



Ministry for the  
Environment  
Government of Gibraltar



# Gibraltar Waste Management Plan 2013

Prepared by the Environmental Agency Gibraltar  
and the Department of the Environment

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## Executive Summary

The management of waste has become an issue of utmost importance as the social, economic and environmental costs of waste disposal rise.

Since 2003, Gibraltar's waste has been sent to landfill in Spain. The EU Landfill Directive (1991/31/EC), set demanding targets to reduce the amount of biodegradable municipal waste sent to landfill. The aim of this plan is to investigate different waste treatment technologies which could enable Gibraltar to become more self-reliant in dealing with its waste and minimise the amount of waste to be landfilled.

An integrated waste management strategy is required for Gibraltar's waste, encompassing the principles of the Waste Hierarchy, the Proximity Principle and the Best Practicable Environmental Option. The existing recycling scheme of aluminium and glass was expanded to include plastics, tetra-brik, paper and cardboard, and most recently WEEE. Government has also embarked on an education programme for Gibraltar, to encourage recycling, waste prevention and minimisation.

The future waste treatment strategy for Gibraltar will consist of a waste reception and sorting facility, with the mainstream waste being thermally treated and a minimal amount of waste being landfilled in Spain.

A waste prevention programme has also been prepared and is incorporated into this plan. The environmental principles of these plans are also reflected in The Environmental Action and Management Plan 2013.

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## 1. INTRODUCTION

This Waste Management Plan supersedes the existing Waste Management Plan and has been prepared by the Environmental Agency and the Department of the Environment. This Plan fulfils the requirements of the new EC Waste Framework Directive 2008/98/EC, which repealed the previous Waste Framework Directive 2006/12/EC, the Hazardous Waste Directive 91/689/EC and the Waste Oils Directive 75/439/EC. The Waste Framework Directive (2008/98/EC) sets the concepts, definitions and targets related to waste management. It explains when waste ceases to be waste and becomes a secondary raw material (end of waste criteria). The directive requires that Member States manage waste without endangering human health and harming the environment, in particular without risk to water, air, soil, plants or animals, without causing a nuisance through noise, odours, and without adversely affecting the countryside or places of special interest.

The updated Waste Management Plan was revised in 2013 and will be revised in August, 2017.

The purpose of this Waste Management Plan is to provide:

- Information on Gibraltar's current waste streams and how it is collected, treated and disposed of.
- A framework to enable decisions to be taken for efficient and sustainable waste management of all waste arising in Gibraltar.
- Guidance on waste prevention.
- Information on how waste shall be managed within the new waste treatment facility.

The plan consists of two main parts:-

1. Gibraltar's current waste management practices (Status).
2. The measures intended to be implemented during the next five years (Planning).

Gibraltar is a peninsula situated at latitude 36°7' North and longitude 5°21' West at the southern tip of the Spanish mainland and the eastern end of the Strait which bears its name. It is clearly marked by its famous Rock, a mass of Lower Jurassic limestone running roughly north to south along the greater part of the peninsula which is approximately 6 kilometres long and 1.2 kilometres at its widest point. It rises to a height of 426 metres and lies just 16 kilometres across the Straits from the north coast of Africa. The total area of the peninsula is approximately 6.5 square kilometres.

Gibraltar is a British territory and has a population of 30,001 (2012 population statistics), one of the highest population densities in the world. The territory has its own elected Government, which is responsible for all internal matters such as provision of municipal services, trade, health, education and housing.

Much of Gibraltar consists of rocky and dense matorral areas, called the Upper Rock Nature Reserve, which is a Special Protected Area (SPA) and a Special Area of Conservation (SAC), where any further development is prohibited. The remaining land has therefore been densely developed, and most of the population, commercial and leisure activities are concentrated on the lower western slopes of the Rock. Much of the city area is built on land reclaimed from the sea within the harbour. Gibraltar also receives an annual influx of some 10 million visitors, the vast majority being day-trippers from Spain. Gibraltar's land mass, as highlighted above is small some, 6.5 square kilometres, of which 30.8% is the Upper Rock Nature Reserve. It is therefore particularly important for Gibraltar to strike a balance between the requirement for development and the preservation of the environment. The protection of the environment is a matter of prime concern.



**Aerial view of Gibraltar**

Gibraltar is a popular port of call for cruise liners; with 187 cruise liners calling in 2011, as well as for other vessels. It also has three marinas offering over four hundred berths for yachts. Gibraltar airport currently offers scheduled air services to the United Kingdom.

There are approximately 40 kilometres of roads in Gibraltar. The network currently connects to that of Spain by a single access road, which runs across the airport runway.

The economy of Gibraltar has many unusual features most of which stem from its small size in terms of area and population. Gibraltar is not capable of sustaining any kind of agriculture due to its topographical features and size constraints. There are no commercial fishing fleets based in Gibraltar and there is no domestic industrial manufacturing activity.

## 2. OVERALL WASTE ISSUES IN GIBRALTAR

Gibraltar has unique circumstances in relation to waste management. These include:-

- a) Its small land area (6.5km<sup>2</sup>). There is a lack of space to provide disposal, recycling and recovery facilities in Gibraltar.
- b) High population density (30,001 people) that is further aggravated by large numbers of visitors (approximately 10 million a year) and consequent pressures on land use. The range of normal disposal, recovery and recycling options available to other countries is not available to Gibraltar due to economies of scale and limited land availability.
- c) There are no production or manufacturing industries in Gibraltar. This means that all industrial and commercial goods have to be imported. This creates a large volume of packaging waste which unfortunately cannot be controlled or reduced. Reduction of packaging waste will happen when manufacturers tackle this issue at source.

Figure 1: *Summary of challenges Gibraltar faces:*



Gibraltar is, however, committed to ensuring it has a waste management regime which, despite the limitations of the difficulties mentioned above, is compliant with EU obligations. Gibraltar is excluded from the customs territory of the European Community. Therefore neither the treaty rules on free movement of goods nor the rules of secondary Community legislation, as regards the free circulation of goods, (to ensure approximation of the laws, regulations and administrative provisions of the Member States pursuant to Article 94 EC, 95 EC and 100a) are applicable to Gibraltar. Consequently, the packaging and packaging of waste directive (94/62/EC), which introduced producer responsibility into the management of packaging materials, does not apply nationally and so this area of waste management is not covered in this plan.

The amounts of hazardous wastes produced in Gibraltar are relatively low. There are no manufacturing industries and there are, with the exception of the construction industry, limited industrial activities carried out on the Rock. Therefore, the investment into complex hazardous waste recovery plants is uneconomical given the quantity and types of waste generated.

Gibraltar's close proximity to Spain allows producers of hazardous waste to export hazardous waste to approved recovery or disposal facilities in Spain following the Directives proximity principle. These transfrontier shipments of waste are conducted through authorised contractors in compliance with the Shipment of Waste Regulations 1013/2006.

Municipal waste is collected six days a week, Monday to Saturday, and is then transported, in accordance with the Shipment of Waste procedures, to a licensed and approved landfill/waste recovery facility at Los Barrios, Spain.

Since the publication of the previous Waste Management Plan, significant changes have been made by the Government as regards the management of waste in Gibraltar. These include:

- A stricter enforcement regime, e.g. tighter controls at the frontier and at licencing stage for all exported waste, including 'green-listed' waste.

- Improved separate collection arrangements have been introduced for the collection and subsequent recycling of glass, aluminium, plastic, tetra-brik, paper and cardboard, waste electrical and electronic equipment (WEEE) and batteries.

The challenges faced in Gibraltar are similar to those faced on islands and mainly arise from the higher degree of self-sufficiency required for resource management. Therefore, it is recognised that there is a need to modernise current practice, with a particular focus upon the delivery of a sustainable waste management system.

## **2.1 WASTE LEGISLATION & ENVIRONMENTAL PROTECTION**

### ***2.1.1 EU Legislation***

The revised Waste Framework Directive 2008/98/EC was adopted on the 20 October 2008 and replaced the previous Waste Framework Directive (2006/12/EC), as well as the Directive on Hazardous Waste (91/689/EEC) and part of the Waste Oils Directive (75/439/EEC) on Waste Oil. The new Framework Directive was transposed into national law in April 2011 by the Public Health Act (Amendment) Regulation 2011.

The main EU Directives dealing with waste and waste management are:

- Directive 2008/98 of the European Parliament and of the Council of the 19<sup>th</sup> November 2008 on waste
- EC Regulation 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste.

### ***2.1.2 The New Waste Framework Directive 2008/98/EC***

The directive sets out a broad framework for waste management policy and legislation in the European Union (EU). The objectives of the previous Directive are carried through into Directive 2008/98/EC, i.e.:

- (i) The duty to manage waste without harming the environment or endangering human health;

- (ii) The objective of moving waste up the hierarchy from disposal to recovery, recycling, reuse and ideally waste reduction;
- (iii) The requirement for Member States to have a permitting system (licensing in Gibraltar) for waste management activities, with exemptions available for activities that pose less risk to the environment;
- (iv) Regulation and inspection of waste facilities;
- (v) The polluter pays principle applied to costs of waste management;
- (vi) Duty of care;
- (vii) Proximity principle, so waste is disposed of within the state of origin or in the nearest disposal facility in the adjoining state (as is currently the case in Gibraltar);
- (viii) A national waste management plan: Article 7 of the Directive requires competent authorities to draw up waste management plans which shall relate in particular to:
  - The type, quantity and origin of waste to be recovered or disposed of,
  - General technical requirements,
  - Any special arrangements for particular wastes,
  - Suitable disposal sites or installations.

This Plan applies the principles of the Waste Framework Directive as far as practicable within the constraints encountered in Gibraltar. The aim of the plan is to facilitate compliance with waste targets and policy.

### ***2.1.3 Hazardous Waste***

The Waste Framework Directive also includes the definition of hazardous waste taken from the previous Hazardous Waste Directive, which refers to the list of properties in Annex III that renders a waste hazardous (e.g. explosive, oxidising, toxic, harmful, etc).

This Directive requires Member States to take the necessary action to ensure that the production, collection, transportation, storage and treatment of hazardous waste

is carried out in conditions providing protection for the environment and human health, including action to ensure the traceability from production to final destination. It reiterates the ban on mixing different hazardous wastes and the requirement for labelling of hazardous wastes.

#### ***2.1.4 Transfrontier Shipment of Waste***

Regulation (EC) 1013/2006 on shipments of waste establishes a system of controls on waste shipments, with detailed provisions which vary according to the countries of dispatch, destination and transit, the intended purpose of waste shipment (disposal or recovery), and the type of waste involved. Consideration of the proximity principle is paramount under this legislation. Every effort is made to ensure that the various treatment facilities used in Spain for our varying waste streams are:

- i) the closest ones to Gibraltar;
- ii) compliant with relevant EU and local waste legislation.

#### ***2.1.5 Other Directives***

There are other Directives and Regulations dealing with specific aspects of waste, waste management or waste streams. These include the Landfill Directive (1999/31/EC); End of Life Vehicles Directive (2000/53/EC); Ozone Depleting Substances (EC Regulation (2037/2000)); Disposal of polychlorinated biphenyls and polychlorinated terphenyls (Directive (96/59/EC)); Batteries and Accumulators (Directive 2006/66/EC) Incineration of Waste (Directive 2000/76/ EC) and the Waste Electrical and Electronic Equipment (Directive 2002/96/EC).

## **2.2 GIBRALTAR LEGISLATION**

The provisions of the Waste Framework Directive are transposed in Gibraltar law by Part VA of the Public Health Act.

The Shipment of Waste Regulation 1013/2006, is directly applicable and is implemented under the Public Health Act as well.

Other legislation dealing with waste and mentioned above have been transposed into our legislation as follows:

- (i) Landfill Directive (Directive 1999/31/EC) – Landfill Act 2002;
- (ii) End of Life Vehicles Directive ( Directive 2000/53/EC) – End of Life Vehicles Rules 2004;
- (iii) EC Regulation on Substances that Deplete the Ozone Layer (Regulation 2037/2000);
- (iv) Disposal of PCBs Directive (Directive 96/59/EC) – Part VA Public Health Act 1950;
- (v) Batteries and Accumulators Directive (Directive 2006/66/EC) – Part VA Public Health Act 1950;
- (vi) Waste Incineration Directive (Directive 2000/76/ EC) – Waste (Incineration) Act 2003;
- (vii) Waste Electrical and Electronic Equipment Directive (Directive 2002/96/EC) – Environment (Waste) Regulations 2007.

### ***2.2.1 Environmental Protection.***

A number of other EU Directives provide operational and management controls for waste management facilities in order to ensure a high level of protection for the environment. These include the Integrated Pollution Prevention and Control Directive (96/61/EC) transposed in Gibraltar by the Pollution Prevention and Control Act 2001 and the Waste Incineration Directive (2000/76/EC) transposed by the Waste (Incineration) Act 2003.

The Integrated Pollution Prevention and Control Directive (IPPC) aims to achieve a high level of protection for the environment taken as a whole. This is to be achieved by preventing or reducing emissions to air, water and land from certain industrial activities, including waste facilities.

The Waste Incineration Directive aims to prevent or limit negative effects on the environment and risks to human health from the incineration of many types of waste including municipal and hazardous waste. The Directive is based on the premise

that the harmfulness of the emissions does not depend on the source, but is a property of the substances emitted and sets emission limit values for these. The Directive also controls releases to water.

### ***2.2.2 Definition of Waste***

Article 3 of Directive 2008/98/EC on waste and Section 192A of the Public Health Act define waste as: Any substance which the holder discards or intends or is required to discard.

### ***2.2.3 End of waste status***

Article 6 of Directive 2008/98/EC sets down the criteria for “end of waste status”. This will enable certain products recovered from wastes to cease being classed as “waste” and for them to be considered as prime material.

End of waste criteria is likely to develop for aggregates, paper, plastics, glass, metal, tyres and textiles. The criteria will be published in the future by EU legislation but four general criteria are laid down in the Directive as follows:

1. the material is used for specific purposes;
2. a market or demand exists for it;
3. it meets the standards and technical demands for such a material or product;
4. its use will not have an adverse impact on the environment and human health.

### ***2.2.4 Waste Licensing Regime***

Section 192D of the Public Health Act states that no person shall carry out a prescribed activity without first having obtained a license. The prescribed activities are defined as —

- (a) in respect of waste —
  - (i) disposal;
  - (ii) abandonment, dumping or otherwise depositing on land in so far as such activity is not disposal;
  - (iii) recovery; and

- (b) additionally in the case of waste oil —
  - (i) collection;
  - (ii) disposal;
  - (iii) regeneration or use as fuel;
  - (iv) storage;
  - (v) disposal of the residues of regeneration or from combustion.
- (c) additionally in the case of hazardous waste –
  - (i) collection,
  - (ii) transportation.
- (d) additionally, in the case of hazardous waste, incineration.

