ENVIRONMENT

SUSTAINABLE DEVELOPMENT PLAN 2016





CONTENT



INTRODUCTION	3
OVERVIEW	3
ENVIRONMENTAL MANAGEMENT	6
NOISE	11
CLIMATE CHANGE	21
AIR QUALITY	29
WASTE MANAGEMENT	34
WATER RESOURCES	37
ECOLOGY, LANDSCAPE AND CULTURAL HERITAGE	41
HOW TO CONTACT US	47



INTRODUCTION

This Sustainable Development Plan is an important document for our airport. It sets out our vision for Manchester over the next decades and addresses some of the key challenges we face.



Since 1982 we have published long term development strategies for the airport. The last Manchester Airport Master Plan was published in 2007. That set out the strategic direction for Manchester Airport up to 2030 by which time the airport was expected to be serving some 50 million passengers. Since 2007, the aviation industry and the wider economy have been through major changes. This led to a significant decline in air travel at Manchester and airports across the UK. Our last Master Plan was produced in 2007 in response to the 2003 Government Air Transport White Paper which suggested that airports demonstrate how they could accommodate the long-term growth projected by the Department for Transport in the White Paper. In the case of Manchester, this was to demonstrate the ability to accommodate an annual throughput of around 50 million passengers forecast for the year 2030. This new Sustainable Development Plan (SDP) replaces the 2007 Master Plan.

It has been produced in consultation with our many stakeholders and local communities as it is important that we engage fully within the region we serve and understand the needs of those who live near to the airport.

Our strategic objectives for the growth and development of the airport run through the plan and underpin our proposals. They are:

- Explain the long-term opportunities for the growth and development of our airport
- Set out our vision for the development of the airport site;
- Provide the framework for capitalising on the benefits of the airport's development and for managing and minimising local disturbance and environmental impact;
- Enable a constructive dialogue with our customers, neighbours and business partners;
- Inform the plans and strategies of others across the north west region and beyond; and,
- Provide evidence to inform Government and others of the implications and benefits of making best use of Manchester's capacity.

The SDP is made up of four detailed plans that cover: Economy and Surface Access, Land Use Environment and Community programmes:



The Plan will be kept under review so that it remains relevant and reflects the evolution and the development of the airport. This follows the guidance in the 2013 Aviation Policy Framework. The formal review process will be undertaken every five years.

OVERVIEW

The Government's Aviation Policy Framework 2013 asks airports to prepare Master Plans to provide a strategic policy framework for their development. Government have provided some guidance on form and content; but acknowledges that local circumstances will determine the approach that is taken.



In 2015, the independent Airports Commission produced its final report for Government, and a decision on how and where to provide additional capacity to best deliver and retain UK aviation hub capacity, is expected later in 2016.

However, there is consistent support for growth at regional airports, such as Manchester, because of the significant benefits that they bring, provided it is within acceptable environmental limits. Manchester Airport is recognised as having a markedly different role to other regional airports, because of its route network, facilities, connectivity and scale. It brings benefits to the whole of Northern Britain and is a significant catalyst for the Northern economy; supporting and attracting inward investment, tourism and trade. In recognition of this, the Government in 2011 confirmed that the Greater Manchester Enterprise Zone be centred on Manchester Airport and that the Airport City concept be used as a springboard for wider growth and regeneration.

This Plan is the latest in a long series of documents which have guided the long-term development strategy for our airport. We published our first Development Strategy in 1982, covering the period up to 1990. Our last Master Plan was produced in 2007 in response to the 2003 Government Air Transport White Paper. This suggested that Manchester should demonstrate the ability to cater for an annual throughput of around 50 million passengers forecast for the year 2030.

Much has changed in the aviation industry since that time. So in 2015 we prepared an updated Sustainable Development Plan, and consulted widely with our stakeholders and neighbours. This final version of the Plan has been modified to take account of the public consultation and the comments that were received. It now sets the framework for the next phase of the airport's operation and development.

We have reassessed the capability of our airport to now deliver an annual passenger throughput of some 45 million. We set out how we would handle that level of activity, and how we would deal with the impacts that arise – both positive and negative. Whilst informed by national forecasts of future airport throughput, this Plan is not driven by, or fixed to, those forecasts. History has shown that fixing plans to forecasts is inherently risky as economic fluctuations can quickly render forecasts out of date.

Whilst annual passenger forecasts are widely used to give an overall scale of airport activity and future growth, our focus is on maximising the capacity of our existing and future facilities and increasing efficiency in the use of all our assets. Our Plan shows how Manchester can develop in future years to play the fullest part in the UK's aviation market and, in particular, how our activities can bring the maximum benefit to our airlines, passengers and the regions that we serve.

MANCHESTER AIRPORT TODAY

Manchester is the largest airport outside London and bigger than many European capital city airports. In 2015, over 23 million passengers travelled on some 165,000 aircraft movements to over 200 destinations worldwide. The airport has three passenger terminals and two runways. The airport serves a wide catchment area across Northern Britain, although the majority of passengers are from the North West region.

OVERVIEW



The World Freight Terminal handled some 100,000 tonnes of cargo in 2015, most of which was carried in the holds of passenger aircraft. An aircraft maintenance area, hotels, office accommodation and other ancillary buildings also make up the airport infrastructure. In total, 310 companies are based at the Airport, employing over 22,000 staff.

Increasingly, the airport is becoming an integrated transport hub with easy access between air, heavy and light rail, bus and coach services for passengers, staff and other people passing through the site. High quality public transport facilities are provided in The Station. Further details of our approach to public transport are set out in the Economy & Surface Access Plan.

MANCHESTER AIRPORT IN THE FUTURE

The framework that will guide the physical development of the airport up to some 45 million passengers per year is set out in the Land Use Plan. The Land Use Plan updates much of the material that was published in the 2007 Manchester Airport Master Plan. Recent air passenger forecasts by both the Department for Transport and the Airports Commission¹ are suggesting that the level of throughput that we planned for in the last Master Plan remains a long-term figure that can be achieved at Manchester Airport. The work that we did to support the preparation of recent statutory planning documents was based upon the 2007 Master Plan which remains fundamentally valid.

We have updated and reviewed our plans to ensure we are still capable of accommodating the long-term forecast throughput whist minimising the environmental impact. The main development principle is one of efficiency, making the best use of our land and technological

improvement. Our plan is for the redevelopment of land within the existing boundary as far as possible and non-core activities moved to the site periphery, or off-site altogether.

SUSTAINABLE GROWTH

We will make the best use of natural resources and minimise the environmental impact of our operations.

Growth brings challenges as well as opportunities. Our commitment to sustaining the growth of our business and controlling environmental impact is clear and unequivocal.

We have a track record of developing environmental policies and taking action to lessen our impact. We aim to be one of the leading airports in Europe in the way in which we tackle environmental issues. Our first Environment Plan was produced in 1996.

Our starting point for future controls has been to assume that our impacts cannot increase in line with airport growth. Wherever possible we will strive to reduce, in real terms the scale and nature of our impacts.

We recognise that there is a cost in delivering some of the environmental controls outlined within this Plan. For example, we already pay a premium for renewable energy.

We know that as we move forward, advances in technology and operating procedures will greatly assist in delivering our objectives. However, timing remains uncertain. Within the Environment Plan we have short-term targets (3 years) along with medium and long-term goals.

ENVIRONMENTAL MANAGEMENT



We will integrate environmental management into our business processes to ensure that the best environmental practice is carried out".



INTRODUCTION

The environmental impacts of the airport's development and operation are many and varied. They arise from:

- Development and operation of the airport itself;
- Aircraft movements and maintenance;
- Aircraft support services such as catering, fuelling and cleaning;
- Fleet vehicle operations and maintenance;
- Cargo handling;
- Terminal operations including retail, catering and cleaning;
- Building management such as heating, lighting and toilets within the terminals, offices and hangars;
- Estate management such as anti-icing and grounds maintenance on the airfield, roads and car parks;
- Passenger and staff travel to and from the airport.

Some of the impacts are directly caused by our own activities, but the majority are caused by the operations of the large number of service partner companies on our site. As the airport operator, however, we take responsibility and leadership for the total impact of the site. We will work with all the companies on the site and influence them to control their impacts so that, as an airport, we can achieve the targets within this Environment Plan.



ENVIRONMENTAL MANAGEMENT



Setting targets is meaningless without a mechanism to deliver change and control the impacts. This is the reason we have adopted the best practice approach to managing the environment promoted by the international environmental management standard ISO14001

ENVIRONMENT POLICY

We are committed to continually improving our environmental performance, preventing pollution and complying with all requirements that apply to us. To achieve this we:

- Continually assess the effects our activities have on the environment and regularly review our objectives, targets and programmes relating to any significant environmental aspects.
- Meet all legal and other environmental requirements and public commitments.
- Publish details of our environmental performance each year.
- Provide information and training to make sure that all employees, service providers and contractors know their responsibility to keep to this policy and act in line with our Environmental Management System.
- Do everything reasonably possible to prevent pollution.
- Periodically review our procedures for keeping the potential environmental risks of our activities, and of any unusual or emergency situations, to a minimum.

The airport's environmental management system seeks to support and deliver these policy aims. It documents all of the significant environmental aspects that arise from the operation of the airport and, in order to maintain certification to the ISO14001 standard, we are required, through 6-monthly independent audits, to demonstrate continuous improvement in environmental performance. The general framework for managing the environment required by the ISO14001 standard is shown below.

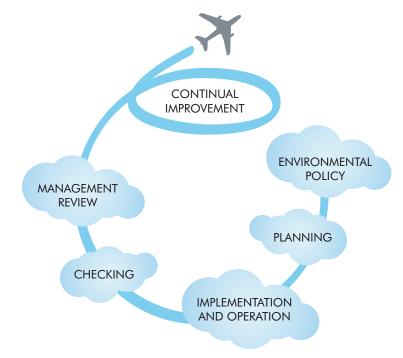


Figure 1: Environmental Management System Model for the ISO 14001 International Standard



ENVIRONMENTAL MANAGEMENT



KEY PERFORMANCE INDICATORS

We have set key performance indicators that are measurable, sensitive enough to allow changes to be monitored objectively and easily understood.

