste generated on the premises is kept and stored thereon until it is collected from the premises.*
 - (2) *Special industrial, hazardous or health care risk waste stored on premises, must be stored in such a manner that it does not become a nuisance or causes harm to human health or damage to the environment, and in accordance with the requirements of any applicable legislation relating to buildings.*
 - (3) *Special industrial, hazardous or health care risk waste must be stored in an approved receptacle and for a period not exceeding 90 days or any other maximum*



period stipulated by the Department of Water and Environmental Affairs, Gauteng provincial government or Council, before collection.

- Sections 21 & 22 (Collection and disposal of special industrial, hazardous or health care risk waste; Transportation of waste):

This requires that the above waste types may only be collected and disposed of by a licensee and subject to the requirements of applicable SANS codes (essentially the same as those contained in the Regulations in terms of the National Road Traffic Act – see also above at 2.11). As already stated in that point, we are of the opinion that the collection of e-waste should not qualify as hazardous waste transport, although the disposal would be.

- Section 23 (Disposal of waste):

(12)No person may store waste for more than 90 consecutive days, unless the person has a permit in respect of the premises concerned for a waste disposal facility from the Department of Water and Environmental Affairs in terms of section 20(1) of the Environment Conservation Act, 1989 (Act No. 73 of 1989).

Chapter 6 deals with licensees (ie waste transporters/disposers):

- Section 24 (Licence requirements):

Subject to the provisions of section 32, no person may collect or transport any of the following waste streams listed in subsection (2) without having obtained from the Council, and being in possession of a licence authorising such collection and transportation:

- (d) *hazardous waste;*
- (e) *recyclable waste.*

Potentially this could cover recyclers or smelters who collect and transport e-waste. However, as already stated, it is doubtful whether e-waste collection and transportation would be regarded as hazardous waste transport.

In our opinion Chapter 6 is confusing and contradictory in that it requires any transporter of those waste types listed in section 24 to apply for a licence, but the bulk of the Chapter seems to be aimed at commercial services. A strict interpretation of section 24 would mean that any person transporting listed waste types (regardless of the quantity or frequency) would have to apply for a licence. It is submitted that this would be an



unintended consequence, as it would then also apply to, for instance, individuals transporting their household recyclables to a local school or drop-off centre.

Section 31 of the By-law makes provision for the Council, having regard to the main objects of the By-law contemplated in section 3(1), and its local waste plan, by notice in the Gauteng Provincial Gazette, to exempt any type of *commercial service* (our emphasis) from any provision of this Chapter to the extent and subject to the terms specified in such notice.

It is unsure if such notice was ever published. If so, and should e-waste not have been excluded, then it is suggested that the Council be approached to establish if a licence would be needed to transport and dispose of e-waste. In our opinion, it would be highly doubtful if a licence would be needed in the first place. Were this the case, then a manufacturer or retailer would also theoretically have to apply for an authorisation to transport, for instance, new equipment. It would not make sense to require an e-waste collector transporting old and still assembled equipment to obtain a licence, while a transporter of new or still working equipment would be exempted.

4.2.2) Water Services By-laws, PN 179 of 21 May 2004

The following sections are relevant:

- Section 43 (Owner to prevent pollution of water):

An owner must provide and maintain effective measures to prevent the entry of any substance or matter, which may be a danger to health or may adversely affect the potability of water or affect its fitness for use, in -

- (a) the water supply system or plant; and*
- (b) any part of the water installation on his or her premises.*

This would prohibit the pollution of water (ground, surface or stormwater) or effluent by hazardous substances found in e-waste.

In terms of the By-law the owner has to prevent the pollution of water. This is a serious flaw in our opinion, as this excludes (at least under this By-law, but not under NEMA or the National Water Act) tenants or other occupiers of land. Having said that, this certainly does not mean that e-waste recyclers, handlers, smelters etc who are not the owners of the premises from which they operate, have no obligation to prevent the pollution of water.



- Section 62 (Objectionable discharge to sewage disposal system):
This section sets out detailed and lengthy requirements for effluent quality. Discharge of hazardous substances from e-waste or related activities would fall under this.

