masterplan 2030

Newcastle International
Your Airport

Newcastle International Airport
Masterplan 2013-2030

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i Foreword

For more than 75 years, Newcastle International has grown and evolved, shaping itself into one of the UK's key regional airports. From a grass airstrip and terminal building in 1935, today the airport serves 75 destinations, enabling business to flourish, loved ones to be connected and trips of a lifetime to be enjoyed.

Newcastle International is the North East's major airport and we are very proud of this role. The airport contributes significantly to the local economy, providing over 3, 200 jobs on site and many more across the region. These and other benefits account for the airport's contribution of over £640 million to the regional economy each year.

In developing the airport, the customer is at the heart of our decision making. We want to provide exciting new routes, quick and easy check-in and security processes, and first class terminal facilities, ensuring that Newcastle is **Your Airport** of choice. This ethos, along with the Big Six, our Customer Service Principles, has helped us to win the Airport Operators Association 'Best Airport under 6 million, passengers' award in the years 2009, 2010, 2011 and 2012, as well as being voted the UK's best large airport by readers of Which? Magazine in 2013.

We want to build on our successes and continue to grow the airport sustainably, mindful of our commitment to protecting the environment and the amenity of surrounding communities.

Our aim is to grow passenger numbers to 8.5 million by 2030. For this to happen, we need new infrastructure to accommodate more passengers, larger aircraft and additional staff. In providing new infrastructure we must be mindful of our environmental impact.

To mitigate the impact of the airport's growth, we are investing in new technology to build on our existing capabilities, ensuring that we continue to monitor noise effectively, so our operations don't unduly disturb our neighbours.

We will continue to work with airlines and business partners to ensure that we can manage carbon emissions and noise, by introducing newer technology to the fleet of aircraft operating at the airport. We also want to continue to reduce the carbon footprint on our site, retrofitting energy efficient solutions to our existing buildings and building new facilities which have carbon efficiencies at their heart.

Following consultation with our neighbours and stakeholders across the region we have now officially adopted this masterplan as our blueprint for the future of Newcastle International Airport. We hope you will be proud of it - I know we are.

David Laws
Chief Executive

ii Executive Summary

In order to grow the airport, we have put together a blueprint for sustainable development.

This masterplan is the third document produced by the Airport Company. The first masterplan covered a period 1994-2006, and the second 2003-2016. This new plan replaces the previous versions and seeks to provide an overview of possible development through to 2030.

1 Overview of Newcastle International Airport

Established in 1935, Newcastle International is the North East's largest airport:

- Accommodated 4.4 million passengers in 2012.
- 11th busiest airport in the UK.
- 3,200 people employed on site, and 900 off-site.
- Overall contribution to the regional economy is £646 million annually

Set within 374 hectares of land, the airport comprises a single runway operating both eastern and western arrivals and departures. In addition there are aircraft taxiways, apron and stands, a terminal building and pier, approximately 7,500 parking spaces, bus and metro stations, three hotels, a petrol filling station and car hire facilities.

To the east of the terminal building lie the fuel farm, air traffic control tower, fire station and fire training facility. To the south lie aircraft hangars, freight, warehouses, and aircraft services provision, such as inflight catering and cleaning, a training facility run by Newcastle College, and private and business aviation facilities.

2 Policy and legislation

The airport operates within a regulated environment. Our activities are subject to legislative and policy requirements at an international, national and local level. We are guided by aviation, planning, environment and economic frameworks all of which influence the development and growth of the airport.

3 Forecasts

- Passenger numbers will grow from 4.4 million in 2012 to up to 8.5 million by 2030.
- Aircraft movements will grow from 62,200 in 2012 to up to 87,500 by 2030.

4 Development

Throughout the masterplan period, in order to accommodate the expected levels of growth outlined within the forecasts, a number of improvements will be required across the site.

By 2021 we expect:

- Realignment of existing internal roadways to increase capacity and circulation as well as some additional long stay car parking.
- Additional apron, to create extra aircraft parking stands.
- Construction of offices and warehouses at the Southside Development.

By 2030 we expect:

- Measures to improve the capacity of the runway, such as taxiways and turning points, but no requirement for a runway extension or second runway.
- Extensions to the terminal and possible pier and/or satellite pier development.
- Additional long stay car parks along with a possible multi-storey short stay car park to the front of the terminal.
- Further apron development to accommodate additional aircraft parking.
- Completion of the Southside Development.
- Road junction and infrastructure improvements.

5 Economic impact

The airport will continue to contribute significantly to the regional economy in terms of connectivity, but also in terms of jobs and GVA (Gross Value Added).

- By the end of the plan period, the airport will support up to 10,000 jobs across the region with a potential additional 2,150 as a result of the Southside Development area.
- We anticipate the airport will contribute £1.3 billion to the regional economy by 2030.

6 Surface access

Newcastle Airport is a critical component of the transport infrastructure of the North East. Our long term surface access strategy is currently under review, with a more detailed document likely to be published in due course. The following provides an overview of surface access priorities:

By 2030:

- We will seek to further increase sustainable transport usage to 30% and to grow staff sustainable travel to 25%.
- We anticipate daily vehicular movements to increase from around 9,000 currently to 16,250. In addition, the development of south side sites A and B would generate 5,000 daily movements.
- The number of car parking spaces will need to be increased from 7,500 currently to 16,000 and reconfigured in order to create capacity on site.
- In addition to the provision of additional car parking we will seek to influence improvements to public transport through additional bus services, the on-going Metro reinvigoration programme and other measures.

7 Environment

Our objective is to grow the airport sustainably, providing long term environmental improvements to protect our community and natural resources.

We will work to improve the following aspects of our operations:

- Reducing our carbon footprint by 25% across the plan period in line with our Energy Policy.
- Continue to work to mitigate airport related noise through improved procedures and the implementation of a new noise and track keeping system.
- Eliminating the use of all landfill waste sites and ensuring that 100% of all the waste we generate is recycled by the end of the plan period.
- Further investing in new infrastructure to improve the quality of surface water leaving our site.
- Managing the impact of our operations on local air quality.
- Working with the community and other groups to improve the wildlife and recreational value of land on the fringes of the site, balanced alongside the need to maintain safety and security.

8 Consultation

In preparing this document we undertook a period of consultation, receiving contributions from a wide variety of stakeholders, local residents and passengers which informed the adopted plan.

1.0 Overview of Newcastle International Airport

Since its opening in 1935, Newcastle International Airport has been facilitating travel to and from the North East of England and beyond. We are one of the UK's main airports and our region's largest, and air travel is becoming a significant mode of choice for the North East travelling population.

We want to build on the airport's successes, so our ambition is to continue to grow in all sectors, including domestic and international scheduled services, charter services, low cost and freight operations.

The airport serves a catchment area with a 3.7 million population, including the whole of the North East and stretching from the Scottish Borders, across to Cumbria and down to North Yorkshire. We hope to stimulate further growth by offering a broader range of destinations to complement existing hub and point to point services. The Emirates service to Dubai, and beyond, has connected the region to the East, however the aspiration remains to improve connectivity to the West, with a direct service to North America.

To deliver passenger growth, we will need to further improve and expand facilities. Expansion of the terminal building, taxiways and apron will be required alongside public transport facilities, improved access, car parking, offices and a possible additional hotel. Development will take place sustainably, with consideration for neighbouring communities, while ensuring that our customers continue to enjoy the level of comfort and service expected from their airport, in line with our intention to be the most welcoming airport in the UK.

By preparing a masterplan of expected growth up to 2021 and then on to 2030, the impacts of expansion, the effect on the regional economy, the road infrastructure network, the environment, and local community can be carefully managed - all while developing an airport fit for the future.

1.1 About us

Newcastle International is the 11th busiest airport in the UK, accommodating 4.4 million passengers in 2012, to 74 destinations. The airport is a large employment site for the North East, with 3,200 on-site members of staff.

The airport operates as a public private partnership. The Newcastle International Airport Limited (NIAL) company comprises 51% ownership by the Newcastle Airport Local Authority Holding Company Limited (LA7), made up of seven local authorities - Durham County Council, Gateshead Metropolitan Borough Council, Newcastle City Council, North Tyneside Metropolitan Borough Council, Northumberland County Council, South Tyneside Metropolitan Borough Council, and Sunderland City Council.

The remaining 49% is owned by the Strategic Infrastructure Trust of Europe, a fund managed by AMP Capital Investors.

AMP CAPITAL

Durham County Council

Gateshead Council

Newcastle City Council

North Tyneside Council

Northumberland County Council

South Tyneside Council

Sunderland City Council

The airport is located six miles north-west of Newcastle, on the outer periphery of the Tyne and Wear conurbation. It has direct access to the national road network. The A696 dual carriageway links to the A1, providing easy access both north and south, with Leeds and Edinburgh both within two hours' driving time. The Tyne and Wear Metro network provides good access to the largest urban centres, connecting into the regional and national rail networks via the Newcastle Central Station, Sunderland and Heworth Interchanges.

Set within 374 hectares of land, the airport comprises a single runway, operating both eastern and western arrivals and departures, along with associated apron and stands, a terminal building and pier, approximately 7,500 parking spaces, bus and metro stations, three hotels, a petrol filling station and car hire facilities. To the east lie the fuel farm, air traffic control tower and fire station and training facility. To the south lie aircraft hangars, freight, warehouses, and aircraft services provision, such as inflight catering and cleaning, a training facility run by Newcastle College, and business and general aviation facilities.

The land surrounding the airport is predominantly green belt, with the villages of Prestwick to the north, Dinnington to the north-east, Ponteland and Darras Hall to the north-west, Wideopen and Hazlerigg, Seaton Burn and Brunswick to the east, and Woolsington to the south.

This masterplan is the third such document produced by the airport. The first masterplan covered a period 1994-2006, and the second 2003-2016. This new plan replaces the previous versions and seeks to provide an overview of planned likely development looking through to 2030. The masterplan is a broad indication of future land uses and is not intended to be prescriptive. Its aim is to ensure we have land allocated to accommodate all possibilities, and that we have shown what all possible impacts might be.

A map of the area covered by the masterplan is shown below.

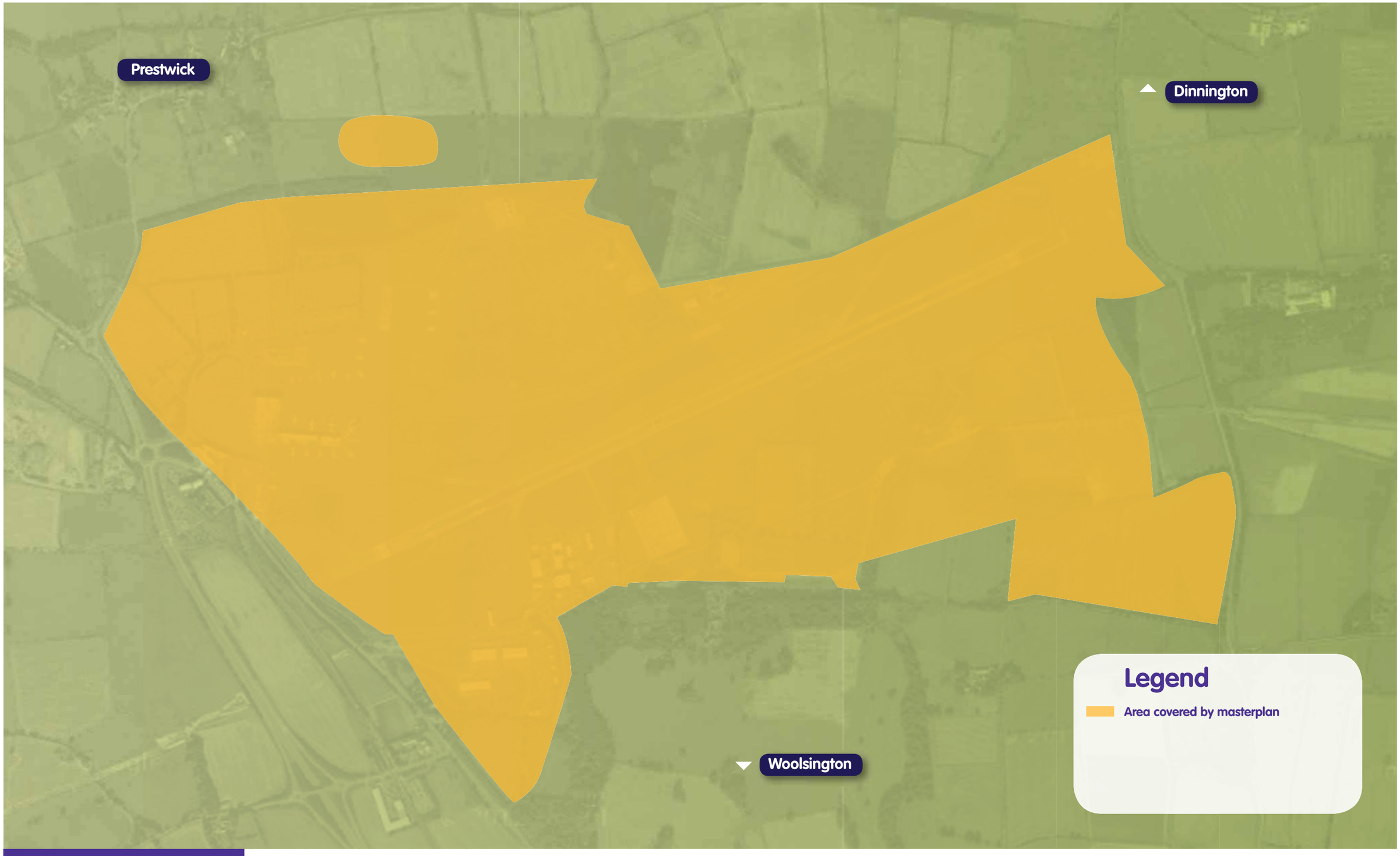


Figure 1: Area covered by masterplan 2030

Figure 2: 1994 and 2003 masterplan covers.

2.0 Policy

In preparing this masterplan, we have carefully considered the policy and legislative framework which will influence the airport's future development and growth.

2.1 National Infrastructure Plan

The Government, in outlining its ambitions for improving the UK's infrastructure to meet the needs of the future, issued its National Infrastructure Plan in November 2011, updated in 2012. A key objective of the plan includes:

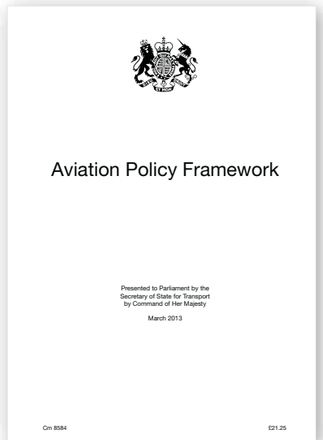
"Improving the performance, capacity, connectivity and environmental impacts of the UK's transport networks, including maintaining the status of the UK as an international hub for aviation."

2.2 National Aviation Policy

National aviation policy has recently undergone review, with the Aviation Policy Framework, published in March 2013, replacing the 2003 Government White Paper 'The Future of Air Transport'. The Future of Air Transport White Paper set out a strategic framework for airport capacity development up to 2030. Within this document lay the requirements for airports to produce a masterplan and surface access strategy, outlining timescales and milestones for development, along with its likely impacts and subsequent mitigation requirements. The Aviation Policy Framework builds on this document, with its overall aim to develop a sustainable policy framework for UK aviation. The framework recognises the planning objectives of achieving long term economic growth as a result of the benefits aviation brings.

The policy outlines the importance of ensuring that growth occurs whilst maintaining a balance between the benefits of aviation and its costs, the impact of climate change and noise.

Government, in helping the economy to grow, seeks to encourage investment and exports as a route to a more balanced economy. Airports play a significant role in this, both in terms of job creation and also creating opportunities for economic rebalancing of the wider region or area by attracting new business activity through new markets as a result of additional international connectivity.



A short term (2020) priority is to ensure that better use is made of existing runway capacity at all UK airports, via improved performance, resilience and passenger experience, alongside new routes and services. This is proposed by maintaining the UK's hub capacity but also developing links from airports providing point to point services. By focusing more on connections from regional airports, this could alleviate pressure on the London airports and would reduce the need for air passengers and freight to travel longer distances to reach the largest UK airports. The framework also seeks to ensure that regional airports are better integrated into the wider transport network.

Beyond 2020, there will be capacity challenges at the large South East airports. A key priority will involve maintaining the UK's hub status, and exploration of opportunities to do this will be required. These issues are being considered within the Howard Davies review, a Government-appointed commission led by Sir Howard Davies, which will report in 2015.

A priority of the Aviation Policy Framework relates to the retention of the airport masterplan and surface access strategy, with emphasis upon airport growth through a transparent and collaborative process of community and stakeholder engagement. The Government recommends that masterplans are updated at least once every five years, with the five year period coinciding, where possible and appropriate, with the periods covered by Noise Action Plans and Surface Access Strategies, to streamline the planning and engagement processes. Airports should also consult on proposed changes to masterplans, and engage more widely with local communities prior to publication, through local authority engagement, drop-in sessions and public meetings.

The framework also recommends strengthening the local consultation process through an enhancement of the role of Airport Consultative Committees and Local Transport Forums, promoting greater engagement with airports.

2.3 Davies Commission

The Government has appointed Sir Howard Davies to chair an independent Commission tasked with identifying and recommending to Government options for maintaining this country's status as an international hub for aviation.

As outlined above, the Commission will:

- examine the scale and timing of any requirement for additional capacity to maintain the UK's position as Europe's most important aviation hub.
- identify and evaluate how any need for additional capacity should be met in the short, medium and long term.

In doing so, the Commission will provide an interim report to Government no later than the end of 2013, setting out:

- its assessment of the evidence on the nature, scale and timing of the steps needed to maintain the UK's global hub status.
- its recommendation(s) for immediate actions to improve the use of existing runway capacity in the next five years - consistent with credible long term options.

The Commission will then publish, by the summer of 2015, a final report for consideration by Government and opposition parties, containing:

- its assessment of the options for meeting the UK's international connectivity needs, including their economic, social and environmental impact.
- its recommendation(s) for the optimum approach to meeting any need.
- its recommendation(s) for ensuring that the need is met as expeditiously as practicable within the required timescale.
- materials to support the government in preparing a National Policy Statement to accelerate the resolution of any future planning application(s).

This masterplan forms part of our submission to the Davies Commission.

2.4 Department for Transport UK Aviation Forecasts 2013

As part of the process of review of aviation policy, in 2013 the Government produced updated forecasts of air passengers and aviation carbon emissions. The updated forecasts reflect the key developments since the last set produced in 2011, including:

- growth constraints at the South East airports, Heathrow having reached capacity.
- increases in Air Passenger Duty rates.
- changes to projections of economic growth and oil prices.
- developments to the forecasting methodology resulting from a process of continual development.

The forecasts are presented as ranges to reflect the inherent uncertainty involved in forecasting to 2050. Low and high forecasts have been defined to represent either end of a range of reasonably likely outcomes, and a central forecast has been defined to lie broadly in the middle of the range. The results of a series of sensitivity tests, in which the key inputs to the forecasts are varied, are also reported.

We consider these forecasts to be conservative, in that they significantly underplay the potential of some regional airports within the UK aviation market. The South East aviation market, with its capacity constraints, has reached a level of maturity. The regional market, particularly the North East, is highly demand and price responsive, experiencing sensitivity to economic changes and new routes, thus indicating that the market is not yet mature. We have therefore commissioned our own independent forecasts which better reflect the market, catchment and economic conditions within which the airport is set. These forecasts are outlined in Chapter 3 of this masterplan.

2.5 National Planning Policy Framework

In March 2012, Government published the National Planning Policy Framework (NPPF).

The NPPF revises and consolidates previous Planning Policy Guidance and Planning Policy Statements of over 1000 pages into a concise 58 page document. The revised framework outlines a presumption in favour of sustainable development driven forward by economic, social and environmental changes. The process of planning, however, remains unchanged by this new document. Local plans are the starting point for decision-making as set out in previous legislation, Section 38(6) of the Planning and Compulsory Purchase Act 2004 and section 70 (2) of The Town and Country Planning Act 1990. Local plan-makers must, however, have regard to the contents and themes of the NPPF in producing their local plans and development frameworks.

2.6 Local policy

2.6.1 Local Development Frameworks

The airport falls within the local authority boundaries of Newcastle City Council and Northumberland County Council. Both authorities are currently in a transitional phase of policy planning, with saved policies from the departing development plans making way for the emerging Local Development Frameworks (LDFs). The LDF is a group of documents which sets out planning strategy and policies for each individual local authority. The airport's noise contours, which outline areas of potential airport related noise disturbance, extend out to the North Tyneside Borough and therefore the planning structure of this authority also requires consideration.

