Newcastle International
Your Airport

Masterplan 2040



Nick Jones, CEO

Our Masterplan sets out our development proposals to 2040, where our passenger figures and economic impact on the North East region is set to grow significantly.

Newcastle Airport takes great pride in already providing vital connectivity for the North East region to the world, whilst being an Airport that our passengers, local businesses and visitors to the region are proud of.

In 2024, we welcomed 5.2 million passengers and remain a key part of the fabric of the region, driving growth and investment by contributing more than £1bn in Gross Value Added annually to the economy.

We are also one of the North East's largest employers with more than 3,200 people working across the Airport site and over 17,000 jobs supported through our supply chain.

Beyond our economic impact, we reached a new milestone in 2024 by handling more than 6,000 tonnes of cargo, enabling local businesses to reach key global markets more efficiently than ever before.

We also continue to help attract tens of thousands of international students to the North East every year and work closely with local universities and colleges to attract talent to the aviation industry.

While we are proud of what we have achieved, our success comes at a time when the aviation sector is facing many challenges and is changing faster than ever before.

From embracing cutting-edge new technologies to transitioning to Net Zero, aviation is rapidly evolving and it is critical that we do the same.

Our new Masterplan outlines our vision for the future and the steps we plan to take to ensure we remain a vital asset for the people and businesses we serve throughout the North East. It shows how we will continue to provide first-class services for our passengers, attract new airlines and destinations and drive further investment and inbound tourism in the region.

It also illustrates our forecast GVA of £2bn and around 32,330 jobs being supported by our operations, which means that we don't just want to be an Airport that adapts to change, but we are determined to lead the way.

This Masterplan is what we think the Airport could be like in 2040 and we want to develop it in consultation with you. We very much welcome your views.



Alice Andreasen, Chief Corporate Affairs Officer

Our Masterplan is a bold and exciting opportunity to share our vision for the future. This year, we have transformed the way we present our long-term ambitions and have focused on three key pillars.

The Masterplan outlines our key strategic path to achieve 9 million passengers by 2040 and our development requirements to reach this. Alongside the Masterplan, we released our Noise Action Plan last year, which focuses on how we manage and mitigate noise from aircraft. Later this year we will release our Surface Access Strategy, which details how we will enhance connectivity to and from the Airport from all forms of transport.

Together, these documents form the base of our future growth, help us to attract new airlines and destinations and ensure we remain a key driver for investment and economic development in the region, whilst also being a responsible neighbour in the community we serve.

At the heart of our Masterplan is our clear commitment to achieve Net Zero Carbon status by the year 2035.

We take great pride in being a leader in our field and continue to make strong progress towards our goal, from reducing our carbon emissions by 4% year on year to investing in a fully electric vehicle fleet.

While we recognise there is still more work to do, this plan outlines our next steps to ensure we keep moving in the right direction to deliver a meaningful, lasting change.

We are proud to share our vision and look forward to working with our business partners, stakeholders and communities to bring it to life.



1. Masterplan Objectives p8



2. Newcastle Airport's History and Current Operations p12



5. Forecast Airport Growth p40



6. Development Plan p48



3. Economic and Social Benefits of Growth p18



4. Why do we need a Masterplan? p34

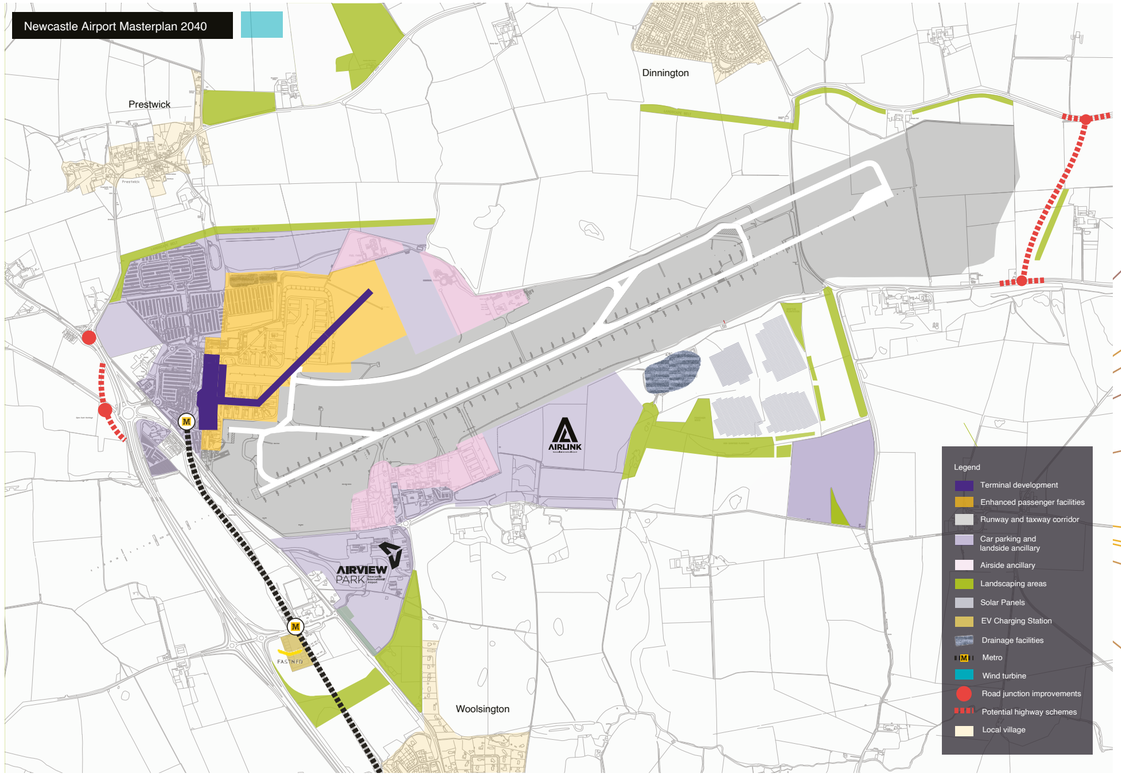


7. Surface Access p70



8. Sustainable Airport Growth p74





1 Masterplan Objectives

1. Masterplan Objectives

1 Masterplan Objectives

The Airport's Masterplan is made up of the following objectives:

1

To be the number one choice of travel for the region, to and from an exceptional range of destinations.

2

Contribute to the regional economy through the growth of GVA and jobs in the region and act as a catalyst to drive the growth of inbound tourism in the region.

3

To inform stakeholders of our potential infrastructure growth plan and ensure that land is safeguarded to accommodate this growth.

4

Ensure that we become a Net Zero Carbon Airport by 2035.

5

Ensure the Airport grows in a sustainable manner by mitigating our environmental impacts and being a responsible neighbour.



2 Newcastle Airport's History and Current Operations

2. Newcastle Airport's History and Current Operations

Our History

90 years going further together

1930s



2.1 The Airport was founded as Newcastle Aero Club in 1925 with the development of an airfield at Cramlington, north of Newcastle. Newcastle Airport opened ten years later in 1935. The aero club subsequently relocated to the site where commercial services began.

1970s



2.2 Demand for air travel in the 1970s resulted in additional investment at the Airport. The arrival of jet aircraft acted as a catalyst to encourage a major extension in the package holiday market. In 1978 a visionary expansion plan was drawn up. This included a 4000sqm terminal expansion as its centrepiece including a passenger pier and airside departure lounge.

1990s



2.3 In the 1990s major improvements in surface access to the Airport were introduced through Nexus' extension of the Metro system to the Airport. This dramatically improved public transport access to and from Newcastle City Centre to the Airport.

2000s



2.4 Passenger figures reached 3 million per year. On 4 May 2001, the seven local authority shareholders sold 49 percent of the shares in the Airport company to Copenhagen Airports. This investment paved the way for the Airport to undertake an unprecedented period of growth and development. A further terminal extension was opened in August 2004. The Airport secured its first ever scheduled long haul flight with Emirates, flying daily direct from Newcastle to Dubai in 2007.

2020s



2.5 The Airport recovered quickly from the impacts of the COVID-19 pandemic. In March 2022 Ryanair opened a new base at the Airport bringing a £200m investment, 19 destinations and 60 new jobs. In July 2023, the Airport's Solar Farm was officially opened, making significant steps towards a Net Zero future. In 2023, the Airport welcomed 4.8m passengers. In May 2025, it was announced that easyJet will be basing three aircrafts at the Airport from 2026 which will create around 130 direct jobs and 1,200 indirect roles.

2 Newcastle Airport's History and Current Operations

The Airport Today

2.6 The Airport today currently serves over 5 million passengers per year. We provide over 80 direct destinations worldwide and over 300 one-stop connections.

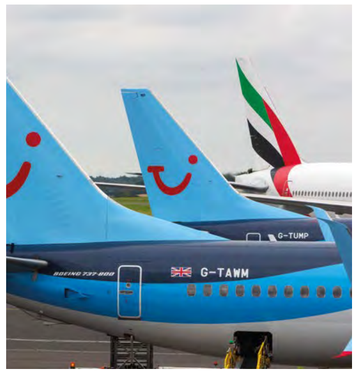
2.7 The Airport employs over 3,700 people in the area. We support a further 17,000 jobs in the region, contributing over £1bn annually in GVA to the North East Economy.

5m+ passengers per year

80 direct destinations

3,700+ employees

£1bn+ annually in GVA





2.8 The Airport is the major global gateway to and from North East England. The terminal building has benefited from major improvements with a next generation security search area and a full refurbishment of the departure lounge.

2.9 To the south of the Airport lies Airview Park, the Airport's on-site business park. A wide range of tenants in industries such as architecture and construction occupy high spec office facilities in a convenient location within the Airport estate.

2.10 Outside of the operational area, the Airport has invested significantly in development projects that support the Airport's transition to a Net Zero future. The Airport's Solar Farm was officially opened in July 2023. The Solar Farm provides 3MW of generating capacity and has provided approximately 20% of the Airport's energy demands since its introduction. In 2025, construction began on Newcastle's largest electric vehicle forecourt at Callerton Parkway.

Next generation security search area

Fully refurbished departure lounge

Creation of an on-site business park

Our solar farm generates 100% of the Airport's electricity on a sunny day









3 Economic and Social Benefits of Growth

3. Economic and Social Benefits of Growth

Overview of economic impact

Supporting over

17,000

jobs in the North East economy

Newcastle Airport contributes over £1bn annually in GVA to the North East economy and supports over 17,000 jobs.

Directly supporting over

650

jobs with an economic impact of

£43m

Newcastle Airport directly supports over 460 jobs with an economic impact of £43m. The Airport is also the base for 60 tenant businesses which, along with the Airport, employ over 3,000 people with an economic impact of £178m.

£200m

economic impact of the supply chain and associated local spending in the North East in 2023

In 2023, Newcastle Airport worked with almost 270 suppliers, with over half operating locally. The combined supply chain spend of the Airport's supply chains and associated local spending has an economic impact of £200m in the North East, and a further 3,500 indirect and induced jobs supported.



3 Economic and Social Benefits of Growth



3 Economic and Social Benefits of Growth

A spend of over

£360m

in the local economy

In 2023, the North East saw almost half a million overseas visitors who spent over £360m in the local economy. Of this, 122,000 were international tourists and holidaymakers, spending £65m locally.

610,000

domestic and international business trips facilitated in 2023

In 2023, approximately 610,000 domestic and international business trips were facilitated by Newcastle Airport, with an estimated contribution of £278m to regional productivity and GVA, and supporting around 2,200 jobs in the North East.

generating a net economic impact of

£1.79bn

The Airport is a huge part of why students choose to study in the North East and, as well as connecting universities to an global pool of talent, enables the wider region to draw in 18,700 international, higher education students generating a net economic impact of £1.79bn.

3.1 The Airport acts as a key employer in the region both directly through the Airport company and through the many business partners who operate at the Airport. By acting as a global gateway, the Airport also acts as a catalyst to drive inbound tourism and trade on an international scale.

The economic impacts of the current Airport operation and the future growth during the Masterplan period have been mapped by Arup, a multi-disciplinary consultancy, and are covered in the following section.

The Current Economic Impacts of Newcastle Airport

3.2 The Airport's economic impacts on the region through both jobs and GVA can be allocated into a number of different categories. These are based around direct operational roles of the Airport and the wider economic impacts that the Airport generates. The categories are as follows:

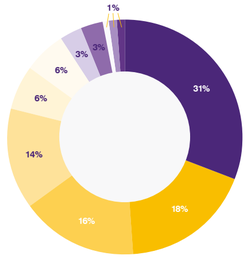
- **Direct** The jobs and GVA generated by the activity of the Airport itself. The majority of these are onsite (security, airline employees etc.) with a small percentage offsite but directly associated with the Airport operation.
- **Indirect** Employment generated in the supply of goods and services to the direct activities of the Airport. This may include retailing, advertising and cleaning.
- **Induced** Employment generated by the spending of incomes earned in the direct and indirect activities.
- **Business Travel** The destinations served by the Airport can provide trade links, inward investment, knowledge and technology sharing. These activities can generate value and productivity to the region.
- **Tourism** Inbound tourism generates economic benefits through spending in the region. This supports businesses and employment.



Newcastle Airport and the Regional Economy

3.3 The Airport's passenger numbers have risen year on year since 2021, and so too have the number of jobs associated with the Airport. There are currently around 3,700 people employed directly on the Airport site. The majority, around 73%, are employed full-time. The largest employers consist of airlines, the Airport itself and ground handling companies.

Figure 1 – Airport employment structure



3.4 These Airport jobs contribute approximately £178m in GVA to the North East region. The indirect and induced impacts provide an additional £190m to the North East region and support an additional 3,540 jobs.

3.5 The North East has key strengths in a variety of sectors including health and life sciences, goods manufacturing and offshore energy. The region is also a regional leader on Net Zero. Over half of the regional jobs created through international investment in 2022 were in the Net Zero sector. Digital tech and advanced manufacturing are other key industries in the North East economy with roles in the electric vehicle industry and artificial intelligence.

3.6 Inbound tourism provides significant investment to the North East. The Airport acts as a gateway to the region, attracting visitors from around the world with almost half a million overseas visitors visiting the North East in 2023. These visitors spent over £360m in the local economy.

3.7 When combining the direct, indirect and induced impacts of the Airport, we currently generate £1.034 billion into the North East economy and support over 17,000 jobs. The international connections offered at the Airport directly provide business links and technology sharing.

3.8 These significant impacts highlight how the Airport already acts act as a major catalyst to encourage economic growth in the region. The efficiency and effectiveness of Newcastle Airport, which provides both strong domestic and international destination portfolios, allows for wealth and economic growth to be spread across the country. The presence of the Airport means that the North East is unlocked for business, investment and tourism.



