

# MAG GREENHOUSE GAS EMISSION REPORT, 2020/21

## 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. As we approach the 'COP26' global Climate Summit, this year has seen an increased focus from all stakeholders on climate change. Last year MAG published its Corporate Social Responsibility (CSR) Strategy: '*Working together for a brighter future*'. Our 2020 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 reviewed the way in which we report the climate impacts of our airports. 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, for the first time, our Annual Report reports against the framework established by the Task Force on Climate-related Financial Disclosures (TCFD). Our Annual Report and Accounts are available on our [website](#).
- **MAG CSR Report 2020/21: 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) Standards: Comprehensive option. The Report, our GRI Contents Index and disclosures are published on our [website](#).
- **Greenhouse gas emission 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 emission inventories and verification statements, is relatively technical. Readers will need to be familiar with climate change, GHG accounting methodologies and associated terminology.

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](mailto: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<sub>2</sub>e). 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) of one unit of carbon dioxide (CO<sub>2</sub>). 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 Carbon Trust (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. This year we have also calculated and reported emissions from home working which has become increasingly prominent during the COVID-19 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 report this year includes additional Scope 3 emissions from waste, and next year we will introduce those from water consumption and trade effluent. 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 2020/21, 2.0% of our Scope 1 and 2 energy use, 1.8% of our location-based Scope 1 and 2 emissions and 4.82% of our market-based Scope 1 and 2 emissions have been estimated.

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.
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.

Activity	Fuel/emission source	Description	Source data and emission calculation methodology
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 <a href="#">EcoAct's Home Working Emissions Methodology</a> . This uses industry standard estimates for typical electricity and natural gas consumption in the home, and is calculated based on the number of staff working from home.
	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 calendar year 2019 to reflect the number of flights during 2020/21.
	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.	
	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.	

Activity	Fuel/emission source	Description	Source data and emission calculation methodology
	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 through '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 the Carbon Trust to provide independent assurance of our GHG emission inventory. Their verification statements are included as Appendix 1 – Verification statements.

### Restated figures

Our 2019/20 GHG emissions report was compiled during the COVID-19 pandemic. As a result, disruption to our business and supply chain meant that it was necessary for us to estimate some of our energy use. Over the last year we have received information which allows us to replace previously estimated figures. Therefore, in accordance with the GHG Protocol, we have restated some of our 2019/20 emissions. Overall, these restatements increased Scope 1 and 2 emissions during 2019/20 by 1,921 tCO<sub>2</sub>e. We have retired additional carbon offsets to maintain carbon neutrality.

The GHG emissions outlined in this report have been presented differently to those detailed in our verification statements (Appendix 1). Specifically, this report includes one line for gas oil which is reported by use in our verification statement. This report also includes emissions from waste, which were not available at the time of verification and, as such, are not included in the verification statements. Finally, this report corrects a calculation error in the 2019/20 total Scope 1 and 2 emissions detailed in the verification statements for London Stansted and Manchester airports.

## 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 2019/20, our carbon offsets were generated by the 'Improved Cookstoves for Social Impact in Ugandan Communities' [project](#) and the 'Darfur Efficient Cook-stove Project' [project](#). These initiatives provide more efficient cookstoves to communities in Uganda and Darfur. 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 2019/20 and 2020/21, 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 2019/20 and 2020/21	Gold Standard Registry link
East Midlands Airport	2,517 tonnes (for 2019/20 emissions)	<a href="#">Registry link</a>
East Midlands Airport	2,777 tonnes (2,137 tonnes for 2020/21 emissions and 640 tonnes for 2019/20)	<a href="#">Registry link</a>
Manchester Airport	9,367 tonnes (for 2019/20 emissions)	<a href="#">Registry link</a>
Manchester Airport	8,779 tonnes (8,737 tonnes for 2020/21 emissions and 42 tonnes for 2019/20)	<a href="#">Registry link</a>
London Stansted Airport	4,181 tonnes (for 2019/20 emissions)	<a href="#">Registry link</a>
London Stansted Airport	3,835 tonnes (for 2020/21 emissions)	<a href="#">Registry link</a>
MAG	2,330 tonnes (for 2019/20 emissions)	<a href="#">Registry link</a>
MAG	1,261 tonnes (22 tonnes for 2020/21 emissions and 1,239 tonnes for 2019/20)	<a href="#">Registry link</a> (247t) <a href="#">Registry link</a> (1,014t)

Table 3. Carbon offset retirements, 2019/20 and 2020/21.

## 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.

	2020/21	2019/20	2018/19
Energy consumption used to calculate emissions (kWh)	181,314,564	210,406,900	208,525,600
Emissions from combustion of gas (Scope 1, tCO <sub>2</sub> e)	11,905	9,806	9,752
Emissions from combustion of fuel for transport purposes (Scope 1, tCO <sub>2</sub> e)	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, tCO <sub>2</sub> e)	7	90	98
Emissions from purchased electricity (Scope 2, location-based, tCO <sub>2</sub> e)	25,074	34,624	33,225
Emissions from purchased electricity (Scope 2, market-based, tCO <sub>2</sub> e)	59	74	5
Total gross emissions based on the above (Location-based, tCO <sub>2</sub> e)	39,309	50,043	47,739
Total gross emissions based on the above (Market-based, tCO <sub>2</sub> e)	14,293	15,492	14,520
Intensity measure (Traffic units)	12,013	66,899	69,167
Intensity ratio (Location-based emissions, tCO <sub>2</sub> e /traffic unit)	3.272	0.748	0.690
Intensity ratio (Market-based emissions, tCO <sub>2</sub> e /traffic unit)	1.190	0.232	0.210
Carbon offsets (Purchased and retired, tCO <sub>2</sub> e)	14,288	15,439	14,520
Total net emissions based on the above (Location-based, tCO <sub>2</sub> e)	20,015	34,551	33,225
Total net emissions based on the above (Market-based, tCO <sub>2</sub> e)	0	0	0

Table 4. SECR Report 2020/21.

### 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 <sub>2</sub> e)		Market-based emissions (tCO <sub>2</sub> e)	
			2020/21	2019/20	2020/21	2019/20	2020/21	2019/20
1	Fuels combustion	Gas	6,108,487	6,307,879	1,127	1,160	1,127	1,160
		LPG	36,551	37,485	8	8	8	8
		Gas oil	677,529	526,601	174	135	174	135
		Biomass	5,973	6,321	0	0	0	0
		Petrol	46	47	0	0	0	0
		Kerosene	4,004	7,120	1	2	1	2
	Owned transport	Diesel	192,099	232,840	47	57	47	57
		Gas oil	2,587,592	6,115,455	664	1,570	664	1,570
		Petrol	38,020	91,983	9	21	9	21
		Company cars	149,496	252,788	38	65	38	65
Total Gross Scope 1			9,799,796	13,578,520	2,068	3,018	2,068	3,018
2	Generation of renewable electricity on site	Wind generated electricity	252,795	288,184	59	74	59	74
	Consumption of purchased electricity, heat, steam and cooling	Consumption of purchased electricity	14,866,933	19,378,388	3,466	4,953		-
	Total Gross Scope 2		15,119,728	19,666,572	3,525	5,027	59	74
1 & 2	Total Gross Scopes 1 & 2		24,919,524	33,245,092	5,593	8,045	2,127	3,092
	Avoided emissions	Purchase and retirement of carbon offsets			2,128	3,092	2,128	3,092
	Total avoided emissions				2,128	3,092	2,128	3,092
	Total Net Scope 1 & 2 emissions				3,466	5,027		
3	Transport-related activities	MAG staff commuting			513	956	513	956
		Other airport staff commuting			7,115	13,258	7,115	13,258
		Home working			20	-	20	-
		Business travel - public transport			8	50	8	50
		Business travel – staff vehicles	1,393	59,728	0	14	0	14
	Downstream transport and distribution	Passenger surface access			3,643	40,849	3,643	40,849
	Aircraft	LTO cycle (departures)			32,471	53,696	32,471	53,696
		En-route (departures, excl. MAG airport LTO cycle)			315,979	525,284	315,979	525,284
		LTO cycle (arrivals)			14,210	23,834	14,210	23,834
		On stand power (FEGP and APU)			1,577	3,611	1,577	3,611
	Tenants and concessionaires – airside vehicles and MAG-supplied energy	Airside vehicles			280	6,677	280	6,677
		Gas			-	-	-	-
		Heating oil			11	25	11	25
		Electricity			1,667	2,601	-	-
	Waste	Waste			6	15	6	15
	Total Gross Scope 3					377,500	670,870	375,833
	Avoided emissions	Purchase and retirement of carbon offsets			2,136	4,048	2,136	4,048
1, 2 & 3	Total Net Scopes 1, 2 & 3				380,957	674,867	375,824	667,313

