

# *Toast Ale*

# IMPACT REPORT

# 2021





# CONTENTS

3

OUR IMPACT  
IN CONTEXT

4-5

OUR IMPACT  
BUSINESS MODEL

6-11

COLLABORATIVE  
ACTIVISM

12-17

OUR CARBON  
FOOTPRINT



We would love to hear your views.  
Please get in touch at [impact@toastale.com](mailto:impact@toastale.com).



# OUR IMPACT IN CONTEXT

In August, the UN Intergovernmental Panel on Climate Change (IPCC) released its sixth assessment report. It was a 'code red for humanity': we face increasingly extreme heat waves, droughts and flooding, and the key temperature limit of 1.5°C being broken in a decade.

Millions of people experienced extreme weather events in 2021. There was record-breaking snowfall in Madrid and temperatures of -13°C in Texas. The Northwest US experienced a Heat Dome, and there were record high temperatures in Moscow, wildfires in Greece and a fire in Oregon that generated its own weather system. There were cyclones in Indonesia and Fiji, a Super Typhoon in the Philippines, and devastating floods in Nepal, India, China, Germany and right here in the UK.

The IPCC report did however say that with deep cuts in greenhouse gas emissions, we can stabilise rising temperatures. The International Energy Agency's Net Zero by 2050 report also made it clear that there must be no new oil, gas or coal development. We must work together to create systemic change and end our dependence on fossil fuels.

Organised activism is making real progress. During 2021, shareholder rebellions put activists on the Board of ExxonMobil and voted for Chevron to cut its carbon emissions. A ruling in the Netherlands ordered Royal Dutch Shell to comply with the Paris Agreement and development of the Cambo Oil Field was halted following protests (Shell pulled out citing economic reasons). The social licence to operate is being removed, and the business case is becoming harder to prove.

World leaders met in Glasgow for the 26th UN Climate Change Conference of the Parties (COP26) in November to agree how to meet the Paris Agreement targets to limit global warming to 1.5°C by 2050. We joined thousands of global citizens, including indigenous people already experiencing the devastating impacts of climate change, on the streets.

The main outcome was the Glasgow Climate Pact - progress, but not commensurate with what's needed in the climate emergency. Food systems, responsible for 1/3 of greenhouse gases, weren't even part of the formal COP agenda (though work is happening at a city level with the Glasgow Food and Climate Declaration).

We must hold governments accountable to commitments whilst working towards greater ambitions for systemic change. The right to peaceful protest - a feedback mechanism from society to government in a healthy democracy - is critical to this. This right is at risk with proposed changes to the Policing bill, so in December we stood against it alongside 200 other businesses. We'll continue to defend and exercise the right to protest to protect people and the planet - will you join us?

Here's to Change.

Louisa Ziane  
Co-founder & Chief Operating Officer



# OUR IMPACT BUSINESS MODEL

## CIRCULAR ECONOMY



Unlike linear business models that unsustainably take from nature and create waste, we apply circular principles. We brew with surplus bakery bread that would otherwise be wasted, using 25% less malted barley than other beers. Our spent grain is fed to animals and spent hops are composted to return nutrients to the soil. It's the circle of loaf.

## SOCIAL ENTERPRISE



We aim to make a profit like other businesses, but it's how we use our profits to create positive change that sets us apart. Our legal constitution specifies that all our distributable profits (min. of 1% of revenue) will go to charities rather than shareholders to fund systemic change.

## CERTIFIED B CORP



We were the first UK brewery to become a Certified B Corp and are the highest scoring with 111.8 points. This means we meet the highest standards of verified social and environmental performance, public transparency, and legal accountability (our Articles of Association specify that we must consider how our business affects ALL stakeholders).

## CARBON NEUTRAL



We measure our full carbon footprint and to compensate for our emissions we invest in regenerative agriculture projects with UK farmers that draws down carbon into the soil. Most emissions occur in our supply chain so we're working with partners to reduce them as part of our B Corp Climate Collective commitment to be Net Zero by 2030.



