Annual Monitoring Report 2024

Bristol Airport

Contents

Section 1 – CEO Foreword

Welcome to the 2024 Annual Monitoring Report (AMR). This brings together the key data and reports from the Airport's operations, our contribution to the regional economy, and highlights the action we've taken to meet our ambitious sustainability targets.

Bristol Airport is here to connect the people and communities of our region to new places, new experiences, and to enable visitors from all over the world to experience this wonderful region for themselves. We're committed to doing this in a responsible way.

We've been publishing our AMR for 19 years as part of our ongoing commitment to be transparent. The past year has seen an unprecedented 10 million passengers passing through the terminal for the first time.

The Airport is being upgraded to meet further increases in demand, with our £400 million investment programme delivering a range of significant service improvements for our customers. Most prominent has been the construction of our new Public Transport Interchange and multi-storey car park opposite the terminal. Our largest project since the construction of the terminal 25 years ago, this facility will transform the passenger experience when completed in summer 2025. This year Bristol Airport became the first UK airport to fully roll-out next generation security, removing the need for passengers to take liquids and electronics out of their hand baggage.

We continue to create more jobs with over 5,000 people now employed on site and thousands more jobs supported locally. Total on-site employee numbers were up over a thousand compared to 2023 re-emphasising the economic importance of the Airport to the region in driving economic growth. This in turn is directly benefiting our local area - around 70% of employees live within 20 miles of the Airport.

As set out in our Sustainability Strategy 2023-2028, we have a clear and ambitious set of targets at Bristol Airport. This AMR provides an update on our progress towards net zero airport operations by 2030, our action to tackle indirect emissions, work to protect our local environment, and support our communities.

In 2024, we made substantial progress towards our target of reaching net zero operations by 2030, with a cumulative 40%+ reduction in emissions since 2019 set against our unique and stretching interim target of a 73% reduction in emissions by 2027. Significant investment and progress is being made with half of our airside buses now electric, plus our remaining diesel landside buses are running on Hydrotreated Vegetable Oil (HVO) with an associated 90% reduction in emissions. Last year, our 1.4MW solar farm went live, generating 1,328,362 kWh, which is the equivalent of powering 125 homes continuously for one year.

The most modern aircraft, such as the Airbus A320neo, are some 40% quieter and provide a 15-20% greater fuel efficiency than the previous generation of planes. The percentage of flights at Bristol Airport using these aircraft continues to grow rapidly, boosted by our proactive support, with almost half our based aircraft now consisting of the most fuel-efficient aircraft. We expect the percentage of these aircraft to grow again this year.

Our unique partnerships with the aerospace sector and others on decarbonisation continued to make progress in 2024. In March, we were proud to host the UK's first airside hydrogen refuelling trial, which was an important early step towards zero emissions flight.

It was a busy year for our retained ecologists working on our off-airport woodland habitat, called 'Lulsgate Wood', to support an increased population of bats (notably greater and lesser horseshoe), alongside dormouse, other woodland mammals, birds, amphibians, invertebrates and plants. We're already seeing positive results, with increases in recorded bat numbers.

Finally, we began to look towards our long-term future consulting the public and our stakeholders on our draft Master Plan to 2040, setting out how we will respond to the growing demand for travel to and from our region which is forecast to have a 10% growth in population over the next decade.

2024 has been a year of significant progress and change at Bristol Airport. We're continuing to invest in the future of the Airport, benefiting our region both economically and socially.

Dave Lees
Chief Executive Officer

Section 2 – 2024 Highlights & Introduction to the AMR

- Almost 10.5 million passengers travelled through the Airport – our busiest ever year.
- 5,500 jobs were provided by Bristol Airport and our business partners in July 2024. Job numbers were up over a third compared to 2023.
- Skills and Employment Plan launched – to deliver measures to promote employment opportunities, with a fund to support those with barriers to entering the workforce.
- Our construction projects continue to support the local supply chain with over £10.5 million spent in the last 6 months of 2024 with suppliers within 20 miles of the Airport.
- We became a Level 2 Disability Confident Employer, being independently accredited for the steps we've taken to be an inclusive employer.
- Two career fairs were held and 14 weeks of on-site work experience provided.
- The Airport hosted Project Acorn, the UK's first hydrogen airside refuelling trial and a first step towards zero emissions flight.
- The most modern, quieter, more fuel-efficient planes now make up 44% of all based aircraft.
- We created the Airport's first airline league table, including environmental and noise performance metrics.
- Our operational carbon emissions were cut by 10%, despite the increase in passenger numbers.
- We continue to introduce new electric vehicles and convert older ones, including our airside buses, of which 50% are now electric. Our remaining landside diesel buses now run on HVO, delivering an emissions saving of up to 90%.
- Biodiversity has been improved in woodland close to the Airport, with an increase in recorded bat numbers compared to recorded numbers in 2019.
- We provided £118,000 for 61 community projects being undertaken by local groups and charities.
- £200,000 was granted for noise mitigation measures for properties affected by aircraft noise.
- Noise monitoring indicates that we continue to operate within the limits set by the Local Authority within our planning consent.
- The A1 Airport Flyer carried more than one million passengers for the first time, a 20% increase on 2023.
- A new coach route connecting the Airport with Cheltenham and Gloucester was launched by National Express and Flixbus began running a service to Swansea and South Wales, expanding our existing links with passengers travelling from those areas.

Section 3 – Environment and Sustainability

We acknowledge the role that we need to play in the transition to a lower carbon future, in a local, regional and national context, and are committed to navigating this journey in a responsible manner. We have been actively reducing our emissions for some time.

There are three separate scopes of carbon emissions in accordance with the Greenhouse Gas (GHG) Protocol. These are defined as:

Scope 1: direct emissions relating to activities owned or controlled by Bristol Airport (e.g., fuel consumption, refrigerants etc);

Scope 2: indirect emissions relating to consumption of purchased fuel (e.g., electricity) which is controlled by Bristol Airport; and

Scope 3: emissions associated with activities controlled by third parties where Bristol Airport can guide and influence (e.g., aviation emissions and surface access emissions).

In 2023, the Airport published its Sustainability Strategy covering the period 2023-28. Further detail on how the Airport is achieving its targets on cutting emissions and working with partners to accelerate our net zero goals can be viewed in the 2024 Annual Sustainability Report. This AMR will provide an overview of progress against the Emissions and Climate Change Action Plan (ECCAP), carbon emissions and air quality.

3.1: Bristol Airport Emissions and Climate Change Action Plan (ECCAP)

Our targets

We are committed to reducing the emissions that directly relate to activities that we own or control (Scope 1 and 2 emission sources) and guiding and influencing the emissions of our stakeholders and our value chain (Scope 3 emission sources) to achieve emission reductions. Our ultimate goal is to become a net zero airport by 2050. This means all of the companies that operate from or provide services to the Airport, including us and the airlines, will be contributing to the UK's carbon net zero economy. An important milestone on that journey will be to achieve net zero operations by 2030. This means all of our Scope 1 and 2 emissions will be minimised as far as practicable with any residual emissions being removed.

2024 Performance – Carbon Emissions

Progress on the measures contained in the ECCAP is detailed in Appendix A. Key measures in relation to carbon emissions that we have progressed in the past year are:

- Design work for air source heat pumps to replace current boilers and remove gas from site began to enable construction in 2026.
- 50% of airside buses are now electric. Our first two electric landside buses are in use. Our remaining buses are now powered by Hydrotreated Vegetable Oil (HVO), a biofuel made from recycled waste oils and fats that would otherwise go to waste.

- Modernised aircraft make up 44% of based aircraft. This equates to 32.4% of the commercial air transport movements.
- Creating the Airport's first airline league table, including environmental and noise performance metrics

The effects of these measures can be seen is our 2024 carbon footprint and have contributed to carbon emissions reduction of over 10% compared to 2023, even though there has been an increase in passenger numbers.

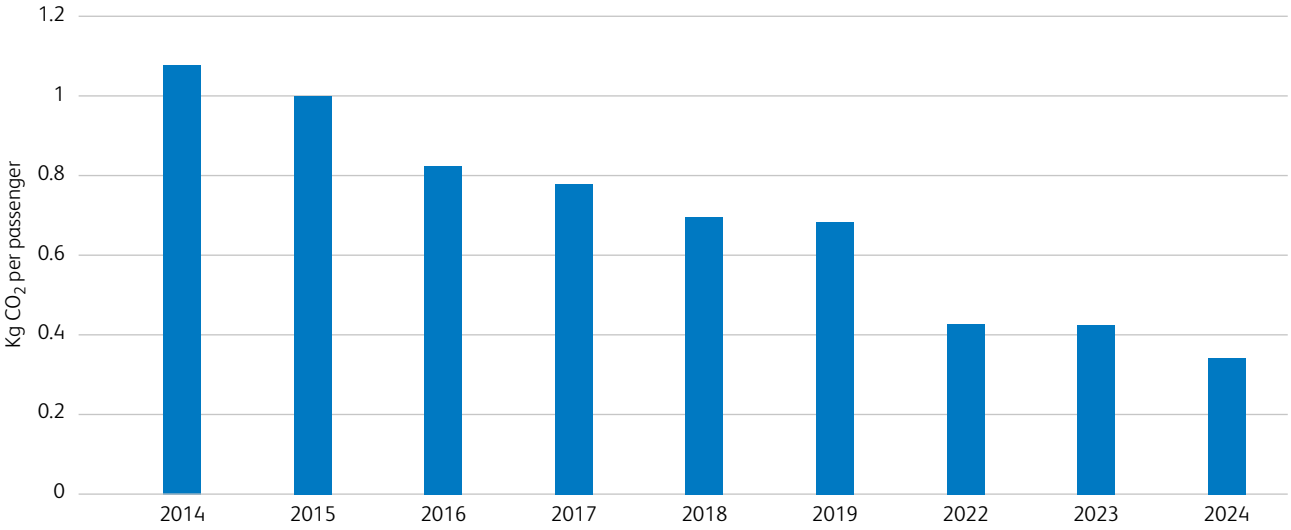
Carbon footprint

Our carbon footprint relative to our 2019 baseline year is shown in **Table 1**. The majority of the carbon emissions relate to our airline partners using the Airport and passengers accessing the Airport over land. Of the carbon emissions over which we have control, the electricity we purchase has the largest footprint, followed by our fleet vehicles.

Table 1: Carbon footprint relative to baseline

Scope	Activity	tCO2e	
		2019	2024
Scope 1	Fuel Consumption - Utilities	659.3	636.81
Scope 1	Operational Vehicles & Equipment	1564.5	561.03
Scope 1	Refrigerants	145.8	134.0
Scope 1	De-icer	46.8	48.0
Scope 1	LPG use for Fire training	6.2	8.09
Scope 2	Purchased Electricity (Location based) *(Market based)*	3660.0 *(0.0)*	2,292.37 *(0.0)*
	Total Scope 1 and 2 (Location based) ***(Market based)***	**6,082.6** ***(2,422.7)***	**3,680.30** ***(1,387.92)***
	% Difference to 2019 baseline (Location based)	**0%**	**40%**

Figure 1: Carbon Emissions (scope 1 and 2) per passenger



A detailed overview of the Airport's carbon footprint can be found in our 2024 Annual Sustainability Report.

Airport Carbon Accreditation

Bristol Airport calculates the footprint in accordance with the Airports Council International's (ACI's) Airport Carbon Accreditation (ACA) Scheme. ACI's ACA is endorsed by the European Civil Aviation Conference (ECAC), the European Organisation for the Safety of Air Navigation (EUROCONTROL) and the United Nations Framework Convention on Climate Change (UNFCCC). We achieved the first level of certification in the ACA scheme during 2015-2017. In June 2018, we gained ACA Stage 2 Certification, and we moved to Stage 3 + Neutrality, in 2021. In 2023, we achieved ACA level 4+, two years ahead of schedule and have maintained this in 2024.

This is independent verification that Bristol Airport has a long-term carbon management strategy for absolute emissions reductions, actively drives third parties towards delivering emission reductions, and that the residual carbon emissions over which the Airport has control, are being offset using internationally recognised offsets. The highest-level airports can currently achieve is level 5, which can be obtained once net zero operations have been achieved. This compares favourably with other UK based Airports of a size similar or larger to Bristol Airport.

3.2 Air Quality

The quality of the air is defined by concentrations of several pollutants that pose harm to human health. Combustion processes produce nitrogen dioxide (NO_2) and Particulate Matter (PM - PM_{10} and $PM_{2.5}$) with the main potential airport sources coming from vehicle traffic (staff and passenger journeys and airport operational vehicles), aircraft engines (during taxiing, take-off and landing), energy generation (diesel generators and gas boilers), fugitive emissions (evaporation - during fuelling of aircraft and vehicles) and other activities such as fire training.

This section considers air quality at Bristol Airport during 2024, comparing recorded concentrations with the UK Air Quality Objectives (AQOs) and against the commitments contained within Bristol Airport's Section 106 Agreement with North Somerset Council (NSC). Action on air quality in the UK is driven by the UK's Air Quality Strategy that sets the AQOs (see **Table 2**). These apply in places where members of the public are expected to spend an amount of time relevant to the averaging period (e.g. houses).

Table 2: Summary of relevant AQOs

Pollutant	Objective (UK)	Averaging period
Nitrogen dioxide (NO_2)	200 μgm^{-3} not to be exceeded more than 18 times a year	1-hour mean
	40 μgm^{-3}	Annual mean
Particulate matter – PM_{10}	50 μgm^{-3} not to be exceeded more than 35 times a year	24-hour mean
	40 μgm^{-3}	Annual mean
Particulate matter – $PM_{2.5}$	20 μgm^{-3}	Annual mean
	Target of 15% reduction in concentration at urban background locations	3 year mean

The Environment Act 2021 establishes a legally binding duty on Government to bring forward at least two new $PM_{2.5}$ air quality targets in secondary legislation by 31 October 2022. This duty sits within the environmental targets framework outlined in the Environment Act (Part 1). The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 set two $PM_{2.5}$ targets into law and contain provisions on how they will be monitored and assessed. The air quality targets set under the Act are:

- Annual Mean Concentration Target ('concentration target') - a maximum concentration of 10 µg m^{-3} to be met across England by 2040; and
- Population Exposure Reduction Target ('exposure target') - a 35% reduction in population exposure by 2040 (compared to a base year of 2018).

Our targets

As well as the ECCAP, air quality management at Bristol Airport is also legally bound by our Section 106 (S106) Agreement with NSC. The S106 stipulates the following requirements:

- Highlight air quality monitoring locations where monitored levels exceed 90% of the National Air Quality Strategy limit (as defined in **Table 2**)
- Report significant deterioration in air quality, defined as an increase in average annual concentration of more than 15% compared to the average levels recorded between 2007-2011 (NO_2) or particulate levels exceeding 50 µg/m^3 in more than 15 days in a calendar year (PM_{10}).

The 12 million passengers per annum (mppa) S106 agreement requires that we operate an air quality monitoring programme consisting of continuous monitoring NO_2 and PM (PM_{10} & $PM_{2.5}$) at two locations and NO_2 monitoring using diffusion tubes at not less than 16 locations.

2024 Performance – Air Quality

Detailed progress on the measures contained in the ECCAP is detailed in Appendix A. The most important measures that we have progressed in relation to local air quality in the past year are:

- The continual upgrade of the airport fleet including the electrification of vehicles and the conversion of buses to run on Hydrotreated Vegetable Oil (HVO) rather than diesel. All have benefits for the local air quality, reducing particulate and nitrous oxide emissions.
- We continue to drive the use of more sustainable transport to and from the Airport and work with our contracted taxi fleet to move towards a fully electric/hybrid fleet. 75% of the fleet is currently EV/hybrid.
- A second continuous air quality monitoring station at the Airport to monitor NOx, NO_2, PM_{10} and $PM_{2.5}$ was installed and diffusion tube monitoring for NO_2 was expanded to 16 sites.

The effect of these measures on local air quality is highly dependent on the location considered relative to the source of emissions. Emissions from aircraft and ground operations affect air quality in the immediate vicinity of the Airport, but within a few hundred metres of the Airport boundary, road traffic is the most dominant emissions source that determines air quality. Due to the height of flights, airborne aircraft do not have a significant impact on ground level pollutant concentrations at this distance. As such, measures related to road traffic are likely to have the greatest effect on pollutant concentrations at locations near to the local road network, where there are local residents. Measures relating to fixed assets and aircraft and airside operations are only likely to affect air quality relatively close to the Airport boundary.

In general, air quality is expected to improve in the future as older vehicles (road vehicles and aircraft) and equipment are replaced with newer models, either removing 'tail pipe' emissions through alternative power sources or meeting tighter emission standards and therefore emitting less pollution. It is therefore challenging to disaggregate the effect of individual measures on air quality from general changes and our focus is on monitoring to demonstrate continued compliance with the AQOs and avoiding significant deterioration in air quality.

Air quality monitoring

Monitoring of air quality is undertaken continuously, with two real-time monitor recording levels of both NO_2 and PM_{10}. NO_2 diffusion tubes are deployed at sixteen locations across the Airport, including the location of the continuous air quality monitor. No exceedances of the AQOs have been recorded in the last seven years and there has been a notable reduction in pollutant concentrations across the site. Further detail on air quality monitoring is contained within Appendix B.

3.3 Biodiversity

In 2023, we adopted an Integrated Landscape and Biodiversity Mitigation and Management Plan (ILBMMP). The purpose of the ILBMMP is to provide a framework for the management of Bristol Airport owned land. It sets out how we intend to protect and enhance habitats for flora and fauna as the Airport expands under our 12mppa permission.

Our approved Biodiversity Construction Management Plan (BCMP) is also a key consideration when it comes to development projects onsite. Ecologists, landscape architects and tree specialists are involved in such projects from the outset in order to ensure negative biodiversity impacts are avoided.

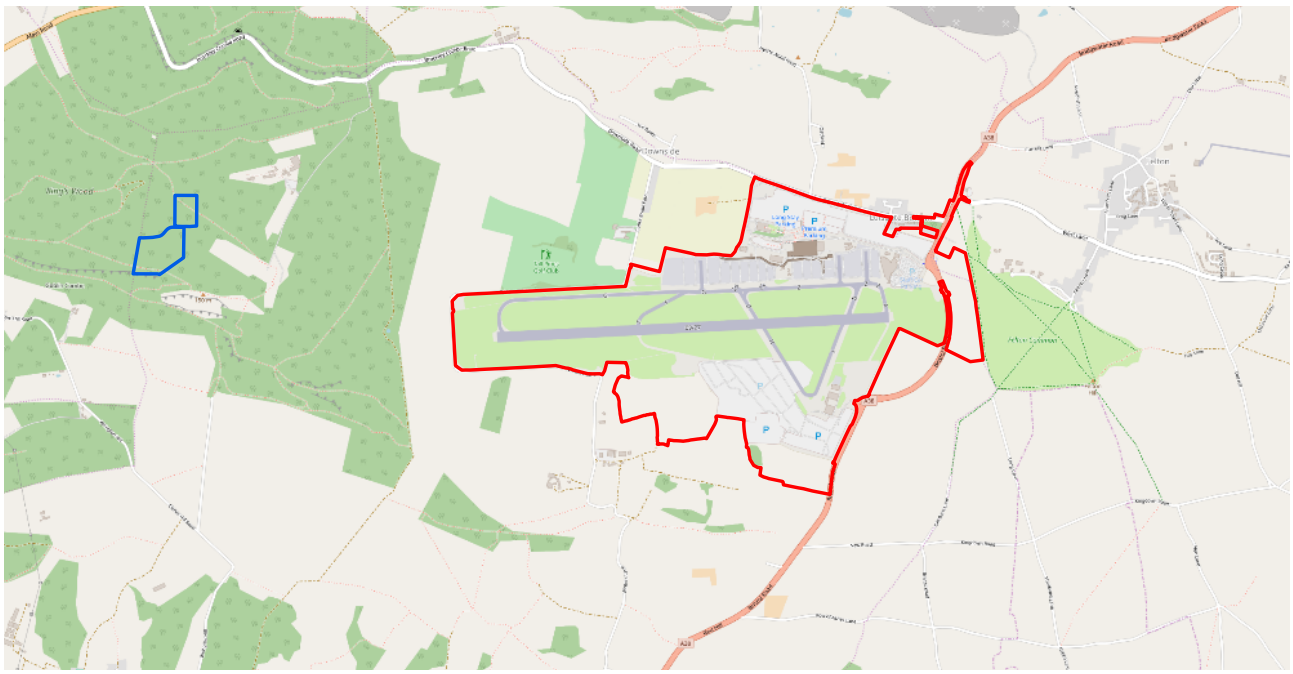
In 2024, detailed ecological surveys have been progressing across the Airport and our off-site woodland, known as Lulsgate Wood, to understand what impact the Airport is having and whether the initiatives set out in our ILBMMP are working. Focused effort has been directed at the restoration of Lulsgate Wood to support an increased population of bats (notably greater and the lesser horseshoe species), alongside dormouse, other woodland mammals, birds, amphibians, invertebrates and plants.

3.4. Habitats

Lulsgate Wood

Lulsgate Wood is located within the much larger Wrington Warren located just to the west of Bristol Airport. Lulsgate Wood was dominated by non-native larch and Scot's pine plantation, with some areas of mixed and deciduous woodland. A Woodland Management Plan was prepared in consultation with Natural England and the Forestry Commission and reviewed by North Somerset Council.

Figure 2: Location of Lulsgate Wood outlined in blue compared to Airport 12mppa planning application boundary in red



The Woodland Management Plan seeks to:

- Meet specific management prescriptions for greater and lesser horseshoe bats as set out in the North Somerset and Mendips Bat Special Area of Conservation Supplementary Planning Document, largely removing the old commercial conifer trees to create a 20% upper canopy cover with regeneration of native species below;
- Introduce a range of specific measures to support both the existing bat populations using the woodland and to increase its carrying capacity;
- Improve the overall biodiversity and habitat of Lulsgate Wood;
- Contribute to the favourable conservation status of Goblin Coombe Site of Special Scientific Interest (SSSI) (a small part of the SSSI is within Lulsgate Wood);
- To enhance the landscape setting of this area of woodland;
- To ensure responsible and high-quality management of Lulsgate Wood, as set out in this Woodland Management Plan, in terms of wider objectives and responsibilities.

Bristol Airport's vision for Lulsgate Wood

Lulsgate Wood will evolve to a thriving and biodiverse mixed woodland, dominated by native broadleaved trees, with an open canopy and revitalised understorey and ground flora, thereby maximising opportunities for greater and lesser horseshoe bats, and the widest range of local, native flora and fauna in accordance with best practice. It will be monitored and managed in accordance with the Lulsgate Wood Management Plan to provide a diverse ecological structure and function, enhancements to ecosystem services, retaining existing access and acting as an example of responsible woodland management to educate and inspire others.

The transformation during the latter half of 2023 and throughout 2024 has been positive and dramatic, with extensive regeneration of the seed bank and a notable increase in plant species and the diversification of habitat structure and function for both bats and other flora and fauna.

Lulgate Wood

Positive measures include the provision of cattle fencing and gates, linked to adjacent land recently restored to open mosaic habitat, to allow conservation management using cows, that will also leave cow pats to attract insects, promoting further use by greater and lesser horseshoe bats. A number of scrapes and shallow ponds were created to provide opportunities for amphibians and aquatic plants in particular. Two wooden bat houses have been provided and a previously unknown mine shaft and adit (a type of underground passageway) discovered, unblocked and enhanced for bats. A range of standing and fallen deadwood habitat has been provided, 'veteranisation[1]' of certain trees completed to provide features for birds, bats and bugs, and bird boxes installed.

Grassland

The main airfield grassland needs to be kept short for safety reasons, but other areas can be left to grow to attract greater biodiversity. Airport grassland is managed in accordance with the requirements of the Civil Aviation Authority's 'CAP772 Wildlife Hazard at Aerodromes', with localised areas being enhanced to provide a greater richness of plants, notably areas of exposed limestone and on the edges of the airfield grassland.

Calcareous Grassland at the Airport

Work to explore how these areas could be further enhanced for biodiversity and carbon sequestration is being undertaken, including the incorporation or organic 'biochar' to improve how plants and the soils can achieve this. This work is ongoing with initial results due later in 2025.

The development of an extension of Silver Zone long stay car park (known as Cogloop 2)(see Section 8) included the creation of a new landscape bund and the successful translocation of more species rich existing grassland onto it. The bund will be seeded with a grass and wildflower mix in spring 2025.

1 A nature conservation technique that creates hollows and cavities embedded in the tree trunk or branches which provides nesting and roosting space for birds, bats or insects.

Trees

All trees not associated with current development areas remain in good health and where necessary, have been protected from development works. The development of the Cogloop2 car park includes the planting of additional trees on a new landscaped bund.

Hedgerows

All hedgerows remain in good health and where necessary, have been protected from development works. Certain hedgerows have been allowed to grow taller and wider to provide benefits to birds and bats.

Ponds

Only one pond is present at Bristol Airport. This is located close to the new Cogloop2 car park. Work was carried out in the winter of 2024 to remove years of accumulated silt and rotting organic matter and support the introduction of aquatic plants and amphibians.

3.5. Species

Bats

A suite of bat surveys using ultrasonic bat detectors were conducted at and near to Bristol Airport in 2024, including the nearby Lulsgate Wood. The echolocations calls were recorded and analysed using specialist bioacoustic software to identify the different species present.

Surveys confirmed the presence of 10 bat species/genera at both Bristol Airport and Lulsgate Wood, comprising common *pipistrelle Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, serotine *Eptesicus serotinus*, *Nyctalus sp.*, *Plecotus sp.*, lesser horseshoe *Rhinolophus hipposideros*, *Myotis sp.*, greater horseshoe *Rhinolophus ferrumequinum*, Nathusius' pipistrelle *Pipistrellus nathusii*, and barbastelle *Barbastella barbastellus*.

Foraging and commuting behaviour of all species present was recorded across all locations. A total of eight new bat roosts were also confirmed at off-airport buildings and structures, for common pipistrelle, soprano pipistrelle, serotine and lesser horseshoe bats. Existing roost structures created by Bristol Airport continued to support horseshoe bats.

Land at the Cogloop 1 and Cogloop 2 car parks in Silver Zone to the south of the Airport recorded the highest levels of bat activity overall. Lulsgate Wood recorded the highest levels of horseshoe bat activity. **Table 3** shows an overview of bat results.

