



Construction and Demolition Waste Strategy for Malta

Public Consultation Document

2020-2025

Managing Construction
& Demolition Resources



MINISTRY FOR THE ENVIRONMENT,
SUSTAINABLE DEVELOPMENT AND CLIMATE CHANGE



Table of acronyms

BICC	Building Industry Consultative Council
CISC	Construction Industry Skill Card
C&D Waste	Construction and Demolition Waste
DPA	Development Permit Application
ERA	Environment and Resources Authority
EU	European Union
GDP	Gross Domestic Product
GPP	Green Public Procurement
KTP	Kamra tal-Periti
MCCA	Malta Competition and Consumer Affairs Authority
MCSD	Malta Council for Science and Technology
MDA	Malta Developers Association
MESDC	Ministry for the Environment, Sustainable Development and Climatic Change
NCFHE	National Commission for Further and Higher Education
OHSA	Occupational Health and Safety Authority
PA	Planning Authority
PDA	Pre-demolition Audits
PPP	Polluter-Pays Principle
RRRA	Resource, Recovery and Recycling Agency
R&D	Research and Development
WMF	Waste Management Facilities
WMP	Waste Management Plan

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Following the extensive work being carried out by the European Commission on moving towards a Circular Economy, *the Construction and Demolition Waste Strategy for Malta* will be a mean, which will further help the transition for Malta to move towards a more circular economy and hence closing the loop of products' lifecycles. This Strategy will help protect our environment and human health from waste related pollution while reducing consumption of raw minerals, and increasing the quality and quantities C&D waste recycled.

This Strategy is a framework acting as a driver intended to bring about a cultural and behavioural shift within the sector in terms of its attitude towards excavation, demolition and construction methods. The measures highlighted in the Strategy should not just be introduced as legislation but should be followed up by further discussions with the relevant stakeholders, and accompanied by standards and adequate training, in order to ensure that a positive change is brought about. Providing only a change in legislation does not ensure compliance and will not bring about the essential behavioral change to yield positive results.

The Construction and Demolition Waste Strategy for Malta should be viewed as an opportunity, which will set the path towards an efficient and effective C&D waste management system. It is to be kept updated, through periodical review, to ensure that any drastic changes within the sector are addressed.

FOREWORD



1.1 BACKGROUND

The European Union (EU) has identified construction and demolition (C&D) waste as a priority waste stream due to the substantial amounts generated across the Union. Given that, several components within the waste stream have a high resource value, there is a high potential for re-use and recycling of such waste.

The EU has recognised the need for improving the quality of recycling and recovery of this waste stream in order to develop market conditions to increase the demand for secondary raw materials. As a result, materials and resources are maintained in the economy for as long as possible, thus guaranteeing a proper transition towards a circular economy. A circular economy from construction through demolition and on to subsequent reconstruction with materials created from the recycled waste is key to leveraging growth in the sector.

C&D waste

Means waste generated by construction and demolition activities.

(Directive 2008/98/EC – Waste Framework Directive)

1.2 CONTEXT OF THIS STRATEGY – OBJECTIVE AND SCOPE

The *Construction and Demolition Waste Strategy for Malta* aims to identify options for the management of waste arising from construction and demolition activities, by primarily addressing the current issues within the sector as well as highlight the possible short term and long-term measures to be adopted, with a view to shifting the treatment of such waste from backfilling to the re-use and recycling.

With the EU gearing towards higher recycling rates, an increase in the supply of secondary materials is expected. This, however, needs to meet the demand. In this context, Malta shall aim to increase not only the quantity of secondary raw materials but also their quality, while guaranteeing safety and proper standards for the protection of human health and the environment.

This Strategy recognises four (4) interconnected main priority areas (figure 1), which are crucial for the successful management of C&D waste.

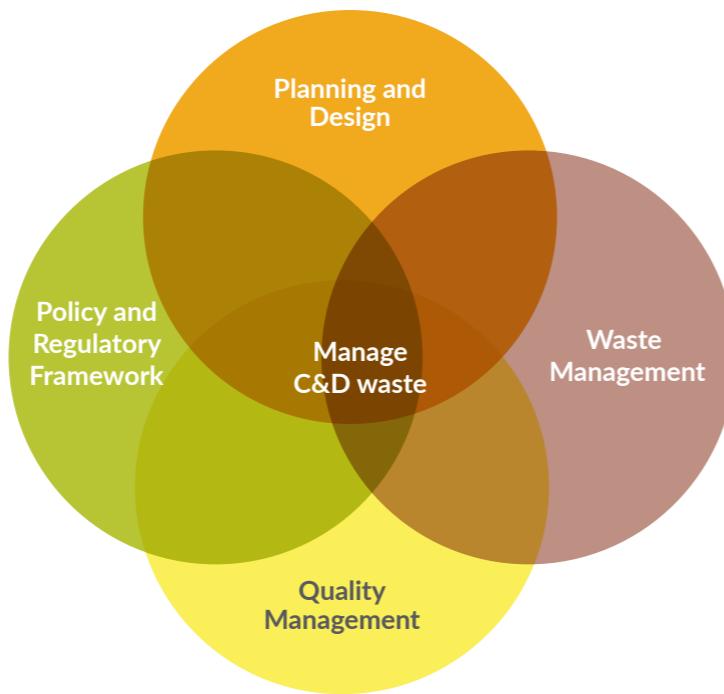


FIGURE 1 Venn diagram highlighting the overlapping and interconnected relationships between the four priority areas.