## BUSINESS ACTIVISM

We use delicious beer to prompt conversations over a pint, open-source a recipe for home brewers to get involved and collaborate with commercial breweries to inspire our industry. We also use our platforms to campaign for positive change.

**AWARD  
WINNING**





# IMPACT RIPPLES

SINCE 2016

**2,575,004**

**SLICES OF SURPLUS  
BREAD RESCUED**

*Our Operations*



**48 tCO<sub>2</sub>e**

emissions avoided



**17 million**  
phones charged

**207,094 m<sup>2</sup>**

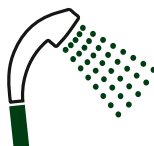
land freed up



**1,059**  
tennis courts

**303,660 Ltrs**

water saved



**18 years**  
of daily showers

**FEED  
BACK**

**307 LETTERS**  
sent to MPs and  
other work to end  
food waste

**RAINFOREST  
TRUST®**  
·UK·

**1.3 MILLION**  
trees protected in  
endangered forests

*Our Profits*

**£74,148**

**DONATED TO  
CHARITIES FIXING  
THE FOOD SYSTEM**



**Soil  
Heroes**

**15 HECTARES**  
of land farmed  
regeneratively

*Our Influence*

**2.5 MILLION**

**PINTS ENJOYED  
WITH PLANET-  
SAVING MESSAGES.**



**12.8 MILLION**  
people reached  
on social media

**1,200**  
media mentions



**86 BREWERIES**  
collaborated with  
in 10 countries

**3.3 MILLION**  
bread slices saved  
by 72 inspired  
breweries

**84,000**  
home brewers  
rescuing 0.7  
million slices





# COLLABORATIVE ACTIVISM

Our direct impact as a small business is limited, but our passion and ambition is not. Our theory of change is this:

If all UK beer was produced using just 10% surplus bread, we could halve the 20 million slices of bread wasted daily (achieving the UN Sustainable Development Goal 12.3 to halve food waste). This will free up land to prevent further deforestation, and reduce freshwater use and emissions of greenhouse gases.

Our beer is proof of what's possible. Our open-sourced recipe for home brewers and collaborations with commercial breweries is our way of sharing our vision, and we're developing new ways to support the transition - watch this space!

We believe collaborative business models have intrinsic positive value, but companies are also responsible for the economic, social, cultural and political power they hold. Critically, business can inform and drive government policy - to stop or push forward change - so in 2021 we led campaigns like Rise Up and The Companion Series, and collaborated with others calling for action.



## **ZERO HOUR**

**Support the CEE Bill**

We support the Climate and Ecological Emergency Bill to enshrine in law the need to limit warming to 1.5°C and to halt and reverse nature loss by 2030.

We joined campaigners in Glasgow during COP26 to help raise awareness. Over 120 MPs and 400 organisations now support the CEE Bill.

**Please add your support by signing up as a business supporter or asking your MP to back the bill at [ceebill.uk/askyourmp](https://ceebill.uk/askyourmp)**

## **better business** **act**

We support the Better Business Act to remove shareholder primacy and ensure all UK companies align their interests with those of wider society and the environment.

**Please add your support by joining the BBA Coalition at [betterbusinessact.org](https://betterbusinessact.org)**



# THE RISE UP SERIES

Our Rise up series collaboration with B Corp Certified brands told the story of our industrial food system's impact on our planet - forests, soil, oceans, rivers, biodiversity and the climate - through a limited-edition range of beers brewed with surplus bread and ingredients from our friends.

Whilst raising awareness of the connection between our food and planetary health, we helped people to take positive action. With Feedback, we made it easy for people to write to their local Member of Parliament. Thank you to everyone who helped to put food waste on the menu for our government ahead of COP26.



Thanks to our B Corp buddies: Divine Chocolate, teapigs, Hobbs House Bakery, Rebel Kitchen, Oddbox, Flawsome, Rubies in the Rubble and Cafedirect.



