

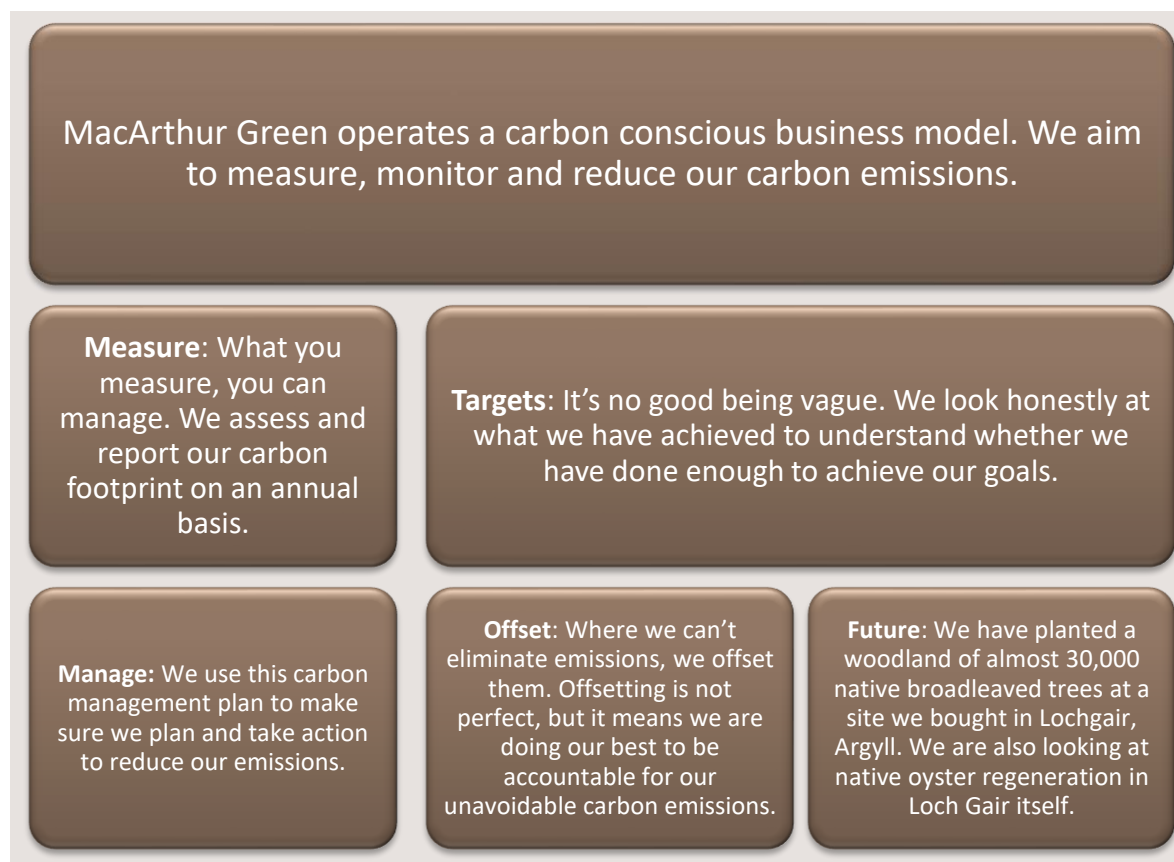


MacArthur
Green



MacArthur Green
Impact Report
2023-2024

Carbon Management Policy



Our Lochgair Woodland

The woodland at Lochgair is registered with the Woodland Carbon Code (WCC). It is estimated that the woodland will sequester over 10,000 tonnes of carbon over 100 years. This is measured in Woodland Carbon Units (WCU) which is a tonne of carbon dioxide which has been sequestered in a WCC-verified woodland.

We do not plan to sell any excess units, so in future years, the woodland will be sequestering significantly more carbon than MacArthur Green's emissions.

Biodiversity bonus features

We have installed bird and bat boxes on site to encourage biodiversity, and we are constantly looking at other opportunities to do more and add to our natural capital. For anyone reading this, ideas and suggestions are welcome!