In Newcastle, this suite of documents is centred on the One Core Strategy, a joint strategy with Gateshead Metropolitan Borough Council. The authorities of Newcastle and Gateshead have taken the view that strategic planning does not stop at administrative boundaries. The LDF for NewcastleGateshead is being subjected to examination in summer 2014.

In Northumberland the current planning policy documents comprise the local plans of the seven former local authorities which have been amalgamated to create the current Northumberland County Council, and the emerging LDF. The Core Strategy is the principal document, setting out the vision for Northumberland over the next 15 years.

In North Tyneside, the current plan is the Unitary Development Plan, however the authority is in the process of developing a Local Development Framework.

Newcastle City Council

The majority of the airport falls into the City of Newcastle, including the terminal building, runway, Freight Village and southside.

The 1998 Unitary Development Plan (UDP) offered strong support to the expansion of the airport;

- on site by way of green belt relaxation for airport development required for the continued expansion of the airport (in line with previous masterplans) and;
- off site by ensuring that designated Public Safety Zones (PSZs) have remained free of development, as well as ensuring that proposed noise sensitive development has regard to areas affected by aircraft noise.

The emerging One Core Strategy further supports the airport's growth aspirations. The strategy proposes designating the airport as a Key Employment Area, recognising its status as a key arrival point into the region, with development centred around the airport benefiting from its connectivity within the region via good local transport networks, as well as nationally and internationally via air services.

The draft policies which specifically relate to the airport, both in terms of the employment and transport chapters of this plan, are outlined in the following paragraphs.

Policy CS6: Employment and economic growth priorities

1 *Employment and economic growth will be concentrated within the Urban Core and our four Key Employment Areas as follows:*

(a) For office, retail, research and further/higher education: the Urban Core.

(b) For manufacturing and engineering, including renewables and environmental industries: Team Valley, Walker Riverside.

(c) For distribution and logistics: Follingsby.

(d) For uses that would benefit from clustering around the airport: Newcastle International Airport.

Policy CS25: Transport Network

To improve the operation of our transport networks and improve our strategic connections, we will work with Partners to bring about:

(4) The sustainable, safe and efficient flow of freight and goods and continue to support the expansion of travel and freight movement opportunities provided by our key gateways – Newcastle International Airport, Newcastle Central Station and the Port of Tyne.

We will work with Newcastle City Council to establish development management policies which further allow for the expansion of the airport, whilst minimising its impact upon the surrounding community, particularly considering noise.

We will also work with the authority to ensure that policies are put in place to restrict development in the local area which would detrimentally impact upon the safe operation or expansion of the airport.

Northumberland County Council

The north-west corner of the airport falls within Northumberland. This area forms part of the long term car park and landscaping belts.

Following the amalgamation of the seven authorities of Alnwick, Berwick-upon-Tweed, Blyth Valley, Castle Morpeth, Tynedale, Wansbeck and Northumberland County in 2009 to form the Northumberland County Council, the local plan from each authority has been brought together into the Consolidated Planning Policy Framework for Northumberland. This document sets out an overview of the relevant statutory planning documents for the county.

Historically, the Castle Morpeth Local Plan and Northumberland County Structure Plan have provided for the growth of the airport, recognising its significant economic development and transportation benefits to the region. The relaxation of green belt policy for airport land, specifically the land to the north-west of the site, enabled us to develop the long term car parks in the 1990s.

The emerging Local Development Framework for Northumberland centres around the Core Strategy, further echoing the previous plan, recognising the airport as an economic driver for the region as well as a significant transport hub. The northern area of airport land within Northumberland continues to be identified as future airport expansion land and activity supplementary to the airport's operation in the emerging plan.

At the time of publishing this masterplan, the LDF process was still under consultation. We will work with the authority to ensure that the airport's growth is provided for, with development management policies that are consistent with those of the Newcastle LDF. This will also serve to protect the amenity of neighbouring communities against the impacts of airport expansion and noise. We will also ensure that policies are put in place to safeguard against development which may impact upon the safe operation of the airport or its expansion.

North Tyneside Council

The existing UDP policies in relation to noise comply with the now superseded PPG 24 (Planning and Noise). In that document four categories of noise to which new dwellings would be exposed are identified, ranging from levels of noise which would not be a factor in granting planning permission, to levels where proposals for new dwellings would be refused. The evidence base within PPG24 is still considered to be sound.

The flight path of the airport passes over the borough, both on arrival and departures to the north-west of the borough and to the north-east toward the coast. The noise contours for the airport correlate to the measurement criteria within the Noise Exposure Categories of PPG 24. Aircraft noise may therefore be a material consideration in determining planning applications.

The existing policy is as follows:

> *Policy E3/1 Proposals for development, including development which may be affected by aircraft noise, will be considered against the criteria set out in the development control policy statement (Development and Noise) of this plan and in respect of residential development with particular reference to the Noise Exposure Categories set out in PPG 24.*

Development Control Policy Statement 7 also outlines Material Planning Criteria to be taken into account when considering individual proposals.

Going forward in the process we will seek to have the existing noise contours embedded into the emerging LDF and appropriate policies put in place to protect the airport's expansion.

In addition to the local plans identified above, the airport, by nature of its significant surface access movement by car, rail and bus, must be considered within Local Transport Plans produced across the region.

2.6.2 Local Transport Plans

The Transport Act 2000 places a statutory duty on local authorities to produce Local Transport Plans and keep them under review. Despite the review of policy by the current government, Local Transport Plans have been retained as useful policy documents in line with Government objectives.

The most recent local transport plan period is the third iteration (LTP3), considering the period up to 2021 and, as with previous plans, requires authorities to outline their transport priorities over a five year period, following which the plan is then refreshed. The plan contains targets to be met, key milestones and objectives, and is considered to be a tool for implementation of transport schemes.

Following national consultation, five goals and challenges were outlined:

- Support economic growth.
- Reduce carbon emissions.
- Promote equality of opportunity.
- Contribute to better safety security and health.
- Improve quality of life and a healthy natural environment.

The Tyne and Wear, and Northumberland LTPs are most relevant to Newcastle Airport.

Tyne and Wear Local Transport Plan

The Tyne and Wear authorities have a vision to ensure a fully integrated and sustainable transport network, allowing everyone the opportunity to achieve their full potential and have a high quality of life. The efficient movement of people and goods within and beyond Tyne and Wear is to be achieved through a comprehensive network of pedestrian cycle and passenger transport links in line with the goals outlined above.

The Tyne and Wear LTP recognises the airport's importance as a key gateway to the North East region and beyond, as well as the economic benefits it brings. The authorities support the development of the airport as well as improved regional transport links to the airport.

Due to the increase in passenger numbers from 1.2 million in 2000, and anticipating passenger numbers to continue on an upward trajectory, the LTP states that the authorities will work with the airport to consider the following:

- how to provide surface access for current and predicted increases in passenger numbers without excessive impacts on congestion and the environment.
- how to maximise use of sustainable modes for travel to/from the site.
- the impacts of the wider development of the airport as a potential major employment site for future travel patterns in the area and the scope for promoting sustainable travel.

Northumberland Local Transport Plan

The Northumberland Local Transport Plan seeks to develop, and maintain a sustainable local transport system that is resilient and responsive to changing needs, promotes sustainable economic growth, minimises the environmental impact of travel, improves health and addresses social exclusion for residents, businesses and visitors. The plan recognises the existing good road transport links to the airport enabling onward travel nationally and internationally.

The contents of the masterplan and subsequent surface access, studies will provide further detail to enable future LTPs to examine the surface access associated with a growing airport.

2.6.3 Local Enterprise Partnerships

Following the abolition of Regional Development Agencies, the Government's Department for Business, Innovation and Skills in 2010 announced the creation of Local Enterprise Partnerships. Local Enterprise Partnerships (LEPs) are a voluntary partnership between local authorities and business, set up to help determine local economic priorities and lead economic growth and job creation within the local area.

The North East LEP has a simple vision, **'to create growth'**. We will work closely with the LEP in order to grow the airport and in particular to move forward the Southside Development.

2.7 Environmental policy and legislation

Operations at the airport are carried out in line with set environmental legislation and efforts are made to ensure compliance at all times.

2.7.1 Aviation Policy Framework

The Aviation Policy interacts with a number of existing and planned guidance.

Sustainable Aviation

The airport is a signatory of Sustainable Aviation, a UK industry coalition of airlines, airports, aerospace manufacturers and air navigation service providers. Sustainable Aviation is a long term strategy which sets out the collective approach of UK aviation to tackling the challenge of ensuring a sustainable future for the industry.

The Sustainable Aviation Road Map for Noise (2013) sets out the UK aviation industry's blueprint for managing noise from aviation sources to 2050.

Noise

As well as the Sustainable Aviation Road Map for Noise (2013), the Aviation Policy Framework refers to several Government policies and initiatives which influence Newcastle Airport's management of noise levels.

National Planning Policy Framework (NPPF)

National Planning Policy Framework (NPPF) states that planning policies and decisions should aim to avoid a situation where noise gives rise to significant adverse impacts on health and quality of life as a result of new development. The planning system should prevent new development being put at unacceptable risk from, or being adversely affected by, unacceptable levels of noise pollution. There is also a responsibility for people moving to an area affected by existing aircraft noise to be aware of the impact before purchasing the property.

National Policy Statements (NPS)

The Government has produced a series of National Policy Statements (NPS) including a Noise Policy Statement for England 2012. This Noise Policy Statement for England (NPSE) sets out the long term vision of Government noise policy to 'promote good health and a good quality of life, through the effective management of noise within the context of Government policy on sustainable development'.

Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development the document aims to:

- avoid significant adverse impacts on health and quality of life;
- mitigate and minimise adverse impacts on health and quality of life;
- where possible, contribute to the improvement of health and quality of life.

Noise controls

The Government also supports the theory of setting noise controls locally and proportionate to the problem. Powers are available to the airport to set noise controls and these will be reviewed as part of the Noise Action Plan process. Noise controls include noise preferential routes, departure noise limits and minimum height requirements. We will work with the Local Authorities to agree any noise controls that are appropriate.

Noise insulation and compensation

The Government continues to expect airport operators to offer households exposed to levels of noise of 69 dB $L_{Aeq\ 16hr}$[1] (in simple terms, an average of noise disturbance over a busy 16 hour period) or more assistance with the cost of moving. For noise sensitive buildings, such as schools, hospitals and residential properties exposed to 63 dB $L_{Aeq\ 16hr}$ or more acoustic insulation should be offered.

Air quality

The Aviation Policy Framework supports Sustainable Aviation in the development of the Sustainable Aviation Road Map for CO_2.

The generation of emissions from aircraft operations contribute to air pollution. On a national level the intention is to seek improved international standards to reduce emissions from aircraft and vehicles.

2.7.2 European Directive on Ambient Air Quality 2008 and Air Quality (England) (Amendment) Regulations 2002

Air quality is regulated under the European Directive on Ambient Air Quality 2008 and Air Quality (England) (Amendment) Regulations 2002. Limit values are set under each of these regulations and compliance is monitored through monthly sampling of Nitrogen Dioxide levels on site, which are reported annually.

2.7.3 Environmental Permitting (England and Wales) Regulations 2010 and Water Industry Act 1991

Discharges made into the local watercourses and sewers are consented by the Environment Agency and Northumbrian Water. Discharge permits are issued by the Environment Agency under the Environmental Permitting (England and Wales) Regulations 2010. Northumbrian Water issues discharge consents thorough the Water Industry Act 1991. All watercourses on site are regularly tested by external consultants to ensure compliance with the consents. This work contributes to the future development of drainage facilities on site.

2.7.4 Waste (England and Wales) Regulations 2011

The correct management of waste is controlled under the Waste (England and Wales) Regulations 2011, which encourages the implementation of a waste hierarchy of prevention, re-use and recycling. The waste hierarchy forms the principles of waste management at the airport. The Regulations also impose a 'duty of care', which requires the waste producer to demonstrate the correct disposal route of all waste.

2.7.5 CRC Energy Efficiency Scheme

As a high energy user, the airport is a participant in the CRC Energy Efficiency Scheme (formerly known as the Carbon Reduction Commitment). This scheme is a mandatory carbon emissions reporting and carbon offsetting mechanism. As part of the involvement of the airport in the CRC Energy Efficiency Scheme, we have successfully achieved the Carbon Trust Standard. Planning for future developments will ensure that energy efficiency is core to the design process.

2.8 Other policies

2.8.1 Aerodrome Safeguarding

Certain types of development have the potential to detrimentally impact upon the safe operation of airports. Annex 2 of The Town and Country Planning (safeguarded aerodromes, technical sites and military explosives storage areas) Direction, requires airports over a certain size to be consulted, as part of the planning system, on certain types of planning applications. These include:

- Tall Structures, such as cranes, bridges and skyscrapers, which may penetrate protected airspace creating an obstacle for aircraft.
- Development which would create bird attracting environments within close proximity to airports, such as lakes, woodland and quarry/landfill sites.
- Development which may interfere with navigations aids, such as highly reflective structures within close proximity to an airfield and wind farms which are able to mimic the track of an aircraft, detrimentally impacting upon the use of radar.

All airports must produce a safeguarding map, which outlines areas of interest for these types of development, where consultation should be undertaken at the pre-application stage of planning. Copies of this map are also made available to Local Authorities who use this to carry out consultations, as outlined above.

In engaging with Local Authorities, where it is relevant, we seek to embed safeguarding within local plans, identifying specific policies where appropriate. In the future we will continue to work with local authorities to transpose relevant policies into new development management documents. On-site airport development must also comply with safeguarding requirements.

2.8.2 Public Safety Zones (PSZ)

Public Safety Zones, designated by the Civil Aviation Authority (CAA), are areas of land at the end of runways of the busiest airports in the UK, where certain planning restrictions apply. These zones are established to control the number of people on the ground at risk in the unlikely event of an aircraft accident on take-off or landing.

The primary objective of PSZs is to ensure that there is no increase in the number of people living, working or congregating in areas of potential risk.

The most recent PSZs were updated in 2010 and due to improvements in aircraft technology we saw a reduction in the amount of land covered within these zones. It is not anticipated that PSZs would be required to be further updated in the near future, however, we will work with the Civil Aviation Authority, should this requirement arise.

We propose to have PSZs reflected in the relevant local plans. We will work with local authorities to ensure relevant policies continue to be included in development management documents.

2.8.3 Airport Consultative Committee

The Newcastle Airport Consultative Committee is an advisory body set up by the airport in accordance with Section 35 (l) of the Civil Aviation Act 1982 (as amended by the Airports Act 1986).

The role of the Consultative Committee is:

- To advise Newcastle International Airport Limited on any matter which it may refer to the Newcastle Airport Consultative Committee.
- To consider any matter in connection with the airport which may affect the communities represented or the amenities of the neighbourhood. The Committee will have access to the Noise and Track Keeping system equipment for any matters concerning aircraft noise and the monitoring of flight paths.To make suggestions to the Chief Executive and Management of Newcastle International Airport Limited on any matter connected with the administration of the airport which can further the interests of the communities represented.
- To protect and enhance the interests of all users of the airport.
- To consider any matter in connection with the airport affecting passengers' interests.
- To stimulate the interests of the local community in the achievements of the airport.

The Newcastle Airport Consultative Committee meets quarterly and is made up of representatives of Local Authorities, ward councillors and residents' groups, as well as business, travel trade, consumer groups and other representatives.

A subsidiary group of the ACC, the Local Transport Forum, specifically considers transport issues and surface access.

3.0 Forecasts

In order to take a long term view on the future of the airport, its routes, its facilities and its impacts, we need to consider the likely demand for air travel within the masterplan period. This allows us to ensure adequate provision of land for development and to ensure that any environmental mitigation is appropriate.

It is common practice to produce high, medium and low forecasts of growth. For the purposes of ensuring that growth can be met, and all aspects and all impacts are properly considered, it is normal to base development requirements and potential environmental mitigation across the masterplan period on high growth scenarios.

3.1 Passenger forecasts

Newcastle, like all regional airports, has been affected by the economic downturn and uncertainty in the marketplace. This and other factors such as increases in Air Passenger Duty caused passenger numbers to fall from 5.7 million in 2007 to 4.4 million in 2008.

Since 2010 passenger numbers have remained largely static, with slight growth occurring in the latter part of 2012, continuing into 2013, and accelerating in early 2014. Looking forward, we anticipate seeing a steady growth in passenger numbers to up to 6.1 million in 2021 and 8.5 million in 2030.

The graph below highlights growth trends. It shows our forecasts compared to the most recent forecasts produced by the Department for Transport. We consider that the DfT forecasts underplay the potential of regional airports.

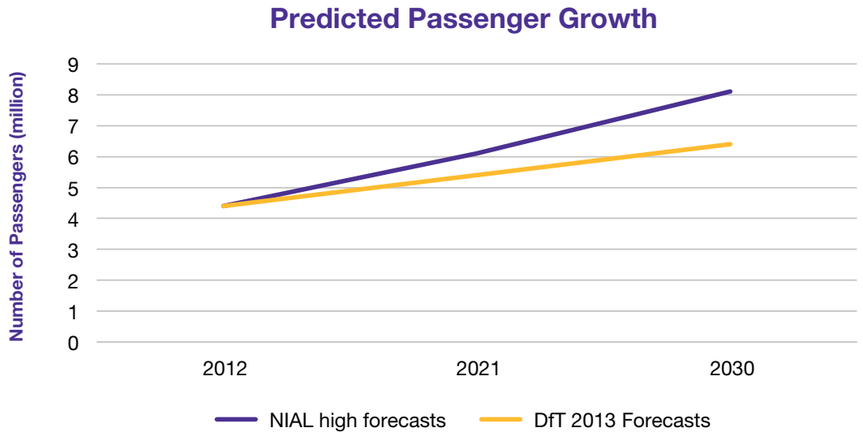


Figure 3: NIAL predicted passenger growth up to 2030

3.2 Air traffic movement forecasts

Air traffic movements can be grouped into two categories; air transport movements and business/general aviation. Air transport movements include all scheduled and charter flights. We expect air transport movements to grow, although at a slower rate than passenger growth. Business and general aviation includes executive jets, light aircraft and military aircraft. We expect this sector to remain broadly the same over the plan period.

From a peak in 2006 of 81,500 annual movements, we saw a decline in movements year on year between 2007 and 2012, as a result of the economic downturn and an increase in average aircraft size. In 2012, there were 62,200 air traffic movements.

For the period up to 2021, movements are expected to grow to up to 72,500 annually and by 2030 there could be further growth to up to 87,500 movements.

The anticipated traffic mix during this period is largely expected to reflect previous decades, notably Airbus A320 family of aircraft and Boeing 737 sized aircraft. It is however considered that air traffic movements will grow at a lower rate than passenger numbers, due to increasing average aircraft size across the plan period, with the introduction of the Boeing 787, and the 777 on the Emirates Dubai route.

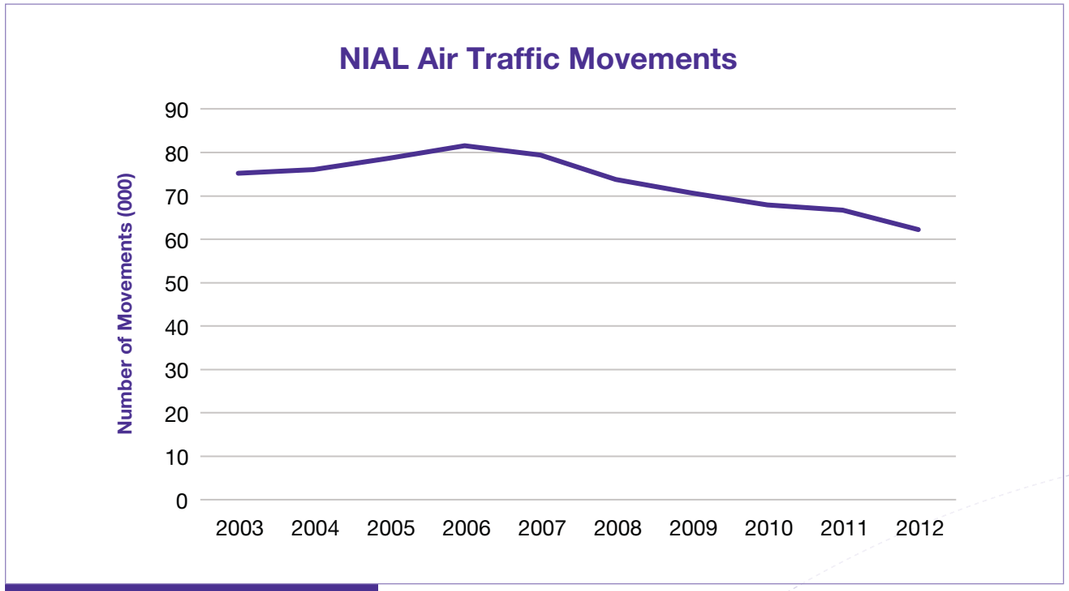


Figure 4: NIAL air traffic movements up to 2012

3.3 Freight forecasts

In 2012, the airport handled just under 3,000 tonnes of freight. This made the airport the 15th largest airport in the UK in terms of freight operations.

