



OUR FIRST CARBON NEUTRAL CASK BEER



We are joining the fight against climate change and launching our first ever carbon neutral cask beer. Every pint of Respire you drink will offset 285g of CO₂e from the atmosphere and support the planting of vital trees in the Yorkshire Dales. So you know the impact you are having is as refreshing as the beer in the glass.

OFFICIALLY CARBON NEUTRAL CASK



CARBON NEUTRAL CASK

Working with an independent consultant we measured the carbon footprint of Respire.

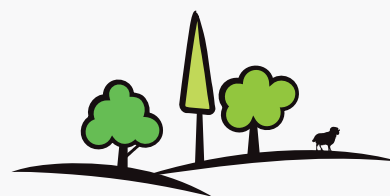
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CARBON OFFSET

We have offset the footprint of Respire by purchasing official carbon credits funding high impact bio-diversity projects.

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YORKSHIRE DALES TREE PLANTING

We are going the extra mile partnering with Yorkshire Dales Millennium Trust. Every pint of Respire you drink contributes to tree planting in our heartland in the Yorkshire Dales.

JARGON BUSTER:

Carbon footprint. You hear a lot of talk about this but what does it mean? The carbon footprint of a product is the total sum of greenhouse gas emissions (CO₂e) produced through its life cycle. For Respire we chose to measure its footprint from 'cradle to gate', so that means from the growing of the ingredients, and all suppliers who provide goods and services, the manufacture, sales & marketing of the beer through to the cask being delivered into the pub cellar (and returned to the brewery empty!).

CO₂e. This stands for 'Carbon Dioxide equivalent' and is the standard measure used today. Carbon Dioxide is the most prevalent greenhouse gas but there are many others, so this measurement makes sure all of those have been taken into account through the footprint calculation.



WHY CARBON NEUTRAL?

At Black Sheep we have always tried to approach brewing with care and consideration to the landscape and environment around us. We live and work in a beautiful part of England and on the edge of the Yorkshire Dales National Park, so aligning ourselves with North Yorkshire's ambitious target to become carbon neutral by 2034 and carbon negative by 2040 is a natural next step for us.

We are at the beginning of our journey and are identifying ways in which we can minimise our impact on the environment through our brewing process, working towards a circular economy to reduce waste and partnering with like-minded suppliers with the same ethos. Respire, our first carbon neutral cask beer, marks the start of that journey.





HOW DID WE ACHIEVE THIS?

We were able to make Respire carbon neutral by first looking at our own carbon footprint. We identified the work we had been doing already to help reduce our emissions, such as our ongoing project with Warren's group to take all our organic brewing waste for anaerobic digestion. We then enlisted the help of an experienced external consultant to calculate the footprint of our cask beer, and specifically Respire. Once we knew the footprint of a cask of Respire we chose to offset this with verified carbon credits in order to make it carbon neutral.

We chose to invest in high impact credits from Verra's verified standard program, which is one of the world's leading carbon verification schemes. By using a verified offset scheme we can be sure that every credit represents the permanent removal of an unclaimed tonne of CO₂e. The projects we invested in were focused around bio-diversity and supporting the communities within these areas.

In addition to this we decided to go a step further. Having always worked in the Yorkshire Dales we wanted to make sure that Respire was supporting positive sustainable projects in our local area. So we have teamed up with Yorkshire Dales Millennium Trust, a registered charity who run tree planting projects in the Dales. Every brewers barrel of Respire sold will contribute £5 towards planting of trees and community projects in this important landscape.





THE BACKGROUND

WHY ARE WE DOING THIS?

We know that the climate change is a real issue and following recent global action it is important that everyone takes responsibility to try and reduce their carbon footprint and help hit the global target of limiting global warming to 1.5C from pre-industrial levels. Greenhouse gases are a key driver of this problem so we felt it important to begin the journey to looking at our own carbon footprint and seeing what we can do about it. Having one carbon neutral cask beer is the start for us as we move towards our long term aim of becoming a carbon neutral brewer.

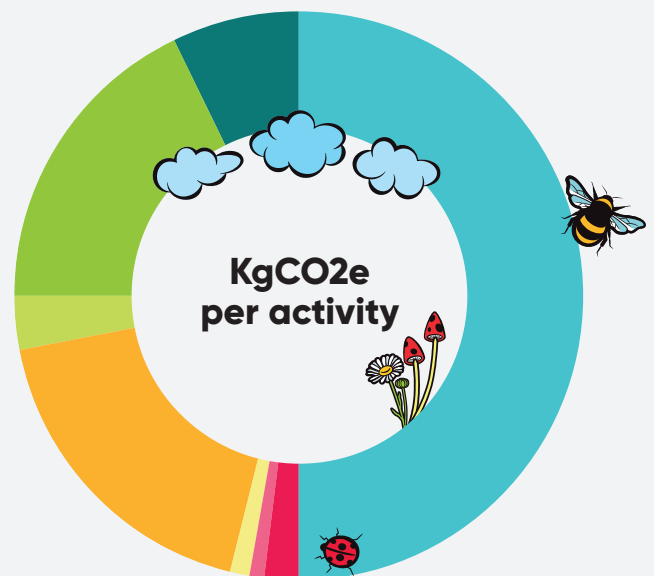
HOW DO YOU CALCULATE THE FOOTPRINT OF A CASK OF BEER?

