Southampton International Airport Ltd

Qualifying explanatory statement in support of PAS 2060 self-certification: 2020

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1 Introduction

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 Southampton 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 Southampton Airport.

2 About Southampton Airport

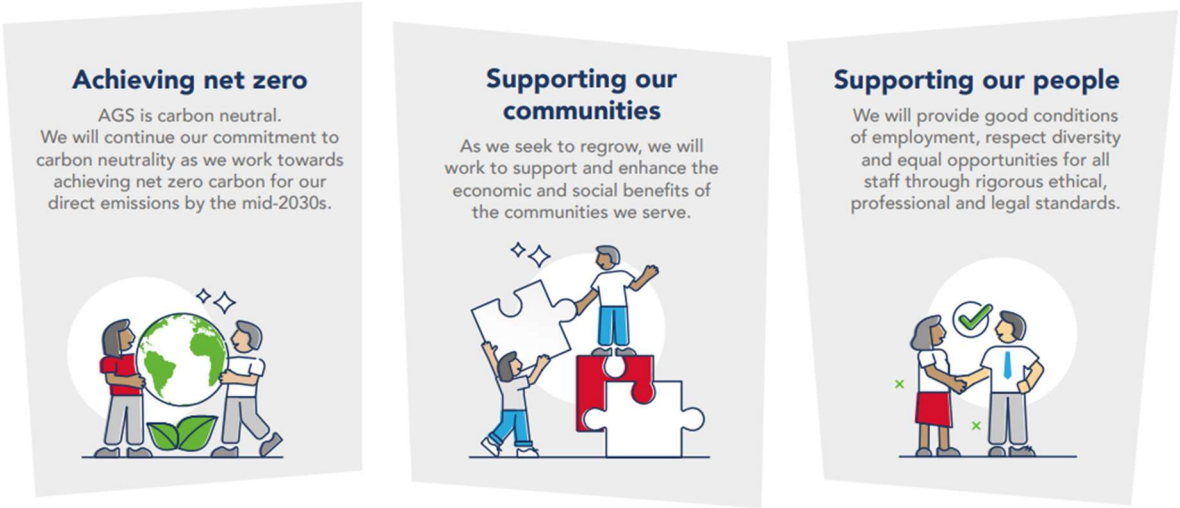
Southampton Airport is located in Eastleigh, Hampshire in the United Kingdom. The airport is owned by AGS Airports (also owners of Aberdeen and Glasgow Airports) and operates 7 days a week, serving around 30 destinations.

In 2020, Flybe went bankrupt due to the impacts of Covid-19 on the aviation industry. Flybe represented approximately 90% of Southampton Airport's flights, and as such this had a significant impact on the operations of the airport in 2020. As a result of this and the impact of Covid-19 on passenger numbers, the number of passengers in 2020 reduced by 84% in comparison to 2019. This has had a dramatic impact on the carbon emissions of the airport, with an overall reduction of 79% compared to the previous year.

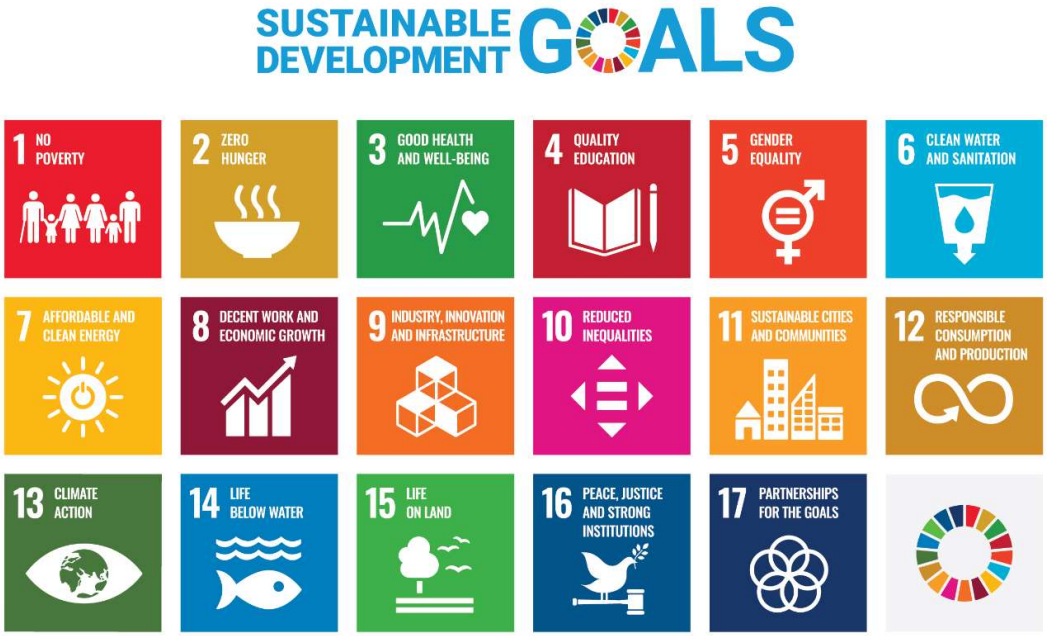
Southampton remains one of the UK's most important regional airports and is progressing with plans to extend its runway by 164 metres. The runway extension is essential to the long-term viability of Southampton Airport. Not only will it ensure the airport has a future, it will safeguard the 2,000 jobs that rely on it and enable the airport to start restoring the connectivity on which the region's economy is so reliant.

