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**MOTT
MACDONALD**

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Carbon Reduction Plan

Mott MacDonald

September 2021

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Executive summary

In 2020, Mott MacDonald became the first company in our class to be externally certified carbon neutral, globally. Alongside maintaining our carbon neutral status, we are also committed to achieving net zero emissions by 2040, if not before.

In the last decade we at Mott MacDonald have made great strides in reducing our own global emissions. We have reduced our individual carbon footprint by 45% per employee in the last five years and are on track to reduce the total figure by a further 25% by 2024 and will keep on driving them down in line with the Science Based Targets initiative.

We recognise the importance of taking urgent action which will lead to meaningful carbon reductions across our organisation. The actions set out within this Carbon Reduction Plan provide the fundamental steps required to achieve our Science Based Targets, and ensure we remain on track for what is required for a 1.5 °C warming pathway.

“We have become carbon neutral because, as an employee-owned business, we share our people’s values and act on their concerns. We have a responsibility to our families, friends, colleagues and society. We believe in leading by example. We know that, to help others, we must have our own house in order.” Mike Haigh, Chief Executive, Mott MacDonald

1 Declaration and Sign Off

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standard for Carbon Reduction Plans.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard¹ and uses the appropriate Government emission conversion factors for greenhouse gas company reporting².

Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported in accordance with the published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard³.

This Carbon Reduction Plan has been reviewed and signed off by the board of directors.



Denise Bower

Board Director

30th September 2021

¹ Greenhouse Gas Protocol: Corporate Standard: <https://ghgprotocol.org/corporate-standard>

² Department for Business, Energy & Industrial Strategy: Government conversion factors for company reporting of greenhouse gas emissions: <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

³ Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Standard: <https://ghgprotocol.org/standards/scope-3-standard>

2 Mott MacDonald Carbon Footprint

2.1 General information

Mott MacDonald is a private limited company registered in the UK, providing management, engineering, and development consultancy solutions globally.

Our organisational boundaries are set according to the control approach, under which Mott MacDonald accounts for 100% of GHG emissions from operations over which it has control. This includes all offices we own and lease and the business travel of our global staff. In this way, we also have control over the reduction efforts we put in place. Greenhouse Gas (GHG) sources are excluded from the assessment where they are deemed to contribute a non-material portion to the carbon footprint. This includes emissions from some very small offices for which data is not collected – instead these are included on a pro-rated basis.

We have reported our 2020 calendar year emissions as tonnes of carbon dioxide equivalent (tCO₂e) for our global business. Our operational boundaries are set in accordance with ISO 14064-1, consisting of the following:

- Direct **scope 1** emissions from sources owned or controlled by Mott MacDonald Group Limited.
- Indirect **scope 2** emissions from the generation of purchased electricity by Mott MacDonald Group Limited (reported using both market and location- based approaches).
- **Scope 3** indirect emissions generated from activities associated with:
 - Business travel
 - Fuel and energy related activities from the operation of offices leased by Mott MacDonald (not included within scope 1 and scope 2)
 - Employee commute and teleworking
 - Purchased goods and services
 - Waste generated in operations

2.2 Carbon footprint methodology

The methodology for calculating the carbon footprint has been developed in accordance with ISO 14064-1. We are confident that our methodology, detailed below, presents a reasonable worst-case scenario of our group carbon footprint.

2.2.1 Emission factors

To compile our 2020 group carbon footprint, we primarily used the emission factors published by BEIS UK (2020), the International Energy Agency (2020) and the Association of Issuing Bodies (2020) to estimate our impacts. Where available, we used national publications to source emission factors, such as from the US Environment Protection Agency and the Australian National Greenhouse Accounts Factors. Note that we include the effect of radiative forcing in our calculations for air travel. All emissions are reported in units of tCO₂e.

2.2.2 Scope 1 and 2 emissions

Electricity and heating

Mott MacDonald controlled offices: we gather information using billed or metered energy consumption. Some offices are not able to meter energy use (for example charged through rent) – these are estimated based on emissions by floor area benchmarks from known offices.