3 Economic and Social Benefits of Growth

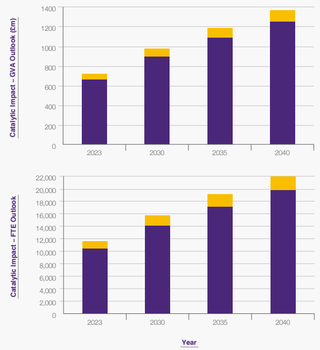
Figure 2 – Total economic impact of NIAL

Study area	North East		United Kingdom	
Impact type	**Jobs**	**GVA (£)**	**Jobs**	**GVA (£)**
Direct	3,070	178.3m	3,070	178.3m
Indirect & Induced	3,570	197.8m	5,190	306.0m
Operational Impacts	**6,640**	**376.1m**	**8,250**	**484.3m**
Business Productivity	2,280	287.0m	2,540	335.0m
Inbound Visitors	8,230	371.0m	9,060	384.7m
Catalytic Impacts	**10,410**	**658.0m**	**11,600**	**719.1m**
Total Impacts	**17,050**	**1,034.0m**	**19,850**	**1,204.0m**

Figure 3 – Employment impacts of the Airport in the UK over Masterplan period



Figure 4 – Catalytic impact of the airport over the Masterplan periods



Forecast Economic Impact

3.9 By taking account of our growth figures alongside route development over the Masterplan period, we have provided forecasts of the proposed economic impacts that the region will benefit from as a result. The anticipated growth signals that the Airport will benefit both jobs and GVA in the region.

3.10 Increased passenger numbers will lead to a greater operational impact of Newcastle Airport. This is in the form of more job opportunities at the Airport to facilitate the larger volume of traffic, as well as a larger number, and greater value, of suppliers to deal with the increased number of passengers, and finally higher spending in the region derived from these impacts.

3.11 By 2040, the Airport could support a larger number of jobs in the North East, growing from 6,650 in 2023 to 12,600 in 2040, and could also have a greater national impact by supporting 3,050 jobs outside of the North East in 2040, compared to 1,610 jobs in 2023.

3.12 All impacts would be expected to increase over the Masterplan period from higher direct GVA from the Airport's on-site operations to larger supply chain links and increased wider spending. GVA generated by Newcastle Airport in the North East could increase from £376.0m in 2023 to £712.9m in 2040. The Airport could increase its contribution to national GVA from £108.2m in 2023 to £205.1m in 2040.

3.13 The forecast passenger numbers could also drive up the catalytic impact of the Airport. Growth in passenger numbers and expansion of the Airport will mean that we have a greater capability to facilitate inbound visitors, which will create jobs locally and contribute to GVA through expanding the North East visitor economy. It will also allow use for a greater number of business passengers, which will provide workers with more efficient access to a wider market and increase productivity of firms in the region.

3.14 In terms of catalytic impacts, a greater number of jobs could be supported in the region as a result of the Airport, increasing from 10,410 jobs in 2023 to 19,730 jobs in 2040. Expansion of passenger numbers creates new jobs in the region and nationally and hence increases the Airport's contribution to GVA. The presence of the Airport as an actor to enable inbound visitors and increased business productivity could mean its contribution to GVA in the North East could grow from £658.0m in 2023 to £1.2bn in 2040. Its contribution to national GVA could also increase from £61.7m in 2023 to £117.0m in 2040.

Economic Impact of the Airport Employment Areas

3.15 The economic benefits set out in the Masterplan are not limited purely to route development and Airport related growth. Several sites south of the Airport have been allocated for employment related development. The delivery of these areas over the Masterplan period will result in additional job and GVA growth.

3.16 Four employment areas were originally allocated for Employment uses (Referred to as Sites A, B, C and D) as part of the Newcastle Gateshead Core Strategy. The solar farm has since been constructed on the former Site C area. Site B has since been part-constructed and renamed as Airview Park, with over 200 employees currently on site. Site A has also since been renamed AirLink. AirLink will operate as a dedicated air freight and logistics facility with direct runway access. Over the Masterplan period, both Sites A & D will be built out and Airview Park's construction will be complete.

3.17 An Economic Impact Assessment was undertaken for the AirLink development site which identified that, when fully developed, the site could support 1,400 direct jobs, with a further 1,200 indirect jobs and supporting up to £165m GVA per annum. Further information on each employment area is provided in Part 6.

Social and Cultural impact

3.18 Growing the Airport through the proposals set out in the Masterplan will open up opportunities for the region from a social and cultural perspective. In addition, increased routes will provide further opportunity for inbound tourism to grow and promote the region to the world. This aligns with the goal set out by Destination North East England within their Destination Development Partnership to double the size of the visitor economy by 2035.

3.19 An enhanced route network also has the potential to improve access to the regions' many universities. Direct routes to more destinations will increase the offer of universities to international students. Approximately 25% of Newcastle University's students are international, with this expected to grow over the coming years. It is estimated that the North East has approximately 18,700 international students in higher education, generating a net economic impact of £1.79bn. The Airport is a key enabler of this.

3.20 Northumbria University currently attracts around 4,000 annual international students, with students coming from India and China, and a growing number from Malaysia and the Middle East. International students not only provide an important income stream, but they can have a huge impact on the wider economy, especially if they go on to work in the region post-graduation.

3.21 An enhanced route network can also allow international students to visit friends and family back home regularly. This in turn will encourage students to remain in the region after graduation and contribute to the region through highly skilled roles.

3.22 The growth in passenger figures will also provide an opportunity to support our sustainability initiatives onsite. Enhanced passenger numbers will allow the Airport to invest in projects such as renewable energy generation, electric vehicle charging infrastructure and biodiversity enhancements.

3.23 The delivery of the Masterplan clearly contributes not only to job creation and increased GVA but also improvements in human and social capital in the region and the delivery of sustainability initiatives.

Masterplan Impacts

3.24 Clearly, the above impacts highlight the potential economic, social and cultural benefits that passenger growth at the Airport can deliver, however the current infrastructure of the Airport would not be able to accommodate such growth. In order to reach our high growth passenger numbers, the infrastructure proposals set out in Section 6 of the Masterplan must be delivered.

> **"Without the Airport people won't come and live and work here and our economic growth plans would be fundamentally undermined."**
>
> Local Government Representative

> **"We are present at 17 airports in the UK and Newcastle Airport is the best airport in terms of operations – Newcastle consistently has the highest customer satisfaction score, with turnover times being very short and other metrics performing well."**
>
> Airport Tenant, Network Carrier Airline





North East Combined Authority Commitments

3.25 The North East Mayoral Combined Authority (NECA) was established in May 2024. The seven local authorities who own a majority share of the Airport have joined together to collaborate on proposals across Council boundaries. The Combined Authority has produced a Corporate Plan to provide a strategic vision centred around five key commitments. We endorse these key commitments and are confident that the economic and social benefits derived from the Airport Masterplan will contribute towards these overall goals for the region.

3.26 A fairer North East NECA will help people thrive with aspirational jobs, new skills, and better homes, improving quality of life for everyone. They will create confidence in the North East by reducing inequalities and improving health.

3.27 A greener North East NECA will take inspiration from our industrial heritage and unique mix of urban areas, countryside, coastline and rivers, to nurture the region's natural resources – creating green jobs, sustainable industry, and clean energy.

3.28 A connected North East NECA will get behind businesses so they can improve productivity and connectivity. With better local transport networks and digital infrastructures, the North East will have a global reach, becoming the go-to place for innovative ideas and real-world results.

3.29 An International North East Building on the region's economic strength, and championing the heritage, culture, arts and sports, NECA will drive the region's ambition to continually attract visitors and investment.

3.30 A successful North East NECA will speak with one voice, and define the regions future, cultivating the talent, skills and innovation that will help grow the existing economy, becoming green industry leaders and a cultural destination – making the North East one of the best places to live, work, and invest.

"The Airport is critical to us in terms of international students and staff. We have students and colleagues from 150 different countries, bringing in many different nationalities."

Local University

"Thanks to the Airport, we are able to demonstrate to students, businesses and investors how easy it is to travel in and out of the region."

Inward Investment Agency



4 Why do we need a Masterplan?

4. Why do we need a Masterplan?

4.1 Our Airport has been considered a regional success story, attracting large numbers of passengers to travel in and out of the region. The Airport has grown significantly in recent years, with a history of investment across the entirety of the Airport estate.

We expect this growth to continue and as a result we need to set out a clear strategic framework to drive sustainable growth. This Masterplan sets out how the Airport will grow up to 2040 and highlights the additional investment that will accommodate our growth in passenger numbers.

4.2 We have set an ambitious target to become a Net Zero Airport by 2035. In order to achieve this, our vision for growth must be built around an emphasis on a sustainable future. As a result, our Masterplan includes a drive for renewable energy generation, habitat creation and accessing the Airport in a sustainable manner.

Purpose of a Masterplan

4.3 Airports are required to produce a masterplan by the Aviation Policy Framework (2013) to set out their strategic growth plans. This Masterplan will be used for:

- A clear statement of intent for future development needs, to be given due weight in the local planning process.
- On-site land and airside infrastructure the Airport will likely need to develop to accommodate the type and quantum of growth indicated in our growth forecast.
- Forecasting the economic and social benefits of this growth, both for the individuals and businesses associated directly with the Airport, and the wider economy.
- Informing how growth can be accommodated sustainably and with sensitivity to our community. The plan details how our growth can be sustainable in terms of noise levels, environmental impact, and energy consumption.
- Informing how the Airport can reach Net Zero by 2035 through appropriate development opportunities and habitat enhancements.

4 Why do we need a Masterplan?





Why the Masterplan is Being Revised and Opportunities for Growth

4.4 The previous Masterplan was produced in 2018. This provided a vision of growth up to 2035. The Airport must seek to update the Masterplan to ensure that appropriate areas of land can be safeguarded for future use. Since the previous Masterplan, Northumberland Council has updated their Local Plan and Newcastle City Council also intend to provide a new Local Plan within the next five years. As a result, it is critical that the Masterplan is up to date and provides significant weight when planning policy is being reviewed in the area. We must safeguard against future development in the areas that could hinder the sustainable growth of the Airport.

4.5 The previous Masterplan was based against Airport growth forecasts at the time. This included a range of destinations, airlines and aircrafts that were considered most likely to operate within the future. There have been significant changes in the aviation industry since 2018 with further growth in leisure markets and a fall in domestic flights. As a result, new growth forecasts take into account the current market and impacts of the pandemic.

4.6 Since the previous Masterplan, the Airport has set an ambitious target to become Net Zero by 2035 across our ground-based infrastructure within our direct control. This means that we will remove more carbon out of the atmosphere than we are generating across our ground-based operations such as, terminal operations, Airport vehicles, firefighting training, and general operation of our buildings. A pathway has been created to reach net zero by 2035, and this must be embedded into the Masterplan. Therefore, renewable energy projects and habitat creation projects are brought forward in this iteration that were not part of previous Masterplans.

There are a number of opportunities within the region to drive the growth of passenger numbers at the Airport:

- A percentage of passengers within the Airport catchment travel to other UK airports in order to fly. Alongside this, those in the outer catchment of the Airport often travel to other Airports in close proximity to their location. There is an opportunity to clawback potential passengers to Newcastle Airport and also reduce unnecessary longer car journeys.
- In order to increase the number of passengers at the Airport from further afield, major improvements must be made to surface access infrastructure to make passenger journeys as straightforward as possible. Significant road infrastructure improvements and improvements to sustainable transport options will allow greater numbers to access the Airport more efficiently.
- The Airport currently operates at peak periods in the early morning and afternoon. Outside of the peak periods, there is sufficient capacity to accommodate additional passengers. Alongside this, there is additional capacity outside of the summer months to accommodate additional flights.
- There is an opportunity to grow our portfolio of long haul operators as long haul carriers are operating more frequently from regional airports and there is an opportunity to increase passenger numbers through the wide bodied aircraft that typically serve these routes.
- New narrow body aircraft with an extended range capability have also come to market or are planned by manufacturers, offering the possibility for airlines to tap into new long-haul markets that were not previously accessible with current single-aisle aircraft.

4.7 Alongside growing passenger numbers making outbound journeys, it is also essential to grow the inbound market to the North East of England. The Airport plays a critical role in encouraging inbound tourism in the region, acting as the global gateway.

4.8 The number of visits to the UK by overseas visitors in 2023 totalled 38 million. The number of visits for leisure reasons have now reached pre-pandemic levels, with visitors from North America higher than numbers in 2019. 1.6% of total visits to the UK were to the North East of England. The majority of visits (51%) to the North East in 2023 by international visitors were to visit friends and family. Business trips made up 19% of all visits to the North East. Holiday visits made up 26% of all trips. There is potential to grow the percentage of total visits to North East England over the Masterplan period.

4.9 There are a number of strong tourist attractions that attract visitors to the region. The catchment area includes three World Heritage Sites[1] and the largest concentrations of castles in the country. There are also significant areas of high landscape value in the region hosting four National Parks[2] and a further three National Landscapes[3]. Other key attractions include iconic nightlife and international sporting events within our three cities and cultural arts centres such as the Baltic and the Glasshouse in Gateshead. The region benefits from a long coastline with award winning beaches in North and South Tyneside and Sunderland.

4.10 Over the Masterplan period it is likely that the North East population will grow. In-migration and proposals for significant housing developments in the region ensure that the population will grow by 2040, which will ensure that there is a larger catchment for the Airport.

4.11 All of the above factors have been taken into account to inform the growth forecasts that this iteration of the Masterplan is based upon. We have presented a high level of growth by 2040 to ensure that an appropriate area of land is safeguarded so that the site can develop to deliver the best passenger experience and be the best Airport in the UK.

[1] Durham, Hadrian's Wall & Lake District

[2] Northumberland, North York Moors, Yorkshire Dales & Lake District

[3] Northumberland Coast, North Pennines, Solway Coast



5 Forecast Airport Growth

5. Forecast Airport Growth

Our Current Aviation Operations

5.1 Newcastle Airport is currently the 11th largest Airport in the UK and the second largest in Northern England, exceeding 5 million passengers and handling over 36,000 commercial aircraft movements in 2024. A further 17,500 movements were generated by private operators and the military.

5.2 16 airlines operate from the Airport to over 80 worldwide destinations with access to 300 destinations worldwide via connecting hub airports (e.g. Amsterdam, London Heathrow and Dubai). We are predominantly an internationally focused Airport, with around three quarters of flights each year being to destinations outside of the UK.

5.3 Newcastle Airport has up to 18 flights a day to seven hub airports in Europe and the Middle East, bringing worldwide connectivity to the North East with one-stop access to destinations across the globe. On an annual basis, around 800,000 passengers flying to and from Newcastle Airport connect via our hub airports to destinations worldwide.