Table 5. GHG Emission inventory, East Midlands Airport



Scope	Activity	Fuel/emission source	Location-based emissions (tCO <sub>2</sub> e)		Market-based emissions (tCO <sub>2</sub> e)	
			2020/21	2019/20	2020/21	2019/20
	Intensity benchmark	Total traffic units (TU)	3,716	8,189	3,716	8,189
1 & 2		Scopes 1 & 2 Gross Emissions/TU	1.51	0.98	0.57	0.38
		Scopes 1 & 2 Net Emissions/TU	0.93	0.61		
1, 2 & 3		Scopes 1, 2 & 3 Gross Emissions/TU	103.09	82.91	101.71	81.98
		Scopes 1, 2 & 3 Net Emissions/TU	102.52	82.41	101.14	81.49

Table 6. GHG Emission intensity, East Midlands Airport

Scope	Activity	Fuel/emission source	Energy consumption (kWh)		Location-based emissions (tCO <sub>2</sub> e)		Market-based emissions (tCO <sub>2</sub> e)	
			2020/21	2019/20	2020/21	2019/20	2020/21	2019/20
1	Fuels combustion	Gas	17,074,310	14,732,133	3,154	2,609	3,154	2,609
		LPG	45,029	25,327	10	5	10	5
		Gas oil	113,292	5,103	29	-	29	-
		Biomass	-	-	-	-	-	-
		Petrol	-	-	-	-	-	-
		Kerosene	-	-	-	-	-	-
	Owned transport	Diesel	1,361,629	2,358,843	333	577	333	577
		Gas oil	820,380	843,750	211	217	211	217
		Petrol	18,871	47,009	4	11	4	11
		Company cars	295,459	383,163	74	95	74	95
Total Gross Scope 1		19,728,970	18,395,327	3,814	3,516	3,814	3,516	
2	Generation of renewable electricity on site	Wind generated electricity	-	-	-	-	-	-
	Consumption of purchased electricity, heat, steam and cooling	Consumption of purchased electricity	33,754,935	43,775,814	7,870	11,189	-	-
	Total Gross Scope 2		33,754,935	43,775,814	7,870	11,189	-	-
1 & 2	Total Gross Scopes 1 & 2		53,483,905	62,171,141	11,684	14,703	3,814	3,516
	Avoided emissions	Purchase and retirement of carbon offsets			3,814	3,516	3,814	3,516
	Total avoided emissions				3,814	3,516	3,814	3,516
	Total Net Scope 1 & 2 emissions				7,870	11,189		
3	Transport-related activities	MAG staff commuting			2,061	4,812	2,061	4,812
		Other airport staff commuting			15,661	36,707	15,661	36,707
		Business travel - public transport			20	516	20	516
		Business travel – staff vehicles	2,196	67,982	1	16	1	16
	Downstream transport and distribution	Passenger surface access			34,261	305,691	34,261	305,691
	Aircraft	LTO cycle (departures)			39,094	172,042	39,094	172,042
		En-route (departures, excl. MAG airport LTO cycle)			382,112	1,569,974	382,112	1,569,974
		LTO cycle (arrivals)			17,534	79,261	17,534	79,261
		On stand power (FEGP and APU)			1,132	4,924	1,132	4,924
	Tenants and concessionaires – airside vehicles and MAG-supplied energy	Airside vehicles			1,191	19,847	1,191	19,847
		Gas			3	153	3	153
		Heating oil				-		-
		Electricity			5,304	8,606	-	-
	Waste	Waste			26	139	26	139
	Total Gross Scope 3				498,400	2,202,688	493,096	2,194,082
	Avoided emissions	Purchase and retirement of carbon offsets			3,834	4,048	3,834	4,048
1, 2 & 3	Total Net Scopes 1, 2 & 3				506,250	2,213,343	493,076	2,193,550

Table 7. GHG Emission inventory, London Stansted Airport

Scope	Activity	Fuel/emission source	Location-based emissions (tCO <sub>2</sub> e)		Market-based emissions (tCO <sub>2</sub> e)	
			2020/21	2019/20	2020/21	2019/20
	Intensity benchmark	Total traffic units (TU)	5,180	30,893	5,180	30,893
1 & 2		Scopes 1 & 2 Gross Emissions/TU	2.26	0.48	0.74	0.11
		Scopes 1 & 2 Net Emissions/TU	1.52	0.36	0.00	0.00
1, 2 & 3		Scopes 1, 2 & 3 Gross Emissions/TU	98.47	71.78	95.93	71.14
		Scopes 1, 2 & 3 Net Emissions/TU	97.73	71.65	95.19	71.00

Table 8. GHG Emission intensity, London Stansted Airport

Scope	Activity	Fuel/emission source	Energy consumption (kWh)		Location-based emissions (tCO <sub>2</sub> e)		Market-based emissions (tCO <sub>2</sub> e)	
			2020/21	2019/20	2020/21	2019/20	2020/21	2019/20
1	Fuels combustion	Gas	41,310,983	32,809,259	7,624	6,032	7,624	6,032
		LPG	51,440	62,105	11	13	11	13
		Gas oil	573,334	247,826	147	64	147	64
		Biomass	-	-	-	-	-	-
		Petrol	-	-	-	-	-	-
		Kerosene	-	-	-	-	-	-
	Owned transport	Diesel	2,210,345	8,679,591	541	2,123	541	2,123
		Gas oil	1,253,365	2,452,579	322	630	322	630
		Petrol	-	-	-	-	-	-
		Company cars	314,237	592,257	78	146	78	146
Total Gross Scope 1			45,713,704	44,843,617	8,723	9,008	8,723	9,008
2	Generation of renewable electricity on site	Wind generated electricity	-	-	-	-	-	-
	Consumption of purchased electricity, heat, steam and cooling	Consumption of purchased electricity	58,655,927	71,984,798	13,675	18,399	-	-
	Total Gross Scope 2		58,655,927	71,984,798	13,675	18,399		
1 & 2	Total Gross Scopes 1 & 2		104,369,631	116,828,415	22,398	27,407	8,723	9,008
	Avoided emissions	Purchase and retirement of carbon offsets			8,723	9,008	8,723	9,008
	Total avoided emissions				8,723	9,008	8,723	9,008
	Total Net Scope 1 & 2 emissions				13,675	18,399	0	0
3	Transport-related activities	MAG staff commuting			2,197	4,611	2,197	4,611
		Other airport staff commuting			21,512	45,089	21,512	45,089
		Home working			311		311	
		Business travel - public transport			13	394	13	394
		Business travel – staff vehicles	2,645	27,130	1	6	1	6
	Downstream transport and distribution	Passenger surface access			33,838	345,259	33,838	345,259
	Aircraft	LTO cycle (departures)			33,728	173,566	33,728	173,566
		En-route (departures, excl. MAG airport LTO cycle)			543,661	2,680,711	543,661	2,680,711
		LTO cycle (arrivals)			15,856	81,741	15,856	81,741
		On stand power (FEGP and APU)			2,030	11,236	2,030	11,236
	Tenants and concessionaires – airside vehicles and MAG-supplied energy	Airside vehicles			2,132	64,101	2,132	64,101
		Gas			2,418	4,762	2,418	4,762
		Heating oil			-	-	-	-
		Electricity			6,401	11,039	-	-
	Waste	Waste			163	370	163	370
	Total Gross Scope 3					664,261	3,422,995	657,497
	Avoided emissions	Purchase and retirement of carbon offsets			8,737	9,409	8,737	9,409
1, 2 & 3	Total Net Scopes 1, 2 & 3				677,922	3,440,993	657,483	3,411,421

Table 9. GHG Emission inventory, Manchester Airport

Scope	Activity	Fuel/emission source	Location-based emissions (tCO <sub>2</sub> e)		Market-based emissions (tCO <sub>2</sub> e)	
			2020/21	2019/20	2020/21	2019/20
	Intensity benchmark	Total traffic units (TU)	3,117	29,749	3,117	29,749
1 & 2		Scopes 1 & 2 Gross Emissions/TU	7.19	0.92	2.80	0.30
		Scopes 1 & 2 Net Emissions/TU	4.39	0.62	0.00	0.00
1, 2 & 3		Scopes 1, 2 & 3 Gross Emissions/TU	220.29	115.98	213.74	114.99
		Scopes 1, 2 & 3 Net Emissions/TU	217.49	115.67	210.93	114.67