Scope 2 dual reporting

From October 2018 we purchased renewable electricity for a portion of our UK offices. This means we now report our emissions using both a location-based (using national average grid factors) and market-based (using residual emission factors for non-renewably sourced electricity, where supplier specific emission factors are unknown, and contract specific emissions factors for renewably sourced electricity). Note that the reported market-based emission factors were for 2019 in some cases (where sourced from AIB). Residual emission factors are slightly higher than the corresponding grid averages as they represent the average emissions from unclaimed energy. Market-based reporting therefore reflects reductions made from purchasing renewably sourced electricity and drives the transition to low carbon electricity.

Refrigerant gases

Evidence of refrigerant gas top-ups was collated from office managers where available. A benchmark based upon office floor area was calculated using the data available. Where offices had an air conditioning unit top-up but were unable to provide evidence of gas usage, the benchmark was used to estimate these emissions. In line with the GHG protocol, emissions from refrigerant gases cover only those detailed under the Kyoto Protocol. The emissions were calculated using the BEIS (2020) emission factors.

2.2.3 Scope 3 emissions

Business travel

We have access to travel agencies for booking air travel, rail travel, and car hire which contains details on journeys made. Data on business travel by personal car and other travel modes is obtained from business expense claims.

Fuel/ energy related activities

Data is gathered using the approach explained above for Mott MacDonald controlled offices. Please note that both location and market-based emissions include scope 3 Transmission & Distribution and Well To Tank emissions.

Employee commute and teleworking

The following emission sources are captured under employee commute and teleworking:

- a. Employee commute: transportation activities between employee homes and places of work
- b. Teleworking:
 - i. Electricity usage from home office appliances and air conditioning units
 - ii. Energy used for heating employee home office space

Data is collected using a MS Forms survey, the results of which are cleansed and analysed before extrapolating to account for the global business. In 2020, the survey was disseminated to ~2,700 Mott MacDonald employees. The response rate resulted in a confidence level of 95%, and a margin error (degree of accuracy) of 3.5%.

Employee commute emissions are determined through collecting data on primary and secondary modes of transport and typical transportation distances. The methodology to estimate teleworking emissions is extracted from the Eco Act Whitepaper, following the guidance for ‘enhanced case’ calculations. For teleworking emissions, data is collected to account for typical home heating and cooling energy use, heating and cooling duration, and information on shared occupancy. Where data is not available, the Eco Act base case assumptions are applied.

Note that respondent’s average number of days working from home per week in the reporting year assists with apportioning the emissions.

Purchased goods and services

Emissions captured within purchased goods and services include all those over which Mott MacDonald have financial control – training and education, financial intermediation, legal services, institutional membership subscriptions etc.

Data is collected using Mott MacDonald financial expenditure, extracted from the internal invoicing and reporting tool used across the Group. The data is cleaned and categorised to meet the requirements of the Scope 3 Evaluator, an online tool set up by the Greenhouse Gas Protocol and Quantis.

Waste generated in operation

This includes emissions from the disposal of Mott MacDonald office waste processed by a third party. Data in the form of volume and expenditure on waste disposal is already currently collected by the UK Mott MacDonald offices, therefore financial expenditure on waste disposal is processed through the Scope 3 Evaluator to calculate these emissions. For many of our offices globally, waste services are included within the office rental agreement. This makes it more difficult to obtain and monitor the emissions, though it is something that will be further investigated and reporting will be updated accordingly.

2.3 2020 carbon footprint breakdown

The emissions presented in the table below represent the footprint of Mott MacDonald Group Limited and Mott MacDonald Limited for the period 1st January 2020 to 31st December 2020.

Emissions Category	Emissions Source	Mott MacDonald Group Limited (global business)	Mott MacDonald Limited (UK business)
		tCO ₂ e	
Total Carbon Footprint	Location-based	20,056*	29,778
	Market-based	19,214*	28,679
Scope 1	Natural gas	1,241	817
	Refrigerants	1,063	277
Scope 2	Location-based	3,011	1,339
	Market-based	2,169	240
Scope 3	Category 1 – Purchased goods and services	under review	18,881

Emissions Category	Emissions Source	Mott MacDonald Group Limited (global business)	Mott MacDonald Limited (UK business)
		tCO ₂ e	
Category 3 – Fuel and energy related activities	1,287	422	
Category 5 – Waste generated in operations	under review	41	
Category 6 – Business travel	5,271	2,584	
Category 7 – Employee commuting	1,347	278	
Category 7 (optional) – Employee teleworking	6,836	5,139	

*Note: Total currently excludes the unconfirmed scope 3 emissions (Category 1 and Category 5). This will be updated when emissions have been confirmed.

