TECHNICAL NOTE ON CARBON AND GREENHOUSE GAS EMISSIONS

IN SUPPORT OF THE LONDON CITY AIRPORT MASTERPLAN 2020-2035

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1 INTRODUCTION

1.1 It is generally acknowledged that climate change is a global issue and carbon budgets are set nationally, not locally or on a project level. Airports underake activities which contribute to climate change such as: emissions from aircraft on the ground and in the Landing and Take-off (LTO) cycle; emissions from airport buildings and energy plant; ground operations including airside vehicles and ground power units; surface access transport; construction and refurbishment works, and; the sustainable consumption of water, energy and natural resources by its own activities and those of its suppliers and tenant companies based at the airport. Airports are able to influence some of these activities eiher directly or indirectly.

1.2 To inform the London City Airport's draft Master Plan, this technical note describes the various sources of Greenhouse Gas (GHG) emissions from the existing and future of operation of he airport. Informed by current and emerging national and international policy, it also explains what commitments are deliverable alongside the growth envisaged in the draft Master Plan including 'carbon neutrality' of the airport's own operations by 2020 and the attainment of 'net zero carbon' by 2050.

2 QUANTIFYING EMISSION SOURCES AND CARBON ACCREDITATION

General Approach

2.1 Greenhouse Gas (GHG) emissions, principally being carbon dioxide (CO_2), can be released directly at an airport (e.g. by burning fuel and gas), but can also be caused indirectly by the airport's operations (e.g. in the refining and transportation of fuel purchased, or in generating electricity consumed by the airport).

2.2 The Greenhouse Gas Protocol (GHG Protocol[1]) defines emissions as direct or indirect. Direct emissions come from sources that are owned or controlled by the reporting entity (in this case LCY), whereas indirect emissions are a consequence of the activities of the reporting entity but occur at sources owned or controlled by another entity (e.g. airlines).

2.3 An airport must understand how much carbon it emits every year and from which activities and operations in order to plan how to limit these emissions. Therefore, as a first step, an airport needs to measure its carbon emissions, also known as its carbon footprint. Once an airport has measured its carbon footprint, it can work towards reducing its carbon emissions.

2.4 Within the field of carbon footprint assessment for airports and other industries, the terms 'Scope 1, 2 and 3' are widely used to denote specific subsets of direct and indirect emissions. These terms may be defined as follows:

a. Scope 1 – direct emissions from sources or sites controlled by the airport, including:

- Vehicle/ ground support equipment
- On-site waste management
- On-site waste water management
- On-site power generation
- Firefighting exercises
- Boilers and furnaces

b. Scope 2 – indirect emissions associated with the generation of electricity directly consumed or displaced by the airport (excluding transmission and distribution losses) for the purposes of:

- Heating
- Cooling
- Lighting

[1] WRI and WBCSD, (2004); The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard. Revised edition

c. Scope 3 – all other indirect emissions that arise because of the airport's operation, including supply chain emissions and other indirect effects. These include, *inter alia*:

- Aircraft landing
- Aircraft taking off
- Aircraft ground movements
- Auxiliary Power Units
- 3rd party vehicles/ ground support equipment
- Passenger travel to the airport
- Staff commuting
- Off-site waste management
- Off-site water management
- Staff business travel

LCY's Carbon Accreditation

2.5 LCY is accredited by Airports Council International (ACI) for reducing its carbon footprint. The ACI is the global trade association of the world's airports, representing over 500 airports in 45 European countries. Its Airport Carbon Accreditation (ACA) scheme is based on existing international standards in the reporting and accounting of GHG emissions, including the GHG Protocol and ISO 14064-1 2018[2] .

2.6 The ACA scheme requires airports to measure their GHG (CO_2) emissions in accordance with the GHG Protocol and to have their emissions inventory verified in accordance with ISO 14064 by an independent third party. As such, the programme is consistent, compatible and compliant with national and international management and reporting of carbon emissions.

2.7 In October 2018, LCY renewed its Stage 3 'Optimisation' certificate under the ACA scheme, following independent assessment and verification. To reach this point it has invested in several carbon reduction schemes - including £500,000 on the installation of 1,300 energy efficient light fixings, the removal of 258 non-essential fixings, and more energy efficient boilers and air handling units.

