Construction Leadership Council

The Green Construction Board

Launch of the Green Construction Board
Zero Avoidable Waste Routemap

22nd July, 2021

Agenda

11.00	Welcome and Introduction: David Pinder, Chair of GCB
11.10	Waste and Resource Priorities: Maya DeSouza, Head of the Resource Efficiency Waste Prevention Team in Defra Resources & Waste Division
11.20	Background to the Routemap: Rob Pearce, Chair of GCB Resources & Waste Task Group
11.30	ZAW Routemap Presentation: Katherine Adams, Consultant, Reusefully
12.10	Q&A Session
12.30	Finish

Welcome and Introductions

David Pinder

Chair of Green Construction Board

Waste and Resource Priorities

Maya DeSouza

Head of the Resource Efficiency Waste Prevention Team in Defra
Resources & Waste Division

Background to the Routemap

Rob Pearce

Chair of GCB Resources & Waste Task Group

The Zero Avoidable Waste in the Construction Sector Routemap

Katherine Adams

on behalf of the GCB

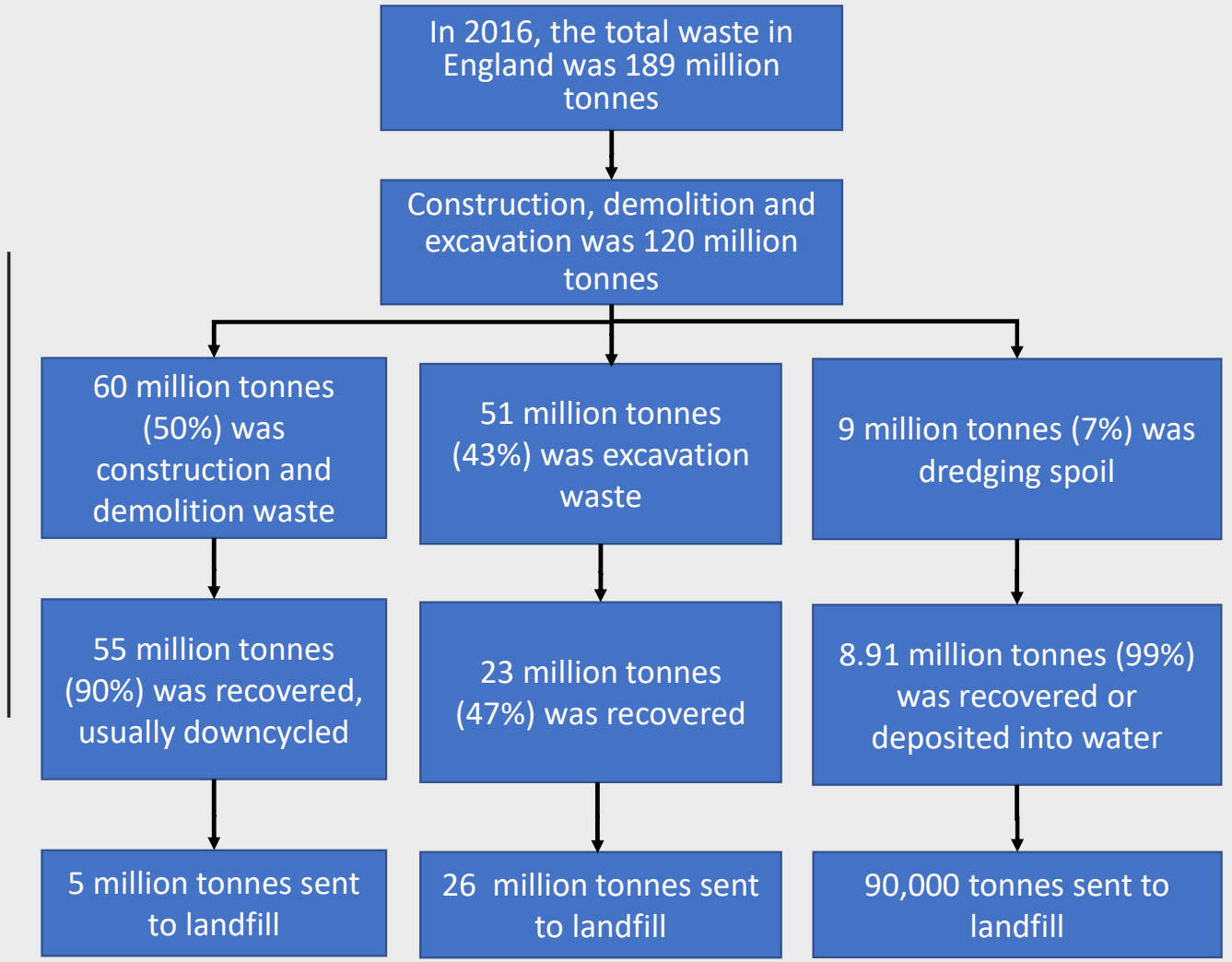
Background

- Supports the Resources and Waste Strategy, published in 2018 which aims '*to eliminate avoidable waste of all kinds by 2050*'
- A key action in the consultation of the Defra Waste Prevention Programme
- Developed a working interpretation and a background paper exploring the factors
- Funded by BEIS, supported by Defra
- Work undertaken by the Green Construction Board Resources and Waste Task Group
  - Group of industry experts who have in-depth knowledge and expertise of resource use and waste in the construction sector

Zero Avoidable Waste in construction means **preventing** waste being generated at **every stage** of a **project's lifecycle**, from the manufacture of materials and products, the design, specification, procurement and assembly of buildings and infrastructure through to deconstruction. At the end of life, products, components and materials should be recovered at the **highest possible level** of the **waste hierarchy**, i.e. reused before being recycled, whilst ensuring **minimal environmental impact**.