Oyster restoration project

We have completed Phase 1 of the oyster restoration project in Loch Gair. See below for more details.

Offsetting

Offsetting is not ideal, and we have not lost sight of the challenging and important work that needs to be done to reduce our carbon emissions. We want to do the best we can, where we can, and we feel offsetting makes a positive contribution provided it runs alongside carbon emission reduction.

We only purchase offsets from verified schemes such as Gold Standard. We aim to purchase carbon offsets equivalent to twice our annual emissions in each financial year. We choose various schemes to have a diversified portfolio of offsets, hopefully spreading the positive impact more widely.

Carbon Reduction Target

Scope 1 represents company vehicle mileage. This **increased** in Year 1 and Year 2 due to essential travel to project sites, resulting in a higher carbon footprint. Year 2 was further impacted by the pandemic because vehicle sharing was not possible.

In Year 3, we made a significant investment by purchasing two electric vehicles (EVs) and the installation of an EV charger. These vehicles were added to the fleet halfway through the year, so Scope 1 emissions **decreased** in Year 3 and Year 4.

In Year 5, we expect a further decrease due to continued use of the EVs and replacement of one more vehicle with EV.

Scope 2 is electricity use in the office. This decreased year on year due to energy saving measures in the office. However, electricity use increased in Year 4 due to increased office occupation, heating and cooling, and vehicle charging. Our energy supplier is Good Energy which is 100% renewable.

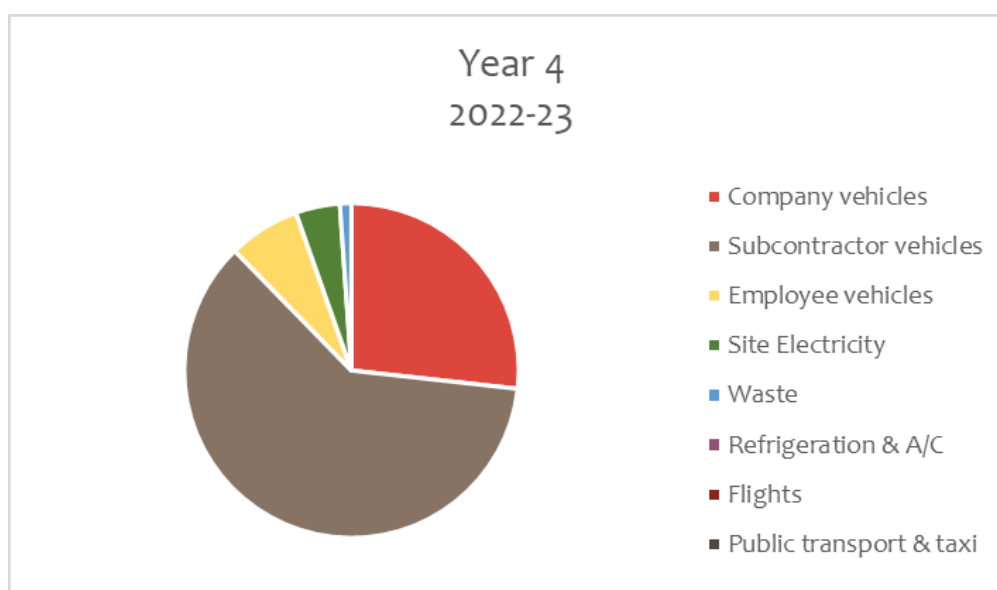
Scope 3 is subcontractor mileage for surveys in remote areas. We are working with our subcontractors to provide them with detailed information on funding for EVs and chargepoints to encourage them to change to EVs if possible.

Buying new vehicles is a substantial investment for sole contractors, and this poses a significant blocker for both our subcontractors and for us in reducing this source of emissions.

Carbon Footprint Summary

MacArthur Green has grown significantly since the baseline year, with turnover increasing from £1.8 million to over £3 million. Whilst our carbon footprint has **increased** during this period from 55 tonnes of carbon dioxide equivalent (tCO₂e) to 89 tCO₂e, the tonnes per million turnover has **decreased** from 31 tCO₂e to 27 tCO₂e.