5.4 The Airport is operational 24/7, 365 days a year, with our peak season broadly running from May to September. The busiest week is typically in or around August, coinciding with school holidays in England and Scotland.

5.5 The throughput of passengers on a daily schedule is not evenly distributed, with the Airport experiencing two peak periods during the day.

Figure 5 – Current destinations

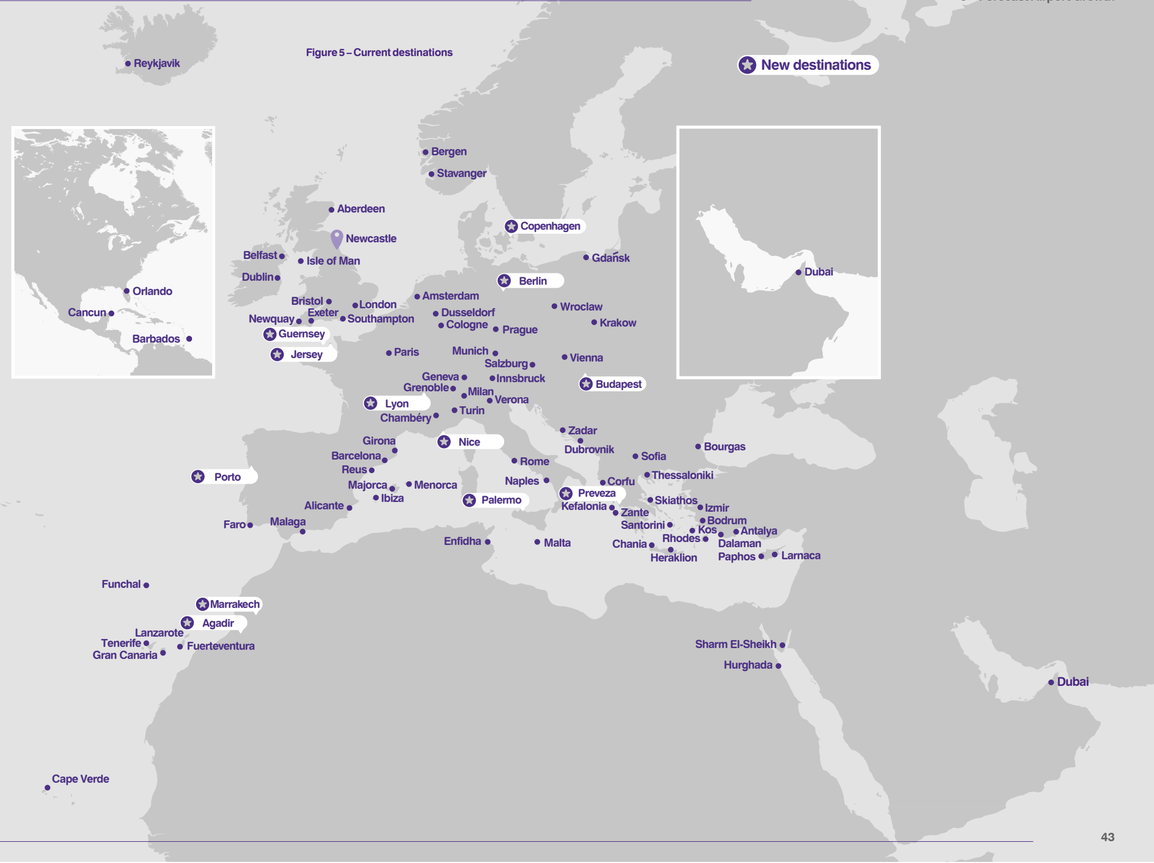


Figure 6 – Passengers carried by destination

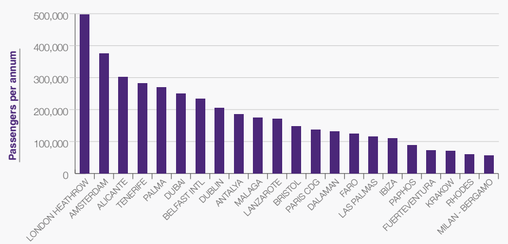
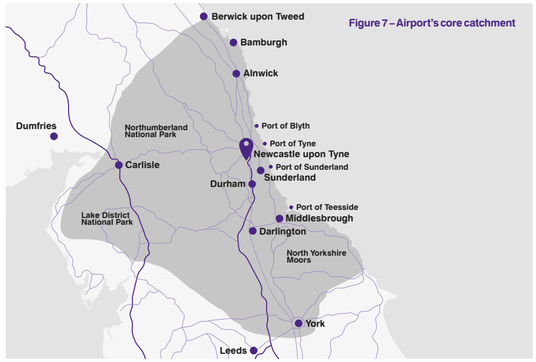


Figure 7 – Airport's core catchment



Airport Catchment

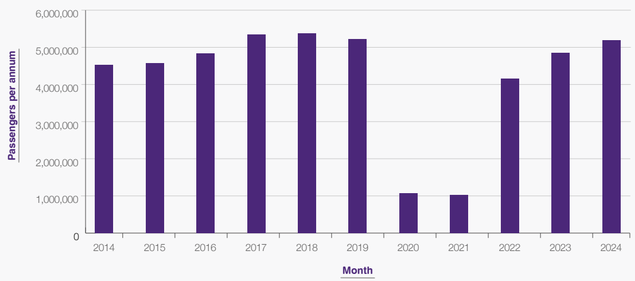
5.6 North East England is the Airport's core catchment, with a population of around 2.6m. Given the distance to other airports, the rurality of large parts of Northern England, and the excellent surface access to the Airport by road and rail, our wider catchment extends into the Scottish Borders, Cumbria, and Yorkshire (population 3.4m), with passenger patronage pronounced along key transport corridors like the A1, A69 and East Coast Mainline railway.

Forecast Growth

5.7 In order to make accurate assessments of both development requirements and environmental impacts arising from the Airport operation, we must make predictions of the potential extent of growth throughout the Masterplan period. Three separate factors have been taken into account in order to feed into the Masterplan process.

- **Passenger Figures** This equates to the number of passengers passing through the Airport and is dictated by seats available on each aircraft and how many flown. The rise in passenger numbers will naturally require additional development in the form of terminal infrastructure, car parking and surface access improvements.
- **Aircraft Movements** The number of aircraft movements and the type of aircraft in use is largely determined by the capability of an Airport's airfield infrastructure. Aircraft parking, aprons, runways and airside facilities all impact the number and type of movements possible at an airport.
- **Air Cargo** Air Cargo demand is impacted by the wider economies needed to move goods by air. As demand rises for cargo, development demands need to be considered such as apron facilities, warehousing and freight processing facilities.

Figure 8 – Annual 10 year pax graph



Global Air Passenger Market

5.8 In order to understand the projected growth of the Airport over the Masterplan period, it is important to consider past demand for travel at Newcastle and the projected growth of the global air travel market.

5.9 The International Air Transport Association (IATA) released a report on the current state of global aviation titled 'Global Outlook for Air Transport' (2023). The report predicts that passenger growth will continue to increase, but at a slower pace compared to that experienced during the past 3 years. Between 2023 and 2040, the number of air passengers is forecast to increase by 4.2% annually. This acceleration will nevertheless allow the number of industry-wide air passenger journeys to more than double from the 2019 level, to reach 7.8 billion by 2040.

Newcastle Airport – Passenger figure overview

5.10 Passenger figures have risen steadily over the last 20 years with a 100% growth in passenger numbers from 1997 to 2024. There have been two noticeable falls in passenger numbers in 2007 and 2020 attributable to the global economic crash and the COVID-19 pandemic respectively. On both occasions passenger numbers have recovered strongly with international passenger numbers higher than they have ever been.

5.11 Since the pandemic there have been noticeable changes in the breakdown of domestic flight movements in the UK. These are predominantly driven by various supply/demand reasons including a rise in working from home, the increase in video conferencing and the loss of domestic airline capacity. The domestic travel market is beginning to show signs of recovery.

Airport Passenger and Movement Forecast Growth

5.12 As part of the Masterplan process, the Airport has provided passenger forecasts for the Masterplan period. The forecast provided anticipates an ambitious high level passenger growth scenario. This has been undertaken to ensure that an appropriate level of land can be safeguarded to meet the potential future needs of the Airport. In addition, it also ensures that the environmental impacts of the site assessed in Section 8 of the Masterplan are based on the highest level of growth to ensure we are well equipped to mitigate future impacts. A high growth scenario is essential from a planning perspective, as the Airport can make informed representations to the relevant local authority on both planning applications and future planning policy documents providing robust information to prevent any future development which may limit the future growth of the Airport.

5.13 As part of the Masterplan process the following passenger growth figures have been assessed for the years of 2035 & 2040:

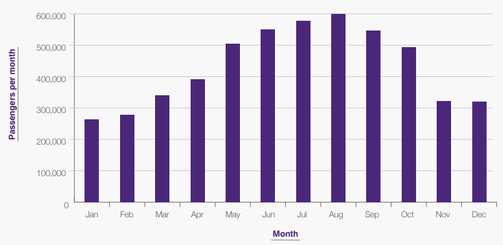
8m
by 2035

9m
by 2040

5.14 The growth forecasts have been calculated by considering a rise in both European and long-haul routes alongside an upsize of aircraft on existing and proposed routes.

5.15 A peak summer day schedule has been forecast for each of the interval development years. In 2035, 111 departures will take place throughout the day. This rises to 128 in 2040.

Figure 9 – Monthly passenger distribution (2024)



Cargo

5.16 Newcastle Airport benefits from a significant cargo operation onsite including on the daily Emirates service to Dubai. In addition, freight facilities focussed around the southside area of the Airport have been in operation for a number of years. Despite existing operations, we have identified opportunities for the Airport's cargo operation to grow significantly over the Masterplan period.

5.17 Airlink, directly to the south of the Airport is a 29 hectare land parcel, allocated as a Key Employment Area in local policy. We are working alongside a preferred developer to develop the site for freight and distribution purposes. Warehouse facilities will be able to take advantage of direct apron access and buildings designed specifically for cargo operational purposes. The development of this site is likely to attract additional investment from cargo operators at the Airport and increase capacity of operations over the Masterplan period.

5.18 Over recent years there has been a significant rise in the demand for online shopping and next day delivery services. As a result of this, last mile freight facilities where goods can be transferred from air to other modes of transport are growing in popularity to meet the demand. Airlink has the potential to accommodate this with the benefit of direct apron access.

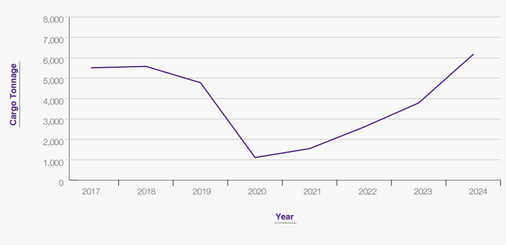
5.19 When preparing the growth forecasts as part of the Masterplan process, bespoke forecasts weren't considered for the cargo operation. The cargo industry is largely dictated by locational decisions made by cargo companies within not only the Airport environment but also the wider economic market.

5.20 Cargo volume at the Airport has fluctuated over the years. This is usually as a result of external factors in the wider economy.

5.21 The Airport handled its highest ever cargo volume in 2024. During the year, the Airport handled just over 6,000 tonnes of cargo, further establishing the Airport as one of the UK's key strategic air cargo gateways.

5.22 Globally, the market for air cargo is expected to continue to grow over the Masterplan period. Boeing conducted their most recent World Air Cargo forecast in 2022. The forecast identified that annual air cargo traffic growth is likely to rise by 4.1% through to 2041. The Report also identifies that due to this anticipated growth there will be approximately 940 production freighter deliveries by 2041.

Figure 10 – Cargo tonnage at Newcastle Airport





6. Development Plan

6.1 To meet the demands for passenger growth and achieve the economic benefits set out in the previous section over the Masterplan period, we must provide an effective infrastructure plan to accommodate such growth.

6.2 Diagrams have been provided in Appendix 1 for each of the Masterplan intervention years, highlighting when infrastructure will be provided.

The development plan takes account of infrastructure needs across the Airport estate including the following:

- Runway Length
- Runway and Taxiway Capacity
- Terminal and Apron
- Airside Ancillary
- Car Parking
- Landside Ancillary
- Freight and Employment Sites
- Onsite Renewable Energy Generation

6.3 The development plan has been informed by a background technical report undertaken by Arup, a global engineering consultancy, with support from the Airport.

Runway Length Performance

6.4 The Airport benefits from a singular runway orientated in a North East southwest arrangement. The runway is 2,329m (7,641ft) in length and 46m in width. The majority of departures (approximately 70%) are undertaken on Runway 25 (western departures). The reason behind this is that aircraft take off into the wind to achieve a higher air speed earlier into their departure. The prevailing wind direction is predominantly from the west.

6.5 Aircraft departing to the west must also take into account the area of high ground to the west of the runway (Black Callerton Hill) that must be cleared after take off.

6.6 The presence of Black Callerton Hill to the west reduces the payload (fuel, passengers and freight) that can be carried over flat terrain post take-off.

6.7 Due to the current runway length, certain aircraft may need to operate with a reduced passenger amount or factor in a fuel stop en-route to reach their destination. This may result in some routes being considered unviable or impact the financial performance of routes served.

6.8 A solution that was proposed in previous Masterplan iterations is an eastern runway extension. This runway extension was included in the previous 2018 Masterplan.

Figure 11 – Proposed runway extension

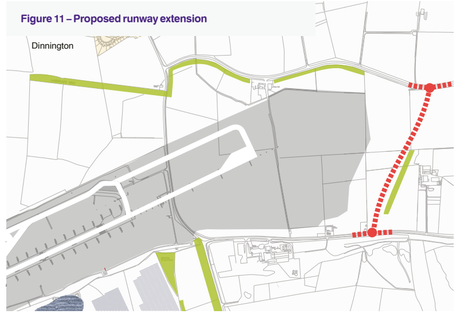


Figure 12 – Aircraft range performance on extended runway



6.9 The decision to introduce the runway extension into the previous iteration of the Masterplan, was based on a predicted rise in long haul destinations being served by the Airport. This factor is still the case in the most recent forecasts prepared as part of this Masterplan process, which have indicated there will be a rise in long haul destinations to serve both business and leisure demand in the region. On the existing runway such long haul destinations would be considered unviable as a result of the reduced passenger/baggage limit due to payload restrictions.

6.10 When considering the development of a runway extension, an extension to the east is the only achievable option. Existing highways infrastructure is located close to the end of the western runway (Metro line, A696) and an extension in this direction would not address the issues highlighted previously.

6.11 In order to assess the optimum length of a future runway extension, calculations were based on a range of aircraft that have the potential to operate from the Airport as part of the future growth forecasts.