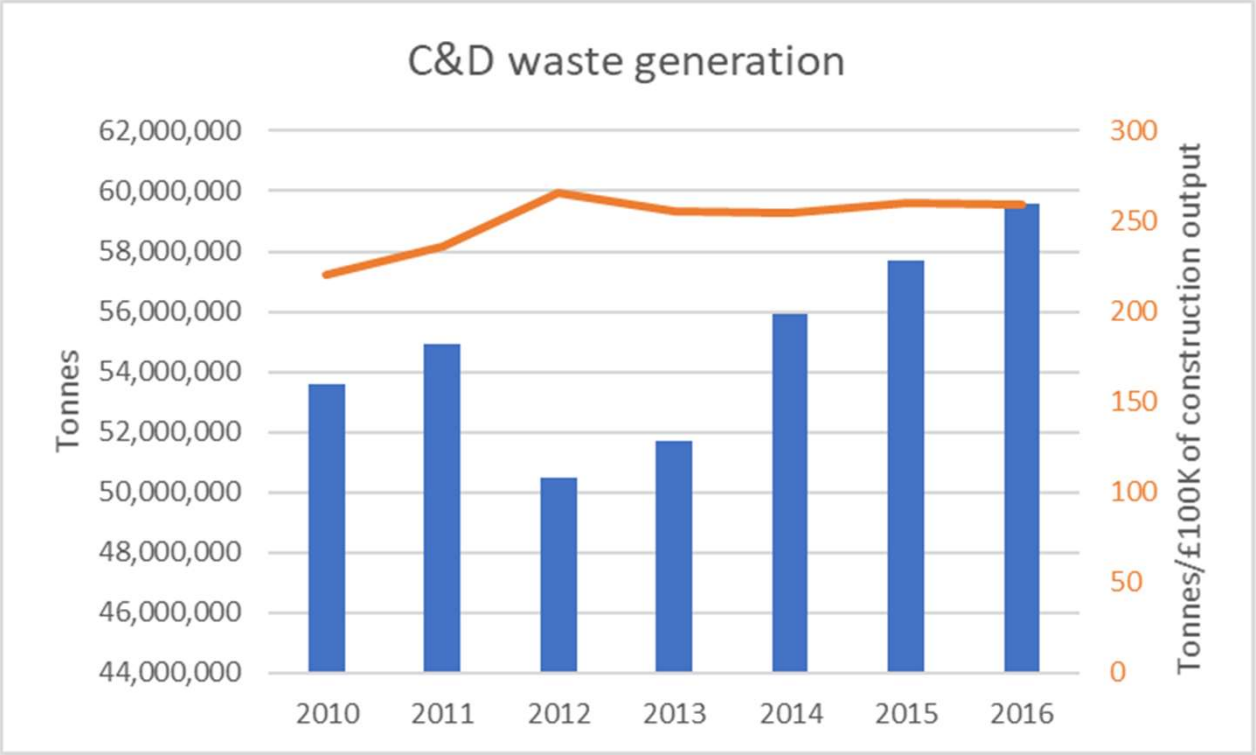
Some stats

(based on Defra figures)

