Annual Sustainability Report 2024

Bristol Airport

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One year on:

Our progress one year into our 2023-2028 sustainability strategy

Foreword from Dave Lees

I am delighted to present our first annual sustainability report, updating on our progress across the four goals that underpin our Sustainability Strategy: Net Zero operations by 2030, reducing indirect emissions and supporting the development of zero emissions flight, protecting and enhancing our local environment, and supporting our communities and enabling our region to thrive.

We continue to make good progress in decarbonising our own operations, investing in technologies to decarbonise our terminal, ensuring our energy comes from renewable sources and swapping out fossil fuel vehicles for electric or low-zero emission alternatives. Our efforts have secured over a 40% reduction in carbon emissions compared to our 2019 baseline year. Reducing waste continues to be a focus and we've made great strides in increasing our recycling rate, thanks to our new onsite sortation facility.

We continue to influence the reduction of scope 3 (indirect) emissions and are working hard with our business partners and supply chain to make positive steps toward Net Zero by 2050. The aviation sector is one of the hardest sectors to decarbonise and we want to play a leading role in supporting the development of zero emissions flight. Working with industry leaders, we are the first airport in the UK to successfully prove the safety case for trialling hydrogen powered ground support equipment, a critical first step to realising hydrogen powered flight. Incremental changes are just as important as long-term zero emission technologies, and we've been working with our airline customers to ensure we have the most efficient and quietest aircraft operating to and from the airport. We've finalised our first Sustainability Supply Chain Charter, ensuring we work with our value chain to drive sustainable practices across our entire value chain – a UK regional airport first.

As the biggest employer of the region, creating employment opportunities is crucial to boosting our local economy. Our employment and skills interventions provide a programme of activities with education providers to support local communities in accessing jobs at the airport, targeting support for individuals from underrepresented groups, those living in deprived areas and those who experience barriers to entering the workplace. Improving access to the airport continues to be an important area of focus, and we've been working with local transport providers to introduce new routes to the airport.

It's fantastic to see the difference we're making in the local community through our community funds, and I'm proud of the work Bristol Airport colleagues continue to do through our volunteering and donation programmes to give back to the communities we serve.

I hope you enjoy reading this report and learning about our progress.

Dave Lees
CEO, Bristol Airport

2024 achievements

1. Over 10% reduction in direct Carbon emissions vs 2023
2. 50% of airside buses now electric
3. 1st hydrogen trial of Ground Support Equipment at a UK airport
4. 60% recycling rate in 2024
5. Maintained ISO14001 environmental management accreditation
6. £118,000 contributed to supporting community projects
7. Over 1 million passengers using Airport Flyer bus services
8. Created airport's first sustainability supply chain charter
9. Launched skills and employment programme
10. 8% increase in the number of modern fuel-efficient aircraft based at the Airport (compared with numbers in 2023)

Goal 1:
Be Net Zero across our operations by 2030

TARGETS	2024 UPDATE
25% on-site renewable energy generation for our own consumption by 2025. Continue to source the remainder of our energy from renewable energy sources.	See update on page 8
65% of Bristol Airport airside buses to be electric by 2027.	See update on page 8
25% of Bristol Airport landside buses to be electric by 2027. All landside buses to be electric or run on HVO by 2030.	See update on page 8
Bristol Airport will have no gas onsite by 2026 through the replacement of chillers and boilers with air source heat pumps where feasible.	See update on page 8
Runway lighting to be 100% LED by 2027.	2027
Achieve a BREEAM rating of "Very Good" for the west and south passenger terminal extensions.	Progressing
Continue to embed actions to manage risk associated with climate resilience into normal business risk management, planning and decision-making.	Progressing
Reduce emissions across our operations by 73% by 2027 (relative to 2019 levels). This translates to a reduction of 4,421 tonnes of CO_2e.	Progressing

Net Zero operations is the crucial first step on the journey to net zero aviation. To ensure we are on track to achieve net zero operations by 2030, we have set several interim carbon targets to 2030.