4.2.3) Public Health By-law, PN 830 of 21 May 2004

This By-law has more limited application for present purposes as it deals with public health, and therefore only indirectly with environmental issues (although there is admittedly a large overlap between these two).

- Section 5 prohibits the causing of public health hazards, this includes the pollution of water supply for domestic consumption. Section 7 makes it unlawful to create public health nuisances; this extends to (domestic) water pollution as well.
- Section 36 (Pollution of sources of water supply) states that:
No person may pollute or contaminate any catchment area, river, canal, well, reservoir, filter bed, water purification or pumping works, tank, cistern or other source of water supply or storage in a way that creates a public health nuisance or a public health hazard.
- Section 42 deals with stormwater runoff and requires the prevention of pollution thereof. E-waste collectors, recyclers etc should therefore ensure that no stormwater pollution takes place, or that no hazardous substances can enter the drains.
- Chapter 7 deals with offensive trades, and e-waste activities may potentially fall under the definition thereof as section 44 defines such trades as including, inter alia:
(b) operating a waste recycling plant including oil and petroleum product recycling;
(c) scrap yard or scrap metal dealing.
- Section 45 requires offensive traders to obtain a permit.
It is suggested that the Council be approached to establish if (larger) e-waste recyclers would also qualify as offensive traders.
- Section 46 sets out various building and structural requirements for premises from which an offensive trade is conducted, while section 47 describes the duties of such traders (for present purposes these would be restricted to the prevention of pollution or other nuisances/hazards).



- Chapter 9 deals with second hand goods, and defines same as, inter alia:
any business in which used goods and materials are sold, including, without limitation –
(a) clothing, furniture, scrapped motor vehicles, footwear, timber, building bricks or blocks, building material or fittings, machinery, drums, tins, bottles, packing cases, boxes, crates or other containers, metal, rags, plastic bags, paper or any other material, which has previously been used.

Sections 58 and 59 prescribe premise requirements as well as duties of such traders.

The provisions governing the Second-Hand Goods Act, 2009, and the Draft Regulations should be kept in mind; these were discussed briefly above (at 2.18).

E-waste recyclers would most likely be regarded as second-hand goods traders in terms of the by-law (as read subject to the Second-Hand Goods Act).

4.2.4) Policies

There are currently no official policies dealing specifically with e-waste which would therefore be regarded as hazardous waste. As such the legislation referred to in this report must be consulted for guidance. Pikitup has, however, made its garden sites available as e-waste drop-off points.

4.3) Durban / eThekweni Municipality

4.3.1) Refuse Removal By-law, PN 47 of 2002

This By-law is vague and merely discusses various waste streams or types in general terms. There is an obligation to dispose of hazardous waste in a responsible and lawful manner, and to ensure that any waste is stored properly.

There are no waste prevention, minimisation, reuse or recycling requirements and this By-law is very much end-of-pipe.

The accumulation of waste, so that it constitutes a nuisance, is prohibited (section 8).



4.3.2) Water Supply By-law, MN 104 of 26 September 1996

Water pollution is dealt with in section VIII/1:

An owner shall at his own cost, take the necessary steps, acceptable to the authorised delegate, to prevent the entry of a substance which may be a danger to health or adversely affect the potability of water into -

- (a) the water supply system; and*
- (b) any part of the water installation on his premises.*

4.3.3) Scheduled Trades and Occupations By-laws, PN 134 of 22 March 1979

E-waste may potentially fall under the following listed activities:

- Refuse collection, storage, removal, processing or disposal
- Scrap yard
- Waste material salvaging, collecting, sorting, storing, treating, processing or recycling/reclaiming

A permit is required to conduct an offensive trade. For the sake of clarity it is recommended that the Council be approached to establish if e-waste collectors/recyclers would be regarded as offensive traders.

4.3.4) Draft By-laws

In closing it should be mentioned that the municipality started reforming and unifying its by-laws, but this process appears to have stagnated as no relevant developments took place since the our initial review. Since these drafts are still unfinalised they will not be discussed here.

