Net Zero Innovation
Programme 2020/21

Procurement tools to measure and reduce carbon emissions

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The Challenge: Cambridgeshire CC scope 3 emissions by 50.4% by 2030

Problem	Project Objectives	Solution
No transparent, uniform and robust mechanism to measure emissions across the range of goods/services delivered	To provide a mechanism to **enable Scope 3 emissions to be measured**	 Carbon Calculator
No mechanism to leverage carbon reductions from procurements	To develop with suppliers a standardised **mechanism to demonstrate carbon reductions**	
No mechanism to enable suppliers to clearly see the Council's expectations on the environment and demonstrate their contributions	To **establish working relationship with suppliers** aimed at reducing emissions and **enable suppliers to demonstrate their contributions**	 Code of practice
No mechanism to enable staff to make procurement decisions based on environmental or carbon considerations	To provide a mechanism for staff to **make decisions based on environmental considerations** e.g. air quality impact	

Our Solution

Carbon Calculator

Quantitative

- For completion during the procurement process, allowing **data collection** and providing a **mechanism to compare**
- For longer term contracts, to provide a consistent baseline to which **KPI reductions can be contractually set**
- **Develop with suppliers** and contract managers for two types of supply chain:

  Construction/Highways

  Waste Management

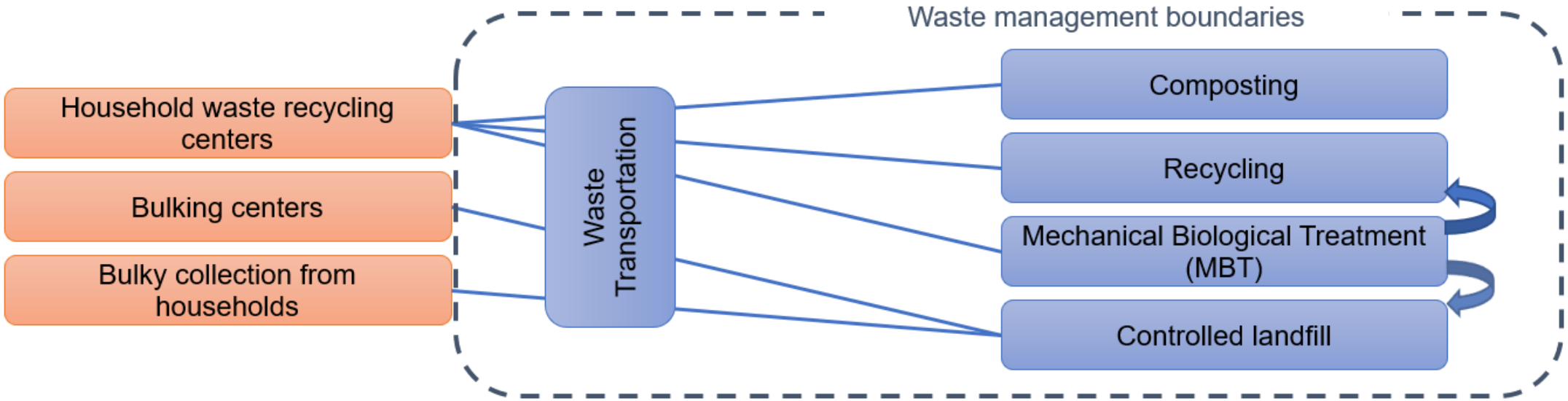
Code of practice

Qualitative

- To set out the Council's **environmental ambitions**
- To provide a qualitative assessment tool to **enable suppliers to demonstrate action** beyond carbon reduction
- Develop internally with senior management and Members to understand what our key environmental ambitions are

