



Supporting the Funeral Industry on the **road to Net Zero**

A Life Cycle Assessment (LCA) analysis of the funeral care supply chain presenting opportunities for regulatory intervention to decarbonize the funeral industry.



Achieving the UK's net zero target by 2050 will require concerted and targeted actions from Government and the various industries in the private sector.

As one of the key industries in the UK - worth £2.7bn, Ibis World, February 2023, the funeral industry can have a significant impact on the UK's overall carbon footprint, and a compelling role to play in helping to meet net zero by 2050 as well as the interim target of 50% reduction by 2030 to limit warming to 1.5°C to avoid the catastrophic impacts of climate change.

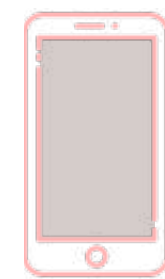
Yet the industry is not currently informed or supported to fully understand the impact of its activities or ways to reduce it. Full Circle Funerals, the first B Corp accredited funeral company in the UK, approached Planet Mark for support in generating the first open-sourced,

independently verified data to quantify carbon emissions associated with different funeral options in the UK.

The report was funded by the community via Crowdfunding - raising over £20k in 20 days, reflecting the community and consumer interest in independent and impartial research. People in and out of the industry can then rely upon these to help them make better informed decisions.

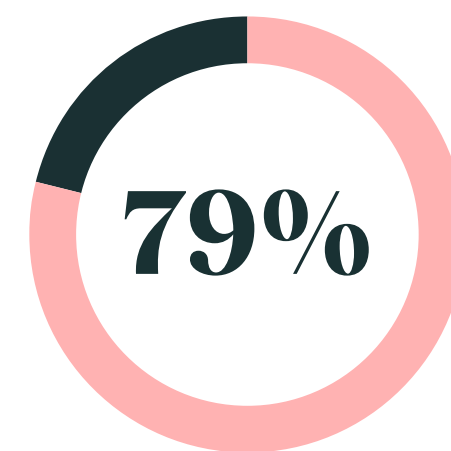
Although the scope is limited to the analysis of two main activities: the variety of coffins, and the main body disposal methods practised across the UK - the report provides sufficient data that can support industry bodies and policy makers in creating a carbon reduction strategy that supports funeral care providers on their road to net zero by 2050, thus helping achieve the UK Government targets.

The estimated **carbon** emissions per funeral in the UK can amount to **400kg** of CO₂e



That's equivalent to charging more than **48,000 smartphones.**

Cremation was chosen by **79%** of people in the UK in 2020.



44%

That's a **44%** increase in cremations over the last 60 years.

IN 2022, THE FUNERAL ACTIVITIES INDUSTRY

Was the **UK's 1st ranked 'other services'** industry by market size.

A call to action

There is a prevalent need for clear and consistent guidance to develop adequate regulation and policies tailored to the industry and that supports the decarbonisation process.

The following key recommendations reflect the top insights gathered through the deployment of life-cycle analysis on coffin manufacturing processes and body disposal choices; relevant carbon footprint calculations and subsequent peer review contributions to the findings:

- Regulators can review the footprint of particular materials and encourage development of legislation that phases out the most harmful materials, and provides a roadmap for replacement for a suitable sustainable alternative over a period of time.

