

**BRISTOL AIRPORT MASTER PLAN:** 

VISION FOR 2040



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#### **CEO FOREWORD**



#### Bristol Airport is proud to be the international gateway to our great region.

We connect the people, businesses and communities in our region with new places, new experiences and new markets. We are proud to enable visitors from all over the world to travel to experience our wonderful region for themselves.

The desire to fly is growing. After the COVID-19 pandemic, more people are taking the opportunity to explore the world, reconnecting with relatives and friends they have missed in recent years. This is especially true for Bristol Airport, which experienced the fastest recovery from the pandemic of any major UK airport. Today, passenger numbers are higher than ever, and in 2024, for the first time we saw over 10 million passengers use the Airport to travel to more than 115 destinations. Demand to fly from Bristol Airport is forecast to grow to around 15 million passengers by 2036.

To meet this rising demand and to provide a local alternative to the millions who use London airports each year, it is essential we look to the future now.

Our plans must meet the needs of our communities, our customers, businesses and local people.

Bristol Airport is critical to our region's economy, and we want to further support its growth. The Airport contributes around £2 billion of gross value added to the South-West and South Wales economies. Our plans for growth to 2040 would increase this to £3 billion.

We are proud to be one of the largest employer sites in our area. The Airport provides over 5,000 jobs on-site, both through direct employment and via the 60+ businesses that operate within the Airport. Around 70% of people working at the Airport live within 20 miles. As a Real Living Wage employer, the Airport provides well-paid jobs for residents of Bristol, North Somerset, Bath and North East Somerset and South Gloucestershire, including those living in areas of our region experiencing relative deprivation.

In the wider region, the Airport supports around 30,000 jobs, including individuals and businesses supplying the Airport, providing services and supporting our ongoing development.

Delivering the plans we set out would lead to approximately 37,000 jobs in our region, including around 1,000 new jobs directly employed on-site by 2040, many of which will be filled by local people, from areas including the southern fringes of Bristol, Weston-super-Mare and rural communities in the area.

Our growth plans will be delivered within the national policy context of making the best use of the Airport's infrastructure and in line with the UK Government's commitment to a net-zero economy.

Our carbon management strategy, along with our proactive drive to work with airlines and other airport businesses to reduce their emissions, has been awarded with the highest accreditation amongst UK airports. Our Sustainability Strategy sets challenging targets and actions for how we will decarbonise our own operations and we are on track to meet our net zero operations commitment by 2030.

Beyond this, it sets out how we will support the decarbonisation of surface access and continue to work with the many aerospace companies in our region to support the transition to zero-emissions flights, with the ultimate goal of becoming a net-zero Airport by 2050.

Our Master Plan builds on our Sustainability Strategy, identifying land that could be used for infrastructure required to enable hydrogen-fuelled aircraft, renewable energy generation and a facility for electric aircraft.

We began drafting our Master Plan back in 2017, with extensive consultation. This was put on hold because of the pandemic and our planning application to increase our passenger cap to 12 million. With travel returning to previous levels across Europe, in late 2024 over a period of 10 weeks, we conducted further consultation with our neighbours, local communities, employees, business partners, regional businesses and political representatives on a final draft Master Plan.

The consultation ended at the end of January 2025 and we thank all who took the time to submit their thoughts to us and attended one of our consultation events.

We received nearly 2,400 responses which have been carefully considered and have informed this Master Plan.

We are pleased to announce the formal adoption of our Master Plan which sets the framework for our growth aspirations to 2040. We now look forward to developing detailed plans and transforming them into reality, and continuing to connect our region responsibly, supporting economic growth through delivering greater levels of employment and wider positive social worth.



Dave Lees

Chief Executive Officer

BRISTOL AIRPORT MASTER PLAN: VISION FOR 2040

#### 2

# NATIONAL AND LOCAL POLICY CONTEXT

To ensure airports like Bristol support their regional economies and keep local stakeholders informed of future intentions, the UK Government within the \*Aviation Policy Framework (APF) advises airports to produce Master Plans for their long-term development. Our Master Plan provides a clear statement of intent for the growth and development of Bristol Airport to 2040, which in accordance with the Government's APF should be given due consideration in the local planning process informing future land use, transport and economic planning processes.

The Master Plan identifies future infrastructure needs and potential impacts on the natural environment, providing transparency to our communities and aiding long-term planning for businesses.

Current Government policy on aviation strategy is set out in the APF. This recognises the important role and major contribution the aviation sector makes to the UK's long term economic growth. It sets out its support for the growth of the sector within a framework which maintains a balance between the benefits of aviation and its costs, particularly its contribution to climate change and its noise impacts.

A key tenet of the aviation policy is to make the best use of existing capacity to improve performance, resilience and the passenger experience.

The APF set out the Government's four main objectives:

- To ensure that the UK's air links continue to make it one of the best connected countries in the world. This includes increasing our links to emerging markets so that that the UK can compete successfully for economic growth opportunities.
- To ensure that the aviation sector makes
   a significant and cost-effective contribution towards
   reducing global emissions.
- To limit, and where possible reduce, the number of people in the UK significantly affected by aircraft noise.
- To encourage the aviation industry and local stakeholders to strengthen and streamline the way in which they work together.

Within these objectives the APF set out that a key priority in the short term is to make the best use of existing capacity at all UK airports.

In June 2018 the Government published Beyond the Horizon: The Future of UK Aviation Making Best Use of Existing Runways, known as the Making Best Use (MBU) policy. The MBU policy confirms Government support for airports beyond Heathrow making best use of their existing runways. It recognises that development

of airports can result in negative impacts as well as positive local impacts, and that any development seeking to make best use of their existing runway will therefore need to demonstrate how it will mitigate local environmental issues as part of their planning application (MBU paragraphs 1.23-1.24 and 1.29).

#### FLIGHTPATH TO THE FUTURE

# In 2022, the Government published Flightpath to the Future, a strategic framework and commitments for aviation over the next 10 years.

This sets out an action plan for how the Government and industry will work together to deliver key priorities across four themes:

- Enhancing global impact for a sustainable recovery, including support for growth in airport capacity where it is justified and delivers for the UK.
- 2. Embracing innovation for a sustainable future, including delivering on the Government's aspiration for zero-emissions flights across the UK within this decade.
- 3. Realising benefits for the UK with recognition that airports can act as catalysts for national and local benefits, such as tourism, and allow people to benefit from improved connections across the union and regions.

4. Delivering for users through improvements to the consumer experience and ensuring security and safety standards continue to meet the needs of an evolving aviation sector.

Flightpath to the Future confirms that the Government remains supportive of airport expansion where it can be delivered in a way that meets environmental obligations and the existing policy frameworks for airport planning.

In summary, Government policy is supportive of sustainable airport expansion in principle. The Flightpath to the Future states: "Airport expansion has a key role to play in boosting our global connectivity" and that "We remain supportive of sustainable airport growth, and our existing planning frameworks provide a robust and balanced framework for airports to grow within our strict environmental criteria".

<sup>\*</sup>Aviation Policy Framework, Cm8584, March 2013

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#### **NET ZERO 2050**

Since 2018, the UK Government has committed in law to achieving a net-zero economy by 2050 and put forward the \*Jet Zero Strategy, providing a framework for the sector to decarbonise.

This includes a number of measures such as systems efficiencies, sustainable aviation fuels, zero emissions flight technology, and new carbon markets and removals.

In April 2024, the UK Government confirmed a sustainable aviation fuel (SAF) mandate. This will require jet fuel across the UK to be 2% SAF in 2025, 10% by 2030 and then rising to 22% by 2040. There are rules proposed to prevent environmentally damaging products being used to create SAF and to reduce reliance on fuel derived from cooking oil.

In 2022, Airbus announced plans to make a commercial hydrogen-powered aircraft.

As a short-haul aircraft, this has the potential to be used on the majority of routes currently served by Bristol Airport. This technology will require new ground infrastructure, storage and regulation – all of which is unfamiliar to the aviation sector. We have been at the forefront of developing this in the UK, working in partnership with easyJet and major aerospace companies. This is a rapidly advancing area, and we will need to bring forward more detailed plans once the technology is closer to commercial use. At this stage, while we have made an indicative provision for hydrogen infrastructure within our Master Plan, the level of detail needed to include proposals within a planning application is not currently available.

Electrical vertical and take-off aircraft (eVTOL) have developed in recent years. These 'flying taxis' are being designed by companies such as Bristol-based Vertical Aerospace and are expected to enter service later this decade.

 $^*\mbox{Jet Zero}$  Strategy: Delivering net zero aviation by 2050, Department for Transport, 2022

#### WEST OF ENGLAND STRATEGIC FRAMEWORK

The West of England Combined Authority (WECA) has published its Strategic Framework setting the direction for the place it aspires the West of England to be by 2040, growing the region, communities and the economy.

The Strategic Framework includes a vision that "By 2040, the West of England will have a world renowned green economy that is creating new jobs for residents; the region will be more equal - with all residents having access to good homes, opportunities and services; and the region will be more prosperous with a healthier and happier population who are driving the region's success."

The Strategic Framework sets 5 priorities for delivery which are:

- **1.** Creating a better-connected region, working towards a worldclass transport system.
- 2. Delivering net zero and nature recovery.
- 3. Creating the jobs and training our region needs now and in the future.
- **4.** Supporting sustainable communities that people are proud to call home.
- **5.** Putting the West of England on the map for national and global success.

#### **JOINT LOCAL TRANSPORT PLAN TO 2036**

WECA published proposals for a mass transit connection to the Airport in its Joint Local Transport Plan (JLTP) 4 2020–2036 (March 2020).

The JLPT 4 contains proposals for a fully integrated public transport network for the West of England. This includes improvements to the bus network, an expanded metrobus network, new Park and Ride sites and enhanced rail services.

Recognising the high passenger flows and capacity constraints, the corridor between Bristol city centre and Bristol Airport is identified as one of five priorities for transformational infrastructure in the form of mass transit, providing a step change in the capacity and quality of public transport.

The JLPT 4 states that the mass transit network will take between 10 and 20 years to deliver and that in the meantime connectivity improvements will be made to the metrobus, including the development of Bristol Airport as a local, subregional and regional transport interchange.

BRISTOL AIRPORT MASTER PLAN: VISION FOR 2040

#### NORTH SOMERSET CORE STRATEGY

North Somerset Council's Core Strategy which was most recently adopted in 2017 sets out a specific policy (CS23) in relation to Bristol Airport within the section of spatial policies entitled Delivering a Prosperous Economy. CS23: Bristol Airport states:

"Proposals for the development of Bristol Airport will be required to demonstrate the satisfactory resolution of environmental issues, including the impact of growth on surrounding communities and surface access infrastructure."

Policy CS23 supports the delivery of North Somerset's Priority Objective 3 which sets out that the Council will:

"Prioritise employment growth throughout North Somerset to support greater self-containment, in particular by ensuring that in Weston-super-Mare housing development is delivered in step with employment growth, brownfield opportunities in Clevedon, Nailsea and Portishead are maximised, and that small and medium enterprises are supported.

Support and promote major employers in North

Somerset, such as Bristol Airport and Royal Portbury

Dock, to ensure continued employment security and
economic prosperity."

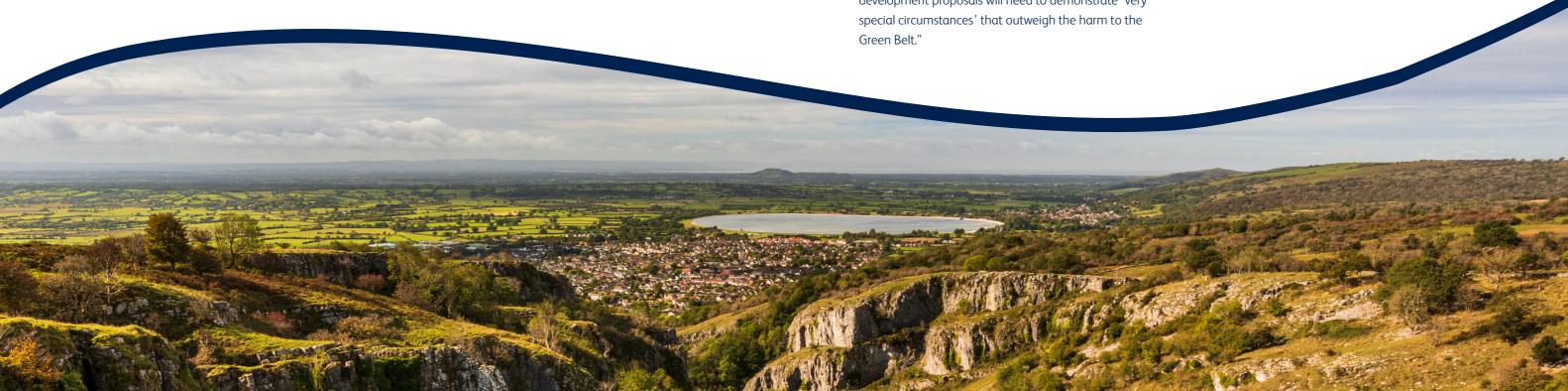
Priority Objective 2 seeks to ensure that major development proposals are delivered in tandem with necessary infrastructure improvements including access improvements to the Airport.