Table 10. GHG Emission intensity, Manchester Airport

Scope	Activity	Fuel/emission source	Energy consumption (kWh)		Location-based emissions (tCO <sub>2</sub> e)		Market-based emissions (tCO <sub>2</sub> e)	
			2020/21	2019/20	2020/21	2019/20	2020/21	2019/20
1	Fuels combustion	Gas	64,495,593	53,876,464	11,905	9,806	11,905	9,806
		LPG	133,019	124,917	29	27	29	27
		Gas oil	1,364,155	779,530	351	200	351	200
		Biomass	5,973	6,320	0	0	0	0
		Petrol	46	47	0	0	0	0
		Kerosene	4,004	7,120	1	2	1	2
	Owned transport	Diesel	3,764,073	11,271,274	921	2,757	921	2,757
		Gas oil	4,661,337	9,411,785	1,197	2,417	1,197	2,417
		Petrol	56,891	138,992	13	32	13	32
		Company cars	779,669	1,291,131	191	316	191	316
Total Gross Scope 1		75,264,760	76,907,580	14,607	15,557	14,607	15,557	
2	Generation of renewable electricity on site	Wind generated electricity	252,795	288,184	59	74	59	74
	Consumption of purchased electricity, heat, steam and cooling	Consumption of purchased electricity	107,297,973	135,001,121	25,015	34,551	-	-
	Total Gross Scope 2		107,550,768	135,289,305	25,074	34,625	59	74
1 & 2	Total Gross Scopes 1 & 2		182,815,528	212,196,885	39,681	50,182	14,666	15,631
	Avoided emissions	Purchase and retirement of carbon offsets			14,666	15,631	14,666	15,631
	Total avoided emissions				14,666	15,631	14,666	15,631
	Total Net Scope 1 & 2 emissions				25,015	34,551	-	-
3	Transport-related activities	MAG staff commuting			4,772	10,379	4,772	10,379
		Other airport staff commuting			44,288	95,053	44,288	95,053
		WFH			187		187	
		Business travel - public transport			55	4,460	55	4,460
		Business travel – staff vehicles	30,820	375,760	7	90	7	90
	Downstream transport and distribution	Passenger surface access			71,743	691,799	71,743	691,799
	Aircraft	LTO cycle (departures)			105,292	339,304	105,292	339,304
		En-route (departures, excl. MAG airport LTO cycle)			1,241,752	4,775,968	1,241,752	4,775,968
		LTO cycle (arrivals)			47,600	184,837	47,600	184,837
		On stand power (FEGP and APU)			4,739	19,771	4,739	19,637
	Tenants and concessionaires – airside vehicles and MAG-supplied energy	Airside vehicles			3,603	22,656	3,603	22,656
		Gas			2,421	4,783	2,421	4,783
		Heating oil			11	25	11	25
		Electricity			13,373	22,246	13,373	-
	Waste	Waste			194	524	194	524
	Total Gross Scope 3				1,540,037	6,171,895	1,540,037	6,149,515
		Avoided emissions	Purchase and retirement of carbon offsets			14,728	20,181	14,728
1, 2 & 3	Total Net Scopes 1, 2 & 3				1,525,309	6,151,714	1,525,309	6,129,334

Table 11.GHG Emission inventory, MAG

Scope	Activity	Fuel/emission source	Location-based emissions (tCO <sub>2</sub> e)		Market-based emissions (tCO <sub>2</sub> e)	
			2020/21	2019/20	2020/21	2019/20
	Intensity benchmark	Total traffic units (TU)	12,013	69,167	12,013	69,167
1 & 2		Scopes 1 & 2 Gross Emissions/TU	3.30	0.73	1.22	0.23
		Scopes 1 & 2 Net Emissions/TU	2.08	0.50	-	-
1, 2 & 3		Scopes 1, 2 & 3 Gross Emissions/TU	131.50	89.96	129.42	89.13
		Scopes 1, 2 & 3 Net Emissions/TU	126.97	88.94	126.97	88.62

Table 12. GHG Emission intensity, MAG

## APPENDIX 1 – VERIFICATION STATEMENTS





## East Midlands Airport, Manchester Airports Group plc

*679,193 tCO<sub>2</sub>e (location based)*

*671,781 tCO<sub>2</sub>e (market based)*

### Verification Summary

Carbon Trust Certification Limited ('The Company') has verified that East Midlands Airport, Manchester Airports Group plc ('You') have reported the above footprint in accordance with the measurement requirements of the Carbon Trust Standard and in accordance with the principles of the WRI/WBCSD GHG Protocol.

### Verified Footprint Period

Your footprint has been verified for the period of 1<sup>st</sup> April 2019 – 31<sup>st</sup> March 2020.

### Boundary

Your footprint and certification correspond to the following boundary:

### Organisational Boundary

East Midlands Airport

### Operational Boundary

This footprint applies to East Midlands Airport i.e. the airport company at East Midlands Airport. It applies to all of the Manchester Airports Group activities at the East Midlands Airport location. This excludes other MAG airports.

Morgan Jones  
Associate Director – Assurance  
Carbon Trust Assurance Limited

**Carbon Trust Assurance Limited**  
Registered in England and Wales Number 06547658.  
4th Floor, Dorset House, 27-45 Stamford Street, London SE1 9NT, United Kingdom

East Midlands Airport - Total Emissions 2019-20	Units Used	Measure	Location Based CO2e (tonnes)	Market Based CO2e (tonnes)
<b>Scope 1</b>				
<b>Fuels combustion</b>				
Boilers & AHUs (gas)	6,307,879	kWh	1,160	1,160
Boilers, AHUs & Fire Training (LPG)	37,485	kWh	8	8
Boilers, vehicles, fire training and generators (gas oil)	252,542	kWh	65	65
Fire training (biomass wood)	6,184	kWh	0	0
Fire training (biomass)	136	kWh	0	0
Fire training (gas oil)	0	kWh	0	0
Fire training (petrol)	47	kWh	0	0
Power back-up (oil)	274,059	kWh	70	70
Fire training (kerosene)	7,120	kWh	2	2
<b>Owned transport</b>				
Vehicles (Diesel)	232,840	kWh	57	57
Vehicles (Gas Oil)	6,673,671	kWh	1,714	1,714
Vehicles (Petrol)	91,983	kWh	21	21
Vehicles (Company Cars)	252,788	kWh	65	65
<b>Total</b>	<b>13,578,520</b>	<b>kWh</b>	<b>3,309</b>	<b>3,309</b>
F-Gas (all types) (Excluded from ACA)	>>>>	kg	291	291
<b>Scope 2</b>				
<b>Consumption of purchased electricity, heat, steam and cooling</b>				
Consumption of purchased electricity	19,378,388	kWh	4,953	0
<b>Generation of renewable electricity on site</b>				
Wind generated electricity	288,184	kWh	74	74
<b>Total Scopes 1 &amp; 2</b>	<b>19,666,572</b>	<b>kWh</b>	<b>8,336</b>	<b>3,309</b>
<b>Scope 3</b>				
Commuting	>>>>	CO2e (t)	956	956
Non-MAG staff commuting	>>>>	CO2e (t)	13,258	13,258
Business travel - public transport	>>>>	CO2e (t)	50	50
Business travel - grey fleet	>>>>	CO2e (t)	14	14
<b>Sold Goods and Services</b>				
Passenger surface access	>>>>	CO2e (t)	40,849	40,849
<b>Tenants &amp; concessionaires</b>				
Fuel combustion - Boilers & catering (gas)	0	kWh	0	0
Owned transport - Third party vehicles	>>>>	CO2e (t)	6,677	6,677
Consumption of heating oil	9,000	litres	25	25
Consumption of purchased electricity	10,176,755	kWh	2,601	0
<b>Aircraft</b>				
Landing and take-off cycle (LTO)	>>>>	CO2e (t)	77,530	77,530
On stand (FEGP)	0	kWh	0	0
On stand (APU)	>>>>	CO2e (t)	3,611	3,611
Aircraft en-route	>>>>	CO2e (t)	525,284	525,284
<b>Total Scope 3</b>			<b>670,855</b>	<b>668,254</b>
<b>Total Scopes 1, 2 &amp; 3</b>			<b>679,193</b>	<b>671,781</b>

## Carbon Trust Assurance Ltd Assurance Statement

### *Relating to Manchester Airport Group's 2020/21 Carbon Footprint for East Midlands Airport*

#### Terms of Engagement

Carbon Trust Assurance Limited (CTA) was commissioned by Manchester Airport Group to provide an independent, limited level of assurance on the following Selected Information:

- Scope 1 emissions
- Scope 2 (location-based) emissions
- Scope 2 (market-based) emissions
- Scope 3 emissions

The Selected Information is presented within annual reporting. We have not performed any work, and do not express any conclusion, over any other information that may be included in the annual reporting or on Manchester Airport Group's website for the current year or for the previous periods unless otherwise indicated.

#### Scope

This engagement covers the verification of emissions from anthropogenic sources of greenhouse gases included within the organisation's boundary.

- Organisational boundary: East Midlands Airport
- Control approach: Operational Control
- Reporting period: 01/04/2020 - 31/03/2021

#### Our Conclusion

Based on the work we have undertaken and the evidence provided by Manchester Airport Group, nothing has come to our attention that leads us to believe that the Selected Information has not been properly prepared, in all material respects, in accordance with the Reporting Criteria.

The total verified footprint was 385,911 tCO<sub>2</sub>e, according to the location-based method and 380,719 tCO<sub>2</sub>e, according to the market-based method. The breakdown by scope is:

- Scope 1: 3,010 tCO<sub>2</sub>e
- Scope 2 (location-based): 3,525 tCO<sub>2</sub>e
- Scope 2 (market-based): 0 tCO<sub>2</sub>e
- Scope 3 (location-based): 379,376 tCO<sub>2</sub>e
- Scope 3 (market-based): 377,709 tCO<sub>2</sub>e

This conclusion shall be read in the context of the remainder of this Assurance Statement, in particular the inherent limitations explained below and this report's intended use.