### ***2.2.5 Pre-Application Assistance***

Prospective applicants for Waste Licences are encouraged to discuss their proposals at an early stage with the Environmental Agency before submitting an application.

### ***2.2.6 Waste Licence Applications***

An application for a Waste Licence will not be considered as valid unless all the information as required by statutory guidance under Section 192Q of the Public Health Act has been complied with. The Environmental Agency may require additional information. Failure to supply this information will result in the licence not being granted.

The application procedure is as follows:-

1. A person who intends to apply for a licence or extension of a licence must publish in the Gibraltar Gazette and in at least one other newspaper circulating in Gibraltar their intention to apply for a waste licence. This notice of intent must be made not less than 14 days before the actual application for the licence is made. This period is the time allowed for any person to object to the issuing of the licence.

2. Once the above period has expired, the person must submit their application with copies of the notices aforementioned. The application must be made to the Environmental Agency not less than two months before it is desired that the licence be issued.

3. In considering applications for waste licences the Environmental Agency will ensure that the waste is recovered or disposed of without endangering human health and without using processes or methods which could harm the environment and in particular –

- (i) without risk to water, air, soil, plants or animals;
- (ii) without causing a nuisance through noise or odours;
- (iii) without adversely affecting the places of special interest;

### ***2.2.7 Waste Licence Consultations***

The Environmental Agency will where appropriate consult:

- The Ministry for the Environment;
- The Ministry of Enterprise, Development, Technology and Transport;
- The Development and Planning Commission;
- The Gibraltar Port Authority;
- The Gibraltar Maritime Administration;
- Any statutory stakeholder whose activities may be affected.

### ***2.2.8 Working Plans***

The Environmental Agency will require a detailed and comprehensive Working Plan to be submitted by the applicant, the format and content of which will require their approval. Hazardous Waste facility applications will not be authorised unless the Working Plan contains specific codes of practice for dealing with these wastes. Any wastes that are incapable of being disposed, recovered or recycled in Gibraltar, will be exported to licensed specialised disposal facilities, in accordance with the Shipment of Waste Regulations.

### ***2.2.9 Review of Waste Licences***

All Waste Licences have a validity of two years and will be kept under constant review and revised and updated as necessary to take account of higher standards (Best Available Technology Not Entailing Excessive Costs - BATNEEC), operation practices and national guidance.

## **2.3 SITE INSPECTION AND ENVIRONMENTAL MONITORING**

### ***2.3.1 Inspection of Licensed Facilities***

All licensed waste facilities will receive both routine and unannounced inspections on a regular basis to check compliance with licence conditions at frequencies related to the nature of the facility.

### ***2.3.2 Environmental Monitoring by Licence Holder***

As part of the licence conditions, licence holders will be required to sample, monitor waste and emissions and make reports to the Environmental Agency at specified times.

### ***2.3.3 Environmental Monitoring***

The Environmental Agency will undertake compliance monitoring on waste as appropriate for the facility concerned in order to check licence holders results.

### ***2.3.4 Registration of certain Establishments, Undertakings, and Brokers***

Section 192E of the Public Health Act requires the registration of any establishment or undertaking:

- (a) collecting or transporting waste on a professional basis; or
- (b) arranging as dealers or brokers for the disposal or recovery of waste on behalf of another person.

The Environmental Agency will seek to determine applications for registration as a carrier and/or broker. Where applicants have committed relevant offences the

Environmental Agency will consider refusing the application or revoking the registration.

### **2.3.5 Enforcement**

The Environmental Agency has in place a prosecution procedure taking into account any statutory defences and statutory guidance.

## **2.4 DESCRIPTION OF WASTE POLICY IN RELATION TO WASTE HIERARCHY**

Everyone produces waste as part of their everyday lives. The nature of waste produced varies from relatively harmless materials to noxious and potentially hazardous materials. In order to safeguard public health, the environment and water resources, all waste arising from society must be properly handled and disposed of.

The disposal of waste by any means may produce pollution that places a burden on the environment to which it is released, be it air, water or land. Climate change, a global problem, may be contributed to by inadequate waste disposal, e.g. through for example the release of methane gas from unmanaged landfill sites. Therefore, it is crucial to ensure that the best practicable environmental option (BPEO) is chosen for the disposal of wastes and that the principles of best available technique not entailing excessive cost (BATNEEC) are applied where appropriate to achieve sustainable waste management.

The European Waste Framework Directive describes five steps in dealing with waste. There is a priority order, known as the waste hierarchy. The waste hierarchy has prevention (avoidance, reduction, and re-use) as the most preferred option. Next comes preparing for re-use (such as repairing) followed by recycling which turns waste into a new product. This is followed by other recovery options including recovering energy from waste. Disposal is the least preferred option which includes landfill and incineration without energy recovery.

The waste streams generated in Gibraltar and covered in this plan are as follows:

- Municipal Waste.
- Non-hazardous bulky waste.

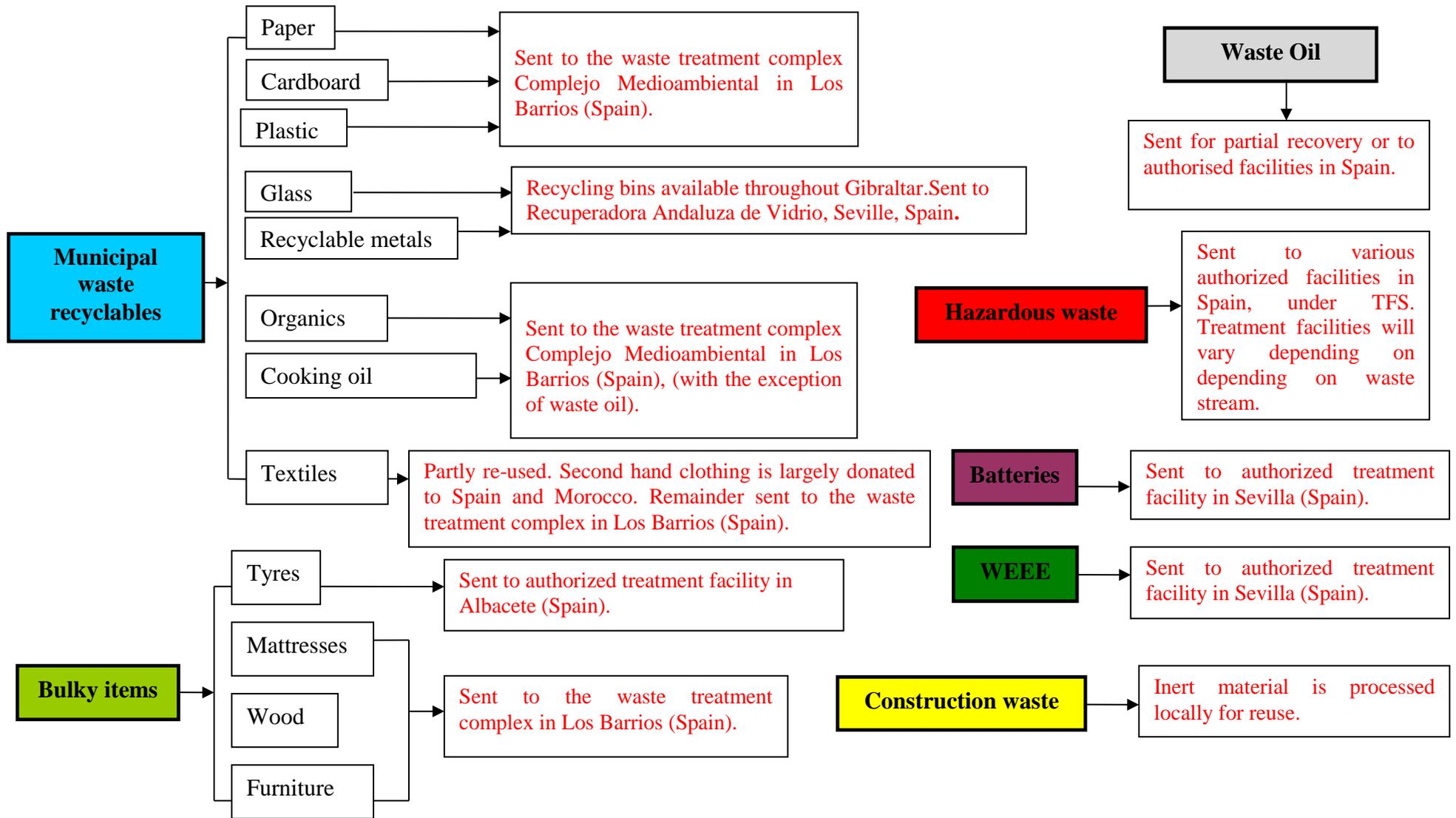
- Hazardous waste.
- Construction and Demolition Waste.
- Shipping Waste.
- Clinical Waste.
- Waste Electrical and Electronic Equipment (WEEE).
- End of Life Vehicles (ELVs).
- Batteries.
- Tyres.

Figure 2 (page 21) provides a snapshot of the waste management process in Gibraltar. Each section is discussed in detail throughout this plan.

Due to Gibraltar's small size, and the lack of heavy industry, recycling can only be achieved by exporting wastes abroad, resulting in high transport costs. Most of the consumer goods and raw materials consumed in Gibraltar have to be imported. The onus, therefore, of the principle of 'Extended Producer Responsibility' falls mainly upon importers, wholesalers, suppliers, and the like.

A principal consideration in developing a waste management strategy for Gibraltar is the current dependency on cross border treatment of wastes. The ultimate goal of Gibraltar's waste management strategy is compliance with both the 'self-sufficiency' and 'proximity' principles. In other words, to become as self-sufficient as possible in terms of waste collection, treatment and disposal, within the smallest geographical area possible. Appreciating how difficult this is to achieve, bearing in mind the unique geography of Gibraltar, the new treatment facility aims to optimise waste treatment and minimize the reliance on Spain for residual waste disposal; encouraging the key principles of waste management within the bounds of economic feasibility and viability.

Figure 2. Summary of Waste management processes in Gibraltar



In the order of priority and effectiveness, these principles are listed as follows:

- Encouragement of reduction of waste at source;
- Recycling and re-use of wastes;
- Treatment to reduce volume of wastes;
- Improving efficiency of the waste management system and reducing its carbon footprint and
- Careful consideration of location for final disposal of residues.

In light of the fact that there are limited opportunities for the re-use of wastes or residues from treatment processes within Gibraltar, this strategy aims to minimise the quantity of residual wastes through the treatment, re-using and recycling of specific waste streams and, hence, the volumes of residual waste requiring long-term disposal to Spain.

An important point to remember is that all waste management processes considered (discussed in 3.1), no matter how efficient, will continue to require some disposal to landfill or other treatment options which are not available in Gibraltar. The main aim is therefore to reduce reliance on landfill as much as possible.

## **2.5 DESCRIPTION OF WASTE POLICY OBJECTIVES**

Despite the limitations encountered in Gibraltar, which are explained in section 2, this Management Plan will address as far as possible the principles contained in the Waste Framework Directive.

The Waste Framework Directive defines different forms of treatment relevant to waste management. It distinguishes between recovery (defined as ‘any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy’, such as recycling and energy recovery processes).

There are a number of key principles that need to be taken into account when implementing a waste policy. These are:

- Sustainable development;
- Proximity principle and self-sufficiency;
- Precautionary principle;
- Polluter pays principle;
- Waste hierarchy;
- Best Practicable Environmental Option (BPEO) and;
- Producer responsibility.

These principles mark the historical evolution of the waste management system, from giving the highest priority to aspects of infrastructure, then adding aspects of human health and the environment, and integrating concerns on conservation of nature and resources, towards a strategic aim of a recycling society, promoting the prevention of waste and, where waste is generated, using it as a resource in a sustainable manner.

### ***2.5.1 Sustainable Development***

The guiding principle of sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Sustainable development recognises the interdependence of environmental, social and economic systems.

### ***2.5.2 Proximity Principle and Self-sufficiency***

The proximity principle, advocates that waste should be disposed of close to the point at which it is generated, thereby avoiding transporting waste to communities that did not produce it and reducing the impacts of waste transport.

The self-sufficiency principle states that the EU and its member states should remain self-sufficient with regard to the disposal of waste. As with the proximity principle, the

self-sufficiency principle advocates the provision of facilities to manage waste locally.

### ***2.5.3 Precautionary Principle***

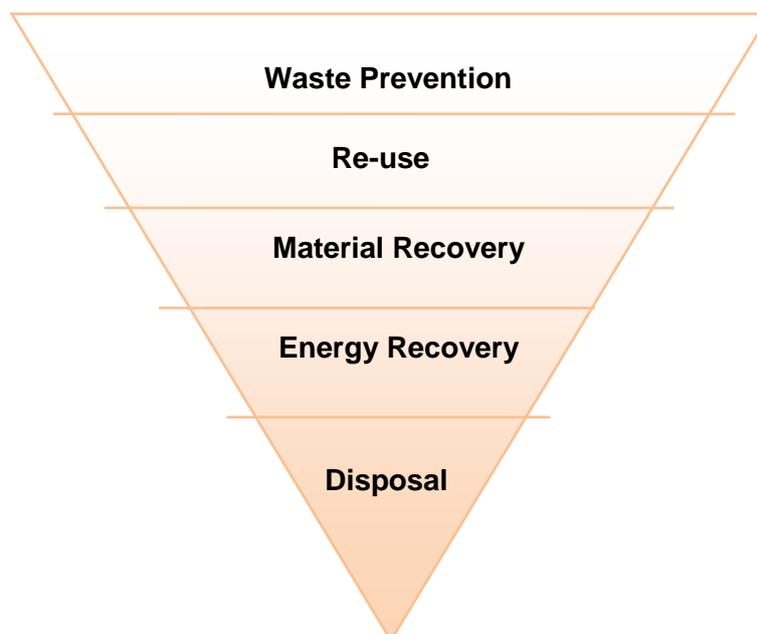
The precautionary principle states that if an action or policy has a suspected risk of causing harm to health or the environment, in the absence of scientific consensus that the action or policy is harmful, the burden of proof that it is not harmful falls on those taking the action.

### ***2.5.4 Polluter pays Principle***

The polluter pays principle requires that the costs of pollution be borne by those who cause it. It includes accidental pollution prevention, control and clean-up costs. All waste licences issued by the Environmental Agency contain specific conditions that require the licensee to adhere to this principle.