Within the spatial policy section on Living within Environmental Limits, Policy CS6: North Somerset's Green Belt sets out that within North Somerset "the boundaries of the Bristol Bath Green Belt will remain unchanged during the plan period. Further amendments to the Green Belt at Bristol Airport will only be considered once long term development needs have been identified and exceptional circumstances demonstrated."

Vision 1: North Somerset Vision within the Core Strategy includes reference that "The future planning of Royal Portbury Dock and Bristol Airport will be guided by the need to balance the advantages of economic growth with the need to control the impacts on those who live nearby and on the natural environment".

The Site and Policies Plan Part 1: Development
Management Policies adopted in July 2016 brings
forward detailed policies to complement the strategic
context set out in the Core Strategy. Within the Section
entitled Delivering a Prosperous Economy, Policy DM50:
"Bristol Airport relates specifically to Bristol Airport.
The policy permits development within the Green
Belt Inset providing certain criteria are met, such as
minimising environmental impacts. Outside of the Green
Belt Inset, the supporting policy text notes that any
development proposals will need to demonstrate 'very
special circumstances' that outweigh the harm to the
Green Belt."

In the context of Policy CS6 and the requirement to demonstrate long term need and exceptional circumstances, it is important to note the Inspectors appointed on behalf of the Secretary of State decision dated 2 February 2022 to grant consent for Bristol Airport to expand to 12 million passengers per annum (mppa). Within this decision, the panel of Inspectors concluded that "the benefits arising from the proposed development were such that they clearly outweighed the harm to the Green Belt and amounted to very special circumstances."



#### **EMERGING NORTH SOMERSET LOCAL PLAN 2040**

## The Council is currently preparing a new Local Plan for the period 2025 to 2040.

Once adopted, this Local Plan will replace the current Core Strategy. Following various stages of consultation from 2020 onwards, a pre-submission plan (Regulation 19) consultation commenced in November 2023. Bristol Airport has responded to each stage of consultation. A further new pre-submission plan was agreed by North Somerset's Executive Committee in July 2024 which responded to comments received during the 2023 consultation, however following national policy changes to housing targets, a full consultation on the 2024 pre-submission plan was paused to allow a specific consultation on housing sites.

In the 2024 pre-submission plan, Draft Policy LP9 removes Bristol Airport from the Green Belt as defined on a draft Policies Map. The proposed new Green Belt Inset is broadly comparable to the 12mppa planning permission boundary and the draft policy is supportive of development within the Inset provided that it meets certain criteria, primarily related to ensuring adequate measures are in place to mitigate impacts on the environment, local communities and surface access.

The 2024 pre-submission plan also includes draft policies on Air Safety (LP10) which will restrict development within the Public Safety Zones, plus Airport Related Carparking (DP20), which promote car parking within the proposed new Green Belt Inset.

As these policies are not yet adopted, they would be given less weight than would be the case with an adopted Local Plan, but would still need to be considered.

Consultation on the full 2024 pre-submission plan with updated housing sites is expected later in 2025.

As stated within the APF, Airport Master Plans need to be given due consideration in local planning processes. On this basis this Master Plan sets out Bristol Airport's future requirements and should be fully considered by North Somerset Council as part of their preparations for the Local Plan 2040.

#### CONCLUSION

Overall, this Master Plan responds positively to the National, Regional and Local policy context and the proposals are presented in a manner to ensure that they accord with the prevailing policy requirements.



# BRISTOL AIRPORT - A BRIEF HISTORY

# Bristol Airport was officially opened in 1957, having previously been an RAF airfield.

Since opening, Bristol Airport has steadily grown larger. In the 1960s, more people started to travel abroad on holiday and jet planes transformed air travel. Changes to the Airport that decade included a longer runway, an extended terminal, a new control tower and a cargo shed.

In the late 1990s, liberalisation of Europe's aviation market made air travel accessible to millions of people.

A new terminal building opened in 2000 at the same time the low-cost airline Go, which was subsequently acquired by easyJet, brought flights to many new destinations.

In 2006, the first Master Plan for Bristol Airport was published. This set out how the Airport should develop as it moved towards 9 mppa by 2015 and a vision of how the site could look in 2030 to reach a capacity of 12.5 mppa.

Throughout the 2010s, the Airport grew steadily as the terminal was expanded and new stands were added. By 2017, the Airport was serving 8 mppa, and this year, for the first time, 10 million people used the Airport.



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# PRESENT DAY AND PLANNED DEVELOPMENT

#### WHERE WE ARE NOW?

BRISTOL AIRPORT MASTER PLAN: VISION FOR 2040

### Bristol Airport now serves over 10 mppa.

The site is one of the area's largest private sector employers. Some 5,000 people work on-site. We are proud to be a Real Living Wage employer, as independently accredited by the Real Living Wage Foundation. In the wider region, the Airport supports 30,000 jobs.

Connecting our region to over 115 destinations, the Airport contributes around £2 billion to the region's economy, with over £500 million benefiting North Somerset alone. This figure is made up of the Airport's own economic contribution and the benefits it brings to productivity and sectors such as tourism.

The COVID-19 pandemic impacted aviation globally and has led to changes in the way the market works, and travel patterns have changed. Bristol Airport made the fastest recovery of any major UK airport and is now serving above pre-pandemic numbers of passengers.

Bristol Airport's primary market is people flying for leisure, but we play an important role connecting businesses and academia, enabling tourists from abroad to visit our region and bringing family and friends together.

We are the primary gateway to the South-West of England and South Wales, providing more routes and serving more passengers than all the other airports in those regions combined. Our share of flights taken by people in our region has risen from 43% pre-pandemic to 53% in 2023. Larger airports, including Bristol, have tended to rebound faster following the pandemic as the major airlines have consolidated passengers at these airports. Jet2's entry into Bristol in 2019 has also increased passenger choice.

We play an important role connecting businesses in our region, enabling friends and family to connect and bringing in tourists from abroad and other parts of the UK. Current forecasts indicate that 12 mppa will be using Bristol Airport by 2027/28.

The pandemic radically changed the way that many of us work. However, despite the shift to virtual meetings, business travel levels from Bristol Airport remain similar to pre-pandemic levels, demonstrating the importance that many businesses place on face-to-face meetings.

### Below is a breakdown of the types of passengers using Bristol Airport:



Visiting Friends and Family



Leisure



**Business** 



Package Holidays

## There are currently 14 airlines operating from Bristol to over 115 destinations.

The top ten destinations in 2024 are shown below:

The top ten destinations in 2024 are shown below.					
1	Amsterdam 500,882	*****			
2	<b>Alicante</b> 482,316	****			
3	Palma de Mallorca 471,147	*****			
4	Edinburgh 448,799	*****			
5	<b>Dublin</b> 432,453	****			
6	<b>Tenerife</b> 411,982	†††††			
7	<b>Malaga</b> 391,376	ttt			
8	<b>Faro</b> 374,313	ttt			
9	<b>Glasgow</b> 290,379	ŤŤ			
10	Barcelona 272,831	Ť			

#### 4.1

#### **CURRENT OPERATIONS**

Just over 78,500 flights, or air transport movements (ATM), occurred in 2024, with the vast majority of these involving scheduled international passenger aircraft.

Out of the commercial movements, over 32% of the movements were by the most modern, fuel-efficient and quiet aircraft, such as the Airbus A320neo and the Boeing 737 MAX. These next-generation aircraft provide a 15-20% greater fuel efficiency than their predecessors and offer up to a 40% noise reduction.

These new aircraft will continue to make up a greater proportion of flights to and from Bristol Airport, reducing the impact of air travel.



Cargo 0



Scheduled domestic passenger aircraft 11,118



Scheduled international passenger aircraft
55,603



Charter domestic passenger aircraft 960



Charter international passenger aircraft 3,791



Positioning flights\*\*
714



Other (incl. flying club, private charter)

6,298

#### Total ATMs

78,554

 $<sup>^*97\%</sup>$  of these flights were to destinations in Europe or Turkey.

<sup>\*\*</sup> Positioning flights are the movements of aircraft from one airport to another, which take place without paying passengers for operational reasons, such as maintenance.

#### **CURRENT SITE**

# Bristol Airport is located approximately 11km south-west of Bristol city centre within the local authority administrative area of North Somerset.

It covers an area of around 200 hectares.

Two roundabout junctions provide access to the Airport site from the A38. The northern roundabout provides access to the northern parts of the Airport including the main terminal building, passenger pick up and drop off areas, airport administration buildings, hotel and operational facilities, and both short and long-stay parking areas. This is also the main access for public transport links to Bristol Airport.

The southern roundabout provides access to Silver Zone long-stay car parking, staff car parking, the fire station, various business partner hangars, Lulsgate House administrative building and the National Grid Helicopter Unit.



#### **OUR SURROUNDINGS**

The Airport is surrounded by predominantly open, undulating countryside including areas which are designated as Green Belt. Its elevated position on Broadfield Down means there are no major surface water bodies or watercourses immediately adjacent to the Airport.

The Mendip Hills National Landscape is a designated Area of Outstanding Natural Beauty and is approximately 5km to the south of the Airport.

To the west are the North Somerset Levels, separated from the Airport by extensive wooded areas which are partially designated as ancient and semi natural woodland or ancient re-planted woodland. Goblin Coombe, north of Cleeve Hill Road, is designated as

a Site of Special Scientific Interest (SSSI) and nature reserve. King's Wood, directly south of Cleeve Hill Road, is also designated as a SSSI. Other designated nature conservation sites of note in proximity of the Airport include the North Somerset and Mendip Bats Special Area of Conservation (SAC), Lulsgate Quarry SSSI and Hartcliff Rocks Quarry SSSI (the latter designated for geological reasons). Felton Common Local Nature Reserve is to the east of Bristol Airport, beyond the A38.

Approximately 5km beyond the woodland to the west of the Airport lie the settlements of Claverham, Yatton and Congresbury. Elsewhere, the landscape is characterised by arable farmland and moderately sized villages, hamlets and farmsteads. To the north-east, the most prominent settlements are Felton, Potters Hill and Lulsgate Bottom, which are all within 1km of the Airport. Dwellings in Lulsgate Bottom that extend along Downside Road, in addition to those along Cooks Bridle Path, are directly adjacent to the Airport. Redhill, Wrington and Lye are approximately 3km to the south.



The major trunk roads in the vicinity of the Airport are the A38 (Bristol to Bridgwater Road) and A370 (Bristol to East Brent Road). The A38 is directly adjacent to Bristol Airport on its eastern extent and provides the main access to the Airport. It is predominantly a single carriageway and connects to the M5 at Junction 22, as well as providing connections to many North Somerset villages including Langford, Potters Hill and Sidcot. Orientated south-west to north-east, the A370 is approximately 2.5km north-west, linking Bristol to Weston-super-Mare before continuing to East Brent where it rejoins the A38 via the East Brent Roundabout. A network of minor roads links these trunk roads to other smaller settlements and hamlets in the vicinity of the Airport.

There are a limited number of recreational facilities in the immediate surrounds of the Airport, the closest being the Tall Pines Golf Club which is west of Cooks Bridle Path. Other recreational facilities further afield include caravan parks and campsites located in the River Yeo Valley and water sports and fishing at Chew Valley Lakes, approximately 7km south-east.



Aerial view of Bristol Airport
Source: Esri. "Satellite" [basemap]. Scale Not Given. "World Imagery". December 12, 2009. World Imagery - Overview. (November 19, 2024).



### PLANNED DEVELOPMENT OVER THE NEXT FIVE YEARS

Planning permission for infrastructure necessary to support 12mppa was granted in 2022.

The Airport is undertaking a transformational investment programme to improve facilities for our customers and enhance the Airport as our region's gateway.

Over the next five years, the following major developments are coming forward:







#### **TERMINAL BUILDING EXTENSIONS**

### The Airport's terminal will be extended in the coming years.

Extensions to the west and south will provide an improved customer experience including:

- A larger immigration area for arriving flights.
- More space for baggage reclaim.
- New retail offerings.
- A new lounge.

We're also working to make your journey smoother and easier, with:

- A redesigned entrance to the Airport and additional car parking will enable quicker access to the Airport.
- A new eastern pier and walkway will reduce the need for passengers to take buses out to their planes.



## PUBLIC TRANSPORT INTERCHANGE AND MULTISTOREY CAR PARKS

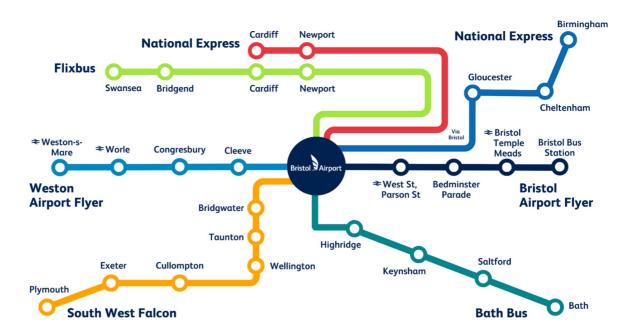
The Airport is currently investing more than £60m to create a new coach/bus interchange serving our region.