The advent of the Emirates service in 2007 saw significant increases in freight throughput. This reflects the fact that this long haul service has opened up new markets and improved air freight connections from the region. The upgrade of the Emirates aircraft to a Boeing 777-300ER has further increased freight capabilities on this route.

We will continue to grow our freight operation across the plan period. The Southside Development will provide bespoke transit and storage facilities, ensuring we are well positioned to attract potential new freight operators to the region, where previously the facilities may not have been available. The provision of freight services is however highly market dependant and so detailed forecasts have not been produced.

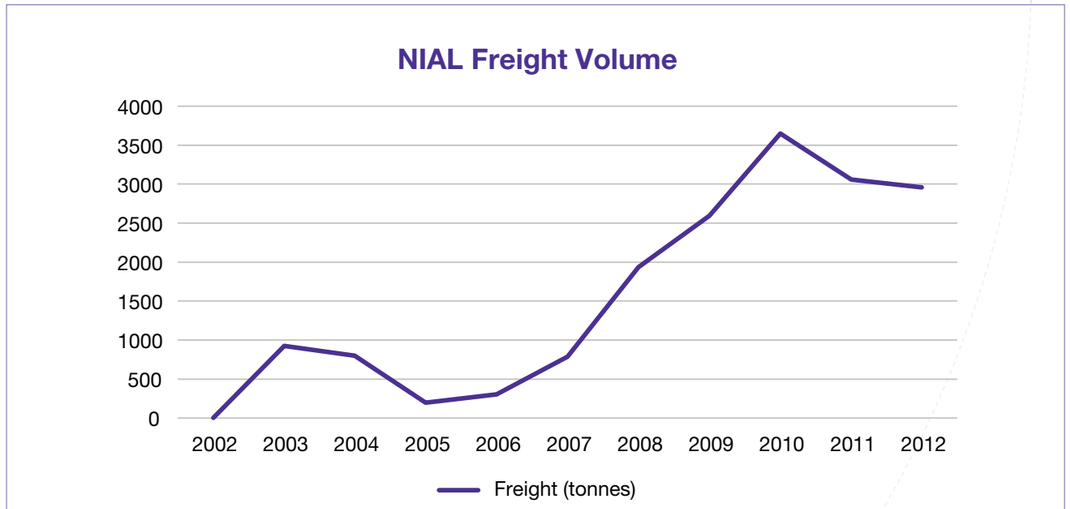


Figure 5: NIAL freight volume up to 2012

4.0 Development

In order to grow the number of passengers and accommodate associated aircraft movements over the plan period, additional infrastructure is likely to be required at the airport.

A set of land-use key diagrams showing the likely development at the airport for the years 2021 and 2030 as well as the base year of 2013 are located at the back of this document.

The land use categories shown are:

- Terminal and pier/satellite.
- Passenger apron.
- Car parking and landside ancillary.
- Airside ancillary.
- Airside or landside ancillary.
- Runway and taxiway corridor.

The proposals contained within the masterplan are intended as a guide and will be reviewed on a regular basis as part of the business planning process. The key diagrams are indicative and illustrative in order to provide stakeholders with a broad picture of the possible scale and location of future land uses. The diagrams show the maximum area of land likely to be required in order that the full potential impact can be considered.

4.1 Terminal and pier/satellite

The provision of adequate terminal capacity to meet continuing demand is essential. The existing facility comprises a 44,000m^2 main passenger terminal building and a single pier. The last major extension to the terminal was in 2000 and the building has since had a number of small-scale developments and internal layout amendments to improve the performance of the security, baggage and immigration areas. Based on the current expected pattern of aircraft type and use, the terminal, with minor operational improvements and measures to spread the passenger peak travel times, could accommodate growth to around 7 or 8 million passengers per annum (mppa). A demand of up to 8.5 mppa is forecast by the end of the masterplan period, and so an extension to the terminal is therefore likely to be required sometime after 2021 but before 2030.

Passenger throughput in the terminal is affected by both the daily movements and seasonality of operations. The terminal needs to be large enough to cater for close to the maximum through flow of passengers at any particular time, and changes in the daily or seasonal peak flows will have to be allowed for in the building.

The terminal building is made up of a complex system of interactive components, each of which need to be planned so that the terminal can accommodate the developing demands placed upon it, and in order that the system as a whole is properly balanced.

The terminal building 'system' includes the following components:

- Road system, including drop-off and pick-up area.
- Landside departure concourse, including ticket desks, passenger assistance point, check-in desks, baggage facilities and retail.
- Security.
- Airside departure lounge, including retail, catering and executive lounges.
- Pier, gate lounges and lounges for passengers waiting for buses.
- Apron level baggage handling area.
- Immigration facilities.
- Arrivals baggage reclaim halls and customs point.
- Arrivals area for 'meeters and greeters'.
- Office, storage and crew room accommodation for airlines, ground handling agents, airport security, retailers and other tenants and concessionaires.

A review of existing capacity has identified a series of necessary improvements which would be required to be implemented in order to meet passenger demand for each of the key years, 2021 and 2030.

The review concluded that a number of capacity enhancements are likely to be required between 2021 and 2030, notably:

- Additional departure concourse and check-in.
- Additional space for baggage handling and reclaim.
- Additional lounge facilities including commercial space.
- A second pier or satellite pier.

Site constraints restrict future development surrounding the terminal building, with much of the site being taken up by the existing pier and apron as well as landside operations to the front of the terminal. The previous terminal extension, opened in 2000, was constructed to the north of the site. Logically, any new terminal development could be accommodated adjacent to the northern area of the terminal to provide an additional departure concourse, check-in and baggage handling facilities. It is also possible that an extension to the east and the south could be accommodated. New apron and a proposed new pier or satellite pier facility could also be accommodated on the land to the north and north-east of this development.

The proposals shown on figure 6 for terminal and pier and/or satellite facility provide indicative locations for these facilities. Detailed studies will influence the final location, scale and timing of this type of development.

4.2 Passenger apron

The passenger and commercial apron accommodates airside activity. It includes parking bays for aircraft (known as stands), together with aircraft taxiways, roadways for airside vehicles and areas for the manoeuvring and storage of equipment such as buses, aircraft steps and refuelling tankers.

The growth in passenger numbers and aircraft movements, together with changes to the terminal area, will combine to have an impact on the required size and layout of the main passenger apron.

There are currently twenty-six aircraft parking stands on the main apron, with some positioned around the existing pier and others remote from the terminal. Three of the stands on the pier are served by air bridges (stands 3, 9 and 10), allowing direct access from the departure lounge onto the aircraft. Access to the remaining pier stands involves a short walk across the apron for passengers. All other stands are served by buses, which are accessed from 'busing lounges' located underneath the pier.

The number, size and type of apron stands required in the future have been calculated. These calculations are principally based on 'model day' aircraft schedules for each key future years, which, in turn, are compiled from the passenger and movement forecasts. Predicted stand demand profiles produced indicate that more stands are likely to be required by 2021 and more again by 2030.

The design and layout of additional apron areas will require careful attention, and will need to consider a number of physical, environmental and operational considerations.

Physical considerations will include:

- entry points to the main taxiways.
- the number of stands served by a single taxiway.
- the size of aircraft, their manoeuvrability and the resulting design implications for the stands.
- land availability.
- other operational constraints.

Environmental considerations will include the impact of northward expansion of the apron on the residents in Prestwick Village, in terms of noise disturbance or visual intrusion. Operational considerations will include passenger and airline aspirations, such as;

- The demand for stands adjacent to a pier.
- The demand for increased numbers of airbridges.

Taking account of these factors, an allocation of land has been made for possible apron development to the north and east of the terminal area. This area could accommodate apron demand up to and beyond 2030. Some of the areas identified occupy land currently in other uses, and may require some operationally less constrained facilities to be relocated. The northern boundary of the area will be limited to minimise the impact upon the residents in Prestwick Village.

4.3 Car parking and landside ancillary

A wide range of activities across the airport site support the operation of the terminal, split between landside and airside. Landside ancillary activities are those which are typically located outside of the airport's restricted or controlled zones, as defined by the main security fence. They include car parking, hotels, offices and freight as well as other miscellaneous activities, such as flight catering, training and servicing.

Car parking

Car parking requirements throughout the masterplan period are informed by passenger forecasts. There are currently over 7,500 car parking spaces at the airport, divided into drop-off, short stay, medium stay and long stay.

Analysis indicates that up to 8,500 additional spaces may be required by the end of the masterplan period. This may include a multi-storey car park to accommodate short stay demand. Due to the nature of short term car parking, this will be required within close proximity to the front of the terminal.

The additional long stay car parking could be located to the north of the site, behind the Britannia hotel, adjacent to the A696 and in a band running along the northern edge of the site. The land-take associated with any additional car parking by 2030 will be confined to within a line of existing woodland planting, thereby protecting the visual amenity of residents in Prestwick Village to the north of the airport. The area of land available for additional parking to 2030 is shown on the key diagram.

The provision of car parking should be directly related to demand, and will only be provided as existing car parking capacity is about to be exceeded. The development of additional car parking will be carried out alongside initiatives to improve sustainable transport modal share. In addition to on-site car parking provision, there are currently three operators of airport parking off site. Two are located at Callerton Parkway and a third behind Prestwick Terrace, close to the entrance of the airport. The Britannia Hotel and DoubleTree by Hilton, and other hotels also operate 'stay and fly' packages to allow guests to leave their cars at the hotels while away on holiday or business.

As the airport grows over the masterplan period, it is anticipated that increased pressure will be placed on local planning authorities for off-site airport car parks over a much wider area. There are a number of existing commercial and industrial areas accessible from the trunk road network on the western side of the Tyne and Wear conurbation, which could experience developer demand for off-site parking.

It is a key objective of this masterplan, and the forthcoming Surface Access Strategy, to ensure that adequate provision of airport related parking is contained on site over the plan period. This will allow for supporting transport infrastructure, landscaping and public transport to be provided whilst ensuring that the impacts of this parking do not result in any detriment to the amenity of neighbouring communities through the proliferation of traffic and visual intrusion.

Figure 6: Potential areas for terminal, pier and apron expansion

Hotels and conference facilities

There are currently three hotels at the airport: The 179 room DoubleTree by Hilton hotel (opened 2011), the 105 room Britannia Newcastle Airport Hotel, and the 89 room Premier Inn. It is envisaged that over the masterplan period an additional hotel may be required on site to meet the forecasted demand. The type and size of hotel provided will be led by market demand, however it is anticipated that it will be developed after 2021.

Car hire

There are currently four car hire companies on site, three of which have desks within the terminal, the fourth being located in the car park area. Each unit has dedicated ready return areas close to the terminal's passenger entrances and exits, and maintenance/storage units adjacent to the Freight Village.

As passenger numbers increase in the future, it is anticipated that car hire demand will also rise, with a resulting need for more facilities, including storage areas. The commercial requirements of car hire companies dictate their location, with vehicle pick up and return facilities close to the terminal, with storage and maintenance facilities able to be located to the southside. Expansion of car hire facilities will occur along these lines, with provision made for new car hire areas adjacent to the terminal and storage and maintenance compounds at the southside of the airport.

Freight development

The Freight Village to the south of the runway offers specialist freight facilities, including transit sheds, warehousing, office and loading facilities. Freight and distribution facilities are expected to grow across the masterplan period. Provision will be made for additional freight warehousing facilities within the proposed site A of the Southside Development area. This will be market led, with the area developed to meet the specific needs of the new freight providers. Apron expansion may also be required, should demand arise. This is envisaged to be situated adjacent to the existing southside apron with land protected for this facility.

Office development

As the airport grows so too will the requirement to provide office space to accommodate new businesses. Offices for airlines and handling agents are likely to be required within or near to the terminal building. There are however airport businesses whose day-to-day functions do not require facilities close to the terminal building. Office accommodation for this activity could therefore be located to the south of the runway, an area known as the Southside Development.

Strong regional airports are attractive to commercial property occupiers, not only through the services they provide, but also because of the combination of surface infrastructure that surrounds them. The major airports in the UK have been able to generate development for both airport and non-airport related occupiers, leading to benefits for the airports and the regions they serve. The Airport City development at Manchester Airport is a recent example of this. Given the strong surface transport infrastructure, including two Metro stations and close proximity to the A1, as well as a land supply to the south of the site, there is a significant opportunity to create a similar regionally important facility at the airport. It is likely that this would be located in the area known as the Southside Development, principally on Site B but possibly also parts of Site A.

Other landside ancillary

In addition to the facilities outlined above, aircraft servicing and cleaning and in-flight catering preparation activity take place on site on the southside of the airport. Predicted increases in air traffic movements over the masterplan period will result in an increased provision of these services. Expansion of these facilities is likely to take place adjacent to the existing site

These facilities can be found airside or landside, and so may be located within either the landside ancillary or the airside ancillary land use areas shown on the Key Diagrams. Their location either side of the security zone would depend on site availability, operational requirements and security requirements.

4.4 Airside ancillary

The masterplan Key Diagrams show the areas of land that will be required for airside ancillary uses. Operations include:

- Freight and airline/airport engineering facilities within the Southside Development.
- Fire station and operational installations.
- Fuel farm.
- General and business aviation.

The expansion of some of these facilities will be dictated by market demand and the masterplan aims to ensure that sufficient land is available for these uses. The main focus for much of the development of airside activities will be within the southside area, as previously mentioned.

Fire station and operational installations

The fire station and fire training ground are located to the north of the runway. Expansion may be required during the masterplan period. There is sufficient land directly adjacent to the existing site to accommodate any extension. In addition to the existing on-site fire operations, we have developed a fire training academy, providing specialist training to both on-site and off-site businesses. It is anticipated that this training academy will grow throughout the plan period. There is, however, considered to be sufficient land available in and around the existing site to accommodate this growth up to and beyond 2030.

On site, we have a wide range of modern navigational aids including radar, navigational beacons and instrument landing systems. Across the lifetime of this plan, it is likely that some of the equipment will be required to be replaced, having reached the end of its lifespan. Full site surveys will be carried out to ensure that any new equipment is fully optimised. This may lead to some of this equipment being relocated elsewhere on the airfield.

Fuel farm

The fuel farm is located airside, along the northern perimeter of the airport boundary. It comprises a series of large above-ground fuel storage tanks. There is sufficient capacity within the existing compound and on adjacent land to accommodate additional facilities across the plan period. Toward the end of the plan period there may be a need to provide a more direct connection between the fuel farm and the new passenger apron.

General and business aviation

General aviation at the airport comprises flying schools, helicopter training, hangars and parking for private aircraft. General aviation activity is likely to remain constant over the plan period. The amount of land allocated for general aviation within the airside ancillary area will not be increased, although reorganisation of this land will allow for capacity increases. Samson Aviation is the airport's business aviation facility, servicing executive jets, private charters and other activity important to the regional economy. We anticipate the expansion of business aviation across the plan period, adjacent to the existing site and possibly to the east of the existing maintenance area.

4.5 Runway and taxiway corridor

A review of the potential future runway and taxiway requirements has been carried out.

Newcastle Airport has a single runway that can be used in both directions. The runway name for take-off to the west is referred to as Runway 25 and for take-off to the east is referred to as Runway 07. These names relate to the degree of orientation of each end of the runway.

Runway performance

Due to the existence of higher ground at Callerton Hill to the west of the airfield, take-offs using Runway 25 towards the west can be affected. In the past aircraft using Runway 25, in certain weather conditions and to certain destinations, where they are unable to operate to the east have been required to operate with a reduced capacity, making it necessary to undertake a technical (refuelling) stop en-route to their final destination, or to depart without a full load of passengers. The incidence of these events has reduced significantly in recent years due to improvements in aircraft technology.

Further technological advances in aircraft are expected in the future, which means that we no longer consider that a runway extension will be required. We will, however, keep under review Civil Aviation Authority (CAA) requirements for Runway End Safety Areas (RESA) improvements. These are areas free from obstruction at either end of the runway and the rules and regulations relating to these areas may be subject to change.

Runway capacity

A number of factors influence runway capacity, including the type of aircraft using it, safety and regulatory requirements, and taxiway provision and layout. The capacity of the runway is measured in movements per hour, and can be converted into an appropriate annual passenger throughput.

The capacity of a single two-way runway is considered to be more than sufficient to accommodate demand for the masterplan period and beyond. Due to the regional catchment of our airport and the considerable existing capacity within the current runway, we do not envisage that there would be a requirement for an additional runway.

In order to maximise the capacity of the single runway during the masterplan period, a number of taxiway and other improvements may be required:

- Taxiways linking new apron areas to the existing parallel taxiway.
- Runway shoulder improvements.
- Improved turning areas.
- Passing bays and holding areas in the area between the main apron and the Runway 07 threshold.
- Access taxiways to serve the Southside Development.

4.6 Airside or landside ancillary

Much of the airport site is easily distinguishable between landside and airside, divided by security fencing with dedicated security access points. Across the site there are, however, certain developments which either require access to both landside or airside areas, could easily be located in either a landside or an airside area, or where the location of the land dictates its status as requiring both landside and airside access. The following areas fall into this category:

- The land to the north of the runway surrounding the tower, proposed to be used for car parking.
- The northern edge of the Southside Development area.

Northern Tower Area

The land surrounding the tower currently occupies an airside location, accessed via the airport perimeter road through the central barrier. Across the plan period, this area is earmarked for car parking, to accommodate the additional spaces required to 2030. To facilitate this, a revised airside/landside boundary would need to be considered, ensuring that the tower, fuel farm and fire station remain as airside facilities, with the car parking area re-designated as a landside area. This activity is likely to be required after 2021, but prior to 2030.

Southside Development Site A

Site allocation within this area could fall within either the airside or landside ancillary categories, identified within the key diagrams, depending on the nature of activity required.

Land known as Site A, providing hangarage for aircraft engineering, maintenance and freight. Planning permission for approximately three quarters of this development has lapsed. Going forward, following the upturn in the regional economy, we will seek to gain a replacement planning permission for the site, for both hangarage and freight as well as office accommodation where there is a requirement.

4.7 Longer term development

While site B no longer has an airport-related restriction, currently site A is limited to airport-related development only. This masterplan recognises the benefits of clustering commercial developments around the airport and seeks to develop site A for a wider range of occupiers, alongside Site B.

In addition to Sites A and B, we have identified further sites to meet possible longer term requirements for employment land emerging from the Local Development Framework Process. For clarity, these sites have been identified as sites C and D and have been allocated for development beyond 2030. The purpose of identifying this additional land is to provide a longer term picture for the local community and to assist Newcastle City Council in meeting future employment land requirements. We propose an extension of uses at the Southside Development site, from office, storage and distribution facilities to bespoke accommodation for airport-related and non-airport-related activity.

There are likely to be a number of constraints associated with the site due to its location in close proximity to the runway, but also adjacent to environmentally sensitive areas as well as being within the green belt. Full site scoping will define the scale of the development and the range of uses able to be accommodated.

5.0 Economic Impact

As an island economy, for centuries the UK's economic prosperity has been dependant on the transport routes linking it to the rest of the world. Globalisation means that quick and easy transport routes have never been more important.

Today, the aviation industry provides over £18 billion in economic output to the UK economy. It contributes to 220,000 jobs in the UK, boasting the second largest aeronautical sector after the USA. In addition to direct outputs, connectivity, inward investment through journey time savings, and tourism all contribute significantly to the UK economy.

Whilst London's position as a major financial centre within the world market relies upon Heathrow (financial services being likely to require six times more travel that some other sectors), the number of passengers using non-London airports in the UK has grown by over a third since 2000.

Newcastle Airport contributes significantly to the economy of the North East, in terms of connectivity but also as a jobs generator. This chapter highlights the existing and likely further contribution across the plan period.

5.1 Employment

The airport is a significant contributor of jobs to the North East economy. During our most recent employment survey undertaken in 2012, 3,200 people were employed at the airport. In addition to this, analysis of airport-related employment within the region estimates a total of 4,100 airport related jobs across the North East.

