

Environmental Policy



SINCE 1953

James T. Blakeman & Co. Ltd.



James T. Blakeman Services Ltd.

Mr Phil Blakeman MInstM
Managing Director

Mrs Susan Cope
Finance Director

Mr Steve Collinge
Operations Director
*(James T. Blakeman
& Co. Ltd.)*

Mr Kevin Moller
Operations Director
*(James T. Blakeman
Services Ltd.)*

Policy created and maintained by

Mr Elliot Whimpany MEng AMIChemE
Process Engineer

Environmental Policy

At Blakemans, we understand that continually improving our environmental performance should be at the forefront of our ambitions. Our environmental policy delivers a unifying vision of environmental principles that will be used to guide the decisions of all employees and management. We are mindful of our impact on the environment and will reduce it by keeping to following aims:

1. Ensure, at a minimum, compliance with all environmental legislation.
2. Set clear and measurable environmental objectives and targets against a base year. We will continually monitor our performance against these goals.
3. Communicate our policy, goals and progress to all colleagues and make them available to interested parties on the company website.
4. Monitor our impact on the climate by looking at our energy use and emissions of Greenhouse Gases (GHGs). In line with our aim to continually improve, we will look at the potential of upgrading process equipment to make reductions in these areas. Our target is to reduce our 2013 Carbon Intensity by at least 55% by 2025.
5. Monitor and reduce our waste in the following key areas:
 - a. Identifying and eliminating all unnecessary plastic waste.
 - b. Following the 5 step waste hierarchy. Observing individual steps in the manufacturing process, highlighting areas where raw material/product waste can be eliminated, re-used, recycled or recovered.
 - c. Our target is to reduce our 2018 Waste Intensity by at least 20% by 2025.
6. We will look for opportunities to use water as efficiently as possible with the aim of reducing and reusing water on site. Our target is to reduce our 2014 Water Intensity by at least 10% by 2025.
7. Minimising the environmental impact of our wastewater by reducing the 2014 Chemical Oxygen Demand value by at least 40% by 2025.
8. We will actively research environmentally friendly materials and technologies.
9. Scrutinise our manufacturing processes with aim to make them more 'lean', a sustainable way of improving the performance of the factory.
10. To include environmental issues in training programs, enthusing all employees to be mindful of their environmental responsibilities whilst at the workplace. Instilling a culture of good environmental practices throughout the business.
11. To work towards having an environmental management system.

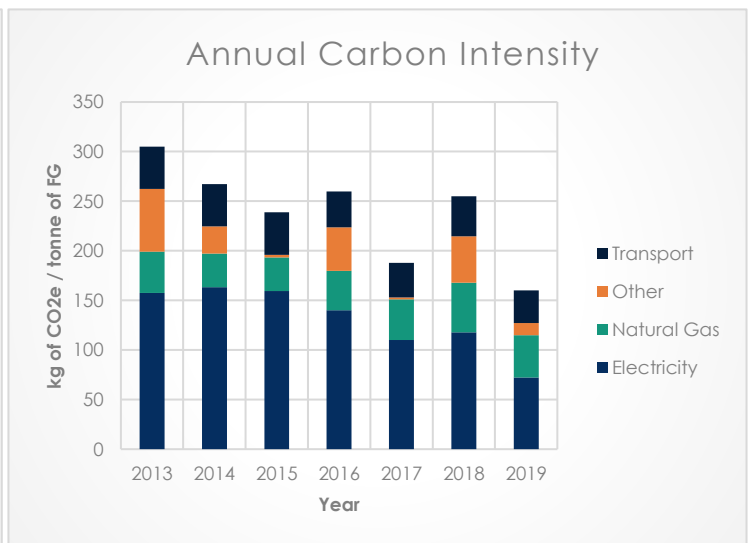
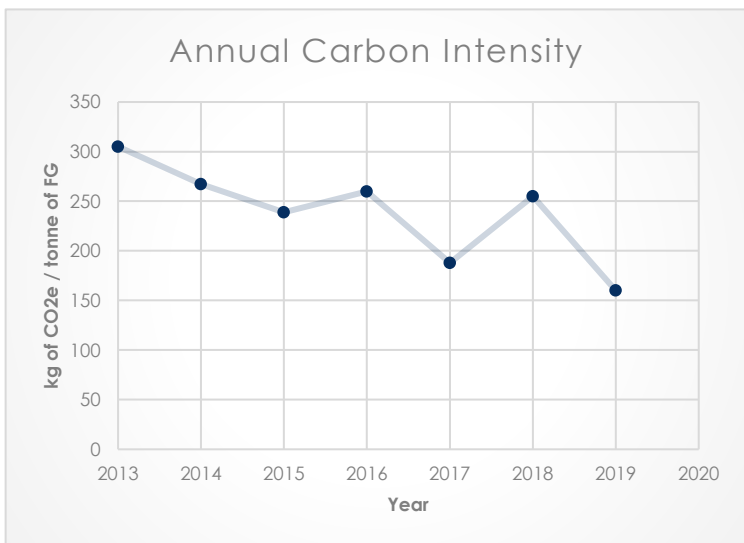
Environmental Report