Currently under construction opposite the terminal, the transformational project is the Airport's biggest investment since the construction of the terminal 25 years ago.

The investment will provide a significantly enlarged public transport interchange, improved internal road system and an additional multistorey car park that will include customer enhancements such as waiting rooms and rest facilities.

The public transport interchange will more than double the number of bus/coach bays to 15 bays (an increase from the current six bays) and it will play an important part in delivering on the Airport's commitment to improving public transport links across the region.

We continue to work with partners to improve bus and coach services to the Airport. The current bus and coach connections serving the Airport are shown on the image below.





The top level of the car park will also provide a dedicated Drop Off and Pick-up location for family, friends and taxis and provide a new connection to the terminal that will significantly improve the customer journey.

A new glazed link bridge will directly connect the top level to the terminal building.

The project will be complete in summer 2025.

We will commence construction of a third multistorey car park in 2026/27 which will provide a further 2,150 spaces over five levels.



### ELECTRIC VEHICLE CHARGING HUB

A new electric vehicle charging hub will be built on the south side of the Airport.

It will consist of 18 ultra-rapid charging points which are capable of charging a vehicle in approximately 10-15 minutes.

Construction is expected to begin in 2025.







#### **EASTERN TAXIWAY LINK AND TAXIWAY WIDENINGS**

In order to improve the operational efficiency of the airfield and manage an increased number of aircraft landing and preparing to take off, a new eastern taxiway link will be built.

Part of the existing taxiway closest to the terminal will also be widened.



#### **HIGHWAY IMPROVEMENTS**

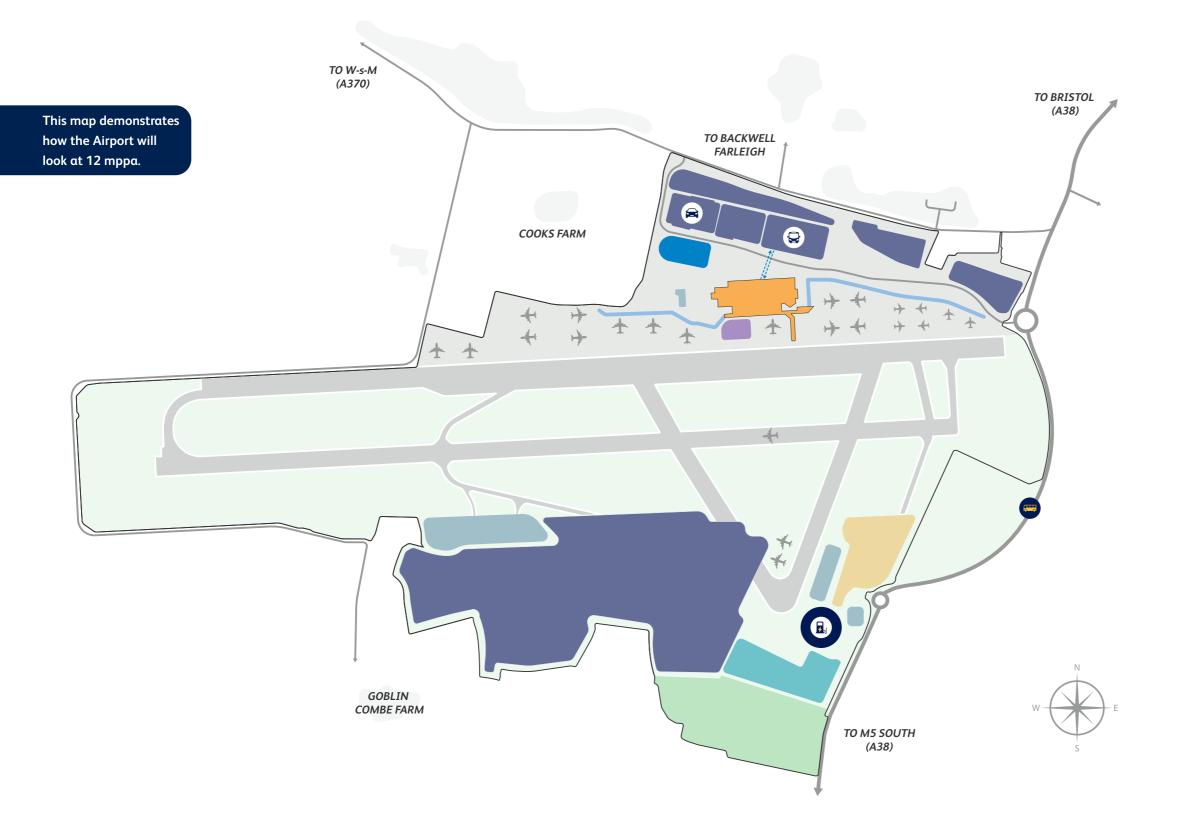
Working with North Somerset Council, improvements will be made to the A38 between the main Airport access roundabout and West Lane in order to accommodate the additional traffic expected for 12mppa.

The main carriageway and Downside Road will be widened at the junction with the A38.

The improvements will also include the provision of new/enhanced footways and cycle paths as well as controlled crossing points.

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# WHAT THE AIRPORT WILL LOOK LIKE IN THE NEXT FIVE YEARS



#### **KEY**

BRISTOL AIRPORT MASTER PLAN: VISION FOR 2040

- Airport ancillary buildings
- Hotel accommodation
- Car rental area
- Extended terminal
- Parking
- Staff parking
- Fuel farm
- Existing road
- Existing site boundary
- Runway and taxiway
- Piers
- Public transport interchange
- **Expanded public parking**
- Rapid charging EV hub
- Highway improvements
- ••• Pedestrian link bridge

#### **OUR GROWTH PLAN**

The latest forecasts anticipate that the Airport will reach 12 mppa by 2027/28. Beyond this consented growth, it is expected that there is demand for 15 mppa to use the Airport by 2036, based on economic growth in our region and demand from passengers across South Wales and the South West region.

Passenger numbers were significantly affected from March 2020 to the spring of 2022 as a result of COVID-19 travel restrictions. Following the lifting of these restrictions, Bristol Airport experienced the fastest recovery of any major UK airport. It is now operating above pre-pandemic levels, and demand for flights is expected to continue to grow.

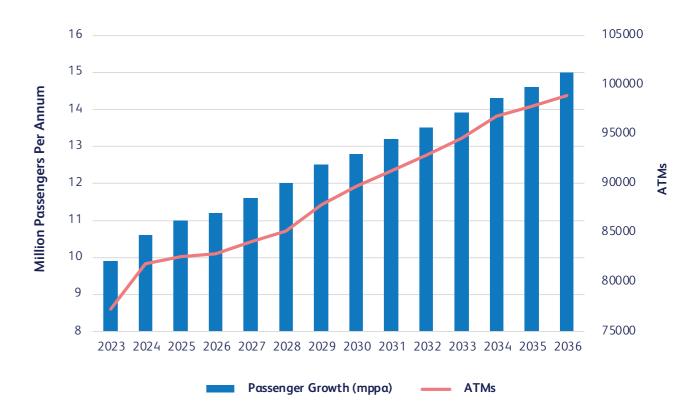


#### **AIR TRAFFIC FORECASTS**

Air traffic forecasts consider demand for domestic travel, international short haul and international long haul. Future growth rates in the market are based on economic growth and air fares, as well as likely catchment area and competing airports.

The passenger forecasts for Bristol Airport are shown below. By 2036, Bristol Airport is expected to have demand for around 15 mppa.

#### PASSENGER FORECASTS BRISTOL AIRPORT



Commercial passenger aircraft movements (ATMs) have been calculated for future years based on a projected average number of passengers per movement. The average number of passengers per movement has been derived by looking at historical trends, as well as considering the likely aircraft fleet plans of the key airlines. We anticipate approximately 100,000 ATMs to serve 15 mppa.

These forecasts have informed the identification of the infrastructure required to operate the Airport, including the number of aircraft stands, terminal size, access to the Airport, arrangements for public transport, and space for staff and passenger parking.





#### **CONSTRAINTS AND OPPORTUNITIES**

To inform how the Airport's infrastructure should be developed to accommodate forecast growth, the site's constraints and opportunities were mapped.

The assessment of the constraints and opportunities focused on the existing airport-owned land and adjacent land parcels not currently in airport ownership that could potentially be developed to accommodate growth.

Every effort has been made to minimise additional land acquisition and to reduce the impact on the surrounding built and natural environments.

#### The following site elements have been identified as key constraints for the purposes of the Master Plan development.

- Existing runway length: this limits long-haul operations but is very challenging to significantly extend either to the west (topography) or to the east (A38 road and green space).
- Airfield (taxiway and apron) constraints:
   additional taxiway capacity is needed to support
   higher peak hour movement and more efficient
   circulation of aircraft.
- Small airport land ownership/footprint and lack of space for development: long-term expansion requires land acquisition.
- Topographical and land use issues, including agricultural land, particularly for the expansion of the terminal aprons to the north and north-west.
- Operational facilities west of the terminal would be impractical to relocate (e.g., air traffic control tower and airport offices).

- Highway network: the existing alignments of Downside Road and the A38 are physical barriers to airport expansion.
- Lack of high-capacity public transport, infrastructure and services.
- Mendip Hills Area of Outstanding Natural Beauty to the south.
- Green Belt designation: this affects existing Airport operations and the future development of the Airport.
- Neighbouring residential land: uses including farms and communities both in the north and in the south side of the Airport.
- **Sensitive environmental habitats** and areas set aside for biodiversity.

### The following elements have been identified as key opportunities for the purposes of the Master Plan development.

- Potential areas for terminal, apron, and surface access expansion to the north-west of the current airport boundary.
- Opportunities for expansion in the east to support improved surface access to the Airport.
- Southern side potentially dedicated to ancillary /support facilities and contingency stands, with limited additional land acquisition required.
- Reconfiguration of aprons to increase the number of contact/walk-out aircraft stands to enhance stand capacity and aircraft operations.
- Improving access from the A38 to the Airport, and between the terminal and south side parking areas, as well as dedicated bus lanes linking the north and south sides of the Airport.
- Introducing new public transport connections and, in the longer term, mass transit services.
- Introducing hydrogen technology and increasing SAF supply in the medium to long term.

- Improving taxiway infrastructure to improve aircraft operations.
- Relocation of fuel farm.
- Additional stands and terminal expansion.
- Renewable energy generation.
- Electric vehicle facilities.
- Opportunities for electric aircraft operations.
- Additional land areas to enhance biodiversity.
- Attracting passengers from our region who currently use London airports by offering new routes to longer haul destinations.
- Opportunities that new aircraft technology will bring, such as the new Airbus A321XLR, which opens up opportunities for new long-haul destinations.

### Airbus's new A321XLR is now in service.

This aircraft is similar to the ones used by airlines, such as easyJet, at Bristol Airport for short-haul flights, but it has a much greater range. Unlike traditional widebody (such as B777, B747 and A380) aircraft, the A321XLR is appropriate for the runway size and market of Bristol Airport, opening up the possibility of more long-haul direct connections.

This would reduce some of the need for passengers to travel to London airports from the South-West of England and Wales each year.

The A321XLR is also more fuel efficient and reduces flight noise when compared to the previous generation of aircraft. Iberia was the first airline to take delivery of the new aircraft and is operating flights between Madrid and Boston.



#### London Heathrow is the second most popular airport for people living in the South West of England and South Wales, after Bristol Airport.

Civil Aviation Authority (CAA) statistics show that, in 2023, around 10 million passengers travelled from the South-West of England and South Wales to fly from London airports.

There is an opportunity for Bristol Airport to capture some of this market, reducing road journeys to the London area, through increased frequency. Of the top 10 destinations, 8 are short-haul destinations already served directly from Bristol Airport.

