

1. Introduction

The Solid Waste Management Strategy for the Maltese Islands was first published in October 2001. In January 2009, the first update to the Solid Waste Management Strategy was launched by the Ministry for Resources and Rural Affairs. This was issued for public consultation from 23 January 2009 to 23 March 2009.

The updated strategy was subjected to a Strategic Environmental Assessment (SEA) and this report represents the final stage of this SEA. The SEA commenced on 23 January 2009 through the consultation of the Draft Updated Strategy and 'Scoping Report'. The draft Environmental Report was sent to the SEA Audit Team and to identified stakeholders on 23 April 2009 and was under consultation until 1 July 2009. Based on the comments received from the Malta Environment and Planning Authority (MEPA) and the SEA Audit Team, the Environment Report was revised and made public on 6 October 2009. This was under consultation until 24 November 2009 and no further comments were received during the second consultation.

During the consultation process of the Draft Waste Management Strategy, 16 individuals and organisations responded. A total of 100 specific issues were raised. The objective of this report is to highlight how the strategy has been revised in the light of the comments received from the public consultation and also in the light of the recommendations made in the Environment Report.

2. Purpose of this Document

This document provides a schedule of the representations received following the public consultation carried out on the January 2009 Draft Solid Waste Management Strategy (entitled 'A Solid Waste Management Strategy for the Maltese Islands – First Update'). The document provides the Ministry for Resources and Rural Affairs' (MRRA) response to the representations received and sets out how the Waste Management Strategy (herein referred to as the 'WMS') has been revised in light of public consultation feedback.

In cases, where MRRA considers that the strategy should not be revised in the light of certain comments, a reasoned justification for not doing so is provided.

It should be noted that during the SEA process, the ownership of the Waste Management Strategy has been given to the Office of the Prime Minister. As the comments and the responses were prepared prior to this time, they still refer to the Ministry for Resources and Rural Affairs.

3. Summary of Comments Received from Public Consultation

The representations received during the public consultation varied from site-specific concerns related to the proposed new facilities to concerns that the strategy does not sufficiently prioritise waste minimisation techniques. These ranged from support for inclusion of principles such as the waste hierarchy, to the need for the strategy to be re-worded to include a baseline analysis of the success of the current (2001) strategy. Some representations called for the strategy to more clearly focus on the issues of construction and demolition waste. MEPA and the Office of the Prime Minister commented that the Strategy should be supported by the inclusion of targets

and should mainly deal with waste streams that have targets that are driven by specific legislation/obligations.

The following list identifies the individuals / organisations who responded to the draft waste management strategy:

1. GRTU
2. Dr J A Doublet
3. Mr James Vella
4. Sannat Local Council, Gozo
5. OPM & MEPA
6. Friends of the Earth Malta
7. Kids Eco Summit 2009
8. Mr Alan Buttigieg
9. Ms Kristina & Mr Louis Borg
10. The Building Industry Consultative Council (BICC)
11. Ms Judy Henman
12. Nature Trust (Malta) and Din L-Art Helwa
13. Marsaxlokk Local Council
14. Perit Carmel Cacopardo
15. Chamber of Engineers
16. Kummissjoni Ambjent (KA) Arcidjocesi ta' Malta

Various issues were raised by the above individuals/ organisations and a detailed list of all the issues raised and the response and change to the strategy is given in Appendix A. The list below summarises the main issues that emerged from the public consultation:

(a) Construction and Demolition Waste

The problem should be addressed, particularly in light of regulatory obligations.

(b) Waste Minimisation

The Draft Waste Management Strategy places too much reliance on processing waste and not enough on moving towards 'zero' waste.

(c) EU Obligations Only

The Strategy should focus on regulatory requirements and targets only.

(d) Targets and Format of the Document

The Waste Management Strategy should be target driven.

The format of the document makes it difficult to identify objectives, policies and targets.

(e) Hazardous Waste

The Strategy needs to be expanded for Waste Electrical and Electronic Equipment (WEEE), End-of-life vehicles (ELV), etc

(f) Location of New Facilities

The Waste Management Strategy should justify the location of waste facilities.

(g) Processing Technology

The Waste Management Strategy should justify preferred technologies.

(h) Background Documents

The Waste Management Strategy should make clear reference to background documents and these should be made public.

(i) Liberalising the waste market

There should be further measures to provide incentives for the private sector to invest in waste management

The following table provides a brief summary of the headline issues which have emerged and assigns all comments received to the Strategy to the relevant section of the January 2009 WMS. For example, comments about the use of different waste processing technologies such as MBT & Incineration are associated with Section 6.5 of the Draft WMS ('Facilities for the Management of Solid Waste').

Document Chapter / Section Number	Object	Support	Support with Conditions	Observations	TOTAL
0.0 Whole Document – General Comment on Waste Hierarchy			2		2
0.0 Whole Document – Comments on Whole Strategy			1		1
0.0 Whole Document – General Comment on Targets	1				1
1.0 Chapter 1 I- Introduction				1	1
2.0 Chapter 2 – Contextualising the Strategy	4		1	2	7
3.2 – Monitoring & Enforcement	1			6	7
3.3 – Consultation				2	2
3.4 – Technical Standards / Codes of Practice		1	1		2
3.6 – Land Use Planning Policy				1	1
3.8 – Implementation of Waste Management Principles	1			2	3
3.9 – Private Sector Involvement	2				2
4.1 – Ownership	1				1
4.2 – MEPA	1				1
4.3 – WasteServ Malta Ltd	1			1	2
4.5 – Municipal Solid Waste (MSW) Collection Services Contracts	1		1		2
5.0 – Chapter 5 – Economic & Financial Measures	1		1		2
5.1 – Charges for Waste Management Facilities and Services	1		1	1	3
5.2 – Charges for Local Councils in the Collection of MSW				1	1
5.4 – Responsibilising Waste Producers	1			2	3
5.5 – Preferential Public Procurement Policies		1			1
5.6 – Incentives for Locally Manufactured Recycled Products / Recycling Processes				1	1
6.0 – Chapter 6 – Technical / Operational Measures	1				1
6.1 – Construction and Demolition Waste	5		1	1	7
6.2 – Agricultural and Animal Husbandry Waste	1			1	2
6.3 – Municipal Solid Waste	6			1	7
6.3.4 – Waste Collection Practices		1			1
6.4 – Hazardous and Other Industrial Waste				2	2
6.4.3 – Other Developments	5				5
6.5 – Facilities for the Management of Solid Waste	15	1		3	17
6.6.1 – Producer Responsibility	1				1
6.6.2 – Civic Responsibility				1	1
6.7 – Contextualising Our Actions	2				2
7.0 – Chapter 7 – Education and Communications				1	1
7.1 – Communications				1	1
7.2 – Education		1		2	3
7.5 - Research		1			1
TOTAL:	52	6	9	33	100

4. Summary of Recommendations made in Environment Report

Chapter 9 of the Environment Report provides a summary of recommendations that should be considered in the Revised WMS. The following are the recommendations made:

Issue	Description	Recommendation
Implementation	The WMS would benefit from more detail on implementation.	The WMS should include a timetable for the identified actions, specifying who is responsible for implementation of the various actions and by when. In general, the final WMS should seek to provide targets for Actions that can be monitored. These targets should be strategic in nature, but should be realistically capable of monitoring in order to benchmark the progress and success of the WMS and identify issues to be considered in subsequent reviews.
Targets	The WMS would benefit from inclusion of targets to help measure its implementation.	The WMS should incorporate targets for implementation, wherever possible, for example, with respect to renewable energy contribution, GHG emissions, waste minimisation, diversion of waste from landfill, increase in recycling, technical standards, fiscal incentives, integrated policy management and hazardous waste.
Education	The WMS would benefit from further elaboration on how the Strategy will be communicated and public participation facilitated.	The WMS should include a general principle and commitment to public consultation – seeking to go beyond ‘minimal legal requirements’ and affirm a commitment ensuring communities feel involved.
Commitment to Best Available Technology (BAT) and monitoring	The WMS should commit to the principle that in examining technologies – the proposer will be committed to securing BAT and subsequently monitoring new waste facilities.	WMS should incorporate a principle that commits to BAT. In considering final technologies for MBT, consideration should be given to life cycle assessment that has already been carried out.
Environmental Protection	Although planning policy will consider impacts at the project level, the WMS would benefit from a commitment to the principle of high standards of design and mitigation in the planning process given the strategic importance of the document.	WMS to incorporate a commitment to best practice in terms of the planning of new waste facilities to ensure protection of public amenity and environmental quality.
Construction	Further commitments	Given that approximately 80% of waste produced in

and Demolition Waste	to Construction and Demolition Waste are required.	Malta is C&D waste, the WMS could include measures to tackle its minimisation.
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5. Main Changes to Waste Strategy following Public Consultation

The table below summarises the main changes being proposed to the Draft Waste Management Strategy following the public consultation and the recommendations of the Environment Report.

Construction and Demolition Waste	<p>The management of Construction and Demolition waste has now been clearly identified as one of the Strategy objectives. A separate section of the strategy has been devoted to Construction and Demolition Waste and cognisance has been given to the challenging targets set for member states through the Waste Directive to reuse / recycle / recover at least 70% of all Construction and Demolition waste by 2020.</p> <p>The revised strategy also places greater emphasis on the implementation of Building Industry Consultative Council (BICC) recommendations regarding Construction and Demolition Waste and also on the reviewing and changing of the current regulatory, construction and planning practices that can lead to significant demolition waste. The strategy proposes that the Austrian Twinning Study on "Recycling of Construction and Demolition Waste in Malta" be used as a basis to promote the minimisation and recycling of Construction and Demolition waste. The recommendations put forward in this study include fiscal incentives to reduce the extraction of virgin stone / primary materials in favour of the re-use of restoration stone / secondary materials.</p>
Waste Minimisation	<p>The annual growth rate for municipal and construction waste continued to increase between 2001 and 2007. The draft strategy identified waste minimisation as a priority although the measures to reduce waste were not clearly communicated in the document and no targets were included for waste minimisation. The revised Waste Management Strategy identifies a target to reduce the rate of growth in Municipal Solid Waste and includes waste minimisation as a specific policy objective.</p>
Landfill Tariffs	<p>The revised Waste Management Strategy acknowledges the increased landfill tariffs which are in line with the Polluter Pays Principle and which will increase the level of accountability within the waste sector. The Strategy also commits Government to continue to monitor the effects of the higher disposal charges for waste in order to determine the impacts of higher gate fees on minimising waste and limiting the overall amount of waste presented for recycling</p>

	and disposal to landfill.
Enforcement and Monitoring	The revised Waste Management Strategy will retain a commitment to enforcement and monitoring.
EU Obligations	The draft Waste Management Strategy does not highlight EU related targets for waste management. Corresponding EU / locally negotiated waste management targets will be identified for each objective of the revised Waste Management Strategy. The revised strategy highlights its commitment to the 'Producer Responsibility Directives' – a collective term for the various Directives that ensures that businesses assume responsibility for the waste they introduce to the market. This will continue through the implementation of the Eco Contribution Act and other measures.
Targets and Format of the Document	The revised strategy includes targets in line with the EU Directives. The document has also been reformatted to relate more clearly to principles and objectives. In this way the document provides a clear statement of Government's waste management policy. The revised Strategy has also been prepared as a strategic policy document, rather than "to be read in conjunction with the 2001 Strategy", in order to make it more easy to interpret and understand.
Hazardous Waste	The revised strategy places emphasis on the completion and operation of the Ghallis Hazardous Waste Landfill and associated storage and treatment facility. Emphasis has also been placed on technical standards for the management of certain hazardous waste streams, which are needed for compliance with specific legislation such as End of Life Vehicles (ELV) and Used Batteries and Accumulators. Relevant EU targets for the various hazardous waste streams are included in the revised Waste Management Strategy.
Location of New Facilities	The revised Waste Management Strategy retains references to the sites being considered for the new facilities, whilst taking cognisance that these sites will be studied in terms of environmental impacts. The revised strategy recognises that any new facilities require permitting through MEPA and any environmental studies as required by MEPA will be carried out during the process.
Processing Technology	The revised strategy reconfirms that further treatment facilities are needed to manage residual waste and this will be achieved through a combination of two mechanical biological treatment plants and an incineration facility. The revised strategy includes a policy commitment to maximise energy recovery through these technologies and recommends the co-treatment of animal and municipal solid waste.

Background Documents	The revised strategy lists all the background documents referred to during the update of the 2001 waste strategy. These background documents have also been made available via the Ministry for Resources and Rural Affairs website.
Liberalising the waste market	The revised strategy retains a commitment to further liberalise the waste sector and move towards regionalised waste collection services. The role of WasteServ as 'an operator of last resort' is re-iterated and the Strategy commits to reviewing existing barriers to private sector investment.

6. Revised Waste Management Strategy

The revised Waste Management Strategy has been re-formatted to include principles and headline policy objectives. This is backed up by proposed actions and targets where relevant.

The Revised Strategy is based on the following Policy Principles:

- (a) Sustainability** – Waste will be managed in a way that does not compromise the ability of future generations to meet their own needs.
- (b) Proximity** – Waste should be treated or disposed of as close as possible to the point where it arises.
- (c) Precautionary** – Taking precautions now to avoid possible environmental damage or harm to human health in the future.
- (d) Polluter Pays** – Polluters and producers should bear the full responsibility and cost of the consequences of their actions.
- (e) Waste Hierarchy** – The Strategy will be implemented on the basis of the following preferences: (i) Waste prevention / reduction; (ii) Re-use, (iii) Recycling, (iv) Recovery, (v) Disposal.
- (f) Achieve Best Practicable Environmental Option (BPEO)** – Greatest benefits for the least damage to the environment as a whole.
- (g) Climate Change** – To explore opportunities for energy from waste and managing waste in a way that reduces green house gas (GHG) emissions.
- (h) Waste as a Resource** – Saving fossil fuels and new materials.
- (i) A Collective Strategy** – Government will encourage partnership with all stakeholders.

Nine high level policy objectives have been included to guide the strategy and its actions. The table below summarises how the 9 Policy Objectives relate to the principles that underpin the Waste Management Strategy.

Objective	Policy
Objective 1 – Promote Waste Minimisation	To implement measures aimed at reducing the growth in the generation of Municipal Solid Waste, with a long term aim of zero net growth in waste generation per capita.
Objective 2 – Improve national capacity to manage Industrial Solid Waste and Hazardous Waste	Government will prioritise the development and implementation of technical standards for various hazardous waste streams and facilities and promote technical standards for the management of other industrial solid wastes. Priority will be placed on the opening and operation of a hazardous waste storage and treatment facility at Ghallis.
Objective 3 – Promote Producer Responsibility	Continue to implement fiscal incentives to ensure producers take responsibility for the waste they generate.
Objective 4 – To manage Construction & Demolition Waste in a more sustainable manner	Schemes and incentives will be introduced to minimise the generation of Construction and Demolition Waste. The revised strategy will promote policy and sectoral reform to work towards recycling 70% of all Construction and Demolition waste by 2020.
Objective 5 – Promote Waste to Energy	To promote waste management technologies that secure energy from waste. The favoured technologies include Mechanical & Biological Treatment (MBT) and use of Biogas and Refuse Derived Fuel (RDF) for combustion.
Objective 6 – Changing Behaviour	Education and communication will be key to the long term implementation of the Waste Management Strategy and changing social attitudes and behaviour. Education and communication have been prioritised to ensure a sense of collective responsibility for sustainable waste management. Government Ministries, Local Councils and other public sector bodies will be expected to demonstrate leadership in their own waste management practices and internal policies in line with this strategy. Government will also promote waste management related research such as the management of C&D waste, energy recovery and land maximisation. Enforcement will continue, where necessary, to ensure changing behaviour and a review of the adequacy of existing enforcement resources and procedures will be undertaken.

Objective 7 – More Recycling and Separation of Biodegradable Waste

To continue to work towards improvements in the proportion of residual household and commercial waste that is separated for recycling. In the period up to 2015, recycling targets established through the Packaging Waste Directive will be aimed for, whilst aiming towards a 2020 target of 50%. Priorities to encourage recycling include:

- Continued education and raising of public awareness to increase recycling participation rates;
- Continue to increase the number of bring-in sites;
- Role out of responsibility for the management of bring-in sites to the private sector via Local Council procurement;
- A review of current collection practices to consider whether collection regimes can place further bias towards the collection of pre-separated waste over mixed waste; and
- Promote further private sector involvement in the recycling sector.

Objective 8 – Reduce reliance on Landfilling: Implementing Preferred Technologies to deal with Residual Waste Streams

The Revised Waste Management Strategy will continue to promote measures that reduce reliance on and take-up of the limited landfill space, in line with the waste hierarchy. Following waste minimisation efforts and recycling of some waste fractions, the Waste Management Strategy will promote the management of residual waste streams through a combination of the following technologies:

- (i) Mechanical and Biological Treatment (MBT); and
- (ii) Incineration.

Technical standards will be prepared for the management of residual waste for incineration and final disposal including landfilling.

Objective 9 – Cost Efficient & High Quality Waste Services

To deliver cost efficient waste management services and ensure public funds are utilised effectively. Government will promote partnership and joint procurement procedures to ensure economies of scale. Government will continue to promote further private sector involvement in the waste sector particularly where this can help to ease public sector financial burdens and promote the polluter pays principle.

The Draft Waste Management Strategy has been revised on the basis of comments received and on the basis of the recommendations given in the Environment Report of the Strategic Environmental Assessment. The revised strategy has been formatted in accordance with the above principles and objectives and is being attached in Appendix B to this report.

**APPENDIX A
COMMENTS AND RESPONSES**

APPENDIX B
REVISED WASTE MANAGEMENT STRATEGY

**APPENDIX A
COMMENTS AND RESPONSES**

A Solid Waste Strategy for the Maltese Islands - First Update Public Consultation Draft January 2009

Summary of Responses and Proposed Revisions to the Strategy May 2010



MINISTRY *for* RESOURCES
and RURAL AFFAIRS



Section of WMS: 0 Waste Hierarchy

Respondent Details and Comment	MRRR Response
OPM & MEPA 5 / 1 Support with conditions	
<p><i>OPM & MEPA agree with the aim of a zero waste society but consider that zero waste is unrealistic in the short term and more conventional waste management options such as waste prevention, re-use, recycling/composting and recovery are more realistic in the short-term. Although the waste strategy is committed to move waste up the hierarchy, it fails to do so holistically, particularly in view of EU obligations.</i></p>	Noted.
<p>Change to the Revised WMS:</p> <p>The WMS is to be revised to provide more clarity and targets to move various waste streams further up the hierarchy. An aspiration to create a 'zero' waste society is essential if waste is to be moved further up the hierarchy.</p>	
Friends of the Earth Malta 6 / 5 Object	
<p><i>The strategy does not specify how much waste is planned for incineration, recycling and landfilling.</i></p>	Noted. The SEA recommended that the revised WMS should be more clear on targets and actions.
<p>Change to the Revised WMS:</p> <p>The revised WMS will provide clearer targets and actions for the management of various waste streams where relevant.</p>	
Chamber of Engineers 15 / 7 Support, with conditions	
<p><i>The Strategy</i> <i>Within the overall objective of developing an appropriate strategy for the sustainable waste management in Malta the CoE is pleased to note the following recommendations;</i></p> <ul style="list-style-type: none"> • a substantial investment in waste management infrastructure, • a mixture solution approach, • a greater focus on energy recovery.. <p><i>It is also recommended that the strategy be made self regulating by demanding that an annual progress report is prepared presenting an overview on progress achieved and highlighting areas that still need to be addressed further.</i></p> <p><i>As mentioned above we think it is now important to translate the established high level strategies, through a second document, into more practical solutions including the introduction of improved ideas for incentive based schemes and improved monitoring.</i></p>	Noted.
<p>Change to the Revised WMS:</p> <p>The revised WMS will include a series of actions that will ensure implementation and achievement of targets.</p>	
Kummissjoni Ambjent (KA) Arcidjocesi ta' Malta 16 / 12 Support with conditions	
<p><i>[TRANSLATED]</i> <i>Conclusion</i> <i>There are other issues in the Update that were not addressed in this Opinion. Some of the major ones include hazardous and industrial waste, agricultural waste etc. Like we said in the introduction, the KA looked at the direction of the Update, rather than the detail. After all, as indicated in the same Update, there are plans that a number of working papers will be issued on the implementation of the different proposals. The KA is ready to raise its voice on them, whenever these working papers are made available for public consultation.</i></p> <p><i>In the Opinion issued by the KA in 2005 over the 2002 WMS, within the conclusions, one finds the following relevant to the Update:</i> <i>'In this Opinion, the KA shows several aspects where the Strategy can be strengthened and improved so that it better reaches its aims. We hope that these aspects are addressed in the revised version of the Strategy. These aspects include: the need to better emphasise and improve citizen participation in decision-making, and also that the first priority should be waste reduction. In this way, we will be tackling the causes and not only the symptoms of the waste problem. The KA hopes that these aspects are addressed in the revised Strategy. We further hope that this revision will give clearer signals on the basic principles on which the original strategy was</i></p>	<p>The general support from the KA is noted. It is also noted that the KA considers that the WMS should provide further emphasis in relation to:</p> <ol style="list-style-type: none"> 1) Hazardous and industrial waste and agricultural waste; 2) Further emphasis on improved citizen participation; 3) Clearer emphasis to principles including the Proximity Principle and self sufficiency.

built, including the proximity and self-sufficiency principles, as well as the polluter pays principle. We hope that these are more rigorously applied so that the responsibility of the national waste problem is shared in a just, wise and equal manner across Malta.

Through this Opinion, the KA wants to continue to emphasise that real development, sustainable development, is one that finds a balance between economic, environmental and social interests. For this to succeed, serious thought on the existing state is required, a set of the values that place the common good as the main priority, and a wide public consultation. Above all, political maturity is required from the civil authorities so that they are flexible enough to be capable to adapt decisions that were taken and projects that were launched, according to the emerging needs of society.'

As shown in detail further above, we think that the Update addresses some of our expectations, but certainly not all, and not necessarily the main issues.

Change to the Revised WMS:

[See recommended changes to the WMS in relation to the individual comments from the KA - 16/1 to 16/11.](#)

Section of WMS: 1.0 Whole Chapter

Respondent Details and Comment

MRRRA Response

OPM & MEPA 5 / 3 Observations

The introduction should set out the context of the strategy, in particular by listing Malta's obligations emerging from the EU acquis and the corresponding targets. The Strategy should focus on areas where the respective objectives have been met... The extensive EU waste acquis gives Malta a guideline as to how waste should be managed in the best interest of human health and the environment. As such, in view of the OPM and MEPA, the waste strategy should generally focus on meeting the country's EU obligations.

Noted. The revised WMS shall be restructured to make reference to the most pertinent EU obligations, particularly those that stipulate targets. The WMS will, however, not provide a lengthy scoping / description of all legislation as this has already been undertaken in the context of the Strategic Environmental Assessment. It is also considered important that the revised WMS highlights priority areas such as hazardous waste and inert waste.

Change to the Revised WMS:

[WMS to make clear reference to all waste EU obligations and targets.](#)

Section of WMS: 2.0 Whole Chapter

Respondent Details and Comment

MRRRA Response

Kids Eco Summit 7 / 1 Object
2009

[TRANSLATED]

We feel that lots of work has been done in this regard, and that people are understanding the need to control waste. However, we feel that people are not aware enough on the need to reduce waste. Hence, it is important that we are informed on what happens to waste once it is collected, how waste can be turned into energy and how we can use organic waste.

The Strategic Environmental Assessment of the Draft WMS also noted that the Strategy was compliant with the principle of the waste hierarchy, but would benefit from the inclusion of targets for waste minimisation.

Change to the Revised WMS:

[Revised WMS to give more priority to waste minimisation measures when compared to the Draft WMS \(January 2009\).](#)

Nature Trust 12 / 2
(Malta) and Din L-
Art Helwa

Recycling

NTM and DLH note that the strategy focuses more on the need for recycling

Suggestions

The Authorities should focus more on - Reduce and Reuse - as again this issue is not being given high importance in the waste strategy. The strategy focuses more on recycle giving more weighting on the last of the 3R's. A campaign should be embarked upon to promote reduce and reuse. More TV and media educational slots are required to educate the public.

The Strategic Environmental Assessment of the Draft WMS also noted the Strategy was compliant with the principle of the waste hierarchy, but would benefit from the inclusion of targets for waste minimisation.

Change to the Revised WMS:

[Revised WMS to give more priority to waste minimisation measures when compared to the Draft WMS \(January 2009\).](#)

Chamber of 15 / 13 Observations
Engineers

Proximity Principle

The proximity principle, albeit a fundamentally positive contributor toward better waste management solutions, poses a number of specific challenges in the context of countries the size of Malta.

For certain type of operations involving a complex technological plant the economies simply do not justify a large number of similar plants to cover individual regions. This is particularly true for plants or installations which might have a negative visual or other impact on the area. These type of facilities must therefore only be implemented in a few properly selected locations which cover the largest possible regional requirements. Conversely less complex and less expensive solutions which have very limited impact on the surrounding area, such as compactors, small recycling plants, waste water treatment plants etc, should be decentralised as much as possible.

Change to the Revised WMS:

No change.

Noted. The proximity principle is an overriding goal of the WMS. In some circumstances the processing of certain wastes will not be possible within Malta. Clearly the centralisation of facilities will be promoted as much as possible.

Chamber of Engineers	15 / 1	Support, with conditions
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We thank you for giving us this opportunity to be able to contribute to the process of defining an improved strategy for waste management. We believe that it is imperative that such strategic documents are renewed and updated so as to better reflect the current existing realities and to address specific developments in the particular sector.

The 2009 document does build upon the principles within the document 'A Solid Waste Management Strategy For The Maltese Islands' published in September 2001 and we have identified a number of key elements which we hope will add value to the current proposals within the document.

We are deeply convinced that the key underlying principles, as indicated below, are of strategic importance and should be further pursued in the updated strategy. The key factors that, in our opinion, the strategic document should reiterate are the following:

- proximity and self sufficiency within the constraints of volumes and area of Maltese Islands,
- precautionary principles,
- polluter pays,
- waste hierarchy,
- best practice environmental options and
- producer responsibility.

From an Engineers' perspective the CoE is satisfied to note that the document recognises that various technological solutions can be employed to alleviate waste management problems and obtain energy recovery from waste. We feel this is an important change from the past since traditionally, the community in general, did not look upon technology as having the potential to make a marked difference on the way we are addressing the waste management challenge in Malta. Together with the recognition that a cultural change is required in our habits this change in perspective towards technologically based solutions gives us added confidence in the possibility of achieving any set targets.

In our opinion however the above positive changes should not shift the attention or in any way alter the waste hierarchy principle. The first priority should clearly remain to reduce waste and only if this is not possible then one should consider reusing waste, recycle waste and finally recovery. The sheer fact that the domestic waste per capita in Malta has increased and is within the highest category of the twenty seven European countries as reported by Eurostat . (reference The Times of Malta, pg 3, dated Tuesday, March 10, 2009) should drive the respective authorities to become more forceful in implementing the necessary changes.

In this document we have prepared a number of generic observations about the strategy as detailed within the document issued for consultation. We have also included a number of recommendations focused on energy recovery, financial considerations and the dire necessity for appropriate standards required to regulate the waste management operations.

in conclusion, while the published strategic document sets the overall parameters for solid waste management in Malta for the next few years we feel that it requires immediate follow up with a follow up document which will specifically focus on the operational issues and which will define more tangible ideas on waste reduction, reuse, recycling and recovery. At this level the Chamber of Engineers commits to make a more detailed contribution.

Change to the Revised WMS:

The revised WMS will place further policy emphasis on the promotion of waste minimisation. The principles of sustainable waste management will also feature more prominently as principles and objectives in the revised WMS.

Noted. The revised WMS will re-iterate Government's commitment to the principle of the waste hierarchy and other waste management principles referred to by the Chamber of Engineers. It is recognised that further policy emphasis is needed to support the principle of waste minimisation, particularly in the areas of commercial/packaging waste and construction and demolition waste.

Chamber of Engineers **15 / 4** **Object**

Liquid Waste

Meanwhile, it is also important to note that such a document, dealing with the national strategy for waste management, cannot be complete if it does not also address the management of liquid waste including contaminated water and other fluids in an integrated approach. This is particularly true for an island like Malta which has a lot of potential for recovery and reuse of water. Furthermore, we believe that strategies noted in the document for solid waste can be equally valid and applicable to address the waste management and potential contamination of both fresh and sea water.

Broadening the scope of the Strategy to include liquid waste could distract the focus of the Strategy away from the management of solid waste. It is accepted that some of the principles are the same, however the processing technologies and responsibilities are different.

The WMS can, however, link in with other waste strategies. For example the WMS acknowledges the synergies of the co-treatment of MSW and Animal & Husbandry waste.

Change to the Revised WMS:

No change.

Kummissjoni Ambjent (KA) Arcidjocesji ta' Malta **16 / 2**

[TRANSLATED]

In 2005, the KA felt that the Solid Waste Management Strategy was a reactive rather than a proactive strategy. According to the fundamental principles of waste management, the highest priority should be given to practices that reduce waste. Nonetheless, the strategy emphasised on waste recycling and did not try to find the means of addressing the cause rather than the symptoms of the problem....

...

The priority of waste management

The original strategy gave priority to practices that reduce waste. To a certain extent, the Update does make this strategic decision. However, in several parts of the document, it is felt that there is doubt on how much the Maltese society is ready to change its attitudes for this to become a reality. We understand that this choice requires greater sensitivity from the public towards the environmental problem of excess waste and the price that one day (if not today ... tomorrow) we need to pay not only in environmental terms but also in economic terms for this lack of care.

In 2005, the KA had appreciated the urgency that the country had to look for means of controlling the amount of waste that is generated, and that the emphasis of the Strategy was more focused on Recycling, Recover and Disposal rather than Waste prevention / reduction.

At that time, the KA expressed its opinion that while the Strategy was meticulous and serious in its proposals to find the cure of the symptoms of this national problem (i.e. the excessive waste generated), there was little emphasis on how the cause can be addressed. The investment was primarily only on technical solutions. Notwithstanding that the strategy acknowledges the participation of citizens as important, there was no indication of any allocated resources so that this can be carried out. Back then, the KA hoped that this situation will change in the revision of the Strategy. Unfortunately, it seems that this factor has once again not been given its due attention in this Update.

Change to the Revised WMS:

The revised WMS will provide more priority to waste minimisation, but has to acknowledge that Malta still needs to increase capacity for treatment of waste if EU Landfill Directive targets are to be met.

Noted. The respondent is correct to identify waste minimisation as a critical objective for the WMS, however, the Strategy must take a pragmatic approach and realise that whilst 'zero waste' should be a goal it will never be fully attained. The WMS must promote a realistic range of treatment options. To rely on the baseline situation (the Sant'Antnin MBT plant plus landfilling and waste minimisation) will result in a significant risk that Malta will not meet its Landfill Directive Targets.

The WMS should, however, promote waste minimisation as a primary goal in the WMS.

Kummissjoni Ambjent (KA) Arcidjocesji ta' Malta **16 / 3** **Observations**

[TRANSLATED]

Recently, Government published the report completed in 2005 that analyses how the strategy published in 2001 has developed and how the original aims were met until 2004. However, this auditing was more like to showcase the progress (or the lack of it) without analysing the reasons that may have led to this.

Another thing that we felt should have been included in this document is a more detailed evaluation of the progress so far ... from the last Situation Audit that was carried out up till 2004. Experience from the past 5 years has shown that a lot of progress was carried out in this sector, especially when

Noted.

we consider the closure of Magtab, the start of the polluter or waste producer pays principle, the several initiatives to increase waste recycling, as well as the heavy investment that was carried out in new waste facilities. Nonetheless, even from the Update, it is obvious that there is still a lot to be done and that we are most probably lagging behind in the national effort to reduce / recycle waste.

Change to the Revised WMS:

The revised WMS will make clear reference to all EU waste obligations and targets.

Section of WMS: 3.2 Monitoring and Enforcement		
Respondent Details and Comment		MRRR Response
GRTU	1 / 5	Observations
<p><i>GRTU is of the opinion that current waste management facilities need to be compliant with the law. We have to however make sure that in doing so, we create the least of casualties where it comes to employment. GRTU cannot accept that a facility that has operated illegally for over 30 years is suddenly faced with an enforcement notice to close its operations, even though some of these illegal operators had a few years back been given a letter of intent from MIP Limited that grounds or allocation is to be made to them so that they can transfer the illegal business to a legal area, so that these waste management facilities can then operate with peace of mind.</i></p> <p><i>In order for any Government not to be faced with such situations, 30 years from now, we should endeavour to close down / or clamp down on those who set up today, waste management facilities without proper permits and licenses. This is imperative if as a country we want to make sure that we do not continue to be faced with such problems .</i></p> <p>Change to the Revised WMS:</p> <p>No change.</p>		<p>Noted, although it would be inappropriate for the WMS to endorse the continued operation of facilities that do not meet legal requirements.</p>
GRTU	1 / 4	
<p><i>It is to be noted that as a country in general we lack in enforcement of environmental legislation. GRTU recommends that whilst MEPA would remain responsible for issuing licences and permits for waste management facilities and operations, it would be the onus of an effective ENFORCEMENT DIRECTORATE under the Environmental and Protection Act which would handle enforcement.</i></p> <p>Change to the Revised WMS:</p> <p>The revised WMS will include a commitment to review current responsibilities for monitoring and enforcement and consider whether resources can be applied more effectively.</p>		<p>Noted. Follow-up monitoring and checks are necessary in the waste sector to ensure that waste management facilities and operations work with legal requirements.</p>
GRTU	1 / 3	
<p><i>The Waste Management Strategy outlined covers the following Waste Streams:</i></p> <p><i>(1) Construction and Demolition Waste; (2) Hazardous Waste; (3) Animal Waste; (4) Waste Oils; (5) Municipal Waste; (6) Packaging Waste; (7) Batteries and Accumulators; and (8) Electrical and Electronic Equipment.</i></p> <p>WASTE COMPOSITION - CHANGEOVER THE DURATION OF THE STRATEGY</p> <p><i>There are a number of reasons why composition of waste may change over the strategy period</i></p> <p><i>a) Change in purchasing behaviour –eg consumers buy less packaging in response to a program for waste minimization/education</i></p> <p><i>b) Manufacturer/retail response to new legislation (EU) specifically in response to the packaging directive which requires recovery of a fixed amount of packaging for recycling by a producer, either by self compliance or by joining a scheme</i></p> <p><i>c) Introduction of new recycling schemes- which will remove items from waste stream</i></p> <p><i>d) In addition the location of new industry to the island may introduce a new waste type(s) for which a management route does not exist or for which existing management capacity is insufficient. This on its own is extremely difficult to predict and will need continued monitoring.</i></p> <p>WASTE DATA - PROJECTED GROWTH OR REDUCTION</p> <p><i>To forecast changes in waste tonnages it is necessary to identify the main factors affecting or influencing waste growth or reduction. The factors include</i></p>		<p>Noted. The monitoring of waste streams is necessary in order to measure the successes or failures of the WMS. Regimes are already in place for measuring headline waste streams, as these are monitoring requirements in order to report on Malta's EU obligations. The revised WMS is likely to include a number of new objectives, for example, relating to reducing Green House Gas Emissions. It is important that these objectives are capable of being monitored. The revised WMS should not, however, be 'bogged down' with the detail of monitoring regimes, which are an operational detail not a strategy detail.</p>

amongst others the following :

Change in population; natural increase or decrease, inward or outward migration; Change in population profile; Change in number of households; Change in household size; Change of economy (growth or decline in GDP); Cost of living; and Effectiveness of waste minimization schemes
Effectiveness of recycling schemes.

COLLECTION OF DATA

For the purpose of developing a Waste Strategy there is a need to identify sources of auditable , comparative data from which to project waste arisings/ decreases /increases over a period of time. The data at present lacks an audit trail and as such is not sufficient for this review. GRTU recommends the collation of DATA as follows:

Collation of waste data to be an integrated part of waste licensing regime

- (1) All collation of DATA through waste Compliance Schemes
 - (2) All waste management facilities to have weighing facilities
 - (3) All waste carriers to have weighing facilities 'legal for trade' within 3 calendar years
 - (4) Data from Kerbside collection to be monitored and audited daily
 - (5) Undertake compositional analysis of deposited commercial and industrial waste
 - (6) Undertake a waste arising survey of animal waste from agricultural sector
- Without fail, baseline data is a key prerequisite for developing a strategy. Without the correct data on waste amounts, types and source it is not possible to monitor change(growth or reduction) or seek to set targets. Progress is being made in the collation of certain data, ie collection through "Recycle Tuesdays Initiative" However this needs to be more detailed and the material fractionized for continued monitoring.

Ensuring that waste is managed in the best environmentally acceptable method is without fail a commitment of any Waste Management Strategy. This can only be build with proper data accordingly made available .

Change to the Revised WMS:

The revised WMS will include a commitment of an early review of existing monitoring regimes, to see if the targets set out are capable of being measured. The purpose of the monitoring review will be to identify any information gaps early and ensure that MRRA, MEPA or other responsible bodies introduce monitoring mechanisms.

GRTU 1 /6

On another aspect of compliance, we cannot as a small island drag our feet to take decisions of where waste management facilities mainly associated with the recycling industry are to be placed. We have wasted enough years and it is time now to decide and move on. Waste Management facilities are a thriving economical sector growing rapidly in many countries. We cannot stifle its growth at its birth.