4.3.5) Policies

The eThekweni Municipality compiled an Integrated Waste Management Plan (“IWMP”) (August 2004). No mention of e-waste was found in the IWMP. The City’s Solid Waste Department did, however, confirm that it made its drop-off facilities available for e-waste, and that discussions with other departments are planned to pave a possible way for an e-waste policy.



4.4) Tshwane

4.4.1) Solid Waste By-laws, 2005

The following provisions are relevant:

- Section 1 (Definitions):

"Hazardous waste" means waste which contains or is contaminated by poison, a corrosive agent, a flammable substance having an open flash-point of less than 100 °C, an explosive, radioactive material, a chemical or any other substance that is classified as a hazardous substance in terms of the Hazardous Substances Act, 1973 (Act 15 of 1973), or in terms of the National Road Traffic Act, 1996 (Act 93 of 1996).

"recycling" means the collection, selection or removal of waste for the purpose of reselling or reusing selected materials in a manufacturing or other process;

"recyclable" means any material intended for recycling or a remanufacture process and which was never part of the waste stream at the point of removal, but was managed as a potential resource by the originator of such material and never contaminated with any other material.

- Section 18 (Notification of generation of special industrial waste, hazardous waste or medical waste):

(1) A person or other legal entity must not, within the area of jurisdiction of the Municipality, operate or conduct a service for the removal of any type of waste contemplated in this chapter from premises, irrespective of whether such service is rendered for payment or not, unless such natural person or other legal entity is registered by the Municipality.

(2) An authorized service provider engaged in an activity or activities which generate special industrial waste, hazardous waste or medical waste to be generated must notify the Municipality, before commencement of such generation, of -

- (a) the composition of the waste;*
- (b) the quantity of the waste;*
- (c) the method of storage of the waste;*
- (d) the proposed duration of the storage of the waste; and*
- (e) in terms of the provisions of section 20(4), the manner in which the waste will be removed.*



As already discussed above, the issue of whether the transportation or removal of e-waste may be regarded as hazardous should be taken up with the authorities.

- Section 19 deals with the storage of special industrial waste, hazardous waste and medical waste and requires that same be stored in a responsible manner.
- Section 20 (Removal and disposal of special Industrial waste, hazardous waste and medical waste) requires that:
 - (1) *A person must not, without the written consent of the Municipality and subject to such terms and conditions as the Municipality may deem fit, remove or have special industrial waste, hazardous waste or medical waste removed from the premises on which it was generated.*
 - (2) *The occupier of premises must only have special industrial waste, hazardous waste or medical waste removed by a contractor approved by the Municipality in compliance with the relevant legislation.*

As pointed out above, the issue of whether the transportation or removal of e-waste may be regarded as hazardous, and thus requiring registration as waste contractor, should be taken up with the authorities.

- Section 27 (Recycling):
 - (1) *Recyclable material for the purpose of recycling must not be stored at any premises resulting in risks or nuisance conditions;*
 - (2) *A person involved in any way in recycling, must comply with all applicable statutory requirements;*
 - (3) *Separation of waste or sorting of recyclables shall be performed on the premises of the point of generation of the recyclable waste stream;*
 - (4) *All facilities where separation and classification of recyclable material is performed, must comply with the applicable statutory requirements.*

It is felt that the provisions of subsection (3) are absolutely counterproductive to overall recycling efforts, and that it represents a serious drafting flaw, as it theoretically, if strictly applied, results in any recycling centres, or activities carried out elsewhere, being declared unlawful. Besides that, it is in clear conflict with the provisions of the White Paper, the NWMS and NEMA.



For this reason, the authorities should be contacted to establish how they would regard e-waste recycling centres.

- Section 32 (Permitting of private service providers by the Municipality):
This section provides that any natural person or other legal entity which operates or conducts waste recycling activities of any nature or extent must be permitted by the Council, irrespective of whether such service is rendered for payment or not.

4.4.2) Sanitation By-laws, 2003

Section 32 (Sewage or other pollutants not to enter stormwater drains) states that leakages or spills may not enter any street, stormwater drain or other watercourse except with the written permission of Council.