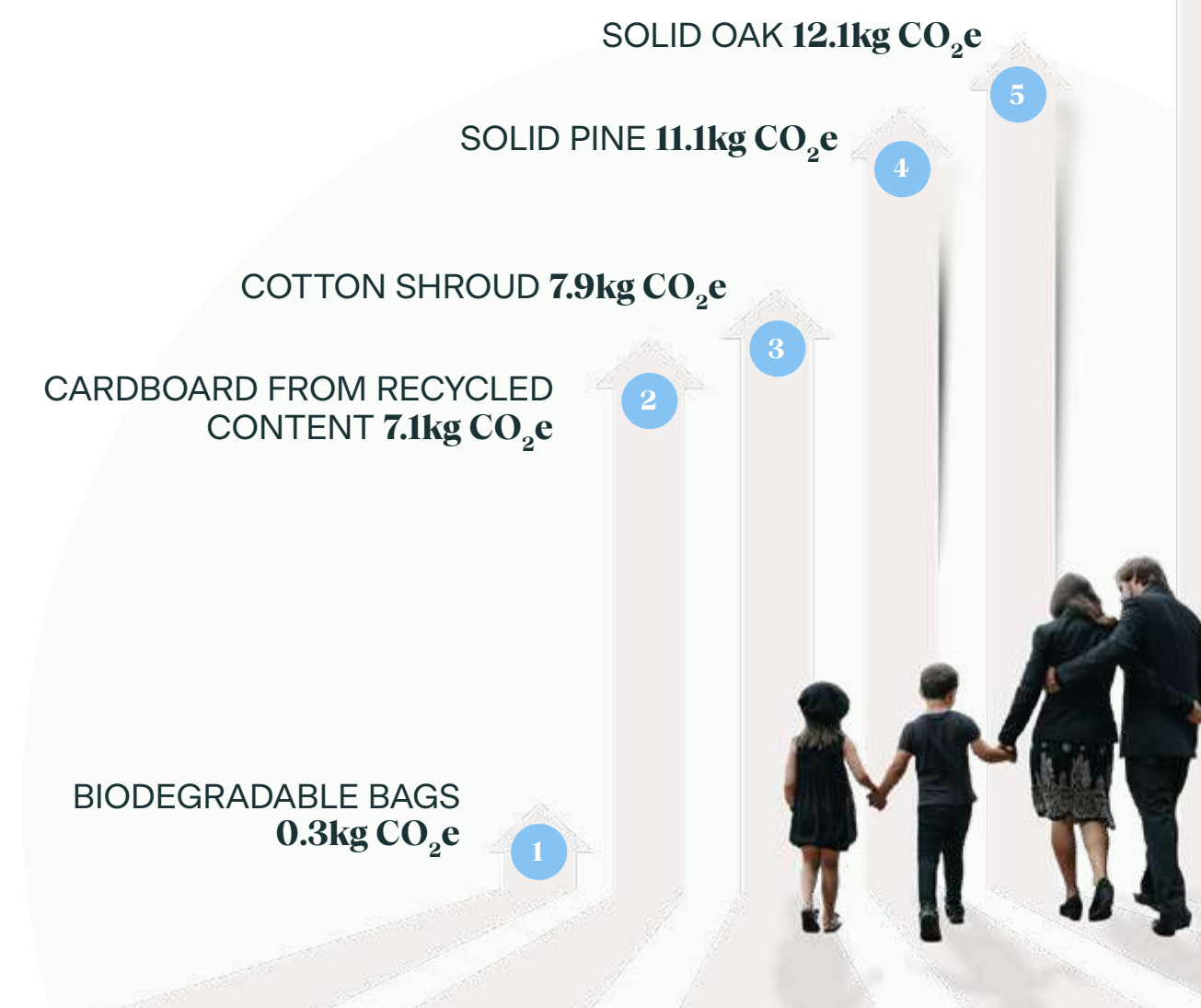
Specifically, the results indicate the imperative for regulators to review and phase out long-term use of natural gas powered flame cremation.

- Engage industry bodies and trade associations in further research to expand and build on the findings in this report. A full list of Constants, Exclusions and assumptions has been provided in the main report (p. 29-30) and include pertinent aspects that require deeper research, such as provision of floral tributes, food & drink, transportation on the day etc.
- Engage industry bodies and trade associations in the swift update of regulation and policy to develop a sustainable Standard that supports efforts from the funeral industry to decarbonise.
- Incentivise and provide the industry with the tools to reduce carbon emissions. Develop access to funding and financial incentives that help the funeral industry to act on compliance in a timely manner and accelerate deployment of low-carbon solutions, such as greener tax incentives like the Environmental tax credit proposed by BIMA.

1. Coffins

THE 5 MOST SUSTAINABLE COFFIN OPTIONS, ANALYSED

Traditional coffins are often made from materials that are not sustainable, such as hardwoods, metals, or plastics. However, there are several more **sustainable options** available that can help reduce the environmental impact of burial.



Other coffin options available

- 6. Wooden Shroud (100% sheeps wool) | **13.2kg CO₂e**
- 7. Woollen Textile with cardboard sides & MDF base | **14.9kg CO₂e**
- 8. Cardboard with MDF base | **15.3kg CO₂e**
- 9. Bamboo from Vietnam | **23kg CO₂e**
- 10. Wicker (British Willow) | **28.7kg CO₂e**
- 11. Oak Veneer, Chipboard sides & base | **31.3kg CO₂e**
- 12. Oak Veneer, Chipboard sides & MDF base | **31.6kg CO₂e**
- 13. Elm Veneer, Chipboard sides & base | **32.4kg CO₂e**
- 14. Vinyl wrapped MDF | **32.9kg CO₂e**
- 15. Mahogany Veneer, Chipboard sides, MDF base | **37.3kg CO₂e**

2. Committal

OPTIONS FROM BEST
TO WORST

The carbon emissions associated with natural and traditional burials are minimal to very small, with Natural Gas Cremation the process with highest emissions, due to the energy consumption required. The latest alternative of Resomation, presents opportunities for reduced energy use, however the impact associated with chemicals used in effluent disposal was not available for us to analyse at this time.