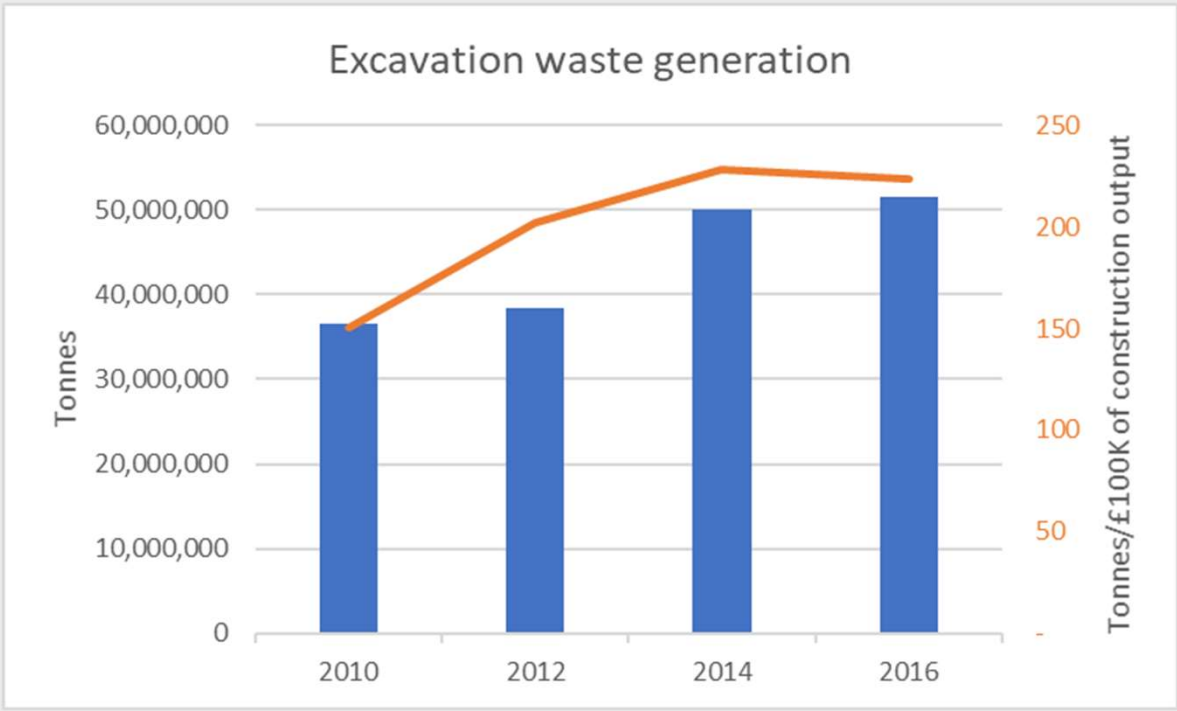


Waste arisings	Considerations
Waste from manufacturing activities	Process dependant, it will often be reused back into the process. This includes waste from offsite manufacturing factories.
Excavation waste	Largely soils, coming from the groundworks of construction projects or infrastructure projects; some opportunities to reduce from cut and fill.
Construction waste on construction sites	Generated from the installation of products and use of temporary systems. Wastage may occur for a variety of reasons such as over-ordering, poor storage, design changes and workmanship. Packaging waste is also produced.
Fit-out waste and refurbishment waste	Includes elements that are defined as construction products such as plasterboard, doors and joinery and those that are not such as light fittings, HVAC etc. This includes wastes from products being taken out as well as waste from the installation of new products including packaging.
Demolition waste	Most of this (around 80%) is inert and half of the inert waste is estimated to be reused on site. Some of this cannot be avoided such as certain hazardous waste, for example asbestos or legacy wastes.
Existing buildings	Demolition waste is avoidable if the building lifetime is extended or elements of the buildings are reused.
New buildings	Be designed to be flexible, adaptable and long lasting. At the end of their life, demolition waste may be avoided through designing for deconstruction and subsequent reuse.

Construction & Demolition Waste Generation



Excavation Waste Generation



Landfill Tax cost

- Excavation waste
  - Landfill tax costs for soils landfilled in 2019: £81 million (this does not include any other costs)
- Construction and demolition waste
  - Landfill tax costs for C&D waste landfilled in 2019: £54 million (this does not include any other costs and waste sent to landfill from waste transfer stations that may be from the construction sector).
- Landfill tax costs total: **£135 million/year**

True cost of waste for construction waste

- Recent study for Zero Waste Scotland suggested that 'The true cost of waste' (materials, labour, rework, skip hire and VAT) is £1619 for 8 cu yard skip.
- This is equivalent to £827/tonne
- Applying this figure to **new build construction waste** (around 14 million tonnes) is **£11 billion per year***