4.4.3) Water Supply By-laws, 2003

Section 18 (Pollution of water) provides that

An owner of premises must take and maintain approved measures to prevent the entry into -

(a) the water supply system; and

(b) any part of the water installation on his or her premises;

of a substance that may be harmful or a danger to the health or well-being of any human or other living organism or may adversely affect the potability of water or its fitness for use.

4.4.4) Policies

The municipality confirmed in 2007 that it did not have any programs or policies dealing specifically with e-waste and that same would therefore be regarded as hazardous waste. It is unsure what the current status is. As such the legislation referred to in this report should be consulted for guidance.



4.5) **Ekurhuleni**

4.5.1) **Solid Waste By-law, PG 51 of 6 March 2002**

The following sections are relevant:

- Section 1 (Definitions):
“hazardous waste” means waste which can, even in low concentrations, have a significant adverse effect on public health and/or the environment because of its inherent chemical and physical characteristics such as toxic, ignitable, corrosive, carcinogenic or other properties.

- Section 18 (Notification of generation of special industrial, hazardous, medical and infectious refuse):
(1) A person engaged in an activity which causes special industrial, hazardous, medical or infectious refuse to be generated, shall notify the Council within seven days of such generation of the composition thereof, the quantity generated, method of storage, the proposed duration of storage, and the manner in which it will be removed.

- Section 19 (Storing of special industrial, hazardous, medical and infectious refuse):
(2) Special industrial, hazardous, medical or infectious refuse stored on premises shall be stored in such manner that it cannot become a nuisance, safety hazard or pollute the environment.

- Section 20 (Removal of special industrial, hazardous, medical and infectious refuse):
(1) (a) No person may, without or not in accordance with the Council’s written approval of conditions, remove special industrial, hazardous, medical and infectious refuse from a premises at which it has been generated.

4.5.2) **Wastewater By-laws, PN 274 of 6 March 2002**

The following sections are relevant:

- Section 33 (Sewage or other prohibited discharges not to enter storm-water drains):
(1) No owner or occupier or any other person shall discharge or cause or permit to be discharged any sewage directly or indirectly into a storm-water drain, river, stream or other watercourse, whether natural or artificial.



- Section 37 (Prohibited discharges):
This section sets out detailed and lengthy requirements for effluent quality. Discharge of hazardous substances from e-waste or related activities would fall under this.

4.5.3) Water Supply By-law, PN 276 of 6 March 2002

The following section is relevant:

- Section 43 (Pollution of surface water):
 - (1) *No person shall -*
 - (e) *cause or permit the water from any sink, sewer, drain, engine, boiler or any other polluted water or liquid or oil for the control of which he or she is responsible, to run or be brought into any such stream, reservoir aqueduct, or other place; or*
 - (f) *do any other act whereby the supply of water to the inhabitants of the Council's area of supply may be polluted.*

4.5.4) Policies

The municipality confirmed in 2007 that it did not have any programs or policies dealing specifically with e-waste and that same would therefore be regarded as hazardous waste. It is unsure what the current status is. As such the legislation referred to in this report should be consulted for guidance.

5) INTERNATIONAL LEGISLATION

International legislation - in the form of Conventions, Agreements, Treaties etc – has, in our opinion, only relatively limited application for present purposes in South Africa since the majority of e-waste would probably be from local sources, as opposed to imported old or broken electronic/electrical equipment entering the country for recycling or treatment purposes. Having said that, a recent case dealing with the importation of used and/or broken electronic equipment, and which was investigated by the Green Scorpions, did highlight this problem and may be indicative of a far larger problem.

Of importance would be the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989) since it covers several toxic components found in e-waste (see eg. Annexes I, III and IV). South Africa is a signatory to the Convention. E-waste is regarded as hazardous waste for purposes of this Convention, and the above incident confirmed this.