In line with the policy of openly and honestly reporting, the performance against all of these indicators will continue to be presented annually within the MAG Corporate Social Responsibility Report².

NOISE

Key performance Indicator: We will limit and reduce where possible the number of people affected by noise as a result of the airport's operation and development and ensure that the area of the aircraft noise contours does not exceed the levels recorded during 2001 (the year the second runway opened).

Whilst actual noise levels can be recorded, their potential to be intrusive and cause disturbance cannot easily be quantified. However the equivalent continuous sound level (dBL $_{\rm Aeq}$) is the most common index of aircraft noise exposure. It is a measure of the equivalent continuous sound level averaged over an 8 hour night (23:00 to 07:00 or a 16 hour day (07:00 to 23:00). This is used to create a contour area within which a certain sound level is exceeded. When laid over a map of the area surrounding the airport, we can measure the area and the population affected by different levels of aircraft noise.

CLIMATE CHANGE

Key Performance Indicator: We will continue to reduce our greenhouse gas emissions by increasing efficiency and obtaining energy from renewable sources.

Building upon our work to date, our priority over the course of this plan will be to drive further efficiency improvements by continuously reducing our energy demand. We believe that generating and purchasing renewable electricity can also make an important contribution to reducing our CO² emissions.

LOCAL AIR QUALITY

Key Performance Indicator: We will minimise the area of the 40 ugm-³ NO₂ contour for airport emission sources.

Air pollution can pose a risk to human health and National Air Quality Standards have been set for a range of pollutants including nitrogen dioxide NO $_2$) (40 μgm^{-3}). We continually monitor NO $_2$ concentrations around the airport site and these are modelled to create a contour area within which the $40\mu gm^{-3}$ level is exceeded. Sources of NO $_2$ include aircraft on the ground, operational vehicles and energy generation. Local sources of NO $_2$ also include road traffic accessing the airport or travelling on the surrounding road network.

ENVIRONMENTAL MANAGEMENT



WASTE

Key Performance Indicator: By the end of 2018 we will seek to send no waste to landfill (excluding International Catering Waste, where no other options are available).

We will manage our waste along the principles of the waste hierarchy (Reduce waste generation, Re-use, Recycle, Recovery, Disposal). We will work with our business partners to minimise the production of waste where possible and promote the re-use and recycling of waste materials.

WATER QUALITY

Key performance Indicator: All surface water discharge samples will remain within consented limits.

Discharge of pollution into rivers and streams can have potentially harmful consequences to fish and the general river habitat. We have a number of consents that control the quality of rainwater runoff that we can release to local watercourses. The Environment Agency regularly monitors compliance with these limits. In addition we will seek to minimise the load placed on the environment by ensuring the sensitive storage and use of chemicals on the airport site.

LANDSCAPE AND ECOLOGY

Key Performance Indicator: The area of land under active ecological and landscape management and enhancement will be maintained or increased.

The airport is a significant landowner. Any development that takes place requires mitigation and compensation measures to be undertaken either in advance, during or immediately following development.

We will further develop our landscape and ecology strategies so that within the constraints imposed by the normal operation of the airport, we will promote the development of rich and varied habitats around the airport and encourage access to the countryside.

PLANNING

In identifying and setting the targets contained within the Environment Plan, we have taken account of current and emerging legislation, aviation policies and local plans, and existing planning agreements and planning conditions.

As part of the Sustainable Development Plan, the airport (and our development partners) will undertake environmental assessment of all major developments in order to effectively understand and mitigate impacts and to ensure that we incorporate environmental standards into the design.

Whilst we are driven by improvements in environmental performance, it is of course essential that we understand the financial implications of our actions. Where possible we have set targets based on absolute totals (eg. tonnes ${\rm CO}_2$ produced) as well as targets that are based on relative measures (eg. ${\rm CO}_2$ emissions per passenger). Interim targets will be set internally as part of the business planning process and also within the project management system of an individual development scheme.

ENVIRONMENTAL MANAGEMENT



IMPLEMENTATION

Our environmental management system has a number of procedures that are designed to control environmental impacts along with detailed action plans for individual subjects such as our energy efficiency programme. Other plans include the Noise Action Plan and Landscape and Ecology Strategies.

We will increase the use of contracts and licences to influence our service partners' behaviour. This includes our Ground Handling Licence which includes an element of environmental performance monitoring. We conduct environmental reviews and audits with our service partners to jointly identify areas for improvement.

Our design standards ensure that environmental requirements are incorporated into all development and renewal schemes. These are continually reviewed and we work hard to encourage our service partners to adopt these standards.

By including environmental specifications when purchasing goods and services we can also control our impacts.

We will continue to use environmental charges along the 'polluter pays' principle and provide incentives to adopt best environmental practice.

We provide training and awareness materials for all staff on issues such as recycling, energy conservation and green commuting. We provide briefings for staff that are tailored for their job and show what they can do to control impacts. We communicate through direct correspondence and meetings, via user groups and through airport newsletters. Our Intranet is as a resource for all staff on site to access environmental information.

CHECKING AND REVIEW

There are many systems for monitoring environmental impacts. These include computer based systems such as our aircraft noise and track monitoring system. We also operate a building management system to control and log energy usage, to control our drainage diversion systems and record water quality. We analyse samples of air and water quality and maintain databases of all information.

Automatic systems alert us to any problems and monitoring helps us to take action to ensure compliance with our targets and our standards. For example, the source of water contamination might be investigated and eliminated, building temperatures adjusted to conserve energy or a vehicle removed from the airfield pending repairs to control emissions.

We undertake regular audits of our own, our service partners' and our contractors' facilities and activities to check compliance with our standards and agree improvements. Whilst we work in partnership with our service partners, there are occasions where we will take enforcement action including the use of fines.

As part of our process of continual improvement we regularly review our information and reporting systems. We will publicly report our performance against the main performance indicators in this Environment Plan on our website.

We also meet and report regularly to our regulators and other stakeholders, such as the Environment Agency, local Environmental Health Officers and various external groups such as the Manchester Airport Consultative Committee. We engage in regular constructive dialogue with key stakeholders and our local community and with others that have an interest in the airport.

Our policies and targets cannot stay static, but must respond to changes in the aviation industry, with legislation, government policy, and with costs. Our environmental policies will therefore be reviewed through the annual reporting process to the airport's senior management team.

NOISE



To limit and reduce where possible, the number of people affected by noise as a result of the airport's operation and development".



CONTEXT

Since the 1970s, we have developed a track record of policies and action to manage the noise impact from our operations. The aim has always been to try to keep the noise impact on local residents as low as possible. Measures range from restricting the use of the noisier types of aircraft, charges which encourage the use of quieter aircraft, and regular communication and dialogue with local communities.

As the airport grows, our policies must evolve so they remain appropriate and effective.

Although aircraft operating today are much quieter than they once were, we recognise that for some people, particularly those who live nearest to the airport, noise is and always will be an important issue.



SUSTAINABLE DEVELOPMENT PLAN ENVIRONMENT

NOISE



The main noise-related issues are:

Aircraft in the air

- Noise from arriving & departing aircraft
- The number and times of aircraft movements.

Track keeping

- The paths followed by aircraft and the extent to which they are concentrated or dispersed along those paths
- The climb or descent profiles adopted by aircraft.

· Aircraft on the ground

- Noise from aircraft taxiing
- Engine testing
- Noise from auxiliary power units which power aircraft while they are on stand
- Reverse thrust which may be needed to slow an aircraft down immediately after landing

Other possible sources of noise impact include road traffic, operation of equipment and construction activity.

LEGAL AND POLICY FRAMEWORK

Aircraft noise is regulated by international agreements, EU and national legislation. Policy and guidelines are set by the UK Civil Aviation Authority (CAA), the International Civil Aviation Organisation (ICAO) and National Air Traffic Services (NATS). At Manchester, additional controls come through locally agreed policies and planning conditions.

As part of its long-term plan for the future of UK aviation the Government has a policy aim of limiting, and where possible, reducing the number of people in the UK that are significantly affected by aircraft noise³.

ICAO is the international body that sets noise emission standards which aircraft must meet in order to enter service. ICAO has also set an approach to managing noise which has been adopted world-wide. This 'balanced approach' has four key components.

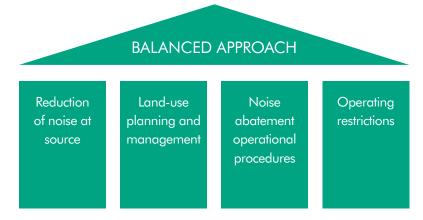
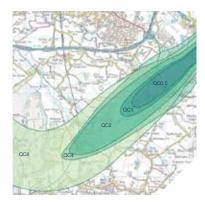


Figure 2: ICAO Balanced Approach

An EU directive (EC 2002/30) requires all member states to adopt the ICAO 'balanced approach' and it ensures that any prohibition of 'noisier' aircraft types is strictly controlled in accordance with a detailed set of rules.

NOISE



NOISE ACTION PLANS

The Environmental Noise (England) Regulations 2006 as amended require airports to produce noise maps and accompanying noise action plans.

The regulations state that the noise action plan must:

- be drawn up for places near the airport that fall within the 55 dB(A) $L_{\rm den}$ contour or the 50 dB(A) $L_{\rm night}$ contour on noise maps
- be designed to manage noise levels and effects, including reducing noise if necessary; and
- aim to protect any quiet areas which may have been identified as a result of the noise mapping.

NOISE MAPPING

Under the Environmental Noise (England) Regulations 2006, as amended, noise mapping is carried out every five years for an average day (January to December) for each of the following periods.

• L_{day} — the level in the day, 7am to 7pm

Levening - the level in the evening, 7pm to 11pm

• L_{night} – the level at night, 11pm to 7am

L_{den} – the level over 24 hours

The L_{den} figures are produced by combining those for L_{day} , $L_{evening}$ and L_{night} . To take account of the fact that noise is considered to be more disturbing at certain times of the day, before the L_{day} , $L_{evening}$ and L_{night} values are combined to produce the L_{den} level, a weighting of 5dB is added to the evening values and 10dB is added to the night values.

The Manchester Airport Noise Action Plan was last reviewed in 2013. It includes details of all our noise related targets and commitments and reports the progress that we have made against achieving them. The latest Noise Action Plan is available on our website⁴.