Getting independent help in calculating our footprint was crucial. We used Environmental Strategies Limited, who are experts in this area, to calculate the carbon footprint of our cask beer. It is important to set the scope and boundary of your measurement. For us we decided to choose a 'cradle to gate' measure. This takes into account all activity from the point of production of all raw materials and supplies to produce the beer, its manufacture, selling and marketing and then distribution into the pub cellar. We also accounted for the return of the empty casks back to the brewery.

Respire footprint per 9 gallon cask:
20.5kg CO₂e (0kg after offsetting)

Respire footprint per pint:
285g CO₂e (0kg after offsetting)

The below chart shows the breakdown of how the footprint is made up from the different areas of manufacturing. Note that 7% of the footprint comes from the excess CO₂ emitted during the fermentation process.



Materials	50%	Transport	18%
Casks	2%	Marketing	3%
Waste	1%	Energy	18%
Maintenance	1%	Fermentation	7%



HOW LONG DID IT TAKE TO MEASURE THE FOOTPRINT?

Black Sheep has been brewing beer for 30 years. Given the recent interruption of the Covid pandemic which upset the balance of many manufacturing businesses, and particularly those in the brewing industry, to get a fair measure we felt it necessary to gather data from two different periods. We looked at data from the last 12 months pre-pandemic, April 2019 to March 2020 and then a 'post-pandemic' 6 month period for comparison between June and October 2021. Based on the data from these periods Environmental Strategies Limited then analysed and made the calculations to form the footprint.

HOW DID WE OFFSET THE CARBON ASSOCIATED WITH THE CASK BEER?

Once we had measured the footprint we decided to offset the CO₂e by purchasing verified carbon credits in two separate projects, one in Indonesia and one in Peru. It is important to offset using officially verified credits so we can be sure that these credits have been retired in our name and the amount of CO₂e offset is guaranteed. We also wanted to invest in projects that supported bio-diversity and the communities within them.



The Katingan Metaya Project in Indonesia is about preventing the release of locked up carbon. 90% of the carbon in the 157k ha project is in the underlying peat soils, (up to 13 meters deep). The area was under threat of conversion to industrial acacia, which would have resulted in the release of carbon through forest clearance, draining and burning of the underlying peat. The project offers a viable alternative to conversion, preventing the release of 447 million tonnes of CO₂e over 60 years, making it the world's largest forest-based avoided emissions project, with a total climate impact equivalent to the annual emissions of France.

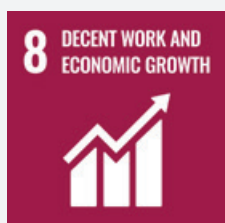
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Protecting the Cordillera Azul national Park in Peru. This project is preserving more than 1.6 million hectares of pristine montane rainforest within the Cordillera Azul National Park, and supporting the 440 communities in its 2.5 million hectare buffer zone through sustainable land use. More than 35 new species have been discovered through this project's endeavours. It is home to around 6,000 plant species, more than 80 large and medium sized mammals, around 180 species of fishes, and over 600 species of birds.

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WHAT DOES THIS MEAN WHEN YOU BUY A PINT OF RESPIRE?

Each pint of Respire you drink you can be sure that we have offset all the associated CO2e associated with its manufacture. As well as that for each brewers barrel of Respire sold we will contribute £5 to Yorkshire Dales Millennium Trust to support their projects that help the people, landscape and wildlife of the Yorkshire Dales and surrounding areas. These projects such as tree planting or wild flower meadow restoration serve to protect and enhance a crucial national park for future generations to enjoy.





WHAT NEXT?

Creating a carbon neutral cask beer is the start of our sustainability journey towards becoming a carbon neutral brewer and supporting the UK and Yorkshire targets for becoming carbon neutral. We realise we are at the beginning of the journey and there is lots more we can do, but we have made a start. It's important to us that we are contributing to a sustainable future and we are contributing to protecting the environment and communities around us.

We will continue to focus on reducing our carbon footprint through the manufacturing process and build on the good things we have been doing so far such as minimising the impact of our organic waste through anaerobic digestion and ensuring no waste goes to landfill. We will also aim to measure the footprint of our bottled and canned beer by the end of 2022.

Keep an eye out for more news!



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www.ydmt.org

Registered Charity No. 1061687