MAG GREENHOUSE GAS EMISSIONS REPORT, 2021/22

INTRODUCTION

Manchester Airports Group (MAG) owns and operates Manchester, London Stansted and East Midlands Airports. We understand our responsibility to tackle climate change; by reducing our own emissions and playing a part in helping to decarbonise the wider sector – creating a sustainable aviation industry for the future.

We know that climate change is an important issue for a wide range of our stakeholders, and it is for us too. Over recent years we have seen an increased focus from all stakeholders on climate change. In 2020 MAG published its Corporate Social Responsibility (CSR) Strategy: 'Working together for a brighter future'. Our Strategy marks the transition to a new strategic priority: 'Zero carbon airports', and our commitment to become a net zero carbon business by 2038. Our headline target is accompanied by a range of other commitments, which will ensure MAG plays its full part in addressing airport-related emissions, including from aircraft and surface access transport.

In parallel with launching our new Strategy, we have enhanced the way in which we disclose information about the climate impacts of our airports and the way in which climate change will itself impact our business. By listening to local voices, industry partners and other stakeholders, we know people would like to know more about airport-related emissions. As such, with the aim of providing greater transparency, we publish the following information:

- MAG Annual Report and Accounts
  Which includes an overview of MAG's energy use and emissions, as required by the Streamlined Energy and Carbon Reporting (SECR) regime which was introduced by the Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018. This year, we have continued to implement the recommendations from the Task Force on Climate-related Financial Disclosures (TCFD). Additional information has been provided about the physical and transitional risks climate change presents to our business. Our Annual Report and Accounts are available on our website.

- MAG CSR Report 2021/22: Working together for a brighter future
- Where we detail our climate-related achievements during the last year, and performance against our CSR Strategy. This is accompanied by an overview of our carbon footprint and an insight into our CSR Programmes. Our CSR Report is prepared in accordance with the Global Reporting Initiative (GRI) Universal Standards 2021. The Report, our GRI Contents Index and disclosures are published on our website.

- Greenhouse Gas Emissions Report (this report)
  A more detailed report providing information about how we measure our energy use and greenhouse gas (GHG) emissions, our indirect emissions and our carbon neutrality and carbon offsetting. The content of this report, which includes GHG emissions inventories and verification statements, is relatively technical. Readers will need to be familiar with climate change, GHG accounting methodologies and associated terminology.

- Climate Change Adaptation Report
  Whilst was submitted to Government in December 2021, outlining our latest views on the impacts climate change will have upon our airport operations and the actions we are taking to minimise impacts. The Report is available on our website.

MAG is fully committed to transparent reporting, which responds to the needs and expectations of our stakeholders. If you have any questions about this report, or ideas about how we could improve it, please contact us by email at: CSR@magairports.com.

SCOPE

In preparing this report, we have followed environmental reporting guidelines published by the Government, adopted the principles of the World Resources Institute (WRI) GHG Protocol Corporate Standard and implemented the sector-specific requirements of Airport Carbon Accreditation.

We have adopted the 'operational control' approach set out in the WRI GHG Protocol. As such, this report considers energy and emissions from all of MAG's UK operations, including:

- East Midlands Airport;
- London Stansted Airport;
- Manchester Airport; and,
- All other facilities MAG use which are not at its airports.

We report energy use in kilowatt hours (kWh) and emissions in tonnes of carbon dioxide equivalent (tCO_2e). This approach allows analysis between different energy sources and expresses emissions of greenhouse gases (GHGs) covered by the Kyoto Protocol in terms of the global warming potential (GWP) equivalent of one unit of carbon dioxide (CO_2e). Reporting is aligned with our financial year, which runs from 1 April to 31 March.

Scope 1 and 2 emissions

Our report details all of MAG's location and market-based Scope 1 and 2 emissions.

Straddling our 2006 commitment to carbon neutrality and our 2020 commitment to net zero carbon, this report adopts a hybrid-approach to reporting the climate impact of refrigerant gases. We recognise that the climate impact of refrigerant gases is, and will increasingly be, important. Whilst these emissions are included in our 2020 net zero carbon commitment, they were not included within the scope of our 2006 carbon neutral commitment and are also not included within the scope of Airport Carbon Accreditation Level 3+ (Neutrality). On this basis we have not included these emissions in our emissions inventories – but do detail them within the verification statements issued by the TÜV NORD (Appendix 1 – Verification statements).

Scope 3 emissions

We have developed our Scope 3 footprint to include emissions from the activities of greatest impact, those over which we have the greatest ability to drive emission reduction and those which we know are important to stakeholders. As a starting point, we report all indirect emissions required by the Airport Carbon Accreditation programme, which is itself informed by an independent Advisory Board comprising distinguished industry and environmental experts. In addition, we report emissions from all departing flights – for the whole flight, as well as the 'landing and take-off cycle' (LTO) emissions from all arriving flights. We also report surface access emissions from all staff working at our airports, whether directly employed by MAG or another organisation. We will continue to calculate and report emissions from home working as this has become increasingly prominent as we move out of the pandemic.

Over time, we will assess other indirect emissions and introduce them to our reporting where we find that they are significant, of interest to stakeholders or from an activity where we can influence significant emission reductions. For example, in 2015/16 we undertook a detailed assessment of emissions from our supply chain, confirming these emissions were less than 1% of our overall footprint and that our major suppliers were within the lower emission 'service sector'. Since then, we have built our Scope 3 emission inventory, and this is included in this report. Our CSR Strategy also includes commitments to introduce a league table identifying the most efficient aircraft operators and to implement assessments of the embodied carbon within our large construction projects. We will provide updates on these important initiatives in future reports.

METHODOLOGY

Information about how we calculate our emissions is presented below. Unless otherwise stated, emissions have been calculated by combining information about energy use with the UK Government GHG Conversion Factors for Company Reporting.

Scope 1 and 2

Our Scope 1 and 2 energy use and associated emissions are calculated using a collection of primary data. Where this has not been possible, we have estimated consumption by extrapolating historic energy use. For 2021/22, 0.4% of our Scope 1 and 2 energy use, 0.3% of our location-based Scope 1 and 2 emissions and 0.8% of our market-based Scope 1 and 2 emissions have been estimated.

Estimations are based on previous period data which is usually a calculated as a rolling average of the previous three months of data. If this is not available, an average of the previous 12 months or same quarter in the previous year is taken.