Greater Horseshoe Bat

Bristol Airport's ecologists hold appropriate Natural England licences that enable the lawful inspection of small numbers of bats to help understand their sex, age, condition and the function of key habitats.

Table 3: Overview of Bat Results from Bristol Airport and Lulsgate Wood

Area Name	Total Survey Nights* in 2024	Total Number of Bat Passes Recorded in 2024	Total Number of Horseshoe Bat Passes Recorded in 2024
Cogloop Car Parks	318	69,867	1,004
Lulsgate Wood	243	31,395	4,258

*Survey Nights is defined as the number of nights that bats were detected on each recorder. Note: this is not the same as the number of nights that detectors were active if there were nights when no bats were detected.

It is possible to gain a representation of how well used an area is by bats through the use of automated ultrasonic bat detectors, which record the echolocation calls from bats flying past. This is often represented through the use of a standardised peak mean bat passes per hour to allow direct comparison of a representative level of bat activity over time.

When comparing greater and lesser horseshoe bat activity across the survey area, between previous data (2018-2019) to 2024, it is positive to see that activity levels have not been affected through the conversion of cattle-grazed grassland to long stay carparking (Cogloop Car Parks). Activity levels have changed at Lulsgate Wood, as displayed in **Table 4** below.

Table 4: Comparison of horseshoe bat activity between 2018-2019 and 2024 bat surveys

Lesser horseshoe bat – peak mean bat passes per hour			
Area Reference	**2018 – 2019 data**	**2024 data**	**Change from 2018-2019**
Cogloop	0.75	0.77	Stable
Lulsgate Wood	1.20	2.86	138% Increase
Greater horseshoe bat – peak mean bat passes per hour			
Cogloop	0.99	1.04	Stable
Lulsgate Wood	2.71	5.32	96% Increase

The bat activity overall at Lulsgate Wood increased substantially from the 2019 surveys, with around three times the number of bat passes recorded in 2024 and a similar number of survey nights. In addition, a new roost for horseshoe bats was created at Lulsgate Wood in 2024, by exposing former mine shafts/adit and building a structure to control temperature, humidity and lighting. These are already being used by hibernating lesser horseshoe bats.

Lulsgate Wood – insulated structure over newly discovered and opened mine shaft and adit – being used as an active bat roost

Mine shaft entrance

Great crested newt

Great crested newt are present in two ponds in Abspitt Wood west of Bristol Airport. The size class of the population (small) remains the same compared to 2018/19 surveys. After the creation of deep 'ruts' and scrapes in Lulsgate Wood, the presence of palmate newt has been recorded in 2024 (no water features were previously present and amphibians had not been recorded before).

Badger

Badgers have been recorded at Bristol Airport for many years with two core clans associated with the south (long-stay) car parks known as Silver Zone. Previous tracking of the badger activity showed that badger also use the airfield. Other badger clans are associated with land near to the northern side of the Airport with evidence of foraging being recorded. Badger continue to remain present at Bristol Airport, using land in the north but particularly the south with evidence of fresh sett excavation in existing car park bunds and areas managed for nature conservation. Badger culling has been in force in North Somerset and close to Bristol Airport for some time and is likely to have had an impact on the viability and distribution of some clans. During this period no notable change in badger habitat availability, condition or disturbance has been recorded.

Birds

Thirty-five bird species were recorded on, adjacent to or flying over the non-operational parts of Bristol Airport and adjacent fields between April and July 2024. Of the species recorded, 12 species were recorded as 'confirmed breeding', two were recorded as 'probable breeding' and 16 were recorded as 'possible breeding'. The remaining five species were recorded as 'non-breeding' (flying over only or present on migration only).

Reptiles

Updated reptile surveys in 2024 did not record any reptiles at Bristol Airport or Lulsgate Wood. This has been the situation since surveys started in 2005 so no change in status, but it is hoped ongoing habitat management may help these animals to colonise in the future.

Dormouse

Updated surveys in 2024 did not record any dormouse at Bristol Airport, but did reconfirm the presence of dormouse in Lulsgate Wood.

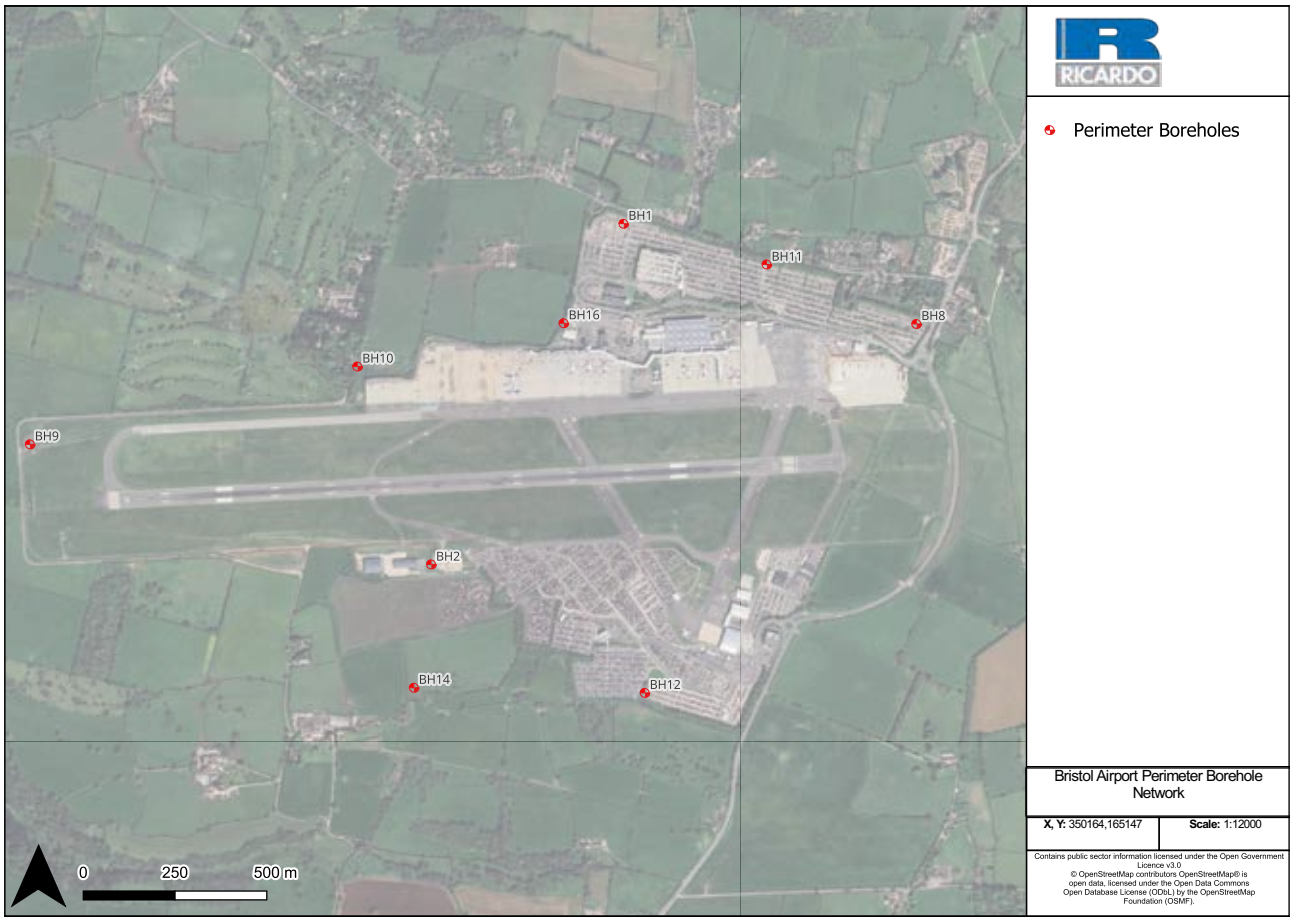
Dormouse has not been recorded at the Airport since surveys started in 2005, so there is no change in status. It is hoped ongoing habitat management activities may help encourage these animals to colonise in the future. The recording of dormouse at Lulsgate Wood in 2024 demonstrates that the woodland management (which was implemented under a Natural England dormouse conservation licence) did not result in a change in the presence of this animal. Numerous measures to improve conditions for dormouse have been implemented at Lulsgate Wood (e.g. increased food diversity, improved temperature conditions in new open glades and rids, provision of nesting boxes).

3.6 Ground Water Management

Bristol Airport has a number of ground water boreholes across its site, as the Airport is situated above an aquifer (a permeable layer of rock that can store and release water). The Airport itself sits on high ground with a local geology of black rock limestone. The groundwater level sits between 70-100 metres below ground with areas of perched groundwater nearer the surface.

Rain that falls onto the Airport's hard surfaces (runway, taxiways, aprons, roads, car parks etc.) drains into the ground via soakaways across the site. These soakaways have discharge permits, which the Environment Agency use to set acceptable discharge limits for potential contaminants including pH and hydrocarbons. To ensure that the Airport's discharges are compliant with the permit conditions and not impacting the quality of the groundwater, the Airport conducts a groundwater monitoring programme which samples groundwater boreholes installed around the perimeter of the Airport to check the quality of the water leaving the Airport site is not causing a negative impact. A map of the Airport showing the perimeter boreholes is detailed in **Figure 3**.

Figure 3: borehole locations



Perimeter boreholes are located strategically to cover key risk areas and are sampled once a quarter. All samples obtained are analysed at a UK Accredited Service (UKAS) laboratory. The laboratory tests for indicators of sewage, heavy metals, hydrocarbons, de-icers, pH levels and other potential contaminants. These results are reviewed against the Environmental Quality Standards (EQS), Water Framework Directive (WFD) and the Drinking Water Standards (DWS). The laboratory results are provided every six months, as required by our permits, to the Environment Agency. All perimeter boreholes were found to be compliant across the year.

As the Airport site continues to develop, additional monitoring is required. Our 12mppa planning permission contains a condition requiring us to monitor new areas of development during both construction and operational phases. To support the 12mppa development works and ensure compliance, new boreholes were drilled to monitor the construction of the Silver Zone car park extension (BH14) and the forthcoming Western Terminal Extension (BH16) works.

Section 4 – Our Operations

4.1 Passenger Numbers

In 2024, the number of passengers who travelled through the Airport was 10,479,112. This is an increase of 7% compared to 2023, and the busiest ever year for the Airport. It is the first time that the Airport has recorded over 10 million passengers in a year, a reflection of the continued and growing demand for air travel in the region.

Table 5 lists the top ten most popular routes from Bristol Airport during 2024 compared to 2023. Amsterdam continues to be the most popular destination, with Alicante remaining in second place. Glasgow features in the top 10 for 2024, with Paris dropping just outside.

Table 5: Top 10 most visited destinations from the Airport

	2024 Destinations	2024 Passenger Numbers	2023 Destinations	2023 Passenger Numbers
1	Amsterdam	500,882	Amsterdam	471,957
2	Alicante	482,316	Alicante	459,151
3	Palma de Mallorca	471,147	Edinburgh	420,513
4	Edinburgh	448,799	Palma de Mallorca	419,351
5	Dublin	432,453	Dublin	399,083
6	Tenerife	411,982	Malaga	389,339
7	Malaga	391,376	Barcelona	369,745
8	Faro	374,313	Tenerife	364,312
9	Glasgow	290,379	Paris	357,163
10	Barcelona	272,831	Faro	346,600

The map below (**Figure 4)** shows all destinations that Bristol Airport operated flights from in 2024. Direct flights are shown in dark blue, one stop indicates lay over destinations and Amsterdam Schiphol as the key connecting hub for KLM.

Figure 4: Destinations flown to from Bristol Airport in 2024

4.2 Air Transport Movements

The number of Air Transport Movements (ATMs) grew in 2024 by 0.9 % when compared to 2023. ATMs include all flights rather than aircraft movements which mainly reflects scheduled and charter flights only. Positioning flights refer to flights which have the sole purpose of positioning the aircraft to conduct a flight from a different airport. The breakdown of ATMs is provided in **Table 6** below.

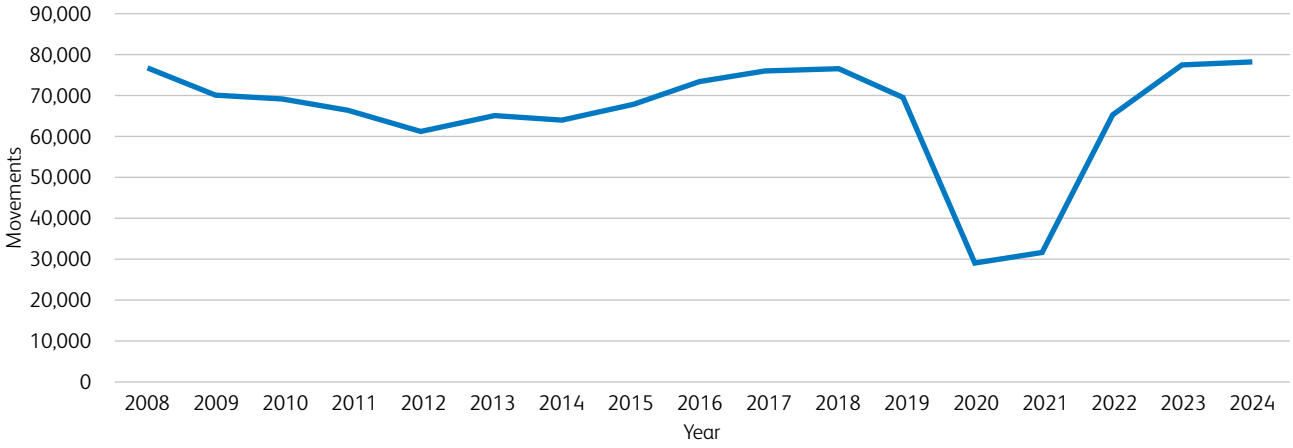
Table 6: 2024 ATMs compared with 2023

Air Transport Movements Categories	2024	2023	% Change from 2023-2024
Cargo	0	0	0 %
Scheduled domestic passenger aircraft	11,118	11,689	-4.3 %
Scheduled international passenger aircraft	55,603	52,233	6.5 %
Charter domestic passenger aircraft	960	937	2.5 %
Charter international passenger aircraft	3,791	3,813	-0.6 %
Positioning flights	714	787	-9.3 %
Other (incl. flying club, private charter)	6,298	8,385	-24.9 %
Total ATMs	**78,554**	**77,844**	**0.9%**

This data is provisional Bristol Airport data and therefore may differ marginally to data published by the CAA.

The number of ATMs for the past fifteen years are shown in **Figure 5** below.

Figure 5: Aircraft Transport Movements 2008 to 2024



Out of the 78,544 total movements in 2024, the Airbus A320neo and A321neo, which are a modernised, quieter aircraft type, made 14,790 movements, equivalent to 18.8 % of total movements. The number of NEO movements increased by 44.6 % in 2024 compared to 2023. The Boeing 737 MAX which is a similarly modern aircraft made 8,521 movements, equivalent to 10.8 % of total movements in 2024. The number of MAX movements increased by 27.2 % in 2024 compared to 2023. The Embraer 2 series are a similar modern aircraft and made 104 movements which is 0.1 % of total movements.

Table 7 below shows a significant increase in the percentage of modernised aircraft flying from Bristol Airport, which are not only quieter, but more fuel efficient as well, reducing their impact on the environment.

Table 7: Fleet breakdown % of Neos/Max's/Embraer 2's of total air traffic movements

Year	2020	2021	2022	2023	2024
% of Neos/Max's & Embraer 2's	21 %	25 %	18.5 %	21.9 %	29.7 %

4.3 Runway Usage

The runway at Bristol Airport is aligned east/west. The runway designation is derived from the compass bearing of each direction. The westerly runway is known as Runway 27 and the easterly runway as Runway 09. The percentage of movements by direction since 2001 is provided in **Table 8**. The average usage over the last 23 years has been 76 % for Runway 27 and 24 % for Runway 09. Runway use is dependent on several factors including wind speed, wind direction and visibility.

Table 8: Runway usage 2001 to 2024

Year	Westerly (27)	Easterly (09)
2001	79%	21%
2002	77%	23%
2003	65%	35%
2004	82%	18%
2005	71%	29%
2006	75%	25%
2007	79%	21%
2008	84%	16%
2009	80%	20%
2010	82%	18%
2011	83%	17%
2012	86%	14%
2013	75%	25%
2014	67%	33%
2015	76%	24%
2016	86%	14%
2017	80%	20%
2018	64%	36%
2019	73%	27%
2020	81%	19%
2021	70%	30%
2022	67%	33%
2023	70%	30%
2024	72%	28%
Average	**76%**	**24%**

4.4 Night Noise Quota Usage

The following information relates to the requirements as set out within the Airport's planning conditions for 12mppa from summer 2024.

Night-time operations at Bristol Airport are controlled by a noise quota system in line with 12mppa planning conditions. The restrictions specify a night period (23:00-06:00) during which time the noisiest types of aircraft may not be scheduled to land or take off. In addition, between 23:30 and 06:00, the night quota period, aircraft movements are restricted by a noise quota limit. Aircraft count against the noise quota according to their quota count (QC) classification.

The quota count itself is related to the noise classification of aircraft. The restrictions allow for dispensations to be given in certain circumstances and there are provisions for dealing with delayed departures and early arrivals. The quota limits are set on a seasonal basis, defined by the period of British Summer Time. The summer season is therefore approximately seven months long for which a current quota count limit of 1,260 applies. The winter season is approximately five months long for which a current quota count limit of 900 applies. There is provision for a proportion of the noise quota limit, if not used in the current season, to be carried over to the following season.

Separately but also part of the 12mppa planning conditions, the total number of take-offs and landings between the hours of 23:30 and 06:00 shall not exceed 4,000 in two adjoining seasons of summer and winter. The total number of take-offs and landings between the hours of 06:00 and 07:00 and between 23:00 and 23:30 (known as the shoulder periods) shall not exceed 9,500 in any calendar year. **Table 9** records the night movements and quota usage since the system came into use back in 2000.

Table 9: Night movements and quota use

Year	Night movements		Quota use	
	Summer	Winter	Summer	Winter
2000/01	2564	1371	1239	435.5
2001/02	2999	1536	1230	614
2002/03	2655	1386	1150	444.5
2003/04	2960	1033	1378	413.5
2004/05	2082	786	1288	426
2005/06	2183	891	1225.5	472.5
2006/07	2181	163	1138	88
2007/08	2057	939	974.5	451
2008/09	2322	831	1118.5	326
2009/10	2146	816	940	346
2010/11	2984	559	1375.5	216
2011/12	2216	257	1112.5	120
2012/13	1861	253	938	117
2013/14	1888	233	975.5	100
2014/15	2210	232	1145	106
2015/16	2378	244	1180	96.5
2016/17	2704	298	1354	120.5
2017/18	2991	353	1522	152
2018/19	2975	254	1490	117.5
2019/20	2933	305	1408.5	144.75
2020/21	570	290	216	129
2021/22	694	331	366	155.75
2022/23	2998	398	1564.5	147
2023/24	3398	408	790.6	100.4
2024/25	**3476**	**CURRENT**	**643.885**	**CURRENT**

The breakdown of movements in each quota count level throughout summer 2024 is shown below in **Table 10** for arrivals and departures.

Table 10: Quota use by aircraft quota count for summer 2024

Quota Count Classification	Arrivals	Departures	Arrivals QC points	Departure QC Points	Total
0.0125	682	0	8.525	0	8.525
0.025	1	0	0.025	0	0.025
0.045	0	0	0	0	0
0.085	1	3	0.085	0.255	0.34
0.125	884	1	110.5	0.125	110.625
0.17	4	1	0.68	0.17	0.85
0.21	541	6	113.61	1.261	114.87
0.25	626	0	156.5	0	156.5
0.34	661	0	224.74	0	224.74
0.42	0	2	0	0.84	0.84
0.5	0	18	0	9	9
0.69	0	19	0	13.11	13.11
0.83	0	2	0	1.66	1.66
1.4	1	1	1.4	1.4	2.8
Exempt*	13	9	0	0	0
Total	**3414**	**62**	**616.065**	**27.82**	**643.885**

*aircraft that weigh under 11.6 tonnes are exempt in terms of noise quota

A total of 3,476 movements are included in the quota count. 3,414 of these were arrivals, and 62 were departures. This compared with 3359 arrivals and 39 departures in 2023. The quota count total of 643.885 for summer 2024 is within our consented quota count of 1260 for the summer season.

Following a successful application for full slot coordination in 2023, Bristol Airport became fully slot coordinated from the summer season 2024, meaning that Airports Co-ordination Limited (ACL) now coordinate slots for all operations at the Airport, day and night. ACL manage all movements at the larger London airports such as Heathrow.

For 2024, ACL designated a certain number of slots to airlines for the night period in accordance with the limits, they also manage the airlines conformance against our controls. If an unscheduled movement occurred within the night period, an airline could lodge a request for it to be dispensed as per the criteria of Condition 16 (under 12mppa). Bristol Airport reviews these requests and reports and agrees any dispensations with the local planning authority in accordance with a process agreed with North Somerset Council. Any requests which did not align to the conditional criteria would be refused and would count as night flights within the figures recorded above in **Table 9**.

There were 711 movements logged as dispensations based on the agreed criteria within the planning conditions. This is a reduction of 11.8% compared to summer 2023 when 806 dispensations were recorded. The majority of these dispensations were due to air traffic disruption across Europe. Delays to flights which would have resulted in serious hardship to passengers were also logged as dispensations, along with a number of emergency flights where there was an immediate danger to life.

There were 6,613 movements during the shoulder periods between the hours of 06:00 and 07:00 and 23:00 and 23:30 during 2024. This remains significantly under the consented threshold of 9,500 movements during these times within a calendar year.

Overall, in 2024, Bristol Airport continued to operate within the limits set within the 12mppa planning permission.

4.5 Noise Contours

The noise contours produced and analysed in this section were completed in line with the Airport's planning requirements. Condition 14 of the 12mppa permission identifies the 57dB daytime noise contour at different passenger throughputs. 57dB is generally used as the industry standard for when people start to become concerned about aircraft noise. Condition 14 stipulates that:

- Up to 11mppa, the area enclosed by the 57dB daytime noise contour shall not exceed 12.42km²
- Up to 12mppa, the area enclosed by the 57dB daytime noise contour shall not exceed 11.56km²
- On reaching 12mppa, the area enclosed by the 57dB daytime noise contour shall not exceed 10.7km² and the night-time noise contour shall not exceed 6.8km²

We are required to produce a forecast daytime noise contour for summer 2025 based on the expected flight patterns between mid-June and mid-September over a 92-day period. The information is derived from airline schedules operated and co-ordinated for Bristol Airport by Airport Coordination Ltd. Noise predictions have then been undertaken using noise modelling software Aviation Environmental Design Tool (AEDT).

The summer daytime forecast for 2025 for the 57dB noise contour is 11.05km². With predicted passengers expected to between 10.5mppa and 11mppa, this forecast contour does not exceed the 12.42km² planning limit, nor the 11.56 km² in the event passenger numbers exceeded 11mppa. As well as forecasting contours, planning condition 14 also requires us to report on the actual summer daytime 57dB noise for 2024. This is based on data collected from our noise monitoring terminals. The summer daytime actual noise contour for 2024 was 11.74km². As the total passenger numbers for 2024 was below 11mppa, the 12.42km² planning limit applied. Therefore, the 11.74km² complied with the condition.

Planning condition 15 of the 12mppa permission requires the Airport to identify the actual 2024 and forecast 2025 summer day and nighttime contours for a variety of noise levels. These are shown in **Tables 11** and **12** below. All contours are forecast to decrease in size.

Table 11: Noise Contour Areas – Summer Day (16h) Period

Contour Level (dB LAeq,16h)	Area of Summer Day Noise Contours - km²	
	2024 Actual	2025 Forecast
≥51	41.16	39.21
≥54	21.61	20.55
≥57	11.74	11.05
≥60	6.40	6.03
≥63	3.25	2.98

Table 12: Noise Contour Areas – Summer Night (8h) Period

Contour Level (dB LAeq,8h)	Area of Summer Night Noise Contours - km²	
	2024 Actual	2025 Forecast
≥40	163.91	150.68
≥55	8.49	7.88

The noise contours referred to in this section can be viewed in Appendix C.

The number of properties within the forecasted 2025 summer daytime contours are detailed in **Table 13** (below), and the number of properties within the night contours are shown in **Table 14**. The number of properties is cumulative. For example, the number of properties in the 60dB contour are also included in the 63dB contour.

Properties located within the 57dB, 60dB and 63dB daytime contours, plus the 55dB nighttime contour, are eligible to apply to the Airport's 2025 noise mitigation scheme. Details of which are available on the Airport's website.

In 2024, 39 households received a total of £200,000 from the Airport's noise insulation scheme to install measures to help mitigate noise, such as double glazing.

Table 13: Number of Dwellings in Noise Insulation Scheme contours in 2024 (actual) and 2025 (forecast)

Contour Level (dB LAeq,16h)	Dwellings within Summer Daytime Air Noise Contours	
	2024 Actual	2025 Forecast
≥51	4,300	3,896
≥54	1,371	1,194
≥57	531	548
≥60	138	145
≥63	30	29

Table 14: Number of dwellings within night noise contours

Contour Level (dB LAeq,8h)	Dwellings within Summer Night-time Air Noise Contours	
	2024 Actual	2025 Forecast
≥40	38,034	27,785
≥55	421	348

Actual noise contours for summer 2024 and predicted noise contours for summer 2025 can be found in Appendix C. Updates on the actions set out in the 2024-2029 Noise Action Plan can be found in Appendix D.

4.6 Noise Monitoring

Bristol Airport continually analyses aircraft noise using three monitors located near Felton, Winford and Congresbury. The Congresbury and Winford (known as Littleton Hill) monitors are positioned in accordance with ICAO standards for monitoring noise from departing aircraft. They are positioned 6,500m from the start of roll from Runway 09 (Littleton Hill) and Runway 27 (Congresbury).

The Airport's Noise and Track Keeping System monitors noise levels recorded at these monitors and ties this information to operational data. The below section provides an insight into noise produced by Aircraft operations at BRS.

Measured and forecasted noise levels during the 16-hour day and 8-hour night period are shown in the **Table 15** and **16** below. The tables show the actual noise levels measured in 2024 compared to what was forecast, so illustrate how accurate the prediction was compared to what actually occurred.

