Edinburgh Airport
Where Scotland meets the world

Edinburgh Airport Qualifying Explanatory Statement (QES) 2022

Contents

1. Introduction

The British Standards Institution's Publicly Available Specification for Carbon Neutrality, PAS 2060, requires that an entity making a declaration in respect to carbon neutrality in accordance with its provisions, make a qualifying explanatory statement (QES) that includes the evidence substantiating the declaration. This document forms the QES that demonstrates Edinburgh Airport's commitment to achieving carbon neutrality, which includes evidence substantiating the declaration under PAS 2060. All information is believed to be correct at the time of issue. Should any information come to light that would affect the validity of the statements herein, this document will be updated to accurately reflect the current status of any carbon neutral statement made by Edinburgh Airport.

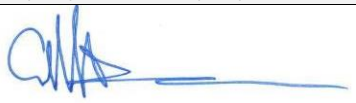
1.1 About Edinburgh Airport

Edinburgh Airport is Scotland's busiest airport, flying to more destinations than any other Scottish airport. Edinburgh Airport works with more than 30 commercial airlines (such as British Airways, Qatar Airways, Turkish Airlines, United, Delta, Jet2, easyJet and Ryanair) and cargo operators (including DHL, FedEx, UPS and Royal Mail).

2. General Information

General information of this statement is outlined in Table 1.

Table 1 General Information of QES

Information required under PAS 2060 guidance	Edinburgh Airport response
Individual responsible for the evaluation and provision of data necessary for the substantiation of the declaration	Morven Sneddon Senior Carbon Manager
Entity responsible for making the declaration	Edinburgh Airport Ltd.
Subject of PAS 2060 declaration	The Scope 1 and 2 operational emissions of Edinburgh Airport Ltd.
Rational for the selection of the subject	The scope and subject of this PAS 2060 includes all emissions based on the operational control principle defined in the World Business Council for Sustainable Development (WBCSD) and World Resources Institute (WRI) GHG Protocol – Corporate Standard.
Type of conformity assessment that has been undertaken	Self-certification
Application period	01/01/2022 – 31/12/2022
Commitment period	01/01/2023 – 31/12/2023
Senior representative: Signature	
Name and position	Gordon Dewar, Chief Executive
Date	March 2024

3. Declaration of Achievement of Carbon Neutrality

Table 2 demonstrates that Edinburgh Airport has met the requirement to self-assess as carbon neutral under the PAS 2060 specification for 1st January to 31st December 2022 and have offset residual scope 1 and 2 emissions. Details of the carbon offsets purchased can be found in Appendix 4. Note that this declaration only applies to the scope and boundary of the subject, and period indicated, and should Edinburgh Airport intent to extend its claim then future offsetting will be required.

A Carbon Management Plan has been set up to target carbon reduction within Edinburgh Airport's scope and boundary (summarised in Appendix 3). The purpose of the plan is to demonstrate the efforts made by Edinburgh Airport to reduce its emission in line with achieving Net Zero by 2030 for scope 1 & 2 emissions, 2040 for non-air traffic movements and 2045 for scope 3 emissions.

Additional efforts will be undertaken to address any remaining scope 3 emissions (for which the airport has no direct influence over) that arise within the operational boundary of the airport. This will be achieved through Level 3+ of the Airport Carbon Accreditation scheme in 2023, and through keyholder engagement plans. More details can be found in Appendix 5.

Table 2 Information Required in QES Under PAS 2060 Guidance

Information Required Under Guidance	Response
Define standard and methodology used to determine its GHG emissions reduction.	Methodology & Appendix 2
Confirm that the methodology used was applied in accordance with its provisions and the principles set out in PAS 2060 were met.	Methodology & Appendix 2
Provide justification for the selection of the methodologies chosen to quantify reductions in the carbon footprint, including all assumptions and calculations made and any assessments of uncertainty. (The methodology employed to quantify reductions shall be the same as that used to quantify the original carbon footprint. Should an alternative methodology be available that would reduce uncertainty and yield more accurate, consistent and reproducible results, then this may be used provided the original carbon footprint is re-quantified to the same methodology, for comparison purposes. Recalculated carbon footprints shall use the most recently available emission factors, ensuring that for purposes of comparison with the original calculation, any change in the factors used is taken into account).	Methodology & Appendix 2
Describe the means by which reductions have been achieved and any applicable assumptions or justifications.	Appendix 3

