

A dramatic, high-contrast photograph of a stormy sky. Dark, heavy clouds fill the upper and middle portions of the frame. A bright, jagged lightning bolt strikes vertically down the right side of the image. The bottom left corner shows a bright, hazy glow where the sun is partially obscured by clouds.

We're not in a teacup

Consistency

Even more important now than it was then

We're pleased to share our third impact report. You can find the previous two here: [Anode On The Wall](#)

In the years that have passed since we published our first impact report, a lot has changed, but our reason why hasn't - because it matters, because we care.

If you want to chat about any of the things you read in this or previous reports please give us a shout at letsgo@anode.ltd

This report has been conducted at group level, for the period April 2023 - March 2024.

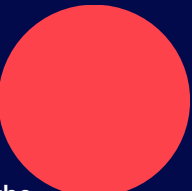
"The cost of doing nothing is much greater than the cost of doing the right thing"

Joe Rising

Save Our Wild Isles: How can businesses help solve the nature crisis?

Scope 1: 
The carbon emissions a company makes directly

Scope 2: 
The carbon emissions a company makes indirectly

Scope 3: 
All emissions the company are indirectly responsible for, up and down the value chain, in order to conduct their business operations [1]

CO2e:
There are more gases than just CO2 that contribute to global warming. For comparison purposes, gases are converted to their equivalent amount of CO2 based on their global warming potential (GWP) [2]

Our Scope 1 and Scope 2 emissions are zero!

We have assessed our Scope 3 emissions, and in this report we have highlighted the emission sources we can have the largest impact on, raw materials, waste processing, transportation of finished product and employee commuting.

Our Scope 3 emissions total 25 tonnes, and we have chosen to offset these emissions through Ecologi.

25 tonnes CO2e offset
through Ecologi



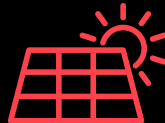
**Our Scope 1 and Scope
2 emissions are zero!**

Still asking questions

Each year, we send questionnaires to our customers and suppliers to understand what's important to them, and to see how supply chain behaviours are changing.

For some of our collaborators, at the third time of asking, they may be questioning the value of filling out the survey. Which is the reason why we share the change we're seeing in responses and the momentum with which our industry is moving forward - it's exciting!

Change doesn't happen overnight!



2 more have set Net Zero goals

5 are contacting their energy suppliers to enquire about 100% renewable energy tariffs for SME's

67% produce their own solar or are on a 100% green tariff

After speaking with many of our current and potential customers, we recognised that many industries require certification to management standards to place orders. As of September 2023 we have been certified to ISO 9001 and ISO 14001 management standards.

ISO 9001
ISO 14001



On The Wall

Dream big



As a group we have set some big scary goals for how we want to operate as an engineering business with sustainability at heart.

In an ideal world, this is how we would operate:



100% recycled materials



So how do we make this dream a reality?
By taking the first steps...



Conduct research to understand our material suppliers commitments to utilising recycled materials in production

