

Review of the Islands Waste Management Strategy Interim Report

Purpose

1 The purpose of this interim report is to provide an update of work undertaken on the Review of the Islands Waste Management Strategy, and to highlight areas where additional work is required prior to the full review of the Strategy and development of an implementation Plan. It is not at this stage intended as a document for formal consultation. However the Department recognises that for many on the Island waste management is an issue of high priority, and that there may be matters discussed on which you may wish to make comment. Any such comments are welcomed and will be considered as part of the on-going review.

Introduction

2 In 2000 the Department of Local Government and the Environment (DLGE) published its Waste Management Plan (the 2000 Plan). The 2000 Plan, incorporating the approved Waste Management Strategy and policy statement was intended to provide for a 20 year period a 'framework for detailed implementation of the Waste Management Strategy'. However the 2000 Plan acknowledged that there would be a need for major review every five years to take account of changes in policy, regulation, or waste management practices.

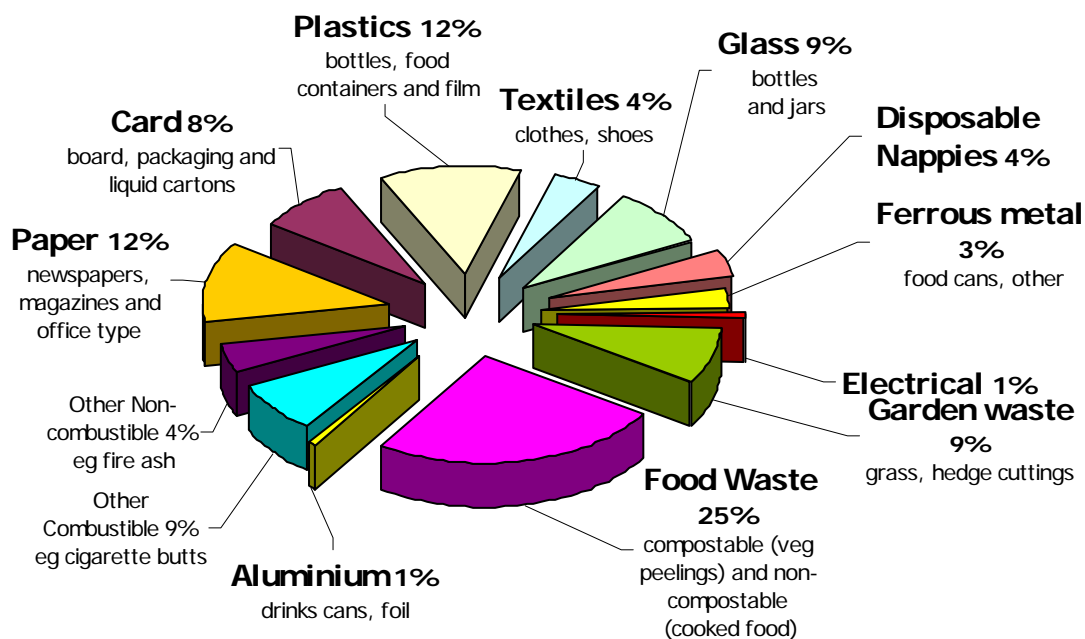
3 Over the past six months considerable work has been undertaken to progress the strategy affording the opportunity to consider, in a more systematic and purposeful manner, the information required for, and anticipated outcomes of, the review. This has, in turn, highlighted several areas of work which need to be addressed as part of the Strategy Review. The time required to address these matters has impacted on the timetable for undertaking the review. Whilst it is acknowledged that there is a need to progress the review expediently, it is considered that this should not be done if it compromises the ability of Government to develop a robust set of objectives, policies and targets to ensure the Island delivers sustainable management of its wastes over the next two decades.

Update Report

4 Since the adoption of the 2000 Waste Management Plan ("the 2000 Plan"), significant progress has been made towards the development of infrastructure and facilities to enable the Island to manage its waste in a more sustainable way. These developments, together with an analysis of areas not yet addressed, are set out in **Appendix A**.