- The first priority area – **Planning and Design**
- targets the construction industry, with specific measures aiming to tackle the problem at source by demolishing or constructing in a sustainable manner;
- The second priority area – **Waste Management**
- lists specific measures to improve waste logistics both at the development site as well as off-site;
- The third priority area – **Quality Management**
- focusses on measures associated with increasing the confidence in C&D waste management practices as well as improving the quality of C&D recycled materials; and
- The fourth and final priority area – **Policy and Regulatory Framework** - deals with improvements in policy and framework conditions in order to break the link between development and waste generation.

Tackling measures within each priority area through an ambitious strategic vision, covering the entire construction and demolition sector, can spur growth; create green jobs, enhance innovation as well as improve the overall human health and that of the environment.



1.3 LEGISLATIVE INSTRUMENTS THAT ADDRESS THE CONSTRUCTION AND DEMOLITION SECTOR

This section outlines the main legal instruments regulating C&D waste as applied at national level. Other applicable legislation stemming from the main regulations is also included together with a short description of the laws.

ENVIRONMENTAL LEGISLATION:

A) Environment Protection Act [CAP 549]

The Environment Protection Act lays out provisions for the protection of the environment and for the establishment of an authority with powers to that effect and for matters connected therewith or ancillary thereto. This Act establishes and gives the power to the Environment and Resources Authority (ERA) to establish measures related to the generation and recovery of C&D waste and to permit and monitor operations related to construction and demolition. ERA regulates the quarrying industry through two subsidiary legislations as follows:

- S.L. 549.50 - *Waste Management (Management of Waste from Extractive Industries and Backfilling) Regulations, 2009*
- S.L. 549.63 - *Waste Regulations, 2011*

The authorisation of the quarrying activities by virtue of the above mentioned subsidiary legalisations aims and is limited to, the controlling and minimising of the potential negative environmental impacts emanating from the mineral extraction processes, quarrying ancillary activities and void space backfilling and restoration. ERA has the power to carry out regular compliance inspections to the authorised sites and may suspend or revoke the authorisation if compliance officers notice significant mismanagement of the site.

B) Waste Regulations [S.L. 549.63]

The Waste Regulations of 2011, transpose Directive 2008/98/EC of the European Parliament and of the Council on waste, more commonly known as the Waste Framework Directive. The aim of these Regulations is to protect the environment and human health by preventing or reducing the adverse impacts of the generation and management of waste and by reducing the overall impacts of resource use and improving the efficiency of such use.

Schedule 5 of the said Regulations, refers to the waste hierarchy which is the sounding pillar of waste management activities and policies. It establishes an order of preference for taking sustainable actions for managing waste with the aim to minimise the amount of waste arising from activities and improving the overall waste management process. Prevention is the most preferred option followed by Reuse, Recycling and Recovery, which should take precedence over the least preferable option of Disposal. Furthermore, the Waste Regulations stipulate a minimum target of 70% recovery of waste arising from construction and demolition activities by the year 2020.

Any person carrying out treatment of C&D waste shall obtain an authorisation for the ERA, in line with the requirements specified under regulation 19 of the Waste Regulations.

C) Waste Management (Management of Waste from Extractive Industries and Backfilling) Regulations [S.L. 549.50]

The Waste Management (Management of Waste from Extractive Industries and Backfilling) Regulations bring into effect the provisions of Directive 2006/21/EC of the European Parliament and of the Council on the management of waste from extractive industries. These regulations deal with waste coming from the extraction and processing of mineral resources (i.e. limestone from quarries) and provide for measures, procedures and guidance to prevent or reduce any adverse effects on the environment, specifically water, air, soil, flora and fauna, as well as landscape, and any risks to human health resulting from the management of waste from the extractive industries. In addition to the provisions laid down in the Waste Regulations, these regulations also, provide general requirements for backfilling of such waste into spent quarries for rehabilitation purposes.

Regulations [S.L. 549.29]

The Waste Management (Landfill) Regulations transpose Council Directive 1999/31/EC on the landfill of waste with the aim to prevent or reduce the possible negative effects on the environment in particular pollution on surface waters, groundwater, soil and air, and the global environment, including the greenhouse effect, as well as any resulting risk to human health, from landfilling of waste, during the whole life-cycle of the landfill. The said regulations, require that all waste landfilled is to be treated prior to the actual landfilling as well as excludes certain types of waste streams from being disposed.

In cases where C&D waste is disposed of in a landfill, the established criteria and procedures for the acceptance of waste at landfills pursuant to Council Decision 2003/33/EC establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC shall be applied.

E) Deposit of Wastes and Rubble (Fees) Regulations [S.L. 549.07]

The Deposit of Wastes and Rubble (Fees) Regulations lay down provisions related to the deposits of rubble and waste which is not hazardous in nature as well as domestic waste, in public waste deposit sites. These regulations also stipulate the fees charged by both land and sea based deposit sites for every tonne of rubble or non-hazardous waste. These Regulations designate an offshore spoil ground for dredged material having a radius of 350 metres, centred at Latitude 35°55.1'N and Longitude 14°34.0'E.

F) Waste Management (Shipments of Waste) Regulations [S.L.549.65]

The Waste Management (Shipments of Waste) Regulations transpose, the provisions of Council Regulation (EC) No 1013/2006 on shipments of waste, which establishes a system of supervision and control of shipments of waste, to guarantee protection of human health and the environment. The exports of non-hazardous C&D waste is subject to the notification procedure pursuant to Article 4 of the said regulations. Furthermore, the exports of the hazardous fractions within C&D waste is subject to the provisions laid down in Article 18.



Situation Analysis

OTHER LEGISLATION:

G) CAP 552 – Development Planning Act

The Development Planning Act lays down provisions for sustainable planning and management of development and establishes an authority with powers to that effect and for matters connected therewith or ancillary thereto.