AGS Airports have published their sustainability strategy that outlines how AGS will play its part by balancing the undoubted economic and social benefits of aviation with their climate change responsibilities. Some key takeaways from the sustainability strategy showing commitment to reducing their impact on the climate include:

1. Target net zero for own infrastructure by mid-2030's
2. Support the UK aviation sector in achieving net zero by 2045
3. Currently divert 100% waste from landfill
4. Purchase 100% renewable electricity from energy suppliers



Southampton Airport's wider sustainability strategy is anchored in the United Nations' 17 Sustainable Development Goals (SDGs). The SDGs are recognised as the blueprint for achieving a better and more sustainable future for all, based on the three pillars of sustainable development – social inclusion, environmental protection and economic growth. In addition to ensuring adherence to the stringent requirements of the Quality Assurance Standard (QAS) for carbon offsetting, the UN SDGs were a key consideration when it came to identifying an appropriate high quality, international carbon reduction project for the airport to support.



3 General information

Information required under PAS 2016 guidance	Southampton Airport response
Individual(s) responsible for the evaluation and provision of data necessary for the substantiation of the declaration.	Amy Le Vieux Health, Safety & Environmental Manager
Entity responsible for making the declaration	Southampton International Airport Ltd
Subject of PAS 2060 declaration	The Scope 1, 2 and Scope 3 operational emissions of Southampton International Airport Ltd.
Rationale 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 WBCSD / WRI GHG Protocol – Corporate Standard.
Type of conformity assessment that has been undertaken	Self-certification
Application period	01/01/20 - 31/12/20
Commitment period	01/01/21 - 31/12/21
Senior representative: Signature	
Name and Position:	Steve Szalay
Date:	21/10/2022

4 Declaration of achievement of carbon neutrality

Table 1 demonstrates that Southampton Airport's have met the requirement to self-assess as carbon neutral under the PAS 2060 specification for 1st January to 31st December 2020, and have offset residual Scope 1 and 2 emissions as well as Scope 3 business travel emissions. Details of the carbon offsets purchased can be found in Appendix 3. Note that this declaration only applies to the scope and boundary of the subject, and period indicated, and should Southampton Airport intent to extend its claim then future offsetting will be required.

A carbon management plan has also been set up to target carbon reduction within Southampton Airport's scope and boundary (summarised in Appendix 3). The purpose of the plan is to demonstrate the meaningful efforts made by Southampton Airport to reduce its emission in line with their targets and policy statement and details the route by which they aim to achieve their net zero carbon ambition.

Additional efforts will be undertaken to address the Airport's Scope 3 emissions (and 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, which the Airport is currently working towards, and through stakeholder engagement plans. More details can be found in Appendix 5.

4.1 Methodology

Southampton Airport's carbon footprint has been calculated by Ricardo Energy & Environment 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 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.

4.2 Carbon emissions

The total emissions offset by Southampton International Airport for 1st January to 31st December 2020 are 518tCO_2e. This includes all residual Scope 1, 2 and Scope 3 business travel emissions. The emissions sources included are outlined in Appendix 1.

Table 1: Checklist for QES supporting declaration of achieving carbon neutrality.