Activity	Fuel/emission source	Description	Source data and emission calculation methodology
Fuels combustion	Gas	Natural gas used in fixed equipment including boilers and combined heat and power (CHP) units to produce heat, hot water and energy for our buildings.	Measured consumption based on supplier invoices and/or meter readings, including 'deduction' submeters which measure energy supplied by MAG to tenants and concessionaires. Data gaps filled using estimates based on historic consumption.
	LPG	Liquified petroleum gas (LPG) used in fixed equipment including boilers and fire service training facilities to produce heat, hot water and for fire service training.	Supplier invoices for regular deliveries.
	Gas oil	Gas oil used in fixed equipment including boilers and fire service training facilities to produce heat, hot water and for fire service training.	Supplier invoices for regular deliveries.
	Biomass	Wood used in fire service training facilities for fire service training.	Historic measurement of wood used for typical training activity, multiplied by actual number of training events.
	Petrol	Petrol used in fire service training facilities for fire service training.	Supplier invoices for regular deliveries.
	Kerosene	Kerosene used in fire service training facilities for fire service training.	Supplier invoices for regular deliveries.
Owned transport	Diesel	Diesel used in vehicles owned or leased by MAG.	Fuelling records from MAG and fuel card supplier fuelling systems.
	Gas oil	Red diesel used in vehicles owned or leased by MAG. Also includes gas oil used in back-up generators, which it is not possible to monitor separately.	Fuelling records from MAG fuelling systems and supplier invoices for regular deliveries.
	Petrol	Petrol used in vehicles owned or leased by MAG.	Fuelling records from MAG and fuel card supplier fuelling systems.
	Company cars	Company cars leased by MAG business travel and/or personal use by employees.	Manufacturer certified emission performance multiplied by maximum contracted mileage.
Generation of renewable electricity on site	Wind generated electricity	Electricity generated by wind turbines, owned and operated by MAG and connected directly to East Midlands Airport's private electrical network.	Measured electricity production based on meter readings. Because MAG receives feed in tariff payments for its wind generated electricity, it does not own the renewable energy attribute and must therefore report emissions using the 'Electricity: UK' emission factor for both location and market-based emissions.

Activity	Fuel/emission source	Description	Source data and emission calculation methodology
Consumption of purchased electricity, heat, steam and cooling	Consumption of purchased electricity	Electricity purchased and used by MAG in fixed equipment including our airport terminals, airfields, offices and associated infrastructure. Includes electricity consumed by electric and hybrid-electric vehicles owned or leased by MAG when charging from a MAG electricity connection.	Measured consumption based on supplier invoices and/or meter readings, including 'deduction' submeters which measure energy supplied by MAG to tenants and concessionaires. Data gaps filled with estimate based on historic consumption.
Avoided emissions	Purchase and retirement of carbon offsets	Retirement of carbon offsets to compensate for residual MAG Scope 1 and 2 market-based emissions.	N/A.

Table 1. Scope 1 and 2 emissions categories and methodologies.

Scope 3

Our Scope 3 emissions are calculated using primary data as a preference. However, the nature of indirect emissions, which are the direct responsibility of another company or individual, means that primary data is not always available to us. Where we do not have primary data, we have developed robust modelling and sampling methodologies to estimate our indirect emissions.

Activity	Fuel/emission source	Description	Source data and emission calculation methodology
Transport-related activities	MAG staff commuting	MAG's directly employed staff commuting to and from MAG airports for work, either in private vehicles or by public transport.	Emissions for 'typical MAG employee' calculated using most recent staff travel surveys (2018-19 at East Midlands, 2018-19 at London Stansted and 2018-19 at Manchester Airports). Multiplied by actual number of MAG staff at each airport.
	Other airport staff commuting	Staff employed by other companies commuting to and from MAG airports for work, either in private vehicles or by public transport.	Emissions for 'typical non-MAG employee' calculated using most recent staff travel surveys (2018-19 at East Midlands, 2018-19 at London Stansted and 2018-19 at Manchester Airports). Multiplied by actual number of airport-based staff employed by other employers.
	Home working	MAG colleagues working from home.	Emissions calculated using EcoAct's Home Working Emissions Methodology. This uses industry standard estimates for typical electricity and natural gas consumption and is calculated based on the number of staff working from home. The energy consumption estimates are based on workstation equipment needed as well as heating and cooling of homes during office hours.
	Business travel - public transport	Business travel undertaken by MAG staff using public transport (including air travel).	Business travel records, including travel mode, class and distance.
	Business travel – staff vehicles	Business travel undertaken by MAG staff using private vehicles owned or leased by MAG staff.	Expense claim records, Government, conversion factor for 'average car unknown fuel'.
Downstream transport and distribution	Passenger surface access	Passengers 'surface access' travelling to and from MAG airports in private vehicles or by public transport.	Emissions for 'typical passenger' calculated using results of passenger surveys undertaken by the Civil Aviation Authority during calendar year 2019. Multiplied by actual number of passengers during financial year.
Aircraft	LTO cycle (departures)	For flights departing from an MAG airport: Departure phases of the landing and take-off (LTO) cycle defined by the International Civil Aviation Organisation (ICAO). Includes aircraft taxiing from parking stand to runway, taking off and climbing to a height 3,000 feet above ground level.	Emissions calculated by Eurocontrol in accordance with their methodology for the European Environment Agency and United Nations Framework Convention on Climate Change (UNFCCC). Eurocontrol's model uses information about flights, flight routes and aircraft performance certification data to calculate emissions. Data is received over six months in arrears, we rescaled emissions from

Activity	Fuel/emission source	Description	Source data and emission calculation methodology
	En-route (departures, excl. MAG airport LTO cycle)	For flights departing an MAG airport: Phases of flight between an aircraft passing 3,000ft after departure and the aircraft parking at destination airport.	calendar year 2019 to reflect the number of flights during 2021/22.
	LTO cycle (arrivals)	For flights arriving at an MAG airport: Arrival phases of the LTO cycle defined by ICAO. Includes approaching aircraft from a height of 3,000 feet above ground level, landing and taxiing from runway to parking stand.	
	On stand power (FEGP and APU)	Systems used to provide power to run systems on parked aircraft. Includes fixed electric ground power (FEGP) and auxiliary power units (APUs).	FEGP: Consumption based on metered electricity consumption, reported within MAG Scope 2 where metering is not available. APU: 'Typical turn-around' APU run-time measured through operational monitoring, multiplied by fuel flow figures for typical APU for each aircraft type.
Tenants and concessionaires – airside vehicles and MAG-supplied energy	Airside vehicles	Vehicles and equipment operated by other companies on the airfield at MAG airports. Includes vehicles which support aircraft and airport operations.	Emissions for 'typical vehicle' calculated using fuelling records from MAG fuelling systems for vehicles where MAG is the fuel supplier. Multiplied by total number of airside vehicles (monitored trough 'airside vehicle permit' records).
	Gas	Natural gas supplied by MAG to tenants and concessionaires for use in fixed equipment including boilers and catering facilities operated.	Measured consumption based on meter readings. Data gaps filled with estimate based on historic consumption.
	Heating oil	Heating oil supplied by MAG to tenants and concessionaires for use in fixed equipment including boilers.	Fuelling records from MAG fuelling systems and supplier invoices for regular deliveries.
	Electricity	Electricity supplied by MAG to tenants and concessionaires for use in fixed equipment and vehicles.	Measured consumption based on meter readings. Data gaps filled with estimate based on historic consumption.
Waste	Waste	Disposal of waste from MAG facilities.	Waste emissions are measured based on tonnage, waste disposal route (recycled, landfill, recovered).
Avoided emissions	Purchase and retirement of carbon offsets	Retirement of carbon offsets to compensate for emissions from MAG business travel.	N/A.

