



MacArthur
Green

CARBON MANAGEMENT PLAN

2019 - 2020

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MacArthur Green is helping to combat the climate crisis through working within a carbon negative business model. Read more at www.macarthurgreen.com.



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1 CARBON MANAGEMENT POLICY

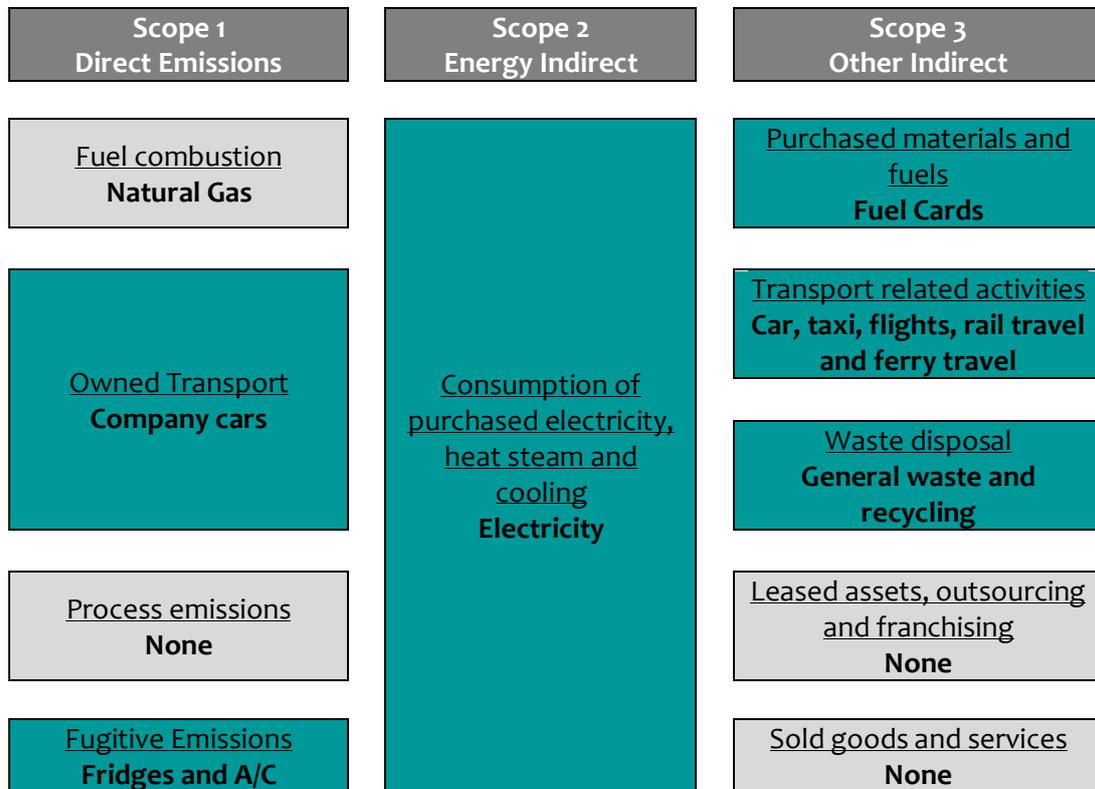
MacArthur Green will manage and reduce the emissions from our operations with the aim of being a carbon negative business. We will do this by:

- Following international standards including the World Resource Institute's Green House Gas Protocol and Defra's GHG reporting guidelines for assessing carbon emissions.
- Putting in place a carbon management plan (this document) to reduce emissions.
- Setting targets to reduce emissions (on a per unit turnover basis) year on year.
- Assessing and reporting our carbon footprint on an annual basis.
- Offsetting our residual emissions through projects verified against the international Verified Carbon Standard (VCS), Gold Standard or Certified Emission Reductions (CERs). We aim to offset our emissions by twice each year to enable us to offset our historic carbon footprint since the company was founded in 2010.
- We have planted a woodland of almost 30,000 native broadleaved trees and have registered this woodland under the Woodland Carbon Code. In the future we plan to use the woodland carbon units to compensate for any residual emissions. It is estimated that the woodland will sequester a total of 10,340 tonnes of carbon.

