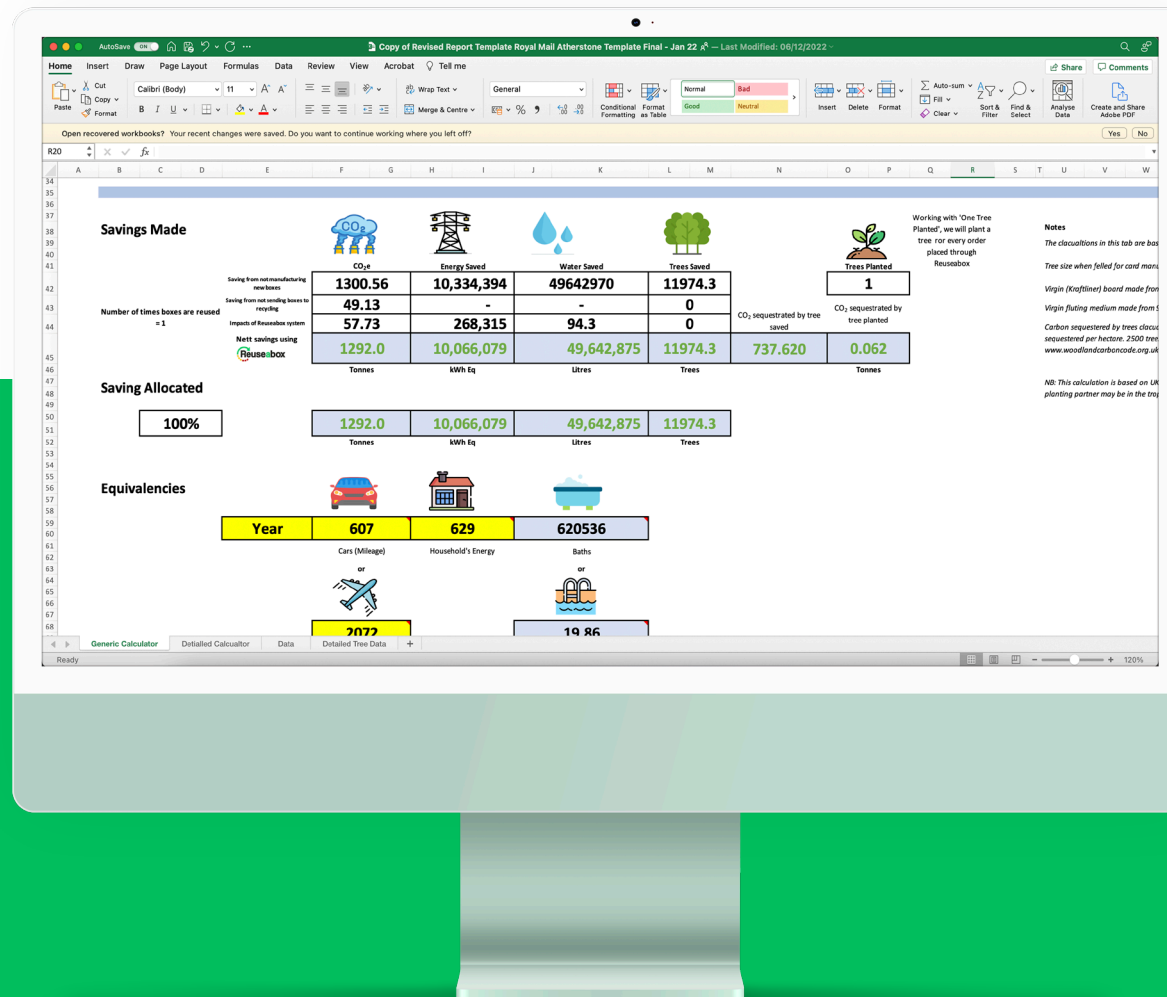


# **THE REUSEABOX ENVIRONMENTAL TOOL**

# WHAT IS THE TOOL?

The Reuseabox Environmental Tool is an excel-based calculator that can be used to assess the environmental savings achievable through the reuse of cardboard boxes compared to purchasing new boxes.



# WHO DEVELOPED THE TOOL?

The tool was developed for Reuseabox by Circular Economy and Carbon Measurement specialist consultancy Eco3 Design Ltd, and Dr Lan Qie at Lincoln University.