Performance against individual targets is set out in detail in the Noise Action Plan. We also monitor the number of people who live within the noise contour greas.

NOISE



In 2005 there were 32,550 people living within the 57 dBL $_{\rm Aeq}$ noise contour (average summer 24-hour period). By 2014 this number had fallen to 25,200 because the area of the 57 dBL $_{\rm Aeq}$ noise contour had reduced. Compared to 2003, the area of the 57 L $_{\rm Aeq}$ noise contour has fallen by nearly 10 km 2 during the day and 2 km 2 at night.

We have legally binding limits on the size of our noise contour (60 dBL $_{\!\!\text{Aeq}}$) as part of the planning permission for the Second Runway. These are (33.6 sq km day, 13.0 sq km night). On a voluntary basis, we have set ourselves tighter limits based on the noise contours in 2001 (when the Second Runway opened). These are a daytime contour area of 25.6 sq km and 7.8 sq km at night. In 2014 the area of the 60dBL $_{\!\!\text{Aeq}}$ daytime contour was 17.0 sq km and the night contour was 6.5 sq km. We will contain our future growth within these lower limits. The measures and controls we will take to achieve this are set out in detail in our Noise Action Plan.

NOISE CONTOURS

In the same way as geographical maps use contours to distinguish between high ground and low ground, noise maps use contours to identify those areas that are relatively louder or quieter.

Our noise maps and contours are produced by the Civil Aviation Authority. The modelling uses the number and types of aircraft, where they are flying, and the time of day or night, to estimate the noise on the ground around an airport.

The Second Runway Planning Conditions and our legal Agreements set the 60 dBL $_{\!\!\!\text{Aeq}}$ average summer day contour as our key indicator. Additionally, in keeping with Government recommendations, we report the area of the 57 dBL $_{\!\!\!\!\text{Aeq}}$ contour and the number of people living within it.

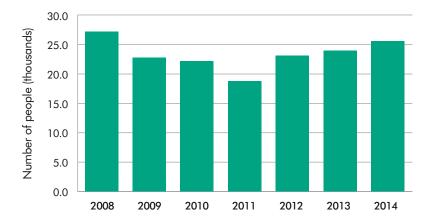


Figure 3: Number of people who live within the 57 L_{Aeq} noise contour (average summer 24-hour period)

NOISE



AIRCRAFT NOISE

We operate both our runways during the day, with landings on one runway and departures on the other. There are however some hours during the day when, for capacity reasons we can revert to using only one.

Departing aircraft normally take off into the wind. Our preferred and usual runway direction (aircraft landing land from the east and taking off to the west) reduces the number of departing aircraft flying over more densely populated areas to the north and east of the airport. We also routinely review our runway usage to identify possible opportunities for using just one runway.

DEPARTING AIRCRAFT

Improved engine design has dramatically reduced the level of noise generated by aircraft immediately after take-off. But it remains a major source of disturbance to local communities.

Like many other airports, we operate a system of what are known as 'preferred noise routes' (PNRs). These concentrate aircraft along the lowest possible number of departure routes, and away from more densely populated areas, whenever this is possible. Through working with our airlines and air traffic controllers, we have significantly improved track keeping. In 2015 just 4% of departures flew 'off track'. We have a system of financial penalties for airlines that persistently fail to keep within the PNRs.

Sometimes, for instance as a result of bad weather, air traffic control may need to operate 'non-standard' departures. As these can result in aircraft flying over more densely populated areas, they can be particularly disturbing. For this reason we keep the number of this type of departure to a minimum.

Noise is measured at a number of fixed points around the airport. Beneath each PNR, noise monitors help us measure impact and performance.

NOISE



To encourage departing aircraft to be flown in the quietest possible way, we operate a system of noise penalties. The maximum level of noise a departing aircraft is allowed to make depends on the time of day – the night-time limits are lower because we recognise that noise can bother people more at night. We donate any penalties to the Manchester Airport Community Trust Fund.

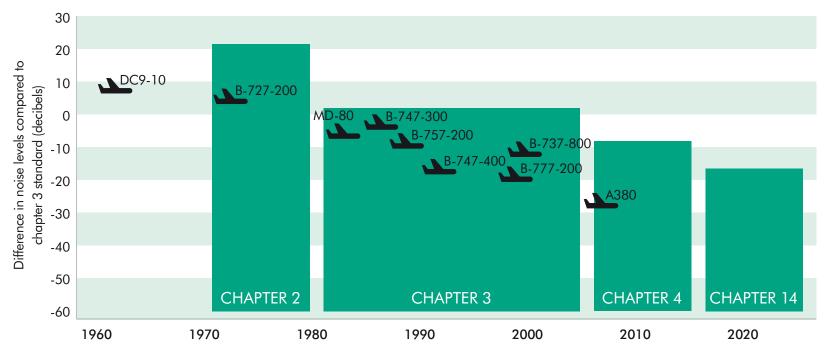


Figure 4: Downward trend in the noise certification of Aircraft

NOISE



ARRIVING AIRCRAFT

Unlike take-off, where the bulk of the noise is produced by the engines, when an aircraft is on approach, engine and airframe noise contribute equally to the noise level. Airframe noise comes mainly from the aircraft's undercarriage and wings and is proportionate to the aircraft's speed as it passes through the air.

All aircraft approaching Manchester Airport are expected to use low-power/low-drag procedures to reduce airframe noise.

LOW-POWER/LOW-DRAG

Low-power/low-drag is a technique designed to keep airframe noise on approach to a minimum by making sure that the landing flaps are extended and the undercarriage is lowered as late as possible. This reduces drag and means that less engine power is needed. As a result, noise is considerably reduced, both in terms of level and time.

Continuous descent approach (CDA) is a noise reduction strategy for landing aircraft adopted at Manchester Airport. Typically, aircraft reduce their altitude in a series of steps. For each of these steps there needs to be a noisy burst of engine thrust to level out the aircraft after it has moved to a lower level. With CDA, pilots work out the best possible continuous rate of descent. This means that the aircraft stays as high as possible for longer and reduces the need for periods of engine thrust to keep the aircraft level.

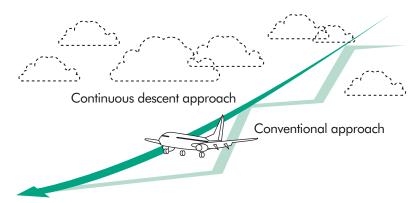


Figure 5: Continuous Descent Approach

More details on the use of the airport's runways and details of CDA can be found in the Runway Data Sheet that is available on our website⁵.

NOISE



AIRCRAFT ON THE GROUND

Ground noise is generated by taxiing aircraft, the use of auxiliary power units (used to provide electricity for the aircraft systems when on stand) and by the testing of aircraft engines after maintenance. For particular areas of the airport site, especially where there are residential properties close by, ground noise can be a source of disturbance.

Airlines are required to avoid the use of reverse thrust as a method of decelerating after landing. Aircraft engine tests take place within a specially soundproofed test bay where at all possible, and tests at night are restricted to no more than 20 each year.

Noise from aircraft auxiliary power (APUs) and mobile generators (GPUs) has been reduced through the alternative use of fixed electrical ground power (FEGP mains electricity). In the future this will be reinforced through operational restrictions on the non-essential use of APUs and GPUs.

REDUCED ENGINE TAXIING

Aircraft engines can produce huge amounts of thrust. Thrust is used to fly the aircraft in the air and to taxi the aircraft when it is on the ground. With all of an aircraft's engines running, even at very low power settings, the thrust produced is often more than enough to move the aircraft along the ground.

Because of this 'surplus' of power, in the right conditions an engine can be turned off while the aircraft is taxiing to and from the runway. Some airlines already do this at Manchester, and this has benefits both to local noise and air quality.

NIGHT NOISE

Night-time noise is often the most disturbing. So we need a balance between the economic and social benefits that the airport brings and a person's right to get a good night's sleep.

We review our night noise policy every five years to make sure that it continues to be relevant. Our policy is that aircraft noise at night will not go above the levels recorded in 2001.

Noise controls use a system of classifying aircraft according to their 'quota count' (QC). Each aircraft has a 'quota count' depending on the noise they generate on take-off and when landing (based on the noise levels measured at the time that aircraft was first introduced). There are seven categories of quota count and these double with each increase of three decibels. In principle, for any season the total number of QC points allowed (the noise budget) could be used for a small number of noisy aircraft or a larger number of quieter aircraft.

We set limits on the total number of QC points between 23:30 and 06:00 depending on the season.

We also limit the use of aircraft with higher quota counts (QC8 &16). These are banned between 23:00 and 07:00. Also, aircraft that have a quota count of QC 4 when taking off may not be scheduled to depart between 23:30 and 06:00.

Whilst quota counts encourage the use of quieter types of aircraft, there is an equally important need to limit the number of night flights in general. Therefore, we also set seasonal and overall limits for the number of night flights that are allowed.

NOISE



The control of the co

MITIGATION SCHEMES

We have had a sound insulation grant scheme for over 40 years.

Those living close to the airport are offered a contribution towards the cost of insulating their home against aircraft noise. Some other buildings affected by noise, such as schools and hospitals, may also be able to get grants.

Details of our mitigation schemes are available on our website⁶.

We continue to provide a vortex damage repair scheme to repair or replace the roofs of local properties that have been damaged by aircraft wake vortexes.

VORTEX DAMAGE

When an aircraft travels through the air it causes air turbulence. This can lead to circulating currents of air known as vortexes.

Most are broken up before they reach the ground, but sometimes – particularly in the final stages of landing – they can reach roof level, causing tiles to lift or slip. We have identified areas where roofs are most likely to be damaged as a result of vortexes.

When it is confirmed that vortexes have damaged a roof, we will immediately repair the roof with a vortex-resistant roof covering. In some areas properties may be eligible for re-roofing.

We routinely review properties suffering from both a very high level of noise and a large increase in noise and consider offers to purchase those properties. We also offer a property relocation scheme. This covers the costs of moving house and is designed to help residents in the noisiest areas to move. This was introduced in 2005 and is available to around 200 properties, principally in Heald Green and Wythenshawe.