3 Carbon reduction targets

3.1 Overview of Mott MacDonald carbon targets

Initial carbon target

In 2016, Mott MacDonald Group Limited committed to a 25% reduction in carbon emissions per employee by 2021 and a 50% reduction in absolute emissions by 2030, taking 2016 as the baseline year.

Science Based Targets

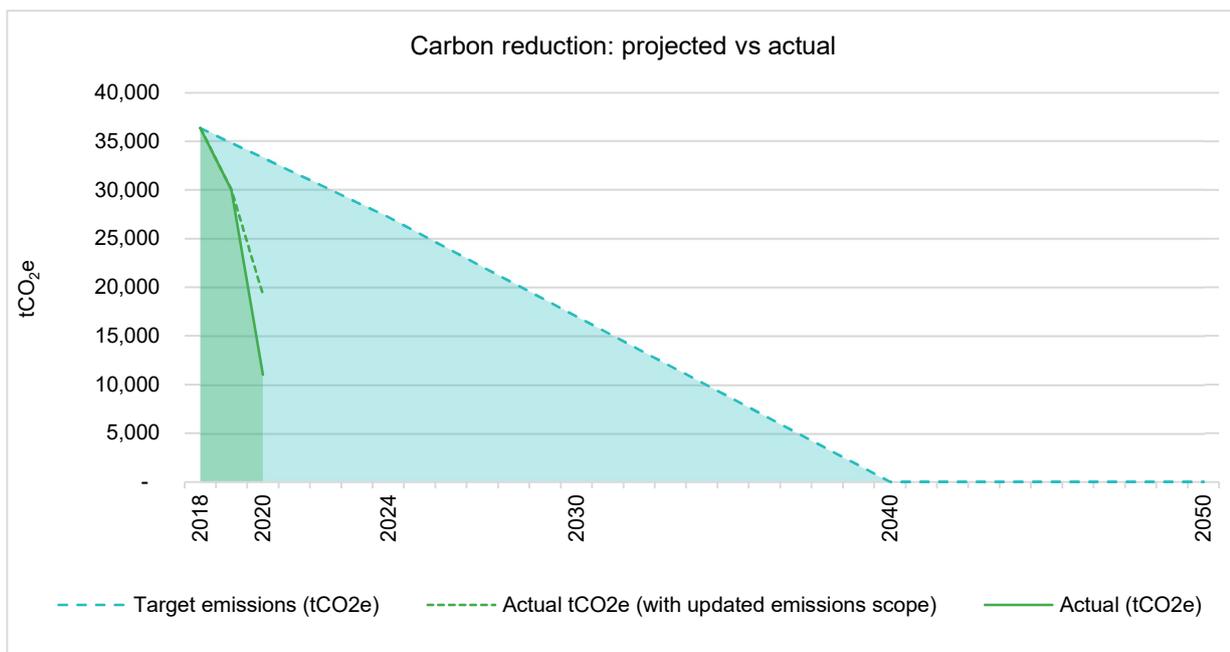
The Science Based Targets initiative (SBTi) certified that our most recent carbon emission targets are aligned with a with a 1.5°C pathway. Under this commitment, Mott MacDonald Group Limited commits to reduce absolute Scope 1 and 2 GHG emissions and Scope 3 GHG emissions from fuel & energy related activities and business travel 25% by 2024 from a 2018 base year⁴.

Net Zero carbon target

Looking forward, we have set a target of achieving [net zero carbon emissions by 2040](#) if not before. This means we will remove as much greenhouse gases from the atmosphere as we put into it from our operations and wider activities using measures that ‘permanently remove an equivalent amount of atmospheric carbon dioxide.’ We are currently developing our Net Zero Carbon Plan to better understand how we will achieve this ambition.