Table 2. Scope 3 emission sources and associated methodologies

Assurance

The methodologies used to monitor our energy and fuel use, and to calculate our carbon footprint, have been developed and refined over a number of years. We believe they represent best practice and are committed to continually improving them. Our methodologies are aligned with government guidance and the WRI GHG Protocol.

Our internal management processes, which are certified to ISO 14001, the international standard for environmental management, provide assurance that we have robust approaches to measuring and monitoring energy use and emissions. Data is independently validated by our specialist climate change consultants, who we appoint to prepare our carbon footprint.

Additionally, we commission TÜV Nord to provide independent assurance of our GHG emission inventory. Their verification statements are included as Appendix 1 – Verification statements.

Restated figures

Where methodology improvements or new information have resulted in changes to previously reported figures, these have been restated. Minor adjustments have been made to reported figures for gas oil, LPG and kerosene at Manchester Airport. Electricity figures at East Midlands Airport have also been restated after it was identified that energy supplied by the airport to business partners had been double counted.

CARBON NEUTRALITY AND CARBON OFFSETS

Our airport operations are independently certified carbon neutral. Each of our airports holds Level 3+ (Neutrality) Airport Carbon Accreditation. More information about Airport Carbon Accreditation is available online.

Although we have made significant investments to reduce our energy use and purchase renewable energy, MAG does still have a small gross carbon footprint. To compensate for these residual emissions, MAG purchases Gold Standard carbon offsets. For 2021/22, our carbon offsets were generated by the 'Improved Cookstoves for Social Impact in Ugandan Communities' project. This initiative provides more efficient cookstoves to communities in Uganda. We selected this project because, in addition to reducing emissions by minimising charcoal requirements, it also generates local employment and improves air quality.

Our GHG emission inventories include details of our carbon offset retirements. An overview of carbon offsets purchased to cover residual emissions in 2021/22, including links to public registries which detail our retirements, provide information about the project which generated them and host independent verification statements, are provided in Table 3.

MAG business unit	Offsets retired for 2021/22	Gold Standard Registry link
East Midlands Airport	1,433 tonnes (for 2021/22 emissions)	Registry link
Manchester Airport	9,587 tonnes (for 2021/22 emissions)	Registry link
London Stansted Airport	2,958 tonnes (for 2021/22 emissions)	Registry link
MAG	161 tonnes (for 2021/22 emissions)	Registry link

Table 3. Carbon offset retirements, 2021/22

GHG EMISSION REPORTS

SECR Report

The SECR report, published in our Annual Report and Accounts, is presented as Table 4. This report provides a high-level overview of our energy use, emissions and carbon intensity as required by the Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018.

We measure carbon intensity against traffic units, which are equivalent to 1,000 passengers or 100 tonnes of freight and mail.

	2021/22	2020/21[1]	2019/20[1]	2018/19[1]
Energy consumption used to calculate emissions (kWh)[2]	178,771,261	174,147,424	200,230,145	190,474,808
Emissions from combustion of gas (Scope 1, tCO2e)	11,570	11,905	9,806	9,752
Emissions from combustion of fuel for transport purposes (Scope 1, tCO2e)	2,063	2,322	5,523	4,665
Emissions from business travel in rental cars or employee-owned vehicles where MAG is responsible for purchasing the fuel (Scope 3, tCO2e)	58	7	90	98
Emissions from purchased electricity[3] (Scope 2, location-based, tCO2e)	22,737	23,407	32,023	30,367
Emissions from purchased electricity (Scope 2, market-based, tCO2e)	49	59	74	5
Total gross emissions based on the above (Location-based, tCO2e)	36,428	37,641	47,442	44,881
Total gross emissions based on the above (Market-based, tCO2e)	13,740	14,293	15,492	14,520
Intensity measure (Traffic units)[4]	28,448	13,986	66,899	69,167
Intensity ratio (Location-based emissions, tCO2e /traffic unit)	1.28	2.69	0.71	0.649
Intensity ratio (Market-based emissions, tCO2e /traffic unit)	0.48	1.02	0.23	0.210
Carbon offsets (purchased and retired, tCO2e)	13,740	14,288	15,439	14,520
Total net emissions based on the above (Location-based, tCO2e)	22,688	23,353	31,950	30,367
Total net emissions based on the above (Market-based, tCO2e)	0	0	0	0

Table 4. SECR Report 2021/22.

[1] Our energy and emission performance have been restated for previous years to make use of the most recent and complete dataset. This approach follows best practice outlined in the World Resources Institute Greenhouse Gas Protocol and guidance issued by the UK Government. As a result, our previously published energy consumption for 2020-21 has decreased by 4%, 2019-20 has decreased by 3.7% and energy consumption for 2018-19 has decreased by 8.7%.

[2] Over the last four years, the emission intensity of our operations has increased by 97%. Last year, as commercial air traffic increased across our airports, our energy use increased by 3%. With passenger numbers significantly below pre-pandemic levels, our energy use during 2021/22 remains 11% lower than 2019/20. As such, our emission intensity last year was 53% lower than in 2020/21 but above pre-pandemic levels. All residual emissions have been offset, and our CSR Strategy includes a commitment to transition to zero carbon operations.

[3] Location-based emissions are based on the average emission intensity of the UK electricity grid. MAG proactively choses to purchase renewable electricity which is backed by Renewable Energy Guarantees of Origin. To demonstrate the carbon saving of our procurement decision we 'dual report' our location and market-based greenhouse gas emissions.

[4] We measure carbon intensity against traffic units, which are defined by the International Civil Aviation Organization (ICAO) as equivalent to 1,000 passengers or 100 tonnes of freight.

Greenhouse gas emission inventories

GHG emission inventories for each of our airports and MAG's combined UK operations are provided as Tables 5, 7, 9 and 11. These inventories provide greater detail about our direct energy use, and our Scope 1, 2 and 3 GHG emissions. Tables 6, 8, 10 and 12 outline the intensity of our Scope 1 and 2, and Scope 1, 2, and 3 emissions relative to the traffic units handled. One traffic unit is equivalent to 1,000 passengers or 100 tonnes of freight and mail.