*Note this assumes that all the waste leaves as mixed waste

Carbon cost

- Approximately **145,000 of tonnes/CO_2e** from landfilling CD&E waste per year
- The embodied carbon in the materials wasted from **new build construction** is approximately **3.3 million tonnes/CO_2e*** per year

* Cradle to gate; assumes no recycled content

Routemap targets

- The overall target is for ‘zero avoidable waste (ZAW) in the construction sector by 2050’.
- Other targets include:
  - By 2030 costs are reduced by 10% through designing out waste and material optimisation.
  - By 2040 eliminate all but hazardous C&D waste entering landfill
  - By 2040 reduce soil to landfill by 75% based on a 2020 level and by 2050 this should be zero unless required for landfill operation purposes.
- Other targets are likely to be set for waste reduction and recovery etc

Routemap guiding principles

- Prevent materials, products or components from becoming waste in line with the waste hierarchy.
- If waste cannot be prevented then the secondary objective is for waste to be kept at its highest level by following the waste hierarchy.
- It is intended to progress the implementation of a circular economy, with materials flowing round the economy.
- Choices should be based on life cycle assessment
- The design life of a project should inform the choice of the materials, components, and elements
- Providing for adaptability in buildings and infrastructure is a fundamental principle

Routemap scope

- Construction, demolition and excavation waste
- All stages of the lifecycle where these wastes are produced
- Building and infrastructure
- All parts of the supply chain
- Small and larger companies
- Material agnostic
- Material, product and buildings
- England focus

Routemap content

- Interactive pdf and printable pdf version
- 6 themes with 17 aims
- 106 actions (Industry and Government)

- Each aim has
  - Actions (2020s, 2030s and 2040s)
  - Act now
  - Context
  - What else would advance the delivery of this ambition?
  - Guidance

The routemap

Demo of the routemap

Question and Answer Session

Please put your questions in the Q&A

Construction Leadership Council

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Thank you

The Routemap can be downloaded at:

https://www.constructionleadershipcouncil.co.uk/news/zero-avoidable-waste-routemap-launch/