### ***2.5.5 The Waste Hierarchy***

The concept of a waste hierarchy was developed over the last decades and is underlined in the latest EU Waste Framework Directive. It provides a preferred order of priorities for selecting and deciding upon waste management practices. These are:



- *Prevention*: Minimising the use of resources and reducing the quantities and/or hazardous qualities of the wastes generated.
- *Re-use*: Using products or items again for the same or different purpose.
- *Recovery/Recycling*: Reprocessing of waste materials for use in the manufacture of the same or different product. This includes composting.
- *Energy recovery*: Obtaining energy from waste.
- *Final disposal*: If there is no other appropriate solution, the disposal of waste by landfilling or incineration without energy recovery.

The Waste Hierarchy needs to be considered in conjunction with other principles, in particular the 'Best Practicable Environmental Option' (BPEO). The waste management strategy discussed in this plan focuses on management and action across all steps of the waste hierarchy. Furthermore, different waste streams fall within different sections of the waste hierarchy. For example, the following waste streams are currently sent to recycling facilities in Spain:

1. Glass;
2. Aluminium;
3. Paper and Cardboard;
4. Plastics;
5. Batteries;
6. Scrap metal;
7. Waste oil;
8. Waste Electrical and Electronic Equipment (WEEE).

In an attempt to further increase current recycling rates, more recycling points for cans, glass, plastics, paper and batteries will be provided in the upper town using smaller containers and specialised vehicles that will be able to negotiate the narrow streets and lanes within this area. Small WEEE recycling bins have also been placed in strategic locations throughout Gibraltar, in the hope of increasing the recovery rate for small electrical and electronic equipment. Textiles - that is to say, second hand clothing - are largely donated to local charities that then send the clothing to developing countries for reuse.

Municipal solid waste is currently taken to waste treatment complex Complejo Medioambiental Sur de Europa in Los Barrios, Spain. At this site, waste is separated to enable manual and mechanical sorting of recyclables. Bio-waste is removed and sent for composting. Any remaining waste is then sent to landfill.

Government awareness campaigns are regularly used to inform the public of the need to minimise the use of resources, reuse as much as possible before recycling and disposal and the need for the community to make use of the recycling facilities available. Further information on waste management can be found on the Government's Department of the Environment website and the Department of the Environment Thinking Green website:

<https://www.gibraltar.gov.gi/environment/environment>

<http://www.thinkinggreen.gov.gi/>

The Government has also embarked upon a high-level media awareness campaign aimed to increase public knowledge of waste management options and to promote the key principles of its waste management strategy.

#### ***2.5.6 The Best Practicable Environmental Option (BPEO)***

The BPEO is the outcome of a systematic and consultative decision-making process that emphasises the protection and conservation of the environment across land, air and water. The BPEO process establishes, for a given set of objectives and circumstances, the option (or combination of options) that provides the greatest benefits or least damage to the environment as a whole, at an acceptable cost, in the long term as well as in the short term.

#### ***2.5.7 The Producer Responsibility***

This principle means that manufacturers, importers, distributors and retailers of products that generate waste should take responsibility for those wastes, rather than expecting the community to bear the burden of arranging and paying for waste collection, treatment, recycling, recovery and disposal.

This principle implies that producers should take responsibility for:

- Minimising their waste arisings;
- Designing and developing goods that are inherently recyclable and do not contain materials that pose an unnecessary risk or burden for the environment;
- Taking back end-of-life products for re-use, recycling, recovery or final disposal;
- Developing markets for the re-use and recycling of the goods they produce;
- Informing consumers of the environmental impacts of products and on the management of end-of-life products.

### ***2.5.8 Waste Authorities***

The Government of Gibraltar is responsible, under the provisions of Section 56 of the Public Health Act, for the collection of municipal waste from households. Municipal waste arising from shops, bars, restaurants and other businesses is also collected as part of this service. The Government of Gibraltar makes arrangements for the collection of litter and bulky household waste. These services are provided by private companies under Government contracts.

The Government also arranges for the disposal of other wastes either directly or by agreement or contract with other companies. It also provides sites where householders can dispose of waste electrical and electronic equipment (WEEE) and inert and non-hazardous waste items such as furniture, timber, building debris, metal scrap etc.

The Environmental Agency is the competent authority appointed by Government for all licensing requirements under Part VA of the Public Health Act (which transposes the provisions of the Waste Framework Directive 2008/98/EC) and for EC Regulation 1013/2006 on shipments of waste.

## **2.6 PUBLIC CONSULTATION AND INFORMATION**

The draft Management Plan has been published on both Environmental Agency and Government of Gibraltar websites so as to give the relevant stakeholders and the general public an opportunity to participate by providing comments and suggestions regarding the Plan.

Government is prepared to consider any proposals or recommendations from any party willing to contribute concrete and tangible proposals that enhance the waste management capabilities in Gibraltar.

The Environmental Agency and the Government of Gibraltar will seek to ensure that information and advice on waste regulation is made available to all sectors of the community - industry, commerce and the general public (including schools) by the use of awareness campaigns and the provision of information. This Plan is available on the Government of Gibraltar ([www.gibraltar.gov.gi/environment/environment](http://www.gibraltar.gov.gi/environment/environment)) and the Environmental Agency ([www.environmental-agency.gi](http://www.environmental-agency.gi)) websites.

The Environmental Agency provides registers detailing the organisations and individuals currently registered as brokers or dealers of waste and licenses for prescribed activities regarding waste under the Public Health Act. These registers are available for inspection by the general public during normal office hours at the offices of the Environmental Agency, 37 Town Range.

## **3. CURRENT STATUS**

### **3.1 WASTE STREAMS & CURRENT WASTE MANAGEMENT ARRANGEMENTS**

Gibraltar has no chemical, manufacturing or other heavy industries and therefore the bulk of the waste consists of waste arising from households and commercial premises.

Light engineering industries, a small ship repair yard and Ministry of Defence activities produce small quantities of hazardous waste.

Some cruise liners and other ships calling and stopping at Gibraltar dispose of their waste, including waste oil.

Clinical waste is generated from various sources such as medical, nursing, dental and veterinary practices.

Waste arisings in Gibraltar are classified into ten general categories namely:

- Municipal Waste
- Non-hazardous bulky waste
- Hazardous waste
- Construction and Demolition Waste
- Shipping waste
- Clinical Waste
- Waste Electrical and Electronic Equipment (WEEE)
- End of Life Vehicles (ELVs)
- Batteries
- Tyres

## **3.2 WASTE STREAMS AND CURRENT MANAGEMENT PRACTISES**

### ***3.2.1 Municipal Waste***

Municipal waste is waste that arises from domestic properties, residential homes, educational establishments, hospitals and nursing homes (excluding clinical waste) shops, offices, bars, hotels, takeaways and restaurants and is deemed not to be hazardous waste.

Municipal waste is collected six days a week by Gibraltar Industrial Cleaners, a commercial company on contract to the Government of Gibraltar. Municipal waste arising from Ministry of Defence establishments and its housing estates is also collected six days a week and forms part of the overall figure of municipal waste collected.

The 2012 municipal waste arisings within Gibraltar (excluding non hazardous bulky wastes) were estimated to be 16,954 tonnes based on a population of 30,001. This



equates to around 565 kilogrammes (kg) of gross municipal waste per capita per year. Although higher than may normally be expected within a developed European country (typically around 524 kg per capita in 2008<sup>1</sup>), these arisings include all waste generated by tourists and packaging waste that comes into Gibraltar.

Municipal waste is collected and unloaded at a temporary transfer station at Europa Advance Road from where it is taken to the Complejo Medioambiental, Sur de Europa, in Los Barrios, Spain. Here, recyclable waste is mechanically and manually separated for recovery, with the remaining fraction going to landfill.

Table 1 shows municipal waste collected during the years 2000 – 2012.

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<sup>1</sup> Eurostat News release, “40% of municipal waste recycled or composted in 2008”, March 2010.

**Table 1. Municipal Waste in Gibraltar in tonnes (excluding mattresses and non-hazardous bulky items) – 2000 to 2012**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
January	1,765	2,051	2,615	2,755	1,596	1,539	1,504	1,487	1,624	1,414	1,921	1,557	1,520
February	1,556	2,135	1,279	1,969	1,499	1,232	1,263	1,272	1,374	1,554	1,595	1,442	1,272
March	1,693	2,589	1,316	2,061	1,499	1,621	1,531	1,414	1,311	1,400	1,647	1,569	1,346
April	1,359	2,023	3,228	2,165	1,510	1,653	1,153	1,427	1,537	1,424	1,353	1,213	1,257
May	1,192	2,309	2,518	2,023	1,392	1,476	1,290	1,540	1,158	1,282	1,283	1,556	1,525
June	2,055	2,183	1,529	1,991	1,636	1,508	1,651	1,382	1,127	1,435	1,504	1,539	1,328
July	2,668	2,373	2,318	1,672	1,625	1,205	1,236	1,470	1,688	1,462	1,355	1,358	1,380
August	1,846	2,301	2,121	1,478	1,570	1,397	1,461	1,456	1,539	1,302	1,405	1,447	1,445
September	1,904	2,015	2,011	1,541	1,588	1,459	1,486	1,379	1,621	1,531	1,526	1,502	1,365
October	2,068	2,571	2,330	1,715	1,572	1,498	1,793	1,323	1,564	1,495	1,423	1,534	1,516
November	2,237	2,241	2,002	297	1,393	1,522	1,393	1,469	1,461	1,390	1,474	1,554	1,603
December	2,256	1,919	1,788	1,774	1,292	1,538	1,688	1,477	1,511	1,451	1,626	1,423	1,367
<b>TOTALS</b>	<b>22,599</b>	<b>26,710</b>	<b>25,055</b>	<b>21,441</b>	<b>18,172</b>	<b>17,626</b>	<b>17,448</b>	<b>17,095</b>	<b>17,516</b>	<b>17,140</b>	<b>18,111</b>	<b>17,694</b>	<b>16,954</b>



Table 2 highlights the amount of recyclable material collected post 2012, since the expansion of recycling facilities to include plastics and paper.

**Table 2: Recycling Rates**

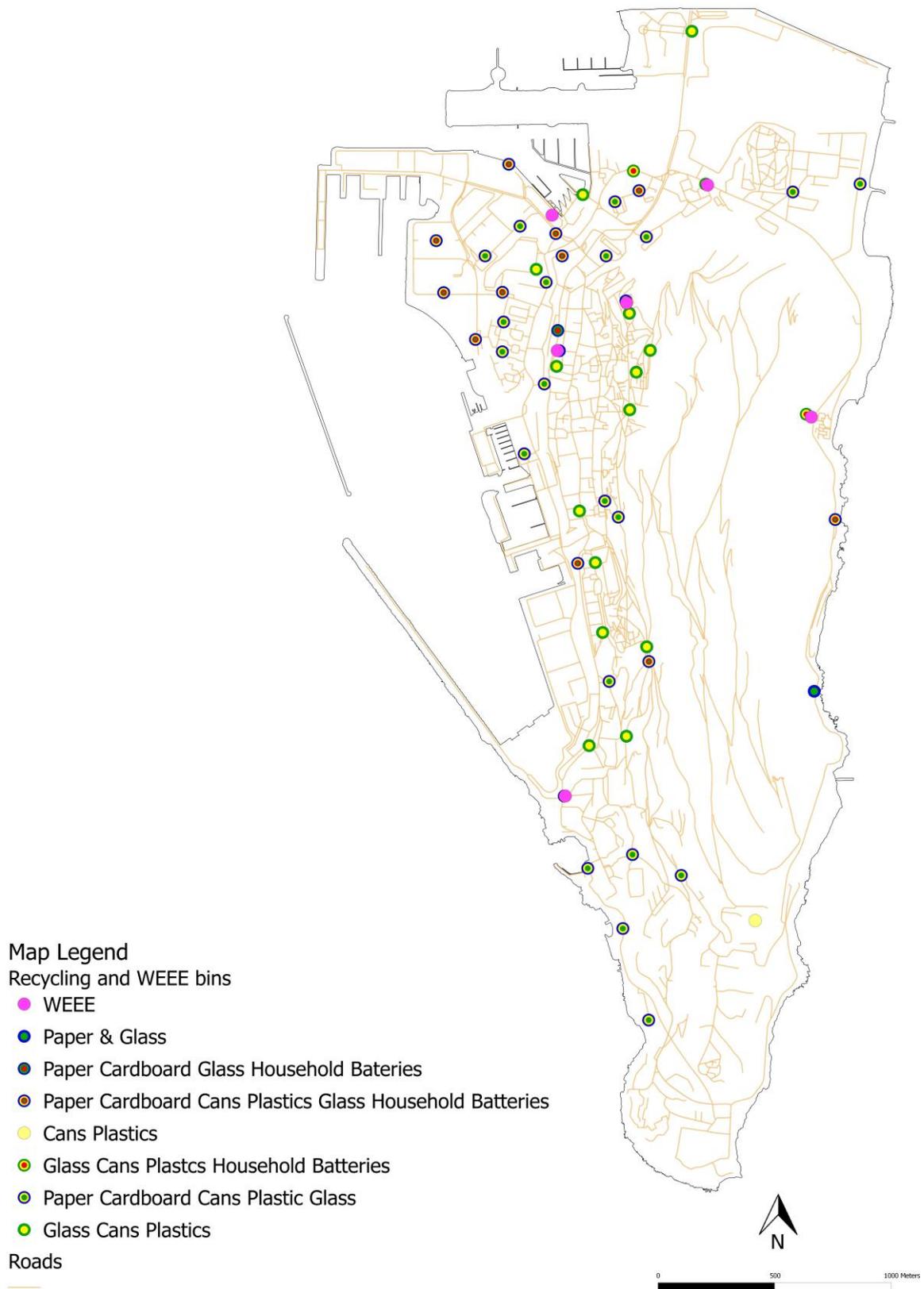
<b>Collection period</b>	<b>Glass</b>	<b>Mix packaging</b>	<b>Paper/ Cardboard</b>
January 2013	14,100 kg	5,760 kg	7,670 kg
February 2013	6,008 kg	4,640 kg	3,970 kg
March 2013	13,940	5,440	6,130 kg
April 2013	13,590 kg	8,160 kg	7,060 kg
May 2013	10,300 kg	5,490 kg	8,610 kg
June 2013	15,680 kg	4,640 kg	6,050 kg
July 2013	13,980 kg	6,900 kg	8,130 kg
August 2013	10,340 kg	5,450 kg	4,970 kg
September 2013	15,700 kg	5,440 kg	7,600 kg

In September 2013 the Government further developed the kerbside recycling scheme to include the collection of WEEE. WEEE bins have initially been installed at 6 points around Gibraltar, as identified below:

1. Central Police Station (town centre)
2. New Mole House Police HQ (south)
3. Waterport (West)
4. A Laguna Estate (north)
5. Top of Catalan Bay, by William's Way (East)
6. Moorish Castle Estate

The sites chosen cover most of the districts in Gibraltar and facilities for WEEE is envisaged to be expanded.