Airport-related jobs can be defined using the following four categories:

Direct on site	those employed on site at the airport.
Direct off site	those staff who are employed in off-site industries directly related to the airport such as hotels and car parking.
Indirect employment	those employed within the region providing airport related services.
Induced employment	those employed through staff spending, shopping, leisure etc.

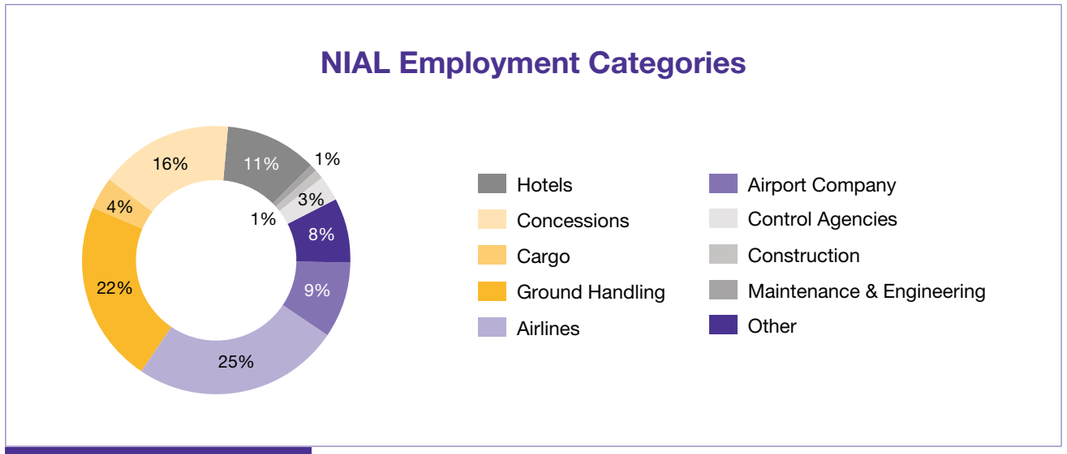


Figure 7: NIAL employment categories

Of the 3,200 employees on site, 2,500 of these staff are in full time jobs. The broad categories of employment are shown in figure 7.

Employment is dominated by airlines and ground handling companies. Together these two groups make up around 47% of on-site employment. Other significant employers include concessions, hotels and the Airport Company.

The growth of the airport, in terms of passenger numbers and aircraft movements, will in turn result in increased employment, both directly and indirectly, on and off-site. In addition to employment increases related to the growth of the airport operation, the development of the southside of the airport into a business park is likely to be a significant employment area over the lifetime of the plan period.

In the shorter term the Southside Development will have a more modest contribution to the overall job numbers, however, by 2030, significant growth is expected.

By 2021 the airport will support up to 5,650 jobs. Two thirds of these jobs can be attributed to aviation activity, with the remainder supported by the development of the southside.

By 2030, the airport operation will directly support around 10,000 jobs regionally. In addition to this, it is anticipated that the Southside Development will contribute 2,150 additional jobs should it be fully developed as planned.

Figures 8 and 9 show an overview of potential employment attributed directly to the airport site alongside a regional picture of expected employment figures over the plan period.

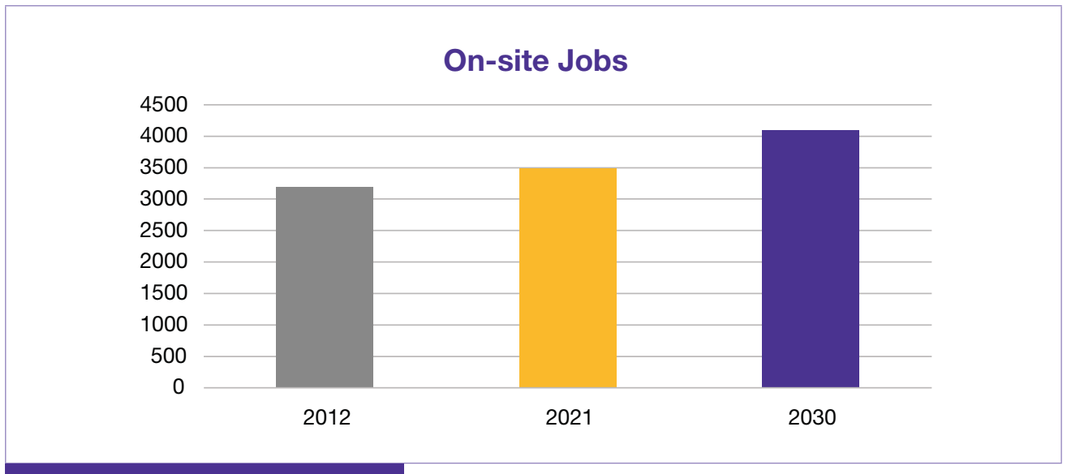


Figure 8: NIAL direct on-site employment forecasts

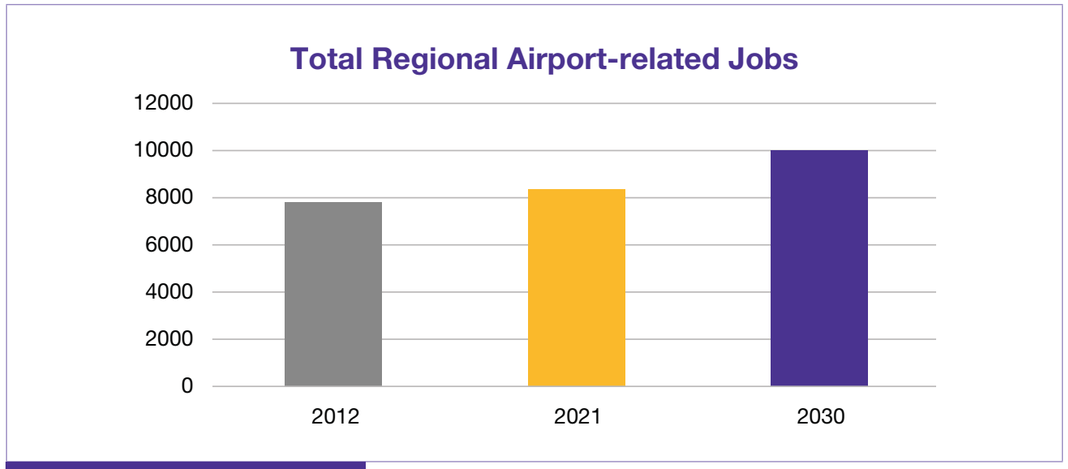


Figure 9: NIAL total job contribution regionally

5.2 Wider economic contribution

Airports are an essential driver for modern regional economies. Without effective, quick and efficient connectivity to the global market, regions struggle to attract inward investment from multinational companies and also to develop trade sectors.

Since the previous masterplan was produced there have been significant changes in the economic conditions the airport is operating under, notably the global recession significantly shrinking the economy, impacting upon air transportation across the UK.

Despite the economic downturn however, the North East has retained a strong base of manufacturing and exporting businesses.

Throughout this period of economic uncertainty, the airport's contribution to the region has also remained strong. In 2012, we commissioned York Aviation to undertake an analysis of this. York calculated a current overall annual contribution of £646 million in GVA (Gross Value Added) and journey time savings to the economy. GVA is the measure of the economic value of the goods and services produced by an industry or business. It is equivalent to the sum of wages, salaries and profits generated.

This direct economic benefit occurs through airline activity, ground services and other related activity. In addition to the direct impact, there are catalytic economic benefits of the airport to the region as a result of connectivity, such as inward investment, benefits to business and tourism.

The entire catalytic impact of the airport is difficult to fully calculate, so York have focused on journey time savings.

Journey time savings for business travellers as a result of the airport, it is estimated, equate to around £151 million - £116 million from UK business passengers and a further £35 million for foreign business passengers. Including leisure passengers this totals £243 million.

We estimate that passengers departing from the airport in 2012 contributed around £49 million to the public purse through the payment of Air Passenger Duty.

The airport also plays an important role in supporting the visitor economy in the North East. It is estimated that 250,000 overseas visitors came to the region last year via air, along with around 150,000 domestic visitors. The spending of these visitors contributes significantly to the regional economy, generating around £57 million in GVA.

A summary of our contribution is highlighted in the table below:

Summary of Economic Impacts in 2012	
Total GVA & Employment Impacts	£403 million
Total Journey Time Savings	£243 million
Total	**£646 million**
Other Impact Indicators	
Value of Business Travel from Newcastle International Airport	£70 million
Value of UK Exports Shipped via Newcastle International Airport	£174 million
Air Passenger Duty Paid at Newcastle International Airport	£49 million

Figure 10: Summary of NIAL economic impacts 2012

Airport jobs

	On site	Total region
2012:	3,200	7,800
2021:	3,500	8,500
2030:	4,100	10,000

Airport regional economic impact

2012: £646 million
2021: £942 million
2030: £1.3 billion

5.3 Future Economic Contribution

If the airport is able to expand, its economic impact will grow. It is estimated that by 2021, the airport will contribute £942 million to the regional economy, and by 2030, this will increase to £1.3 billion.

In 2012, the value of exports flown from Newcastle Airport was £174 million. Future predictions for exports flown from the airport have yet to be calculated, but we estimate that the 2013 figure will be £245 million.

The table below provides an overview of the airport's contribution across the plan period.

Future Economic Impacts of Newcastle International Airport (000s jobs and £ million at 2012 prices)		2012	2021	2030
Gross Value Added & Employment Impacts				
North East GVA & Employment Impacts	GVA	**£403**	**£536**	**£704**
Total Journey Time Savings		£243	£406	£642
Total		**£646**	**£942**	**£1346**
Other Impact Indicators				
Value of Business Travel from Newcastle International Airport		£70	£97	£125
Air Passenger Duty Paid at Newcastle International Airport		£49	£69	£92

Figure 11: Summary of future economic impacts of NIAL

Source: York Aviation

During the plan period we will maximise the airport's economic output through utilisation of our existing on-site resources. We hope to further expand operations at our fire training academy, providing improved facilities for airport uses but also to accommodate additional training requirements to service the existing offshore oil and gas sector and the emerging renewables industry.

Similarly with the Newcastle College Aviation Academy, we hope to build on the existing foundations and work collaboratively with the college to increase our aviation education package.

By 2021, it is anticipated that only a small section of the Southside Development area will be completed. This is however likely to contribute £78 million per annum to the regional economy. By 2030, the Southside Development sites are likely to be fully developed and contributing £128 million annually to the regional economy.

The creation of the Southside Development will further increase the economic contribution to the region, by bringing significant increases in jobs, as well as providing facilities for bespoke hangarage, office and freight accommodation, allowing the region to remain competitive in the world market.

6.0 Surface access strategy

Newcastle Airport is a critical component of the transport infrastructure for the North East. In addition to providing national and international air transport, the airport is a destination in its own right for staff, local people making public transport connections and members of the public either visiting the airport or picking-up and dropping-off passengers.

Accessibility to and from the airport is hugely significant in providing a well-functioning facility. We work closely with a range of stakeholders, including Newcastle City Council and Northumberland County Council, the Highways Agency and Nexus and other public transport providers, to ensure that as the airport expands we have enough capacity in our transport network to accommodate this growth.

In driving forward new transport initiatives, sustainability is at the heart of our strategy. We are committed to ensuring the increased use of sustainable transport, easing road congestion and reducing pollution, in line with the Government priorities. For this to be effective across the plan period it is important that we have an up to date Surface Access Strategy.

We are currently in the process of reviewing our Surface Access Strategy to reflect the future needs of the airport. We propose to outline a robust series of targets and initiatives to help to limit our carbon footprint, in line with the requirements of the Aviation Policy Framework. The full document will be published in due course, however in the interim, we have provided an overview of surface access priorities within this masterplan.

6.1 Existing surface access infrastructure

Newcastle Airport is primarily served by the A696 dual carriageway, which connects to the A1, thereby accessing the countrywide highway network. Access to the Freight Village and airport southside is via the B6918 Ponteland Road, which joins the A696 at the terminal entrance. Improvements to both the junctions of the terminal and Freight Village have been undertaken in recent years, to ensure that the road network can facilitate the volume of traffic accessing the airport.

Existing access to the terminal is via a circulatory system, which allows a flow of vehicles through the site, to the hotels, filling station, car parks and terminal frontage.

In addition to a good highway network and over 7,500 on-site parking spaces, express pick up and drop off, short stay, medium stay and long stay, there are a number of other transport methods at the airport.

During our last Modal Share Survey, carried out in 2013, just over 20% of all surface trips to the airport were made using sustainable forms of transport. These included trips by Metro, bus, coach, cycling and car share. The equivalent information for staff during this survey indicated that around 13% of staff travel using these methods. These figures compare favourably with other UK regional airports.

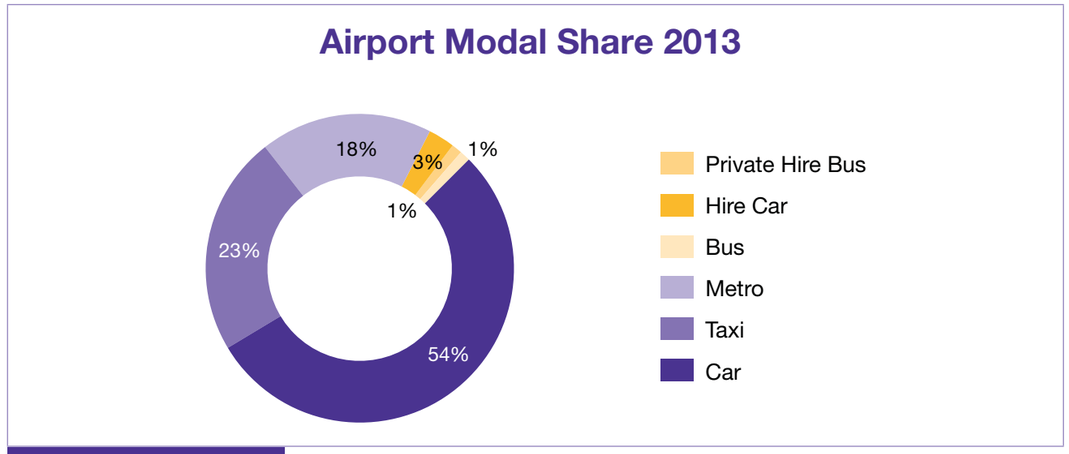


Figure 12: NIAL Modal Share 2013

6.1.1 Metro

After the car, the Metro light rail system is the most popular means of travel to the airport. The airport is served by two Metro stations, the main station connected directly to the terminal building and the second at Callerton Parkway, a short walk from the southside of the airport. These stations allow journeys to Newcastle city centre of around 23 minutes, every 12 minutes at peak times. The Metro offers good connectivity to the Tyne and Wear conurbations, including Sunderland, Newcastle, and Gateshead and also connecting, via a change at Newcastle Central Station, into the National Rail Network.

We work closely with Nexus, Metro's operator, to improve facilities for those travelling to and from the airport. Past initiatives, such as our investment into Central Station to provide an up escalator for passengers, helped to significantly improve the interchange for customers with luggage. Recent on-going reinvigoration of the system by Nexus has seen the creation of dedicated luggage storage areas on Metro trains and the upgrading to new smart ticketing machines which allow electronic ticket purchases via credit card and paper money. These improvements are also anticipated to result in an increase in the Metro modal share for the airport. Whilst the Metro is not a 24 hour service, will continue to work with Nexus to increase the hours of operation to accommodate the busy early morning period.

6.1.2 Bus

There are a number of local bus services in operation serving the region, in addition to a National Express coach service between Glasgow and Hull, which makes a stop at the airport. Many of the local services pick up and drop off directly outside the terminal, with others on Ponteland Road which also serve the airport southside. These services provide public transport links to communities not served by the Metro, such as the surrounding towns and villages of Ponteland, Dinnington, Woolsington and Wideopen, as well as Cramlington, Killingworth and Hexham.

Some of these services operate at times when the Metro does not and therefore serve those making early morning trips to and from the airport. The overall proportion of people travelling to the airport by bus is very modest, at less than 1%. This will be an area for growth going forward in the plan period. There are also opportunities to increase bus travel for those communities outside of the Tyne and Wear conurbation which are not served by a direct train service. We hope to explore the use of shuttle bus services to those communities during the plan period.

6.1.3 Taxi

Taxis are provided on site via the Newcastle International Airport Taxi Association. The Association provides a number of taxi ranks running across the terminal frontage, allowing pick-ups and drop-offs directly outside of the terminal building. In addition to this service, pre-booked taxis are able to pick up and drop off in our car parks.

6.1.4 Cycling

Cycle racks are provided at the front of terminal, adjacent to the short stay car park, as well as at the majority of locations across the airport site. Staff changing and shower facilities are provided for almost all staff.

6.1.5 Walking

There are well established routes for pedestrians walking to the airport. This will be kept under review to ensure that pedestrian access to and around the airport continues to be safe and convenient.

6.2 Traffic forecasts

Through analysis of existing trip patterns and projected passenger forecasts, we anticipate that trip generation to the airport will grow accross the plan period. Whilst we will continue to drive forward improvements in sustainable methods of travel we also recognise that some of our passengers, for reasons of geography, convenience, customer preference or due to their travel times being outside of public transport operation, must travel by car. Car parking is also an important revenue generator to the airport business.

Increases in vehicle movements relating to the terminal infrastructure are likely to be as follows (for comparative purposes actual 2012 figures have been provided):

- 2012 average daily vehicle movements: 12,700.
- By 2021 we anticipate 14,000 daily vehicle movements.
- By 2030 we anticipate 16,250 daily vehicle movements.

Considering the Southside Development area, we anticipate the following vehicle movements across the plan period.

- By 2021 anticipated average daily movements are expected to be up to 4,000 movements.
- By 2030 on completion of the development, average daily movements are anticipated to total up to 5,000 movements.

Given the likely bespoke nature of the Southside Development particularly relating to Site A, these figures are indicative and are likely to vary depending upon the developed use of the sites. By forecasting indicative trip generation over the masterplan period however, we are able to assess the infrastructure requirements needed to meet this growth, whilst also taking into account potential sustainable travel initiatives. The generation forecasts do not include the potential impact of the through road proposed by Newcastle City Council to support possible housing development. They also exclude traffic generation for sites C and D, as they are planned beyond 2030.

6.3 Future surface access requirements

6.3.1 The airport road network

The masterplan allows for the eventual reconfiguration of much of the existing internal road system, in order to better facilitate increased passenger numbers and subsequent vehicle movements over the plan period. The most significant of these are:

- New entrance arrangements, including potential improvements to the existing roundabout access and a new dedicated junction to the long stay car park. A new junction will be constructed only when traffic numbers demonstrate a requirement. The preferred junction location is the site of the existing A696 Prestwick Road Ends roundabout, although more detailed studies will define the exact location. It is likely that these works will be required after 2021, and before 2030. The previous masterplan envisaged a grade separated junction. This scale of infrastructure is no longer expected to be required. Any improvement will be at ground level.
- Alterations to the internal road layout to allow for improvements to circulation following the potential provision of a multi-storey car park. It is likely that these works will be required after 2021 but before 2030.
- A road link through the southside of the airport between Brunton Lane and Ponteland Road, predominantly to serve potential local housing developments. The timing of this road and the case for it will be determined via the NewcastleGateshead LDF process.
- The possible implementation of the Callerton Link Road to facilitate the Southside Development. These works are likely to be required after 2021 but before 2030. We acknowledge residents' concerns in relation to this aspect of the masterplan and are committed to a review of access requirements relating to the Southside at the appropriate time.

6.3.2 Car parking

Car parking development will comprise provision of the following:

- Additional long-term self-park and courtesy-park car parks to the north of the site, north of the passenger apron but within the airport's northern boundary. It is estimated that around 3,000 spaces will be required by 2021, with a further 2,000 spaces by 2030.
- Reconfiguration and potential extension of express parking area located to the front of the terminal providing improved circulation and reduced queuing by 2021.
- Additional short-term car parking close to the front of the terminal, probably in the form of a multi-storey car park, required between 2021 and 2030.

The land-take associated with long term car parking to the north will be confined to within a line of existing woodland planting, thereby protecting the visual amenity of residents in Prestwick Village. This is a commitment we made in the 1993 and 2003 masterplans, and one which we will continue to make.

6.3.3 Public and sustainable transport

A wide range of initiatives to increase the use of sustainable surface modes of travel will be undertaken through the masterplan period, building on the successes of the existing implemented schemes.