Describe the actual reductions achieved in absolute and intensity terms and as a percentage of the original carbon footprint. (Quantified GHG emissions reductions shall be expressed in absolute terms and shall relate to the application period selected and/or shall be expressed in emission intensity terms (e.g. per specified unit of product or instance of service)).	Appendix 3
State the baseline/qualification date.	General Information
Provide an explanation for circumstances where a GHG reduction in intensity terms is accompanied by an increase in absolute terms for the determined subject.	Whilst there was a reduction in scope 1 and 2 emissions, scope 3 emissions increase as the business recovered from the impacts of COVID-19
Select and document the standard and methodology used to achieve carbon offset.	Methodology & Appendix 2
Confirm that:	
a) Offsets generated or allowance credits surrendered represent genuine, additional GHG emission reductions elsewhere.	Appendix 4
b) Projects involved in delivering offsets meet the criteria of additionality, permanence, leakage and double counting. (See the WRI Greenhouse Gas Protocol for definitions of additionality, permanence, leakage and double counting).	Appendix 4
c) Carbon offsets are verified by an independent third-party verifier.	Appendix 4
d) Credits from Carbon offset projects are only issued after the emission reduction has taken place.	Appendix 4
e) Credits from Carbon offset projects are retired within 12 months from the date of the declaration of achievement.	Appendix 4
f) Provision for event related option of 36 months to be added here.	Appendix 4

g) Credits from Carbon offset projects are supported by publicly available project documentation on a registry which shall provide information about the offset project, quantification methodology and validation and verification procedures.	Appendix 4
h) Credits from Carbon offset projects are stored and retired in an independent and credible registry.	Appendix 4
Document the quantity of GHG emissions credits and the type and nature of credits actually purchased including the number and type of credits used and the time period over which credits were generated including:	Appendix 4
a) Which GHG emissions have been offset.	Appendix 4
b) The actual amount of carbon offset.	Appendix 4
c) The type of credits and projects involved.	Appendix 4
d) The number and type of carbon credits used and the time period over which the credits have been generated.	Appendix 4
e) For events, a rationale to support any retirement of credits in excess of 12 months including details of any legacy emission savings, considered.	Appendix 4
f) Information regarding the retirement/cancellation of carbon credits to prevent their use by others including a link to the registry or equivalent publicly available record, where the credit has been retired.	Appendix 4
Specify the type of conformity assessment.	General Information
Date the QES and have it signed by the senior representative of the entity concerned (e.g., CEO of a corporation; Divisional Director, where the subject is a division of a larger entity; the Chairman of a town council or the head of the household for a family group).	General Information
Make QES publicly available and provide a reference to any freely accessible information upon which substantiation depends	Completed

3.1 Methodology

Edinburgh Airport's carbon footprint has been calculated in-house, in accordance with the principles of the Greenhouse Gas Protocol Standard for Corporate Accounting and Reporting produced by the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI). This is a globally recognised standard and is best practice for carbon footprint calculation The carbon emissions figures have been calculated using the UK government DEFRA conversion factors for company reporting, and emissions have been expressed in terms of Carbon Dioxide Equivalent (CO_2e).

The methodology meets the principles set out by PAS 2060 where '*Entities shall confirm and record their application of the methodology selected for quantification of the greenhouse gas emissions from the subject, conforms to those principles'* and is outlined in more detail in Appendix 2.

3.2 Carbon emissions

The total carbon emissions covering operations at Edinburgh Airport for 1st January to 31st December 2022 are 145,346 tCO_2e (market-based methodology and excluding climb, cruise and descent). Edinburgh Airport's carbon emissions sources included are outlined in Appendix 1.

Appendix 1: Carbon Footprint Emissions Sources

The carbon emission sources that have been offset as part of this declaration of carbon neutrality are outlined in Table 3. These emissions are from activities that fall under the airport's scope 1 and scope 2 emissions and are therefore emissions from sources and activities that are owned or controlled by Edinburgh Airport. Remaining scope 3 emissions that the airport does not have direct influence over are detailed in Appendix 5.