	Baseline 2018-19	Year 1 2019-20	Year 2 2020-21	Year 3 2021-22	Year 4 2022-23	Trend
Year end	31-Jan-19	31-Jan-20	31-Jan-21	31-Jan-22	31-Jan-23	
Carbon Footprint	55	57	65	65	89	
Number of employees	27	27	29	30	32	
tCO ₂ e per employee	2.1	2.1	2.2	2.2	2.8	
Turnover £Million	1.79	1.67	1.74	2.17	3.25	
tCO ₂ e per £Million Turnover	31	34	37	30	27	
% increase/decrease	-	11%	20%	-3%	-11%	



tCO₂e Tonnes of Carbon Dioxide Equivalent

A carbon footprint is measured in tonnes of carbon dioxide equivalent (tCO₂e). This is a standard unit which can be used express the impact of each of the greenhouse gas in terms of the amount of carbon dioxide that would create the same amount of global warming. This unit is used so that a carbon footprint which accounts for many different greenhouse gases can be expressed as a single number.

Lochgair Woodland Project

In 2018, we planted almost 30,000 trees in MacArthur Green's woodland in Lochgair, Argyll. This created over 18 hectares of new woodland. We are also protecting and enhancing eight hectares of existing oak woodland and almost six hectares of peatland habitat. The trees are now in their fifth year and we have submitted the five-year verification report to Woodland Carbon Code.



Bracken control has been an issue on site, as has rhododendron. These plants can impede the growth of the trees planted and so need to be removed frequently.



Oyster Restoration Project

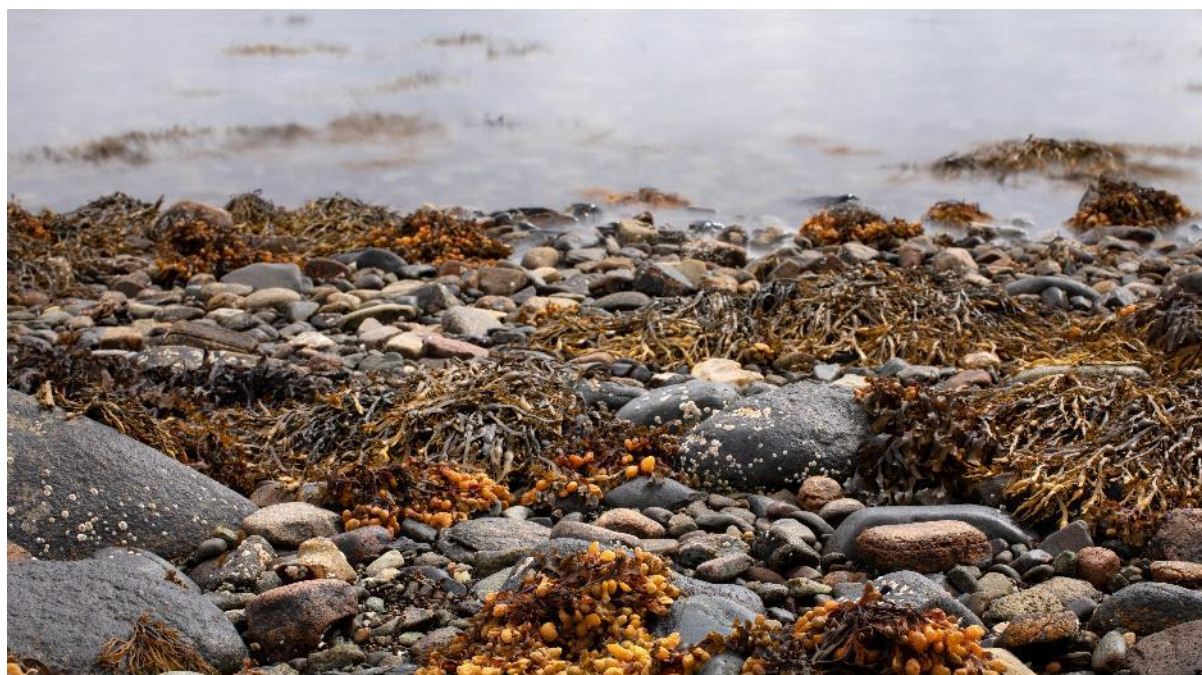
MacArthur Green was awarded a grant by the Scottish Marine Environmental Enhancement Fund (SMEEF) to investigate restoring native oysters in Loch Gair, with charity partner Seawilding. The purpose of the project was to establish whether a viable population, if any, of native oysters (*Ostrea edulis*) exists in Loch Gair, and what the potential might be for restoration or reinstatement.