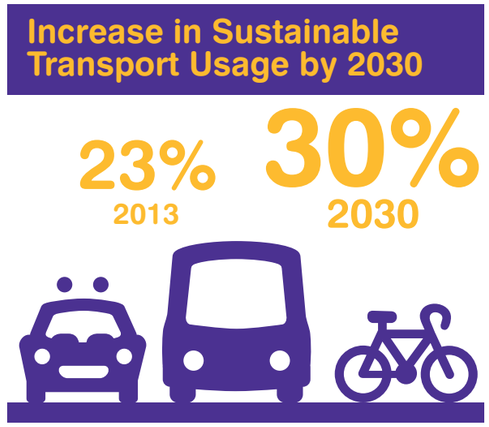
By 2030:

- we seek to further increase sustainable transport usage to 30%.
- we will seek to grow our staff's sustainable transport usage to 25%.

In order to meet these targets we propose an expansion of existing staff green travel initiatives, including our corporate bus and metro ticketing initiatives, car sharing club, and Cycle2work scheme. Each of these schemes aims to incentivise staff members to travel more sustainably either through direct discounts of tickets and bikes, or indirectly through reduced costs of motoring through car sharing.

We will also continue to look for improvements to Metro and bus services and facilities, including support for improvements to rail/Metro interchange at Newcastle Central Station and other key interchange points. As these services are operated outside of the airport's control, any improvements in facilities, scheduling and subsequent patronage will require full liaison and continued co-operation with partner organisations.

On site, we will seek to upgrade Metro and bus facilities at the airport to include an improved public transport interchange, in liaison with operators, further improving the customer journey for public transport users.



We will also continue to explore the potential provision in the very long term of direct mainline rail services to the airport, further opening up the airport's catchment. Given the cost of such infrastructure provision, it is likely that this would be an initiative brought forward through regional or central government funding.

The modal share targets that we have set, and on which we will be judged when applying for future planning permissions to expand and develop, are stretching and will be a challenge to meet. They will require significant investment and marketing to ensure that staff and customers are attracted to the public and sustainable transport options that are available to them.

The Airport Consultative Committee, the Local Transport Forum and other stakeholders will oversee progress on our surface access strategy and our success in encouraging sustainable transport use. More importantly, public opinion will be the best measure to judge whether or not success has been achieved.

7.0 Environment

As the airport grows, so too does its potential to impact upon our surrounding communities and the environment. In bringing forward development, via the planning system, full environmental impact assessment will be carried out in line with all current regulations. The airport and its environs are an extremely valuable resource. We aim to maintain and grow the airport and the benefits that it brings, while managing the environment in a manner which will sustain and enhance its natural assets.

This chapter provides an overview of the anticipated impacts of the airport through the plan period, and identifies possible mitigation measures. In carrying this out, we have provided information in relation to air quality and noise, as well as energy, water, biodiversity and land use.

Our main objective is to grow the airport sustainably, providing long term environmental improvements as well as day to day activities to ensure that our natural resources and neighbouring communities are protected.

7.1 Noise

There are three distinct elements of noise generated by the airport:

- air noise.
- ground noise (including aircraft manoeuvring on the apron area)
- road traffic noise.

7.1.1 Air noise:

Air noise relates to either airborne aircraft or those on the ground, as they prepare for departure or are decelerating along the runway following landing. This noise source has been analysed in relation to industry standards.

Contour modelling was first carried out during the preparation of the 1994 masterplan. The base year for the modelling was 1993 and we have a commitment that the noise impact in 2030 will not exceed 1993 levels. A comparison of 2030 and 1993 noise contours demonstrates that this commitment can be met.

The following pages contain noise contour diagrams for the following years

Figure 15: 1993 Daytime contours (7:00 - 23:00 hrs)
Figure 16: 1993 Night-time contours (23:00 - 7:00 hrs)
Figure 17: 2012 Daytime contours (7:00 - 23:00 hrs)
Figure 18: 2012 Night-time contours (23:00 - 7:00 hrs)
Figure 19: 2021: Daytime contours (7:00 - 23:00 hrs)
Figure 20: 2021: Night-time contours (23:00 - 7:00 hrs)
Figure 21: 2030: Daytime contours (7:00 - 23:00 hrs)
Figure 22: 2030: Night-time contours (23:00 - 7:00 hrs)

Each of the key masterplan years (2021 and 2030) has been assessed for both the daytime (07:00 – 23:00) and night time (23:00 – 07:00) periods, and noise contour maps have been produced in line with national standards for contour production.

A noise contour is a line showing areas of equal noise impact from arriving and departing aircraft. Each contour indicates the areas having the same average noise exposure. Noise is measured and modelled in decibels (dB) L_{Aeq}, which is the most recognised measure, and the term refers to the Equivalent Continuous Level of noise. In the case of aircraft noise, the accepted approach is to model over a busy 16 hour daytime period, expressed as $L_{Aeq\ 16h}$ and 8 hour night time period $L_{Aeq\ 8h}$.

The daytime contours start at 57 dB $L_{Aeq\ 16h}$ and the night time contours at 48 dB; $L_{Aeq\ 8h}$ increasing in 3dB steps to 72dB $L_{Aeq\ 16h}$ and 66 dB $L_{Aeq\ 8h}$ respectively.

To provide a context for understanding the relevance of noise contours, Planning Policy Guidance note 24 – Planning and Noise (PPG24) - provides guidance in understanding of noise levels and their potential impact. Whilst this guidance has been superseded by the National Planning Policy Framework (NPPF), this guidance remains current in the relevant local plans for the areas surrounding the airport. We will seek to have the relevant policies from PPG 24 (which are considered to have a sound basis) transposed into emerging development management guidance.

PPG24 defines detailed noise exposure categories (NECs) for proposed residential development affected by transportation noise. The NECs and the levels of air traffic noise, road traffic noise, rail traffic noise and mixed sources that apply to new residential property are given in figures 13 and 14. The NECs correlate directly to the noise contours the airport produces.

NEC	Description
A	Noise need not be considered as a determining factor in granting planning permission, although the noise level at the high end of the category should not be regarded as a desirable level.
B	Noise should be taken into account when determining planning applications and, where appropriate, conditions imposed to ensure an adequate level of protection against noise.
C	Planning permission should not normally be granted. Where it is considered that permission should be given, for example, because there is no alternative quieter site available, conditions should be imposed to ensure a commensurate level of protection against noise.
D	Planning permission should normally be refused.

Figure 13: Description of Noise Exposure Categories

Noise levels corresponding to the Noise Exposure Categories for new dwellings $L_{Aeq,T}$ dB

Noise source and time of day	Noise Exposure Category			
	A	B	C	D
Air traffic				
07:00 – 23:00 (16 hour period)	<57	57 – 66	66 – 72	>72
23:00 – 07:00 (8 hour period)	<48	48 – 57	57 - 66	>66

Figure 14: Noise Exposure Categories

Based on Government research, the 57 dB $L_{Aeq\ 16h}$ daytime index is commonly considered to represent “the approximate onset of significant community annoyance”, however, it is recognised that there may be some individuals living outside the 57 dB $L_{Aeq\ 16h}$ contours who will also consider themselves affected by aircraft noise. The 48 dB $L_{Aeq\ 8h}$ contour has similar significance in terms of community annoyance during the night time period.

The contours below present the predicted 2021 and 2030 daytime and night–time noise contours conducted to inform the masterplan. These contours are modelled based upon air traffic movements data for a summer day and night in each of the forecast years. To provide an example of the current noise environment, figures 17 and 18 illustrate the modelled noise contours for a summer day and night in 2012.

The noise contours have been produced on our behalf by the CAA’s Environmental Research & Consultancy Department (ERCD) using the internationally recognised ANCON-II noise model. The noise calculations take account of the number and types of aircraft and are based upon flight track information taken from our Noise and Track Monitoring System.

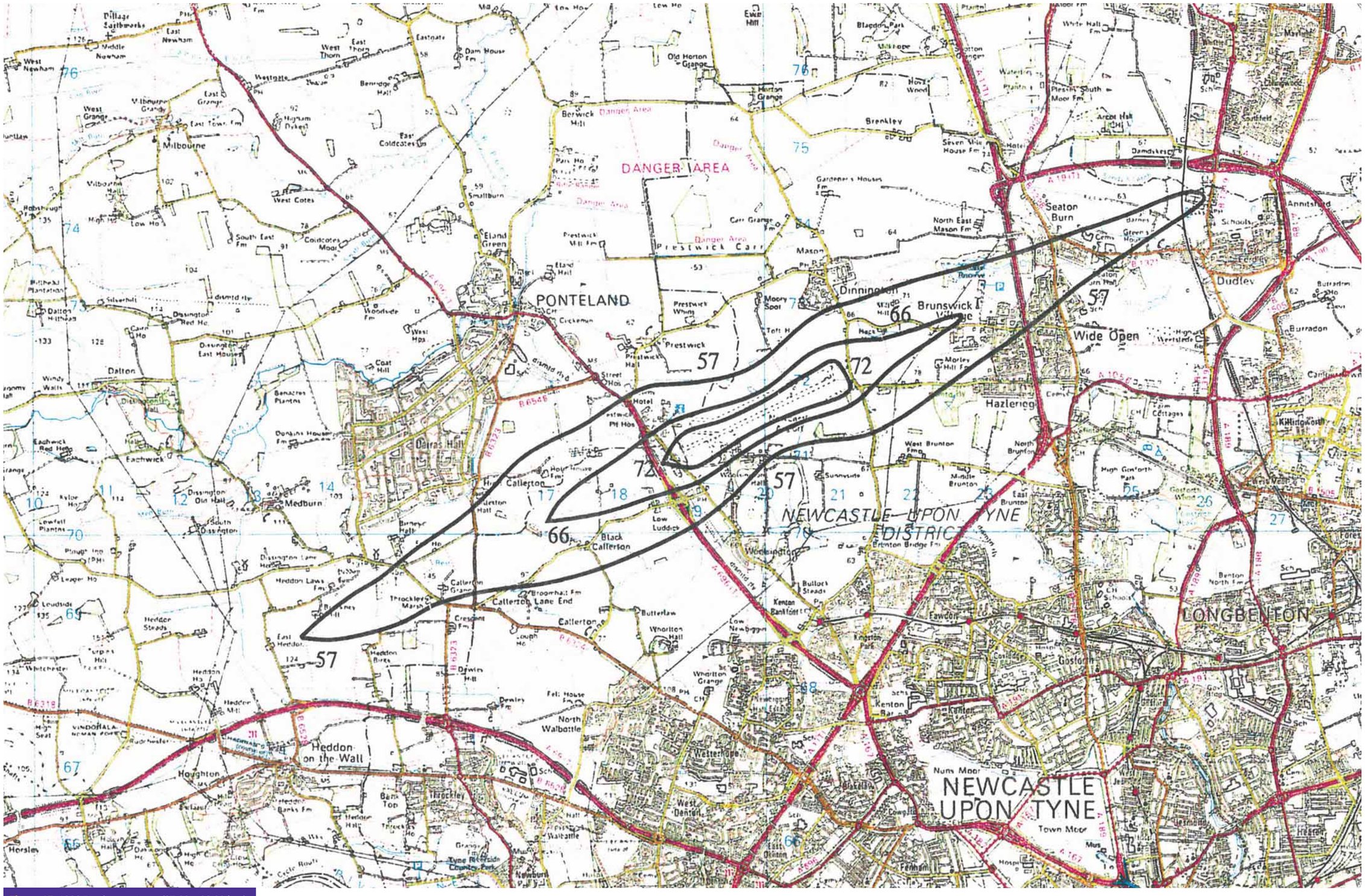


Figure 15: 1993 Daytime contours (07:00 – 23:00 hrs.)

Figure 16: 1993 Night-time contours (23:00 – 07:00)