6.12 The proposed assessments concluded that safeguarding land for a runway extension of 700m in length is considered the most appropriate option. This length ensures that existing and most future aircraft that will operate from the Airport over the Masterplan period would be able to operate with sufficient payload to ensure routes are viable. This length of extension would remove the previous limitations of the current runway length and would lead to the least impact to existing residents.

6.13 This Masterplan seeks to safeguard for a potential runway extension in 2035 when it is anticipated that demand for its installation will be met. Benefits of a runway extension include:

- A longer runway would enable aircraft to reach destinations with a full payload or larger aircraft to operate to destinations currently out of range.
- The lower levels of engine thrust required to take off from the Airport this will likely result in lower levels of noise emissions in the area around the aerodrome than current operations.
- The destination map located above highlights additional destinations which could be served through a runway extension; however it is not expected that there will be demand for all routes highlighted.



6.14 As was the case in the previous Masterplan iteration, an assumption has been made that the proposed runway extension would be implemented by 2035. The runway extension has been included on both the 2035 and 2040 key diagrams. Noise contours have also been produced to take into account the runway extension. This will ensure that local authorities are assisted by an evidence base when ensuring that future housing and noise sensitive developments are not approved in areas that could prevent the future growth of the Airport.

6.15 Whilst there are several positive benefits to the provision of a runway extension, there are a number of implications that need to be considered at the design stage.

- The land safeguarded to deliver the runway extension is not within the Airport's ownership. The Airport Company would be required to enter negotiations in order to acquire the land required to construct a runway extension.
- The development of the runway extension would result in alterations to arrivals and departures. This would mean that aircraft would operate at different heights to current levels. As a result of this, a larger area of residents may be able to observe aviation noise than currently.
- The existing Public Safety Zone would need to be amended to reflect the extended runway. This would extend towards Brunswick Village and the recently constructed Havannah Park. The Public Safety Zone would result in development restrictions to the areas covered.
- The area of land safeguarded for the runway extension lies within the Newcastle Green Belt. The development of the runway extension would still ensure that the area remains open and would restrict urban sprawl.

Runway Performance

6.16 The Airport measures the capacity of the runway to ascertain how many aircraft can operate safely from the aerodrome within a certain period. Runway capacity is measured in air traffic movements per hour. This is the number of aircraft departing and arriving at the Airport within an hour.

6.17 The current runway arrangement benefits from four runway exits and a parallel taxiway. The rapid exit taxiway allows aircraft to clear the runway efficiently and thus minimise delays. The parallel taxiway allows aircraft to taxi in a dedicated area without taxiing on the runway itself. The provision of these taxiways allows the runway to operate a high-capacity level.

6.18 The current runway capacity is 30 aircraft movements an hour, with no more than 18 departures or 18 arrivals within a one hour period. There are periods when air traffic movements are high during the early morning wave of flights and the afternoon. Despite this, the runway demonstrates significant capacity to accommodate the anticipated growth over the Masterplan period. The analysis has highlighted that there is not demand for an additional runway to be constructed. Despite this, improvements to existing infrastructure are proposed to maximise the quality of the existing airfield.

6.19 During the analysis of the existing runway/taxiway a number of locations were highlighted where improvements could be made to increase the efficiency. The western area of the runway is located adjacent to the main terminal building. Due to this location, there is often congestion in this area as aircraft pushing back from stands delay other aircraft from exiting taxiways or parking at stands.

6.20 The Airport currently benefits from a holding taxiway at the western end of the runway. This area is used for aircraft to wait until departure. It would be beneficial to extend this area, as currently the holding taxiway can only accommodate 2 narrow bodied aircraft. If more than two aircraft were to be held in the holding taxiway this would cut off access to the southern stands. By widening the holding taxiway to the west, this would allow two sets of aircraft to queue without blocking access to the southern stands.

6.21 An additional area of congestion occurs at the end of the pier. Aircraft parked at the most eastern stands on the pier block the taxiway, access to Runway 07 and access to the south of the pier when pushing back from the stands. In order to address this issue it is necessary to construct a bypass taxiway to the east. This would allow aircraft to use this taxiway when aircraft are pushing back from the pier, preventing congestion.

6.22 Airport growth forecasts indicate that there will be a rise in the number of larger aircraft operating at the Airport. Currently larger aircraft such as the Boeing 777 which Emirates operate to Dubai cannot travel up the runway and turn 360 degrees at Runway 025. As a result of this, the Dubai service must use the parallel taxiway. This limits the ability to deliver repairs on the parallel taxiway as it is required seven days per week for operational purposes.

6.23 By constructing a runway turning area at the eastern end of the runway, this could allow larger aircraft to turn 360 degrees at Runway 025.

Figure 13 – Potential taxiway widening

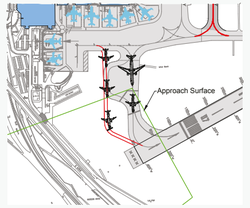


Figure 14 – Potential by-pass taxiway

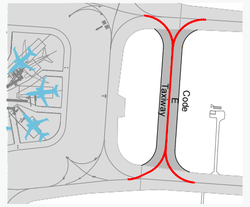
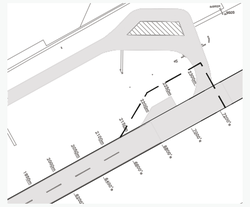


Figure 15 – Potential runway turning area





Airport Terminal Development

6.24 The majority of the passenger journey throughout the Airport occurs in the main terminal building. A range of services and functions are accommodated within the building. As passenger numbers grow throughout the Masterplan period it is essential that the terminal building can accommodate passenger growth whilst delivering a high-quality passenger journey.

6.25 The most recent extension to the terminal was completed in 2024 providing additional bar space within the departure lounge. An extension was also completed in 2019 providing extended space for the immigration area. Planning permission was approved in 2025 for a three-storey extension to the east of the building. This will provide additional space within international baggage arrivals and the departure lounge.

6.26 As part of the Masterplan process a detailed capacity assessment has taken place. This has taken into account all elements of the terminal building and assessed their capacity against the future growth forecasts. It is essential for each element of the terminal to interact effectively with one another and ensure the terminal operates within capacity.

6.27 The frequency of passenger movements through the Airport terminal is not a constant. There are periods where the terminal is busy and also quieter periods. As a result of this, the terminal often operates below capacity. By taking the growth forecasts of the Masterplan into account, the existing terminal could accommodate additional capacity if departures and arrivals are spread more evenly throughout the day. This opens up the opportunity of additional long haul services, which are likely to carry large numbers of passengers to be accommodated without placing demand on the busier periods of the day. It must be noted however that peak periods of the day (early morning and mid-afternoon departures) are most popular times to fly and as a result demand will always stay high in these periods.

6.28 As passenger numbers grow, terminal capacity will need to expand to manage additional demand over the Masterplan period.

6.29 The Airport has recently undertaken several improvement works within the main terminal building. The security search area completed a full renovation with all security scanners replaced with next generation equipment in 2023. Within the departure lounge existing bar areas have been refurbished and new bar/restaurants (Aster & Thyme, Tap & Brew) opened in 2024 providing additional space for passengers in the lounge. In 2025 full refurbishments of retail outlets and Bar 11 were undertaken.

6.30 The existing Aspire lounge has witnessed a full refurbishment and expanded lounge area. A three-tier system has been introduced offering a significant increase in capacity for lounge products at the Airport. Additional lounge capacity will be required over the Masterplan period.

6.31 Whilst significant developments have been made within the terminal recently to improve the passenger experience, a number of technological improvements could be introduced in order to increase the efficiency of the terminal within its existing footprint before a terminal extension is necessary.

6.32 Despite the wide range of possibilities to improve the existing footprint of the terminal building there are opportunities within the Masterplan period to extend the terminal to improve the efficiency and operation of the building. Any potential future extension would need to be planned closely in association with passenger demand. The existing capacity of the apron must also be taken into account.

Apron Development

6.33 The Airport apron is the location where aircraft park on stands to load and unload passengers. The Airport apron is located to the east of the terminal building and benefits from contact stands in which passengers can walk to from the Airport Pier onto aircraft. Remote stands are also available where passengers are transported to/from the aircraft via buses. There are currently 12 contact stands with a further 13 remote stands located to the north.

6.34 The apron is impacted in the same way as the terminal building by peak levels of demand. There are often periods of time when the apron is operating significantly below capacity, however, during peak periods, there is congestion around the apron. As a result of this, it is considered essential to demonstrate sufficient capacity for the highest level of demand outlined in the Masterplan growth forecasts. A further 11 aircraft stands are required to accommodate the forecast growth. At peak periods, the apron may potentially require stands to accommodate up to seven wide bodied aircraft.

6.35 Provision of additional stands at the Airport will be delivered in a phased approach in advance of the passenger demand to ensure we are well equipped for future growth. The existing pier will be extended in a north eastern direction to add additional contact stands. The development of an extended pier is more beneficial than 'remote' stands which require passengers to use buses to/from the aircraft. The delivery of an extended pier would reduce the need for bus movements and other vehicles which assist passengers with reduced mobility.

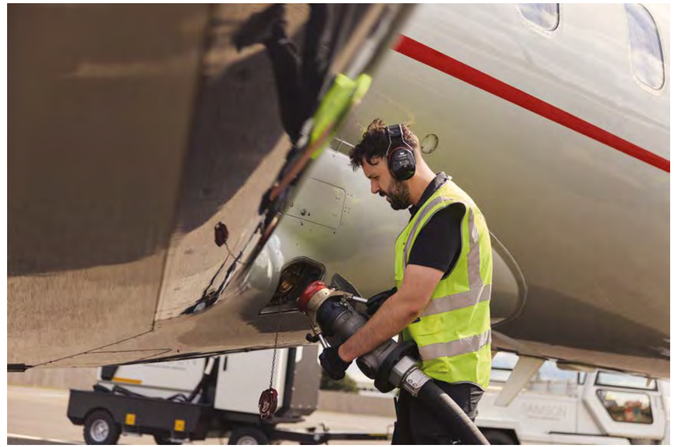
6.36 A broad area to the north and north east of the terminal has been safeguarded to accommodate an extended pier and additional apron space. There may be requirements to realign existing parking areas to separate locations within the Airport estate to accommodate growth.

Airside Ancillary

6.37 A variety of additional operations are undertaken airside that are essential to the operation of the aerodrome and are likely to grow over the Masterplan period.

Fuel Farm

6.38 The Airport Fuel Farm is located to the north of the runway. Demand for onsite fuel will grow over the Masterplan period. It is likely that an additional 2-4 tanks alongside associated infrastructure would be required. These tanks will store traditional aviation fuel and Sustainable Aviation Fuel. There is sufficient land available to accommodate such growth both to the east and west of the existing fuel farm.



Fire Station and Training Academy

6.39 The current Fire Station and Training Academy is located to the north of the runway. The facilities currently provide for Category 9 fire cover with capacity for four fire engines and associated vehicles. Category 9 fire cover refers to the specific level of rescue and fire fighting services (RFFS) provided at airports for aircraft that fall within a particular size range. This category covers aircraft with an overall length between 61 and 76 meters and a maximum fuselage width of seven meters. Over the Masterplan period, it is considered that the existing facilities will accommodate proposed growth.

6.40 The Airport benefits from an onsite Fire Training Academy. This site provides both classroom and simulated fire training facilities. The site has provided training opportunities to fire teams across the world. Due to the success of the operation, it is likely that additional classroom facilities will need to be provided to accommodate growth. There is sufficient land available to the east of the existing training academy to extend buildings onsite.

Air Traffic Operations

6.41 The air traffic control tower is located to the north of the runway and taxiways. The tower is 45m in height and was constructed in 2007. It is considered that the existing facilities will meet the demands of the Airport during the entire Masterplan period.

Aircraft Maintenance

6.42 A number of airlines currently base their aircraft maintenance and admin offices within a collection of buildings south of the runway. They are conveniently located adjacent to the main apron to allow easy access for maintenance purposes.

6.43 As passenger numbers and the number of movements at the Airport grow, there will be a requirement for additional aircraft maintenance facilities onsite. The existing buildings are of a significant age and are already close to capacity in terms of availability and space. Over the Masterplan period it is likely that some of these operations will move to the Southside as part of the AirLink development.

6 Development Plan

Vertical Take-off and Landing Aircraft

6.44 Over the Masterplan period, it is likely that the use of vertical take off and landing aircraft will begin to occur in the UK. It is likely that such aircraft will operate from Airports. Such 'air taxis' may be associated with logistics purposes or for commercial activities. As the Airport already benefits from helicopters and private aviation facilities within the Southside Development, it is considered prudent to safeguard an area within this location to allow vertical take-off/landing aircraft to operate from here in the future.

Vehicle Maintenance

6.45 The existing vehicle maintenance centre is located within the Southside Development south of the runway. This facility provides maintenance services for the majority of vehicle fleet operating at the Airport. The vehicle maintenance facility is currently located airside. As passenger numbers grow, there may be an additional infrastructure requirement for the vehicle maintenance centre. It would be beneficial for future growth of the vehicle maintenance centre to allow both air and landside access to increase the efficiency of the operation.

Landside Developments

6.46 The landside of the Airport consists of the area before security and is accessible by all visitors, passengers and staff, with restricted access in some areas. This section highlights the range of proposals set to be brought forward during the Masterplan period.

Hotels and Conference Facilities

6.47 It is important for Airports to have a wide range of hotel facilities on site. Providing high quality hotel facilities can help those making longer journeys from the extended catchment area or those preparing for early morning flights. As passenger figures grow throughout the Masterplan period, there will be a necessity to expand the existing hotel offer onsite.

6.48 The Airport benefits from a number of on-site and off-site hotels. Three hotels are within walking distance of the main terminal.

DoubleTree by Hilton
179 rooms

Britannia
99 rooms

Premier Inn Airport North
88 rooms

6.49 In addition to the above, there is a Premier Inn located adjacent to Callerton Parkway Metro Station. Further afield, a number of hotels are located adjacent to the A696/A1 roundabout that provide suitable facilities for Airport passengers.

6.50 When taking the passenger forecast into account, two hotels of a similar scale of the existing DoubleTree by Hilton would be required to be constructed during the Masterplan period. These additional hotels could be provided either on site or adjacent to the Airport site.

6.51 A number of potential locations for future hotel development are available within or in close proximity to the Airport site. As a result of this, it is not considered necessary to seek to remove land from the green belt to accommodate hotel development.

Aircraft Viewing Centre

6.52 In the recent past the Airport identified an opportunity to develop an aircraft viewing centre, to allow our community to observe and learn about operations at the Airport. Such a development could also provide educational interpretation displays about the history of aviation and the Airport, and so become a valuable community asset. The facility could also utilise new and emerging technology, such as virtual reality, to enhance the visitor experience. The development remains a possibility and we will explore options to help fund its delivery over the Masterplan period.