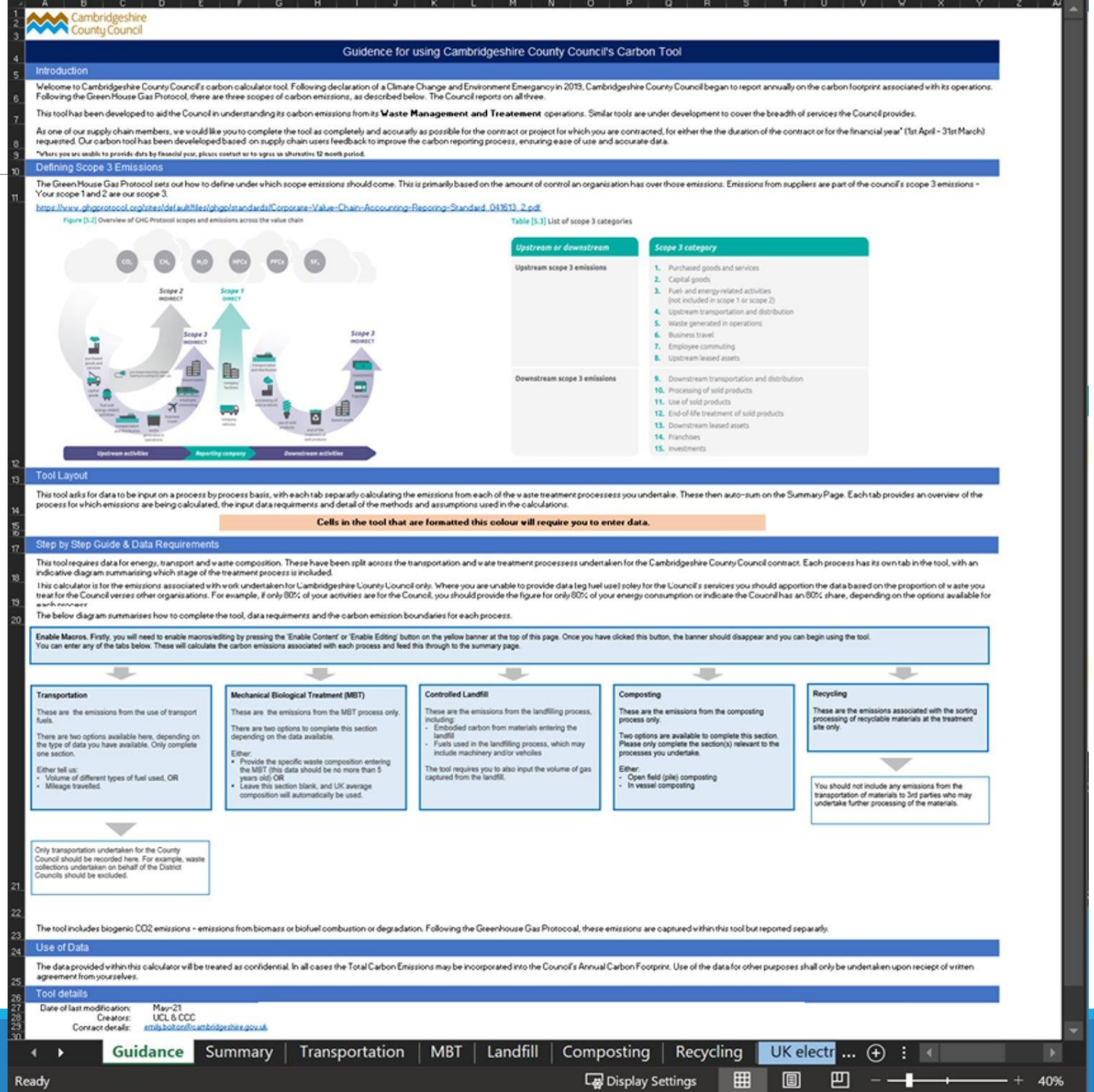
The Waste GHG calculator

- Co-designed with the council and its suppliers
- Modular structure
  - Tailored to Cambridgeshire County Council's waste management operations
  - Each module corresponds to a specific waste treatment
  - Easy to add new modules



The Waste GHG Calculator

- Structure of the tool
  - Guidance
  - Summary page
  - Calculation sheets
  - Background data sheets (blue labels)



Cambridgeshire County Council

Guidance for using Cambridgeshire County Council's Carbon Tool

Introduction

Welcome to Cambridgeshire County Council's carbon calculator tool. Following declaration of a Climate Change and Environment Emergency in 2019, Cambridgeshire County Council began to report annually on the carbon footprint associated with its operations. Following the Green House Gas Protocol, there are three scopes of carbon emissions, as described below. The Council reports on all three.

This tool has been developed to aid the Council in understanding its carbon emissions from its **Waste Management and Treatement** operations. Similar tools are under development to cover the breadth of services the Council provides.

As one of our supply chain members, we would like you to complete the tool as completely and accurately as possible for the contract or project for which you are contracted, for either the the duration of the contract or for the financial year* (1st April - 31st March) requested. Our carbon tool has been develeloped based on supply chain users feedback to improve the carbon reporting process, ensuring ease of use and accurate data.

*Where you are unable to provide data by financial year, please contact us to agree an alternative 12 month period.