Table 15: Actual and Forecast Noise Levels – Summer Day (16h) Period

Monitoring Location	Summer Day Predicted Noise Level, dB LAeq,16h	
	2024 Actual Measured	Model – 2024 Forecast
Felton	61.9	61.8
Congresbury	55.8	55.5
Littleton Hill	57.3	57.3

Table 16: Actual and Forecast Noise Levels – Summer Night (8h) Period

Monitoring Location	Summer Night Predicted Noise Level, dB LAeq,8h	
	2024 Actual Measured	Model – 2024 Forecast
Felton	59.9	59.1
Congresbury	51.4	51.9
Littleton Hill	55.5	55.0

Aircraft Noise Levels

Aircraft using Bristol Airport are required to be operated in the quietest possible manner. Aircraft exceeding 90 dB(A) by day (0600 to 2330 local time) and 85 dB(A) by night (2331 to 0559 local time) at the Congresbury and Littleton Hill (LH) noise monitoring points will be subject to a penalty as set out in the Airport Fees and Charges. A summary of data relating to aircraft movements from the noise monitoring undertaken in 2024 is provided in **Table 17** with 2023 data presented in brackets. All departing aircraft complied with the noise infringement limits and no penalties were levied in 2024.

Table 17: Noise monitoring - aircraft movements from Congresbury and Littleton Hill noise monitoring points (2023 data in brackets)

	Peak aircraft noise level Lmax dB(A)	
Month	**Runway 27 – Congresbury**	**Runway 09 – Littleton Hill**
January	81.2 (81.9)	82.5 (83.2)
February	80.8 (79.7)	82.3 (85.1)
March	83.1 (80.5)	No Data* (82.9)
April	80.5 (79.9)	83.5(84.3)
May	82.5 (82.1)	81.9 (80.9)
June	80 (80.1)	81.4 (80.4)
July	81.3 (80.5)	85.1 (82.5)
August	80.5 (78.8)	81.4 (83.1)
September	83.3 (82.3)	80.7 (81.4)
October	80.9 (80.1)	81.9 (88.6**)
November	80.8 (80.3)	83.9 (82.7)
December	80.5 (84.1)	83 (79.4)

*Technical problem with the noise monitor in March 2024 meant no readings were collected.
**Military Aircraft operating for essential authorised training.

4.7 Noise Climate

Noise climates show how noise varies over a set period. This data is an average of noise levels recorded each month over 24-hours, shown in **Table 18**.

Table 18: Noise Climates over the past two years

	Congresbury		Littleton Hill		Felton	
	2024	2023	2024	2023	2024	2023
Month	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)
January	58.5	58.5	55.8	56	60.1	60.1
February	58.4	58.2	56.1	55.9	61.3	60.5
March	58.3	58.9	-*	56.8	61.2	60.8
April	57.8	59.1	58	57.5	61.5	61.4
May	57.5	58.5	57	56.5	61.9	61.1
June	57.7	58.1	57.3	56.3	61.7	60.9
July	57.5	58.9	57.2	57.6	61.7	61.6
August	57.6	58.5	57.3	57.0	61.9	61.7
September	58.1	58.7	58	58.8	61.9	62.0
October	58.3	58.6	57	57.1	61.8	61.6
November	57.4	58.4	56.5	56.0	59.9	60.5
December	58.4	58.8	59.8	56.5	61.6	61.3

*Technical problem with the noise monitor in March 2024 meant no readings were collected.

4.8 Environmental Complaints

For logging and tracking noise and environmental complaints, Bristol Airport operates a web-based system, accessible at https://www.bristolairport.co.uk/contact-and-help/noise-and-environmental-concerns/, and by post.

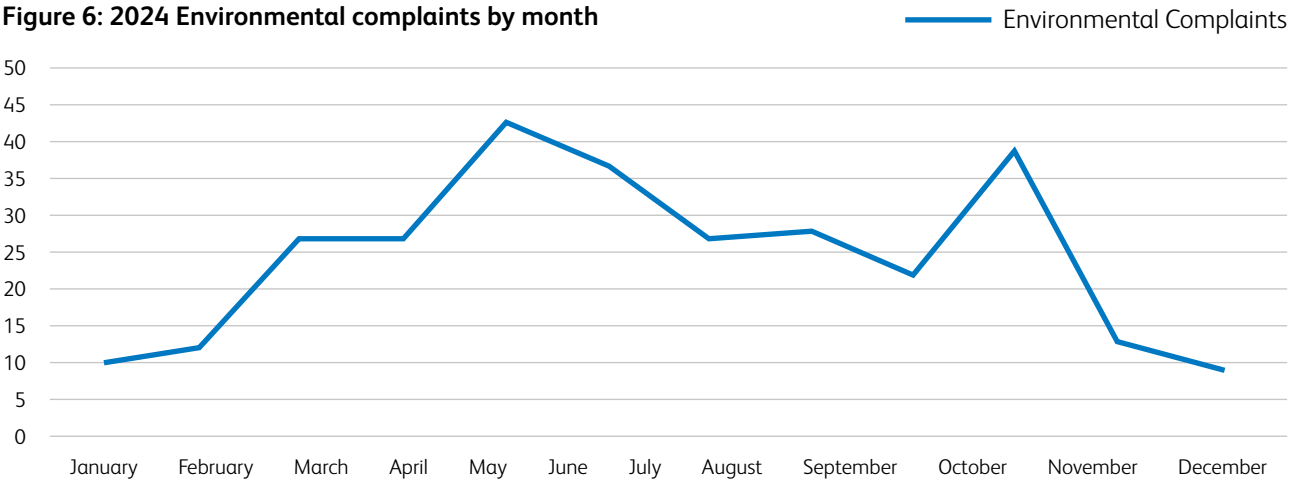
During 2024, Bristol Airport received 294 environmental complaints, of which 233 were related to noise. Environmental complaint statistics are shown in **Table 19** below.

Table 19: Environmental complaints

	2024	2023	2022	2021	2020	2019
Total number of complaints	292	276	398	159	199	451
Number of individual complainants	147	167	253	105	96	229
Average number of complaints per complainant	2	1.7	1.6	1.5	2.1	1.9

The distribution of noise complaints by month throughout 2024 is shown in **Figure 6** below.

Figure 6: 2024 Environmental complaints by month



The nature of complaints is shown below. Aircraft noise and flight paths were the primary causes of concern in 2024, shown in **Table 20**.

Table 20: Environmental complaints by category

Type of Complaints	Number of Complaints
Night Noise	174
Day Noise	35
Flight Paths	19
Environmental Effects of Development	13
Low Flying	10
Congestion	8
General Pollution	8
Off-site Parking	7
Ground Noise	7
Noise Mitigation Scheme	3
Air Quality	2
Waste Management	2
Helicopter Movements	1
Idling	1
Odour	1
Litter	1
TOTAL	**292**

Complaints can also be split by location, as shown below. **Table 21** identifies area where three or more complaints have been made in 2024 or 2023.

Table 21: Areas with three or more environmental complaints during 2024 or 2023

Location	2024	2023
Backwell	7	3
Bath	23	68
Bristol	21	110
Chippenham	3	0
Cleeve	20	8
Clevedon	1	4
Congresbury	6	4
Corsham	54	0
Downside	14	0
Felton	4	5
Grittleton	18	0
Keynsham	9	3
Pensford	3	0
Redhill	4	0
Stanton Drew	6	0
Unknown	6	12
Weston Super Mare	5	6
Winford	5	6
Wrington	14	7
Yatton	14	0

The table shows the origin of environmental complaints, as per postcode given when reporting the complaint. Two complainants in 2024 dwell in Corsham. One complainant submitted multiple complaints between January and July which were handled using airport policy, leading to no further submissions of complaints. Excluding these complainants, most complaints originated from Bath, Bristol and Cleeve in 2024.

4.9 Flight Routings

Indicative flight routes for easterly and westerly operations are provided in Appendix E. The Noise Preferential Routes (NPRs) are to be flown by all departing aircraft of more than 5700 kg maximum certified weight, unless otherwise instructed by Air Traffic Control (ATC) or unless deviations are required in the interests of safety and/or weather. The NPR requires aircraft to climb straight ahead for 4.5 nautical miles when departing on Runway 27 and 4.7 nautical miles on Runway 09 and to be no lower than 3,000ft above sea level before commencing the turn. The obligations of the NPR cease when an altitude of 4,000ft above sea level has been reached.

Bristol Airport's noise and track keeping system, ANOMS, is used to monitor adherence to the NPRs and to record continuous descent approaches. As part of the Airport's Noise Action Plan, an online flight tracking system is available for public use on the Airport's website. A map showing the NPRs can be found in Appendix E. Conformance to NPRs in 2024 was 99% for all departures.

Bristol Airport works with the airlines and the air traffic services provider, NATS, to promote the use of continuous descent approaches (CDAs). In contrast to conventional airport approaches, aircraft following CDAs descend continuously from as high as possible. A continuous descent requires less engine thrust than level flights and provides additional noise attenuation by keeping the aircraft higher for longer. In 2024, 89.6% of all flights used a CDA on arrival. Data is now reviewed frequently with airlines and air traffic control to improve CDA compliance. Helicopter movements and light aircraft as defined by the European Aviation Safety Agency as aircraft under 5700kg, such as two-seater planes used for training flights, are excluded from this data. 94.35% of arrivals operated by the Airport's four main airlines (easyJet, Ryanair, Jet2 and TUI) utilised a CDA approach.

Factors that mean an aircraft cannot utilise a CDA include weather and air traffic routing requirements. An arrival is classified as a CDA if it is below an altitude of 6000ft, no level flight, or one phase of level flight is no longer than 2.5 nautical miles. CDA performance is regularly reviewed with the airlines at the Flight Operations and Safety Committee to improve performance.

Bristol Airport reserves the right to levy a surcharge against any operator who, on a persistent basis, fails to operate in-line with the prescribed NPRs as recorded by ANOMS. No such surcharges were levied in 2024.

4.10 Ground Noise Management

Measures adopted by Bristol Airport to minimise the effects of ground noise are set out in a Ground Noise Management Strategy prepared in accordance with the 10mppa S106 Agreement dated 16 February 2011. Progress against the areas of action is set out below. Please note as part of the 12mppa S106 Agreement, a new Ground Noise Strategy is in the process of being written.

Fixed electrical ground power

Fixed electrical ground power (FEGP) is provided as a primary substitute for the use of aircraft auxiliary power units (APUs) or mobile ground power units.

Its use is mandatory where provided and is subject to strict operational rules. Aircraft stands 18, 19, 20, 34, 35, 36, 37, 38 and 39 have been equipped with FEGP as these are the stands closest to residential properties.

Ground running of aircraft engines

Ground running of aircraft engines is necessary as part of the scheduled maintenance undertaken to ensure that aircraft are airworthy and fit for flight. All such activities are subject to strict operational procedures. **Table 22** shows these runs; idle is when there is no additional power, so the engine sat at base lowest thrust setting. Anything above this sits in that 'above idle' category.

Table 22: Ground Running of Aircraft Engines

	2024	2023	2022	2021	2020	2019
Idle	448	424	372	566	297	347
Above Idle	14	23	42	36	26	32

Aircraft auxiliary power units

Strict operational procedures are in place to control the use of APUs engine runs. APU engine runs between 23:00 and 07:00 are subject to prior approval. APU engine runs within this time period are shown in **Table 23** below.

Table 23: APU engine runs between 23:00 and 07:00

	2024	2023	2022	2021	2020	2019
APU Engine Runs	16	10	10	5	5	20

Section 5 – Community

5.1 Community Fund and Diamond Fund

In 2024, Bristol Airport launched its new Local Community Fund and Diamond Fund to support projects and community groups in the local area that are most affected by the Airport's operations. The Airport Environmental and Amenity Improvement Fund (known as the Bristol Airport Local Community Fund) was set up as one of the commitments the Airport agreed to provide in connection with its 12mppa planning permission for development. Bristol Airport Local Community Fund has been established to invest in a range of local projects which benefit the local community and the environment. Its main purpose is to mitigate the environmental impacts of the Airport's operations and to give something back to the surrounding communities who are affected by being situated in close proximity to the Airport.

The Fund's area of benefit concentrates on the areas most affected by airport operations. The Local Community Fund grants financial contributions to:

a) Schemes which improve, enhance, protect and conserve the natural environment within the vicinity of the Airport,
b) Noise mitigation for non-residential buildings (residential buildings can apply to the separate Noise Mitigation Scheme),
c) Traffic implications associated with an increase in passengers using the Airport,
d) Any other projects/schemes which can demonstrate they will help mitigate an environmental and/or amenity impact that can be attributed to the Airport expanding.

The Fund has been set up as a Community Interest Company dedicated to the purpose of investment in local community projects. A partnership approach has been taken to the management of the Fund which involves community representatives in determining how funds are allocated. Applications for funding are considered four times a year by a management committee comprising four representatives from Bristol Airport Limited and four elected members of North Somerset Council. The management committee is independently chaired, and the Chairman has a casting vote on funding decisions if necessary. The Management Committee evaluates each application carefully and uses its local knowledge and expertise to ensure that the Fund is used to deliver the greatest possible benefit to the local community. Each year, Bristol Airport contributes £100,000 to the Bristol Airport Local Community Fund and £50,000 to the newly created Diamond Fund, which supports projects in the local area which do not meet the criteria for the Local Community Fund.

In 2024, Bristol Airport granted £68,000 from the Local Community Fund and £50,000 from the Diamond Fund to 63 different projects (£118,000 in total). A full list of the organisations and projects that have been supported are contained within Appendix F. Unspent Local Community Fund money (from the annual £100,000 contribution) will roll over to 2025.

5.2 Other Community Funding and Events

A new Noise Mitigation Scheme was established as part of our 12mppa permission which helps mitigate the impact of aircraft on residential properties close to the Airport. This scheme provides grants for sound insulation, such as new window installation. In 2024, Bristol Airport pledged a total of £200,000 to support 39 individual residential properties in the local area.

The chosen charity for the Airport to support in 2024 was the Great Western Air Ambulance Charity (GWAAC). The money raised throughout the year for GWAAC has gone directly to respond to people in urgent need of critical care. GWAAC perform procedures normally only seen inside a hospital emergency department, for patients whose survival relies on receiving that treatment right there at the scene. Throughout 2024, the Airport raised more than £33,300 for the charity, which included a charity golf day in September that raised more than £23,000. Other fundraising activities included 10 plane spotter events for aviation enthusiasts, Bristol Airport employees and their friends and family; a charity abseil at Ashton Gate; and a cake sale by members of the Airport team.

In the autumn, the Airport held its annual Poppy Appeal collection which raised more than £14,400 for the Royal British Legion. Donation boxes were located across the Airport and a member of the British Royal Legion collected funds for the charity in the terminal for the two weeks leading up to Armistice Day.

Other notable charitable moments in 2024 included food donations to the Weston-super-Mare Foodbank in July and December. The food was donated by Bristol Airport colleagues and Business Partners across the Airport. Along with the food donation, members of the Bristol Airport team volunteered at the Foodbank to help organise, sort and pack donations from across the local area.

During 2024, the Airport's Fire department donated a large amount of personal firefighting protective equipment and other essential gear to the charity FIRE AID to help firefighters around the world. In total, 38 tunics, 32 pairs of leggings, portable pumps, a generator, fire boots, flash hoods and gloves were all handed over to FIRE AID and International Development.

At the beginning of the year, Bristol Airport donated a surplus minibus to the village of Blagdon to help transport groups and residents to surrounding villages and nearby towns. In the summer, the airport partnered with a women's night shelter and day centre for the homeless in Bristol and donated toiletries and liquids that customers were unable to take in their hand luggage. Meanwhile, the Airport partnered with the Community Scrapstore North Somerset to donate more than 200 old security trays to help schools and community groups in Weston-super-Mare.

Each year, every member of the Bristol Airport team has a volunteer day to help support and to give something back to local charities and organisations in the local community. Throughout 2024, the Bristol Airport team provided 840 volunteer hours supporting projects and educational learning in the local community. This included litter picking on nearby Felton Common; clearing away brambles and pruning chilli plants at Uncle Paul's Chilli Charity in Butcombe; and volunteering at Weston-super-Mare Foodbank.

In December, Bristol Airport teamed up with Jet2.com to offer a charity Santa flight for some very deserving children and their families. Families from Bristol Airport's charity of the year, Great Western Air Ambulance Charity (GWAAC), along with Children's Hospice South West, British Heart Foundation and Weston Hospice were invited to attend the event. Children from local schools including, Winford Church of England Primary School, Wrington C of E Primary School, Court de Wyck Church School in Claverham and Backwell C of E Junior School also joined the festive flight.

Section 6 – Employment

6.1 Onsite jobs

Bristol Airport is one of the largest employment sites in the region, with 5,500 people employed directly at the Airport in July 2024 of which around 86 % are full time jobs. A survey of business partners was conducted to establish the number of employees in July, which is peak season and when the maximum number of people will be employed on site. Thousands more people are indirectly employed through the supply chain, associated businesses as well as in the inbound tourism sector. Bristol Airport Ltd itself employed approximately 375 people during 2024.

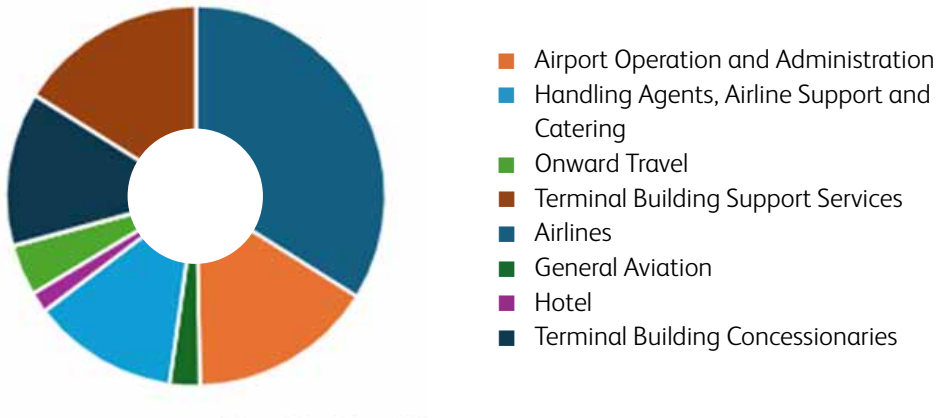
Table 24 below summarises the number of staff and companies located on site. Please note that throughout the pandemic, we did not record job numbers and information is not available during these years.

Table 24: Details of employment at the airport.

	2015	2016	2017	2018	2022	2023	2024
Total number of staff	3,392	3,470	3,918	3,978	3,401	4,101	5,508
Number of companies	52	52	54	56	50	53	62
% change number of staff	-	2.30	12.91	1.53	-14.50	20.58	34.31

The employers on site at Bristol Airport have been categorised to give an indication of the employment areas. This can be seen in **Figure 7**.

Figure 7: Areas of employment



6.2 Skills and Employment Plan

As part of Bristol Airport's expansion plans and 12mppa planning permission, we worked with North Somerset Council to develop a new Skills and Employment Plan (SKEP) to deliver measures to promote employment opportunities at the Airport for local residents, including residents of South Bristol and Weston-super-Mare. The SKEP includes a variety of objectives and targets relating to local labour and community benefits for the construction phase of the 12mppa expansion plans; a programme of employment and skills initiatives with education providers for the operational phase of 12mppa expansion; and an education programme of engagement from primary level through to university. The SKEP was introduced in July 2024. Progress and achievements against agreed key performance indicators (KPIs) have

been recorded for the latter half of 2024 and are outlined below in **Table 25**. Please note that the SKEP has only been in place for less than half of the year, therefore progress has been measured against half of the value of the annual targets. All indicators are green which is a very positive start. Progress against the full annual targets will be reported in the 2025 AMR (and future AMRs).

Table 25: 2024 SKEP Progress

Performance Indicators	2024	
Construction & Supply Chain Phase	**Annual Target**	**6 month progress**
(**KPI 1**) New local[2] direct employees hired 1 FTE per £5m spend Annual target of 7FTE per annum	**14** 7.0 FTEs	20
(**KPI 2**) New entrant trainees/apprentices 0.5FTE per £1m spend Annual target of 18 per annum	**21** 18	16
(**KPI 3**) Training hours for new and existing staff 60hrs per £1m spend Annual target of 2,200 hrs per annum	**4,154 hrs** 2,200	2,881 hrs
(**KPI 4**) Local school and college visits (10 hrs per £1m spend) Annual target of 370 hrs per annum	**596 hrs** 370 hrs	430 hrs
(**KPI 5**) Meaningful work placement weeks 2 weeks per £1m spend Annual target of 75 weeks	**45 weeks** 75 weeks	29.7 weeks
(**KPI 6**) Local supply chain spend (within 20 miles) £200k per £1m spend Annual target of £7.25m	**£12,925,000** £7,250,000	£10,511,568.10
(**KPI 7**) Local subcontractors used on project 25 % per contract (within 20 miles)	**25%**	64.25 %
Airport Workforce	**Annual Target**	**6 month progress**
(**KPI 8**) Local careers fairs held & attended	4	12
(**KPI 9**) Meaningful work experience weeks hosted by Bristol Airport	5 weeks	14.4 weeks
(**KPI 10**) Individuals undertaking a Bristol Airport apprenticeship and/or internship	5	11
(**KPI 11**) Disability Confident Employer Status within 12 months of infrastructure commencement	Level 1	Level 2 Status
(**KPI 13**) School engagement & awareness programme	To setup and deliver	~249 hrs recorded
Achieve Fund	**Target**	**Progress**
(**KPI 12**) Achieve Fund employability initiatives, workshops & activity		45 hours recorded

2 Within the BS postcode area

Construction Phase

We are working closely with our on-site construction contractors to progress key development projects across the Bristol Airport site, including additional social value targets. Our construction contractors have continued to support sustainable local employment and contribute to local communities across 2024, by hiring 20 local individuals, offering apprenticeship and/or internship opportunities to 16 local individuals, and investing over £10.5 million in the local supply chain. We will continue to collaborate with current and incoming construction contractors in 2025 to ensure our 12mppa expansion projects create employment opportunities for local individuals and benefit local communities in a meaningful way.

Bristol Airport colleagues working alongside our construction partners, Griffiths and Farrans to build our Public Transport Interchange and Multi-Storey Carpark 2 and deliver a range of significant social value benefits as well.

Airport Workforce

As we move towards the operational phase of the Airport expansion, and with the requirement for increased staff numbers, we are continuing to identify employment opportunities for young people and adults in the local community. During 2024, we attended, hosted and supported a wide range of school, college and community organisation events including careers fairs, employability days, speed networking, on-site Bristol Airport Insights Sessions (including careers discussions and Terminal tours), work experience placements and volunteering opportunities. While we value each opportunity to support young people and organisations in the local community, some notable initiatives include:

- **Bristol Airport Careers Fairs:** We hosted two careers fairs at Bristol Airport, in February and May 2024, to showcase the hundreds of opportunities available on site with both Bristol Airport and our Business Partners. Across these two fairs, we welcomed over 330 local residents to Lulsgate House to speak with operational, ground handling, retail and catering, and security business partners
- **2024 Work Experience Programme:** During 2024, we hosted local school students for over 14 weeks of on-site work experience placements. During their visit, students gained meaningful insights into how a busy international airport operates. They spent time with both our operational and support teams including Terminal Operations in the Control Centre, Airside Operations, Engineering, Motor Transportation, BRS Fire Station Officers and Ground Transportation. They also visited some on-site business partners like NATS in our Air Traffic Control Tower and our on-site Avon and Somerset Police Community Support Officers. Since introducing an application process for our 2025 Work Experience Programme, we have received over 550 applications from local students.
- **School engagement programme:** During 2024, Bristol Airport's on going Education Programme involved colleagues visiting schools and colleges in the local community or inviting students to the Airport to learn about the history, operations, sustainability initiatives and career opportunities at the Airport. Schools included Winford Primary School, Wrington Primary School, Backwell Junior School, Chew Valley School, Backwell Sixth Form, Knowle DGE Academy and Ashton Park School. The Education Programme also saw engagement with all the main regional colleges, including Weston College, City of Bristol College, Bath College, Wiltshire College and South Gloucestershire & Stroud College. In total, there were 32 visits to schools/colleges and over 2,400 students engaged with the educational sessions.

Achieve Fund

Under the SKEP, we have committed to supporting under-represented groups with barriers to entering the workforce by partnering with specialist training providers to run a series of employability and skills interventions for individuals who are willing and able to commute to Bristol Airport. In 2024, we worked with North Somerset Council to design the 'Bristol Airport Take Off Programme'; an employability support programme that supports unfunded skills development and addresses pre-employment barriers faced by individuals in the agreed catchment areas. The Take Off Programme will comprise of two 'wings'; the 'Early Flyers' programme (focusing on Young People Not in Education, Employment or Training (NEETs) and individuals under the age of 24) and 'Soaring to Success' (focusing on adults aged 19+ who experience barriers to entering the workplace).

In Q4 of 2024, we invited tenders from specialist training providers to deliver the Take Off Programme (Early Flyers, Soaring to Success, or both programmes) across 2025 and 2026. We are pleased to confirm that we have engaged Weston College to deliver the Early Flyers programme and Partners in Bristol (in partnership with City of Bristol College) to deliver the Soaring to Success programme. We look forward to working with both training providers (as well as our on-site business partners and North Somerset Council) across 2025 to deliver their respective 'wings' of the Take Off Programme. We will report on the method of engagement and success rate of engagement for the 2025 Take Off Programme as part of the 2025 AMR.

Bristol Airport representatives attending the City of Bristol College STEM Careers Fair in April 2024

Bristol Airport Engineering and Motor Transport Apprentices with Cherie Marchant, People Director, and Dave Lees, Chief Executive Officer.

Inclusive Practices

Disability Confident Status

Under the SKEP, we committed to achieve Disability Confident Employer status within 12 months of the infrastructure phase commencement date. During 2024, we achieved both Disability Confident Committed Employer (Level 1) status and subsequently Disability Confident Employer (Level 2) accreditation. We were awarded Level 2 Disability Confident accreditation after demonstrating that we had fulfilled the commitments made as part of our Level 1 application, which included:

1. Offering apprenticeship opportunities at Bristol Airport;
2. Offering work experience opportunities at Bristol Airport;
3. Offering interviews and job opportunities to Disabled applicants; and
4. Inclusive language in Bristol Airport job advertisements.