Climate

CO₂ concentrations are at their highest levels in over 800,000 years and continue to rise globally. It is now widely understood that this is causing climate change, including a rise in the average global temperature. One of the goals set by the Intergovernmental Panel on Climate Change (IPCC) is “Holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels”. Here at Blakemans we will support this ambition by monitoring our Greenhouse Gas (GHG) emissions, setting ambitious targets and continually looking for ways to reduce them.

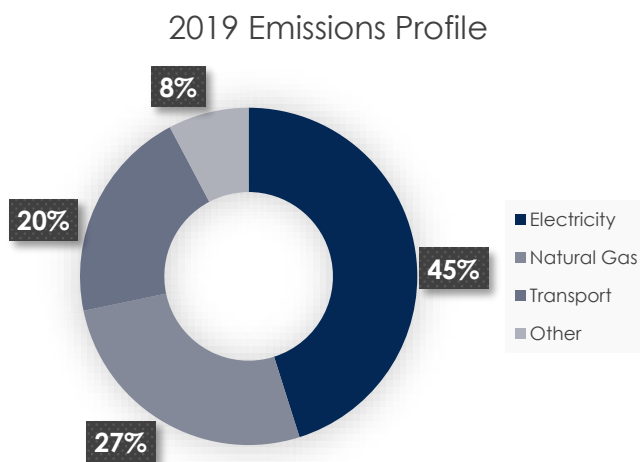
Monitoring

All GHGs emitted from our usage of energy, transport or process equipment are converted to CO₂ equivalent (CO₂e) values. This is done by multiplying their quantity by their Global Warming Potential (GWP). GWP is the heat absorbed by any greenhouse gas in the atmosphere, as a multiple of the heat that would be absorbed by the same mass of carbon dioxide (CO₂). All Scope 1 and 2 emissions are calculated and recorded following the guidelines set by the Greenhouse Gas Protocol. The total CO₂e emitted over the course of the year is divided by the tonnes of product produced in that year.



Emissions	2013 base year	2025 Target	2019 Performance
CO ₂ per tonne FG	305.1kg	137.3kg	160.1kg
% Change	-	-55.0%	-47.5%

As shown on the previous page, in 2019, significant progress was made towards our ambitious 2025 emissions target. Scope 1 and 2 emissions were the lowest recorded since the base year, 2013, at 160.1 kg CO₂e/tonne FG. Already, we have nearly halved emissions with a 47.5% improvement from 2013 when carbon intensity was 305.1 kg CO₂e/tonne FG.



Our biggest saving on emissions has been from electricity, this is due to a lower CO₂e conversion factor and our production volumes increasing at a much faster rate than electricity consumption. Since 2013, annual production volumes have increased by 38.6% and electricity consumption has only increased by 10.8%, showing a significant increase in energy efficiency. This is largely due to ongoing investment into the production facility allowing continuous improvements to be made.