Defining Scope 3 Emissions

The Green House Gas Protocol sets out how to define under which scope emissions should come. This is primarily based on the amount of control an organisation has over those emissions. Emissions from suppliers are part of the council's scope 3 emissions - Your scope 1 and 2 are our scope 3.

https://www.ghgprotocol.org/sites/default/files/ghgp/standard/Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf

Figure [5.2] Overview of GHG Protocol scopes and emissions across the value chain

Table [5.3] List of scope 3 categories

Upstream or downstream	Scope 3 category
Upstream scope 3 emissions	1. Purchased goods and services 2. Capital goods 3. Fuel- and energy-related activities (not included in scope 1 or scope 2) 4. Upstream transportation and distribution 5. Waste generated in operations 6. Business travel 7. Employee commuting 8. Upstream leased assets
Downstream scope 3 emissions	9. Downstream transportation and distribution 10. Processing of sold products 11. Use of sold products 12. End-of-life treatment of sold products 13. Downstream leased assets 14. Franchises 15. Investments

Tool Layout

This tool asks for data to be input on a process by process basis, with each tab separatly calculating the emissions from each of the waste treatment processess you undertake. These then auto-sum on the Summary Page. Each tab provides an overview of the process for which emissions are being calculated, the input data requirments and detail of the methods and assumptions used in the calculations.

Cells in the tool that are formatted this colour will require you to enter data.

Step by Step Guide & Data Requirements

This tool requires data for energy, transport and waste composition. These have been split across the transportation and wate treatment processess undertaken for the Cambridgeshire County Council contract. Each process has its own tab in the tool, with an indicative diagram summarising which stage of the treatment process is included.

This calculator is for the emissions associated with work undertaken for Cambridgeshire County Council only. Where you are unable to provide data (eg fuel use) soley for the Council's services you should apportion the data based on the proportion of waste you treat for the Council verses other organisations. For example, if only 80% of your activities are for the Council, you should provide the figure for only 80% of your energy consumption or indicate the Council has an 80% share, depending on the options available for each process.

The below diagram summarises how to complete the tool, data requirments and the carbon emission boundaries for each process.

Enable Macros. Firstly, you will need to enable macros/editing by pressing the 'Enable Content' or 'Enable Editing' button on the yellow banner at the top of this page. Once you have clicked this button, the banner should disappear and you can begin using the tool.
You can enter any of the tabs below. These will calculate the carbon emissions associated with each process and feed this through to the summary page.

Transportation

These are the emissions from the use of transport fuels.

There are two options available here, depending on the type of data you have available. Only complete one section.

Either tell us:
- Volume of different types of fuel used, OR
- Mileage travelled.

Only transportation undertaken for the County Council should be recorded here. For example, waste collections undertaken on behalf of the District Councils should be excluded.

Mechanical Biological Treatment (MBT)

These are the emissions from the MBT process only.

There are two options to complete this section depending on the data available.

Either:
- Provide the specific waste composition entering the MBT (this data should be no more than 5 years old) OR
- Leave this section blank, and UK average composition will automatically be used.

Controlled Landfill

These are the emissions from the landfilling process, including:
- Embodied carbon from materials entering the landfill
- Fuels used in the landfilling process, which may include machinery and/or vehicles

The tool requires you to also input the volume of gas captured from the landfill.

Composting

These are the emissions from the composting process only.

Two options are available to complete this section. Please only complete the section(s) relevant to the processes you undertake.

Either:
- Open field (pile) composting
- In vessel composting

Recycling

These are the emissions associated with the sorting processing of recyclable materials at the treatment site only.

You should not include any emissions from the transportation of materials to 3rd parties who may undertake further processing of the materials.

The tool includes biogenic CO2 emissions - emissions from biomass or biofuel combustion or degradation. Following the Greenhouse Gas Protocol, these emissions are captured within this tool but reported separatly.

Use of Data

The data provided within this calculator will be treated as confidential. In all cases the Total Carbon Emissions may be incorporated into the Council's Annual Carbon Footprint. Use of the data for other purposes shall only be undertaken upon reciept of written agreement from yourselves.

Tool details

Date of last modification:	May-21
Creators:	UCL & CCC
Contact details:	emily.bolton@cambridgeshire.gov.uk

Guidance | Summary | Transportation | MBT | Landfill | Composting | Recycling | UK electr ...

