

Mott MacDonald Carbon Footprint 2016

Introduction

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

Overall responsibility for the delivery of the Group Carbon Footprint lies with the Group Sustainability Leader, Davide Stronati, who reports to the board member responsible for Sustainability.

Mott MacDonald's carbon footprint refers to greenhouse gases (GHG) emitted directly by ourselves or from sources over which we have control. We first estimated our carbon footprint for 2007; at the same time we made a long term commitment to reduce our carbon footprint per member of staff by 5% per year.

We have reported our 2016 calendar year emissions as tonnes of carbon dioxide equivalent (tCO₂e) for our global business. We have undertaken the calculations following the approach set out in ISO 14064.

Boundaries

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. Our operational boundaries are set in accordance with the three *scopes* defined by the GHG Protocol:

- Scope 1: Direct GHG emissions from sources owned or controlled by us, such as gas heating.
- Scope 2: Indirect GHG emissions from the generation of purchased electricity used by us.
- Scope 3: Other indirect GHG emissions. This includes indirect emissions associated with the supply of energy to our offices and business travel.

Sources of operational data

We have gathered information from Mott MacDonald controlled offices and from the business travel of our employees. We have not included office energy emissions associated with *site offices*, such as joint venture offices, staff collocated in clients' offices and temporary offices on actual construction sites in our footprint. However, business travel from these employees is included where these journeys are booked through Mott MacDonald. The company has access to travel agencies for booking air travel, rail travel, and car hires which contains details on journeys made. Data on business travel by personal car and other travel modes was obtained from business expense claims.

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 refrigerant gas top ups which account for less than 1% of overall emissions (and will be reviewed every 5 years), and some very small offices for which data is not collected – instead these are included on a pro-rated basis.

Base Year

This 2016 report forms a new base year to which future years will be compared in line with our Carbon Reduction Plan. This accounts for changes in our North American business and changes to emission factors used, notably with the inclusion of radiative forcing related to flight emission factors.

For comparison, historical data back to 2012 in this report for illustrative purposes only with corrected emission factors, but reflecting our previous operations.

Sources of emission factors

Emission factors convert the data on energy usage or travel distances to equivalent emissions of CO₂e. The selection of specific emission factors is critical to a reliable estimate of a carbon footprint and must be robust and justifiable. We have used the emission factors published by Defra/DECC (UK) and the International Energy Agency to estimate our impacts.

Calculations

The data received from each office, and the data obtained on business travel, were multiplied by the respective emissions factors to obtain aggregate emissions, expressed as tCO₂e. Taking each component in turn:

- Scope 1 and 2: Billed or metered energy consumption for offices is calculated in tCO₂e using the relevant emission factor, and expressed as tCO₂e. Some offices are not able

to meter energy use (for example charged through rent) – these are estimated based on the average of the known offices and the size of the office. We have a small number of company owned vehicles. Due to our accounting practice, the fuel for these vehicles is estimated from scope 3 road business travel based on data collected in our 2012 audit. We will review this estimate every 5 years.

- Scope 3: Emissions from air travel were estimated from the flight distance data multiplied by the air travel emission factors for each journey type. We include the effect of radiative forcing in our calculations. Emissions from surface travel were estimated in the same way from travel distance data for each journey multiplied by the emissions factor for each mode. Indirect emissions associated from electricity use are based on the total amount of electricity consumed in offices.

Results

Emissions for Mott MacDonald Group in 2016:

Scope	Total emissions tCO ₂ e	tCO ₂ e per FTE
Scope 1 (gas)	1,040	
Scope 2 (electricity)	10,769	
Scope 3 (T&D)	3,045	
Scope 3 (WTT)	141	
Scope 1-3 total (office)	14,997	1.20
Scope 1 (business travel)		
Scope 3 (business travel)	22,220	
Scope 3 (business travel WTT)	2,917	
Scope 1-3 total (travel)	25,137	1.39
Scope 1-3 (total emissions)¹	40,134	2.59

** Figures rounded to the nearest tonne*

¹ Excluded Scope 0 (biogenic) emissions – 1 tCO₂e

Assessing Uncertainty

We have used expert judgement to assess the sources of uncertainties likely to occur within our emissions inventory and calculations. The GHG Protocol uncertainty tool was used to calculate a cumulated uncertainty of +/- 5.7% (Good), based on conservative confidence levels for sources of activity data and emissions factors.

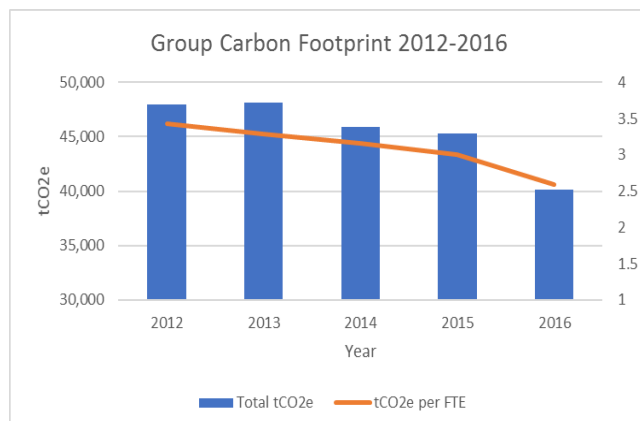
The qualitative influences of uncertainty on our GHG emissions are identified as the following:

- Source data: travel data that is extracted from our employee expense system is likely to contain some human error;
- Methodology: Scope 1 mobile emissions are assumed based on data from previous years' assessments; Office energy use is calculated based on assumptions if consumption data is not available;
- Inherent uncertainty in emissions factors and the metering of office energy;
- Subjective component of the uncertainty assessment.

Comparison to past years

2016 has been defined as a new baseline year in-line with our new Carbon Action Plan 2016-2021. Previous years have been adjusted following our new approach and are provided here for illustration only.

There has been a 24% decrease in the group carbon footprint per person between 2012-2016.



Carbon Management

Our Carbon Action Plan assigns responsibility to business and office managers for actions that will make a significant reduction in our carbon footprint. The Plan includes:

- Business management: including sustainability as an agenda item in all management board meetings
- Office management: taking steps to reduce energy use in offices through better building management and driving changes in staff behaviour. We have replaced lighting and improved HVAC systems in some of our key offices to reduce energy use. We also included office energy performance as part of our criteria for selecting new offices.
- Business travel: a global standard for travel plans that addresses not just travel to work by our staff, but also how we travel on business and how visitors travel to our offices. We have increased focus on reducing our internal operational travel, although the demand for travel overall is dependent on our work. Staff behaviour: continuing to provide information and training to staff so they can take action to reduce their carbon footprint at home and at work.

Reporting

This report has been prepared in accordance with ISO 14064 guidance.

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