2.8 To achieve the ACA Stage 3 'Optimisation' level also required LCY to engage closely with third parties in order to agree joint measures to reduce the carbon footprint of the whole airport campus. These third parties included the airlines and various service providers, for example, independent ground handlers, catering companies, NATS and others working on the airport site. It also involved engagement on surface access modes with authorities and users (e.g. TfL and DLR).

[2] Intranational Standard ISO 14064-1: 2018 - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals

2.9 The airport is now on course to achieve a 20% reduction in emissions by 2020 (compared to 2013) and is one stage away from Stage 3+ 'carbon neutral' status. Carbon neutrality is when the net CO_2 emissions over an entire year is zero (i.e. the airport absorbs the same amount of carbon dioxide as it produces). Achieving carbon neutrality for an airport is in almost all cases impossible without external help. For this reason, LCY, is examining options for carbon offsetting as the final part of the solution. Carbon offsetting provides funds or resources to other projects that reduce carbon dioxide so as to make up for the emissions that one is not able to eliminate.

2.10 The different levels and requirements of the ACA scheme are illustrated in the tables below:

Table 1: Key Stages and Requirements of the ACI Europe Airport Carbon Accreditation (ACA) Scheme

<table>
<tr><th colspan="2">Airport Carbon Accreditation</th></tr>
<tr><td colspan="2">Stage 1 – Mapping (Carbon Reduction Measurement)</td></tr>
<tr><td colspan="2">Requirements:
Determine its 'operational boundary' and the emissions sources within that boundary which are Scope 1 and Scope 2 sources, as defined by the Greenhouse Gas Protocol
Collect data and calculate the annual carbon emissions for the previous year for those sources
Compile a carbon footprint report
Engage an independent third party to verify the report before submission, to ensure that the carbon footprint calculation is in accordance with ISO14064 and accreditation requirements.</td></tr>
<tr><td colspan="2">Stage 2 – Reduction (Carbon Management)</td></tr>
<tr><td>Requirements:
Fulfil all the requirements of 'Mapping'
Provide evidence of effective carbon management procedures including target setting
Show that a reduction in the carbon footprint has occurred by analysing the carbon emissions data of consecutive years.</td><td>Carbon Management Measures:
Show it has a low carbon/low energy policy
Show that a senior committee or body has responsibility for climate change/carbon/energy matters
Show how it communicates emissions performance to relevant stakeholders
Show it has procedures for preparing and checking an accurate carbon footprint
Monitor consumption of fuel & energy
Have carbon/energy reduction targets
Show it has programmes or control mechanisms to ensure operations minimise emissions
Show it considers emissions impact of investments
show it undertakes awareness training about emissions for staff
Show it has a process of self-assessment & auditing to monitor progress of improvement delivery</td></tr>
<tr><td colspan="2">Stage 3 – Optimisation (accounting for 3rd Party/ Scope 3 emissions)</td></tr>
<tr><td>Requirements:
Fulfil all the requirements of 'Mapping' and 'Reduction'
Widen the scope of its carbon footprint to include a range of Scope 3 emissions. (GHG Protocol)
Presentation of evidence of engagement with third party operators to reduce wider airport-based carbon emissions.</td><td>Scope 3 emissions to be measured include:
Any other Scope 3 emissions which the airport chooses to include.
Landing and take-off cycle emissions
Surface access to the airport for passengers and staff
Staff business travel emissions</td></tr>
<tr><td colspan="2">Stage 3+ - Neutrality (neutralising remaining direct carbon emissions by offsetting).</td></tr>
</table>

Requirements:

- Fulfil all requirements of 'Mapping', 'Reduction' and 'Optimisation'
- Offset its remaining Scope 1 and 2 carbon emissions (GHG Protocol) to show its commitment to achieving carbon neutral operations for all direct emissions and indirect emissions over which the airport has control, using internationally recognised offsets.

2.11 ACI is expected shortly (June 2019) to announce a resolution formally committing the industry to reach net zero carbon emissions by 2050 and to work to accelerate the decarbonisation of aviation in the intervening period. London City Airport supports this resolution which will mark a significant step change in the climate action ambitions for the airport industry. As a signatory to this, LCY will commit to produce net zero carbon emissions for Scope 1 and 2 sources, without relying on offsets such as buying carbon credits. As such, this commitment to 'net zero carbon' goes beyond the ACA 3+ Neutrality level.