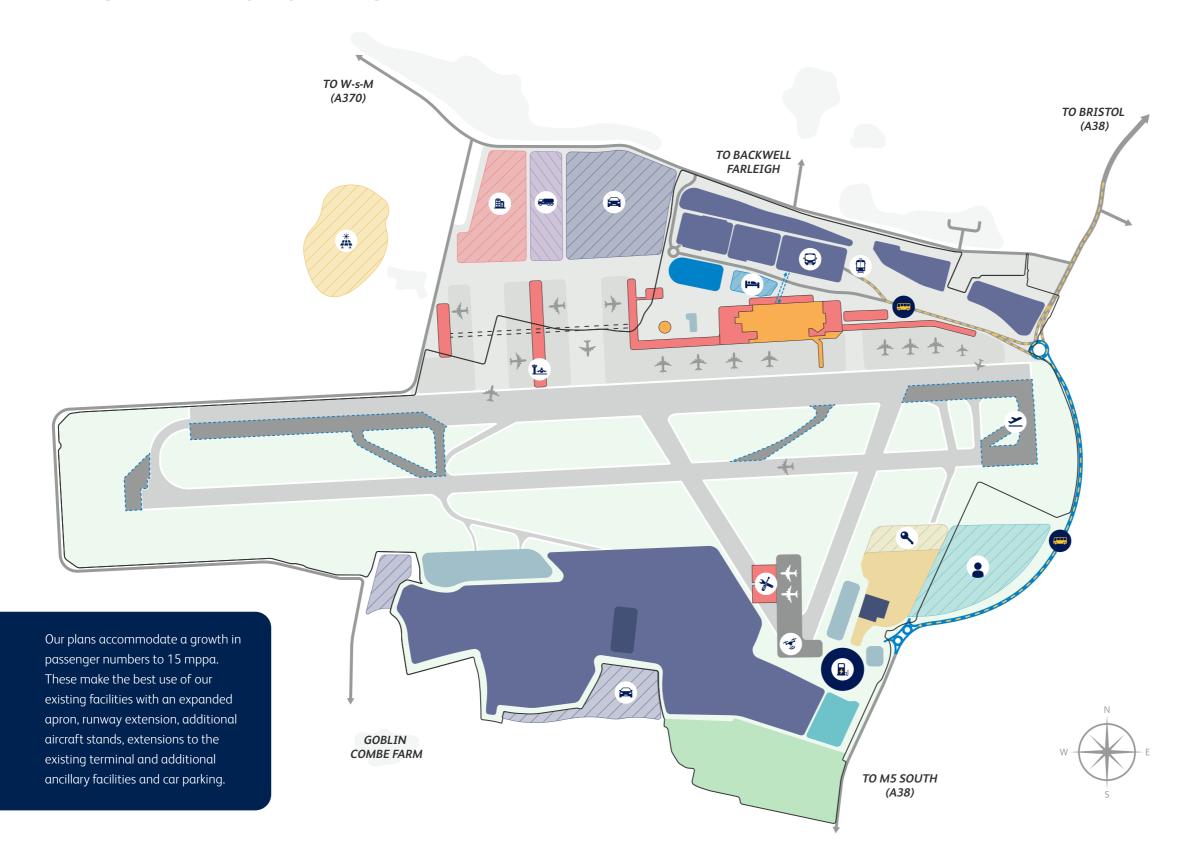
The two remaining destinations are long-haul to New York and Dubai. With over 225,000 people per annum travelling from our catchment to those two cities each day, there is unmet demand for direct connections from Bristol Airport.

### Around 10 million passengers

living in the South West of England and South Wales currently use London Airports. Enabling passengers to fly from their local airport would meet demand in our region and reduce journeys to London.



#### **ADOPTED 2040 MASTER PLAN**





#### TRANSPORT AND ENERGY INFRASTRUCTURE IMPROVEMENTS

→ New bus lanes

Improved public transport links

Highway improvements

Rapid charging EV hub

Indicative location for renewable energy and/or hydrogen infrastructure

Indicative location for mass transit interchange

Public transport interchange

Indicative location for electric take off/landing

#### EXISTING BUILDINGS AND INFRASTRUCTURE

Airport ancillary buildings

Hotel accommodation

Car rental area

Existing terminal

Parking

Staff parking

Existing road

Existing site boundary

Pedestrian link bridge

Air traffic control tower

#### **CAPACITY IMPROVEMENTS**

New buildings

Runway and taxiway works

Single-tier carpark

Raised carparks

**Expanded public parking** 

Fuel farm

Airport ancillary buildings

Additional hotel accommodation

Expanded staff car parking

Expanded car rental area

Maintenance, repair and overhaul hangars

Extended apron

Extended runway and airfield improvements

Tunnel

#### **AIRPORT LAYOUT**

The Airport layout presented within the Master Plan reflects the historic growth of Bristol Airport, which has seen development focused on the northern side of the Airport within the Green Belt Inset. It has evolved following initial consultation on a new Master Plan for the Airport that took place in 2017 and 2018, the approval of proposals to expand the capacity of the Airport to 12 mppa in 2022 and, most recently, consultation of the final draft Master Plan in 2024.

In 2017, work commenced on the preparation of a new Master Plan for the future growth of Bristol Airport. In 'Your Airport, your views' which was subject to public consultation between November 2017 and January 2018 three example scenarios were presented to illustrate the ways in which the layout of the Airport could evolve to serve 20mppa by the mid 2040s.

#### These were:

- A. Broad continuity with the existing terminal developed and the layout evolving over time with the inclusion of additional land in the north west to provide additional aviation capacity.
- B. A new replacement terminal on the north side of the Airport with the inclusion of additional land in the north west to provide additional aviation capacity.
- C. The development of a 2nd terminal on the southern side of the Airport with additional aviation capacity and a more extensive expansion of car parking also on the southern side of the Airport.

Having reflected on feedback on the illustrative layout scenarios from the community, Parish Councils, the Mendip Hills Area of Outstanding Natural Beauty Unit (as it was then) and airlines, the 2018 draft Master Plan entitled 'Your airport; your views' proposed a developed version of Scenario A with an improved and extended terminal and more modest aviation capacity focused on the north side of the Airport to facilitate growth to 12mppa. The 2018 Master Plan also envisaged that development to accommodate growth to 15mppa would also be focused on the northside of the Airport (including development of adjoining land). Feedback on the 2018 Master Plan included the view that focussing development on the Northern side of the Airport would minimise the effect on the Green Belt and wider landscape as well as providing a better passenger experience with facilities housed in a single terminal building.

This approach to the Airport layout was taken forward within the 12mppa planning application and ultimately received approval from Inspectors appointed by the Secretary of State. From a layout perspective the proposals sought to maximise development within the Green Belt Inset which encompasses the terminal building and its immediate surrounds on the northern side of the Airport.

The final draft Master Plan, which was subject to consultation between November 2024 and January 2025, presented a layout of the Airport to meet demand to 2040 and to serve 15mppa. To accommodate this growth the final draft Master Plan set out proposals in relation to the terminal, runway, airfield, apron and aircraft stands, taxiways and associated ancillary buildings. The Master Plan builds on the principles first explored in the 2017 proposals, established by the 2018 draft Master Plan and 12mppa application by focussing development on the Northern Side of the Airport, further expanding the existing terminal and with the aviation capacity in this part of the Airport.

In order to facilitate the increased number of aircraft stands required to serve the projected passenger numbers, the apron needs to be extended. Operationally that apron extension needs to be located adjacent to terminal to facilitate efficient, covered, customer friendly access between the terminal building and the aircraft. It would not be possible to operate the Airport with a significant number of aircraft stands located on the south side of the Airport, away from the terminal as departing passengers would have to be transported by bus from the terminal to aircraft across the runway which would significantly impede the use of the runway and operation of the Airfield. The long standing approach to

evolve and extend the current terminal building which opened in 2000 and is located in the Green Belt Inset was established within the 2018 draft Master Plan and consented as part of the 12mppa planning application. These two factors lead to an overall layout which proposes further extensions to the existing terminal and expansion of the aviation capacity and aircraft stands on the north side of the Airport.

The location of the A38, a significant number of properties along Downside Road, the main access to the Airport and the Public Transport Interchange, and the location of the runway, prevent any significant development of the apron in the north east corner of the Airport. The only suitable location for the apron to be extended close to the terminal, is therefore in the north west corner of the Airport site, in line with the illustrative example Scenario A originally presented in 2017 and in the final draft Master Plan in 2024. Similarly the ancillary buildings including the fuel farm need to be closely located to the apron to enable an efficient operational environment. The fuel farm and some of the ancillary buildings need to sit across the landside and airside boundary and so they also need to be located in the north west corner of the layout.



#### **TERMINAL**

The Bristol Airport terminal, including linked walkways to gates, currently has a gross floor area of approximately 50,000 square metres (sqm) and has permission to be extended to 70,000 sqm as part of the 12 mppa planning permission.

In order to cater for 15 mppa and provide an enhanced passenger experience during departure and on arrival, our plans will see the terminal and piers grow to 130,000 sqm.

The facility requirement for the expansion of the terminal building to cater for future demand has been developed through a rigorous process using detailed air traffic forecasts, International Air Transport Association (IATA) best practice standards for terminal space, and external advisers, and in consultation with operational staff.

Factors such as maximum queue times have been considered, along with space per passenger, average transaction times as well as comparable examples from other airports.

We are proposing to extend the terminal floor area to approximately 130,000 sqm, capable of serving 15 mppa but also delivering an improved customer experience in terms of waiting areas, retail space and facilities. Indicative spatial requirements for airport facilities – such as check-in, security, departure lounge and baggage reclaim – have informed this Master Plan. Further work will be undertaken to develop and define the design of the terminal extension at planning application stage.



#### **RUNWAY IMPROVEMENTS**

# Bristol Airport has a short runway when compared to other UK airports, at 2,011 metres in length.

Airports such as Luton, Leeds Bradford and Liverpool have slightly longer runways – while airports like Manchester and Stansted have runways of over 3,000 metres.

We are proposing a small extension to our existing eastern runway of some 150 metres which will make the total runway around 7% longer. This would be built within the existing airport boundaries in the space between the existing runway and the A38, to our east. Owing to the topography, it is not feasible to extend the runway to the west.

The extension would accommodate aircraft that could serve a limited number of long-haul routes. The extension would not enable us to host the largest aircraft, such as the Airbus A380, but medium-sized, widebody (code E) aircraft, such as the Airbus A350 and Boeing 787 Dreamliners, would be able to use it. Further work since the consultation has demonstrated

the need for an amended taxiway alignment at the western end of the runway to provide adequate runway length for take-off and landing Code E aircraft. This is shown on the Master Plan.

Accommodating Code E aircraft would open up more opportunities for long-haul travel and meet existing demand from residents in the region, who currently have to travel to London airports to access long-haul destinations.

New aircraft, such as the Airbus A321XLR, are similar in size to the existing aircraft that Bristol Airport currently hosts but have a significantly longer range, owing to the amount of fuel they can carry. The small runway extension opens the possibility of these aircraft reaching new destinations on east-coast North America and the Middle East, providing new direct links for business and the various communities within our region, including those from East Africa and the Indian subcontinent.

We will continue work with our airlines and NATS, which manages airspace in the UK, to assess the potential wider implications of the runway extension before bringing forward more detailed proposals. This includes, for example, the need for additional airfield equipment, approach lighting and infrastructure.



#### **AIRFIELD FACILITIES**



#### APRON EXPANSION AND AIRCRAFT STANDS

# The existing terminal aprons at Bristol Airport provide a total of 38 Code C aircraft stands.

Code C refers to the size of an aircraft wingspan (between 24 and 36 metres). These narrowbody aircraft, such as the Airbus A320, are the mainstay of our current and expected future operations.

Only one existing stand can accommodate a Code E aircraft (wingspan 52–65 metres). Code E aircraft include the Airbus A330, A350 and Boeing 787 which are long-range, widebody aircraft. There are a total of 13 contact walk-out stands, with the remainder requiring a bus transfer between a bus gate and the stand.

Future aircraft stand requirements have been identified using the air traffic forecasts and considering the number of aircraft on the ground at any given time.

To provide greater flexibility and operational resilience, an additional contingency factor of 10% has been added to the Master Plan's stand requirements to ensure there are sufficient contingency stands for unforeseen delays, for example, a spare operational aircraft being available if one develops a technical issue.

A total of 48 Code C stands are provided on the north side of the Airport, with an additional three stands on the south side, primarily for contingency purposes. Six of the Code C stands closest to the terminal will also have the flexibility to accommodate three larger Code E aircraft. Almost all of the 48 stands on the north side will be contact stands, meaning passengers can travel directly to the aircraft without the need for a bus transfer, significantly improving the customer experience.

To get to the aircraft stands, a series of piers will be constructed, containing travellators, which will link directly to the terminal building. A tunnel beneath the west apron will enable passengers to access the aircraft located furthest from the terminal building. An overground pier will take passengers to aircraft located on the east apron.



#### **TAXIWAYS**

The Master Plan has considered the need for airfield infrastructure improvements to maximise peak hour runway throughput and minimise aircraft congestion and delays on the ground. We are proposing a full-length taxiway widening to Taxiway Golf (the taxiway closest to the terminal and north of the runway). This will enable two narrowbody (Code C) aircraft to travel in opposite directions on the same taxiway, or two aircraft to travel side by side and be reordered in preparation for take-off, for example, during the morning peak when multiple aircraft are lining up to take off. Provision has also been made for a number of 'fillets' on taxiways as well as a realigned taxiway on the western end of the runway to improve operational efficiency of aircraft using the runway. For example, when landing, they will be able to turn off onto a fillet and navigate back to the apron, as opposed to having to traverse the whole length of the runway.



#### **AIRPORT ANCILLARY FACILITIES**



#### **FUEL STORAGE**

To provide a better layout and utilise the apron space closest to the terminal building, the existing fuel storage facility will be relocated and expanded to accommodate storage tanks with a combined capacity of up to 4 million litres.