It's important to consider that advances in the use of renewable energy and biofuels can support a reduction in emissions from these processes. Investment and development research to assess how best to harness these advances in technologies, is urgently needed to support the industry and end users in their choices. As previously mentioned, the multiple variables and combinations can make a significant difference on the overall impact, and therefore having access to clear and reliable information is crucial for both funeral practitioners and the general public.

High
CO₂e

Natural gas cremation

126kg CO₂e

Highly intense process due to energy required to reach combustion. This has the highest carbon footprint for the energy consumption stage of the life cycle. In addition to this, the air pollution associated is likely to be significant. However, This can be carried out more sustainably if fuelled by electricity from a sustainable source.

Resomation

20kg CO₂e

Using the chemical process of alkaline hydrolysis to reduce the body to organic matter, with no tissue residual. Although this method has low carbon emissions associated with it, this report did not analyse the impact of chemicals used or effluent disposal, as there is no publicly available data on these aspects.

Traditional burial

4.1kg CO₂e

While the immediate carbon emissions associated with this method are small, the use of fuel-powered machinery for digging results in a key contribution (4.1kg CO₂e). Unlike natural burial, (shallower and allows organisms to aid decomposition) it may take around 100 years for the body to fully degrade.

Natural burial

0.kg CO₂e

Interment of the body without chemical intervention, to allow decomposition through a natural process with minimum impact and likely over a shorter period of time. There is minimal release of CO₂ into the atmosphere as the carbon is sequestered into other living organisms.