Scope	Activity	Fuel/emission source	Energy consumption (kWh)		Location-based emissions (tCO_2e)		Market-based emissions (tCO_2e)	
			2021/22	2020/21	2021/22	2020/21	2021/22	2020/21
1	Fuels combustion	Gas	6,127,736	6,108,487	1,122	1,127	1,122	1,127
		LPG	19,167	36,551	4	8	4	8
		Gas oil	451,439	677,529	116	174	116	174
		Biomass	918,356	5,973	14	0	14	0
		Petrol	178	46	0	0	0	0
		Kerosene	9,054	4,004	2	1	2	1
	Owned transport	Diesel	55,715	192,099	14	47	14	47
		Gas oil	215,331	2,587,592	55	664	55	664
		Petrol	59,352	38,020	14	9	14	9
		Company cars	146,748	149,496	37	38	37	38
	Total Gross Scope 1		8,003,076	9,799,797	1,379	2,068	1,379	2,068
2	Generation of renewable electricity on site	Wind generated electricity	228,476	252,795	49	59	49	59
	Consumption of purchased electricity, heat, steam and cooling	Consumption of purchased electricity	7,952,123	7,716,081	1,688	1,799	0	0
	Total Gross Scope 2		8,180,599	7,968,876	1,737	1,858	49	59
1 & 2	**Total Gross Scopes 1 & 2**		**16,183,675**	**17,768,673**	**3,116**	**3,926**	**1,428**	**2,127**
	Avoided emissions	Purchase and retirement of carbon offsets			1,427	2,128	1,427	2,128
	Total avoided emissions				1,427	2,128	1,427	2,128
	Total Net Scope 1 & 2 emissions				1,689	1,798	0	0
3	Transport-related activities	MAG staff commuting			581	513	581	513
		Other airport staff commuting			8,047	7,115	8,047	7,115
		Home working			13	20	13	20
		Business travel - public transport			5	8	5	8
		Business travel – staff vehicles	-	2,645	0	0	0	0
	Downstream transport and distribution	Passenger surface access			2,812	3,643	2,812	3,643
	Aircraft	LTO cycle (departures)			42,379	32,471	42,379	32,471
		En-route (departures, excl. MAG airport LTO cycle)			412,395	315,979	412,395	315,979
		LTO cycle (arrivals)			18,546	14,210	18,546	14,210
		On stand power (FEGP and APU)			2,165	1,577	2,165	1,577
	Tenants and concessionaires – airside vehicles and MAG-supplied energy	Airside vehicles			1,145	275	1,145	275
		Gas			0	0	0	0
		Heating oil			18	11	18	11
		Electricity			1,531	1,667	0	0
	Waste and Water	Waste			44	6	44	6
		Wastewater			25	123	25	123
		Water			38	182	38	182
	Total Gross Scope 3				489,744	377,800	488,213	376,133
	Avoided emissions	Purchase and retirement of carbon offsets			1,433	2,136	1,433	2,136
1, 2 & 3	**Total Net Scopes 1, 2 & 3**				490,001	377,462	486,781	373,997

Table 5. GHG Emission inventory, East Midlands Airport

Scope	Activity	Fuel/emission source	Location-based emissions (tCO_2e)		Market-based emissions (tCO_2e)	
			2021/2022	2020/21	2021/2022	2020/21
	Intensity benchmark	Total traffic units (TU)	5,694	4,793	5,694	4,793
1 & 2		Scopes 1 & 2 Gross Emissions/TU	0.5471	0.6895	0.2506	0.3736
		Scopes 1 & 2 Net Emissions/TU	0.2965	0.3159	0	0
1, 2 & 3		Scopes 1, 2 & 3 Gross Emissions/TU	86.5577	67.0400	85.9924	66.4313
		Scopes 1, 2 & 3 Net Emissions/TU	86.0556	66.2912	85.4902	65.6826

Table 6. GHG Emission intensity, East Midlands Airport

Scope	Activity	Fuel/emission source	Energy consumption (kWh)		Location-based emissions (tCO_2e)		Market-based emissions (tCO_2e)	
			2021/22	2020/21	2021/22	2020/21	2021/22	2020/21
1	Fuels combustion	Gas	12,679,628	17,074,310	2,331	3,154	2,331	3,154
		LPG	34,152	45,029	7	10	7	10
		Gas oil	139,664	113,292	36	29	36	29
		Biomass	0	0	0	0	0	0
		Petrol	0	0	0	0	0	0
		Kerosene	0	0	0	0	0	0
	Owned transport	Diesel	1,516,973	1,361,629	371	333	371	333
		Gas oil	519,294	820,380	133	211	133	211
		Petrol	125,726	18,871	29	4	29	4
		Company cars	130,272	295,459	32	74	32	74
	Total Gross Scope 1		15,145,709	19,728,970	2,939	3,814	2,939	3,814
2	Generation of renewable electricity on site	Wind generated electricity	N/A	N/A	N/A	N/A	N/A	N/A
	Consumption of purchased electricity, heat, steam and cooling	Consumption of purchased electricity	33,464,712	33,754,935	7,106	7,870	0	0
	Total Gross Scope 2		33,464,712	33,754,935	7,106	7,870	0	0
1 & 2	**Total Gross Scopes 1 & 2**		48,610,421	53,483,905	10,045	11,684	2,939	3,814
	Avoided emissions	Purchase and retirement of carbon offsets			2,940	3,814	2,940	3,814
	Total avoided emissions		0	0	2,940	3,814	2,940	3,814
	Total Net Scope 1 & 2 emissions				7,105	7,870	0	0
3	Transport-related activities	MAG staff commuting			2,549	2,061	2,549	2,061
		Other airport staff commuting			19,361	15,661	19,361	15,661
		Home Working			147	55	147	55
		Business travel - public transport			18	20	18	20
		Business travel – staff vehicles		2,196	0	1	0	1
	Downstream transport and distribution	Passenger surface access			36,274	34,261	36,274	34,261
	Aircraft	LTO cycle (departures)			96,176	39,094	96,176	39,094
		En-route (departures, excl. MAG airport LTO cycle)			940,058	382,112	940,058	382,112
		LTO cycle (arrivals)			43,137	17,534	43,137	17,534
		On stand power (FEGP and APU)			2,738	1,132	2,738	1,132
	Tenants and concessionaires – airside vehicles and MAG-supplied energy	Airside vehicles			1,496	1,191	1,496	1,191
		Gas			8	3	8	3
		Heating oil			0	0	0	0
		Electricity			5,885	5,304	0	0
	Waste and water	Waste			44	26	44	26
		Wastewater			158	375	158	375
		Water			90	189	90	189
	Total Gross Scope 3		0	2,196	1,148,139	499,019	1,142,254	493,715
	Avoided emissions	Purchase and retirement of carbon offsets			2,958	3,834	2,958	3,834
1, 2 & 3	**Total Net Scopes 1, 2 & 3**		48,610,421	53,486,101	1,155,226	506,869	1,142,235	493,695

Table 7. GHG Emission inventory, London Stansted Airport

Scope	Activity	Fuel/emission source	Location-based emissions (tCO_2e)		Market-based emissions (tCO_2e)	
			2021/22	2020/21	2021/22	2020/21
	Intensity benchmark	Total traffic units (TU)	13,058	5,180	13,058	5,180
1 & 2		Scopes 1 & 2 Gross Emissions/TU	0.77	2.26	0.23	0.74
		Scopes 1 & 2 Net Emissions/TU	0.54	1.52	0.00	0.00
1, 2 & 3		Scopes 1, 2 & 3 Gross Emissions/TU	88.70	98.59	87.70	96.05
		Scopes 1, 2 & 3 Net Emissions/TU	88.47	97.85	87.47	95.31