Previous Carbon Assessment Supporting the CADP Planning Application

2.12 As part of the planning application for the City Airport Development Programme (CADP) submitted to LBN in July 2013, an assessment of carbon emissions from the proposed development was completed and reported in the Environmental Statement (ES) submitted with the application. This presented a carbon footprint calculation for the airport's baseline (present-day operations) and future year (2025) 'with' and 'without' the proposed CADP. The chapter was subsequently updated in the Updated Environmental Statement (UES) in September 2015 which was submitted in support of the CADP Appeal.

Methodology

2.13 This assessment considered the direct (Scope 1), indirect (Scope 2) and, where feasible, Scope 3 emissions of the project. In order to form the most comprehensive assessment, the emissions factors used included the 'Kyoto basket'[3] of GHGs, converted to CO_2-equivalent 100-year global warming potential (GWP). This is denoted by CO2e units in emissions factors and calculation results.

2.14 Elements included within the assessment boundary comprised direct emissions within the environs of the airport, indirect emissions arising from electricity consumption, indirect emissions from the fuel supply chain; and emissions during the Landing and Take-off (LTO) cycle from aircraft using the airport.

2.15 Although both future scenarios (with and without development) included a greater number of passengers and aircraft movements, in the 'without development' scenario the number of movements and the size of aircraft would be constrained by the existing infrastructure. Therefore, the number of passengers and number of aircraft movements in the 'with development' scenario are greater.

2.16 The approach to estimating GHG emissions was based on the use of published metrics (emissions factors) to convert data regarding activity, energy and resource consumption at the airport into GHG

[3] Methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride. 100-year GWPs from the IPCC's Fourth Assessment Report, built into the UK Government factors for company reporting (Ricardo-AEA for Defra/DECC, 2015) have been used.

emissions. The principal source of emissions factors used were the Department for Environment Food and Rural Affairs (Defra) / Department for Energy and Climate Change (DECC) GHG Conversion Factors for Company Reporting, which brings together information from a number of published studies and national statistics.

2.17 GHG emissions arising from electricity consumption in the future year (2025) were estimated using DECC's Interdepartmental Analysts' Group's projections of the carbon intensity of future electricity generation. The factor includes Scope 3 emissions for typical transmission and distribution losses to a commercial consumer.

2.18 For the baseline year, information on activity at the airport (e.g. electricity, gas, LPG road petrol/diesel and red diesel consumption) was taken from the verified Airport Carbon Accreditation (ACA) report for the calendar year 2014.

2.19 Electricity and gas consumption at the Terminal buildings in the future year was estimated using Integrated Environmental Solutions (IES) 2012 software (which uses the SBEM calculation methodology). Full details of the calculation approach and proposed energy measures were given in the CADP Energy and Low Carbon Strategy Report (the Energy Strategy), which accompanied the CADP planning submission.

2.20 Aircraft emissions were estimated using assumed thrust setting and 'time in mode' for each stage of the LTO cycle in calendar year 2014, based on recorded aircraft movements and operational experience at the airport. Fuel consumption at each thrust setting was obtained from the International Civil Aviation Authority (ICAO) Engine Exhaust Emissions Databank for all certified turbofan aircraft, and the Swedish Defence Research Agency (FOI) Aircraft Engine Emissions Database for all certified turboprop aircraft operating at the Airport. Fuel consumption for two aircraft (the Bombardier CS100 and Embraer E190-E2) were obtained from information provided by the manufactures. Full detail of the methodology and data sources for estimating aircraft fuel use was provided in the UES.

Results

2.21 Tables 17.2 and 17.3 of the UES reported the results of the assessment including operational GHG emissions in the future year (2025) without and with CADP. These tables are reproduced below:

Table 17.2: Future year (2025) GHG emissions without development

Emissions Source	Scope 1 emissions	Scope 2 emissions	Scope 3 emissions	Total emissions
Terminal energy, fuel consumption and waste (tCO_2e)	1,013	1,127	312	2,452
Aircraft LTO emissions (tCO_2e)	74,794	-	15,419	90,213
TOTAL (tCO_2e)	75,807	1,127	15,731	92,665

Table 17.3: Future year (2025) GHG emissions with development

Emissions Source	Scope 1 emissions	Scope 2 emissions	Scope 3 emissions	Total emissions
Terminal energy, fuel consumption and waste (tCO_2e)	1,314	4,598	616	6,528
Aircraft LTO emissions (tCO_2e)	88,971	-	18,341	107,313
TOTAL (tCO_2e)	90,285	4,598	18,957	113,841

2.22 UES Table 17.4 below provides a summary of the total emissions estimated for the three assessed scenarios (baseline, 'without' development and 'with' development).