**Figure 3. Recycling Points in Gibraltar**



### ***3.2.3 Municipal Waste and Non-Hazardous Waste Analysis***

In the Waste Characterisation Study carried out in 2006, municipal waste from three refuse collection routes was analysed. These were the Upper Town, Main Street and Devil's Tower Road. In addition to these, samples were taken from ship waste (see Table 3).

Three collection rounds were chosen to represent the range of waste collected by the municipal rounds. The Upper Town is almost completely residential, Main Street is predominately non-hazardous commercial waste with some residential and Devil's Tower Road is a mixture of light commercial and residential.

The sub-samples were sorted by hand into 12 categories:

- Paper and Card;
- Organics;
- Dense Plastics;
- Plastic Film;
- Metals;
- Glass;
- Composites;
- Textiles;
- Special Municipal Waste;
- Unclassified Incombustibles;
- Unclassified Combustibles; and
- Fines.

These categories were then analysed for weight and bulk density. The results of the analysis showed a certain amount of variability in the composition of the waste from the collection rounds which is thought to be due to the type of premises that the round collects from.

There appeared to be a seasonal change with the waste from Upper Town and Devil's Tower Road having lower levels of organic waste and higher levels of paper and cardboard in August than in February. The waste from Main Street by

comparison had an increase in organic waste and a decrease in paper and cardboard due to tourists increasing the trade for restaurants, bars, etc.

It can be seen that there was a higher percentage of special municipal waste from shipping than from the collection rounds and there appeared to be a higher degree of variability for the waste from shipping.

**Table 3. Waste Characterization results**

Load Number	Waste Categories	Total weight (kg)	Weight (%)	Bulk Density (kg/l)
1. Upper Town (Residential)	Organic	84.1	38.4	0.267
	Papers & Cardboard	39.8	18.2	0.108
	Composites	16.3	7.4	0.103
	Textiles	5.8	2.6	0.133
	Dense Plastics	13.6	6.2	0.042
	Plastic Film	26.8	12.2	0.036
	Glass	10.8	4.9	0.176
	Metals	12.6	5.7	0.096
	Special Municipal Waste	1.6	0.7	0.091
	Unclassified Combustibles	3.2	1.5	0.183
	Unclassified Incombustibles	1.6	0.7	0.183
	Fines	3.0	1.4	0.343
	<b>Total</b>	219.2	100.0	-
2. Main Street (Commercial)	Organic	28.4	13.1	0.325
	Papers & Cardboard	124.9	57.6	0.085
	Composites	6.8	3.1	0.041
	Textiles	2.8	1.3	0.107
	Dense Plastics	18.0	8.3	0.051
	Plastic Film	14.8	6.8	0.025
	Glass	7.0	3.2	0.2
	Metals	6.4	2.9	0.061
	Special Municipal Waste	2.8	1.3	0.16
	Unclassified Combustibles	2.4	1.1	0.091
	Unclassified Incombustibles	2.4	1.1	0.274
	Fines	Trace	-	-
	<b>Total</b>	216.7	100.0	-
3. Devil's Tower Road (Commercial/ Industrial Residential)	Organic	73.2	31.1	0.523
	Papers & Cardboard	62.8	26.7	0.137
	Composites	8.8	3.7	0.084
	Textiles	19.4	8.3	0.100
	Dense Plastics	16.4	7.0	0.043
	Plastic Film	18.0	7.7	0.043
	Glass	12.0	5.1	0.229
	Metals	9.4	4.0	0.107
	Special Municipal Waste	4.8	2.0	0.137
	Unclassified Combustibles	4.4	1.9	0.168
	Unclassified Incombustibles	0.8	0.3	0.046
	Fines	5.0	2.1	0.571
	<b>Total</b>	235	100.0	-
	Organic	18.8	11.6	0.358

4. Ship Waste 1	Papers & Cardboard	52.6	32.6	0.067
	Composites	3.4	2.1	0.049
	Textiles	15.0	9.3	0.132
	Dense Plastics	14.8	9.2	0.022
	Plastic Film	9.6	6.0	0.030
	Glass	7.0	4.3	0.2
	Metals	8.0	5.0	0.050
	Special Municipal Waste	32.2	20.0	0.2
	Unclassified Combustibles	Trace	-	-
	Unclassified Incombustibles	Trace	-	-
	Fines	0.0	-	-
	<b>Total</b>	161.4	100.0	-

The Department of the Environment will be commissioning a new waste characterisation survey, to include the recycling scheme, in order to update our understanding of waste streams and waste composition in Gibraltar.

### **3.2.4 Hazardous Waste**

Hazardous waste is defined in Section 192KA of the Public Health Act and means waste which displays one or more of the properties listed in Part 2 Schedule 11A of the Public Health Act which transposes Annex III of the Waste Directive 2008/98/EC.

Hazardous wastes are collected separately by licensed waste contractors and some fractions of hazardous waste produced in small quantities by households, offices etc., may be taken to the Civic Amenities Site of the Government of Gibraltar.

All hazardous waste are sent for either disposal or recovery operations to licensed plants in Spain under the Shipment of Waste Regulations 2006.

Waste oil from shipping and other sources was treated (partial recovery) at a Waste Oil Treatment Facility in Gibraltar but is currently exported mainly to Spain and other EU countries under the Shipment of Waste Regulations 2006.

Table 4 shows the types of hazardous waste, disposal site and quantity of hazardous waste recycled or disposed of between 2005 – 2010 from all sources, including the Ministry of Defence. All such waste was exported in accordance with the Shipment of Waste Regulations.

**Table 4. Hazardous Waste 2005 – 2010**

WASTE	Units	2005	2006	2007	2008	2009	2010	Recovered/ Disposed	Location
Asbestos	Tonnes	151	455	201	193	52	-	Disposed	Gamasur Los Barrios
Bitumen	Cubic metre	13	18	40	187	193	-	"	
Ceramics & Bricks	Tonnes	-	-	-	-	-	-		Reciclados Mijas
Electronic Equipment	"	0.288	82	36	14	54	11	Recovered	Gamasur Los Barrios
Fire Foam	"	-	-	1.8	-	1	2	Disposed	FCC Ambito Cordoba
Fluorescent tubes	"	-	1	0.26	1	2	0.3	Recovered	Recitec Sevilla
Grit	"	10811	2992	57	1520	123		Disposed	Gamasur Los Barrios
Halogenated Solvents	"	1	-	-	2	-	-	"	FCC Ambito Cordoba
Lead Batteries	"	6	-	37	-	119	108	Recovered	Gamasur Los Barrios Azor, Murcia
Oil & grease containing waste	"	-	12	42	57	71	-	Disposed	Gamasur Los Barrios
Medicines	"	4	-	-	-	-	-	"	Gemasur Cordoba
Misc. chemicals	"	0.343	-	4.8	-	-	-	"	FCC Ambito Cordoba
Non- halogenated solvents	"	4	3	-	45	-	-	"	"
Oil-containing sludge	"	4800	-	-	-	-	-	"	Gamasur Los Barrios Verinsur Cadiz
Oil filters	"	-	7	8	6	7	5.700	"	"
Waste paint, varnish & chippings	"	5	-	9	12	50	-	"	Gamasur Los Barrios
Petrol	Cubic metre	-	-	2.8	-	-	-	"	Gemasur Cordoba
Photographic liquid	"	1	-	-	-	-	-	"	"
Sand & soil with hydrocarbons	Tonnes	5	600	7946	-	-	-	"	Gamasur Los Barrios
Sand with metals	"	1481	98	-	-	-	-	"	Gemasur Cordoba
Used waste oil	Cubic metre	-	3460	2975	-	-	-	Recovered	Ecologia Iberica y Mediterranea Barcelona

Please see tables for 2011 and 2012 below:

**Table 5. Hazardous Waste 2011**

GB NO.	EWG CODE	DESCRIPTION	TOTAL FOR 2011	UNITS	R /D CODE	RECOVERY/ DISPOSAL FACILITY
100	20 01 35*	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components (21)	0.75	TON	R4, R7	GAMASUR, LOS BARRIOS
108	20 01 21*	fluorescent tubes and other mercury-containing waste	0.26	TON	R4, R7	GAMASUR, LOS BARRIOS
109	16 01 07*	oil filters	0.62	TON	D9	GAMASUR, LOS BARRIOS
112	15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	2.62	TON	D9	GAMASUR, LOS BARRIOS
114	17 06 05*	construction materials containing asbestos (18)	0.82	TON	D9	GAMASUR, LOS BARRIOS
139	19 01 11*	bottom ash and slag containing dangerous substances	1.68	TON	D9	GAMASUR, LOS BARRIOS
140	12 01 16*	waste blasting material containing dangerous substances	679.42	TON	D9	GAMASUR, LOS BARRIOS
141	17 09 03*	other construction and demolition wastes (including mixed wastes) containing dangerous substances	324.72	TON	D9	GAMASUR, LOS BARRIOS
142	06 01 06*	other acids	5.362	TON	D15	GEMASUR, CORDOBA
143	16 05 06*	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	0.306	TON	D15	GEMASUR, CORDOBA
144	16 06 01*	lead batteries	0	TON	R4	AZOR AMBIENTAL, MURCIA
145	13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils	0.7	TON	R9	GAMASUR, LOS BARRIOS
146	11 01 07*	pickling bases	0.882	TON	R9	GEMASUR, CORDOBA
147	09 01 02*	water-based offset plate developer solutions	3.663	TON	D15	GEMASUR, CORDOBA
148	08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances	15.438	TON	D15	GEMASUR, CORDOBA
149	16 06 01*	lead batteries	0	TON	R4, R5, R6	AZOR AMBIENTAL, MURCIA

160	16 07 08*	wastes containing oil	0	TON	D9	VERISUR, JEREZ DE LA FRONTERA
161	13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils	0	TON	D15, R13	VERISUR, JEREZ DE LA FRONTERA
163	08 01 13*	sludges from paint or varnish containing organic solvents or other dangerous substances	25.63	M <sup>3</sup>	D15, R13	VERISUR, JEREZ DE LA FRONTERA
165	17 05 03*	soil and stones containing dangerous substances	30	TON	D5, D9	VERISUR, JEREZ DE LA FRONTERA
166	15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	23	TON	D5	BEFESA, HUELVA
167	17 05 03*	soil and stones containing dangerous substances	20.22	TON	D9	BEFESA, HUELVA
168	18 01 03*	wastes whose collection and disposal is subject to special requirements in order to prevent infection	58.32	M <sup>3</sup>	D9	CEPSA, GRANADA
171	07 02 13	waste plastic	2.46	TON	D5	GAMASUR, LOS BARRIOS
172	08 03 17*	waste printing toner containing dangerous substances	0.5	M <sup>3</sup>	D9	GAMASUR, LOS BARRIOS
177	13 04 01*, 02*, 03*	bilge oils from inland navigation, bilge oils from jetty sewers, bilge oils from other navigation	2700	M <sup>3</sup>	R3	DRAMAR ANDALUCIA, ALGECIRAS
178	12 01 16*	waste blasting material containing dangerous substances	593.144	TON	D9	VERISUR, JEREZ DE LA FRONTERA
180	17 06 05*	construction materials containing asbestos (18)	380.1	TON	D5	VERISUR, JEREZ DE LA FRONTERA
188	17 05 04	soil and stones other than those mentioned in 17 05 03	0	TON	D5	BEFESA, HUELVA
193	17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	2624.14	TON	D1	GAMASUR, LOS BARRIOS
197	14 06 03*	other solvents and solvent mixtures	2.807	TON	D15	GEMASUR, CORDOBA
198	06 03 13*	solid salts and solutions containing heavy metals	0.314	TON	D9, R13	GEMASUR, CORDOBA
199	16 05 04*	gases in pressure containers (including halons) containing dangerous substances	0.069	TON	D9, R13	GEMASUR, CORDOBA
200	20 01 35*	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous	6.64	TON	R4, R7	GAMASUR, LOS BARRIOS

		components (21)				
201	20 01 21*	fluorescent tubes and other mercury-containing waste	2.11	TON	R4, R7	GAMASUR, LOS BARRIOS
206	16 01 07*	oil filters	3.378	TON	D15, R4	VERISUR, JEREZ DE LA FRONTERA
207	15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	7.409	TON	D9, R13	VERISUR, JEREZ DE LA FRONTERA
208	16 07 08*	wastes containing oil	13.708	TON	D9	VERISUR, JEREZ DE LA FRONTERA
209	19 08 11*	sludges containing dangerous substances from biological treatment of industrial waste water	2.932	TON	D9	VERISUR, JEREZ DE LA FRONTERA
211	16 02 11*	discarded equipment containing chlorofluorocarbons, HCFC, HFC	40.42	TON	R4, R5, R13	RECICLEC, SEVILLA
212	16 02 13*	discarded equipment containing hazardous components (16) other than those mentioned in 16 02 09 to 16 02 12	163.64	TON	R4, R5, R13	RECICLEC, SEVILLA
216	16 06 01*	lead batteries	44.69	TON	R4, R5, R6	AZOR AMBIENTAL, MURCIA
218	13 07 03*	other fuels (including mixtures)	5090.47	TON	R9	SOCIEDADE DE LIMPIEZA E TRATAMIENTO DE CONBUSTIVEIS, PORTUGAL
220	13 04 01*, 02*, 03*	bilge oils from inland navigation, bilge oils from jetty sewers, bilge oils from other navigation	1653.462	TON	R3	DRAMAR ANDALUCIA, ALGECIRAS
222	16 07 08*	wastes containing oil	3439.265	TON	R9	ECO-OIL, PORTUGAL
223	19 01 13*	fly ash containing dangerous substances	15	TON	D9	GAMASUR, LOS BARRIOS
224	19 01 11*	bottom ash and slag containing dangerous substances	19.32	TON	D9	GAMASUR, LOS BARRIOS
226	16 01 07*	oil filters	2.96	TON	D9	GAMASUR, LOS BARRIOS
228	17 06 05*	construction materials containing asbestos (18)	90.94	TON	D9	GAMASUR, LOS BARRIOS
229	17 03 03*	coal tar and tarred products	22.36	TON	D9	GAMASUR, LOS BARRIOS