## Rise Up for **FORESTS**



Food production is the biggest cause of deforestation, with trees cleared to graze animals and grow crops. But one-third of food is wasted. By reducing food waste, and preserving ancient forest and reforesting land, we can mitigate climate change and protect biodiversity.

Our Chocolate Stout was brewed with surplus bread and cocoa powder from Divine, whose co-operative model supports sustainable forestry.



## Rise Up for **SOIL**



Intensive food production is eroding the fertile soil we need to grow healthy food. Yet one-third of food is wasted. By reducing food waste and supporting farming practices that regenerate our soils, we can remove carbon from the atmosphere, protect biodiversity and produce more nutritious food.

Our Oat Pale Ale was brewed with surplus bread and organic oats in collaboration with Rebel Kitchen.



## Rise Up for **OCEANS**

teapigs.

Plastic pollution and the way we fish is threatening ocean life. But one-quarter of fish are discarded, and half of the plastic produced is for single-use. By reducing waste and plastic use, and by protecting and restoring marine ecosystems, we can sustain life and improve our health.

Our Lemongrass Lager was brewed with surplus bread and pure lemongrass from teapigs (Certified Plastic Free).



## Rise Up for **RIVERS**



Pesticides, fertilisers and slurry from industrial farms is polluting our rivers, which create coastal dead zones as they enter the ocean. But one-third of food is wasted. By reducing food waste, and supporting farming practices that use less chemicals, we can protect our fresh water.

Our Baker's Witbier was brewed with surplus Real Bread from Hobbs House Bakery, baked with organic flour to help regenerate nature and without any additives.



## Rise Up for **BIODIVERSITY**



Habitats are being polluted and destroyed by industrial agriculture, contributing to the mass extinction of species. By reducing food waste and restoring and protecting nature, we can preserve the diverse web of life on which we all depend.

Our Mango IPA was brewed with surplus bread and over 1,000 wonky mangoes rescued by Flawsome and Oddbox.



## Rise Up for **CLIMATE**



Food production accounts for one-third of greenhouse gas emissions, the biggest contributor to climate change. Yet one-third of food is wasted. We can take action in the climate crisis by reducing food waste and regenerating natural carbon stores like forests, soils and the ocean.

This beer is brewed with surplus fresh bread and wonky raspberries from Rubies in the Rubble, who make condiments from surplus produce.





# THE COMPANION SERIES

For our Companion Series we brought together 24 other breweries to show the power of collaboration amongst 'competitors'. We supplied surplus bread to our brewing Companions and gave them advice on brewing with bread, building on everything we've learnt over the past six years. Together we released 26 incredible limited-edition beers, all brewed with surplus bread and carrying an anti-food waste message.

We raised funds to support important environmental causes. Proceeds from the sale of the beers go to Rainforest Trust UK to protect existing ancient forests and to Soil Heroes to support farmers transitioning to regenerative agriculture practices in the UK.

We also published an open letter calling on world leaders at COP26 to work together to combat the climate and nature emergency. We highlighted the huge opportunity we have to address the crises in the fastest and most equitable way by reducing food waste.





# Dear World Leaders

We are a coalition of 25 breweries who've come together to call on you to respond to the global climate and nature crisis.

Our message is simple. We are in a climate emergency. According to the latest IPCC report, global temperatures are set to rise by more than 1.5°C above pre-industrial levels over the next 20 years. We face worsening wildfires and flooding, loss of habitats and species, and threats to lives and livelihoods. There's no time to waste.

One of the fastest and most equitable measures to tackle the crisis is to reduce food waste. Food systems are responsible for one-third of GHG emissions and 80% of deforestation. However one-third of the world's food is never eaten, which means the land and resources used and greenhouse gases emitted in producing it were unnecessary.

We need you, our global governments, along with businesses and groups with the power to influence the food system, to come together and change the status quo.

## **We're taking a stand.**

Led by Toast Ale, we've created the Companion Series. This limited-edition collection of beers uses surplus bread to prevent food waste and reduce demand for natural resources. It will raise £65,000 for conservation and regenerative agriculture organisations so we can protect 3.25 million trees in threatened tropical rainforests, and sequester 360 tCO<sub>2</sub> in agricultural soils (which also store more water and support biodiversity).