As a Disability Confident Employer, we have built on the above commitments by pledging to:

1. Advertise our Disability Confident status on the Bristol Airport website;
2. Offer reasonable adjustments to all applicants, new and existing employees at Bristol Airport; and
3. Continue to spread awareness and information about inclusive practices, and the benefits of recruiting, retaining and developing disabled people within our business.

We will continue to review workplace and recruitment practices to ensure accessibility and inclusivity at Bristol Airport. Notably, we will strive to progress from a Disability Confident Employer to a Disability Confident Leader (Level 3). We will demonstrate our commitment as a champion for Disability Confident by:

1. Providing appropriate training to our hiring managers, managers and People Team;
2. Report with reference to the Voluntary Reporting Framework on key equality, diversity and inclusion metrics, including disability, mental health and wellbeing metrics; and
3. Support and encourage other on-site employers to adopt inclusive recruitment practices and engage with the Disability Confident Scheme.


easyJet

Section 7 – Surface Access

Bus and coach services at the Airport increased both passenger numbers and routes in 2024 compared to 2023. Bristol Airport continued to work with partners, Local Authorities and other transport stakeholders to improve services for passengers and staff. Highlights of progress in 2024 included:

- National Express launched a new service to the north of the Airport stopping at Cheltenham, Gloucester and Central Birmingham.
- FlixBus launched a service to Newport, Cardiff, Bridgend and Swansea, expanding our coverage of South Wales.
- We welcomed WESTlocal, providing a staff link to towns and villages in North Somerset.
- The Flyer carried more than one million passengers in a year for the first time. This was a 20% increase in passenger numbers compared to 2023.

The key public transport services at the Airport in 2024 are shown in **Table 26** below, and illustrated in **Figure 8**

Table 26: Bus Operators and Routes

Service	Route	Operator
A1 Bristol Flyer	Bristol City Centre, Bristol Temple Meads, Bristol Bus Station	First
A3 Weston Flyer	Weston-super-Mare, Worle Station	First
A4 Air Decker	Bath City Centre	Bath Bus Company
Falcon	Plymouth, Exeter to Bristol via Bristol Airport	Stagecoach
FlixBus 910	Newport, Cardiff, Bridgend, Swansea	Cymru Coaches
National Express 100	Cheltenham, Gloucester, Birmingham	National Express
National Express 216	Cardiff, Newport	National Express
WESTlink	On demand transport – South Zone	West of England Combined Authority and North Somerset Council
WESTLocal	Wrington, Congresbury, Yatton	Nailsea District Community Transport

Figure 8: Bus Route Network map

The frequency of the A1 and A3 flyer services will be increasing from April 2025. The A1 will be increasing from one every 12 minutes to one every 8 minutes. The A3 will be increasing from one every hour to one every 30 minutes. These were commitments we made as part of our 12mppa S106 legal agreement.

7.1. User Statistics

In 2024 for the first time ever, the A1 bus service carried more than 1 million passengers, an almost 20% increase in journeys since 2023. The A3 service has seen a year-on-year increase of 32% in journeys, carrying over 78,000 passengers in 2024.

Combined, the A1 and A3 bus services carried 1.3 million passengers in 2024.

The graphs below (**Figure 9** and **Figure 10**) show the figures for the A1 Flyer and A3 Flyer across 2024, compared to the previous two years. These figures are passengers only and do not include staff.

Figure 9: Bristol City Centre bus travel statistics for A1 flyer.

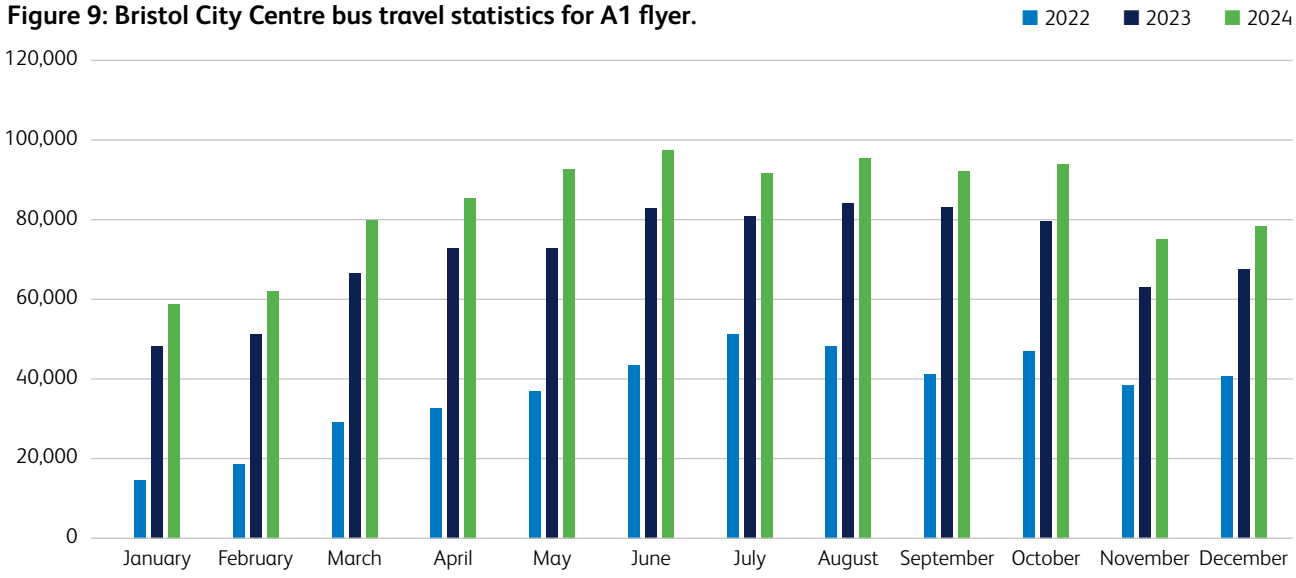
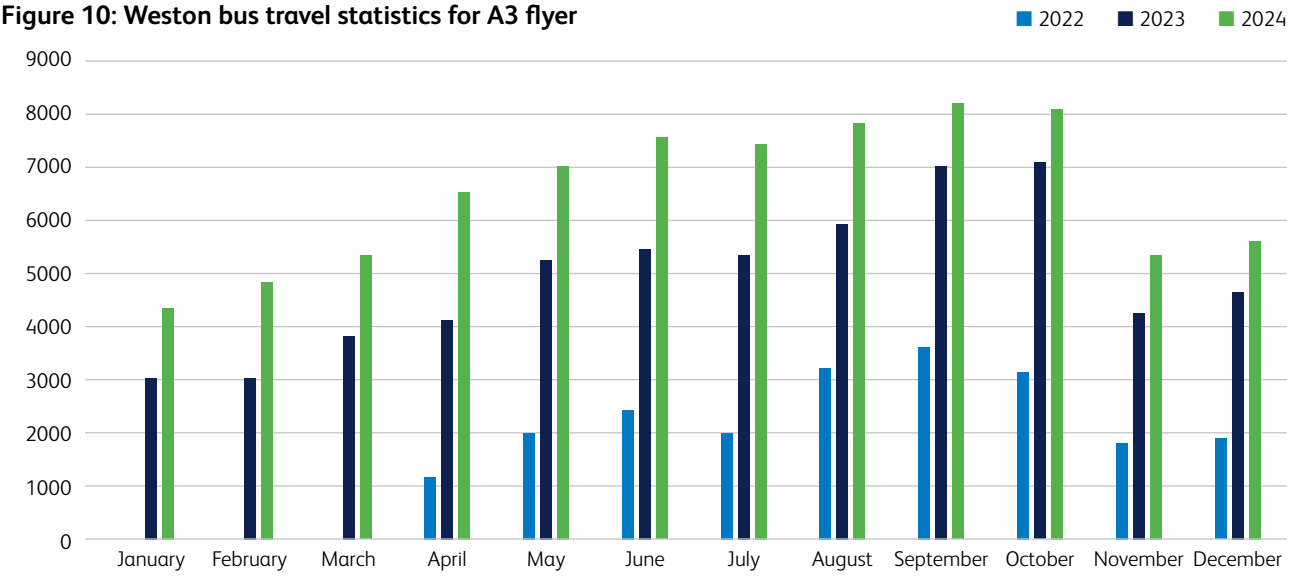
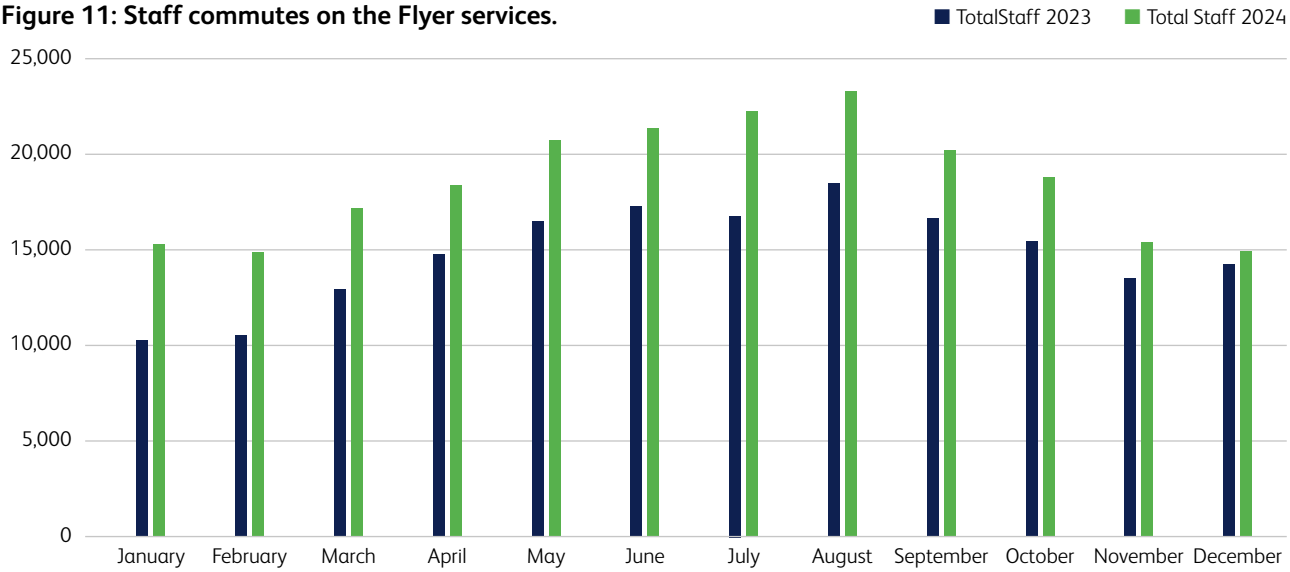


Figure 10: Weston bus travel statistics for A3 flyer



Since 1st August 2022, all directly employed airport and business partner staff have been able to commute for free on the Flyer services. Across the year in 2024 there was a monthly average of 18,568 staff journeys per month (**Figure 11**). This was a total increase of 26% increase in staff numbers using free Flyer travel from 2023. 17% of all Flyer journeys were staff commutes, with staff making up 49% of A3 users.

Figure 11: Staff commutes on the Flyer services.



To encourage passengers to use public transport and working with our partners at First and Great Western Railway, we continued to undertake a range of promotional and marketing activities including advertising on radio, digital and on posters as well as promotional discount rates. Customers were offered incentives, ranging from 50% off to family discounts and special rates for children and students.

Section 8 – Development and Growth

8.1. Completed Projects

The Airport is undergoing some significant changes. Some of the major projects that have been completed this year include:

Temporary Silver Zone Extension

The Airport gained planning permission for the temporary use of land to extend the Silver Zone car park on land to the south of the Airport site (to an area colloquially known as 'Cogloop 2'). The development provides an additional 2,700 parking spaces for use between May and October. Maintaining green bunds with vegetation on the perimeter of the site to provide screening and enhance biodiversity was an important element of the project.

Construction of the site commenced in early 2024 and was opened for use in May 2024.

Cogloop1 and Cogloop2 within Silver Zone

Air Traffic Control Tower

2024 saw the completion of the Air Traffic Control Tower refurbishment. The Airport invested £3.5m on a comprehensive refurbishment to improve and enhance the 20 year old building.

Security Upgrade

The Airport successfully upgraded its security equipment to next generation scanners in summer 2024. The cutting-edge technology has revolutionised the security search process for passengers and those entering airside environment. It eliminates the need to unpack bags, including large electronics and liquids, resulting in a more streamlined and efficient experience.

8.2. Ongoing Projects

Multi-Storey Carpark 2 and Public Transport Interchange

Work has continued to progress on the construction of a new Multi-Storey Car Park 2 (MSCP2) with Public Transport Interchange (PTI) on the top level. The Airport is investing more than £60m in the project. Construction commenced in autumn 2023 on the former long stay parking area and is expected to be completed in summer 2025. An approved construction environmental management plan is in place for this project which aims to minimise the environmental impact of the construction work and also minimise the impact on residents living close to the site.

The new MSCP2 will provide approximately 2,000 new spaces and will adjoin to the existing multi-storey car park. On the top level, a PTI will be built which will more than double the number of coach bays from 6 to 16. It forms a significant investment and commitment to improve public transport links to and from the Airport and across the region. The terminal will be accessed via a pedestrian bridge link, and the whole scheme, once completed, will form a new transformational gateway to the Airport. The photograph above demonstrates the sheer scale of the construction project.

South Gates

The construction of the South Gates project commenced in autumn 2024 and is due to be completed in spring 2025.

The project creates three new contact stand gates south of the terminal building. In addition, there will be a new coaching forecourt, segregated arrivals route and a new area for Person with Reduced Mobility (PRM) accommodation.

Executive Lounge C

The Airport has invested in the enclosure of the east terminal building airside roof terrace to enable the space to become part of the main terminal building and allow passengers to use it year-round. The space will be used to upgrade and relocate the existing business lounge, providing seating with food and beverage support for approximately 150 passengers.

Construction commenced on the project in summer 2024, and the Lounge is anticipated to open in summer 2025.

Main Gate

The construction of an additional lane at the Main Gate, where vehicles are searched before accessing airside, began in autumn 2024 and is anticipated to be completed in spring 2025. The additional lane means that there will be a total of three lanes to allow vehicles to access airside; two lanes will allow access into airside, and one for access out. The project will include a canopy to shelter staff when undertaking vehicle inspections and searches.

8.3. Future Projects

Terminal Extensions

As part of our 12mppa permission, we have consent to expand the terminal building to the west and south.

The west terminal extension with comprise of almost 11,000 sqm of additional floorspace covering four levels. The project will see the re-configuration of the existing baggage re-claim area to accommodate additional conveyors. The project will also see the introduction of a landside arrivals concourse, extensions to the central search area plus expansion of the departure lounge to house additional retail facilities and waiting space.

The south terminal extension will be approximately 4,000 sqm and will primarily be for additional retail, food and beverage units. Both extensions are due to commence in 2025 and will provide an enhanced customer experience once complete.

Proposals to grow beyond 12mppa

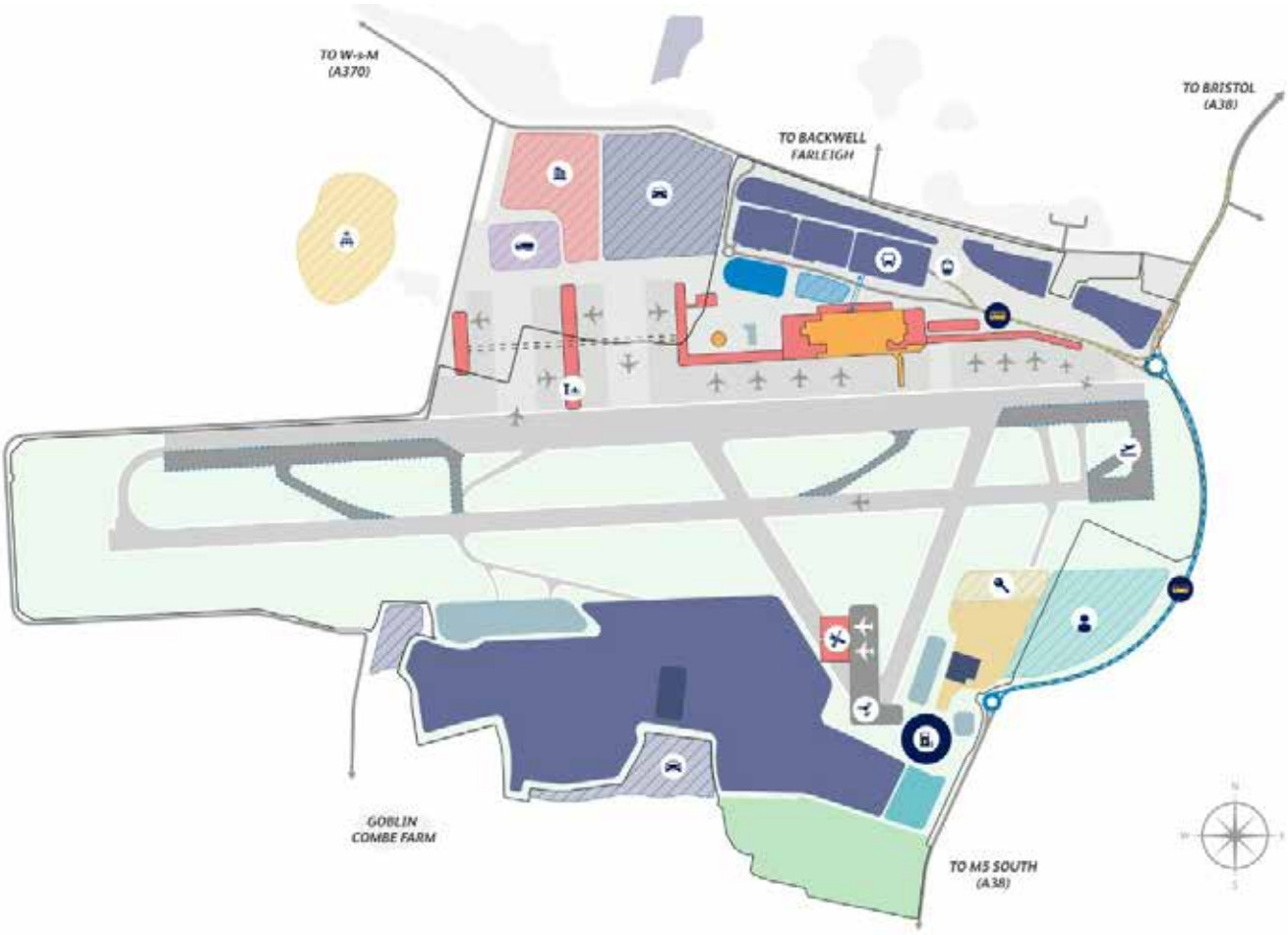
In November 2024, the Airport launched a consultation on plans and proposals for future development to 2040. This included the final draft Master Plan which provides a longer-term projection of how the Airport will transform itself. Views were sought on:

- Proposals to develop the Airport's infrastructure and buildings to accommodate 15 million passengers per annum.
- Preliminary assessment of the effects of the Airport's growth on the environment and local communities, and existing and outline proposals for mitigation.
- Making the most of opportunities and benefits arising from the Airport's growth, including new job opportunities.

The consultation ran for two months between 25th November 2024 and 31st January 2025 with a range of consultation events being held in the local community, plus a consultation website was launched to collect feedback.

Following the consultation, a final Master Plan will be produced and this will be followed by development of more detailed information and the undertaking of assessments to inform the content of a planning application which will be submitted to North Somerset Council.

Master Plan



Contact Us: pressoffice@bristolairport.com

Appendix A – Emissions and Climate Change Action Plan

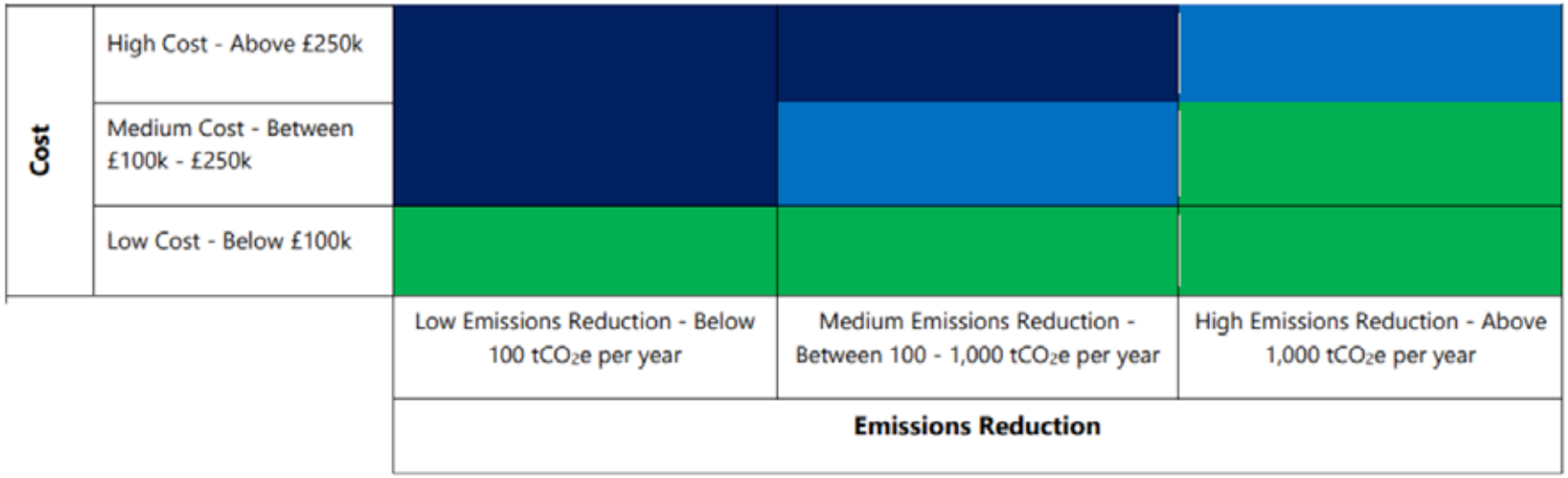
This document details the current baseline for carbon emissions (2019) and air quality. The majority of the carbon emissions relate to our airline partners using the Airport and passengers accessing the Airport over land. Of the carbon emissions over which we have control, the electricity we purchase has the largest footprint (location-based), followed by our fleet vehicles. Air quality is generally good surrounding the Airport, and the AQOs are not exceeded. Emissions from aircraft and ground operations effect air quality in the immediate vicinity of the Airport, but within a few hundred metres of the Airport boundary, road traffic is the most dominant emissions source that determines air quality.

Control

We are dedicated to taking a leadership position in the management of carbon emissions, by reducing the emissions that we control (Scope 1 and 2 emission sources), and guiding and influencing the emissions of our stakeholders and our value chain (Scope 3 emission sources) to achieve emission reductions.

Hierarchy

Each measure detailed in this ECCAP has been assigned to an indicative hierarchy based on the cost of implementation and the associated emissions reduction.