5 Preliminary work has also been undertaken to identify and consider the options for sustainable management of individual waste types (**Appendix B**). However, it should be pointed out that for many waste types work still needs to be done to: collate data on waste arisings; consider in detail each of the options for managing those waste types; identify a preferred option which takes account of the need to conserve resources and reduce consumption of energy; and, identify and cost the facilities/systems for delivering each preferred option.

6 Following the agreement in Tynwald in January 2006 for the need for kerbside collection of recyclables from households, a kerbside collection partnership was established with Local Authorities. Following approval for funding, a detailed study into the options for, and costs of, implementing kerbside collection, has been ongoing. Interim data has been obtained on waste household waste composition (see pie chart below)



7 The all Island Kerbside Study is due to report in late-March 2007, and will provide for the first time detailed compositional analysis of the types and amounts of household wastes produced across the Island, forecasts of household waste arisings, and the potential impact of kerbside collection on diverting waste from the EfW. It will also indicate a preferred option for implementing kerbside collection on the Island and costs (set up and annual) associated with that option. This will allow the Government to consider the impact of future waste arisings on the capacity at the EfW, given the need to manage the EfW as a strategic waste management facility and bearing in mind household waste makes up 90% of waste delivered to the EfW. It will also identify what new schemes and infrastructure will be required to deal with the diverted waste.

GAP analysis

8 A robust strategy and plan which will over time effect change and meet objectives requires a number of elements. The baseline review has identified the following gaps or deficiencies in information which need to be addressed to allow the Plan to be progressed:

Baseline Data required to compile the strategy

9 Baseline data is a key prerequisite for developing a strategy. Without data on waste arisings - amounts, types and source - it is not possible to monitor change (growth or reduction) or seek to set targets. At present there is no comprehensive reliable data base on the amount of waste arising on the Island and how each tonne or litre of that waste is managed. Since the £100/tonne waste disposal charge was

introduced, a significant tonnage of waste, previously recorded at the landfill site, has been diverted to other disposal routes. However, without data from these facilities there is no means of auditing waste movements or the total amount of waste being disposed of.

10 Progress is being made on collation of disposal data for certain wastes. For example, for household waste accurate weighbridge data is available for the amount of collected MSW disposed of via the EfW. This is currently circa 50,000 tpa. As part of the work on the kerbside collection strategy, the Department is currently working to itemise this fraction of the waste stream in more detail. However, even for household waste there is still a need for provision of auditable data for waste that is collected at Civic Amenity Sites and reused or recycled. The Department will be working with Local Authorities to provide universal standards for the operation of Civic Amenity Sites and these will include provision of statistical information on the amounts and methods for 'disposal' of Civic Amenity Site collected household waste.

11 For commercial and industrial waste there is only comprehensive data on the combustible element of this waste category. Whilst this data can be broken down by waste producer it does not provide information on waste composition. There is no comprehensive information on organic or green waste arisings (commercial, industrial and domestic), or any proxy data, based on sample surveys (on-Island or UK), which could be applied to Manx companies.

12 Data on wastes shipped off island for disposal under UK Transfrontier Shipment Regulations is available, as are tonnages for material shipped off island which are claimed for under the Recycling Subsidy Scheme.

13 Three commercial and industrial sector waste surveys have been undertaken on the Island over the past three years, each seeking to identify types and tonnages of waste produced and disposal methods. The overall response rate to these surveys has been poor. This problem could in part be overcome by requiring submission of obligatory annual waste returns (for larger companies), which is covered through the conditions applied to some existing Waste Disposal Licences. The data is incomplete as:-

- not all licences contain such a condition;
- there is currently no data base of data returns that are completed;

14 Inert waste is particularly problematic to record as it can be utilised in activities that are not technically waste disposal. There is therefore a need for a review of the classifications of 'waste management activity', and specifically the need for a form of registration of activities classified subsequently as exempt from licensing.

15 Therefore, the strategy needs to identify the specific data requirements and promote the introduction of the necessary schemes to obtain, collate, monitor and manage that information. Without all the above information it is not possible to plan for provision of waste management facilities and schemes over the plan period and beyond, or identify legislation required to ensure waste is managed in the best environmentally acceptable method.