2 CARBON MANAGEMENT PLAN

2.1 Scope of Carbon Management Plan

The scope of our company's carbon management plan is as follows:



Key:



Figure 1 The assessment boundary.

The areas not within the scope of the carbon management plan have not been covered for the following reasons:

- MacArthur Green does not operate any processes which release greenhouse gases into the atmosphere as Fuel Combustion (Natural Gas).
- There are no direct emissions from processes.
- Subcontractor mileage has been included.
- There are no leased assets, outsourcing or franchising to report.

2.2 Our Carbon Management Process

This carbon management plan is reviewed periodically, once a year as a minimum.

An overview of the process is shown below.

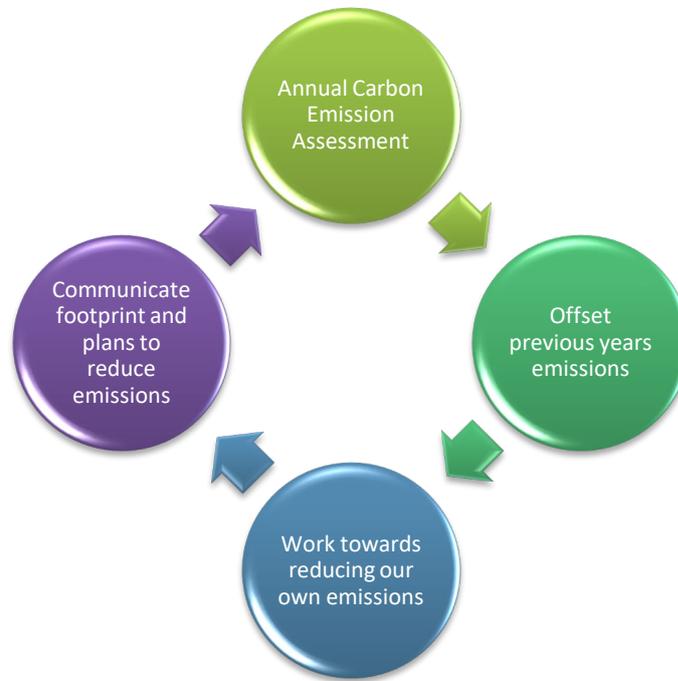


Figure 2 MacArthur Green's carbon management process.

2.3 Our Carbon Reduction Target

We aim to reduce our annual carbon footprint on a **per unit turnover basis (tCO₂e/£m turnover)** by at least 10% per year on an ongoing basis. This target will be met by the actions detailed in Section 4 that we are putting in place.

3 CARBON FOOTPRINT TRACKING

3.1 Company's baseline carbon footprint

The baseline year for comparing future carbon footprint reductions is 01/02/18 to 31/01/19. This period is aligned to the company's financial year.

MacArthur Green's carbon footprint for the baseline year was **52.89 tCO₂e**. The detailed results and the methodology used for the calculations can be found in the carbon footprint appraisal report for that year.



2019 Macarthur
Green Report.pdf

The chart below shows the breakdown of the emissions during the baseline year:

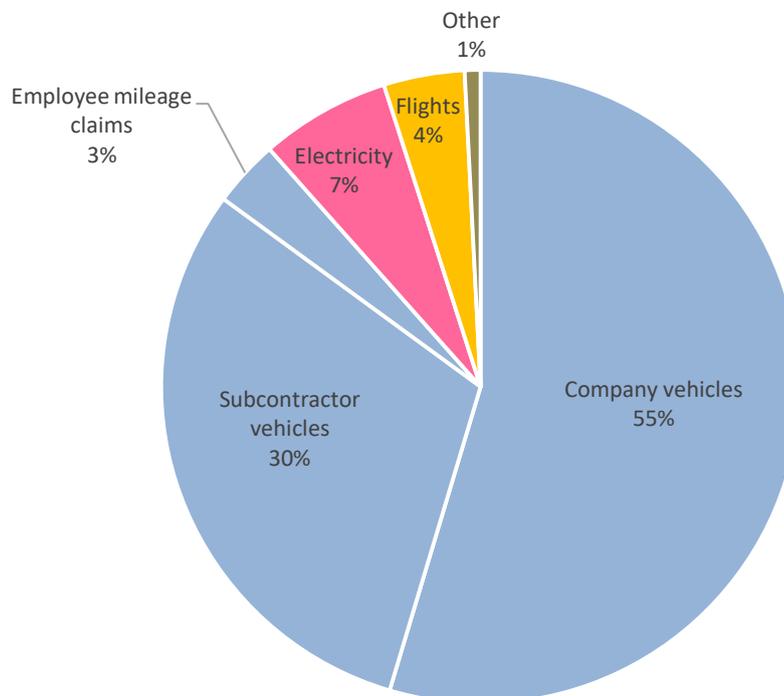


Figure 3 Percentage contribution of each element during the baseline year.

4 CARBON REDUCTION PLAN

4.1 Acknowledgement of company's restrictions

MacArthur Green is renting office premises and is midway through a five year lease. This unfortunately means that we cannot make structural changes to the building, and it would not be cost effective to install new systems (e.g. heating controls, LED lighting) unless our landlord was willing to pay for them as an upgrade to the property.

4.2 Carbon reduction actions

The following carbon reduction actions are designed to help our company reduce our carbon emissions and meet our target.

Six months after the end of the appraisal period, all carbon reduction actions must be assessed against performance. Should an action not be in place or is incomplete, a corrective action should be enacted to ensure our reduction target is met.

4.2.1 Travel

Action Number	TR01
Action description	Zero flight policy. The company will avoid travel by plane unless it is impractical to use other forms of transport, for example due to the total travel time.
Allocated to	Operations Manager.
Performance assessment (to be completed 6 months after the end of the appraisal period)	Check number of flights used in 2019-2020 financial year and look at the reasons.
Corrective action (only if performance assessment reveals the action is not being carried out)	If flight travel has been used unnecessarily, look at other ways to implement the zero flight policy (Director approval before purchase of flights for example).

Action Number	TR02
Action Description	Plan for replacement of Hiluxes and Jimny with a lower emissions model. Replacing one Hilux with Rav4 (118 g/km CO ₂) will result in a 40% reduction for that vehicle.
Allocated To	Operations Manager & Directors.
Performance assessment (to be completed 6 months after the end of the appraisal period)	One vehicle to be replaced. Commitment to change all vehicles to hybrid or electric by end of 2021.

Action Number	TR02
Corrective action (only if performance assessment reveals the action is not being carried out)	Consider adding fuel monitoring equipment to hiluxes to track fuel consumption and encourage more efficient driving.

4.2.2 Heating & Cooling

Action Number	HC01
Action Description	Measure and track electricity use in office (weekly readings). Use thermometers to monitor temperature. Aim for 5% reduction on previous year.
Allocated To	Operations Manager.
Performance assessment (to be completed 6 months after the end of the appraisal period)	Compare annual electricity usage.
Corrective action (only if performance assessment reveals the action is not being carried out)	Investigate costs for new heating controls to be added to current system (possible funding available from Resource Efficient Scotland).

4.2.3 Lighting

Action Number	Ll01
Action Description	Quotes for LED bulb replacement have been obtained. £3,825 and £2,159. Ex VAT. All lights to be switched off using master switch at end of day.
Allocated To	Directors.
Performance assessment (to be completed 6 months after the end of the appraisal period)	Review energy use (aim for 5% reduction as per HC01) and review LED lighting quotes.
Corrective action (only if performance assessment reveals the action is not being carried out)	Look at LED lighting quote again if reduction has not been achieved.