The WMS specifies sites that will be further studied through the EIA process. The site selection will include studies that consider both health and environmental factors.

Change to the Revised WMS:

The revised WMS will make reference to certain sites that are recommended for further studies as required by the MEPA process. These sites will be studied in terms of health and environmental impacts. Alternative sites will be considered as required by the EIA process.

Chamber of 15 /5 Object
Engineers

While education and leading by example are measures that are essential for targets to be achieved, enforcement is imperative in order to align those individuals who persist in being devious. We therefore urge the authorities to detail and commit to a more comprehensive enforcement policy within the document.

Noted. Follow-up monitoring and checks are necessary in the waste sector to ensure that waste management facilities and operations work within legal requirements. Environmental monitoring is also important in order to prosecute the minority of individuals who fly-tip.

Change to the Revised WMS:

The revised WMS will include a commitment to review current responsibilities for monitoring and enforcement and consider whether resources can be applied more effectively.

Chamber of 15 /12 Observations
Engineers

Compliance and Operational Standards
To complement the efforts and recommendations directed at establishing better standards and regulations stated above we recommend:
• An increased effort towards improved governance and wider compliance with the established standards. A more comprehensive auditing system is necessary to monitor the individual operations in view of more private operators being introduced in the future.

Noted.

- An increased effort towards ensuring the placing and upkeep of adequate facility standards,
- The introduction of a more effective monitoring and enforcement system.

Change to the Revised WMS:

The revised WMS will include a commitment to review current responsibilities for monitoring and enforcement and consider whether resources can be applied more effectively.

Kummissjoni 16 /6
Ambjent (KA)
Arcidjocesi ta'
Malta

[TRANSLATED]

The Update lists the development of laws and regulations in this sector which is certainly impressive. At the same time, it is a fact that if there is not a total implementation and enforcement of these laws, then this development will mean nothing. The implementation and enforcement requires resources, systems and processes that the Update itself indicates (p.9). Here, Governments declare the need for better use of the existing resources. This particularly applies to the situation within MEPA. It must be noted that the administrative and personnel resources at MEPA are in a precarious state and most probably are not reaching the obligations that are required for Malta by the EU. This is especially true for the Environment Protection Directorate (EPD). This directorate not only needs more staff, but ones that are more technical that have the necessary capacity for the enforcement work. By enforcement, we do not mean that one acts as a policeman or inspector, but also that there is a system in place that works on information collection so that one can really tell whether the strategy is working and whether the aims are being met. Therefore, the idea to relocate the competent resources in the public services that are not being adequately used to the EPD is not necessarily going to solve the problem of enforcement and implementation.

Noted. Follow-up monitoring and checks are necessary in the waste sector to ensure that waste management facilities and operations work within legal requirements. It is also critical that suitable and competent resources are available in the public sector to fulfil the management requirements associated with EU obligations.

Change to the Revised WMS:

The revised WMS will include a commitment to review current responsibilities for monitoring and enforcement. This review will consider whether resources can be applied more effectively.

Section of WMS:	3.3 Consultation
Respondent Details and Comment	MRRRA Response

GRTU 1 /1 **Observations**

GRTU, Malta Chamber of Small and Medium Enterprises welcomes this type of consultation, although it would have expected a wider timeframe to provide its position document

Noted.

Change to the Revised WMS:

No change.

OPM & MEPA 5 /4

The Draft WMS makes reference to 6 topic papers. It is not clear what these topic papers will cover or when they will be launched. It is also suggested that these topic papers should focus on delivery - as implementation plans.

Noted.

Change to the Revised WMS:

The need for topic papers will be reviewed, especially as in some cases the issues are already known. The revised WMS will emphasise the preparation of topic based Action Plans rather than topic papers.

Section of WMS:	3.4 Technical Standards / Codes of Practice
Respondent Details and Comment	MRRRA Response

Chamber of 15 /11 **Support with conditions**
Engineers

Technical Standards and Codes of Practice
The Chamber is pleased to note that the Authorities are aware of the necessity to prepare and implement a set of standards and operating regulations to address the wide variety of waste, waste management techniques and associated hazards. In line with this we urge the Authorities to;

- review the list of waste which qualifies as Hazardous waste, and

Noted.

strengthen the knowledge on how best to treat it.

- perform comprehensive studies, such as the one done for the waste generated by the medical sector, for other specific and specialised sectors such as the emergent Marine, Aeronautical and Pharmaceutical industries.
- involve sector expertise in the setting up of specifications and the collation of data, establishing appropriate evaluation methodology and establishing the right operational standards.
- The CoE is aware that a compulsory waste management plan for all commercial operations is a considerable burden not only on the business/commercial operators but also on the authorities to administer and monitor. Hence it recommends an approach which regulates and monitors the basic essential while investing in a much greater effort to educate on and promote improved best practices and standards.

Change to the Revised WMS:

The revised WMS will provide actions for hazardous waste streams.

**Kummissjoni 16 /7 Support
Ambjent (KA)
Arcidjocesi ta'
Malta**

Who carried the Responsibility of their Actions

The Update puts special emphasis on the need to improve technical standards and codes of practice in all the work and operations that are related to waste management. The KA perfectly agrees with this. It believes that these practices need to be developed at all levels: from the street waste collector up to the technical persons responsible for the waste treatment plant. We believe that the time has arrived that the operator becomes liable to the public. This means that an operator who is paid to ensure that the plant works correctly within the established limits, must be individually and directly kept responsible for all damages on public health and the environmental resources, if it is proved that this damage occurred due to operational negligence. This responsibility must be shouldered from the company that employs the worker.

We understand that there is still much to do to reach this level of accountability and that the 'nothing is nothing' attitude is eradicated once and for all. However, we believe that only this behavioural responsibility can ensure that everybody carries out his own work without any political and/or administrative interference. All strategies fail or succeed in their implementation phase. In this implementation there are 3 levels of responsibility: political, administrative and technical. Normally, political responsibility is left at the people's discretion during an election. Not the same can be said for administrative or operational responsibility. Our justice system (as well as the social and cultural one) seems to create a lot of obstacles so that accountability and liability is carried out in a just and practical way.

On the other side, waste producers must assume responsibility and pay the expenses involved in waste management. The KA agrees with this just principle. This includes Eco-Contribution and other schemes mentioned in the Update. At the same time, it is essential that such schemes are transparent so that the public does not see them only as a way to collect funds for the implementation of the strategy (or worse as simple a tax), but as a useful tool that effectively reduces waste, especially that which harms most the environment. Example is tax on plastic bags.

Change to the Revised WMS:

Landfill tariffs were recently increased (October 2009). The revised WMS places a commitment to monitor and review tariffs to ensure they meet the true cost of disposal, in line with the Polluter Pays Principle. This will lead to an increased level of accountability within the waste sector.

Support is noted.

Section of WMS: 3.6 Land Use Planning Policy

Respondent Details and Comment

MRRR Response

OPM & MEPA 5 /2 Observations

OPM & MEPA point out that the consultation draft WMS does not make reference to the Waste Management Subject Plan (Space for Waste) 2001.

Noted, although reference to the Subject Plan is made in Section 3.6.

Change to the Revised WMS:

The revised WMS will include a brief section to indicate its relationship with other plans such as site-specific / land use planning documents. A list of relevant background documents will also be included.

Section of WMS:

3.8 Implementation of Waste Management Principles

Respondent Details and Comment

MRRRA Response

Carmel
Cacopardo

14 /1

Object

The document published by Government that proposes an update of the waste strategy offers raw proposals. It is raw because although it has good ingredients, it does not lead the way to a reduction in waste generated by households.

The proposal places incineration at the centre of waste management. In my opinion, this is erroneous. It is erroneous not because incineration should be ignored. None of this. It is wrong because for incineration to be useful tool, it should be incorporated in a strategy that gives priority to environmental and fiscal tools that encourage people to reduce waste production.

Noted. The respondent correctly identifies waste minimisation as a critical objective for the WMS, however, the Strategy must take a pragmatic approach and realise that whilst 'zero waste' should be a goal it cannot be fully attained. The WMS must promote a realistic range of treatment options. To rely on the baseline situation (the Sant'Antnin MBT plant plus landfilling and waste minimisation) will result in a significant risk that Malta will not meet its Landfill Directive Targets. The WMS should, however, promote waste minimisation as a primary goal in the WMS.

Change to the Revised WMS:

The revised WMS will provide more priority to waste minimisation, but acknowledge that Malta still needs to increase capacity for treatment of waste if EU Landfill Directive targets are to be met.

Chamber of
Engineers

15 /2

Observations

Having read and discussed the document in detail we feel that this would be of greater value if it was supported by an annex that would incorporate the following:

- 1) A set of identified deliverables that are achievable and linked to required resources.*
- 2) An assessment of the impact these deliverables might have on the Maltese economy particularly for small and medium sized businesses.*
- 3) An implementation schedule coupled to measurable milestones.*
- 4) Benchmarking our current and future positions with those of other countries which have similar demographic characteristics and constraints.*

Noted.

Change to the Revised WMS:

The revised WMS will include a set of actions that are linked to targets.

Detailed implementation schedules will not be appropriate for the WMS. As a strategy document, the WMS needs to achieve the correct balance between setting out clear priorities for waste management and implementation details.

Chamber of
Engineers

15 /15

Waste Management Principles

As stated above we are pleased to note that the document clearly reaffirms the waste hierarchy policy. In this regard we have the following additional remarks:

Authorities should make a bigger effort to spearhead the increased use of improved waste management best practices. While we acknowledge efforts are being done we feel that some of the governmental institutions and local councils are still not addressing the waste management problem with enough force and are occasionally outright complacent.

■ *Authorities should introduce specific measures for state projects and for projects in which government has a direct involvement. Contractors willing to participate in publicly funded contracts should be obliged to implement a certain level of waste management practice.*

■ *Unless there is a serious effort to reduce waste there will always be a volume and capacity problem. We think that ironically the closing of the Maghtab has made this element of the solid waste challenge less visible to the general community. We thus urge the Authorities to flag up this issue through an appropriate campaign.*

■ *The awareness and examples of recycling have increased however we feel that since the building industry has been the single largest contributor to the waste volume in Malta there should be more effort to identify improved design elements and a drive to use alternative and more recyclable materials. With respect to medium and large sized projects we highly recommend much more use of steel in construction. It is faster and much more readily recyclable.*

■ *We believe that within the frame work of a mixed solution for reuse and*

Noted, however it is considered that the WMS already promotes these measures, such as a commitment for the implementation of a 'Public Sector Green Procurement Policy'. In relation to construction and demolition waste (C&D), minimisation and recycling and recovery are the preferred solutions for managing this waste stream. Land reclamation (using C&D waste) has a number of potentially environmentally damaging impacts on the sea bed, and a commitment to land reclamation is seen as outside the scope of this strategy.

recycling of waste, land reclamation should continue to be considered as an option and part solution.

■ While the Authorities have been very successful in increasing awareness in the last few years we feel that there is a need for a second campaign which communicates to the community through practical examples, methods of reduction, reusing, recycling and recovery. Like previous campaigns the importance of initiatives to educate the younger generation will be the most beneficial,

Change to the Revised WMS:

No change.

Section of WMS: 3.9 Private Sector Involvement

Respondent Details and Comment

MRRR Response

Chamber of 15 / 8 **Object**
Engineers

It is understood that one of the main policies with respect to waste management is to try to involve more private enterprise. We feel that the document does not reflect this policy at a strategic level. Roles of state and private enterprise have remained traditional. The involvement of private enterprise is limited to the carriage of waste and in our opinion this aspect needs to be upgraded and regulated to support and reflect current policies. On the other hand, to date, there is no involvement of private enterprise in the disposal of waste. The document is short of recommending strategies to entice private enterprise to invest in the disposal section.

Noted. It is considered that the long term economic sustainability of the waste sector will be dependent on further involvement of the private sector and WasteServ must be considered as the operator of last resort. The constrained size of the waste market in Malta must, however, be acknowledged. Whilst the waste sector remains in relative infancy, the need for further public sector interventions into waste facilities will remain throughout the period of the revised WMS (2010-2015). Short and medium term measures to create a viable market for waste operators will continue to be implemented. Government is currently, for example, seeking further increases in gate fees for MSW, this is another step towards providing a viable market for future operators.

Change to the Revised WMS:

The revised WMS shall place greater emphasis on reducing disincentives for the private sector to become actively involved in the waste sector, but acknowledge that continued public sector intervention will be inevitable during the period of the revised strategy.

Chamber of 15 / 16
Engineers

Involvement of the Private Sector

The current level of involvement of the private sector in waste management is very limited and its increase is in our opinion fundamental to accelerate the further development of the required solutions and improved practices in this matter.

Notwithstanding the acknowledgement of this principle by the Authorities and the past attempts to target specific initiatives, the results obtained were limited. Meanwhile, the actual management of those areas which have already been delegated to the private sector have proved challenging to govern.

This leads us to put forward a number of recommendations whereby the Authorities should;

- 1) make the opportunities within the waste management field more visible to the business and entrepreneurial community. This includes the clear communication of a long term and gradual cost/price change.*
- 2) facilitate the formation of consortia to take over specific waste management operations by introducing specific support and positive incentives in this regard. We particularly urge the Authorities to renew their efforts to convince the operators within the soft drinks and the bottled water industries to resolve the industry specific high volume issue.*
- 3) encourage greater third party commitment through longer term contracts. In turn this will motivate operators to comply more stringently with the operating parameters and standards since their liabilities will by nature be higher.*
- 4) facilitate the process for applying and processing of operating and facility permits and related formalities. From experience the processing time factor and the uncertainty is a large disincentive to potential investors. Hence, as highlighted above, and also to reduce the uncertainty element we recommend that very clear operating and facility standards are made*

Noted. It is considered that the long term economic sustainability of the waste sector will be dependent on further involvement of the private sector. The constrained size of the waste market in Malta must, however, be acknowledged. Whilst the waste sector remains in relative infancy, the need for further public sector interventions into waste facilities will remain throughout the period of the revised WMS (2010-2015). Short and medium term measures to create a viable market for waste operators will continue to be implemented. Government is currently, for example, seeking further increases in gate fees for MSW, this is another step towards providing a viable market for future operators.

available.

5) make clear the long term intentions of WasteServ Limited known and thus avoid possible interpretation as a market distortion.

As part of the strategy to entice more private operators into this business opportunity we propose that the Authorities should initially consider embarking on a number of lead projects with a private-public approach possibly involving other stake holders such as environmental non governmental organisations and sectors such as those coming from the tourist and hotel industries. While fine tuning the operational and commercial aspects for future reference these lead projects have the potential to gain a wider consensus on the resulting model of operation.

Change to the Revised WMS:

The revised WMS shall place greater emphasis on reducing disincentives for the private sector to become actively involved in the waste sector, but acknowledge that continued public sector intervention will be inevitable during the period of the revised strategy.

Section of WMS: 4.1 Ownership

Respondent Details and Comment

MRRRA Response

GRTU 1 / 9 Object

Further to this, MEPA are responsible for updating the producers register for both WEEE and Waste Packaging. The last update was effected in May 2008, nearly a year ago.

MEPA officials state that they do not have the manpower to update this producers register/s. We are in a state where MEPA is the responsibility of the Office of the Prime Minister and the Implementation of the National Waste Management Strategy is in the hands of MRRA. A decision needs to be taken and a direction given. Officials at MEPA state that they answer to OPM only and insist on this.

If this Waste Management Strategy implementation is to happen, we will definitely need people, who are ready to decide and move on. Wasting time now would be a detriment to one and all. GRTU is four square behind any changes that will bring about real change in this Authority.

Change to the Revised WMS:

No change.

Noted. The responsibility for implementation of the revised WMS is the joint responsibility of Government (including OPM, MEPA and the MRRA) as well as other government departments, the commercial sector and individuals.

Section of WMS: 4.2 MEPA

Respondent Details and Comment

MRRRA Response

GRTU 1 / 8 Object

Whilst being aware that a Reform is being planned for this Authority, GRTU would like to point out the following in respect to its Environmental Directorate.

1)The lack of either decision taking by individuals within the Authority or the lack of political direction or a combination of both, which is creating havoc in the permitting regime. Time thresholds need to be set up, so that applicants for waste management permits are made aware within a maximum period of 120 days in respect of acceptance or rejection of an application. Certain applications have stood on the pending for a number of years. Permits for end of life vehicle facilities are stagnant.

Sometimes permits are not issued because MEPA have never issued one like it before, so they take too long a time to draw up this permit and when they do, it is a mixture of all permits issued across the community.

It is an institution that needs a radical change, a change from the roots. Communication leaves much to be desired. For over two months now, many of the staff at Hexagon house have been working to rule, meaning they do not answer calls or emails.

Change to the Revised WMS:

No change.

Noted. The structural efficiencies of MEPA are best dealt with through the MEPA reform, which is currently underway.

Section of WMS: 4.3 WasteServ Malta Ltd

Respondent Details and Comment

MRRRA Response

GRTU 1 / 10 Object

Wasteserv Limited, a fully owned Government company (this is omitted in the document), was set up in November 2002 with the responsibility of

Noted. Government remains committed to the principle that WastServ is an 'operator of

organizing, managing and operating integrated systems for waste management including integrated systems for minimization, collection, transport, sorting, re-use, utilization, recycling, treatment and disposal of solid and hazardous waste.

GRTU, being, the voice of private enterprise was never in agreement with the setting up of Wasteserv Limited. It has over the years proved that it has stifled the growth of the waste management economy sector because Wasteserv had all the EU funding and further used a substantial part of Government funding (public funds) and competed directly and still does with the private sector.

The operation of Wasteserv today is clearly against EU competition rules. The document states that "Wasteserv was established to serve as an operator of last resort". Private Industry has been following its operation daily and Wasteserv has continued year after year not only to be 'an operator first' but continues to stifle private investment in the sector.

We will now elaborate by providing some hard facts:

1) Private Enterprise requested a permit with MEPA four years ago to set up an MRF facility (Materials Recovery Facility). The Investor involved requested allocation of space for the said MRF. Although a letter of intent was issued by MIP Limited, to date this has not materialized. In the meantime two years after Waste serv apply for a permit to set up an MRF at Sant Antnin. Permit was granted overnight and the MRF set up within a year and a half.

2) Five individuals have applied since three years ago to set up an end of life vehicle facility. To date none of these permits have been issued.

3) Wasteserv have purchased a substantial number of vehicles that transport waste from A to B. Once again this could have been done easily by private industry if Waste serv out farmed its operations.

The above are only a few examples.

It is to be pointed out that the way forward could have been that Waste Management Operators in the business in 2002, could have been offered the funding and the know how to set up what Wasteserv has as a monopoly been doing since 2002. Even today when private industry is trying its best to convince Government that it needs to be integrated, we visualize a Wasteserv that continues to employ more people, and involves itself in more Waste management activities instead of involving the local private industry.

The Government's intention to induce further private industry operation in the sector should not be just a few words on paper but a real hands on approach. We need to be convinced by facts.

GRTU hopes that this Waste Management Strategy plan will include the downsizing of Wasteserv and the out farming of current operations being done by Wasteserv. Private Industry in this sector needs a breathing space.

Change to the Revised WMS:

The WMS should clarify that the long term goal is full liberalisation of the Waste Sector, but clarify WasteServ's role, particularly with regard to improving the infrastructural capacity to deal with waste.

last resort', but the WMS must strike a pragmatic balance. The waste sector is still in relative infancy when compared to larger EU member states. The role of WasteServ in securing inward investment to improve the capacity of the waste sector should not be under-estimated. Significant infrastructure and private sector partnerships have been put in place to manage waste in a way that helps Malta work towards meeting its Landfill Directive requirements and manage waste in a more sustainable way. The Waste Strategy must strike a balance between full 'liberalisation' and the recognition that WasteServ can help to secure funding to build the infrastructural capacity of the waste sector.

Kummissjoni	16 /8	Observations
Ambjent (KA)		
Arcidjocesji ta' Malta		

Certainly, WasteServ has been indispensable for the many successful initiatives in waste management in recent years. Its role in public education is praiseworthy. At the same time, as a major operator in this sensitive sector, we feel that this company must also assume responsibility for the damages that its operations can have of health and the environment. The KA understands that this will not be done voluntarily from the company, and so feels that the authorities should develop a legal system that results in this.

The KA also notes the worries expressed by representatives of the commercial sector on the WasteServ's role when they said that this creates an imbalance in the market, to the detriment of the private sector. This argument shows the progress in this sector, when one considers that in the 1990s, there were little who looked at waste as a market. Now we have reached a point where we realise that waste is an important resource and that its management can result in financial gain. At the same time, the KA understands the need for Government to maintain a role in this sensitive sector for the economy and sustainable development even through WasteServ. At the same time, there should be given space to the private sector, especially if the principles of accountability and liability are seriously introduced.

Noted. The KA do not specify the nature of the 'damages' that certain WasteServ operations are associated with. WasteServ has, over the years, carried out waste operations in Malta and Gozo with great environmental prudence. Compared to the situation in Malta and Gozo prior to the establishment of WasteServ, basic environmental procedures in the waste industry have improved considerably. Regarding the second point, the Government remains committed to the principle that WasteServ is an 'operator of last resort', but the WMS must strike a pragmatic balance. The waste sector is still in relative infancy when compared to larger EU member states. The role of WasteServ in securing inward investment to improve the capacity of the waste sector should not be under-estimated. Significant infrastructure and private sector partnerships have been put in place to manage waste in a way that helps Malta work towards meeting its Landfill Directive

requirements and manage waste in a more sustainable way. The Waste Strategy must strike a balance between full 'liberalisation' and the recognition that WasteServ can help to secure funding to build the infrastructural capacity of the waste sector.

Change to the Revised WMS:

The WMS should clarify that the long term goal is full liberalisation of the Waste Sector, but clarify WasteServ's role, particularly with regard to improving the infrastructural capacity to deal with waste. WasteServ will always, however, remain the operator of last resort.

Section of WMS:	4.5 Municipal Solid Waste (MSW) Collection Services Contracts
Respondent Details and Comment	MRRRA Response

GRTU	1 / 11	Object	
<p><i>GRTU continues to insist that each Local Council will continue to have a right to issue a tender for MSW services, however the tender document has to be agreed to by the stake holders involved.</i></p> <p><i>GRTU does not agree with the setting up of regions for these tenders. Whilst we appreciate that there could be economies of scale, there are other ways and means of how economies of scales can be achieved, ie in the way the waste carriers submit their own tenders.</i></p> <p><i>GRTU is of the opinion that the Service Contracts for MSW are now issued, in agreement with the Local Councils Association. We further note that these Service Contracts should cover MSW only.</i></p> <p><i>With respect to BRING IN SITES, it would be best if Wasteserv offered the responsibility to each Local Council, and it would be the Local Councils to administer these in each and every locality. This would create a further holistic approach to waste collection in the locality.</i></p> <p><i>GRTU outlines that whilst it is in agreement with Recyclables Collection, we should now allow schemes to take over this responsibility through cooperation with Local Councils via the issue of an expression of interest. Schemes would offer a financial package to Local Councils and Councils would have a choice of operator.</i></p> <p><i>GRTU agrees with the setting up of a Waste Management Inspectorate Directorate which will include Waste managers who will cover each a part of the island. They will have the obligation to monitor collections of both MSW and recyclables and will have the power to issue "non conformity of service penalties" to operators on the spot'</i></p>			<p>Noted. However, the regionalisation proposal is likely to result in cost savings and more efficiency. Government has a duty to ensure efficiencies are maximised, particularly where this involves public funding. However, GRTU's comment regarding regionalisation versus individual Local Council tenders will be studied in greater detail at implementation phase.</p>

Change to the Revised WMS:

Revised Strategy will continue to promote regionalisation of MSW service contracts.

Kummissjoni Ambjent (KA) Arcidjocesi ta' Malta	16 / 9	Support with conditions	
<p>[TRANSLATED]</p> <p><i>The Role of Local Councils</i></p> <p><i>The KA agrees with this plan, because in this way, more power and responsibility is given to these local administrations in the workings of the strategy and the enforcement and implementation of its several sensitive phases. These initiatives will only succeed if there is a genuine effort so that LCs will be completely included in their planning and implementation (and not only consultation). In all this, Government must not give the impression that it is moving its own responsibilities to the LCs because this will be wrongly interpreted by consumers and waste producers. At the same time, it is important that if the LC and the communities will carry further responsibilities, they need to be given greater powers to decide and control the implementation of waste management together with their accountability and liability obligations.</i></p> <p><i>This reasoning is in line with what the KA has expressed on the 2nd proposal for the development of the Sant' Antrnin Plant. Back then, the KA had suggested that a Regulatory Board is formed that includes representatives of WasteServ, MEPA and regional communities. The Board would be responsible to oversee each stage of the process (design, planning, construction and commissioning of facilities) and that monitors the operations of the plant. The forming of this Board, apart from ensuring that an agreement is reached by all parties so that each party is satisfied, would</i></p>			<p>Support for the further involvement of Local Councils in the delivery of the WMS is noted.</p>

have given greater power and control to residents in the environmental decision taken in their locality. However, this idea was ignored. One asks: Why? Are we afraid to give this power to civil society? Or while stressing on its rights, the civil society itself is afraid from the obligations and responsibilities tied with this power?

Change to the Revised WMS:

The revised WMS will clearly identify Actions where the active involvement of Local Councils is envisaged. For example, through the implementation of new Waste Contracts and the Regionalisation of MSW if feasible.

Section of WMS: 5.0 Chapter 5 - Economic & Financial Measures

Respondent Details and Comment

MRRRA Response

OPM & MEPA 5 / 5 Object

Throughout the strategy, there is limited reference to facilities owned by the private sector. The Strategy should be the tool to stimulate the private sector in this area and should address the waste sector rather than focus on government facilities and agencies.

Noted. It is considered that the long term economic sustainability of the waste sector will be dependent on further involvement of the private sector. The constrained size of the waste market in Malta must, however, be acknowledged. Whilst the waste sector remains in relative infancy, the need for further public sector interventions into waste facilities will remain throughout the period of the revised WMS (2010-2015). WasteServ will continue to act as the operator of last resort.

Short and medium term measures to create a viable market for waste operators will continue to be implemented. In October 2009 Government, for example, increased gate fees for MSW. This is another step towards providing a viable market for future operators.

Change to the Revised WMS:

The revised WMS shall place greater emphasis on reducing disincentives for the private sector to become actively involved in the waste sector, but acknowledge that continued public sector intervention will be inevitable during the period of the revised strategy.

Chamber of Engineers 15 / 10 Support, with conditions

Financial Considerations

The following financial considerations are thought to be imperative to ensure the success of the proposed strategy;

- *Adequate financial resources must be allocated to ensure that the most appropriate technology and facilities are utilised to properly manage waste. We believe that the consequences of losing the gained momentum are too high and recovering lost ground at this stage would prove to be very expensive and difficult to pay for later.*
- *Of primary importance is addressing the real waste management cost issue. Gradual implementation coupled with incentives for reduction, reuse and recycling are fundamental.*
- *The CoE believes that the proportion of overall costs for waste management not covered by the proceeds from treating the waste must be recovered in accordance with the 'polluter pays' principle. Thus the cost of disposing of waste must be borne by either the waste collecting operators and/or directly by the previous holders that is the waste source producer.*
- *Accelerating the process for establishing the regulation and price for selling/buying renewable or recovered energy.*

Change to the Revised WMS:

The WMS should be revised to give further priority to the 'polluter pays' principle. In the context of commercial / packaging waste and Construction and Demolition Waste, the WMS will state that all initiatives to reduce C&D & Commercial Waste must be prepared in the context of this principle.

Noted. The WMS identifies the 'polluter pays' principle as a key driver to encourage waste minimisation.

Section of WMS: 5.1 Charges for Waste Management Facilities and Services

Respondent Details and Comment

MRRRA Response

GRTU **1 / 12** **Observations**

This is a crucial issue which needs to be handled with the utmost of care. Ensuring full cost recovery is not easy to change from words to facts. One needs to effect a due diligence impact assessment on all the stakeholders and sectors it will without fail effect.

Without figures and data in hand it would be detrimental to give a final opinion on this subject matter. However one cannot state that because the charges allocated to C&D waste were absorbed by the construction industry to date, this does not mean that all other sectors can absorb any price increase too.

As such GRTU recommends THAT IN INTRODUCING NEW LANDFILL FEES THERE ARE NO HICCUPS OF ANY NATURE. WE CANNOT ALLOW TRADE OR INDUSTRY TO WAKE UP WITH ANOTHER MAJOR STUMBLING BLOCK IN ADDITION TO THE CURRENT ELECTRICITY TARIFFS.

Due to the fact that most Waste Management facilities are operated by WasteServ, in itself, this creates a monopoly, and thus a stumbling block to building once again a structure whereby industry and trade and the consumer are made to pay exorbitant prices, this time for waste disposal. GRTU, having seen the current setup at Waste serv and the infrastructure/s of the current waste management facilities confirms that it is not in agreement with Government who is stating that prices of Government owned facilities will be revised to reflect the true cost. This, today, would be totally unacceptable.

Such changes can only be acceptable gradually when there is a more competitive market.

Change to the Revised WMS:

No change. The revised WMS will retain a commitment to continually review gate fees.

Noted. A commitment to revise landfill tariffs has been included as part of the WMS. This has been prepared in line with the waste hierarchy and various Directives that strongly favour diversion of waste from landfill.

OPM & MEPA **5 / 8** **Object**

Importance should be given to the provision of incentives for the private sector to invest in this infrastructure, and this could be mainly achieved by making it mandatory for all public waste facilities to charge realistic gate fees that cover the full cost of operation and also internalise environmental externalities.

Change to the Revised WMS:

No change. The revised WMS will retain a commitment to continually review gate fees.

Noted. The Draft WMS includes reference to an overhaul of the charging regimes at section 5.1 of the Strategy, although it is accepted that specific action is required.

Nature Trust (Malta) and Din L-Art Helwa **12 / 1** **Support, with conditions**

Tariffs for waste disposal

While NTM and DLH agree that the tariff for waste per tonnage should increase to reflect the polluter waste principle which to date this has not been so- yet the NGOs strongly feel that if the issue of law enforcement is not solved prior to the introduction of such tariffs, fly tipping in our country side will again become a common occurrence.

Suggestions

Prior to the tariff increases, the authorities should set up a law enforcement unit - preferably beefing up the ALE and give it a more focused role in environmental protection with more patrols in the countryside.

Higher fines to deter law abusers - such as high fines, confiscation of vehicle, etc should be introduced. Only then should higher tariffs be implemented.

Change to the Revised WMS:

The WMS will include a commitment to increase the level of enforcement.

Noted. The respondent correctly points out that 'gate fees' for the disposal of MSW (€1 per tonne) and Construction and Demolition Waste (€4 per tonne) are low and do not fully reflect the 'polluter pays' principle. The Government has recently (October 2009) significantly increased 'gate fee' charges. Further increases in 'Gate Fees' may be implemented during the timeframe of the revised strategy (2010-2015), subject to further revision. It is accepted that a steep increase in charges for commercial or Construction and Demolition Waste could lead to increased instances of fly-tipping. The WMS should acknowledge this and ensure that a review of Enforcement Resources available to the Environment Protection Directorate at MEPA should coincide with the next review of gate fees, in anticipation of pressure for illegal dumping.

Section of WMS: 5.2 Charges for Local Councils in the Collection of MSW

Respondent Details and Comment

MRRRA Response

GRTU 1 / 13 Observations

After continued discussions with both the Waste carriers and the Local Councils Association, it is recommended that the payment of landfilling fees would still be borne by the waste carrier as it is today.
 There are a number of reasons for this namely:
 A carrier could have collections in the same collection which is being paid for by private industry or trade. This would mean that, in the way Government is proposing, the Local Council would finish paying for private industry. It would also create an unfair level playing field to waste carriers.
 GRTU still feels that there could be a time in the future, long term, that this proposal could be brought in, but this will first need a lot of education, and also, the contracts for collection of separated waste in each locality would have been awarded too. It is important to have a cutting line between households and trade and industry.
 Local Councils would outline in their tender document the average daily tonnage that they require the waste carrier to collect and specify a rate that the carrier has to budget for the landfilling. Without fail any changes in the landfilling fee would then need to be adjusted accordingly.
 Local Councils would need to instigate their residents to decrease Mixed waste and accordingly increase recyclables waste for which Schemes would offer incentives. Thus a Local council would gain funds from decreasing waste going to landfill and also would take in money for increasing recyclables. In turn these incentives should be rewarded down the line to the citizens in a number of ways.
 This is the way forward if we want to achieve realistic targets.

Noted. Most commercial waste is packaging waste. The most appropriate way to deal with this is through the introduction of fiscal incentives, voluntary and regulatory measures to discourage excessive packaging waste. It must, however, be recognised that there will always be quantities of commercial packaging waste to process. Government is committed to introduce a fee structure to encourage the sorting and recycling of commercial packaging waste. A price differential will be introduced to ensure that the cost of disposal of 'clean' commercial packaging waste is less if presented for recycling rather than landfill. GRTU concerns about the potential mixing of household waste with commercial waste are noted, although too detailed for the Strategy to address. It is an issue for the terms of reference of waste contracts and enforcement of contracts. The introduction of price differentials for commercial waste should, however, minimise the likelihood of mixed commercial and household waste.

Change to the Revised WMS:

The revised WMS will provide continued commitments to moving commercial waste further up the waste hierarchy. These will include:

- 1) Actions to minimise commercial packaging waste
- 2) Commitments to increasing the price differential between commercial waste for landfill and recycling

Section of WMS: 5.4 Responsibilising Waste Producers

Respondent Details and Comment

MRRRA Response

Carmel 14 / 2 Object
 Cacopardo

Composition
 The first step is to closely examine the contents of the waste generated at home. The document published by Government does not refer to any of this. In fact, the report prepared by the Austrians on incineration entitled 'Waste to Energy in Malta- Scenarios for Implementation' refers to a survey carried out in 1989 by Vince Gauci, and a study carried out by the National Statistics Offices of Malta in 2003. There seems to be no recent information. The type of waste that is generated varies according to our habits and the way we live. For example, the amount of plastic waste seems to be continuously on the increase and one of the reasons is our ever increasing dependency on food plastic packaging. This is a result of not only our fast lives, but also of the ever increasing role of large supermarkets in the food retail business.
 Research that backs the update of Malta's policy on waste is necessary, but missing. How can a policy that answers today's needs be prepared if the present situation is not measured frequently and adequately? In other countries this is carried out regularly and so they can detect in advance the changes that are occurring, giving them time to respond.
 In the UK in early February 2009, a report from the Local Government Association entitled 'War on Waste: Food Packaging Study Wave 3' was published. In this report, the role of all the supermarket chains was examined in relation to waste generation. The report suggests whether food packaging, that is required for hygienic purposes, can be done using biodegradable plastic. This type of plastic will not require incineration but can be processed together with other organic waste.
 It seems that the Maltese Government did not examine this. The group that prepared the waste strategy do not seem to have realised its relevance for the update of the strategy.

Noted. The respondent is correct to identify waste minimisation as a critical objective for the WMS, however, the Strategy must take a pragmatic approach and realise that whilst 'zero waste' should be a goal it will never be fully attained. The WMS must promote a realistic range of treatment options. To rely on the baseline situation (the Sant'Antnin MBT plant plus landfilling and waste minimisation) will result in a significant risk that Malta will not meet its Landfill Directive Targets.
 The WMS should, however, promote waste minimisation as a primary goal in the WMS.

Aims

It is good ask: where do we want to arrive? There are several aims that we would like to achieve. Firstly, we should aim to reduce waste. A lot of effort is being carried out to reduce the waste that is thrown away, and the results of this are slowly being achieved through the people's greater awareness of the need to recycle. However, although recycling is good, it is not enough. When supermarkets offer discounted prices, they do this for several reasons. They buy in bulk and press their suppliers for lower prices, as well as reducing labour costs. This considerably reduces their expenses. It is more convenient to grab a packet off the supermarket shelf or from a freezer straight into the trolley without the need to queue to weigh the ham or cheese. Some of the supermarket expenses that are saved end up carried into the waste management system because more plastic waste is generated. This can be avoided in two ways. Where possible we can avoid using plastic by purchasing more fresh food. Apart from the higher nutritional value, there is a reduced generation of waste, while promoting the local agricultural industry.

Government should insist that packaging is carried out using biodegradable plastic. There are a number of measures that can be carried out for this purpose. It is not fair that for supermarkets to remain competitive, they place the burden on public services that carry the burden of the additional waste that is increasingly being generated.

The updated strategy does not address this.

Change to the Revised WMS:

The revised WMS will provide more priority to waste minimisation, but to acknowledge that Malta still needs to increase capacity for treatment of waste if EU Landfill Directive targets are to be met.

Chamber of	15 /3	Observations
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Engineers

It is understood that the operational and the environmental cost of the waste management and disposal methods, currently employed in the Maltese Islands, are still heavily subsidised. We feel that exposing these costs immediately and defining their gradual transfer to the customers is an imperative first step in the strategy to reduce the generation of waste. By including such details, the document will serve as a medium to justify and fine tune the proposed strategies. Individuals, businesses and organisations who make an effort to reduce, reuse or recover waste should be rewarded financially or further motivated through a discount. While we appreciate it is challenging to implement, the funds for such financial incentives should come directly from perpetrators who insist on a selfish and blatant waste generation attitude.

