



GREENHOUSE GAS EMISSIONS REPORT (FY 2023)

Report for: MTC UK

Ricardo ref. ED21058 Issue: 3 22nd November 2024

Customer:

MTC

Confidentiality, copyright and reproduction:

"This report is the Copyright of MTC UK and has been prepared by Ricardo Energy & Environment, a trading name of Ricardo-AEA Ltd under contract Consultancy Services Agreement No. ED21058 dated 29th October 2024. The contents of this report may not be reproduced, in whole or in part, nor passed to any organisation or person without the specific prior written permission of MTC UK. Ricardo Energy & Environment accepts no liability whatsoever to any third party for any loss or damage arising from any interpretation or use of the information contained in this report, or reliance on any views expressed therein, other than the liability that is agreed in the said contract."

Ricardo reference:

ED21058

Contact:

Nat Johnstone, Gemini Building, Fermi Avenue, Harwell, Didcot, OX11 0QR, UK

T: +44 (0) 7543 300617

E: Nathaniel.johnstone@ricardo.com

Author:

Nat Johnstone

Approved for issue by: Daniel Crowe

Signed

Date:

22nd November 2024

Ricardo is certified to ISO9001, ISO14001, ISO27001 and ISO45001.

Ricardo, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to as the 'Ricardo Group'. The Ricardo Group assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Ricardo Group entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

CONTENTS

1.	INTRODUCTION	1
	1.1 SCOPE AND OBJECTIVES	1
2.	GREENHOUSE GAS EMISSIONS	1
	2.1 REPORTING BOUNDARY	1
	2.2 GREENHOUSE GAS EMISSIONS & PROGRESS VS. TARGET	3
3.	OBSERVATIONS	5



1. INTRODUCTION

1.1 SCOPE AND OBJECTIVES

- This report provides an annual update on MTC UK's Greenhouse Gas emissions, the third year of reporting.
- It shows how emissions have changed year on year, as MTC progress towards their target of Net Zero scope 1, 2 and 3 greenhouse gas emissions by 2035, compared to a 2021 baseline.

2. GREENHOUSE GAS EMISSIONS

2.1 REPORTING BOUNDARY

The GHG Protocol Corporate Accounting and Reporting Standard, and the Corporate Value Chain (Scope 3) Standard provide guidance on greenhouse gas (GHG) calculations and reporting and have been followed in the development of MTC UK's carbon boundaries and the calculation of GHG emissions. These cover:

- Scope 1: direct GHG emissions that occur from sources that are controlled or owned by an organisation (e.g. fuel combustion in boilers, furnaces, vehicles).
- Scope 2: indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling.
- Scope 3: the result of activities from assets not owned or controlled by the reporting organization, but that the organization indirectly impacts in its value chain. The GHG Protocol defines 15 categories for scope 3 emissions. These have been reviewed against MTC's operations to identify which are applicable.

MTC's UK operations have been reviewed against the GHG Protocol standards to identify the boundary for the GHG assessment. The boundary, shown below, indicates which emissions fall into which scopes, what control MTC has over their reduction and what emissions are outside of scope.

Figure 1: MTC UK Emissions reporting boundary

Corporate

Contract site within MTC operational control

Contract site without MTC operational control

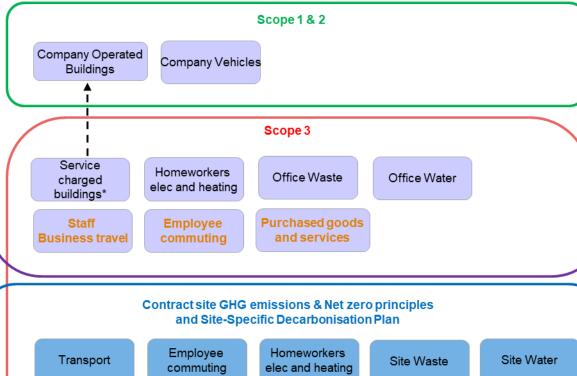
MTC operational control

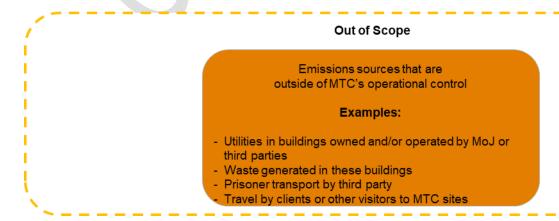
MTC GHG emissions

Corporate GHG emissions & Net Zero Commitment

Scope 1 & 2

Company Operated





MTC Operated sites'

Elec, fuel & refrigerants

Purchased goods

and services

- The emission generating activities have been split into three areas: corporate, contract site within MTC operational control and contract site without MTC operational control.
- The black boundary indicates MTC GHG emissions within the reporting boundary. This includes corporate and contract emissions.
- The green boundary shows emissions which are scope 1 and 2, and the red boundary which emissions are scope 3.
- The purple boundary indicates MTC's corporate GHG emissions, which are discussed in the corporate
 sections of this report and are included in the proposed Net Zero commitment. Three of these
 emission-generating activities (staff business travel, employee commuting and purchased goods and
 services) are highlighted in orange as they will include travel and goods / services associated with the
 contract sites where MTC has not got operational control.
- The blue boundary indicates MTC's contract site emissions which are discussed in the contract sections of this report and are covered by the Net Zero principles, and when produced, by the site's own specific decarbonisation plan.
- The orange dashed boundary indicates emissions outside of scope.