- S.L. 552.09 – the Environmental Management Construction Site Regulations. The Environmental Management Construction Site Regulations aim to limit environmental degradation through appropriate construction management practices that cause the least nuisance to neighbors, minimising the risk of injury to the public, protecting the property belonging to the Government and Local Councils, and as much as possible reducing the harm to the environment.

H) CAP 513 – Building Regulations Act

The Building Regulation Act provides for matters relating to the construction of buildings and other matters connected therewith and for consequential amendments.

I) CAP 427 – Product Safety Act

The Product Safety Act deals with consumer protection and seeks to establish a common framework for ensuring the safety of products sold or offered for use by consumers, by specifying that products supplied to consumers, whether for a consideration or provided free of charge, must be safe; defining a safe product; and laying down a framework for assessing safety.

- CAP 427.83 - Construction Products (Implementation) Regulations. The Construction Products (Implementation) Regulations implement the provisions of Regulation (EU) No. 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC.

J) CAP 117 – Supplies and Services Act

The Supplies and Services Act provides for maintaining supplies and services essential to the life of the community and for controlling the production, distribution and consumption of goods.

- S.L. 117.38 - Requisition of Excavation Voids Regulations. The Requisition of Excavation Voids Regulations enable government to requisition any excavation void or parts thereof from any quarry operators and may give such directions which are necessary or expedient to start receiving C&D waste against compensation.

K) CAP 123 – Income Tax Act

The Income Tax Act provides for an imposition of tax upon income.

- S.L. 123.186 – Tax Credit (Construction Waste Recycling) Rules. The Tax Credit (Construction Waste Recycling) Rules provide for the granting of tax credits to persons who are in possession of a permit issued by ERA for the acceptance in their quarries of construction and demolition material from third parties. Such persons may during the years 2017, 2018 and 2019 claim a tax credit equivalent to 25% of the gross fees received by them for the provision of the above-mentioned services, provided that their fees do not exceed €8 per tonne. The tax credit shall not exceed the tax chargeable on the income derived by such persons during the year in which the claim for the tax credit is made.

L) Barcelona Convention and its Dumping Protocol

The Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft (known as the Dumping Protocol) to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (known as the Barcelona Convention) to which Malta is a party, aim to reduce pollution in the Mediterranean Sea and protect and improve the marine environment in the area, thereby contributing to its sustainable development.

2.1 CONSTRUCTION INDUSTRY

The construction industry is considered one of the most prominent industries in Malta, contributing to circa 4% towards Malta's Gross Domestic Product (GDP)¹, while ² employing more than 13,000 people.

Recent data, as highlighted in figure 2, indicates that in 2017, there was an increase in construction activity, reaching similar levels to what was experienced prior to 2008. Such growth in activity is evidenced by an increase in the number of permits annually approved by the Planning Authority.

Relation between number of approved building permits and construction & demolition waste generated