Noted. It is considered that the long term economic sustainability of the waste sector will be dependent on further involvement of the private sector. The constrained size of the waste market in Malta must, however, be acknowledged. Whilst the waste sector remains in relative infancy, the need for further public sector promoted interventions into waste facilities will remain throughout the period of the revised WMS (2010-2015). Short and medium term measures to create a viable market for waste operators will continue to be implemented. Government is currently, for example, seeking further increases in gate fees for MSW, this is another step towards providing a viable market for future operators.

Change to the Revised WMS:

The revised WMS shall place greater emphasis on reducing disincentives for the private sector to become actively involved in the waste sector, but acknowledge that continued public sector intervention will be inevitable during the period of the revised strategy.

Chamber of	15 /14
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Engineers

Producer Responsibility

Notwithstanding the challenges at the political level, the principle of Producer Responsibility remains a very important fulcrum of the strategy as presented in the document. We hope that in due course this principle becomes an inherent part of our business and social culture and we urge the Authorities to proceed with this strategy and continue to pursue this objective.

Implementation of any type of new measure should ideally be introduced gradually and should always be accompanied by a positive incentive for those who take the initiative to reduce, reuse, recycle or recover.

As a general policy the Authorities should also start to promote the idea that environmental impact by all industries must be met not only with the current financial commitment paid to the authorities as part of the project approval process but also with an equivalent social responsibility that somewhat offsets this impact.

Noted.

Change to the Revised WMS:

No change.

Section of WMS: 5.5 Preferential Public Sector Procurement Policies

Respondent Details and Comment

MRRRA Response

GRTU 1 / 15 Support

GRTU agrees with increasing further the "Green Public Procurement Guide" in order to make sure that the initiatives outlined are actually implemented. GRTU also agrees that a tender should include "GREEN" criteria.

Noted.

Change to the Revised WMS:

The revised WMS will include a commitment for the delivery of a public sector green procurement policy.

Section of WMS: 5.6 Incentives for Locally Manufactured Recycled Products / Recycling Processes

Respondent Details and Comment

MRRRA Response

GRTU 1 / 16 Observations

This would be a welcome initiative for the few companies now in the market. GRTU would focus on research funding and funding for export promotion and not in favour of reduced tax rates. GRTU also agrees to reduced port rates in order to incentivize further the export of recyclables.

Noted.

Change to the Revised WMS:

No change.

Section of WMS: 6.0 Whole Chapter

Respondent Details and Comment

MRRRA Response

OPM & MEPA 5 / 21 Object

COMMERCIAL AND INDUSTRIAL WASTE

Although this waste stream is not regulated by one specific regulation and no European targets have been set, by no means should Malta underestimate the overall potential and impact of this waste stream. There is minimal reference in the national waste strategy as on how this waste stream is to be managed nationally. Furthermore, Malta recently received a question from the European Commission dated 6 January 2009 on how commercial waste is managed and whether this waste stream is being recorded or not within the scope of Article 5(2) of the landfill directive regarding the diversion targets.

The Government responded to the question from the European Commission on 2nd February 2009. The Government's response clarified that those fractions of waste that are normally from Civic Amenity sites or via kerbside collection (mainly cardboard, paper, metal, glass and plastic) are classified as municipal solid waste in the context of the Landfill Directive. A significant amount of this type of waste is also collected from SMEs by the same contractors who transport kerbside/civic amenity site waste. This is also defined as municipal solid waste in the context of the Landfill Directive. The WMS primarily concentrates on meeting targets for waste management established through EU Directives and relevant transposed law. It should be noted, however, that the WMS puts in place preferred options for managing residual waste that is not just covered by EU targets. In considering the technical specifications for MBT capacity and future incineration plant capacity for any residual amounts, the likely commercial waste (that is not classified as municipal, hazardous or inert) will be factored in as a technical consideration alongside municipal waste when considering waste flows. This will ensure that alternatives to landfill exist for the remaining commercial waste streams that fall outside of specific legal targets.

Change to the Revised WMS:

No change.

Section of WMS:

6.1 Excavation, Construction and Demolition Wastes

Respondent Details and Comment

MRRRA Response

GRTU **1 / 14** **Observations**

*Over 84% of waste is C&D Waste. In itself it is a statement which needs particular attention. Whilst on a day to day basis we fail to realize this, we need to wake up to a new reality.
GRTU agrees that the landfilling of quarries should continue but all stakeholders need to sit down and assess the current situation in this waste stream.
GRTU, realizes that C&D waste needs to be separated and where possible recycled. In itself this creates practical problems. GRTU is informed by excavation and demolishing contractors in Gozo, that they have been instructed to separate the steel mesh from the concrete before depositing at a quarry. These operators do not have the know how or the machinery to do this.
Whilst a Twinning Project was in place with the Austrian Environment Agency, a number of practical issues were discussed. Our operators both in Malta and Gozo need to be taught more on this subject matter. GRTU strongly recommends due education for these operators.
GRTU RECOMMENDS THE SETTING UP OF A STAKEHOLDER COMMITTEE including quarry owners, excavation and demolition contractors, BICC, University of Malta, MRRRA, MEPA Minerals Board, so that the recommendations put forward by the Austrian Twinning Project are individually looked into and a final recommendations made, to be then included in the final revised Waste Management Strategy.*

Change to the Revised WMS:

The Revised WMS will include a number of firm actions with regard to C&D Waste in line with EU targets.

Noted. The WMS is a strategic level document that will not specify specific techniques. However, the WMS will commit to EU targets for C&D Waste and to recommendations made in the Twinning Project Action Plan and to review the recommendations of the BICC.

Dr J A Doublet **2 / 1** **Object**

*I think that one of the main problems of the proposed strategy is that it is giving a lot of importance to household waste and how this could be utilised as a resource etc in order to increase the lifetime of the Ghallis landfill but it is not giving enough attention to the major contributor of our waste problem, which is construction and demolition waste. The impression given is that such waste which is being generated cannot be reduced and so we have to find ways and means of how one could dispose it or utilise it in one way or another. I believe that this is a wrong departure point. I will address first the issue dealing with construction and demolition waste and then make a brief comment on the household waste.
It is a general accepted fact that Maghtab grew to the scale it is today mainly due to the large quantities of construction and demolition (C&D) waste which were deposited there over the last decade or so. One is looking at a scale ranging into millions of tonnes of material deposited annually, Figure 1 shows the amount of construction and demolition waste deposited in quarries and dumped at sea during the period 2003 -2007.
If one were to compare the quantities of construction and demolition (C&D) waste disposed in quarries and the sea and add them to the debris fraction, as was done prior to 2003 and then calculate the percentage composition of each waste fraction, as done prior to 2003, then one will notice that the percentage composition of the construction and demolition waste fraction was in fact higher than in previous years (Note that the figures for 2007 are lower due to the lack of data for one of the depositary sites) (see Figure 2). If one were to factorise that waste, one would find that most of it is excavated material, the rest being mainly from the demolition of buildings, that is stones, roof structures etc. Unfortunately, the document gives an incorrect percentage of C&D waste whereby it is attributed that it corresponds to 84% (See pg 24) when in fact this went up to over 90% during the years 2004, 2005 and 2006 and possibly even afterwards. The fraction found in these figures is probably less than that which is actually produced because a certain amount of C&D waste is recycled and reused for a variety of purposes. I am not aware of the statistics for material which is recycled In this manner.
I believe that most of this is the result of planning policies which came into effect after 1992, the financial returns from construction and also the price of land. The principle policies which are the driving force behind excavation are those related to transport, i.e. the demand by the Malta Environment and Planning Authority, MEPA for car parking spaces. This is resulting in a situation whereby a lot of excavation is being carried out to accommodate*

Noted. The revised WMS will recognise that increasing quantities of C&D waste are being deposited at licensed C&D landfills and this situation is not sustainable in the long term.

garages or car parking spaces. The strategy under consideration claims that the cost of depositing such material is borne by the producer of the waste. Granted, but that is not acting as a disincentive because the cost is passed on to the client and will form part of the cost of the building. The net result is that the developer produces as much waste as is necessary and is bearing no particular added cost. Unlike what the document claims, if the cost for disposal was acting as a disincentive then one should observe a reduction in waste, but the official figures show another story, i.e. an increase in C&D waste!

If one looks at the issue from the planning point of view, irrespective of the policies for garage parking which were introduced since 1992, one could easily say that these have not served as any disincentive for anyone; cars have increased considerably, parking is still a problem in many areas and the consequential pollution effects have also increased. The issue of cars is basically directly linked with the public transport problem in Malta. If that issue is resolved, then people could be encouraged to make less use of their own transport facilities and utilise more the public system. This would also release the demand for parking spaces. As things stand, parking spaces are being provided through the planning system, cars are on demand as a result of the public transport system, pollution is on the increase due to the number of cars and more than 90% of the waste produced annually is C&D waste mostly arising from excavations. One must also note the great quantities of dust generated in urban areas during the excavation process together with the large quantities of fuel used and the corresponding pollution and greenhouse gases being produced to excavate and carry this material away. Certainly, all this process is definitely not sustainable or environment friendly in any way!

One must note that in 2002 the Waste Management Working Party produced a document focusing on the three R's. Almost seven years later following that report, we are being informed that the Government shall ensure that the recommendations are taken up. One might say that it is better late than never, however, in a subsequent report by an Austrian Environment Agency, the main focus is not on the reduction of C&D waste but on the recycling and reuse of that waste, implying that the first R (REDUCE) is practically not applicable to this sector.

The proposed strategy is recommending that one would find ways and means of how this type of waste would be disposed in the future once the current systems are exhausted. Such methods include also those of dumping waste at sea. This is a wrong way of tackling the problem. The point of departure here is that we are accepting the fact that we NEED to produce such quantities of waste as if nothing could be done. I think that we need to go back to basics and analyse the whole situation, i.e. the real cause/s of such waste, whether we really need to produce such amounts of waste, where are we heading to, whether all this is sustainable? What do we understand by sustainable development? Can we really achieve it if we move along this path? Are we really trying to find a long term solution or a short term one which is the easiest way out without ruffling too many feathers of the interested stakeholders but to the detriment of the remaining population? Frankly, as things stand, a lot of demand is being made on the part of the population which is producing the least amount of annual waste with the remaining part being asked just to pay for the waste which they deposit, something which the latter are just passing onto the clients and future buyers. I think that primarily one must address the public transport system, something which is currently being done and hopefully the reform will come into effect sooner rather than later. Secondly, one must address the excavation issue through the planning policies. I think that apartments should have limited garage spaces and not full. A price would be paid for spaces which are not accommodated in the development. Garages could be above ground level if necessary. This would serve as a disincentive to build excessive number of apartments and excavations in urban areas should not exceed one storey depth. In Urban Conservation Areas excavations should be avoided and car garages should also be restricted in size. This would limit the number of apartments and also the quantity of excavated material being produced. In cases where one is building public structures such as hotels and major luxury projects above a certain size, excavation would be allowed to accommodate the traffic generated by such development, but there should be an additional cost for the excavated material which is produced. This should be such as to serve as a disincentive for the developer. The last resort should be that of depositing waste at sea. Unfortunately, it seems that such a practice is being recommended by MEPA staff for certain developments, thus facilitating the way for certain developers. One needs to understand the effects such a practice is having on our marine life. The sea is not our landfill. We cannot keep on playing the ostrich and ignoring the effects such a practice might be having on our marine environment. The

excavated material which we are dumping in exhausted quarries and in the sea is a resource which we could possibly use now or/and in the future. I think such issues should be adequately addressed prior to finding easy solutions which are not sustainable. Dumping waste into the sea would basically almost exhaust the potential use of such material although this could still be recovered in the future but obviously at a much higher cost than if recovered from a land-based source. The idea of creating islands which is suggested in the document is a simple way of further creating more C&D waste because obviously one would like to see the end of the construction of these islands in a short span of time (ideally over a legislature) and so rather than reducing waste, this would serve as an incentive to produce as much as possible because it would create a demand for such material. I feel that the proposed strategy should seek better ways of how to address this issue which is a major contributor to our annual wastes. This should be done in view of the political and social commitment towards sustainable development which the government has made in the recent past. As things stand, with regards to C&D waste the strategy is looking at the lowest level in the waste hierarchy i.e. disposal of waste when I think that the strategy should be addressing this hierarchy in the order presented on page 7, i.e. waste reduction and prevention. It seems that such a possibility is beyond our means when it comes to this sector.

Change to the Revised WMS:

The Revised WMS will include a number of firm actions with regard to C&D Waste in line with EU targets.

OPM & MEPA 5 / 10 Support with Conditions

Malta should achieve a minimum recovery of 70% of construction and demolition waste by 2020. The recommendations in the strategy address most of the requirements; however it is recommended that the strategy lays out clear staggered targets for the achievement of the overall 70% reduction target in 2020 as well as a target date for the completion of the relevant topic paper.

Noted.

Change to the Revised WMS:

The Revised WMS will include a number of firm actions with regard to C&D Waste in line with EU targets.

**Friends of the 6 / 7 Object
Earth Malta**

In the case of construction and demolition waste, no mention is made about the low price of local stone. The strategy mentions the possibility of an increase in the price for the disposal of construction and demolition, however increasing the price of stone will encourage its reuse, reduce wastage during production and lead to a higher appreciation of this mineral resource

Noted. The Draft WMS included various references to actions on C&D Waste including preparation of a topic paper, a 'Recycled Building Materials Working Party' to prepare a C&D Strategy, implementing the recommendations of the Waste Management Working Party relating to Recovery & Recycling of C&D Waste.

Change to the Revised WMS:

The revised WMS will acknowledge that any review of current practise will have to consider all fiscal issues to minimise the use of virgin stone/primary material.

**The Building 10 / 1
Industry
Consultative
Council (BICC)**

These comments are based on a BICC meeting specifically dedicated to this subject, as well as on preliminary research. The BICC meeting was held on 6th March 2009. Apart from the stakeholders represented on the BICC, other persons attended and participated in the meeting including the Head of the Faculty for the Built Environment, a representative from Wasteserv and two private architects who are responsible for major projects in Malta. (The stakeholders represented an BICC are listed as an addendum). These comments took into account the report Recycling of Construction and Demolition Waste in Malta Strategy for Short-Term implementation which was submitted to the Ministry of Resources and Rural Affairs by Unweilbundsamt GmbH Austria. The report: referred to in the Consultation Document, was a Twinning Project funded by the EU. The following proposals are being made taking into account the following:
1) The volume of waste resulting from the construction industry is substantial. With dwindling availability of quarries where to dump this material, the need to find solution becomes more urgent.
2) Most of the C&D waste comes from excavation. Hence solutions

It is noted that the BICC and others have undertaken considerable research into the issue of Construction and Demolition Waste. Challenging targets for the reuse and recycling of this waste have been set by the EU.

directed specifically to excavation waste will go some way at solving the problem, although obviously due attention has to be given to waste from demolition of existing buildings.

3) The reconstituted stone is often cited as one possible solution. Without excluding this option entirely, it seems an unnecessary waste of energy to first break up the material and then expend considerable effort to re-form into a stone blocks (knaten) for building. Apart from issues of cost, there is greater take-up of energy and materials to adopt this process. It makes more sense to seek and encourage ways of excavating the material from site in a manner which could be put to good use or cut into stones for building

4) The operation of the market is more likely to provide a long term solution provided that the use or recycling of waste is economically viable.

5) It is suggested that means are sought to create a market for

- recutting larger blocks into smaller ones (blocks/knaten as well as thin panels)

- used for retaining walls or similar gravity structures

- used for stone sculpture and decorative elements

6) The creation of a market should be promoted by

- Providing better information to bring producers of excavated material from development sites in contact with potential buyers.

- Assisting the private sector on how to deal with slack piles of material which may accumulate.

- Providing financial assistance on capital investment (ex to acquire machinery to excavate material in large blocks).

- Providing funds for technical innovation and research, in order to add value to the stone material, and enhance its performance to access wider markets.

- Allowing for, through the planning system, lead times between the excavation phase and the construction phase of a development site.

7) There already is some level of recycling of excavated material i.e. a market is developing and there appears to be potential for this market to develop further. There is at least two sizeable site, where the material is being excavated into large blocks for resale. Where there is coralline limestone, material excavated from a development site is used to produce spells.

8) There is no single solution to address the problem. Seven different actions involving various government agencies as well as the private sector are proposed for phase 1. The proposed seven actions for phase 1 are to be carried out, as far as is practicable, concurrently.

9) The intervention of government in the form of regulations, taxation or subsidy should be a last resort, and only if the market does not operate effectively enough to deal with the volume of waste material produced. One or more of the three actions proposed for Phase 2 could be considered depending on the outcome of the Actions in Phase 1.

PHASE 1

Objective; to create a market for

A. Limestone material in the form of large blocks from excavation

B. stones (knaten) from deconstruction of buildings.

Proposed Action 1 - Market information

Set up website to bring sellers and buyers together. Sellers can post C&D waste for sale.

Proposed Action 2 - Wasteserv Depot

i) Wasteserv to establish two or three depots in Malta where excavated material from a building site can be taken provided that the material is in the form of large blocks. Excavated material which is not in the form of blocks is not to be accepted. The depots are also to accept stones (knaten) from a deconstructed building.

ii) Wasteserv will seek to sell the material locally. Subject to MRA permit, Wasteserv may also seek to sell the material in bulk overseas. For said material, Wasteserv will pass on the funds to the developer who brought the material, less, say, 25% to cover costs.

iii) If Wasteserv is unable to sell and the depots become full, Wasteserv will use the material to create artificial reefs (see action 6b), for landscape modelling (see action 6c) or in any other way it sees fit. In this eventuality, no payment will be due to the developer who brought the material to the depot.

This will create incentives to developers to excavate material from development sites in large blocks namely;

- they will not incur expense to dispose of material and

- they might actually get some income out of it.

These advantages should offset the disadvantage of increased time and

possibly expense to excavate site. Additional research may be required in order to identify the way increased time to excavate a given site, and hence costs, could be mitigated.

Proposed Action 3 - Private Sector Depots

Encourage the private sector to establish sites where excavated large blocks can be

- stockpiled and / or*
 - cut into smaller stones (knaten). All stone cutting to be carried out in enclosed space (temporary closed tent structures will suffice).*
- Initially, private sectors depots will complement those provided by Wastesev. Eventually, if and when the market develops, only private sector depots should remain operational.*

Proposed Action 4 - Planning and Environmental regulations

MEPA to review relevant regulations and policy guidance to facilitate the process including;

- Not requiring sites which excavate in large blocks, and normal stone blocks (knaten), to do an EIA as if they were a quarry, subject to special conditions aimed at reducing dust emission and noise.*
- Allow permit issue for excavation prior to issue of the full development permit if the developer intends to excavate site in large blocks.*
- Prepare specific planning guidance so that applications for sites where large blocks are to be stored or processed could be assessed properly.*

Proposed Action 5 - Monitoring

Establish monitoring to provide information for further policy action if required

Proposed Action 6 - Research

- a) Carry out research on products that may be derived from the large stones (ex. stone cladding, paving), required treatments, fixing technologies etc.*
- b) Identify suitable sites for artificial reefs. Location and design of reefs should be to create a habitat for fish and thus increase marine life. A number of small reefs suitably located is considered preferable to one large reef to reduce negative impact on seabed and to reduce costs.*
- c) Identify sites where landscape modelling could be carried out alongside road to Hal Far.*
- d) Initiate discussion with ADT on the possibility of using crushed franca material for the construction of grade 3 roads.*
- e) Carry out research on reconstituted stone not only on how to produce and cost but also on qualities of finish, low-maintenance and durability that can be achieved.*

Proposed Action 7 - Funding

Identify sources of funds to provide financial assistance to operators on capital investment (ex to acquire machinery to cut large blocks into smaller stones (knaten)).

PHASE 2

Depending on the outcome of actions in Phase 1 and depending on the extent to which material excavated from development sites is reused, one or more of the following actions should be considered. This is a problem which is likely to become more acute in the coming years. Unless, the operation of the market substantially reduces the volume of waste, some form of intervention through regulation or levies will become inevitable.

A proper assessment of the situation will be required before introducing any of the subsequent proposed actions to ensure that these will accelerate the setting up of a market for material excavated from development sites and to safeguard against any negative effects that these may have on the construction industry.

Proposed Action 8

Pass regulations making it obligatory for all sites larger than say 500 sq. m. to be excavated in large blocks

Proposed Action 9

Pass regulations making it obligatory for the use of deconstruction methods when demolishing building for redevelopment purposes.

Proposed Action 10

Pass regulations to impose a levy on hardstone spalls. The income generated is to be used to subsidise stones (knaten) derived from large

blocks and/or reconstituted stone. The objective would be to make the price of stones (knaten) derived from large blocks and/or reconstituted stone comparable to that of bricks and stone (knaten) from quarries.

Other Considerations

Excavating a site in large blocks would have an added advantage namely reduced impact on neighbouring properties and on the environment in terms of vibration, noise and dust. Factoring in the environmental benefits into the equation would provide an even stronger justification for the various proposals in phase 1 to be implemented.

Similarly, should it be made obligatory to deconstruction methods to demolish building (proposed action 10), the risk for adjoining properties would be significantly reduced.

In both cases, however there is the downside of increased time and possibly also increased costs.

Change to the Revised WMS:

The revised WMS will include targets in line with EU commitments. Government will review proposals put forward by the BICC and others for the management of C&D waste.

The recommendations of the Austrian Twinning Study of June 2008 will be used to promote the minimisation and recycling of C&D waste as a policy objective in the revised WMS.

**Nature Trust 12 / 4
(Malta) and Din L-
Art Helwa**

Construction and demolition waste

No focus to reduce this seems to be considered

NO store of the main resource is envisaged (the stone)

Demolition should be done in a way to save the resource for reuse as much as possible

NTM and DLH feel that with the present rate, the option of dumping at sea will become necessary and thus this will not encourage the reduction of such waste but on the contrary create a demand for more waste for the reclamation needs

Noted. The revised WMS will recognise that increasing quantities of C&D waste are being deposited at licensed C&D landfills and this situation is not sustainable in the long term.

Change to the Revised WMS:

The revised WMS will include targets in line with EU commitments. Government will review proposals put forward by the BICC and others for the management of C&D waste.

The recommendations of the Austrian Twinning Study of June 2008 will be used to promote the minimisation and recycling of C&D waste as a policy objective in the revised WMS.

**Kummissjoni 16 / 11
Ambjent (KA)
Arcidjocesi ta'
Malta**

[TRANSLATED]

Construction Waste

The generated amount of this type of waste has always been a problem ... and it seems that it has remained so. It seems that several initiatives taken in the waste management framework did not lead to the aspired results.

Therefore, the KA completely agrees the direction indicated in pg 22 of the Update. In this same page, there is reference to a report prepared and presented by the BICC in October 2002. The report makes specific recommendations on management of this type of waste. The Update encourages Government to implement these recommendations (more than six years later). What is keeping Government from implementing these recommendations?

Often, we hear arguments that one of the ways of better utilising this waste is to reclaim land with it. As we said in 2005, we feel that this possibility should not be presented as an easy solution to the problem. It would be wiser if we work to reduce as much as we can the generation of such waste and that we reuse this resource. At the same time, we do not agree that if this resource is used for land reclamation, this will be the most effective way to use this resource. There are other more efficient methods that can be applied so that this resource is used in the building industry. For example, it makes more sense that excavations are done in a way so that the generated material will be used as building blocks for the same building ... this used to happen in the past. Or is it that for this industry, haste and economic gain are high priorities that come before the careful and sustainable use of this resource?

The use of large blocks in the construction industry has always been done. Proof of this is found in many farmhouses (that are now either collapsed or

It is noted that the BICC and others have undertaken considerable research into the issue of Construction and Demolition Waste. Challenging targets for the reuse and recycling of this waste have been set by the EU.

being demolished), were the yard there is a large hole dug into rock. This was the quarry that from it the farmer used to cut the rock to build his home. He used to save on carrying the material. Apart from this, the hole was used as a well to store water. Therefore, this was sustainable twice more than us! We do not see why we cannot do a similar thing today, especially with modern machinery, such as trenchers where one can cut large blocks (1m3), that can be used as retaining walls or as foundations, always if the rock type is geologically adequate.

There is also the case where Authorities should consider whether there should be a permit condition that states that a percentage of a relatively new building that is being demolished (built in the last 25 years) should be reused for the foundations of the same structure approved by MEPA. If not, this material should go to a recycling depot where whoever is going to build or make alterations can buy such material from there. In this way, building stone can be recycled.

Change to the Revised WMS:

The revised WMS will include targets in line with EU commitments. Government will review proposals put forward by the BICC and others for the management of C&D waste.

The recommendations of the Austrian Twinning Study of June 2008 will be used to promote the minimisation and recycling of C&D waste as a policy objective in the revised WMS.

Section of WMS: 6.2 Agriculture and Animal Husbandry Waste

Respondent Details and Comment	MRRRA Response
<p>GRTU 1 / 17 Observations</p> <p><i>Animal Waste is a subject which has been treated and discussed in detail, even well before the issue of this consultation document. We have had a number of meetings with various stake holders including Waste serv. We are enclosing with this document two documents entitled</i></p> <p><i>a) Animal Waste in Malta; Outline of Malta's Problem Annex B)</i></p> <p><i>b) Treatment of animal Waste in Malta - an analysis of the Sustech Report. (Annex C)</i></p> <p><i>GRTU will await the issue of the Agricultural Waste Management Plan for consultation prior to commenting further on the subject matter.</i></p> <p><i>GRTU however recommends that even in this matter real consultation with the Industry is to be held, before decisions are taken. Treating animal waste needs careful assessment and correct data, otherwise the methods chosen could prove to be unrealistic for Malta's needs.</i></p> <p>Change to the Revised WMS:</p> <p>The revised WMS will clarify why the strategy promotes co-treatment of Animal and municipal waste in terms:</p> <p>1) The economic rationale; and</p> <p>2) The potential to derive energy from waste.</p> <p>The revised WMS will also reference background documents that support this stance.</p>	<p>Noted. Although there are no 'EU Directive driven targets' to manage this waste stream, the conclusion of the Austrian Twinning Report and the Agricultural Waste Management Plan is that significant economies of scale will be realised through the co-treatment of municipal and agricultural waste. Further benefits include opportunities to derive energy from this waste stream and help Malta to meet its National Reform Programme goal of securing energy from waste.</p>

<p>OPM & MEPA 5 / 11 Object</p> <p><i>It should be noted that Malta has no specific obligations in relation to agricultural and Animal Husbandry Waste. Further information should be provided as to how the strategy concludes that Malta requires 3 new treatment plants. MRRRA should assess whether the 3 indicated treatment plants should be a priority given that there are a number of other areas (obligations) which require immediate action.</i></p>	<p>Noted. Although there are no 'EU Directive driven targets' to manage this waste stream, the conclusion of the Austrian Twinning Report and the Agricultural Waste Management Plan is that significant economies of scale will be realised through the co-treatment of municipal and agricultural waste. Further benefits include opportunities to derive energy from this waste stream and help Malta to meet its National Reform Programme goal of securing energy from waste.</p>
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Change to the Revised WMS:

The revised WMS will clarify why the strategy promote co-treatment of Animal and municipal waste in terms:

- 1) The economic rationale; and**
- 2) The potential to derive energy from waste.**

The revised WMS will also reference background documents that support this stance.

Section of WMS: 6.3 Municipal Solid Waste

Respondent Details and Comment	MRRRA Response
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HOUSEHOLD WASTE

Most of the initiatives taken during the last years focused mainly on the household generated wastes being generated. Most of these were successful, although there is still a lot of room for improvement. The only drawback which I think had a significant negative effect was the introduction of PET bottles in lieu of the glass bottles. Although these bottles are recyclable, we don't have a system which collects back these bottles. We had a perfect and unique system whereby most of the glass bottles used to be collected and now almost the same number of bottles (millions a year) are ending up in a landfill. I think there is an urgent need to address the recovery of plastics. One could look at incentives such as one where for every number of bottles returned a certain monetary refund is given or else the set up of recovery centre which would take all types of plastics and a refund paid for a given weight. Similar systems already exist whereby one could exchange wrappers or other household stuff with household items. One might ask what these companies do with the significant quantities of paper and plastic which they recover? Hope that these are sent for recycling. I think that the next step one should look at is that of further separating waste at source, i.e. organics, glass, paper, plastics and mixed waste. One could produce good quality compost from the organic waste and reduce the amount of labour and money in order to separate the bags of the recycle Tuesday waste.

Noted. The revised WMS will continue to promote recycling of Municipal Solid Waste, including a commitment to the separation of organic waste. Whilst the capacity to process recyclable waste streams has and will continue to improve, the revised WMS should also prioritise waste minimisation. Waste minimisation is further up the waste hierarchy when compared to recycling and hence more desirable from a sustainable development point of view.

Change to the Revised WMS:

Revised WMS to give more priority to waste minimisation measures when compared to the 2001 strategy.

OPM & MEPA 5 / 13 Object

Furthermore, the new Waste Framework Directive imposes a target of 50% recovery of domestic waste by 2020. The target and plans on how it is to be achieved are not addressed in the strategy.

Noted as a regulatory requirement.

Change to the Revised WMS:

The revised WMS will include targets in line with EU Directives.

OPM & MEPA 5 / 14

MBT

Further information should be provided as to how the strategy identifies 'Tal-Lewz' and 'Delimara' as the proposed sites for the installation of an MBT coupled with a manure treatment plant and incinerator respectively.

The WMS specifies sites that will be further studied through the EIA process. The site selection will include studies that consider both health and environmental factors.

Change to the Revised WMS:

The revised WMS will make reference to certain sites that are recommended for further studies as required by the MEPA process. These sites will be studied in terms of health and environmental impacts. Alternative sites will be considered as required by the EIA process.

OPM & MEPA 5 / 15

BIO-WASTE

The strategy fails to address this waste stream in spite of Malta's obligations under Article 22 of the waste framework directive whereby Member States are to encourage separate collection of bio-waste with a view to the composting and digestion of bio-waste and the use of environmentally safe materials produced from bio-waste. The same article, calls upon the Commission to carry out an assessment of the management of bio-waste, with a view to submitting a proposal, if appropriate.

Noted. The WMS promotes the processing of municipal bio-waste in order to meet landfill diversion targets and maximise opportunities to derive energy from waste. Given this, it is considered the strategy will benefit from a commitment to produce a national bio-waste management plan. This commitment will be included in the revised WMS.

The Green Paper on the management of bio-waste in the EU aims to explore options for the further development of the management of bio-waste. It summarizes important background information about current policies on bio-waste management and new research findings in the field, presents core issues for debate, and invites stakeholders to contribute their knowledge and views on the way forward. It aims at preparing a debate on the possible need for future policy action, seeking views on how to improve bio-waste management in line with the waste hierarchy, possible economic, social and environmental gains, as well as the most efficient policy instruments to reach this objective.

In this context, Malta is to keep abreast of any future developments in the management of bio-waste and is to promote separate collection of bio-waste. A new legislative proposal imposing obligations for the separate collection of bio-waste and introducing uniform requirements on compost and digestate, could adversely affect established waste infrastructure and / or pipeline investments decisions.

Change to the Revised WMS:

The revised WMS will include a commitment for a Bio-Waste Management Action Plan. The broad terms of reference for the Action Plan will be to identify implementation options that:

- 1) Maximise opportunities for the collection of household bio-waste;**
- 2) Maximise opportunities for the collection of commercial bio-waste; and**
- 3) Investigate options for bio-waste in terms of its use as a soil improver and its use as a renewable energy source.**

OPM & MEPA **5 / 12**

The section on municipal solid waste should include reference to Malta's obligation of the landfill Directive and how Malta is to achieve the following targets for Biodegradable Municipal Waste: 75% by 2010, 50% by 2013 and 35% by 2020, based on the BMW produced in 1995. Malta is currently undergoing infringement proceedings, as per Infringement Number 2007/2338, whereby the Commission indicated that according to Article 5 (1) of the Landfill Directive, Member States shall set up a national strategy for the implementation of the reduction of biodegradable waste going to landfills by 2006. The Commission also pointed out that the strategy should include measures to achieve the targets set out in the Directive.

The commissioning of Sant Antnin provides the first facility in Malta that can process biodegradable waste. This and other future facilities should regularise Malta's position with regard to biodegradable waste.

Change to the Revised WMS:

The revised WMS will provide an update and include targets for the reduction of biodegradable waste to landfill. The revised MSW strategy will identify its obligatory targets.

Friends of the Earth Malta **6 / 8**

The document states that Government still intends to achieve the 400 bring-in sites target but also mentions that WasteServ Malta Ltd has been allocated funding from structural funds for 300 such sites. Where is the rest of the funding coming from?

Funding sources for the bring-in sites is considered as an operational detail and inappropriate for inclusion in the WMS, which sets strategy.

Change to the Revised WMS:

No change.

Friends of the Earth Malta **6 / 6**

The strategy states that the Recycle Tuesday initiative should be encouraged, however, to date, no assessment has been issued stating how much it is costing the Maltese taxpayer and the pressure it is causing on the Sant' Antnin Waste Treatment facility.

Noted. This is considered to be a detailed operational issue and not appropriate for inclusion in the WMS.

Change to the Revised WMS:

No change.

Section of WMS: 6.3.4 Waste Collection Practices

Respondent Details and Comment

MRRR Response

GRTU **1 / 19** **Support**

GRTU totally agrees that waste collection by waste carriers should be upgraded to a higher standard, with the implementation of regulations related to public health, occupational health and safety.

GRTU outlines that it is useless to try and upgrade standards if the current vehicle fleet is at the end of its life. Waste carriers need an immediate reprieve in order to be able to purchase better vehicles (RCV s) for their waste collections.

GRTU RECOMMENDS that a concession for a period of twelve calendar months is given immediately to all those who want to import RCV vehicles with a Euro III conformity, and in so doing is exempt from first registration tax. This will instigate owners to purchase vehicles immediately from foreign suppliers.

GRTU further outlines that currently a number of RCV s (app 20) are currently kept garaged as they cannot afford to pay first registration tax on these vehicles. GRTU recommends that these are allowed first registration against payment as follows:

Vehicles manufactured between 1998 and 2000 : 20% of current registration tax, whilst all others manufactured before 1998 will be charged 40% for first registration. These RCVs will also be exempt from any penalty clause.

This would guarantee a vehicle fleet which would be more environmentally friendly and would also guarantee less on the road damages to the said owners.

The above recommendations are of utmost importance if one would want a

Noted. The draft WMS includes a commitment on Government to continue to explore the upgrading of waste collection practices. As part of this review current barriers, such as the procurement of appropriate RCVs will be examined and recommendations made accordingly.

revamped sector and a better served public.

Change to the Revised WMS:

The revised WMS will commit Government to continue exploring new waste management practices in relation to the collection of waste.

Section of WMS: 6.4 Hazardous and Other Industrial Wastes

Respondent Details and Comment

MRRRA Response

GRTU 1 / 20 **Observations**

HAZARDOUS AND OTHER INDUSTRIAL WASTE
PORT AND AIRPORT WASTE
ASBESTOS

GRTU will forward its comments on the above three subjects in a separate document which is at present being drawn up.

Change to the Revised WMS:

No change.

Noted, although this document was not subsequently submitted as part of the consultation process.

OPM & MEPA 5 / 16 **Observation**

The Strategy needs to address all hazardous waste streams.

Noted. The SEA of the Draft WMS has also highlighted the importance of implementing a national system for hazardous waste management. The SEA notes: "The WMS [January 2009] is less specific about how hazardous waste will be managed in the future. The operation of the Ghallis Landfill site in conjunction with early adoption of a National Hazardous Waste Management Plan will limit the likelihood of adverse amenity and health impacts and should be prioritised further in the WMS." [Page 117 of the Strategic Environmental Assessment of the Solid Waste Strategy for the Maltese Islands: Consultation Document January 2009. Environmental Report Published April 2009].

Change to the Revised WMS:

The revised WMS will provide actions for hazardous waste streams.

Section of WMS: 6.4.3 Other Developments

Respondent Details and Comment

MRRRA Response

OPM & MEPA 5 / 17 **Object**

WEEE

(a) For WEEE falling under categories 1 and 10 of Schedule 1A -
(i) the rate of recovery shall be increased to a minimum of 80% by an average weight per appliance, and
(ii) component, material and substance reuse and recycling shall be increased to a minimum of 75% by an average weight per appliance;

(b) For WEEE falling under categories 3 and 4 of Schedule 1A -
(i) the rate of recovery shall be increased to a minimum of 75% by an average weight per appliance, and
(ii) component, material and substance reuse and recycling shall be increased to a minimum of 65% by an average weight per appliance;

(c) For WEEE falling under categories 2, 5, 6, 7 and 9 of Schedule 1A -
(i) the rate of recovery shall be increased to a minimum of 70% by an average weight per appliance, and
(ii) component, material and substance reuse and recycling shall be increased to a minimum of 50% by an average weight per appliance;

(d) For gas discharge lamps, the rate of component, material and substance reuse and recycling shall reach a minimum of 80% by weight of the lamps.

Change to the Revised WMS:

The revised WMS will identify the targets highlighted by EU Directives and also consider recommendations through

Noted.