We're competing businesses but we are uniting because the climate and nature crisis is bigger than us all. The word 'companion', from the Latin 'com' (together with) and 'panis' (bread), represents the need for collaboration. To solve this systemic problem, we need systemic change, and that needs everyone who can to co-operate and work together.

## **Now we're laying down the gauntlet for you.**

As you meet in Glasgow for the COP26 climate talks, you have a once in a lifetime opportunity to protect people and nature from the effects of the global climate crisis. We need you to agree and commit to robust and wide-ranging targets to halt further warming - and to co-operate in taking action to meet them.

## **Here's to tackling the Climate and Nature Crisis, Together.**

Toast Ale, Adnams, Beavertown, Bedlam Brewery, Better World Brewery, Brixton Brewery, Five Points Brewery, Fyne Ales, Guinness, Harbour Brewery, Hepworth Brewery, Ignition Brewery, Meantime, Northern Monk, Orbit, Sambrooks, Signature Brew, Stroud Brewery, Tap Social Movement, Tooth & Claw Brewing, Unity Brewing Co, Utopian Brewery, Wild Card Brewery, Windsor & Eton Brewery, Wold Top Brewery.

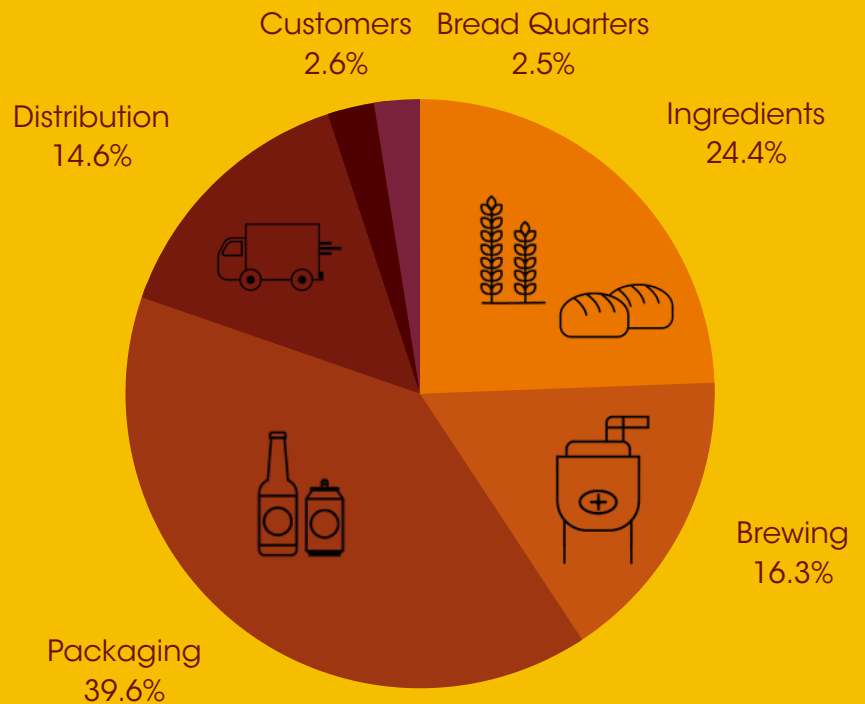
#COPCompanions  
15th October 2021

# OUR CARBON FOOTPRINT

We measure every aspect of our business according to the GHG Protocol.