Fixed Assets

Table A.1: Emission reduction measures – fixed assets

Reference	Relevance	Measure	Description	Deliverable	Target date	Progress to date	Baseline	Reduction	Control	Hierarchy
FA1	Carbon and air quality	Construction Environmental Management Plan	Production of a CEMP in accordance with planning condition 7, including measures to reduce carbon emissions and manage air quality.	Production of a CEMP.	Pre-construction	We will produce a CEMP for each element of 12mppa development. A CEMP for the South and West Terminal Extension has been produced. Delivery of the measures within each CEMP will be included within contractual arrangements.	No	Indirect reductions in carbon emissions and maintaining / improving air quality	Guide and influence	
FA2	Carbon	Securing renewable electricity supply	Our current agreement is for a 100% renewable energy supply. This will be supplemented by FA17 with direct solar which would be considered 'additional'.	100% of electricity supply from renewable energy sources.	Retain	100% renewable energy supply continues to be used. A corporate PPA is agreed with Bracon Ash Solar Farm.	3.66 kt CO_2e per year for Scope 2 electricity consumption	Scope 2 emissions are reduced to zero	Control	
FA3	Carbon	Offsetting of residual direct carbon emissions from 2021 to 2030 to achieve carbon neutrality	Offsets will be through carbon reduction credits from regional, national or international projects which meet environmental integrity criteria as defined by the ACI ACA Scheme. As part of efforts for continual improvement and development, we will increase the delivery of localised schemes rather than international projects in our offsetting projects. Continual reduction in the volume of offsets as efforts to decarbonise at emission source are implemented.	Achievement of ACA Level 3+ accreditation in 2021, Level 4 in 2023 and Level 4+ in 2025.	2025	Achieved Level 4+ in 2023, two years ahead of schedule. This was retained in 2024.	5.77 kt CO_2e per year for Scope 1 and 2 emissions[4]	Offsetting of residual Scope 1 and 2 emissions to achieve carbon neutrality	Control	
FA4	Carbon	On-site zero-emission building	Deliver a zero-emission building (a highly energy efficient building supplied only by renewable energy generated on-site), for the Consolidated Car Rental Centre (CCRC). We have fitted over 200 kW of solar PV to the CCRC building. Over a 12 month period this will generate 100% of the building's heating and electrical requirements.	A zero-emission building on the CCRC with energy use covered by renewable energy generated on-site.	2022	Complete	CCRC energy demand of 200,000 kWh / 0.05 kt CO_2e per year (2021)	Saving of 0.05 kt CO2e per year through on-site renewable energy generation	Control	
FA5	Carbon	Energy efficiency appraisal for all capital projects	We will update our internal processes to include an appraisal of energy efficiency for all capital projects.	Updated internal processes for all capital project with sustainability criteria.	2022	This is ongoing and has been factored into capital projects going forward.	Estimated 12 mppa building energy use of 4,000,000 kWh / 1.02 CO_2e per year[1]	Indirect reductions in carbon emissions	Control	

1 BAL (2021). Addendum to Environmental Statement, Doc Ref. 43002-WOOD-XX-XX-RP-O-0002_S3_1.

Table A.1: Emission reduction measures – fixed assets continued

Reference	Relevance	Measure	Description	Deliverable	Target date	Progress to date	Baseline	Reduction	Control	Hierarchy
FA6	Carbon	Point-of-use electrical hot-water heating for tenants	Installation of point-of-use electrical hot-water heating for tenants thus reducing gas dependency and allowing decommissioning of the existing gas heaters. As well as removing our gas requirements for hot water it will also allow shut down of the large boiler dilution fans, resulting in additional energy savings.	Installation of point-of-use electrical hot water heating for tenants across the Airport.	2022	Phase one completed end of Q4 2022. Phase 2, during which the remaining gas fired water heaters in terminal will be removed, was completed in Q1 of 2024.	Estimate 290,000 kWh (0.05 kt CO2e) airport gas consumption for water heating (7 % of total) per year[4]	Estimate 30,000 kWh energy removed with a reduction 0.01 kt CO_2e per year	Guide and influence	
FA7	Carbon	Continue to actively work with Government and other organisations	To work with Government to deliver aims and objectives of the Jet Zero Strategy and continue work with organisations such as Fly Zero, Connected Places Catapult and others to aid the delivery of technological solutions and learnings for the industry.	Continued engagement and participation in programmes where relevant.	Ongoing	Ongoing engagement with Government, including the Future Flight project and driving the development of hydrogen infrastructure.	Actively working with Government and other organisations	Indirect reductions in carbon emissions	Guide and influence	
FA8	Carbon	Sharing best practice learning with partners	Implement a collaboration programme for sharing best practice learning and discussions with stakeholders to disseminate our journey to net zero with the wider community and provide support to partners in their own journey where possible.	Implement a collaboration programme for sharing best practice learning.	2023	From 2023, annual Business Partner events are held to update our BPs on our progress and share learnings.	Collaboration programme to be implemented	Indirect reductions in carbon emissions	Guide and influence	
FA9	Carbon	Further on-site zero-emission buildings	Deliver further zero-emission ancillary buildings across the Airport site based on ongoing learning from the CCRC. This will likely include transitioning heating systems to air / ground heat pumps to reduce reliance on gas.	Create the CRCC to be a demonstrator and a plan to deliver other out-stations in 2023	2023	Learning ongoing. Additional solar on the roof space of ancillary buildings has been identified and due for installation in 2025.	Total BAL energy consumption of 14,000,000 kWh electricity (3.66 kt CO_2e) and 3,600,000 kWh (0.66 kt CO_2e) gas per year[4]	Delivery under review following CCRC project	Control	
FA10	Carbon	Implement processes and procedures for inclusion of low embodied carbon construction material	We will implement policy and review procedures for inclusion of low embodied carbon construction materials in the internal procurement processes and every effort will be taken to utilise local suppliers where practicable.	Updated internal procurement processes.	2023	We are actively implementing this through our procurement process, ensuring low embodied carbon materials are considered in design, with major projects built to high BREEAM standards. Where feasible, we prioritise local suppliers, as reflected in our Skills and Employment Plan.	Relates to future construction	Indirect reductions in carbon emissions	Guide and influence	

Table A.1: Emission reduction measures – fixed assets continued

Reference	Relevance	Measure	Description	Deliverable	Target date	Progress to date	Baseline	Reduction	Control	Hierarchy
FA11	Carbon	Refrigerant loss surveys	More frequent operational surveys will occur to regularly collect data on refrigerant losses beyond the TM44 reporting requirement to enhance carbon footprinting of associated emissions with the view to considering alternative refrigerant types were possible.	TM44 survey every 5 years. Updated information on losses at least every 3 years.	2023	Ongoing and reported on through the Net Zero delivery group.	75.5 kg refrigerant charge / 0.15 kt CO_2e per yea[r4]	Review considering alternative refrigerant types	Control	
FA12	Carbon	Increased energy metering	Installation / replacement of electricity meters on key infrastructure to create a detailed baseline of energy usage.	Install meters by end of 2024	2024	Phase 1 of a metering project for business partners and concessions completed. Phase 2 has been initiated will continue in 2025. Phase 2 will include both main supply meters and substations. Substations will be metered for key site loads.	Total BAL energy consumption of 14,000,000 kWh electricity (3.66 kt CO_2e) per year[4]	Produce detailed baseline to assess reductions	Control	
FA13	Carbon	Introduce sustainability league table for tenants in energy, water and waste efficiency	Establish an on-site sustainability league table of tenant resource use, recognising and rewarding best behaviours by 2024 as part of our efforts to guide and influence reductions in direct tenant gas and electricity use.	Reporting of league table	2024	All tenant meters are monitored and logged on sitewide BMS. Key business partners have engaged with regarding energy consumption with further engagement to aid reducing electricity planned in 2025.	Tenant energy consumption of 3,500,000 kWh electricity (0.89 kt CO_2e) and 660,000 kWh (0.12 kt CO_2e) gas per year[5]	Indirect reductions in carbon emissions	Guide and influence	
FA14	Carbon	Reduce tenant gas and electricity use and establish corporate sustainability objectives	Influence our value chain and on-site third parties to enter carbon reduction partnerships through a dedicated Carbon Management Forum. Early initiatives could include removal of natural gas dependency.	Reporting of progress through the Carbon Management Forum.	2024	Decarbonisation works are ongoing. They include: • Removal of gas supply from ATC tower. Completed Q4 2022. All gas fired hot water to transitioned to electric by Q4 2023. • Terminal main gas boiler replacement for heat pumps planned for 2026	Tenant energy consumption of 3,500,000 kWh electricity (0.89 kt CO_2e) and 660,000 kWh (0.12 kt CO_2e) gas per year[5]	Indirect reductions in carbon emissions	Guide and influence	
FA15	Carbon	Deliver energy reductions across the airport site	Plan the phased replacement of chillers and boilers across the site with air source heat pumps where feasible. The programme will be determined by the replacement cycle of current assets.	Creation of phased replacement plan in 2024.	2024	The installation of chillers is now due in 2025/26 once existing chillers reach end of life.	Estimate 3,400,000 kWh (0.63 kt CO_2e) BAL gas consumption for water / space heating (95 % of total) per year[4]	To be reviewed as part of the replacement plan	Control	
FA16	Carbon	Upgrade external lighting	Replace non-LED external car park lighting with LEDs with time / occupancy controls.	Replace by the end of 2024 or when development comes forward.	2024	Survey works completed. A trial of wind and solar powered car park lighting was started in Q3 2024.	Estimate 2,100,000 kWh BAL electricity consumption (0.55 kt CO_2e) for lighting (15 % of total) per year[4]	LEDs save up to 90 % of energy compared to traditional bulbs	Control	

Table A.1: Emission reduction measures – fixed assets continued

Reference	Relevance	Measure	Description	Deliverable	Target date	Progress to date	Baseline	Reduction	Control	Hierarchy
FA17	Carbon	Delivery of direct renewable energy supply to meet 25% of demand	We will install renewable generation systems at various points across the Airport to meet the target of 25% direct on-site renewable energy supply by 2025 for our own consumption. NB: This is dependent on securing planning permission for installations where applicable.	Installation of renewables to deliver 25% of electricity supply by the end of 2025.	2025	A 1.4MW solar farm was installed in late 2023. Additional solar installations ., to be installed at the Fire Station, Snow Base and new areas as part of our development plans, such as South Gates roof and Lounge C in 2025.	Total BAL energy consumption of 14,000,000 kWh electricity (3.66 kt CO_2e) per year[4]	Scope 2 emissions are reduced to zero (when combined with FA2)	Control	
FA18	Carbon	Delivery of tree planting / re-wilding on- and off-site	Implement local projects for ecological and carbon sequestration, including tree planting on airport land, through strategic partnerships against recognised standards. Sites could potentially be in areas to provide shade and thereby reduce the need for cooling.	The introduction of localised partnership with direct carbon removal attributes by 2025.	2025	Project for local carbon sequestration opportunities ongoing and is being explored through Aviation Carbon Transition Programme.	We have already planted 500 trees locally as part of Replant Bristol run by the Forest of Avon Trust	To be determined per project	Control	
FA19	Carbon	Renewable energy use for extensions to the passenger terminal	Under 12 mppa, 15% of the on-going energy requirements for the extensions to the passenger terminal will be generated through renewable or low-carbon technologies.	15% generated through renewable or low-carbon technologies.	As works brought forward	Terminal extensions will commence at the end of 2025. This requirement is being delivered within the plans and additional options being assessed and finalised.	Estimated 12 mppa terminal extensions energy use of 2,100,000 kWh / 0.53 CO_2e per year[5]	Scope 2 emissions are reduced to zero (when combined with FA2)	Control	
FA20	Carbon	Heating and cooling upgrades to buildings	Review of options for improvements to existing buildings to reduce energy usage (e.g. increase insulation in walls / roof of older buildings, improve airtightness and draught proofing, add solar film for cooling, reducing ambient temperature, providing spot heating for staff) by 2026. This will lead to a subsequent delivery programme.	Review of potential improvements to existing buildings, followed by implementation.	2026	BMS control optimisations ongoing. Terminal Setpoint changes completed. Chiller / Boiler control strategy modified. Time schedule and outside hold off control completed. Site survey by external consultant was conducted in Q2 2024 as part of Energy Saving Opportunity Scheme (ESOS). An action plan for energy efficiency measures has since been created.	Estimate 3,200,000 kWh (0.58 kt CO_2e) BAL gas consumption for space heating (88% of total) per year[4]	Action is to undertake a review	Control	
FA21	Carbon	Upgrade apron floodlights for efficiency improvements	Install remote controls to the apron floodlights from the Airport Control Centre such that the lights are only switched on when needed. Our security system will be upgraded to infrared (IR) CCTV such that lights can be switched off externally and around the apron.	Installation of controls on apron floodlights by 2026.	2026	This project is at design stage and is marked in the capital programme for 2028.	Estimate 2,100,000 kWh BAL electricity consumption (0.55 kt CO_2e) for lighting (15% of total) per year[4]	Estimated saving of 0.04 kt CO_2e per year	Control	

Table A.1: Emission reduction measures – fixed assets continued

Reference	Relevance	Measure	Description	Deliverable	Target date	Progress to date	Baseline	Reduction	Control	Hierarchy
FA22	Carbon	Installation of LED airfield ground lighting	AGL replacement to LED as part of runway resurface by 2027 dependant on asset condition.	Installation of LED airfield ground lighting.	2027 dependant on asset condition	Ongoing and scoping/planning underway.	Estimate 2,100,000 kWh BAL electricity consumption (0.55 kt CO_2e) for lighting (15 % of total) per year[4]	LEDs save up to 90 % of energy compared to traditional bulbs	Control	
FA23	Carbon	New buildings to target a BREEAM standard minimum requirement of "Very Good"	All new buildings (including extensions) required to support the increase to 12 mppa will target a BREEAM standard minimum requirement of "Very Good". Projects will be evaluated for energy efficiency and the cost of implementation of such measures will be understood.	Updated internal processes for major capital project with sustainability criteria and availability of BREAM reports on our website.	2028	Work on the detailed design is ongoing. During this process, we are working with engineering consultants to ensure we meet the BREEAM Very Good standard for each building.	Relates to future construction	BREEAM "Very Good" delivers average CO2 savings of 15 %	Control	

Aircraft and Airfield Operations

Table B.2: Emission reduction measures – aircraft and airfield operations

Reference	Relevance	Measure	Description	Deliverable	Target date	Progress to date	Baseline	Reduction	Control	Hierarchy
AAO1	Carbon and air quality	Encourage based airlines to use continuous descent approaches	CDAs will be tracked and actively encouraged through the committees that we use to engage with airlines, such as the Night Time Slot Committee and Flight Operations Safety Committee. Recommendations will continue to be included in policy and procedure documents.	Target of at least 95 % of main customer-based airlines using CDAs. Annual targets will be reviewed and set.	Currently implemented and ongoing	CDAs are now tracked monthly at the Health, Safety and Sustainability Board (compliance) and Flight Operations Safety Committee. In 2024, we achieved 94 % CDAs for main airlines.	Scope 3 approach emissions contribute 28.60 kt CO_2e per year[4] Aircraft and ground operations contribute ~60 % of NOx on the Airport and ~30 % ~300 m beyond the boundary	CDAs can deliver an estimated 50 % reduction in fuel use and carbon	Guide and influence	
AAO2	Carbon	Support long-term policy developments for sustainable flight	We will continue to engage with Sustainable Aviation and other aviation sector groups to drive long-term policy developments for sustainable growth to UK aviation. We will support action in line with the Sustainable Aviation Decarbonisation Roadmap (e.g., supporting initiatives to develop fuel-efficient aircraft or carbon efficient operations).	Collaboration and engaging with industry.	Currently implemented and ongoing	We continue to engage directly with Sustainable Aviation. Our planning and sustainability director is now a member of the Jet Zero task force. This group provides strategic leadership and take an outcome-focussed, whole systems approach to support innovation and the decarbonisation of the UK aviation sector.	Actively working with Sustainable Aviation and other organisations	Indirect reductions in carbon emissions	Guide and influence	
AAO3	Carbon and air quality	Work across the aviation sector to push for sustainability metrics within aircraft slot allocation guidelines	We are committed to working across the sector to push for sustainability metrics within local and national aircraft slot allocation rules / guidelines encouraging the take-up of new, more fuel-efficient aircraft into the fleet.	Collaboration and engaging with industry to produce a harmonised approach to green slots.	Currently implemented and ongoing	We continue to engage directly with Government, airline partners and other organisations to support sustainable aviation and encourage the take up of newer aircraft into their fleet.	Actively working with Government and other organisations	Indirect reductions in carbon emissions and maintaining / improving air quality	Guide and influence	
AAO4	Carbon and air quality	Hydrogen South West partnership	Continue to support the Hydrogen South West partnership. We are collaborating to enable businesses and communities to create cross-sectoral partnerships that drive the development of hydrogen infrastructure and technology.	Support the Hydrogen South West partnership.	Currently implemented and ongoing	We continue to support Hydrogen South West partners to create a hydrogen economy in the region. During 2024, this included working with Airbus to to develop their Zero Emissions Development Centre at Filton, participating in Wales & West Utilities' creation of a 'South West Conceptual Plan' to develop a local hydrogen transmission system, utilising the existing gas network, and highlighting the confirmation of the construction of a hydrogen refuelling station for vehicles in the South West.	Actively working with Hydrogen South West	Indirect reductions in carbon emissions and maintaining / improving air quality	Guide and influence	

Table B.2: Emission reduction measures – aircraft and airfield operations continued

Reference	Relevance	Measure	Description	Deliverable	Target date	Progress to date	Baseline	Reduction	Control	Hierarchy
AAO5	Carbon and air quality	Establish an Aviation Carbon Transition Programme worth £250k in 2021 for enabling scope 3 emissions reduction solutions at Bristol Airport	Continue to offer Bristol Airport as a 'test bed' for innovation projects. An ACT Programme worth £250k was established in 2021 to kickstart innovative ways to reduce Scope 3 emissions. This starter fund was open for solution developers to apply for in 2021.	Delivery of external fund and details of projects funded including their outcomes on our website.	Annually up to 2030	The successful 2024 projects are as follows: Wanderlands: Nature investment scheme. The project will outline short, medium and long term investment strategies into UK based carbon offsetting projects. Equilibrion: Nuclear derived SAF and hydrogen. This is research and development into this technology and how it would benefit the airport in the future. Ultima Forma: Hydrogen feasibility study. The project involves designing, analysing, and animating a mobile liquid hydrogen refuelling system for Bristol Airport. Further work regarding SAF and hydrogen is also being investigated with the 2024 fund.	ACT Programme worth £250k	Indirect reductions in carbon emissions and maintaining / improving air quality	Guide and influence	
AAO6	Carbon and air quality	Implement an electric bus trial on-site	Implement an on-site trial of an airside bus switching to EV. This will be used as a feasibility study on the phasing of zero emission fleet including details on charging specifications, fleet renewals, and coverage. We will implement a hydrogen bus trial to inform our procurement strategy for fleet. This will become the blueprint for zero emissions fleet by 2030.	Include 1 EV bus within our fleet and conduct a feasibility study on future investments.	Implemented in 2022	As of 2024, there are 11 electric buses on site. Delivery of buses is a phased approach and timed with current vehicles reaching end of life. There have been many delays with EV bus deliveries however we remain on track to have 65 % of BRS airside buses electric by 2027 and 25 % of BRS landside buses electric by 2027.	11 buses were in the airside fleet, with estimated 390,000 litres of total BAL fleet diesel fuel use (1.0 kt CO_2e)[4] Aircraft and ground operations contribute ~60 % of NOx on the Airport and ~30 % ~300 m beyond the boundary.	Emission-free airside bus operations	Control	
AAO7	Carbon and air quality	Single-engine taxiing	We actively encourage single-engine taxiing (where aircraft type and operations allows) through the committees that we use to engage with airlines such as the Night Time Slot Committee and Flight Operations Safety Committee, as well as operational procedures. Review applicability at Bristol Airport through data gathering and review. There are limitations on which aircraft can do this, so a specific airport wide target has not been set.	Review application and where feasible, encourage single-engine taxiing.	Ongoing	Engagement with airlines through the Night Time Slot Committee and Flight Operations Safety Committee is ongoing.	Scope 3 taxiing emissions contribute 33.2 kt CO_2e per year[4] Aircraft and ground operations contribute ~60 % of NOx on the Airport and ~30 % ~300 m beyond the boundary.	Single-engine taxiing (where possible) can have up to a 50 % reduction in fuel use and pollutant emissions. This is not something that is currently tracked but will be encouraged during busier periods when taxi times are longer. Arrival taxi time is tracked – e.g. the average arrival taxi time for Rwy 27 is 2 mins 58 seconds. For certain aircraft, they can only reduce to single engine taxi for arrival after 3.5 minutes from arrival. Therefore, no specific target is set as circumstances will vary.	Guide and influence	

Table B.2: Emission reduction measures – aircraft and airfield operations continued

Reference	Relevance	Measure	Description	Deliverable	Target date	Progress to date	Baseline	Reduction	Control	Hierarchy
AA08	Carbon and air quality	Reduce auxiliary power unit running times	Review APU running time allowances in operational procedures and reduce to minimum level practicable, engaging with airlines through committees such as the Flight Operations Safety Committee. Further research is required to determine current levels of APU use, which will then determine targets for reductions.	APU running time reduction requirement implemented through operating procedures.	2023	We detail within our AIP and Airside Operational Instructions that APUs must be run at the minimum time possible when on stand. Overall, this is widely adhered to and any restrictions on certain stands due to noise monitoring is strictly monitored by the airside operations teams in conjunction with airlines. APU run times are not currently logged by airside operations or BAL, however data may be available via airlines.	Scope 3 APU emissions contribute 4.1 kt CO_2e per year[4] Aircraft and ground operations contribute ~60% of NOx on the Airport and ~30% ~300 m beyond the boundary.	Under review	Guide and influence	
AA09	Carbon and air quality	Encourage quieter and greener fleets through a league table	A league table will be established in 2023 to measure and record carbon emissions and noise levels from aircraft operators arriving at Bristol Airport. This will encourage and drive airlines to continually engage in improvement. The league table will be developed in the future to include SAF and new technology aircraft.	Production of league table showing movements measured by quota count, published on our website.	2023	An airline league table has been produced and will be published in line with the winter and summer seasons. This will be published in the sustainability section of our website.	Scope 3 cruise and LTO emissions contribute 476 kt CO_2e per year[4] Aircraft and ground operations contribute ~60% of NOx on the Airport and ~30% ~300 m beyond the boundary.	Indirect reductions in carbon emissions and maintaining / improving air quality	Guide and influence	
AA010	Carbon and air quality	Review of landing charge structure to incentivise fuel efficient aircraft	Review of landing charges and contract renewals where applicable to incentivise more fuel efficient aircraft based at Bristol Airport.	Complete review	From 2023 annually and/or when contracts are renewed	New agreements made in 2024 to increase individual airlines to operate more Max/NEO type aircraft in future years.	Scope 3 cruise and LTO emissions contribute 476 kt CO_2e per year[4] Aircraft and ground operations contribute ~60% of NOx on the Airport and ~30% ~300 m beyond the boundary Current structure published on the BAL website	Under review. In 2023, 22% of aircraft movements were Max/Neo and considered fuel efficient (excluding general aviation/ helicopters). Expected to be 30% in summer 2024.	Guide and influence	

2 https://www.bristolairport.co.uk/about-us/doing-business-with-us/fees-and-charges

Table B.2: Emission reduction measures – aircraft and airfield operations continued

Reference	Relevance	Measure	Description	Deliverable	Target date	Progress to date	Baseline	Reduction	Control	Hierarchy
AA011	Carbon	Support customer offsetting of flights to / from Bristol Airport via an online platform	Work with airline partners to highlight their processes for customers to offset flight emissions. This will provide details of offsetting provisions provided by flight operators from Bristol Airport, giving the customer choice and increasing transparency around offsetting commitments delivered by airline operators.	Development of website providing customers with details to offset their carbon emissions.	2023	We are currently developing a section of our website to direct customers to airline sustainability pages to ensure transparency and enable informed choices regarding emission offsetting. This initiative aims to enhance visibility around the commitments made by airlines operating from Bristol Airport. This will be available from Q1 2025.	Scope 3 cruise and LTO emissions contribute 476 kt CO_2e per year[4]	Indirect reductions in carbon emissions	Guide and influence	
AA012	Carbon	Add de-icer usage to our carbon footprint	As part of continuous improvement, de-icer usage will be added to our carbon footprint. This will help support efforts to identify actions to reduce usage.	De-icer included in carbon footprint.	2023	Since 2022, Scope 1 and Scope 2 de-icer has been included in our carbon footprint calculations.	De-icer to be added to carbon footprint	Actions to reduce usage to be reviewed	Control	
AA013	Carbon	Control the use of de-icer with our Winter Weather Response Plan	Our Winter Weather Response Plan includes details to control the use of de-icer. The Plan sets out conditions for de-icing and governance procedures, to ensure that de-icing occurs only when required.	Review of Winter Weather Response Plan annually.	2023	De-icer consumption is continually monitored as part of scope 1 carbon calculations. This supports the review of Winter Weather response.	De-icer to be added to carbon footprint	Actions to reduce usage to be reviewed	Control	
AA014	Carbon and air quality	Reduce vehicle / equipment idling and improve efficiency	Airside staff will be provided with information to encourage them to operate more efficiently and minimise idling of vehicles / equipment. Install tracking on all vehicles we own where possible to reduce idling and improve efficiency of equipment.	Install tracking on all our vehicles where feasible.	Complete review in 2022 and begin implementation in 2023	Vehicle and equipment idling is included in airside audits. Reduction in vehicle and equipment idling has been included in driver training process.	Estimated 390,000 litres of total BAL fleet diesel fuel use (1.0 kt CO_2e)[4] Aircraft and ground operations contribute ~60% of NOx on the Airport and ~30% ~300 m beyond the boundary (2023 – 30 fleet vehicles are tracked (mix of vans and cars, EV and diesel – is collects information on idling times, speeding, braking, cornering, routes, frequency on certain routes).	Vehicle tracking can deliver an estimated 14% reduction in fuel usage	Control	

Table B.2: Emission reduction measures – aircraft and airfield operations continued

Reference	Relevance	Measure	Description	Deliverable	Target date	Progress to date	Baseline	Reduction	Control	Hierarchy
AAO15	Carbon and air quality	Airside vehicle and equipment pooling scheme	Review the possible implementation of a pooling scheme for airside vehicles and equipment to reduce fuel usage and support the transition to zero emissions options.	Review implementation of a pooling scheme for airside vehicles and equipment.	2023	Airside GSE pooling scheme project signed off. Inviting suppliers to express interest in Jan '25. Shortlist for tendering process to be finalised in February 2025.	Vehicles and equipment operated by third parties not included within the carbon footprint4 Aircraft and ground operations contribute ~60% of NOx on the Airport and ~30% ~300 m beyond the boundary	Under review	Guide and influence	
AAO16	Carbon and air quality	Auxiliary power unit running time surveys	Carry out spot checks to monitor the time taken to shut down the APU after arrival on stand and set targets for shutdown to enable continuous improvement.	Implement APU running surveys.	2024	Procedures are in place to limit the use of APUs. Further APU running surveys will be undertaken in 2025.	Scope 3 APU emissions contribute 4.1 kt CO_2e per year[4] Aircraft and ground operations contribute ~60% of NOx on the Airport and ~30% ~300 m beyond the boundary	Under review	Guide and influence	
AAO17	Carbon and air quality	Support the introduction of low-carbon flights	We will support the introduction of short-haul, low- zero-emission, hybrid flights or electric vertical take-off and landing (eVOLT). We are participating in the Future Flight Challenge, supported by government funding.	Participation in the Future Flight Challenge.	2025	Participation in Future Flight Challenge is ongoing and is due to end in Q1 2025.	Scope 3 cruise and LTO emissions contribute 476 kt CO_2e per year[4] Aircraft and ground operations contribute ~60% of NOx on the Airport and ~30% ~300 m beyond the boundary (Figure 3.5)	Indirect reductions in carbon emissions and maintaining / improving air quality	Guide and influence	
AAO18	Carbon and air quality	Airside vehicle / equipment ultra-low emission zone	Airside vehicle and equipment fleet will be regularly reviewed to ensure older items are replaced. Increased permit costs will be applied for older and high-polluting vehicles / equipment over time. Review and prepare plan in 2023 for phased removal (subject to consultation). Target implementation of an airside ultra-low emission zone with 100% of vehicles / equipment meeting Euro 6/VI / Stage V emissions standards by the end of 2025 where feasible.	100% of vehicles / equipment Euro 6/VI / Stage V.	2023 & 2025	Many BAL airside partners are working towards a fully electric fleet. Within airside operations we have now moved to a fully electric fleet of four vehicles, significantly reducing our emissions on within the airside environment. Our Energy Efficiency manager is working site wide on providing electric charging facilities to support this transition.	Estimated 390,000 litres of total BAL fleet diesel fuel use (1.0 kt CO_2e)[4] Aircraft and ground operations contribute ~60% of NOx on the Airport and ~30% ~300 m beyond the boundary Out of 105 registered road vehicles, 30% are Euro 6. These are vehicles purchased from 2014 onwards.	Euro 6 standard particularly focuses on restricting diesel NOx emissions, with the permitted level of NOx reduced from 0.18 g/km in Euro 5 to 0.08 g/km	Control	

Table B.2: Emission reduction measures – aircraft and airfield operations continued