Only use materials whose country of origin is of **low carbon intensity**

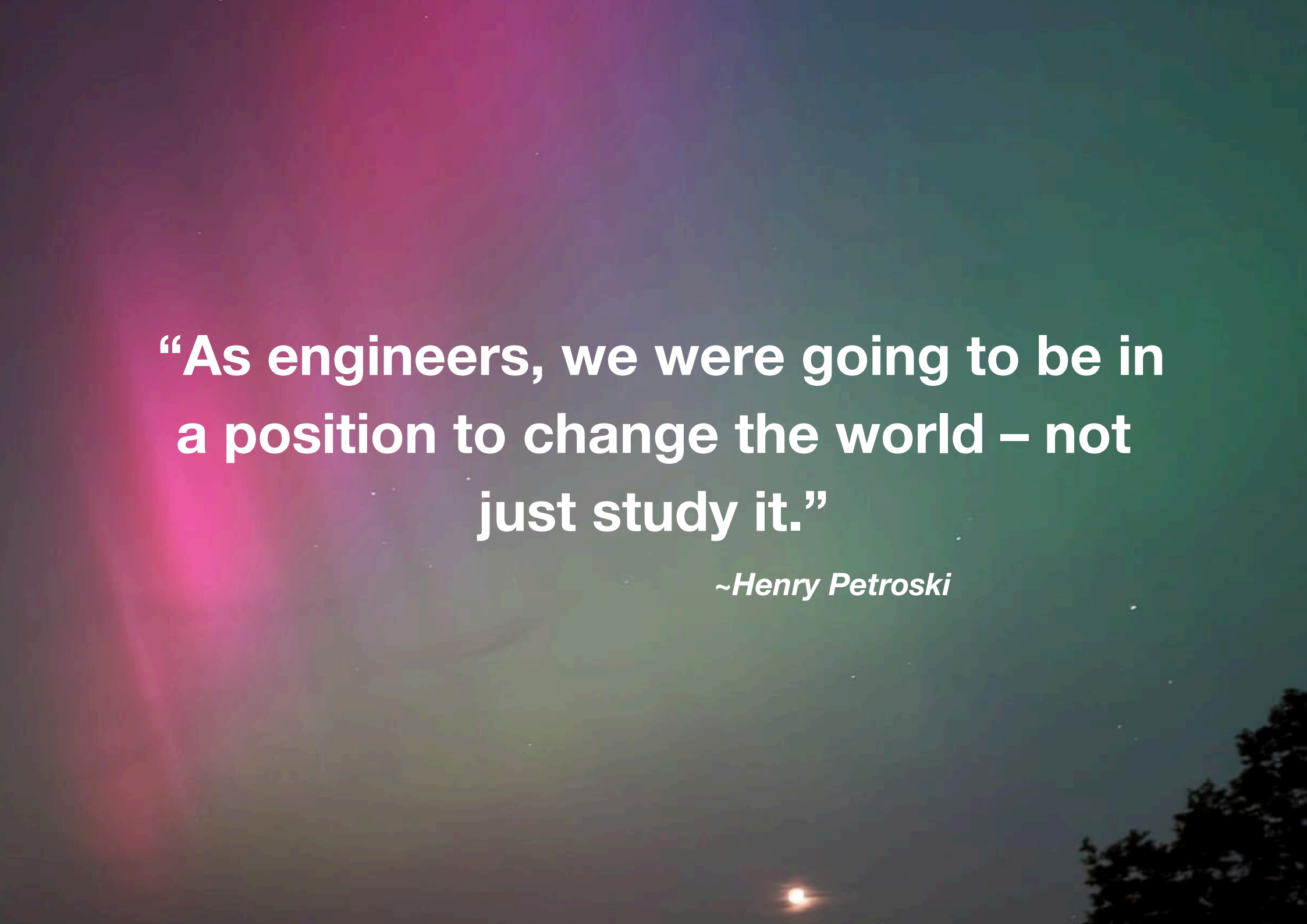


Data collection on our most utilised material grades and sizes, cross referenced against country of origin

Zero Emissions



Our scope 1 and scope 2 emissions are zero. We are reducing our scope 3 emissions where possible and we currently offset the remaining calculated emissions (net zero)



**“As engineers, we were going to be in
a position to change the world – not
just study it.”**

~Henry Petroski

Electricity

SME's make up 99.9% of businesses in the UK. By taking actions to reduce our emissions, we could have a huge impact on the business landscape through demand for green tariffs, green products and B2B contracts.

The British Business Bank estimates that UK SME's account for a third of total UK emissions [3]. Through a holistic, knowledge sharing approach, we have the opportunity to significantly reduce UK emissions.



The Carbon Trust introductory guide to net zero for SME's highlights a number of carbon reduction opportunities and include business case studies which detail actions taken, their carbon reduction impact and their monetary payback period.

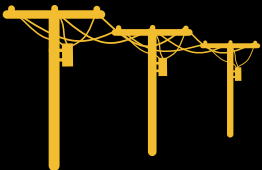
The ofgem website includes links to grants and funding opportunities for carbon reduction and energy efficiency projects.