Scope 1

- Airport Utilities (natural gas)
- Airport De-Icer (diluted glycol)
- Airport Owned Operational Vehicles (diesel, gas oil, diesel HVO)
- Refrigerant Gases (HFC, R32, R410A)
- Fire Training (diesel, LPG, wood pellets, paper and board, CO_2 fire extinguisher)

Scope 2

- Utilities (Airport electricity use, not including tenant use)

Table 3 Market Based Emissions (tCO2e) for 2022

Market Based Emissions Category	Emissions (tCO2e)
Scope 1	**265**
Airport natural gas	3
Airport de-icer	124
Airport operational vehicles	33
Refrigerants	60
Fire training	45
Scope 2	**-**
Airport electricity	-

Appendix 2: Methodology

Standard and Methodology Used

The quantification, reduction and offsetting of Edinburgh's Airport has been achieved through the calculation of its carbon footprint, which has been calculated in accordance with the principles of the Greenhouse Gas Protocol Standard for Corporate Accounting and Reporting produced by the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI). The Standard provides requirements and guidance for companies and other organisations calculating their emissions and has been specifically designed to:

- help companies prepare a GHG inventory that represents a true and fair account of their emissions using standardised approaches and principles
- simplify and reduce the costs of compiling an emissions inventory
- provide business with information that can be used to build an effective strategy to manage and reduce emissions
- increase consistency and transparency in GHG accounting and reporting among various companies and GHG programmes.

The UK government conversion factors for company reporting have been utilised in the calculations, and emissions have been expressed in terms of Carbon Dioxide Equivalent (CO_2e).

Justification

The methodology has been chosen since it is a globally recognised standard and is considered best practice for carbon footprint calculation. It offers a robust framework for calculating GHG emissions that has been applied in accordance with its provisions and that the principles set out in PAS 2060 have been met.

Given the increasing regulation surrounding climate change, it is necessary for companies to be able to understand and manage their environmental risks effectively. Especially if they want to ensure long term success in a competitive business environment, not to mention potential future government intervention through climate policy.

All carbon emissions relevant to the subject have been included when determining the carbon footprint. This shows that Edinburgh Airport has demonstrated a true and fair representation of its emissions, therefore meeting the requirements of PAS 2060 and offering an enhanced level of transparency in its carbon foot printing.

Data Quality

Data from directly metered sources was used in the calculation of carbon emissions where available (e.g. electricity, natural gas, water, operational vehicle fuel use), and industry standard methodologies were used where directly metered sources were not available (e.g. Landing take-off cycle fuel use was calculated based on ICAO methodology). In all cases, appropriate UK government conversion factors for company reporting were applied to convert fuel use to carbon emissions. This allows for a high confidence in the data.

Appendix 3: Carbon Management Plan

Historical Emission Reduction Progress

Edinburgh Airport has a range of current and ongoing initiatives focused on carbon emission reductions. Within its Carbon Management Plan, the airport highlights that understanding energy consumption and improving energy efficiency provides multiple benefits. As well as reducing carbon emissions and increasing cost savings, energy efficiency supports sustainable growth and increases energy security through reducing demand.

Transition to LED Lighting

In 2017 £390,000 was invested to begin a programme of LED replacement in the terminal building saving 550,000kWh's per year and resulting in annual savings of £66,000. An additional £30,000 was invested in 2018 saving an additional 60,000 kWh's per year and resulting in further annual savings of £7,200. This project has now expanded across the airport. Within the Air Traffic Control Tower, lighting was replaced, with additional presence detection and dimmable lighting being installed in the offices. Presence detection was also installed in corridors and stairwells to prevent lighting being left on unnecessarily. Additionally, within two external buildings, all lighting was also switched to LED. This totals to 1,017 lights being replaced, with a calculated saving of 191 MWh per year. 108 lights were replaced at a third external building, calculating a saving of 27,300 kWh per year. A project also took place at the Car Rental Centre, with all downlights and grid lighting in public foyer and toilet areas being switched to LEDS. There is also an on-going programme to update airfield stand lighting, with 26 stand mast pylons already replaced to LED.

Fixed Electrical Ground Power Upgrades

Fixed Electrical Ground Power (FEGP) units are ground power systems that allows aircraft to plug directly into a fixed, electricity-powered energy source while parked on the airfield. Previously installed ground power units had diesel-powered engines rather than electricity. Edinburgh Airport is moving away from diesel-powered aircraft and towards FEGP, which provides significant operational and environmental benefits. Already fourteen aircraft stands have been completed.

Energy Management System/Building Management System

In 2017 £34,000 was invested in the EMS and BMS to improve controls and identify energy saving opportunities, leading to annual savings of 1,200,000kWh's and £144,000. More recently, multiple plantrooms main control panels were replaced to improve reliability and help improve monitoring of the HVAC (Heating, Ventilation, and Air Conditioning) equipment. New variable speed drive inverters were also fitted to the HVAC motors, which are more efficient, allow better control and allow variable speed, reducing energy consumption. There is also an ongoing improvement programme to install energy efficiency technologies to the terminal expansion, including additional meters.