Table 17.4 Summary of Total GHG Emissions

Emissions Source	Total Baseline Emissions (2014)	Total Without Development Emissions (Future Year 2025)	Total With Development Emissions (Future Year 2025)
Terminal energy, fuel consumption and waste (tCO_2e)	7,042	2,452	6,528
Aircraft LTO emissions (tCO_2e)	63,589	90,213	107,313
TOTAL (tCO_2e)	70,630	92,665	113,841

2.23 Both future scenarios (with and without development) include a greater number of passengers and aircraft movements compared to the baseline situation, which accounts for the increased aircraft LTO emissions in the future year. In the 'without development' scenario, the number of movements and the size of aircraft was constrained by the existing infrastructure whereas with the CADP infrastructure in place (i.e. the new stands and parallel taxiway) and enhanced passenger processing facilities in the extended Terminal and New East Pier, a further increase in aircraft movements, percentage of new generation aircraft and passenger numbers would be realised by 2025.

2.24 Although the airport's growth, driven by increasing passenger demand, leads to greater total GHG emissions than in the baseline year, this is the case with or without the proposed CADP. However, with the development, the total emissions per passenger (shown in Table 17.5 below) were predicted to be marginally lower in the future year, compared to the baseline year and the future year without development.

Table 17.5: Future year GHG emissions per passenger

Emissions Source	Baseline	Without development	With development	With dev. change from baseline		With dev. change from without dev.	
Terminal energy, fuel consumption and waste ($kgCO_2e$)	1.93	0.51	1.09	-0.84	-44%	0.58	113%
Aircraft LTO emissions ($kgCO_2e$)	17.43	18.85	17.90	0.48	3%	-0.95	-5%
TOTAL ($kgCO_2e$)	19.36	19.36	18.99	-0.37	-2%	-0.37	-2%
Passengers (no.)	*3,648,949*	*4,785,213*	*5,994,260*	*2,345,311*	*64%*	*1,209,047*	*25%*

2.25 The above analysis illustrates that CADP will enable the airport to accommodate the predicted increase in passenger numbers with a minor decrease (around -2%) in GHG emissions per passenger, compared to the future without development scenario by its first year of full operation (2025). This is on account of a number of factors including the greater energy efficiency of the new terminal buildings, reduced emissions from energy plant and ground power units/ FEGP, and the introduction of 'new generation' aircraft (e.g. the Embraer E190-E2) which are both larger and up to 17% more fuel efficient than the aircraft which they will replace once the CADP infrastructure is in place.

2.26 From the above tables, it can also be noted that the difference in emissions between the with and without development scenarios is relatively minor in percentage terms. This is because the fleet penetration of the new generation aircraft was expected to be limited by this stage (2025).

Implications for the Master Plan

2.27 Consistent with the Aviation Policy Framework (APF) the draft Masterplan sets out the key themes with respect to carbon and climate change which the airport is currently and will continue to address as part of its future growth plans. The draft Master Plan represents a high-level statement of intent for the Airport up to 2035. Unlike the CADP application, there is no detailed forecasts or technical work to inform a detailed assessment.

2.28 It is not possible at this time to calculate total emissions which might arise from the draft Master Plan because this relies upon the accurate quantification of GHG emissions using detailed modelling and data from a combination of aircraft forecasts, fleet mix composition, construction and engineering designs, energy supply, and other details of the proposed future infrastructure. However, during the Master Plan period up to 2035, it can be expected that further improvements in aircraft fuel efficiency and emissions will take place as greater numbers of 'new generation' aircraft such as the Airbus A220-100 are introduced to the fleet. Moreover, the airport is predicted to accommodate an approximate 69% increase in passengers by 2035 (i.e. from 6.5 to 11 million passengers per annum) coupled with only a 36% increase in flights (i.e. from the 111,000 ATMs to 151,000 ATMs) and with only limited additional infrastructure. As such, provisional analysis would suggest that carbon emissions per passenger will decrease even further over the Master Plan period.