Table 8. GHG Emission intensity, London Stansted Airport

Scope	Activity	Fuel/emission source	Energy consumption (kWh)		Location-based emissions (tCO_2e)		Market-based emissions (tCO_2e)	
			2021/22	2020/21	2021/22	2020/21	2021/22	2020/21
1	Fuels combustion	Gas	44,317,073	41,310,983	8,117	7,624	8,117	7,624
		LPG	229,487	58,837	49	13	49	13
		Gas oil	51,570	486,335	13	125	13	125
		Biomass	0	0	0	0	0	0
		Petrol	0	0	0	0	0	0
		Kerosene	20815	67594	5.1	16.5	5	17
	Owned transport	Diesel	3,762,492	2,210,345	920	541	920	541
		Gas oil	1,532,583	1,253,365	394	322	394	322
		Petrol	0	0	0	0	0	0
		Company cars	256,464	314,241	64	78	64	78
	Total Gross Scope 1		**50,170,483**	**45,701,700**	**9,562**	**8,719**	**9,562**	**8,719**
2	Generation of renewable electricity on site	Wind generated electricity	N/A	N/A	N/A	N/A	N/A	N/A
	Consumption of purchased electricity, heat, steam and cooling	Consumption of purchased electricity	65,416,475.64	58,655,927.00	13,889.88	13,675.00	0	0
	Total Gross Scope 2		**65,416,476**	**58,655,927**	**13,890**	**13,675**	**0**	**0**
1 & 2	**Total Gross Scopes 1 & 2**		**115,586,959**	**104,357,627**	**23,452**	**22,394**	**9,562**	**8,719**
	Avoided emissions	Purchase and retirement of carbon offsets			**9,562**	**8,723**	**9,562**	**8,719**
	Total avoided emissions				**9,562**	**8,723**	**9,562**	**8,719**
	Total Net Scope 1 & 2 emissions				**13,890**	**13,671**	**0**	**0**
3	Transport-related activities	MAG staff commuting			2,403	2,197	2,403	2,197
		Other airport staff commuting			23,597	21,512	23,597	21,512
		Home working			48	111	48	111
		Business travel - public transport			24	13	24	13
		Business travel – staff vehicles	-	2645	0	1	0	1
	Downstream transport and distribution	Passenger surface access			39731.3616	33,838	39,731	33,838
	Aircraft	LTO cycle (departures)			79,850	33,728	79,850	33,728
		En-route (departures, excl. MAG airport LTO cycle)			1,287,118	543,661	1,287,118	543,661
		LTO cycle (arrivals)			37,539	15,856	37,539	15,856
		On stand power (FEGP and APU)			5,059	2,109	5,059	2,109
	Tenants and concessionaires – airside vehicles and MAG-supplied energy	Airside vehicles			2,038	2,132	2,038	2,132
		Gas			3,733	2,418	3,733	2,418
		Heating oil			0	0	0	0
		Electricity			7,662	6,401	0	0
	Waste and water	Waste			388	163	388	163
		Wastewater			352	769	352	769
		Water			259	447	259	447
	Total Gross Scope 3				**1,489,801**	**665,356**	**1,482,139**	**658,955**
	Avoided emissions	Purchase and retirement of carbon offsets			9,587	8,737	9,586	8,737
1, 2 & 3	**Total Net Scopes 1, 2 & 3**				**1,503,666**	**679,013**	**1,482,114**	**658,937**

Table 9. GHG Emission inventory, Manchester Airport

Scope	Activity	Fuel/emission source	Location-based emissions (tCO_2e)		Market-based emissions (tCO_2e)	
			2021/22	2020/21	2021/22	2020/21
	Intensity benchmark	Total traffic units (TU)	9,695	3,239	9,695	3,239
1 & 2		Scopes 1 & 2 Gross Emissions/TU	2.42	6.91	2.31	2.95
		Scopes 1 & 2 Net Emissions/TU	1.43	4.22	0	0
1, 2 & 3		Scopes 1, 2 & 3 Gross Emissions/TU	156.08	212.36	153.86	206.16
		Scopes 1, 2 & 3 Net Emissions/TU	155.09	209.66	152.87	203.46

Table 10. GHG Emission intensity, Manchester Airport

Scope	Activity	Fuel/emission source	Energy consumption (kWh)		Location-based emissions (tCO_2e)		Market-based emissions (tCO_2e)	
			2021/22	2020/21	2021/22	2020/21	2021/22	2020/21
1	Fuels combustion	Gas	63,124,437	64,495,590	11,570	11,905	11,570	11,905
		LPG	282,806	140,416	61	30	61	30
		Gas oil	642,673	1,277,156	165	328	165	328
		Biomass	918,356	5,973	14	0	14	0
		Petrol	178	46	0	0	0	0
		Kerosene	29,869	71,598	7	18	7	18
	Owned transport	Diesel	5,335,180	3,764,073	1,305	921	1,305	921
		Gas oil	2,267,208	4,661,337	582	1,197	582	1,197
		Petrol	185,078	56,891	43	13	43	13
		Company cars	540,575	779,529	132	191	132	191
	Total Gross Scope 1		**73,326,361**	**75,252,608**	**13,880**	**14,603**	**13,880**	**14,603**
2	Generation of renewable electricity on site	Wind generated electricity	228,476	252,795	49	59	49	59
	Consumption of purchased electricity, heat, steam and cooling	Consumption of purchased electricity	106,854,682	100,147,137	22,688	23,348	0	0
	Total Gross Scope 2		**107,083,158**	**100,399,932**	**22,737**	**23,407**	**49**	**59**
1 & 2	**Total Gross Scopes 1 & 2**		**180,409,518**	**175,652,541**	**36,617**	**38,010**	**13,929**	**14,662**
	Avoided emissions	Purchase and retirement of carbon offsets			13,929	14,662	13,929	14,662
	Total avoided emissions				**13,929**	**14,662**	**13,929**	**14,662**
	Total Net Scope 1 & 2 emissions				**22,688**	**23,349**	**0**	**0**
3	Transport-related activities	MAG staff commuting			5,533	4,772	5,533	4,772
		Other airport staff commuting			51,005	44,288	51,005	44,288
		WFH			207	187	207	187
		Business travel - public transport			150	55	150	55
		Business travel – staff vehicles			58	7	58	7
	Downstream transport and distribution	Passenger surface access			78,818	71,743	78,818	71,743
	Aircraft	LTO cycle (departures)			218,405	105,292	218,405	105,292
		En-route (departures, excl. MAG airport LTO cycle)			2,639,571	1,241,752	2,639,571	1,241,752
		LTO cycle (arrivals)			99,221	47,600	99,221	47,600
		On stand power (FEGP and APU)			9,961	4,739	9,961	4,739
	Tenants and concessionaires – airside vehicles and MAG-supplied energy	Airside vehicles			4,679	3,598	4,679	3,598
		Gas	20,423,249	13,117,582	3,741	2,499	3,741	2,499
		Heating oil			18	11	18	11
		Electricity	71,009,669	57,360,045	15,077	13,373	0	0
	Waste and water	Waste			476	194	476	194
		Wastewater			535	1,266	535	1,266
		Water			387	818	387	818
	Total Gross Scope 3		**91,432,918**	**70,477,627**	**3,127,843**	**1,542,194**	**3,112,765**	**1,528,821**
	Avoided emissions	Purchase and retirement of carbon offsets			14,139	14,725	14,139	14,725
1, 2 & 3	**Total Net Scopes 1, 2 & 3**		**271,842,436**	**246,130,168**	**3,150,321**	**1,565,479**	**3,112,555**	**1,528,758**