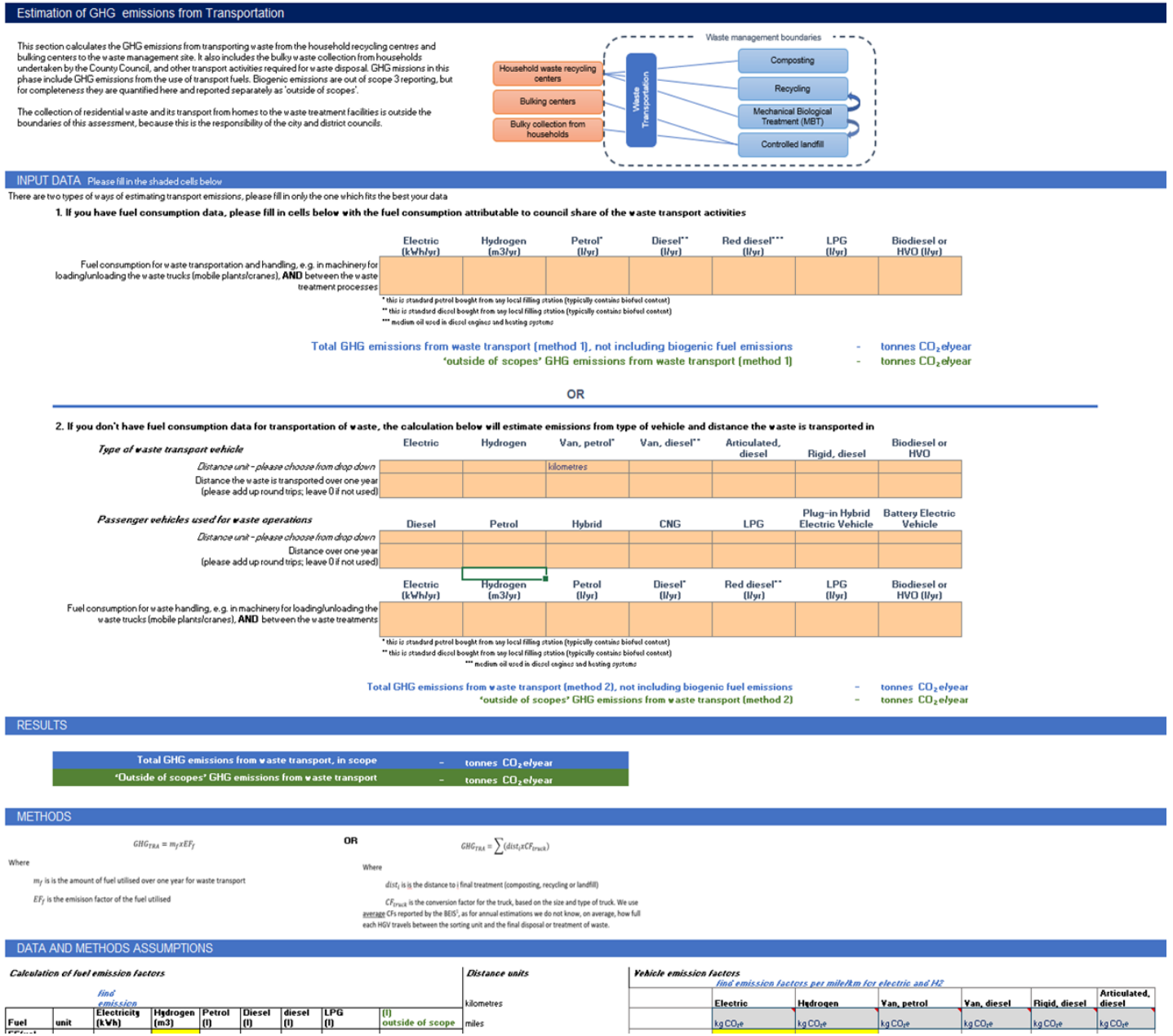
Ready | Display Settings | 40%

UCL Cambridgeshire County Council

Taking a closer look

e.g. Waste transportation GHG emissions estimation

- Description of the module
  - Text
  - Highlighted module on the system boundary diagram
- Data input section
  - User to fill in orange shaded cells
  - Flexible depending on availability of data, e.g. fuel type and amount vs type of vehicle and distance
- Calculation method
  - Specified within the tool for maximum transparency
  - Follows IPCC Waste treatment and GHG Protocol guidelines
- Data sources
  - Primarily supplier data
  - Emission factors from BEIS/other trustable and regularly updated datasets
  - Proxies/averages based on national averages