Reference	Relevance	Measure	Description	Deliverable	Target date	Progress to date	Baseline	Reduction	Control	Hierarchy
AAO19	Carbon and air quality	Additional runway entry point	The efficiency of airfield movements will be improved through an additional runway entry point which is expected to reduce waiting times.	Reduced taxi and hold times based on baseline.	2027	Currently working with Airspace Change and in the early stages of planning. Runway modifications are also being assessed. Proposals to make further changes to the runway and taxiways were included in the final draft Master Plan that was published for comments during a consultation period at the end of November 2024.	Scope 3 cruise and LTO emissions contribute 476 kt CO_2e per year[4] Aircraft and ground operations contribute ~60% of NOx on the Airport and ~30% ~300 m beyond the boundary	Analysis carried out by NATS indicates that taxi times on arrival may decrease by around 30% with the 12 mppa layout on easterlies and increase by around 24% on westerlies, with marginal (~3-5%) increases in departure taxi times. The current average waiting time at BRS is 93 seconds (Runway Hold Area Delay). The target is to reduce this time following the creation of the additional runway entry point.	Guide and influence	
AAO20	Carbon	Installation of LED airfield ground lighting	AGL replacement to LED as part of runway resurface by 2027 dependant on asset condition.	Installation of LED airfield ground lighting.	2027 dependant on asset condition	Early stages of planning have been initiated.	Estimate 2,100,000 kWh BAL electricity consumption (0.55 kt CO_2e) for lighting (15% of total) per year[4]	LEDs save up to 90% of energy compared to traditional bulbs	Control	
AAO21	Carbon	Airspace modernisation	We will conduct airspace modernisation with National Air Traffic Services (NATS) to minimise miles flown from 2027. Airspace modernisation is also expected to reduce hold times and ground delay. This will reduce carbon emissions and noise impacts. The process is currently at the stage 2 gateway.	Completion of airspace modernisation.	2027	Project has advanced to Stage 3 of 6, the aim of which is to narrow down routes following a consultation process expected in May 2026.	Scope 3 LTO emissions contribute 120 kt CO_2e per year[4]	Current forecasts show that modernising airspace in the UK offers the potential to reduce CO_2 emissions by up to 20% by 2050	Guide and influence	

Table B.2: Emission reduction measures – aircraft and airfield operations continued

Reference	Relevance	Measure	Description	Deliverable	Target date	Progress to date	Baseline	Reduction	Control	Hierarchy
AAO22	Carbon and air quality	Development of new airside power and distribution methods	Building on feasibility studies conducted, where it is deemed feasible, we will develop a new power and distribution site(s) for airside vehicles, GSE and mobile electric ground power units (GPUs) by 2027. We will ensure that use of mobile EGP/GPU is mandatory where provided.	Installation of power and distribution site(s) for airside vehicles, GSE and mobile electric GPUs by 2027.	2027	On schedule	Vehicles and equipment operated by third parties not included within the carbon footprint[4] Aircraft and ground operations contribute ~60% of NOx on the Airport and ~30% ~300 m beyond the boundary	Reductions in carbon emissions and maintaining / improving air quality	Guide and influence	
AAO23	Carbon and air quality	Transition to zero emission fleet	We will transition to zero emission (hydrogen / full electric plug-in / alternative fuels) ground fleet vehicles / equipment by 2030. This commitment includes airside buses and support vehicles.	Zero emission ground fleet vehicles / equipment.	2030	On schedule. Our Energy Efficiency manager is working site wide on providing electric charging facilities to support this transition.	Estimated 390,000 litres of total BAL fleet diesel fuel use (1.0 kt CO_2e)[4] Aircraft and ground operations contribute ~60% of NOx on the Airport and ~30% ~300 m beyond the boundary	Emission-free BAL fleet vehicles	Control	

Surface Access

Table C.3: Emission reduction measures – surface access

Reference	Relevance	Measure	Description	Deliverable	Target date	Progress to date	Baseline	Reduction	Control	Hierarchy
SA1	Carbon and air quality	Construction Environmental Management Plan	Production of a CEMP in accordance with planning condition 7, including a construction traffic management plan with details of the transport routes and vehicle entrance routes into the Airport to be used by contractors' vehicles moving to and from the site (and the appropriate signage thereof) and HGV delivery times.	Production of a CEMP.	Pre-construction	CEMPs in place for existing capital works projects. A CEMP has been produced prior to the commencement of construction of the South and West Terminal Extensions (the first 12mppa infrastructure works).	Relates to future construction	Indirect reductions in carbon emissions and maintaining / improving air quality	Guide and influence	
SA2	Carbon and air quality	To convene an Airport Transport Forum	We will continue to convene an Airport Transport Forum (ATF), to oversee the development and delivery of the ASAS and its targets.	ATF meeting minutes to be provided to the Airport Consultative Committee.	Ongoing	This continues to be held twice a year. Most recently on 5th December 2024.	Actively working with the ATF	Indirect reductions in carbon emissions and maintaining / improving air quality	Guide and influence	
SA3	Carbon and air quality	Optimise third party deliveries	Encourage those companies operating retail and catering concessions at the Airport to optimise the transport and logistics for deliveries of goods to the Airport.	Considered as part of the ASAS.	2023	Timeslot sequencing around the clock has been introduced to improve delivery efficiencies.	Supply chain not included within the carbon footprint[4] Road traffic contributes ~20% of NOx on the Airport and ~50% ~300 m beyond the boundary	Indirect reductions in carbon emissions and maintaining / improving air quality	Guide and influence	
SA4	Carbon and air quality	Provide a replacement Airport Surface Access Strategy	The enhancements contained in the ASAS would include bus service improvements, a public transport improvement fund, publicity, interchange improvements, integration of services, parking management and pricing controls. The ASAS will apply a 'transport mode hierarchy', recognising the environmental impacts of different transport modes. The exact scope of the measures contained in the ASAS would be determined in consultation with a Surface Access Steering Group.	Measurement will be contained in ASAS	2023	The replacement ASAS was published in April 2024 following consultation with stakeholders and the Bristol Airport Transport Forum.	Current ASAS Staff surface access emissions are 8.12 kt CO_2e and passenger surface access emissions are 109.05 kt CO_2e per year[4] Road traffic contributes ~20% of NOx on the Airport and ~50% ~300 m beyond the boundary	Exact scope of all measures to be determined within the revised ASAS to inform potential emissions reductions	Guide and influence	

3 https://gat04-live-1517c8a4486c41609369c68f30c8-aa81074.divio-media.org/filer_public/43/c1/43c169eb-1fd5-4d7e-a98e-f13fc287b5ff/cd74_-_bristol_airport_surface_access_strategy_2012.pdf

Table C.3: Emission reduction measures – surface access contiuned

Reference	Relevance	Measure	Description	Deliverable	Target date	Progress to date	Baseline	Reduction	Control	Hierarchy
SA5	Air quality	Air quality monitoring reporting	Air quality monitoring to continue around the Airport and be reported on a quarterly basis alongside other key metrics (e.g. flights, passenger numbers, quota count).	Continued reporting of air quality monitoring data in Annual Monitoring Report.	2023	Air quality continues to be monitored and reported on in the Annual Monitoring report.	No exceedances of the AQOs surrounding the Airport for NO_2 and PM_{10}	Maintaining / improving air quality	Control	
SA6	Air quality	Additional air quality monitoring locations	We will install a second continuous air quality monitoring station at the Airport to monitor NOx, NO2, PM10 and PM2.5 and expand diffusion tube monitoring for NO2 to 16 sites.	Installation of additional Air Quality Monitor.	2023	An additional air quality monitor was installed in Q3 2024 and diffusion tube monitoring was expanded to 16 sites.	No exceedances of the AQOs surrounding the Airport for NO_2 and PM_{10}	Maintaining / improving air quality	Control	
SA7	Carbon and air quality	Passenger and staff travel surveys	Passenger and staff travel surveys will be undertaken every year to gain a better understanding of origins and mode choices (alongside CAA data) so that public transport options and charging infrastructure is planned accordingly.	Completion of annual surveys and achievement of targets for transport modes.	2023	Staff Travel Survey conducted in September 2024. CAA departing passenger surveys are ongoing with quarterly reports.	Staff surface access emissions are 8.12 kt CO_2e and passenger surface access emissions are 109.05 kt CO_2e per year[4] Road traffic contributes ~20% of NOx on the Airport and ~50% ~300 m beyond the boundary	Indirect reductions in carbon emissions and maintaining / improving air quality	Guide and influence	
SA8	Carbon and air quality	Encourage EV usage for travel to the Airport	Assess ways in which EV usage can be encouraged (e.g. preferential parking spaces for EVs, EV charging valet service), improved filling facilities and infrastructure.	Considered as part of the ASAS.	2023	Free two-hour access for all car park bookings to charging points in Long stay car park has been introduced. Rapid charging hub installation planned for 2025. Additional EVCPs planned for MSCP2- opening date 2025. EVCPs installed in Car rental centre to increase adoption of EVs as rental cars.	Staff surface access emissions are 8.12 kt CO_2e and passenger surface access emissions are 109.05 kt CO_2e per year[4] Road traffic contributes ~20% of NOx on the Airport and ~50% ~300 m beyond the boundary	Indirect reductions in carbon emissions and maintaining / improving air quality	Guide and influence	

Table C.3: Emission reduction measures – surface access contiuned

Reference	Relevance	Measure	Description	Deliverable	Target date	Progress to date	Baseline	Reduction	Control	Hierarchy
SA9	Carbon and air quality	Annual sustainable transport marketing programme	Undertake an annual marketing programme to raise awareness of, and promote, all sustainable modes of transport at the Airport including the development of the Bristol Airport website to enable customers to make a comparison between all journey options by different modes (including parking and public transport) and pricing during, or to inform, their booking.	Annual marketing programme.	2023	Digital Marketing programme executed for 2024. This included radio and out of home advertising campaigns focussed on key travel periods. The same programme is also scheduled in 2025 launching in Q1.	Passenger surface access emissions are 109.05 kt CO_2e per year[4] Road traffic contributes ~20% of NOx on the Airport and ~50% ~300 m beyond the boundary	Indirect reductions in carbon emissions and maintaining / improving air quality	Guide and influence	
SA10	Carbon and air quality	Optimise construction deliveries	Policy and procurement requirements for development projects will include the requirement to optimise transport and logistics of materials brought to site for construction processes.	Updated internal procurement processes.	2023	Procurement policy has been updated to ensure sustainable and environmental considerations during the procurement lifecycle in line with our company targets or roadmap to net zero.	Supply chain not included within the carbon footprint[4] Road traffic contributes ~20% of NOx on the Airport and ~50% ~300 m beyond the boundary	Indirect reductions in carbon emissions and maintaining / improving air quality	Guide and influence	
SA11	Carbon and air quality	Delivery of a Workplace Travel Plan in line with surface access targets	Low-carbon alternatives such as carsharing, a cycle to work scheme and the introduction of an employee travel scheme, including a new travelcard package by 2025, will be incorporated into the plan.	Achieve a 30% share of staff travel by non-single occupant vehicle modes such as car share, public transport, motorcycle, walking and cycling. This will be recorded in staff travel surveys. Staff survey methodology to be agreed and provided as part of the 12mppa planning permission.	2023	The updated Workplace Travel Plan will be finalised and published in March 2025, following the completion of the staff travel survey in autumn 2024. Measures to ensure the staff mode share target is are being planned and delivered as part of the Travel Plan, including increases to the frequency of the A1 and A3 bus services from April 2025.	Staff surface access emissions are 8.12 kt CO_2e per year[4] Road traffic contributes ~20% of NOx on the Airport and ~50% ~300 m beyond the boundary	Indirect reductions in carbon emissions and maintaining / improving air quality	Guide and influence	
SA12	Carbon and air quality	EV salary sacrifice scheme	The salary sacrifice scheme covering bikes/E-bikes will be expanded to include EVs for Bristol Airport Ltd employees.	Expand salary sacrifice scheme to Bristol Airport Ltd employees. Octopus Energy EV salary sacrifice commencing in April – will be available to approximately 300 BRS employees.	2023	Scheme brought in in 2022	Staff surface access emissions are 8.12 kt CO_2e per year[4] Road traffic contributes ~20% of NOx on the Airport and ~50% ~300 m beyond the boundary	Indirect reductions in carbon emissions and maintaining / improving air quality	Guide and influence	

Table C.3: Emission reduction measures – surface access contiuned

Reference	Relevance	Measure	Description	Deliverable	Target date	Progress to date	Baseline	Reduction	Control	Hierarchy
SA13	Carbon and air quality	Installation of EV charging infrastructure	Deliver a scheme for the installation of rapid EV charging points at the Airport. We intend to develop an EV charging hub, subject to planning approval. This will be designed for passenger and employee use. In accordance with planning condition 11, the number and locations of the charging points and timetable for their installation is subject to approval by NSC.	Delivery of an EV charging hub.	2024	Plans complete. Installation planned for Q4 2025.	Staff surface access emissions are 8.12 kt CO_2e and passenger surface access emissions are 109.05 kt CO_2e per year[4] Road traffic contributes ~20% of NOx on the Airport and ~50% ~300 m beyond the boundary	Indirect reductions in carbon emissions and maintaining / improving air quality	Guide and influence	
SA14	Carbon and air quality	Airport access improvements	Main gate entrance enhancements to airfield allowing improved access for essential services.	Delivery of access improvements.	2024	Main Gate is currently under construction - the scheme is aiming to be fully complete and ready for summer 2025.	Estimated 390,000 litres of total BAL fleet diesel fuel use (1.0 kt CO_2e) Vehicles and equipment operated by third parties not included within the carbon footprint[4]	Indirect reductions in carbon emissions and maintaining / improving air quality	Guide and influence	
SA15	Carbon and air quality	Local road network improvements	Improvements to the local road network will be made to reduce queuing on local roads, particularly the A38.	Support delivery of local road network improvements undertaken by North Somerset Council.	Estimated 2025	Bus Prioritisation works, funded by BSIP are continuing throughout North Somerset. The improvements to the A370 corridor at Brockley Combe and improvement at Wood Hill have been completed in 2024. The 12mppa A38/Downside Rd improvements will be delivered by North Somerset Council as part of the wider A38 Major Road Network scheme, which also includes constructing a new bus lane going north between the Silver Zone roundabout and main access roundabout. NSC are managing a tender process for the works and a firm timetable on delivery will be agreed once a contractor is selected.	Staff surface access emissions are 8.12 kt CO_2e and passenger surface access emissions are 109.05 kt CO_2e per year[4] Road traffic contributes ~20% of NOx on the Airport and ~50% ~300 m beyond the boundary	Indirect reductions in carbon emissions and maintaining / improving air quality	Guide and influence	

Table C.3: Emission reduction measures – surface access contiuned

Reference	Relevance	Measure	Description	Deliverable	Target date	Progress to date	Baseline	Reduction	Control	Hierarchy
SA16	Carbon and air quality	Disincentivise high-carbon employee vehicles	Needs-based allocation of staff car parking will be implemented from 2025. Additionally, parking charges will be reviewed to incentivise public transport and EV use.	Increase the percentage of staff travelling by sustainable modes of transport including car sharing to 30% by 2030. This will be recorded in staff travel surveys. 2022 – fleet in 76 taxis. 46 are petrol hybrid and 1 is fully electric. The rest are petrol/diesel.	2025 (implementation of needs-based allocation of staff parking)	The staff travel survey conducted in autumn 2024 demonstrates that 24.9% of staff at the Airport are using sustainable transport modes. Further measures to mee the 30% target will be introduced within the refreshed travel plan including consideration for needs-based allocation of car parking, charges and EV use (noting that EV use in itself does not count towards the 30% target set within the planning obligation).	Staff surface access emissions are 8.12 kt CO_2e per year[4] Road traffic contributes ~20% of NOx on the Airport and ~50% ~300 m beyond the boundary	Reductions in carbon emissions and maintaining / improving air quality	Guide and influence	
SA17	Carbon and air quality	EV taxi fleet	Phased introduction of EVs into our contracted taxi fleet and encourage the use of lower emission vehicles amongst other taxi operators. Initial target within the contracted taxi fleet of 75% of vehicles to be fully electric or hybrid, transitioning to 100% by 12 mppa. Taxi contracts have been updated to reflect the requirement for the introduction of EVs. Onsite EV charging will be provided as part of the EV strategy.	100% of Bristol Airport Limited Contracted taxi vehicles to be fully electric or hybrid. 75% of onsite taxis will be hybrid1 or pure electric by the end of 2025. Out of this 75%, at least 25% will be fully electric.	2030	Existing taxi concession is converting to fully electric/hybrid. 75% of fleet currently EV/hybrid.	Vehicles and equipment operated by third parties not included within the carbon footprint[4] Road traffic contributes ~20% of NOx on the Airport and ~50% ~300 m beyond the boundary	Indirect reductions in carbon emissions and maintaining / improving air quality	Control	
SA18	Carbon and air quality	Improve and encourage the use of public transport links through the Public Transport Improvement Fund	We have committed to encouraging the use of public transport and increasing modal splits of passengers and employees travelling to the Airport by public transport. These targets are dependent on the passenger capacity at the Airport. There is a commitment to achieve 17.5% of passengers travelling by public transport by 2030 under 12 mppa. This will be achieved through measures such as improved ticketing, real-time travel information and the Public Transport Interchange.	Increase the percentage of passengers travelling by public transport to 17.5% by 2030 for a 12 mppa capacity airport. This will be measured within CAA data.	2030	Passenger modal share for Public Transport (as a main mode) was 17% in 2024. Additional coach routes are running from Birmingham and South Wales were introduced in 2024. Further measures are being developed using the PT Improvement Fund which will be made available for use by North Somerset Council. Once the new Public Transport Interchange is open in summer 2025, the modal share for passengers is expected to increase.	Staff surface access emissions are 8.12 kt CO_2e and passenger surface access emissions are 109.05 kt CO_2e per year[4] Road traffic contributes ~20% of NOx on the Airport and ~50% ~300 m beyond the boundary	Reductions in carbon emissions and maintaining / improving air quality	Guide and influence	

Table C.3: Emission reduction measures – surface access contiuned

Reference	Relevance	Measure	Description	Deliverable	Target date	Progress to date	Baseline	Reduction	Control	Hierarchy
SA19	Carbon and air quality	Transition to zero emission fleet	We will transition to zero emission (hydrogen / full electric plug-in / alternative fuels) ground fleet vehicles by 2030. This commitment includes landside buses and the Airport Flyer services. We are investigating the feasibility of delivering hydrogen or EV buses landside. By 2027 a trial period will be completed with a phased transition planned beyond this. On-site infrastructure will be provided as required.	Zero emission fleet landside. 2022 – BAL has 15 fully electric vehicles supplied to 8 internal departments at Bristol Airport including 1 fully electric landside bus which transports passengers on the Apron. No Airport Flyer buses are electric at present.	2030	Ground fleet vehicles transitioning to EV including Airside and landside buses. As of 2024, there are 11 electric buses on site. Delivery of buses is a phased approach and timed with current vehicles reaching end of life. There have been many delays with EV bus deliveries however we remain on track to give 65% of BRS airside buses electric by 2027 and 25% of BRS landside buses electric by 2027. Airport flyer services will change to be EV services in 2025.	Estimated 390,000 litres of total BAL fleet diesel fuel use (1.0 kt CO_2e)[4] Road traffic contributes ~20% of NOx on the Airport and ~50% ~300 m beyond the boundary	Emission-free BAL fleet vehicles	Control	

Appendix B – Air Quality Monitoring Results 2024

Continuous air quality monitoring results are shown in **Table 1**. Ambient concentrations of NO_2 and PM_{10} recorded by real time monitoring in 2024 are shown in **Table 2** with analysis against National Air Quality Strategy (NAQS) and S106 objectives. No exceedances of the AQOs have been recorded in the last seven years and there has been a notable reduction in pollutant concentrations across the site since 2019 excluding years that were affected by the COVID-19 pandemic that show reduced nitrogen dioxide levels due to significantly reduced airport activity. The rise in NO_2 and PM_{10} levels between 2023 and 2024 is linked to increased passenger numbers, leading to higher vehicle activity at the airport and increased flight operations. However, levels remain within regulatory limits and are closely monitored. To support cleaner air, we have transitioned airport buses from diesel to HVO and EVs which has helped to maintain levels significantly below 2019 figures.

Table 1: Continuous monitoring results

	Recorded annual mean (µg/m³) (NO_2- hourly means > 200µg/m³; PM_{10}- daily means > 50µg/m³)					
Pollutant	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
NO_2	17		8	12.7	12.6	13.3
PM_{10}	17.7		15.5	14.7	14.3	15.0

Table 2: Analysis of continuous monitoring data against NAQS and S106 requirements

Pollutant	Recorded annual mean (µg/m³)	NO_2 Hourly Means > 200µg/m³ PM_{10}- Daily Means > 50µg/m³	NAQS Compliant	Annual Mean <90%	Significant Deterioration
NO_2	13.3	0	Yes	Yes	No
PM_{10}	15.0	0	Yes	Yes	No

Monthly ambient concentrations of NO_2 and PM_{10} recorded by real time monitoring are in **Figures 1** and **2**. Note that the target PM_{10}/NO_2 is the mean limit set in the National Air Quality Strategy Objectives.

Figure 1: Particulate Matter monthly average readings for real time monitoring in 2024

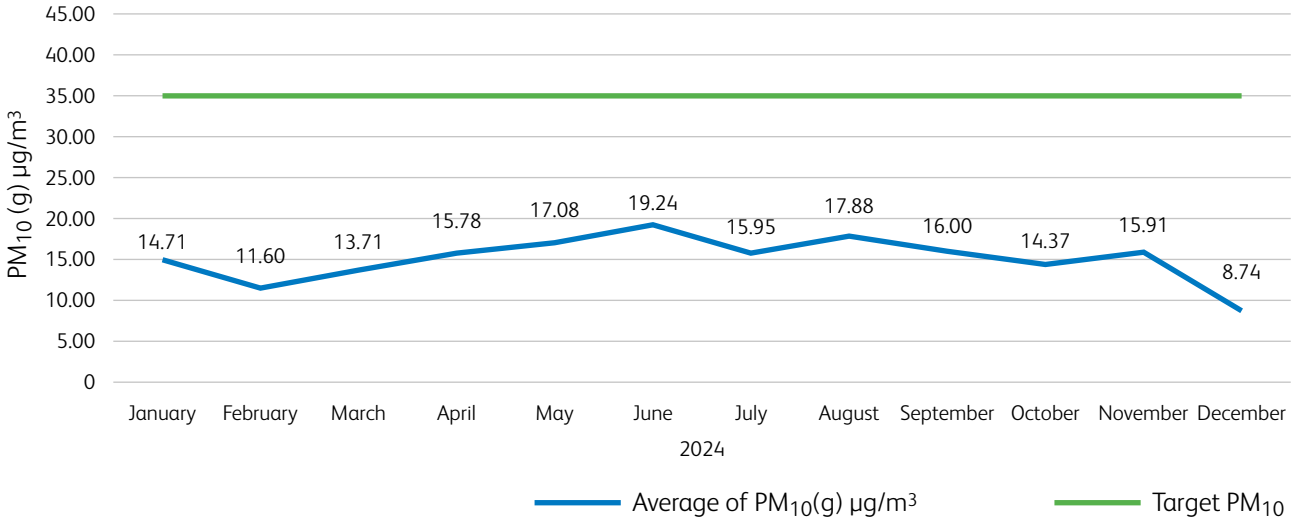
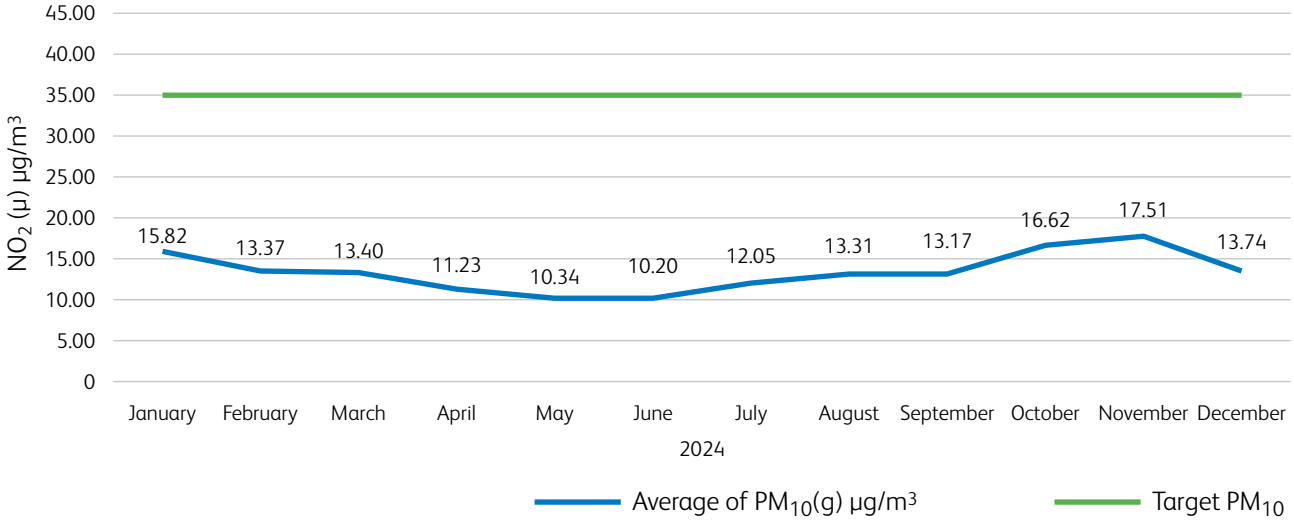


Figure 2: Nitrogen Dioxide monthly average concentrations recorded by real time monitoring in 2024



NO_2 concentrations recorded by diffusion tube monitoring are shown in **Tables 3** and **4** below. There have been no exceedances of the AQOs recorded in the last seven years.