Table 11.GHG Emission inventory, MAG

Scope	Activity	Fuel/emission source	Location-based emissions (tCO_2e)		Market-based emissions (tCO_2e)	
			2021/22	2020/21	2021/22	2020/21
	Intensity benchmark	Total traffic units (TU)	28,448	14,000	28,448	14,000
1 & 2		Scopes 1 & 2 Gross Emissions/TU	1.29	2.72	0.49	1.05
		Scopes 1 & 2 Net Emissions/TU	0.80	1.67	0	0
1, 2 & 3		Scopes 1, 2 & 3 Gross Emissions/TU	111.23	112.87	109.91	110.25
		Scopes 1, 2 & 3 Net Emissions/TU	110.74	111.82	109.41	109.20

Table 12. GHG Emission intensity, MAG

TÜV NORD

CERTIFICATE

Carbon Footprint 2021/2022

according to GHG Protocol - A Corporate Accounting and Reporting Standard (https://ghgprotocol.org/)

The Carbon Footprint was verified by TÜV NORD CERT GmbH in accordance with DIN EN ISO 14064-3: 2020 regarding its correctness and completeness for

Manchester Airports Holdings Limited
East Midlands Airport
Castle Donington
Derby DE74 2SA
Great Britain

MAG

Acting as an independent Certification Body TÜV NORD CERT GmbH has verified the carbon footprint of the organization for the reporting period **01.04.2021 - 31.03.2022**

to be **82,637** t CO_2e.

The level of assurance is limited. The carbon footprint includes Scopes 1, 2 and 3 (location-based approach).
The calculation of the carbon footprint comprises of emissions arising from arising from stationary and mobile Combustion, fugitive Emissions, electricity purchased (Location based) as well as onward supply, water, waste-water, WTT and T&D, business travel, employee commuting and working from home, cargo handling, landing and take offs, auxiliary power units and fixed electrical ground power.

Certificate Registration No. 44 776 220954-003
Audit Report No. 3532 3232

Certification Body
at TÜV NORD CERT GmbH

Essen, 2022-06-16

TÜV NORD CERT GmbH Am TÜV 1 45307 Essen www.tuev-nord-cert.com

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Akkreditierungsstelle
D-VS-12007-01-00

Manchester Airports Holdings Limited- East Midlands Airport

			21/22		
	Category	Unit	Qty	Total Emissions Location-Based (tCO2e)	Total Emissions Market-Based (tCO2e)
Scope 1	Refrigerants	kg	6	12	12
	Natural Gas	kWh	6,127,736	1,122	1,122
	Gas Oil	litres	62,061	171	171
	Kerosene	litres	870	2.21	2.21
	LPG	litres	2,640	4	4
	Petrol	litres	6,343	14	14
	Wood	tonnes	251.15	14.35	14.35
	Straw	tonnes	0.00	0.00	0.00
	Diesel	litres	5,425	14	14
	Company Cars	miles	133,000	36.70	36.70
Scope 1 total				**1,391**	**1,391**
Scope 2	Electricity	kWh	8,180,599	1,737	1,737
Scope 1&2 total				**3,128**	**3,128**
Scope 3	Onward Supply	Various	7,791,341	2,815	1,284
	Water	m3	89,967	38	38
	Wastewater	m3	90,606	25	25
	Waste	tonnes	244	44	44.5
	WTT	Various	14,157,450	696	696
	T&D	kWh	7,952,123	149	149
	WTT T&D	kWh	7,952,123	49	49
	Business Travel	tCO2e	5	5	5
	Employee Commuting & Ho	tCO2e	8,640	8,640	8,640
	Downstream T&D	tCO2e	2,812	2,812	2,812
	Handling	tCO2e	1,145	1,145	1,145
	LTOs	tCO2e	60,925	60,925	60,925
	APUs	tCO2e	2,165	2,165	2,165
	FEGP	kWh	0	0	0
Scope 3 - total				**79,509**	**77,978**
				82,637	**81,106**

CERTIFICATE

Carbon Footprint 2021/2022

according to GHG Protocol - A Corporate Accounting and Reporting Standard (https://ghgprotocol.org/)

The Carbon Footprint was verified by TÜV NORD CERT GmbH in accordance with DIN EN ISO 14064-3: 2020 regarding its correctness and completeness for

Manchester Airports Holdings Limited
London Stansted Airport
Bassingbourn Road
Stansted CM24 1QW
Great Britain

Acting as an independent Certification Body TÜV NORD CERT GmbH has verified the carbon footprint of the organization for the reporting period **01.04.2021 - 31.03.2022**

to be **224,867** t CO_2e.

The level of assurance is limited. The carbon footprint includes Scopes 1, 2 and 3 (location-based approach).
The calculation of the carbon footprint comprises of emissions arising from arising from stationary and mobile Combustion, fugitive Emissions, electricity purchased (Location based) as well as onward supply, water, waste-water, WTT and T&D, business travel, employee commuting and working from home, cargo handling, landing and take offs, auxiliary power units and fixed electrical ground power.

Certificate Registration No. 44 776 220954-002
Audit Report No. 3532 3232

Certification Body
at TÜV NORD CERT GmbH

Essen, 2022-06-16

TÜV NORD CERT GmbH Am TÜV 1 45307 Essen www.tuev-nord-cert.com

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D-VS-12007-01-00

Manchester Airports Holdings Limited- London Stansted Airport

			21/22		
	Category	Unit	Qty	Total Emissions Location-Based (tCO2e)	Total Emissions Market-Based (tCO2e)
Scope 1	Refrigerants	kg	317	454	454
	Natural Gas	kWh	12,679,628	2,331	2,331
	Gas Oil	litres	62,622	169	169
	Kerosene	litres	0	0.00	0.00
	LPG	litres	4,704	7	7
	Petrol	litres	13,397	29	29
	Wood	tonnes	0.00	0.00	0.00
	Straw	tonnes	0.00	0.00	0.00
	Diesel	litres	147,704	371	371
	Company Cars	miles	116,500	32.15	32.15
Scope 1 total				**3,394**	**3,394**
Scope 2	Electricity	kWh	33,464,712	7,106	7,106
Scope 1&2 total				**10,499**	**10,499**
Scope 3	Onward Supply	Various	29,057,630	8,997	3,112
	Water	m3	603,340	90	90
	Wastewater	m3	582,524	158	158
	Waste	tonnes	2,071	44	44.1
	WTT	Various	46,494,262	2,390	2,390
	T&D	kWh	33,464,712	629	629
	WTT T&D	kWh	33,464,712	164	164
	Business Travel	tCO2e	18	18	18
	Employee Commuting & Ho	tCO2e	22,057	22,057	22,057
	Downstream T&D	tCO2e	36,274	36,274	36,274
	Handling	tCO2e	1,496	1,496	1,496
	LTOs	tCO2e	139,313	139,313	139,313
	APUs	tCO2e	2,738	2,738	2,738
	FEGP	kWh	0	0	0
Scope 3 - total				**214,367**	**208,483**
				224,867	**218,982**