#### Reporting Criteria

The Reporting Criteria used by Manchester Airport Group is the GHG Protocol.

#### Management Responsibility

The management of Manchester Airport Group are responsible for:

- designing, implementing and maintaining internal controls relevant to the preparation and presentation of the Selected Information that is free from material misstatement, whether due to fraud or error;
- selecting and/or developing objective Reporting Criteria;
- measuring and reporting the Selected Information in accordance with the Reporting Criteria; and
- the contents and statements contained within the Report and the Reporting Criteria.

### **Our Responsibilities**

Our responsibility is to plan and perform our work to obtain limited assurance about whether the Selected Information has been prepared in accordance with the Reporting Criteria and to report to Manchester Airport Group in the form of an independent limited assurance conclusion based on the work undertaken and the evidence obtained.

### **Assurance Standards Applied**

We performed our work in accordance with CTA's assurance methodology based on ISO14064-3.

### **Our Assurance Activities**

Our objective was to assess whether the Selected Information is reported in accordance with the principles of completeness, comparability and accuracy. We planned and performed our work to obtain all the information and explanations that we believe were necessary to provide a basis for our assurance conclusions.

Considering the level of assurance and our assessment of the risk of material misstatement of the Selected Information, whether due to fraud or error, our work included, but was not restricted to:

- assessing the appropriateness of the Reporting Criteria for the Selected Information;
- conducting interviews with Manchester Airport Group management to obtain an understanding of the key processes, systems, controls and related documentation in place over the preparation of the Selected Information;
- carrying out 1 site virtual site visit which included interview and raw data walkthrough
- performing analytical reviews and detailed sampling of the Selected Information; and
- reading the annual reporting and narrative accompanying the Selected Information in the annual reporting with regard to the Reporting Criteria, and for consistency with our findings.

### **Inherent Limitations**

The accuracy and completeness of the Selected Information is subject to inherent limitations given their nature and methods for determining, calculating and estimating such data. As such, this Assurance Statement should be read in connection with annual reporting. For those subject matters with a limited assurance, the evidence-gathering procedures are more limited than with a reasonable assurance, and therefore less assurance is obtained than in an overall reasonable assurance statement.

### **CTA's Competence and Independence**

CTA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach is rigorous and transparent.

For and on behalf of  
Carbon Trust Assurance Limited

A handwritten signature in blue ink, appearing to read "Morgan Jones".

Morgan Jones  
Head of Assurance

Carbon Trust Assurance Ltd, London  
Email: [info@carbontrust.com](mailto:info@carbontrust.com)

Manchester Airports Group - East Midlands Airport - Total Emissions 2020-21			Location	Based	CO2e	Market	Based	CO2e
			(tonnes)			(tonnes)		
Scope 1								
Fuels combustion								
Boilers & AHUs (gas)	6,108,487	kWh			1,127			1,127
Boilers, AHUs & Fire Training (LPG)	36,551	kWh			8			8
Boilers, vehicles, fire training and generators (gas oil)	177,317	kWh			46			46
Fire training (biomass wood)	5,973	kWh			0.09			0.09
Fire training (biomass)	0	kWh			-			-
Fire training (gas oil)	0	kWh			-			-
Fire training (petrol)	46	kWh			0.01			0.01
Power back-up (oil)	500,212	kWh			128			128
Fire training (kerosene)	4,004	kWh			1			1
Owned transport								
Vehicles (Diesel)	192,099	kWh			47			47
Vehicles (Gas Oil)	92,587,592	kWh			664			664
Vehicles (Petrol)	38,020	kWh			9			9
Vehicles (Company Cars)	149,496	kWh			38			38
<b>Total</b>	<b>9,799,796</b>	<b>kWh</b>			<b>3,010</b>			<b>3,010</b>
F-Gas (all types) (Excluded from ACA)	459	kg			941			941
Scope 2								
Consumption of purchased electricity, heat, steam and cooling								
Consumption of purchased electricity	14,866,933	kWh			3,466			0
Generation of renewable electricity on site								
Wind generated electricity	252,795	kWh			59			59
<b>Total Scopes 1 &amp; 2</b>	<b>24,919,524</b>	<b>kWh</b>			<b>6,535</b>			<b>3,069</b>
Scope 3								
Commuting	>>>>	CO2e (t)			513			513
Non-MAG staff commuting	>>>>	CO2e (t)			7,115			7,115
Home Working	>>>>	CO2e (t)			20			20
Business travel - public transport	>>>>	CO2e (t)			8			8
Business travel - grey fleet	>>>>	CO2e (t)			0			0
WTT (Various and Excluded from ACA)	>>>>	CO2e (t)			837			837
Water (Excluded from ACA)	>>>>	CO2e (t)			182			182
Wastewater (Excluded from ACA)	>>>>	CO2e (t)			123			123
T&D Electricity (Excluded from ACA)	>>>>	CO2e (t)			298			298
WTT T&D Electricity (Excluded from ACA)	>>>>	CO2e (t)			64			64
Waste (Excluded from ACA)	>>>>	CO2e (t)			6			6
Sold Goods and Services								
Passenger surface access	>>>>	CO2e (t)			3,643			3,643
Tenants & concessionaires								
Fuel combustion - Boilers & catering (gas)	0	kWh			0			0
Owned transport - Third party vehicles	>>>>	CO2e (t)			280			280
Consumption of heating oil	4,000	litres			11			11
Consumption of purchased electricity	7,150,852	kWh			1,667			-
Water Supply (Excluded from ACA)	>>>>	CO2e (t)			23			23
Water Treatment (Excluded from ACA)	>>>>	CO2e (t)			48			48
Gas Oil – Red Diesel (Excluded from ACA)	>>>>	CO2e (t)			299			299
Aircraft								
Landing and take-off cycle (LTO)	>>>>	CO2e (t)			46,681			46,681
On stand (FEGP)	524,856	kWh			0			0
On stand (APU)	>>>>	CO2e (t)			1,577			1,577
Aircraft en-route	>>>>	CO2e (t)			315,979			315,979
<b>Total Scope 3</b>					<b>379,376</b>			<b>377,709</b>
<b>Total Scopes 1, 2 &amp; 3</b>					<b>385,911</b>			<b>380,719</b>

This assurance report is made solely to Manchester Airport Group in accordance with the terms of the engagement contract between us. Those terms permit disclosure to other parties, solely for the purpose of Manchester Airport Group showing that it has obtained an independent assurance report in connection with the Selected Information. We have not considered the interest of any other party in the Selected Information. To the fullest extent permitted by law, we accept no responsibility and deny any liability to any other party other than Manchester Airport Group for our work, for this assurance report or for the conclusions we have reached.



## London Stansted Airport, Manchester Airports Group plc

*2,226,726 tCO<sub>2</sub>e (location based)*

*2,206,931 tCO<sub>2</sub>e (market based)*

### Verification Summary

Carbon Trust Certification Limited ('The Company') has verified that London Stansted Airport, Manchester Airports Group plc ('You') have reported the above footprint in accordance with the measurement requirements of the Carbon Trust Standard and in accordance with the principles of the WRI/WBCSD GHG Protocol.

### Verified Footprint Period

Your footprint has been verified for the period of 1<sup>st</sup> April 2019 – 31<sup>st</sup> March 2020.

### Boundary

Your footprint and certification correspond to the following boundary:

#### Organisational Boundary

London Stansted Airport

#### Operational Boundary

This footprint applies to London Stansted Airport i.e. the airport company at London Stansted Airport. It applies to all of the Manchester Airports Group activities at the London Stansted Airport location. This excludes other MAG airports.

Morgan Jones  
Associate Director – Assurance  
Carbon Trust Assurance Limited

**Carbon Trust Assurance Limited**  
Registered in England and Wales Number 06547658.  
4th Floor, Dorset House, 27-45 Stamford Street, London SE1 9NT, United Kingdom