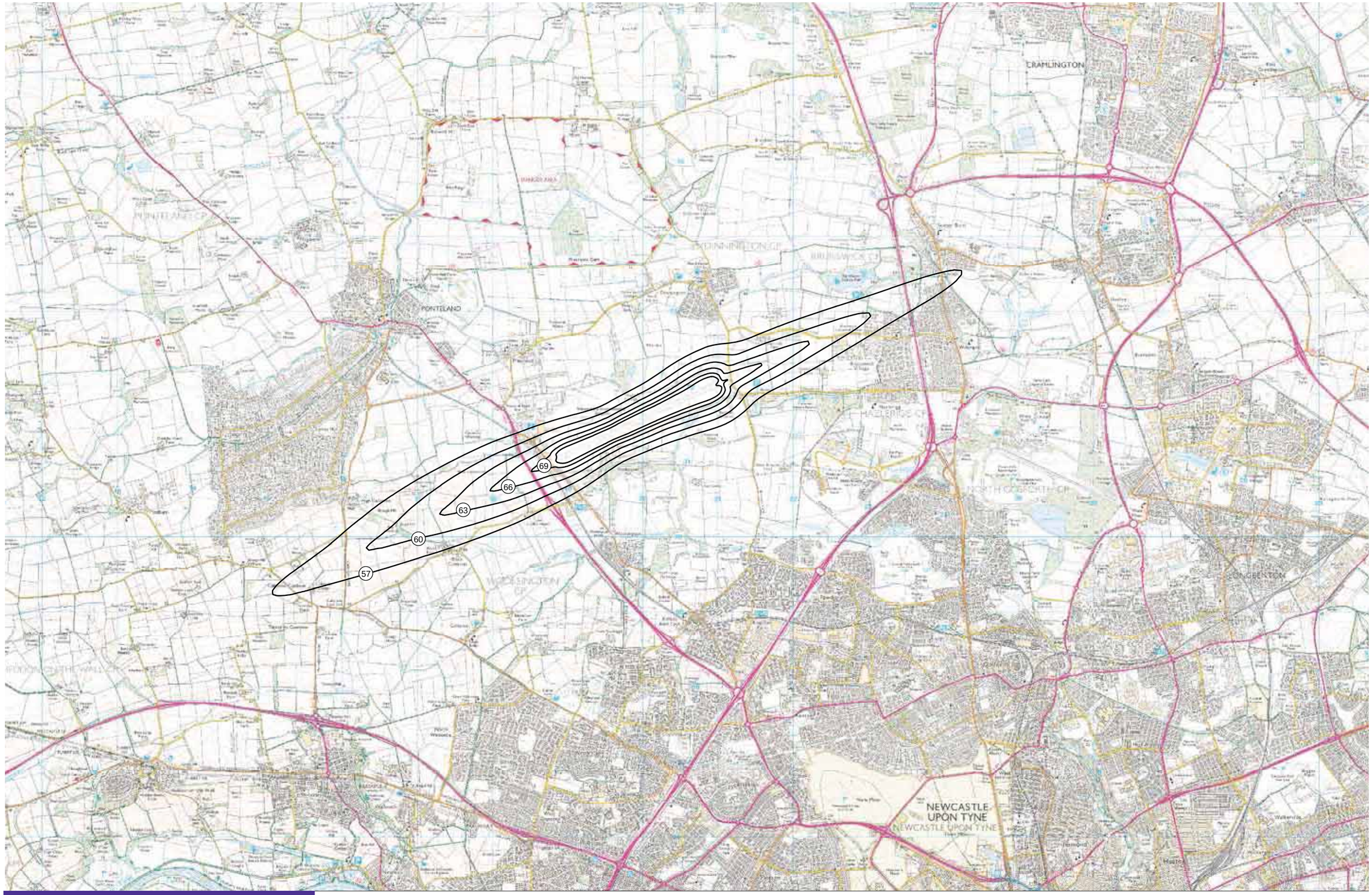


Figure 17: 2012 Daytime noise contours (07:00 - 23:00) – $dBL_{Aeq,16h}$

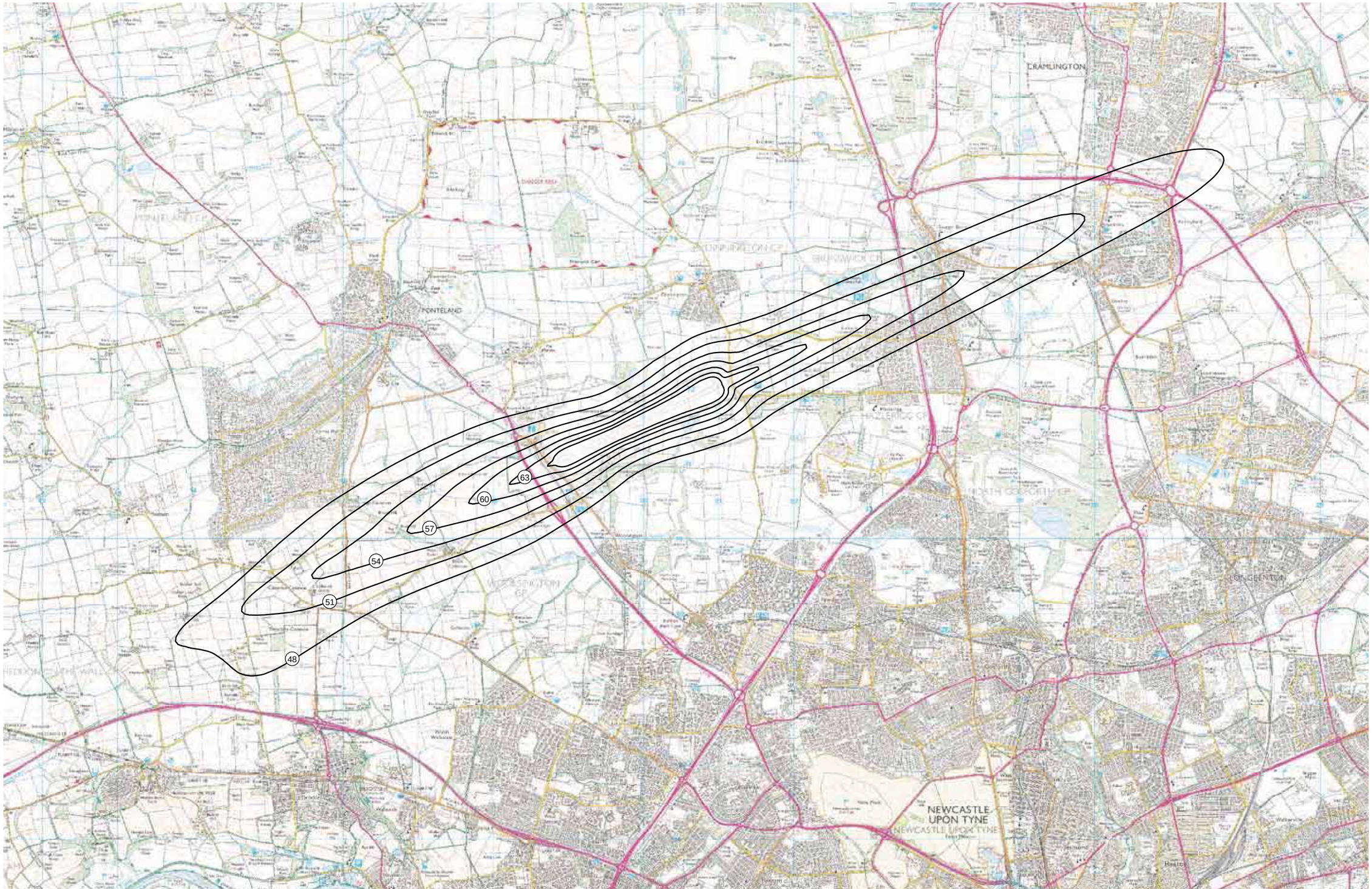


Figure 18: 2012 Night-time noise contours (23:00 - 07:00) – $dBL_{Aeq,8h}$

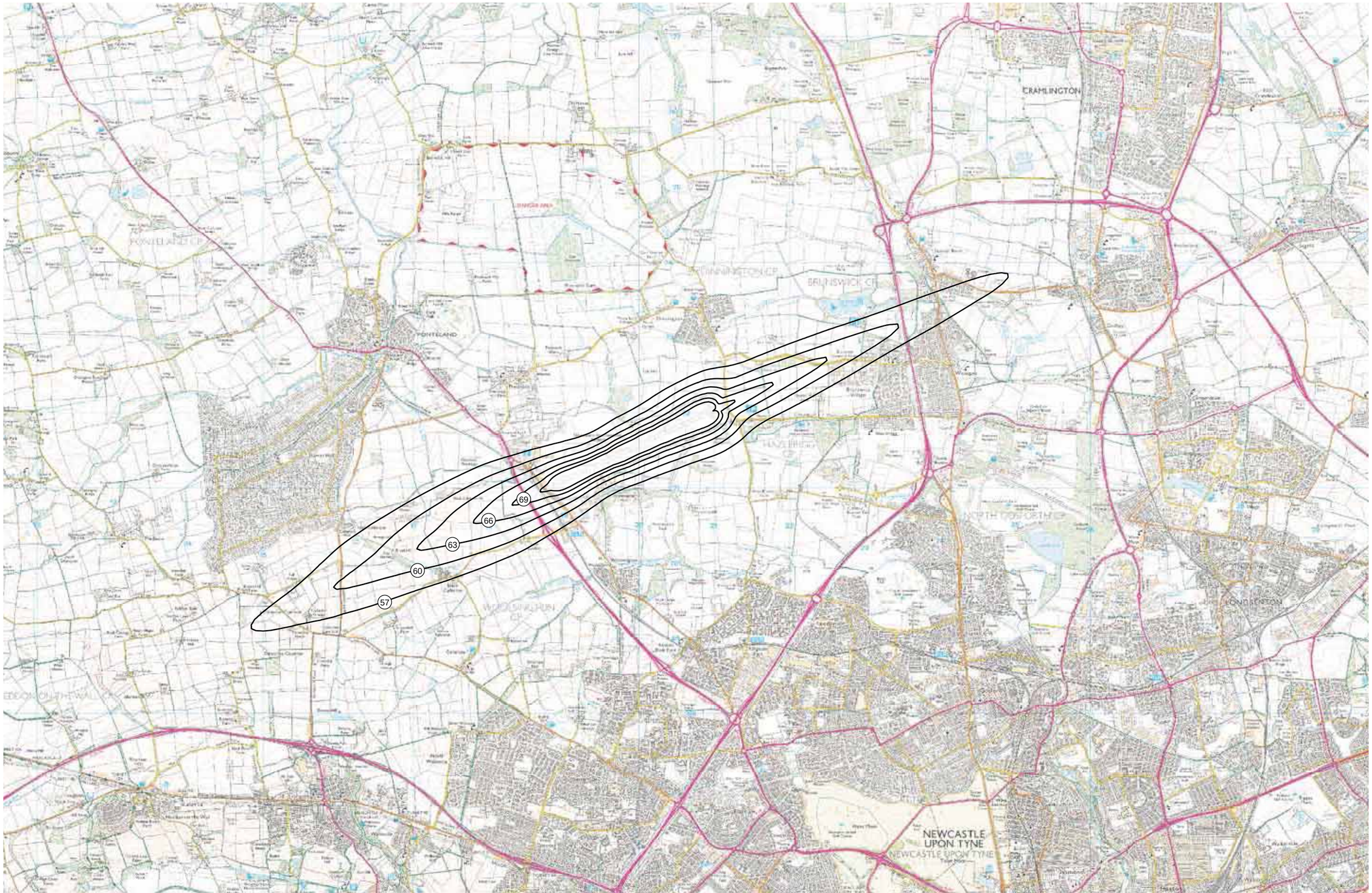


Figure 19: 2021 Daytime noise contours (07:00 - 23:00) – $dBL_{Aeq,16h}$

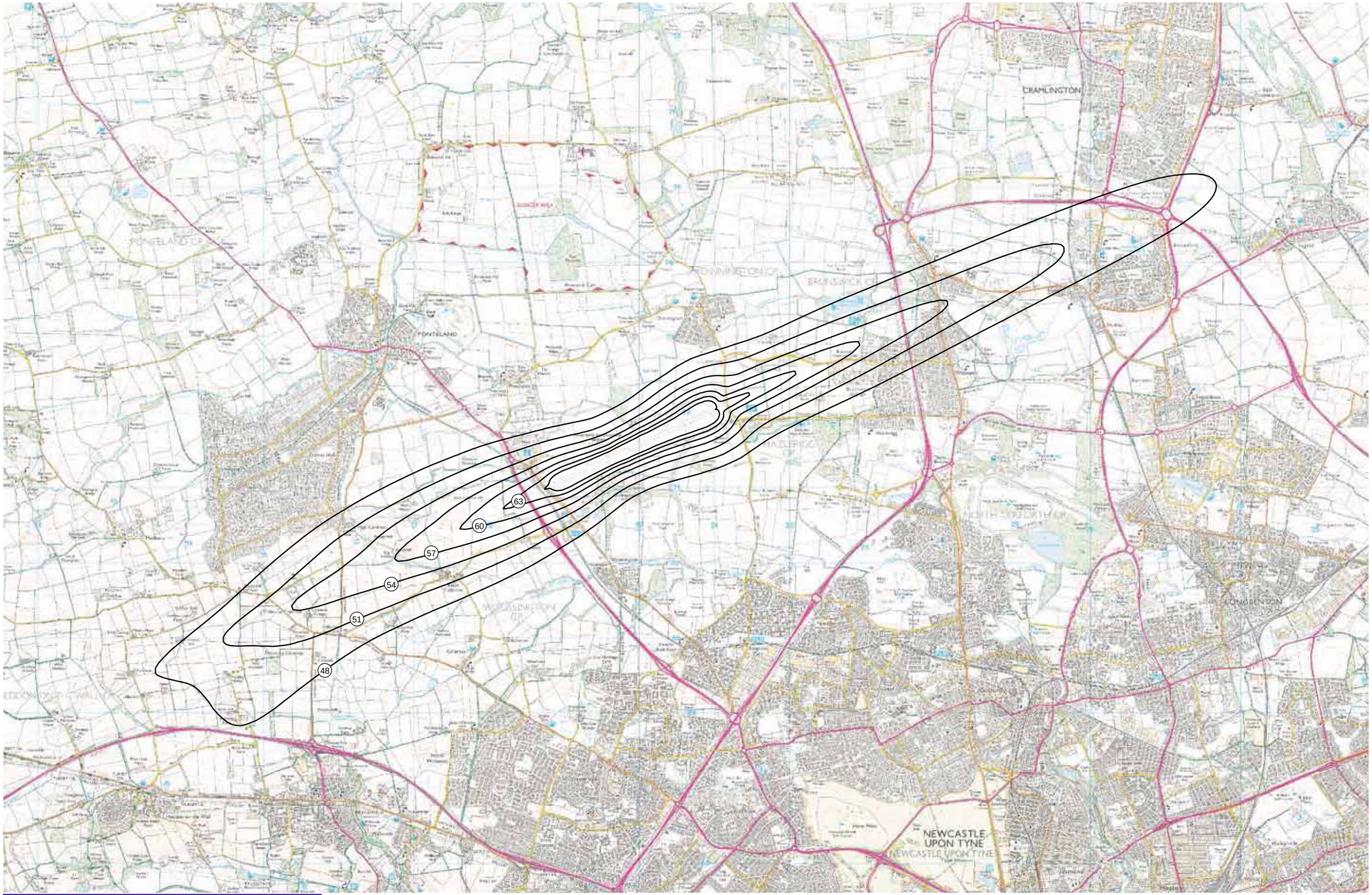


Figure 20: 2021 Night-time noise contours (23:00 – 07:00) - $dBL_{Aeq,8h}$

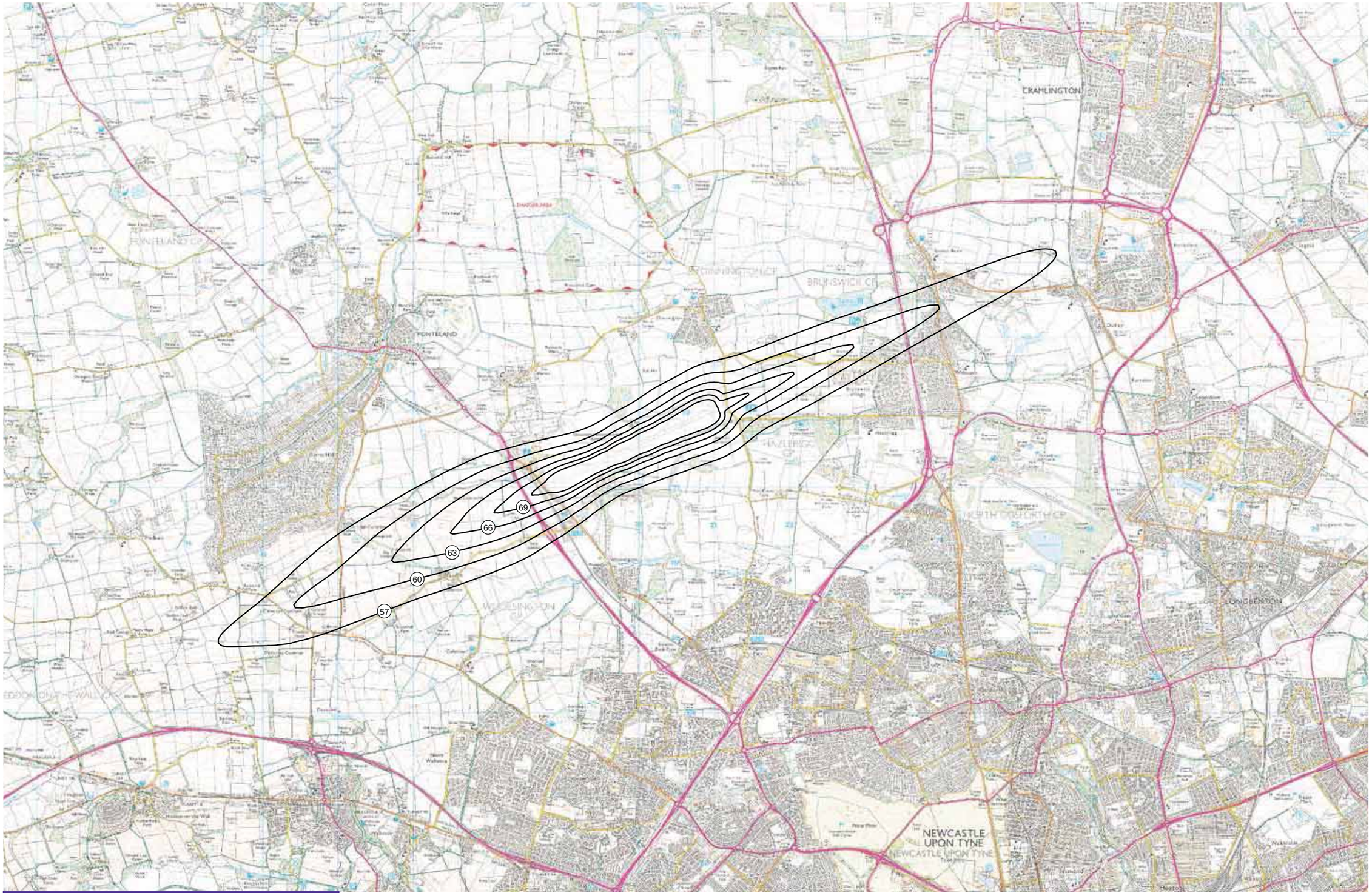


Figure 21: 2030 Daytime noise contours (07:00 - 23:00hours) – $dBL_{Aeq,16h}$

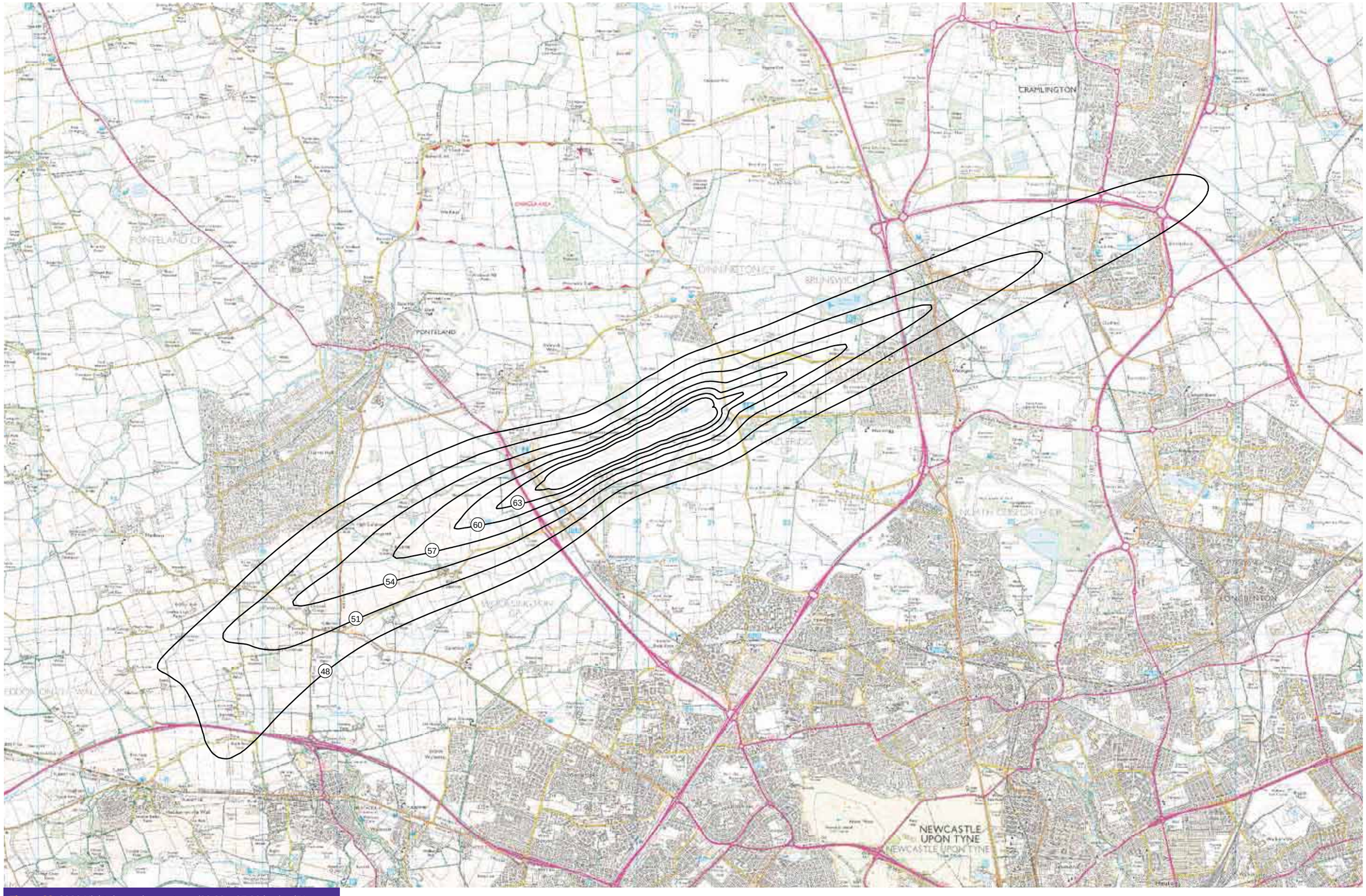


Figure 22: 2030 Night-time noise contours (23:00 – 07:00 hrs.) - $dBL_{Aeq,8h}$

7.1.2 Air noise impact

2012

The current size of population living within the daytime 57 decibel (57 dB $L_{Aeq\ 16h}$ contour is small and encompasses only scattered dwellings and a small area to the north of Wideopen. This suggests that few people are currently significantly impacted by daytime air noise. At night, the 48 decibel contour stretches east as far as Dudley and encompasses the northern half of Wideopen).

2021

In 2021 the daytime 57 dB $L_{Aeq\ 16h}$ contour area comprises a scattered number of dwellings and a small part of Wideopen. The area of the 57 dB $L_{Aeq\ 16h}$ contour increases from 7.6 km2 in 2012 to 9.0 km2 in 2021. There are no properties exposed to levels of noise 63 dB (A) or higher. At night time the 48 dB $L_{Aeq\ 8h}$ is approximately double the area of the 57 dB $L_{Aeq\ 16h}$ contour, covering an area to the north of Wideopen extending to the east between Cramlington and Dudley. During the night time hours there are no properties within the 57 dB $L_{Aeq\ 8h}$ Contour.

2030

The 2030 57 dB $L_{Aeq\ 16h}$ contour is broadly unchanged compared to 2021, with only a small increase in the contour area affecting Wideopen. A key difference is that a very small number of households are likely to be exposed to levels of 63dB (A). The night time 2030 contour only increases in size by approximately 10% compared to the 2021 night time contour. This results in a small number of households being exposed to levels of 57 dB(A).

7.1.3 Mitigation of air noise impacts

Over the masterplan period, measures will be implemented to mitigate any noise impacts on the local communities.

A Noise Action Plan has been produced to comply with the Environmental Noise (England) Regulations 2006 Environmental Noise Directive 2002/49/EC. The Action Plan aims to manage and reduce environmental noise where necessary and to preserve environmental noise quality where it is good.

The Action Plan has regard to the International Civil Aviation Organization (ICAO) 'balanced approach' to controlling noise at airports, which has four main elements summarised below:

- reducing noise at source – to be regulated through ICAO, by means of progressive tightening of noise certification standards. The latest 'Chapter 4' standard for new aircraft took effect in 2006.
- land-use planning and management – to ensure that inappropriate development is discouraged or prohibited around airports.
- noise abatement operational procedures – steps taken by pilots and air traffic controllers to minimise the noise nuisance from 'over flights'.
- operating restrictions – measures that limit the access of aircraft to airports, such as night restrictions or the phased withdrawal of the noisiest aircraft types.

The Noise Action Plan sets out a number of actions to achieve this aim over a five year period. After this period the plan will be updated with revised actions.

A number of key mitigation measures are currently undertaken at the airport, including:

- Continuous Descent Approaches – aircraft to use low power, low drag approach techniques at all times.
- Visual approach requirements – to ensure that aircraft do not establish onto final approach too late or too low.
- Ground engine testing – this is prohibited between 2300 and 0600 (winter), 2200 and 0500 (summer), unless there are overriding operational requirements.
- General Aviation – such aircraft must avoid overflying built up areas and training circuits are variable to reduce the impact on one area.
- Preferential Departure Routes (PDRs). Following an extensive consultation as part of the Newcastle Airspace Change Proposal in 2004, we implemented these routes. The routes are well established and have resulted in a reduction in noise complaints within the local communities.
- Standard Instrument Departures (SIDS) and Standard Arrival Routes (STARS). Air Traffic Services are working with the based airlines to implement SIDS and STARS, which will improve the accuracy of routeing. A consultation on these procedures will be carried out in autumn 2013.

Further to the above, we also operate a Noise and Track Keeping system to provide real time noise levels at four permanent locations within the local communities:

- Dinnington First School.
- Ponteland Middle School.
- Middle Drive, Woolsington.
- Seaton Burn Community College.

In addition to the permanent monitors, a portable noise monitor is available to assess noise levels at different locations. In parallel with the consultation on this masterplan, investment is being made into a new Noise and Track Keeping system. This new system offers an upgrade on the existing equipment, with the ability to monitor aircraft against agreed operational procedures, such as Continuous Descent Approaches (CDAs). We also propose to install a permanent noise monitor in Heddon-on-the-Wall replacing a monitor removed from Walbottle Campus when the school was redeveloped.

Towards the end of the plan period, should noise insulation be required, we will consult on a noise insulation scheme.

Newcastle Airport will continue to support Sustainable Aviation and in relation to noise the principles of the Noise Road Map will be followed. This document sets out a commitment to developing ways to limit and where possible reduce the number of people affected by aircraft noise. The Road Map provides a useful toolkit for UK airports to follow and share best practice in areas such as community engagement, land use planning and operational measures.

7.1.4 Ground noise impact

Ground noise arises from aircraft manoeuvring on the apron and taxiways, together with a range of ground vehicles, power units and plant.

By 2021, increases in ground noise are likely to be barely perceptible, at less than 1 decibel. The nearest residential properties to the stands and aprons are located within Prestwick Village to the north, approximately 580 metres away. Ground noise is not likely to constitute an adverse impact on local residents in Woolsington or Dinnington, both of which are a significant distance from stands, aprons or taxiways.

By 2030, unmitigated increases in ground noise are likely to be minor, at less than 3 decibels. However, if required, mitigation measures would be implemented to ensure that there is no perceptible increase in ground noise levels.

7.1.5 Mitigation of ground noise impacts

The following proposals for mitigation measures will be considered as appropriate:

- Acoustic screening of new developments where possible and where required. This will include appropriate screening between new apron developments and the village of Prestwick.
- Design and orientation of aircraft stands to minimise noise disturbance.
- Implementation of a preferential stand use policy, to avoid noise-sensitive areas.
- Design new pier and terminal structures to maximise noise screening.
- Provide fixed electrical ground power (FEGP) to minimise the requirement for aircraft to operate Auxiliary Power Units (APUs).

7.1.6 Road traffic noise impact

By 2021 increases in road traffic noise are likely to be barely perceptible, at less than 1 decibel.

By 2030 increases in road traffic noise are likely to be minor, at less than 2 decibels. Impacts will be concentrated on internal roads and car parks around the terminal building. The availability of the A696 dual carriageway means that it is not anticipated that there will be a significant increase in airport-bound road traffic using the roads through the neighbouring villages of Prestwick, Dinnington and Woolsington.