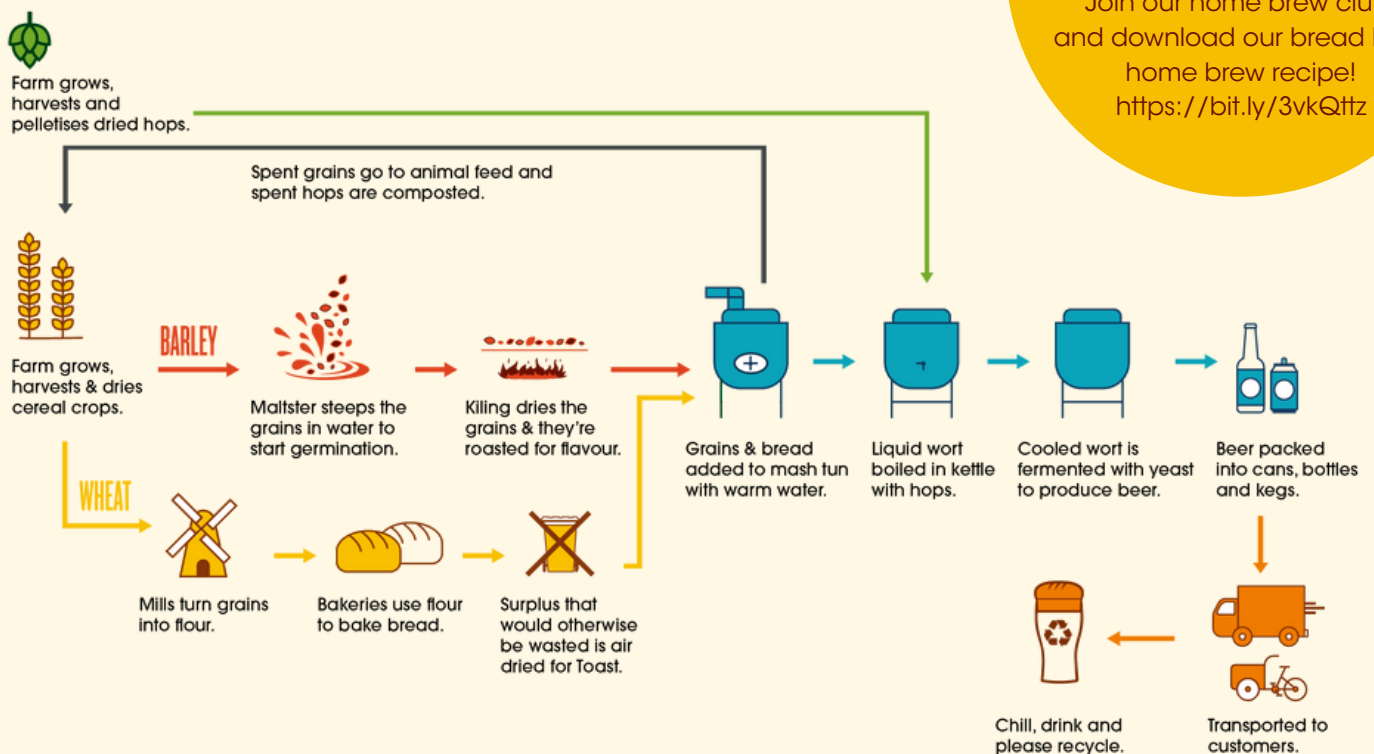
Our Scope 1 and 2 emissions (from sources owned or controlled by our business) are only 3% of our emissions.

97% of our emissions are Scope 3 (from 3rd party sources) because we work with other businesses to produce and distribute our beer. We are therefore managing our footprint by working with our suppliers.



Our 2021 carbon footprint was 167 tCO<sub>2</sub>e (a 5% reduction from 2020 on a per litre basis). This includes 8.2 tCO<sub>2</sub>e for surplus bread as an ingredient because we pay a fair price for it. However, by preventing it from being wasted, we are avoiding 9 tCO<sub>2</sub>e of emissions and our net footprint would be 158 tCO<sub>2</sub>e.

## HOW DO WE BREW WITH BREAD?





## INGREDIENTS (24%)

We use five main ingredients to brew our beer: malt (11% of emissions), bread (5%), hops (6%), yeast and water.

Malt, the main ingredient in brewing, provides nutrients for the yeast and contains enzymes that break down starches into fermentable sugars to produce alcohol. The choice of malt also affects the colour and flavour of the beer.