CERTIFICATE

Carbon Footprint 2021/2022

according to GHG Protocol - A Corporate Accounting and Reporting Standard (https://ghgprotocol.org/)

The Carbon Footprint was verified by TÜV NORD CERT GmbH in accordance with DIN EN ISO 14064-3: 2020 regarding its correctness and completeness for

Manchester Airports Holdings Limited
Manchester Airport
Manchester M90 1QX
Great Britain

Acting as an independent Certification Body TÜV NORD CERT GmbH has verified the carbon footprint of the organization for the reporting period **01.04.2021 - 31.03.2022**

to be **234,282** t CO_2e.

The level of assurance is limited. The carbon footprint includes Scopes 1, 2 and 3 (location-based approach).
The calculation of the carbon footprint comprises of emissions arising from arising from stationary and mobile Combustion, fugitive Emissions, electricity purchased (Location based) as well as onward supply, water, waste-water, WTT and T&D, business travel, employee commuting and working from home, cargo handling, landing and take offs, auxiliary power units and fixed electrical ground power.

Certificate Registration No. 44 776 220954-001
Audit Report No. 3532 3232

Certification Body
at TÜV NORD CERT GmbH

Essen, 2022-06-16

TÜV NORD CERT GmbH Am TÜV 1 45307 Essen www.tuev-nord-cert.com

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D-VS-12007-01-00

Manchester Airports Holdings Limited- Manchester Airport

			21/22		
	Category	Unit	Qty	Total Emissions Location-Based (tCO2e)	Total Emissions Market-Based (tCO2e)
Scope 1	Refrigerants	kg	501	758	758
	Natural Gas	kWh	44,317,073	8,117	8,117
	Gas Oil	litres	147,449	407	407
	Kerosene	litres	2,000	5.09	5.09
	LPG	litres	31,609	49	49
	Petrol	litres	0	0	0
	Wood	tonnes	0.00	0.00	0.00
	Straw	tonnes	0.00	0.00	0.00
	Diesel	litres	366,345	920	920
	Company Cars	miles	230,500	63.61	63.61
Scope 1 total				**10,320**	**10,320**
Scope 2	Electricity	kWh	65,416,476	13,890	13,890
Scope 1&2 total				**24,210**	**24,210**
Scope 3	Onward Supply	Various	56,705,704	11,946	4,284
	Water	m3	420,636	259	259
	Wastewater	m3	1,292,378	352	352
	Waste	tonnes	3,531	388	387.9
	WTT	Various	109,802,235	5,307	5,307
	T&D	kWh	64,707,259	1,216	1,216
	WTT T&D	kWh	64,707,259	316	316
	Business Travel	tCO2e	24	24	24
	Employee Commuting & Ho	tCO2e	26,048	26,048	26,048
	Downstream T&D	tCO2e	39,731	39,731	39,731
	Handling	tCO2e	2,038	2,038	2,038
	LTOs	tCO2e	117,389	117,389	117,389
	APUs	tCO2e	4,908	4,908	4,908
	FEGP	kWh	709,216	151	151
Scope 3 - total				**210,072**	**202,410**
				234,282	**226,620**

CERTIFICATE

Carbon Footprint 2021/2022

according to GHG Protocol - A Corporate Accounting and Reporting Standard (https://ghgprotocol.org/)

The Carbon Footprint was verified by TÜV NORD CERT GmbH in accordance with DIN EN ISO 14064-3: 2020 regarding its correctness and completeness for

Manchester Airports Holdings Limited
Olympic House
Manchester M90 1QX
Great Britain

with the locations according to the annex

Acting as an independent Certification Body TÜV NORD CERT GmbH has verified the carbon footprint of the organization for the reporting period **01.04.2021 - 31.03.2022**

to be **541,895** t CO_2e.

The level of assurance is limited. The carbon footprint includes Scopes 1, 2 and 3 (location-based approach).
The calculation of the carbon footprint comprises of emissions arising from arising from stationary and mobile Combustion, fugitive Emissions, electricity purchased (Location based) as well as onward supply, water, waste-water, WTT and T&D, business travel, employee commuting and working from home, cargo handling, landing and take offs, auxiliary power units and fixed electrical ground power.

Certificate Registration No. 44 776 220954
Audit Report No. 3532 3232

Certification Body
at TÜV NORD CERT GmbH

Essen, 2022-06-16

TÜV NORD CERT GmbH Am TÜV 1 45307 Essen www.tuev-nord-cert.com

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D-VS-12007-01-00

ANNEX

to Certificate Registration No. 44 776 220954
Carbon Footprint 2021/2022
according to GHG Protocol - A Corporate Accounting and Reporting Standard (https://ghgprotocol.org/)

Manchester Airports Holdings Limited
Olympic House
Manchester M90 1QX
Great Britain

Certificate Registration No.	Location
44 776 220954-001	Manchester Airports Holdings Limited Manchester Airport Manchester M90 1QX Great Britain
44 776 220954-002	Manchester Airports Holdings Limited London Stansted Airport Bassingbourn Road Stansted CM24 1QW Great Britain
44 776 220954-003	Manchester Airports Holdings Limited East Midlands Airport Castle Donington Derby DE74 2SA Great Britain