During the latter part of the masterplan period the southside area could be developed which may alter the local road network. The Southside Development proposal includes a possible Callerton link road. A further new road linking Brunton Lane and Ponteland Road is also proposed as part of the Newcastle Local Development Framework. Even with these additional links, traffic noise is not considered to be a significant source of noise for local residents across the plan period.

Our assessment has not taken into account the possible traffic generation from the through road proposed by Newcastle City Council to support future housing development, and does not include development of sites C and D, as they are expected to occur beyond 2030.

7.1.7 Road traffic noise mitigation

No significant road traffic noise effects are anticipated and therefore no noise mitigation measures are proposed. Although this will continually be reviewed throughout the plan period, particularly at such time local road changes are planned.

7.2 Air quality

A high level review of the previous masterplan, published in 2003, has been undertaken as well as a review of likely forecasts for future years 2021 and 2030 for the updated masterplan. The 2003 masterplan forecast that pollutant concentrations at and surrounding the airport would remain within the relevant air quality objectives for all years assessed.

Newcastle City Council has an obligation to manage air quality and is required to monitor pollution levels and take action to reduce these levels where they exceed prescribed levels. This is carried out via an Air Quality Management Plan. At the present time air quality in the area of the airport is good. Newcastle City Council has declared two air quality management areas, areas where at least one of the air quality objectives is exceeded. These are located in the city centre and Gosforth, which lies 5km south east of the airport. No such management area has been required to be developed at the airport.

Monitoring of nitrogen dioxide, one of the main potential pollutants, has been undertaken at the airport since 1997. Recent annual mean nitrogen dioxide concentrations for 2011 and 2012 indicate that levels remain below the annual mean nitrogen dioxide objective at locations of relevant public exposure.

Road traffic data and aircraft movements per year have been reviewed for a base year of 2006 and the forecast years of 2021 and 2030. A base line year of 2006 has been selected as a full traffic assessment was carried out during this year, and passenger numbers were higher than current levels, at 5.4 million. It is important to note that road vehicle emissions and therefore background pollutant concentrations are expected to decrease across the period. This is not due to a reduction in vehicles, but rather to developments in clean fuel technologies. Further improvements in the automotive industry are predicted to come forward during the masterplan period, with alternative fuel

vehicles such as electric and hydrogen powered cars becoming more common.

Forecasts for road traffic movements for the airport access road and the A696 for the future years indicate an 11% and 30% increase in traffic for the future forecast years 2021 and 2030, respectively, from the 2006 base year. The change in emissions due to this growth has been investigated and is described below.

Forecasts for aircraft movements at the airport indicate a 5% and 11% increase in aircraft movements the future forecast years of 2021 and 2030, respectively, from the 2006 base year. The change in emissions due to this growth has also been investigated and is described below. We have assumed that the use of airside vehicles will also increase in proportion to additional aircraft movements, however emissions from these vehicles are not anticipated to have a significant effect on air quality.

7.2.1 Air quality impact in 2021

By 2021, road traffic movements are anticipated to increase by 11% from 2006 base line data and an increase in aircraft movements of 5% is expected. Taking into account this forecast of growth, road vehicle emissions along the airport access road and A696 will decrease, due to expected improvements in vehicle emissions technologies.

Emissions from aircraft are expected to grow in line with movements, however due to an anticipated reduction in background pollutant concentrations it is not anticipated that an increase in emissions would result in an exceedance of the air quality objectives. The use of airside vehicles will also increase in proportion to additional aircraft movements, however, emissions from these vehicles are not anticipated to have significant effects on air quality.

7.2.2 Air quality impact in 2030

By 2030, road traffic movements are anticipated to increase 30% from 2006 base data and an increase in aircraft movements of 11% is also expected.

Total road vehicle emissions, with the exception of carbon dioxide, along the airport access road and A696 will decrease, despite the growth in traffic due to expected improvements in vehicle emissions technologies. This relative reduction is less than 2021 as the growth in traffic starts to reverse the positive impact of improving vehicle technologies.

Emissions from aircraft are expected to be proportionate to the increase in movements as mentioned above. Due to an anticipated reduction in background pollutant concentrations it is not expected that an increase in emissions would result in an exceedance of the air quality objectives. The use of airside vehicles will also increase in proportion with additional aircraft movements; however emissions from these vehicles are not anticipated to have any significant effects on air quality.

7.2.3 Mitigation of air quality impact

To ensure that air quality remains good at the airport and its surrounding area, a mitigation strategy has been put in place. These measures are listed below:

- Continue with the periodic sampling across the airport site and local villages.
- Continue to measure NOx levels at designated points on the airport site.
- Review the potential for using electric or low-emission vehicles on site building on the success of the electric vehicle charging points installed on site in summer 2013.
- Review measures aimed at encouraging the use of sustainable modes of transport.
- Periodically conduct a detailed air quality assessment.
- Carry out an air quality modelling exercise using data based upon a detailed emissions inventory.
- Minimise emissions from Auxiliary Power Units (APU) within aircraft while on the ground by using Fixed Electrical Ground Power (FEGP) at stands if available.
- Review procedures for aircraft taxiing.

Our assessment has not taken into account the possible traffic generation from the through road proposed by Newcastle City Council to support future housing development, and does not include development of sites C and D, as they are expected to occur beyond 2030.

7.3 Water quality

The protection of the aquatic environment in and around the airport has been an area of particular focus over the last 20 years. The capture, disposal and treatment (where necessary), of surface water from our site requires significant management.

A dedicated polluted water system is in operation on site to handle all surface water run-off. Run-off, via the site drainage system, is held in series of lagoons on site and from this point the system analyses the water quality. Lagoons are located to the south of the runway, with a smaller facility to the north of the main apron. If the water quality is identified as being clean then it is discharged into the local watercourse, and if not, the discharge is made to the Northumbrian Water Limited sewer.

The airport and the immediate surrounding area fall into two catchment areas in:

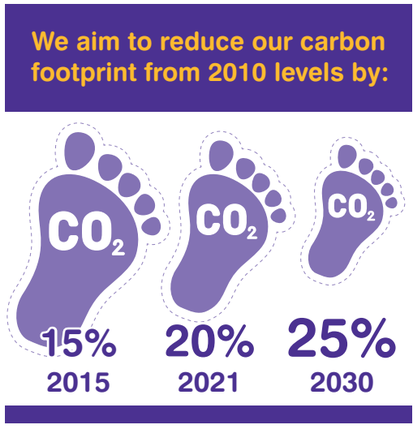
- River Tyne, via the Sunniside Drain and Ouse Burn, to the south of the airport.
- River Pont, via the Hawthorn and Whins Drains, to the north of the airport.

We hold discharge consents and land drainage consents in relation to both of our surface water discharge points, issued by both the Environment Agency and Northumbrian Water Ltd. There has been significant investment in water management infrastructure and associated monitoring systems, with nearly £2 million having been spent over the last few years.

In addition to the on-site system, we also employ external consultants to monitor water quality throughout the year on a monthly basis, and twice a week during the winter period.

All of our drainage systems are designed to meet the criteria set by the regulatory authorities to protect the local watercourses and further improvements will be made where appropriate. As part of the masterplan process we have identified a location to the north of the airport to develop new drainage facilities. The key diagram for 2030 illustrates two drainage facilities, in an area to the north of the fuel farm. It is proposed that these future water attenuation lagoons will be underground, to reduce the visual impact for surrounding communities. A full impact assessment will be carried out at such time as developments trigger the need for additional storage capacity.

All future development will be designed to meet the required guideline levels for both water quality and flood alleviation.



7.4 Energy

Energy consumption, both in terms of its financial and environmental costs, impacts significantly upon the airport. Across the site there is lighting, heating and cooling of the terminal building and the lighting of the runway and other infrastructure such as our car parks. This means that significant amounts of energy are used.

Across the masterplan period our energy commitment is threefold:

- **Energy Efficiency** – to reduce energy consumption, through improved controls and processes, in retrofitting of lighting and other installations.
- **Improving the efficiency of supply** – future developments may lead to opportunities for newer technologies with carbon efficiencies over conventional sources of electrical and thermal energy.
- **Renewable energy** – opportunities will be sought on and off site to implement renewable energy strategies.

We have identified a number of targets to reduce the airport's energy consumption, greenhouse gas emissions and carbon footprint related to our buildings, infrastructure and vehicle fleet. In line with our Energy Policy, a five-year strategic plan produced in 2010, we aim to reduce our carbon footprint from 2010 levels of 11,197.3 tCO_2e by;

- 15% by 2015
- 20% by 2021
- 25% by 2030

We achieved an 11.2% absolute reduction in 2010-2011, which enabled us to regain the Carbon Trust Standard. We consider that we are well on the way to achieving our 2015 target.

A significant contributor to this energy reduction has come via improvements to our lighting systems. Since implementing energy efficient lighting systems to our car parks we have achieved annual energy savings for this area of around 90%, which equates to a reduction in carbon footprint of around 100 tonnes per year. Similarly, advertising signage lighting improvements have delivered annual energy savings of over 50% and carbon reductions of around 80 tonnes per year.

We also completed a programme of high efficiency lighting replacement with movement sensors, where appropriate, within the terminal building. We are able to monitor this centrally and identify areas of high energy usage so that we can target energy saving initiatives at specific areas.

We achieved an 11.2% absolute reduction in 2010-2011, which enabled us to regain the Carbon Trust Standard. We consider that we are well on the way to achieving our 2015 target.

7.5 Climate Change

The aviation sector is responsible for about 1 to 2% of greenhouse gas emissions globally. In the UK, emissions account for approximately 6% of total greenhouse gas emissions. We recognise the current and future potential aviation has on climate change and understand that this is challenge our sector needs to address. The most effective way to reduce emissions is to take action at a global level and develop a global agreement on emissions that is comprehensive, non-discriminatory and ensures that CO_2 emissions are not displaced elsewhere.

Providing large scale sources of on-site renewable energy is a longer term aspiration across the plan period. Feasibility studies have been undertaken for a number of larger-scale renewable energy projects on site. Where new developments come forward within the plan period, such as an extension to the terminal or a proposed new pier, where there is an opportunity to do so, we will seek to incorporate renewable technologies into these developments, in line with planning and building regulations requirements.

7.6 Waste

As with energy, the generation of on-site waste significantly impacts upon our carbon footprint. Each year airport operations generate around 1,158 tonnes of on-site waste through packaging, paper, drinks bottles etc. We have actively encouraged an ethos across the airport to recycle more and send less waste to landfill.

Within all of the airport's buildings, including the terminal building, both customers and staff have the opportunity to recycle. Across the site bins and commercial skips are provided for paper, plastic bottles, glass, wood, cardboard and metal recycling as well as general waste.

Currently we achieve good rates of recycling. During 2012, 79% of all waste generated by airport activities was diverted from landfill and recycled.

Going forward we hope to achieve the following:

- In 2014 we hope to achieve a recycling rate of 90% of waste produced on site.
- By the end of the plan period we hope to be achieving 100% recycling rates of waste produced on site.

7.7 Biodiversity

The airport site provides a habitat for a number of species of plants and wildlife. Where possible, we look to nurture wildlife habitats and environments encouraging establishment of species, while maintaining a safe operation, particularly in respect of bird hazard. Most recently we have been working with the Ponteland Red Squirrel Group to encourage habitat creation for the species, introducing feeding boxes around the airport site.

There are no Sites of Special Scientific Interest within the masterplan study area, although two do exist close by at Big Waters and Prestwick Carr. There are also a number of Sites of Nature Conservation Importance and Local Conservation Interest, on site and within close proximity to the airport, notably Sunniside Pond, Dinnington Road Fen, Havannah Nature Reserve, Moorey Spot Pond, Woolsington Hall, Prestwick Burn and Foxcover Wood. There are also a variety of wildlife corridors, inside or within close proximity to the site.

A number of protected species have been identified on site, including bats, great crested newts and water voles.

Across the plan period, there is the potential for disturbance of protected species and designated sites during construction of a number of projects identified. Any potential impacts will be carefully considered and closely controlled through the planning system, with full environmental surveying carried out along with appropriate mitigations. Wildlife corridors may be impacted by the Southside Development area, and the significance of this will be carefully considered.

Where required, and where on-site provision cannot be made, appropriate and proportionate provision for biodiversity enhancement will be made off site. Any future landscape work and planting will aim to maximise biodiversity benefits. All development will be carried out in line with current guidance as well as the emerging NewcastleGateshead One Core Strategy which requires development to 'protect and enhance biodiversity, recognising local distinctiveness, and the particular importance of designated sites, wildlife enhancement corridors, and local Biodiversity Action Plan habitats and species'. Any biodiversity improvements will be undertaken in a way that does not impact upon safety, notably the creation of habitats that would attract hazardous species of birds.

7.8 Land use

The airport is situated in a semi-rural location and around predominately agricultural land, mainly associated with cereal crop production and grassland.

The majority of the future proposals focus on the terminal area and will involve development on areas of existing hard surfaces, displacing the current operational uses. Some development may take place on current green field sites within agricultural land, both arable and grassland, such as the Southside Development.

The majority of the development area has been removed from the Green Belt through the Newcastle Unitary Development Plan. The remaining development areas outlined within this masterplan we hope to earmark for removal from the Green Belt in the emerging Local Development Framework for Newcastle.

7.9 Heritage

One listed building has been identified immediately outside the site area: Woolsington Hall and associated buildings. The heritage receptors at Woolsington Hall will need to be carefully considered in future proposals. A review of recorded sites, historic monuments and historic landscape features has located a number of other features within the vicinity of the airport.

As development of the airport and southside progresses, full protection of the setting of Woolsington Hall will be considered via planting belts. Full archaeological surveying will be carried out on other sites where this is considered to be required, in consultation with Tyne and Wear Archaeology, and appropriate action taken.

7.10 Agriculture

The majority of the land within the masterplan area is classified as Grade 3 according to the Agricultural Land Classification maps. There is a small area of land categorised as 3a (best and most versatile), although the majority of the land is 3b (moderate quality).

Some areas of Grade 3a and 3b land will be lost as a result of development. Best practice techniques will need to be employed to ensure that the topsoil is removed in a suitable manner to allow its use elsewhere on site. Loss of higher quality land will be minimised where possible.

7.11 Landscape

The airport is located within National Character Area 13: South East Northumberland Coastal Plain, as designated by Natural England. The area is crossed by a series of gently undulating broadly west-east ridges and the runway is aligned along the crest of one such ridge.

At the local level the site is covered by four separate character areas identified within the Newcastle Character Assessment: Protecting Newcastle's Character and Local Distinctiveness. The majority of the masterplan is covered by Area C28: Newcastle Airport, where the built form of the airport is a dominant feature.

There are significant areas of mature and semi-mature woodland throughout the wider area. Extensive areas of woodland planting have been undertaken as part of advance investigation of proposals in this masterplan. Additional planting to screen proposed developments will be carried out where required. Wildflower planting has been introduced and will be further utilised to soften visual intrusion caused by new development to the south of the site, where required. Landscaping schemes will enhance the landscape value of the airport, whilst ensuring that safeguarding in relation to bird strike hazards is upheld.

The table below outlines the potential landscape and visual effects which may arise from the masterplan developments.

Year	Development	Potential effects	Mitigation
2021	Southside Development	• Loss of trees and hedgerows • Introduction of new built form • Change in landscape character • Changes to views	Retention of existing vegetation wherever possible. Introduction of hedgerows, native species planting belts and earth mounding. Where possible to be implemented as advance works. Sensitive use of lighting while not compromising safety.
	Long stay car park extension	• Introduction of new surface level car parking • Change in landscape character (localised) • Changes to views	
2030	2nd pier/satellite construction	• Loss of hedgerows • Introduction of new hard standing and built form • Change in landscape character (localised) • Changes to views	Retention of existing vegetation wherever possible. Introduction of hedgerows, native species planting belts and earth mounding. Where possible to be implemented as advance works. Sensitive use of lighting while not compromising safety.
	Additional Southside Development incl. Callerton link road	• Loss of trees and hedgerows • Introduction of new built form • Change in landscape character • Changes to views	
	North car parking incl. new access to long stay parking	• Loss of trees and hedgerows • Introduction of new surface level car parking • Change in landscape character (localised) • Changes to views	
	Terminal development incl. multi-storey car park and public transport interchange	• Introduction of new built form • Change in landscape character (localised) • Changes to views	

Figure 23: Summary of expected landscape and visual impacts up to 2030

7.12 Recreation

There are a number of statutory Public Rights of Way (PROW) within the study area, as well as cycle routes and non-statutory routes. The table below gives the main impacts on the PROW and their recreational use of members of the public for each of the major developments considered by the review, together with the mitigation measures that we will consider.

Year	Development	Potential effects	Mitigation
2021	Southside Development	• Alternation of Public Right of Way 10	Consideration of forms of screening to mitigate visual impact and path realignment, where possible to mitigate loss of right of way.
	Long stay car park extension	• Introduction of new surface level car parking • Change in landscape character (localised) • Changes to views	
2030	Additional Southside Development incl. Callerton link road	• Alteration of Public Right of Way 10 • Alteration to setting of Blue Star Recreation Ground	Consideration of forms of screening to mitigate visual impact, and path realignment where possible to mitigate loss of right of way.
	North car parking incl. new access to long stay parking	• Loss of potential Right of Way • Change in setting of Public Rights of Way 1 and 2	

Figure 24: Public Rights of Way crossing NIAL land

8.0 Consultation

In preparing this document we undertook a period of consultation, receiving contributions from a wide variety of stakeholders, local residents and passengers which all informed the adopted plan.

Consultation on the draft masterplan began in summer 2013, commencing on 25th July and running until 31st October. The draft document was made available on our website, with comments invited by post or email.

Publicity and promotion was undertaken via the local media, social media, local mailing lists and community groups. We also organised public meetings and drop in sessions at community centres and libraries, allowing local residents the opportunity to speak directly to airport representatives and highlight any comments or concerns they had. We also attended parish council meetings and neighbourhood forums.

Land owners, stakeholders and elected representatives were written to and provided with a copy of the summary leaflet, notifying them of the document and where they could view it. With the help of the local community we were able to publicise the document in parish newsletters and through leaflet drops.

We received 170 formal responses to the plan, via email, social media or letter. Of the consultation responses received, 138 of these came via social media. Facebook was the most used tool for commenting on the Masterplan and, as well as the 118 comments received in relation to the plan, another 277 people showed their support for the plan using the 'like' function.

The majority of people who responded were supportive of the masterplan and its content, it being an aspirational, ambitious plan, with many welcomed additional facilities. Some respondents felt the airport could be more ambitious, in terms of passenger numbers, route development and terminal/runway extension plans, while others would like to see more development inside the terminal to improve the leisure and commercial offer.