2.29 Should a detailed proposal come forward in the future, the airport would need to assess the total GHG emissions of that proposal as part of an Environmental Impact Assessment (EIA). This will need to calculate all emissions sources from the construction and operation of the 'proposed development' which would be defined through that planning application. In his regard, the Airports NPS (paragraph 5.76) NPS states:

> *"Pursuant to the terms of the Environmental Impact Assessment Regulations, the applicant should undertake an assessment of the project as part of the environmental statement, to include an assessment of any likely significant climate factors. The applicant should provide evidence of the carbon impact of the project (including embodied carbon), both from construction and operation, such that it can be assessed against the Government's carbon obligations, including but not limited to carbon budgets. The applicant should quantify the greenhouse gas impacts before and after mitigation to show the impacts of the proposed mitigation. This will require emissions to be split into traded sector and non-traded sector emissions, and for a distinction to be made between international and domestic aviation emissions."*

3 GOVERNMENT POLICY AND ACTION

3.1 The DfT's Beyond the Horizon (December 2018) policy statement and the recently released Aviation 2050: the future of UK Aviation Green Paper, demonstrates that the UK can keep within its legally binding carbon budget whilst also allowing airports to make best use of their existing runway capacity.

3.2 As set out in this Green Paper, the government aims to maintain the UK's position as a world leader in aviation, aerospace and climate change policy. It is proposing a long-term vision for UK aviation carbon emissions reduction and a pathway to achieve this by 2050. In developing this vision and pathway, the government recognises the following challenges:

- Concerted global action requires consensus and takes time to achieve
- Unilateral, national level action could put UK airlines at a competitive disadvantage compared to their global competitors and lead to carbon leakage (when aircraft and their emissions are moved elsewhere rather than reducing them), with no environmental gain.

3.3 The Green Paper states:

> *"The government is committed to setting a clear and appropriate level of ambition for the sector. In doing so, the government recognises that international action is the first priority for tackling international aviation emissions. However, the government recognises that international action takes time, so will also consider appropriate domestic action to support international progress.*
>
> *In order to implement the government's long-term vision for addressing UK aviation emissions, the government will maintain its current policy not to mandate sector specific emissions reduction targets to ensure reductions are made wherever it is most cost effective across the economy.*
>
> *The government agrees with the current Climate Change Committee (CCC) advice that international aviation emissions should, for now, continue to be formally excluded from carbon budgets. The government proposes therefore, to continue using the CCC advice and leave 'headroom' for international aviation when setting carbon budgets so that the economy as a whole is on a trajectory to meeting the 2050 Climate Change Act target (including international aviation). To set a clear level of ambition for the sector, the government proposes to accept the CCC's recommendation that emissions from UK-departing flights should be at or below 2005 levels in 2050."*

3.4 At the international level, the UK was instrumental in reaching agreement in ICAO, on a global market-based measure for international aviation, known as Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), and the introduction of the first global commercial aircraft CO_2 standard. ICAO has defined a basket of measures to address aviation's climate impact, namely technological improvements, operational efficiencies, sustainable alternative fuels and market-based measures. LCY supports and is perusing initiatives in these same areas, as described below.

3.5 The UK aviation sector currently participates in the EU Emissions Trading System (EU ETS). This 'cap and trade' system requires aircraft operators on routes within the European Economic Area to surrender enough allowances to equal the number of tonnes of CO2 they emitted in the previous

year. The government is considering a range of options to manage emissions for these flights, including continuing to participate in the EU ETS after 2020 or a UK approach which is at least as ambitious as the current system. Again, LCY strongly supports this objective.

3.6 To implement the government's long-term vision and pathway for addressing UK aviation's impact on climate change, the government also proposes to:

- *"Negotiate in ICAO for standards for all engine emissions with climate effects. As scientific understanding improves, the government will expect ICAO to issue best practice guidance on operational mitigations for non-CO2 effects.*

- *"Consider the use of all feasible abatement options, particularly in-sector measures, to ensure effective action is taken at the national and international level. This includes policies that may evolve over the long term such as technological developments, operational efficiencies, sustainable fuels, market-based measures, demand management and behavioural change.*

- *"Require planning applications for capacity growth to provide a full assessment of emissions, drawing on all feasible, cost-effective measures to limit their climate impact, and demonstrating that their project will not have a material impact on the government's ability to meet its carbon reduction targets."*

3.7 The government will review the CCC's revised aviation advice due in 2019 (the first advice was published in 2009) and its advice on the implications of the Paris Agreement for the UK's long-term emissions reduction targets, due to be published at the same time. Regular reviews thereafter will broadly align with the setting of carbon budgets. The reviews will ensure that government and industry action utilise evolving research and technological advancements and remains aligned to policy developments.