Car Hire

6.53 A range of car hire operators are located at the Airport. The services operated by the operators are split across the Airport estate. Car hire customer service desks are located in the main terminal building, car return and pick up facilities are located north of the main terminal building and storage and cleaning facilities are located in the Southside Development.

6.54 It is anticipated that an additional 115 car hire spaces will be required throughout the Masterplan period to accommodate for passenger growth and demand. In addition, the car hire cleaning and storage facility will also be required to expand to accommodate growth.

6.55 As demand for electric vehicle use increases over the Masterplan period, car hire operators will increase their fleet of electric vehicles. As a result of this, there will be a necessity to provide electric vehicle charging infrastructure within existing car hire facilities.



Southside Development

6.56 The Southside is a term used to describe the area to the south of the terminal and airfield. A mix of development is incorporated into this area including the Freight Village, Aviation Academy and private aviation facilities.

Private Aviation

6.57 Samson Executive Jet Centre is the dedicated business flight operator providing executive jet operations from the Airport. The facility allows customers to access private jets in a dedicated location separate from the main terminal building. The current operation benefits from a hangar and lounge area.

6.58 Due to the recent growth of operations at Samson there are constrained operations during busy hours. An area of land has been safeguarded at Southside to accommodate an extension to the existing Samson building. Land has also been safeguarded at Southside to, if necessary, fully relocate Samson to a new dedicated building.

Airline Services

6.59 The Southside Development hosts a range of businesses dedicated to providing ancillary aviation services such as cleaning and catering. These are located within both the freight village and the area immediately south of the runway. Over the Masterplan period, it is likely that such operations will grow in line with aviation growth forecasts.

6.60 Over the Masterplan period there may be demand from airlines to provide dedicated aircraft hangars on site. An appropriate area of land will be safeguarded within the southside development to accommodate a hangar with apron access.

Training Facilities

6.61 Newcastle College has based its Aviation Academy at the southside of the Airport since 2009. The Academy offers a range of aviation related courses including aeronautical engineering. The Academy offers students the opportunity to gain hands-on experience working in unique facilities such as an aircraft hangar. The current footprint of the Aviation Academy is relatively small. If future expansion is proposed over the Masterplan period, land should be safeguarded adjacent to the existing academy to the south and east.

Bonded and Freight Warehousing

6.62 The Airport freight village is currently located to the south of the runway. The current site provides a range of office and warehouse spaces for operators directly related to the Airport use. The freight village is well occupied and is suitably located adjacent to the surrounding strategic road network.

6.63 Land has been safeguarded to the west of the existing freight village for expansion of the site over the Masterplan period. The current freight village does not benefit from direct apron access. However, the development of the Airlink site will provide options for freight operators who require direct apron access.



Employment Sites

6.64 The Airport benefits from a large landholding which offers opportunities for employment development. Such sites are attractive due to being well connected not only internationally, but also locally through a strong public transport and strategic road network.

6.65 Newcastle City Council allocated four sites to the south of the Airport for employment uses (AirLink, AirView Park, and Site D). Site C has subsequently been developed as the Airport Solar Farm.

6.66 Policy KEA1 of the Newcastle Gateshead Core Strategy makes reference to these sites and supports employment related uses. The sites also benefit from Enterprise Zone status where future occupiers can access tax incentives.

AirLink

6.67 AirLink (formerly known as Site A) is a 29 hectare land allocation located to the south of the runway and directly to the east of the existing Golf Apron.

6.68 Due to the site's beneficial location adjacent to the runway, future development can benefit from direct apron access. The site is also well located in close proximity to the A696 to the west and the A1 to the east. As a result of this, the site offers potential for freight and distribution purposes.

6.69 The Airport have a preferred developer to develop the site, which will deliver a large-scale freight/warehousing development. The site would be of regional significance and would enhance the current freight operation at the Airport over the Masterplan period.

AIRLINK
Newcastle International Airport

Prospective Site Plan

6.70 A planning application will be submitted in late 2025 with phased construction beginning shortly after planning permission is secured.



Airview Park

6.71 Airview Park (formerly known as Site B) is a business park located to the south of the existing freight village. The site has been developed by Tynexe, a joint partnership between Newcastle City Council and Dysart Developments.

6.72 The site has been part developed with three offices currently constructed. The first office is currently occupied by Bellway Homes, who relocated their group office to the site in 2021. Over 150 employees are based at the national housebuilders office which has been extended since construction due to office growth.

6.73 A further phase has been constructed on site which provide a range of sizes of high-quality office space. The International Space Station (ISS) has opened within phase 2 of the development. The ISS provides a space for businesses to operate who have international links. Businesses with links in the Middle East and Pakistan are set to base on site and can take advantage of the close proximity to the Airport.

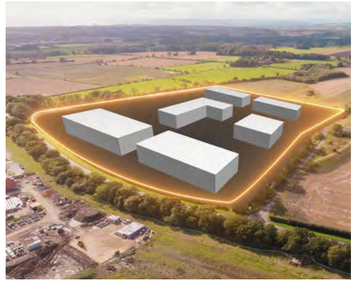
6.74 The site benefits from strong public transport connectivity due to its convenient location close to Callerton Parkway Metro Station.

6.75 Due to the success of the site, a further two phases of the site are set to be constructed over the Masterplan period. The future phases offer bespoke custom built office space opportunities for occupiers interested in the site.



Site D

6.76 Site D is a 13.1 hectare site located to the south east of the Airport estate. The site is abutted by Dinnington Road to the east. The site is in close proximity to existing and future residential development with the Great Park to the east. The Kingston Village site to the south benefits from planning permission for up to 900 homes and is set to be developed over the Masterplan period. Due to the site's beneficial location adjacent to residential development and existing road networks, the site offers a development opportunity to construct a large single occupier office scheme.



Net Zero Projects

6.77 For us to meet our ambitious target to become a Net Zero Airport by 2035 we must significantly reduce our Scope 1 and 2 emissions (emissions that we control). These emissions consist largely of heating and electricity use in the main terminal building and wider Airport site. By generating renewable forms of energy onsite, we can significantly reduce and make considerable steps towards our Net Zero target.

Airport Solar Farm

6.78 As part of the Airport's commitment to Net Zero by 2035, the Solar Farm is a centre piece for our Net Zero Ambitions. Our 3MW solar farm was constructed in 2023 and plays a crucial role in reducing our reliance on grid electricity.

6.79 Due to the beneficial location of the Solar Farm, the energy generated can transfer directly into the Airport energy supply. On a sunny day between mid-morning and afternoon over 5,000 panels are able to supply all of the Airport's electricity requirements. In 2024 alone, it produced 2,371,699 kWh of clean energy, preventing over 478 tonnes of CO_2e emissions—equivalent to the annual electricity consumption of approximately 878 average UK homes.

6.80 Several areas of woodland planting has been undertaken around the Solar Farm site to ensure the area will be screened from view in the future.

6.81 We have secured planning permission to expand our solar farm up to a maximum of 16MW. All three remaining phases of the Solar Farm are set to be constructed over the Masterplan period. Future phases of the Solar Farm will generate surplus energy



which can either be stored in batteries or exported back to the grid.

Wind Turbines

6.82 The solar farm can only generate electricity during the day. Generation is also dependent upon weather conditions. In order to ensure that we can generate electricity over a more prolonged period of time, we intend to construct wind turbines on site during the Masterplan period.

6.83 One location is currently being proposed to the north of the Airport estate, north of Prestwick Road.

6.84 A detailed safeguarding assessment has been undertaken to ensure the wind turbines will not impact the safe operation of the aerodrome. These assessments included impacts to radar equipment and air traffic operations.

Air Source Heat Pumps

6.85 In order to reduce our consumption of gas to heat the main terminal building, alternative renewable options are being considered. Air Source Heat Pump technology is being considered on the Airport site. An air source heat pump works by absorbing heat from the environment, even when temperatures are well below freezing. It extracts heat from the air around us and transfers that heat to the inside.

Electric Vehicle Charging Infrastructure

6.86 In order to help reduce Scope 3 emissions for both staff and passengers' journeys to/from the site it is essential for the Airport to provide appropriate levels of electric vehicle charging infrastructure onsite.

6.87 We are planning that the Airport owned vehicle fleet is fully electric by 2035. The Airport added 30 new EV vehicles to its fleet in 2024 alone. As our fleet electrifies over time, we have transitioned our existing diesel vehicles to be fuelled by Hydrotreated Vegetable Oil (HVO). HVO can be used as a drop-in replacement for diesel, requiring no modifications or engine retrofits. Its most significant benefit is it helps to reduce net CO2 emissions by 90% compared to diesel.

6.88 Across the Masterplan period, electric vehicle ownership is expected to increase significantly. This is partly to do with the Government's effective ban on the sale of petrol and diesel vehicles by 2030. The Airport catchment is large and many passengers make long journeys to the site. As a result, EV users may require to charge their vehicles while on holiday or before they make their return journey.

6.89 In 2025 the Airport constructed Newcastle's largest electric vehicle charging forecourt, adjacent to Callerton Parkway Metro Station. The site has been developed alongside our partners Fastned. The site consists of 12 ultra rapid electric vehicle chargers. 100% of the electricity provided by Fastned is renewable. The canopy which covers the chargers benefits from solar panels which generate electricity supplied on site.

6.90 Our business partners are also investing significantly in the rollout of electric vehicle fleets. The entire fleet of Jet2 operational vehicles are electric and Swissport are continually investing in electric vehicles as part of their fleet.



6.91 Over the Masterplan period, we will continue to invest in electric vehicle charging infrastructure with proposals to implement additional bays in long stay car parks, express parking, staff car parks and car hire areas.

6.92 As the number of bays in long stay increase, there will be a demand to deliver an additional forecourt onsite. The most optimum site for this would be adjacent to the new long term car park that is set to be implemented in 2024.

Highway Infrastructure Projects

Local Road Infrastructure Improvements

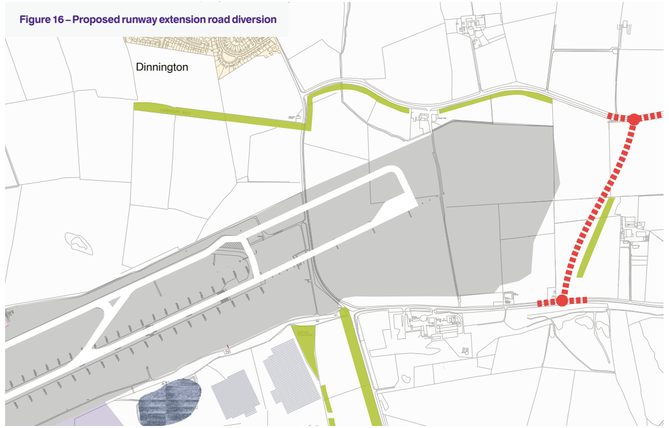
6.93 In order to facilitate the additional rise in passenger journeys to both the Airport and related infrastructure by private car, there are a number of road infrastructure improvements that could be implemented to help mitigate any potential traffic impacts. The projects will not solely benefit the Airport but also the surrounding development of industry and residential schemes in the city.

Runway Extension Road Diversion

6.94 The development of the Airport runway extension to the east would result in the loss of Dinnington Road. The road currently runs north to south along the eastern boundary of the Airport. An option has been proposed to construct a replacement road diversion to the east which would connect Sandy Lane to the north with Coach Lane to the south. Journey times would only be increased slightly.

6.95 The detailed design of the road will come into effect at the same time as the runway extension project. This will be led by Newcastle City Council who will consider impacts of noise, design and amenity.

Figure 16 – Proposed runway extension road diversion



Airport Access Roundabout

6.96 There is currently a single-entry point for vehicles accessing and exiting the terminal. The junction on the A696 also accommodates significant amounts of non-Airport related traffic.

6.97 The Airport access roundabout was assessed as part of the Masterplan to test the operational performance of the roundabout. Traffic flow data for future years has been calculated using predicted changes in passenger numbers across the Masterplan horizon years, adjusting growth upon average car occupancy. The current modal share identified in the most recent surveys was also taken into account. No future modal share changes have been considered as the analysis uses a worst-case scenario.

6.98 When calculating future traffic flows, associated trips from committed developments were considered along with traffic growth to local through traffic, and passenger growth to trips where the Airport was an origin or destination.

6.99 Upgrades are proposed to the existing Airport Access Roundabout to future proof the junction to provide additional capacity for the expansion of the Airport and growth in the area. The existing road between the Airport Access Roundabout and Internal Airport Roundabout is short in length and there is insufficient run-up to the Airport from the Access Roundabout. Land has been safeguarded to the west of the existing Airport Access roundabout to allow for a new roundabout to be constructed with a longer run in/out of the Airport. An additional slip lane could also be provided for cars accessing the Airport from the north. Any detailed design of the roundabout would be led by National Highways, the Airport and Northumberland County Council.



Prestwick Road Access

6.100 Throughout the Masterplan period, there is significant growth proposed to long stay car parking options. The provision of a separate vehicular entrance/exit to the Airport for long stay parking products has a range of benefits.

6.101 Whilst no upgrades are required to the Airport Access Roundabout with regards to capacity, the provision of a separate entrance/exit to the Airport would alleviate congestion. The internal road flow would work in a more efficient manner if long stay parking was part of a separate flow to other car parking products. This would allow those using, for example, the Express pick up and drop off product to access the site in a more efficient manner.

6.102 The additional access/egress to the site is proposed along Prestwick Road to the north of the site. A protected right turn pocket would be proposed to ensure the junction does not lead to congestion on Prestwick Road. The detailed design of the junction would be carried out by Northumberland County Council.

Car Parking

6.103 Due to the significant growth in passenger numbers over the Masterplan period, alongside the modal split of passenger journeys, there is a requirement to deliver additional car parking onsite by 2040.

6.104 The Airport currently has approximately 13,150 permanent car parking spaces. This is split between the following;

Figure 17 – Car parking provision 2025

Express	100
Long Stay	8700
Premium Meet & Greet	1800
Short Stay 1	640
Short Stay 2	620
Premium Fast Track	90
Offsite	1200
Total	13,150

6.105 Demand for car parking varies significantly over the year, but at the summer peak the Airport is already operating close to capacity. If passenger numbers grow as forecast there will be demand for around an additional 7,890 spaces across all products when considering a modal share target of 35% by the end of the Masterplan period. However, there are a number of factors to consider in relation to this:

- The development of an extended apron over the Masterplan period will result in the loss of existing parking spaces. Any spaces that are lost as a result of a potential apron extension would be replaced as part of new parking development elsewhere on the Airport estate.
- There is a requirement to provide an additional 200 parking spaces for staff spaces over the Masterplan period.