3.2 Progress towards Science Based Targets

In 2020, we achieved a 70% reduction in our global carbon emissions compared to a 2018 baseline (this equates to a reduction of 25,348 tCO₂e).



⁴ View Appendix A for further information on the baseline emissions.

Note that the reductions achieved in 2020, whilst supported by our commitments within our Carbon Neutral Plan (for example, switching to renewables has resulted in a ~30% reduction in global Scope 2 emissions), were largely as a result of changes to business-as-usual following global Covid-19 restrictions.

Although recognising 2020 as an anomaly year, we endeavour to take stock of the lessons to help continually reduce our carbon footprint. For example, in light of Covid-19, we have recently expanded our scope of emissions reporting to include Scope 3 emissions from employee commute and teleworking. Note that when including these additional sources in our 2020 footprint, a 47% reduction in total emissions has been achieved compared to the 2018 baseline.

4 Carbon Reduction Activities

4.1 Our commitment to carbon neutrality

We endeavour to maintain our carbon neutral status by continuing to offset our scope 1 and 2 operational emissions (over which we have control), and scope 3 emissions from business travel and fuel/ energy related activities.

Our offset strategy has been developed with four primary objectives:

1. Primarily drive down our carbon emissions in the short, medium and long term, by also improving carbon performance management
2. Maintain carbon neutrality through the purchase of offsets, driving down the need to offset as much and as fast as possible thereafter
3. Improve the quality of the offsets we buy progressively so we show leadership against best practice standards and benchmarks
4. Develop partnerships with Non-Government Organisations (NGO's) and develop our own Mott MacDonald projects for offsetting in the longer term

Striving for the best possible outcome, we will continue to assess the environmental and social integrity of our offsetting scheme in line with emerging evidence and best practice and adapt as necessary. We endeavour to always purchase offsets that demonstrate additionality, permanence and provide co-benefits aligned to the Sustainable Development Goals.

4.2 Maintaining carbon neutrality

To maintain Carbon Neutrality, there are eight distinct activities that will be undertaken in the short term to drive down our absolute carbon emissions footprint, these include:

- **Activity 1:** Continual improvement of our carbon management process and delivering the Group Carbon Footprint;
- **Activity 2:** Support regional uptake of renewable energy and reach 100% in UK. Continue to drive energy efficiency across all offices;
- **Activity 3:** Update the Group Travel Policy and roll out regional behavioural change to support low carbon modes of transport and reduce business travel;
- **Activity 4:** Investigate alternative sources for procurement to ensure a low carbon supply chain;
- **Activity 5:** Investigate low carbon choices and investigate mechanisms to ensure staff can reduce their emissions;
- **Activity 6:** Continue to offset our residual emissions;
- **Activity 7:** Investigate a carbon incentivisation scheme supporting carbon reduction and innovation; and
- **Activity 8:** Renew PAS 2060 Carbon Neutral certification and report on Science-Based Targets.

These activities will be undertaken initially by a central team who will provide guidance on implementation, which can be rolled out and support the Regions. Regions will then implement and be accountable for the carbon reductions and offsetting programme going forward to obtain and maintain our Carbon Neutral status.

More detailed information on our carbon management plan can be found in Appendix B. Given that we intend to maintain carbon neutrality for the defined subject going forward, we will review and amend the carbon management plan at least every 12 months.

In addition to the above, we are also in the process of developing our Group Net Zero Plan which will build upon the foundations already being implemented by our Group Carbon Neutral Plan.