The storage tanks will be capable of storing kerosene and SAF.

Beyond 2040, as aircraft require hydrogen to fuel flight, it is anticipated that the fuel facility will reduce in size as hydrogen storage and infrastructure are developed. As a result of consultation feedback, we have redesigned the Master Plan to move the proposed fuel farm further away from residential properties near Downside Road and Cooks Bridlepath.



#### MAINTENANCE REPAIR AND OVERHAUL HANGAR

The provision of a maintenance, repair and overhaul (MRO) hangar on the south side of the airfield and associated facilities will enable aircraft requiring maintenance or repair to remain on-site and to reduce unnecessary flights to off-site facilities.

This will provide environmental benefits as well as cost savings to our airline partners. The hangar will provide high-skill employment and training opportunities, building on our region's existing strong engineering capability.



#### **VERTIPORT**

Space is allocated for a potential vertiport, which is infrastructure to serve electric vertical, take-off and landing (eVTOL) aircraft services.

These zero-emissions aircraft are sometimes called 'flying taxis', and in future could play a role comparable to helicopters today. While the technology is in the early stages of development, it is unlikely to be a major passenger service, but over time it could become viable to carry greater volumes of people between UK regions.



#### AIRPORT ANCILLARY BUILDINGS

The Master Plan identifies an area for airport ancillary buildings.
These will accommodate support facilities necessary for the running of a 15mppa airport.

The Airport ancillary buildings will accommodate expanded services and facilities related to and including the following:

- A new facility to maintain our increasing fleet of vehicles.
- Engineering maintenance building and yard.
- Catering facility to provide catering to flights.
- Consolidation centre where all goods are delivered, security screening takes place and waste is collected.
- Ground-handling accommodation.
- Freight forwarding facility (for aircraft belly cargo); this will be a small facility handling limited amounts of cargo.
- Office accommodation for airline and operational staff.



### POTENTIAL FOR RENEWABLE ENERGY AND/OR HYDROGEN INFRASTRUCTURE

Airbus plans to introduce a hydrogen-powered aircraft in the future, and companies such as Zero Avia in the South-West are developing regional aircraft, which will come into service later this decade.

Hydrogen flight will require new infrastructure, including for refuelling and fuel storage.

Bristol Airport is at the forefront of research in the UK to understand the requirements of future hydrogen aircraft and the impact their adoption will have on our future operations.

The aviation and aerospace sectors continue to work at considerable pace to develop the new technology. Trials in the UK and Europe are being undertaken to increase understanding of the impact of hydrogen flight on airport operations.

Bristol Airport has worked with specialist consultants to forecast the land that may be required for hydrogen storage and other infrastructure required to enable hydrogen fuelled flight.

## Depending on how quickly the new aircraft are adopted, storage requirements are expected to be significantly greater after 2040.

The land use requirements for hydrogen-related infrastructure will be explored in future Master Plans, as technology develops and infrastructure requirements are better defined.

The Airport currently has a target of achieving 25% on-site renewable energy for our own consumption by 2025, with the remainder being renewable energy purchased through the grid. Solar photovoltaic (PV) has been added to multiple areas on our site, with limited options for additional PVs.

We recently entered into a 10-year agreement with Luminous Energy to buy energy from its solar developments elsewhere in the UK.

We expect that our energy requirements will increase in the future, owing to rising passenger numbers, demands for electric vehicle charging and removing gas from our buildings.

We have therefore identified land to the west of the current Airport boundary for the potential renewable energy and/or hydrogen infrastructure. Owing to the space requirements of both renewables and hydrogen infrastructure, they are unlikely to be able to be accommodated within the Airport's footprint.

#### AIRBUS ZEROe

Airbus's ambition is to bring the world's first hydrogen-powered aircraft to market in the future.

This new aircraft would allow zero-emissions flight to become a reality and could serve most of the routes from Bristol Airport

Our region is playing a key role in this new technology's development. Airbus's new Zero Emissions Development Centre in Filton, Bristol, is being built to design and test elements such as the aircraft's new fuel system.



#### **ZERO AVIA**

Based at Cotswold Airport, near Cirencester, Zero Avia is developing hydrogen-fuelled powertrains to replace conventional engines in propellor aircraft.

In 2027, the company aims to provide powertrains for the type of aircraft that currently fly from Bristol to destinations such as Dublin and the Channel Islands, with 40–80 passengers on board

# TRANSPORT, SURFACE ACCESS AND PARKING

We conducted traffic surveys in late summer 2024, when the Airport was at its busiest, in order to fully understand vehicle demand and movements in the local area.

Discussions about any potential mitigation measures that may be required will need to take place with transport bodies, including North Somerset Council, National Highways and WECA.

#### POTENTIAL MITIGATION MEASURES COULD INCLUDE, BUT NOT BE LIMITED TO:

- A revised Surface Access Strategy to introduce new targets and measures to reduce the proportion of car trips made to the Airport.
- A revised Staff Travel Plan to include further targets to increase travel by sustainable modes of transport.
- Provision of new bus and coach links, as well as increased frequency of services to link up with our new Public Transport Interchange.
- Promotion of the use of public transport through advertising, other incentives and extending the public transport fund.
- A remote Park and Ride facility and service for passengers and staff.



#### **PUBLIC TRANSPORT**

## The Master Plan proposes bus priority within the Airport site and off-site.

The public transport interchange opposite the terminal will be completed in summer 2025, significantly improving the experience of those travelling by public transport and providing the opportunity for new bus and coach routes to serve the Airport.

As part of our recent planning permission to serve 12 mppa, we have commitments to increase the percentage of passengers using public transport to travel to and from the Airport. The existing target is to increase the percentage of passengers using public transport by 2.5% by the time we hit 12 mppa. Similarly, we have a target of 30% of staff travelling to and from the Airport using more sustainable modes of transport by the time we reach 12 mppa.

We introduced free bus travel for staff on our A1 Airport Flyer and A3 Weston Flyer bus services in 2022, which has been highly effective in increasing public transport usage.

Growing beyond 12 mppa will require Bristol Airport to ensure that even more journeys to the Airport are made by public transport and more sustainable forms of transport. We will work with stakeholders to develop an ambitious but realistic public transport modal share target as part of future detailed proposals.

We will also explore the feasibility and benefits of authorised Park and Ride sites for both passengers and staff.







#### **IMPROVED AIRPORT ACCESS**

Our proposals include works to the main/northern roundabout, which provides access to the Airport from the A38.

The new roundabout layout would provide widened lanes and would be signal controlled with bus priority lanes. It would improve the approach to the Airport and increase capacity for vehicles, easing congestion as well as providing new walking and cycling routes.

The southern roundabout would also be upgraded as part of our plans. We will introduce an additional roundabout, forming a double roundabout, which would provide a dedicated access into the proposed staff car park and into our car rental facility. This will help to improve access and flow of traffic both on the A38 and within the Airport site. Widened lanes would provide additional capacity into the Silver Zone parking area. The roundabouts would not be signalled but would include priority bus lanes and increase capacity for vehicles. A new 'bus only' link to exit the staff car park directly onto the A38 and connect with the northbound bus lane on the A38 has been proposed. The bus priority measures would greatly improve public transport links between north and south for both staff and passengers.



# A38 CONNECTION BETWEEN NORTH AND SOUTH AIRPORT ACCESS JUNCTIONS

Proposals for a bus lane northbound between the north and south airport access junction are being advanced by North Somerset Council and are anticipated to be completed by 2026.

As part of our development proposals, we are assessing the need for an additional southbound bus lane to provide a fast and more resilient shuttle service between the southern car parks and the Airport terminal. A shared pedestrian and cycle link is also planned.

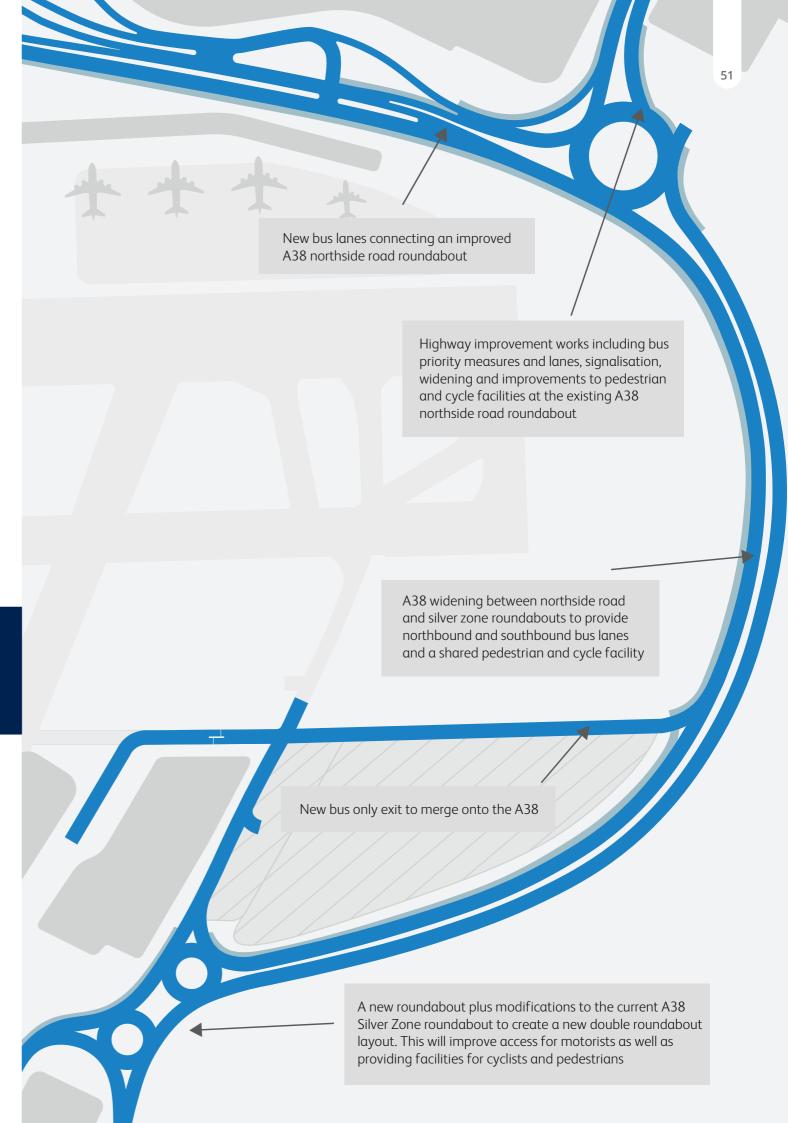
We have identified that improvements to the main (northern) entrance roundabout and also the southern (Silver Zone) roundabout will be required.



### OTHER OFFSITE HIGHWAY WORKS

Depending on the outcome of further assessment of existing and predicted traffic, modifications and enhancements to other parts of the highway network to enable bus priority measures, widening, traffic signals or other changes may also be required.







#### **CAR PARKING**

We want to encourage as many people as possible to travel to the Airport via public transport, but we also appreciate that this is not always achievable or a preferred choice for some people.

Currently, the Airport provides just over 18,000 car parking spaces, although there are seasonal restrictions in place, which means the capacity falls during the winter season. To the north of the terminal, we are building a new second multistorey car park and have been granted permission to build a third multistorey car park. Additional land on the south side of the Airport is now available for car parking from May to October. In total, our planning permission to expand our capacity to serve 12 mppa will increase overall car parking capacity at the Airport to around 22,300 spaces.

Additional areas for surface car parking have been identified on the Master Plan to meet the demand for parking from an increase in passenger numbers to 15 mppa. We will work with stakeholders to develop new public transport modal share targets to 2040 to encourage more people to travel to and from the Airport more sustainably. This will help to determine how many car parking spaces are needed at the Airport.

We will deliver additional car parking in a phased approach to ensure supply meets demand while also increasing public transport. As an indication, we anticipate that at 15 mppa we would need around 26,000 car parking spaces to cater for our peak periods.

We will continue to work with North Somerset Council and Avon and Somerset Police to address the issues associated with off-site car parking on the roads and in the communities around Bristol Airport.

We currently fund a dedicated Parking and Planning Enforcement Officer at the Council who enables enforcement action to be taken against unauthorised off-site car parks around the Airport. As part of a multiagency approach, we are working closely with a range of teams at the Council including licensing, trading standards and anti-social behaviour. This allows us to address specific complaints relating to taxi and private hire vehicle drivers, rogue meet and greet operators and littering.

As part of this Master Plan, we will increase the capacity of our Free Waiting Zone, to provide an alternative to waiting on local roads. This will be complemented by our new Electric Vehicle Hub, which will include a new food and beverage unit and toilets, improving the facilities available for waiting drivers.



#### **STAFF CAR PARKING**

# There are currently approximately 1,000 staff car parking spaces on the south side of the Airport.

We are committed to targets to increase staff travel to and from work via public transport or walking/cycling and car sharing where possible. However, our assessments show that the capacity of the staff car park will need to increase for the Airport to serve 15 mppa and the associated additional jobs, and the Master Plan has made provision for this.