Oysters are important to the marine environment because they filter seawater, removing pollutants and chemicals. One oyster alone can filter 200 litres of water a day. In addition to these benefits, oysters also sequester carbon and contribute to biodiversity by creating underwater reefs.

Seawilding carried out surveys in March 2023. The total area surveyed was 65 hectares, through walkover surveys of intertidal areas, video transects, snorkel surveys and salinity testing.

In addition to the survey, MacArthur Green and Seawilding engaged with the local community through leading an event which included a 'sea safari' on the shores of Loch Gair. We aim to incorporate citizen science activities into the project in the future by engaging at an early stage with the local community. By raising awareness of the native oyster protection and potential restoration, we hope to encourage locals to be involved in future works relating to restoration activities (e.g. placement of oysters and monitoring).

Now that Phase 1 is complete, we plan to proceed with Phase 2 in 2024/2025 which will be a trial project, leading onto Phase 3 which would be a wider restoration to deliver significant marine biodiversity benefits.



Charity & Community

In addition to our original tree planting project, we identified a unique opportunity to use unplanted areas of the site at Lochgair for discrete projects to plant additional trees for targeted charitable organisations where their values are aligned with ours.



MacArthur Green is working with a Scottish charity called Includem on the 'Seeds of Hope' project. The project will see trees planted for every child, young person and family currently supported by the charity and in the future as well as for each member of staff they support both now and in the future. The first set of 20 trees was planted in our Lochgair Woodland.

Project Lead, John Gemmell said:

"We think this is a project that will have a lasting impact on the children, young people, and families we support. It is symbolic to have a tree planted for them. This tree will grow and prosper, just like we believe every child and young person has the right and opportunity to do so. We hope that every child and young person will be able to look back positively on the support they receive from includem. They can then return to this area to see that support represented and how it has grown over time with the right systems and supports in place."

McArthur Green Founder, David McArthur, said:

"The outdoors has always been a big part of my life, and I'm keen to introduce the countryside to young folk who may have lived in the city all their lives and are perhaps unaware of the joy it can bring. From little things big things grow, so it's a privilege to be able to expose these young folk to Scotland's unique natural beauty through our tree planting project at Lochgair and introduce them to the positive outcomes of learning new skills in a safe, inclusive and enjoyable environment. Young people are both the custodians and the inheritors of the natural world, so we need to commit to equipping them with knowledge and skills to ensure that Scotland remains on track to reach our net zero targets."



Includem ADAPT for CashBack @Includem_ADAPT · Jul 17

We went up to Lochgilphead at the start of the month to plant trees as part of our 'Seeds for hope' launch! We had a fantastic day working as part of a team to plant the first 20 trees 🌲 😊



Fleet - Electric Vehicles

Up to 93% of our carbon footprint comes from vehicle travel – company vehicles, employee vehicles and subcontractor vehicles. This is the biggest challenge we face to reducing our carbon emissions.

It's not possible for our surveyors to use public transport due to the remote nature of the sites. Our team uses public transport for meetings, training and events. We have a zero-flight policy with no flights used since 2019.

We introduced two electric vehicles (EV) to our fleet in 2021. One vehicle is a Renault Zoe which has a range of about 120 miles. The other is an MG5 estate which has a range of about 160 miles. This was a significant investment for MacArthur Green. The cost was equivalent to 10% of net profit in that year.