Impact of targets on our direct emissions

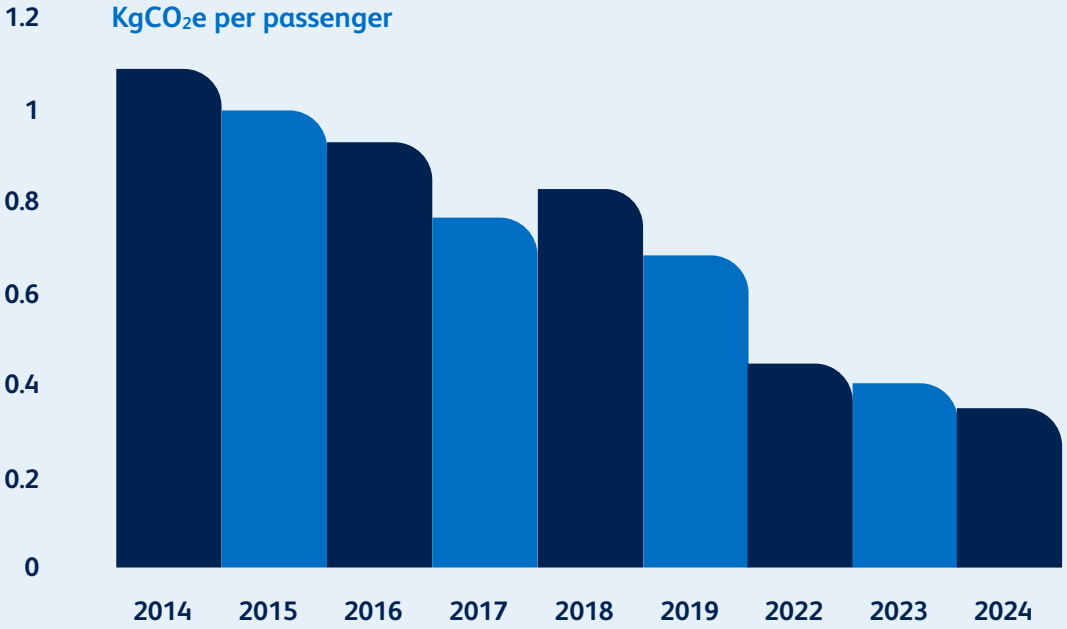
We calculate our total carbon emissions (Scopes 1, 2, and 3) in alignment with the Greenhouse Gas (GHG) Protocol, the globally recognised standard for greenhouse gas accounting. Our methodology adheres to industry best practices and is independently validated through the Airport Carbon Accreditation (ACA) programme and external consultants. Bristol Airport is proud to hold Level 4+ (Transformation) certification under the ACA, reflecting our commitment to comprehensive carbon management and reduction.

Scope 1 and 2 emissions significantly reduced in 2024 compared to 2023. Emissions per passenger decreased to 0.33 kg CO_2e per passenger, representing a 41 % reduction from our 2019 baseline and a 10.8 % reduction compared to 2023. Similarly, emissions per Air Traffic Movement (ATM) fell by 6 % compared to 2023 and by 4 % compared to our baseline year.

SCOPE 1: emissions at Bristol Airport encompass all direct emissions from sources owned or controlled by the airport. The primary contributors to Scope 1 are natural gas consumption for heating and fuel used by operational vehicles and equipment. Additionally, smaller contributions come from the use of LPG for fire training exercises, refrigerants for cooling systems, and de-icing agents applied during winter operations.

SCOPE 2: emissions, by contrast, represent indirect emissions from purchased electricity used to power airport facilities. These emissions are influenced by our ongoing initiatives to increase energy efficiency and source renewable electricity.

These downward trends highlight our ongoing efforts to decouple emissions from growth, ensuring Bristol Airport can grow responsibly while supporting the transition to Net Zero aviation.