The WMS must take into account the requirements of this Directive, which is primarily aimed at waste minimisation. WEEE is currently managed at Civic Amenity sites. This service will need to be further strengthened together with other producer initiatives (eg. retailer take back schemes) to ensure compliance with existing legislation. Reducing this waste and improving its ability to be recycled should assist waste minimisation and recycling schemes in the future.

the Twinning Project with Germany (MT04-IB-EN-04) which gave advice for the implementation of EU regulations on producer responsibility.

OPM & MEPA 5 / 18

BATTERIES

Malta is to achieve the following minimum collection rates:
(a) 25 % by 26 September 2012;
(b) 45 % by 26 September 2016.

Malta's particular situation, including its geophysical circumstances and structural disadvantages, the highest population density in Europe as well as difficulties in achieving economies of scale in the recovery and recycling of waste, severely compromises its ability to meet, in a beneficial and economically viable manner, the requirements and targets of Directive 2006/66/EC (batteries and accumulators and waste batteries and accumulators) in particular the collection targets for portable batteries set out by Article 10 of the Directive, namely:

• a transitional period of three years until 26 September 2015 instead of 2012 within which to reach 25% collection of Article 10(2)(a);

• a transitional period of three years until 26 September 2019 instead of 2016 within which to reach 45% collection of Article 10(2)(b);

To this end, Malta is considering to apply for an extension to the timeframes set out in Directive 2006/66/EC to fully implement the objectives and attain the stipulated targets. Nevertheless the strategy should indicate how Malta is achieving the targets within the suggested timeframe in the Justification Document for a Transitional Period for the Batteries Directive.

Furthermore recycling processes shall achieve the following minimum recycling efficiencies:

(a) recycling of 65% by average weight of lead-acid batteries and accumulators, including recycling of the lead content to the highest degree that is technically feasible while avoiding excessive costs;

(b) recycling of 75 % by average weight of nickel-cadmium batteries and accumulators, including recycling of the cadmium content to the highest degree that is technically feasible while avoiding excessive costs; and

(c) recycling of 50 % by average weight of other waste batteries and accumulators.

Change to the Revised WMS:

The revised WMS will identify the targets highlighted by EC Directive 91/157/EEC - Batteries and Accumulators.

Noted.

The WMS must take into account of the requirements of this Directive. The requirements of the Regulations are noted in the WMS. Any existing and future waste management facility shall be developed to ensure full compliance with these requirements will assist in removing a potentially hazardous element from the MSW stream.

OPM & MEPA 5 / 19

ELVs

With regards to end-of-life vehicles, the strategy should address how the respective targets highlighted below are to be met.

(i) No later than 1 January 2006, for all end-of life vehicles, the reuse and recovery shall be increased to a minimum of 85 % by an average weight per vehicle and year. Within the same time limit the reuse and recycling shall be increased to a minimum of 80 % by an average weight per vehicle and year; for vehicles produced before 1 January 1980, the Competent

Authority/Member State may lay down lower targets, but not lower than 75 % for reuse and recovery and not lower than 70 % for reuse and recycling.

(ii) No later than 1 January 2015, for all end-of life vehicles, the reuse and recovery shall be increased to a minimum of 95 % by an average weight per vehicle and year. Within the same time limit, the re-use and recycling shall be increased to a minimum of 85 % by an average weight per vehicle and year.

Change to the Revised WMS:

The revised WMS will include a commitment to implement ELV processing and include EU targets. The WMS will include a commitment to identify:

- 1) Existing ELV processing capacity and future needs;**
- 2) Existing barriers to the setting up of ELV plants; and**
- 3) Required policies to facilitate private sector investment in ELV facilities.**

Noted.

OPM & MEPA 5 / 20

PACKAGING WASTE

Article 6 of Directive 94/62/EC on packaging and packaging waste as amended, lays down the minimum recovery and recycling targets to be achieved. Malta obtained a five year derogation to abide by the relevant targets. However to date these targets have not been achieved. Indeed, as at 2006 Malta should have reached a minimum overall recovery target of 28% (instead of 10.8%), a minimum overall recycling target of 25%

Noted.

(instead of 10.8%), a glass recycling target of 15% (instead of 14.3%), a metals recycling target of 15% (instead of 7%), a paper and board recycling target of 15% (instead of 11.2%). However, Malta reached the plastics recycling target of 5% (indeed it achieved 7.4%).
The strategy fails to address these targets and does not provide direction on how Malta is to achieve them.

Change to the Revised WMS:

No change.

Carmel 14 / 3
Cacopardo

Electrical and electronic waste

Noted.

The updated strategy postpones its look at electrical and electronic waste. Malta has obligations that need to be implemented resulting from the EU WEEE Directive. The WEEE Directive obliges producers or agents of electrical and electronic equipment to collect such equipment following its use. Although the legal notice has long been published, it has not yet been implemented. The reason for this is clear. While the EU, on the basis of 'producer responsibility' insists that whoever produces such equipment needs to carry the responsibility for all the waste that is generated, the Eco-Contribution Act, assigns such responsibility to government instead of the private sector. The reason for the eco-contribution is to collect funds to make up for the expenses. Whenever the WEEE Directive gets implemented, part of the Eco-Contribution Law will need to be erased or revised since sellers will be subject to a double expense – the eco-contribution and the expense to collect and process the electrical and electronic waste. Government has not found a solution to this and keeps on postponing. Meanwhile, this waste will not wait for Government to decide. Whoever want to change a fridge or TV still needs to discard the old one. Some of the old fridges are collected by the bulky refuse system operated by Local Councils. Others are collected from the shop from where the new one is bought. However, several others end up in scrap yards in Malta. These scrap yards are not mentioned in the strategy, even though if they are organised correctly can contribute to the waste strategy.

Change to the Revised WMS:

The revised WMS will identify the targets highlighted by EU Directives and also consider recommendations through the Twinning Project with Germany (MT04-IB-EN-04) which gave advice for the implementation of EU regulations on producer responsibility.

The revised WMS will also include a commitment by Government that in instances where the producer assumes the environmental burden of products on the market, he will be given an incentive through the Eco Act.

Section of WMS: 6.5 Facilitates for the Management of Solid Waste

Respondent Details and Comment

MRRR Response

GRTU 1 / 18 **Object**

RDF/ INCINERATION

GRTU will at this stage comment on the incineration facility for RDF. GRTU outlines that Waste Incineration should only be acceded to as a very last resort. Without fail incineration is a dying technology and even though one could state that today's technologies are state of the art, GRTU does not believe that any incineration facility established locally would be monitored as it should be according to EU legislation.

Failure to monitor incineration processes could prove to be deadly, due to dioxins and furans. Dioxins cause cancer. We are enclosing a detailed report on Incineration. (Annex D)

"The emissions from incinerator processes are extremely toxic. Some of the emissions are carcinogenic. We know scientifically that there is no safe threshold which we can allow such emissions. We must use every available instrument to eliminate altogether"

UK Environment Minister to a House of Lords Inquiry

GRTU would like to express the following opinion in respect to incineration: The public sector will shoulder most of the risks and the private sector (the company or business involved) will obtain most of the rewards in building waste to energy facilities.

Change to the Revised WMS:

The preferred option (a mix of baseline, further MBT capacity and incineration) will be re-iterated in the revised WMS.

At a strategic level, the WMS is considered to have positive impacts on air quality (see Table 8.3, page 118 of the SEA Environment Report, April 2009). Air emissions from landfill are more difficult to manage than incineration. The GRTU makes the assumption that future incineration facilities will be poorly managed. This is not the case elsewhere in Europe. Incineration technology is now well established in most European countries and the use of BAT (Best Available Technology) and best practice operation is assumed. If not assumed, for this or other available technologies, this would effectively limit Malta's opportunities to engage in cleaner waste management solutions over and above the baseline situation, which is characterised by reliance on land filling.

GRTU has noted the contents of Pages 33, 34 and 35 of this consultation document. We duly comment as follows:

MRF Facility

The current MRF can cater for 36,000 tons of recyclables. From data currently in hand, Maltese producers place somewhere between 80, 000 to 100, 000 tons of recyclables in the market. Thus this would require Schemes to collect approximately 40,000 tonnes of recyclables, thus exceeding the capacity of the current MRF. This means a weekly collection of about 760 tons.

GRTU recommends that MEPA permits at least another MRF operational facility to private industry in order to anticipate this situation and create the much needed market competition in this sector.

LANDFILLS

Whilst recyclable waste collections will increase GRTU recommends that studies are taken in hand to find new allocation/s for a landfill. This could also take the form of land reclamation as a preferred option in depths of less than 20metres.

DIGESTION PLANT

GRTU notes that this will cater for 35,000 tons only of biodegradable material. Despite the tonnage restriction mainly due to permit conditions, one has to study whether technically the plant could take more if proven well in its operations daily.

CONSOLIDATION OF WASTE STREAMS

We are in agreement with the position taken by the Government on these fractions. However we do not agree with incineration to compliment the further addition of digestion plants.

SPECIFIC FAVOURED OPTIONS

GRTU agrees with the development of a second mechanical biological treatment plant towards the north of Malta and also to the development of a third small scale mechanical biological treatment plant in Gozo.

However we continue to insist that we are against the development of an incinerator facility with energy recovery for the treatment of the residual fraction of waste including RDF.

PRODUCER RESPONSIBILITY

Civic Amenity sites were build for the consumer to be able to take in waste accordingly. Now it has become a habit of companies going directly to these sites and depositing their waste there, thus eliminating work for a waste carrier. Although this might reduce in the coming months due to the implementation of LN 106, GRTU recommends that there needs to be a criteria of who can and who cannot deposit waste at CA sites.

GRTU further notes that it is in agreement with a clearing house, even if it is virtual.

GRTU notes that Government intends to legislate so that the catering industry specifically separates the organic fraction so that it would be fed to digestors. It also outlines that this would be done at the catering industry's cost. GRTU recommends that no legislation is put in place prior to a sector due diligence impact assessment.

Change to the Revised WMS:

No change.

Noted. Additional MRF and MBT facilities are being set up by WasteServ, to cater for additional residual waste in order to meet the recycling and processing targets set through EU Directives. In the future, Government will be analysing to see how such facilities can be operated even through management contracts / agreements with the private sector.

Mr James Vella 3 / 1

PROPOSED MBT - TAL-LEWZ

It is with regret that we note that the tal-Lewz has been identified as the area for the recycling of manure and domestic waste. The reasons for our disappointment are various and come to mind with least effort.

- 1) The choice of the location will affect the way of life of four villages who have to put up with the eyesore of the plant and the increase of heavy vehicles used to transport the materials being recycled. Please bear in mind that these are quiet villages and most traffic passing through is local.
- 2) This project will have a negative impact with regards to views being presently enjoyed and will depreciate all the properties that border the site.
- 3) As can be seen from the site plan this proposed project is in an area having various boreholes and any accident or mishap could affect the water table in an area which we believe to be of considerable value.
- 4) Why should we continue to erode an agricultural area? Why should we start the proposed National Park of Mgarr Ix-Xini on a negative note?
- 5) The idea of having this project near the Sannat Cemetery will surely distress and upset the people of the area.
- 6) Various other places with a lesser impact are available but no place is more suitable than the already suggested area at tal-Kus, as a Waste

The WMS specifies sites that will be further studied through the EIA process. The site selection for the MBT plant in Gozo will include studies that consider environmental factors and alternative sites.

transfer station and visual impact can be controlled if necessary.
Furthermore, a new approach road is at a tender stage and traffic will not affect the residents in any area.

Whilst assuring you that we are not being presumptuous, we are confident that a solution can be found in a way that will have the least impact on all concerned and it is for this reason that we ask that the area of tal-Kus be considered in an objective and serious manner.

Change to the Revised WMS:

The revised WMS will make reference to certain sites that are recommended for further studies as required by the MEPA process. These sites will be studied in terms of health and environmental impacts. Alternative sites will be considered as required by the EIA process.

Sannat Local Council, Gozo 4 / 1

Apart from the effects that the plant may have on the health of the residents from the locality, the Sannat Local Council would like to mention the following points:

The proposed site for the 'mechanical treatment plant' is within an 'Intensive Agricultural Zone' that is specified in map 14.11E of the Gozo Local Plan. Development in such zones is regulated by policies GZ-AGRI-2 and GZ-AGRI-3 of the same Plan. In these two policies there is specified that the following types of development can be carried out:

Greenhouses
Farm buildings
Farm dwellings
Agricultural stores

For this reason, the development of a 'mechanical biological treatment plant' is not permitted in this zone because it is not a development allowed by the Gozo Local Plan policies for this area.

In fact, there is no site identified in the Local Plan for this type of development and it is only with a modification to the Local Plan, brought into effect in August 2006, that such a development can be carried out. Sites for other types of development concerning waste were identified in the Local Plan.

If the criterion for the selection of the site at Tal-Lewz was that of 'Intensive Agricultural Zone', then this is not the only site of this type in Gozo. A study to identify other alternative sites has not been carried out.

Naturally, alternative sites need to be identified from whoever is proposing this development and not from the Local Council or the Sannat residents.

The alternative sites must have characteristics that allow for such development to be carried out, and not be discarded because their characteristics do not allow for such a development.

The site is very close to Ta' Cenc, one of the most important tourist zones in Gozo. Since Ta' Cenc is located downwind of the proposed site, the proposed development will have a negative impact on the tourist product, especially a high visual impact on the view from Ta' Cenc that is considered a Natura 2000 site.

The proposed development will not only be within the buffer area of the Mgarr ix-Xini valley, but right at the beginning of this same valley. This valley is the centrepiece of a Regional Park of the same name, for which considerable investment (from the Sannat and Xewkija Local Councils) in research and other work is being carried out so that all the aspects of the valley can be conserved – natural, archaeological, hydrological, geological, ecological aspects etc. – while at the same time staying accessible to the Maltese and Gozitan public, as well as foreigners, so that it can be enjoyed by all. The proposed development will minimise and destroy all the efforts that are being carried out to reach the abovementioned goal.

The perception of the plant is that of an industrial site and therefore not compatible with the agricultural nature of the area.

The proposed site is only a few hundred metres away from the Sannat cemetery that is also used by Munxar. Hence, it is not compatible with the cemetery; a holy place that should be respected in itself. The Council would also like to draw the attention that many Sannat residents are voicing their objection to the plant with Council.

Change to the Revised WMS:

The revised WMS will make reference to certain sites that are recommended for further studies as required by the MEPA process. These sites will be studied in terms of health and environmental impacts. Alternative sites will be considered as required by the EIA process.

OPM & MEPA 5 / 7

The strategy should holistically identify the waste infrastructure that is necessary within the Maltese Islands for the successful implementation of the strategy. Gaps in required infrastructure must be addressed.

Noted. The revised strategy will highlight the waste streams where further processing capacity is needed - in the context of the waste hierarchy. Exact predictions of the nature and scale of facilities cannot always be included in the WMS as this can often depend on further feasibility work. However, the revised strategy will identify priorities for the introduction of further processing capacity (by waste stream) and preferred technologies for dealing with different waste streams.

Change to the Revised WMS:

The revised WMS will identify priority areas where further processing capacity is required.

OPM & MEPA **5 / 9** **Observations**

*MBT
Further information should be provided as to how the strategy identifies MBT, digestion and incineration as the best technologies for the management of MSW in Malta.*

Noted. The Strategy is supported through a number of technical background papers. These will be referenced in the revised WMS. The SEA of the Draft WMS supports a combination of technologies that are likely to have the minimal environmental impact and most potential reduce Green House Gas Emissions, based on the assumption that 'best available technology' is used.

Change to the Revised WMS:

The revised WMS will provide a brief justification for the preferred option for waste management technologies and reference supporting background documents.

Friends of the Earth Malta **6 / 4** **Object**

There is no reference to a financial analysis as to how much the proposed waste-to energy solution will cost and whether it is more financially viable than other discarded solutions.

Noted. Economic costings of options would not be expected to appear in the final Strategy, costings will have been a consideration when preparing options.

Change to the Revised WMS:

The revised Strategy will re-iterate the preferred options for the processing of waste and include reference to background documents that support the Strategy's preferred technologies.

Friends of the Earth Malta **6 / 1**

*A strategy document should set direction after different alternatives have been assessed. However, the strategy document gives the feeling that it is a *modus operandi*, aiming to seal current practices rather than examining the outside environment and eventually setting a strategy that aims to provide a sustainable waste management action plan. This, from a strategic point of view, is very dangerous since the strategy is heavily dictated by inside considerations.*

Noted. The Draft WMS does not clearly identify the various technology options that have been considered in recent years. Various studies have been undertaken, which have led to a preferred mix of technologies for waste management. In the context of solid waste treatment, the SEA 'Environment Report' of the Draft WMS examined these options further and Chapter 7 of the Environment Report provides an evaluation of the alternatives considered. In the case of waste treatment technologies, these are: Option 1 (Base Case), Option 2 (Mechanical Biological Treatment), Option 3 (Mechanical Biological Treatment and Incineration) and Option 4 (Incineration). The SEA concluded that Option 3 was considered likely to result in the most environmental benefit when compared to other options.

Change to the Revised WMS:

The revised WMS will provide brief justification to alternatives considered in the context of facilities for the management of solid waste plus reference to the relevant background documents that informed the preferred choice of technology.

Friends of the Earth Malta **6 / 2**

The said document points out at the very beginning that Malta's focus is going to be waste-to-energy. The very important aspect of waste

Noted. The respondent is correct to identify waste minimisation as a critical objective for

minimisation is very scantily mentioned with the only measure being the implementation of an awareness campaign. We have heard ad nauseum some would say, that waste minimisation at source cannot or is very difficult to achieve. However, this is the preferred option in the waste management hierarchy and the most sustainable solution for the Maltese Islands. The decoupling of municipal solid waste (MSW) from Gross Domestic Product (GDP) growth should form the basis of a sustainable waste management strategy particularly for a small island with limited space; however this is never mentioned in the document under review. An awareness campaign will be able to reach some objectives but campaigns are expensive to run, need to be continuous and, when they manage to reach the target population they are often blurred by 'noise' and distortion.

A reliable waste minimisation strategy should focus on producers and importers in order to avoid the generation of waste itself. The creation of more incentives/disincentives together with having a lengthy period to achieve tangible results, often includes a hefty administration bill. Possible solutions should look into providing cleaner technology advice that coach producers/importers to reduce the waste they produce, for e.g. in the case of packaging. Alternative type of packaging should also be looked into. Other solutions, which would integrate products and the services they provide and which is nowhere to be seen in the document under review, are product-service systems. The latter would offer consumers the chance to obtain the service of particular products without actually purchasing them. Product-service systems are nowadays used for car-pooling, washing machines etc. The Strategy's review has tackled the current situation by simplistically looking at waste disposal figures in recent years (including waste separation data) and searched for a technology to fix the figures when they appear to be unattractive. This means that instead of getting to the root of the problem and searching for the reason why the data is what it is, the team revising the strategy made an overall assumption that these figures remain constant. Waste in itself has a human dimension and this dimension seems to have been forgotten by the review team. A technology-based solution is an end-of pipe solution but what we need for the Maltese Islands is a sustainable solution and sustainability needs prevention not incineration.

Change to the Revised WMS:

The revised WMS will provide more priority to waste minimisation, but acknowledge that Malta still needs to increase capacity for treatment of waste if EU Landfill Directive targets are to be met. The preferred option (a mix of baseline, further MBT capacity and incineration) will be re-iterated in the revised WMS.

Friends of the Earth Malta 6 / 9

The strategy states that one of the reasons for a waste-to-energy solution are the current oil prices, however these have gone down. Does this mean that the strategy is already outdated?

the WMS, however, the Strategy must take a pragmatic approach and realise that whilst 'zero waste' should be a goal it will never be fully attained. The WMS must promote a realistic range of treatment options. To rely on the baseline situation (the Sant'Antnin MBT plant plus landfilling and waste minimisation) will result in a significant risk that Malta will not meet its Landfill Directive Targets.

The WMS should, however, promote waste minimisation as a primary goal in the WMS.

In 2007, 5.5% of Malta's total GHG emissions were from the Waste Sector. 76.48% of these emissions came from landfill. The reduction of reliance on landfill through use of MBT and incineration technology to secure energy from waste will reduce GHG emissions from the Waste Sector. It also has synergy with the Draft Sustainable Development Strategy for Malta (2004) which calls for a policy to be put in place to promote renewable energy production and reductions in GHG emissions.

Change to the Revised WMS:

The revised WMS will place greater priority on the promotion of energy from waste technology and the need to reduce GHG emissions, as prioritised through the Draft Sustainable Development Strategy for Malta.

Kristina & Louis Borg 9 / 1

Following the public meeting held last Saturday, 28th February 2009, regarding the above mentioned project, we would like to put forward the following points for consideration:

- 1. The idea of building a waste recycling plant in Gozo is a commendable idea; however the choice of location leaves a lot to be desired.*
- 2. Tai-Lewz Valley in Sannat is an unspoilt green area bordered by the villages of Sannat, Xewkija and Tac-Cawla, Victoria. It would be a great pity if this serene location were to be ruined by the construction of large buildings and digestive tanks. No matter how artistic the design may be, it would be very difficult to blend this construction into the natural countryside.*
- 3. Assuming that the system, when up and running, is silent, there would still be an increase in noise and traffic created by the trucks bringing in the*

The WMS specifies sites that will be further studied through the EIA process. The site selection for the MBT plant in Gozo will include studies that consider environmental factors and alternative sites.

animal and domestic waste to the plant.

4. The planned construction is too close to the cemetery of Sannat. This is disrespectful to the villagers of Sannat, especially those having relatives buried there.

5. There are two boreholes on either side of the planned location, is it wise to build a waste recycling plain above a water table? If one argues that there will be no leakages, then why not construct the plant in one of the disused quarries, where it will not be such an eyesore?

6. The Tal-Lewz Valley can be seen by Sannat residents along the ridge from the top of Triq Skerla, in Ta' Cenc, along Triq Ta' Cenc, down to the main square near the church, and all the way to the football ground. This means that the view of the planned construction will impact many residents in Sannat, besides others in Xewkija and Tac-Cawla.

7. I am sure that sites such as Tal-Kus or Ras it-Hobz, where waste plants are already implemented, would be better suited to take the recycling plant proposed for Tal-Lewz. Keeping waste plants in the same area would also make more logistic and economic sense.

8. Finally, two important ecological areas are targeted close to Sannat, namely the Natura 2000 site at Ta' Cenc, and the Mgarr ix-Rini National Park. It is ironic that two great projects aiming to safeguard our remaining natural environment are to be demeaned by this latest waste recycling project.

We thank you for considering our suggestions, which we put forward as concerned residents of Sannat.

Change to the Revised WMS:

The revised WMS will make reference to certain sites that are recommended for further studies as required by the MEPA process. These sites will be studied in terms of health and environmental impacts. Alternative sites will be considered as required by the EIA process.

Ms Judy Henman 11 / 1

We refer to the Draft National Waste Strategy Plan, which indicates Tal-Lewz In Sannat Gozo to be considered for the location of Gozo's Mechanical Biological Treatment Plant. It is appreciated that the study for the site selection process is still at a very early stage, and no decisions have yet been taken. Nonetheless, it is pertinent to point out that anybody who is even remotely familiar with Gozo, will immediately realize that it does not make sense to locate such development at tal-Lewz, even more so when there are number of suitable alternative locations.

The Tal-Lewz site consists of very good tilled arable agricultural land, forming part of the water catchment area and valley bed leading to the mouth of Mgarr ix-Xini Valley. There are in fact Water Services Corporation Ground Water Boreholes only a few metres away from the site. The Sannat Cemetery, where both Sannat and Munxar residents pay their last respects to their beloved, is barely 300m from the site.

The Tal-Lewz site is less than 200m from large parts of the development zone residential areas of both Sannat and Xewkija. This distance is indeed a small fraction of the distance between the development zone and the Ghallis waste management complex on Malta. Furthermore, the tal-Lewz area forms the foreground of arguably the most breath-taking panoramic scene of Gozo, as seen from the much popular Ta' Cenc area. From Ta' Cenc one can fully appreciate tal-Lewz forming a rural landscape foreground to the background of characteristic undulating hilly landscape, and the historical hill-top Gozitan settlements, centered around the Gozo Cittadella. These are the increasingly scarce qualities which give Gozo its beautiful and unique scenic character, which character is the pride of the local population, and leaves a lasting positive impression on tourists regularly frequenting the area so much so that the 2006 Gozo Local Plan protects the area overlooking tal-Lewz as the Ta' Cenc Pedestrian Path, (policy GZ SNAT 2), and moreover zones a Public Belvedere and Rural Public Recreational Area directly overlooking the Tal-Lewz site (policy GZ RECR 1). It does not make sense to introduce the inevitably conspicuous, massive, and alien structures of a waste-treatment facility, together with all the ensuing supporting infrastructure and industrial vehicles and activity into this setting. This would contrast sharply with the Draft Strategy's assurances pg.4 "The island of Gozo is seen to have a strategic dimension not only because of its geographical characteristics but also because of its importance as a tourism destination". The arable nature of tal-Lewz, the context of the site in an overlooked rural setting, and its relative proximity to large tracts of residential areas and popular tourist routes, render the siting of a waste treatment plant at Tal-Lewz unacceptable. In view of the above, it is clear, from any aspect that one may consider, including planning, economic, and social aspects, that Tal-Lewz site is certainly not suitable for locating the proposed Mechanical Biological

The WMS specifies sites that will be further studied through the EIA process. The site selection for the MBT plant in Gozo will include studies that consider environmental factors and alternative sites.

Treatment Plant. We trust that you will exclude tal-Lewz, and carry out a thorough site selection exercise which would identify a number of much more suitable sites around Gozo for the proposed development, away from residential areas, so that unnecessary aggravation to residents is avoided.

Change to the Revised WMS:

The revised WMS will make reference to certain sites that are recommended for further studies as required by the MEPA process. These sites will be studied in terms of health and environmental impacts. Alternative sites will be considered as required by the EIA process.

**Nature Trust 12 / 3 Observations
(Malta) and Din L-
Art Helwa**

Incineration

Incinerators have today become more environmental friendly and these are also regulated by the European Union making them more save for use.

NTM / DLH Position

While the NGOs have as yet no position for or against incineration, they ask if studies have been carried out on what type of emissions would be generated by the incineration plant. If such reports exist then NGOs request to be granted the right to see them and that also these be made public. If the incinerator is justified and the authorities proceed with this project then NTM and DLH request that the NGOs be granted the right to appoint an expert which should be given access to real time monitoring of Incinerator emissions etc when this is operational.

With regards to the issue of the transport of waste the NGOs recommend that this be done via sea as much as possible to reduce traffic emissions. Notwithstanding this the NGOs still question the need to incinerate when the latest tariffs of fossil fuel have shown that the demand for energy went down during the winter months despite the cold weather (Malta could save millions if Incineration is not done).

NTM is concerned that the incinerator will be waste hungry and this will result in the creation of waste to burn instead of the main focus being reduce and reuse. Here again the Incinerator - if done, should be a small incinerator so as not to encourage more waste burning.

Change to the Revised WMS:

No change.

**Marsaxlokk Local 13 / 1 Object
Council**

The Marsaxlokk Local Council understands that this is a national plan, more than a local one. Nonetheless, it is felt that Council needs to get involved and provide some comments in light of Marsaxlokk being chosen by government as the preferred site for the incinerator.

Council would like to highlight issues concerning the health of residents, the environment, as well as comments on the site selection process. Council is also asking a number of questions that remain unanswered.

Comments on the health of residents

The effects of the emissions from the incinerator at Delimara cannot be considered on their own. These need to be considered together with those of the existing power station and with the extensions proposed by Enemalta. From a Parliamentary Question by Hon. Leo Brincat to the Prime Minister, it is evident that there is no data on the existing emissions of the power station. This data needs to be continuous, spread over a number of months, and not measured twice yearly. This will make it possible for the operator to ensure that the emissions on the measured days are within the established limits.

In these circumstances, Council cannot understand how whereas no information is available on the emissions of the existing power station, Government is proposing in the same location another plant that will emit gases into the air. Government is only considering the proximity of these plants with regards to the synergy in energy generation, but it is evident that the negative health effects resulting from this proximity is not being considered.

Comments on the environment

It has been mentioned that gas emissions can have negative impacts in a zone of 25km around the plant. Therefore, it should be seriously considered whether an incinerator is suitable for a small country such as Malta. We already mentioned that the impacts of this plant regarding emissions should be considered together with the power plant in the area.

The specifications of the planned incinerator will be examined by a technical team giving regard to current and projected waste streams. The site selection and the health and environmental impacts will be examined through the EIA process. However, with regard to health impacts Government is committed to abide by national emission levels and the results of the IPPC process.

The specifications of the planned incinerator will be examined by a technical team giving regard to current and projected waste streams. The site selection and the health and environmental impacts will be examined through the EIA process. However, with regard to health impacts Government is committed to abide by national emission levels and the results of the IPPC process.

It seems that that the transport of the RDF to the plant, and the hazardous residue from the plant to the landfill has not yet been studied. One needs to question whether it makes sense to place such a plant at the tip of the island, far away from where the hazardous waste needs to be discarded. At the moment, there is no tangible information on the exact siting of the incinerator, and what will the visual impact on the village, usually described as picturesque and heavily visited by tourists, will be.

Comments on the site selection process

It seems that Government chose the site at Delimara following the June 2008 report entitled 'Waste to Energy in Malta – Scenarios for implementation'. In Chapter 9 of this report, there is the methodology of how the Delimara site was chosen as the preferred site.

Two groups of experts were given 6 alternative sites and established criteria to give points ranging between +2 to -2 for each of the criteria, according to whether the site was very good or very bad respectively.

This study does not seem to have been a scientific one. In fact, the two groups gave totally different points from each other and even the ranking of the alternative sites did not match.

One needs to keep in mind that these experts were asked to report on waste to energy and therefore this criterion would have been the major criterion that was considered when they wrote the report.

One asks how much importance was given to other criteria such as public health, the social and environmental impacts during the site selection process. Different criteria cannot be given points and then counted together, as has been done. This would mean that if a site is given a +2 for transport and a -2 for health, then these cancel each other out when counted. In fact, one would expect that the health criteria should have more weight than others.

Hence, Council feels that the site selection process was neither a professional nor a scientific one that Government can base its decisions upon to declare a preferred site.

Other questions

Although a number of meetings were held, there are still a number of unanswered questions with regards to Government's proposal on the waste strategy:

- 1. How can the EIA be seriously considered if the majority of these favour the developer: in this case Government?*
- 2. During the public meeting of the 16 April 2009 at Marsaxlokk, Hon. Minister Gorg Pullicino confirmed that the decision to place an incinerator in Malta was taken. How did Government reach this conclusion when an SEA still needs to be carried out?*
- 3. What are the toxin levels that are expected from the incinerator?*
- 4. Is incineration being proposed because Government did not reach its targets on waste separation or because nothing was done with regards to alternative energy?*
- 5. What are the alternatives that Government considered instead of the incinerator and what studies were carried on these alternatives?*
- 6. Does Government feel comfortable that it has in place enough legislation that reduces as much as possible the production and importation of products that are not recyclable?*
- 7. How much waste will be processed per year by the incinerator? This information should result from a feasibility study of the incinerator, before Government goes for an EIA.*
- 8. What capacity will the incinerator have?*
- 9. Will the incinerator work 24?*
- 10. How will the waste be transported from and to the plant? If this will be using heavy vehicles, has the impact on infrastructure been considered?*
- 11. Will residents be compensated for the loss of their property have?*

Conclusions

Council feels that Government cannot yet make its own conclusions. The studies that were carried out do not appear to be professional and scientific enough and a number of questions remain unanswered.

Council waits for Government to carry out the necessary studies, especially those on the effects on the health of residents, before proposing other plants that can be a detriment to residents, from wherever they are.

Change to the Revised WMS:

The revised WMS will take cognisance of the recommendations of the report "Waste to Energy in Malta - Scenarios for Implementation". The revised WMS recommends that a site selection study be carried out to determine the most suitable site for the incineration plant.

The strategy reiterates that the procurement of the incineration facility will ensure that the best available technology

and potential negative impacts are mitigated. Potential negative impacts will be addressed during the MEPA process together with any environmental studies that may be required by MEPA during the application process.

Carmel **14 / 4**
Cacopardo

Priority

The waste strategy focuses on the generation of electricity from waste. In itself this is a good thing. However, the way the update to the strategy was formed does not give importance to the whole picture. The impression is that by burning part of the waste, we will solve many problems. It is true that we will reduce the rate of landfilling, generating around 3% of the electricity from waste sources would be thrown away. This is OK. But when one places so much importance on incineration as a solution, the wrong message is given that it is no more important to address waste reduction. The strategy does not indicate how waste can be reduced.

This is even more evident when other nations are mentioned as proof of the success of incineration. It is never told that some of these nations have high success rates in the way they address waste: how much they try to reduce the waste that is incinerated and that their recycling rates are much better than ours. Proof of this is the recently published EU waste statistics.

The strategy needs to be cooked further. It must be shown that priority should be given to waste reduction. This must be reflected in initiatives that lead to this priority being implemented.

For this reason, the proposal is raw because it requires further thought. If whoever produced this update want, I am sure there are several persons who could contribute since we are agreeing on the aim. What is missing is that is the road leading to success.

Change to the Revised WMS:

The revised WMS will provide more priority to waste minimisation, but to acknowledge that Malta still needs to increase capacity for treatment of waste if EU Landfill Directive targets are to be met.

Noted. The respondent is correct to identify waste minimisation as a critical objective for the WMS, however, the Strategy must take a pragmatic approach and realise that whilst 'zero waste' should be a goal it will never be fully attained. The WMS must promote a realistic range of treatment options. To rely on the baseline situation (the Sant'Antnin MBT plant plus landfilling and waste minimisation) will result in a significant risk that Malta will not meet its Landfill Directive Targets.

The WMS should, however, promote waste minimisation as a primary goal in the WMS.

Chamber of **15 / 9** **Support**
Engineers

Disposal Methods

As stated earlier the CoE is very pleased to note the specific focus, the targets and the commitment towards energy recovery. In line with this we would like to encourage the Authorities to continue to seek other and better technologies to maximise the recovery of materials and as much energy from waste as practicable possible.

It is recognised that the capacity of the present landfill to take unsorted waste is limited. In any case it should be the top most priority of the Authorities to extend as much as possible the life of the current landfill. The objective should be that only waste that cannot be disposed of in any other way should be taken to landfill, this is also in accordance to EU directives.

The new Mechanical and Biological waste treatment (MBT) technologies are now third generation plants and include many well proven examples. In Europe these processes are well established and proving to be viable. Moreover, as a country, we now have the experience of Sant Anthnin behind our backs. This should generate further confidence in these processes. The Functions of MBT could include:

- *Pre-treatment of waste going to landfill;*
- *Diversion of non-biodegradable and biodegradable household waste going to landfill through the mechanical sorting of this waste into materials for recycling and/or energy recovery as refuse derived fuel (RDF);*
- *Diversion of biodegradable domestic waste going to landfill by:*
 - 1) *Reducing the dry mass of biodegradable domestic waste prior to landfill;*
 - 2) *Reducing the biodegradability of biodegradable domestic waste prior to landfill;*
- *Stabilisation into a compost-like output (CLO) for use on land;*
- *Conversion into a combustible biogas for energy recovery; and*
- *Drying materials to produce a high calorific organic rich fraction for use as RD*

Bio gas made from anaerobic digestion of agricultural and animal waste is suitably addressed in the document. Although limited as a source of energy, this process should be exploited to its maximum as it presents a win-win situation whereby waste is disposed of while energy is generated. The burning of the fuel produced by this process could be maximised by utilising combined heat and power (CHP) technologies.

With respect to this, as Engineers, we feel that the incineration systems are very effective and offer the added advantage of reducing waste with extremely high proportions. The technology available today has improved a lot and is critical to addressing the limited landfill capacity and the ever

Support for the proposed mix of technologies is noted.

increasing volumes of waste. Hence it is our opinion that it is a feasible solution for Malta at this very particular time and considering our specific constraints. This statement is valid subject to the condition that the chosen plants meet the highest design and operational specifications.

Change to the Revised WMS:

No change.

Kummissjoni 16 / 10 Object
Ambjent (KA)
Arcidjocesi ta' Malta

[TRANSLATED]

The Incinerator

The Update chose to give great importance to the need for waste incineration. It is possible that this was chosen because the strategy failed in reaching its main aims to reduce waste going to landfill and the amount of recycled waste. However, the KA feels that this choice must be done on valid reasons and not assumptions. We need to make sure that if we adopt this strategy, we are not creating conditions that go against the effort that needs to be carried out to reduce the generated waste. Therefore, it is important to analyse the main reasons that were given that justify incineration.

•The lack of space for engineered landfills: It is true that despite all efforts to reduce waste generation and increase recycling, the expected results were not achieved. Hence, the existing landfill at Ghallis will not last long. It is clear that the fundamental problem is that initiatives to reduce certain types of waste did not work. Before going to such a drastic solution, one should analyse why this happened, so that the symptoms and not the causes will be tackled.

•The use of waste as a source of energy: Incineration is only one of several methods how energy can be recovered from waste. In fact, the Update provides details of other methods such as MBT. The KA agrees with the concept of energy recovery from waste that more such plant will increase (e.g. at Ghallis and Gozo) as long as such development is done, implemented and operated in a way that respects public health and the environment. Nonetheless, the reasons given of reaching the indicated aims are not enough to justify the incinerator at Delimara.