Our **market based emissions** for energy generation are **zero**, and our location based emissions calculated with the 2023 conversion factors from GOV.UK [4] total: **10.9 tonnes CO2e**

We have also calculated our Transport and Distribution losses (Scope 3 category 3), which total: **1 tonne CO2e**

Our electricity usage decreased slightly from last year, but our chosen measurement metric, monthly usage/average staff has increased sharply.



This is due to two team members in business support roles leaving, one at the beginning of the financial year and one midway through the year. Our main source of energy usage is our CNC machinery and our workload in this area remained consistent with the previous year.

Tax Year	Units kWh	Average staff	Normalised Monthly Usage/ Average staff
2020	32965	4	686.77
2021	46986	6	652.59
2022	61726	8	642.98
2023	54637	8	569.14
2024	52666	6.5	675.20

Raw materials & waste

Last year titanium featured more heavily for us in materials purchased for subtractive manufacturing. Unfortunately we are yet to find reliable data on the carbon emissions associated with its manufacture.

	2022	2023	2024
<i>Aluminium</i>	3,414 kg	3,767 kg	2,655 kg
<i>Steel</i>	745 kg	940 kg	865 kg
<i>Titanium</i>	0 kg	4 kg	172 kg
<i>Total</i>	4,159 kg	4,711 kg	3,692 kg

As with previous years, we have estimated the carbon emissions associated with the production of aluminium and steel* we source, by using the carbon intensity of the electricity supply in the country of origin [5], and the global average energy consumption values for production [6] [7]. The estimated footprint for production of the metal used in our manufacturing operations is **16.4 tonnes CO2e**.

In the period April 2023 - March 2024, we have recycled 3,500 kg of metallic waste with our local metals recycler. The emissions associated with recycling our process waste back into a usable product fall into scope 3, and total: **1.75 tonnes CO2e**.

Our recycled waste has increased from last year by 210 kg, despite our overall material usage declining, this could be for a number of reasons:

- The material usage calculated is from materials purchased throughout the period and does not account for material utilised from 'stock' or material free issued to us from customers.
- We made a conscious effort to clean up our stock hold last year of left over materials and offcuts, utilising what we could and recycling anything deemed unusable.
- Mistakes or number of setters produced will heavily influence the amount of material recycled. Whilst we do our best to avoid it, mistakes do happen and we have recently began recording our 'good part scrap' rate to understand where improvements can be made and to measure the carbon cost of good scrap.

**processes such as smelting, forming, rolling etc*



A green wooden boat is positioned on a river, with its bow pointing towards the viewer. The river is surrounded by dense tropical vegetation, including palm trees and various green plants. The water is a murky brown color. The boat has a green painted hull and a dark interior. A rope is visible on the boat's deck.

We've funded 100 tonnes of carbon
avoidance and planted 1000 trees with

Ecologi

Ecologi

Supporting
climate action
projects

Further scope 3

Transportation of finished product

As we purchase transport and distribution services for our sold products, these are counted as scope 3 category 4 - upstream transportation and distribution. Occasionally we also use the same services for transportation of purchased goods to our site, which also falls under category 4 of scope 3 emissions.



Using the UK Gov conversion factors for 2023 [4] for a class 3 van, the estimated emissions associated with upstream transportation and distribution is **0.3 tonnes CO₂e**.

This number appears significantly lower to previous years, and that's because we've improved our data capture and estimation process. Previously we used a spend-based method to calculate emissions. We are now using a distance-based method due to improved data integrity.

Employee commuting



December 2023 saw our first Octopus electric vehicle through their employee salary sacrifice scheme! We're happy our team member can reduce their household emissions considerably and they are now able to take advantage of a special EV tariff for their household energy supply too.



Emissions associated with employee commuting total **5.3 tonnes CO₂e** for the period April 2023 - March 2024.

We continue to offer both EV salary sacrifice and cycle to work schemes to current and future employees.



Having an impact

Workplace charity

For our 2024 workplace charity, we have chosen Smalls for All, a charity based in Scotland that collects underwear for people in Africa and the UK who can't afford or can't get any. Because dignity matters.

To date they have collected more than 2 million items of underwear!