#### **CAR RENTAL**

# Our car rental area on the south side of the Airport is popular with customers, particularly inbound tourists.

Provision is made to extend this area to increase capacity as part of the Master Plan. This will enable us to ensure that in-bound tourists have access to hire cars and encourage them to visit places of interest in the region, encouraging spend and supporting the vitally important tourism sector within the regional economy.





#### MASS TRANSIT ACCESS

A Strategic Outline Case for mass transit was approved by WECA in July 2024 to move forward with developing plans for WEST Rapid Transport, a segregated rapid transport, and an Outline Business Case (OBC) of options for the scheme, including the Bristol city centre to Bristol Airport corridor, are in development.

WECA anticipates that the development of the OBC will take three years to complete and confirm routes for the scheme.

At this stage, several options for the Bristol city centre to Bristol Airport corridor are being considered.

It is premature at this stage to incorporate plans for WEST Rapid Transit either within the Master Plan or development proposals to accommodate 15 mppa, with much work still to be undertaken on feasibility (construction and operational constraints) and viability. We will continue to work with North Somerset Council, Bristol City Council, and WECA to advance proposals for WEST Rapid Transport, and with coach and bus operators and Great Western Railway to improve the number of passengers travelling by bus, coach and via rail services.

We are committed to working with WECA to determine the best viable option to improve public transport connectivity to the Airport and to ensure that options, and ultimately the final preferred option, can be accommodated within the next iteration of the Airport Master Plan.



7

# IMPACTS ON LAND, PROPERTY AND PUBLIC SAFETY



### LAND ACQUISITION AND COMPULSORY PURCHASE

The development plan outlined in this Master Plan cannot be realised exclusively on land currently owned by the Airport, albeit much of that which is required is already within the ownership of the Airport, including the areas to the east and south of the existing Silver Zone car park. Two parcels of land and property are owned by other individuals and would be required to bring forward the proposals. In addition, any off site land that may be required to facilitate road improvements is not owned by the Airport.

Bristol Airport will seek to purchase the necessary property by agreement with the owners of land required. If potential acquisition by agreement is not practicable, or cannot be reached on acceptable terms, the Airport and the relevant Highways Authority would have powers of compulsory acquisition. However, there are set procedures that must be followed and compulsory purchase is always subject to Ministerial confirmation.

For property needed exclusively for airport facilities other than roads, the Airport would be responsible for the compulsory purchase procedures. However, at this stage it has not been determined whether the Airport, or the Highways Authority, would promote a Compulsory Purchase Order for the property that might be needed exclusively for road improvements. This will be discussed with the relevant authorities at an appropriate later stage.

Property owners would not be prejudiced by selling by agreement rather than by through compulsory purchase. Owners selling by agreement would be entitled to the market value of their land and property. Property now in the Airport's ownership, or land purchased in the future, would be retained in existing use where possible until required for airport development.



#### **PUBLIC SAFETY ZONES**

Provisional assessment shows that the planned expansion of Bristol Airport, as provided for in this Master Plan, can be accommodated without exceeding established measures of risk in respect of the public safety zone around the Airport.

The main instrument of Government policy with respect to the control of this risk is the establishment of Public Safety Zones (PSZ) extending from each runway end. The basic policy objective is that there should be no increase in the number of people living, working or congregating in PSZs and that, over time, the number should be reduced as circumstances allow. The proposed runway extensions included in this Master Plan would not result in any properties coming to fall within the restricted zone of a revised PSZ at Bristol Airport.



#### 7.1

#### SOCIAL AND ECONOMIC IMPACT

As the Airport grows in the future, its ability to deliver economic impacts in North Somerset, the Bristol City region, the South-West and South Wales will also grow.



#### **CURRENT ECONOMIC IMPACT**

The Airport currently has around 5,000 people working on-site. However, the Airport's economic impact goes way beyond its site boundary.

Within the Bristol City Region, it is estimated that the Airport's economic footprint supports around 10,650 jobs and around £810 million of gross value added (GVA). When the additional wider impact from productivity and tourism are included, the overall benefit rises to 14,700 jobs and £1.27 billion of GVA.

Within the South-West of England and South Wales, it is estimated that the Airport supports around 15,050 jobs and around £990 million of GVA. When the additional wider impact from productivity and tourism is included, the overall benefit rises to 29,850 jobs and £2.26 billion of GVA.



Supporting
29,850
jobs across South West England
and South Wales



Supporting
14,700
jobs in the Bristol City Region

# **ECONOMIC IMPACT OF**THE MASTER PLAN

The growth in demand for air services from Bristol Airport will substantially increase the economic impact of the Airport.

In terms of direct on-site jobs, we estimate that an additional 1,000 jobs will be provided at the Airport, primarily for local people, including areas including the southern fringes of Bristol, Weston-super-Mare and rural communities in the area. A significant proportion of the Airport's existing workforce is based in these locations.

The benefits to the economies of the South-West of England's and South Wales are significant, contributing some £3 billion of GVA.

Overall, the delivery of this Master Plan would support around 37,000 jobs (through direct, indirect, supply chain and inbound tourism) across the South-West and South Wales. This is an increase of over 7,000 jobs.

		CURRENT STATUS	15 MPPA*	INCREASE
North Somerset	Jobs	7,350	8,650	1,300
	GVA (£m)	<b>£</b> 600	<b>£</b> 720	£120
Bristol City Region	Jobs	14,700	17,550	2,850
	GVA (£m)	<b>£</b> 1,265	<b>£</b> 1,595	£330
South-West England and South Wales	Jobs	29,850	36,900	7,050
	GVA (£m)	£2,255	£2,945	€690

**Source:** York Aviation \*mppa = million passengers per annum.



#### **EDUCATION AND SKILLS**

# We are dedicated to investing in the future workforce of the region, and in 2023 we saw the reintroduction of the Bristol Airport Education Programme.

We visited schools and colleges in the local community, and students visited the Airport to learn about the history, operations, sustainability initiatives and the future of Bristol Airport.

We want to continue this engagement with young people across the region, and work with North Somerset Council and education sector to build skills for future employees.

In summer 2024, we also agreed a New Skills and Employment Plan with North Somerset Council. The new Plan contains a suite of measures and indicators designed to benefit the local community by promoting the use of a local workforce and local suppliers during the construction of newly permitted infrastructure.

Targets for apprenticeships, training and new jobs are now agreed with all contractors working on construction projects at Bristol Airport anticipated to cost more than £1 million.

In addition to construction, the Plan seeks to promote opportunities for people to work at the Airport, particularly from underrepresented groups and individuals who may experience barriers to entering the workplace. A fund is available to offer support and training to give people the chance to gain employment at the Airport or work experience that may help them gain employment elsewhere. Working alongside North Somerset Council, we will use this money to address skills gaps and develop a talent pipeline through upskilling and reskilling.

For growth beyond our current passenger cap of 12 mppa, we would commit to investing more into the Skills and Employment Plan to ensure the benefits of growth could be shared across the region. We would continue to:

- Work with local construction companies and use local suppliers.
- Engage with contractors who will identify local community projects and support them through donations in kind.
- Ensure new entrant trainees and apprenticeships are part of our agreement with contractors.
- Ensure sufficient training for new and existing staff.
- Engage with local schools and colleges and offer work placements.

- Offer our own Bristol Airport apprenticeships and trainee schemes.
- Work with underrepresented groups and try to remove barriers to entering the labour market.
- Work with local education providers to promote a wide range of opportunities for young people and adults to gain employment at the Airport.



### **SUPPORTING COMMUNITY PROJECTS**

The Bristol Airport Local Community Fund invests in a range of local projects that benefit the local community and the environment.

Overall, Bristol Airport has granted £1.8 million in projects for the surrounding community since the fund was set up in 2012 and will continue to support the community. Each year, we will contribute £150,000 to new projects.

Decisions about how and where to invest funding are made in partnership with North Somerset Council.

We have set up a Community Interest Company (CIC), and funding decisions are made between Bristol Airport and North Somerset Council representatives, with funding awarded to communities most affected by Airport operations.



**£216,000+**In 2023, the fund provided grants totalling £216,628 to 63 local projects



projects every year





#### **ENVIRONMENTAL IMPACTS**

### We are committed to the sustainable growth of Bristol Airport.

In December 2023, we published our Sustainability Strategy to drive progress across four sustainability goals over the next five years:

- **Be a net-zero airport** across our operations by 2030.
- Reduce indirect emissions and support the development of zero-emissions flights.
- Protect and enhance our local environment.
- Support our communities and enable our region to thrive.

The impacts of our current operations and growth to 12 mppa on the environment and local communities are actively managed by us in accordance with planning controls and a suite of strategies and action plans relating to issues such as noise, air quality, climate change and biodiversity.

The ECCAP for the Airport sets out a programme of measures to reduce carbon emissions and the impact of the Airport on air quality and climate change.

8.1

#### **TOWARDS 12 MPPA**

Key progress in reducing carbon emissions and other emissions in the past year include:

- Installation of a 1.5-MW solar farm completed to contribute to our target of achieving 25% renewable energy generation on-site for our own consumption. A 100% renewable energy supply continues to be used to power the remainder of the Airport site.
- Phase one of the installation of point-of-use electrical hot water heating for tenants across the Airport completed, reducing gas dependency in line with our terminal decarbonisation initiatives.
- Seven out of 18 airside buses now electric.
   All of Bristol Airport's diesel buses have been adapted to use hydrotreated vegetable oil.







### NOISE INSULATION SCHEME AND OTHER NOISE MITIGATION

The Noise Insulation Scheme has been set up to provide grants for new double glazing window installation for those living close to the Airport.

We provide £200,000 per annum for noise-reducing home improvements for local people, including measures like window glazing and insulation.

In 2024, 39 households received contributions to deliver these measures.

We will continue to meet with our airlines on a monthly basis to assess their performance on noise, clearly identify if targets are not being met and agree how improvements will be made.

As part of our growth to 12 mppa, we will be implementing a new Ground Noise Management Plan to ensure we are implementing operational and procedural noise controls on the ground running of aircraft, in addition to a Noise Control Scheme to incentivise airlines to use quieter aircraft.





households received contributions for noise mitigation in 2024

#### **Noise Insulation Grant Scheme**

Our Noise Insulation Scheme is available for those most affected by aircraft noise. The scheme provides grants of up to 100% of the cost of noise-insulating works, such as new acoustic windows and loft insulation.

#### **Continuous Descent Approaches**

Bristol Airport works with our airlines and national air traffic control to implement a system of Continuous Descent Approaches (CDA), which minimises noise and fuel burn from aircraft. In 2023, we introduced a new and highly ambitious target of 95% of our major airlines' planes achieving CDAs.





#### **EXISTING BIODIVERSITY PROJECTS**

The Integrated Landscape and Biodiversity Mitigation and Management Plan (October 2023), which covers the growth of the Airport to 12 mppa, seeks to minimise the effects of the Airport's development on biodiversity and deliver ecological enhancements across the site.

#### **MEASURES INCLUDE:**

- Planting and grassland management: while
  grass directly beside the airfield must be kept
  short with minimal seeding and planting to
  prevent attracting wildlife, which brings a risk to
  aircraft and passengers, elsewhere on the site
  we are attempting to enhance biodiversity with
  hedgerow reinforcement, tree planting, grassland
  management and bat boxes.
- Landscaping: there are a number of measures to improve the landscape and visual amenities around the Airport. For example, the extensions to the Silver Zone car park are screened by a landscaped bund.
- Pondlife: an existing pond will be rejuvenated and enhanced to encourage biodiversity.
- **Lighting:** we keep the perimeter dark to encourage bats to forage for insects.

We are working to enhance an 11-acre area of woodland, known as Lulsgate Wood, 1.5 km northwest of the runway to create a thriving and biodiverse mixed woodland, providing habitat for greater and lesser horseshoe bats and a wide range of local, native flora and fauna.

#### To date, we have:

- Developed an associated Woodland Management Plan to fell non-native trees and reduce the canopy cover to make it more suitable for bats.
- Introduced hibernation roosts and features to attract invertebrates.
- Provided two insulated timber bat cabins for greater and lesser horseshoe bats to use as night roosts, fallen deadwood features and small ponds to support lesser horseshoe bats.

We are also working with the Eden Project's National Wildflower Association to create wildflower landscapes across the Airport site to improve biodiversity. We are also introducing additional trees within a field known as Cornerpool, situated to the south, to maximise its attractiveness to horseshoe bats.



#### **TOWARDS 15 MPPA**

There is potential for growth of Bristol Airport beyond 12 mppa to give rise to impacts associated with, for example, the development of land, additional flights and surface access movements.