London Stansted Airport - Total Emissions 2019-20	Units Used	Measure	Location Based CO2e (tonnes)	Market Based CO2e (tonnes)
<b>Scope 1</b>				
<b>Fuels combustion</b>				
Boilers & AHUs (gas)	14,732,133	kWh	2,609	2,609
Boilers, AHUs & Fire Training (LPG)	25,327	kWh	5	5
Boilers, vehicles, fire training and generators (gas oil)	0	kWh	0	0
Fire training (biomass wood)	0	kWh	0	0
Fire training (biomass)	0	kWh	0	0
Fire training (gas oil)	0	kWh	0	0
Fire training (petrol)	0	kWh	0	0
Power back-up (oil)	4,834	kWh	1	1
Fire training (kerosene)	0	kWh	0	0
<b>Owned transport</b>				
Vehicles (Diesel)	2,358,843	kWh	577	577
Vehicles (Gas Oil)	843,750	kWh	217	217
Vehicles (Petrol)	47,009	kWh	11	11
Vehicles (Company Cars)	383,163	kWh	95	95
<b>Total</b>	<b>18,573,881</b>	<b>kWh</b>	<b>4,157</b>	<b>4,157</b>
F-Gas (all types) (Excluded from ACA)	>>>>	kg	641	641
<b>Scope 2</b>				
<b>Consumption of purchased electricity, heat, steam and cooling</b>				
Consumption of purchased electricity	43,775,814	kWh	11,189	0
<b>Generation of renewable electricity on site</b>				
Wind generated electricity	0	kWh	0	0
<b>Total Scopes 1 &amp; 2</b>	<b>43,775,814</b>	<b>kWh</b>	<b>15,346</b>	<b>4,157</b>
<b>Scope 3</b>				
Commuting	>>>>	CO2e (t)	4,812	4,812
Business travel - public transport	>>>>	CO2e (t)	516	516
Non- MAG staff commuting	>>>>	CO2e (t)	36,707	36,707
Business travel - grey fleet	>>>>	CO2e (t)	16	16
<b>Sold Goods and Services</b>				
Passenger surface access	>>>>	CO2e (t)	305,691	305,691
<b>Tenants &amp; concessionaires</b>				
Fuel combustion - Boilers & catering (gas)	111,464	kWh	153	153
Owned transport - Third party vehicles	>>>>	CO2e (t)	19,847	19,847
Consumption of heating oil	0	kWh	0	0
Consumption of purchased electricity	33,668,283	kWh	8,606	0
<b>Aircraft</b>				
Landing and take-off cycle (LTO)	>>>>	CO2e (t)	251,303	251,303
On stand (FEGP)	0	kWh	0	0
On stand (APU)	>>>>	CO2e (t)	4,924	4,924
Aircraft en-route	>>>>	CO2e (t)	1,569,974	1,569,974
<b>Total Scope 3</b>			<b>2,211,380</b>	<b>2,202,774</b>
<b>Total Scopes 1, 2 &amp; 3</b>			<b>2,226,726</b>	<b>2,206,931</b>



# Carbon Trust Assurance Ltd Assurance Statement

## *Relating to Manchester Airport Group's 2020/21 Carbon Footprint for Stansted Airport*

### Terms of Engagement

Carbon Trust Assurance Limited (CTA) was commissioned by Manchester Airport Group to provide an independent, limited level of assurance on the following Selected Information:

- Scope 1 emissions
- Scope 2 (location-based) emissions
- Scope 2 (market-based) emissions
- Scope 3 emissions

The Selected Information is presented within annual reporting. We have not performed any work, and do not express any conclusion, over any other information that may be included in the annual reporting or on Manchester Airport Group's website for the current year or for the previous periods unless otherwise indicated.

### Scope

This engagement covers the verification of emissions from anthropogenic sources of greenhouse gases included within the organisation's boundary.

- Organisational boundary: Stansted Airport
- Control approach: Operational Control
- Reporting period: 01/04/2020 - 31/03/2021

### Our Conclusion

Based on the work we have undertaken and the evidence provided by Manchester Airport Group, nothing has come to our attention that leads us to believe that the Selected Information has not been properly prepared, in all material respects, in accordance with the Reporting Criteria.

The total verified footprint was 514,730 tCO<sub>2</sub>e, according to the location-based method and 501,556 tCO<sub>2</sub>e, according to the market-based method. The breakdown by scope is:

- Scope 1: 4,097 tCO<sub>2</sub>e
- Scope 2 (location-based): 7,870 tCO<sub>2</sub>e
- Scope 2 (market-based): 0 tCO<sub>2</sub>e
- Scope 3 (location-based): 502,763 tCO<sub>2</sub>e
- Scope 3 (market-based): 497,459 tCO<sub>2</sub>e

This conclusion shall be read in the context of the remainder of this Assurance Statement, in particular the inherent limitations explained below and this report's intended use.

### Reporting Criteria

The Reporting Criteria used by Manchester Airport Group is the GHG Protocol.

### Management Responsibility

The management of Manchester Airport Group are responsible for:

- designing, implementing and maintaining internal controls relevant to the preparation and presentation of the Selected Information that is free from material misstatement, whether due to fraud or error;
- selecting and/or developing objective Reporting Criteria;
- measuring and reporting the Selected Information in accordance with the Reporting Criteria; and



- the contents and statements contained within the Report and the Reporting Criteria.

### **Our Responsibilities**

Our responsibility is to plan and perform our work to obtain limited assurance about whether the Selected Information has been prepared in accordance with the Reporting Criteria and to report to Manchester Airport Group in the form of an independent limited assurance conclusion based on the work undertaken and the evidence obtained.

### **Assurance Standards Applied**

We performed our work in accordance with CTA's assurance methodology based on ISO14064-3.

### **Our Assurance Activities**

Our objective was to assess whether the Selected Information is reported in accordance with the principles of completeness, comparability and accuracy. We planned and performed our work to obtain all the information and explanations that we believe were necessary to provide a basis for our assurance conclusions.

Considering the level of assurance and our assessment of the risk of material misstatement of the Selected Information, whether due to fraud or error, our work included, but was not restricted to:

- assessing the appropriateness of the Reporting Criteria for the Selected Information;
- conducting interviews with Manchester Airport Group management to obtain an understanding of the key processes, systems, controls and related documentation in place over the preparation of the Selected Information;
- carrying out 1 site virtual site visit which included interview and raw data walkthrough
- performing analytical reviews and detailed sampling of the Selected Information; and
- reading the annual reporting and narrative accompanying the Selected Information in the annual reporting with regard to the Reporting Criteria, and for consistency with our findings.

### **Inherent Limitations**

The accuracy and completeness of the Selected Information is subject to inherent limitations given their nature and methods for determining, calculating and estimating such data. As such, this Assurance Statement should be read in connection with annual reporting. For those subject matters with a limited assurance, the evidence-gathering procedures are more limited than with a reasonable assurance, and therefore less assurance is obtained than in an overall reasonable assurance statement.

### **CTA's Competence and Independence**

CTA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach is rigorous and transparent.

For and on behalf of  
Carbon Trust Assurance Limited

A handwritten signature in blue ink, appearing to read "Morgan Jones".

Morgan Jones  
Head of Assurance

Carbon Trust Assurance Ltd, London  
Email: [info@carbontrust.com](mailto:info@carbontrust.com)

Manchester Airports Group - Manchester Airport - Total Emissions 2020-21			Location	Based	CO2e	Market	Based	CO2e
			(tonnes)			(tonnes)		
Scope 1								
Fuels combustion								
Boilers & AHUs (gas)	17,074,310	kWh			3,154			3,154
Boilers, AHUs & Fire Training (LPG)	45,029	kWh			10			10
Boilers, vehicles, fire training and generators (gas oil)	0	kWh			0			0
Fire training (biomass wood)	0	kWh			0			0
Fire training (biomass)	0	kWh			0			0
Fire training (gas oil)	0	kWh			0			0
Fire training (petrol)	0	kWh			0			0
Power back-up (oil)	10,548	kWh			29			29
Fire training (kerosene)	0	kWh			0			0
Owned transport								
Vehicles (Diesel)	1,361,629	kWh			333			333
Vehicles (Gas Oil)	820,380	kWh			211			211
Vehicles (Petrol)	18,871	kWh			4			4
Vehicles (Company Cars)	295,459	kWh			74			74
<b>Total</b>	<b>19,728,970</b>	<b>kWh</b>			<b>4,097</b>			<b>4,097</b>
F-Gas (all types) (Excluded from ACA)	188	kg			283			283
Scope 2								
Consumption of purchased electricity, heat, steam and cooling								
Consumption of purchased electricity	33,754,935	kWh			7,870			0
Generation of renewable electricity on site								
Wind generated electricity	0	kWh			0			0
<b>Total Scopes 1 &amp; 2</b>	<b>24,919,524</b>	<b>kWh</b>			<b>11,966</b>			<b>4,097</b>
Scope 3								
Commuting	>>>>	CO2e (t)			2,061			2,061
Non-MAG staff commuting	>>>>	CO2e (t)			15,661			15,661
Home Working	>>>>	CO2e (t)			155			55
Business travel - public transport	>>>>	CO2e (t)			20			20
Business travel - grey fleet	>>>>	CO2e (t)			1			1
WTT (Various and Excluded from ACA)	>>>>	CO2e (t)			1,630			1,630
Water (Excluded from ACA)	>>>>	CO2e (t)			189			189
Wastewater (Excluded from ACA)	>>>>	CO2e (t)			375			375
T&D Electricity (Excluded from ACA)	>>>>	CO2e (t)			677			677
WTT T&D Electricity (Excluded from ACA)	>>>>	CO2e (t)			94			94
Waste (Excluded from ACA)	>>>>	CO2e (t)			26			26
Sold Goods and Services								
Passenger surface access	>>>>	CO2e (t)			34,261			34,261
Tenants & concessionaires								
Fuel combustion - Boilers & catering (gas)	13,586	kWh			3			3
Owned transport - Third party vehicles	>>>>	CO2e (t)			1,191			1,191
Consumption of heating oil	0	litres			0			0
Consumption of purchased electricity	22,752,279	kWh			5,304			0
Water Supply (Excluded from ACA)	>>>>	CO2e (t)			38			38
Water Treatment (Excluded from ACA)	>>>>	CO2e (t)			0			0
Gas Oil – Red Diesel (Excluded from ACA)	>>>>	CO2e (t)			701			701
Diesel (Excluded from ACA)	>>>>	CO2e (t)			488			488
Petrol (Excluded from ACA)	>>>>	CO2e (t)			19			19
Aircraft								
Landing and take-off cycle (LTO)	>>>>	CO2e (t)			56,628			56,628
On stand (FEGP)	338,645	kWh			0			0
On stand (APU)	>>>>	CO2e (t)			1,132			1,132
Aircraft en-route	>>>>	CO2e (t)			382,112			382,112
<b>Total Scope 3</b>					<b>502,763</b>			<b>497,459</b>
<b>Total Scopes 1, 2 &amp; 3</b>					<b>514,730</b>			<b>501,444</b>