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
Record the percentage economic growth rate for the given application period used as a threshold for recognising reductions in intensity terms.	9.9% GDP fall (UK) due to impacts of Covid-19
Provide an explanation for circumstances where a GHG reduction in intensity terms is accompanied by an increase in absolute terms for the determined subject.	N/A - 9% reduction in absolute terms since 2019
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, taken into account.	N/A
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

Appendix 1: Carbon footprint emission sources

Below is a list of all carbon emissions sources that have been offset as part of this declaration of carbon neutrality. Remaining Scope 3 emissions that the airport does not have direct influence over are detailed in Appendix 5.

Scope 1

- Combustion of fuels
  - Boilers & AHUs (natural gas)
  - Standby / back-up generators (gas oil)
  - Fire training (kerosene, LPG, gas oil, wood, etc.)
  - Fire suppression (CO_2)
- Airport owned transport
  - Operational vehicles (Airport fire trucks, Airport snow fleet, etc.)
  - Non-operational vehicles (Airport pool vehicles, car park buses, airside buses, etc.)
  - Airport owned GPU and air start units, etc.
- Glycol Based De-Icer
- Fugitive emissions
  - Refrigerant gases (e.g. HFC, HCFC, SF6)

Scope 2

- Consumption of purchased electricity
  - Airport electricity use (i.e. not tenant/service partner use)

Scope 3

- Transport-related activities
  - Airport business travel (national and international, all transport modes)

Emissions source	Scope 1 emissions	Scope 2 emissions	Scope 3 emissions	Total emissions (tCO_2e)	% of emissions
Utilities	428	-	-	**428**	**82.7%**
Operational vehicles	52	-	-	**52**	**10.0%**
Electricity	-	0	-	**0**	**0.0%**
Fire training	16	-	**0**	**16**	**3.1%**
Business travel	0	-	22	**22**	**4.2%**
Total emissions	**496**	**-**	**22**	**518**	**100.0%**

Appendix 2: Methodology

Standard and methodology used

The quantification, reduction and offsetting of Southampton'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 standardized 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 Scope 1 and Scope 2 emissions relevant to the subject have been included when determining the carbon footprint. In addition to this, all Scope 1, 2 and 3 emission sources calculated to be material have been considered in determining the carbon footprint. This shows that Southampton 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 footprinting.

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

Southampton airport have already implemented several energy efficiency projects over the last 15 years that have had a significant effect on the airport's energy consumption and carbon emissions. The following projects have either been completed or are ongoing:

1. **Full LED retrofit:** 95%+ of the lighting on site is now LED, with much of it automatically controlled via the BMS. Daylight and occupancy sensors have been installed where appropriate.
2. **BMS (ongoing):** Much of the plant on the site is already controlled via BMS, but the software has recently been upgrades to the latest TREND Vision package. The Engineering department are working to integrate as much of the equipment on site into the BMS system as possible, including working with programmers to include systems that are not out of the box compatible. The eventual aim is to have an interconnected IIOT system (Industrial internet of things) that allows for visibility and control of all major energy consuming equipment on site.
3. **Pump Replacement:** The majority of water pumps on site have been retrofitted with modern highly energy efficient motors.
4. **Voltage optimisation:** The transformers at site have been tapped to reduce voltage and the associated losses.
5. **Power factor correction:** PF correction equipment is already installed on site and has reduced reactive unit costs as a result.
6. **Over-door heater replacement (ongoing):** The existing 9kW over-door heaters are being replaced with 3kW models, with smarter BMS and open-door controls.
7. **Fixed electric ground power (ongoing):** 75% of all aircraft stands now have FEPGs installed, which have replaced gas oil ground power units. The remaining 25% are due for replacement over the coming years.

Ongoing emission reduction progress

Proposed small scale projects

Within Southampton Airport's Carbon Management Plan, there are proposed renewable / carbon reduction projects which can be financed within the SIAL CAPEX / approval levels.

Initiative	Description	Project savings (kWhr/yr.)
LED Replacements		
LED Upgrade Stand Lighting	Replace existing 400w LED fittings for 140w fittings	>60,000 kWh/yr.
LED Wig Wags (Aircraft control)	Two sets of Wig Wags are yet to be changed.	55 kWh/yr.
LED Multi Storey Car Park	Existing LED tubes can be upgraded for higher lumen lower wattage tubes	>9,000 kWh/yr.
LED Long Stay Car Park	Existing LED tubes can be upgraded for higher lumen lower wattage tubes	>5,000 kWh/yr.