* 2020 and 2021 incomplete due to global pandemic

Carbon footprint

SCOPE	ACTIVITY	2019	2024
Scope 1	Fuel Consumption – Utilities	659.3	631.6
Scope 1	Operational Vehicles and Equipment	1,564.5	561.03
Scope 1	Refrigerants	145.8	134.0
Scope 1	De-icer	46.8	48.0
Scope 1	Liquid Petroleum Gas (LPG) use for Fire training	6.2	8.09
Scope 2 (Location based)	Purchased Electricity	3,660.0	2,292.37
Scope 2 (Market based)	Electricity Consumption	0.0	0.0
	Total Scope 1 and 2 (Location based)	6,082.6	3,680.3
	Total Scope 1 and 2 (Market based)	2,422.7	1,387.92
	% Difference to 2019 baseline (Location based)	0%	40%

Footprint is externally verified by an independent qualified assessor and by the Airport Carbon Accreditation Standard

*Baseline year: 2019. Due to the global pandemic, 2020 and 2021 data was incomplete

Renewables

In 2024, our 1.4MW solar farm went live, generating 1,328,362 kwh, which is the equivalent of powering 125 average UK homes continuously for one year. 2024 also marked the first year of our virtual Corporate Power Purchase Agreement (CPPA) with leading renewable energy developer, Luminous Energy. The agreement provides price certainty for Bristol Airport in relation to a significant proportion of its energy needs alongside Renewable Energy Guarantee of Origin (REGO) certificates, to ensure 100 % of the airports energy supply is from renewable sources. In addition, we're working hard to achieve our ambitious 25 % onsite renewable energy target for our own consumption compared to our 2019 baseline. It's a challenging target, navigating safety constraints with spatial and energy export limitations, but we have identified additional space for solar array to get us as close to the target as possible. These additional installations will generate over 360,000 kwh energy for the airport, saving over 74 tonnes of carbon every year.

Terminal decarbonisation

Design work for our new energy centre is underway, as part of our commitment to remove gas onsite by the end of 2026. The energy centre will house air source heat pumps which will heat our buildings, removing the need for gas boilers, and more efficient handling units that cool our buildings will replace older models. We are continually assessing and implementing optimisations to our Building Management System (BMS), with a particular focus on terminal heating. These efforts ensure that our energy use is as efficient as possible. In 2024, these targeted BMS optimisations contributed significantly to an 8 % reduction in our gas emissions compared to 2023.

Vehicles

We've made great progress with our phased transition to electric vehicles, navigating the market challenges of coordinating delivery delays with vehicles reaching end of life. 50 % of our airside buses are now electric and our first two electric landside buses are in use. Our remaining landside buses are now powered by Hydrotreated Vegetable Oil (HVO), a biofuel made from recycled waste oils and fats that would otherwise go to waste. Since these materials are already part of the carbon cycle, using HVO avoids releasing 'new' carbon into the atmosphere, unlike fossil fuels, which extract and emit carbon stored underground for millions of years. This makes HVO a more sustainable option, cutting lifecycle carbon emissions by up to 90 % compared to conventional diesel and serves as a good alternative while we continue to electrify more of our vehicles.

Goal 2:
Reduce indirect emissions and support the development of zero emissions flight

TARGETS	2024 UPDATE
Continue to support our business partner's phased transition to zero emission ground fleet vehicles and equipment by 2030.	Progressing
Develop infrastructure for electric vehicles (EVs) for passenger use.	2026
Reduce indirect carbon emissions through the modernisation of the Airport's airspace and operational procedures, including Continuous Descent Approaches and departure routes.	See update on page 10
Actively support the development of airport hydrogen infrastructure with the aim of enabling commercial flights by 2035.	See update on page 12
Commit to an annual fund of £250k for the Aviation Carbon Transition programme, which supports research and development for decarbonisation initiatives that reduce scope 3 emissions up to 2030.	See update on page 13
Be an airport testbed to drive the development of electrical vertical, take-off and landing (Evtol) technology to 2030.	Progressing
Work with our airline customers on reaching the UK wide Sustainable Aviation Fuels mandate of 10% uplift by 2030.	See update on page 13

SCOPE 3: Our indirect emissions account for the majority of our carbon footprint. With over 70 Business Partners operating at the airport, it's important that we understand each other's Net Zero trajectories and work together to decarbonise the sector.