2.2 GREENHOUSE GAS EMISSIONS & PROGRESS VS. TARGET

MTC's GHG emissions were calculated for the calendar year 2023, these are detailed in the table below.

Table 1: MTC GHG emissions (2023)

Emissions area	Emissions (tCO ₂ e)	% of Corporate Total	% of MTC Total	Data source	Potential improvement	
Corporate						
Electricity ¹	4.0	18.5%	0.9%	Energy consumption from office. Includes T&D Losses & WTT.	N/A	
Gas	0.3	1.3%	0.1%	Energy consumption from office. Includes WTT.	N/A	
Company vehicles	1.2	5.5%	0.3%	Fuel claims. Includes WTT.	N/A	
Business travel	17.6	45.0%	4.1%	Could not be separated from staff travel to contract sites, below.	Separate from Contract site travel. Capture distance travelled and transport mode (e.g., size of vehicle, fuel type).	
Homeworkers elec and heating	16.0	41.0%	3.7%	FTE homeworkers and DEFRA emissions assumptions.	N/A	
Office Waste	-	-	-	No data as deemed negligible	Waste volume data and disposal method	
Water	-	-	-	No data as deemed negligible.	Spend data and meter water consumption to obtain actual figures	
Corporate Total	39.0	100%	9.1%			
Active contract sites						
Staff business travel to site - Car	270.7	-	63.1%	Staff mileage claims.	N/A	
Staff business travel to site – Rail & Bus	5.4	-	1.3%	Expense claims	N/A	

¹ Electricity, gas, company vehicles also include Scope 3 Well to Tank and T&D losses in this table.

Emissions area	Emissions (tCO ₂ e)	% of Corporate Total	% of MTC Total	Data source	Potential improvement
Employee Commuting to site	113.4	-	26.5%	Staff travel mileage recorded from March 2023. Jan-Feb extrapolated.	N/A
Contract Sites Total	389.5	-	90.9%		
MTC Total	428.5	-	100%		

Table 2: Scope 1, 2 and 3 Summary

Scope	2021 (tCO ₂ e)	2022	2023	Variance vs. Baseline Year (%)
Scope 1	0.7	2.8	1.2	70%
Scope 2	6.9	4.4	3.0	-57%
Scope 3 - Corporate (Excluding Employee Commuting)	25.6	49.1	34.9	36%
Corporate Total	33.2	56.4	39.0	-50%
Scope 3 - Business Travel, Contracts	557.2	341.6	276.1	-47%
MTC Total exc. commuting	590.3	397.9	315.1	-47%
Scope 3 – Employee Commuting	Not quantified	Not quantified	113.4	New inclusion.
MTC Total inc. commuting	Not quantified	Not quantified	428.5	New inclusion.

In Table 2, Employee Commuting has been removed from the percentage comparisons in order to provide a true comparison to past carbon footprints as this emissions source was included for the first time this year.

MTC's objectives are to reduce corporate Scope 1, 2 and 3 greenhouse gas emissions in absolute terms by:

- 25% by 2025.
- 50% by 2030.
- Net Zero by 2035, compared to a 2021 baseline.

MTC have seen a reduction of 47% in overall emissions (including scope 3 emissions from contracts), although Corporate emissions rose by 36% (excluding newly calculated Employee Commuting).

Figure 2 shows a breakdown of emissions by scope, in which it is clear that the vast majority of MTC's emissions are Scope 3. This is typical as MTC is only responsible for the Scope 1 and 2 emissions for the relatively small 6 Snow Hill site.

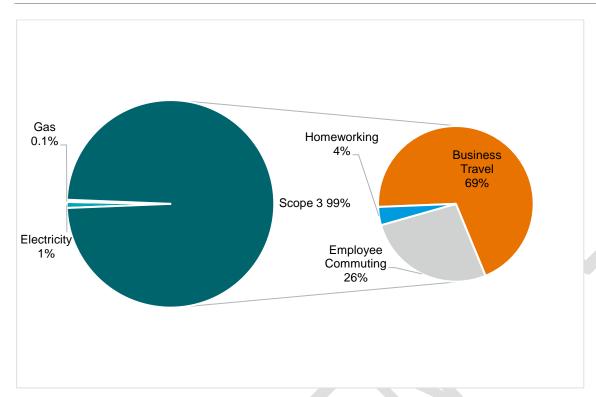


Figure 2: 2023 GHG emissions by scope (% of total)

3. OBSERVATIONS

- The corporate scope 3 emissions have decreased as a result of decreased corporate business travel to MTC's contracted site during 2023.
- The corporate emissions from the MTC offices are dwarfed by those from the contract sites, however
 the corporate emissions are the ones over which MTC has the most control and the best ability to
 implement data improvements and decarbonisation methods. These are also the emissions which
 MTC is expected to report in its carbon reduction plan and so may be worth the effort in improving and
 reducing, despite their smaller size.
- The contract sites are normally the larger emissions category, and in this year all emissions are associated with travel to the sites; this disparity can be expected to continue as more contract sites are adopted and if MTC takes on responsibility for energy, water and wate management at those sites.
- Scope 2 emissions have reduced in line with reduced electricity usage at the office.
- As Employee Commute has been included for the fist time in this year's inventory, it may be worth attempting to estimate this emissions source for the baseline year so that future footprints are comparable.



T: +44 (0) 1235 75 3000 E: enquiry@ricardo.com

W: ee.ricardo.com