CONSTRUCTION NOISE

Major construction projects can generate noise disturbance through:

- Demolition
- Excavation and earth moving
- Construction
- Mixing and batching plants
- Crushing plant

When we develop detailed proposals for any major construction projects such as the modernisation of the airport's terminals, we will include assessments of construction noise and the necessary mitigation proposals will be developed.

NOISE



MONITORING AND REPORTING

We regularly report our performance using the dBL_{den} and dBL_{Aeq} measures, but these are not easily understood by non-experts. To help people understand the noise climate around the airport, we will publish 'Number Above' contour maps showing the number of times aircraft noise was louder than a given level.

We will also publish flight-path maps. These show the number of flights into and out of the airport and where they flew. They allow people to see which areas are flown over and how frequently this can be expected to happen. As well as the more familiar noise contours we also report performance indicators based upon average departure noise levels, recorded each month or the noisiest departures over a full summer or winter season.

Over time our monitoring systems and the ways in which we use them have developed. The MANTIS system monitors and reports on noise from aircraft and checks and records the path of every aircraft within 30 kilometres of the airport, up to a height of 12,000 feet. It automatically flags aircraft that exceed our noise limits, those that stray from our 'preferred noise routes' (PNRs) or do not follow a continuous descent approach.

Effectively sharing information is vital to the success of our noise policy. We will continue to improve our monitoring and reporting systems. In 2015 we completed an upgrade to our MANTIS system and have introduced a web-based facility (www.manchesterairport.co.uk/webtrak) to allow members of the community to access information about where aircraft fly and the noise levels they have made. We will continue to report our performance in the annual MAG Corporate Social Responsibility (CSR) report.

CLIMATE CHANGE



We will continue to reduce our greenhouse gas emissions by increasing efficiency and obtaining energy from renewable sources".



CONTEXT

Greenhouse gas (GHG) emissions are known to impact on the global climate. There is scientific consensus about increasing global temperatures, warming oceans, rising sea levels and more extreme weather events as a result of increasing atmospheric GHG concentrations. In the UK, Government reports that temperatures are now 10C warmer than 100 years ago and 0.5C warmer than in the 1970s⁷.

Globally the aviation sector is estimated to contribute about 2% of global GHG emissions, 5% of which is from airport operations. In the UK, aviation contributes some 6% of total GHG emissions. The forecast growth of air transport and efforts to de-carbonise other industries do however mean that aviation's contribution is expected to rise, to around 3% of global emissions by 2050.

GREENHOUSE GASES

The term 'greenhouse gas' (GHG) refers to a number of substances which retain heat within the earth's atmosphere and contribute to climate change.

The Kyoto Protocol specifies six gases, which are cumulatively referred to as GHGs:

- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous oxide (N₂O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs); and
- Sulphur hexafluoride (SF₆)

Whilst CO_2 is the most widely reported GHG, the climate change impacts of other gases are also very important. GHG emissions can be reported individually for each substance however it is often helpful to consider the impact of emissions relative to those of CO_2 . To provide a single measure of GHG emissions, emissions are often reported in terms of 'carbon dioxide equivalent' (CO_2e) .

CLIMATE CHANGE

HOW EMISSIONS ARE GENERATED AT THE AIRPORT?

Manchester was the first airport in the UK to calculate and publish its carbon footprint and we continue to publicly report this on an annual basis. We also ensure that the data and the calculation methodology are independently verified.

Our carbon footprint is produced and reported according to international guidelines. We monitor and report emissions:

- (i) From our own activities that we directly control (referred to as Scope 1)
 - Fuel we use to heat up the airport as well as in mechanical and other systems
 - Fuel we use in back-up generators, operational vehicles and company cars
- (ii) Emitted during the production of electricity that we consume (referred to as Scope 2) that we can influence through our choice of supplier and by ensuring we use electricity as efficiently as possible
- (iii) Emitted by staff, customers, business partners (including airlines) and suppliers, some of whom we can influence and others that we can guide. These include:
 - Aircraft emissions on stand and during the landing and take-off (LTO⁸) cycle into and out of the airport
 - Staff commuting to and from the airport
 - Passenger surface access to and from the airport
 - Energy and fuel used by companies based at the airport to support their operation
 - Business travel undertaken by our staff

In 2013-14, Manchester Airport's carbon emissions totalled 483,764 tonnes of CO₂, with 91% of those emissions falling outside our direct control.

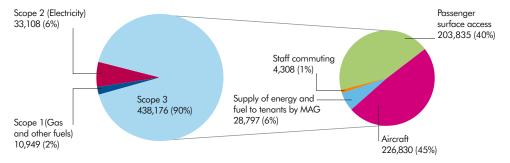


Figure 6: Carbon Footprint, Manchester Airport 2014-15 (tonnes CO₂) 9

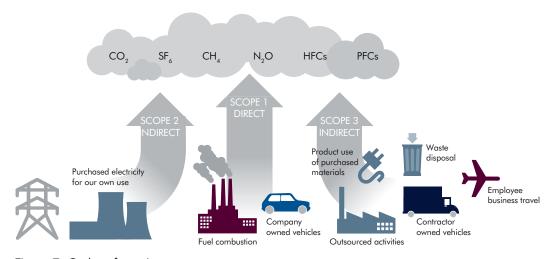
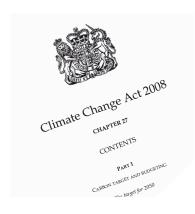


Figure 7: Carbon footprint

⁸ In common with other airports, we calculate emissions from aircraft on the ground and during the landing and take-off (LTO) cycle as defined by the International Civil Aviation Organisation (ICAO). The LTO cycle is the period of flight below 3,000 feet (including approach; landing; taxi-in; taxi-out; take-off; and climb-out). We do not calculate emissions from aircraft in flight because these are regulated and managed through national and European policies including the EU Emissions Trading Scheme. Overall aircraft emissions are calculated and published by Government.

⁹ Airports Commission – an independent commission advising Government on options for long term airport capacity.

CLIMATE CHANGE



LEGAL AND POLICY FRAMEWORK

The international political response to climate change began at the Rio Earth Summit in 1992, where the Rio Convention included the adoption of the UN Framework on Climate Change (UNFCCC). This convention set out a framework for action aimed at stabilising atmospheric concentrations of GHG's to avoid 'dangerous anthropogenic interference with the climate system'. Annually a Conference of Parties (COP) is held to review the Convention's implementation. COP21 held in Paris in 2015, for the first time in over 20 years of UN negotiations, reached a legally-binding and universal agreement to limit global warming to 1.5C above pre-industrial levels.

The International Civil Aviation Organisation (ICAO) is a UN specialised agency, which works with 191 Member States to reach consensus on international civil aviation standards and recommended policies and practices in support of a safe, efficient, secure, economically sustainable and environmentally responsible civil aviation sector. ICAO has agreed to develop a global market-based measure (MBM) scheme for international aviation that is to be implemented by 2020. Types of MBM include emissions trading, emission-related levies and emissions off-setting.

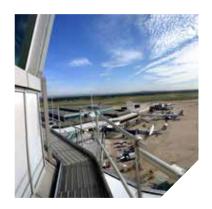
Since 2012, all emissions from flights to and from EU airports have been included within the European Union Emissions Trading Scheme (EU ETS). Airlines can either reduce their own emissions or purchase allowances or credits from other sectors where the options for reducing CO_2 emissions are easier to deliver. However in November 2012, the EU announced that it would suspend the rule for all flights to allow ICAO time to agree a global deal to tackle aviation emissions. As a result the EU ETS currently only covers flights within the European Economic Area.

Nationally the Climate Change Act (2008) requires CO₂ emission reductions of 80%, compared to 1990 levels, by 2050. The Government also has an objective to ensure that the aviation sector makes a significant and cost-effective contribution towards reducing global emissions. The UK's carbon budgets set an envelope for territorial UK emissions. Whilst domestic aviation and shipping emissions are included within the carbon budgets, international aviation and shipping emissions are excluded. Although in setting the levels of the existing carbon budgets, the Government has taken account of international aviation and shipping emissions. In effect, the budgets for other sectors have been constrained so that, to 2027, the UK is on a trajectory that could be consistent with a 2050 reduction target that includes emissions from international aviation and shipping. Government recognises the significant potential for global action (through ICAO) in this area, stating that emissions from international sectors such as aviation should be tackled at the international level.

Manchester Airport is also included in the EU ETS, and is therefore also required to contribute to European climate change targets by reducing the CO_2 generated by our energy plant or by purchasing allowances or credits from other sectors where the options for reducing CO_2 emissions are easier to deliver. In addition, CO_2 emissions resulting from our energy use are also subject to significant taxation as part of the Government's Carbon Reduction Commitment (CRC) Energy Efficiency Scheme which incentivises low carbon initiatives.

We strongly support transparent environmental reporting, and legislation was passed in 2013 that introduced mandatory corporate carbon reporting for large companies. Although the mandatory requirements do not apply to us, we have introduced additional corporate reporting that meets the regulatory requirements and will support future measures to strengthen the mandatory carbon reporting programme.

CLIMATE CHANGE



We also support regional incentives to accelerate GHG emission reductions as a full partner of the Greater Manchester Low Carbon Hub. We believe that the Greater Manchester target to reduce emissions to 48% of 1990 levels by 2020 is ambitious and will set the area apart from other UK regions. We are playing our part in bringing down regional emissions and we consider carbon both with our normal operations and future developments. We have reduced the absolute energy consumption of the airport site by 55% since 1995 (the earliest year that we have data for). This reduction is against the backdrop of a 50% increase in passengers and a number of major developments including the Second Runway, Terminal 3 and new hotels and offices.

MAG is a founding member of Sustainable Aviation 10 which is the first pan-industry alliance of its type in the world, including aircraft and engine manufacturers, airlines, airports and air navigation service providers. Sustainable Aviation has recently updated its Carbon Road-Map, which demonstrates that it is possible for UK aviation to accommodate significant growth to 2050 without a significant increase in $\rm CO_2$ emissions. The Carbon Road-Map and the Sustainable Fuels Road-Map demonstrate how the aviation industry will reduce its net $\rm CO_2$ emissions in 2050 to half of the 2005 levels.

REDUCING THE AIRPORT'S CARBON FOOTPRINT

Our aim is to continue to reduce our own energy and fuel consumption by increasing operational efficiencies and to source our energy supplies from renewable sources. Where this is not possible we will off-set our gross Scope 1 and scope 2 emissions by purchasing carbon offsets. This approach is consistent with that set out in the last Environment Plan, which introduced our hierarchical approach to decarbonising the airport.