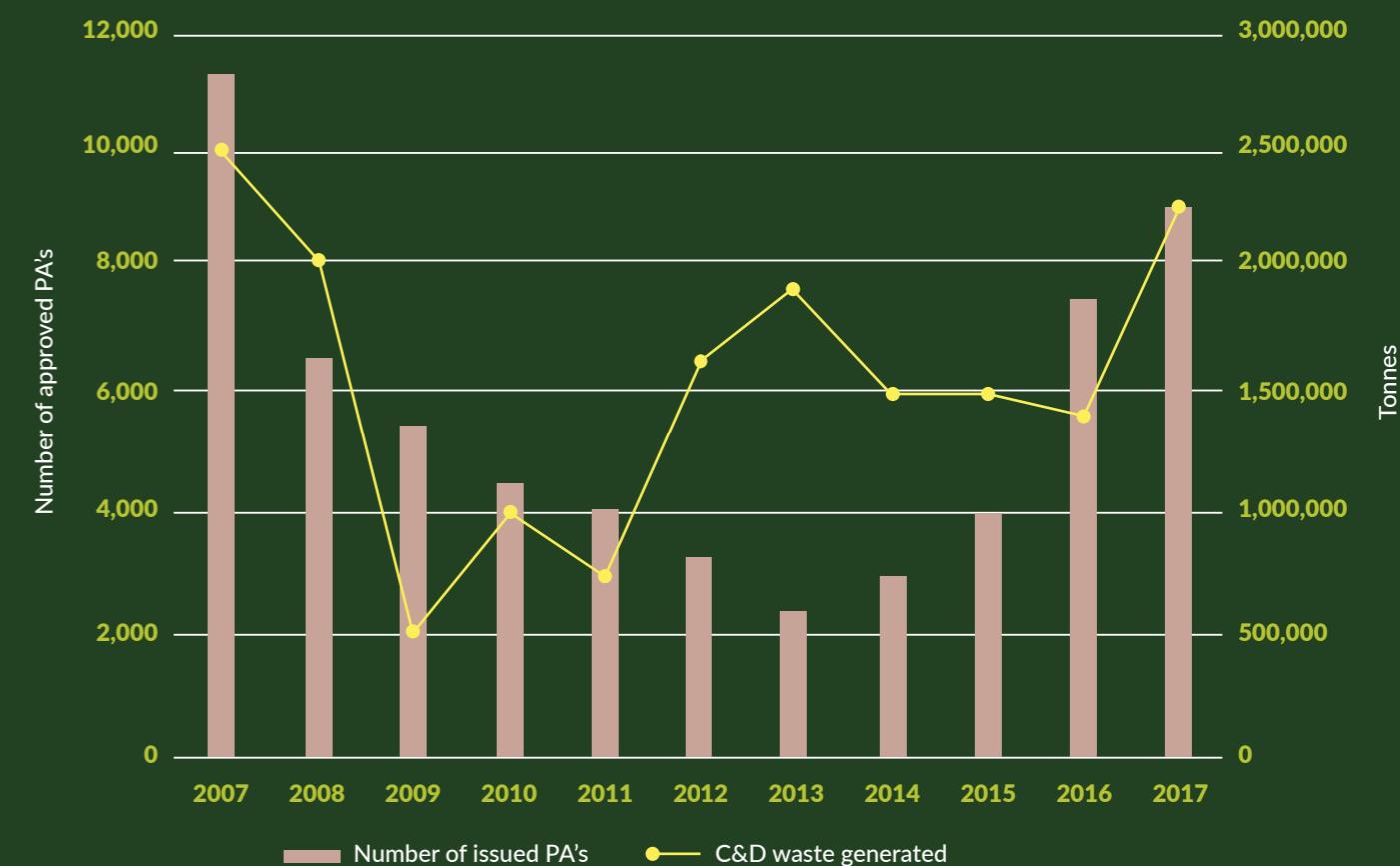


FIGURE 2 Number of building permits approved between 2007 and 2017 [Source: Planning Authority]

¹ National Statistics Office - Malta, News Release 139/2018

² National Statistics Office - Malta, News Release 101/2018

This surge in construction activities has resulted in additional pressure on the extraction of both the hardstone and the soft stone to satisfy the demand for building materials, as can be seen in figure 3.



FIGURE 3 : Extraction of mineral resources (hardstone and soft stone) between 2007 and 2017 [Source: National Statistics Office]

2.2 C&D WASTE GENERATION

The construction industry is generating high amounts of waste from its activities. C&D waste is generated from activities such as the construction of buildings, civil infrastructure, total or partial demolition of buildings, road construction and maintenance.

C&D waste is considered the heaviest and most voluminous waste stream generated in the Maltese Islands, amounting to over 1.5 million tonnes of waste generated annually. This constitutes the largest share of waste generated in Malta, accounting to roughly 80% of the total waste arising each year, as indicated in figure 4 below. This percentage share is considered as significantly high, particularly when compared to the EU average, which accounts to approximately 25% to 30% of all waste generated in the EU.

Inert waste

Refers to waste that does not undergo any significant physical, chemical or biological transformations, and will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health.

(Directive 1999/31/EC on the landfill of waste)

Dredged material

Means any sedimentary formation (incl. clay, silt, sand gravel, rocks, and any indigenous parent rock material) removed from areas that are normally or regularly covered by seawater, by using dredging or other excavation equipment.

(UNEP (DEPI)/MED - Updated Guidelines on Management of Dredged Materials - Decision IG.23/12)

The generation of C&D waste stream is dependent on the economics of the construction industry in a particular year. Factors that affect the generation of C&D waste are mainly:

- The extent of the development, such as the increase in recent years of major developments;
- The amount of excavated material throughout the development; and
- The amount of waste generated due to demolishing activities.



FIGURE 4 : C&D waste generated between 2007 and 2017 compared with total waste generation



Mineral waste from excavation and mineral waste from construction and demolition constitutes the largest share of the generation of this waste stream, amounting to approximately 74% of all C&D waste generated annually.

Other materials generated include, primarily dredged material as well as copper, bronze, brass, aluminum, iron, steel and other mixed metals and minimal amounts of construction materials containing asbestos.

Construction & Demolition Waste Generation by Waste Type

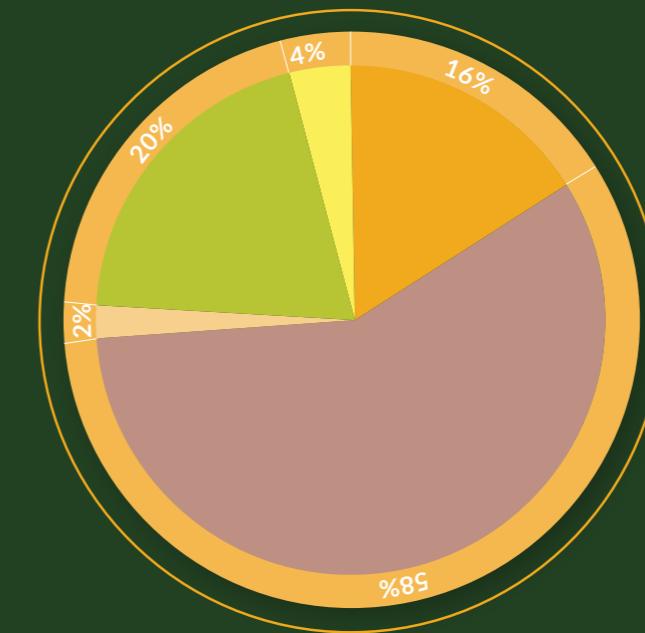


Figure 5 provides a detailed representation of the type and percentage share of waste deriving from the construction and demolition industry as in 2017.

- Mineral waste from excavation - 58%
- Dredged material - 20%
- Mineral waste from C&D- 16%
- Other C&D waste inc. metals - 4%
- Soil - 2%

FIGURE 5: C&D waste generation by type of waste material for 2017.

2.3 TREATMENT OF C&D WASTE

Prior to 2012, as figure 6 indicates, Malta relied heavily on the disposal of C&D waste, both on land and at sea. In fact, between 2007 and 2012, circa 65% of all C&D waste treated was disposed in inert landfills, while another 25% were disposed at sea, and only around 10% were recycled. During this period, although spent quarries were accepting C&D waste for rehabilitation purposes, they were permitted as inert landfills and thus considered as disposal.

Reuse

Means any operation by which products or components that are not waste are used again for the same purpose for which they were conceived.