4.2.4 Electrical Equipment

Action Number	EQ01
Action Description	Low energy equipment shall be purchased where this option is available (printers, monitors, laptops, PCs, kitchen appliances, heaters).
Allocated To	Operations Manager.
Performance assessment (to be completed 6 months after the end of the appraisal period)	Check equipment purchased in 2019-2020 and whether energy consumption was a factor in purchasing decision.
Corrective action (only if performance assessment reveals the action is not being carried out)	Update the purchasing procedure and ensure this is communicated effectively.

Action Number	EQ02
Action Description	Batteries.
Allocated To	Operations Manager.
Performance assessment (to be completed 6 months after the end of the appraisal period)	Record number of batteries purchased over 12 month period. Monitor this in the next appraisal period and continue to look for alternative options (e.g. rechargeable battery technology for Anabats which may be available in future).
Corrective action (only if performance assessment reveals the action is not being carried out)	n/a.

4.2.5 Buildings

Action Number	BU01
Action Description	The office space is rented and we are unable to make modifications to the building. Lease break option – 1 Jan 2021. Lease ends – 31 Dec 2022.
Allocated To	Directors.
Performance assessment (to be completed 6 months after the end of the appraisal period)	Not applicable.

Action Number	BU01
Corrective action (only if performance assessment reveals the action is not being carried out)	Not applicable.

4.2.6 Supply Chain

Action Number	SC01
Action Description	Communicate carbon reduction aims to subcontractors and encourage them to look at lower emission vehicles. Collect current vehicle data (CO ₂ emissions g/km) and ask for this information for all new subcontractors.
Allocated To	Operations Manager & Project Managers.
Performance assessment (to be completed 6 months after the end of the appraisal period)	Use vehicle emissions data for carbon footprint 2019-2020 calculation.
Corrective action (only if performance assessment reveals the action is not being carried out)	Identify alternative subcontractors where possible if positive change is not apparent.

Action Number	SC02
Action Description	Request details of carbon reduction plans for top suppliers and aim to influence positive change. Update purchasing policy to include carbon management checks for new suppliers where practical or where the purchase is over a certain amount.
Allocated To	Operations Manager.
Performance assessment (to be completed 6 months after the end of the appraisal period)	Top 10 suppliers to be contacted in 2019-20 and positive responses received.
Corrective action (only if performance assessment reveals the action is not being carried out)	Identify alternative suppliers.

5 CARBON OFFSETTING PLAN

Our main aim is to be a carbon negative company. In order to achieve this status, we commit to achieve carbon reductions within our organisation. We will offset all residual emissions by a factor of two.

Our offset projects and methodology for offsetting meet the following principles:

- The offsets we purchase or the allowance credits we surrender represent genuine, additional GHG emission reductions elsewhere.
- The projects involved in delivering our offsets meet the criteria of additionality, permanence, leakage and double counting.
- Our carbon offsets are verified by an independent third party verifier.
- Our credits from carbon offset projects are only issued after the emission reduction associated to the offset project has taken place.
- Our credits from carbon offset projects are retired within 12 months from the date of the declaration of achievement of carbon neutral status.
- Our credits from carbon offset projects are supported by publicly available project documentation on a registry which provides information about the offset project, quantification methodology and validation and verification procedures.
- Our credits from carbon offset projects are stored and retired in an independent and credible registry.

Our offset credits are retired from either Markit or APX Registry on our behalf by Carbon Footprint Ltd. Our offset credits can be tracked by anyone on the registry website (<http://mer.markit.com/br-reg/public/index.jsp?s=ca> or <https://vcsregistry2.apx.com/myModule/rpt/myrpt.asp?r=206>) by running a search using our company name (and the date of retirement in the case of APX Registry) – the credits will appear as retired by Carbon Footprint Ltd with a statement saying “Retired on behalf of Company”. When doing this, information will be displayed including:

- The amount of offset.
- The type of offset and projects involved.
- The number and type of carbon offset credits used and the time period over which the credits have been generated.