Our carbon footprint includes emissions that we can directly control as well as others over which we have less control. Our approach to reducing emissions reflects this.

REDUCING EMISSIONS WHERE WE HAVE FULL CONTROL

Automated metering systems which were introduced in 2012, provide accurate records of energy use within buildings across the site and allow individual budget control. This encourages improved behaviours in relation to energy efficiency and it also ensures that users see the benefits of individual energy reduction schemes.

Since our last Environment Plan, over 20 energy efficiency projects have reduced our annual energy consumption by 24% (60,000 tonnes of $\rm CO_2$) compared to 2005 levels. This is against a backdrop of increased passenger numbers. A range of projects have been delivered, including energy efficient hand-dryers, LED lighting across the terminals and improvements to air handling systems. Our energy programme also focusses on the way that energy is used. We have introduced intelligent building controls that link live flight information with building controls so that areas of the terminals are only lit and ventilated when flights are operating and then reduce to minimum levels at other times. This is expected to further reduce the $\rm CO_2$ footprint by over 3,000 tonnes a year.

These energy savings have only been possible by proactively working with suppliers to ensure that as we develop we use new and innovative products. We will continue this approach and seek to capitalise on new technology as it comes on to the market.

¹⁰ Sustainable Aviation is a long term strategy for the UK aviation industry, bringing together airlines, airports, manufacturers and air traffic service providers. www.sustainableaviation.co.uk

CLIMATE CHANGE



New buildings include energy efficiency measures from the design stage. New buildings are assessed through the Building Research Establishments Environmental Assessment Methodology (BREEAM), which has become the industry standard. Our target for new buildings is BREEAM rating 'Excellent' but sometimes the unique nature of some airport buildings makes it difficult to achieve. Our minimum standard will be 'Very Good'.

The airport provides a range of opportunities to develop and implement renewable technologies. This includes the programme to extend and develop Terminal 2. Opportunities to integrate renewable energy within new buildings are considered at the design stage and are implemented where practical and appropriate. To maximise the benefits that renewable energy offers, and to guide future developments, we will develop an airport-wide renewable energy strategy.

CARBON EFFICIENCY IN OUR VEHICLE FLEET

Emissions from our operational vehicles and company cars are a small percentage of the overall airport GHG emissions, but this is a source that we can readily control and influence. Our own fleet of 118 operational vehicles is nearly all fuelled by diesel. Despite this we have made progress in modernising it. For example we were the first UK airport to introduce diesel-electric hybrid vehicles to our fleet, and more recently we have rolled out models that meet the latest Euro VI emission standard. We have also introduced a cap on the CO_2 emissions of company cars, meaning that colleagues to whom we provide a car must select from a list of vehicles with emissions less than $130g\ \mathrm{CO}_2/\mathrm{km}$.

Low emission vehicles are rapidly developing, and we believe there are opportunities to introduce them to our fleet. We will develop and implement a Sustainable Vehicle Policy that ensures our vehicles meet current or previous Euro emission standards and that hybrid or alternatively fuelled vehicles are purchased where appropriate. These measures will also help reduce local air quality impacts. We will continue to promote green-driving techniques and operate a switch-off policy on the airfield.

USING OUR INFLUENCE TO REDUCE EMISSIONS

Over 90% of the GHG emissions associated with the airport are outside our direct control. We believe however that it is particularly important that wherever possible we work and influence to collectively reduce aviation emissions.

BUYING SUSTAINABLY

In our last Environment Plan we committed to purchasing renewable energy. We have now secured 100% of our electricity from renewable sources, reducing our net CO_2 emissions by 33,000 tonnes a year. Our influence in this area ensures that a further 20,000 tonnes of net CO_2 emissions are avoided by our tenants and service partners to whom we supply electricity.

We believe that our supply chain offers further emission reduction opportunities, and that as a significant buyer we can influence our suppliers to reduce their emissions or identify more sustainable options. We will undertake an analysis of our supply chain to quantify new areas of our indirect GHG emissions and identify suppliers who we can work with.

CLIMATE CHANGE



REDUCING TRANSPORT EMISSIONS

Government statistics¹¹ show that the proportion of passengers travelling to the airport by private car is reducing, and passenger's use of rail doubled from 7% in 2004 to 14% in 2014. This stepchange was supported by the investment in a third rail platform and rail improvement plans across our catchment area. This development continues, with the airport Metrolink being completed in 2014 and the fourth rail platform opening in 2015. We also encourage airport staff to make use of our public transport connections (bus, Metrolink and rail) through the offer of discounted season-tickets and monthly payroll deduction options.

Access to the airport continues to be dominated by the car. We wish to reduce the dependence on the car and secure a major increase in public transport use. Our initiatives to promote and develop public transport services will reduce carbon emissions and local pollution, avoid congestion and improve choice. Details of the measures to achieve this are set out in our Economy and Surface Access Plan.

WORKING WITH OTHERS TO REDUCE THEIR EMISSIONS

Through our initiatives to reduce GHG emissions we have developed a wealth of knowledge and experience. Our position as the operator of a major airport provides us with a platform from which to share this with our business partners, including or airline customers. We believe that it is our responsibility as a major airport operator to work with airlines and other industry stakeholders to collectively reduce aviation emissions.

Our active membership of Sustainable Aviation and our contribution to other industry groups ensures that Manchester remains at the forefront of the development and implementation of efficient operating models. Sustainable Aviation provides a unique platform from which to engage with our airline partners and to work together with their aircraft and engine manufacturers to understand the opportunities to reduce emissions in the short-term, and further into the future as new aircraft types enter service.

We are also working with National Air Traffic Services (NATS), the UK en-route air traffic control provider, on two major airspace efficiency projects. Our contribution to the long-term London Airspace Management Programme (LAMP) and Northern Terminal Control Area (NTCA) projects will provide more direct routes and more efficient climb/descent profiles for aircraft operating at the airport.

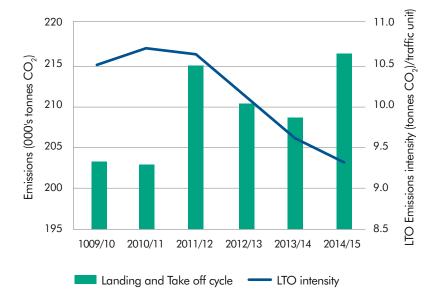
We are working with Eurocontrol, the European network manager, and the wider industry to implement the collaborative decision making (CDM) process. By sharing information, CDM will enable more optimised flight plans that reduce aircraft holding on the ground and in the air, and more direct (and therefore shorter) flight routings, all reducing aircraft fuel consumption. Our Collaborative Environmental Management (CEM) group brings together air traffic controllers, airlines, ground handlers and representatives of the airport. CEM is assisting the implementation of industry standards, including departure and arrival codes-of-practice, the use of continuous descent approaches, reduced taxiing and promoting the use of fixed electrical ground power. These and other initiatives reduce fuel consumption, noise and emissions. CEM is already providing benefits. Working across the airport we have implemented reduced engine taxi for more arriving and departing aircraft and the use of fixed electrical ground power is increasing.

CLIMATE CHANGE



Feedback from CEM partners and advance flight schedules enable us to manage the airfield to reduce congestion. This also includes the reduced use of the Second Runway when demand does not require it. We are also reorganising the airfield including the apron road system, to reduce congestion and future airfield layouts will be designed to reduce aircraft taxiing and holding.

Recent years have seen a change in the way that our customer airlines operate. The airlines are increasingly using larger and more modern aircraft that deliver efficiencies for both the airlines and the airport.



We measure the intensity of our operations against a traffic unit, which is defined by the International Air Transport Organisation (IATA) as equivalent to 1,000 passengers or 100 tonnes of freight.

Since 2009/10 the average number of passengers per flight has increased by 20%. This provides a benefit with reduced emissions per passenger. Between 2009/10 and 2013/14, passenger numbers increased by 24%, but aircraft movements only increased by 7%. During the same period, emissions from the LTO cycle reduced by 15% from 10.5 to 9kg of $\rm CO_2$ per passenger 12. Data for the last two years of this period also shows a reduction in absolute $\rm CO_2$ emissions.

In addition to operating larger, fuller aircraft, since 2005, UK airlines have introduced more than 470 new aircraft into service. This represents an investment of over \$49.6Bn at 2014 prices. These new aircraft are more efficient than those they replace, for example the Boeing 787 Dreamliner is over 20% more efficient than the earlier Boeing 767 aircraft. Other new aircraft that are entering service include the Airbus A320neo, the A330neo, A350 and Boeing 737Max. They offer fuel efficiencies in the range of 14-25% and significant reductions in noise. We have a role to play, ensuring our airfield and facilities are ready to accommodate these new aircraft types.

CLIMATE CHANGE RESILIENCE

The operation of the airport enables the movement of people and goods, and it is therefore strategically important to the North West region and the wider UK. It is imperative that we prepare to maintain and protect our operations against the backdrop of a changing climate.

Our corporate risk governance processes identifies the risks and the opportunities that climate change presents to the airport. The climate change risk assessments highlight the actions that we will take to better

¹² This intensity is measured against a Traffic Unit which is defined by the International Air Transport Organisation (IATA) as equivalent to 1,000 passengers or 100 tonnes of freight

CLIMATE CHANGE



understand the impact that a changing climate will have and to ensure that our operation is climate change resilient. Our climate change risk assessment was first prepared in 2010 and last reviewed in 2015. It also contributes to national climate change adaptation programmes prepared by Government, and also to regional resilience initiatives.

We will continue to review our climate change risk assessments to take account of updated climate change projections as they become available, to reflect changes at the airport and progress against identified actions. We will continue to develop our collaborative approach to climate change resilience, ensuring that we work with others to maintain airport operations.

MONITORING AND REPORTING

We will continue to monitor and annually report our GHG emissions in our Corporate Social Responsibility Report.

Since publishing our last Environment Plan, the Government has published revised environmental reporting guidelines and introduced mandatory reporting of GHG emissions for some businesses. While mandatory reporting requirements do not apply to our business, we will follow Government's guidelines in our own reports.