Green Gas and Reducing Gas Consumption

In 2020 Edinburgh Airport changed to purchase 100% green gas. Since then, various gas reducing measures have been put in place, such as a lowered set point from 11 to 10 degrees Celsius.

Baggage Hall

During 2022, new technology was installed into the baggage hall, upgrading to the latest motor and control systems to reduce energy consumption. A frictionless belt was also installed which uses less electricity than the previous system.

Vehicle Fleet

Since 2018 a review has been carried out on operational vehicles, to find more environmentally friendly solutions. Vehicles operating in and around the campus are now being powered by vegetable oil as the airport continues to look at ways of reducing its emissions. Thirty-four diesel vehicles have been replaced by Hydrotreated Vegetable Oil (HVO) vehicles which is a renewable diesel alternative that eliminates up to 90% of net carbon dioxide emissions whilst also offering significant savings on nitrogen oxide, particulate matter and carbon monoxide emissions. The airport has also installed an HVO fuel pump on campus, being used by airport vehicles and those operated by third parties and contractors, supporting campus partners with their decarbonisation programmes.

Future Emission Reduction Plans

Edinburgh Airport has also identified a range of future planned initiatives underpinning its carbon neutral target. The projects identified below are a sample of those that have been selected for implementation within the next five years. These projects have been taken from the latest five-year plan and have already been planned for delivery as an ongoing programme of works.

As the Carbon Management Plan becomes embedded into wider business processes and decision making, additional projects will be added to the list of initiatives and progress reported against on an annual basis.

Low Carbon Transition

Funding has been awarded by the Scottish Government to introduce low carbon infrastructure. To self-generate 25 per cent of our energy needs by 2030 as set out in the Greater Good (Sustainability) Strategy, a 9.7MWh solar farm, with 1.5MWh battery storage, will be installed to supply 40 electric vehicle charging points for staff and passengers. These will be located at two different locations across the airport campus, planned to be operational by the start of 2024.

Electric Vehicle Fleet Expansion

In June 2023, new Yutong electric airside buses will be introduced to Edinburgh Airport. The ABe14 electric zero emission airport bus overcomes the four key challenges of driving range, emission, battery life and safety. It delivers greatly reduced operating costs compared to that of conventional airport buses together with zero carbon emission giving both economic and environmental benefits. The 258kWh battery gives huge flexibility of operation and in many cases the bus can operate for several days without charging.

Expansion of LED Lighting

Between 2023 and 2024 more LED lights will replace older lighting and smart lighting controls will also be installed to improve energy efficiency. This also includes the replacement of lighting in all terminal plant rooms, switch rooms, node rooms will be switched to LED, including LED Lighting throughout the whole baggage hall. There is an ongoing improvement programme in place to replace stand lighting with LED's. As part of a larger runway resurfacing project due to take place in 2025, runway lights will be replaced with LED's leading to significant energy savings.

Expansion of Fixed Electrical Ground Power Upgrades

Edinburgh Airport is looking to continue upgrading the ground power units for aircrafts. It is currently planned for five stands and a further five stands to be upgraded to FEGP units, phasing out diesel operated units.

Conformance to the Carbon Management Plan

Edinburgh Airport is working with, and will continue to work, with several partners to deliver the Carbon Management Plan, including Scottish Enterprise, Zero Waste Scotland, Energy Saving Trust and local businesses and organisations. Working proactively to identify and build partnership opportunities will support with the delivery of the plan.

The Carbon Management Plan set out by Edinburgh Airport states its aspiration to achieve net zero emissions, on scope 1 and 2 emissions, by 2040. In line with a commitment made in July 2019 through Airport Council International (ACI) Europe and Scottish Government targets.

The CMP additionally focusses on the airport's ambitions for 2040, and a roadmap for progress. Reducing emissions is not just about a commitment to the environment and sustainability. The same processes that are used to identify carbon emissions reduction will also identify and realise financial savings through improved efficiency in the procurement and operation of its buildings and transport.

The CMP details Edinburgh Airport's strategy for reducing carbon emissions over the coming years and sets out a clear timetable as well as identifying the responsibilities and internal resources required to deliver the programme.