(Directive 2008/98/EC - Waste Framework Directive)

In 2012, the reviewing of existing permits for spent quarries enabled backfilling operations, which operation is considered as a recovery operation. This resulted in a drastic shift from disposal to recovery of inert waste with backfilling of excavation voids being the preferred option for the management of such waste. In 2016, Malta recorded the highest percentage rate of inert waste directed for backfilling; thereby 77% of the total C&D waste treated was backfilled.

Recovery

Refers to any operation the principal result of which is waste serving a useful purpose by replacing other materials, which would otherwise have been used to fulfill a particular function, or waste being prepared to fulfill that function, in the plant or in the wider economy.

(Directive 2008/98/EC – Waste Framework Directive)

Recycling

Refers to any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purpose.

(Directive 2008/98/EC – Waste Framework Directive)

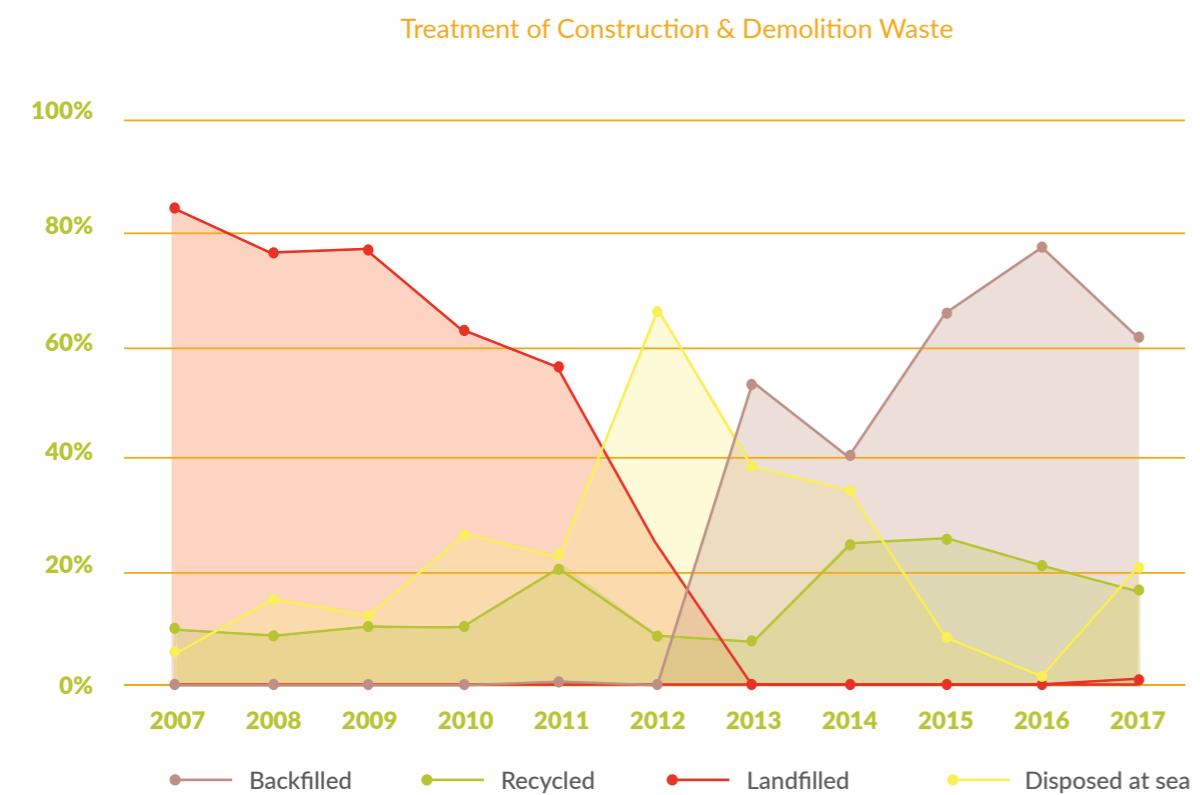


FIGURE 6: Treatment of C&D waste between 2007 and 2017

Such backfilling activity has significantly contributed towards Malta's achievement in attaining the target to prepare for re-use, recycle and recover a minimum of 70% by weight of the C&D waste generated, laid down in the Waste Framework Directive. Nonetheless, Malta has to put more effort within this sector by moving towards reuse and recycling of construction, demolition and excavated waste, thus reducing reliance on backfilling.

On the other hand, disposal at sea, at the designated offshore spoil ground (refer to figure 7), remains the preferred option for the treatment of dredged material. In fact between 2010 and 2017, circa 2.9 million tonnes of dredged material were disposed at sea, of which 1 million tonnes were disposed in 2012, while no dredged material was disposed at sea in 2016.

A minimal amount of inert material, around 100 thousand tonnes, were also disposed at sea between 2010 and 2017. However, this amounts

to less than 1% of the total amount of inert waste generated during the same period.

Backfilling

Means any recovery operation where suitable non-hazardous waste is used for purposes of reclamation in excavated areas or for engineering purposes in landscaping. Waste used for backfilling must substitute non-waste materials, be suitable for the aforementioned purposes, and be limited to the amount strictly necessary to achieve those purposes.

(Directive 2008/98/EC – Waste Framework Directive)



FIGURE 7: Location of the designated offshore spoil ground



Recycling of C&D waste is another recovery operation being carried out. Recycling of such waste stream remained constant over the years, with an annual average of 15% being recycled, reaching an all-time high of 26% in 2015. Approximately 90% of the total C&D waste recycled annually is recycled locally. Local recycling takes the form of:

- Aggregates for concrete and roadworks;
- Crushed material as 'torba'; and
- Other material used for renovation works.

Other waste deriving from construction and demolition activities, namely iron, steel and other mixed metals are exported for recycling. Given the lack of local facilities for the treatment of hazardous waste, such waste arising from the construction and demolition industry, including construction waste containing asbestos is also exported for further treatment.