6.106 The provision of car parking across the Masterplan period will largely be in line with the increase in passenger numbers at the Airport. Car parking will only be provided as and when there is deemed efficient need to expand beyond the current levels.

6.107 The use of long-term parking options can reduce the need for additional journeys to be made to the Airport. If passengers are dropped off and picked up at both their arrival and exit from the Airport, this results in two additional journeys that are not required if passengers park their car at the Airport for the duration of the journey.



Long Term Car Park

6.108 Long term car parks form the majority of current car parking on site and, in order to meet the future 2040 car parking requirements, additional long stay parking is required. In 2025, a 1,700 space extension to the long term car park was constructed. Within the Masterplan period, it is proposed to develop a further extension to the long stay car park.

6.109 A further extension will be required by 2040. This will be located adjacent to the Air Traffic Control Tower and fuel farm. This land will be safeguarded for this future use. Due to the distance from the main Airport terminal, it is most likely that this site would be used for block parking for passengers who drop their vehicle at the concierge service.

6.110 As the long term car park facilities grow, rationalisation of the car parking layout would allow for greater circulation across the site. It is proposed to relocate the entrance to long stay parking to a new entrance on Prestwick Road. This will support circulatory flows throughout the long stay car park and ease congestion on the existing Airport roundabout.

Multi Storey Car Park

6.111 The extension of long term car parking leads to longer transfer times to the Airport. The preference for the Airport is to reduce inter-Airport journey lengths for passenger journeys. As pressure grows to accommodate car parking, more remote parking options will need to be considered for vehicles to be parked by concierge services onsite. This would not be preferable from an operational perspective.

6.112 Constructing a multi storey car park on site may allow for additional parking capacity to be available within the existing footprint of car parking.

Express Passenger Pick-up and Drop-off

6.113 The Airport's Express pick-up and drop-off facilities are located directly to the west of the main terminal building. This is accessed via the main Airport access. This facility is the most used car park. In order to accommodate growth in traffic movements, there is a requirement to extend the express parking facility. It would be beneficial to accommodate car hire, taxi areas and VIP drop off within this area to rationalise the site.

Autonomous Vehicles

6.114 Across the Masterplan period it is possible that autonomous vehicles will form part of everyday use. From an Airport perspective, autonomous vehicles could accommodate security patrols or other airport related activity. Autonomous pods can also collect passengers from long term car parks and transport them to the main terminal.

6.115 For passengers, it is expected that autonomous vehicles will operate in the same manner as existing driver operated vehicles with parking provision and other infrastructure remaining unchanged. When autonomous vehicle infrastructure is required, it is likely that this will be accommodated in the existing long term car park. The Express parking facilities will accommodate these vehicles for pick up and drop off.



7 Surface Access

7. Surface Access

7.1 Every trip to the Airport begins with a surface journey by private or public means. This could include a private car, taxi or a range of public transport options and can be taken by a passenger, staff member or someone dropping or picking someone up. It is imperative that the Airport maintains reliable, efficient and safe access to the Airport from our entire catchment.

7.2 The Airport currently benefits from one of the quickest public transport connections from an airport to a city centre in the UK with the Tyne & Wear Metro taking only 23 minutes to reach Newcastle. The Airport also benefits from dedicated bus stops, a range of parking options and car hire facilities. However, in order to accommodate Airport growth, additional journeys will be made, and infrastructure is required to support this. In addition, we wish to support a rise in the percentage of sustainable journeys made to and from the site over the Masterplan period.

7.3 The Airport is preparing the production of an updated Surface Access Strategy, which will be released in late 2025. This Strategy previously sat within the Masterplan, however, it is important that this document is published as an in-depth standalone strategy that fully addresses all surface access opportunities at the Airport.

7.4 The following points below summarise some of the key initiatives that will form part of the Surface Access Strategy published later this year.

Tyne & Wear Metro

7.5 The Airport will support the rollout of the new Metro fleet to improve reliability and efficiency and also proposed future expansions of the Metro network as part of the Leamside Line. We will continue to lobby for an early morning Metro service which will serve the first wave of passenger services at the Airport.

Desire for Rail Link

7.6 Support the delivery of reinstating infrastructure to allow for direct heavy rail services to use existing Metro lines to access the Airport from the East Coast Main Line.

Electric Vehicle Infrastructure

7.7 Deliver the largest electric vehicle charging station in Newcastle and continue to rollout electric vehicle charging throughout the Airport site for both passengers and staff.

Additional Road Access to the Airport

7.8 Deliver an additional road access to the Airport on Prestwick Road to improve circulatory road flows and ease congestion around the existing access roundabout.

Staff Green Travel

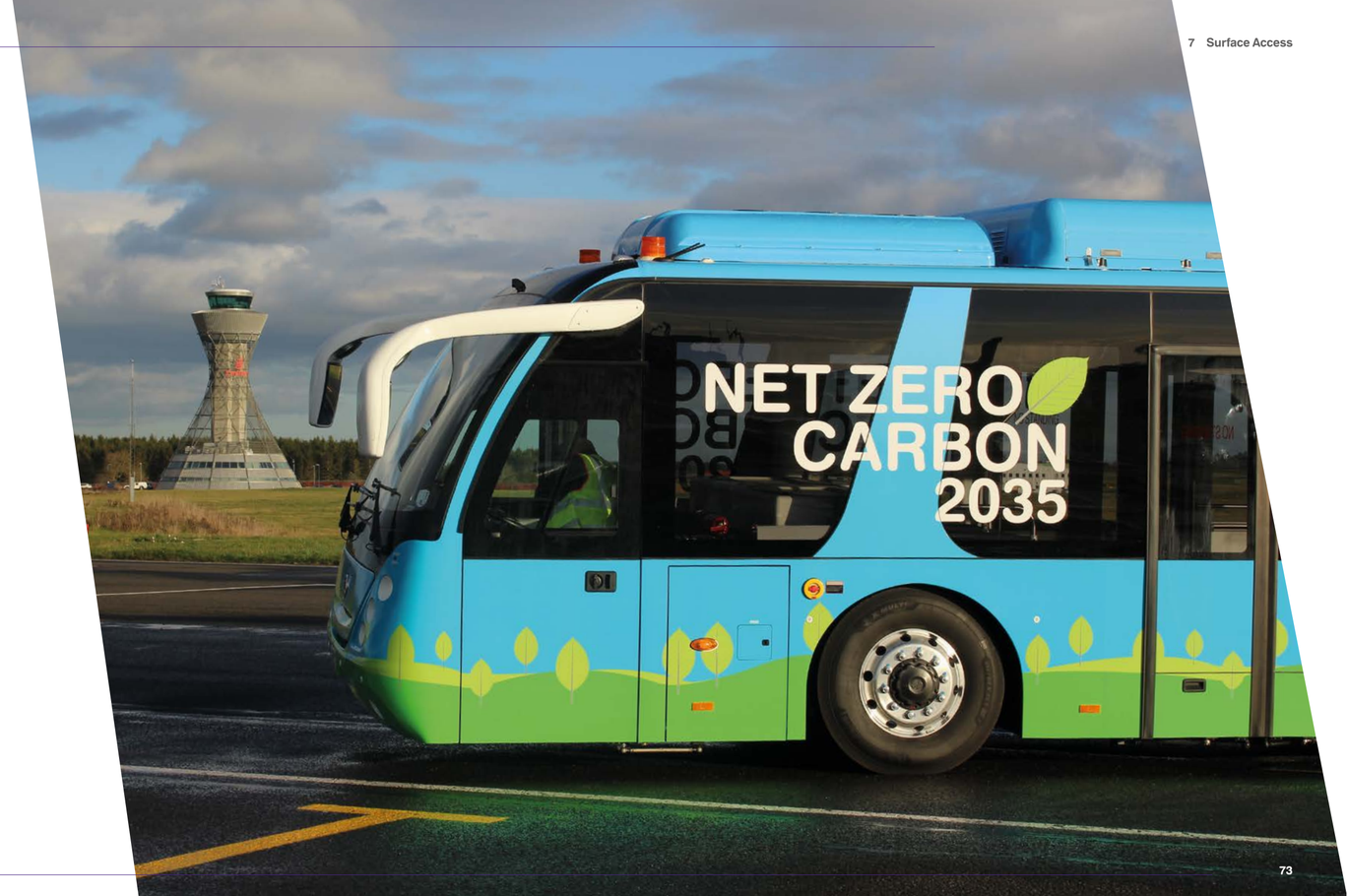
7.9 Continue to encourage staff to make sustainable journeys to work through initiatives such as cycle to work, electric car scheme, car share and corporate Metro passes.

Bus Services

7.10 Work with operators to encourage new routes for local, regional and long-distance bus services which are currently unserved to the Airport.

Integrated Ticketing

7.11 Lobby for a simpler, integrated ticketing system throughout the North East across all forms of public transport to improve the customer experience of both new visitors to the region and residents travelling to the Airport.



7 Surface Access



8. Sustainable Airport Growth

8.1 As the Airport grows over the Masterplan period, we must make conscious steps to reduce our environmental impact locally and globally. We currently have a wide range of mitigation measures across a scope of environmental factors. We are committed to enhancing existing mitigation measures and developing new initiatives to ensure the growth of the Airport is in the most sustainable manner possible.

8.2 The Airport demonstrates our commitment to sustainable management through our participation in the Global Real Estate Sustainability Benchmark (GRESB). GRESB acts as an environmental, social and governance assessment to measure the sustainability levels of infrastructure companies. Most recently, the Airport scored 100% in 2024 and was ranked second in the UK amongst participating airports.

8.3 Development proposals such as wind turbines and runway extensions would be subject to Environmental Impact Assessments at the planning application stage. This will ensure that the potential environmental consequences of the development are assessed adequately. The majority of environmental factors are heavily influenced by legislation and policy. This can be in the form of planning policy, ensuring future developments operate sustainably, or government legislation restricting impacts to a prescribed level.

8.4 The following environmental factors are considered with regards to development within the Masterplan. Mitigation measures are set out within each section to ensure the growth proposed is in a sustainable manner.

- Noise Impact
- Air Quality
- Waste Management
- Drainage and Water Quality
- Biodiversity
- Landscape Impact
- Agriculture
- Net Zero

8 Sustainable Airport Growth



Noise

8.5 Airports by their operation generate noise which may impact on individuals' health and quality of life. It is also acknowledged that everyone experiences noise in separate ways and has potential to impact some more than others. We have been committed to managing and mitigating the impacts of aviation noise throughout the past and we intend to ensure mitigation is in place to allow the Airport to grow in a sustainable manner.

Noise Action Plan

8.6 The Airport produced an updated Noise Action Plan in 2025. This document highlights our commitment to mitigating the noise impacts to communities who are affected. The Noise Action Plan sets out key proposals to address the issue of aviation noise and also maps our existing and future noise profiles through noise contour maps.

8.7 The full Noise Action Plan is available on the Airport website and provides detailed explanation of our mitigatory measures to noise.

Waste

8.8 The overarching policy governing Waste in England is the Waste Management Plan for England (2021). This policy sets out how the country will work towards a zero-waste economy. Within the policy, the waste hierarchy is promoted as a guide to sustainable waste management and a legal requirement. The Airport applies the main principles of waste management at the Airport.

8.9 The Airport generates waste across all areas of the site. The business has ultimate responsibility over waste management on site. Recycling bins are set up throughout the site and within the terminal. In addition, the main waste management areas are clearly signposted with a variety of separate bins to ensure the majority of waste can be recycled.

8.10 The total amount of waste produced onsite in 2024 totalled 1,138 tonnes. The Airport currently diverts 100% of its onsite waste from landfill and has done for the last decade. The waste is either recovered for recycling or sent to energy from waste facilities or sent for specialist hazardous waste disposal.

8.11 International Catering Waste (ICW) is waste generated from international flights (any flights outside of the United Kingdom). ICW is designated Category 1 Animal By-Product (ABP), the highest risk ABP, under the Waste Management Plan for England. Due to this designation, the waste must be incinerated or disposed of in hazardous waste landfill. The Airport is involved in an active trial alongside other UK airports and major airlines to implement segregating into Cat 1ABP and clean recyclables.

8.12 It is anticipated that the total volume of waste generated on the Airport site is set to rise by 118% over the Masterplan period. As waste grows, so too will the requirement to increase our onsite recycling rate from its current levels. The Airport currently recycles 42% of waste on-site. The following targets have been set over the Masterplan period to increase this:

- Continue to send zero waste to landfill
- Achieve 45% on-site recycling rate by 2025
- Achieve 50% on-site recycling rate by 2030
- Achieve 60% recycling rate on site by 2035
- Achieve 65% recycling rate on site by 2040.

Figure 18 – Total volume of waste generated

Year	Estimated no. passengers per annum	Waste (tonnes)	% increase on 2022 levels
2030	6,500,000	1,442.97	56
2035	7,900,000	1752.55	89
2040	9,100,000	2018.75	118





8.13 A number of additional measures are proposed in order to help to reduce recycling rates. We will consider the following actions over the Masterplan period:

- Integrate smart waste management technology. Technology can allow staff to be notified when bins reach capacity. Bins can communicate to staff and can decrease the number of bin changes per day.
- Converting ICW into energy. Innovative technology has been developed to reuse and recycle International Catering Waste. ICW is dried out and turned into biomass fuel with water recovered from dryers used to wash bins. Areas of the Airport can be fuelled by biomass in the future.
- Encourage use of reusable food and drinks containers with business partners. Containers can be collected at designated areas and reused regularly at catering outlets in the terminal.
- Incentivise recycling by weighing the different types produced by each concession in the terminal building and charging higher rates for non-recyclable waste. Leaderboards can be produced to encourage competition between concessions.

Air Quality

8.14 Due to the operation of the Airport, there is a requirement to monitor air quality levels around the Airport site and flight paths. The overarching policy is the Environment Act (2021). Within this Act there are requirements for local authorities to allocate Air Quality Management Areas and implement Air Quality Strategies.

8.15 As passenger numbers rise over the Masterplan period, so too will the number of air traffic movements and customer journeys to the Airport. As a result of this, there is the potential for air quality levels to change as a result. The Airport regularly monitor nitrogen dioxide (NO_2) levels onsite. This is due to the potential negative impacts to human health and the natural environment from exposure to NO_2.

8.16 Air quality levels are monitored by the Airport across the entire site. A total of 22 active locations are monitored for air quality through the use of diffusion tubes. The Air Quality Standards Regulations (2010) defines the policy framework for air pollutants known to have harmful effects on human health or the natural environment. With regards to NO_2 levels the annual mean air level must be below 40µg/m3 at all receptors over the Masterplan period. Since 2020, there have been no incidences of exceedance on the Airport site where NO_2 levels have exceeded the objective level.