Amy and Amber took part in the Blenheim Palace Super Sprint Triathlon in June 2024, conquering fears of open water swimming and raising £500 in the process!

[Link to fundraiser](#)

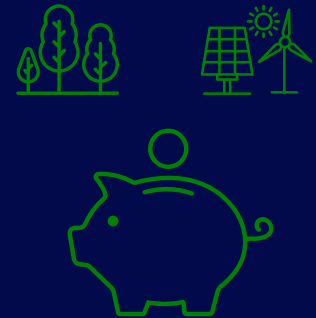


Pension

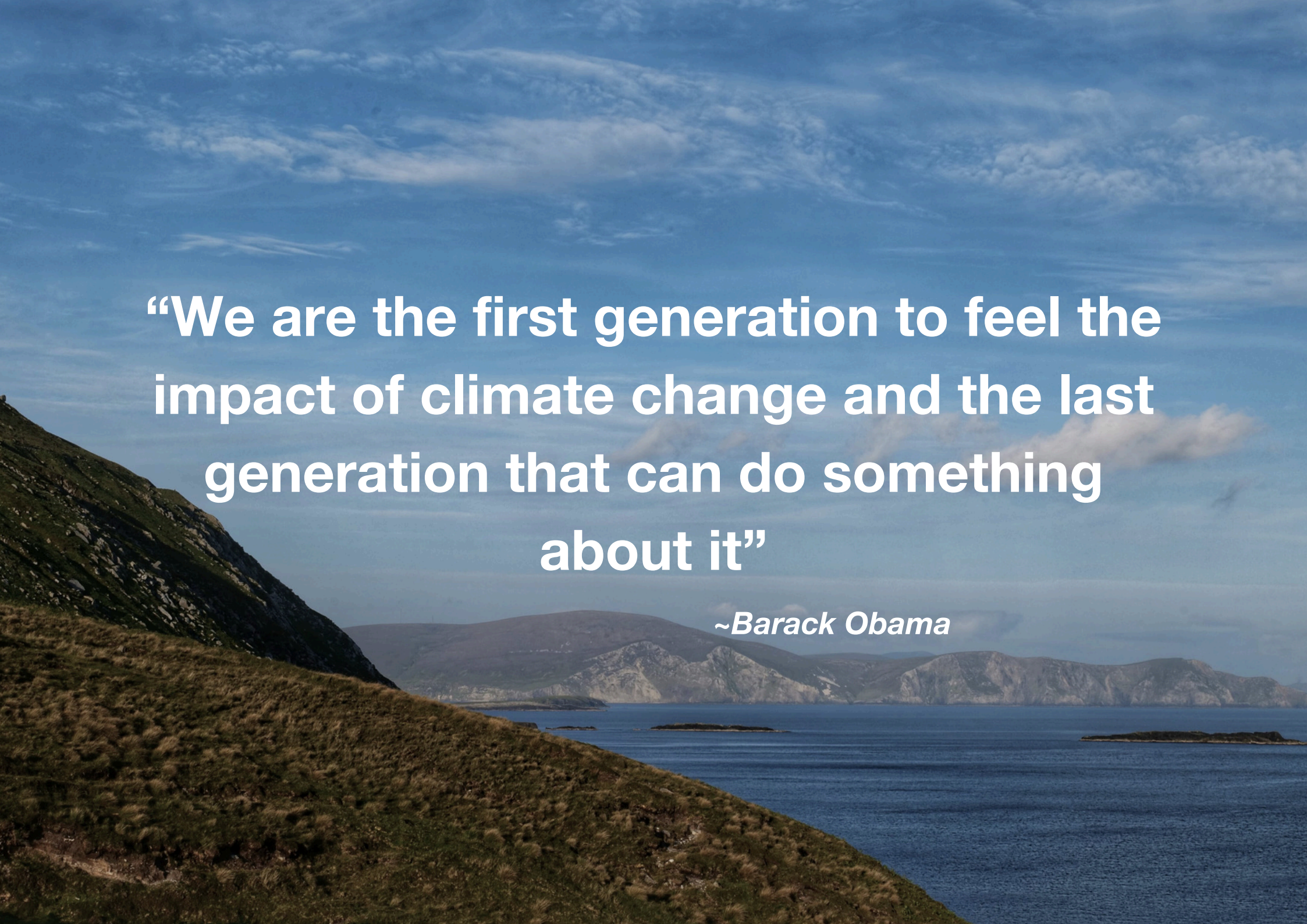
According to Make My Money Matter, there is currently **£3 trillion in UK pensions**. In 2021 the UK government recognised the UK pension pot as “the largest single group of institutional investors in the UK, with significant influence over the flow of investments in the economy.”