Low
CO₂e

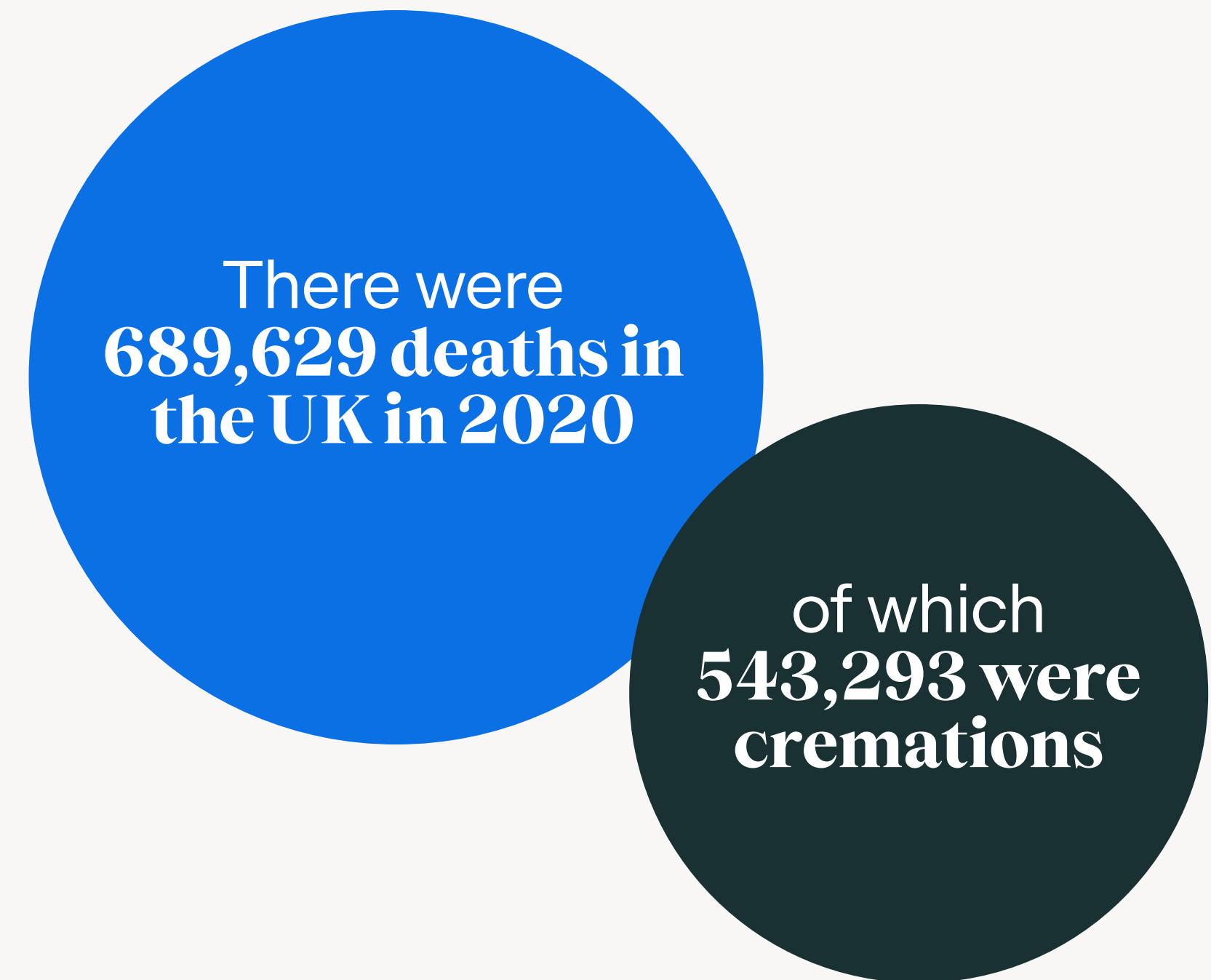
Understanding the Collective Impact

The emissions may not seem significant when considering one individual funeral, however when analysed collectively the impact is massive.

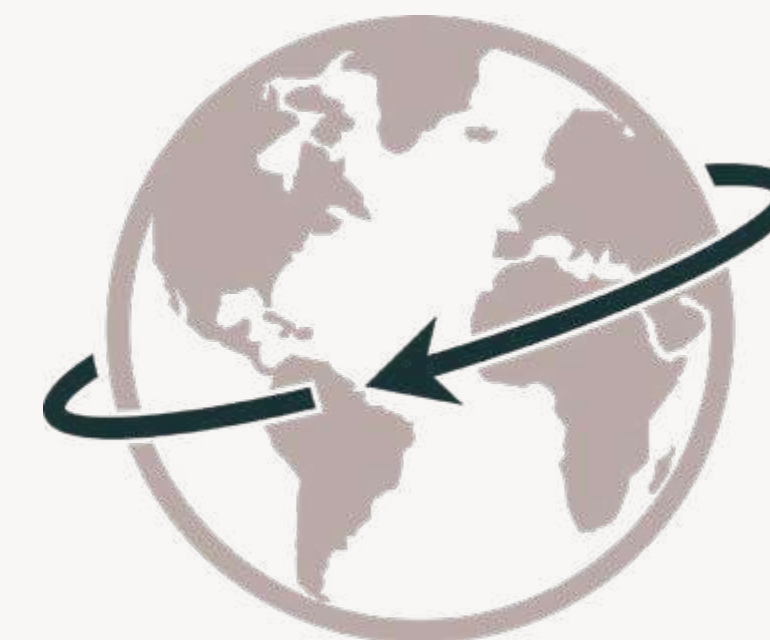
The adjacent graphic puts into perspective the emissions produced by one body disposal vs the emissions that could potentially be saved if collectively more conscious choices were made.

Adopting a holistic approach that takes into consideration not only the material processes involved, but also the influence from the cultural,

religious and personal preferences in funeral choices is a key factor in this process, as many variables and personal decisions can affect the overall impact. Assisting the wider industry, including engaging with manufacturers and suppliers and supporting further research and sharing findings, can help funeral practitioners to offer options that help consumers in making informed decisions.



Collectively, we can reduce more than **400 thousands tonnes of carbon** emissions by choosing consciously.



That's equivalent to the emissions generated by an average **family car driving around the earth's equator** more than **59,000 times**.

Ensuring a **just transition** into a net zero economy

Conclusion:

To ensure a just transition into a net zero economy, the UK government, industry, private sector and the community will need to join forces behind a common strategy.

A significant number of organisations in the funeral industry are also part of the nearly 6 million small and medium enterprises (SMEs) operating today in the UK. Collectively, SMEs account for almost **30% of total emissions in the UK**, and both government and larger organisations have a responsibility to support their decarbonisation efforts.

Facilitating private sector initiatives that educate, benchmark and share know-how with smaller organisations can go a long way in helping them to find an often elusive starting point. They can also help them save time and resources, and to quickly identify potential areas to focus their efforts and accelerate their transition into a net zero path.

Regulators: Can use the findings and expert data gathered in this report to inform structural and legal modifications to existing regulations that support the funeral industry in accelerating the transition to decarbonisation, such as phasing out natural gas flame cremation and the use of chipboard coffins. Furthermore, they could support an in depth analysis of the polluting emissions resulting from the process of cremation - as replacing natural gas with biofuel or a renewable energy source is only a partial solution to a wider polluting issue.

Finally, we encourage regulators to contact [Planet Mark](#) to further discuss the findings of the paper and consider devising a collaborative road map to radical decarbonization.





FULL CIRCLE
FUNERALS. YOUR WAY

This research was initiated by Full Circle Funerals, the first UK Funeral Director to achieve B Corp certification, and funded by the community via Crowdfunding. Thank you all those from the industry who contributed to the peer reviewing process.



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Get in touch with [Planet Mark](#) if you are interested in finding out more about how to assess the environmental impact of your business and developing a plan to achieve net zero emissions.