LED Overflow Car Park	Existing LED tubes can be upgraded for higher lumen lower wattage tubes	>2,500 kWhr/yr.
LED Prepaid Car Park	Existing LED tubes can be upgraded for higher lumen lower wattage tubes	>10,000 kWh/yr.
LED Main Terminal Building (MTB)	Existing LED tubes can be upgraded for higher lumen lower wattage tubes	>500 kWh/yr.
LED MTB upgrade High Bay	Existing high bay lights can be replaced with higher lumen lower wattage fittings.	>500 kWhr/yr.
LED MTB Plant rooms	Existing fluorescent tubes can be upgraded for higher lumen lower wattage tubes	>50 kWhr/yr.
LED Mitchell way	Existing SON lamps can be upgraded for higher lumen lower wattage tubes	>50 kWhr/yr.
LED Aeronautical Ground Lighting	Replace tungsten filament AGL lights with LED ones	>50 kWhr/yr.
Solar options		
Increased solar road lighting	Replace road lighting with solar options	To be developed
Solar Wig Wag (Vehicle control)	Installing solar runway guard lighting on all new vehicle access points to runway	To be developed
Solar Car Parking	To add solar car parking shelters to 2860 spaces in LSCP	4.2MW
Smart Flower solar array	Solar array which follows the sun to allow maximum effect during all seasons.	To be developed
Battery storage		
Battery storage for EV charging	Linked to solar option to enhance EV charging	To be developed
Use EV charging to offset TRIAD	Link EV charging of large vehicles to offset against TRIAD	To be developed
Battery storage for critical systems	Link UPS systems to offset against TRIAD	To be developed

Proposed large scale projects

There are also large-scale capital investment projects which are required to be submitted to the full AGS Capital Approval Process. AGS has appointed an Energy Innovation Consultant to bring long term energy reduction projects using innovative technology and their expertise in securing external funding.

These projects have been conceptualised as, but not limited to:

- Geothermal CHP
- Battery Storage / DRUPS / Sunamp
- Advanced IIoT systems
- Vehicle electrification
- Advanced local Microgrid
- Private wire to offsite renewables
- Boiler replacement with ground source heat pumps

Conformance to the Carbon Management Plan

Understanding and managing the environmental impact is a high priority at Southampton Airport. The Carbon Management Plan details how the airport intends to deliver carbon reduction works, set to deliver the airport objective of carbon neutrality by 2030 and the Government objective for net zero emissions by 2050.

Southampton Airport will utilise their CMP going forward using a Carbon Management Implementation Strategy (CMIS). This covers the identification and development of carbon management initiatives; strategic planning; implementing; operating; monitoring; reviewing; exercising and improving carbon management at the Airport. The strategy is fully aligned to SIAL's overall business objectives and targets outlined below and ensures the ability to meet internal standards, stakeholders' needs and commitments to robust carbon management and results.

The progress of the CMP will be monitored through monthly progress reports which shall be reviewed by the Leadership Team. Performance in this area will be measured by:

- Airport carbon management plans being delivered on budget; and
- Achievement against AGS carbon management targets.

This will also include monitoring performance and progress of the commitments as set out in the table below:

Action	Impact	Timescale
SIAL will maintain a robust carbon foot printing methodology to measure and monitor the carbon footprint.	Scope 1, 2 and 3 Emissions.	Ongoing
SIAL will report on the Carbon Footprint annually.	Scope 1, and 2 Emissions.	Annually
SIAL will review the Carbon Management Plan every three years.	Scope 1, 2 and 3 Emissions.	Annually
SIAL will invest in systems and equipment across the infrastructure to enable the airport to understand the energy consumption. Including investment in smart metering	Scope 1 and 2 Emissions.	Ongoing

and intelligent computer software		
SIAL will dedicate resources to monitoring and measuring the energy consumption and auditing improvements.	Scope 1 and 2 Emissions.	Ongoing
SIAL will review energy reporting processes to provide a better focus for improvement.	Scope 1 and 2 Emissions.	Ongoing
SIAL will appraise energy efficiency for all major capital projects.	Scope 1 and 2 Emissions.	Ongoing
SIAL will work to improve methodologies for measuring operations.	Scope 3 emissions.	Ongoing
SIAL will Continue to measure, monitor and report on ambient air quality levels.	Scope 3 emissions.	Ongoing

Carbon reduction targets

The SIAL Leadership Team has endorsed an airport target to be Net Zero for its own direct emissions by the mid 2030's and to follow the Government target, assisting industry to achieve net zero for scopes 1, 2 and 3 emissions by 2045. An independent review has demonstrated that achievement of the overall target is attainable though the path will be a challenging and require investment in new technology and sustainable assets year on year. The options and deliverables are outlined within the Carbon Management Plan and the SIAL Environment Policy.