4.3 Completed carbon reduction initiatives

The following environmental management measures and projects have been completed or implemented since our 2018 baseline target year:

- Group Carbon Neutral Plan in place to maintain our Carbon Neutral status and continue to reduce our carbon emissions in line with our science-based targets
- Certified ISO 14001: Environmental Management
- Certified ISO 14064: Greenhouse Gases – Part 1
- Certified PAS 2060: Carbon Neutrality
- Certified PAS 2080: Carbon Management in Infrastructure
- Signed up to SBTi and targets were approved as being in line with a 1.5°C trajectory for Scopes 1 & 2
- Signed up to United Nation's Race to Zero: Business Ambition for 1.5°C
- Signed up to Built Environment (including Engineers) Declare Climate and Biodiversity Emergency
- Signed up to Advancing Net Zero with the World Green Buildings Council
- Signed up to Pledge to Net Zero
- Support given to Part Z: A proposed amendments to UK Building Regulations 2010
- Each Office Manager must prepare and annually update an Environmental Impact Assessment and a Local Environmental Practice Plan (LEPP), which sets local objectives and targets for the reduction of resource use and waste management in the office. Energy usage figures are also transmitted monthly from each of our offices to our carbon management team via our Mott MacDonald Office Manager app.
- Single-use plastics initiative to remove avoidable single-use plastics from our business where there are viable and sustainable market alternatives by the end of 2022 in our European business and by the end of 2023 in the remaining regions.
- Promoting a personal carbon reduction tool for our colleagues to become personally carbon neutral.

In the future we will implement further measures such as:

- Finalising and publishing our net-zero plan to meet our commitment of becoming net-zero by 2040.
- We will continue to improve our carbon performance management and drive down our carbon emissions in the short, medium and long-term by:
 - Robustly managing carbon consumption through improved data.
 - Switching to renewable energy supplies.
 - Reducing international travel.
 - Switching our hired vehicles to a hybrid/electric fleet where fuelling/charging infrastructure exists.
 - Maintain our certification to PAS 2060, the international standard for carbon neutrality.
- Support our clients with this five-point plan:
 - Whenever possible, we will show our clients how they can transition to net-zero and support them by identifying risks and opportunities associated with this transition.

- We will help our clients develop realistic organisational, institutional and regulatory frameworks for net-zero.
- We will help our clients mobilise and transform their supply chains through applying influence, leadership and information-sharing.
- We will show our clients how to maximise the benefits of zero-carbon solutions for their business, their clients and society.
- We will use our ingenuity to show how the costs of a net-zero transition can be minimised and our influence in the infrastructure industry to show how finance can be mobilised.

Appendix

A. Baseline year emissions (2018)

Our Science Based Targets at Group level and are set according to a 2018 baseline year. Further information relating to the baseline year emissions is included in the table below:

Emissions Category	Emissions Source	Mott MacDonald Group Limited (global business)	Mott MacDonald Limited (UK business)
		tCO ₂ e	
Total carbon footprint	Market-based	36,379	19,877
Scope 1	Natural gas	1,284	930
Scope 2	Market-based	8,354	3,725
Scope 3 (included sources)	Category 3 – Fuel and energy related activities	2,282	921
	Category 6 – Business travel	24,459	14,301

B. Mott MacDonald Group Carbon Neutral Plan

Below sets out more detailed information, plans and actions to help achieve the actions discussed within Section 4.2.

Activity 1: Continual improvement of our carbon management process and delivering the Group Carbon Footprint

We had feedback from the Carbon Trust as part of the PAS2060 audit and greater assurance on the data received by the office managers is required as in 2019. A more robust system is still required to capture the data and the office managers need a better appreciation of the importance of the data supplied. With more robust data, greater transparency is needed. Continuing to make the global carbon footprint available on Power BI will enable colleagues globally to interrogate our emissions and develop regionally specific mitigation measures.

Governance on operational carbon management needs to be set, to track performance of each part of the business and take corrective actions.

Actions:

- Carbon Management team to analyse quality of data and carry out our 2020 Carbon Footprint
- Investigate Scope 3 emissions of our staff working from home as well as the impact of our procurement decisions
- Work with BMS and Digital Ventures to enhance Power BI dashboard for the Group carbon footprint
- Continue to support Office Managers in the requirement of monthly reporting globally
- Investigate ways of automating the Group Carbon Footprint feeding directly into a dashboard for the Executive
- Publish 2020 Carbon Footprint in Power BI and make it available to the Group via Compass

Activity 2: Support regional uptake of renewable energy and reach 100% in UK. Continue to drive energy efficiency across all offices

Continue to convert the offices to renewable energy where possible and drive energy efficiency, working with the Regional leads.