We will also report our net Scope 1 and 2 emissions and also report Scope 3 emissions resulting from passenger surface access and aircraft operations during the LTO cycle. We currently hold, and will maintain, certification to Airport Carbon Accreditation (Optimisation level) and the Carbon Trust Standard. Participation in these schemes is important to us as it validates the significant efforts we have made to reduce energy consumption and carbon emissions.

We will continue to support national climate change adaptation programmes and publish climate change adaptation reports. We will report the findings of our climate change risk assessments and progress against our previously identified actions.

AIR QUALITY



We will continue to closely monitor local air quality and seek ways to reduce emissions from our operations".



CONTEXT

Air quality is an important and complex subject and can be affected by a number of different pollutants that in high concentrations can cause harm to human health. The majority are produced during combustion processes.

AIR POLLUTANTS

- oxides of nitrogen (NOx)
- nitrogen dioxide (NO₂)
- particulate matter (PM₁₀ and PM₂₅)
- volatile organic compounds (specifically non-methane VOCs)
- carbon monoxide (CO)
- sulphur dioxide (SO₂)
- lead (Pb)
- benzene (C₆H₆)
- 1, 3-butadiene
- Ozone (O₃)



AIR QUALITY



When the levels of these pollutants are high, some people may experience eye irritation, lung irritation and breathing difficulties. These symptoms will be experienced most by people with existing conditions such as lung disease, asthma and heart conditions. Some air pollutants contribute to the formation of ground level ozone, a secondary pollutant that is also harmful to health. In addition, pollutants such as NO_2 and SO_2 react in the atmosphere to form 'acid rain' that can harm ecosystems.

The main airport-related sources of emissions are:

- Staff and passenger journeys
- Aircraft engines, auxiliary power units (APU) operation and engine testing;
- Exhaust emissions from operational vehicles;
- Energy generation equipment: diesel generators, boilers;
- Fugitive emissions (evaporation) during fuelling of vehicles and aircraft, and;
- Miscellaneous emissions from activities such as aircraft fire training.

Air quality is significantly affected by emissions from vehicles using the local road network, especially the M56, even though a relatively small proportion of this traffic is associated with the airport. Particulate matter concentrations can even be due to sources outside the UK. Carbon dioxide (CO2) is produced by many of the same sources and whilst it does not affect local air quality, it is the principal gas causing climate change.

As a large site, with some 310 individual companies, we recognise the need to not only address our own operation, but to work collaboratively with service partners to implement best in class technologies and working practices across the site to reduce local air quality emissions.

LEGAL AND POLICY FRAMEWORK

In order to protect human health, air quality standards are set at an EU and UK level. The pollutants and objectives most relevant to airport operations are NO_2 and PM10. Most pollutants have a short term (hourly or daily) and long term (annual) objective that reflects the scientific assessment of how these pollutants impact on health.

CONCENTRATION	MEASURED AS	
Nitrogen dioxide (NO ₂)		
40 μgm ⁻³	Annual mean (long-term)	
200 µgm ⁻³ with up to 18 exceedances per year	1 hour mean (short-term)	
Particulate matter (PM ₁₀)		
40 μgm ⁻³	Annual mean (long-term)	
50 μgm ⁻³ with up to 35 exceedances per year	24 hour mean (short-term)	

Figure 8: Air Quality Standards Regulations (2010) air quality objectives

AIR QUALITY



Local authorities are responsible for local air quality, conducting reviews and assessments of local levels against national objectives. Where exceedances are predicted to occur in residential areas, local authorities have a duty to declare Air Quality Management Areas (AQMA) and produce an Air Quality Action Plan (AQAP).

The Greater Manchester Air Quality Management Area is based on a modelled 35 μ gm-3 annual mean NO2 exceedance contour. It includes parts of the airport (runways, taxiways and terminal areas) due to high concentration of emissions.

[The Government's] policy on air quality is to seek improved international standards to reduce emissions from aircraft and vehicles and to work with airports and local authorities as appropriate to improve air quality, including encouraging HGV, bus and taxi operators to replace or retrofit with pollution-reducing technology older, more polluting vehicles."

Aviation Policy Framework, 2013

HOW WE MANAGE AIR QUALITY



OUR VEHICLE FLEET

We have a fleet of 118 operational vehicles. Increasingly stringent emissions standards have seen this fleet become cleaner over the years. European standard Euro V was introduced for vehicles certified after 2008. A newer standard, Euro VI, applies to vehicles certified from 2014. This will deliver an 80% reduction in NOx emissions and also halve particulate emissions. Low emission vehicles are now on the market and manufacturers are working on improvements to electric vehicles and hydrogen powered vehicles.

We were the first airport in the UK to operate diesel/electric hybrid busses and will be introducing other low emission vehicles. We will develop and implement a Sustainable Vehicle Policy. Our aim is to have a fleet of vehicles that is no older than 6 years, or retrofitting exhaust abatement equipment where appropriate.

AIRSIDE VEHICLES AND EQUIPMENT

95% of airport vehicles are operated by third parties such as airline handling agents. We work with operators to encourage the operation of cleaner fleets.

All vehicles operating on the airfield undergo regular inspections, including an emissions test. Our airfield operations team carry out ad hoc inspections, banning vehicles which fail to meet MOT emission standards. They also enforce our vehicle 'switch off' policy, ensuring that stationary vehicles are turned off. We are working with our service partners on new controls and codes of practice.

AIRCRAFT

Aircraft exhaust emissions are the dominant source of NO_x on the airfield. The majority of these are from aircraft taking off and climbing up to 200m above ground level at which point the emissions have a negligible effect on the ground. Aircraft landing and taxiing produce less NO_x by comparison.

ICAO has recently introduced new standards that will see a 15% improvement in NO_x emissions, whilst ACARE (Advisory Council for Aeronautics Research in Europe) has targeted an 80% reduction in NO_x emissions from commercial aircraft by 2020. How we manage aircraft CO_2 emissions is described within the Climate Change chapter of this Environment Plan.

SURFACE ACCESS TO AND FROM THE AIRPORT

We promote the use of sustainable transport by airport staff and passengers. Our Economy and Surface Access Plan outlines the measures we are taking on surface access, and which will have benefits in improving local air quality. Access to the airport continues to be dominated by the car. We are committed to reducing that dependence and securing a major increase in public transport use by both passengers and by staff. This will reduce emissions and pollution, reduce congestion and improve passenger choice.

HOW WE MANAGE AIR QUALITY



MONITORING AND REPORTING

We carry out on-site monitoring of nitrogen dioxide through diffusion tube surveys and additional pollutants are monitored as required to assess compliance with legislation.

With Manchester City Council, we jointly maintain an air quality monitoring station near the airport that forms part of a national network. NO_2 , SO_2 , PM_{10} , $PM_{2.5}$ and O_3 are monitored. Data and annual statistics can be viewed on the national air quality web site¹³.

We will continue to assist local authorities with their air quality reviews. We provide data and support joint modelling work, and assist in the annual update of the Greater Manchester Emissions Inventory (EMIGMA). We also support the Greater Manchester Air Quality Action Plan and Cheshire East Council's Local Air Quality Strategy.

We will continue to compile an annual emissions inventory of all airport emissions and produce an annual air quality monitoring report for local Environmental Health Officers. We also will continue to develop our modelling capability to more fully understand our impact on local air quality. We will continue to report our impacts on air quality through our annual Corporate Social Responsibility Report.

WASTE MANAGEMENT



Our aim is to produce less waste and to increase recycling and waste recovery rates".



INTRODUCTION

Airports are like small towns in terms of the range of businesses and activities that operate. We manage the waste from our own, and many of our tenants' activities, including the following:

- · Aircraft cleaning and catering
- Terminal cleaning
- Office cleaning
- Terminal retail and catering
- Maintenance activities
- Cargo handling

The types of waste include packaging, food, newspapers, pallets, metals and green waste. Additionally hazardous, clinical, liquid and construction wastes are generated on the site.

LEGAL AND POLICY FRAMEWORK

Waste and recycling programmes are regulated by a wide range of EU Directives and UK regulations aimed at reducing waste, reducing reliance on landfill for disposal and auditing to ensure waste is handled and recycled or recovered in a responsible manner. Changes in legislation and the Landfill Tax provide financial incentives to increase recycling and recovery.

Aircraft waste is subject to additional controls to prevent the spread of animal diseases. Any cleaning waste from outside the EU that contains certain food items is considered Category 1 International Catering Waste (ICW). There are tight controls on storage, transport and disposal of this type of waste, which must be disposed in a specifically licensed landfill or incinerator. Any recycling or recovery of this waste must be undertaken within the controls set by the legislation and DEFRA's guidance.

WASTE MANAGEMENT



HOW WE MANAGE WASTE

Our target is that by the end of 2018 we will work to send none of our waste to landfill¹⁴. We use the waste hierarchy



Figure 9: Waste Hierarchy

Reduce – eliminating waste generation in the first place. As electronic communications improve, the amount of paper being used across the site has fallen significantly.

Reuse – we salvage materials for reuse as spares and donate surplus items such as furniture and working electrical equipment to local charities. Clothing discarded by passengers at check in when they realise they have misjudged their baggage allowance is sent to a clothing bank provided by a local hospice.

Recycle – we provide recycling facilities for 13 separate materials. This includes containers for card and glass from retail and catering and lamp banks for the 10,000 fluorescent tubes generated annually. By sorting, bulking and baling some materials, we have reduced transport costs and now raise income from recycling materials such as cardboard, paper and plastic bottles.

Recover – residual waste from terminal and offices goes off-site to a recovery plant where it is processed before being burnt with energy recovery.

Disposal – currently Cat 1 ICW goes to landfill, along with the residue from the recovery process, although we are working with our contractor to identify non-landfill alternatives.

RECYCLING PROJECTS

Since the last Environment Plan in 2007, we have increased our landfill diversion rate from 16% to 71% by:

- Installation of 125 bespoke recycling bins across the terminals. We were the first recycling SuperZone under the Coca Cola funded Recycle on the Go initiative.
- Separate collection of plastic bottles and aerosols discarded by passengers. Combined with on-site baling of the bottles, the project delivered an 86% reduction in the weight of this waste.
- A central waste management contract with a single contractor responsible for on-site management and recycling and disposal of all non-hazardous and several hazardous waste streams.
- We have co-ordinated a group of UK airlines and airports to help cabin crew collect materials for recycling on-board the aircraft in a way that complies with the Animal Byproducts legislation.
- Inspection of aircraft cleaning waste and sorting of any bags that do not contain food to recover recyclables.