•The incinerator will burn waste, making us less dependent on oil for energy and helps us reach Malta targets for climate change: The use of gases such as methane to produce energy make sense and help reduce the impact of climate change. However, one needs to ask whether such reasoning makes sense in the case of the incinerator?

There are several studies that contradict this argument. It was found that the use of incinerators, when compared with the burning of oils and other fuels, does not necessarily reduce the gas emissions that change the climate. At the same time, if one considers the energy used to produce the waste products that will be burnt in the incinerator (embodied energy), it is difficult to present incineration as a holistic strategy that helps with the conservation and reduced use of energy.

It is clear that the best long-term strategy, built on real sustainability principles that safeguard the environment is that in one way or another, reduce the amount of waste that is not recyclable. The final aim should be to reduce the amount of residual waste. The use of incineration in order to use the residual waste can be counterproductive to the efforts to reduce this waste. This is because the operational efficiency of the incinerators would require that the amounts of waste for burning is stable and certainly not reduced. In fact, the countries that chose this method for waste management do this to ensure that there is a continuous and substantial amount of this type of waste. Hence, there is a concrete possibility that instead of reducing waste, the incinerator will increase the requirement of waste such that the plant can continue functioning. This worry follows several statements that sustain that the residual waste fraction in Malta is small.

In the public discussions on the choice of incineration, it was often mentioned the risk on the public health and the environment caused by emissions of such a plant, especially when it is not operated properly. At the same time, there are others who state that incinerators such as this exist in other places in Europe and it seems that the risk are well under control. Then why can such a thing not be carried out in Malta?

The KA agrees that we should not assume that if such plants are operated in Malta, then they must work in a bad manner.....

.....However, one asks: Where is this perception of so many people coming from? Is it maybe from experience? Is it from our culture where nobody seems to shoulder professional responsibility for their actions? Is it because

The specifications of the planned incinerator will be examined by a technical team giving regard to current and projected waste streams. The site selection and the health and environmental impacts will be examined through the EIA process. However, with regard to health impacts Government is committed to abide by national emission levels and the results of the IPPC process. The respondent is correct to identify waste minimisation as a critical objective for the WMS, however, the Strategy must take a pragmatic approach and realise that whilst 'zero waste' should be a goal it will never be fully attained. The WMS must promote a realistic range of treatment options. To rely on the baseline situation (the Sant'Antnin MBT plant plus landfilling and waste minimisation) will result in a significant risk that Malta will not meet its Landfill Directive Targets. The WMS should, however, promote waste minimisation as a primary goal.

nobody was ever made accountable for negligence that resulted in environmental, social and economic damage? Is it because we always found it difficult to sustain long-term and holistic plans?

Certainly, one of the major achievements of the Strategy is the closure of several small incinerators (if they can be described as so) located in several locations (including St. Luke's Hospital and the Malta Drydocks) that operated with several problems. The recent incinerator at Marsa (Marsa Thermal Treatment Facility) that started operating a year ago with the original aim to burn a limited amount of a certain type of waste, ended up being developed into a facility that burns a greater amount of waste. As yet, it is not clear as to why the original plans had changed (that had to be long term): Maybe because the original specifications of the plant as developed were not adapted to the original aims? Maybe because the long term plans of the plant were not clear? It was claimed that as a result of these changes, the plant should be working with greater efficiency.

However, one should ask on what this statement is based. This is because the plant is still being commissioned and going through phases of technical trials. From available online information of the emissions (WasteServ), we cannot make clear conclusions, because the information is not complete. For example, it seems that carbon monoxide emissions were not low and were very close to the established limits. In a period of nine months, there was only one reported test on the levels of dioxins and furans (very dangerous gases for health) that were at acceptable levels. The KA understands that these tests cost money and that these gases are not measure in real time. However, we also ask: In a period of nine months, where there other results of similar tests? In the light of such lack of information, the people cannot hastily conclude whether the plant is working in good order or not. It is in this framework that we need to be careful before deciding that waste incineration should be given priority over other technologies. In our opinion, this choice is not yet justified enough.

Change to the Revised WMS:

The revised Strategy will re-iterate the preferred options for the processing of waste and include reference to background documents that support the Strategy's preferred technologies.

Kummissjoni 16 /4 **Observations**
Ambjent (KA)
Arcidjocesi ta'
Malta

[TRANSLATED]

Noted.

As a general comment, the KA feels that this Update proposes several proposals that make sense, and in many parts provides sensible justifications. Unfortunately, in some parts of the Update, there is a lack of consistency in the quality of reasoning and justifications, especially in relation to the need for waste incinerations. In these parts, the document is too apologetic on why this decision needs to be taken, and instead of exploring alternatives, reaches the conclusion that this will be the best way for certain types of waste. In a few words, it seems that this part of the document tried to justify a strategic decision that has already been made.

Change to the Revised WMS:

The revised WMS will provide a brief justification for the preferred option for waste management technologies and reference supporting background documents.

Section of WMS: 6.6.1 Producer Responsibility

Respondent Details and Comment

MRRR Response

GRTU 1 /7 **Object**

GRTU has taken the forefront in respect to Compliance Schemes. It has set up GREEN MT Limited with the aim of operating Waste Compliance Schemes. Green MT Limited today holds operating permits for a Waste Packaging Compliance Scheme and a Waste electrical and Electronic Equipment Compliance Scheme. GRTU continues to stress that there is no room for both Eco Contribution and Schemes working together. GRTU disagrees with Government on the principle that Government in this document has stated that 'Government needs to determine whether Eco Contribution will be charged in full or in part depending on the firm commitment of "take back" scheme/s to recover products from the market' Government has in the past committed itself a number of times that it will exempt members of Waste Compliance Schemes from Eco Contribution. GREEN MT Limited on behalf of producers of Waste Packaging will only

Noted.

accept to collect what is required by European Legislation. Government was aware of these obligations from way back 2004 and it would be a pity if Government now played around with figures to suit the fiscal situation. Whilst producers have an obligation which they are prepared to take up, the Government has to make sure that it abides to the rules of the game. At present it is failing to do so.

GRTU notes that it is not in agreement to any rebate mechanism as outlined in Page 20 of the consultation document.

GRTU is also not in agreement with the statement made by Government that :the eco contribution payment will have to be effected upon importation or local manufacture”

Both the above go against the spirit of EU legislation, which was transposed into Maltese law by LN 277 of 2006.

Whilst the document continues to harp on the fact that waste management can no longer be seen to be solely the responsibility of Government, and all actors, small and large need to honor their obligations, it is the same Government which is not allowing these actors to take on their obligations as they wish.

Change to the Revised WMS:

The revised WMS will include a commitment from Government that in instances where the producer assumes the environmental burden of products on the market, he will be given an incentive through the Eco Contribution Act.

Section of WMS: 6.6.2 Civic Responsibility

Respondent Details and Comment

MRRRA Response

OPM & MEPA 5 / 22 Observations

The shift from a 'do nothing' attitude towards a resource efficient society entails cooperation between government, stakeholders and most importantly the general public. Government is to invest primarily in waste awareness campaigns if it aims to break the link between economic growth and waste production.

Noted.

Change to the Revised WMS:

The revised WMS is to give more prominence to collective responsibility for waste and further action from Government to implement public awareness campaigns.

Section of WMS: 6.7 Contextualising Our Actions

Respondent Details and Comment

MRRRA Response

GRTU 1 / 2 Object

It would be futile to review any Waste Management Strategy without taking it as part of climate change and the renewable energy programs set out by the EU Community for member States to abide with. The Climate Change Strategy presented a few days before this consultation document was an important step to make sure that any strategies that follow suit are not deviating from this very important Strategy.

GRTU considers this as a very important milestone when effectively drawing up any Implementation plans of any Waste Management Strategy to be agreed upon.....

During AGORA, held in Brussels in June 2008, discussing climate change, NGO s from across the community including Malta presented a final document to the European Parliament so that it is taken heed off before the Copenhagen Summit to occur later this year. This final document emphasized the need to reduce emissions by 30% by 2020 and not the current target of 20% by 2020.

The final texts (Annex A) called for the immediate adaption of effective policies aiming at keeping the average rise in the Earth's surface temperature to well below 2 degrees centigrade above pre-industrial levels by significantly reducing EU's Greenhouse gas emissions unilaterally while striving for a comprehensive common effort of all the world countries.

'Supports the EU's commitment to reduce its emissions by 30% by 2020 compared to 1990 levels as a contribution towards the success of climate agreement negotiations and considers that this will require even stronger measures than the ones currently proposed.'

Noted. The Draft WMS acknowledges that climate change is an issue the waste sector can help to address. However, it is acknowledged that the draft needs to further re-enforce the contribution the waste sector can make towards reducing green house gas emissions.

The need for the WMS to more clearly prioritise climate change was also highlighted through the SEA of the Draft WMS.

These documents will be highlighted as relevant contextual policy drivers alongside existing EU commitments.

It is noted that the GRTU refers to research that suggests Europe should be meeting a target of 30% reduction in GHGs by 2020.

The waste industry is only one sector that can influence reductions in GHGs. Although this helps to re-enforce the importance of GHG reduction targets, for the purpose of the WMS, the target should be to encourage the most efficient technologies for recovery of GHGs/energy from waste. Until the technologies and capacities for new waste treatment facilities are finalised, it would be arbitrary to have a specific target for GHG reductions in the sector.

Change to the Revised WMS:

Revise the WMS to place greater emphasis on climate change. In addition to relevant EU obligations, the revised WMS should make reference to national commitments to tackle climate change. These include the NRF, which acknowledges the important role that solar, wind and energy from waste will play in reducing reliance on fossil fuels.

Friends of the Earth Malta 6 / 3

The document is not an end in itself but is based on a number of other documents that are not available to the general public.

Noted.

Change to the Revised WMS:

The revised WMS will provide references to the documents that informed the Strategy. These documents will be made public.

Section of WMS:	7.0 Whole Chapter
Respondent Details and Comment	MRRRA Response

GRTU 1 / 22 **Observations.**

Having gone through the document and also other documents related to the subject matter, it can be clearly identified that in all that happens once the eventual Waste Management Strategy is to be implemented, both communications and education take a pivotal front line. Education without fail will constitute a large percentage of whether we want this implementation to be the success we want it to be. If we want it to be a success we need to place high targets, we need to be demanding, we need to deliver, we need to make sure there is everyone's commitment and drive. Implementing a Waste Management Strategy is easier said than done. Government needs to be backed by the right people and the Authority which needs to be totally committed. Whilst at top management levels, we have the vision, we need the middle management people who are prepared to make the reality come true. And this is where education is primary, followed by communication. We need more staff trained in waste management, sustainable environment policies. This is our future, the future of our children, the future of generations to come. Whilst education remains the responsibility of Government it is to be noted that in accordance with their permit conditions, Authorized Schemes should also be able to provide extensive education when it comes to the waste hierarchy. As an organization with strong beliefs in the well being of the Environment GRTU proposes the setting up of an Environment Educational fund to be funded 50% by Authorized Schemes and 50% by Government. GRTU through its environmental arm, Green MT recommends also that whichever way this fund is used, educationally, it will promote team work, Government and Schemes.

Noted. The WMS places an emphasis on education & communications. This will also be reflected in the revised WMS. Whilst Government, prima facie is not against the setting up of a joint public / private sector fund, yet prior to any commitment, the exact details of the proposed fund need to be examined.

Change to the Revised WMS:

The revised WMS will include 'Promote good waste management practices including waste minimisation' as a policy objective. This is to include on-going awareness and educational campaigns. This will be clarified through specific Actions, where possible.

Section of WMS:	7.1 Communications
Respondent Details and Comment	MRRRA Response

Kummissjoni Ambjent (KA) Arcidjocesi ta' Malta 16 / 1 **Observations**

[TRANSLATED] In providing its opinion of the Strategy for the Management of Solid Waste published in July 2005, the KA identified the basic principles of sustainable development and argued about the importance that these are put in the strategy of waste management. We argued that it is everybody's responsibility, the local authorities and even more the general public, to solve the waste problem. This means that citizens need to be given the opportunity to develop the capacity, attitude and values that are based on environmental ethics, that help to shoulder such responsibility. For this reason, there is the need of a continuous programme of communication and consultation, and not only information meetings. It is obvious that waste management does not rest only on technical solutions but also on the participation of the informed and the educated citizen, together with correct and just incentives (and when

The WMS already acknowledges the role that all citizens and agencies have to play in the implementation of the strategy through acknowledgement of the "Producer Responsibility" principle and a commitment to education and communications.

required disincentives) that serve to help citizens make choices for the common good.

Change to the Revised WMS:

No change.

Section of WMS: 7.2 Education

Respondent Details and Comment

MRRR Response

Kids Eco Summit 7 / 2 Observations
2009

[TRANSLATED]

In the groups we mentioned the importance of educational campaigns to solve these environmental problems. Education teaches people how to behave themselves and what choices they need to make. Often, it does not matter what technology we use (e.g. whether we use energy-saving bulbs), but how we behave (e.g. we waste less energy).

Change to the Revised WMS:

The revised WMS will include 'Promote good waste management practices including waste minimisation' as a policy objective. This is to include on-going awareness and educational campaigns. This will be clarified through specific actions, where possible.

Noted. The WMS places an emphasis on education & communications. This will also be reflected in the revised WMS.

Chamber of 15 / 6
Engineers

It is the opinion of the CoE that a good waste management strategy starts with a good house keeping and cleanliness plan. It is unfortunately a cultural challenge we have not yet managed to overcome as a nation and we urge the government to include this basic element in the strategic document and to launch a housekeeping effort on all the public places and infrastructure. The way our country looks has a direct bearing on the message it transpires to all its visitors and its habitants.

Change to the Revised WMS:

The revised WMS will include 'Promote good waste management practices including waste minimisation' as a policy objective. This is to include on-going awareness and educational campaigns. This will be clarified through specific Actions, where possible.

Noted. The WMS includes various actions to promote good waste management actions, including within Government.

Kummissjoni 16 / 5 Support
Ambjent (KA)
Arcidjocesi ta'
Malta

[TRANSLATED]

The KA notes with satisfaction that the introduction of the concept that it had often suggested: such as environmental education for adults, an educational strategy focused on all sectors (formal, non-formal and informal) and planned initiatives that strengthen the information in this sector, especially through research. Although the document accepts the importance of the role of environmental education in this strategy, however, the KA notes that there is lots of confusion on what this means.....

...For example, the Update makes the same mistake as the previous version that confuses environmental education with a one-way process of information transfer. Research in this area has shown that by simply informing, one is not educating; the necessary skills and attitudes to bring a change in behaviour are not sown in this way.

Another strange assertion was that the waste management theme is not being given due attention and emphasis in school, in so far that it is not bringing about a change in attitudes and behaviour of students. Whoever has contact with schools knows that the work carried out by WasteServ and the EkoSkola programme has created a generation of students that are very conscious of their waste management responsibilities. The problem is not that kids are not aware of the issue, but that they become confused when they are faced with decisions that go against that behaviour that they became accustomed to (e.g. the collection of different waste fractions in one single bag instead of separate ones, and the introduction of plastic bottles that replaced glass ones).

Change to the Revised WMS:

The revised WMS will include 'Promote good waste management practices including waste minimisation' as a policy objective. This is to include on-going awareness and educational campaigns. This will be clarified through specific Actions, where possible.

Noted. Changes in waste management collections for recycling will always occur, depending on numerous factors such as the recyclable value of certain recyclable waste streams and changes in waste processing technologies. Changing collection regimes need to be effectively communicated, hence the emphasis in the strategy on communication.

Section of WMS: 7.5 Research

Respondent Details and Comment

MARRA Response

Chamber of 15 / 17 Support
Engineers

Future Research and Development

The chamber notes with satisfaction that the Government is considering support initiatives towards research and the future development of improved waste management, recycling and energy recovery systems.

We support such consideration and urge the Authorities to finalise these policies and details these incentives as soon as possible. We recommend that these support initiatives should not be limited to large scale and commercial projects only but should be open to students, educational institutions and individual researchers as well.

Finally, we believe that the Authorities should strengthen their capacity of technical capability to continuously investigate and evaluate the multitude of new technological solutions placed on the market each year.

Support is noted.

Change to the Revised WMS:

No change.

APPENDIX B
REVISED WASTE MANAGEMENT STRATEGY

A SOLID WASTE MANAGEMENT STRATEGY FOR THE MALTESE ISLANDS

FIRST UPDATE

2010



Ministry for Resources
and Rural Affairs

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Foreword

Following public consultation and discussion, it gives me great pleasure to launch the revised update of the Solid Waste Management Strategy for the Maltese Islands. This update now reflects a policy document that has been revised in the light of the representations received from individuals and organisations.

Over the past eight years we have witnessed a vast number of developments that have raised the profile of waste management in Malta to a level that had not been witnessed ever before. We could no longer afford a piecemeal approach towards waste management. Hence, the leap in quality and the stronger measures that we have introduced. Malta's membership to the European Union has brought with it binding commitments in this area. We are on the right track and the benefits of EU membership are being translated both through the operational improvements registered as well as through the financial assistance that has been forthcoming.

It needs to be emphasised that this document does not intend to radically change the original 2001 Strategy which remains the foundation of the vision that we enshrine for this sector. Hard decisions over the past years have meant that we can now look ahead and plan the next important steps. The challenge is far from over and a great deal of work lies ahead. Our long term aim is to have a zero waste scenario, in which all waste is changed into a resource. This can be achieved by either re-using the material or else using the same material as a source of energy generation. In fact, this Strategy puts strong emphasis on the issue of energy generation from waste. The previous strategy focused more on the planning and completion of the basic waste management facilities needed for the storage and treatment of waste. Now that we have made significant improvement in these areas, we can forge ahead with our ambitious plans to maximise waste as a resource.

The setting up of WasteServ Malta Limited has proved to be a success in that we now have an entity that focuses upon the provision of waste management services and facilities without impinging on the potential development that may occur within the private sector. On the contrary, WasteServ is intended to act as a catalyst for such operators and will only act as the 'operator of last resort'. WasteServ has, since its inception, contributed to provide new construction and demolition landfills operating at zero cost to Government, ensured the closure of our dump sites at Magtab and Qortin, provided for engineered landfills at Ta' Zwejra and Ghallis whilst also moved forward with the development of the state of the art facility at Sant' Antnin. This plant is aimed at providing a facility that will contribute towards improved waste management practices whilst at the same time introducing for the first time the concept of recovering energy from waste. Through WasteServ we have also embarked upon a process that will see a culture change within Maltese society to ensure that we separate our waste in a manner which ensures that our obligations in terms of the recycling targets set by the European Union are met.

It is not our intention to 'go it alone' and through the various initiatives that are put forward it is our intention to provide ample space for the private sector to participate, as well as to shoulder its responsibilities, and to encourage further the workings of Local Councils and to promote their operation within defined regions that ensure greater economies of scale.

This Waste Strategy is also intended to create a synergy with Government's efforts in other areas, namely renewable energy and climate change. The Climate Change Strategy touches upon waste management, amongst other areas, because if untreated, waste contributes towards climate change.

Our past achievements in this sector fill me with confidence that we will manage to implement a challenging strategy such as this. This confidence is also strengthened by the fact that the people have so far reacted well and responded positively to the changes that were introduced in this sector. I am sure that further improvements in waste management will benefit the people, the environment, our country and most importantly, our future generations.

George Pullicino

Minister for Resources and Rural Affairs

May 2010

1.0

Introduction

Current waste management policies reflect those set out in Malta's first ever strategy document entitled "A Solid Waste Management Strategy for the Maltese Islands" published by Government in October 2001.

This first update to the 2001 Strategy must be seen in the context of the numerous developments that have occurred in this sector including:

- the setting up of WasteServ Malta Limited to provide facilities and services in relation to waste management
- the closure of the Maghtab and Qortin landfills;
- the establishment of engineered landfill facilities at Ta' Zwejra and Ghallis;
- the introduction of bring-in centres;
- the introduction of civic amenity sites;
- the design of the upgrading of the existing Sant' Antnin composting facility;
- the introduction of cooking oil collection systems for its conversion to biodiesel;
- the introduction of construction and demolition (C&D) landfills and the halting of the dumping of C&D waste to the engineered landfill;
- the closure of the non-compliant incinerators; and
- the evaluation of the potential for the introduction of waste to energy facilities as has been intended in the new thermal facility at Marsa and the upgraded plant at Sant' Antnin.

This update must not be interpreted as a singular updating effort. The updating of this Strategy has been a process that commenced in early 2005 when the Strategy Team entrusted with the first updating was appointed to put forward recommendations to Government.

The first updated document was drafted by the Strategy Team appointed by the then Ministry for Resources and Infrastructure, the lead Ministry for this Strategy, and which consisted of:

- o Perit Kevin Gatt , Management Efficiency Unit (Chair)
- o Dr Ing. Christopher Ciantar, Ministry for Resources and Rural Affairs
- o Mr Kevin Mercieca, Malta Environment and Planning Authority
- o Professor Alfred Vella, University of Malta.

The Ministry and the Strategy Team are indebted to all those organisations and persons who have contributed to this document. This update is not intended to represent a new direction, but one which acts as a continuation of the 2001 Strategy and whilst adhering to all provisions and targets established by European Union (EU) legislation, seeks to fine tune the scenarios put forward in 2001.

The Waste Management Strategy is intended to serve as a policy document, that is, a statement of the direction intended to be pursued by Government. Consequently, the initiatives proposed are kept at a high level and specific actions will be detailed and pursued during the lifetime of this revised Waste Management Strategy.

It is Government's intention to ensure that the measures being proposed are equally applicable to both Malta and Gozo. The island of Gozo is seen to have a strategic dimension not only because of its geographical characteristics but also because of its importance as a tourism destination. Government will give Gozo self-sufficiency from a waste management perspective by offering state of the art facilities and projects of excellence, thereby reducing the amount of waste transferred to Malta. The eco-Gozo initiative will also link with the concepts of sustainable waste management practices.

Sustainable waste management is the responsibility of everyone including Government, public bodies, private firms and households. This strategy has been prepared by the Ministry for Resources and Rural Affairs (MRRA) and sets out the roles and responsibilities of Government, businesses, households, and various organisations to ensure that waste is managed in a sustainable manner.

1.1 - Revised Strategy following consultation

The strategy sets out 9 high level Principles to guide the sustainable management of waste in Malta between 2010 and 2015. These are backed up by 9 Policy Objectives, all of which are based on a combination of:

- International & national policy drivers;
- Malta's legal obligations and targets; and
- Recycling experience in Malta and best practice in the field.

Targets and actions are identified where they are a legal requirement, for example under the Landfill Directive. Other targets and actions have been included where they will help to achieve the Strategy's objectives.

The first consultation draft was issued in January 2009¹. A total of 100 responses to the draft were received from 16 individuals and organisations. The draft was also subject to independent Strategic Environmental Assessment (SEA) to ensure the Strategy reflects national environmental priorities including those set out in the draft National Sustainable Development Strategy (2004) and the State of the Environment Report (2005).

This document takes into account various factors including:

- Consultation responses to the Draft Waste Management Strategy;
- National Legislation;
- On-going review of technology options; and
- The recommendations of the SEA.

The consultation and SEA processes have resulted in an increased policy emphasis in favour of waste minimisation and the pursuit of measures to manage inert / construction and demolition waste. Background documents provide the rationale and justification for the content and scope of this Waste Management Strategy and the changes made to the Draft Waste Management Strategy². Other Background Documents provide the evidence base for the preferred technologies identified in the Waste Management Strategy. Background Documents that support the Waste Management Strategy have been uploaded to the MRRA's website (go to www.mrra.gov.mt/wastestrategy) and are listed below:

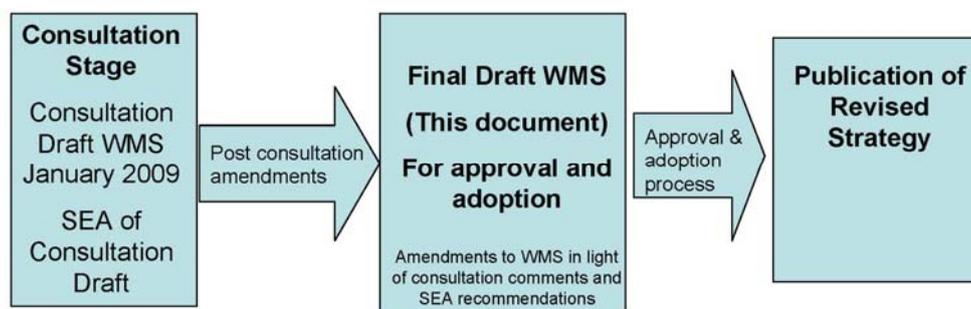
Title	Date	Purpose of the Document
A Solid Waste Management Strategy for the Maltese Islands (First Update) – Summary of Responses and Proposed Revisions to the Strategy	February 2010	To set out how the draft Waste Management Strategy was changed in light of consultation responses.
Waste Management Plan for the Maltese Islands	July 2009	To set out specific implementation measures for the Waste Management Strategy
Environment Report: Strategic Environmental Assessment on the Solid Waste Strategy for the Maltese Islands	September 2009	To assess whether the draft Waste Management Strategy meets national sustainability objectives and if any changes are required to the strategy on sustainability grounds.
Dealing with Construction and Demolition Waste - Proposals for Action	March 2009	Submitted to MRRA as part of the Waste Management Strategy consultation process by the Building Industry Consultative Committee (BICC)
Recycling of Construction and Demolition Waste in Malta: Strategy for Short-Term implementation	June 2008	Report prepared by Umweltbundsamt GmbH Austria as part of the Malta-EU Twinning Project to consider the potential for recycling of C&D waste.

¹ A Solid Waste Management Strategy for the Maltese Islands (First Update) - Consultation Document, January 2009.

² See Background Document 'Summary of Responses and Proposed Revisions to the Strategy' – February 2010 and Strategic Environmental Assessment on the Solid Waste Strategy for the Maltese Islands – September 2009.

Environment Report: Strategic Environmental Assessment on the Solid Waste Strategy for the Maltese Islands: Revised Scoping Report	March 2009	Identifies key legislation and policy considerations for the Waste Management Strategy and the SEA Environment Report to consider.
A Solid Waste Management Strategy for the Maltese Islands (First Update) - Consultation Document,	January 2009	Draft Waste Management Strategy issued for consultation.
National Strategy for Policy and Abatement Measures Relating to the Reduction of Greenhouse Gas Emissions Climate Change Committee, Malta	Consultation Report January 2009	Sets out a draft policy direction to tackle climate change. Covers all sectors including waste.
Agricultural Waste Management Plan for the Maltese Islands, Final Report	June 2008	Sets out options and recommendations for the treatment of manure.
Component 2 - Documentation and Recommendation for C&D waste Recycling and Disposal in Malta	October 2007	Report prepared through the Malta / Austria Twinning Project to look at options for dealing with C&D waste.
Assessing the Feasibility of Waste to Energy Technologies in Malta Waste to Energy Working Group Ministry for Rural Affairs and the Environment	May 2006	Assesses potential waste to energy technologies in the Maltese Islands as a means of treatment for solid waste. Report considers most suitable technologies in the context of existing waste streams.
Situation Audit of the Solid Waste Management Strategy for the Maltese Islands	January 2005	Provides a progress review of the 2001 Waste Management Strategy
Report into Construction and Demolition waste, conducted by the Management Efficiency Unit, (MEU)	September 2003	Sector based review of C&D waste.
A Solid Waste Management Strategy for the Maltese Islands	September 2001	First Waste Management Strategy for the Maltese Islands

The approval process of the Waste Management Strategy is set out below.



1.2 - Definitions

Various references are made to different types of waste and processes for dealing with waste. The table below provides a set of definitions that place some of the terminology used in this Strategy into context.

<p>•Biodegradable Waste – Sometimes referred to as ‘organic waste’. Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food and garden waste, and paper and paperboard.</p>
<p>•Construction and Demolition Waste – Material resulting from constructing and demolishing buildings, roads, bridges and other built infrastructure.</p>
<p>•Material Recovery Facility - A MRF is a facility at which components of a mixed waste stream, in this case co-mingled dry recyclables are extracted by the use of mechanical separation techniques.</p>

<p>•Mechanical Biological Treatment (MBT) – Mechanical Biological Treatment - an interim treatment process dealing with residual waste after most recyclable materials have been removed (often at a MRF or through kerbside separation). The residual waste is mechanically sorted and treated to produce separated main fractions. Often the organic waste components (from Municipal Waste) are separated for anaerobic digestion (AD) and energy from biogas. This process can be supplemented with organic animal husbandry waste / agricultural sewage sludge.</p>
<p>•Recovery – The recovery of 'value' from mixed residual waste, either resulting in energy or lower quality materials.</p>
<p>•Reduction – Means less waste collected and managed by local councils, WasteServ and other licensed waste carriers. This can include reduced waste through consumer purchase decisions and recycling material within the household – eg composting.</p>
<p>•Recycling – Collection, sorting and storage of material ready for consignment to a recycling contractor.</p>
<p>•Residual waste – Waste remaining after reduction.</p>
<p>•Waste – This strategy relates to the management of solid waste including Municipal Solid Waste (Household and Business Waste including waste brought to recycling centres and bring-in sites), Construction & Demolition Waste, hazardous wastes, marine waste and agricultural solid waste.</p>
<p>•Waste Hierarchy – The promotion of (i) Waste reduction first followed by (ii) Re-use, (iii) Recycling, (iv) Recovery, (v) Disposal. The aim of the hierarchy is to promote waste reduction and ensure as little waste as possible is disposed of without gaining some benefit in terms of re-use or recovery of materials / energy.</p>
<p>•Waste Transfer Station - A facility to which waste is taken for onward transfer for treatment, recycling or landfill elsewhere.</p>

2.0

Contextualising the Strategy

This Strategy document is not meant in any way to be a standalone document but one that fits within the priorities of Government at a national level.

It is opportune to recall that Government's five year plan, as cited in the President's address on the occasion of the opening of Malta's eleventh Parliament, foresees an increased commitment to waste management. However, more importantly, Government's five year plan is to be underpinned by its commitment towards sustainable development as a keystone of its entire decision making. Sustainable development brings with it the integration of the economic, social and environmental pillars into decision making with a view towards ensuring that whilst our resource utilisation pattern satisfies the needs of today, it does not in anyway compromise those of tomorrow. Government is inviting all towards entering into a sustainable development pact. Government needs to be at the forefront of such initiatives and therefore this Strategy will aim to embrace this vision.

One issue that has risen to the forefront of the international agenda is the fight against climate change. This debate has dominated the world's centre stage and has been recognised as an international priority both by the United Nations as well as by the European Union which has entrenched climate change as an integral part of its Lisbon objectives. The Inter Governmental Panel on Climate Change (IPCC) Fourth Assessment Report 2007 puts forward some bleak projections in terms of the climatological patterns that are likely to prevail. The reduction of greenhouse gases is a must and not an option. Hence, waste management must, to the extent possible, lend itself towards the reduction of Green House Gases (GHG) by exploiting the energy embedded in waste and to recover this with a view to contribute towards Malta's reduction of its dependency on fossil fuels.

Malta's Operational Programme I, aimed at charting out Government's intended priorities for the disbursement of EU structural funds, clearly recognises that there is more to achieve in the waste management sector. The specific development objective of Priority Axis 5 is to continue with the upgrading process of the country's environment infrastructure, particularly in the areas of solid waste management and risk prevention. Minimising landfilling of waste, the rehabilitation of disused landfills, as well as the increase in the capacity for waste treatment for energy recovery and recycling purposes feature amongst the operational objectives of this Priority Axis.

Waste minimisation remains a critical strategic objective. There is a need to minimise the effects of waste on the environment and society and to fully comply with EU Regulations. Extensive awareness campaigns play an invaluable role in this regard and will continue to do so in the years to come. Malta's strategic vision also encompasses the possibility of exploiting the potential energy embedded in waste. The overall aim is to reduce the amount of waste and divert the remaining residues for recycling, the recovery of resources and the efficient utilisation of waste for energy production. Priority Axis 5 not only foresees the continuation of investment in infrastructures for sound waste management practices, but builds upon the latter by enhancing through interventions to promote waste prevention. On a National level, Government will continue exploring the possibility of introducing Producer Responsibility schemes. A first attempt to collect packaging waste through a kerb-side collection system, and to be eventually financed by the private sector, has already commenced.

Land use constraints in Malta and Gozo make the use of landfills a far less desirable option. Government has set itself the target of commissioning the establishment of two mechanical biological treatment plants, one for Gozo and another one for Malta. This Priority Axis will co-finance the establishment of mechanical biological treatment plants and will also co-finance measures for the rehabilitation and restoration of former landfills.

Apart from all this, waste management can also contribute towards Malta's targets to reduce its dependency on fossil fuels, and hence emission levels.

3.0 Policy Dimension

Since accession to the European Union, waste management legislation in Malta has grown significantly. The Environment Protection Act (Cap 435) today acts as an enabling legislative instrument for a suite of other regulations that result from the transposition of Directives into national law.

The legislation that sets the framework for waste management in Malta applies across the European Union. The main driver for Malta has, in recent years, been the EU Landfill Directive (1999/31/EC). This Directive establishes targets to decrease the amount of untreated waste that is deposited to landfill. Malta has been increasingly working towards these targets. Since 2001, this legislation has influenced the structure of the waste sector in Malta.

Other Directives deal with specific waste streams such as hazardous waste and the control and reduction of packaging and other forms of waste (waste minimisation). Some of the more pertinent Directives that influence the Waste Management Strategy are:

- The Packaging and Packaging Waste Directive (94/62/EC);
- The Landfill Directive (1999/31/EC);
- The Waste Electrical and Electronic Equipment Directive (WEEE) (2002/96/EC);
- The Batteries and Accumulators Directive (2006/66/EC);
- The Waste Framework Directive (2008/98/EC), which includes provisions on hazardous waste and waste oils;
- The End of Life Vehicles (2000/53/EC); and
- Waste Shipments Regulation.

This Strategy does not identify all legislative requirements and transposed regulations. A comprehensive list of legislation and regulations has been identified in background papers³. Instead the Strategy focuses on the main areas of legislative responsibilities and ensures resources and priorities are directed towards meeting these at the Strategic level. Responsibilities for meeting legislative requirements fall on many entities, including Government and competent authorities such as MEPA.

Equally important is the Eco-Contribution Act (Cap 473) which was aimed to play a decisive role in the management of waste, or end-of-life products, by levying an eco-contribution on a selected number of products which generate such waste.

Legislation reflects Government's policy and direction towards achieving specific objectives. Legislation which is not properly enforced not only becomes defunct but will pose an increased challenge towards retaining its credibility and will be difficult to revive.

It is therefore pertinent to take stock of the existing legislation in place with a view to determining its scope and targets, where applicable, and to determine whether these objectives are being met and whether there is the need for revisiting any portion in order to positively contribute towards Government's goals in the waste management sector.

3.1 - Technical Standards / Codes of Practice

Technical standards / codes of practice are aimed at establishing minimum technical requirements for the quality of certain goods or resources, and /or the operation and performance of specified activities. The standards currently being used in Malta are those adopted in the United Kingdom. Malta needs to establish its own national standards that would have a strong legal backing. These standards / codes

³ Environment Report: Strategic Environmental Assessment on the Solid Waste Strategy for the Maltese Islands: Revised Scoping Report, March 2009 and Environment Report: Strategic Environmental Assessment on the Solid Waste Strategy for the Maltese Islands, September 2009.

of practice are to be tailored to suit Malta's particular needs and circumstances in the waste management sector. These standards must be made official through the Malta Standards Authority.

Priority will be given to developing and implementing technical standards and related codes of practice with respect to:

- the management of wastes that pose a potential risk to public health and environment and therefore require special methods of handling treatment e.g. used batteries, used oils, healthcare and other potentially hazardous wastes;
- the landfilling / final disposal of wastes (including thermal treatment); and
- the management of waste within the Public Sector to complement the efforts of the Green Leaders appointed within all Government Ministries.

With respect to hazardous waste, immediate action has to be taken so that the current practice of storing such wastes, where they arise, would be terminated.

The relative competent authorities are therefore being instructed to develop the necessary Codes of Practice, whether through the adoption of foreign equivalents or through the development of specifically tailored documents that are made legally binding through the legal provisions vested in the Malta Standards Authority. Moreover, such authorities should ensure that a suitable communications and information campaign is designed in order to ensure the dissemination of such standards after having ensured an adequate consultation process amongst key stakeholders and interested parties.

3.2 - Compliance

Government has embarked upon a housekeeping process with a view towards ensuring that its waste management facilities are compliant with the various legislative provisions. Although this has taken some time to achieve, due to circumstances which could not be avoided, it is now appropriate to place compliance to existing waste management legislation at the forefront of Government's agenda with a view to securing a level playing field in the sector and to work towards the goals and objectives of sound waste management governance.

To this effect Government will be taking stock of all current waste management facilities with a view towards ensuring that the appropriate level of compliance is being achieved.

4.0

Institutional Frameworks

The implementation of the Strategy requires communication and close cooperation between the Office of the Prime Minister, who is responsible for Waste Policy, the Ministry for Resources and Rural Affairs, who is responsible for the implementation of this strategy, other Ministries and Government institutions. A strong mandate from Cabinet is being requested for the provisions of this strategy to be given priority and for line Ministries to give these proposals their due urgency.