The Renault Zoe was used for [travel to a wind farm site](#) where we were able to leave a Toyota Hilux 4x4 vehicle. This reduced the number of miles travelled in the Hilux for this project by 6000 miles, resulting in a saving of **2 tCO₂e** of carbon dioxide emissions.



The saving from using both EVs in 2021-22 is **4.7 tCO₂e** compared to driving a Hilux for the same number of miles.

We continue to encourage the use of public transport and active travel, for both business travel and commuting. We have facilities to store bikes and wet weather gear. Hybrid working for the team has also reduced the amount of commuting and helped with home life requirements. It's a balance between feeling part of a team and all the benefits of being in the office.

We are fortunate to have a switched on and engaged team who are looking for creating solutions to vehicle emissions. One example of this recently is where one of our team attended a conference in the Netherlands, travelling from Glasgow by train and ferry, taking a bike travel the last few miles to the destination.

Careful planning of survey work means that we minimise the use of our diesel and petrol vehicles, using the EVs whenever the site location allows and/or where the tracks on site are suitable for vehicles with lower clearance. We very rarely need to drive in true offroad conditions, so many sites are accessible using cars rather than 4x4.

We also seek to combine surveyor journeys wherever possible, for example, using one vehicle to take two members of the team and coordinate to drop offs when sites are nearby.

We use local subcontractors to conduct surveys in the north of Scotland, and this reduces the number of miles to travel. It is also an important part of supporting jobs for rural communities (where many of our sites are located) and this is a key consideration in line with Scottish Government's focus on there being a just transition to net zero. We are working with our subcontractors to make sure they have the information about EVs and chargepoint installation to make it easy for them to transition to EVs when they can. With legislation in place that states petrol and diesel cars will be banned in 2030 and hybrids outlawed from 2035, the advice we are providing sub-contractors is timely and will help with future decision making.

In 2020, we replaced a 2009 Suzuki Jimny with a new model. Unfortunately, there were no affordable four-wheel drive EV options available, and this vehicle is used for offroad driving to access survey locations. The CO₂ emissions figure for the new vehicle is 174 g/km compared to 191 g/km for the old vehicle. This is a 12% decrease.

Our Office – Energy Use

In June 2021, we changed to Good Energy as our office electricity supplier.

Many suppliers now offer affordable tariffs that are labelled as 'green' but there are differences in how suppliers buy renewable electricity and carbon offset gas. Good Energy's tariffs achieved Gold Standard Green Accreditation under Uswitch's [accreditation scheme](#) and we felt they were the best supplier to tie in with our carbon reduction objectives

We are minimising energy use in the office through careful use of the heating system alongside thermometers and a timer. We did not use the air conditioning throughout the past two summers during the pandemic, as its use was forbidden by HSE as our system is one which recirculates air. The temperature was controlled using the blinds to block the sun and opening windows. We will continue with this in future, when weather allows, to minimise energy use.

We are replaced the fluorescent lightbulbs in our office with modern LED bulbs in 2022, and this will help to reduce electricity use.



Supply Chain & Purchasing

Our purchasing procedure includes consideration of energy consumption and sustainability. This involves looking for ethical, recycled and environmentally friendly products.

One example of this is our printer purchase. We opted to buy a refurbished printer rather than purchasing a new machine.

Another example is the free sanitary products we supply our team. We have opted for a brand that uses only organic cotton and chlorine free materials.

Other examples of implementing our purchasing procedure are things like our coffee and tea brands, which are fair trade. Our toilet roll, blue roll and printer paper and stationary are all recycled and unbleached too.

Finance, Investments & Pensions

Our employee pensions have an option for [ethical and environmental portfolio investments](#). Ensuring that your pension is in an ethical fund could be the most powerful thing you can do as an individual to cut your carbon according to makemymoneymatter.co.uk

Our company banking is with ethical investments, where possible.

Ideas Welcome!

We are by no means done in our quest to reduce our carbon footprint, so if you have any ideas or suggestions you feel we could benefit from, please do fire them over to info@macarthurgreen.com and we'll do our best to investigate and implement them!