³⁵

WASTE MANAGEMENT



We provide bulk containers for recyclables for use by retail and catering companies, and provide a mixed recycling bin service to our tenants within the office blocks and the world freight terminal. All our containers and our publicity material on recycling use the national branding (WRAP) for recycling so it makes it more recognisable for airport passengers, staff and service partners, leading to improved quality and quantity of recyclables.

We will work to introduce an on-site Material Recycling Facility (MRF) to divert more aircraft cleaning waste away from landfill, and increase recycling.

The amount of waste generated is strongly linked to passenger numbers. The types of service provided by airlines can also have an impact – there is less on-board catering than several years ago and fewer free newspapers are distributed. Although we will try to reduce the amount of waste generated, we anticipate that higher passenger numbers will lead to an overall increase in the waste tonnage.

Most waste is generated by our service partner's operations and we work with them and their cleaning companies to encourage recycling. We are looking at transparent charging systems that are based on the polluter pays principle which incentivises waste reduction and recycling.

We will continue to manage waste according to the waste hierarchy, but with a focus on reducing and recovering costs and reducing landfill. Our target is to not send any waste to landfill by 2018. However, this is currently the only option for Cat 1 ICW; as there is not a suitably licenced incinerator in the area. Some hazardous wastes are generated on the site, including waste oils, solvents and oily liquid wastes. We do not handle hazardous wastes generated by tenant companies, but we do check storage, transport and disposal arrangements.

We comply with permits and licences and make sure that all waste is transported in accordance with Duty of Care and Hazardous Waste requirements.

MONITORING & REPORTING

We collect detailed information on waste generation and recycling rates. Waste to landfill has decreased from 84% in 2006 to 29% in 2014. Further details are in our annual Corporate Social Responsibility Report and the aircraft waste recycling programme is also reported through Sustainable Aviation. We will enhance our carbon reporting by the inclusion of waste within Scope 3 emissions.

WATER RESOURCES



To aim to use less mains water and to control on-site activities and developments that help improve the quality of local watercourses".



INTRODUCTION

Around 520,000 m³ of water is used each year, mainly in the terminals for toilets and washing. Around 15% is associated with tenant activities such as catering, hotels and aircraft de-icing and washing. Currently, almost all of this is 'mains' potable water and is returned to the foul sewer for treatment at United Utilities' Davyhulme wastewater treatment works.

Rainwater runoff is discharged into the River Bollin and a number of small streams bordering the site. These watercourses support a variety of wildlife including fish, and the Bollin Valley is also a valuable local recreational resource..

There are many potential sources of surface water or groundwater pollution including:

- · Chemicals used for aircraft and airfield anti-icing and de-icing
- Detergents used in aircraft and vehicle washing and general cleaning
- Chemicals and oils from aircraft and vehicle maintenance
- Silt, chemicals and fuels from construction activities
- Spillages of fuel and sewage from aircraft and service vehicles

- · Leaks from inappropriate storage of chemicals and fuel
- Fire-fighting foam, mainly from training.

We manage these impacts to divert runoff contaminated with these chemicals away from watercourses to avoid pollution.

LEGAL AND POLICY FRAMEWORK

The Water Framework Directive sets a strategy to manage the whole water cycle within a river basin. The main aims are to:

- Promote the sustainable use of water;
- Reduce pollution and improve aquatic ecosystems;
- Reduce the effects of floods and droughts.

The Environment Agency is working to improve water quality in the Mersey catchment within which the airport lies.

Climate change could reduce water availability, but also increase the frequency and intensity of rainfall events. As a major transport infrastructure operator, we are part of the Government's climate change adaptation plans. We also prepare our own adaptation plan. This is detailed in the Climate Change section of this Environment Plan.

The Environment Agency control the quality of discharges to surface water or groundwater and can prosecute anyone who 'causes or knowingly permits' pollution to occur. We have very tight limits on the quality of surface water that we send to local watercourses, including the River Bollin. United Utilities (UU) control our discharge of surface water and trade effluents to the foul sewer.

WATER RESOURCES



HOW WE MANAGE WATER USE

Water is largely supplied from the Lake District by UU. Our private pipe network serves most of the airport site. We are working with UU to reduce our peak demands, while providing supplies for future airport growth.

The toilets in the terminals and other airport buildings have water saving devices installed and our leak detection programme ensures quick detection and repair. Water efficiency in all new developments will exceed current Building Regulations levels. We have upgraded water meters on many tenant properties and also installed a number of sub-meters within the areas we control. The meters are read automatically and give detailed information that can be used to calculate consumption, help to identify conservation opportunities as well as promoting good practice through effective and accurate billing.

Rainwater harvesting captures rainfall for uses such as toilet flushing where treated drinking water is not necessary. There are no costs for the water, but a separate water tank, filtration and plumbing system is needed.

We will continue to reduce our water use. We will be installing more sub-meters, which will allow us to build up a more detailed picture of where water use is highest and where additional efficiency measures should be focussed. We will reduce the overall water consumption per passenger within the terminal areas, but we recognise that our total water use is likely to increase as passenger numbers grow.

We have two small rainwater harvesting /grey water systems in operation. Retro-fitting such systems to the existing terminal buildings are expensive and difficult, but we will install new systems as part of the planned future terminal development and undertake refurbishment works where possible.

HOW WE MANAGE SURFACE WATER DRAINAGE

Rainfall runoff from the site is carried via a separate surface water system to a number of different streams and rivers around the site. Oil interceptors remove any oil and fuel, and in some locations, there is balancing storage to attenuate peak flow rates during heavy rainfall.

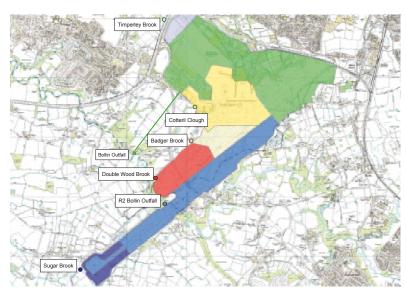


Figure 10: Drainage Catchments at Manchester Airport

WATER RESOURCES



Anti-icing and de-icing chemicals are the main water pollution sources on the site. We have changed to less polluting products and will continue to review what alternatives are available. Run-off that is contaminated with anti-icing and de-icing chemicals is diverted into our containment system and via a large balancing reservoir into the public sewer for treatment at UU's wastewater treatment works.

We are currently looking at ways to treat run-off on-site, although the quantities and variability of the quality of this discharge make this challenging. We are also considering whether centralised aircraft deicing would help reduce the volume of contaminated run-off Our drainage system is extensive and includes the following elements:

- >28km of surface/foul drainage networks
- 7 separate surface water catchment areas
- 6 consented surface water discharge outfalls
- 18 foul pump stations
- 10 surface water pump stations
- >40 penstocks and actuators on the containment system
- >30 oil interceptors
- >3000 manholes
- 4 surface water lagoons
- 2 storage reservoirs

WATER RESOURCES



A comprehensive drainage management system allows us to continuously monitor and control run-off. Water quality monitors help us manage the system effectively, and supplement this with Sampling at all of our outfalls to ensure we compliance with our environmental permits. We are investing in new monitoring equipment to allow us to optimise the amount discharged to sewer whilst complying with our environmental permits. Our target is to achieve 100% compliance with our environmental permits. As part of our Environmental Management System, we audit our own and our tenants' facilities and operations to check that pollution risks are controlled, including from bulk storage tanks. We also make sure that all aircraft and vehicle washing activities only take place where the drainage is diverted to the foul sewer. We periodically review what chemicals we use, including airfield anticing products and fire-fighting foams and will be changing to more environmentally friendly products where possible.

We have robust fuel spill response procedures in place and these are tested as part of our emergency planning process.

We regularly review our drainage model and drainage capacity, and will be undertaking detailed work to understand how our drainage systems will need to be altered and managed to deal with any increased volumes of runoff associated with future airport development. As part of this, we will consider the impacts of climate change on weather events. Adequate attenuation of runoff will be provided for all new developments including future terminal developments.

MONITORING AND REPORTING

We will continue to regularly discuss drainage issues and compliance with the Environment Agency and United Utilities. We will also continue to report our water consumption and surface water compliance within our annual Corporate Social Responsibility Report.

OUR **Approach**

ECOLOGY, LANDSCAPE AND CULTURAL HERITAGE



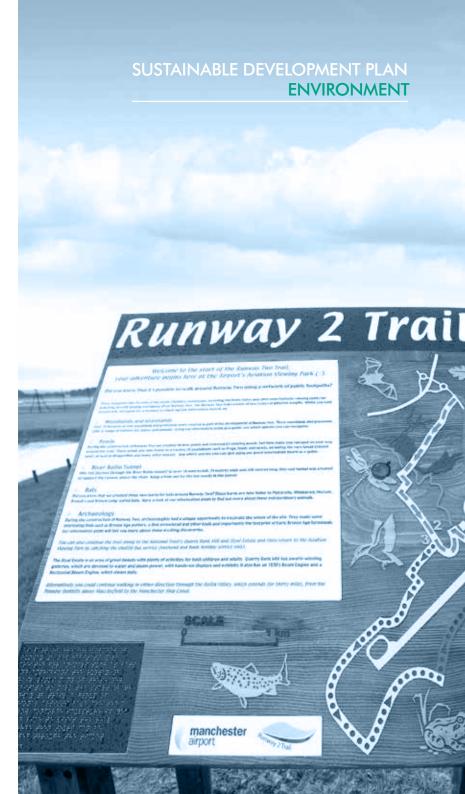
We aim to limit our effects on nature conservation, landscape, archaeological resources and cultural heritage and where possible, to create new features and enhance the ecological and landscape value of the area".