This assurance report is made solely to Manchester Airport Group in accordance with the terms of the engagement contract between us. Those terms permit disclosure to other parties, solely for the purpose of Manchester Airport Group showing that it has obtained an independent assurance report in connection with the Selected Information. We have not considered the interest of any other party in the Selected Information. To the fullest extent permitted by law, we accept no responsibility and deny any liability to any other party other than Manchester Airport Group for our work, for this assurance report or for the conclusions we have reached.



## Manchester Airport, Manchester Airports Group plc

*3,460,007 tCO<sub>2</sub>e (location based)*

*3,430,568 tCO<sub>2</sub>e (market based)*

### Verification Summary

Carbon Trust Certification Limited ('The Company') has verified that Manchester Airport, Manchester Airports Group plc ('You') have reported the above footprint in accordance with the measurement requirements of the Carbon Trust Standard and in accordance with the principles of the WRI/WBCSD GHG Protocol.

### Verified Footprint Period

Your footprint has been verified for the period of 1<sup>st</sup> April 2019 – 31<sup>st</sup> March 2020.

### Boundary

Your footprint and certification correspond to the following boundary:

#### Organisational Boundary

Manchester Airport

#### Operational Boundary

This footprint applies to Manchester Airport i.e. the airport company at Manchester Airport. It applies to all of the Manchester Airports Group activities at the Manchester Airport location. This excludes other MAG airports.

Morgan Jones  
Associate Director – Assurance  
Carbon Trust Assurance Limited

Manchester Airport - Total Emissions 2019-20	Units Used	Measure	Location Based CO2e (tonnes)	Market Based CO2e (tonnes)
<b>Scope 1</b>				
<b>Fuels combustion</b>				
	32,809,259	kWh	6,032	6,032
Boilers & AHUs (gas)	62,105	kWh	13	13
Boilers, AHUs & Fire Training (LPG)	0	kWh	0	0
Boilers, vehicles, fire training and generators (gas oil)	0	kWh	0	0
Fire training (biomass wood)	0	kWh	0	0
Fire training (biomass)	0	kWh	0	0
Fire training (gas oil)	0	kWh	0	0
Fire training (petrol)	247,826	kWh	64	64
Power back-up (oil)	0	kWh	0	0
Fire training (kerosene)				
<b>Owned transport</b>				
Vehicles (Diesel)	8,679,591	kWh	2,123	2,123
Vehicles (Gas Oil)	2,452,579	kWh	630	630
Vehicles (Petrol)	0	kWh	0	0
Vehicles (Company Cars)	592,257	kWh	146	146
<b>Total</b>	<b>44,678,622</b>	<b>kWh</b>	<b>9,513</b>	<b>9,513</b>
F-Gas (all types) (Excluded from ACA)	345	kg	505	505
<b>Scope 2</b>				
<b>Consumption of purchased electricity, heat, steam and cooling</b>				
Consumption of purchased electricity	71,984,798	kWh	18,399	0
<b>Generation of renewable electricity on site</b>				
Wind generated electricity	0	kWh	0	0
<b>Total Scopes 1 &amp; 2</b>	<b>71,984,978</b>	<b>kWh</b>	<b>27,913</b>	<b>9,513</b>
<b>Scope 3</b>				
Commuting	>>>>	CO2e (t)	4,611	4,611
Non MAG staff commuting	>>>>	CO2e (t)	45,089	45,089
Business travel - public transport	>>>>	CO2e (t)	394	394
Business travel - grey fleet	>>>>	CO2e (t)	6	6
<b>Sold Goods and Services</b>				
Passenger surface access	>>>>	CO2e (t)	345,259	345,259
<b>Tenants &amp; concessionaires</b>				
Fuel combustion - Boilers & catering (gas)	25,901,972	kWh	4,762	4,762
Owned transport - Third party vehicles	>>>>	CO2e (t)	64,101	64,101
Consumption of heating oil	0	kWh	0	0
Consumption of purchased electricity	43,189,213	kWh	11,039	0
<b>Aircraft</b>				
Landing and take-off cycle (LTO)	>>>>	CO2e (t)	255,307	255,307
On stand (FEGP)	524,856	kWh	134	0
On stand (APU)	>>>>	CO2e (t)	11,102	11,102
Aircraft en-route	>>>>	CO2e (t)	2,680,711	2,680,711
<b>Total Scope 3</b>			<b>3,432,094</b>	<b>3,421,055</b>
<b>Total Scopes 1, 2 &amp; 3</b>			<b>3,460,007</b>	<b>3,430,568</b>

## Carbon Trust Assurance Ltd Assurance Statement

### *Relating to Manchester Airport Group's 2020/21 Carbon Footprint for Manchester Airport*

#### Terms of Engagement

Carbon Trust Assurance Limited (CTA) was commissioned by Manchester Airport Group to provide an independent, limited level of assurance on the following Selected Information:

- Scope 1 emissions
- Scope 2 (location-based) emissions
- Scope 2 (market-based) emissions
- Scope 3 emissions

The Selected Information is presented within annual reporting. We have not performed any work, and do not express any conclusion, over any other information that may be included in the annual reporting or on Manchester Airport Group's website for the current year or for the previous periods unless otherwise indicated.

#### Scope

This engagement covers the verification of emissions from anthropogenic sources of greenhouse gases included within the organisation's boundary.

- Organisational boundary: Manchester Airport
- Control approach: Operational Control
- Reporting period: 01/04/2020 - 31/03/2021

#### Our Conclusion

Based on the work we have undertaken and the evidence provided by Manchester Airport Group, nothing has come to our attention that leads us to believe that the Selected Information has not been properly prepared, in all material respects, in accordance with the Reporting Criteria.

The total verified footprint was 692,738 tCO<sub>2</sub>e, according to the location-based method and 672,661tCO<sub>2</sub>e, according to the market-based method. The breakdown by scope is:

- Scope 1: 8,764 tCO<sub>2</sub>e
- Scope 2 (location-based): 13,675 tCO<sub>2</sub>e
- Scope 2 (market-based): 0 tCO<sub>2</sub>e
- Scope 3 (location-based): 670,299 tCO<sub>2</sub>e
- Scope 3 (market-based): 663,898 tCO<sub>2</sub>e

This conclusion shall be read in the context of the remainder of this Assurance Statement, in particular the inherent limitations explained below and this report's intended use.

#### Reporting Criteria

The Reporting Criteria used by Manchester Airport Group is the GHG Protocol.

#### Management Responsibility

The management of Manchester Airport Group are responsible for:

- designing, implementing and maintaining internal controls relevant to the preparation and presentation of the Selected Information that is free from material misstatement, whether due to fraud or error;
- selecting and/or developing objective Reporting Criteria;
- measuring and reporting the Selected Information in accordance with the Reporting Criteria; and

- the contents and statements contained within the Report and the Reporting Criteria.

### **Our Responsibilities**

Our responsibility is to plan and perform our work to obtain limited assurance about whether the Selected Information has been prepared in accordance with the Reporting Criteria and to report to Manchester Airport Group in the form of an independent limited assurance conclusion based on the work undertaken and the evidence obtained.

### **Assurance Standards Applied**

We performed our work in accordance with CTA's assurance methodology based on ISO14064-3.

### **Our Assurance Activities**

Our objective was to assess whether the Selected Information is reported in accordance with the principles of completeness, comparability and accuracy. We planned and performed our work to obtain all the information and explanations that we believe were necessary to provide a basis for our assurance conclusions.

Considering the level of assurance and our assessment of the risk of material misstatement of the Selected Information, whether due to fraud or error, our work included, but was not restricted to:

- assessing the appropriateness of the Reporting Criteria for the Selected Information;
- conducting interviews with Manchester Airport Group management to obtain an understanding of the key processes, systems, controls and related documentation in place over the preparation of the Selected Information;
- carrying out 1 site virtual site visit which included interview and raw data walkthrough
- performing analytical reviews and detailed sampling of the Selected Information; and
- reading the annual reporting and narrative accompanying the Selected Information in the annual reporting with regard to the Reporting Criteria, and for consistency with our findings.