#### **AIR NOISE**

# The main source of noise is from flights into and out of Bristol Airport.

An increase in passengers from 12 mppa to 15 mppa would result in an increase in aircraft movements from 85,990 to 100,000 per year. On a busy day in peak period this would result in 35 extra aircraft movements. While night flying restrictions would remain, we are proposing to increase night flights by 1,000 (on average, four per night on a busy night in the peak period). The vast majority would arrive between 23:30 and 02:00.

Noise consultants have been commissioned to determine the change in noise levels that would be experienced by local communities with or without the proposed development coming forward. This is typically assessed by calculating the average noise level over a 16-hour day (from 07:00 to 23:00) and 8-hour night (from 23:00 to 07:00) for an average day over a 92-day summer period. The average noise level is given in decibels (dB) and presented as noise contours that show the areas exposed to different levels of noise. This averaged decibel measurement 'LAeq', shown on a noise contour map, is the primary metric used to assess UK aircraft noise and it refers to 'equivalent continuous noise level'.

For the assessment of noise contours, the concepts of Lowest Observed Adverse Effect Level (LOAEL) and Significant Observed Adverse Effect Level (SOAEL) as defined in the Noise Policy Statement for England are used.

LOAEL is defined as 'the level above which adverse effects on health and quality of life can be detected'. SOAEL is defined as 'the level above which significant adverse effects on health and quality of life occur'.

The threshold for LOAEL for air noise is defined in the UK policy as 51 dB LAeq,16h for day-time noise and 45 dB LAeq,8h for night-time noise. The threshold for SOAEL is defined as 63 dB LAeq,16h for day-time noise and 55 dB LAeq,8h for night-time noise.

For 2036 forecast Air Traffic Movements associated with 12 mppa (without development) and 15 mppa (with development) have been used. These forecasts detail the modernisation of the aircraft fleet at the Airport over time, with the introduction of newer quieter aircraft.

As forecasts show that additional night-time air traffic movements would be required to accommodate the growth to 15 mppa, the preliminary noise assessment has assumed an increase in the current night-time air traffic movement limit from 4,000 to 5,000 air traffic movements per year.

The current restrictions on take-offs and landings within the shoulder periods of 06:00 hours and 07:00 hours and 23:00 hours and 23:30 hours of 9,500 in any calendar year have been assumed to remain in place within the preliminary noise assessment.

For comparison against the current situation, noise contours have also been prepared based on the peak summer period activity in 2023.

The noise contours can be found within the Master Plan Supporting Documents section of our website.



The table below contains estimates of the likely size of the summer daytime noise contours and the population within those contours.

The results of the preliminary assessment of summer daytime noise forecasts that the impact will decrease over time. Between 2023 and 2036 there is forecast to be a decrease in the area of the noise contours, with or without the potential growth beyond 12mppa, and therefore also a decrease in the population affected by noise.

DECIBEL LEVEL (LAEQ,16H)	SUMMER DAY NOISE CONTOUR AREA – KM² (POPULATION)			
	2023	<b>2036</b> (without growth)	<b>2036</b> (with growth to 15 mppa)	
51	40.31 (8,703)	25.84 (3,462)	30.6 (5,478)	
63	3.13 (38)	1.89 (0)	2.25 (38)	
69	0.90 (0)	0.63 (0)	0.75 (0)	

The table below estimates the likely size of the summer night-time noise contours and the population within those contours. The results of the preliminary assessment of summer night-time noise forecasts that the area affected by noise will decrease over time. Between 2023 and 2036 there is forecast to be a decrease in the area of these noise contours, with or without the potential growth beyond 12mppa, and therefore also a decrease in the population affected by noise.

DECIBEL LEVEL (LAEQ,8H)	SUMMER NIGHT NOISE CONTOUR AREA – KM² (POPULATION)			
	2023	<b>2036</b> (without growth)	<b>2036</b> (with growth to 15 mppa)	
45	61.76 (11,410)	41.1 (8,006)	47.78 (8,964)	
55	7.55 (718)	5.0 (237)	5.95 (538)	
63	1.22 (0)	0.9 (0)	1.04 (0)	

There is a reduction in the area daytime and night-time contours from 2023 to 2036 despite an increase in the number of flights to accommodate 15 mppa.

This occurs because modernisation of the aircraft fleet is forecast to be virtually complete by 2036. The effect of the newer aircraft being quieter than those they are replacing more than offsets the increase due to more flights, leading to an overall reduction in noise.

In 2024, about 32% of all commercial movements were undertaken by modernised 'new generation' variants such as the Airbus A320neo and Boeing 737 MAX 8.

These next generation aircraft provide a 15-20% greater fuel efficiency than their predecessors and offer up to a 40% noise reduction.

By 2036, this proportion is forecast to increase, with new generation variants comprising around 75% of movements. This will mean the noise contours decrease in size.

If the 2036 noise contours with growth to 15 mppa are compared to the 2036 noise contours without growth, it is estimated that an additional 301 people will be exposed to noise levels above the SOAEL during the night-time period and an additional 38 people during the daytime period.

When considering the absolute change in noise level in 2036 some people are forecast to be subject to potentially significant air noise effects, prior to mitigation. These findings are set out in the EIA Scoping Report.

There are a range of measures already in place that address the noise impact of the Airport, set out in the Bristol Airport Noise Action Plan 2024-2029.

These measures include operational procedures such as continuous aircraft descents and climbs, operational limits and an action plan to reduce aircraft noise.

Households likely to experience significant effects from aircraft noise are eligible for grant funding for noise insulation under the current Noise Mitigation Scheme.

#### SUBJECT TO FURTHER ASSESSMENT, REVISED MEASURES WILL INCLUDE:

- Review of current noise controls and other measures to further incentivise quieter and more fuel efficient new generation aircraft.
- Encourage aircraft operators to utilise operational procedures and practises to reduce the impact of ground noise.
- Revised Noise Mitigation Scheme.



#### **AIRCRAFT GROUND NOISE**

Ground noise from aircraft after landing and when preparing to take-off, road traffic noise from vehicles accessing the Airport and construction noise from infrastructure works will also need to be considered as part of plans to grow beyond 12 mppa.

It is expected that ground noise impacts will increase in line with aircraft movements, and the extended apron also has potential to result in ground noise impacts. Ground noise and construction noise impacts are most likely to be experienced by residents closest to the new infrastructure, such as the proposed aprons to the west of the terminal.

#### POTENTIAL MEASURES TO MITIGATE GROUND NOISE AND CONSTRUCTION NOISE INCLUDE:

- Further use of Fixed Electrical Ground Power (FEGP) or battery-powered Mobile Ground Power Units (MGPU) on new stands to substitute the use of aircraft Auxiliary Power Units (APU) in order to reduce ground noise.
- Construction of purpose-built acoustic barriers around the site, particularly near residential properties.
- Adoption of Considerate Constructor Schemes
  best practice to reduce construction noise impacts
  on nearby properties, which ensure that any issues
  are managed professionally and independently.



#### **ROAD TRAFFIC NOISE**

Increases in road traffic generated by the proposed development have the potential to result in an increase in noise levels.

Further assessment of these effects will be undertaken and mitigation measures considered if necessary.





#### **AIR QUALITY**

# Emissions from aircraft and ground operations and road traffic affect air quality in the immediate vicinity of the Airport.

Emissions from Bristol Airport will increase as passenger throughput grows from 12 to 15 mppa. The impact of the increase in emissions is being assessed against national, legally binding limits and will consider sensitive human health and ecological receptors in the vicinity of the Airport, as well as those near the road network used by airport-related traffic.

At this stage, emissions impacts at ecological receptors, such as the North Somerset and Mendip Bats Special Area of Conservation, King's Wood and Urchin Wood, Brockley Hall Stables and Goblin Combe Sites of Special Scientific Interest, Felton Common Local Nature Reserve and Ancient Woodland, are predicted to remain within all legal limits.

Our development proposals will optimise the airfield layout to minimise times for aircraft taxiing and holding and deliver improvements to the A38 and the internal road layout, which will reduce congestion. These measures will, in turn, reduce airborne emissions from, respectively, aircraft and vehicle movements.

Our ECCAP contains actions to minimise emissions, and we will set further targets to manage emissions for growth above 12 mppa.

#### ADDITIONAL MEASURES MAY INCLUDE, FOR EXAMPLE:

- Routeing of heavy goods vehicles during the construction period and timing of movements in order to reduce congestion and queuing.
- Increased use of Fixed Electric Ground Power.
- Planning of arrivals/departures as part of normal operations to avoid idling of traffic.
- Implementation of dust management plans during construction.
- Provision for additional electric vehicle (EV) charging.
- Further investment to enhance surface access and increase public transport mode share.



#### **CARBON EMISSIONS**

# The UK has carbon budgets that place a restriction on the total amount of greenhouse gases the UK can emit over a 5-year period.

The Government's Sixth Carbon Budget period is 2033 to 2037 and is closest to our Master Plan timeframe. A preliminary assessment of emissions as a result of growth to 15 mppa and the associated increase in air traffic movements concludes that they would be less than 0.1% of the Sixth Carbon Budget and that they would gradually reduce in line with the Government's net-zero commitments.

Embedded in the Master Plan is an optimised airfield layout which will reduce aircraft taxiing and holding, and their associated emissions. We expect our energy requirements to increase in the future, owing to the growth in passenger numbers and the increasing demands for electricity. Our Sustainability Strategy sets clear targets and actions to achieve net-zero operations by 2030 and for Bristol Airport to be net zero by 2050. As we develop, we will undertake further carbon assessment of the impact of growth and will identify additional actions to keep us on track to meet our commitments. This may include additional renewable energy infrastructure, sustainable building design, further EV charging provision and measures to promote further public transport use.

We will continue to actively work with our airline partners to reduce the indirect emissions resulting from flights operating out of the Airport and passenger transport. Beyond our development proposals to accommodate 15 mppa, we are beginning to consider the spatial requirements for hydrogen infrastructure to enable hydrogen-fuelled flight and identify land to the west of the Airport on the Master Plan for this purpose. In our journey to become a net-zero airport by 2050, hydrogen fuel could make a significant contribution to reducing the carbon footprint of the Airport's future operations and ushering in zero-emissions flight.

We are committed to being a leading player in facilitating zero-carbon flight in the UK and will continue to build on Bristol Airport's connections with the South-West's world-leading aerospace hub and centre for research and excellence. We will work with partners to be a driver for change, supporting and leading where we can, taking actions to decarbonise flight and collaborating with our airline partners and suppliers to decarbonise ground operations.

#### **AVIATION CARBON TRANSITION**

In 2021, we launched Bristol Airport's Aviation Carbon Transition (ACT) programme.

The ACT programme is an annual fund of £250,000 to kick start and fast track decarbonisation initiatives in the South-West, focusing on Scope 3 emissions from flight and transport at the Airport, and is unique to Bristol Airport. Organisations that have been awarded funding include Buckinghamshire New University, for its deep dive into surface access and commuting emissions at Bristol Airport; airlines easyJet and Jet2, to accelerate the electrification of airside vehicles and equipment; and Johns Associates Limited, for exploring airfield grassland sequestration through innovative biochar absorption.

# Bristol Airport Amazing journeys start here

#### **HYDROGEN ALLIANCES**

Bristol Airport is uniquely working with partners to develop zero-emissions hydrogen flight technology.

Bristol Airport is a founding member of Hydrogen South-West, a network that brings companies together to accelerate hydrogen innovation and research and development in our region.

It is also a member of the Hydrogen in Aviation alliance, a collaboration between the aerospace industry, easyJet and others. The alliance has provided a roadmap for the UK Government, industry and our regulators to accelerate the development of zero-emissions flight.

#### **PROJECT ACORN**

In 2024, Bristol Airport hosted the first airside hydrogen refuelling trial ever to take place at a major UK airport. The groundbreaking trial was a critical step to achieving zero-emissions aviation while meeting UK regulations. Hydrogen was used to refuel and power ground support equipment (GSE) – servicing easyJet passenger aircraft in an operational environment.

The outputs of the trial will help develop industry best practice; provide guidance to airports, airlines, local authorities and regulators on required infrastructure changes; and support the development of a regulatory framework for hydrogen use on an airfield.

BRISTOL AIRPORT MASTER PLAN: VISION FOR 2040



#### **BIODIVERSITY**

# Bristol Airport, and the adjacent land required to increase capacity to 15 mppa, does not include any protected nature conservation sites but does include previously undeveloped land that is in agricultural use.

The effects of the development proposals on the wider landscape will be considered. The area supports a number of designated sites, including the North Somerset and Mendip Bats Special Area of Conservation (SAC), which has been designated in part for its resident populations of lesser horseshoe and greater horseshoe bats. The SAC is approximately 2 km west of the Airport.

Ecological surveys undertaken to date have demonstrated that the site and the surrounding area is home to a number of protected or notable species, including bats and badgers. Hedgerows, trees and scrubland support an assemblage of farmland birds.

Taking into account the results of ecological surveys completed to date, as well as data from third-party sources and our understanding of the site, a high-level preliminary assessment of the potential effects of the development on biodiversity has identified the following potential impacts:

#### **HEDGEROWS:**

A limited number of hedgerows on adjacent land will need to be removed or will become fragmented. These will be replaced elsewhere and new connecting habitat introduced wherever possible.