Aircraft emissions

We are committed to reducing aircraft emissions by working closely with airlines to promote the use of Sustainable Aviation Fuel (SAF) and supporting the transition to hydrogen aviation. We work with our airlines to strive for the quietest and most fuel-efficient aircraft to be based at the airport and encourage best practice flight procedures to lower emissions.

Airspace change

The Airport is in the early stages of airspace modernisation, which is part of UK-wide reforms that aim to reduce emissions and provide an opportunity to minimise noise impacts.

Tenant and 3rd party ops

Through renewable energy leasing agreements and collaboration with tenants, airlines, and ground handlers, Bristol Airport is driving sustainable operations across all airport activities.
We are supporting the transition to energy-efficient equipment, promoting the use of low-emission ground support vehicles, and encouraging businesses on-site to adopt lower-carbon practices in line with our net-zero commitments.

Indirect Emissions – Tonnes of CO_2

ACTIVITY	TCO_2E		EMISSIONS SOURCE
	2019	2024	
Flight emissions	498,757	564,362	These are emissions generated by aircraft during their operations at the Airport, including taxiing, take off, cruise, and landing
Business travel	26	8.06	Emissions arising from employees' work-related travel
Airport surface access	108,386	113,673	Emissions associated with passengers and employees accessing the airport, typically through transportation modes like cars, buses and taxis
Operational Vehicles and Equipment	2,170	2,200	Emissions from vehicles and equipment used for Airport operations, such as ground support equipment and maintenance vehicles
Airport Construction (Contractors)	427	101.64	Refers to emissions related to construction and development activities at the Airport
Waste and water	617	75.9	These emissions result from waste management and water consumption at the Airport
Electricity Consumption*	673	1,236	Emissions arising from the electrical consumption of third-party operators at the Airport
Fuel Consumption – Utilities	98	283.01	Emissions arising from the natural gas consumption of third-party operators at the Airport
De-icer**	144	227.61	Emissions associated with the application of de-icing substances on aircraft and Airport surfaces to prevent ice buildup
Total Scope 3	611,297	682,167	
% Difference to 2019	0%	+ 11.6%	

*Electricity consumption increased due to completion of metering project, which gives us greater visibility of tenant usage than ever before.
**Use of de-icer increased due to increase of cold weather/temperatures across site

Working with our airline customers

Emissions from aircraft account for the majority of indirect emissions. Whilst zero emissions flight is the long-term solution to decarbonising aviation, the most modern aircraft, such as A320neo and Boeing 737 MAX provide a 15-20% greater fuel efficiency than its predecessors and offer up to a 40% noise reduction. We have taken a responsible, proactive position with our airline customers to secure the quietest and most efficient aircraft at the airport. We've published our first airline league table that includes several environmental and noise performance metrics, which can be found on the Environment page.

Air Traffic Movements (ATMs) vs proportion of neo/max split

	2019	2020	2023	2024
Total No. Commercial ATMs	61,723	56,411	68,496	72,256
No. of Neo/Max ATMS	6,158	12,192	17,120	23,415
% Neo/Max ATMs	9.9%	21.6%	24.9%	32.4%
% Neo/Max Night ATMS summer	12.4%	25.6%	37.5%	53.9%

Based aircraft vs proportion of neo/max split

	2019	2020	2023	2024
Total based aircraft	28	33	36	38
Based Neo/Max aircraft	2	11	13	17
% Neo/Max based aircraft	7%	33%	36%	44%

* Relative to 2019 baseline

Project Acorn: Supporting the development of Airport hydrogen infrastructure

We recognise that multiple technologies will be required to decarbonise the sector, and we believe that hydrogen will be a key enabler of the industry's transition to net zero. A gap identified is the lack of regulatory framework or operational guidance on the use of hydrogen at airports, with the critical path being hydrogen storage and refuelling in the restricted and highly regulated airside environment. Project Acorn involved a cross-sector collaboration of experts from across the aviation value chain and academia to address this issue, with the first airside hydrogen refuelling trial of its kind taking place at the airport, led by easyJet and supported by several cross-industry partners, including Bristol Airport, DHL and the Civil Aviation Authority. The data and insight gathered will be used to create the first ever safety guidance and will inform the creation of the regulatory framework that's needed to use hydrogen airside. ACORN REPORT LINK.