However malt has a high carbon footprint due to the land required to grow barley and the energy used during malting. We use 1/4 less malt than most brewers by replacing it with surplus bakery loaves. Bakers produce to customer forecasts that are often different to the final order, leaving them with surplus that would otherwise go to landfill.

Hops add aroma and bitterness to the beer, and act as a natural preservative. In 2021 we changed to all-English hops for our Pale Ale. Very few British hops are irrigated, making them some of the most environmentally sustainable hops in the world in terms of water usage. They're also bred to be more disease resistant, meaning less use of pesticides or herbicides than hops from other growing areas.

### WHAT WE'RE UP TO IN 2022

We're exploring sourcing and malting regeneratively grown barley. This is our ultimate aim as we partner with farmers in the interim to fund research and learn lots!

We're also trialling alternative hops and continuing to improve our brew efficiency to get more beer for less ingredients.

#### WHAT'S REGENERATIVE AGRICULTURE?

A way of farming with nature rather than against it: protecting the soil structure (built by the mighty worm) by not tilling, using diverse crops to protect nutrient levels and compost/ animal manure to return nutrients, planting cover crops to prevent soil erosion and supporting diverse ecosystems.

#### CARBON

Cover crops add biomass (which will be integrated into the soil) and no/shallow tilling keeps the carbon that has been built up, maintained in the soil.

#### WATER

Good plant cover and soil structure holds more water, preventing surface runoff and flooding that would otherwise erode the soil and wash away nutrients.

#### BIODIVERSITY

Wildflowers support bees and other beneficial insects that are useful for pollination and pest control. Regenerative practices also protect life in the soil.

## BREWING (16%)

We partner with breweries to use existing capacity in the industry and minimise our land and capital equipment footprint. We worked with SEB in Broadstairs in 2021.

During brewing, energy is used to heat liquid during the mash and boil stages, to cool the beer for fermentation, and for packaging processes. Heating uses natural gas (consisting largely of methane) whilst chilling and packing uses electricity.

The fermentation process also releases emissions as the yeast converts sugars to alcohol and CO<sub>2</sub>. Whilst CO<sub>2</sub> is captured in the beer for good carbonation levels, some is released into the atmosphere. A number of large breweries now have equipment to capture that CO<sub>2</sub>, but it's not yet feasible for smaller breweries.

At the end of the brew process, spent grains go to a local farm to feed animals (who get fibre, proteins and minerals from the grain after we've used the sugars). This circular approach avoids waste and reduces the demand for crops grown specifically for animal feed, including soya from deforested land. Spent hops are used for compost, returning nutrients to the soil.

### WHAT WE'RE UP TO IN 2022

We're working with our brewery partners to gather more data on the energy use of their processes so we can look at how to improve them whilst sourcing renewable power.

### SUPPORTING THE CIRCULAR ECONOMY

In 2022, we're launching a new ingredient for breweries, produced from surplus bread. This will help to overcome the barriers we've identified to using surplus bread, including the sourcing and preparation for the brewhouse.





## PACKAGING (40%)

Our beer is packaged into infinitely recyclable glass bottles and aluminium cans and supplied to our trade customers in reusable steel kegs.

With packaging the biggest proportion of our carbon footprint, we've done our homework to understand the emissions. Our cans have a significantly lower footprint because of a number of factors: recycled aluminium content (of which there is a good quantity due to high recycling rates) requires less energy, aluminium is lighter so uses less fuel to transport (this is more significant the further the beer travels!), and the compact size of cans mean we need less packaging & storage space.

We're proud to have largely eliminated plastic, using fully recycled and recyclable FSC certified cardboard for packing. However, at the moment, our can and bottle labels are still made with polypropylene.

For our Rise Up and Companion Series limited-edition can labels we used Forest Film, a bioplastic material made from the surplus resin from sustainable forestry. We reviewed paper-based labels, though they can tear and bubble during fast application in the wet brewery environment, and staining is also a problem for customer acceptance.