Stakeholder consultation

16 Key to developing a strategy is knowledge about the proposals and plans of those producing waste and those managing waste. There are a number of key stakeholders

(Government Departments, industry representatives, regulators) whose input to inform the draft strategy is pivotal. To date, consultation on waste issues has been on an ad hoc, operational level, as and when issues have arisen. Preliminary discussions with a number of key stakeholders have already taken place, and these discussions need time to develop further. In addition there are key players off-Island, such as the UK Environment Agency, who need to be consulted.

Where do we want to go?

17 Essential to any Plan or Strategy, including that for managing waste, is an objective or set of objectives to provide the overarching guiding principles within which goals and targets can be set and progress assessed. We need to know where we want to get to in order to plan our route. In considering issues relating to environmental, economic or national development the objective of achieving sustainable development is applied. Whilst there is no blue-print for how this can be achieved for waste management, as for other forms of development, there are a number of widely-acknowledged (Government Business Plan, UK and International documents) aims which need to be considered in the context of the Isle of Man: Climate Change and carbon emissions (essentially reducing energy consumption and burning of fossil fuels which are acknowledged as key causal factors for Climate Change); the waste hierarchy; Island self-sufficiency; and the proximity principle. How management of the Islands waste accords with each of these principles has not to date been considered in detail.

Sustainability and self-sufficiency

18 The principle of achieving development that is considered sustainable is challenging for the Island. Two key tests over the life of the strategy will be how far we are able to move waste management further up the waste hierarchy (prevention, reduce, reuse and recycle), and whether we can achieve this in accordance with the proximity principle, under which waste should be managed as close as possible to the source of waste arisings. Whilst 'zero waste' may for some communities be an aspiration, it is an unrealistic proposition for the Island at this point in time.

19 The Isle of Man is required under international legislation to manage the waste it produces, the exception being wastes for disposal pre-notified and agreed by the UK, and wastes sent to the UK for recycling. Economies of scale and the highly technical nature of some waste management processes dictate that the Island will never be totally self-sufficient in managing its waste. For example, the Island will not for the foreseeable future, be able to sustain an iron smelting plant or a paper mill. The waste strategy will therefore require reliance on both on and off-island management routes, but will also need to consider the best balance between both options to provide an assurance that waste management routes will be sustained.

Waste Management Off-Island

20 Under the Basle Convention/TFS Regulations the Isle of Man, as a country outside the EU, can ship material to the UK for recycling or recovery, or for disposal if there are no facilities on-Island and the UK agrees it is not viable to provide them. The necessary paperwork is complete in terms of the Duly Motivated Request (DMR) and TFS.

21 For waste types that could either be sent to the UK or further a field for recycling or managed on-Island through the EfW, the decision about which waste management option to utilise becomes one of environmental verses economic cost benefit analysis. In

terms of the waste hierarchy, recycling is above recovery of energy, but for many businesses the decision over which option to use is very much influenced by its financial viability, although this is not the case for all companies some of which have environmental policies or accreditation. Financial viability is, in turn, is affected by the costs of shipping and buoyancy of the recycling market, both of which are variable.

22 In developing the waste strategy the Island will need to ensure, therefore, the on-going availability of waste management facilities in the UK, and our access to them. Without such capacity the Island would be forced into the position of stockpiling wastes until a suitable route were identified. To minimise risk, therefore, the option of developing contingencies or on-Island provision for management of more difficult wastes needs to be explored.

Waste Management on-Island

23 Since the introduction of the producer pays policy, there has been an increase in the number and type of waste facilities on-Island. Waste transfer stations have developed which allow mixed wastes loads to be separated to allow for recycling, with incinerable and non-incinerable loads identified. The development of the EfW has guaranteed a long-term bulk disposal route for combustible materials that were previously being disposed of to landfill. The number of companies involved in recycling has also increased, although many are effectively acting to pre-treat and bulk-up materials for shipping to the UK/Europe for reprocessing. Longer term, the Island could seek to encourage the development of facilities/companies on-Island for reprocessing materials. The mechanisms for supporting research and development for such on-Island facilities need to be developed.