### **Inherent Limitations**

The accuracy and completeness of the Selected Information is subject to inherent limitations given their nature and methods for determining, calculating and estimating such data. As such, this Assurance Statement should be read in connection with annual reporting. For those subject matters with a limited assurance, the evidence-gathering procedures are more limited than with a reasonable assurance, and therefore less assurance is obtained than in an overall reasonable assurance statement.

### **CTA's Competence and Independence**

CTA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach is rigorous and transparent.

For and on behalf of  
Carbon Trust Assurance Limited

A handwritten signature in black ink, appearing to read "Morgan Jones".

Morgan Jones  
Head of Assurance

Carbon Trust Assurance Ltd, London  
Email: [info@carbontrust.com](mailto:info@carbontrust.com)



Manchester Airports Group - Manchester Airport - Total Emissions 2020-21			Location (tonnes)	Based	CO2e	Market (tonnes)	Based	CO2e
Scope 1								
Fuels combustion								
Boilers & AHUs (gas)	41,310,983	kWh			7,624			7,624
Boilers, AHUs & Fire Training (LPG)	51,440	kWh			11			11
Boilers, vehicles, fire training and generators (gas oil)	0	kWh			0			0
Fire training (biomass wood)	0	kWh			0			0
Fire training (biomass)	0	kWh			0			0
Fire training (gas oil)	69,814	kWh			18			18
Fire training (petrol)	0	kWh			0			0
Power back-up (oil)	503,520	kWh			129			129
Fire training (kerosene)	0	kWh			0			0
Owned transport								
Vehicles (Diesel)	2,210,345	kWh			541			541
Vehicles (Gas Oil)	1,253,365	kWh			322			322
Vehicles (Petrol)	0	kWh			-			-
Vehicles (Company Cars)	314,237	kWh			78			78
Total	45,713,704	kWh			8,764			8,764
F-Gas (all types) (Excluded from ACA)	23	kg			41			41
Scope 2								
Consumption of purchased electricity, heat, steam and cooling								
Consumption of purchased electricity	58,655,927	kWh			13,675			0
Generation of renewable electricity on site								
Wind generated electricity	0	kWh			0			0
Total Scopes 1 & 2	24,919,524	kWh			22,439			8,764
Scope 3								
Commuting	>>>>	CO2e (t)			2,197			2,197
Non-MAG staff commuting	>>>>	CO2e (t)			21,512			21,512
Home Working	>>>>	CO2e (t)			311			311
Business travel - public transport	>>>>	CO2e (t)			13			13
Business travel - grey fleet	>>>>	CO2e (t)			1			1
WTT (Various and Excluded from ACA)	>>>>	CO2e (t)			3,122			3,122
Water (Excluded from ACA)	>>>>	CO2e (t)			447			447
Wastewater (Excluded from ACA)	>>>>	CO2e (t)			769			769
T&D Electricity (Excluded from ACA)	>>>>	CO2e (t)			1,169			1,169
WTT T&D Electricity (Excluded from ACA)	>>>>	CO2e (t)			162			162
Waste (Excluded from ACA)	>>>>	CO2e (t)			163			163
Sold Goods and Services								
Passenger surface access	>>>>	CO2e (t)			33,838			33,838
Tenants & concessionaires								
Fuel combustion - Boilers & catering (gas)	13,103,995	kWh			2,418			2,418
Owned transport - Third party vehicles	>>>>	CO2e (t)			2,132			2,132
Consumption of heating oil	0	litres			0			0
Consumption of purchased electricity	27,456,913	kWh			6,401			0
Water Supply (Excluded from ACA)	>>>>	CO2e (t)			28			28
Water Treatment (Excluded from ACA)	>>>>	CO2e (t)			0			0
Gas Oil – Red Diesel (Excluded from ACA)	>>>>	CO2e (t)			162			162
Diesel (Excluded from ACA)	>>>>	CO2e (t)			101			101
Aircraft								
Landing and take-off cycle (LTO)	>>>>	CO2e (t)			49,583			49,583
On stand (FEGP)	338,645	kWh			79			79
On stand (APU)	>>>>	CO2e (t)			2,030			2,030
Aircraft en-route	>>>>	CO2e (t)			543,661			543,661
Total Scope 3					670,299			663,898
Total Scopes 1, 2 & 3					692,738			672,661

This assurance report is made solely to Manchester Airport Group in accordance with the terms of the engagement contract between us. Those terms permit disclosure to other parties, solely for the purpose of Manchester Airport Group showing that it has obtained an independent assurance report in connection with the Selected Information. We have not considered the interest of any other party in the Selected Information. To the fullest extent permitted by law, we accept no responsibility and deny any liability to any other party other than Manchester Airport Group for our work, for this assurance report or for the conclusions we have reached.



## Manchester Airports Group plc

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*6,371,659 tCO<sub>2</sub>e (location based)*

*6,314,788 tCO<sub>2</sub>e (market based)*

### Verification Summary

Carbon Trust Certification Limited ('The Company') has verified that Manchester Airports Group plc ('You') have reported the above footprint in accordance with the measurement requirements of the Carbon Trust Standard and in accordance with the principles of the WRI/WBCSD GHG Protocol.

### Verified Footprint Period

Your footprint has been verified for the period of 1<sup>st</sup> April 2019 – 31<sup>st</sup> March 2020.

### Boundary

Your footprint and certification correspond to the following boundary:

### Organisational Boundary

All UK operations including all subsidiaries.

### Operational Boundary

This footprint applies to all of the Manchester Airports Group activities at Manchester Airport, East Midlands Airport, London Stansted Airport's location and other group facilities.

Morgan Jones  
Associate Director – Assurance  
Carbon Trust Assurance Limited

**Carbon Trust Assurance Limited**  
Registered in England and Wales Number 06547658.  
4th Floor, Dorset House, 27-45 Stamford Street, London SE1 9NT, United Kingdom



Manchester Airports Group - Total Emissions 2019-20		Units Used	Measure	Location Based CO2e (tonnes)	Market Based CO2e (tonnes)
Scope 1					
<b>Fuels combustion</b>					
Boilers & AHUs (gas)	53,876,464	kWh		9,806	9,806
Boilers, AHUs & Fire Training (LPG)	124,917	kWh		27	27
Boilers, vehicles, fire training and generators (gas oil)	252,542	kWh		65	65
Fire training (biomass wood)	6,184	kWh		0	0
Fire training (biomass)	136	kWh		0	0
Fire training (gas oil)	0	kWh		0	0
Fire training (petrol)	47	kWh		0	0
Power back-up (oil)	526,988	kWh		135	135
Fire training (kerosene)	7,120	kWh		2	2
<b>Owned transport</b>					
Vehicles (Diesel)	11,271,274	kWh		2,757	2,757
Vehicles (Gas Oil)	9,411,785	kWh		2,417	2,417
Vehicles (Petrol)	138,992	kWh		32	32
Vehicles (Company Cars)	1,291,131	kWh		316	316
<b>Total</b>	<b>73,222,764</b>	<b>kWh</b>		<b>16,995</b>	<b>16,995</b>
F-Gas (all types) (Excluded from ACA)	773	kg		1,438	1,438
Scope 2					
<b>Consumption of purchased electricity, heat, steam and cooling</b>					
Consumption of purchased electricity	135,001,121	kWh		34,551	0
<b>Generation of renewable electricity on site</b>					
Wind generated electricity	288,184	kWh		74	74
<b>Total Scopes 1 &amp; 2</b>	<b>208,686,165</b>	<b>kWh</b>		<b>51,619</b>	<b>16,995</b>
Scope 3					
Commuting	>>>>	CO2e (t)		10,379	10,379
Non MAG staff commuting	>>>>	CO2e (t)		95,053	95,053
Business travel - public transport	>>>>	CO2e (t)		4,460	4,460
Business travel - grey fleet	>>>>	CO2e (t)		90	90
<b>Sold Goods and Services</b>					
Passenger surface access	>>>>	CO2e (t)		691,799	691,799
<b>Tenants &amp; concessionaires</b>					
Fuel combustion - Boilers & catering (gas)	26,013,436	kWh		4,783	4,783
Owned transport - Third party vehicles	>>>>	CO2e (t)		22,656	22,656
Consumption of heating oil	9,000	litres		25	25
Consumption of purchased electricity	87,034,250	kWh		22,246	-
<b>Aircraft</b>					
Landing and take-off cycle (LTO)	>>>>	CO2e (t)		399,304	399,304
On stand (FEGP)	524,856	kWh		134	0
On stand (APU)	>>>>	CO2e (t)		19,637	19,637
Aircraft en-route	>>>>	CO2e (t)		4,775,968	4,775,968
<b>Total Scope 3</b>				<b>6,320,039</b>	<b>6,297,793</b>
<b>Total Scopes 1, 2 &amp; 3</b>				<b>6,371,659</b>	<b>6,314,788</b>

## Carbon Trust Assurance Ltd Assurance Statement

### *Relating to Manchester Airport Group's 2020/21 Carbon Footprint for the Group*

#### Terms of Engagement

Carbon Trust Assurance Limited (CTA) was commissioned by Manchester Airport Group to provide an independent, limited level of assurance on the following Selected Information:

- Scope 1 emissions
- Scope 2 (location-based) emissions
- Scope 2 (market-based) emissions
- Scope 3 emissions

The Selected Information is presented within annual reporting. We have not performed any work, and do not express any conclusion, over any other information that may be included in the annual reporting or on Manchester Airport Group's website for the current year or for the previous periods unless otherwise indicated.