The EU has the following legislation:

- Directive on Waste Electrical and Electronic Equipment (known as WEEE Directive)
- Directive on the Restriction of the Use of certain Hazardous Substances in Electrical and Electronic Equipment (known as RoHS Directive)

According to the WEEE Directive, Member States must encourage the design and production of equipment which take into account and facilitate dismantling and recovery, in particular the reuse and recycling of WEEE, their components and materials (Art 4). For WEEE from private households, Member States shall ensure that by 13 August 2005 systems are set up allowing final holders and distributors to return such waste at least free of charge. Member States must implement the availability and accessibility of the necessary collection facilities, taking into account in particular the population density. Producers are, however, allowed to set up and operate individual and/or collective take-back systems for WEEE from private households provided that these are in line with the objectives of this Directive (Art 5). Producers or third parties acting on their behalf, in accordance with Community legislation, must set up systems to provide for the treatment of WEEE using best available treatment, recovery and recycling techniques (Art 6). Priority must be given to the reuse of whole appliances, and in this regard the Directive sets out recovery targets (Art 7).

Users of equipment in private households must be given the necessary information about:

- (a) the requirement not to dispose of WEEE as unsorted municipal waste and to collect such WEEE separately;
- (b) the return and collection systems available to them;
- (c) their role in contributing to reuse, recycling and other forms of recovery of WEEE;
- (d) the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment;
- (e) the meaning of the symbol shown in Annex IV to the Directive (ie separate collection) (Art 10).

The RoHS Directive requires Member States to ensure that new equipment put on the market does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE) (Art 4(1)). The Annex to this Directive exempts the use of lead, mercury, cadmium, hexavalent chromium in certain equipment, although maximum permissible levels are set.

In Switzerland we find the:

- Ordinance on the Return, the Taking Back and the Disposal of Electrical and Electronic Equipment (ORDEE), 1998



The purpose of the Ordinance is to ensure that equipment does not enter the municipal refuse stream and that it is disposed of in an environmentally friendly manner (Art 1). A person disposing of equipment shall return it to a retailer, manufacturer or importer or to a disposal facility. The return is also permissible to a public collection or disposal facility (Article 3). To this end, traders, manufacturers and retailers are required to take back free of charge any equipment (Art 4). If they cannot guarantee safe disposal they must contribute financially to a permitted disposer who can do so on their behalf, and at their expense (Arts 5 and 7). The disposer must ensure that their activities are conducted in an environmentally friendly manner (Art 6).

6) CONCLUSION

As could be seen, the legislation governing hazardous waste, and in particular e-waste, in South Africa is far from clear. A range of laws, ranging from national, provincial to local, must be consulted to obtain an answer. Naturally this is an unsatisfactory status quo. Furthermore, seeing that waste removal and disposal is largely regulated on a local level there are differences in terms of strictness and enforcement.

A fundamental problem is that e-waste is not mentioned in any legislation, nor is it identified anywhere as being hazardous. Compounding the problem is the general lack of awareness by the public, and to an extent the authorities, regarding the nature and danger of e-waste. On a practical level is the current general absence of infrastructure to deal with e-waste, and to an extent its toxic components, and treatment or recycling is almost entirely a voluntary initiative either by individuals, organisations or small enterprises, although there is some support from local authorities.

What clearly is needed is more active involvement by the authorities, either in the form of legislation or policies dealing specifically with e-waste.

With the recent promulgation of the Waste Act, as well as the publication of the List of Waste Management Activities requiring a Licence, a general improvement should take place. Having said that, it will impose fairly stringent duties on e-waste recyclers, some of which are arguably too onerous considering the nature of activities conducted, and the low risk posed by correct e-waste storage, handling and dismantling. This is particularly so if we compare the activities of e-waste recyclers with those engaged in manufacturing, selling or repairing new and/or used electronic and electrical equipment, and who would not be affected by the licencing and other waste management requirements.

The second-hand goods legislation (current and proposed) holds further restrictive implications for the e-waste sector and imposes additional administrative and regulatory burdens.



It is very encouraging to see that some members of the IT industry have joined the current e-waste initiative, and that they agreed to become actively involved in addressing the situation. In addition, the support rendered by Hewlett Packard to the Maitland dismantling plant should be pointed out.

However, in our opinion, until such time as the authorities fully acknowledge the e-waste problem and introduce controls or incentives the progress towards a nationwide, wholesale and integrated solution will be a slow one. What is, furthermore, needed is the active buy-in by other role players (eg manufacturers, dealers or suppliers of all electronic and electrical equipment) so that comprehensive systems are in place as, for instance, in Europe or Switzerland.