Continuous Improvement

It is expected that our emissions per tonne of finished goods will continue to decrease in the years to come, as a result of continual improvements made throughout the business.

Refrigeration Systems

In March 2020, we made an important investment to switch our Cold Store refrigeration system from an R404a plant to an Azanefreezer unit. The previous system accounted for around 24% of our annual Electricity consumption in 2018. Comparatively, the Azanefreezer unit is much more energy efficient, consequentially having lower electricity consumption and lower CO₂e emissions. Being one of our biggest energy uses on site, we expect to see significant savings on our CO₂e emissions. Furthermore, the refrigerant used in this system is low charge Ammonia where previously R404a was used. Ammonia is not harmful to the climate, as it is a naturally occurring refrigerant that has zero global warming potential and zero ozone depletion potential. With this change we have made a big step in reducing the volume of environmentally detrimental substances on site. On top of this, we are planning to go ahead with the next stage of our refrigeration upgrade in the near future.



Lighting

Lighting accounts for around 8% of annual electricity usage here at Blakemans, and was therefore identified as a key area for improvement. Our goal is to make energy savings by upgrading all the existing metal halide and high pressure sodium luminaires in the factory to LED. A current project is underway to convert all of the Cold Store lighting to LED and is over 50% completed. As well as improving the level of light, LEDs are more environmentally friendly as they use less energy and have a longer working life.

Variable Frequency Drives

The switch to VFDs has already been made on various process equipment such as on refrigeration systems, a block flaker and air compressors for both sides of the business. This is because they increase energy efficiency, demand lower power on start, help to control speed/acceleration and can extend the life of equipment. We continue to evaluate the potential savings by installing VFDs on new and existing machinery around the site.

Transport

Being one of the biggest emitters of GHGs for the business, transport is a key area for environmental improvement. The majority of emissions are from our fleet of Heavy Goods Vehicles (HGVs). Recently, three of the HGVs were renewed for Volvo vehicles. The Volvo vehicles all contain the latest Euro 6 engines, making them much more environmentally friendly. The rest of the fleet are planned to be upgraded in 2021. Furthermore, as the trailers are renewed they are installed with Thermo King SLXe refrigeration units, these provide much improved energy and operational efficiency.

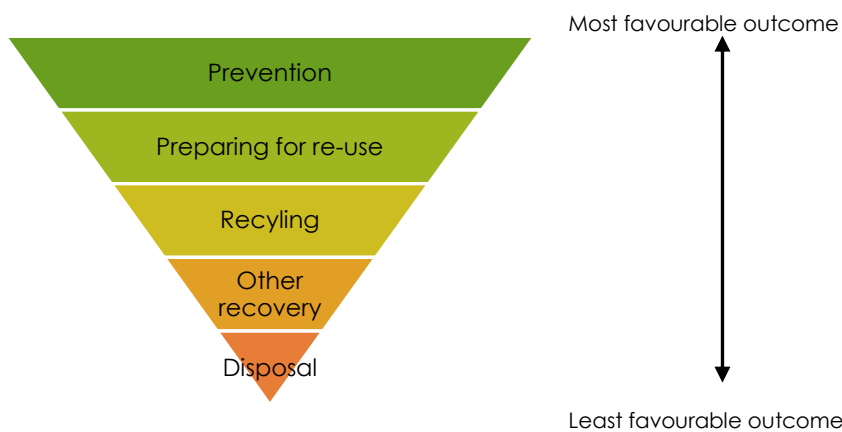


Energy Savings Opportunity Scheme (ESOS)

In 2019, we had an ESOS report produced for us by Inenco Group. This report contains a number of energy saving opportunities that could potentially be used. We are currently undergoing a project to replace the existing gas water heater and boiler based on the recommendations given. The other opportunities suggested are currently under an in depth review by our engineering team to evaluate their potential savings and costs.

