Waste Management in Building and Construction Projects
Agenda

CWM – Strategy
CWM – Objectives
Integrated Waste Management
NADAFA Program
Purpose of Waste Management in Building & Construction Projects
Waste Management Issues in Building & Construction Projects
Future Action for Waste Management in Building & Construction Projects
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C & D Recycling Facilities in Abu Dhabi Emirate
The Centre of Waste Management-Abu Dhabi

Established in December 2008, the Center is the lead agency responsible for controlling and coordinating waste management activities throughout the Emirate. This includes implementing the Waste Management Strategy and all aspects of service delivery required to establish a full cycle integrated waste management system inline with the Abu Dhabi 2030 strategy.

The Centre of Waste Management-Abu Dhabi-Strategy

- Provide best practices in the field of Waste Management and contribute to Sustainable Development to ensure better Health, Environment, and Economy in Abu Dhabi in line with Abu Dhabi 2030 Strategy.
- Divert waste away from landfill disposal and maximize resource recovery.
- Promote resource conservations, and maximize social and environmental benefits.
The Center of Waste Management - Abu Dhabi - Objectives

- Develop and implement an integrated waste management system, designed, constructed and operated to meet the highest international standards.
- Reduce waste production in the emirate through environmental awareness about waste minimization, re-use and recycling to achieve:
  1) 45% reduction by the end of 2012
  2) 70% reduction by 2015
  3) 80% reduction by 2018
- Establish an electronic database of all waste-related information for the Emirate to enable monitoring and planning.
- Monitor and Control all waste management activities to minimize or avoid pollution and health risks.
- To minimize the final disposal of waste to landfill by using the waste hierarchy and innovative practices and technologies.
Integrated waste management

**Disposal**
- Rehabilitation of landfill
- Operating and management of landfills

**Treatment**
- Treatment of hazardous and medical waste
- Treatment and disposal of waste non-recyclable
- Recycling of scrap cars and e-waste
- Green Waste Recycling
- The village of Abu Dhabi to recycle waste
- Recycling of used oils
- The recycling of tires

**Recycling construction and demolition waste**

**Rehabilitation of landfill**

**Collection and transport of waste**

**Disposal**
- Reduce waste production at source
- Encourage Waste Reduction from the Source
- Encourage Waste separation at source

**Information Center and Licenses**
- Development and modernization of the collection points
- Oversight and control
- Collection and transport

**Solid waste sorting stations**

**Public awareness**

**Public awareness**

**Oversight and control**

**Green Waste Recycling**

**Treatment**
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NADAFA Program

Established in accordance with Law No. (21) For the year 2005 on waste management in the Emirate of Abu Dhabi, Law No. (24) For the year 1999 on the protection and development of the environment, and the Executive Council decree 21/2010 regarding the implementation of waste tariff on the commercial, industrial, tourism ...etc. establishments in the emirate.

NADAFA Program represents a pioneering regional initiative lead by the Emirate of Abu Dhabi and supervised by the Center of Waste Management-Abu Dhabi, to ensure the efficient and sustainable use of natural resources towards a sustainable future.

It monitors, controls and records all waste related activities, using the waste hierarchy and innovative practices and technologies to tackle the challenge of the environmental and economic damages related to waste generation.
The purpose is to set up a best practice to deal with the waste generated from building & construction, Infrastructure and Labour camps Projects in the Emirates of Abu Dhabi which could turn as a role model for the construction industry for this part of the world.

Construction & demolition is the major waste stream for all region
Pressure: Construction activities account for 54 percent of all waste
Waste Management Issues in Building & Construction Projects

- Variation in the composition of C&D waste reaching landfills suggests the need for more effective segregation, to insure complete removal of incompatible materials, whether hazardous or non-hazardous.

- Municipalities will need to determine sites for landscaping and filling activities outside the sanitary landfills.

- Hazardous wastes resulting from construction or demolition sites should not be mixed with other inert materials, and should always be handled by Environmental Service Providers (ESPs) permitted by CWM.

- Recyclable materials must be recycled and reused.

96.7 % Waste was disposed at landfill; Recycling & Composting was 3 % only.

Source: Center of Waste Management 2008 / 2009
Future Action for Waste Management in Building & Construction Projects

• To avoid and minimise environmental and health pollution risks associated with the storage, collection, transport, handling, re-use, recycling and disposal of C&D debris in the Emirate of Abu Dhabi.

• To eliminate the illegal dumping of C&D debris.

• To provide alternative systems for the processing, re-use and recycling of C&D debris in order to promote resource conservation, enhance carbon footprint initiatives and to minimise the disposal of C&D debris to landfill.

• To implement a C&D debris management system to ensure that the management of C&D debris is always controlled and environmentally safe, flexible, and economically viable under local conditions.

• To enhance the environmental knowledge and awareness related to the C&D debris among the individuals and the generators.
Benefits of Recycling C & D Waste

Cost Reduction
Many of the contractors have made changes to their operations and practices to take advantage of reduced waste disposal costs and revenues derived from recycle, reuse and salvage materials. Utilizing reuse and salvage methods on site reduce the need for new materials, reduces materials that end up in the landfill, creates a cleaner and safer project site, and improves community relations.

Environmental Benefits
In the long run, preventing waste reduces dependence on natural resources such as trees, oil, and minerals plus creates less pollution by reducing manufacturing and transportation related emissions. Reduction of the energy and water required to produce building supplies from virgin materials contributes to reduced greenhouse gasses related to the manufacturing and transportation of those materials.
# C & D Recycling Facilities in Abu Dhabi Emirate

## Center of Waste Management (CWM):

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<th>Capacity</th>
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