UK pension schemes invest heavily in fossil fuel industries, and companies furthering deforestation - two key sources of climate change causing carbon emissions.

Greening our pension cuts our carbon footprint 21x more than eating a vegetarian diet, giving up flying or switching energy providers. [8]



As a workplace, we chose **Nest** as our pension provider due to their climate plans and their fund choices for team members. Their fund options give our team members the opportunity to invest sustainably in funds such as the Nest Ethical Fund, which considers a number of ethical topics when choosing companies to invest in, such as: animal testing, animal fur trade, weapons of war, climate change, human rights and how companies operate.



**“We are the first generation to feel the
impact of climate change and the last
generation that can do something
about it”**

~Barack Obama

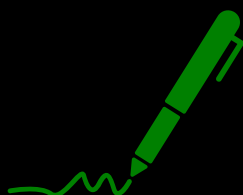
Hands up

From our first impact report, we said we wanted to hold ourselves accountable, for the good and the bad.

In the process of calculating this year's emissions, we discovered we made a mistake when previously calculating our location based electricity emissions for 2022 and 2023. An emissions factor from 2020 was used rather than the emissions factor corresponding to the reporting year. The result was an overestimation of emissions. The recalculated values are shown below. The reported units of electricity used in kWh remain the same.

Location based emissions for electricity generation

	Reported		Actual
2022	14.4 tonnes CO ₂ e	➤	13.1 tonnes CO ₂ e
2023	11.3 tonnes CO ₂ e	➤	10.5 tonnes CO ₂ e



This year we have put considerable time and resource into improving our data collection processes and our database management. The result has been improved data integrity across emissions calculations and a more detailed assessment of all scope 3 categories.

We are yet to find reliable data for the emissions associated with cutting tools we purchase. We are confident that as the industry moves towards net zero, product footprints for cutting tools will become more widespread and this will allow us to include them in future estimations.

	Greenhouse Gas Protocol Category	Emissions (tonnes CO ₂ e)
Scope 1	Direct GHG Emissions	0
Scope 2	Electricity - Market based	0
	Electricity - Location based	10.9
Scope 3	Purchased Goods and Services	16.4
	Fuel and Energy related activities	0.9
	Upstream Transport and Distribution	0.3
	Waste generated in operations	1.8
	Business Travel	0.04
	Employee Commuting	5.3
	E.o.L. treatment of sold products	0.3

Total: 25 tonnes CO₂e

**Total calculated using market-based electricity emissions*

See you later aligator

Thanks for taking the time to read this impact report. Through sharing knowledge and holding each other to account, we really believe we can make a positive impact. Help us engineer a sustainable future!

Get in touch with us through the links below:

anode.ltd

letsgo@anode.ltd

evolve-mhde.co.uk

human@evolve-mhde.co.uk



References

[1] <https://www2.deloitte.com/uk/en/focus/climate-change/zero-in-on-scope-1-2-and-3-emissions.html>

[2] <https://www.inspirecleanenergy.com/blog/clean-energy-101/what-is-co2e>

[3] <https://www.british-business-bank.co.uk/about/research-and-publications/small-businesses-and-transition-net-zero>

[4] <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2023>

[5] <https://ourworldindata.org/grapher/carbon-intensity-electricity>

[6] <https://www.iea.org/data-and-statistics/charts/energy-consumption-in-the-iron-and-steel-sector-by-scenario>

[7] <http://wordpress.mrreid.org/2011/07/15/electricity-consumption-in-the-production-of-aluminium/>

[8] <https://makemymoneymatter.co.uk/pensions/>