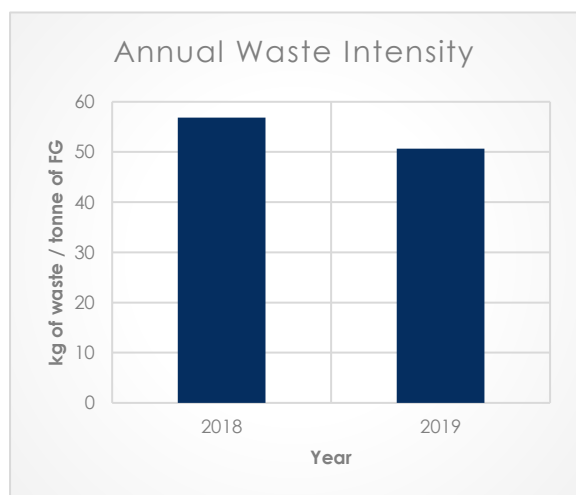
Waste

At Blakemans, we know how important reducing waste is to our environmental responsibilities. Our aims are to prevent as much waste as possible, minimise the percentage of waste to landfill and increase the percentage of waste that is re-used recycled or recovered. We follow the 5 step waste hierarchy below when dealing with waste.



Monitoring

As part of our Environmental Policy we are now monitoring the amount of waste that we produce on site. This is so we can highlight key areas for improvement and set clear measurable goals.



In 2019, we had 50.7kg of waste/tonne of FG an improvement of 10.9% on the 2018 base year. This is because we are being more conscious of waste whilst constantly looking for ways to eliminate it. As we move forward we will be working with suppliers to source more environmentally friendly materials. Additionally, we will incorporate awareness around waste into our environmental training, as well as looking at our own processes to further reduce our waste.

Waste Produced	2018 base year	2025 Target	2019 Performance
Waste per tonne FG	56.9kg	45.52kg	50.7kg
% Change	-	-20.0%	-10.9%

Packaging

We want to minimise the impact of packaging used in all stages of producing and supplying our products. We have already been very successful in reducing our plastic waste through collaboration with suppliers, many of them now adopting the Gas Flush/Modified Atmosphere packaging to supply our raw material. This technique also increases the shelf life of our raw materials as inert gases are used, helping us reduce food waste.



Food, fats, oils and grease

Rather than sending food we cannot use to landfill, it is collected by Advanced Proteins. We also use grease traps (also known as grease interceptors or fat traps) on the Services side of the business to capture fats, oils and grease before they enter the drainage system. The products are then rendered in Advanced Proteins state of the art facility where the tallow oil is extracted. This is a highly sought after renewable biofuel that can be used in their onsite electricity

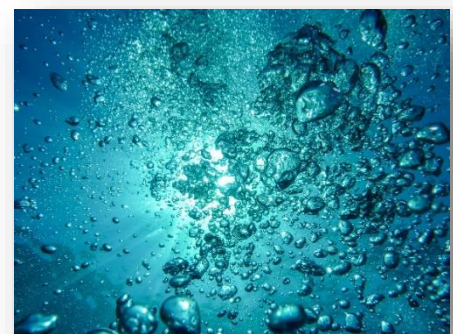
generation plant or as an essential biodiesel ingredient. Any remaining product is then further processed into high-quality fats/oils, animal proteins or biomass fuels.

Hazardous Waste

To ensure we don't harm the environment and to comply with all the applicable waste regulations, all our hazardous waste is collected and disposed of by a fully licenced waste management company.

Water

Water is essential to our business as it is used in many key areas such as our cooling towers, producing our products and maintaining the hygiene of our facility. With the requisite to use water sustainably ever increasing, we are committed to becoming more efficient with our water use. Additionally, we are conscious of protecting water sources by meeting all requirements relating to wastewater.