#### Scope

This engagement covers the verification of emissions from anthropogenic sources of greenhouse gases included within the organisation's boundary.

- Organisational boundary: Manchester Airport Group
- Control approach: Operational Control
- Reporting period: 01/04/2020 - 31/03/2021

#### Our Conclusion

Based on the work we have undertaken and the evidence provided by Manchester Airport Group, nothing has come to our attention that leads us to believe that the Selected Information has not been properly prepared, in all material respects, in accordance with the Reporting Criteria.

The total verified footprint was 1,593,398 tCO<sub>2</sub>e, according to the location-based method and 1,554,951 tCO<sub>2</sub>e, according to the market-based method. The breakdown by scope is:

- Scope 1: 15,872 tCO<sub>2</sub>e
- Scope 2 (location-based): 25,074 tCO<sub>2</sub>e
- Scope 2 (market-based): 0 tCO<sub>2</sub>e
- Scope 3 (location-based): 1,552,452 tCO<sub>2</sub>e
- Scope 3 (market-based): 1,539,079 tCO<sub>2</sub>e

This conclusion shall be read in the context of the remainder of this Assurance Statement, in particular the inherent limitations explained below and this report's intended use.

#### Reporting Criteria

The Reporting Criteria used by Manchester Airport Group is the GHG Protocol.

#### Management Responsibility

The management of Manchester Airport Group are responsible for:

- designing, implementing and maintaining internal controls relevant to the preparation and presentation of the Selected Information that is free from material misstatement, whether due to fraud or error;
- selecting and/or developing objective Reporting Criteria;
- measuring and reporting the Selected Information in accordance with the Reporting Criteria; and

- the contents and statements contained within the Report and the Reporting Criteria.

### **Our Responsibilities**

Our responsibility is to plan and perform our work to obtain limited assurance about whether the Selected Information has been prepared in accordance with the Reporting Criteria and to report to Manchester Airport Group in the form of an independent limited assurance conclusion based on the work undertaken and the evidence obtained.

### **Assurance Standards Applied**

We performed our work in accordance with CTA's assurance methodology based on ISO14064-3.

### **Our Assurance Activities**

Our objective was to assess whether the Selected Information is reported in accordance with the principles of completeness, comparability and accuracy. We planned and performed our work to obtain all the information and explanations that we believe were necessary to provide a basis for our assurance conclusions.

Considering the level of assurance and our assessment of the risk of material misstatement of the Selected Information, whether due to fraud or error, our work included, but was not restricted to:

- assessing the appropriateness of the Reporting Criteria for the Selected Information;
- conducting interviews with Manchester Airport Group management to obtain an understanding of the key processes, systems, controls and related documentation in place over the preparation of the Selected Information;
- carrying out 1 site virtual site visit which included interview and raw data walkthrough
- performing analytical reviews and detailed sampling of the Selected Information; and
- reading the annual reporting and narrative accompanying the Selected Information in the annual reporting with regard to the Reporting Criteria, and for consistency with our findings.

### **Inherent Limitations**

The accuracy and completeness of the Selected Information is subject to inherent limitations given their nature and methods for determining, calculating and estimating such data. As such, this Assurance Statement should be read in connection with annual reporting. For those subject matters with a limited assurance, the evidence-gathering procedures are more limited than with a reasonable assurance, and therefore less assurance is obtained than in an overall reasonable assurance statement.

### **CTA's Competence and Independence**

CTA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach is rigorous and transparent.

For and on behalf of  
Carbon Trust Assurance Limited



Morgan Jones  
Head of Assurance

Carbon Trust Assurance Ltd, London  
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Manchester Airports Group - Manchester Airport - Total Emissions 2020-21		Units Used	Measure	Location (tonnes)	Based CO <sub>2</sub> e	Market (tonnes)	Based CO <sub>2</sub> e
<b>Scope 1</b>							
<b>Fuels combustion</b>							
Boilers & AHUs (gas)	64,495,593	kWh			11,905		11,905
Boilers, AHUs & Fire Training (LPG)	133,019	kWh			29		29
Boilers, vehicles, fire training and generators (gas oil)	177,317	kWh			46		46
Fire training (biomass wood)	5,973	kWh			0		0
Fire training (biomass)	0	kWh			0		0
Fire training (gas oil)	69,814	kWh			18		18
Fire training (petrol)	46	kWh			0		0
Power back-up (oil)	1,117,024	kWh			287		287
Fire training (kerosene)	4,004	kWh			1		1
<b>Owned transport</b>							
Vehicles (Diesel)	3,764,073	kWh			921		921
Vehicles (Gas Oil)	4,661,337	kWh			1,197		1,197
Vehicles (Petrol)	56,891	kWh			13		13
Vehicles (Company Cars)	779,669	kWh			191		191
<b>Total</b>	<b>75,264,760</b>	<b>kWh</b>			<b>15,872</b>		<b>15,872</b>
F-Gas (all types) (Excluded from ACA)	670	kg			1,265		1,265
<b>Scope 2</b>							
<b>Consumption of purchased electricity, heat, steam and cooling</b>							
Consumption of purchased electricity	107,550,768	kWh			25,074		0
<b>Generation of renewable electricity on site</b>							
Wind generated electricity	252,795	kWh			59		59
<b>Total Scopes 1 &amp; 2</b>	<b>24,919,524</b>	<b>kWh</b>			<b>40,946</b>		<b>15,931</b>
<b>Scope 3</b>							
Commuting	>>>>	CO <sub>2</sub> e (t)			4,772		4,772
Non-MAG staff commuting	>>>>	CO <sub>2</sub> e (t)			44,288		44,288
Home Working	>>>>	CO <sub>2</sub> e (t)			187		187
Business travel - public transport	>>>>	CO <sub>2</sub> e (t)			55		55
Business travel - grey fleet	>>>>	CO <sub>2</sub> e (t)			7		7
WTT (Various and Excluded from ACA)	>>>>	CO <sub>2</sub> e (t)			5,591		5,591
Water (Excluded from ACA)	>>>>	CO <sub>2</sub> e (t)			818		818
Wastewater (Excluded from ACA)	>>>>	CO <sub>2</sub> e (t)			1,266		1,266
T&D Electricity (Excluded from ACA)	>>>>	CO <sub>2</sub> e (t)			2,145		2,145
WTT T&D Electricity (Excluded from ACA)	>>>>	CO <sub>2</sub> e (t)			319		319
Waste (Excluded from ACA)	>>>>	CO <sub>2</sub> e (t)			194		194
<b>Sold Goods and Services</b>							
Passenger surface access	>>>>	CO <sub>2</sub> e (t)			71,743		71,743
<b>Tenants &amp; concessionaires</b>							
Fuel combustion - Boilers & catering (gas)	13,586	kWh			2,421		2,421
Owned transport - Third party vehicles	>>>>	CO <sub>2</sub> e (t)			3,603		3,603
Consumption of heating oil	0	litres			11		11
Consumption of purchased electricity	22,752,279	kWh			13,373		0
Water Supply (Excluded from ACA)	>>>>	CO <sub>2</sub> e (t)			89		89
Water Treatment (Excluded from ACA)	>>>>	CO <sub>2</sub> e (t)			48		48
Gas Oil – Red Diesel (Excluded from ACA)	>>>>	CO <sub>2</sub> e (t)			1,172		1,172
Diesel (Excluded from ACA)	>>>>	CO <sub>2</sub> e (t)			589		589
Petrol (Excluded from ACA)	>>>>	CO <sub>2</sub> e (t)			507		507
<b>Aircraft</b>							
Landing and take-off cycle (LTO)	>>>>	CO <sub>2</sub> e (t)			152,892		152,892
On stand (FEGP)	338,645	kWh			79		0
On stand (APU)	>>>>	CO <sub>2</sub> e (t)			4,739		4,739
Aircraft en-route	>>>>	CO <sub>2</sub> e (t)			1,241,752		1,241,752
<b>Total Scope 3</b>					<b>1552,452</b>		<b>1539,079</b>
<b>Total Scopes 1, 2 &amp; 3</b>					<b>1,593,398</b>		<b>1,554,951</b>

This assurance report is made solely to Manchester Airport Group in accordance with the terms of the engagement contract between us. Those terms permit disclosure to other parties, solely for the purpose of Manchester Airport Group showing that it has obtained an independent assurance report in connection with the Selected Information. We have not considered the interest of any other party in the Selected Information. To the fullest extent permitted by law, we accept no responsibility and deny any liability to any other party other than Manchester Airport Group for our work, for this assurance report or for the conclusions we have reached.