Calculator results

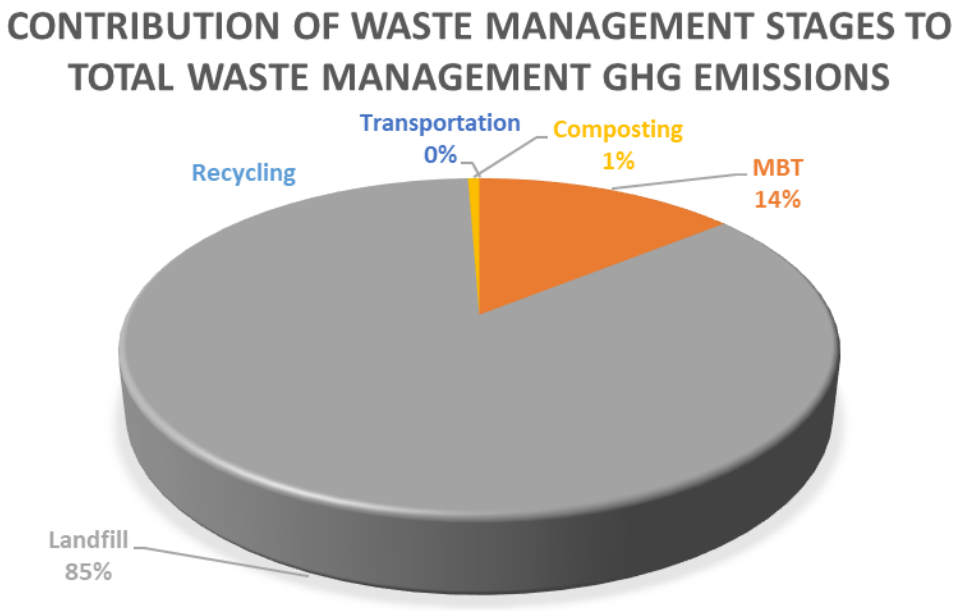
2 types of results

- GHG emission from each waste treatment

RESULTS		
Total GHG emissions from recycling per year	-	kg of CO_2e/year
'Outside of scopes' GHG emissions	-	kg of CO_2e/year

  - "Outside of scopes" GHG emissions are carbon dioxide (CO_2) emissions from burning biomass and biofuels. As per current accounting rules their impact is considered net zero, but they need to be documented.

- Overall results
  - Total per year – scope 3 emission reporting
  - Contribution analysis – guide measures for emission reduction



The Impact

Kicked off the conversation

- Gave something tangible to coalesce talks internally
- Supported conversations with our suppliers
- Triggered sharing of ideas and knowledge with other LAs

Opened our Eyes

- To suppliers' challenges for delivering carbon reductions.
- Capacity challenges for smaller suppliers
- Challenges of leveraging change through tenders with limited supplier pool

Support those without carbon expertise

- Reduces the need to understand carbon
- Introduces language of carbon accounting in a structured way

Highlights the scale of the challenge

- e.g. how long emissions from landfill will continue into the future
- Where we can make decisions now for best future
- Benefits of specific data - gives opportunity for identifying best practice

Lessons Learnt: Project

Ask the right questions & Keep It simple

- There's no point if the tool it too complicated for anyone to use!

Everyone* has Carbon on their mind

- All parties wanted to progress to net zero
- The ambition is there but further resources to create and maintain the collaborative space is needed

Don't reinvent the wheel

- Understand what already exists
- Share learning to ensure a co-beneficial process
- Some suppliers are ahead of us – we can learn from them

Lessons Learnt: Partnerships

Know what you want to achieve and be clear about it

- Clear definition of scope and outcomes to ensure adequate planning and progression
- Diverging from the original outputs may happen but it is essential to stay mindful of the original outcomes

Speak to each other

- Collaborative working possible and profitable if you define roles and expectations.
- Regular communication, both formal and informal, is essential

It always take longer than you think

- Third Parties were essentially volunteering their time - the timelines of the NZIP project does not apply to them

"But, what's in it for me?"

- Involving all key stakeholders in the project at the earliest stage to encourage buy-in is key.
- When engaging, start with the bigger picture - helps them to find hooks to link to their own work

Next Steps

- Follow up project – NZIP Accelerator
- Working with other LAs to further develop the tools to:
  - Make more applicable to a wider range of authorities – i.e. Not so Cambridgeshire specific
  - Introducing other waste treatment modules to encompass processes not yet incorporated
- Hope to make the tools available via the LGA for use - towards the end of the year