Hydrogen in Aviation Alliance

Bristol Airport is a member of the Hydrogen in Aviation (HIA) alliance alongside Airbus, GKN Aerospace, Rolls Royce, easyJet, Zero Avia, and Ørsted. The HIA aims to establish the UK as a global leader in hydrogen-powered flight. HIA focuses on addressing the challenges of re-engineering the fuel supply chain and developing aircraft technologies that can efficiently access hydrogen while meeting the demands of efficient airline operations. In March 2024, the HIA published the 'Launching Hydrogen-Powered Aviation' report, which set out a series of recommendations for industry, regulators, and the UK Government. The HIA is now taking forward key recommendations in the report, working with partners in the West of England and nationally. The report recognises that Bristol Airport is one of several airports leading in developing a network of hydrogen-ready airports and intends to be an early adopter, linking up with our regional hydrogen consortia and producers, and enabling routes between the Airport and other hydrogen ready airports. LINK TO REPORT.

Sustainable Aviation Fuels

The use of sustainable aviation fuel (SAF) will grow in the coming years, forming a major part of the aviation sector's decarbonisation and journey towards achieving the UK's net zero 2050 target. This year the UK Government introduced a mandate for SAF, requiring a 2% increase in SAF use in 2025, 10% by 2030, rising to 22% by 2040. Bristol Airport is represented on the UK Government led Jet Zero Taskforce Expert Group working to support the development, production, commercialisation and use of SAF in the UK and globally. Within our region, we are exploring opportunities for collaboration with SAF stakeholders (producers, suppliers and airlines) to scale up the production of SAF.

Aviation Carbon Transition Programme

The Bristol Airport ACT (Aviation Carbon Transition) Fund supports innovative projects that advance the transition to low-carbon aviation and sustainable practices. In 2024, the fund awarded support to three forward-thinking initiatives: Wanderlands, Nature investment strategy which focuses on developing investment strategies for high-integrity UK-based carbon offsetting projects that enhance habitats and provide public access; Ultima Forma, Hydrogen feasibility study which is investigating mobile liquid hydrogen refuelling at the airport; and Equilibrion, Nuclear derived SAF and Hydrogen which is researching nuclear-derived sustainable aviation fuel (SAF) and hydrogen production, creating a roadmap for regional production and deployment. These projects aim to drive impactful carbon reduction solutions and sustainable advancements in aviation.

You can find out how these projects are progressing, and learn about previous projects that have been supported by the ACT programme HERE.

Goal 3:
Protect and enhance our local environment

TARGETS	2024 UPDATE
Increase the biodiversity value on and offsite through the implementation of our Integrated Landscape, Visual and Ecological Mitigation Masterplan committed to as part of our planning permission.	See update on page 15
Implement a new ground noise management strategy to minimise ground noise by 2024.	See update on page 15
Work with our business partners over the next three years to increase recycling levels to 65% and target carbon-intensive waste. Continue to divert all waste from landfill.	See update on page 16
Increase passenger journeys to and from the Airport made by public transport with a target of 17.5% public transport modal share upon reaching 12 million passengers per annum.	See update on page 16
Work towards a stretch modal share target of 30% of airport employees adopting sustainable travel and working arrangements upon reaching 12 million passengers per annum.*	See update on page 16