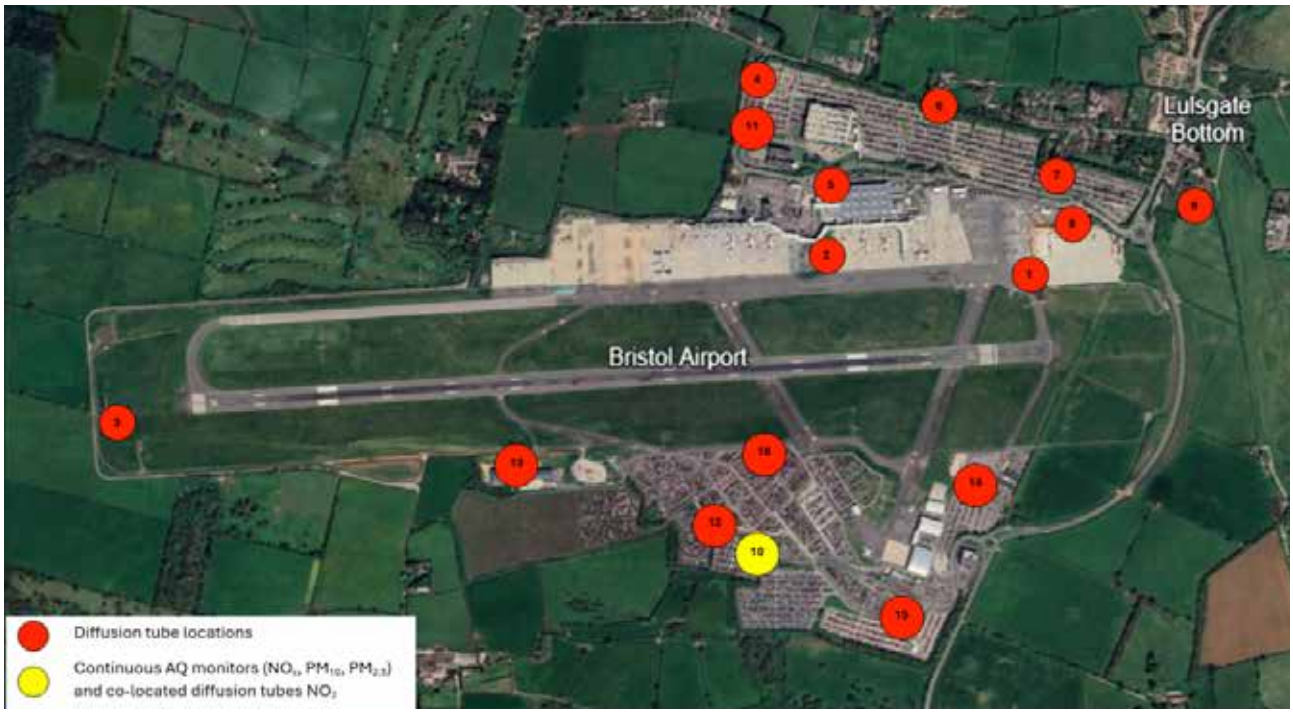
Table 3: Historical diffusion tube monitoring results

	Recorded annual mean (µg/m3)					
Monitoring location	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
1	31	-	12	16	16	14
2	34	-	17	29	29	28
3	11	-	8	10	10	11
4	13	-	8	11	17	14
5	33	-	12	22	21	22
6	20	-	12	16	14	16
7	23	-	11	17	16	16
8	36	-	14	24	29	26
9	21	-	11	15	10	10
10	-	-	-	-	-	15
11	-	-	-	-	-	20
12	-	-	-	-	-	13
13	-	-	-	-	-	16
14	-	-	-	-	-	17
15	-	-	-	-	-	13
16	-	-	-	-	-	20

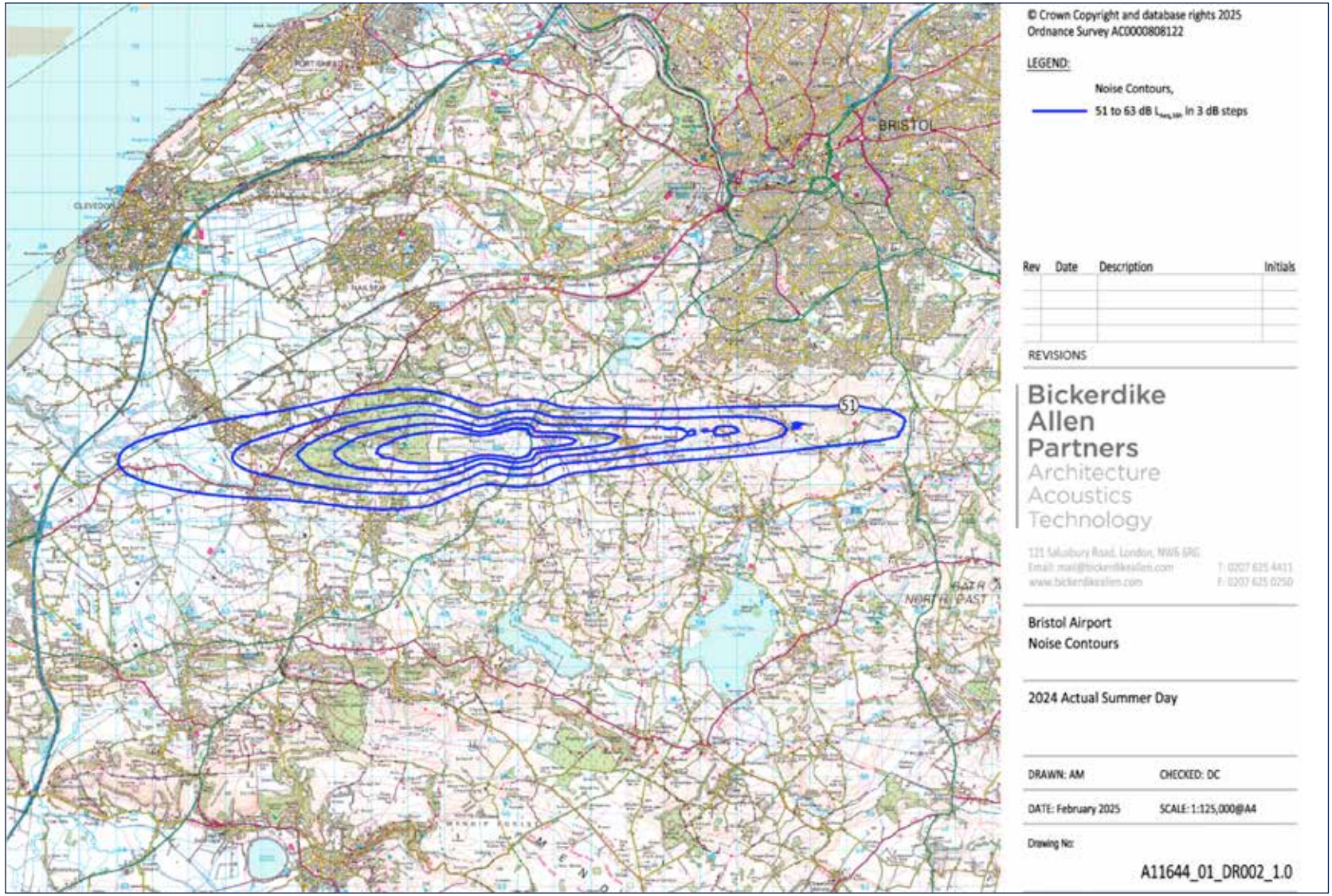
Table 4: Diffusion tube monitoring results for 2024

Monitoring Location	Recorded annual mean (µg/m3)	NAQS Compliant	Annual Mean <90%	Significant Deterioration
1	14	Yes	Yes	No
2	28	Yes	Yes	No
3	11	Yes	Yes	No
4	14	Yes	Yes	No
5	22	Yes	Yes	No
6	16	Yes	Yes	No
7	16	Yes	Yes	No
8	26	Yes	Yes	No
9	10	Yes	Yes	No
10	15	Yes	Yes	No
11	20	Yes	Yes	No
12	13	Yes	Yes	No
13	16	Yes	Yes	No
14	17	Yes	Yes	No
15	13	Yes	Yes	No
16	20	Yes	Yes	No

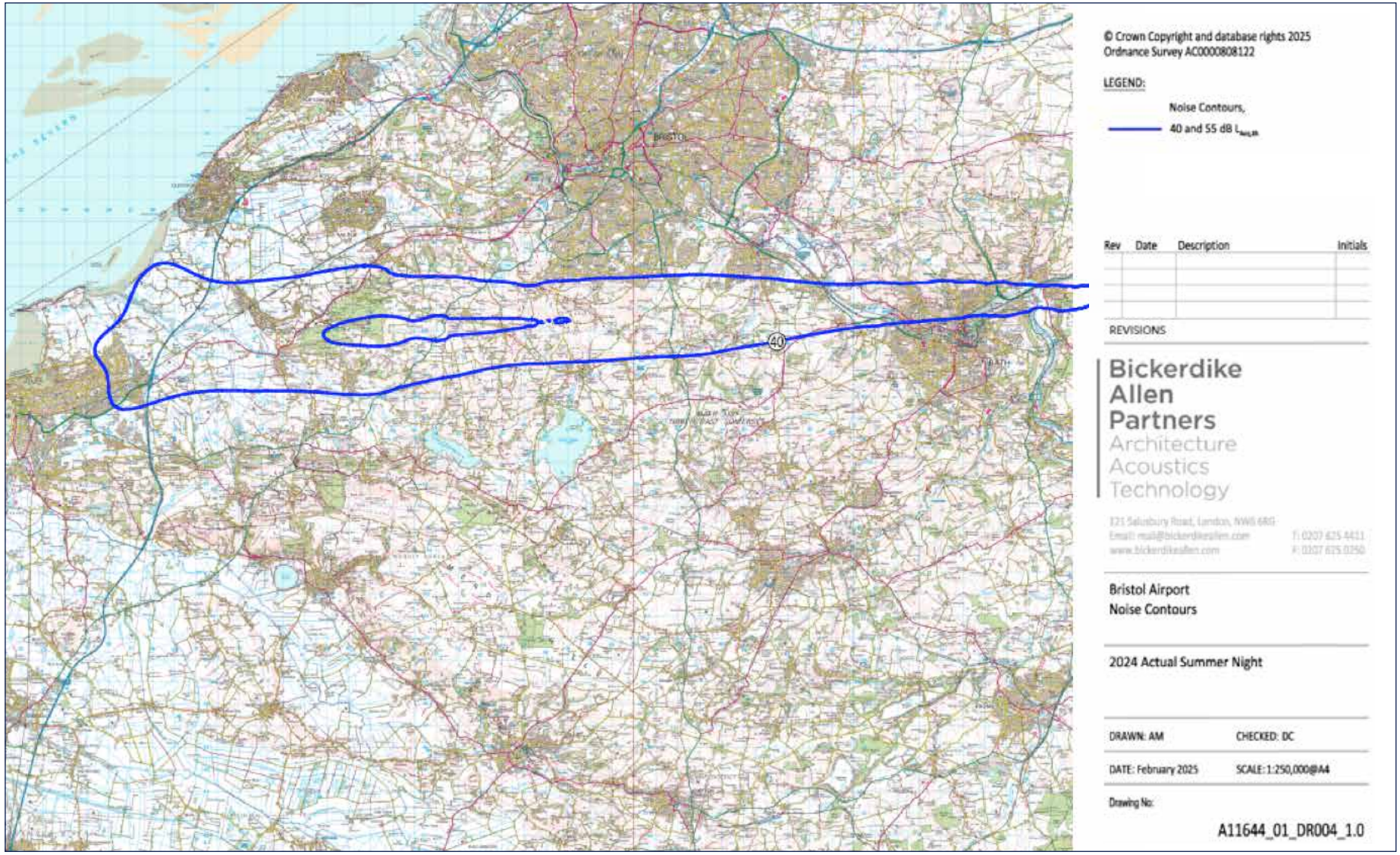
Figure 4: Air quality monitoring locations



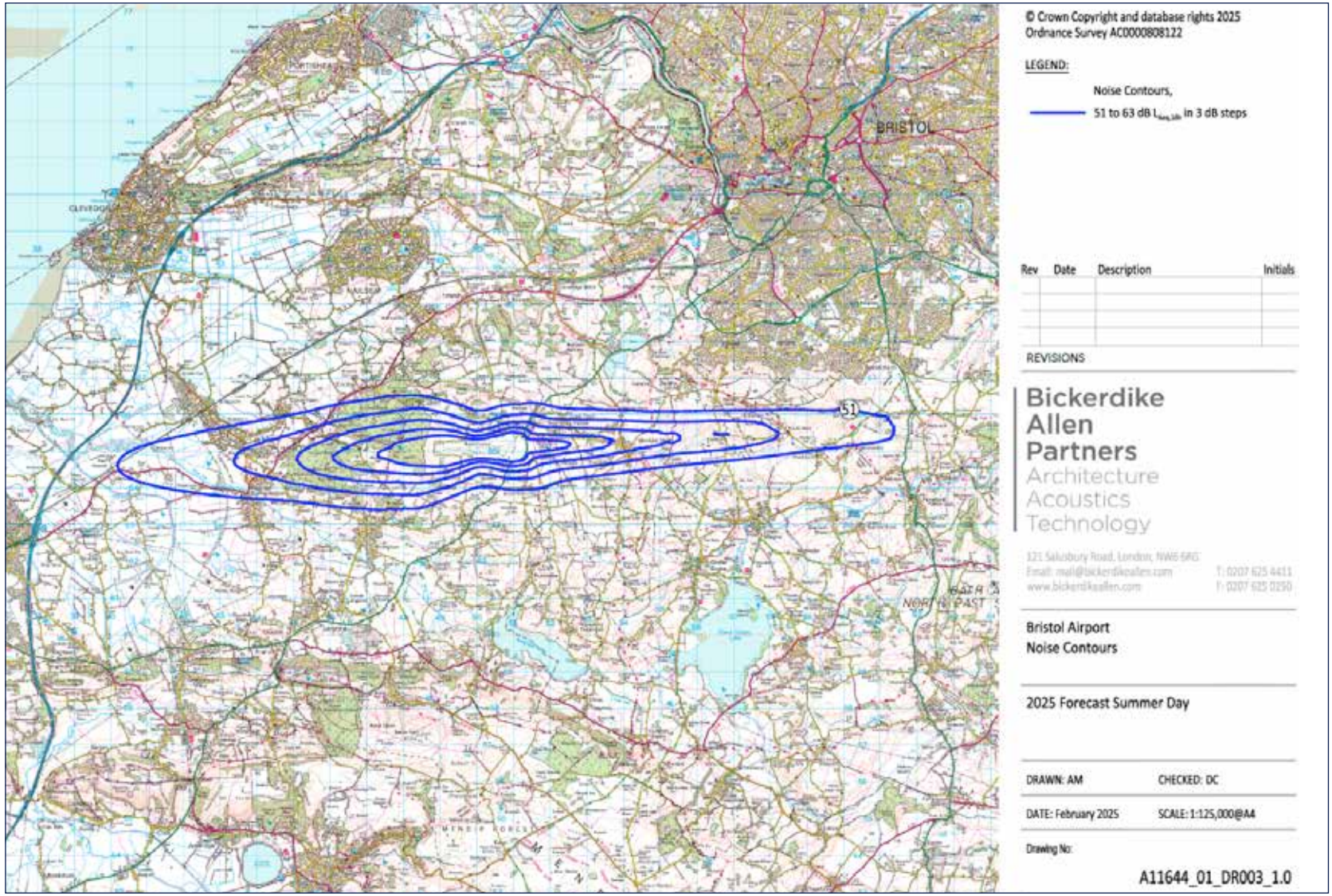
Appendix C – Summer 2024 – Actual Noise Contours



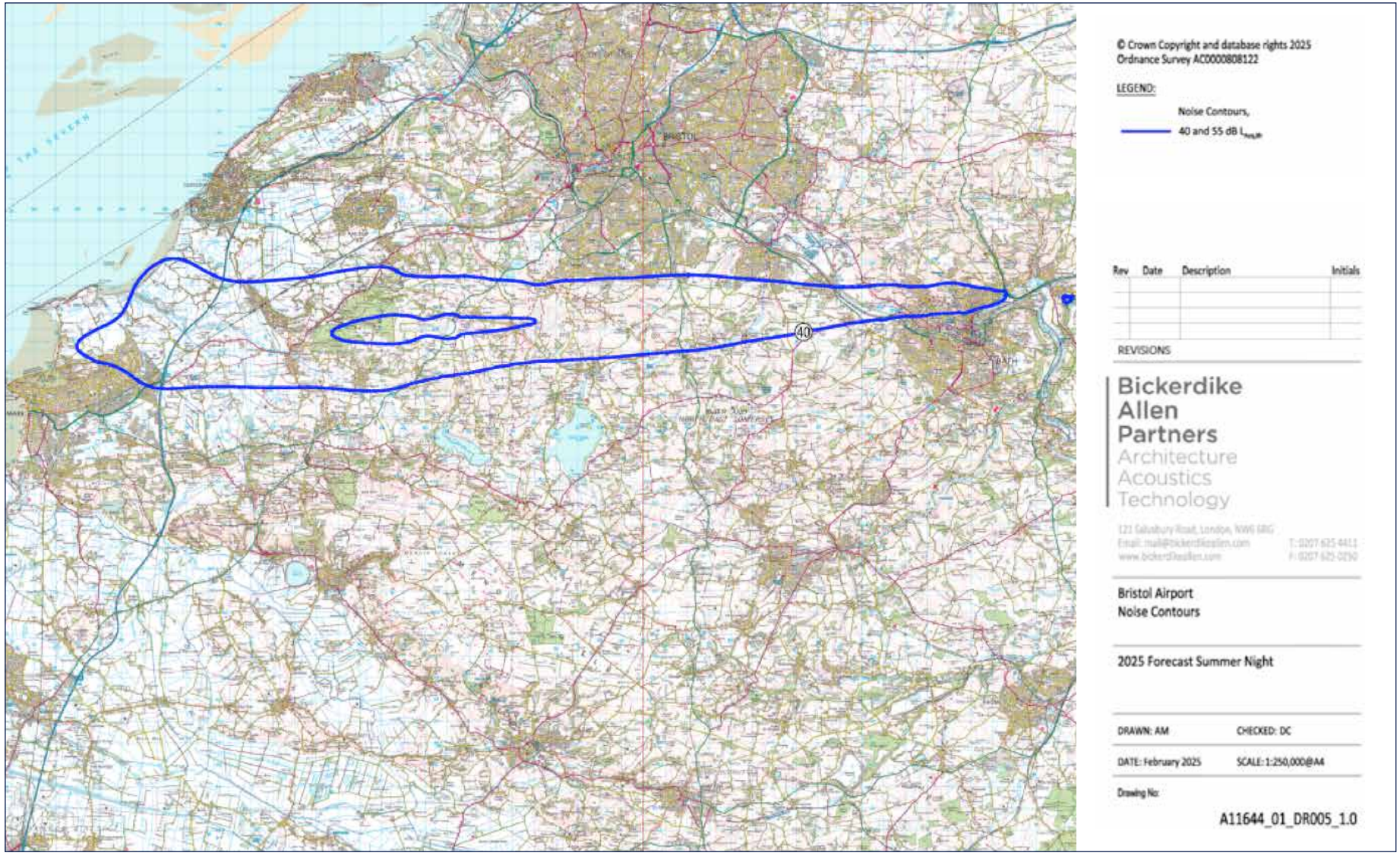
Appendix C – 2024 Actual Summer Night Noise Contours



Appendix C – 2025 Forecast Daytime Noise Contours



Appendix C – 2025 Forecast Night Noise Contours



Appendix D – Noise Action Plan

Bristol Airport's current Noise Action Plan is live from 2024 to 2029 and is accessible on the airport website: 2024-2029-nap-adopted-v2.pdf. Actions within the action plan are set out below. To aid this review of progress, the below tables highlight progress in a simple Red, Amber, Green or RAG status. Red shows an action which has not been completed, Yellow depicts an action which is ongoing with Green denoting its completion. New actions are shown in Blue. These have been introduced as part of the 12 mppa consent and are new to the 2024 - 2029 Noise Action Plan.

Complete

Action	Progress - May 23	Progress – December 24
Actions to manage and reduce the effects of noise from aircraft on the ground		
We will ensure that ground equipment is well maintained and provide facilities to support the use of electric vehicles on the aircraft parking apron.	All ground equipment in use on the airfield is subject to an annual 'MOT-type' inspection by the Bristol Airport Motor Transport team. Provision has been made on the Western Walkway for electric vehicle charging. Charging points are also available on the Eastern Apron. The majority of the equipment associated with the baggage handling operation is electric powered.	Electric vehicle charging is provided at appropriate locations airside. Each vehicle that goes airside receives an airside MOT and an airside vehicle inspection. EV charging hubs are located behind Air Traffic Control (ATC) Tower for the west side and there is a hub outside Northgate house for east side. All Business Partners (BPs) use various versions of electric baggage handling equipment.
We will review the feasibility of installing fixed electrical ground power (FEGP) to selected existing stands.	Provision has been made for the installation of fixed electrical ground power on stands 1 to 5 in conjunction with the Central Walkway project. FEGP has been installed on the recently constructed new stands on the Western Apron and will be installed on all future new stands in accordance with the planning conditions attached to the 2011 planning permission.	FEGP has been installed and is in use, in accordance with the planning conditions.

Complete continued

Action	Progress - May 23	Progress – December 24
We will undertake and complete a feasibility study for the further installation of FEGP provision to service stands which currently rely on MGPU use by December 2020.	Bristol Airport successfully completed an electric turnaround trial in 2022 for 6 months. Review complete and no further FEGP planned at this time.	The 12mppa S106 commits us to producing a Ground Noise Management Plan which will include measures to reduce and phase out the use of mobile diesel generators, through FEGP and any transitional arrangements towards FEGP at all aircraft stands. We are currently curating this management plan, to be implemented in the second half of 2025. Our Emissions and Climate Change Action Plan (ECCAP) also includes a commitment to developing new airside power and distribution methods
We will review the Bristol Airport Ground Noise Management Strategy prepared in 2012 in 2019.	This has been achieved. The review of the Ground Noise Study was completed as part of the Airport's Planning Application. The main revision was the ability to provide FEGP to the East Stands in 2019.	Review complete.
We will review procedures for managing the ground running of aircraft engines and the use of aircraft auxiliary power units.	Procedures revised, published and now incorporated into the Ground Noise Management Strategy (2011). KPI's relating to ground engine running are incorporated into the annual Operations Monitoring Report. These will be reviewed annually.	Complete. Will be updated by revised Ground Noise Management Strategy.
Implement the Bristol Airport Ground Noise Management Strategy prepared in 2012 in compliance with the planning obligation in the Section 106 Agreement dated 16 February 2011. This includes the actions described above and in addition covers the installation of noise attenuation buildings and screens.	Installation of noise attenuation buildings and screens complete. East Apron works complete.	Installation of noise attenuation buildings and screens complete.
Actions to manage and reduce the effects of noise from airborne aircraft		
Incentivise airlines to use the most modern and quiet aircraft by imposing a surcharge on Chapter 3 high aircraft.	The Bristol Airport Fees and Charges include a 50% surcharge for Chapter 3 aircraft. No Chapter 3 high aircraft are currently operating at Bristol Airport.	No Chapter 3 high aircraft are currently operating at Bristol Airport. In addition, the Bristol Airport Fees and Charges also include a 200% surcharge for aircraft not meeting Chapter 3, and those operating at night.

Complete continued

Action	Progress - May 23	Progress – December 24
We will consult with the airlines regarding the introduction of a penalty system for flagrant disregard of noise preferential routes and introduce the agreed penalty system.	This was introduced in 2012 as part of the Noise Control Scheme.	Complete.
We will ensure that adherence to the night noise quota system is maintained and report night quota usage and night movements on a seasonal basis to the Airport Consultative Committee and North Somerset Council.	Ongoing. Night flying activity is in full compliance with the refreshed restrictions on night flying in the 2011 planning permission.	The Airport remains compliant with these restrictions for night flying and reports publicly on performance annually. New enhanced quota count system were introduced as part of the 12mppa consent.
We will promote adherence to the Arrivals Code of Practice issued by the Department for Transport relating to continuous descent approaches. We will investigate and adopt, where appropriate, the best practice guide for environmentally optimum departure procedures under preparation by Sustainable Aviation.		A Guide to continuous decent approaches (CDA) has been published by Sustainable Aviation and this has been issued to our Airline partners. The Airport also address CDA's with our Flight Operations Safety Committee (FLOPSC) on a quarterly basis in addition to the governance of a league table where the highest performance rated airline is identified.
The Airport will provide localised guidance to CDA's and will issue to airlines by 2020.	This has been made clear within the updated Aeronautical Information Publication (AIP) for Bristol Airport available online within a specific section for Noise Abatement Controls. The Airport will also produce a localised booklet to pilots during the life of this iteration of the Noise Action Plan.	Regular dialogue takes place at FLOPSC. Complete.
We will work with Bristol City Council, its neighbouring authorities and Defra to protect quiet areas within the Bristol agglomeration, as far as practicably possible, from noise from aircraft using Bristol Airport.	No quiet areas have been identified within the Bristol agglomeration. The implementation of Area Navigation approaches (RNAV) from the south is expected to result in an increase in the average height of aircraft flying over the Mendip Hills AONB.	No further areas have been identified in the Bristol agglomeration. The implementation of RNAV approaches from the south has been completed. Complete and to be removed unless new areas are identified.

Complete continued

Action	Progress - May 23	Progress – December 24
Measures to mitigate the effects of aircraft noise		
We will engage with North Somerset Council to ensure that awareness of aircraft operations is considered in the preparation of local planning policy as set out in the Local Development Framework/Local Plan.	Draft policies concerned with airport safeguarding are incorporated in the North Somerset Council Replacement Local Plan and the Consultation Draft Sites and Policies Development Plan Document.	The North Somerset Council Replacement Local Plan incorporates draft policies concerned with airport safeguarding.
The 2011 planning permission introduced a new requirement to monitor the footprint of the 63dB LAeq,16h noise contour in relation to the area of previous A38 Diversion noise insulation grant scheme and provide grants for noise insulation to any properties within this contour that did not previously qualify for noise insulation. The Section 106 Agreement also establishes an Airport Environmental Improvement Fund, one of the purposes of which is to fund noise mitigation measures. We are implementing a programme of noise insulation for local residents through this fund.		This is complete and within the 12mppa airport noise mitigation scheme.
In 2019, will be updating our noise insulation scheme guidance to allow for two opportunities to apply and enhancements to treatments it can cover.		New enhanced scheme in place for 12mppa as of 2024. Funds within the scheme have increased from £85,000 to £200,000. Properties within the 57dB and 60dB contours no longer need to contribute 50% of costs to the completion of works. Eligible households are offered between £5,000 and £8,000 depending on their location. This is an increase from the prevous scheme, offering between £2,500 to £5,000 to local residents.
In association with a successful planning application the quota count system will be reviewed	Complete. The Quota Count system was reviewed and new system in place for 2022 planning permission.	Information on Quota Count to continue to be issued within Annual Operations Monitoring Report.