#### **GRASSLAND:**

Areas of species-poor grassland within the airfield and on land adjacent to the current Airport will be reduced, as will small extents of species-rich grassland along the A38. These will be recreated or translocated elsewhere, improving other poor-quality grasslands.

#### TREES AND SCRUB:

Some establishing and older trees on land adjacent to the Airport are likely to be removed, reducing habitat for birds, bats, invertebrates and lower plants that are associated with them at these locations. These will be replaced elsewhere and new trees and shrubs introduced wherever possible.

#### **BIRDS**:

Increased air traffic has the potential to disturb birds at important sites, like the Severn Estuary Special Protection Area (SPA) and SAC and Chew Valley Lake SPA and Site of Significant Scientific Interest (SSSI), but significant impacts are not anticipated.

#### HORSESHOE BATS:

Development may lead to the loss of important foraging habitats on land adjacent to the current Airport, for greater and lesser horseshoe bats, which are an interest feature of the North Somerset and Mendip Bats SAC. Increased lighting could disturb their natural behaviour in retained habitats and adjacent land. Where possible, this habitat will be retained, as will dark corridors, and replacement habitat that exceeds the value of that being lost will be provided.

#### **OTHER BATS:**

Various bat species could lose roosting and foraging areas where grassland, trees and buildings are to be removed, and lighting could disturb behaviour.

Opportunities for bats will be incorporated wherever possible at Bristol Airport, particularly in unlit areas, but also in off-site, currently poor-condition habitats.

#### **BADGERS**:

Setts and foraging areas may be affected in land adjacent to the current Airport, leading to potential harm or isolation of badger populations. Badgers have always been conserved and supported at Bristol Airport and this will continue, with new setts being provided and better foraging and watering habitat made available.

#### **BREEDING BIRDS:**

Birds may lose breeding habitats associated with the trees and hedges to be removed, although these will be replaced elsewhere and new connecting habitat introduced wherever possible.

Protected and designated sites, such as Goblin Combe SSSI and King's Wood and Urchin Wood SSSI, are unlikely to experience changes in vegetation caused by increased emissions to air from aircraft and vehicle traffic, as these are predicted to remain within legal limits.

Where possible, the scheme is being designed to avoid or reduce adverse effects on valued ecological features and deliver benefits for biodiversity in accordance with policy and best practice. Overall, our proposals will be required to deliver a minimum of 10% biodiversity net gain through landscaping and habitat creation proposals and the management of retained and proposed habitat areas.

These measures will be included in a Landscape and Biodiversity Management Plan to be submitted as part of the planning application.



BRISTOL AIRPORT MASTER PLAN: VISION FOR 2040



#### LANDSCAPE AND VISUAL IMPACTS

A preliminary assessment of the potential effects of the Master Plan on landscape character and visual amenity has been undertaken, informed by mapping where the proposals would theoretically be visible from within a 5-km study area.

The varied topography throughout the study area, combined with intervening vegetation and built form, limits views of Bristol Airport from the surrounding area.

Towards the southern part of the study area, the land rises appreciably in the vicinity of the Mendip Hills. This results in elevated, panoramic views from this part of the study area.

While it is not anticipated that the physical development of the Airport to accommodate 15 mppa will significantly affect the Mendip Hills National Landscape, further assessment is required to consider the impact of additional ATMs on the special qualities of this protected landscape. This assessment will be included in the planning application.

It is expected that there will be localised effects on the local landscape character, and there is potential for visual impacts for residents living close to the Airport at Lulsgate Bottom and along Downside Road (to the east of Cooks Bridal Path only), around Winters Lane and along Cooks Bridal Path, and for recreational users of the Tall Pines Golf Club.

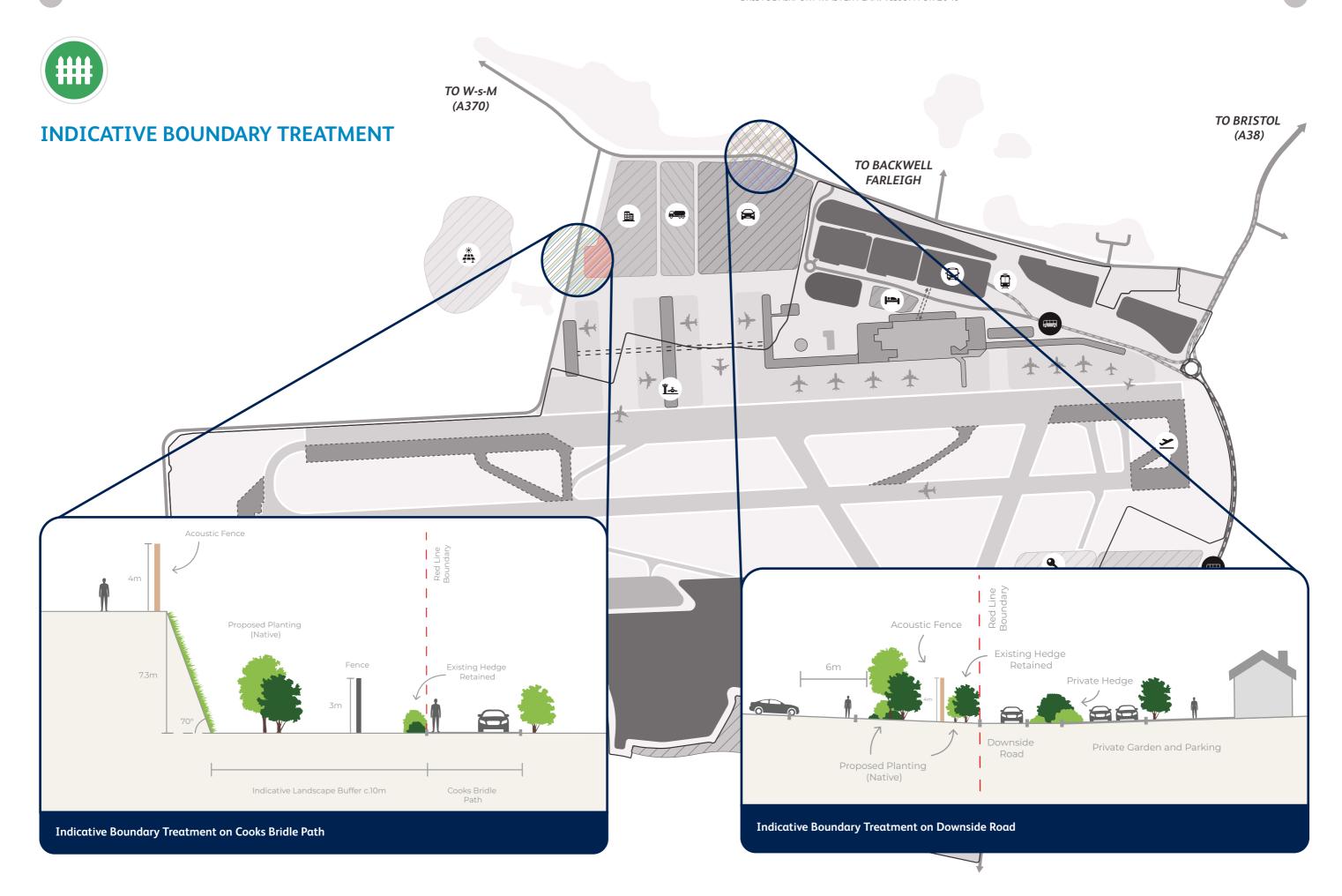
Where possible, elements of our proposals are being designed sensitively to minimise any potential landscape effects. This includes making use of natural landscape features, for example, by constructing new buildings and structures in lower-lying areas or adjacent to existing built form, thereby reducing the visual effect of new structures in the wider landscape.

Any additional mitigation that may be required to reduce potential landscape and visual impacts will be set out in a Landscape and Biodiversity Management Plan.

#### **MEASURES COULD INCLUDE:**

- Additional landscape bunds on the southern airport boundary.
- Tree planting and reinforcement of existing hedgerows along the Airport boundary.
- A lighting strategy to minimise light spill and glare.







#### AGRICULTURAL LAND

The proposals would require the development of land that is currently agricultural land to the north of the airfield and west of the terminal for the extended apron, the fuel farm and aviation-related buildings. It is proposed to develop additional agricultural land to the south of the airfield for car parking. Assessment will be undertaken to confirm whether, and the extent to which, Best and Most Versatile agricultural land would be lost. The assessment will be included in the planning application.





#### **GREEN BELT**

Where possible, the proposed development has sought to focus further development on the north side of the Airport in areas outside the Green Belt designation and where the openness of the Green Belt would be least affected.

However, the proposed development would require the release of additional land from the Green Belt to extend the apron, accommodate the fuel farm and aviation-related buildings, and meet the demand for additional parking.

The height of development within the Green Belt to the south of the airfield (where we consider impact on openness on the Green Belt is likely to be more significant) has been kept to a minimum. This includes making use of natural landscape features, for example, by constructing new buildings in existing lower-lying areas or adjacent to existing built form, thereby reducing their visibility in the wider landscape. Boundary landscaping will include the creation of perimeter bunding to screen car parking areas, and we will develop lighting proposals to reduce night-time effects.

Nevertheless, we accept that our proposals could be considered inappropriate development within the Green Belt and we will be making the case with justification (called 'very special circumstances' as defined in the National Planning Policy Framework) for this proposed development within the Green Belt as part of our planning application for development to accommodate 15 mppa. We also intend to make further representations to the North Somerset Local Plan to release Green Belt land for development and will work with North Somerset to consider ways that the impact can be offset through compensatory improvements to the environmental quality and accessibility of the remaining Green Belt.

As part of the Master Plan, we envisage that further land in the Green Belt may be required to accommodate additional renewable energy generation and hydrogen infrastructure required to enable zero-emissions flight.

These proposals, at this time, require further feasibility and technology development and therefore will not be taken forward as part of the planning application for development to accommodate 15 mppa.

In the meantime, we will continue to work closely with industry experts to develop our understanding of the requirements for infrastructure to enable hydrogen flight from the Airport from the mid-2030s onwards. Further land requirements will be defined in subsequent reviews of the Master Plan.

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# WHAT OUR MASTER PLAN MEANS FOR YOU

Ultimately, we want to build an airport that limits our impact on communities, that our passengers want to use and local people are proud of.

The benefits to local communities, businesses and people are a central consideration of our future plans.



#### PROVIDING MORE JOBS FOR THE REGION

## Expanded capacity would create up to 1,000 jobs on-site and an additional 7,000 across the region.

The transition to hydrogen-fuelled flight would see an increase in green jobs, helping to create a sustainable legacy for the Airport.

We understand the importance of providing accessible opportunities to young people to grow their careers.

That's why our Skills and Employment Plan focuses on building even more partnerships with colleges, schools and universities, such as the GW4 Group, to provide real opportunities for the workforce of tomorrow, including in Weston-super-Mare and South Bristol, whatever their skillset.





#### **SUPPORTING OUR COMMUNITIES**

While improving and expanding the Airport's facilities would bring substantial economic value to the region, we are also committed to delivering social value both locally and regionally.

Our Community Fund has invested £1.8 million in the local area since 2012, including in biodiversity projects, schools, parish councils and more. Our Skills and Employment Plan is supporting the take-up of jobs by local people, increasing the number of apprentices and developing the skills needed for future employment opportunities.



#### **CONNECTING YOU TO THE WORLD**

Now, more than ever, Bristol is becoming the flight hub for the South-West and South Wales. Expanding our capacity would allow us to connect you to new destinations as well as offer more frequent flights to your favourites. Bristol Airport is here to connect the people and communities of our region to new places and new experiences, and to enable visitors from all over the world to see this wonderful region for themselves.



#### SHOWCASING OUR AMAZING REGION

### Expanding the Airport's capacity will provide space for new routes and increased frequency of flights.

With better connections to the rest of the world, we can showcase more of what our region has to offer:

- Our landscapes
- Vibrant cultural centres
- Coastline
- Heritage

All of which would help sustain our vital tourism economy.





#### **GLOSSARY**

ACRONYM	DESCRIPTION
ACA	Airport carbon accreditation
ACI	Airport Council International
ACT	Aviation carbon transition
APU	Auxiliary power unit
ATM	Air transport movement
CAA	Civil aviation authority
CDA	Continuous descent approach
CIC	Community interest company
dB	Decibels
ECCAP	Emissions and climate change action plan
EV	Electric vehicle
eVTOL	Electrical vertical and take-off aircraft
FEGP	Fixed electrical ground power

ACRONYM	DESCRIPTION
GVA	Gross value added
LOAEL	Lowest observed adverse effect level
МРРА	Million passengers per annum
NATS	National Air Traffic Services
SAC	Special area of conservation
SAF	Sustainable aviation fuel
SOAEL	Significant observed adverse effect level
SPA	Special protection areas
SSSI	Site of significant scientific interest
WECA	West of England Combined Authority