Moreover, this same mandate needs to include an escalation mechanism that will ensure that non compliant Ministries will be sanctioned by Cabinet.

4.1 - Ownership

The Waste Management Strategy shall be owned by the Office of the Prime Minister (OPM). The implementation of the Strategy will continue to be carried out by the Ministry for Resources and Rural Affairs which through its implementation arm would be empowered and responsible to ensure that all stakeholders are adhering to the proposed timeframes and that it is kept informed of all steps being taken to ensure the achievement of the Strategy defined policy goals.

Furthermore it is important that each and every stakeholder appoints its own Executive with whom the Ministry for Resources and Rural Affairs can dialogue on the implementation of the Strategy. Such Executives need to be conversant with their Ministry's plans and need to be empowered to take decisions that may be required from time to time. One element that has been certainly missing is the project management aspect. The Strategy needs to be considered as one project, which is managed in a professional manner.

It is Government's intention to commission periodical independent reviews of the progress of the Strategy as a means to benchmark the level of progress achieved with the policy direction set by Government.

4.2 - Malta Environment and Planning Authority

The Malta Environment and Planning Authority (MEPA) was established following the merger between the former Planning Authority and the Environment Protection Department, on 1st March 2002. This was a departure from the original plan contemplated by the Strategy that seemed to indicate the creation of a separate Authority; however, in operational terms the creation of MEPA still serves to fully implement the creation of an autonomous entity responsible for regulating environmental matters as outlined in action B2 of the 2001 Strategy.

The functions of the Authority are drawn out in the Environment Protection Act, which states that:

'The Authority shall be the principal means whereby the Government shall implement its duties under this Act. The Authority shall advise the Minister in the formulation and implementation of policies relating to the promotion of sustainable development, protection and management of the environment and the sustainable management of natural resources, and on such other matters as may be necessary for the better carrying out of the provisions of this Act.'

The primary tasks of the Authority are intended to be:

- the issuing of licenses or permits for waste management facilities and activities;
- monitoring and inspection to ensure that the license or permit conditions are being adhered to;
- taking enforcement action where applicable;
- providing input to the OPM in the formulation and implementation of plans and policies relating to waste management; and
- advising the OPM on Malta's position on pipeline waste management EU Acquis.

This Strategy recognises that MEPA therefore has a crucial role to play in the implementation of this Strategy, cognisance of which shall be taken accordingly. However, MEPA is being directed to provide Government with timely and practical advice in conformity to current regulations, every time it is called upon to do so in terms of waste management.

The functions of the inspectorate section within the former Environment Protection Department were taken up by MEPA. Inspectors have been delegated full enforcement and inspection powers as provided for by the Environment Protection Act.

MEPA is being directed to ensure that its Waste Management Inspectorate has a plan of action which is aimed at monitoring compliance of existing waste management facilities and initiatives. MEPA is being directed to provide a plan of action for its Waste Management Inspectorate and to present this to the Ministry for Resources and Rural Affairs within 6 months of the publication of this strategy document.

4.3 - WasteServ Malta Limited

WasteServ Malta Limited was established in November 2002 as a limited liability company responsible for organising, managing and operating integrated systems for waste management including integrated systems for minimisation, collection, transport, sorting, re-use, utilisation, recycling, treatment and disposal of solid non-hazardous and hazardous waste.

The establishment of WasteServ and MEPA has managed to achieve a clear institutional separation of the Government's powers and functions as a legislator, as a regulator and as a provider of waste management facilities and services. WasteServ was established to:

- provide Waste Management facilities and services;
- finance as much as possible Waste Management facilities and services;
- retain ultimate responsibility; and
- serve as an operator of last resort.

WasteServ has been instrumental in the setting up of a number of waste management facilities and services. The closure of the former dump sites, the establishment of the Ghallis engineered landfill, the provision of permitted sites for the depositing/storage of Inert Waste, the ongoing upgrading of the Sant' Antnin solid waste treatment facility, the takeover and upgrading of the Marsa abattoir incinerator, the network of bring-in sites and civic amenity sites and the educational campaigns undertaken are just a flavour of the evolution that WasteServ has brought within the sector.

In line with Government's declared intention not to use WasteServ as a barrier to private enterprise involvement in waste management services, an evaluation of this agency needs to be carried out in order to assess its effectiveness of service and cost as well as the strategic direction that is to be adopted with a view to planning for facility devolution. This is not a process which is anticipated to be completed overnight but one which needs to be set in motion in order to determine the ideal strategic direction to be adopted.

At this point in time Government wishes to reiterate that it does not intend to involve WasteServ in activities that compete with or impinge upon the services that could be offered by the private sector. Notwithstanding, in line with WasteServ's mandate to act as an operator of last resort, Government will be forced to ask WasteServ to enter into additional services should the private sector not fill in the demands that are being created.

5.0

Principles & Policy Objectives

It is Government's intention to base the Strategy on the waste management principles.

From a hierarchical perspective waste reduction will remain Government's overall objective. To this effect, and in conformity with the polluter pays principle, every generator of waste has a responsibility to work towards this objective. In the absence of voluntary compliance, Government will look into other mechanisms which could provide incentives and disincentives to secure this goal.

Due consideration will be given to initiatives that are aimed at achieving the re-use or recycling of waste as well as the recovery of energy or material from waste.

The responsibility for waste management can no longer be seen to be solely as the responsibility of Government and all actors, small and large, are to be called to honour their obligations.

5.0.1 - Policy Principles

Based on Malta's legislative responsibilities and national commitments to manage waste in a sustainable way, this Strategy highlights a number of Policy Principles that guide the Waste Management Strategy and its proposed Actions. These are:

POLICY PRINCIPLES

(1) Sustainability – Waste will be managed in a way that does not compromise the ability of future generations to meet their own needs.

(2) Proximity – Waste should be treated or disposed of as close as possible to the point where it arises.

(3) Precautionary – Taking precautions now to avoid possible environmental damage or harm to human health in the future.

(4) Polluter Pays – Polluters and producers should bear the full responsibility and cost of the consequences of their actions.

(5) Waste Hierarchy – The Strategy will be implemented on the basis of the following preferences: (i) Waste prevention / reduction; (ii) Re-use, (iii) Recycling, (iv) Recovery, (v) Disposal.

(6) Achieve Best Practicable Environmental Option (BPEO) - Greatest benefits for the least damage to the environment as a whole.

(7) Climate Change – To explore opportunities for energy from waste and managing waste in a way that reduces green house gas (GHG) emissions.

(8) Waste as a Resource – Saving fossil fuels and new materials. For example, reuse of excavation and demolition waste for new structures.

(9) A Collective Strategy – Government will encourage partnership with all stakeholders.

Principles 1 to 6 have evolved from the 2001 Waste Management Strategy and provide the basis for sustainable management of waste in the context of waste management legislation and best practice. Principles 7, 8 and 9 have been incorporated following consultation on the Strategy that was

conducted in January 2009 and Strategic Environmental Assessment (SEA). The SEA identified renewable energy as an important consideration for the Waste Management Strategy, particularly in light of Malta's NRP targets to maximise energy from waste.

5.0.2 - Policy Objectives

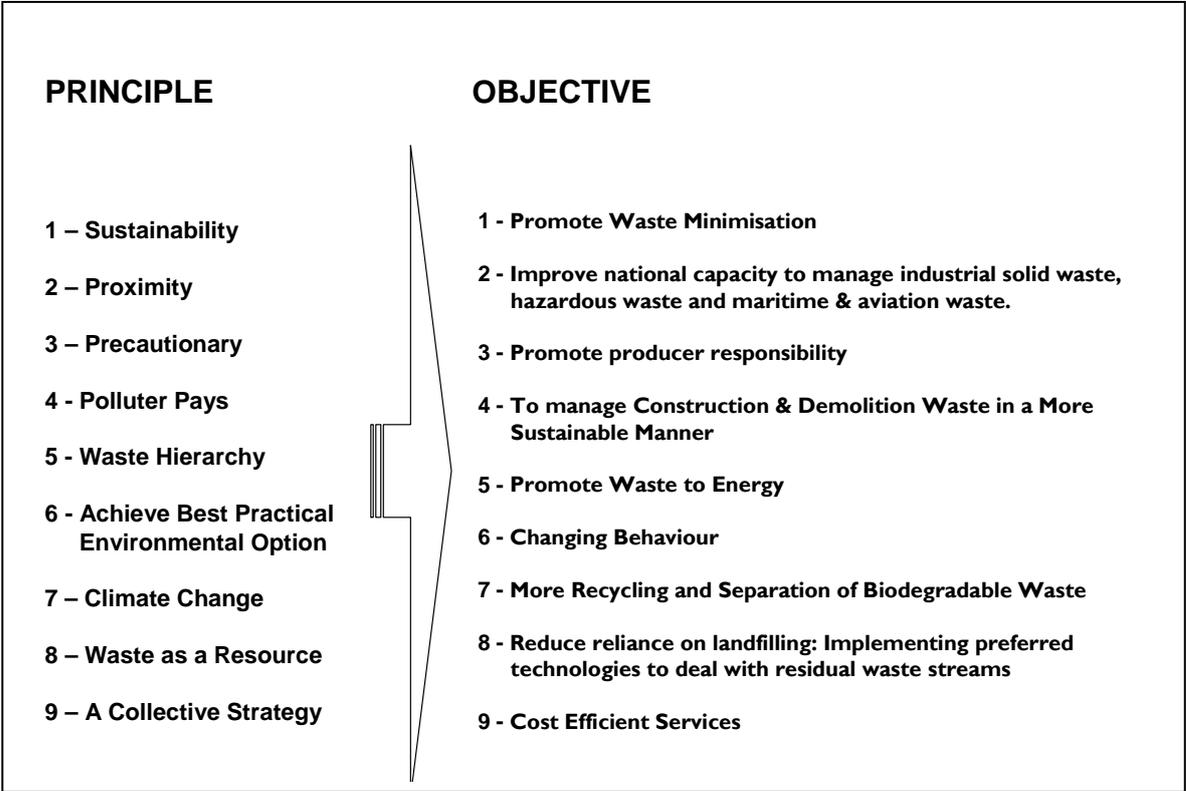
The strategic approach for dealing with solid waste in Malta and Gozo can be summarised as:

- Promoting further waste reduction;
- Achieving high levels of recycling, including construction & demolition waste;
- Treating residual waste in order to maximise energy recovery and reduce Green House Gas Emissions; and
- Further reducing reliance on landfill.

This approach can be implemented in many different ways. Preferred solutions need to be realistic and capable of implementation, have the least impact on the environment and be financially deliverable. Emphasis is placed on further measures to promote waste reduction to reduce processing costs, but also ensure resource efficiency. It is recognised, however, that realistically waste reduction measures alone will not reduce reliance on landfill significantly and further facilities for the treatment of residual waste, in addition to Sant' Antnin Waste Treatment Plant, are required. Preferred technologies are identified through **Objective 8**.

Nine high level policy objectives have been included to guide the strategy and its actions. Further details on how each policy objective will be achieved are considered in this chapter.

The figure below summarises the Strategy and shows how the 9 Policy Objectives relate to the principles that underpin the Waste Management Strategy. A summary of Actions, Responsibilities and Targets for each Policy Objective is set out in Appendix A.



5.1 - Policy Objective 1 – Waste Minimisation

The Waste Management Strategy aims for zero net growth in waste generated per annum in the long term. In the short to medium term (2010 to 2015) the target is to reduce the underlying annual waste growth to less than 1.5% per annum. This target has been set by taking a realistic view of the trends in waste growth and acknowledging that education, awareness and community participation must be intensified, but can have long lead-in times in terms of changing attitudes and behaviour across the whole population

Historically a major obstacle to prevention and minimisation of wastes in Malta has been the very low charge for disposal of wastes to landfill. Prior to October 2009 the 'gate fee' for waste disposal to landfill was €0.77 for mixed waste, providing no incentives for minimising the production of waste in the first place. This has now been increased to €20 per tonne for mixed Municipal Solid Waste collected by Local Councils and €0.50 per tonne for separated wastes presented at Sant Antnin for recycling by Local Councils. These changes shall be introduced for waste delivered by other entities during 2010. Government will continue to monitor the effects of relatively higher disposal charges for waste in order to determine the impacts of higher gate fees on minimising waste and limiting the overall amount of waste presented for recycling and disposal to landfill.

Government is in the process of handing over the responsibility for managing the bring-in sites to Local Councils; this should help them to improve their respective waste collection services and motivate residents to make more use of them, ultimately creating a situation where Local Councils will have more funds in hand that can be better invested in other projects for the benefit of the community.

Given the significance of Waste Framework Directive Targets for the minimisation and recycling of C&D waste, the Waste Management Strategy provides specific targets and measures to deal with this waste stream. These are set out through **Policy Objective 4**.

Government, NGOs and other organisations will be encouraged to share best practice and continually review experiences and developments in the EU to see whether these experiences / best practice can be applied in Malta. Government will use research and information shared on best practice to develop clear messages to feed back to consumers and businesses through **Policy Objective 6** (Promote good waste management practices through Education and Communication). This experience will also be used to promote specific achievements in waste reduction through **Policy Objective 6**.

Other priorities for Government include reviewing current regulatory regimes (such as those relating to packaging waste) and current household waste collection practices. The latter will include a review to see whether reduced collection days or 'one bag only' policies⁴ could start to give rise to waste reduction habits. This will only be done following a comprehensive investigation into the household concerns and/or suggested solutions.

Between 2010 and 2015 Government will promote a range of regulatory and fiscal measures to reduce C&D waste generation and promote the recycling of building materials and excavation waste. Further details are set out through **Policy Objective 4**.

Policy Objective 1 – Promote Waste Minimisation

To implement measures aimed at reducing the growth in the generation of Municipal Solid Waste, with a long term aim of zero net growth in waste generation per capita.

⁴ Whereby carriers of household waste carry a maximum amount of waste per collection in order to encourage prudence in terms of consumer decisions on purchasing items with high packing content, disposing excessive food waste, etc.

5.2 - Policy Objective 2 – Improve Capacity to Manage Industrial Solid Waste and Hazardous Waste

The Ghallis complex includes a facility for the disposal of certain hazardous wastes. This is a small facility suitable only for receiving and disposing of a limited range of solid hazardous waste with a capacity of 100,000 cubic metres. It is Government's intention to develop a hazardous waste treatment facility in close proximity to the main landfill facility at Ghallis, using Co-Financing from the European Union⁵. The hazardous waste that is received at the facility will be divided into two waste streams: (i) those that can be treated and disposed of safely and cost-effectively in Malta; and (ii) those that will need to be accumulated, bulked-up, stored and either treated locally and exported for disposal overseas or subsequently exported for treatment and disposal overseas. The facility at Ghallis will substantially increase Malta's capacity to safely manage a broad range of hazardous waste streams, in the context of the Proximity Principle.

Given the lack of reliable data on hazardous waste arisings, this project component will, to some extent, have to evolve in response to actual needs and experience. However, at this stage, it is envisaged that this component will include *inter alia*:

- a reception area and facility for inspecting, weighing and recording vehicles and wastes arriving at, and leaving, the facility;
- a laboratory for sampling, analysing and determining the basic characteristics of hazardous wastes received at the facility (as other tests will be carried out in accredited laboratories);
- a facility for pre-treating mainly inorganic hazardous waste using conventional (and relatively simple and low-cost) physical and / or chemical treatment processes;
- storage for radio active waste generated in the Maltese Islands; and
- a facility for bulking, packing or re-packing and temporarily storing mainly organic hazardous waste prior to local further treatment or to export for treatment / disposal overseas of:
 - potentially hazardous wastes;
 - spent batteries and accumulators;
 - asbestos;
 - oily sludges; and
 - consumer durable and electronic goods.

The primary objective of this waste management strategy is to maintain a high level of independence for waste treatment. However, the export of waste may of course prove to be viable and efficient as a result of economies of scale.

5.2.1 - National System for Hazardous Waste Management

MEPA has a hazardous waste consignment procedure in place. A consignment note must accompany every movement of hazardous waste. All persons wishing to transfer hazardous wastes within the Maltese Islands should first apply for a permit on an appropriate form (CP form). Following the issue of the CP permit, all subsequent waste movements authorised under this permit need to be notified to the Authority on the CN form. Detailed guidance on the consignment note system is available from MEPA offices and on the MEPA website.

Cognisant of the small amounts of hazardous waste that may be generated by a significant number of operators in Malta, and the need to facilitate its interim storage prior to disposal, Government remains committed to provide interim storage and pre-treatment facilities prior to export at the hazardous waste landfill at Ghallis and/or local treatment at the Marsa abattoir of hazardous waste generated in the Maltese Islands.

There is the need for a national characterization and implementation plan for hazardous waste. This should take into account:

⁵ The project is being proposed for financing through the 2007-2013 Cohesion Funds allocated by the European Union.

- the establishment of final destination points where export of such waste is accepted; and
- negotiations with the major commercial banks to provide guarantees to shippers exporting such waste.

Government, through MEPA and WasteServ, has benefited from a Twinning Light project entitled "Hazardous waste inventory and technical assistance in regulatory aspects of hazardous waste management". The overall objective of the project is to further strengthen Malta's capacity to comply with the EU Environmental *Acquis* in the field of waste management. Its purpose is to enhance the ability of the Malta Environment and Planning Authority and WasteServ Malta to manage hazardous wastes and provide Malta with the capacity to comply with monitoring and inventory obligations pursuant to the relevant EU Directives and Regulations. Government will be embarking on the setting up of an Action Plan for the implementation of this report.

5.2.2 - Clinical and Abattoir Waste

The Working Group on the Treatment of Clinical Waste was jointly appointed in 2006 by the then Ministries for Rural Affairs and the Environment and that for Health and Care for the Elderly with a view to determining the options that are available for the management of clinical waste as well as to determine the feasibility of utilising the abattoir thermal treatment facility for the treatment of clinical waste.

Malta did not have any authorized facilities for the treatment of clinical waste. Healthcare waste from St. Luke's hospital was being incinerated in an on-site incinerator. With certain modifications, the new plant, situated at the civil abattoir in Marsa, gave rise to an opportunity to consider the treatment of clinical waste at this facility. It was proposed by Government to consider upgrading this facility so as to permit the co-incineration of clinical and industrial waste according to EU standards related to environmental emissions in particular in a manner that will be safe for the neighbouring community.

The Working Group recommended that there could be a strong potential to treat healthcare waste at the new abattoir facility for the following reasons:

- Incineration of clinical waste at the abattoir is a solution that can be immediately implemented and also seems to provide a viable solution for the long-term. The upgraded abattoir facility provides the quickest solution to terminate the temporary solution and to shut down the non complaint St. Luke's incinerator and that at the Gozo hospital;
- It fulfils Government's obligation to provide a proper facility for the treatment of clinical waste;
- The new abattoir incinerator conforms to national and international regulations;
- The treatment of clinical waste will not jeopardize compliance of the facility;
- It is the least costly environmentally-acceptable option available at present time;
- Clinical waste, in addition to abattoir waste, would assist the new incinerator to be able to achieve the thermal capacity for which it was designed. This will contribute to making the facility operate efficiently with fixed overheads being absorbed by higher waste volumes and waste with higher calorific values;
- The treatment of clinical waste at the upgrade facility will not induce additional capital cost over and above those foreseen for the required upgrade.

At the same time it would also make sense to attempt to quantify the total potential generation of pharmaceutical waste in order to ensure that the abattoir facility has the sufficient capacity to treat all clinical waste and for its management to assess the amount of industrial waste that can be accommodated within this facility.

As a result, Government has commissioned a permanent waste treatment facility at the Civil Abattoir at Marsa originally intended for the thermal processing and destruction of waste arising from public and private slaughterhouses, certain food-processing industry, port and airport risk wastes. A separate report assessing the potential of any spare capacity at this facility to be used for the treatment of clinical and certain hazardous waste had concluded that, with some modifications to the existing facility, this potential could be achieved.

In fact the abattoir incinerator was upgraded to be able to treat hazardous waste and is now in operation. It is envisaged that this facility will go a long way to provide for the local treatment of hazardous waste which will prove to be a benefit, both administratively as well as financially, for local industry.

5.2.3 - Port and Airport Waste

Most vessels deliver their solid waste at ports chosen by their owner. A survey carried out in 2003 identified that over 93% of the vessels visiting Maltese waters requested the separate collection of waste from ashore (land side). None of this waste was delivered separate to public licensed facilities.

All port or terminal operators were required to prepare a waste management plan with respect to the provision and use of port reception facilities in consultation with all stakeholders by the 14 November 2004. The waste management plan is to comply with all the requirements of Schedule 1 of legal notice 278 of 2004 Port reception facilities for ship-generated wastes and cargo residues regulations. These regulations further require that the Master or the agent of a ship notify the Malta Maritime Authority about the waste on board and the arrangements needed.

Waste separation is carried out in a number of sea vessels. In fact, inspections carried out during 2008 showed that all vessels ranging from cargo to passenger ships had a waste separation system in place. Recent communications with the entities of concern has shown that at the Maltese terminals waste being handed over to the waste carriers was being mixed in the process and the resultant waste was being landfilled at the Ghallis non hazardous waste landfill.

In order to rectify the situation and divert the recyclable waste to the appropriate recycling facility, the Malta Environment and Planning Authority, the Malta Maritime Authority and WasteServ Malta Ltd. have decided to take on different procedures to ensure a good common practice. WasteServ Malta Ltd. introduced a differential pricing mechanism whereby through different prices, waste recycling is preferred other than disposal. Acceptance of the different waste streams at facilities operated by WasteServ shall be subject to a notification procedure. A waste transfer note will be issued by WasteServ upon request by the waste carrier or ship agent at least 3 working days prior to the delivery of the waste. A copy of the waste transfer note sent to the waste carrier or ship agent shall also be made available to the Malta Maritime Authority, who may conduct inspections on the records that should be retained by waste carriers. Consignments not accompanied by a waste transfer note shall be refused entry into the relevant facility. As from the 1st of September 2008, waste carriers entering the different terminals have to be registered with MEPA as part of its new waste carrier registration according to Legal Notice 106 of 2007. This will ensure that all vehicles/vessels that carry waste are up to standard and that waste is delivered to the appropriate facility.

A similar waste marshalling area should be made available at the airport. This will receive, process and store all recyclables off-loaded from aircraft as well as from duty free stores. Other waste, including hazardous waste from aircraft maintenance, should also be stored prior to it being transported for treatment to a local licensed facility.

5.2.4 - Asbestos

Some 2000m³ of asbestos is estimated to be in storage awaiting disposal. Additionally, it is estimated that some 5000m³ of this same material remains installed and will eventually be dismantled as refurbishment works on the older building stock are gradually carried out. Failure by the private sector to export this waste material has led Government to undertake a feasibility study in order to determine the best and most practicable waste management option available for this waste.

5.2.5 - Other developments

A Twinning Light assignment between Austria and Malta entitled "Hazardous waste inventory and technical assistance in regulatory aspects of hazardous waste management" has been undertaken and is intended to underpin Government's direction in the management of hazardous waste. The

hazardous waste streams identified included Waste Oils, WEEE (Waste Electrical and Electronic Equipment), End of Life Vehicles and Batteries and Accumulators. Specific comments on some of these waste streams are set out below:

5.2.6 - Waste Electrical and Electronic Equipment (WEEE)

The WEEE Directive aims to prevent such products from entering municipal waste collection systems through reuse, recycling and recovery of substances. The Directive has now been transposed into local legislation and the implementation of the WEEE initiative is prioritised through the Waste Management Strategy (WMS). Government will undertake an urgent review of existing facilities for WEEE and consider whether legislative, promotional and/or fiscal barriers are preventing Malta from fulfilling its target obligations under the WEEE Directive.

5.2.7 - End-of-life vehicles (ELVs)

The ELV Directive encourages the responsible management of waste from vehicles that have reached the end of their useful life. Malta introduced regulations to oversee the implementation of this Directive in 2003. It requires that waste operators dealing with ELVs prioritise the safe management of potentially hazardous materials and ensures maximum rates of re-use and recycling.

Particular circumstances have made the implementation of this strategy challenging. A lack of available sites for ELV processing and delayed permitting has resulted in a slow upgrading of private sector capacity to implement ELV legislation.

5.2.8 - Lead (Pb)-Accumulators

The Batteries and Accumulators Directive (2006/66/EC) promotes the collection, safe storage and treatment of batteries. Infrastructure for the collection of used batteries is becoming well established and WasteServ Malta Ltd has led a number of successful educational campaigns to encourage the separate disposal of used batteries.

During the period of the revised Waste Management Strategy (2010 to 2015) further measures will be implemented to maximise used battery collections and increase collection and recycling rates and promote best practice and participation. The completion of the Ghallis hazardous waste storage facility will improve capacity for storage. Malta is geographically small and provides relatively small quantities of hazardous waste when compared to other EU member states. Because Malta is an Island, it is not possible to share facilities with other countries or municipal Governments and economies of scale are unlikely to provide the economic feasibility for certain treatment facilities in Malta. Due to these unique economic and locational circumstances, this waste stream is likely to be exported for treatment.

Policy Objective 2 – Improve capacity to manage industrial solid waste and hazardous waste.

Government will prioritise the development and implementation of best available technical standards to guide the design and management of facilities for hazardous wastes and other industrial solid wastes.

Priority will be placed on the development and operation of a hazardous waste storage and treatment facility.

5.3 - Policy Objective 3 – Promoting Producer Responsibility

The principle is to ensure that all producers are responsible for the treatment of products they place on the market when they become waste. Whether it is industry or the private household (represented by the local council) the nature of the waste and the volumes generated remain the responsibility of the waste producer until this is accepted for treatment at an authorised facility. Government must ensure that its facilities are receiving permitted waste, recovering all costs incurred and that there is no cross subsidisation between operations.

It is therefore of utmost importance for Producer Responsibility schemes, with the full cooperation of local councils, to be set up in a rational manner that permits economies of scale to be achieved.

Waste prevention on an industrial level encompasses the repeated use of a product / material, increased product life as well as changing a product's design in such a way that production of waste and its polluting potential is reduced. Above all, the long-term reduction in volume of solid waste produced is only possible by implementing measures that enable the re-introduction of materials into the production cycle and thus reduce the quantity of primary raw materials used. Source segregation and the separate collection of industrial waste facilitates this process since waste originating from one entity might well be the feedstock of another.

Waste prevention entails immediate benefits to industry only if handled at a management (as opposed to an individual) level and the packaging regulations should help the commercial sector understand better its obligations as well as the need to re-use packaging wherever possible.

To further complement the Civic Amenity sites that have been developed (three of which are close to industrial estates), all major industries will be obliged to formulate a waste management plan and set up the necessary storage facilities so that all solid waste generated on these estates is handled / stored separately and transported separately for treatment. A notification procedure will also be enforced. Industry will be encouraged to team up on this effort since in many cases one waste marshalling area per estate will suffice.

Effective recovery exchanges of waste require a sufficient supply of information on what is available in the field, otherwise they remain largely unused. The difficulty stems from the fact that there still exists a lack of reference and consulting activities as well as the need to overcome communication barriers.

Help could be established by Government organising a national clearing house (which may be virtual). This entity should manage information of what waste is available and where, on the Maltese Islands, so that this may be put to good use. Such waste could include construction and demolition waste, solvents, waste oils, etc.

To simplify matters of inter-company recovery, Government will consider issuing legislation not to characterise certain clearly defined waste fractions as waste so that the use of secondary materials will be facilitated. Experiences of other Member States in this regard will be sought.

In any event, a certain quality standardisation for waste generated in relevant quantities would surely facilitate recovery irrespective of any legislation suspending the classification of waste. The need for such a facility is likely to increase further with the introduction of new recovery schemes of specific waste fractions.

The catering sector offers a tremendous potential for providing excellent quality organic waste from its food preparation area. Collected separately from all other waste provides a very good feedstock to digesters. Consequently, Government should actively consider legislating in favour of the separate collection of the organic fraction from all licensed catering establishments at the latter's cost with a view to directing this waste to digestion plants.

5.3.1 - Eco-Contribution

The Eco-contribution Act introduced in 2004, aimed to encourage the recovery of potentially hazardous and recyclable products. Government acknowledges that this objective will not be achieved solely through the current fiscal structure of the eco-contribution since:

- the contributions stipulated in the Act are too low and are based on price relativity;
- the current system allows for partial refunds to be applicable;
- the range of products covered is too narrow; and
- payment is effected on the first sale of the product subject to eco-contribution.

Government remains fully committed towards the producer responsibility and polluter pays principles and until the development and growth of fully fledged private sector based schemes, Government will retain responsibility for producer induced waste and its eco-contribution. As producers start to subscribe to schemes they will become exempted from Eco-Contribution charges as per regulations that will be published from time to time. Provisions for those who opt for self compliance will be based on refunds subject to compliance audits.

Government will consider revising the Eco-Contribution Act if the producer fails to shoulder part or all of its waste management responsibility. The major changes proposed envisage:

- a wider range of products subject to eco-contribution to minimise potential cross-subsidisation;
- the revision of contribution rates, on existent and new products to be covered by the Act, to reflect the actual cost of disposal of a product; and
- the eco-contribution payment will have to be effected upon importation or local manufacture.

The introduction of a rebate system would ensure that those producers who take up full responsibility for the disposal of their product are refunded the contribution paid upon proof of recovery. The rebate system coupled by a fiscal regime would also provide an incentive for producers to invest in cleaner technologies. Demanding payment on importation or manufacture will reduce the possibility of under-declaration. Partial payment should be considered as a measure to mitigate against producers' cash flow problems.

A competent body has been set up to manage and monitor eco-contribution. This body acts as a reference point on matters relating to eco-contribution in order to reduce the number of free-riders.

Producers must be provided with alternatives prior to the revision of the eco-contribution and the increase in enforcement and penalties. For selected waste streams, Government intends to provide for, through legislation, the establishment of licensed schemes. Consideration will also be given to legislating in favour of one mandatory scheme per sector where economies of scale are an issue. These licensed schemes need to be encouraged, through the provision of adequate incentives. MEPA consequently has a determining role to play for it is believed that such schemes will actually "take off" once MEPA communicates its intention to commence the enforcement of Regulations pertaining to this aspect. An intention by MEPA to enforce such regulations should stimulate the industry to react within a reasonable timeframe.

These licensed schemes would be responsible for the collection and final disposal. If Government had to allow for one mandatory licensed scheme per sector, sound justification would be demanded to concede such an arrangement. Justification would be granted if pre-determined criteria are met.

The establishment of licensed schemes would be consonant with promoting producer responsibility and the recovery of resources. These licensed schemes would induce a change in behaviour and would encourage waste producers to shoulder responsibility for the treatment and disposal of the waste generated.

5.3.2 - Compliance Schemes

Several categories of waste have been identified (through the relevant Producer Responsibility directives) for which the producers / manufacturers of the products giving rise to such wastes should

bear responsibility for arranging and paying for their management and disposal in accordance with relevant legislation. These include:

- used packaging materials;
- used batteries and accumulators;
- used mineral oils;
- end-of-life electrical and electronic goods; and
- end-of-life vehicles.

The Eco-Contribution Act puts greater emphasis on producers / importers to either develop recovery schemes or pay for the costs incurred by Government when the specific product ends in the general waste stream. In the case of the former, producers will have control over the cost structure of their own recovery scheme as opposed to paying for a central public service for which they do not have direct cost control. Recommended recovery schemes are to be analysed on various aspects. For example, Government needs to determine whether eco-contribution will be charged in full or in part depending on the firm commitment of the 'take back' scheme to recover products from the market. Apart from meeting the obligations, such schemes translate in an enhanced waste separation initiative thereby improving the overall quality of Municipal Solid Waste (MSW).

MEPA has formulated guidelines of how schemes are to be licensed with recommendations on how to waive the eco-contribution charge if responsibilities for waste are shared. The policy document "Authorisation/Registration of Schemes – Eco Contribution Exemption/Refund Mechanism" provides incentive schemes that play a determining role in the achievement of Malta's waste management targets in conjunction with possible amendments to the Eco-Contribution Act to offer additional incentives to such schemes.

To further facilitate implementation, Government appointed an Eco-Contribution Commission to advise on the implementation and enforcement of the Eco-Contribution Act as well as to recommend recovery schemes. This Commission submitted its report to Government in February 2005. This Commission should be reactivated with a view to taking stock of the current situation, in order to determine any further amendments that merit consideration in the light of the current reality.

MEPA is to ensure, possibly even through stronger enforcement regimes, that the targets negotiated with the EU for the recycling and recovery of packaging and packaging waste are reached within the agreed transitional periods in accordance with the 'Polluter Pays' principle.

5.3.3 - Responsibilising All Actors

Whether corporate or individual, all actors have a social responsibility in the generation and management of their waste arisings. The consequence of their behaviour is undoubtedly translated into actions required centrally, and the expenditure that is required to counter such behaviours. There is no doubt that waste generation forms part of our daily activity. However, managed appropriately rather than indiscriminately, waste can be harnessed in order to be treated in the most cost effective manner, recovering as much of its embedded energy as possible.

The choice on the cost and extent of waste management operations depends on each and every individual. Egoism will result in the loading of burdens on fellow citizens!

5.3.4 - Civic Responsibility

As individuals, Government and the private sector have given two main options for the separation of Municipal Solid Waste – bring in sites and the kerbside collection of dry recyclables. Volumes, albeit on the increase, are still low. Households need to become more aware of their responsibility towards the management of their waste with a view to assisting the waste management process at a national level.

The figure of approximately 28% referred to in Section 5.7.3 in terms of what is currently being collected through the Recycle Tuesdays initiative with respect to the total potential that can be

collected is very worrying. It is our duty to realise that by not separating waste we are contributing to higher operational costs of our collection and treatment infrastructure as well as limiting the potential for the generation of energy from waste, both of which will have to come out of the taxpayer's contributions. Our behaviour must change, not for legislative compliance, but for the sustainability of our social and economic environment.

Efforts should be made to promote the aforementioned initiatives as well as other initiatives such as the separate collection of cooking oil and the deposit of such oil at central depots for recycling by industry. To this effect, Government should consider incentivising the private sector to contribute towards such initiatives.

Objective 3 – Promote Producer Responsibility

Continue to implement fiscal incentives to ensure producers take responsibility for waste.

5.4 - Policy Objective 4 – Managing Construction and Demolition Waste

Construction and demolition waste comprises an average of 84% of the total waste arisings in the Maltese Islands. It is therefore a good strategic decision to treat this type of waste on its own and to have a strategy which is directed at the management of this type of waste. Moreover the Thematic Strategy on the prevention and recycling of waste (COM-2005-666) will serve as a beacon to complement Malta's strategy in this regard.

Since the implementation of the 2001 Waste Management Strategy, considerable research has been undertaken into the possible measures and methods that could be applied to deal with increasing quantities of Construction and Demolition (C&D) waste. The Building Consultative Committee and other stakeholders have provided a tangible list of ideas to create a market for the re-use and recycling of C&D waste (and other forms of inert waste). The Waste Directive has recently been amended and there are now challenging targets for the minimisation and recycling of C&D waste. This provides further impetus to implement measures to limit C&D waste.

As from January 2005, the subsidy on the disposal fee of construction waste has been removed and therefore the waste generator now pays the true cost for the disposal of the waste generated which is in line with the Polluter Pays Principle. Although a drop in the amount of C&D waste handled was observed between 2004 and 2005, this amount has crept up slightly between 2005 and 2006. The amount of C&D handled by WasteServ in 2007 still continued to show a rise although a reversal in this trend is anticipated for 2008. Government remains committed to:

- increase the observance of waste-avoiding measures in the construction planning phase;
- explore ways how the useful life of buildings and parts thereof may be prolonged;
- provide assistance on the use of recycled materials in the construction of new buildings; and
- advise on toxicity of construction materials before licensing.

The 'Recycled Building Materials Working Party' as proposed in the 2001 Strategy was set up under the auspices of the Building Industry Consultative Council (BICC) together with other representatives from relevant entities e.g. Malta Environment and Planning Authority, Malta Resources Authority, Malta Standards Authority, together with a Producer Responsibility Group representing the main waste producers and producers and suppliers of construction materials.

The proposed aims of the Working Party were primarily to propose ways to recover and recycle materials from excavation, construction and demolition wastes.

During the consultation of this strategy, BICC made a number of recommendations for proper management of C&D waste. Most of the recommendations focused specifically on practical guidelines for action, applying the three R's (Reduction, Re-use and Recycle), strategy to waste management, emphasising on the impact of C&D waste and its long-term impact on the building construction industry at large.

Government shall ensure that the recommendations made by BICC are taken up in order to establish the feasibility and scheduling of their implementation.

In addition, a Twinning Agreement with an Austrian Environment agency (MT-05-IB-EN-01) dealt with the options available for the management of construction and demolition waste and this is envisaged to assist the Recycled Building Materials Working Party in designing a C&D management strategy with, amongst others, the following terms of reference:

- determine the structural feasibility of using demolished and newly-dressed stone in new buildings;
- identify financial incentives for the use of such recycled products;
- examine existing financial provisions in respect of C&D waste and propose any amendments thereto;
- quantify existing space for disposal of C&D waste;

- consider the disposal of C&D waste at sea as an emergency solution when C&D landfill space is not available;
- develop guidelines for the quarrying of large sites earmarked for development and allowing the export of extracted stone blocks;
- examining the potential for reclamation as well as converting what is today deemed as waste into a resource for the embellishment of Product Malta; and
- identify other possible alternatives that could positively contribute towards the management of C&D waste.