* Includes carshare

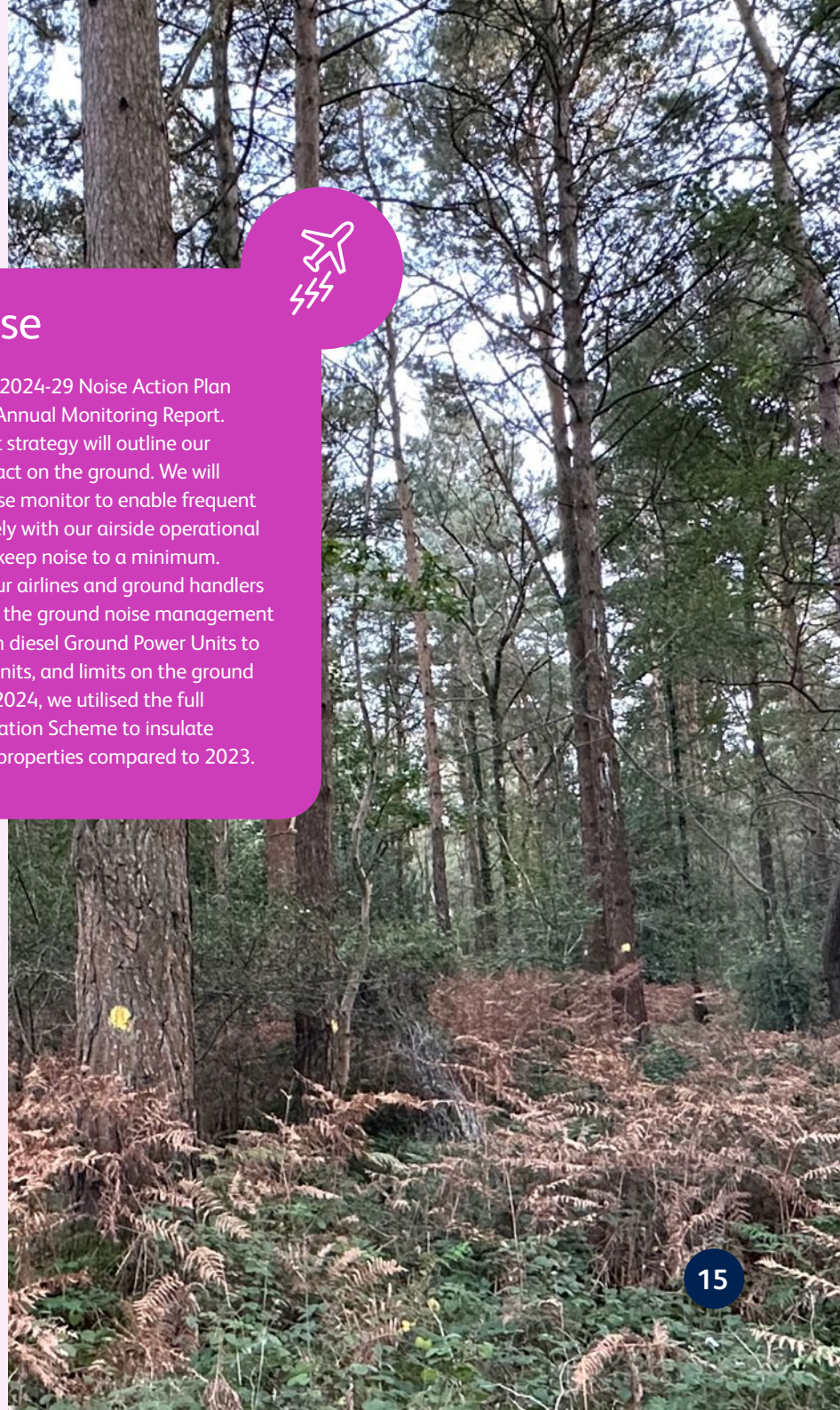
We recognise the impact airport operations can have on our local environment and the neighbouring communities and are committed to managing and mitigating our impacts.

Biodiversity

We've made good progress with the initiatives in our Integrated Land Biodiversity Management and Mitigation Plan to boost biodiversity on and offsite. Projects include extending and enhancing bat roosts for the greater horseshoe bats, ongoing hedgerow and scrub maintenance, and tree and woodland management across onsite airport car parks to support work to improve species diversity for all fauna, including the restoration of a pond in the southeast of the Airport, adjacent to the new silver zone long stay car park. Completion of works to restore Lulsgate Wood from 100 % canopy cover species poor woodland (dominated by non-native larch) to a thriving well-structured open mosaic woodland, retaining all native broadleaved trees, with a variety of features for a wide variety of flora and fauna. A diverse range of species have been spotted across site including, 10 bat species at both Bristol Airport and Lulsgate Wood, and great crested newts recorded in two ponds in Abspitt Wood west of the Airport. Badgers have been recorded at Bristol Airport for many years with two core clans associated with the south long-stay car parks. Thirty-five bird species were recorded on, adjacent to or flying over the non-operational parts of Bristol Airport.