### WHAT WE'RE UP TO IN 2022

We'll be nudging customers to choose cans over bottles. Will you make the switch? While we look for new label materials for bottles, we're now brewing some beers at the scale to use printed cans and eliminate labels altogether. Look out for them in 2022!





## **DISTRIBUTION (15%)**

We move beer from the brewery to storage and fulfilment partners before it goes out to our customers. We have a policy against export for environmental reasons so we only distribute within the UK. We can't justify shipping heavy liquid so instead collaborate with incredible breweries around the world. Fortunately this also shielded us from Brexit-related disruptions experienced by the industry.

Our change in brewery partner in 2021 means canning now happens on site. We previously moved beer from the brewery to a canning facility in large containers called Arlingtons. We've eliminated this journey and reduced loss of beer in the process, a real win-win.

Our website orders are delivered by DPD, who are moving towards an all-electric fleet. They provide us with data so we can see how many of our parcels have been delivered in this way, and they offset the emissions associated with all deliveries.

## **DRINKERS (3%)**

Our packaged beer is stable and can be stored under ambient conditions, but tastes much better if it's chilled before drinking so we account for refrigeration energy. For kegged beer, we account for the energy used to store and dispense on draught.

The empty packaging is disposed of once the beer has been enjoyed, contributing to further emissions. In the UK, a fantastic 82% of aluminium cans are recycled, and 68% of glass. The more we can increase recycling, the lower the emissions.

The Deposit Return Scheme being introduced in Scotland in 2023 (and likely to follow in the rest of the UK) is a great initiative that will encourage greater reuse and recycling, and reduce the burden of landfill.

## **BREAD QUARTERS (2%)**

After over a year being largely home-based due to covid, we moved into our lovely new office at X&Why (a fellow Certified B Corp) in May. They sourced 50% renewable power (moving to 100% in 2022) and have a Zero Waste to Landfill agreement with the waste company First Mile.

For home working, all Team Toast use renewable electricity providers.



# REMOVALS

Whilst we work to reduce our carbon footprint, we are working with Soil Heroes to balance our emissions with removals and help build resilience in food supply chains.

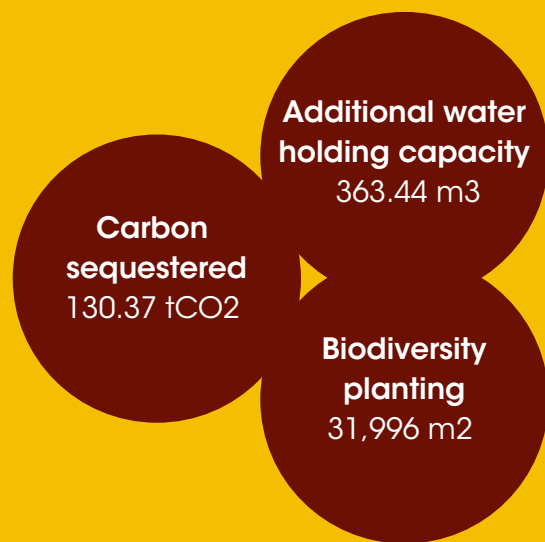
We're providing funding to UK farms that are using regenerative agriculture techniques (in the current absence of government subsidies that reward investment in nature for food production). Healthy soils sequester more carbon, hold more water and enhance biodiversity, whilst improving crop nutrients for healthier and tastier food.

## Update on 2020 removals

The payment we made to compensate for our 2020 emissions (86tCO<sub>2</sub>) was invested in regenerative practices in the barley fields at Showsley Farm in Towcester (pronounced Toaster!), Northamptonshire.

The results on the right are from the agronomist in the fields. They have measured the impact of practices used, including transitioning to no/shallow tillage, planting cover crops to protect the soil and planting biodiversity lanes to support wildlife including pollinators and pest controllers.

The donation we are making from the Companion Series is being invested in Weston Park Farms in Hertfordshire. We'll update with the agronomist's results in our 2022 impact report.



*Cheers*





**TOASTALE.COM @TOASTALE**