BACKGROUND

The airport lies in the northern part of the Cheshire Plain, a gently undulating area with an open pastoral landscape, punctuated with scattered farms and dwellings. The main exceptions to this pattern are the historic estates of Tatton and Styal, the airport complex, the urban fringe and the Bollin Valley. The underlying sedimentary rocks are Keuper Marls of Triassic origin including Mercia Mudstones, these are overlain by an uneven layer of boulder clay. The River Bollin flows underneath the second runway through a tunnel 24m wide and 240m long. Downstream of the tunnel, the river valley is characterised by recently enhanced channel and valley features. Upstream of the tunnel the river flows through an open valley some 300m wide characterised by a series of oxbow lakes, farmland and wooded sides.

Our non-operational land holding extends to some 380 hectares of principally arable land, woodland and wildflower grassland. The majority is managed as an ecological and landscape resource for the local area and provides a rich and varied network of habitats through which animals and plants can move around.



OUR **Approach**

ECOLOGY, LANDSCAPE AND CULTURAL HERITAGE



LEGAL AND POLICY FRAMEWORK

The Government published the first Natural Environment White Paper for 20 years in 2011 — The Natural Choice: Securing the Value of Nature — which shifted the emphasis from piecemeal conservation action towards a more integrated landscape-scale approach. The White Paper aims to improve the quality of the natural environment across England, halt the decline in habitats and species, and strengthen the connection between people and nature. Government believe this will create a radical shift on how we view our natural assets by incorporating the natural environment into economic planning and ensuring there are opportunities for businesses that are good for nature and good for a strong green economy.

At a local level, Manchester City Council's Core Strategy¹⁵ states that 'In order that the environmental impacts of airport expansion are minimised, all development needs to consider its impact in terms of ecology, air quality and noise'. We intend to further develop our ecology and landscape policies in line with Manchester and Cheshire East Biodiversity Strategies.

LANDSCAPE AND HABITAT MANAGEMENT PLAN

This guides the management of our non-operational land holdings. The aims are to maximise wildlife, visual and amenity benefits, whilst being consistent with the demands of airport safety and security. This relies on the continued management by our tenant farmers of much of the land for productive agriculture, mostly pastoral farming.

Our plan is essentially ecologically led as it was developed from the ecological mitigation works and the Landscape and Habitat Management Plan (LHMP) associated with the development of the Second Runway. As a result we have extensive experience of habitat creation and long term monitoring which we are using to mitigate the environmental impacts of current developments including the World Logistics Hub and a new surface car park. Ecological surveys are always undertaken on land that is proposed for new development.

Across our rural estate we have created or restored over 130 ponds which now provide an important resource for amphibian and aquatic invertebrate species including the great crested newt which has special legal protection. Our policy is that for every pond that is lost to development we will either create two new or restore two existing ponds, as suitable habitats for amphibians and continue to maintain them as such.

We have successfully built three new barns to act as roost sites for bats; two of these are nursery roosts for pipistrelle bats and one for brown long eared bats. We have recently finished building a fourth barn designed for pipistrelle bats. The barns have been supplemented by the erection of 260 bat boxes within woodlands around the site. We will monitor and maintain the new barn and boxes to ensure that they remain suitable for bats.

OUR **APPROACH**

ECOLOGY, LANDSCAPE AND CULTURAL HERITAGE



Badgers are also legally protected. We encourage badgers onto our landholding and we will continue to ensure that the badger population remains unaffected by airport operations.

Our plans include the strengthening and improvement of the existing landscape features and creation of new features such as woodland, grassland or hedgerows. We are currently planting an additional 6 hectares of woodland and scrub around the World Logistics Hub which will supplement the 50 hectares that we have planted over the last 20 years.

We have exposed one Regionally Important Geological and Geomorphological Site in the Bollin Valley and allow educational access. We will undertake detailed assessments to identify if any similar opportunities exist.

Our long-term commitment is demonstrated by being the only airport in the country to employ our own ecologist and our agreement to extend the LHMP through to 2030.

Feature	Number	Area or Length
Existing hedgerows	207	31.9 km
New hedgerows	32	5.1 km
Translocated woodland	2	3.6 ha
Grassland translocation	4	4.5 ha
New scrub	42	20.2 ha
New woodland	15	25.2 ha
Wildflower Grassland	37	24.8 ha
Existing valuable grassland	13	19.6 ha
Existing woodland	19	21.7 ha
Agricultural grasslands	-	220 ha
New ponds	62	-
Restored ponds	68	-
Other existing ponds	63	-

Figure 11: Schedule of Ecological Works Undertaken

OUR **Approach**

ECOLOGY, LANDSCAPE AND CULTURAL HERITAGE



ECOLOGY

There is part of a national Site of Special Scientific Interest (Cotteril Clough SSSI) to the west of the aircraft maintenance area and two local sites of ecological interest (Ponds near Manchester Airport Runway (Grade C) and Marl Pit near Cotteril Clough (Grade A) lie within the Operational Area of the airport.

Our approach to development is to avoid any direct impact to these sites and to minimise as far as possible any secondary effects. Given the overall importance and interest of the SSSI the ecological approach is to increase its quality and bio-diversity. Future land uses will avoid the SSSI and include clear boundaries for protection and enhancement works.

Other designated sites of ecological importance in the vicinity of the airport include:

- Sunbank Wood (Grade A Site of Biological Importance or SBI);
- Castle Hill Road Cutting (Grade A SBI);
- Well and Double Woods (Grade A SBI);
- Hooksbank Wood (Grade A SBI);
- Arthur's Wood SBI;
- Holly Bank Wood (Grade A SBI).

Where these are not within our land ownership we will work with the landowners to support the management of the sites. We will also continue to work with and support the National Trust with their objective of managing the countryside of the Bollin Valley & the Styal estate.

The agricultural land that we own is mainly managed as pastoral farming. Some of the land is managed under Environmental Stewardship Schemes. We intend to continue to manage it as such, however with scope for the development of some short-rotation biomass production.

LANDSCAPE

Landscape is important in order to enhance the airport's setting, and particular attention will be paid to the main gateways, transport corridors and sections of the perimeter that are close to residential areas. Our aims are to:

- Minimise the visual impact of the airport on the surrounding countryside and on people nearby
- Enhance the overall appearance and image of the airport
- Provide a framework which allows visitors and staff to use the airport with maximum ease and efficiency
- Provide a framework within which all new development can be located in a co-ordinated way
- Ensure that the landscape in and around the airport is designed and managed so as not to prejudice aircraft safety.

We predominately use native species to ensure that new planting blends with the surrounding countryside and contributes to the ecology and habitat diversity of the area. Our plantings are designed not only to screen and soften the appearance of the airport but also to prevent inappropriate vantage points for plane spotters.

OUR **Approach**

ECOLOGY, LANDSCAPE AND CULTURAL HERITAGE



Around the terminal complexes, we plant and maintain bold formal arrangements of trees such as birch, horse chestnut, whitebeam and lime to frame or control views and to encourage efficient movement along the internal roads. These are supplemented with principally ornamental shrub species to provide colour, form and shape.

Our landscape areas are managed to the highest possible standards particularly in regard to safety and security. Our Landscape Design Guide will be maintained to give strategic guidance on landscape issues

We recognise that the area covered by the LHMP is an important recreational area for local people because of the network of adopted and permissive footpaths and bridleways. We will continue to encourage their use and to erect interpretation boards to explain the ecological interest of the area. We will use our links with the local community to promote its use as Natural Accessible Greenspace.

ARCHAEOLOGY

During the construction of the Second Runway, archaeological sites were discovered at the former Oversley Ford Brickworks and also within the Bollin Valley. Archaeological surveys prior to and during development were undertaken recording any features found. This procedure will be incorporated into any future major developments.

LISTED BUILDINGS

There are several Listed Buildings within the Operational Area. They are all listed Grade 2 and are:

- 1-2 Hale Top Cottages, Thorley Lane;
- Rose Cottage, Hasty Lane; and
- Cloughbank Farm, Old Wilmslow Road.

Special permission is needed for works to Listed Buildings. During the construction of the Second Runway, three high quality timber-framed Listed Buildings were dismantled and reconstructed elsewhere. Preliminary surveys indicate that due to the condition and construction of the remaining buildings this is not a viable option. However the buildings will be fully surveyed and recorded if directly affected by any development works.

In addition to the Listed Buildings, The Church of Ringway St Mary is located on Sunbank Lane and is subject to normal Listed Building controls. We recognise the sensitivities of this site and its local importance. We will ensure that the site and graveyard is protected and substantial levels of environmental mitigation are to be put in place as part of any adjacent development schemes.

There are a number of important local heritage sites which are affected by airport activity. These include the National Trust properties at Tatton Park, Dunham Massey and Quarry Bank Mill. We will work closely with the National Trust and Cheshire East Council to minimise the adverse effects of airport operations in particular aircraft noise and promote areas of benefit, including support for their growth as major tourist and recreational destinations.

OUR **APPROACH**

ECOLOGY, LANDSCAPE AND CULTURAL HERITAGE



SPECTATOR FACILITIES

There remains a continuing demand for facilities to accommodate visitors and spectators. Viewing facilities are provided at the Runway Visitor Park on Old Wilmslow Road. Providing viewing facilities helps remove pressure from the central terminal complex and from the local road network.

The Runway Visitor Park provides a wide range of attractions for visitors and spectators. These include several static aircraft exhibits, the highlight of which is one of British Airways' Concorde aircraft. The Visitor Park may be relocated from its current location to a new site south of the Second Runway from where visitors could access the footpath and bridleway network within the LHMP area and we will promote the use of these by visitors.



HOW TO CONTACT US

The Sustainable Development Plan is an important document for Manchester Airport. It helps set out what our aspirations are for Manchester Airport. There are many stakeholders who have an interest in the airport and the views and comments from Government, Local Authorities, neighbours, the business community and customers are an important part of the planning process. We are committed to be open in sharing the vision for Manchester Airport and the local area. The plan looks to where possible, reflect local views and ideas.

Neighbours, stakeholders and a wide range of organisations in the region were consulted in 2015 to obtain their views. Where possible these comments have been incorporated into the final set of Sustainable Development plan documents. We will monitor our progress and will carry out a full review of our Plan every 5 years. To obtain copies of the Sustainable Development Plan or to contact the team:

Visit: www.manchesterairport.co.uk/developmentplan

Write: Manchester Airport

Planning

Olympic House Manchester Airport

Manchester M90 1QX

email: developmentplan@manairport.co.uk

or

planning@magairports.com