Managing noise

We continue to implement the 2024-29 Noise Action Plan that can be found in our 2024 Annual Monitoring Report. Our ground noise management strategy will outline our efforts to reduce our noise impact on the ground. We will install a designated ground noise monitor to enable frequent noise checks and will work closely with our airside operational teams and ground handlers to keep noise to a minimum. In early 2025 we will engage our airlines and ground handlers in realising the objectives set in the ground noise management strategy, including moving from diesel Ground Power Units to Fixed Electrical Ground Power units, and limits on the ground running of aircraft engines. In 2024, we utilised the full £200,000 from our Noise Mitigation Scheme to insulate 37 properties, an increase of 7 properties compared to 2023.



Increasing sustainable modes of travel

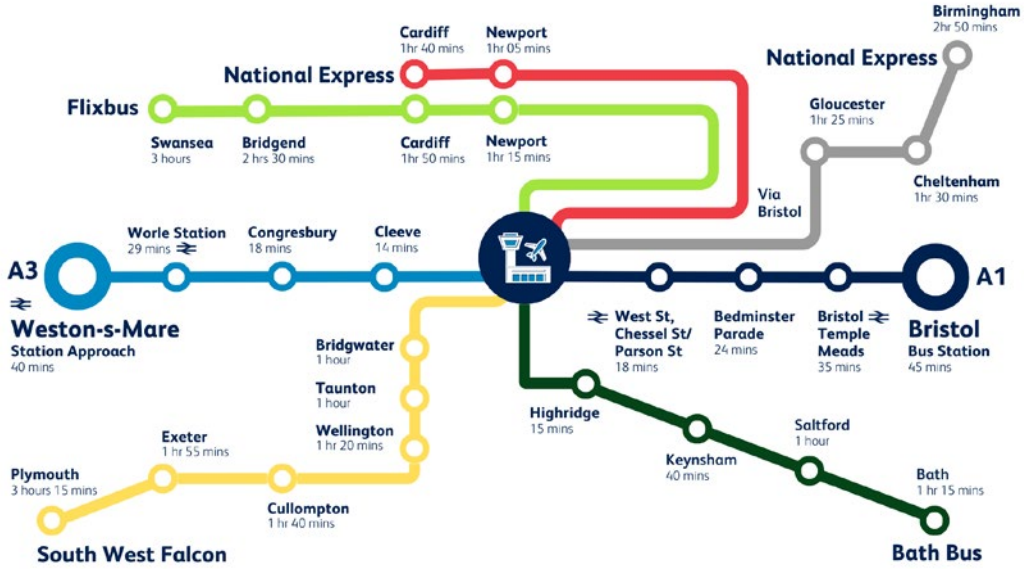
We recognise that access to the airport could be improved and we're working hard to increase our public transport modal share in line with our target to increase modal share by 2.5 % upon reaching 12mppa and ensure 30 % of airport employees are adopting sustainable travel arrangements. During 2024, 25 % of employees, and 15 % of passengers travelled to the airport by sustainable modes of transport,

Since 2022, employees have had free travel on the A1 and A3 flyer bus services and we have increased the frequency of the A1 by 39 %, and the A3 by 64 %, as well as increasing the number of stops for passengers and staff. Our efforts are paying off. 2024 saw a record number of journeys for the Airport Flyer bus service with the A1 bus service to Bristol Airport carrying more than 1 million passengers for the first time. Combined with the Weston-super-Mare A3, this increases to 1.3 million Flyer journeys in 2024. To accommodate passengers in the northern part of the South West region, we now have coach services that link the Airport to Bridgend and Swansea via Cardiff and Newport, Gloucester, Cheltenham and to the midlands via Birmingham Central. Where possible, we have integrated stops with train stations to expand our reach. Our new transit map shows all of our current services, and we look forward to adding additional services over the coming years.