230	15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	84.84	TON	D9	GAMASUR, LOS BARRIOS
231	13 05 02*	sludges from oil/water separators	19.802	TON	D9	GAMASUR, LOS BARRIOS
232	13 07 03*	other fuels (including mixtures)	1.04	M <sup>3</sup>	R3	GAMASUR, LOS BARRIOS
233	20 03 01, 03, 09	mixed municipal waste, street-cleaning residues, municipal wastes not otherwise specified	30416.36	TON	D1	URBASER
235	17 09 03*	other construction and demolition wastes (including mixed wastes) containing dangerous substances	19.92	TON	D9	GAMASUR, LOS BARRIOS
236	16 06 01*	lead batteries	33.345	TON	R4	AZOR AMBIENTAL, MURCIA
241	18 01 03*	wastes whose collection and disposal is subject to special requirements in order to prevent infection	3.888	M <sup>3</sup>	D9	CEPSA, GRANADA
255	12 01 16*	waste blasting material containing dangerous substances	2283.14	M <sup>3</sup>	D9, D1	GAMASUR, LOS BARRIOS
256	08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances	173.58	M <sup>3</sup>	D9, D1	GAMASUR, LOS BARRIOS
318	16 07 08*	wastes containing oil	2717.57	M <sup>3</sup>	D8	ECO-OIL, PORTUGAL

**Table 6. Hazardous Waste 2012**

GB NO	EWC CODE	DESCRIPTION	TOTAL FOR 2012	UNITS	R /D CODE	RECOVERY/DISPOSAL FACILITY
200	20 01 35*	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components	8.68	Mt	R4, R7	GAMASUR, LOS BARRIOS
201	20 01 21*	fluorescent tubes and other mercury-containing waste	0.64	Mt	R4, R7	GAMASUR, LOS BARRIOS
206	16 01 07*	oil filters	0.368	Mt	D15, R4	VERISUR, JEREZ DE LA FRONTERA
208	16 07 08*	wastes containing oil	25.72	Mt	D9	VERISUR, JEREZ DE LA FRONTERA

209	19 08 11*	sludges containing dangerous substances from biological treatment of industrial waste water	14.58	Mt	D9	VERISUR, JEREZ DE LA FRONTERA
211	16 02 11*	discarded equipment containing chlorofluorocarbons, HCFC, HFC	5.68	Mt	R4, R5, R13	RECICLEC, SEVILLA
212	16 02 13*	discarded equipment containing hazardous components other than those mentioned in 16 02 09 to 16 02 12	163.64	Mt	R4, R5, R13	RECICLEC, SEVILLA
218	13 07 03*	other fuels (including mixtures)	7996.377	Mt	R9	SOCIEDADE DE LIMPIEZA E TRATAMIENTO DE CONBUSTIVEIS, PORTUGAL
220	13 04	bilge oils	2627.265	mt	R3	DRAMAR ANDALUCIA, ALGECIRAS
223	19 01 13*	fly ash containing dangerous substances	28.72	Mt	D9	GAMASUR, LOS BARRIOS
224	19 01 13*	fly ash containing dangerous substances	7.16	Mt	D9	GAMASUR, LOS BARRIOS
226	16 01 07*	oil filters	0.46	Mt	D9	GAMASUR, LOS BARRIOS
228	17 06 05*	construction materials containing asbestos	4205.94	Mt	D9	GAMASUR, LOS BARRIOS
229	17 03 03*	coal tar and tarred products	22.36	Mt	D9	GAMASUR, LOS BARRIOS
230	15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	14.46	Mt	D9	GAMASUR, LOS BARRIOS
231	13 05 02*	sludges from oil/water separators	3817.48	Mt	D9	GAMASUR, LOS BARRIOS
233	20 03 99	municipal wastes not otherwise specified	10186.16	mt	D1	URBASER
235	17 09 03*	other construction and demolition wastes (including mixed wastes) containing dangerous substances	163.36	Mt	D9	GAMASUR, LOS BARRIOS
236	16 06 01*	lead batteries	33.345	Mt	R4	AZOR AMBIENTAL, MURCIA
241	18 01 03*	wastes whose collection and disposal is subject to special requirements in order to prevent infection	466.56	M <sup>3</sup>	D9	CEPSA, GRANADA
242	19 01 11*	bottom ash and slag containing dangerous substances	12.7	Mt	D9	BEFESA, HUELVA
243	19 01 13*	fly ash containing dangerous	2.45	Mt	D9	BEFESA, HUELVA

		substances				
244	15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	35.92	Mt	D5	BEFESA, HUELVA
245	17 05 03*	soil and stones containing dangerous substances	8.4	Mt	D9	BEFESA, HUELVA
246	13 05 02*	sludges from oil/water separators	8.1	Mt	D9	BEFESA, HUELVA
247	17 06 05*	construction materials containing asbestos	42.2	Mt	D5	BEFESA, HUELVA
250	16 02 13*	discarded equipment containing hazardous components other than those mentioned in 16 02 09 to 16 02 12	187940	M <sup>3</sup>	R4, R5, R13	RECICLEC, SEVILLA
251	16 02 11*	discarded equipment containing chlorofluorocarbons, HCFC, HFC	31710	M <sup>3</sup>	R4, R5, R13	RECICLEC, SEVILLA
255	12 01 16*	waste blasting material containing dangerous substances	2691.06	M <sup>3</sup>	D9, D1	GAMASUR, LOS BARRIOS
256	08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances	58.04	M <sup>3</sup>	D9, D1	GAMASUR, LOS BARRIOS
268	06 01 06*	other acids	1480	M <sup>3</sup>	D15	GAMASUR, LOS BARRIOS
272	17 06 05*	construction materials containing asbestos	234.806	Mt	D1	GAMASUR, LOS BARRIOS
274	13 04	bilge oils	3928.97	M <sup>3</sup>	R3	DRAMAR ANDALUCIA, ALGECIRAS
281	13 02	waste engine, gear and lubricating oils	111.78	M <sup>3</sup>	R1, R9	ECOGRADES, CADIZ
288	13 04	bilge oils	284.48	M <sup>3</sup>	R1, R9, R13	ECOGRADES, CADIZ
291	09 01 02*	water-based offset plate developer solutions	0.75	Mt	D9, D15	BEFESA, HUELVA
292	08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances	8.66	M <sup>3</sup>	D9, D15	GAMASUR, LOS BARRIOS
293	20 01 29*	detergents containing dangerous substances	0.2	Mt	D9, D15	GAMASUR, LOS BARRIOS
296	06 03 13*	solid salts and solutions containing heavy metals	0.25	Mt	D9, D15	GAMASUR, LOS BARRIOS
297	16 05 04*	gases in pressure containers (including halons) containing dangerous substances	0.953	Mt	D9, D15	GAMASUR, LOS BARRIOS
299	08 03 17*	waste printing toner containing dangerous substances	520	M <sup>3</sup>	D9	GAMASUR, LOS BARRIOS

300	16 06 04	alkaline batteries (except 16 06 03)	1340	M <sup>3</sup>	D9	GAMASUR, LOS BARRIOS
302	16 06 01*	lead batteries	17.535	M <sup>3</sup>	R4	AZOR AMBIENTAL, MURCIA
303	20 03 99	municipal wastes not otherwise specified	16347.16	Mt	D1	COMPLEJO MEDIOAMBIENTAL SUR DE EUROPA, LOS BARRIOS
304	16 01 07*	oil filters	3080	M <sup>3</sup>	D9, D15	GAMASUR, LOS BARRIOS
306	17 06 05*	construction materials containing asbestos	4.08	Mt	D9, D15	GAMASUR, LOS BARRIOS
308	15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	11740	M <sup>3</sup>	D9, D15	GAMASUR, LOS BARRIOS
309	13 05 02*	sludges from oil/water separators	10.04	Mt	D9, D15	GAMASUR, LOS BARRIOS
311	18 01 03*	wastes whose collection and disposal is subject to special requirements in order to prevent infection	129600	M <sup>3</sup>	D9	CEPSA, GRANADA
318	16 07 08*	wastes containing oil	2717.57	M <sup>3</sup>	D8	ECO-OIL, PORTUGAL
319	16 06 01*	lead batteries	69.77	M <sup>3</sup>	R4, R5, R6	AZOR AMBIENTAL, MURCIA
320	13 07 03*	other fuels (including mixtures)	3121543.241	M <sup>3</sup>	R9	ECO-OIL, PORTUGAL
325	16 01 07*	oil filters	2.575	M <sup>3</sup>	D15, R4	VERISUR, JEREZ DE LA FRONTERA
326	15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	2.962	M <sup>3</sup>	R7, R12	VERISUR, JEREZ DE LA FRONTERA
331	17 05 04	soil and stones other than those mentioned in 17 05 03	12964.64	Mt	D1	CMT CARMIN, LOS BARRIOS
333	16 07 08*	wastes containing oil	9107.161	M <sup>3</sup>	R3	ECO-OIL, PORTUGAL
338	13 07 03*	other fuels (including mixtures)	19161.425	M <sup>3</sup>	R9	CARMONA, PORTUGAL
339	08 03	wastes from MFSU of printing inks	3.511	M <sup>3</sup>	R5, R12, D9	VERISUR, JEREZ DE LA FRONTERA

### 3.2.5 Non-Hazardous Bulky Wastes

Bulky waste includes timber, timber pallets, some scrap metals and mattresses. These materials are collected separately from the general waste stream and transported to a sorting facility situated at Europa Advance Road where they are accumulated on site. Contractors then transport the waste to the Complejo Medio Ambiental Sur de Europa, Los Barrios, Cadiz, Spain. The movement is carried out in accordance with the Shipment of Waste Regulations.

Table 7 below shows the quantities in tonnes of non-hazardous bulky wastes collected in years 2006-2012.

**Table 7. Quantities in tonnes of non-hazardous bulky wastes**

	2006	2007	2008	2009	2010	2011	2012
January	539	695	909	1071	727	861	926
February	897	760	962	1140	969	962	882
March	759	1032	851	1156	1033	1349	899
April	557	880	1085	1259	869	846	626
May	604	953	982	924	720	1043	947
June	718	881	790	1059	916	1120	730
July	784	781	1359	975	760	1097	784
August	712	783	982	783	788	1394	762
September	665	919	1241	959	907	1174	646
October	880	1054	1404	1038	1046	1207	804
November	953	1050	1291	1026	1015	1440	849
December	637	747	1161	776	830	744	619
<b>Totals</b>	<b>8,705</b>	<b>10,535</b>	<b>13,017</b>	<b>12,166</b>	<b>10,579</b>	<b>12,936</b>	<b>9,474</b>

### ***3.2.6 Construction and Demolition Waste***

Construction and demolition waste, the majority of which is inert waste, arising from building construction, including improvement repairs, alterations or demolition and excavations.

The volume of waste arising in this category is extremely difficult to quantify as this depends on the degree of building construction activity going on at any given time.

Non-hazardous construction and demolition wastes, for example, spoil and rubble are used for backfilling.

Estimates of construction and demolition waste as calculated in the “Waste Characterisation Study” in 2006 amounted to 30,000 tonnes per annum. In 2009/2010 construction and demolition waste received at the Government Eastside project for backfilling purposes amounted to approximately 236,250 tonnes; this figure reflects the considerable amount of major construction, demolition and development works that took place during this period.

### ***3.2.7 Shipping Waste***

The Port of Gibraltar provides facilities for the collection of shipping waste. This includes certain hazardous wastes, including bilge oils and grey waters. The collection of these wastes is carried out by contractors that are licensed under Part VA of the Public Health Act and also hold Gibraltar Port Authority Waste Operators Licences to operate within British Gibraltar territorial waters.

These wastes join the main waste streams in Gibraltar and their management is carried out taking into consideration the waste hierarchy, transfrontier shipment regulations and regulated through the Environmental Agency’s strict licencing conditions.

**Table 8. Waste from shipping landed at the Port of Gibraltar  
for years 2006-2010**

Category of Waste	Units	2006	2007	2008	2009	2010
Plastics	Cubic Metres	49	282	100	461	549
Floating dunnage, lining or packing material	"	35	74	42	78	167
Ground paper produce, rags, glass, metal, bottles, etc	"	210	372	71	380	484
Paper product, rags, glass, metal, bottles etc	"	202	301	101	360	559
Food waste	"	34	280	74	291	282
Incinerator ash	"	37	11	2	11	7
Oil slops	Tonnes	172	261	< 1	113	145

### **3.2.8 Clinical Waste**

Clinical Waste is classified as hazardous waste by virtue of Section 192KA and the properties contained in Part 2 of Schedule 11A of the Public Health Act.

Clinical Waste consists of the following:

- wholly or partly of human or animal tissue.
- blood or other body fluids, excretions.
- drugs or other pharmaceutical products.
- swabs or dressings or syringes, needles or other sharp instruments being waste which unless rendered safe may prove hazardous to any person coming into contact with it, and
- any other waste arising from medical, nursing, dental, veterinary, pharmaceutical or similar practice, investigation treatment care, teaching or research or the collection of blood or transfusion, being waste which may cause infection to any person coming into contact with it.

Clinical Waste arisings for the years 2005 - 2012 are detailed in Table 9 which shows a breakdown of the quantities by month. The clinical waste between January 2005 and April 2008 was taken to Tecnicas Medioambientales TecMed SA, Avenida

Card Bueno Monreal 56,20D 41012, Sevilla, Spain. The movements were subject to Transfrontier Shipment of Waste Regulation control.

A new clinical waste incinerator was commissioned in Gibraltar in April 2008 by Environmental Waste and Management Services Ltd at Governor's Cottage, Europa Advance Road and all clinical waste produced in Gibraltar is now incinerated at this plant. The plant is licensed under Part VA of the Public Health Act 1950 and Waste Incineration Act 2003 by the Environmental Agency.

**Table 9. Clinical Waste Arisings 2005 - 2012 (in litres)**

Date	2005	2006	2007	2008	2009	2010	2011	2012
Jan					220060	244025	227160	265320
Feb	16287	18321	27038	13545	221150	239870	222000	257040
Mar	20850	25028	20114	194400	242110	257835	241740	257160
Apr	17345	22214	26300	174120	220580	230590	225900	245780
May	19410	26099	6000	110160	224755	279445	232980	254940
Jun	12888	23125	-	-	243675	302420	223815	233880
Jul	15470	20586	-	-	235170	260380	223380	242710
Aug	15410	24608	25988	-	229515	247220	246180	246360
Sep	14190	19612	14407	32400	224205	316170	230140	222360
Oct	10859	26145	19346	64800	237110	262620	238860	249720
Nov	15566	19543	17858	31980	219350	262335	236050	248100
Dec	16409	15451	22935	-	236055	334620	234180	239658
TOTAL	191379	257800	203676	643290	2753735	3237530	2782385	2963028

### ***3.2.9 Waste Electrical and Electronic Equipment (WEEE)***

The amount of WEEE generated in communities is growing rapidly. The content of hazardous components in electrical equipment is a major concern for environmental management.