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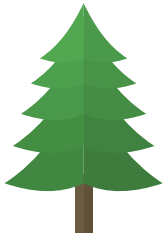
**MIDLANDS  
ENGINE**  HM Government



# WHAT DOES THE TOOL DO?

**The tool measures the environmental savings that can be achieved by re-using cardboard boxes instead of disposing of them.**

**The savings are presented as 4 specific measures:**



## TREES SAVED

**a measure of the equivalent number of trees needed to make the raw material used in the cardboard boxes**



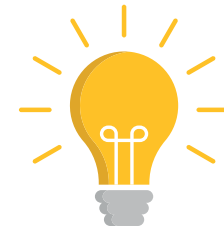
## WATER

**a measure of the total water resources used during the manufacture of a product measured in litres**



## CARBON

**a measure of global warming potential measured by weight of equivalent CO<sub>2</sub> (tonnes)**



## ENERGY

**a measure of the total primary energy input for the generation of a product measured in kWh equivalent**

**The tool includes the impacts of the collection, storage and delivery of reused boxes.**

# TOOL CALCULATION PRINCIPLES

**The calculations in the tool follow a 'life-cycle' principle and includes impacts of materials, transport, storage (at Reuseabox's facility) and final disposal (recycling).**

**The tool has been developed in line with standards such as the GHG Protocol and PAS2050.**

# TOOL DATA

**The environmental impact data in the tool comes from independent, third party, peer reviewed commercial databases and the information relating to the number of trees was developed in collaboration with Lincoln University.**

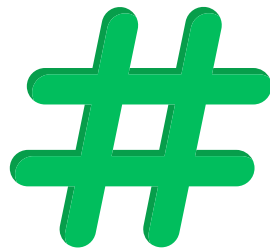
**The third-party environmental impact data is updated every 12 months and therefore the results generated by the tool may change over time to reflect these updates.**

# WHAT INFORMATION IS NEEDED TO USE THE TOOL?

To undertake a calculation the tool requires a number of inputs:



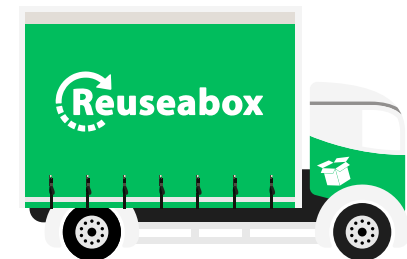
**Box specification,  
weight and  
material type**



**Total number  
of boxes**



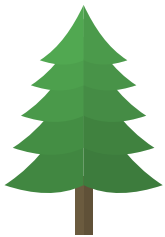
**Collection  
and delivery  
postcodes**



**Type of  
transport used  
for collection  
and delivery**

# HOW DOES THE TOOL PRESENT RESULTS?

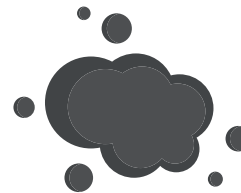
The tool presents results as 4 discrete measures:



Trees saved



Water saved



CO2 Saved



Energy saved

The last three results are also presented in terms of 'equivalents.' These equivalents take the impact results and presents them in terms of equivalent measures that might be more understandable to non-experts. These are:



CO2e as equivalent miles driven in an average family car. The saving is presented as the equivalent number of cars taken off the roads for the defined period of time.



CO2e as equivalent standard class seats on return flights from London to New York.



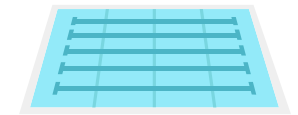
CO2e as equivalent HGVs taken off the road for a year.



Energy as the number of average UK households that would use the same amount of energy in a year (gas and electricity).



Water as the number of 80 litres bathtubs that could be filled with the same amount of water.



Water as the equivalent number of Olympic-sized swimming pools.

# TOOL ACCURACY

The Reuseabox Environmental Tool is a screening tool that presents an assessment of the environmental savings that can be achieved through the reuse of boxes using inputs provided by the user.

It does not conduct a full Life Cycle Assessment that is compliant with ISO standards.







[WWW.REUSEABOX.CO.UK/SUSTAINABILITY](http://WWW.REUSEABOX.CO.UK/SUSTAINABILITY)