3.8 The government also proposes to use CCC's reviews to monitor the sector's progress at the national and international level and to adjust its mix of policy measures and overall approach accordingly.

3.9 Progress with the above CCC and government policy initiatives will be accounted for by LCY in the carbon and climate change assessment presented in the ES supporting any future planning application.

4 LCY COMMITMENTS AND INITIATIVES

4.1 LCY fully understand and support the need to reduce its carbon emissions and to become an even more sustainable business. It has already exceeded its 2020 targets to achieve a 20% reduction carbon per passenger compared to 2013 and is now working to achieve and maintain the ACA Level 3+ - Neutrality level, becoming an independently accredited 'carbon neutral' airport by 2020.

4.2 Alongside its industry partners, LCY is committed to achieving net zero emissions by 2050. This is consistent with the emerging commitments from governments and industry around the world, including a pending resolution by ACI Europe which is expected to be announced in June 2019. The net zero commitment covers scope 1 and 2 emissions of airport operators (see Section 2). These emissions relate to the operation of airport terminals, buildings, equipment, landside and airside activities, including vehicles owned by the airport operators. To achieve this, it will embrace innovation and deploy several practices to reduce emissions even further and meet international industry standards to advocate net zero emissions in the wider industry.

4.3 The airport has a part to play in reducing air emissions in flight progressively over time by supporting the decarbonisation of the aviation sector where possible. In particular, it supports moves to further strengthen the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). As described above, CORSIA is the first global carbon pricing instrument covering an entire sector. The significance of this agreement cannot be overestimated. It requires all carriers to offset of their related carbon emissions. As a result, CORSIA will overall result in a greater CO2 mitigation in international aviation than any domestic policy for aviation can achieve.

4.4 LCY's ongoing CADP investment will increase opportunities to further improve emissions by accommodating quieter, cleaner, more fuel-efficient new generation aircraft (such as the Airbus 220-100 and Embraer E190-E2). These new generation aircraft are up to 17% more fuel efficient than current models and they can accommodate more seats, meaning carbon emissions per passenger mile flown are lower than with existing and previous generation aircraft.

4.5 The more efficient airfield layout achieved through the City Airport Development Programme (CADP), and as further envisioned in the draft Master Plan, will also play its part in reducing taxiing time, thus reducing emissions from aircraft on the ground.

4.6 The following additional initiatives and commitments are recommended, which will be confirmed in the draft Master Plan:

- LCY will continue to work with aircraft manufactures and airlines in the development and introduction of even more technologically advanced aircraft such as hybrid and electric aircraft. Whilst technology is emerging, it is anticipated that such aircraft will have the capability to fly 1,000 miles within the next decade and potentially open opportunities to become compatible with the airport's domestic and short haul European network in the longer term.

- LCY will continue its programme of upgrading existing buildings, plant and equipment to make them more energy efficient and to extend the life of these assets. Measures include installing FEGP to all refurbished and new stands and installing low energy low-energy lighting and fuel-efficient ground vehicles.

- LCY are actively engaged in discussions with the NATS and the CAA on the 'Our Future Skies' airspace modernisation programme which will deliver annual savings of CO2 by adopting more efficient operating procedures and allowing aircraft to fly more direct routes.

- LCY will continue to actively support various initiatives led by the industry body Sustainable Aviation, including supporting its CO2 Road-Map (2016). The Roadmap demonstrates that whilst UK aviation will increase further by 2050, these measures could help achieve half of the net CO2 emissions compared to 2010 levels.

- LCY continues to have the highest level of passenger public transport usage of any UK airport at 69%. Our target, with the help of our partners and extended DLR operating hours, is to achieve 80% of journeys by public and sustainable transport by 2035.

- In line with the Aviation 2050 Green Paper, LCY will seek to provide innovative solutions and incentives to for journeys to and from the airport in order to help to reduce carbon, congestion and improve air quality;

- LCY will strive to reduce overall demand for energy in current and future buildings It already has a strategy in place to reduce overall demand for energy in buildings through the adoption of energy efficiency measures and controls, including the use of photovoltaics.

- LCY support the Mayor of London's ambitious target for London to becoming a zero-carbon city by 2050 by a combination of energy efficient buildings, clean transport and increasing recycling.