24 Where facilities have been developed on-Island to provide for the long-term, environmentally sound, management of specific waste streams such as the EfW, it is imperative that the capacity at these facilities is managed efficiently and effectively. This includes strategic landfill capacity. Current projected increases in arisings of the incinerable fraction of the Island's waste stream are a cause for considerable concern, particularly the household waste stream. The kerbside collection study will provide options to reduce the amount of household-derived waste needing disposal to the EfW. Whichever option is selected, this will be at a significant cost. This cost, however, must be balanced against the consequences of not investing in waste reduction. This is both in terms of the need to develop additional waste disposal capacity and the loss of materials for recycling and increased energy consumption required to make replacement materials.

Government Policy Review and Co-ordination

25 Isle of Man Government is a major purchaser, developer, producer of waste, regulator of development and activities, employer and source of funding. As such, it provides an opportunity, through its policies, to deliver a co-ordinated approach to implementation of a strategy for sustainable waste management. Adopting a 'green Government' approach will address, inter alia:-

- Reduction in waste: considering refurbishment schemes;
- Use of recycled products in - design and construction, the office environment;
- Recycling of waste – within construction and demolition projects, within the office environment; through development of recycling facilities;
- Funding - for research & development in waste reduction or recycling.

26 At present, no one Department is responsible for review and co-ordination of Government policy which results in a number of areas where there is apparent policy conflict. For example, in relation to the policy for the use of primary aggregate in construction/road schemes; fiscal benefits for the extraction of primary aggregate; need to demonstrate value for money when considering introduction of recycling schemes. This policy conflict needs to be resolved.

Cost

27 Before a Waste Strategy can be adopted it will need to be subject to an economic assessment, that is, an estimate of the fiscal cost to the Island of implementing the strategy, in part or in total. Both public and private sector interest will focus on whether as an Island we can afford the additional costs undoubtedly incurred in managing our waste more sustainably. Some costs are relatively clear, such as the cost of under provision of disposal capacity and the need to develop additional facilities. By its very definition 'sustainable' waste management development demands consideration of the environmental costs of not implementing a sustainable waste strategy.

28 Environmental 'costs' are often hidden, longer term, and are inherently subjective. However, globally it is now an almost universally accepted maxim that abuse of non-renewable resources, energy consumption and carbon emissions are the major threat to our environment whether this be as a small Island community or a large developing nation. Considerable research has been undertaken in other countries to provide a quantitative measure for environmental cost of, for example, recycling versus disposal. The information in this research will need to be used to advise the Waste Strategy, in consultation with key stakeholders.

29 The charging structure for the management of waste remains the focus of attention for many, specifically in terms of the application of the producer pays principle. Whilst the cost for disposal of waste will continue to have a direct influence on decisions as to how waste is managed, this is only one of the mechanisms for delivering the strategy. As such it will need to be considered, along with legislation and regulation, as part of the strategy implementation process.

Summary and Timetable

30 The review of the Waste Management Plan provides an opportunity to assess, in the broadest sense, current practices and policies on-Island which relate, in some form, to how waste is managed. This review has highlighted a number of key issues which will need to be addressed as part of the preparation of the Waste Management Strategy and beyond. The Plan (policies and targets) will not necessarily address fully the issues highlighted in the shorter term. Effecting a change in culture and behaviour, policy and practice, can be a long- term process involving education, change in policy or legislation, and use of fiscal policies. Establishing systems to collect, collate and analyse data equally takes time. Once that data is available decisions will then need to be taken regarding options for managing the waste streams which may require commitment of capital expenditure for the development of facilities.

31 However, this report has identified what needs to be achieved in the longer term, and has set out a timetable for the review and development of the Plan and Strategy in the interim. Although subject to on-going review, the Plan will provide at any one point in

time, an overarching national framework within which policies can be developed and subsequent development and activities assessed.

Addressing the GAPS

32 There is an acknowledged need to address the 'GAP's' before a Waste Management Plan and Strategy for the Island can be prepared. However given the complex nature of some of the issues (data collection systems or changes in legislation for example) they will take time to resolve. It is not considered pragmatic to defer drafting the Strategy and Plan until such issues are resolved. There is a need both within Government and amongst external agencies for at least a draft Strategy and Plan to be available by the end of 2007. The following interim timetable is therefore proposed for preparation of a draft Strategy and Plan for consultation.