Complete continued

Action	Progress - May 23	Progress – December 24
Through our partnership with Sustainable Aviation we shall continue to seek technological and operational improvements towards the ACARE (Advisory Council for Aeronautics Research in Europe) goal of 50 % reduction in perceived external noise by 2020 based on new aircraft relative to equivalent aircraft of 2000. We will monitor ongoing research into the effects of noise on health.	The ACARE provides strategic, technical, and institutional guidance to the European Commission, Member States and its stakeholders. In their 2001 document 'A Vision for 2020', ACARE set numerous goals for the sector, including "a reduction in perceived noise to one half of current average levels." The newest aircraft on the market have, on average, a noise footprint that is 30-50 % that of the aircraft they are replacing thanks to new engine and airframe design and technology. Additional reductions in noise are delivered through Continuous Descent Approaches and other operational changes.	ACARE have published goals to 2050, which include operational improvements and noise abatement procedures to reduce the perceived noise emission of flying aircraft by 65 % per operation relative to the 2000 baseline.
Arrangements for monitoring aircraft noise		
In 2019 we will review our current noise and track keeping system and upgrade where necessary.		Current system has been reviewed and deemed appropriate for track keeping. No upgrades have been necessary to date.
By 2020, we will introduce a new interactive online tracker tool presenting, with a minimal delay where possible, of live information to aid members of the public to understand the proximity of aircraft to their location and enhance the ability of improvements of track keeping to be made.	Complete Tool available here - https://webtrak.emsbk.com/brs2	System live.

Complete continued

Action	Progress - May 23	Progress – December 24
We will complete the commissioning of the new runway 09 noise monitor at Littleton Hill ('Tracker'), continue with the monitoring of noise at Felton and Congresbury and use the new monitor system in conjunction with a feed from the radar system to record the tracks taken by aircraft. Noise monitor results will be assessed on a month-by-month basis and the results of the monitoring will be reported to the Airport Consultative Committee on an annual basis.	This installation of the new noise monitor has been completed. A range of noise indicators are reported to the Airport Consultative Committee, including Leq, SEL, Lmax, average departure noise levels and number of flights. The tracker system provides flight tracks for use in responding to noise complaints and these can be downloaded from the Bristol Airport website as Google Earth files. A range of noise indicators will continue to be reported to the Airport Consultative Committee, including Leq, SEL, Lmax, average departure noise levels and number of flights. The Tracker system provides flight tracks for use in responding to noise complaints and these can be downloaded from the Bristol Airport website as Google Earth files.	Publicly available tracker system is now through Webtrak (a software provided by Envirosuite) which offers a user-friendly interface to track flights and see conditions affecting flight paths such as weather. Noise monitor results are assessed monthly and are presented to the Airports' Environmental Effects Working Party as well as being published on the Airport webiste.
To maintain and improve the systems described above, as appropriate.	Track keeping and CDA performance is recorded in the annual Operations Monitoring Report presented to the Airport Consultative Committee.	As in 2023
Actions to engage and work with the local community on matters relating to aircraft noise		
We will undertake a public attitude survey (by telephone survey), every two years, to assess the local community views on aircraft noise.	To be kept under review but experience elsewhere suggests that this is a complex task and it will be difficult to get meaningful results. The recent consultation on the final draft Master Plan which closed at the end of January 2025 included a number of questions regarding the impacts on noise and the effectiveness of our noise mitigation scheme. We will carefully analyse the responses in respect of noise to assess local community views on aircraft noise.	Additional feedback from the community is obtained from the regular community feedback sessions described above.

In –Progress.

Action	Progress – May 23	Progress – December 24
Actions to manage and reduce the effects of noise from aircraft on the ground		
We will review aircraft stand allocation at the beginning of each operational season.	The stand allocation is reviewed annually. Use of stands at Western Walkway is prioritised to make use of the building screening.	Stand allocation to contact stands is prioritised and reviewed daily. Current development works on site has resulted in the closure of 4 contact stands. Overall, in 2024, 70% of aircraft were allocated to contact stands.
Endeavour to minimise the noise from ancillary activities, such as reversing alarms and activities within the car parks within close proximity to residential areas.	Relevant staff have been made aware of this requirement.	Further to employees being made aware of this requirement a curfew has been imposed on activity in the multi storey car park in-conjunction with construction works as part of a dedicated construction environment management plan for such works.
Actions to manage and reduce the effects of noise from airborne aircraft		
We will review the aeronautical fee differentials for aircraft every two years to ensure that appropriate incentives are in place for airlines to use the quietest available aircraft on the basis of recognised and published operational noise characteristics.	The majority of aircraft operating at Bristol Airport comply with Chapter 4 noise standards. For summer 2023, we expect significant improvement in the number of flights operated by the quietest and most environmentally friendly aircraft. Ryanair will replace 2 of their previous generation Boeing 737 with 2 new Boeing Max aircraft and Easyjet will increase the number of flights operated by Airbus NEO aircraft. The vast majority of Tui's services will be operated by Boeing Dreamliner or Boeing Max models. New airlines such as Swiss ,Sunexpress , Corendon and Aegean all have Airbus NEO and Boeing Max models and BAL is working with these airlines to deploy these aircraft at BAL as a priority .	We continue to prioritise business with commercial airlines who operate modern aircraft fleets.
By 2021, the Airport will review the aeronautical fee differentials based on aircraft noise certification to further enhance incentives for quieter aircraft to operate from Bristol Airport. The resulting findings and actions will be published within our Annual Operations Report for the year 2021.	This is pending due to the impact of COVID19 on the industry.	The Airport's fees and charges document is reviewed on an annual basis and includes charges relating to the noise certification of aircraft. This document can be found on our website.

In –Progress continued

Action	Progress – May 23	Progress – December 24
We will consult with airlines on the introduction and implementation of a departures noise limit at the runway 27 and 09 departures noise monitors and a penalty for infringement of the noise limit. The penalty system will be reviewed every two years to ensure that it continues to provide a strong financial incentive for airlines to use the quietest aircraft.	The penalty system was introduced through the noise control scheme put in place in 2012. Details of penalties levied will be reported annually in the Operations Monitoring Report. Penalty system review has been carried out and changes implemented with revised penalty charges	The number of penalties levied continue to be reported in the Airport Annual Operations Report. The success of the scheme has meant 0 infringements made since the last update.
We will assess the mechanics of the Penalties Scheme and update, where applicable, in line with latest guidance and best practice in 2019. Reviews of the application of the scheme and if required alterations applied, every two years thereafter.	The mechanics of the Penalties Scheme using daytime and night-time Lmax levels continues to be best practice as emulated by other airports. This will be reviewed as further guidance provided by industry bodies to highlight best practice in this area as and when available.	No further update.
We will review approach and departures procedures with a view to identifying measures to reduce noise impacts through flight path management on an annual basis with ATC and the airlines. We will report progress on an annual basis to the Airport Consultative Committee and make the information publicly available on the Bristol Airport website.	We have been working with the airlines through the Bristol Airport Flight Operations Safety Committee to promote the use of continuous descent approaches (CDAs) and other operational improvements. League table is still operating and analyses the 4 major airlines (TUI, Ryanair, easyJet and Jet2) CDA performance in depth and all other airlines as total CDA %. 2022 CDA performance for major airlines was 94% and all airlines was 84%. Sustainable Aviation suggest a target of 80%, which we exceed for all airlines.CDA performance is included in the annual Operations Monitoring Report.	The implementation of RNAV approaches from the south has been completed. CDA performance continues to report to the Airport Consultative Committee and is detailed within our Annual Operations Monitoring Report.
We will seek to achieve a 85% CDA compliance rate (an increase of almost 10% in performance) by 2023.	Reached 84% in 2022 - difficult for CDA to increase substantially further because of limits to technology, weather conditions etc. All airlines include all aircraft over 5760kg and excludes helicopters.	2024 CDA performance for major airlines was 94.35% and all airlines was 89.6%.

In –Progress continued

Action	Progress – May 23	Progress – December 24
We will begin looking at alternative flight paths for respite purposes with a view for implementation by 2026/27	Ongoing.	Public consultation on airspace change expected in 2026
We will review the procedures for light aircraft operations regularly with representatives of the general aviation community and work with them to limit the noise effects of their operations.	Ongoing.	This is raised at regular MASIG Flight Operations Sub Committee (FLOPSC) meetings to ensure the correct procedures are adhered to and will continue to do so.
We will review our approach with the General Aviation community and how best to deliver best practice in conjunction with future airspace change work.	Ongoing.	Currently reviewed on a regular basis as quarterly FLOPSC meetings.
We will work with NATS and the airlines using Bristol Airport to adopt flight path management procedures that ensure that aircraft overflying the Mendip Hills Area of Outstanding Natural Beauty (AONB) do so at as high an altitude as is practically possible, given the constraints of air safety and the need to avoid other adverse environmental impacts.	Early discussions with NATS	This may be considered for later airspace change public consultation.
We will liaise with NATS to ensure that consideration of noise effects from aircraft using Bristol Airport is considered in proposals for airspace redesign.	Ongoing. The RNAV proposal has been prepared in conjunction with NATS.	The implementation of RNAV approaches from the south has been completed in conjunction with NATS.
The Airport will introduce RNAV routes for arrivals and departures by 2026/27.	Ongoing.	Public consultation on airspace change expected in 2026
We will monitor the implementation of RNAV approaches from the south and explore opportunities for implementing similar techniques from the north in the longer term. This is likely to involve a complex change to airspace which may not be achievable in the short term.	Ongoing.	The implementation of RNAV approaches from the south has been completed.

In –Progress continued

Action	Progress – May 23	Progress – December 24
We will monitor ongoing work by the UK aviation industry and the CAA exploring the adoption of steeper approaches. An approach at 3.25˚ instead of the standard 3˚ is understood to result in a 9 % reduction in the noise footprint of the Boeing 737-800. The majority of aircraft operating at Bristol are thought to be capable of undertaking approaches at this angle but at present instrument landings at angles steeper than 3˚ are prevented by international regulation. Even if this regulation is relaxed current technology is likely to require a dual angle instrument landing system, which may give rise to a cost that is disproportionate to the benefit. There may be potential for steeper angles for the intermediate approach. We will monitor research and development on this subject.	On going	On going
Low Power Low Drag is a noise abatement technique for arriving aircraft in which the pilot delays the extension of wing flaps and undercarriage until the final stages of the approach, subject to compliance with ATC speed control requirements and the safe operation of aircraft. Such techniques may be able to offer noise reductions of between 1 and 3 dBA SEL in the initial and intermediate approach phases. We will explore the implementation of these techniques in conjunction with the implementation of RNAV approaches from the south.	n/a - New Action	Such techniques are discussed at our Flight Operations Sub Committee (FLOPSC) and where possible introduced. This action will remain open as the Civil Aviation Authority explores this further.

In –Progress continued

Action	Progress – May 23	Progress – December 24
Measures to mitigate the effects of aircraft noise		
We will keep the noise climate under review and reassess the need for changes to the previous noise insulation grant in the event that the noise climate alters significantly (an increase of 3 dB on the 16 hour LAeq measured using the noise monitors over a summer season).	Noise monitoring and noise mapping undertaken to date indicates that the noise climate has not altered significantly.	Noise monitoring and noise mapping undertaken to date indicates that the noise climate has not altered significantly. The scheme has been updated and this is captured in a new action.
We will use a portable noise monitor for ad hoc noise monitoring where hot spots are identified through the noise inquiry system.	The noise monitors are currently being regularly used, setting up between 4 and 6 each year. Currently installed for 2 week periods during the summer months when the most movements occur, installed between June and August.	Current noise monitoring approach is being reviewed in early 2025 to include more monitoring, as well as locations further from the Airport than present, and outside of the June to August period.
We will, based on the findings of the noise climate generated from the monitor data it will allow the Airport to consider any noise mitigation measures on a case by case basis. This will be introduced from 2018.	Covered by 3.2 above. These monitors are used to consider noise mitigation on a case by case basis	On going. The Noise Mitigation Scheme has been updated and included as new action.
Arrangements for monitoring aircraft noise		
We will undertake an annual review of airline track keeping and establish a 'league table' of performance with an annual awards ceremony to recognise the best performing airlines. Performance data and penalties imposed will be included in the annual Operations Monitoring Report provided to the Airport Consultative Committee.	Track keeping and CDA performance is recorded in the Annual Operations Monitoring Report presented to the Airport Consultative Committee. A 'league table' has been established and Ryanair received the first 'Tracker' award in 2013.	Track keeping and CDA performance is recorded in the annual Operations Monitoring Report presented to the Airport Consultative Committee.
Actions to engage and work with the local community on matters relating to aircraft noise		
We will record and make available, on request, flight tracks of aircraft recorded by the 'Tracker' system within our controlled airspace. We will respond to all queries from the local community, providing them with details of the location of the aircraft in question.	Flight tracks are provided in response to noise queries where appropriate. Tracks, showing aircraft altitude by height band, are also available for download from the Bristol Airport website for viewing using Google Earth.	Achieved and ongoing.

In –Progress continued

Action	Progress – May 23	Progress – December 24
We will set a target to respond to all reasonable noise inquiries from the local community within ten working days of receiving the inquiry and to complete any detailed follow up investigations within 20 working days. We will provide a quarterly report on noise inquiries to the Airport Consultative Committee.	Achieved and ongoing.	Achieved and ongoing.
We will provide an annual report on aircraft track keeping to the Airport Consultative Committee. NPR violations and noise infringements will be reported quarterly.	Detailed information is reported through the Environmental Effects Working Party sub-group. Track performance is reported annually to allow for full investigation. Ongoing.	Detailed information continues to be reported through the Environmental Effects Working Party sub-group. Track performance is reported annually to allow for full investigation.
In 2019, we will refresh how this information is presented and reported i.e. citing particular instants and associated improvements where relevant.	Achieved in 2019.	As part of the Environment Effects Working Group, close views of tracks to highlight flight profiles in the local community are now reported on a quarterly basis. This will continue to be worked on and refreshed with the group.
We will continue to engage with the local community through the Consultative Committee on noise management and future noise implications. Our Community Relations Manager will hold regular surgeries in the local community providing members of the public an opportunity to discuss noise related matters directly with airport management.	Liaison is ongoing.	Liaison is ongoing.
From 2019, the Airport will host every 6 months a community feedback session at the airport to update residents directly on airport matters including noise abatement measures and in order to receive feedback on how these are perceived.	Ongoing.	We hold two events a year with representatives from 70+ Parish Councils in the local area. Hosted by CEO.

In –Progress continued

Action	Progress – May 23	Progress – December 24
We will publish an annual Operations Monitoring Report which will include key performance indicators relating to noise management including aircraft movements, aircraft movements by key periods of the day, night quota usage, track keeping, noise monitor results and noise complaint statistics.	The Operations Monitoring Report has been published annually.	The Operations Monitoring Report has been published annually and will continue to do so.
In 2019, we will review the Annual Operations Monitoring Report content and presentation to make it even more accessible	The Annual Monitoring Report for 2019 was published with fresh artwork and included more data than previous reports, in particular regarding complaints analysis as requested by local community representatives. In the 2021 Annual Monitoring Report, we have expanded it further with Ground Water Monitoring being included for the first time.	Continue to receive feedback from the Airport Consultative Committee and Environmental Effects Working Party
We will publish an annual progress report on the actions within the Action Plan, the performance achieved and the benefits obtained. All monies raised from noise and track keeping penalties will be added to the Bristol Airport Community Fund. All aircraft have operated within the noise limits and no penalties have been levied to date.	To be carried forward.	The Operations Monitoring Report to include a dedicated progress report on the actions within the Action Plan.

These actions are all related to 12mppa planning permission and due to be triggered in 2025.

New

Action	Details of New Actions	Progress – December 2024
Actions to manage and reduce the effects of noise from aircraft on the ground		
Ground Noise Management Strategy to be reviewed by 2024	Within six months of commencement a revised Ground Noise Management Strategy (GNMS) should be submitted for approval.	NEW ACTION
Construction Environmental Management Plans	Demonstrate how construction of works will take place, including details of construction and traffic routes, mitigation plans, waste management and air quality management plan, and working hours in accordance with condition 7 of the 12mppa permission.	NEW ACTION
Pre-flight servicing	Revised GNMS to include measures to reduce noise from pre-flight servicing or checks on aircraft while stationary on stands.	Revisions underway
Ground power	Revised GNMS to include measures to reduce and phase out mobile diesel generators through FEGP along with transitional arrangements towards FEGP for all stands.	Revisions underway
Actions to manage and reduce the effects of noise from airborne aircraft		
Passenger limits	Planning condition 5 restricts passenger movements to 12 million passengers per annum. Details of compliance to be agreed with local authority.	Compliance methodology agreed with local authority – Ongoing monitoring of passenger limits reported within the AMR
Movement limit - night	The total number of aircraft movements at the Airport including take-offs and landings between the hours of 23:30 hours and 06:00 hours for 12 months shall not exceed 4,000.	Ongoing – reported within the AMR
Movement limit – shoulder periods	The total number of take-offs and landings between 06:00 hours and 07:00 hours and between 23:00 hours and 23:30 hours (the 'shoulder periods') shall not exceed 9,500 in any calendar year	Ongoing – reported within the AMR

New continued

Action	Details of New Actions	Progress – December 2024
Contour limit - 10mppa – Day	Upon commencement of development, up to the passenger throughput at Bristol Airport exceeding 10 million passengers in any 12-month period, the area enclosed by the 57dB $L_{Aeq\ 16h}$ daytime noise contour shall not exceed 12.42 km^2.	Ongoing – reported within the AMR
Contour limit -11mppa – Day	Upon commencement of development, up to the passenger throughput at Bristol Airport exceeding 11 million passengers in any 12-month period the area enclosed by the 57dB $L_{Aeq\ 16h}$ daytime noise contour shall not exceed 11.56 km^2.	Ongoing
Contour limits 12mppa – Day	The area enclosed by the 57 dB LAeq 16h daytime noise contour shall not exceed 10.70 km^2 from when passenger throughput at Bristol Airport reaches 12 mppa in any 12-month period .	Ongoing
Contour limits 12mppa – Night	The area enclosed by the 55 dB $L_{Aeq,8h}$ night- time noise contour shall not exceed 6.8km^2 from when passenger throughput at Bristol Airport reaches 12 mppa in any 12-month period	Ongoing
Movement reporting	a) the number of passengers per annum; b) the number of Air Traffic Movements per annum; c) the number of nighttime flights per annum; d) the number of flights in the shoulder period per annum; e) the quota count score for the preceding British Summer Time and British Winter Time respectively. f) The number of positioning flights per annum	Ongoing – reported within the AMR
New enhanced QC count system	New planning condition limit on QC. Quota count usage to be included in Annual Operations Monitoring Report.	Ongoing – reported within the AMR

New continued

Action	Details of New Actions	Progress – December 2024
Revised Noise Control Scheme (NCS)	A new revised NCS is required to contain a mechanism to impose penalties on airlines for breach of noise limits, including the publication of an airline performance league table, and provide incentives for the use of quieter aircraft as well as further measures to encourage operators of aircraft to adopt operational procedures and practices (in conjunction with Flight Operations Committee) aimed at achieving ongoing improvements in the levels of aircraft noise.	Revisions underway
Measures to mitigate the effects of aircraft noise		
Enhanced sound insulation scheme – grants	New scheme required with sound insulation grants of £8,000 for dwellings exposed to levels ≥60 dB $L_{Aeq,16h}$, £5,500 for levels ≥57 dB LAeq,16h and £5,500 for those above a night time level of 55 dB $L_{Aeq,8h}$.	Implemented from 2024
Sound insulation scheme – in situ testing	The noise mitigation measures included in any Noise Mitigation Scheme shall be supported by evidence of in-situ testing of effectiveness against aircraft noise for a representative sample of residential properties	Planned for 2025
Sound insulation scheme – ventilation and overheating	As well as noise mitigation measures the Noise Mitigation Scheme shall include measures to provide suitable alternative means of ventilation and prevention of overheating where appropriate and necessary	Within the sound insulation scheme
Sound insulation scheme – performance targets	New scheme to be designed to achieve recommended internal levels based on BS8233:2014 internal noise guidelines and World Health Organisation internal noise guidelines for noise maxima at night.	Within the sound insulation scheme

New continued

Action	Details of New Actions	Progress – December 2024
Reduce airside ground noise	Investigate the incentivisation of electric ground equipment through a revised airside vehicle permit scheme which will help reduce background noise levels. Continue to investigate the feasibility of ground service equipment pooling allowing BRS to influence an expeditious move to wholesale electric ground handling operation	GSE equipment pooling scheme proposal complete. Out to tender in 2025, with a view to starting the scheme in 2026.
Sound insulation scheme – reporting	Details of grants provided will be provided to the Council annually.	Achieved and Ongoing
Arrangements for monitoring aircraft noise		
Noise monitoring	The Annual Operations Monitoring Report shall include comparison of the predicted noise levels at the Noise Monitoring Terminals based on the forecast noise contours for the previous year with the 92-day averaged summer measured noise levels at the NMTs	Complete and contained within this report
Contour reporting	Forecast aircraft movements and consequential forecast and actual noise contours for the forthcoming year shall be reported to the Local Planning Authority annually within the Annual Operations Monitoring Report. The area enclosed by the 63, 60, 57, 54 and 51 dB $L_{Aeq,16h}$ (07:00 hours to 23:00 hours) noise contours and the 55 and 40 dB $L_{Aeq,8h}$ summer night-time noise contour (23:00 hours to 07:00 hours) for the forthcoming year (from 1 January to 31 December each year) shall be reported.	Complete and contained within this report
Contour verification	As soon as reasonably practicable following the third Annual Monitoring Report following the Effective Date (and subsequently at three year intervals) a verification report shall be submitted which shall include input data, methodology, and output data used to calculate the noise contours as well as recommending appropriate calculation procedures.	NEW ACTION

New continued

Action	Details of New Actions	Progress – December 2024
Actions to engage and work with the local community on matters relating to aircraft noise		
Enhanced sound insulation scheme consultation	A Noise Mitigation Scheme shall be submitted to the Council for not less than three months consultation. The scheme shall not be implemented before considering any consultation feedback from the Council.	Complete and implemented in 2024
Revised Noise Control Scheme (NCS) consultation	Within six months of the Commencement of Development a draft Revised NCS scheme shall be submitted to the Council for consultation. The scheme shall be implemented within 12 months with details reported in the Annual Monitoring Report.	To be complete once revised noise control scheme is finalised

Appendix E – Noise Preferential Routes

Appendix F – Community Fund and Diamond Fund Projects

2024 Community Fund (£68,000 spent of £100,000)

Project Location/Recipient	Project Description
Backwell & Cleeve Community Energy Group	Solar Panel Installation
Churchill and Langford Minibus Society	Replacement Community Bus
Wrington C of E Primary School	Internal Noise Insulation Improvements
Prestow Wood Conservation Group	Biodiversity Project
CPRE Avon and Bristol	Biodiversity Project
Mendip Access Adventure Foundation	Beehive Project
Weston Hospicecare	Cycle to Work Initiative
Felton Village Hall	Solar Panel Installation
Groundwork South - Goblin Combe Lodge	Internal Noise Insulation Improvements
Alive Activities	Biodiversity Project
Arnos Vale Cemetery Trust	Biodiversity Project

2024 Diamond Fund (£50,000)

Project Location/Recipient	Project Description
Whiteoak Way School Association (WOWSA)	Funding for sports kit and equipment
Holly Hedge Animal Sanctuary	Garden improvements
Clevedon Cricket Club	Outside furniture
Nailsea Tithe Barn Trust: Memories at the Barn: Supporting Local People with Dementia	Funding for transportation costs
Nailsea & District Community Transport	Fleet Vehicle Tracking System
Dolphin Society	Funding for maintenance of pendant alarms
Somerset International Festival of the Arts – Wrington & Congresbury & Yatton & Backwell	Educational music lessons
Yatton RFC Under 7's	Funding for sports kit and equipment
Sporting Weston Football Club	Funding for sports equipment

Project Location/Recipient	Project Description
Burrington Parish Room Limited	Hall improvements
Wellspring Counselling	1:1 counselling sessions
Cleeve Village Hall	Hall improvements
Claverham Village Hall	Hall improvements
Ablaze Bristol	Training for new volunteers
Soap Soup Theatre	To purchase two tablets
Backwell Swimming Club	New starting blocks
Long Ashton Community Centre	Upgrades to a cinema screen
Rainbow Pre-school - Backwell	To purchase push bikes and helmets
Grief Encounter South West	Training and support
Churchill Cricket Club	Cricket equipment improvements
Backwell Parish Council	New notice board
Vision North Somerset	Training and support
Banwell Foodbank	Food and supplies
Grove Preschool Nailsea	Outdoor Play Equipment
InterAct Stroke Support	20 hospital sessions
Children's Hospice South West	New profiling bed
Brain Tumour Support	Community face-to-face group sessions
Trigger Productions Ltd	IT improvements
Mothers for Mothers	One-to-one peer support groups
Lifeskills Learning for Living	Educational sessions
Church Lane Preschool	Outdoor Area Improvements
Friends of Crockerne PTA	Outdoor play area
Burrington Primary School	Weather station
The Max Dixon Foundation	Bleeding kits
North Somerset Council, Physical Activity Team, Public Health	Local community walking event
Freeways	A hydrotherapy pool
The Diary Toolkit	To improve teachers' wellbeing
LPW CIC	Forest school activities and cooking sessions
The Harbour	Grief support groups

Project Location/Recipient	Project Description
Unseen UK	Raising the awareness of the National Modern Slavery helpline
Operation Community Hamper	To support vulnerable families in North Somerset
Young Bristol	Youth Club on Wheels Sessions
Long Ashton Memory Café	Payment for the use of the cafe
Nailsea Community Group	Foodbank support
Period Friendly Places (PFP)	Financial support for the charity
Yatton Parish Council	New noticeboard
Friends of Chew Magna Primary School Committee	New laptops for Chew Magna Primary School
Wrington Village Association	Gazebo and protective bag
Springboard Opportunity Group	Installation of a security fence
Backwell Playing Fields Charity	New door
St Katharine Church - Felton Common Hill	Church improvements
Lighthouse Schools Partnership (LSP)/ Backwell School	Sports equipment

Contact us

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