All electronic scrap components can contain hazardous substances such as lead, cadmium or beryllium. Recycling and disposal of electronic waste can involve significant risk to both humans and the environment at large. As a result, great care must be taken to avoid any detrimental impacts from the disposing of WEEE.

The Waste Electrical and Electronic Equipment Directive (WEEE Directive) is the European Community Directive (2002/96/EC) on waste electrical and electronic equipment (WEEE). This Directive became European Law in February 2003. The aim of this legislation on waste electrical and electronic equipment is to address and minimise the environmental impacts of electrical and electronic equipment when it reaches the end of its life.

The WEEE Directive has been transposed into Gibraltar law through the Environment (Waste) Regulations 2007 (WEEE Regulations). All electrical and electronic equipment used by consumers and electrical and electronic equipment intended for professional or domestic use are caught by the provisions of the WEEE Regulations.

There are ten main categories of WEEE described within the regulations:

1. Large household appliances e.g. refrigerators, coolers, radiators, microwaves, fans, etc.
2. Small household appliances e.g. toasters, fryers, clocks, vacuum cleaners, etc.
3. IT and telecommunications equipment e.g. laptops, desktops, printers, telephones, mobile phones, modems, etc.
4. Consumer equipment e.g. televisions, musical equipment, DVD and video players, etc.
5. Lighting equipment e.g. fluorescent tubes and lamps.

6. Electrical and electronic tools (with the exception of large-scale stationary industrial tools) e.g. power drills, circular saws, jig saws, etc.
7. Toys, leisure and sports equipment e.g. video game consoles, sports equipment with electrical and electronic components.
8. Medical devices (with the exception of all implanted and infected products).
9. Monitoring and control instruments e.g. smoke detectors, thermostats, heating regulators, etc.
10. Automatic dispensers e.g. automatic dispensers for hot and cold drinks, money, confectionary, etc.

The WEEE Regulations encompass all electrical and electronic equipment in the above categories with a voltage of up to 1000 volts AC or up to 1500 volts DC.

The Government of Gibraltar has provided a waste collection point for WEEE at the Civic Amenities Site situated at Europa Road. All WEEE is collected separately and exported for recovery by a licensed contractor under a Transfrontier Shipment of Waste arrangement to an authorised recycling facility in Spain.

**Table 10. Estimated weight of WEEEs exported between 2010-2012**

YEAR	WEEE (KGS)
2010	10,640
2011	7,740
2012	201,440

### **3.2.10 End of Life Vehicles (ELVs)**

Directive 2000/53/EC on end-of-life vehicles (ELVs) was adopted in September 2000 and was transposed into local legislation by the End-of-Life Vehicles Rules 2004. Its overall aim is to reduce the environmental impact of scrapped vehicles. The key objectives are to:

- (a) Facilitate and increase the reuse, recycling and recovery of ELVs;

- (b) Reduce the incidence of hazardous materials in vehicles and their components;
- (c) Improve regulation by introducing certificates of destruction for ELVs;
- (d) Ensure that ELVs are treated and disposed of in an environmentally sound manner;
- (e) Set up a system of producer responsibility for ELVs.

The Directive applies only to cars, vans and three-wheeled vehicles (excluding tricycles). It does not apply to lorries, coaches and other large commercial vehicles.

Statistics on the number of ELVs were first collated in the year 2008 and the table below shows the number of vehicles collected for decontamination and subsequent recovery.

The End of Life Vehicles are dismantled and de-polluted by a licensed contractor and subsequently crushed. The different fractions are then sent for recovery to Recuperacions Los Chichos SL, Chiclana de La Frontera, Cadiz, Spain, under the Transfrontier Shipment of Waste arrangements.

**Table 11. Number of End-of-Life Vehicles collected for Decontamination and Recovery.**

YEAR	VEHICLES (UNITS)
2008	177
2009	457
2010	172
2011	351
2012	277

### **3.2.11 Batteries**

The Batteries Directive (2006/66/EC) promotes a high rate of collection and recycling of waste batteries and accumulators and improvement in the environmental

performance of all involved in the life-cycle of batteries and accumulators, including their recycling and disposal.



The aim is to reduce the amount of hazardous substances – in particular, mercury, cadmium and lead - dumped in the environment; this should be done by reducing the use of these substances in batteries and accumulators and by treating and re-using the amounts that are used.

To ensure that a high proportion of spent batteries and accumulators are recycled, Member States must take whatever measures are needed (including economic instruments) to promote and maximise separate waste collections and prevent batteries and accumulators being thrown away as unsorted municipal refuse. Arrangements are made enabling end-users to discard spent batteries and accumulators at collection points in their vicinity and have them taken back at no charge by the producers, (or in the case of Gibraltar, retailers and wholesalers). Collection rates of at least 45% have to be reached by the 26<sup>th</sup> of September 2016. All batteries were exported for recovery to Reciclec Sociedad Anonima, Seville, Spain under the Transfrontier Shipment of Waste arrangements.

**Table 12. Estimated weight of batteries collected during 2010 - 2012**

Year	Batteries Collected (kgs)
2010	950
2011	2,116
2012	1,785

### 3.2.12 Tyres

Tyres are collected separately and stored at Europa Advance Road Waste Transfer Station. The tyres are then sent to an authorised reuse and recycling plant in Albacete (Spain) called Recuperaciones EMRO, Sociedad Limitada. Table 13 shows the amount of tyres in Tonnes (all types of tyres) sent for reuse and recycling.

**Table 13. Tyres sent for reuse and recycling (in tonnes)**

<b>Year</b>	<b>2004</b>	<b>2006</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Weight</b>	9.42	206.27	19.04	253.6	200	400	360

### **3.3 ORGANISATION & FINANCING**

In Gibraltar the financing of waste management includes private enterprises, public enterprises and semi-public entities. Each of the waste streams identified in section 2.4 (listed below) will be discussed in turn.

- Municipal Solid Waste.
- Non-hazardous bulky waste.
- Hazardous waste.
- Construction and Demolition Waste.
- Shipping Waste.
- Clinical Waste.
- Waste Electrical and Electronic Equipment (WEEE).
- End of Life Vehicles (ELVs).
- Batteries.
- Tyres.

**Please note** that costs have not been divided into collection, separation, treatment and final disposal. A global figure is provided which includes all of these stages. The reason for this is that there are very few companies in Gibraltar that deal with waste management. By revealing such detail, we would in effect be doing a disservice to the companies by revealing commercially sensitive data.

#### **3.3.1 Municipal solid waste**

Municipal Solid Waste costs are paid out of consolidated funds raised by municipal rates and tax.

### ***3.3.2 Non-hazardous bulky waste***

Non-hazardous bulky waste costs are paid out of consolidated funds raised by municipal rates and tax.

### ***3.3.3 Hazardous waste***

The organisation and funding for the collection, transportation, storage, administrative cost, recovery and disposal of most hazardous waste streams are charged by licensed operators to the individual producers of waste.

The Environmental Agency as Competent Authority under the Public Health Act imposes the following charges:-

1. Administration fee for the processing of waste licenses (Permits) is dependent on the time taken in processing the application and whether the Agency has had to engage outside consultants in the preparation of the licence. Licences are subject to a minimum fee of £75.00. Valid for two years.
2. Administration fee for the processing of application for the registration as a waste collector, dealer or broker is £40 valid for four years per application.
3. Administration fee for the processing of Transfrontier Shipment of Waste applications is dependent on the time taken in processing the application and is subject to a minimum fee of £75.00 TFS Authorisations. Valid for one year.
4. A Financial Guarantee is required from the exporter to cover shipment and recovery in the event of an incident.

The cost of exporting hazardous waste to Spain under Transfrontier Shipment of Waste arrangements is commercially sensitive information due to our small size and local competition.

### ***3.3.4 Construction and Demolition waste***

All inert construction and demolition waste is recovered and re used for backfilling. All material is taken by individual contractors to the Eastside Reclamation.

All hazardous construction and demolition waste material is sent to an authorised treatment facility in Spain under the shipment of waste regulations by the producer.

Government does not raise any charges for non-hazardous construction and demolition waste arriving at the site as it is all reused primarily for the creation of land.

### ***3.3.5 Shipping Waste***

These wastes join the main waste streams in Gibraltar and their management is dependent on whether they are hazardous or not. Municipal type waste is taken by licenced Port Waste Operators to the waste transfer station and treated with other municipal solid wastes. The costs of this waste are therefore accounted for under the figures given in 2.2.1.

Any hazardous shipping waste, for example incinerator ash and oil slops, is taken by private contractor to treatment plants in Spain under the transfrontier shipment of waste Regulations at the producer's expense.

### ***3.3.6 Waste Electrical and Electronic Equipment (WEEE)***

All WEEE is sent to authorised treatment facilities in Spain. The Government of Gibraltar has a contract for this purpose. The costs are paid from consolidated funds raised from municipal rates and tax.

### ***3.3.7 End of Life vehicles (ELVs)***

All ELVs are taken to a local ELV de-polluting authorised centre. The various component parts are currently being stockpiled until the quantities are sufficient to make the costs of transporting them to further treatment facilities in Spain economically viable.

### ***3.3.8 Batteries***

All batteries are sent to authorised treatment facilities in Spain. The Government of Gibraltar has a contract for this purpose. The costs are paid from consolidated funds raised from municipal rates and tax.

### **3.3.9 Tyres**

All tyres are sent to authorised treatment facilities in Spain. The Government of Gibraltar has a contract for this purpose. The costs are paid from consolidated funds raised from municipal rates and tax. The costs are paid from consolidated funds raised from municipal rates and tax.

### **3.3.10 Recyclables**

Glass, aluminium, plastics, paper and cardboard, are collected from the recycling points shown in Figure 3 and taken to:

Recuperadora Andaluza de Vidrio  
c/tra Dos Hermanas Km 51  
Utrera, Alcala de Guararia,  
Sevilla  
Spain

## **3.4 ASSESSMENT OF PREVIOUS OBJECTIVES**

### **3.4.1 Municipal Waste Disposal**

The 2004 Waste Management Plan indicated that the re-designing and refurbishment of the waste to energy plant for the disposal of municipal waste was expected to be commissioned by late 2004 or early 2005. This has not materialised and a new treatment facility is to be commissioned (refer to Chapter 7). In the meantime, all our municipal waste will continue to be sent to the Complejo Medioambiental “Sur de Europa” in Los Barrios (Cadiz) Spain.

### **3.4.2 Collection of Recyclables**

Since the publication of the previous Waste Management Plan the Government has introduced a collection scheme for glass, aluminium, batteries, plastics, paper and cardboard, and most recently WEEE. The collection and segregation strategy of these waste streams has improved considerably since the 2004 Waste Management

Plan. Government also provided two sites which are open to the general public for the disposal of WEEE at no cost. A site for ELVs has also been provided.

A new privately operated plant is currently licensed for the dismantling and de-polluting all ELVs. Producers of these wastes have been encouraged to segregate their hazardous wastes and to dispose of them separately at approved collection sites or by collection by authorised contractors.

A stricter enforcement regime, e.g. controls at the frontier with Spain to ensure that all exported waste including “green listed” wastes are authorised.

## 4. WASTE MANAGEMENT PLANNING

### 4.1 FACTORS INFLUENCING FUTURE WASTE DISPOSAL ARRANGEMENTS

#### 4.1.1 Population

In 2012 the total population of Gibraltar was 30,001. This figure includes Gibraltarian, other British and non-British residents. Ministry of Defence personnel stationed in Gibraltar are also included in this figure. The population of Gibraltar is estimated to increase at a growth rate of 0.613% per annum for the next two years (to 2015), reducing to 0.4% per annum thereafter, giving a projected total population in 2030 of 32,657.

Examples of future developments include additional housing aimed at attracting new residents to Gibraltar, building of new hotels etc., which might result in further increased numbers of residents in Gibraltar.

#### 4.1.2 Visitors to Gibraltar

Tourism constitutes one of Gibraltar's most important economic pillars. Although the population of Gibraltar numbers only some 30,000 people, there were nearly 12 million visits in 2012, giving it one of the highest tourist-to-resident ratios in the world.

In 2012, a total number of 11,787,015 visitors called at Gibraltar of which 11,310,698 were visitors arriving by land, 309,051 by sea and 167,266 air arrivals. Table 14 below shows the number of visitors that called into Gibraltar from 2002 - 2012.

**Table 14. Visitor Arrivals in Gibraltar 2002 – 2012**

YEAR	BY AIR	BY SEA	BY LAND	TOTAL
2002	96,439	136,910	7,375,112	<b>7,608,461</b>
2003	114,484	164,052	7,502,815	<b>7,781,352</b>
2004	134,497	182,677	7,311,555	<b>7,628,729</b>
2005	150,303	206,030	7,434,420	<b>7,790,753</b>
2006	143,914	225,567	7,815,661	<b>8,185,142</b>
2007	159,666	292,675	8,977,761	<b>9,430,102</b>
2008	164,939	325,181	9,664,884	<b>10,155,002</b>
2009	160,713	363,213	9,778,312	<b>10,302,238</b>

2010	131,147	328,264	11,071,345	<b>11,530,756</b>
2011	164,428	351,534	11,424,581	<b>11,940,543</b>
2012	167,266	309,051	11,310,698	<b>11,787,015</b>

These figures include a number of frontier workers who travel into Gibraltar each day from nearby Spain. The “By Air” figures, in Table 14, include persons arriving at Gibraltar but whose final destination is Spain. It has not been possible to obtain specific figures for these groups of persons but it is reasonable to assume that they form a relatively small proportion of the total daily visitors to Gibraltar and for the purposes of estimating the future quantities of waste arisings will not materially affect the overall amounts.

In estimating the future quantities of waste which will require disposal, consideration must be given to the ultimate resident population to be catered for and an assessment of the likely numbers of visitors to Gibraltar over the next 20 years.