February/March 2007:	Progress Report to Department: stakeholder consultations; data identification and issues; interpretation of sustainability principles;
April 2007:	Results of the Household Kerbside Collection Study Published – options and costs;
April-June 2007:	Local Authority/Government consultation on Kerbside Report: selection of option and implementation plan;
June/July 2007:	Department report: Draft WMP/Strategy & timetable for green/organic waste study. Preparation of a programme for implementing Kerbside Recycling, issue of tenders, consultation with Local Authorities, programme of education and publicity. Progress on stakeholder consultations; data identification and issues.
2008:	Implementation of kerbside collection scheme.

2000 Waste Management Plan proposals – analysis of progress

Minimisation

What we said.....

- To encourage by appropriate means the minimization, in terms of quantities and harmfulness, of waste at source.

What we have done.....

In the absence of historical robust statistics on waste arisings and methods management it is difficult to gauge the success or otherwise of this aim. The introduction of the producer pays policy has certainly focussed the efforts of commerce and industry on the amount and hazardousness of waste they produce. Many companies have undertaken waste minimisation initiatives, such as separation of potential wastes to allow for reuse. For householders however this has not been the case. There is no financial incentive for households to reduce the amount of waste they produce, and changing the behaviour of a 'consumer society' is extremely difficult to achieve. As such promoting waste prevention or minimisation is often low priority. With household waste weights increasing broadly in line with GDP there is a real need to promote waste prevention, particularly for organic food wastes.

Recycling

What we said.....

- Encourage, improve and promote the re-use of recyclable materials for example glass, aluminium, paper, clothes, construction and demolition wastes.
- Collection banks should be sited within the towns and villages.

What we have done.....

- Following the agreement of the Waste Management plan in 2001, the Department established 57 public bring sites around the Island containing a total of 180 recycling banks. At present there are now 100 sites, 48 of which are full public access sites (e.g. CA sites / Grandstand) and 52 are restricted sites (e.g. schools). These sites now contain over 300 recycling banks in total.
- There are 160 Department owned glass banks at 80 pubs and hotels around the island, provided for the collection of commercial glass. These banks were provided and serviced by DLGE until the autumn of 2003. However, when waste charges were introduced in autumn 2003, this responsibility changed, and commercial glass collections by the private sector commenced.
- Established a system for collecting and recording data on the amount by weight of material recycled through the public recycling banks, and other materials e.g. textiles
- Introduced in 2005 a dry cell battery recycling scheme for householders in conjunction with the Co-op stores
- Waste charge increases have provided an incentive for increased source separation of construction and demolition type waste and aggregate recycling and for the recycling of other commercial wastes such as glass, paper as well as textiles.

- Provided subsidy payments to cover the costs of transporting recyclable goods to the UK. Subsidies are paid for recycling of paper, scrap metal, lead acid (car) batteries, and for recycling of glass (2004/05 £475k)
- Developed a programme of activities for waste education for use in schools and with interest groups. In 2005/06 58 educational activities undertaken in schools ranging from full waste audits to full school assemblies, and individual class lessons.
- Developed a bespoke web site for waste minimisation and recycling
- Utilised the local media and public events for promoting of waste minimisation and recycling
- Provided advice and support for local companies in terms of waste minimisation and recycling and assisted in setting up schemes for recycling throughout the Isle of Man
- Worked with Local Authorities to consider options for kerbside collection and assisted in setting up, monitoring and review of a pilot kerbside scheme.
- Liaised with the UK authorities concerning the implementation of new EU and revised UK waste legislation

What we haven't done.....

- Determined how best to respond to the need to recycle WEEE in terms of the infrastructure and charging mechanisms required for the management of both domestic and commercial end of life electrical and electronic equipment
- Developed a strategy for recycling including setting targets for materials recovery

Civic Amenity Sites

What we said.....

- Provide sites for householders to dispose of bulky household waste, garden waste and other items not normally collected. These sites will also provide facilities for the deposition of recyclable and re-usable materials and other problematic wastes such as oils and batteries. In addition to this two sites to act as an "Waste Exchange Centres" where goods can be taken to be made free of charge for re-use by other people.