8.17 Two Air Quality Management Areas (AQMA) are in place within the city of Newcastle (Gosforth and the City Centre). Both AQMA's are in place due to regular exceedance above the objective level. There are no AQMAs within 2km of the Airport site.

8.18 As part of the Masterplan process, analysis has been undertaken of air quality to understand the potential changes by 2040. Future aircraft movements and road traffic modelling has been taken into account to understand future air quality levels.

Road Traffic

8.19 Road traffic journeys to and from the Airport are likely to rise over the Masterplan period. As a result of this, air quality analysis has been undertaken at key road traffic nodes in and out of the site. The analysis has identified that annual mean NO_2 concentrations are predicted to be well below the annual mean objective throughout the Masterplan period. The rise in electric vehicle ownership is also likely to result in an improvement in air quality in these areas. As a result, it is considered that the impact of additional road traffic during the Masterplan period is likely to have a negligible impact on air quality.

Air Traffic

8.20 The increase in aircraft movements will likely impact air quality levels around the site. The analysis has identified that NO_2 emissions are likely to rise by 67% by 2040 compared with the baseline level of 2022. This is in line with the increase in both air traffic movements and passengers. It should be noted that aircraft technology will improve over the Masterplan period. These improvements are likely to improve emissions and fuel consumption and will likely mitigate and reduce the modelled rise in emissions. There is also likely to be a rise in long haul passenger journeys with more passengers travelling on fewer aircraft. As a result, it is likely that there will be a decrease in the tonnes of NOx per passenger by the end of the Masterplan period.

8.21 We will also continue to monitor air quality across the Airport site and intend to expand our monitoring sites to cover both neighbouring villages and settlements potentially sensitive to pollution.

Water and Drainage

8.22 Due to the scale of the Airport site and existing development, it is essential that a holistic drainage system is in place to ensure foul and surface water is discharged effectively from the site. In 2016, Arup delivered a Drainage Study of the site. This included a review of existing drainage systems through a variety of onsite surveys.

8.23 Upon completion of the drainage survey, a hydraulic model was designed for the site. This model is used to assess the impact of new development on the Airport site. The development proposals set out in the Masterplan have been assessed against this model to understand the potential drainage implications.

8.24 The existing drainage system benefits from a dedicated polluted water system that manages surface water onsite. The run-off is stored in lagoons to the north and south of the airfield. Each lagoon is fitted with a Total Organic Carbon (TOC) Monitor. This monitor analyses the quality of water within the lagoons and can hold or release water depending on its quality.

8.25 If the water quality is deemed clean, South Lagoon water is released into either the River Tyne via Sunniside Drain or the Ouseburn to the south of the airfield. North Lagoon water is released into the River Pont north of the airfield via the Hawthorn drain.

8.26 Any releases into existing watercourses are subject to a consent issued by the Environment Agency. This consent requires water quality to be of a sufficient standard otherwise water is released into the foul sewer. The Airport is limited to a specific volume of discharge into both the foul sewer and neighbouring watercourses. This is set out in the Discharge Permits issued by the Environment Agency. Discharge consents are also issued by Northumbrian Water through the Water Industry Act 1991.

8.27 The developments proposed in the Masterplan have been assessed against the hydraulic model of the Airport. Certain development proposals such as apron extension, terminal extension and employment sites are likely to increase hardstanding and surface water levels. As a result of this, improvements will need to be made to existing drainage systems over the Masterplan period in order to accommodate additional onsite water treatment.

8.28 Land has been safeguarded adjacent to existing lagoons in order to accommodate extensions over the Masterplan period. In addition, future planning applications for development will likely accommodate sustainable urban drainage systems as part of the development.

8 Sustainable Airport Growth

8.29 The potential impacts of climate change have been taken into account when assessing drainage flow rates. Over the Masterplan period it is considered likely that significant rainfall events will occur more frequently. As a result, the hydraulic model compensates for an increase in rainfall.

8.30 The development proposals brought forward over the Masterplan are also likely to increase the amount of foul water discharged into Northumbrian Water's network. As a result of this, additional capacity will be required to deliver pumping infrastructure and sewer capacity.

Energy & Net Zero

8.31 The Airport has set an ambitious target to become a Net Zero carbon airport by 2035.

8.32 In order to achieve this goal, we set out our Net Zero Strategy in 2021 which calculated the current carbon footprint of the Airport and identified measures to both reduce and offset carbon emissions in order to reach this goal.

8.33 The strategy outlines our current carbon footprint under three categories:

8.34 Scope 1 emissions – These emissions are from sources that we own or control directly.

Scope 2 emissions – These emissions are caused indirectly and come from where the energy we purchase and use is produced.

Scope 3 emissions – These emissions are not produced by the Airport directly but we are indirectly responsible for as a result of our operation.

8.35 As can be seen in the table below, carbon emissions are spread across each category. The Airport has limited control over our Scope 3 emissions. As a result of this, only Scope 1 & 2 emissions will be taken into account when calculating our goal to reach Net Zero. This means that we will not generate any carbon from energy used to run the ground-based infrastructure within our direct control, such as vehicles for passengers, terminal operations and the general running of buildings.

Figure 19 – Current carbon footprint

Scope 1 and 2
Emissions that the Airport controls:

Activity	tCO2e*
Heating and Fuel Use	2,049
Electricity	3,662

Scope 3
Emissions that the Airport has the most influence over:

Activity	tCO2e*
Staff Commuting	464
Passenger Surface Transport Access	21,723
Sold Fuels	1,279
Waste Processing	31

Scope 3
Emissions that the Airport has limited influence over:

Activity	tCO2e*
Aircraft Landing and Take-off (LTO) Cycle Up to 3,000ft	51,685

*Tonnes of carbon dioxide equivalent

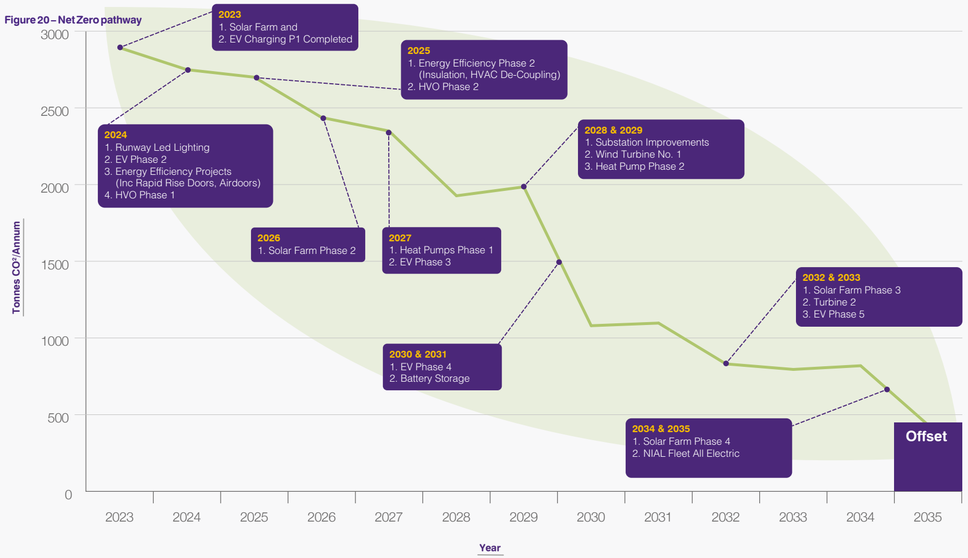
8.36 Whilst our Scope 3 emissions are not calculated as part of our Net Zero ambitions, the Airport has set a goal to be carbon neutral for passenger journeys to and from the Airport by 2035. Further details of this will be set out in the Surface Access Strategy to be released at the end of 2025.

8.37 We have limited control over the emissions created by aircraft landing and taking off at the Airport. However, these emissions account for a significant amount of our Scope 3 emissions and we must take action to reduce our carbon emissions from flights. We will continue to work with our airlines to use the latest, most efficient aircraft.

Net Zero Pathway

8.38 In order to achieve our goal, the Net Zero Strategy identified seven key initiatives to be undertaken by 2035.

Figure 20 – Net Zero pathway



Energy efficiency improvements

Retrofitting existing buildings and including programmes in new development.

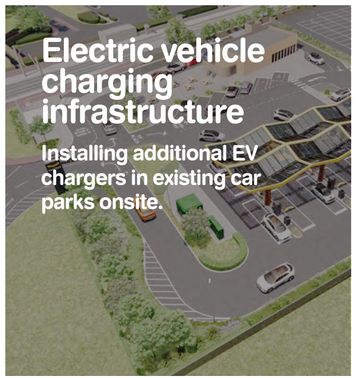


Tree planting

Undertaking significant tree planting both onsite and exploring offsite opportunities.

Solar energy generation

Investing in onsite renewable energy generation.



Electric vehicle charging infrastructure

Installing additional EV chargers in existing car parks onsite.

Green energy contracts

Procuring our existing energy demands through green energy to reduce our Scope 1 & 2 emissions.



Public transport access

Improving the availability of sustainable transport options to the Airport.

Zero carbon heating

Investigating potential heat generation options for the terminal building including air source heat pumps/mine water heat pump.

Airport Carbon Accreditation

8.39 The Airport Carbon Accreditation (ACA) is an institutionally endorsed, global carbon management certification programme for airports. The Airport has been a member of the scheme since 2022. There are currently seven levels of certification. The Airport is currently ACA Level 4 'Reduction'. Over the Masterplan period, we will continue to reduce our carbon footprint, benefit from increased efficiency through lowered energy consumption, share expertise and communicate results. We will continue to work towards the highest level of carbon accreditation available.

Global Real Estate Sustainability Benchmark (GRESB)

8.40 The Global Real Estate Sustainability Benchmark (GRESB) is the global ESG benchmark for financial markets. GRESB provides a rigorous methodology and framework to measure the ESG performance of individual assets and portfolios based on self-reported data. The Airport has been a part of the scheme since 2017.

8.41 We are proud to have achieved the highest score achievable of 100% for GRESB in 2024, an improvement on the 99% achieved in 2023.

8.42 This score was calculated from:

Management & Policy Evaluation of the governance, risk management, and policies of an organisation related to sustainability.

Implementation & Measurement A focus on the actual implementation of sustainable strategies, including the measurements such as energy consumption, carbon emissions and waste management.

Performance Indicators Includes environmental and social performance metrics such as energy efficiency, Greenhouse Gas emissions and health & safety data.

8.43 Over the Masterplan period, the Airport will strive to maintain our 100% GRESB rating and operate as the most sustainable Airport in the UK.

Climate Change

8.44 The Airport is conscious that future development proposals set out in the Masterplan have the potential to impact upon climate change. A range of factors during the development stage have the potential to accelerate the impacts of climate change such as:

- Material incorporated into development
- Transportation of materials and waste during construction
- Emissions from construction
- Energy use of buildings once constructed
- Operation transport impacts arising from the site.

8.45 We have considered a variety of mitigation measures to reduce the impact of future construction and operation of future development at the Airport. Future developers will be encouraged to undertake the following:

- Achieve BREEAM 'Excellent' on new developments and use this as a minimum standard for the future
- The use of green technology is adopted wherever we can in both new developments and existing investments – this includes district heating schemes, PV roof panels, air source heat pumps, EV charging points, low carbon materials and battery storage
- Ensure building materials are sourced locally
- Ensure future buildings are constructed to high sustainability and energy efficient levels.



8 Sustainable Airport Growth

Biodiversity

8.46 The Airport will ensure that future development does not have a detrimental impact on the existing biodiversity onsite.

8.47 It is mandatory within English planning regulations to deliver 10% biodiversity net gain as part of development proposals. This means that whatever habitats are lost during the development process must be replaced plus an additional 10 percent. This will ensure that a range of habitat improvements will occur onsite as a result of future Masterplan development at the Airport.

8.48 The fenced 'operational area' of the airfield is considered low in ecological value. This is in order to ensure that birds are not attracted to this area of the site and increase the risk of birdstrike. However, the wider Airport estate contains a wide range of habitats including mature woodland, hedgerows, fen, scrubland and peatland.

8.49 In terms of legislation, the overarching policy for biodiversity is the Environment Act (2021). This sets out clear statutory targets for nature recovery including biodiversity. This Act sets out the fundamental principles of Biodiversity Net Gain.

8.50 There are a number of protected habitats in close proximity to the Airport. There are three Sites of Special Scientific Importance in the local area (Big Waters, Brenkley Meadows and Prestwick Carr). These sites are considered of national importance for flora and fauna. There are a number of other sites which have been highlighted of local conservation interest (Sunniside Pond, Dinnington Road Fen, Havannah Nature Reserve, Moorey Spot Pond, Woolsington Hall, and Foxcover Wood).

8.51 A baseline habitat survey of the entire Airport site was undertaken in 2023. The survey graded the quality of habitats across the Airport site. The baseline survey also identified the presence of badgers and bat species on site. A number of protected birds were also present such as Curlew, Oystercatcher and Northern Lapwing.

8.52 Any proposals that are brought forward during the Masterplan period will take account of existing habitats and seek to introduce mitigation measures to ensure existing habits are retained or new habitats created.



Woodland Planting

8.53 As part of the Airport's Net Zero 2035 ambitions, since 2022 the Airport has been engaging in a woodland planting project across site. Over 15 hectares of woodland creation has occurred on sites to both the north and south of the airfield. The following projects have been undertaken to date.

- **Woodland Planting Phase 1** In 2022, five hectares of woodland was planted in areas surrounding the solar farm in previous arable farmland to the south of the Airport site. The woodland will act as a visual buffer in future years to mitigate the landscape impacts of the solar farm.
- **Hedgerow Planting Project** In 2023, 4.5 hectares of new hedgerow habitats were created throughout the site. This included the creation of new hedgerows and gapping up existing hedgerows.
- **Woodland Planting Phase 2** In 2024 the Airport completed our largest habitat creation project. Over ten hectares (17,000 trees) of woodland was created in previous farmland to the north of the Airport and Prestwick road.

8.54 The woodland planting at the Airport has been delivered as part of the North East Community Forest, an initiative to increase tree cover in the North East. By planting trees on site, we are helping to offset carbon emissions and enhance a green canopy across the region.

8.55 Over the Masterplan period, additional areas of woodland planting are set to be developed on offsite locations in order to continue to offset carbon emissions and increase the size of the North East Community Forest.

8 Sustainable Airport Growth



Abbotswood

8.56 The Airport owns an area of land to the east of Airview Park known as Abbotswood. This area is used by the local community for recreation purposes. In 2022 the Airport, alongside Woolsington Parish Council, set out a range of enhancements to the area as part of the Abbotswood Management Plan. Some elements of the plan have been undertaken over the past two years with the support of the North East Community Forest. The following biodiversity improvements have been undertaken so far:

- Installation of bird boxes and bat boxes throughout the site
- Installation of three new benches
- Planted 500 bulbs
- Planted six trees
- Innovative grass cutting methods to ensure increase in grassland habitats
- Planted 200 sapling trees.