Disposal

Refers to any operation, which is not recovery even where the operation has a secondary consequence the reclamation of substances or energy.

(Directive 2008/98/EC - Waste Framework Directive)

Intensive development and the subsequent large volumes of waste arising from excavations and construction and demolition activities, coupled with the high reliance on backfilling of inert waste, is causing a major problem vis-à-vis the lack of void space available on the Islands.

Current situation indicates that in the coming years the volume of authorised void space might not meet the increasing demand for the backfilling of C&D waste. Through the Tax Credit (Construction Waste Recycling) Rules, S.L. 123.186, the Government announced a tax incentive, aiming to increase backfilling space, whereby operators of quarries authorised to accept C&D waste, may claim a tax credit equivalent to 25% of the gross fees paid to them where the price of C&D waste accepted does not exceed €8 per tonne. It was further stated that this incentive will apply for three years, between 2017 and 2019, and would benefit only those operators who have the necessary authorisations to accept C&D waste from third parties.

Excavation voids

Refers to an excavated piece of land created through surface or underground extraction.

(Requisition of Excavation Voids Regulations – S.L. 117.38)

Although the main aim of such a tax incentive was to encourage excavation void owners to accept inert waste, thus increasing the available space for backfilling, the issue of not having enough space for the treatment of inert waste persists.

3.1 IMPLEMENTATION PROGRAMME

Establishing a proper system for the management of C&D waste is important as it generates a multitude of advantages. The implementation programme consists of four main priority areas, which are crucial in achieving the overall aims of this Strategy, that of identifying options for the management of waste arising from construction and demolition activities. Every priority area is assigned specific measures to be implemented in the short and long-term, which ultimately fulfill the priority areas' respective objectives.

- Intensive Development;
- Lack of void space;
- High rates of C&D waste;
- High dependency on backfilling and disposal of C&D waste;
- Recovery operations taking precedence over recycling operations;
- Limited recycling options.



IMPLEMENTATION PLAN

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- To improve building design in order to ensure its recycling and recovery;
- To increase the recyclability of the material at the design stage;
- To improve the market for recycled construction and demolition material.



- To increase the collection of separately collected C&D waste;
- To reduce the amounts of C&D waste generated;
- To move up the waste hierarchy;
- To innovate and incentivise the recycling industry.



- To ensure better products are placed on the market;
- To achieve a circular economy for construction materials;
- To instil a behavioural change for stakeholders within the construction and demolition sector;
- To develop technical standards for the construction and demolition sector.



- To better regulate the management of C&D waste;
- To enforce C&D regulations;
- To cater for appropriate infrastructure for the recycling of raw materials.





Priority Area	Proposed Measures	Aim(s)	Enabler(s)
1	<p>Establish standards for the construction industry</p> <ul style="list-style-type: none"> • Best practices for (de)construction • Classification of C&D waste • Appropriate excavation works • Apertures dimensions for dwellings <p>Incorporate these standards in the regulatory framework</p>	<ul style="list-style-type: none"> • To classify C&D waste generated according to the material type and composition in order to improve the quality of the waste streams for subsequent treatment; • To be able to re-use the material extracted for construction or agriculture; • To purify the main C&D waste stream (i.e. inert material); and • To promote on-site re-use operations. 	<ul style="list-style-type: none"> • BICC • ERA • MCAA • PA • KTP
2	Promote innovation through Research and Development	<ul style="list-style-type: none"> • To encourage innovation; • To enhance productivity; and • To foster innovative activity in knowledge-intensive manufacturing fields. 	<ul style="list-style-type: none"> • MCST • Industry • Academia
3	Introduce a new regulatory framework directed at the management of C&D waste	<ul style="list-style-type: none"> • To properly manage C&D waste; • To promote a transition towards a circular economy; and • To promote the development of secondary markets for end of life resources. 	<ul style="list-style-type: none"> • Government • ERA • PA • MCAA • MDA • KTP
4	<p>Allow for Mandatory Training</p> <p>Further develop National Occupational Standards</p>	<ul style="list-style-type: none"> • To boost productivity; and • To increase the quality of work. 	<ul style="list-style-type: none"> • NCFHE • BICC • OHSA • Academia • MDA
5	<p>Encourage Home Restoration Projects</p> <p>Set Price Differentiation for Planning Applications</p>	<ul style="list-style-type: none"> • To reduce the number of abandoned dwellings; and • To lessen the need for further development by filling up already built property. 	<ul style="list-style-type: none"> • Government • PA • Private investors
6	<p>Improve Waste Classification and Source Separation</p> <p>Establish mandatory record keeping on development sites</p>	<ul style="list-style-type: none"> • To help identify the C&D waste generated; • To implement proper deconstruction; • To improve dismantling and demolition practices; and • To improve the quality of C&D waste for subsequent re-use, recycling or recovery. 	<ul style="list-style-type: none"> • Government • ERA • PA • Industry • KTP • MDA