#### **4.1.3 Waste Trends**

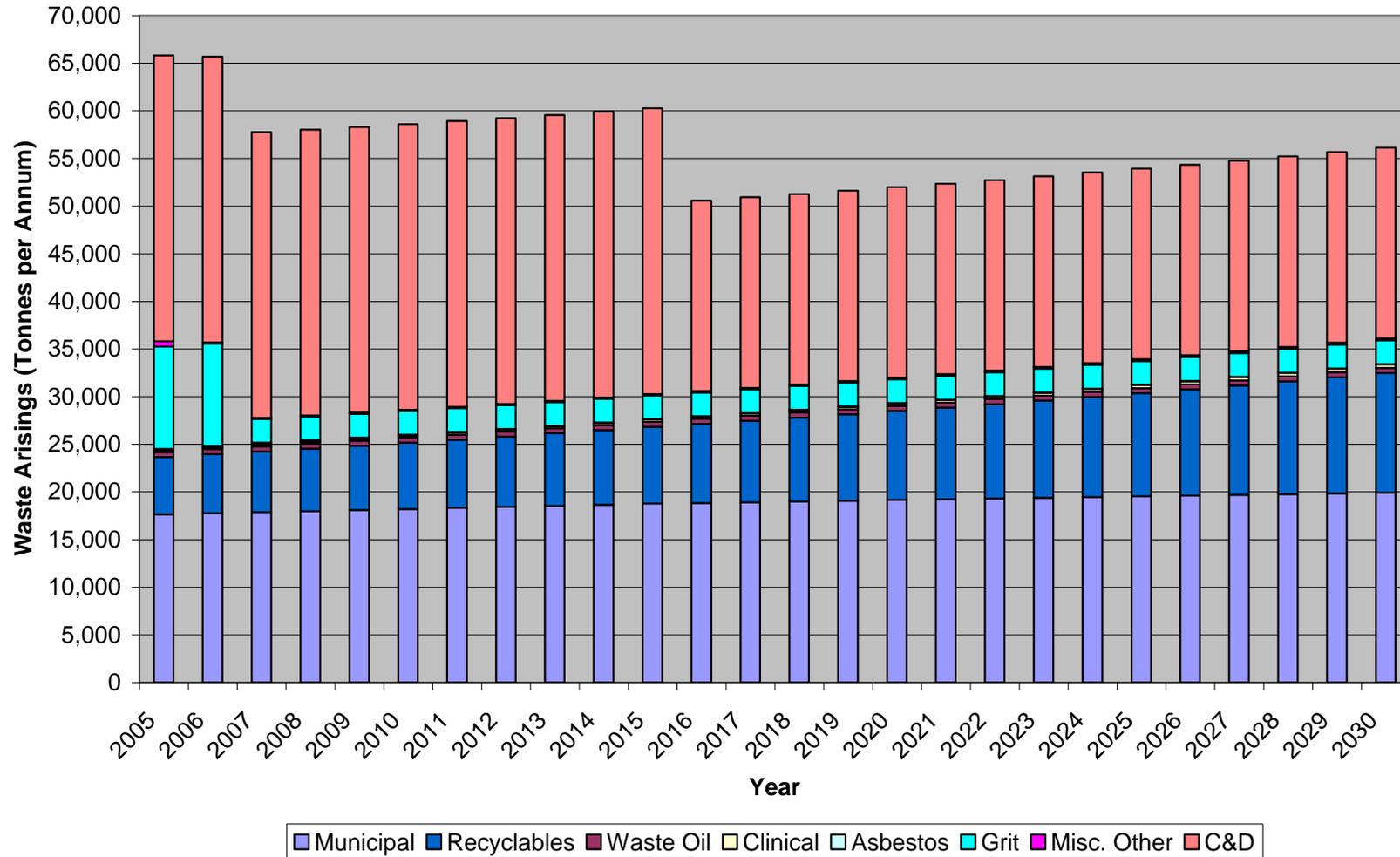
Between 2002 and 2012 MSW generation in the EU-27 has been relatively stable. However there are large differences between European countries; for example, in 2009 municipal waste generation ranged from 831 kg per capita in Denmark to 316 kg per capita in the Czech Republic. There are also countries in which municipal waste levels are increasing, such as Malta, Greece and Denmark.

The treatment of municipal waste in the EU has changed significantly between 2000 and 2009. By 2009, 38.2% of municipal waste was placed in landfills, compared with 57.6% in 2000. This 4.5% annual reduction from 2000 to 2009 supports the objectives of the EU directive on the landfill of waste. During the same period, the amount of municipal waste incinerated, recycled or composted increased substantially. Incineration rose from 16% in 2000 to over 20% in 2009, representing an average annual growth of 2.8%. Similarly, recycling rose by an average of 4.7% per year from about 16% in 2000 to over 23% in 2009. Composting showed the biggest average increase of 5.5% per year from 11% in 2000 to almost 18% in 2009.

Recycling and composting together accounted for about 41% of municipal waste treatment in 2009.

In the case of Gibraltar, it is anticipated that the overall growth in municipal waste arisings will grow in the 0.5% range; this is based on current and projected population growth rates and the actual increase in municipal waste between 2005 and 2010. The municipal waste arisings are therefore estimated to rise from 17,650 tonnes per annum in 2005 to 19,920 tonnes per annum in 2030; however, this figure may be less as a result of an increased segregation of recyclables. Graph 1 illustrates the predicted waste arisings for various waste streams in Gibraltar.

**Graph 1. Estimated Total Waste Arisings in Gibraltar - 2005 to 2030**



#### **4.1.4 Future Development**

Gibraltar's size limits building developments because of the lack of land and space suitable for construction. Future projects are likely to be mainly concerned with upgrading existing facilities or providing selected developments on former Ministry of Defence land or on land reclaimed from the sea for major infrastructural projects.

The recent development boom will clearly have an influence on the population growth and consequently the potential future waste arisings within Gibraltar. In general, it is envisaged that future development will focus mainly on the provision of new tourist facilities, shopping, residential and marina complexes; with growth in waste arisings consequently being focused on the municipal waste stream (Other developments are associated with the growth of Gibraltar as a financial and commercial centre).

For the foreseeable future, waste streams, such as clinical wastes and hazardous wastes, shall continue to be treated in the same manner and recycling shall continue to be encouraged. After careful consideration of the various options for waste management it is Gibraltar's intention to commission a new waste treatment facility (see section seven below) which will treat our municipal waste.

The expansion of recycling services and the development of a new waste treatment facility will allow Gibraltar to be more self-sufficient in handling its waste, in line with the self-sufficiency principle and reduce the amount of waste sent to landfill, as per the landfill directive. Thereby helping to maintain our environment and quality of life.

## **4.2 WASTE MANAGEMENT OPTIONS**

### **4.2.1 Waste Recovery**

Waste recovery is being encouraged where possible. The recycling scheme since its inception, has been developed and expanded to recover a greater number of recyclable materials and the number of bins has also increased. During 2012 and

2013 the Department of the Environment has hosted a number of awareness days to encourage the public to recycle more; informing them of the environmental benefits of recycling. Adverts to encourage recycling have also been created. The Department of the Environment's new 'Thinking Green' website also provides information on recycling and other waste issues.

#### ***4.2.2 Municipal waste and non-hazardous bulky waste***

The various options for re-use, recovery and disposal of the waste generated in Gibraltar have been considered. The size of Gibraltar and the amount of waste produced limits the available options and makes options like re-use and composting uneconomical (section 3.1).

The ideal waste disposal option for Gibraltar with its unique circumstances and characteristics would be one where –

- Demands on land use are kept to a minimum;
- Human health and the environment are safe guarded;
- Waste is reduced as far as possible, and
- Recovery of waste is encouraged.

At present and until the new waste treatment plant is commissioned, all municipal waste collected will continue to be taken to the Complejo Medioambiental Sur de Europa.

As part of these temporary arrangements municipal waste is collected as usual and unloaded at a waste transfer station at Europa Advance Road, from where it is subsequently taken to Complejo Medioambiental Sur de Europa for processing.

#### ***4.2.3 Recycling***

Government is committed to recycling; the criteria for which is decided on practicality and economical terms. In 2008 the 'bring' recycling scheme, i.e. residents bring their own recycling to communal collection containers, was adopted for glass and cans.

This was then expanded in 2012 to include plastics, tetra-brik, paper and cardboard and most recently in 2013 to include small items of WEEE.

**Table 14. Recycling Quantities**

Collection period	Glass	Cans	Mix packaging	Paper/ Cardboard
Sept-Dec 2008	23,130 kg	3,120 kg	-	-
Jan-Dec 2009	83,150 kg	11,000 kg	-	-
Jan-Dec 2010	78,340 kg	12,020 kg	-	-
Jan-Dec 2011	114,010 kg	12,360 kg	-	-
Jan-Dec 2012	126,400 kg	14,620 kg	-	-
Jan 2013	14,100 kg	-	5,760 kg	7,670 kg
Feb 2013	6,008 kg	-	4,640 kg	3,970 kg
March 2013	13,940	-	5,440 kg	6,130 kg
April 2013	13,590 kg	-	8,160 kg	7,060 kg
May 2013	10,300 kg	-	5,490 kg	8,610 kg
June 2013	15,680 kg	-	4,640 kg	6,050 kg
July 2013	13,980 kg	-	6,900 kg	8,130 kg
August 2013	10,340 kg	-	5,450 kg	4,970 kg
Sept 2013	15,700 kg	-	5,440 kg	7,600 kg

In 2009, 1.6% of cans were recycled this has risen to only 2.35% in 2012. In 2009 10.22% of glass was recycled and this has risen to only 14.4% in 2012. These figures are extremely low compared with EU target figures of recycling 50% of our municipal waste by 2020. In order for Gibraltar to meet its targets, it needs a serious commitment from the community. However, the expansion of recycling services, although recently introduced, seems to be encouraging greater participation in recycling.

Public awareness and advertising campaigns will be increased with the aim of encouraging the general public, including commerce, to utilise these recycling facilities.

In February 2013, Government also introduced a new collection facility from all Government departments, schools and hospitals, for wood pulp products, ink cartridges, small batteries and small items of WEEE.

Waste such as metal scrap and large items of WEEE, are collected separately. Government provides two facilities where the public and commerce are encouraged to deliver items of WEEE. All WEEE collected is then taken by a licensed contractor to approved recovery plants in Spain. These wastes are exported to Spain under the Shipment of Waste Regulations controls to approved recovery plants.

The amount of other wastes, including hazardous wastes, generated by a population the size of Gibraltar, in the absence of any significant manufacturing activities, is too small to justify the provision of recovery, disposal or treatment facilities in Gibraltar. The costs of providing and operating such facilities to deal with these small amounts of wastes would not be economically viable. Therefore the only alternative option available to Gibraltar is exporting the waste to the nearest recovery or disposal facilities in Spain. Waste oil, however, is partially recovered at a licensed recovery plant locally and the final product transported to Portugal for further treatment and re-use.

#### ***4.2.4 Incineration of Clinical Waste***

Clinical waste is generated from sources such as medical, nursing, dental and veterinary practices. The main sources of clinical waste are St Bernard's Hospital, King George V Hospital and Military Medical Centre. The remainder is produced by private surgeries, dental clinics and a veterinary practice.

All clinical waste is required to be properly segregated from domestic waste, be placed in yellow plastic bags and into marked 60 litre plastic containers. Waste, such as sanitary towels, nappies or incontinence pads originating from households are not considered to be either infectious or clinical waste. Similar waste may also be generated in for example, schools, nurseries and shopping centres. Here again

the usual assumption is that such waste is not clinical as the source population is essentially healthy and the risk of infection should usually be no greater than for domestic waste.

The Clinical Waste Incinerator built at Europa Advance Road has been in full operation since May 2008. The Clinical Waste Incinerator is adequate to meet Gibraltar's needs for the disposal of clinical waste and all of this waste will continue to go to this facility. In case of unexpected shutdown of the plant, the clinical waste will be exported as was formerly the case to an approved waste disposal plant in Spain, in accordance with the Shipment of Waste Regulations.

#### ***4.2.5 Disposal of construction and demolition waste***

The reclaiming of land from the sea on the eastern side of Gibraltar commenced in 1988. A length of coastline approximately six hundred metres extending from Catalan Bay to the southern side of Eastern Beach has been used as the base for this reclamation project. This project entailed the reclamation of approximately two hundred and fifty metres out to sea along the entire length of the abovementioned coast. Construction Waste, i.e. solely non-biodegradable, non-hazardous waste, consisting of building debris, rubble and sand was used for reclamation purposes. The reclamation project was completed in June 2012 and construction waste is currently being stockpiled in this area in preparation for possible further reclamation. Such reclamation will be preceded by the construction of suitable regional limestone revetment walls on all three sides. The area behind these walls and in front of the existing reclaimed land will be lined with a suitable geotextile material before the stockpiled material is used to infill the area.

The site is fully supervised and the personnel monitor all incoming vehicles to ensure that only non-biodegradable, non-hazardous waste is disposed of in the site.

#### ***4.2.6 Scrap yards/End of Live Vehicles (ELVs)***

All scrap metal is collected by licensed operators for decontamination, recovery of different metals and subsequent exportation to Spain. One of the scrap yards is licensed for the dismantling and depolluting of ELVs. All scrap metals and other

waste fractions arising from the operation are exported to Spain under the Shipment of Waste arrangements.

#### ***4.2.7 Oil Sullage Plant***

There was a waste oil treatment facility situated at Western Arm North Mole, which came into operation in 2001. This waste oil treatment facility was licensed under the Public Health Act to treat waste oil.

However, as a result of a major fire and explosion at the plant, the facility has not been operational for some years and all waste oil is currently being trans-shipped to Portugal for treatment as necessary, disposal or regeneration.

#### ***4.2.8 Batteries***

There are currently 23 bins strategically sited throughout Gibraltar for the separate collection of spent batteries (refer to Figure 3).

#### ***4.2.9 Civic Amenities Site***

The Government provides a site at Europa Advance Road where householders dispose of their bulky timber items, white goods, electrical goods, mattresses, building debris and metal scrap for free.

White goods and electrical goods mentioned above are stored until there is a sufficient quantity for it to be exported to a licensed recovery facility in Spain under the Shipment of Waste Regulations.

## **5. WASTE MANAGEMENT PLAN REVIEW**

The Waste Management Plan will be reviewed every four years and will take into account any known changes in waste streams, waste facilities and waste management options available.

### **5.1 CONTINGENCY PLAN**

At present all municipal waste is being exported to Spain for recycling or landfilling. The construction of a new waste management facility will allow Gibraltar to become more self-sufficient in handling its municipal waste and will reduce the amount of waste requiring exportation to Spain.

### **5.2 IMPLEMENTATION, MONITORING AND REVIEW**

#### ***5.2.1 Implementation***

The Waste Management Plan forms the basis of a sustainable approach to the management and organisation of waste disposal in Gibraltar. The implementation of the plan will be ensured by Government through the Department of the Environment and the Environmental Agency, both operationally and through planning procedures.

At present the number of companies registered for the collection of waste is unlikely to increase given market conditions and Gibraltar's size. These companies collect waste from the various households and establishments and deliver directly to the waste transfer station. In the case of hazardous wastes, these are stored by licensed contractors for final recovery or disposal under Shipment of Waste Regulations controls in Spain or other EU countries.