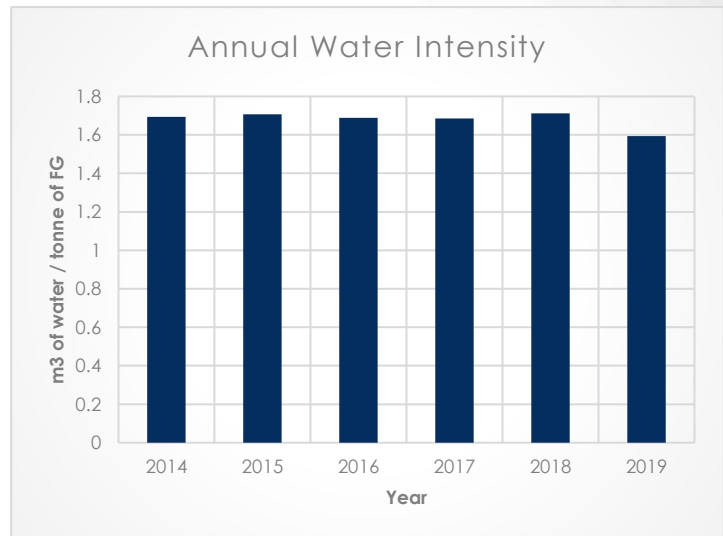
Monitoring

To monitor our environmental performance in regards to water, two performance indicators are used:

- Water Usage (measured in m³ per tonne of FG)
- Chemical Oxygen Demand (measured in kg of COD per tonne FG). Chemical Oxygen Demand (COD) is an indicator for the amount of organic material in our wastewater, a higher value of COD indicates higher organic pollution.

Water Usage

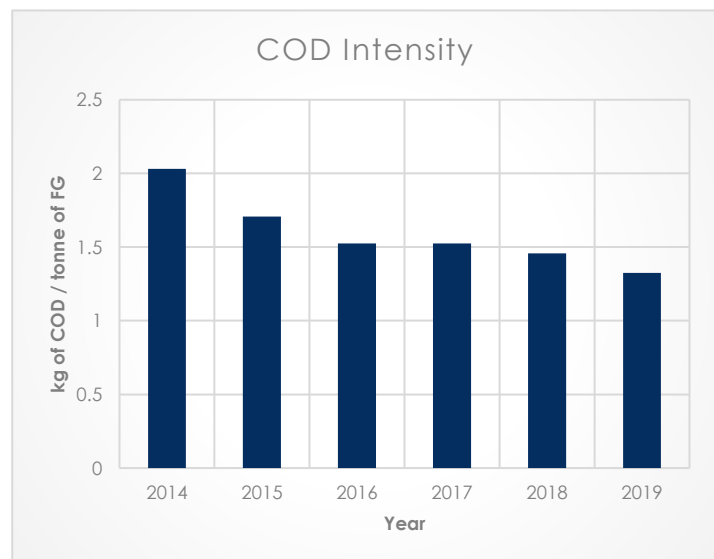
Despite an increase in water intensity from 2017 to 2018, in 2019 we achieved a reduction of 6.1% from 2014. To reduce this further we aim to ensure good water stewardship by all employees through training and awareness. Additionally, we will continue to look at replacing or upgrading process equipment to improve water efficiency.



Water Usage	2014 base year	2025 Target	2019 Performance
m³ per tonne FG	1.69m³	1.52m³	1.59m³
% Change	-	-10%	-6.7%

Chemical Oxygen Demand

Since the 2014 base year, steady progress towards our 2025 target has been made every year. In 2019, we achieved a 34.8% decrease in COD Intensity from 2014. Similarly to water usage, training and awareness of staff is key to reducing our COD levels in wastewater. To reduce this further we are evaluating the potential of a wastewater treatment plant.



COD in Wastewater	2014 base year	2025 Target	2019 Performance
COD per tonne FG	2.03kg	1.22kg	1.32kg
% Change	-	-40.0%	-34.8%