Reducing waste and increasing recycling

We have been increasing our recycling rates year on year and are proud of our 60 % recycling rate over the last two years. Our new onsite sortation facility will support our ambition to achieve 65 % over the next two years.

Cabin food waste, known as International Catering Waste (ICW) from the EU is classified as high-risk category1 animal by-product, and must therefore be disposed of as per UK regulations. In 2023, the airport worked with easyJet to trial the inclusion of international catering waste in our dry mixed recycling. In 2024 we've taken this one step further, working in partnership with DEFRA, Animal Plant Health Agency, waste providers and airlines on setting industry guidance on collecting and recycling ICW from aircraft. As of February 2025, we will begin to recycle ICW with three of our main airlines: TUI, easyJet and Jet2.



Goal 4:
Support our communities and enable our region to thrive

TARGETS	2024 UPDATE
Deliver employment and skills interventions and a programme of activities with education providers to support local communities in accessing jobs at the Airport, targeting support for individuals from underrepresented groups, those living in deprived areas and those who experience barriers to entering the workplace.	2025
Increase our school's engagement and awareness programme 10% year on year to 2030.	See update on page 18
Work with Visit West and other partners to promote our region and increase inbound tourism and work with our airline partners to increase flight routes.	Progressing
Maintain the community fund with annual investments of £150,000 per annum to support community projects and initiatives in the communities most affected by Airport operations.	See update on page 18

School engagement and Skills and Employment

Supporting the local economy is key to bringing prosperity to our region. Creating good quality jobs starts with education, and we are committed to promoting STEM learning and inspiring the next generation to work in the aviation sector. We work closely with local schools to ensure our communities understand the role the airport and aviation play in connecting people, and the importance we place on providing quality jobs to local people. In 2024, we spent over 245 hours engaging with over 2,400 students through workshops and outreach activities. We will use this figure as our baseline go forward, as we look to increase engagement by 10 % year on year. As our development works onsite continue at pace to support our growth to 12 million passengers per annum, we are working with our key contractors, Griffiths and Farrans JV to maximise our social value outreach. In 2024 20 people from the local Bristol area were hired to support our development work.

Working with our supply chain

Following a materiality assessment with our top ten suppliers, we have developed a sustainability supply chain charter which contains a number of metrics to monitor the environmental performance of our suppliers, furthering our understanding of their sustainability ambitions and encouraging best practice across our value chain. In 2025 we will pilot this initiative with our top 10 suppliers.

Community Fund

We are proud of the contribution we make to the local community through our local community funds that support projects in the local area including noise mitigation, transport and biodiversity initiatives. 100 projects benefited from the Local Community Fund and Diamond Fund and, with 39 of those projects relating to Noise Mitigation Scheme grants. Projects supported include noise insulation for charity Groundwork South's education centre in Cleeve, solar panels for Felton Village Hall, a biodiversity scheme for Alive Activities in Bristol and improvements to the outdoor space of local charity, Backwell Playing Fields.

What's next?

Exciting plans are underway in 2025 to make further progress on the 4 Sustainability Strategy goals including:

1

Goal 1: Net Zero operations by 2030

- Complete design plans for our energy centre, to be installed in 2026
- Additional solar array to achieve 25 % target

2

Goal 2: reduce indirect emissions and support the development of zero emissions flight

- Work with our Business Partners to reduce onsite energy consumption
- Undertake three innovation projects funded by our Aviation Carbon Transition Programme

3

Goal 3: protect and enhance our local environment

- Drive recycling rates across site to 65 % and reduce general waste
- Open the Airport's first Public Transport Interchange, increasing the number of bus bays from 6 to 15, enabling new public transport routes and increased frequency of services

4

Goal 4: Support our communities and enable our region to thrive

- Launch new "Take Off" employability programme to deliver employment opportunities at the Airport
- Roll out the airports first sustainability supply chain charter to our top 10 suppliers

Bristol Airport

bristolairport.co.uk