Twinning Project MT05-IB-EN-01 - Recycling of Construction and Demolition Waste in Malta: Strategy for Short-Term Implementation – between Malta and the Austrian Umweltbundesamt provides a number of recommendations for the management of C&D waste. The recommendations put forward to introduce recycling in the construction industry in the final document focus around the following:

1. Full implementation and enforcement of EU Legislation

- Inert landfills;
- Waste acceptance (incl. chemical analysis where necessary);
- Waste documentation;
- Construction products.

2. New National Legislation for:

- Separation of C & D waste (incl. collection centres for large construction sites);
- Disposal levy;
- Levy on resources ("landscaping levy");
- Documentation of waste streams;
- Enforcement of Permit Conditions for Quarries (refilling, restoration).

3. Standards and Guidelines for

- Recycled materials from civil works;
- Recycled building materials;
- Deconstruction works.

4. Develop basic economic conditions for a market of recycled products:

- No illegal dumping;
- Product standards/requirements;
- Establishing a market under ecological conditions.

5. Allocation of storage areas for

- Mineral C & D waste;
- Recycling products.

6. Introduction of Separation & Collection, that means:

- Separation at the site (demolition, new construction);
- Collection Centres (large construction sites).

7. Installation of a sorting plant (hand sorting)

8. Installation of a Mobile Plant or a Stationary Plant for Recycling of mineral C & D waste

9. Initiatives on Re-use & Recovery; this could be:

- Re-use of recycled Concrete for Aggregates (batching, blocks, pre-casting) or road construction;
- Re-use of recycled Asphalt for fresh asphalt and/or road construction;
- Soft stone recovery on industrial level for reconstituted stone ("Eco block");
- Re-use of Building elements (e.g. shaping of used blocks for new purposes), incl. installation of a computer based exchange market;
- Refurbishment of non-used buildings.

10. Development of Disposal Strategies and allocation of the necessary facilities:

- Quarries for clean excavation material and quarrying residuals;
- Inert waste landfill (if the material is really “inert”);
- Non hazardous waste landfill for mineral waste;
- Non hazardous waste landfill for residuals;
- Hazardous waste landfill;
- Land reclamation at sea (for clean excavation material), if technically, economically and environmentally feasible.

11. Initiatives on Public Procurement with focus on:

- Public tenders (Provision of alternatives for recycled materials);
- Preference for recycled materials in certain public construction activities (sidewalks, landscaping etc.);
- Elaboration of standardized documents for public procurement, where recycled products are included.

12. Information and Public Awareness Raising:

- Teaching waste management & recycling technologies (schools, University);
- Promoting the use of recycled products in general and specified technical media;
- Organize instruction courses on the use of standards and guidelines (e.g. modular training on deconstruction, proper use of recycled materials, waste acceptance at landfills etc.).

13. Improvement of the Data Management with regards to:

- Quarrying activities;
- Construction activities;
- Building materials;
- C & D waste production;
- Prices.

14. Encourage and support research activities (Pilot Projects, Task Forces) for

- Reconstituted stone ("Eco Block");
- Organised stripping of a building and separate collection;
- Collection centre for a large construction site;
- Processing of C&D waste in a test recycling facility & re-use of recycled material at a test site (roads, buildings);
- Elaborating Standards/Guidelines & modular training system;
- Possible testing of the “diamond-wire-cutting-technique” for soft stone excavations.

5.4.1 - Managing excavation, construction and demolition wastes

In order to achieve Malta’s targets for reducing and recovering excavation and construction and demolition wastes and to limit the use of landfills for this type of waste, Government intends to enforce the current system of development permits granted by MEPA, in which planning permits oblige construction and demolition waste to be disposed of at authorised C&D landfill facilities and, as far as possible, try to channel excavation waste for recycling. This will assist Malta in achieving European targets for preparing for re-use, recycling and other material recovery (a minimum of overall 70% by weight by 2020). Enforcement is envisaged to increase in order to improve compliance rates so that all the developers of major projects submit a Construction Management Plan, waste management, demolition and dismantling arrangements, for MEPA to review.

A five-year contract had been awarded to a private entity to acquire and manage on behalf of WasteServ a number of licensed sites, usually quarries, for the disposal of construction and demolition waste. Subsequently, WasteServ had introduced a scheme which permits quarry owners to enter into a joint venture with WasteServ with a view towards ensuring that the latter manages the quarry as a construction and demolition landfill. However, Malta must not become overconfident that it has unlimited disposal volumes available and a study on the true potential of other C&D sites as well as in respect of future C&D related strategies needs to be undertaken. This should include the use of disposal of C&D waste at sea as a temporary measure when no facilities for disposal on land are

available as well as allowing developers of large projects to move from excavation to quarrying techniques for the purposes of space creation below ground, with the resulting stone blocks being authorised for export purposes.

This situation needs to be tackled from a sustainability point of view and due consideration should be given to the introduction of fiscal initiatives, such as the abolition of VAT on the sale of recycled building materials, in order to potentially serve as an incentive to trade in this resource.

The use of such materials to create assets that are in the national interest will also be considered. It is important to open the debate on the potential of reclamation as well as that of the creation of islands, initially as an embellishment feature for our beaches, in order to transform what is now considered as waste into a resource.

Should unsustainable trends prevail Government will consider further raising the cost of disposal to C&D landfills to disincentivise the excessive generation of C&D waste.

Objective 4 – To manage Construction & Demolition Waste in a more sustainable manner

Government will continue to promote fiscal and other reforms deemed necessary to work towards recycling 70% of all C&D waste by 2020.

The Austrian Twinning Study of June 2008⁶ will be used to promote the minimisation and recycling of C&D waste.

⁶ Recycling of Construction and Demolition Waste in Malta: Strategy for Short-Term implementation. Umweltbundsamt GmbH. June 2008

5.5 - Policy Objective 5 – Promoting Waste to Energy

Government is committed to increase the capacity to deal with residual waste fractions. Processing technologies for waste management have advanced. Increasingly waste is viewed as a resource and can help to further reduce reliance on fossil fuels thereby reducing the generation of greenhouse gas emissions through the production of energy from waste.

The existing MBT plant at Sant Antrnin has insufficient capacity to process all waste arisings following implementation of minimisation and recycling measures set out through Policy Objectives 1, 6 and 7. If disposal to landfill is to be minimised, further infrastructure to treat waste is required. In considering the nature and type of future infrastructure, the Waste Management Strategy prioritises recovery of energy from waste and preferred treatment options are set out in Policy Objective 8. This is in line with the waste hierarchy (minimise, reuse/recycle, recover and disposal).

Promotion of waste to energy technologies will help to meet national commitments regarding the promotion of renewable energy generation. The National Reform Programme for Malta sets a target for Malta to meet at least 10% of its energy requirements from renewable sources by 2020. The NRP recognises that a significant proportion of Malta's potential will come from waste. This is an objective that the Waste Management Strategy supports and is reflected in the choice and emphasis of technologies for managing waste.

Further detail on the preferred mix of facilities is set out through **Policy Objective 8** and is based on background research carried out in preparation for this Waste Management Strategy and the Agricultural Waste Management Plan. It is inappropriate for the Waste Management Strategy to prejudge the exact processing or energy generating capacities of new facilities until the technical specifications are drawn up. A higher target for energy from waste will be incorporated into the Waste Management Strategy following the next review.

Government will undertake any environmental studies that will be required by MEPA during the permitting procedures for new waste management facilities (as set out through **Policy Objective 8**) and ensure waste to energy requirements are embedded to project proposals. As part of this, Government will undertake studies to determine what fractions will go to existing facilities and what additional treatment capacity will be required to recover embedded energy prior to disposal.

Policy Objective 5- Promote waste to energy

The strategy will promote waste management technologies that maximise the potential for energy from waste. The favoured technologies include Mechanical & Biological Treatment (MBT) and the use of Biogas and RDF (Refuse Derived Fuel) for incineration / heat recovery.

5.6 - Policy Objective 6 - Changing Behaviour

Since 2001, a number of successful public awareness campaigns have been launched in relation to waste and waste management. Campaigns by WasteServ as well as awareness efforts from private organisations have helped to start to change attitudes towards waste. Campaigns to encourage separation of specific wastes such as batteries and waste management initiatives within schools have also been successful. It is important that further resources are targeted at communications to encourage further civic responsibility and changes in attitudes towards waste.

5.6.1 - Education

Education is an important foundation to the process as it provides a more learned workforce that can undertake the challenges required as Malta continues to upgrade its waste management infrastructure.

Targeting educational institutions is an effective long term way to ensure generational changes in attitude towards waste. It can also exert considerable influence over the attitudes and behaviour of parents and other members of society.

Resources will be specifically targeted towards improvements to the environmental components of primary, secondary and tertiary educational curricula. Specific vocational training will also be targeted. Government will continue to work with the competent authorities to review curricula and ensure that waste management learning remains prominent. Particular priority will be given to **Policy Objective 1** (Waste Minimisation) although broader awareness of the waste hierarchy and importance of recycling will continue.

Education should not be limited only to the formal type. Non-formal education, aimed at the various strata of society, outside formal learning institutions is another crucial aspect of educating society. Outreach programmes by different actors will be encouraged with a view towards securing a positive interaction with learners that should translate into a better understanding of what goals, objectives and process are all about and the importance of a participatory approach towards successful implementation.

A number of projects have already been undertaken in this respect departing from the well known character of Xummiemu to the promotion of home composting, a European Social Fund (ESF) project to improve the employability of 28 trainees who visited 50,000 households as part of the programme in order to educate citizens on waste management and another project under the EQUAL programme to conduct small scale recycling activities.

5.6.2 - Communications

Communication is equally important as it ensures that unilateral approaches are avoided and that all interested stakeholders have a real and true opportunity to participate in a process. Waste management is no exception to this and it is clear that the number of stakeholders involved is wide and varied. Government recognises the need to allay any fears as well as to rope in all those who are willing to contribute concrete and tangible proposals that enhance our waste management capabilities.

It is recognised that the Waste Management Strategy will be implemented collectively. Its implementation depends on effective communication between citizens, Government, the Waste Sector and NGOs in order to engender ownership and shared responsibilities for waste management. Particular communication priorities include:

- Obtaining information and feedback on key issues from stakeholders (such as households and businesses) during implementation of the Waste Management Strategy;
- Addressing concerns and objections and proactively involving local communities who consider themselves affected by planned new waste management facilities; and

- Developing an understanding amongst the target groups of economic realities and practical constraints of waste management, and the importance of cost recovery for waste management.

5.6.3 - Public Sector Leadership

Government will undertake a detailed review of the human resources and training needs within institutions including, Waste Managers within Joint Committees, Malta Maritime Authority, Malta International Airport, Ministry for Resources and Rural Affairs, Ministry for Gozo, Ministry for Social Policy, Enemalta Corporation, Malta Tourism Authority, Malta Resources Authority, BICC, WasteServ and Malta Environment and Planning Authority. This review will focus on their waste management responsibilities and functions.

Public sector institutions require a small nucleus of people who are entrusted with the responsibility of waste management within their organisation. The introduction of Green leaders is a step in the right direction and could represent the necessary seed to stem this initiative further. To date no progress has been made in assessing the human resource capacity and training required. Government is committed to carrying out a detailed review and assessment of the human resource and training needs of the aforementioned entities with respect to their waste management responsibilities and functions. Following such review, these institutions should take the necessary actions to comply with this initiative. Notwithstanding, a review of the human resource availability and competencies within WasteServ is also required.

5.6.4 - Preferential Public Sector Procurement Policies

In October 2006, Government published a draft Green Public Procurement Action Plan for consultation. The thrust of the plan is that in future the government will give added weight to environmental considerations when it purchases goods and services. Government is a major purchaser of public goods and services with around €90 million worth of contracts being awarded annually over the past three years and hence its influence on the environment and health of a properly-directed "green" procurement policy is considerable. A preliminary draft for General Conditions of Contract on the Environmental Performance of Public Procurement has also been drafted. These conditions place a duty on the Contractor to ensure the safeguard of the environment at all times and in every aspect related to the project.

The introduction of "green" purchasing could also bring the wider benefit of setting an example in reducing the use of natural resources and reducing pollution. It influences the market place in those areas where public purchases are particularly significant, such as computers, energy-efficient buildings, public transport, packaging, transportation of products, electricity consumption and how a product is disposed of at the end of its use.

The new "green" procurement policy will include criteria, as part of the tender bidding process, affecting not only the quality of a product or service but also minimum environmental requirements. Moreover, in establishing a "green" procurement policy, Government will lead by example and provide the impetus to industry to adopt "green" technologies.

Government is to be a prime supporter of the local market promoting waste recovery by giving preference to recycled products manufactured locally in its procurement policies. The Strategy suggests that this initiative initially attempts to focus upon:

- products and materials recovered from excavation and construction and demolition wastes, recycled oils and waste-derived compost products;
- consumables such as paper, toners and other stationery items; and
- furniture and fittings produced from recycled materials.

Government intends to publish guidelines for departments to refer to in order to ensure adherence within both the public sector and public service. Moreover Green Leaders are being given an annual budget in order to 'green' the public sector/service.

5.6.5 - Enforcement

The need for effective monitoring and enforcement will also be a central theme of the educational and communications programme. The enforcement of environmental regulations and standards has been neglected in the past, and the importance of effective enforcement has not yet been fully recognised and accepted by all sections of our society.

A focus on education and communication is a proactive way to reduce the incidence of fly-tipping and breaches of waste management regulations in the long run. Unfortunately some forms of abusive waste disposal are likely to continue. It is therefore important that resources remain dedicated to the enforcement of waste management regulations. Proactive learning and engagement in waste management will therefore be supported by firm enforcement procedures.

Laws and regulations governing waste management are not in themselves sufficient to ensure their success. To be effective, such measures must be administered and enforced, which in turn requires that adequate systems, procedures and resources be deployed to fulfil these tasks. In order to specify and quantify these requirements more precisely, Government shall be:

- carrying out a systematic assessment of the resources required for establishing and maintaining a monitoring and enforcement regime sufficient to ensure a continuing high level of compliance;
- specifying and then providing or acquiring sufficient human and technical resources based on the results of the assessment;
- developing and implementing integrated systems and procedures for monitoring, inspection and enforcement; and
- periodically reviewing the adequacy of resources, systems and procedures, and adjusting these in the light of experience and changing circumstances.

Government is conscious of the financial situation of the country and is therefore determined to ensure that:

- existing resources are being deployed in an effective and efficient manner;
- any competent resources within the public service/sector who are not being utilised to their full potential will be detailed to the Environment Protection Department (EPD) within MEPA; and
- recruitment is the last yet inevitable option.

Government will work with MEPA to ensure that the Waste Management Strategy is implemented to minimise the incidence of abusive waste disposal. For example planned increases in gate fees for municipal waste will be coordinated with MEPA's enforcement section to ensure extra resources are dedicated to manage incidences of fly-tipping. In order to ensure that adequate systems, procedures, and resources are deployed to fulfil these tasks a review of existing enforcement resources will be undertaken. Government will ensure that MEPA is properly resourced to fulfil the entrusted tasks particularly those regarding the enforcement component which is critical to ensuring adherence to permits, legislation and other provisions. Notwithstanding, Government is directing the Malta Environment and Planning Authority to prove its cost effectiveness and to put forward proposals to ensure that its current and future operations become as financially independent from Government as possible.

5.6.6 - The Need for Data

Communications and information is not a one way process. The main actors need to contribute data to central authorities with a view to enabling the assessment of the national picture, whilst central authorities need to make data available to researchers, the general public and interested parties in order to stimulate the necessary interest and to instil an independent controlling mechanism within the sector. Consequently, there is a need for a data sharing platform to be established.

Data and information on wastes and waste management activities needs to be collected, processed and analysed for a variety of reasons, including:

- to provide essential input to the planning, development, management and control of waste management facilities and services;
- to provide the necessary data and information for effective monitoring, inspection and enforcement;
- to fulfil the reporting obligations concerning waste management required by EU legislation; and
- to inform and facilitate communications with stakeholders, in particular producers and transporters of wastes, operators of waste management facilities and the general public.

The scope and quality of data and information about wastes and waste management activities have improved to some extent in recent years, but there are still some major gaps and weaknesses, notably:

- insufficient or inadequate data and information about some waste streams e.g. the quantities and types of hazardous wastes; the composition of Municipal Solid Waste;
- insufficient or inadequate data and information about some waste producers, transporters and facilities; and
- the lack of a comprehensive system and procedures for classifying, collecting, processing, analysing and disseminating data and information on wastes and waste management activities in a consistent and standardised format.

The European Commission has issued a number of decisions and clarifications relating to the collection and reporting of information on waste management.

The Malta Environment and Planning Authority is responsible for developing and managing a national waste management information system. This entails a high level of cooperation and input from the National Statistics Office (NSO), being the Competent Authority responsible for the Waste Statistics Regulation. Implementation requires the establishment of a national computerised database for data storage, processing and retrieval, supported by integrated systems and procedures for data gathering, verification and reporting. This information system should also cater for dissemination to the public of waste management information and data. MEPA shall also compile a Waste Management Register, which would provide the public with information about all permitted waste facilities and activities. This register shall be made available online on the MEPA website.

The setting up of such systems, that in any case are essentially required for reporting purposes to the European Commission, would require MEPA to dedicate more trained human resources towards this scope. To date, MEPA's main priorities in this area were on the transposition of the EU's waste management *Acquis*. Little progress has been registered on actually developing waste management data and information systems. This issue needs to be given higher priority during the lifetime of the revised strategy.

The NSO has a major role to play in advising on the methodologies that need to be employed for data collection as well as to identify the best way in which the data can be collected. The NSO also has a determining role in transmitting and making that data available to all interested parties.

5.6.7 - Research

Research is key in order to address potential solutions to intrinsic waste management problems. The Strategy recognises the importance of research with a view to providing innovative solutions to the needs of the central authorities and the private sector. It is therefore important for Government to encourage such research through a variety of instruments that would make this sector more attractive to researchers.

Government recognises the potential that waste management offers towards achieving Malta's goals and objectives in various areas – energy recovery, re-use of construction and demolition waste and land maximisation being but a few target areas.

Government intends to support research initiatives in this area. To this effect Government is considering the following initiatives:

- establishing formal working groups with local and foreign research institutions with a view to establishing a research interest in the field of waste management;
- creating a Fund which from time to time will support research initiatives in this area; and
- work towards providing fiscal incentives for those undertaking research in waste management.

Objective 6 – Changing Behaviour

Education and communication will be key to the long term implementation of the Waste Management Strategy and changing social attitudes and behaviour. Education and communication will be prioritised to ensure a sense of collective responsibility for sustainable waste management. Government Ministries, Local Councils and other public sector bodies will be expected to demonstrate leadership in their own waste management practices and internal policies in line with this strategy.

Government will also promote waste management related research (such as the management of C&D waste, energy recovery and land maximisation).

Enforcement will continue to ensure changing behaviours, where necessary.

5.7 - Policy Objective 7 – More Recycling and Separation of Biodegradable Waste

5.7.1 - Municipal Solid Waste (MSW)

The yearly average increase since 2001 for this stream amounted to around 2.4% per annum (NSO, 2008). Efforts to minimise waste going to landfill must continue to be implemented to counter balance efforts to increase the qualitative growth of the national economy. By default this increase in economic activity entails greater flow of goods. The increase in single households, the change in consumer's consumption habits to packaged products as well as the wider range of disposable products continue to push the generation of Municipal Solid Waste up. The availability of more electronic equipment per household basis has also resulted in more specialised waste fractions being produced. The growing success towards the separate collection and recovery of recyclables must continue to be re-enforced. This underlines the importance of measures being taken so far. These measures also form an important condition for the success of waste prevention and hence must be further intensified. One aspect must always be borne in mind, waste prevention and recovery measures are not boundless. Measures require significant funding and must be affordable, comprehensive, viable and attractive for the consumer to participate.

Since 2003, the total volume of separated waste collected from Bring in Sites has risen from 157.88 tonnes to 2255.24 in 2006 (NSO, 2008). Notwithstanding, taking 2006 figures only, the amount of waste collected from Bring in Sites amounted to 1.35% of total municipal solid. During its initial period the Recycle Tuesdays' Initiative has managed to collect 140 tonnes per week of separated waste which if projected over a 52-week period would increase separated waste by 7280 tonnes. Hence this system together with that for bring in-sites might yield 5.71% of all total Municipal Solid Waste arisings assuming there is no migration from those who used bring in sites to the kerb side system. The quantity of recyclable waste collected via the Recycle Tuesdays initiative from 5th May 2008 until December 2008 was 4,248 tonnes. The maximum collected per week was 140.98 tonnes which translates to 0.35 kgs per week per capita based on a population of 407,810 inhabitants. This means that efforts are still required to ensure desired penetration levels of separation.

The Ghallis engineered landfill has a total capacity of 1.7 million cubic metres. On the basis of total waste arisings going to landfills in 2006 which amounted to 247,256 tonnes, a further 278,501 tonnes in 2007 and 283,960 tonnes in 2008 and taking into account the annual 71,000 tonnes capacity at Sant' Antnin including the potential recovery of 36,000 tonnes of separated waste, the total amount of waste which would go to landfill would render its lifespan very short. It is clear that annual landfill volumes are still on the rise!

The size of Malta is one of its main limitations and hence the choice of new landfill sites is not an easy task. Hence the current scenario is questionable in terms of sustainability.

Industry too is an important player in the success of household waste prevention. The need to minimise use of materials and energy during production, the use of low-waste products and packaging design, the introduction of incentive-based and education-based initiatives for the recovery of packaging and products as well as the marketing of ecologically preferable products should continue to be prioritised. Substituting the type of materials that are put in circulation, more so if the hazardous content of such material is high, is also a step in the right direction. Anything short of this, Government will explore ways to penalise the non-conformers as the Eco-Contribution Act highlights.

Further potential for separate collection and subsequent recovery of up to 36,000 tonnes of recyclables and 35,000 tonnes of clean organic fraction exists. The recyclable fraction is actually expected to increase further through the participation of private schemes. One must keep in mind that there exists a threshold when greater tonnages of both the recyclable and the clean organic fraction are no longer environmentally or economically feasible to recover. This happens due to the increased effort needed to recover smaller fractions of material.

The residual waste (approximately 150,000 tonnes) must be treated to reduce waste going to landfill. Mechanical biological treatment processes separate the high calorific waste from the organic matter,

inerts and metals with the ensuing fraction requiring landfilling being drastically reduced. The high calorific fraction may be used for energy recovery whilst the organic fraction may be stabilised for use as landfill cover by means of a digester from which energy may also be recovered. One needs to highlight potential implications namely, that if an authorised Refuse Derived Fuel (RDF) incineration facility is not provided in the same time as the RDF is being produced the RDF may have to be “stored” in a landfill. Although this material could potentially be mined in the future for use as RDF, in the short term Malta would still be faced with potential infringement proceedings due to failure to meet Malta’s obligations with respect to the landfill directive targets.

The hazardous household waste must start to be extracted from the residual waste. This is being encouraged through the development of Civic Amenity Sites. The Maghtab, Hal-Far, Mriehel, Luqa and Tal-Kus Civic Amenity Sites are open for use from Monday to Sunday, 7.30am to 5.30 pm including weekends and public holidays. Bulky and other wastes which can be taken to a Civic Amenity site and deposited separately include:

- Paper, cardboard, glass, metal, plastic;
- Furniture, mattresses, carpets, tiles and other white goods such as fridges, cookers and microwaves;
- Garden waste;
- Edible oil and lubricant oils;
- Batteries, solvents, neon tubes, expired medicines, used syringes, chemicals, paint and other hazardous domestic waste;
- Computers, monitors, mobile phones, printers, toys, transmitters, electronic tools;
- Small quantities of household construction waste; and
- Tyres.

5.7.2 - Management of Bring in sites

Government, in association with the local councils, intends to achieve 400 ‘bring-in sites’ to facilitate public participation in the collection of clean, source-segregated recyclable materials. Such centres are conveniently located in or near to areas easily accessible to the public that could include car parks, supermarkets, recreation areas, etc, and equipped with labelled and colour-coded containers for receiving and temporarily storing different recyclable materials. To facilitate the acceptance of these facilities, bring-in sites shall be located at a frequency of one site per 300 households and should be maintained in good working order.

Bring-in sites have already been introduced in some localities. As a start, Government allocated €3,494 to each local council that participates in the scheme. Localities which have a ‘no bins policy’ had the funds withdrawn.

Local Councils are also encouraged to locate one site for every 300 households. In the meantime, when sites were identified, WasteServ Malta Ltd assisted in the acquisition of all the necessary permits to install the bring-in sites, the capital expenditure of which has been co-funded through Structural Funds secured precisely for this reason. The recurrent expenditure for the daily operation of these sites was covered by WasteServ and for the future it is foreseen to be met as follows.

WasteServ Malta Limited has concluded an EU co-funded project which provided funding for 300 bring-in sites within localities and 200 other sites within schools. It is important that these bins continue to be used and those local councils, who are responsible for waste collection, could form a partnership with Government in order to further contribute towards separating waste at source.

Bring-in sites combined with a separate kerbside collection system of packaging waste financed through producer subscriptions to licensed schemes should provide the country with the necessary infrastructure to ensure that a producer complies with the relevant regulations. This would ensure that all major stakeholders would become involved in this process leading to a better utilisation of Government resources and the fostering of a strategic partnership between local and central government.

Until such an arrangement is in place, Government is willing to continue to provide and maintain all the bring-in sites designated for each locality at €3,494 per locality. These funds will be allocated by the Department of Local Councils. Alternatively, a Local Council may opt to be provided with all the required bins and with the €3,494 per annum to organise the maintenance of the bins in the respective locality on its own steam. Which ever arrangement will be adopted, the standard frequency of 1 bring-in site for every 300 homes shall be adhered to.

5.7.3 - Source Segregation and Separate Collection of Recyclables from MSW

Government intends to consult respective stakeholders on the possibility of legislating in favour of source segregated and the separate collection of all domestic, commercial and industrial waste. The reasons for this are threefold. Firstly, source segregation and separate collection of organic waste may be used as feedstock for the upgraded facility at Sant’ Antnin (once this is commissioned). Secondly, the source segregated and separate collection of packaging waste contributes towards meeting Malta’s waste management targets. Thirdly, every effort must be made to ensure that commercial and industrial outlets have a contract in place for the collection of solid waste. Such a practice should also help to focus the attention of waste producers on the amount and value of their waste and stimulate waste avoidance.

Furthermore, Government intends to continue consulting closely with local councils and all interested stakeholders on the manner in which source segregation and separate collection of waste may continue to be extended. Initiatives already in place are the bring-in-sites that are available in almost every locality and which offer the possibility for the public to separate their recyclables and the Recycle Tuesdays’ Initiative which offers a weekly kerbside collection of dry recyclables – paper, plastic and metal. Following agreements with the localities, the separation may be strengthened by the further kerb side collection of the separated waste. In the event of non compliance, Government intends to introduce the necessary legal mandates to ensure compliance even through its own direct intervention.

What is certain is that both businesses and citizens have to rise to the occasion and work in tandem with Government in order to solve a potentially national problem. Statistics from the first four weeks of the Recycle Tuesdays Initiative provided by WasteServ show that the peak amount that was collected was 144,660kg which when divided by the national population produces a per capita contribution to the separated fraction of 0.35kg per person per week.

When one considers the Domestic Waste Composition Survey data (NSO, 2002) it emerges that on the parallels drawn from that exercise one would expect, on average, to have the generation of plastic, paper and metal to amount to around 1.26kg per person per week. Hence the Recycle Tuesdays initiative has so far only managed to contribute around 27.27% of what is perceived to be the statistical potential. This needs to improve and not at the expense of the waste that is deposited in bring in sites.

With respect to bring in sites, statistics for the period 2003-2008 are reproduced in Table 1 hereunder.

Table 1 – Waste Deposited at Bring in Sites 2003-2008 (tonnes)

	Material	2003	2004	2005	2006	2007	2008
Bring in sites	Paper	82.64	476.41	892.04	1084.76	1344.95	1793.37
	Plastic	25.76	163.95	266.14	352.39	537.42	769.84
	Cans	15.76	81.20	135.48	165.34	218.73	256.38
	Glass	33.72	241.02	494.77	632.75	897.39	1287.28

It is evident that if one were to compare the amount of paper, plastic and cans collected via bring-in sites in 2007 (2101.1 tonnes) and compare it to a straight line annual projection based on the maximum amount of waste achieved during the first four weeks of the Recycle Tuesday initiative (6026.8 tonnes), it appears that this latest initiative has the potential to increase the amount of

separated waste that is collected separately. Figures for 2008 show an increase in the amount of waste deposited at bring-in sites, a fact which so far complements other separation initiatives.

Notwithstanding, it is imperative that separation rates are increased in order to meet the targets that are set within the suite of environmental directives as well as to recover as much as possible of the embedded resources within these fractions.

5.7.4 - Private Sector Facilities for the Recycling of Waste

Many private sector companies are already involved in the processing of specific waste streams such as waste oils. The Solid Waste Management Strategy promotes further private sector involvement in the provision and management of facilities for recycling, such as ELV processing. This is particularly important given that **Policy Objective 2** seeks to diversify the number of waste streams that will be treated in Malta. The Business Promotions Act has now been amended to provide fiscal incentives for the establishment of recycling facilities. Notwithstanding this, the long term economic sustainability of recycling facilities will be influenced by other regulatory and cost factors. The scale of the market for recycled materials in Malta is also limited, necessitating exportation in most cases. Government is committed to reviewing opportunities and threats to further private sector investment in new waste treatment facilities.

5.7.5 - Export of Recycled Products / Recyclable Materials

The success, sustainability and profitability of waste treatment facilities attempting to recover resources, necessitates the opportunity for the exporting of recyclable products and materials. Given the scale of the local market, recyclables would have to be exported. The current rates charged by port service providers do not help the export potential of such products. Partial exemptions of port charges in the case of recyclables are needed to supplement the mission and the results obtained through the implementation of the aforementioned initiative.

5.7.6 - Collection Systems – The *Modus Operandi*

There are various strong arguments in favour of reorganising MSW collection service provision into fewer yet larger regions. As a result, Government intends to pursue further the need for waste collection to be regionalised. One must emphasise that the more waste prevention and recovery initiatives take off, the less residual waste remains and the greater the number of separate collections to be carried out. To overcome the existing diseconomies of scale, it is essential that the concept of regionalisation be taken into account in MSW collection processes as well as in other waste collection contracts. Government will support this activity through the setting up of the necessary legislative and administrative framework within which regions for the collection of waste will function. In addition Government is also committed to deploying personnel from within its own resources to act as full time waste manager/s within each region. All these initiatives shall be carried out in collaboration with Local Councils through the Local Councils Association.

The introduction of new systems for the source segregation and separate collection of recyclable materials from MSW will provide an opportunity to optimise collection frequencies and reduce vehicle idle times so that, for example, wet organic waste may be rationalised to be collected four times per week, while essentially dry materials are collected periodically. Rationalisation of collection frequencies in this way has the potential to improve the productivity and reduce the costs of collection services substantially. Government is also committed to explore further the possibility of adopting additional practices and audits that aim at responsabilising individuals towards better waste management behaviours. This will be explored further through separate consultation papers outlining the possible waste collection options available.

This and other measures relating to the collection of MSW mean that the draft contract for the provision of MSW collection services, prepared in mid-2002 for the Department of Local Councils and

presented to local councils in January 2003, have been updated and adopted by Local Councils in the light of the reform in the Local Councils system.

Government will explore the adoption of financial incentives that are best suited for both households and local councils and that encourage them to adopt more environmentally acceptable waste management. In the case of local councils Government has introduced a fee for waste on a *per tonne* basis and has provided incentives for the deposit of properly separated dry recyclables at the Sant' Antrnin plant. This would not only ensure increased waste separation and composting initiatives at local level but also instigate the local council to monitor the contractor to ensure that household waste is not contaminated *en route* to the waste facility. Government will remain responsible to educate on a national level and to provide the entire necessary infrastructure to support these initiatives.

5.7.7 - Waste Collection Practices

Government plans to introduce a guidance document for MSW service providers. Waste collection is governed by environmental regulations, as well as regulations and standards related to public health, occupational health and safety, vehicle regulations, local council by-laws, police laws and possibly others. This guidance document will set out the necessary criteria that service providers must aim for. In line with this requirement, local councils will need to introduce a standard procedure for pre-qualifying potential bidders for MSW collection contracts against the requirements stipulated in this guidance document. This will be a further step towards implementing, successfully and in a sustainable manner, new waste management principles in the Maltese Islands.

Government may explore the possibility of assisting the upgrading of all waste collection practices to conform to ISO accreditation. Government will also consider favouring the use of appropriately sized Refuse Collection Vehicles (RCV) with a view to improving congestion that is currently created as well as to improve accessibility within village cores and other narrow streets.

5.7.8 - Agricultural and Animal Husbandry Waste

The Ministry for Resources and Rural Affairs had awarded a consultancy services contract related to the compilation of an Agricultural Waste Management Plan for the Maltese Islands. This Plan has been submitted to Government.

The plan proposes to set up agricultural waste treatment plants to treat cattle, poultry and rabbit manure with the consequent biogas co-generation power and soil improvers production. This provides a treatment alternative whilst recovering embedded energy and providing an alternative to imported fertilizer. The possibility of treating other (non-manure) agricultural waste (fallen stock, slaughterhouse waste, fish waste and other waste from industry) estimated at 7000 tonnes per annum is also considered in the draft plan.

The Agricultural Waste Management Plan has sought to identify a solution that is tailored to Malta's unique requirements and which entails least costs and minimal space requirements taking into account the social, economic and environmental realities of, and objectives for, the Maltese Islands.

The recommended option for the treatment of manures and agricultural slurries in the Maltese Islands involves:

- the construction of a centralized manure treatment plant in Gozo to treat all the manures generated in Gozo, to be combined with WasteServ's Mechanical Biological Treatment (MBT) plant for the organic fraction resulting from the MSW which is to be received at the Waste Transfer Station.
- the construction of a regional manure treatment plant in the north of Malta to treat the manures generated in the north of Malta, to be combined with WasteServ's MBT plant for MSW in Malta North. A site for these treatment plants is to be identified by WasteServ. This plant will initially treat approximately 30% of all the manure and slurry generated in Malta.

- the construction of a regional manure treatment plant as close to the centre of gravity of the residual farms to treat the manures and slurries generated in the north-west, central and south of Malta. This plant will treat approximately 25 - 35% of all the manure and slurry generated in Malta.

The plan recommends that the treatment plants be of modular construction so that plant capacity may be increased if required.

The recommended solution of the Plan is intended to give the following advantages:

- provide a staged approach to mitigate against the inherent uncertainties associated with the animal husbandry sector;
- seek to combine treatment facilities for MSW, sludge and manure within a limited number of sites for enhanced operational flexibility and economies of scale;
- provide a future solution for the treatment of all agricultural manures and slurries, including pig slurry, and thereby achieve a considerable reduction on the loading of the new sewage treatment plants;
- removal of approximately 50% of the nitrogen in manure, which today is causing pollution of the groundwater;
- produce a high-quality fertilizer product, which is stable and easy to use, and may even reduce the import of commercial inorganic fertilizer;
- provide a means of controlling the distribution and application of fertilizer and the recording of fertilization rates;
- produce a significant amount of electricity from a renewable source (approximately 33,000 MWh per year if one also takes the biogas production from the MBT plants into account);
- reduce the amount of greenhouse gas emissions currently being released from the manure heaps and the improper management of manure.

This Strategy also takes into account the commissioning of three new sewage treatment plants. All efforts should be made to synergise the treatment of similar waste streams in Malta and to avoid the duplication of facilities, at the expense of greenfield sites. This would also in turn provide increased economies of scale both for the treatment aspect as well as for the generation of electricity.

It is Government's intention to issue the Agricultural Waste Management Plan for consultation in respect of how to best develop our strategy for the treatment of this waste stream which whilst consolidating facilities within established boundaries provides also for different lines to treat the different waste streams to enhance the re-use potential of the ensuing product.

5.7.9 - Biodegradable Waste

There is also further scope to diversify the range of materials that are separated for recycling or recovery of energy from waste. Typically household waste consists of around 60% food waste and a number of sectors such as the tourism, health (hospital food waste) and agriculture produce significant quantities of organic waste. Government is committed to exploring the potential for the comprehensive collection of commercial and household organic waste, including biodegradable waste and waste oils. Significant progress towards this will be made in 2010 when the Sant' Antnin Waste Treatment Plant is expected to be commissioned to accept 35,000 tonnes of biodegradable material. Establishing a national collection and treatment regime for food and other organic waste has the dual benefits of:

- Further diverting waste from landfill and associated emissions of methane; and
- Capturing value from waste (potential for biogas and electricity generation from anaerobic digestion).

Composting is another means to reduce the total fraction of organic waste that is disposed to landfill. WasteServ Malta Ltd currently promotes the practice of home composting and offers subsidised compost bins. This practice can help to further divert waste to landfill.

The priorities for recycling and separation of waste are therefore:

- Increase public and business participation in recycling via the use of bring-in sites and kerbside 'Recycle Tuesdays' scheme; and
- To investigate the potential to collect household and commercial organic waste.