Motivations to achieve the target are as follows:

- Responsible business and active member of the community the airport operates in;
- Recognise the impact that aviation can have on the environment and want to play a key role in being part of the solution;
- CO_2 financial penalties;
- Increasing unit cost of utilities.

Three methods of achieving the target have been identified (with some additional enabling programmes):

- A behavioural change programme to ensure staff operate assets in an energy efficient manner, including staff awareness campaigns, communication programmes, etc.;
- Investment in energy efficient technology and asset improvements (including on-site renewables and energy storage). This will be delivered as part of the Innovation Energy Consultancy contract. (See section 3).
- Or by entering a carbon offsetting scheme through the purchase of carbon credits;

Each single option in itself will not achieve the target. However, the principle of diminishing returns on capital/revenue investment indicates that a weighted balance between all three will ensure the target is achieved at the best cost effectiveness.

Appendix 4: Carbon offset strategy

CO_2e emissions to be offset – 518 tCO2e

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

Scheme 1: Gold Standard

 # Credits: 518 CERs (certified emissions reduction units)

Scheme Name: Improved Cookstoves for Social Impact in Ugandan Communities

Timeframe for credit generation: 2019

Public registry with link to credits: https://registry.goldstandard.org/credit-blocks/details/216748

Commitment to carbon neutrality

The entity will commit to monitor, reduce and declare all of its carbon equivalent emissions for the commitment period 01/01/21 - 31/12/21. Southampton Airport will subsequently offset the declared emissions using a genuine source of carbon credits.

Scope	Definition	Total (tCO_2e)
1	Direct emissions (consumption of fuel, airport owned transport, fugitive emissions) arising from operational control at Southampton Airport	**496**
2	Emissions arising from the consumption of electricity at Southampton Airport	**531**
3	Emissions arising from business travel at Southampton Airport	**22**
	Location-based Total	**1,049**
	Credits resulting from the procurement of renewable electricity (fully REGO backed)	**531**
	Market-based Total	**518**

Appendix 5: Scope 3 emissions

In preparing the organizational GHG inventory Southampton Airport adopted a traditional organisational boundary that includes all Scope 1, 2 and several Scope 3 emission sources. The Scope 3 emissions included in the carbon footprint are those required under Level 3/3+ of the Airport Carbon Accreditation (ACA) scheme.

Scope 3 emissions have not been included in this declaration of carbon neutrality as the airport does not have direct influence over these emissions sources. However, these will be the focus of future efforts for carbon reduction initiatives through stakeholder engagement as the airport aims to achieve net zero carbon emissions by 2045.

This is in line with the requirements level 3+ of the ACA scheme, where all Scope 1 and 2 emissions, as well as Scope 3 business travel, are required to be offset to achieve carbon neutral status. Southampton Airport are working towards Level 3+ of the ACA scheme, and as part of this will look to reduce their Scope 3 emissions through stakeholder engagement activities that incentivise the reduction of Scope 3 emissions over which the airport does not have direct influence.

The Scope 3 emissions that are included in Southampton Airport's carbon footprint, and will be the focus of future carbon reduction schemes, are as follows:

Scope 3

- Transport-related activities
  - Staff commuting
  - Tenant commuting (who use airport car parks)
  - Passenger surface access
  - 3rd party operational vehicle fuel use
- Purchased materials and fuels
  - Water use
  - Wastewater treatment
- Waste disposal
  - Waste
  - Recycling
- Tenants & concessionaires (on airport supply)
  - Airport supplied gas and electricity
- Aircraft
  - Aircraft LTO (aircraft arriving, departing and taxiing – up to 3,000ft / 1,000m)
  - Aircraft engine testing
  - Aircraft APU usage
  - De-icer used on surfaces and aircraft

Emissions source	Scope 3 emissions
Staff commute (Airport and tenants)	**163**
Passenger surface access	**1,278**
3rd party operational vehicle fuel use	**89**
Water and wastewater treatment	**20**
Waste	**16**
Tenant energy use (electricity and natural gas)	**57**
Aircraft (LTO, engine testing, APUs and De-icing)	**2,515**
Total Scope 3 emissions	**4,138**