- End of the List -

Certification Body
at TÜV NORD CERT GmbH

Essen, 2022-06-16

TÜV NORD CERT GmbH Am TÜV 1 45307 Essen www.tuev-nord-cert.com

DAkkS Deutsche Akkreditierungsstelle D-VS-12007-01-00

Manchester Airports Holdings Limited

			21/22		
	Category	Unit	Qty	Total Emissions Location-Based (tCO2e)	Total Emissions Market-Based (tCO2e)
Scope 1	Refrigerants	kg	824	1,225	1,225
	Natural Gas	kWh	63,124,437	11,570	11,570
	Gas Oil	litres	272,131	747	747
	Kerosene	litres	2,870	7.30	7.30
	LPG	litres	38,953	61	61
	Petrol	litres	19,740	43	43
	Wood	tonnes	251.15	14.35	14.35
	Straw	tonnes	0.00	0.00	0.00
	Diesel	litres	519,475	1,305	1,305
	Company Cars	miles	480,000	132.46	132.46
Scope 1 total				**15,105**	**15,105**
Scope 2	Electricity	kWh	107,083,157	22,737	22,737
Scope 1&2 total				**37,842**	**37,842**
Scope 3	Onward Supply	Various	93,554,675	23,757	8,680
	Water	m3	1,113,943	387	387
	Wastewater	m3	1,965,508	535	535
	Waste	tonnes	5,847	476	476.5
	WTT	Various	170,475,319	8,394	8,394
	T&D	kWh	106,145,465	1,994	1,994
	WTT T&D	kWh	106,145,465	529	529
	Business Travel	tCO2e	150	150	150
	Employee Commuting & Ho	tCO2e	49,546	56,745	56,745
	Downstream T&D	tCO2e	78,818	78,818	78,818
	Handling	tCO2e	4,679	4,679	4,679
	LTOs	tCO2e	317,626	317,626	317,626
	APUs	tCO2e	9,810	9,810	9,810
	FEGP	kWh	709,216	151	151
Scope 3 - total				**504,053**	**488,975**
				541,895	**526,817**

ecoact
an atos company

This is to certify that

Manchester Airport Group

has offset

1,433 tCO_2e

related to Improved Cookstoves in Ugandan Communities, based on Gold Standard Methodology for Improved Cook-stoves and Kitchen Regimes V.01
Location: Uganda

East Midlands Airport

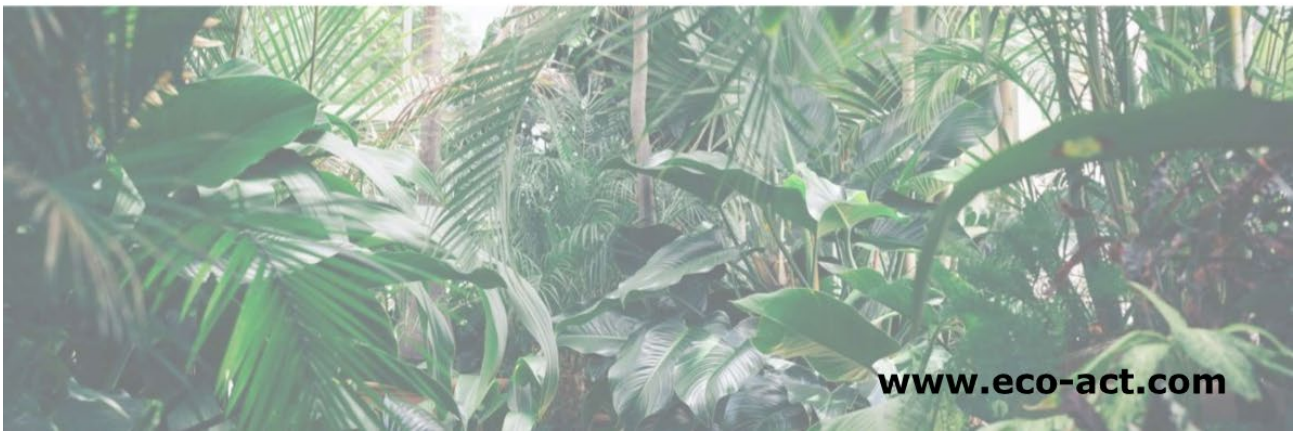
REF: Y2022 – 10156

Registry controlled by Ecocert Environment,
An independent / third-party / external body

ENVIRONNEMENT
ECOCERT

Arnaud Doré,
Group Director, Nature and Technology Based Solutions

Date: 19/07/2022



This is to certify that

Manchester Airport Group

has offset

9,587 tCO_2e

related to Improved Cookstoves in Ugandan Communities, based on Gold Standard Methodology for Improved Cook-stoves and Kitchen Regimes V.01
Location: Uganda

Manchester Airport

REF: Y2022 – 10157

Registry controlled by Ecocert Environment,
An independent / third-party / external body

Arnaud Doré,
Group Director, Nature and Technology Based Solutions

Date: 19/07/2022

ecoact
an atos company

This is to certify that

Manchester Airport Group

has offset

2,958 tCO_2e

related to Improved Cookstoves in Ugandan Communities, based on Gold Standard Methodology for Improved Cook-stoves and Kitchen Regimes V.01
Location: Uganda

Stanstead Airport

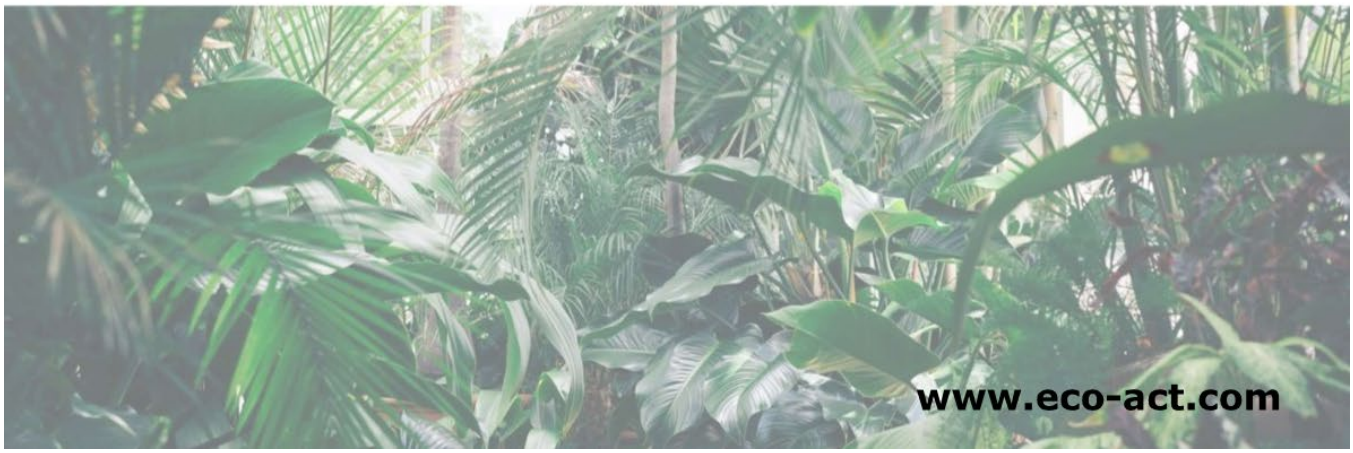
REF: Y2022 – 10159 & 10160

Registry controlled by Ecocert Environment,
An independent / third-party / external body

ENVIRONNEMENT
ECOCERT

Arnaud Doré,
Group Director, Nature and Technology Based Solutions

Date: 19/07/2022



This is to certify that

Manchester Airport Group

has offset

161 tCO_2e

related to Improved Cookstoves in Ugandan Communities, based on Gold Standard Methodology for Improved Cook-stoves and Kitchen Regimes V.01
Location: Uganda

REF: Y2022 – 10158

Registry controlled by Ecocert Environment,
An independent / third-party / external body

Arnaud Doré,
Group Director, Nature and Technology Based Solutions

Date: 19/07/2022