In 2006 there were four regional Civic Amenity sites in operation

- Northern CA site - located adjacent to Wrights Pit East
- Western CA site - near St Johns
- Eastern CA site - Middle River, Douglas
- Southern CA site - near Port St Mary

Civic Amenity (CA) Sites

What we have done.....

- Gained Tynwald approval for all island residents access to all CA sites, without the need for permits
- **Northern CA site** - Residents of the North still utilise the Department run site adjacent to Wrights Pit East landfill in Bride, the Department together with the Local Authorities in the north are looking for an appropriate place to build a new site nearer to the main centre of population. The first site that progressed through to planning

application was refused, and the Department is currently undertaking a feasibility study to see if a more appropriate location can be found.

- **Eastern CA site** – development of bespoke CA site at Middle River Industrial Estate.
- **Southern CA site**- facilitated a green waste composting scheme, the product being used for the remediation of the adjacent landfill site. The site is set up to accept waste from small commercial producers, which are charged for the use of the site and collect the charges for recycling items such as refrigeration units.

What we haven't done

- Ensured all CA sites act as "exchange centres" for potentially reusable household items, or for collection of hazardous WEEE for recycling.
- Ensured all CA sites operate to minimum standards (hours of opening, provision of facilities etc)
- Ensured all CA sites provide calibrated tonnage data on waste disposed of and waste recycled through CA sites
- Set targets for recycling through CA sites

Landfill

What we said.....

- The landfill of putrescible waste should cease as soon as the treatment can be achieved by incineration.
- After the commencement of incineration of waste, established landfills must be able to accommodate incineration residues and non-incinerable wastes. Furthermore, the sites should be capable of receiving putrescible waste during the period of non-operation of the incinerator plant.

What we have done.....

- Ceased the landfill of putrescible wastes at Wrights Pit East.
- Maintained landfill capacity for the deposit of bottom ash. The option of recycling the ash is being investigated. Air Pollution Control Residues (APCRs) which are classified as hazardous, are exported to the UK for treatment prior to landfilling into a hazardous landfill site.
- Applied for planning permission to develop a replacement strategic landfill site at Archallagan plantation.

What we haven't done:

- Obtained planning permission for a strategic landfill facility to replace Wrights Pit East
- Provide robust and comprehensive statistics on the amount and types of waste for which landfill is the only practicable option.

Incineration

What we said.....

- Putrescible municipal wastes will be disposed of in an incinerator, which will comply with EC Directives.

- Clinical waste, veterinary waste, fallen animals, confidential and security waste will be disposed of in an incinerator, which comply with relevant EC Directives.
- A waste complex should be developed to facilitate management, site facilities and energy efficiency common to both plants. The incinerator should be in operation no later than December 2000(1)

What we have done.....

- Develop an EFW which is fully compliant of EC Waste Incineration Directives.
- Commissioned the Primary waste stream at the EFW in August 2004. From May 2004 all household putrescible waste has been disposed of at the to EFW.
- Completed commissioning of the secondary waste stream in July 2005, through which clinical waste, veterinary waste, fallen animals, confidential and security waste are now disposed of.
- Provided a disposal route on island at the EfW for waste mineral oil, originally exported to the UK.

Industrial/Commercial/Special Wastes

What we said.....

- Where wastes cannot be reused they should be exported for treatment/disposal.
- A facility should be established for the reception, assessment and storage of these wastes.

What we have done.....

- Set up a problematic waste management service on the Isle of Man in January 2004 appointing Cleanaway UK Limited to provide a collection and disposal service for problematic wastes arising on the Isle of Man.
- Establish a hazardous waste store in Jurby to take small amounts of hazardous waste.
- Set up a dry cell battery recycling scheme that exports batteries that contain hazardous components to the UK.
- Provided financial support for the recycling of lead acid (car) batteries through the recycling subsidy scheme
- Provide advice for the establishment of commercial schemes to recycle end of life lamps, fridge/freezers, PCs and TVs.

What we haven't done:

- Provided a dedicated facility for the reception, within a guaranteed minimum time period, and assessment of special wastes from all producers both commercial and households.