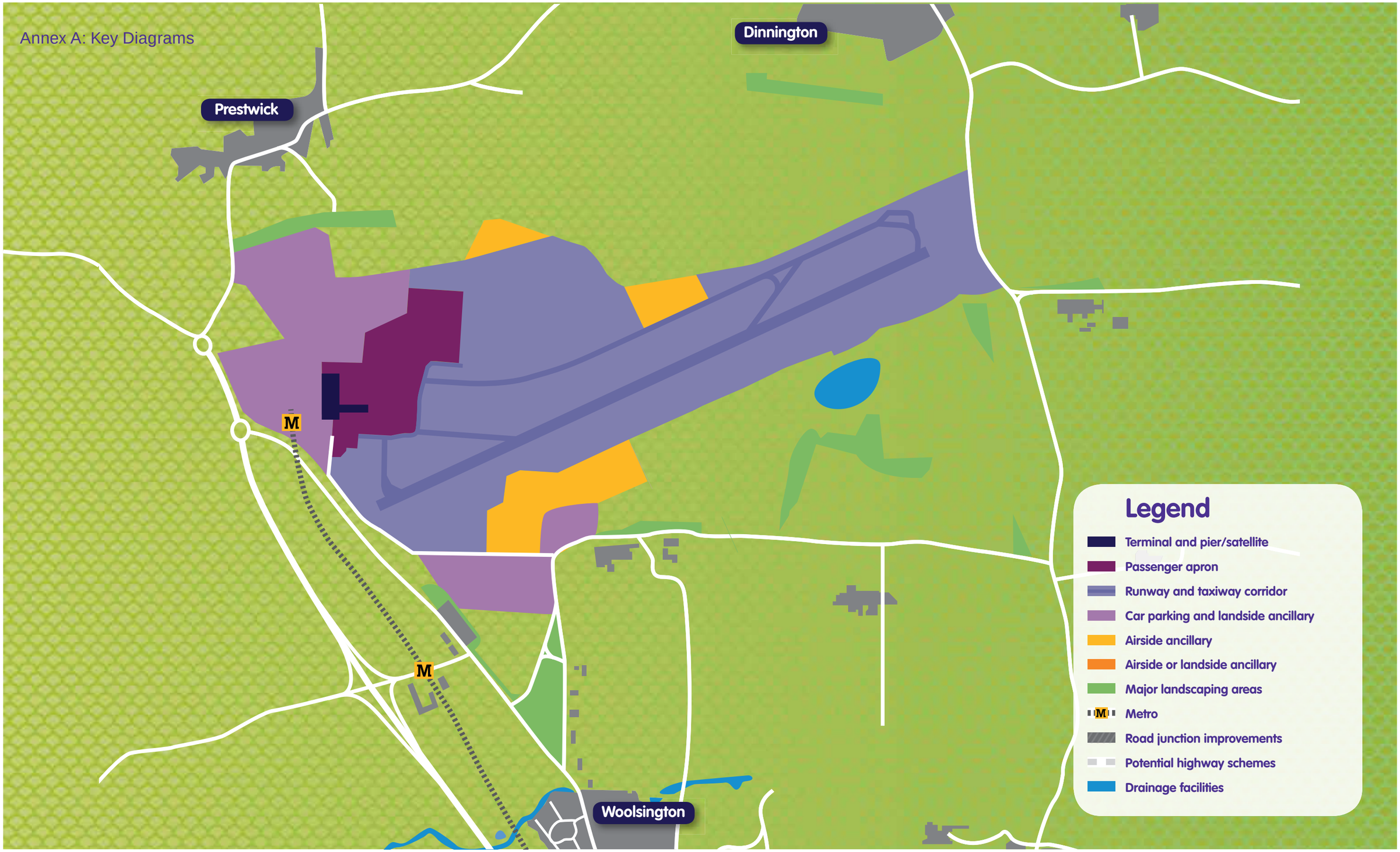
A summary of general comments include;

- Aspirational
- Ambitious
- Key Gateway
- Important jobs driver
- Significant to the economic development of the region

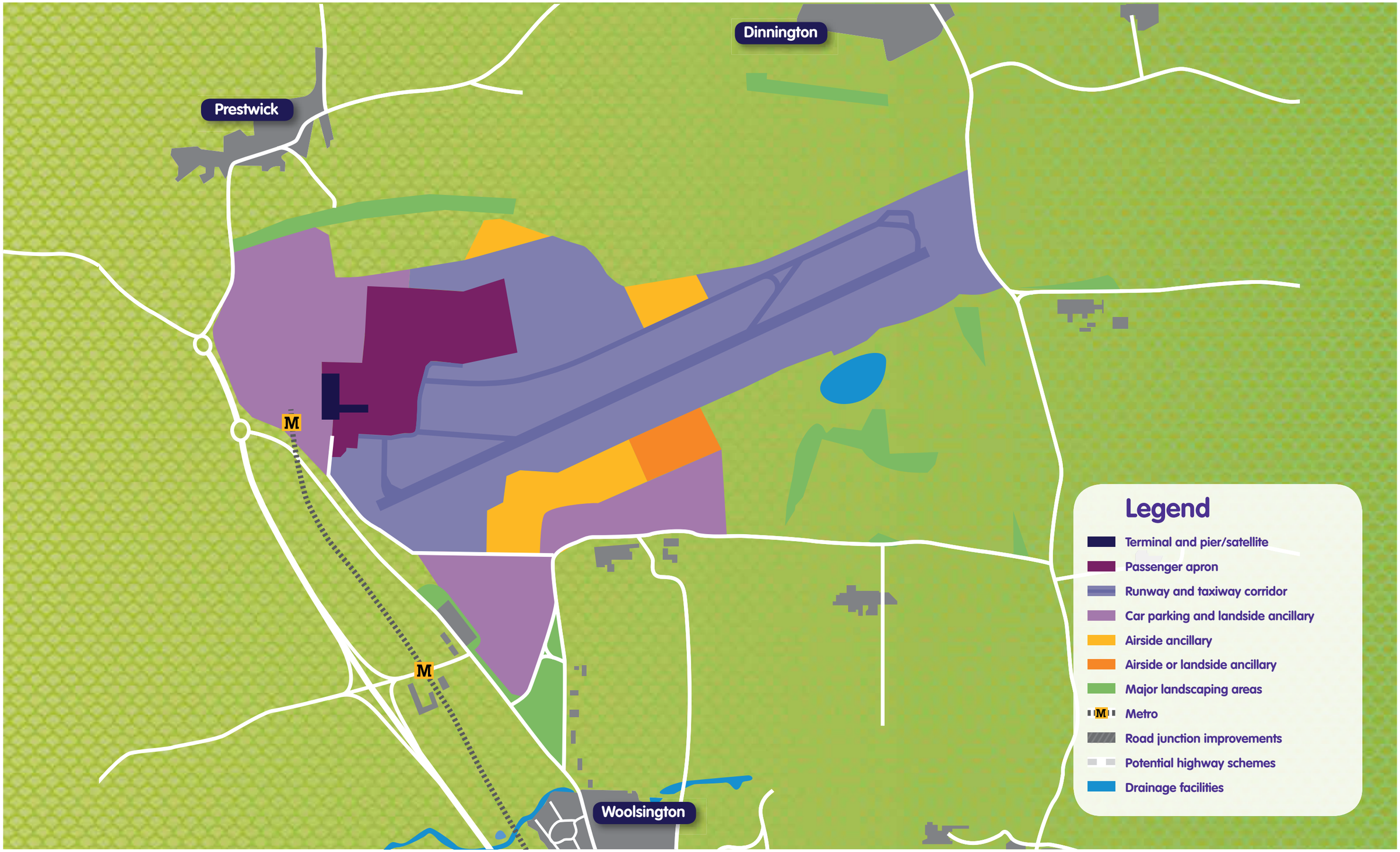
Those objecting to the Masterplan raised concerns about:-

- Increased noise impact
- Traffic impact harmful to residential amenity.

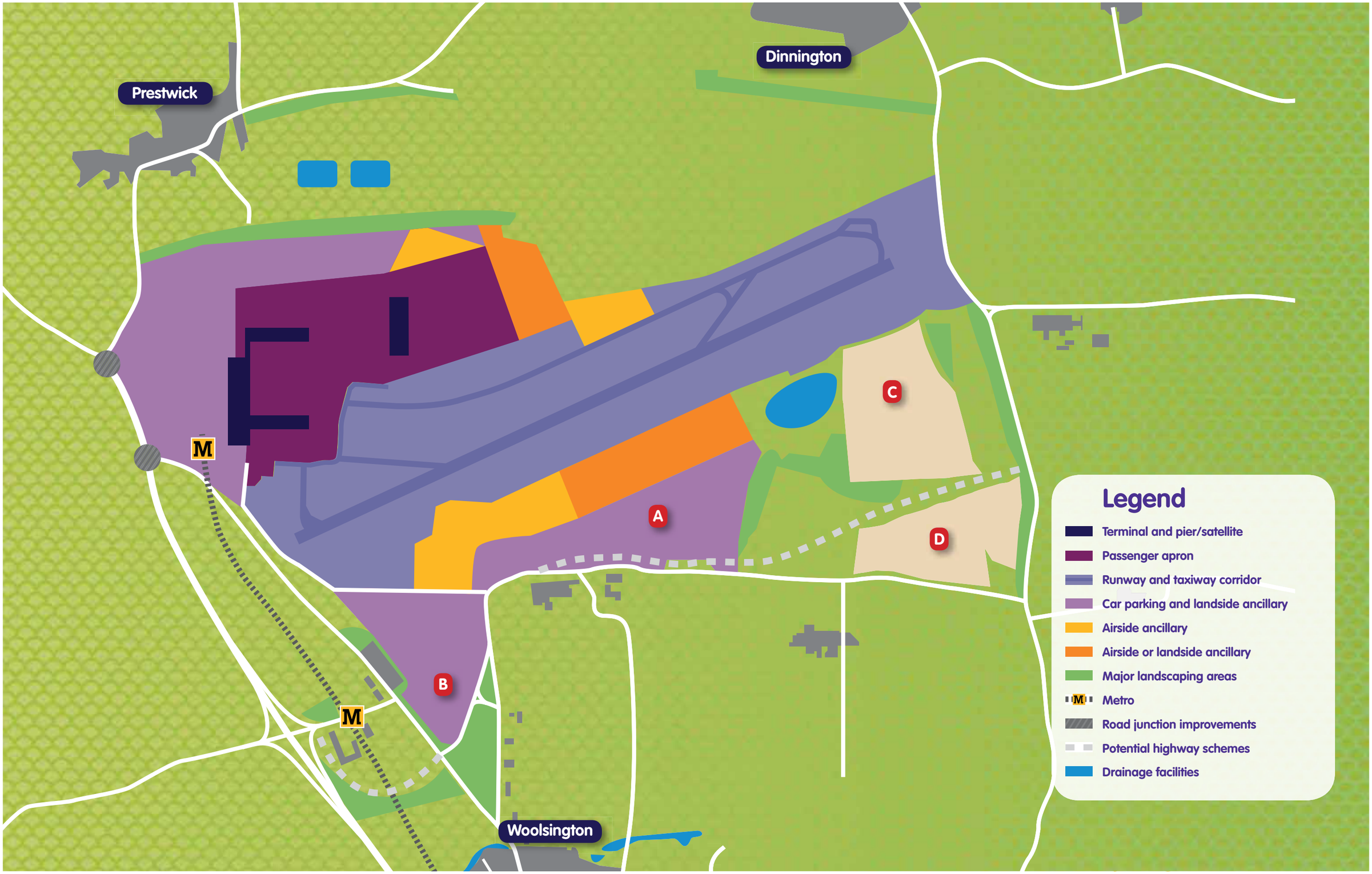
The document and accompanying consultation report have now been approved by the Airport Company's board, formally adopting the masterplan.



Key Diagram 2013



Key Diagram 2021


Prestwick
Dinnington
Woolsington
M
M
A
B
C
D
Legend
Terminal and pier/satellite
Passenger apron
Runway and taxiway corridor
Car parking and landside ancillary
Airside ancillary
Airside or landside ancillary
Major landscaping areas
Metro
Road junction improvements
Potential highway schemes
Drainage facilities

Annex B

Extract from Aviation Policy Framework: Guidance on masterplans, airport transport forums and airport surface access strategies.

This Annex replaces existing guidance on the content of airport master plans, ATFs and ASASs.

Masterplans

Suggested content;

The Government recommends that the more ground covered in a masterplan and the more extensive the consultation which has informed its preparation, the greater its value in informing future land use, transport and economic planning processes, and in supporting prospective planning applications. We would anticipate that, in the case of most airports, masterplans will address the following 'core' areas:

- forecasts.
- infrastructure proposals.
- safeguarding and land/property take (please see paragraph B.5).
- impact on people and the natural environment.
- proposals to minimise and mitigate impacts.

Forecasts

It would be helpful for airport operators to provide an introduction to the forecasts on which the masterplan is based in the form of an up-to-date breakdown of current traffic (daytime and night-time, passenger, cargo and air transport movements). An explanation of this data in relation to historic trends and expected market developments would provide important context.

Infrastructure proposals

To help recipients of the masterplan it would be helpful for airports to include information on existing airside and terminal infrastructure. It may also be helpful if airports were to include a statement of their adopted planning standards. These would include issues such as gate utilisation strategies and queue lengths for normal throughput, average and maximum delay criteria for landings and take-offs and how these would impact on their proposals.

The plans are not expected to take the form of detailed engineering or architectural drawings, such as those that might accompany a planning application, but to be of value they ought to contain sufficient information, including drawings where appropriate, so that they may be clearly understood by the lay person as well as professionals.
In addition to airside and terminal development and surface access infrastructure, plans for the next ten years might usefully include landside development (e.g. car parking, servicing and support areas, environmental features, landscaping and other mitigation measures), clearly identifying what is new and what already exists. They should also show airport boundaries and highlight any additional properties or land that may need to be taken. Maps showing safety surfaces and PSZs can be provided separately.

Safeguarding and land/property take

Perhaps one of the most important issues masterplans should seek to address is what the long-term land requirements are for future airport development and whether this requires changes to airport boundaries. Where it does, the additional land and property involved, including those associated with PSZs and safety surfaces, should be clearly identified to minimise long-term uncertainty and non-statutory blight.

Mitigation

Proposals for mitigation measures across the major impact areas identified will be an important component of masterplans; for example emission controls, noise abatement measures, sound insulation, surface access schemes and traffic management and measures to address landscape and biodiversity impacts.

It will be appropriate for masterplans to address any proposals for compensation measures that may be required where the scale of impacts is such that they cannot adequately be mitigated. Such measures might include appropriate voluntary purchase schemes and assistance with relocation costs where the extent of property and land-take is clear.

Airport transport forums

Suggested content;

The Government suggests that ATFs are made up of the following groups:

- Airport operator (who should lead the forum).
- Local Highway Authority and Integrated Transport Authority.
- Local Enterprise Partnership.
- Local transport providers (e.g. bus, rail, coach, car hire).
- Local authorities.
- Passenger representatives.
- Freight industry representatives.
- Local businesses.
- Representative from the Airport Consultative Committee.
- Representatives of airport users.
- Representatives of airport employees.
- Bodies representing interests of walkers, cyclists and disabled people in the area.

However, the Government recognises that local circumstances will have a bearing on the make-up of the group. This list should not therefore be taken to be prescriptive or exhaustive.

The Government suggests that ATFs should meet at least twice per year, and engage proactively in dialogue with group members throughout the year.

In order to ensure the forum is effective, we recommend that airport operators should limit the membership to a manageable number. However they should engage frequently in wider consultation with interested parties including members of the local community e.g. through workshops.

Costs relating to ATFs should be borne by the airport operator.

Airport surface access strategies

Suggested content;

The Government suggests that ASASs should include:

- analysis of existing surface access arrangements
- targets for increasing the proportion of journeys made to the airport by public transport by passengers and employees; cycling and walking

There should be short- and long-term targets;

- consideration of whether freight road traffic can be reduced;
- consideration of how low carbon alternatives could be employed;

short-term actions and longer-term proposals and policy measures to deliver on targets such as:

- proposed infrastructure developments e.g. light rail; car/taxi sharing schemes;
- improved information provision on public transport, cycling and walking options;
- car park management; and
- through-ticketing schemes;
- indication of the cost of any proposals;
- performance indicators for delivering on targets;
- monitoring and assessment strategies (internal and external); and
- Green transport incentive schemes for employees.

The Government recognises that different targets and proposals for meeting targets will be appropriate for different areas. This list is therefore not prescriptive or exhaustive.

Annex C

Frequently Asked Questions

Will the existing road network cope with the predicted increased passenger numbers?

As the airport grows so too will the number of surface access trips made by private car. While we will work to increase passenger journeys to and from the airport using public transport, it is expected that the majority of passengers will travel by car.

Nine out of ten of all car journeys to and from the airport use the A696 dual carriageway that joins the A1. This avoids all local villages. It is likely that, in future, an even higher proportion of journeys will be made along this road. There is sufficient capacity in the A696 to meet our existing growth forecasts with only minor changes to the existing road network. An overview of anticipated infrastructure requirements is provided within this document, however a full assessment of future road traffic will however be provided in the forthcoming Surface Access Strategy.

Do you plan on improving public transport at the airport?

As passenger numbers grow, so will the numbers of cars, taxis, buses and coaches. Newcastle Airport is committed to increasing the proportion of passengers travelling by public transport, and the upgrade of public transport facilities will make such means more attractive to more people.

We have reserved land in the longer term for a potential heavy rail link connecting the airport directly into the national rail network.

We will also work with public transport operators going forward to further improve existing facilities and extend public transport to wider communities where required.

Will there be more night flights?

Newcastle Airport is a 24hr operation and it is essential that aircraft are able to use the airport during night time hours, 23:00 – 07:00. As an example, the Royal Mail operates two mail flights each night from the airport, which are essential for the distribution of mail for the region.

At present approximately 11% of movements take place during the night and this percentage is likely to remain at a similar level during the masterplan period.

What are the flight paths operated from Newcastle Airport?

The flight paths operated from Newcastle Airport have been designed with both safety and environmental considerations. Where possible the departure and arrival routes avoid residential areas, however, due to the location of the airport this is not always possible. Any changes to the departure routes are the subject of consultation with airspace users and local communities. Copies of the current flight paths can be viewed at:

www.newcastleairport.com/flight-paths

What is the largest aircraft you expect to operate from the airport? Will there be larger aircraft operating from the airport?

Towards the end of the masterplan period we expect to accommodate more frequent larger aircraft, to facilitate long haul destinations. However, the type of aircraft will be similar to the largest aircraft currently operating from the airport, which is the B777. As new aircraft are introduced to the flying schedule we always encourage airlines to operate the most environmentally friendly aircraft.

Due to operational constraints we will not be able to operate the likes of an A380 which are the largest aircraft currently operating in the UK.

Will noise levels increase as the airport expands?

We are committed to protecting the local communities and this can be demonstrated by a comparison of 2030 and 1993 noise contours, which shows that the noise impact in 2030 will not exceed 1993 levels. As detailed in this masterplan, permanent noise monitors will continuously measure local noise levels to assess the impact.

Why have you removed the runway extension from the plan?

Technological improvements in aircraft now allow us to fly further, for longer. This is expected to further improve in the future, meaning that we will no longer require additional runway length to fly directly to serve most of our existing and future long haul destinations.

What work are you doing to protect the environment?

There are a number of environmental strategies in place to ensure that any impacts on the environment are minimised, regular monitoring is carried out to ensure that the strategies in place are effective.
Any future developments are the subject of an environmental review to assess any potential impact and identify mitigation measures.

Annex D

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.

ATC
Air Traffic Control.

ATM
Air Traffic Movement.

APD
Air Passenger Duty is 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.

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

Big Six
Newcastle International Airport's customer service principles:

- **SMART** appearance forms the first impression
- **SMILE** you are part of someone's journey
- **SAY** "hello" or ask "how are you?"
- **SUPPORT** and assist where needed
- **SOLVE** and resolve - don't pass the buck
- **SAY** "thank you" or "have a nice flight"

Callerton link road
The road linking B6918 with the A696.

CDA
Continuous Descent Approach. A method by which aircraft approach airports to land, designed to reduce fuel consumption and noise.

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

dB
Decibel. A unit of measurement for sound and noise.

dB(A)
Units of sound level on the A-weighted scale, which incorporates a frequency weighting approximating the characteristics of human hearing.

dB LAeq
The A-weighted equivalent continuous sound pressure level which is a notional continuous level

dBLAeq 8hr
The LAeq,8hr over the period 2300 - 0700, local time.

dBLAeq 16hr
The LAeq,16hr over the period 0700 – 2300, local time.

DfT
Department for Transport.

Employment Land Review
Assesses the demand for, and supply of, land for employment use in an administrative borough.

Energy Policy
NIAL's strategy for reducing on-site energy and carbon consumption.

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.

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

GDP
Gross Domestic Product.

GVA
Gross Value Added measures the contribution to the economy of each individual producer, industry or sector in the United Kingdom.

ICAO
International Civil Aviation Organisation: is a specialized 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 per cent 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.

Land-take
The area of land taken up by a given development.

LDF
A suite of planning documents which will collectively deliver an authority's spatial planning strategy.

LEP
Local Enterprise Partnership: a voluntary partnership between local authorities to help determine local economic priorities and lead economic growth and job creation within its local area.

LTP
Local Transport Plan: A plan produced by local authorities to indicate future transport developments within the region.

MPPA
Million passengers per annum: A standard measure of airport size.

Modal Share Survey
Survey of the main modes of transport for airport visitors.

Model day
A chosen day during the airport's busy period which is used to forecast likely future activity.

NIAL
Newcastle International Airport Limited.

NEC
Noise Exposure Category: Categories of noise impact for development around an airport.

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 5 year noise management programme for the airport. The plan was produced in 2009 to comply with the Environmental Noise Directive 2002/49/EC.

Noise Road Map
Collective approach from UK aviation to tackle the issue of aircraft noise

NPPF
The National Planning Policy Framework (NPPF): A document which sets out the Governments requirements for the planning system in England.

PDRs
Preferential Departure Routes are 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.

PROW
Public Right of Way

RESA
Runway End Safety Area: An area of land required to be kept free of most development for safety reasons.

Runway 25
Western runway orientation, dependent on meteorological conditions.

Runway 07
Eastern runway orientation, dependent on meteorological conditions.

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 Development
Area to the south of the runway earmarked for office, light industrial and hangar development

SIDS and STARS
Standard Instrument Departures (SIDS) and Standard Arrival Routes (STAR). CAA approved routes implemented into the aircraft flight navigation system, which will improve the accuracy of routeing.

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

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