Priority Area	Proposed Measures	Aim(s)	Enabler(s)
7	Recognise the need for Resource Recovery and Storage Depots	<ul style="list-style-type: none"> To provide space for off-site C&D waste separation derived from small-scale developments. 	<ul style="list-style-type: none"> Private Investors MDA WMF ERA
8	Explore ways of introducing the Polluter Pays Principle	<ul style="list-style-type: none"> To instill a behavioral change for stakeholders within the construction and demolition sector. 	<ul style="list-style-type: none"> Government ERA MDA Industry
9	Extraction of Resources at Development Sites	<ul style="list-style-type: none"> To divert C&D waste from backfilling; and To ensure that good quality rock is not wasted. 	<ul style="list-style-type: none"> ERA PA MDA
10	Promote markets for secondary raw materials	<ul style="list-style-type: none"> To encourage the use of secondary raw materials. 	<ul style="list-style-type: none"> Government PA ERA Private Investors Industry
11	Set Re-use and Recycling Targets for any Development	<ul style="list-style-type: none"> To decrease the dependency on natural resources; To reduce the need for virgin aggregates; and To move towards a circular economy. 	<ul style="list-style-type: none"> Government ERA PA MDA KTP Industry
12	<p>Enforce Recovery through Restoration of Void Spaces</p> <ul style="list-style-type: none"> Carry out an exercise to identify quarries Launch Schemes for quarry restoration 	<ul style="list-style-type: none"> To restore void spaces to their former state; and To allow for further treatment of C&D waste through backfilling operations. 	<ul style="list-style-type: none"> ERA PA Quarry owners
13	Discourage Landfilling of C&D Waste	<ul style="list-style-type: none"> To increase source segregation and recycling of C&D waste; and To ensure that C&D waste is gradually and effectively recovered through proper waste management by applying the waste hierarchy. 	<ul style="list-style-type: none"> ERA Landfill operators
14	Assess the Characteristics of the Offshore Spoil Ground	<ul style="list-style-type: none"> To reduce pressures on landfill and excavation void spaces; and To ensure minimum harm is done to the marine environment. 	<ul style="list-style-type: none"> ERA
15	Explore the viability for land reclamation	<ul style="list-style-type: none"> To reduce pressures on landfill and excavation void spaces; and To ensure minimum repercussions on the environment. 	<ul style="list-style-type: none"> Government ERA PA

3.2 PROPOSED MEASURES

1 Establish Standards for the Construction Industry

The Building Industry Consultative Council Research (BICC) has been set up with the aim to monitor the building industry and to advise policy makers on ways to enhance it as a strong social and economic contributor to improve sustainable development. The BICC are currently discussing and drafting a set of standards related to the different stages of the construction and demolition chain. In this context, this Strategy aims to build upon the measure highlighted in the Waste Management Plan for the Maltese Islands, by putting in place a set of standards focusing on:

1. Best practices for (de)construction, aimed at reducing the C&D waste generated and purifying the resulting waste streams;
2. The classification of C&D waste by type, material, composition and weight, aimed to encourage on-site separation as well as improve the quality of the waste streams for subsequent re-use or recycling;
3. Appropriate excavation works, with the aim to re-use excavated rock for the purposes of construction; and
4. Dimensions of internal and external apertures of residential dwellings aimed at encouraging the re-use of fittings as well as reduce diversification bringing about economies of scale.

These standards shall be incorporated within the regulatory framework and shall be an essential requirement prior to the issuance of an executable Development Permit.

2 Promote Innovation through Research and Development

Whilst recognising the work carried out by the Malta Council for Science and Technology (MCST) vis-à-vis research and development in the area of science and technology, this Strategy intends, by to set up National Research and Development

Schemes aimed at increasing the knowledge related to the placing on the market of recyclable construction products and the piloting of new approaches towards resource recovery and use of C&D waste.

3 Introduce a new regulatory framework directed at the management of C&D waste

Successful management of C&D waste can only take place if the appropriate regulatory framework is in place. The national legal framework will be developed and discussed with all actors involved along the construction and demolition chain.

4 Allow for Mandatory Training

In addition to the courses being offered by the BICC, this Strategy will seek to better the current system by outlining specific training programmes for the purposes of training developers, construction workers and demolition workers. Furthermore, training shall be made mandatory and the Construction Industry Skill Card (CISC) shall be issued to personnel upon completion of new training courses.

Moreover, the National Commission for Further Higher Education (NCFHE) shall further develop National Occupational Standards for specific jobs within the Building and Construction Sector with the aim to increase efficiency and improve health and safety at the work place.

5 Encourage Home Restoration Projects

For the purpose of this Strategy, abandoned dwelling refers to a dwelling, which has been unoccupied for at least ten (10) full years.

Owners of abandoned dwellings that sell their property shall benefit from a tax credit equivalent to a percentage of the transfer value of the property.

Moreover, a percentage reduction in the development permit application (DPA) fee will be granted to owners or buyers of abandoned dwellings who intend to redevelop the building without carrying out major alterations to the abandoned structure.

The fees for planning applications related to restoration works shall be cheaper than those related to demolition works. This price differentiation aims to encourage rehabilitation and restoration works over demolition with the ultimate objective to reduce C&D waste generated.

6 Improve Waste Classification and Source Separation

The submission of pre-demolition audits (PDA) shall be made mandatory for high-density residential developments serving 16 or more units. Such audits aim to provide an estimate of the C&D waste expected to be generated on site as well as highlight the chosen deconstructing and dismantling practices for better C&D waste management. A pre-demolition audit shall include the following:

1. Identification of all waste streams generated;
2. Quantities of the identified waste streams;
3. Which materials can be separated at source;
4. Which materials are not suitable for re-use or recycling;
5. Information on the management of the hazardous and non-hazardous fractions;
6. Information on the recycling possibilities of C&D waste; and
7. An estimate of the percentage re-use and recycling potential based on proposals for systems of separate collection during the demolition process.

Such an audit is to be carried out by a warranted architect, who has sufficient knowledge in construction materials, techniques as well as waste treatment options. No executable permit shall be issued by the Planning Authority prior to the submission of a pre-demolition audit to ERA for approval.

Hazardous materials shall be removed correctly and systematically from developing sites prior to excavation, demolition and construction works. A detailed methodology on the process of hazardous waste separation shall be defined in the pre-demolition audits prepared. Such waste shall be treated and disposed of in accordance with the relevant waste legislation.