Actions:

- Continue to engage with Property Services in the UK, US and other global offices on switching to renewables

Activity 3: Update the Group Travel Policy and roll out regional behavioural change to support low carbon modes of transport and reduce business travel

In 2019, emissions from business travel accounted for 70% of the Group emissions, largest source of emissions. A combination of measures needs to be used in order to reduce emissions associated with transport, as documented below.

Actions:

- Update NEO to include holding messages when staff book air travel
- Update research on airlines post COVID-19 to ascertain most efficient and type of offsetting schemes to help inform airline booking when traveling
- Continue behavioural change campaign regarding business travel post COVID-19
- Continue to work with Procurement and car hire companies, including Enterprise, to provide guidance on alternatives to fossil fuelled vehicles as well as ensuring electric / hybrid vehicles form a major part of the hire car fleet.

Activity 4: Investigate alternative sources for procurement to ensure a low carbon supply chain

This activity would be looking at emissions which fall outside of our current footprinted scope for ISO14064. However, our purchasing power should be used to further influence and reduce emissions where possible in our supply chain.

Actions:

- Research and work with Procurement to ensure that only low carbon choices are made, for example only recycled paper notebooks are procured, Carbon Neutral companies preferred etc.
- Investigate the scope 3 emissions of our procurement decisions and feed into the Group Carbon Footprint if deemed possible.
- Check and understand whether an update to the Procurement Policy and contractual clauses are required to support such decisions to be made.

Activity 5: Investigate low carbon choices and investigate mechanisms to ensure staff can reduce their emissions

We need to look at how we can facilitate staff to reduce their carbon footprint and make low carbon choices.

Actions:

- Work with Pebbles to see what low carbon incentives we can provide for our staff
- Investigate EV programme / leasing potential for colleagues in the UK
- Work with Aviva My Money to make it easier for colleagues to make green choices with their pension.

Activity 6: Continue to offset our residual emissions

The Carbon Neutrality strategy focuses on emission reductions through direct action within our operations and value chains. The use of offsets should not be counted toward the progress of our own emission reduction targets, but rather to go beyond those and achieve carbon neutrality from 2020.

Offsetting is a means to accelerate action on climate change by financing activities that reduce or remove greenhouse gas emissions in the atmosphere. They may also bring about additional economic, social and environmental benefits that support our business values.

Actions

- Purchase offsets from Ecosphere+
- Share offsetting requirements guidance developed in 2020 with Regional Leads
- Work with the team in New Zealand to support the local offsetting project to ensure its compatible with the PAS2060 certification.
- Offer support to regions if desired, to develop regionally specific offsetting programmes.
- Re-assess project/ portfolio options
- *Optional: develop strategy for our own projects, including business case, potential structuring options and partners.*

Activity 7: Investigate a carbon incentivisation scheme supporting carbon reduction and innovation, with carbon targets

The feasibility of an internal incentivisation scheme for the company and setting regionally based carbon targets.

As part of the feasibility study we need to decide on targets for our activities driving our carbon footprint. This can be done at a project, divisional regional or Group level. The aim would be to identify which of our activities are driving carbon footprint and generate an incentivisation scheme to facilitate reduction.

Actions:

- Summarise a plan and who will be accountable to deliver the incentivisation plan.
- Review of best practise and what works well and what doesn't.
- Set outcomes and targets for Regions to ensure buy-in to the programme

Activity 8: Renew PAS 2060 Carbon Neutral and report on Science-Based Targets

Renewal of PAS 2060: Carbon Neutral Certification. External verification by the Carbon Trust Certification would continue to certify Mott MacDonald to PAS 2060 - the internationally recognised certification standard for the demonstration of carbon neutrality.

In addition, we need to report on our science-based targets which allows for Mott MacDonald Group to work towards keeping greenhouse gas emissions below the required 1.5°C temperature rise and align its emissions with the global budgets generated by climate models.

Actions:

- Prepare for PAS2060 re-certification
- Engage Carbon Trust for certification and undertake audit
- Report on Science Based Targets

**Opening opportunities
with connected thinking.**