The main objectives of the plan are:

- to continue to take a whole business approach so that carbon management is adopted as a key objective in decision making and processes. Key stakeholders will be identified and appointed to ensure that carbon reduction is fully integrated into the organisation's culture.
- to adopt revised targets for the measurable reduction of carbon emissions and to deliver these reductions.

The progress of the CMP will be monitored through the annual carbon footprint (which also includes Scope 3 emissions), which will be the primary way of monitoring carbon reduction and performance against targets. The information is obtained through the organisations own records and converted to carbon dioxide equivalent (tCO2e) using recognised GHG Protocol consistent emission factors. This report is produced by an external consultancy to ensure accuracy and robustness of data.

Monthly monitoring of gas and electricity data will also be used to monitor progress and reporting will be completed in line with the communications strategy.

Data from the carbon footprint will be published in the annual Corporate Responsibility Report which is published on the Edinburgh Airport website and available to all interested stakeholders.

Carbon Reduction Targets

Edinburgh Airport has stated its aspiration to achieve net zero emissions by 2040. However, it also recognises the additional reputational, staff satisfaction and stakeholder engagement benefits achieved through delivering effective carbon management.

Reducing carbon emissions demonstrates the airport's commitment to good carbon management and sustainability and will enable the organisation to act as an exemplar to encourage others. In addition, a commitment to sustainability is increasingly linked to an organisation's reputation with better sustainability credentials and good carbon management enhancing the organisation's reputation.

The organisation's key stakeholders, including staff, elected representatives and the local community, are increasingly focusing on sustainability. The organisation's engagement and enhanced commitment and leadership with this agenda will improve its relationship with these stakeholders. Edinburgh Airport will seek to become an exemplar of good practice and so engage others in making a positive contribution to sustainable development.

Appendix 4: Carbon Offset Strategy

The total emissions to be offset by Edinburgh Airport for 2022 are 280 tCO_2e (see Table 4).

The carbon credits have been purchased from the following two schemes, and have all been retired:

Verified Emission Reduction Scheme: Gold Standard

Project 1: BaumInvest Mixed Reforestation in Costa Rica
Number of Credits: 202 Verified Emission Reductions
Retirement date: 5th June 2023
Public registry with link to credits: BaumInvest Mixed Reforestation in Costa Rica – Gold Standard Marketplace

Project 2: The Nicaforest High Impact Reforestation Program
Number of Credits: 78 Verified Emission Reductions
Certification date: 5th June 2023
Public registry with link to credits: The Nicaforest High Impact Reforestation Program – Gold Standard Marketplace

Commitment To Carbon Neutrality

Edinburgh Airport will commit to monitor, reduce and declare all its carbon equivalent emissions for the commitment period. Edinburgh Airport will subsequently offset the declared emissions using a genuine source of carbon credits.

Table 4 Emissions to be offset

Scope	Definition	Total (tCO_2e)
1	Direct emissions (consumption of fuel, airport owned transport, fugitive emissions) arising from operational control at Edinburgh Airport	2,371
2	Emissions arising from the consumption of electricity at Edinburgh Airport	3,134
	Location-based total (Scope 1 & 2)	**5,505**
	Credits resulting from the procurement of renewable electricity (REGO certificated)	5,217
	Market-based total	**280**

Appendix 5: Scope 3 Emissions

Table 5 outlines a list of all the carbon emissions sources that make up the scope 3 emissions which are those emissions that the airport does not have direct influence over.

Scope 3 Emissions

- Aircraft Movements (aviation turbine fuel)
- Passenger Surface Access (car, bus, taxi, light rail and tram)
- Employee Commute (car, bus, light rail and tram)
- Waste (disposal and material use)
- Electricity Transmission and Distribution and Well-to-tank
- Fuels and Bioenergy Well-to-tank
- Third Party De-Icer (undiluted and diluted glycol)
- Third Party Operational Vehicles (diesel, gas oil, diesel HVO)
- Water (usage and sewage)
- Aircraft Engine Testing (aviation turbine fuel)
- Tenant Natural Gas
- Business Travel (flights, taxis, bus, rail)

Table 5 Scope 3 Emissions

Market Based Emissions Category	Emissions (tCO2e)
Scope 3	**145,082**
Aircraft movements	111,480
Passenger surface access	24,737
Staff commute	981
Waste	4,527
Utilities (third party use of gas, electricity and water)	2,472
Staff commute	981
Operational vehicles	701
Aircraft engine tests	169
Business travel	15