8.57 Over the Masterplan period, further improvements are proposed at Abbotswood including further tree planting and wildflower planting alongside new information boards.

Agricultural Land

8.58 A large area of the Airport estate is currently arable farmland. This area is in the ownership of the Airport with tenant farmers cultivating the land. The majority of the land within the Airport's ownership (and the wider area) is Grade 3 quality according to the government Agricultural Land Classification Map.

8.59 In order to bring developments proposed in the Masterplan forward, there will likely be loss to existing farmland. This may be down to the land itself being required for development or as an offsetting area to deliver biodiversity net gain as part of planning applications. We will ensure that the best quality agricultural land is retained for agricultural purposes when bringing new development forward.

Landscape

8.60 The Airport undertook a period of tree planting in the early 1990's. This resulted in the creation of a number of mature planting areas to the north and west of the Airport estate. These areas act as further visual buffers to mitigate the potential landscape impacts of the airport development and car park areas.

8.61 There are development proposals within the Masterplan that are likely to be visual when considered from a landscape level. The development of multi-storey car parking and potential wind turbine developments will be assessed at a landscape level during any future planning application process. We will ensure that relevant mitigation measures are proposed to ensure future developments have as minimum an impact on the wider landscape as possible.

8.62 Some developments within the Masterplan are likely to impact on existing footpaths, cycleways and Public Rights of Way. The runway extension will likely require redirecting all of the above as part of the proposals. Any such routes will be redirected appropriately to ensure no unnecessary diversions are created as a result of future development.

8.63 Apart from the potential runway extension and wind turbines, no other development in the Masterplan period falls within the Newcastle Green Belt.

Figure 21 – Proposed mitigatory measures to prevent impacts to wider landscape

Year	Development	Potential Effects	Mitigation
2030	Apron extension	• Loss of vegetation • Introduction of new hardstanding • Visibility of aircrafts over an extended area/ changes to views	• Consider tree planting to the north to help screen views from sensitive visual receptors such as Public Rights of Way and nearby residential properties.
2030 and 2035	New Pier	• Introduction of new built form • Increased visibility/changes to views	• Consider tree planting to the north to help screen views from sensitive visual receptors such as Public Rights of Way and nearby residential properties.
2025 onwards	Car park extension	• Loss of woodland, trees and hedgerows and areas of open grassland • Introduction of new surface level car parking • Localised change in landscape character	• Retain existing vegetation, especially mature trees where possible. • Extending woodland belt by planting native species of local provenance. Where possible to be implemented as advance works. • Sensitive use of lighting while not compromising safety.
2030 –2040	Runway extension	• Loss of woodland, trees and hedgerows • Introduction of hardstanding • Change in landscape character • Changes to Public Rights of Way	• Retain existing vegetation, especially mature trees, where possible. • Improvements to existing hedgerows and additional tree planting. Use native species of local provenance where possible. • Apply for redirection of Public Right of Way. • Sensitive use of lighting while not compromising safety.

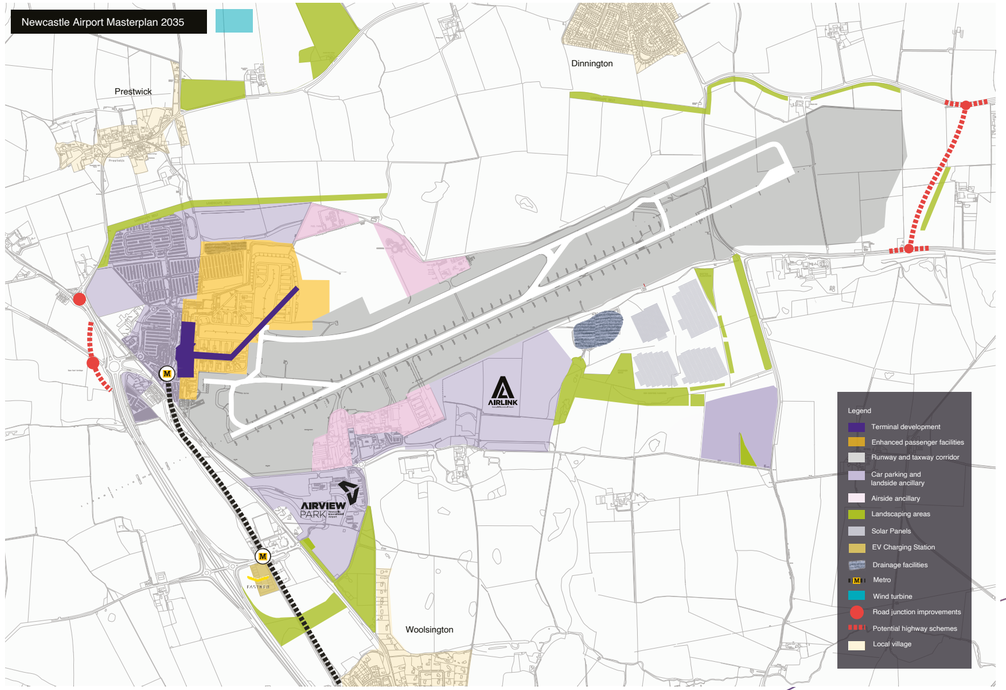
The table above highlights the proposed mitigatory measures over the Masterplan period to prevent impacts to the wider landscape.

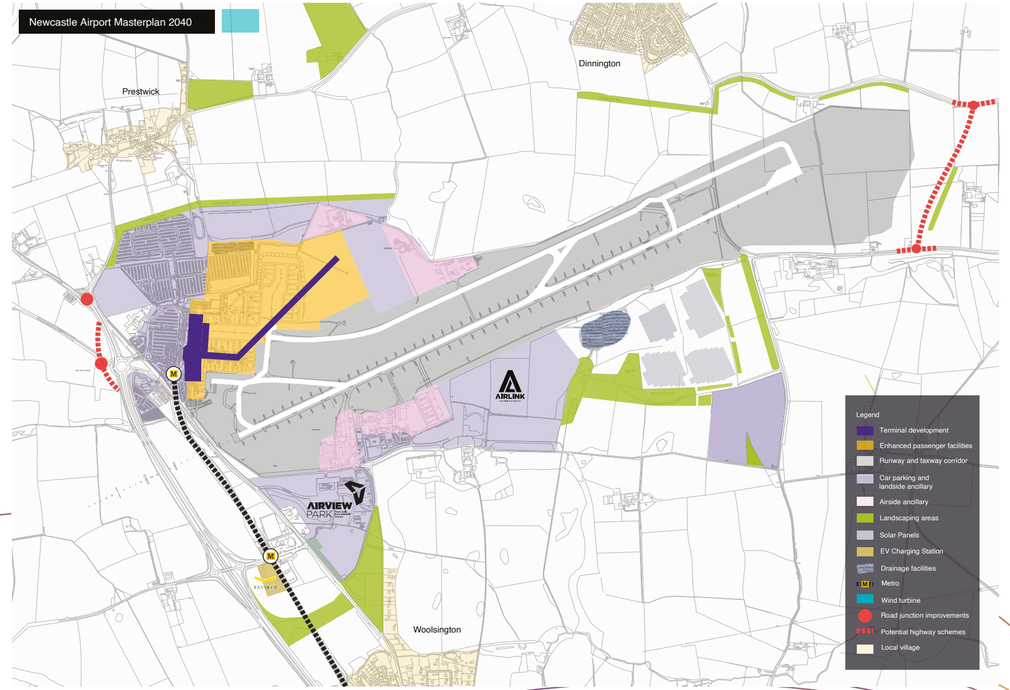
Appendices
Key diagrams





Appendices
Key diagrams





Appendices
Glossary of terms

Airside
The area of the airport beyond security, accessible only to authorised airport staff and visitors, and passengers holding valid boarding cards for imminent travel.

ANCON II
A mathematical model used by the CAA to produce the annual dBLAeq 16hr and dBLAeq 8hr noise exposure contours forecasts related to projected future airport operations.

ANIS (Aircraft Noise Index Study)
DfT study into the effects aircraft noise, which defined a relationship between aircraft noise exposure and the proportion of the population that would be expected to be 'highly annoyed'. The study found LAeq as the most appropriate metric to measure noise. It defined 57 LAeq16h as the approximate onset of significant community annoyance.

ATM (Air Traffic Movement)
Any aircraft take-off or landing at an airport. For airport traffic purposes one arrival and one departure are counted as two movements.

APD (Air Passenger Duty)
An excise duty which is charged on the carriage of passengers flying from a United Kingdom airport on an aircraft that has an authorised take-off weight of more than ten tonnes or more than twenty seats for passengers.

Apron
The area of the airport where aircraft are parked, unloaded or loaded, refueled, or boarded, as distinct from the runway and taxiways.

Aviation Policy Framework
The government's current overarching policy document for the aviation industry.

AOA
Airport Operators Association. The industry body representing the interest of UK airports.

APU (Auxillary Power Unit)
A small engine which produces power for an aircraft when it is on the ground and the main engines are turned off.

BREEAM (Building Research Establishment Environmental Assessment Method)
A method of assessing, rating, and certifying the sustainability of buildings, used globally.

Callerton link road
The road linking B6918 with the A696.

CAA (Civil Aviation Authority)
Regulatory authority for aviation in the UK, creating and enforcing rules and regulations for aircraft, airports and airlines.

CDA (Continuous Decent Approach)
Method by which aircraft approach airports prior to landing. It is designed to reduce fuel consumption and noise compared to other conventional descents. Instead of approaching an airport in a stairstep fashion, throttling down and requesting permission to descend to each new (lower) altitude, CDA allows for a smooth, constant-angle descent to landing.

FDI (Foreign Direct Investment)
Investment made by a company or individual in one country, in business interests in another country.

FEGP (Fixed Electrical Ground Power)
Fixed electrical supply system to allow the aircraft to get electricity straight from the local grid when it is on the ground and the main engines are turned off.

Freight Village
A cluster of buildings at the southside of the airport site, used by airport-related businesses such as cargo operators and car hire companies.

Green Belt
An area of open land around a city, on which building is restricted.

GRESB (Global Real Estate Sustainability Benchmark)
Assesses the sustainability performance of real estate and infrastructure portfolios and assets worldwide, allowing for benchmarking against other airports.

GVA (Gross Value Added)
Measure of the value of goods and services produced in an area, industry or sector of an economy.

Hub Airport
Used by multiple airlines to concentrate passenger traffic and flight operations at a given airport. They serve as transfer points to get passengers to their final destination.

IATA (International Air Transport Association)
A trade association for airlines, it supports many areas of aviation activity and helps formulate industry policy on critical aviation issues.

ICAO (International Civil Aviation Organisation)
A specialised agency of the United Nations fostering the planning and development of international air transport to ensure safe and orderly growth.

LA7
The holding company comprising the majority 51% shareholder of the airport, the seven North East local authorities – South Tyneside, Newcastle, Sunderland, Gateshead, Northumberland, Durham and North Tyneside.

Landside
The area of the airport before security, accessible by all visitors, but with restricted access in many areas.

LEP (Local Enterprise Partnership)
Locally-owned partnerships between local authorities and businesses. They play a central role in deciding local economic priorities and undertaking activities to drive economic growth and create local jobs.

LOEL (Lowest Observed Effect Level)
Noise level above which adverse effects on health and quality of life can be detected.

Modal Share
The portion of people using a particular type of transport.

Net Zero
A target of completely negating the amount of greenhouse gases produced by human activity, to be achieved by reducing emissions and implementing methods of absorbing carbon dioxide from the atmosphere.

NIAL
Newcastle International Airport Limited.

NOAL (No Observed Effect Level)
Noise level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.

Noise Exposure Contours
A noise contour is a line on a map that represents equal levels of noise exposure.

Noise Action Plan
The Noise Action Plan sets out a five year noise management programme for the Airport. The plan was produced in 2009 to comply with the Environmental Noise Directive 2002/49/EC.

Non-Commercial Aviation
All civil aviation operations other than scheduled air services and non-scheduled air transport operations, remuneration or hire, gliders, corporate jets, emergency services.

NOx
The gases nitric oxide and nitrogen dioxide that are produced when fuel is burned and can be harmful to the environment and human health.

NO_2
Nitrogen Dioxide, a gaseous air pollutant from the exhaust of internal combustion engines.

NPPF
A document which sets out the government's requirements for the planning system in England.

Parallel Taxiway
A pathway adjacent to the runway for aircraft to travel to the runway from the apron area.

PBN (Performance Based Navigation)
A flight route system allowing more flexible positioning of routes and enables aircraft to fly them more accurately. This helps improve operational performance in terms of safety and capacity, and also offers the flexibility to attempt to design routes to mitigate the environmental impact of aviation. It allows for greater concentration of aircraft on route centrelines.

PDRs (Preferential Departure Routes)
Published routes for the airport, designed to avoid residential areas.

Pier
The narrow structure extending from the main terminal building around which aircraft are parked.

PM10
Particulate matter, microscopic solid or liquid matter suspended in Earth's atmosphere which are ten micrometers or less.

Public Safety Zone
Areas of land at the end of runways where certain planning restrictions apply, which aim to control the number of people on the ground at risk in the unlikely event of an aircraft accident on take-off or landing.

RESA (Runway End Safety Area)
An area of land required to be kept free of most development for safety reasons, in the event of an aircraft undershoot, overshoot or runway excursion.

Runway 25
Western runway orientation, dependent on meteorological conditions (aircraft departing to the west and arriving from the east).

Runway 07
Eastern runway orientation, dependent on meteorological conditions (aircraft departing to the east and arriving from the west).

SOAEL (Significant Observed Adverse Effect Level)
Noise level above which significant adverse effects on health and quality of life occur.

Southside
The southside is a term used to describe the area to the south and east of the terminal and airfield. This area hosts the Freight Village, Newcastle College's Aviation Academy, Samson Aviation, several flying schools and other aspects of airport operations.

Southside Employment Development
Land to the south of the Airport site allocated for the development of office, light industrial, and/or fright and warehousing facilities.

SSSI (Site of Special Scientific Interest)
A site designated by Natural England as an area of special interest by reason of any of its flora, fauna, geological or physiographical features.

SUD (Sustainable Urban Drainage)
System to reduce the potential impact of new and existing developments with respect to surface water drainage discharges, they transport (convey) surface water, slow runoff down (attenuate) before it enters watercourses, by providing areas to store water in natural and man-made contours.

tCO2e
Tonnes of carbon dioxide emitted.

Terminal
The main terminal building to the western end of the airport land. All commercial passengers pass through the terminal to use the airport.

World Heritage Site
A landmark or area which is selected by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as having cultural, historical, scientific or other form of significance, and is legally protected by international treaties.