All Government contracts on waste collection will ensure that all the requirements of this plan are strictly adhered to and that all operations are carried out using the best practicable environmental option. Government contractors and private entities will be encouraged where possible to:-

(a) reduce the generation of waste;

(b) where further waste reduction is not practicable, re-use either for the same or an alternative purpose.

Only if neither of the above offer an appropriate solution should waste be disposed of.

To encourage waste reduction and reuse, all Government contractors are issued with literature and information on waste management. In 2013 the Government issued its Environmental Action and Management Plan in which there is a commitment to numerous environmental improvement policies. Contractors and private entities are encouraged to adopt an Environmental Policy document or subscribe to an Environmental Management System e.g. ISO 14001.

### ***5.2.2 Monitoring***

The Environmental Agency will continue to regularly monitor all waste management facilities to ensure that operations are carried out in accordance with licensing conditions. The inspection frequency will be commensurate with the type of waste facility. In addition the Government of Gibraltar, through the Department of the Environment, will monitor and ensure that Government contractors comply with contract conditions.

### ***5.2.3 Review***

The operation of policies in this Plan and waste disposal trends and developments will be monitored and will be reviewed if any information or procedures become unsuitable or incorrect. Environmental issues, regulatory controls and waste management technologies are evolving rapidly and therefore regular reviews will be required to keep pace with any material change in circumstances.

## 6. WASTE PREVENTION PROGRAMME

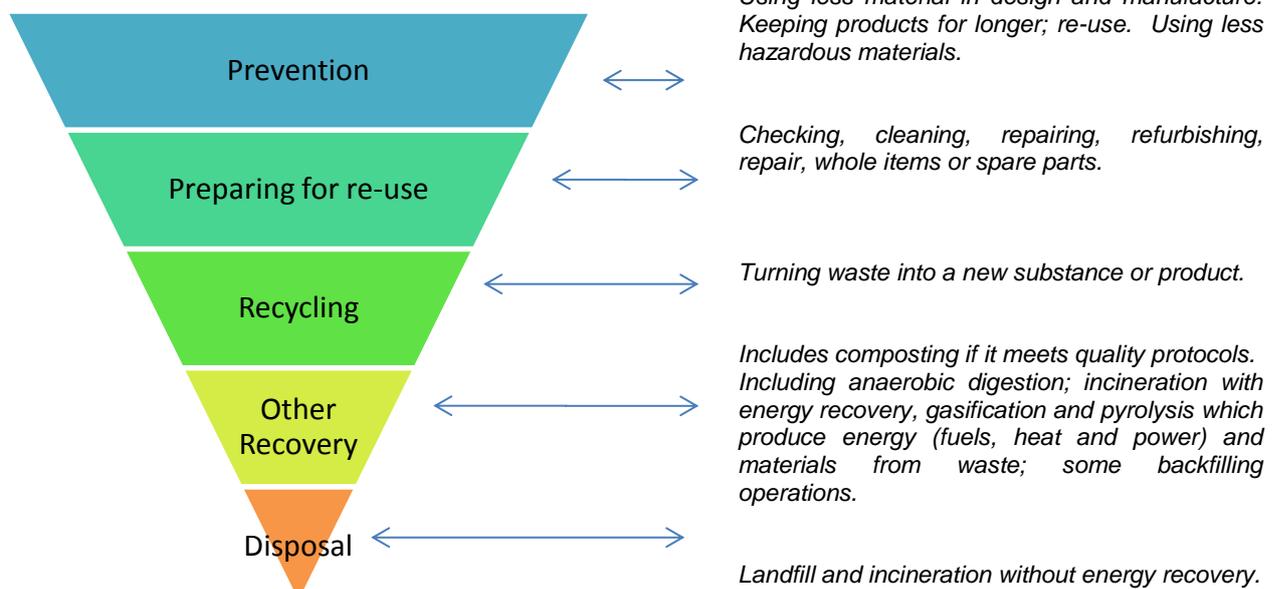
### 6.1 INTRODUCTION TO WASTE PREVENTION

Waste prevention as a key strategic element of European waste policy is becoming increasingly important. It is clear that the amount of waste generated is growing every year. In particular, it is recognised that waste growth has been historically linked to economic growth and this link needs to be broken in order to achieve waste prevention. Our society based on consumerism, coupled with our ‘throw-away’ attitude, greater affluence and excessive product packaging have meant that waste arisings have continued to grow. Since one of the main goals of the EU is to secure economic growth and prosperity, it is imperative that economic growth should not be restricted by the generation of waste.

The revised Waste Framework Directive defines waste prevention as measures taken before a substance, material or product has become waste, that reduces:

- a) the quantity of waste, including through the re-use of products or the extension of the life span of products;
- b) the adverse impacts of the generated waste on the environment and human health; or
- c) the content of harmful substances in materials and products.”

#### ***The Waste Hierarchy***



As prevention has the highest priority in the EU waste hierarchy, efforts should aim at reducing the quantity of waste generated. Two terms are commonly used in this respect: ‘waste prevention’ and ‘waste minimisation’.

Preventive Measures			Waste Management Measures			
Prevention	Reduction at source	Re-use of products	Quality Improvement	Recycling	Energy recovery	Pre-treatment
<b>Waste Minimisation</b>						

OECD definition of waste prevention and waste minimisation

Preventing excess waste from occurring delivers the best environmental and economic outcome, and is key to moving towards a more sustainable economy. The will to reduce waste arisings and to increase resource efficiency should be a priority for all sectors of the economy.

The term ‘waste prevention’ encompasses a range of policy options and has a broad range of benefits, from designing products so they last longer, are easily repaired and use fewer or less hazardous resources, reducing the amount and toxicity of waste, before recycling, composting, energy recovery and landfilling become options; or use of different business models which promote a new way to consume goods, like service-based or collaborative consumption models.

Waste prevention can also be achieved by reducing the quantity of material used in the creation of products and increasing the efficiency with which products, once created, are used. Preventing waste by limiting unnecessary consumption and by designing and consuming products that generate less waste are strict forms of avoiding waste. Waste prevention also encompasses actions that can be undertaken once a product reaches its end-of-life: rather than discarding the product, the final user should consider re-use, repair or refurbishment as options. Extending a product’s lifetime or considering options like reuse are forms of prevention through diversion of waste flows.

### **6.1.2 Waste Prevention Objectives**

The Waste Prevention Programme aims to protect the environment and human health by preventing or reducing the adverse impacts of the generation and management of waste, by reducing overall impacts of resource use and improving the efficiency of such use. It will:

- improve the environment in support of sustainable economic growth.
- help businesses recognise and act upon potential savings through better resource efficiency and preventing waste, to contribute to a more sustainable economy.
- help businesses recognise the opportunities for growth through offering new and improved products and services.
- Make it easier for people to find out how to reduce their waste, and how to repair broken items, and reuse items they no longer want.
- Support action by businesses and the public to capitalise on these opportunities.

By increasing the level of efficiency of material use, and thereby reducing waste arisings, this will contribute to breaking the link between waste arising and the environmental impacts associated with the generation of waste, known as 'decoupling'.

### **6.1.3 Waste Prevention Planning**

The Waste Prevention Programme will be an integrated part of the Gibraltar Waste Management Plan. Annex IV to the Waste Framework Directive lists 16 examples of waste prevention measures. These are divided into:

- (i) Measures that can affect the framework conditions related to the generation of waste, such as the use of economic instruments, promotion of research and development or the development of indicators;
- (ii) Measures that can affect the design and production, and distribution phase, such as the promotion of eco-design, the provision of information on waste prevention techniques to businesses or the promotion of environmental management systems (e.g. EMAS);

- (iii) Measures that can affect the consumption and use phase, such as promotion of eco-labels, the use of awareness campaigns for the general public or the establishment of repair and re-use centres.

Gibraltar, as already stated in this plan, is a net importer of products. There is no manufacturing or production which means that in terms of waste prevention, it can only focus its efforts on point (iii) and to a lesser extent point (i).

## **6.2 THE ROLE OF GOVERNMENT**

Government has a key role in driving forward a reduction in waste arisings. The Government's waste prevention policy focuses on waste prevention and minimisation at the consumption and use phase. This is aimed at household, commercial and industrial levels.

The following measures shall be adopted as part of the waste prevention strategy (extracted from Annex IV, 2008/98/EC):

1. The use of planning measures, or other economic instruments promoting the efficient use of resources.
2. The development of effective and meaningful indicators of the environmental pressures associated with the generation of waste aimed at contributing to the prevention of waste generation at all levels.
3. Economic instruments such as incentives for clean purchases or the institution of an obligatory payment by consumers for a given article or element of packaging that would otherwise be provided free of charge.
4. The use of environmental education in schools, awareness campaigns and information provision directed at the general public as well as specific sectors.
5. The promotion of creditable eco-labels.
6. In the context of public and corporate procurement, the integration of environmental and waste prevention criteria into calls for tenders and contracts. Government policy at present includes environmental criteria which covers minimum packages for relevant tenders.

7. The promotion of the reuse and/or repair of appropriate discarded products or of their components, notably through the use of educational, economic, logistic or other measures.

It is the Government's intention to hold a series of seminars to promote the adoption by the private sector of the Government's Environmental Action and Management Plan. Part of these seminars will focus on waste management, including waste prevention. One of the aims will be to motivate and help businesses to implement a waste management programme by encouraging better, cleaner, greener, more resourceful business practices, through the reduction of the consumption of resources which will in turn avoid the generation of pollution. The ethos "Prevention is better than cure" will be promoted in this context of waste prevention/management. The adoption of environmental managements systems will also be encouraged. The introduction of a Government Green Procurement Policy will enable the public sector to obtain the best value for money and procure low-carbon, environmentally friendly goods and thereby help achieve reductions of carbon emissions, energy and water consumption, and waste generation. The long-term aim is to try to ensure that cleaner greener production and environmental efficiency become the established practice in both the public and private sectors of our community.

### ***6.2.1 The Role of Business***

The opportunities for businesses are not limited to resource efficiency savings through internal business practices. This could include a move towards more sustainable business models which support the development of products and services with environmental benefits, reduced resource use/waste, and which are economically viable.

A supportive corporate culture and leadership commitment to integrate waste prevention activities is important to driving action, as well as engagement across the whole supply chain to fully achieve the benefits. Businesses are encouraged to

consider how they can work with their supply chain to make the most of these opportunities.

The first step in being able to reduce waste requires an understanding of both the amount and type of waste produced by an individual organisation. Businesses should undertake work to assess their own practices, and the practical steps they can take to make those practices more efficient.

### ***6.2.2 The Role of Individuals***

There are many examples where voluntary action is achieving real benefits in terms of encouraging waste prevention and increasing levels of reuse, and delivering real social benefits.

Consumers are encouraged to consider their own buying habits to identify where they could make savings, for example, wasted food. There are several simple practices which all contribute to reducing the amount of waste produced; from reusing shopping bags, repairing items instead of automatically replacing them, passing on items no longer needed or selling them.

### ***6.3 Monitoring and Assessment***

The waste prevention programme is an on-going process and shall be reviewed every six years and or as a result of any changes in legislation.

A widely recognised rule in environmental policy is that “what is not measured is not managed”. Developing indicators and benchmarks is therefore essential in tracking progress on objectives and targets and to evaluate the efficacy of waste prevention policies. However, past experience in EU countries has shown that difficulties in measuring waste prevention using reliable indicators have limited the efficacy of waste prevention measures. This is often the result of the inherent difficulty in measuring ‘prevented’ waste, as opposed to measuring waste recycled or waste sent to landfill.

Nevertheless in order to assess performance, indicators such as the amount of waste being generated each year per person will be monitored.

## 7. FUTURE WASTE MANAGEMENT IN GIBRALTAR

H.M. Government of Gibraltar initiated a tender process this year to provide a waste treatment facility with the aim of achieving the highest environmental standards in the treatment of its Municipal Solid Waste (MSW). Additionally, Gibraltar has to meet the requirements of self-sufficiency and proximity principles, as stipulated under article 16 of the Waste Framework Directive (2008/98/EC).

The Waste Treatment Facility (WTF) to be constructed is to be comprised of:

- a) a Waste reception, sorting and storing facility for specific and separate waste-streams;
- b) a Materials Recovery Facility;
- c) a Waste Treatment Plant (technologies of advanced thermal treatment are being procured).

The Waste Treatment Facility will receive the general MSW collections on a daily basis and separate the different waste streams before extracting 'dirty' recyclables from the mainstream MSW. The general waste stream will then be processed in the treatment plant, which will be of an advanced thermal treatment process (e.g. pyrolysis, gasification, anaerobic digestion or similar).

Government has required that the treatment processes have the capability of:

- i. Generating electricity and/or;
- ii. Producing potable water and/or;
- iii. Producing biodiesel and/or;
- iv. Producing syngas.

The tender process was started in February 2013 when the advert was published in the Official Journal of the European Union (OJEU) under Contract No 55516-2013. The tender process has now closed and tender submissions are now being reviewed and assessed by Government.

When the Waste Treatment Facility is commissioned, Gibraltar's waste management will change from reliance on neighbouring Member State Spain for all waste stream disposal and treatment, to that of self-sufficiency on a great part of Gibraltar's waste, although reliance on Member State Spain will continue to a lesser degree with some of our waste streams.

## Bibliography

1. Directive (2008/98/EC) of the European Parliament and of the Council on Waste and Repealing certain Directives.
2. Regulation (EC) No.1013/2006 of the European Parliament and of the Council on Shipments of Waste.
3. Council Directive 1999/31/EC on the Landfill of Waste.
4. Council Directive 96/59/EC on the Disposal of Polychlorinated Biphenyls and Polychlorinated Terphenyls.
5. Directive 2006/66/EC of the European Parliament and of the Council on Batteries and Accumulators and Waste Batteries and Accumulators and repealing Directive 91/157/EEC.
6. Directive 2000/76 of the European Parliament and of the Council on the Incineration of Waste.
7. Directive 2002/96/EC of the European Parliament and of the Council on Waste Electrical and Electronic Equipment (WEEE).
8. Landfill Act 2002.
9. End-of-Life Vehicles Rules 2004.
10. Waste Incineration Act 2003.
11. Part VA Public Health Act 1950.
12. Environmental Waste Regulations 2007.
13. Gibraltar Waste Characterization Study - Golder Associates - 2007.
14. Waste Management Study Gibraltar – Golder Associates - 2007.
15. Preparing a Waste Management Plan – A methodical guidance note – European Commission 2011.
16. Waste Treatment Options Assessment Ramboll 2013.
17. Consultation on the Waste Prevention Programme for England August 2013.
18. European Commission Eurostat – Municipal Waste Statistics.