Objective 7 – More Recycling and Separation of Biodegradable Waste

To continue to work towards improvements in the proportion of residual household and commercial waste that is separated for recycling. In the period up to 2015, recycling targets established through the Packaging Directive will be aimed for, working towards a 2020 target of 50%. Priorities to encourage recycling include:

- **Continued education and raising of public awareness to increase recycling participation rates;**
- **Continue to increase the number of bring-in sites;**
- **Roll out of responsibility for the management of bring-in sites to the private sector via Local Council procurement;**
- **A review of current collection regulations to determine how collection regimes can place further bias towards the collection of pre-separated waste over mixed waste; and**
- **Promote further private sector involvement in the recycling sector.**

Further work will be undertaken into the feasibility of increasing levels of composting and separating biodegradable waste from household and commercial waste for energy recovery at proposed Composting / MBT plants.

5.8 - Policy Objective 8 - Facilities for the Management of Solid Waste

From the previous discussion it is clear that Malta requires more facilities in order to be in a position to fully treat its solid waste arisings. The treatment capacity available was designed to achieve the 2010 target of the Landfill Directive obliging the reduction of organic waste which is directed for landfilling. This treatment capacity is insufficient to meet the targets of 2013 and 2015 and the behavioural pattern that prevails today will also limit the life span of the current engineered landfill forcing the selection of another site for landfilling purposes. Waste which can be diverted to treatment facilities can be treated and resources recovered from it. If such waste is allowed simply to be disposed of at our landfill, this will represent the taking up of unnecessary space from an already finite volume and a rate of consumption of volume which will exhaust the available space in a shorter timeframe. Selecting a new landfill site is indeed an arduous task particularly in the light of Malta's size and density of urban development and we should therefore alter our behaviours with a view towards maximising the amount of landfill space currently available. At the same time, Malta also has an obligation to achieve agreed recovery and recycling targets.

Landfilling of untreated waste remains the least preferred option. Land use constraints in Malta makes this option a far less desirable technique. A policy for diverting waste from landfills can only succeed if the waste management system is able to receive and manage the diverted waste flows. In particular, the 'maturity' of the system will determine the capacity to deal with waste. This capacity depends on the existence of separate collection schemes and recovery capacity to deal with separated and mixed wastes.

The Ghallis engineered (non-hazardous) landfill has a total capacity of 1.7 million cubic metres. The Engineered Landfill of Ta' Zwejra contained the waste landfilled from May 2004 to end of 2006. Waste arisings going to landfills in 2006 amounted to 247,256 tonnes, in 2007 to 278,501 tonnes and 283,930 tonnes in 2008. Taking into account the annual 71,000 tonnes⁷ capacity at the Sant' Antnin Waste Treatment Plant, including the potential recovery 36,000 tonnes of separated waste, the total amount of waste which would go to landfill would render its lifespan very short (estimated to be approximately 7 years).

The Waste Management Strategy responds to this scenario by placing further priority on waste minimisation and waste separation at source by businesses and households. The Waste Management Strategy sets an ambitious target to reduce the rate of growth of waste. However, even combined with Malta's significantly increased capacity to manage and recycle separated municipal waste (primarily through the upgraded Sant' Antnin Plant), waste minimisation and recycling alone will not prove sufficient to manage all of Malta's municipal solid wastes.

It is therefore recognised that further capacity to manage, separate and process unsorted waste is needed to reduce significant fractions from being deposited at landfill.

As a result and during the coming years, Government intends to develop new specialised facilities for the residual waste fraction based on the best available technologies option. Government will commission work to ensure that Malta moves towards meeting its targets for Renewable Energy Sources (RES) from the treatment of solid waste. As a consequence, material flow and cost benefit analyses will be undertaken to determine what fractions will be going to the planned facilities and what additional treatment technologies will be required to recover this embedded energy prior to disposal.

5.8.1 - Preferred Technology

During the period of the revised Waste Management Strategy (2010-2015), the Government intends to increase the nation's capacity to manage residual fractions of municipal solid waste. This will be achieved through a combination of additional MBT plants and increased incineration capacity.

⁷ 35,000 tonnes of biodegradable waste and a material recovery facility to treat 36,000 tonnes of recyclable material.

5.8.2 - Sant Antnin Solid Waste Treatment Plant

In December 2004, the Cohesion Funds application, submitted by WasteServ Malta Ltd to upgrade the Sant' Antnin facility was approved by the Commission to the total amount of EUR 16,747,500 of which EUR 11,723,250 represents the Cohesion Fund EU contribution. All the necessary permits have been secured and the first phase of the plant, destined to manage the collection of dry recyclables, has been brought into operation. Work is ongoing to finalise the subsequent phases of the plant.

The facility will be equipped with a digestion / composting facility to treat 35,000 tonnes of biodegradable material and a material recovery facility to treat 36,000 tonnes of recyclable material. Tonnages indicated are on a per annum basis. Other forms of composting, on a localised scale (such as homes and farms) will also be promoted further wherever possible. In order to further ensure the quality of the input to Sant' Antnin and any other digesters, Government should legislate in favour of separate collection and disposal of all catering waste to this facility (hotels, restaurants, hospitals etc.).

Part of this upgrading involved Government developing a Materials Recovery Facility (MRF) for the recovery of recyclable materials such as plastics, glass, paper, metals and wood. This facility will be able to receive clean, source segregated recyclable materials directly from the waste collectors, bring-in sites and other sources. Most materials treated will be sold for export for recycling and recovery. The MRF will be a facility that will be able to accept materials collected by schemes and which will be subsequently certified as having been recycled by WasteServ.

The 71,000 tonnes of input to the Sant' Antnin facility are initially planned to pass through a Mechanical Treatment Plant (MTP) to recover the metals, inerts, organics as well as the high calorific fraction (plastics, cardboard, etc). The cleaner the fractions become through increased public separation, the less the material that will pass through the MTP.

5.8.3 - Proposed Facilities

Two potential, yet diametrically opposed scenarios would revolve around the further consolidation of digestion as the preferred method of treatment or the move towards incineration as a means for securing volume reduction with both methods allowing for the recovery of energy from waste. The choice will have to be based on a number of criteria not least the following:

- availability of sites for landfilling;
- availability of sites for the setting up of other waste management facilities;
- population contribution towards effective separation of waste at source;
- meeting the agreed targets;
- energy recovery efficiency;
- environmental considerations.

Government shall endeavour to consolidate as much as possible the waste streams generated with a view to minimising the amount of different waste treatment plants required.

The preferred option which is a combination of further MBT capacity and incineration technology (both incorporating waste to energy technology) has been reached following a sectoral review of projected waste streams and available technologies. A report - *Assessing the Feasibility of Waste to Energy Technologies in Malta* was prepared by the then Ministry for Rural Affairs and the Environment in May 2006. It took stock of existing municipal, commercial and agricultural waste streams and considered possible treatment options that would allow for recovery of energy from waste. As part of its terms of reference, environmental and commercial considerations were incorporated. The study concluded that further digestion capacity will be required to process biodegradable waste. To benefit from economies of scale the report recommends the co-treatment of municipal bio-waste with other fractions including sewage sludge and agricultural manure. This recommendation has since been

supported through the Agricultural Waste Management Plan⁸. In addition to the existing Sant' Antnin Plant a second plant is envisaged for Malta and digestion capacity on Gozo will also be required, to reduce the amount of bio-waste being transported for processing or disposal in Malta (in line with the Proximity Principle).

Although further MBT capacity will assist in separating waste (mainly for refuse derived fuel) and energy recovery from bio-waste, other measures are likely to be required to reduce the remaining volumes of mixed waste that will otherwise be presented for final disposal at landfill.

In this context, the Twinning Project between Malta and Austria (report entitled "Waste to Energy in Malta – Scenarios for Implementation") recommended that incineration would be the preferred technology to complement the new digestion plants. The Environment Report carried out as part of the SEA process supports this technology.

The incineration facility would be in a position to:

1. reduce the amount of waste going to landfill thereby prolonging the lifespan of this facility and postponing the need for new landfill space for some time;
2. permit the recovery of energy from refuse derived fuel which, although currently being produced, cannot be fully utilised. This is particularly significant in the light of current oil prices as well as Malta's commitment to reduce its dependency on the use of fossil fuels;
3. recover energy from the mixed waste fraction which, when disposed to landfill, is, in the main, mostly forfeited; and
4. contribute towards our energy recovery targets.

In procuring the new digestion and incineration facilities, key factors will include:

- A mix of technologies that will minimise waste to landfill;
- Capacity to manage agricultural manure and sewage slurries;
- Provision of spare capacity to account for potential growth in the treatment of agricultural and non 'municipal' commercial waste;
- Consolidation of waste streams – to minimise the amount of waste treatment plants required; and
- Provide maximum economic benefit from the use of public funds, particularly where this involves management / contract agreements with the private sector.

Initial estimations of residual treatment capacity were made in 2006⁹. These will be reviewed through the procurement process for new treatment plants to ensure investment meets current and projected demands.

Each new treatment facility will require permitting through MEPA; any environmental studies required by MEPA will be carried out during this process.

The procurement of each new treatment facility will ensure that the best available technology and potential negative impacts are mitigated. Government will be engaging technical experts in the field to ensure that this objective is met. Potential negative impacts will also be addressed during the MEPA process. Government will work with environmental organisations and residents who live in the vicinity of existing and planned facilities to reduce the potential for inconvenience and increase community benefits.

For some facilities, Government has identified a preferred site and most of these sites are being assessed within a matrix of alternatives as part of the planning process which has already started for most of the treatment facilities. In light of this, Table 2 below sets out the mix of new treatment facilities considered necessary to deliver **Policy Objective 8**.

⁸ Agricultural Waste Management Plan for the Maltese Islands Management, Sustech Consulting, June 2008.

⁹ *The Feasibility of Waste to Energy Technologies in Malta, Ministry for Rural Affairs and the Environment, May 2006*

Table 2: List of existing and planned waste treatment facilities

Facility	Description Nature of waste to be treated	Preferred site recommended for further studies
Gozo Waste Transfer Station, Tal-Kus	<p>Municipal and other Solid Waste. A full development planning process for the permanent waste transfer-loading facility at Tal-Kus has been completed. Notwithstanding, Gozo will also benefit from a facility that will treat both animal waste as well as municipal solid waste. This facility will enable the recovery of energy embedded in such waste thereby contributing to Gozo's Renewable Energy Sources amounts.</p> <p>The design of the new transfer station mainly comprises an enclosed and controlled facility for the reception, sorting, processing, interim storage and transfer of waste originating from Gozo and Comino. Similar to activities in Malta, the dry waste fractions shall be manually sorted and bailed to improve efficiency in transportation for further treatment or export.</p>	N/A – Committed facility. Planning consent secured.
Sant Antnin MBT, Marsascala	<p>Municipal Solid Waste (MSW) and source separated Solid Waste (Dry Recyclables). To separate 35,000 tonnes of municipal biodegradable waste and animal husbandry waste from (central / southern parts of Malta) and a material recovery facility to treat 36,000 tonnes of recyclable material. The facility is intended to produce energy from organic waste via biogas and produce RDF for incineration. This facility should be fully operational in 2010.</p>	N/A - Existing facility.
Second MBT Facility, Malta	<p>Municipal and other non-Hazardous, non-Inert Solid Waste currently being received to be deposited at the Ghallis Landfill together with waste resulting from Animal Husbandry.</p> <ul style="list-style-type: none"> • Organic waste from mixed MSW ; • Organic separated household and commercial waste, once collection regime is established; • Organic waste not treated at Sant' Antnin Waste Treatment Plant; • Animal husbandry waste (from north of Malta); • Sewage sludge from north Malta sewage treatment plant; • To treat approximately 30% of manure and slurry generated in Malta; • Separation of metal and aluminium from MSW; • Production of Refuse Derived Fuel; • Treatment of Bulky Refuse currently directed for landfilling. 	<p>Ghallis, Malta.</p> <p>Due to potential synergy with existing waste management functions at Ghallis.</p>
Third small scale MBT facility, Gozo	<p>Organic Waste fraction resulting from MSW and Animal Husbandry</p> <ul style="list-style-type: none"> • Organic waste from mixed MSW, remaining MSW to be transported to Malta for treatment; • Organic separated household and commercial waste, once collection regime is established; • Animal husbandry waste (from Gozo); • Sewage sludge from north Gozo sewage treatment plant. 	<p>A site selection exercise has been carried out to determine the most suitable site for this plant. This exercise recommends the Tal-Kus site although this will now need the necessary MEPA approval. Government is in favour of the Tal-Kus site.</p>

Fourth digestion facility, Malta	<p>Manure</p> <p>There is a provisional identified need for a fourth digestion facility to process animal husbandry waste from farms concentrated in the south of Malta. Further analysis will be prepared before commissioning of this facility. To treat approximately 30% of manure and slurry generated in Malta.</p>	Siggiewi, Malta
Incineration facility (incorporating energy recovery from waste)	<p>Refuse Derived Fuel (RDF) and Waste fractions which cannot undergo other treatment process.</p> <p>Refuse Derived Fuel (RDF) from MBT facilities and rejects from the sorting of dry recyclables at the Sant' Antnin MRF and Waste Transfer Station at Gozo. Other waste fractions which must undergo thermal treatment and covered by the operations permit.</p>	<p>Whilst taking cognisance of the recommendations of the report "Waste to Energy in Malta – Scenarios for Implementation" which recommends that technically the site at Delimara offers opportunities that need to be explored further, a site selection exercise will be carried out to determine the most suitable site for the incineration plant.</p>

Objective 8 – Reduce reliance on landfilling: Implementing preferred technologies to deal with residual waste streams

The Waste Management Strategy will continue to promote measures that reduce reliance on and take-up of limited landfill space, in line with the waste hierarchy. Following waste minimisation efforts and recycling of some waste fractions, the Waste Management Strategy will promote the management of residual waste streams through a combination of the following technologies:

- (i) Mechanical Biological Treatment (MBT); and**
- (ii) Incineration.**

In procuring such technology, Government will ensure regard is given to Best Available Technologies as set out in relevant EU guidelines.

5.9 - Policy Objective 9 - Cost Efficient and High Quality Waste Services

The experience of the pegging of charges for disposal at authorised construction and demolition landfills with the charges being incurred by Government was introduced over a three year period and today mirrors the principle of full cost recovery. These charges are thought to have been well absorbed by the construction industry as the amount of landfilled C&D waste kept rising year after year.

Government should ultimately aim towards ensuring full cost recovery of all its existing and new waste management facilities without causing any significant social or economic disturbances. WasteServ Malta Limited was created with the main objective of providing waste management facilities and services as a last resort operator. It is hence Government's aim for WasteServ to farm out as many of these facilities and services as possible and to ensure that their building and operation comes at zero cost to Government. Waste management operations all over Europe are generally carried out by private entities whose business depends on the manner in which they operate. As these European Operators usually manage to derive profit and sustainability from such facilities there is no reason to believe that the case in Malta should be any different.

In our small market there shall be activities with limited room for competition and rates may be inflated. WasteServ has been resorting to contracting the service by tendering process while retaining the management of the waste management activity to be in a position to ensure public use by all permitted users and also have controlled charge for the public service provided. WasteServ should be used to safeguard the interests of the public such that any very expensive service continues to be provided by WasteServ particularly if this can be provided at a cheaper cost. However, the financial regulations for the sector should ideally set parameters which delimit fees, in proportion to the characterisation of the associated costs, which any private operator would be allowed to charge.

Waste management facility financing should ultimately be derived from the fees that are charged for the disposal of waste to be managed by the same facility. Most of the waste arriving at facilities results either from municipal solid waste, collected by Local Councils, from individual households or directly from individual (or a group of) producers.

It must be borne in mind that EU co-financing mechanisms¹⁰ require the recovery of costs on behalf of beneficiaries to occur in a manner which ensures that subsidies may be eliminated.

To this effect it is proposed that all gate fees of Government owned facilities be revised to reflect the true cost of managing that waste. This will also require adjustments of the financing that is currently made to WasteServ and Local Councils for the management of waste. Moreover, such a scenario would pave the way for the divestment of the management of such facilities by Government thereby leading to a more competitive market in the waste management sector.

5.9.1 - Waste Collection - MSW

MSW collection services have been assigned to Local Councils. However their operations in respect of the collection of MSW have largely been an individualistic effort with only a limited number of the smaller Councils teaming up to provide a more cost-effective service. It is evident that greater economies of scale can be achieved by regionalising the collection of MSW.

For the purposes of certain services, Local Councils have been grouped into six regions. The selection of the proposed regions was based on the groupings of Local Councils in respect of the devolution for the maintenance and provision of street lighting.

¹⁰ Co-financing mechanisms involve partial financing by the EU and part by the beneficiary of projects accepted for this kind of financing. However, such financing is usually characterized by conditions such as those requiring the beneficiary to ensure full cost recovery of capital and recurrent expenditure.

It is felt that this degree of regionalisation has the potential to enable a more rationalised and cost effective collection of MSW to be achieved. However, in order to further promote the role of Local Councils, Government, in consultation with the Local Councils Association, will be conducting feasibility studies to determine whether it would make economic sense to make use of the regionalised concept.

Government in collaboration with the Local Councils Association should seek to reform the way in which municipal waste is collected. The efforts made by WasteServ in drawing up a waste collection draft contract need to be brought to fruition not least through the necessary consultations with interested stakeholders. Local Councils have also been advised to issue yearly MSW collection service contracts so as to facilitate the introduction of the new contract format, once an agreement is reached. The revised conditions are to apply once a new waste collection setup is launched. Therefore, while the new contract has been drafted, it is not yet being adopted by Local Councils.

Any waste collection system introduced will give cognisance to the autonomy and jurisdiction assigned to Local Councils. In this context, Government will continue to promote the concept of bring-in sites within their localities. The frequency of these bins should conform to the national average, that is, one bring-in site for every 300 homes. In any proposed setup, all entities involved must work closely together to ensure a joint effort and an efficient outcome in this respect as well as to determine whether the standardisation of such sites should be pursued for better identity management. Notwithstanding, it is of utmost importance that the source segregation and separate collection of MSW be raised both through bring in sites as well as through the weekly separate kerbside collection of dry recyclables in order to contribute towards Malta's obligations in terms of packaging waste and European re-use and recycling targets (a minimum of overall 50% by weight by 2020).

Government and Local Councils need to work together with a view towards securing the process by which bring in sites will be eventually devolved to Local Councils within the context of a reform in the financial allocations in respect of waste management.

For similar reasons, it will be important that the supervision and control of MSW collection service providers is strengthened and undertaken on a more professional basis in future.

Government intends to provide regions with a person to act as a waste manager with a view to supervise and control service providers effectively thereby providing a focus on waste management in all regions. Government commits itself to train the waste manager in overseeing adequate systems / procedures for enhanced service quality and reliability. The waste manager may need a sufficient resource in order to perform effectively but this depends on the region in question.

Local Councils are currently entrusted with the collection and disposal of municipal solid waste from households. Under the current system Local Councils pay a contractor to collect and dispose of the municipal solid waste generated by households. Government is of the firm belief that Local Councils play an important part in achieving the necessary separation at source with a view to contributing towards recycling targets for packaging waste as well as for producing a 'cleaner' input to the digestion plants proposed. Government also believes that Local Councils should play an active role in this process and should take initiatives to contribute towards such objectives. In return, Government should provide the necessary incentives to encourage individual actions at a Local Council level.

Current charging systems should be modified to ensure that the fees chargeable to Councils originate in two forms namely:

- (a) a transportation fee for the collection and carriage to the waste facility; and
- (b) a fee based on the weight of waste deposited which is charged directly to the Local Council and not the carrier. This would take place through the introduction of consignment notes which Local Councils would hand over to their waste collector and which would identify the quantity and origin of waste.

Furthermore, Government should adopt a differential pricing policy for all separated waste that is taken to the Sant' Antnin waste treatment plant and subsequently to other waste management facilities. Incentives to promote such pricing policies should be introduced to facilitate its adoption.

This system would incentivise Local Councils to take required measures and initiatives in order to ensure that their community is encouraged to minimise waste requiring door-to-door collection through the possible modification and alteration of behavioural patterns, the use of bring-in sites and any other measures deemed appropriate. Moreover, it would incentivise Local Councils to encourage the Recycle Tuesday initiative with a view towards providing larger quantities of source separated recyclables and bio-waste fraction for treatment at the waste digester.

A national debate should be initiated as to the ideal manner in which financing should be secured for the operation of facilities as well as regards to the introduction of incentives to promote better waste management practices. This should also be complemented by other initiatives that entice Local Councils to minimise on the waste generated within their locality and on the collection of a marketable recyclable fraction that will allow their charges to be lower than those of their peers whilst at the same time providing an equally good service in line with prevailing waste management principles. Local Councils may choose to team up with established schemes to further minimise their waste. This is mirrored by the fact that industry pays for collection and disposal of its voluminous waste. Households equally contribute to significant quantities of waste which although negligible on an individual basis, when aggregated, contribute to a significant expense in terms of what is spent on waste management.

Producers who deposit their waste at any landfill facility should also be charged at an appropriate rate that instils a change in their waste management practices towards more sustainable trends. The principle is to ensure that all producers are responsible for the waste they place for treatment. Whether it is industry or the private household does not really matter for it is the nature of the waste, volumes generated and the treatment process that need to be looked into. Government must ensure that its facilities are sustainable and welcomes proposals from stakeholders on methods to achieve such. At the same time producers must also be responsible towards their Producer Responsibility obligations in order to meet the legal targets.

It is therefore of utmost importance for Producer Responsibility schemes to be promoted in a rational manner that permit economies of scale to be achieved.

WasteServ Malta Limited has recently been allocated funding for 300 locality based bring-in sites and 200 sites within schools. It is important that these bins be put to good use and that Local Councils, who are responsible for waste collection, forge a partnership with Government in order to further contribute towards the gradual introduction of separating waste at source. Government reiterates that it shall be adopting a policy of securing that WasteServ does not compete with private enterprises unless it is forced to do so as an operator of last resort or in the light of unforeseen difficulties. Government will continue to pilot a packaging waste collection scheme which will eventually see a locality based collection system which differentiates between organic/mixed waste and dry recyclables. Whilst the collection of organic/mixed waste will continue to be financed by Government, the collection of dry recyclables will be financed through a mechanism which will see local councils being serviced by licensed schemes which would in turn be funded by importers/producers who place such dry recyclables on the market.

This would provide the country with the necessary infrastructure needed to ensure compliance by producers. Secondly, all major stakeholders would in this way be involved in this process leading to a better utilisation of Government resources and the fostering of a strategic partnership between Local and Central Government and the Private Sector.

Waste management facilities need strong regulatory and financing mechanisms to maintain their sustainability. European policy and legislation on this issue is very clear in that waste producers are expected to pay, through appropriately devised charges, the full costs of the service and facilities required to manage their wastes in an environmentally sound manner. Therefore it is equally important for the local competent authorities to ensure that not only are environmental conditions being observed but that the fee structure for such facilities is one that is approved and regulated in a professional manner that truly reflects the real cost of treating waste at that facility whilst at the same time safeguarding the social and economic realities of Malta's people.

The introduction of any form of incentive-based mechanisms to other waste fractions is seen to be a strategy that could help to contribute towards reducing mixed waste fractions.

Notwithstanding, it would be impossible to have an incentive-based scheme on each and every type of packaging material and therefore Government recognises the need of other setups in particular where packaging waste is concerned.

5.9.2 - Private Sector Involvement

Government feels that we are approaching a time which merits the increased involvement of the private sector in waste management governance. Government will be examining all its current roles with a view to prioritising those which can be devolved or partnered with the private sector. This will be a process which will be discussed with the constituted bodies and which will be subsequently issued for consultation prior to adoption.

By means of this Strategy document, the private sector is herewith invited to put forward its suggestions as to the roles it can assume as a result of this process.

5.9.3 - The role of WasteServ

Government remains committed to the role of WasteServ as ‘the operator of last resort’. **Policy Objective 9** must be implemented with a pragmatic balance. The waste sector in Malta is still in relative infancy when compared to larger EU member states. The role of WasteServ in securing inward investment remains important. Significant private sector partnerships have been put in place to help Malta work towards managing waste in line with its EU Landfill Directive Targets. Government and WasteServ will continue to explore partnership and management options in the procurement of new facilities. Government is also committed to reviewing why private sector investment has been slow to come forward for recycling facilities and certain types of waste treatment facilities such as ELVs (see **Policy Objectives 2 & 7**).

5.9.4 - Co-treatment of waste streams

Malta has a limited market for waste. The application of the proximity principle (which discourages exportation in favour of local responsibility for treatment), and the small quantities of certain waste streams result in certain technologies being less feasible than in larger European Countries where municipalities can share facilities. Government is therefore committed to review treatment options in favour of co-treatment of waste streams. For example, the co-treatment of municipal bio waste with animal husbandry waste is proposed through **Policy Objective 8**.

Objective 9 – Cost Efficient & High Quality Waste Services

To deliver cost efficient waste management services and ensure public funds are utilised effectively. Government will promote partnership and joint procurement procedures to ensure economies of scale. Government will continue to promote the polluter pays principle and to promote further private sector involvement in the waste sector; particularly where this can help to ease public sector finances.

Appendix A - Actions, Responsibilities and Targets

Objective	Actions	Responsibilities	Targets	Policy Links																
Policy Objective 1 Promote Waste Minimisation	<ul style="list-style-type: none"> Monitoring of gate fee charges – to incentivise Local Councils to encourage waste minimisation and higher recycling rates. Maximise opportunities to encourage public awareness and good practice for households and companies (see also Objective 6) 	Shared responsibilities – Government / Local Councils to lead on canvassing opinions towards revised collection schedules and developing feedback messages. Government and other agencies to continue to lead on education initiatives.	<ul style="list-style-type: none"> Reduce average rate of growth in MSW per capita from 3.1% (Recorded between 2000 and 2007) to 1.5% for 2010 to 2015. The Waste Management Strategy will work towards the long term goal of ensuring that 70% of construction and demolition waste will need to be re-used, recycled or otherwise recovered. 	Policy Objective 6 (Promote good waste management practices through Education and Communication), Policy Objective 8 (Reducing Reliance on Landfilling).																
Policy Objective 2 Improve national capacity to manage industrial solid waste and hazardous waste.	<ul style="list-style-type: none"> Development and operation of a Hazardous Waste storage and treatment facility. The Marsa Thermal Treatment Facility will continue to be used for animal, clinical and certain other hazardous waste streams. Improved monitoring of hazardous waste streams (See Actions under Policy Objective 6) 	Shared responsibilities – Government, MEPA (particularly the monitoring of hazardous waste), Private Sector Waste Operators, WasteServ, Consumers and Producers	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center; background-color: #f2f2f2;">WEEE Targets</th> </tr> </thead> <tbody> <tr> <td style="font-size: small;">Definition of waste (Category - Schedule 1A of Hazardous Waste Directive)</td> <td style="text-align: center;">1 & 10</td> <td style="text-align: center;">3 & 4</td> <td style="text-align: center;">2, 5, 6, 7 & 9</td> </tr> <tr> <td style="font-size: small;">Minimum Rate of Recovery</td> <td style="text-align: center;">80%</td> <td style="text-align: center;">75%</td> <td style="text-align: center;">70%</td> </tr> <tr> <td style="font-size: small;">Component Material</td> <td style="text-align: center;">75%</td> <td style="text-align: center;">65%</td> <td style="text-align: center;">50%</td> </tr> </tbody> </table> <p style="font-size: small;">For gas discharge lamps, the rate of component, material and substance reuse and recycling shall reach a minimum of 80% by weight of the lamps.</p> <p>Targets for the collection and treatment of Batteries and Accumulators</p> <p style="font-size: small;">To achieve a minimum collection rate of batteries¹¹ and accumulators of 25% in the period to 2015, followed by a minimum collection rate of 45%.</p>	WEEE Targets				Definition of waste (Category - Schedule 1A of Hazardous Waste Directive)	1 & 10	3 & 4	2, 5, 6, 7 & 9	Minimum Rate of Recovery	80%	75%	70%	Component Material	75%	65%	50%	Policy Objective 6 (Promote good waste management practices through Education and Communication), Policy Objective 7 – (Increased levels of recycling) and Policy Objective 8 (Reducing Reliance on Landfilling).
WEEE Targets																				
Definition of waste (Category - Schedule 1A of Hazardous Waste Directive)	1 & 10	3 & 4	2, 5, 6, 7 & 9																	
Minimum Rate of Recovery	80%	75%	70%																	
Component Material	75%	65%	50%																	

¹¹ Time frame requested by the Maltese Government to the EU through the 'Justification Document for a Transitional Period for the Batteries Directive' report. If this negotiation proves to unsuccessful, the collection targets set out through the Directive shall apply – 25 % by 26 September 2012; and 45 % by 26 September 2016.

Objective	Actions	Responsibilities	Targets	Policy Links
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Recycling processes shall achieve the following minimum recycling efficiencies: (a) recycling of 65% by average weight of lead-acid batteries and accumulators, including recycling of the lead content to the highest degree that is technically feasible while avoiding excessive costs; (b) recycling of 75% by average weight of nickel-cadmium batteries and accumulators, including recycling of the cadmium content to the highest degree that is technically feasible while avoiding excessive costs; and (c) recycling of 50% by average weight of other waste batteries and accumulators.

ELV Targets

Reuse and recovery shall achieve a minimum of 85% by an average weight per vehicle

Reuse and recycling shall achieve a minimum of 80% for vehicles before 1 January 1980

No later than 1 January 2015, for all end-of life vehicles, the reuse and recovery shall be increased to a minimum of 95% by an average weight per vehicle and year. Within the same time limit, the re-use and recycling shall be increased to a minimum of 85% by an average weight per vehicle and year.

Packaging Waste

Packaging Waste Target	2010	2011	2012	2013	2014
Overall Recovery	53	56	58	60	n.a
Overall Recycling	48	51	53	55	n.a
Glass Recycling	43	50	55	60	n.a
Metals Recycling	38	41	46	50	n.a
Plastics Recycling	17.5	19.5	21.5	22.5	n.a
Paper & Board Recycling	42	50	55	60	n.a
Wood Recycling	11	13	14	15	n.a

Objective	Actions	Responsibilities	Targets	Policy Links
Policy Objective 3 Promote Producer Responsibility	<ul style="list-style-type: none"> Continue to implement fiscal incentives to ensure producers take responsibility for waste 	Shared responsibilities – Government / Local Councils to lead on canvassing opinions towards revised collection schedules and developing feedback messages. Government and MEPA to lead on reviewing current planning practices regarding demolition waste.	Ongoing.	Policy Objective 2 (Improve national capacity to manage industrial solid waste and hazardous waste Policy), Policy Objective 6 (Promote good waste management practices through Education and Communication), Policy Objective 7 – Increased levels of recycling, and Policy Objective 8 (Reducing Reliance on Landfilling).
Policy Objective 4 To manage Construction & Demolition Waste in a more sustainable manner	<ul style="list-style-type: none"> To implement the recommendations of the Austrian Twinning Study of June 2008 	Shared responsibilities – Government, BICC, MEPA and Private Sector to assist in construction waste minimisation and recycling targets.	<ul style="list-style-type: none"> To work towards re-cycling, reusing / recovery of a minimum of 70% of construction and demolition waste by 2020. 	Policy Objective 1 (Waste Minimisation), Policy Objective 6 (Promote good waste management practices through Education and Communication), Policy Objective 7 – Increased levels of recycling, and Policy Objective 8 (Reducing Reliance on Landfilling).

Objective	Actions	Responsibilities	Targets	Policy Links
Policy Objective 5 Promote waste to energy	<ul style="list-style-type: none"> To introduce further MBT processing capacity in Malta and Gozo by 2015 to incorporate waste to energy technology. To introduce incineration facility by 2015, incorporating waste to energy technology. 	Shared responsibilities: Government & private sector	<ul style="list-style-type: none"> Total RES recovered from waste by 2013 (17 GWh/a nnum). 	Policy Objective 8 (Reducing Reliance on Landfilling).
Policy Objective 6 Promote good waste management practices through Education and Communication	<ul style="list-style-type: none"> Education and Communications Plan (by Jan 2011) Enforcement resources review Public Sector – Waste management skills and resources review Ensure Green Leaders take a prominent role in the implementation of the Waste Management Strategy Establish and implement a National Waste Management Database and Waste Management Register to provide better monitoring of waste arisings, including hazardous waste 	Government to lead with assistance from Ministry for Education, MEPA, Local Councils and WasteServ. The private sector will also be invited to become involved in dissemination of information and best practice. The skills and resources review remains a requirement of the 2001 Strategy and could be implemented by 'Green Leaders'.	To implement the items listed as Actions for Objective 6 .	Policy Objective 1 (Promote Waste Minimisation), Policy Objective 2 (Improve national capacity to manage industrial solid waste and hazardous waste Policy), Policy Objective 7 (Increased levels of recycling) and Policy Objective 8 (Reducing Reliance on Landfilling).

Objective	Actions	Responsibilities	Targets	Policy Links
Policy Objective 7 More Recycling and Separation of Biodegradable Waste	<ul style="list-style-type: none"> • Implementation Plan for the Management of Biodegradable Waste to consider treatment options and feasibility of a comprehensive system for the collection of separated organic waste from households and businesses. • Participation Plan for recycling and waste separation • Review of collection practices in favour of further source separation and collection of separated waste, including the introduction of separate collection of bio waste¹². • Composting plan – Prepare a campaign to further promote home composting and consider scope for composting of commercial waste. • Review of opportunities and barriers to further private sector investment in new recycling facilities. 	<p>All stakeholders. Government to lead in terms of Education & Communication (Policy Objective 6), with implementation assistance from entities such as WasteServ and private sector companies providing recycling services.</p>	<ul style="list-style-type: none"> • To meet targets of Landfill Directive and to reduce the organic waste directed to landfill by 2010, 2013 and 2020.(Policy Objective 8) • A minimum of 50% (by weight) of all potentially recyclable MSW to be recycled by 2020 • To continue to build and implement new bring-in sites in the period to 2015. 	<p>Policy Objective 6 (Changing Behaviour) and Policy Objective 8 (Reducing Reliance on Landfilling).</p>

¹² Action D3 of the 2001 Waste Management Strategy identified ‘Introduce source segregation and separate collection of recyclable (including biodegradable) materials from MSW’. Kerbside and bring in separation facilities exist. Bio waste source separation will be introduced to coincide with the commissioning of Ghallis and future MBT capacity.

Objective	Actions	Responsibilities	Targets	Policy Links
<p>Policy Objective 8 Reduce reliance on landfilling: Implementing preferred technologies to deal with residual waste streams</p>	<ul style="list-style-type: none"> To implement the preferred technology mix as specified in this Strategy. 	<p>Government to lead with assistance from the private sector and WasteServ. MEPA to provide regulatory functions for planning and environmental permitting</p>	<ul style="list-style-type: none"> To procure and implement new treatment facilities by 2015. <p>The Landfill Directive (99/31/EEC) sets the following landfill diversion targets for Malta:</p> <ul style="list-style-type: none"> By 2010 the amount of biodegradable waste sent to landfill is to be reduced to 75% of the total amount by weight of biodegradable municipal waste produced in 1995. By 2013 the amount of biodegradable waste sent to landfill is to be reduced to 50% of the total amount by weight of biodegradable municipal waste produced in 1995; and By 2020 the amount of biodegradable waste sent to landfill is to be reduced to 35% of the total amount by weight of biodegradable municipal waste produced in 1995. 	<p>This Policy Objective is interlinked with all Policy Objectives. The treatment capacity and specifications of future treatment infrastructure will be determined following regular review of the success of other targets and objectives to minimise waste and increase levels of recycling.</p> <p>All Policy Objectives.</p>
<p>Policy Objective 9 Cost Efficient & High Quality Waste Services</p>	<ul style="list-style-type: none"> Finalised review into benefits of regionalisation of waste services and legislate accordingly. Continued review of existing partnership arrangements, costs, size and type of refuse vehicle fleet, and potential for cost efficiencies in the context of waste collection services and waste facilities. Continued review of fiscal context for the waste sector - eg gate fees. 	<p>Government to lead in partnership with the waste transport sector, Local Councils Association, WasteServ, households, and the commercial sector.</p>	<p>Ongoing</p>	<p>All Policy Objectives.</p>

Way Forward

The aim of the Revised Solid Waste Management Strategy for the Maltese Islands is to serve as a policy document for sustainable waste management practices that subscribe to both local and international obligations.

The Strategy is aimed to ensure the well-being of every member of society, from whatever walk of life, and in whatever capacity he or she is currently acting. It is a policy document that thinks of future generations and that has to keep inter-generational solidarity at the heart of the directions to be taken.

No matter how large or small an idea may be, no matter whether it originates from an individual, SME or a corporate or multinational enterprise, all suggestions have the potential to spark off improvements in certain areas of the proposals being put forward. We cannot afford to be self-centred and the common good must prevail.

The success of the past augurs well for the challenges we need to undertake for the future. We cannot afford to be laid back any longer. Waste management is no longer solely Government's responsibility. It is **OUR** responsibility and it is only in a collective manner that we can achieve the objectives that befit the Maltese Islands.

This document is not the ideal forum for the inclusion of the specific details of the individual strategic choices – that forum will develop at a later stage when specific topic papers are released. At this stage, Malta needs to firmly refine and re-establish its vision for the forthcoming years in this sector. Together we can succeed.