Maintaining site records at construction sites shall be legally binding for any development. This will aid in quantifying the actual amounts of excavation, demolition and construction waste being generated on site according to its type, material and composition.

7 Recognise the need for Resource Recovery and Storage Depots

In order to encourage the setting up of privately owned storage depots, whereby material from excavation activities as well as C&D waste can be temporarily stored for eventual re-use, recycling or recovery, the Government will introduce a scheme, through which, operators of such depots may benefit from a percentage refund of the total amount invested in the establishment of such activity.

8 Explore ways of introducing the Polluter Pays Principle

Explore ways of introducing legislative or non-legislative measures to implement the polluter-pays principle (PPP) for construction and demolition waste, whereby developers, as the waste producers, would bear the costs of waste management, including for the necessary infrastructure and its operation.

9 Extraction of Resources at Development Sites

Environmental Permits may be issued by the ERA for on-site extraction in line with the aforementioned standards related to appropriate excavation works. Such permits shall be granted in cases where good quality hard and/or soft stone can be extracted. The use of such extracted resource shall not be limited to the same development and can be transferred to storage depots or quarries for further processing.

10 Promoting markets for secondary raw materials

The competent authorities together with the relevant stakeholders will carry out an exercise to identify adequate infrastructure for the purposes of recycling the various C&D waste streams, with the aim of setting up the said infrastructure to cater for the large amounts being generated.

The competent authorities together with the relevant stakeholders shall aim to explore ways to boost the feasibility and the market demand for secondary raw materials.

Any person who buys or makes use of recycled construction material or material that includes recycled content shall benefit from a tax credit equivalent to a percentage of the gross fees paid for that material.

11 Set Re-use & Recycling Targets for any Development

The Green Public Procurement National Action Plan 2019-2025 have established mandatory national criteria for road construction as well as for office building design, construction and management procured by the Government. In line with the Government's vision in the GPP National Action Plan, this Strategy endeavours to extend such vision to the construction of high-density residential developments serving 16 or more units, as follows:

1. By 2021, a minimum of 40% of excavated material shall be re-used or recycled. This shall be enforced through the compliance certificate issued pursuant to the Development Planning Act (CAP 552), whereby no such certificate shall be issued unless proof on the use of such materials is provided.

2. By 2021, a minimum of 15% of construction material shall be made up of re-used material or materials recycled locally with a possibility of further re-use or recycling at the building's end of life. This shall be enforced through the compliance certificate issued pursuant to the Development Planning Act (CAP 552), whereby no such certificate shall be issued unless proof on the use of such materials is provided.
3. By 2021, at least 25% of the granular material used for construction shall be made up of aggregates recycled locally in order to decrease the dependency on virgin aggregates. The percentage share of recycled aggregates used shall contribute towards attaining the 15% target for re-use and recycled materials as highlighted in indent (1). This shall also be enforced through the compliance certificate issued pursuant to the Development Planning Act (CAP 552), whereby no such certificate shall be issued unless proof on the use of such materials is provided.
4. By 2021, a minimum of 40% by weight of non-hazardous waste generated during demolition activities shall be prepared for re-use, recycling and /or other forms of material recovery (excluding backfilling operations), with a view to increase the minimum target to 55% by 2023. Information on the intended re-use and proposed materials destined for recycling shall be included in the pre-demolitions audits to be submitted prior to demolition works.

12 Enforce Recovery through Restoration of Void Spaces

The ERA in collaboration with the Planning Authority shall carry out an exercise to identify quarries, which have been declared as partly exhausted, exhausted or inactive, with the aim to restore such areas to their former state through backfilling operations.

The Government will provide support in the form of quarry restoration schemes to operators of excavation voids who want to restore inactive or exhausted quarry sites to high environmental standards.

13 Discourage Landfilling

A cost-benefit analysis will be carried out to determine the real cost of landfilling C&D waste, with a view of establishing a differentiated landfill gate fee for sorted and mixed C&D waste entering the landfill. This aims to discourage landfilling and encourage waste separation at source. This measure is also aimed at ensuring that void space at landfills is not used up by clean inert material that has the potential to be recovered.

14 Assess the Characteristics of the Offshore Spoil Ground

By the end of 2020, the ERA shall carry out a study on the physical, chemical and biological characteristics of the designated offshore spoil ground and its surrounding area, in line with the requirements in Measure KNO1 of the Malta's Second Water Catchment Management Plan. This study shall be undertaken in order to improve knowledge on the conditions of the site and carry out the necessary updates in policy related to dumping of waste at sea. Moreover, such study can help the ERA determine whether there is a need to extend the current location for disposal at sea from a point (with buffer) to a quadrant.

Further to the findings of this study, a cost benefit analysis shall be carried out to quantify environmental damage with the aim of determining the true cost of dumping at sea.

15 Explore the viability for land reclamation

The ERA will develop location selection criteria for potential areas for land reclamation, followed by an evaluation of the socio-economic, technical and environmental impacts associated with the feasibility and viability of land reclamation.

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CONCLUSION

This Strategy proposes concrete measures in the short and mid-term designed to make the change to a more circular economy, a reality. The successful implementation of this Strategy relies on proper enforcement of these measures and on the successful cooperation of all relevant stakeholders.

Whilst understanding that these measures may instill socio-economic effects, several aspects outlined in the Strategy would need to be taken into consideration for its successful implementation. The Government is calling on competent authorities, and enablers within the entire excavation, construction and demolition chain, and all relevant stakeholders, to commit to the implementation of such measures.

Without the participation of all enablers, this exercise will prove unsuccessful. Nonetheless, the Government shall commit itself to embark on exploring long-term measures within the sector.

