YOUR LONDON AIRPORT
Gatwick

GATWICK AIRPORT LIMITED

Environmental Noise Directive

Noise Action Plan 2019–2024

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As Gatwick has grown significantly over the past decade and today welcomes more passengers than ever before; over 46.1 million passengers in 2018 carried on 284,000 aircraft movements. The airport, as part of the UK aviation network, plays a vital role in supporting the local as well as national economy. As one of the largest companies in our region, Gatwick helps businesses to prosper and tourism to flourish, as well as generating employment for 24,000 people on the airport and a further 12,000 in the local economy.

We continue to sustain air passenger growth in line with the government's challenge for airports to optimise the use of existing infrastructure. However, in supporting aviation growth and creating a range of economic and social benefits, we also recognise our responsibility to ensure we deliver a sustainable and considerate airport operation.

The Independent Review of Arrivals, initiated in August 2015, heralded a significant shift in our approach to tackling community concern regarding airspace and aviation noise. A series of recommendations were put to the airport, all of which were accepted.

The establishment of the Noise Management Board as a result of the Review - the membership of which includes a spectrum of industry stakeholders and community representatives - has created a highly effective means of engaging on noise issues relating to aircraft arrivals, departures as well as on the ground. This robust structure of industry stakeholder collaboration, strongly influenced through a process of community engagement, has allowed the evolution of the noise management process to help identify noise issues and develop solutions which are now managed through a more dynamic Noise Management Board Work Plan.

Under the Environmental Noise (England) Regulations 2006, Gatwick Airport Ltd is required to produce a Noise Action Plan, designed to manage noise issues and effects arising from aircraft departing from and arriving at the airport. This third version of the END Noise Action Plan, containing 58 Action Plan Actions, continues to align with the S106 Legal Agreement with West Sussex County Council and Crawley Borough Council, the work plan of the Noise Management Board and our Decade of Change Sustainability Strategy.

We continue to deliver on our commitments and obligations relating to sustainable growth, captured in the S106 Legal Agreement, Noise Management Board Work Plan, Decade of Change strategy and this END Noise Action Plan. To ensure transparency, we remain committed to publicly reporting our performance against these and the effectiveness of our actions to address community concerns.

STEWART WINGATE
CHIEF EXECUTIVE OFFICER

SECTION TWO

PURPOSE AND SCOPE

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The purpose of this Noise Action Plan is to comply with the requirements of the European Union (EU) Environmental Noise Directive 2002/49/EC (END) and associated UK Government Regulations.

The airport operator is deemed the competent authority for drawing up the Action Plan which for Gatwick Airport, is Gatwick Airport Ltd. The final adoption and approval of the noise action plan is undertaken by the Secretary of State for the Department for Environment, Food and Rural Affairs (DEFRA).

Government guidance states that noise action plans are designed to manage noise issues and effects arising from aircraft departing from and arriving at the airport, including noise reduction if necessary.

Gatwick Airport Ltd is committed to reducing noise at or around the airport and has significantly increased the level of focus in addressing the challenges arising from aircraft noise over recent years however it continues to remain an area of concern for local communities. While we can't eliminate aircraft noise completely, our goal is to reduce it as much as possible and this document sets out how Gatwick Airport Ltd plans to manage and where possible reduce the impact of aircraft noise.

Responsibilities within the management of noise do not always fall to the airport operator and where responsibility falls to the Department for Transport, air navigation service providers or the Civil Aviation Authority then the airport can seek to recommend or influence changes. The Noise Management Board at Gatwick is an excellent example of where a wide range of key industry experts and stakeholders are gathered with the purpose of reducing the impact of noise on the local community.

Gatwick Airport's first Environmental Noise Directive Noise Action Plan was published in June 2010 and covered the period 2010 - 2015. This action plan was subsequently updated to cover the period 2013 - 2018. This is the third revision to the action plan and has been devised in line with the latest guidance provided to airport operators by DEFRA.

In revising this action plan, the following bodies have been consulted:

- The Gatwick Airport Consultative Committee
- The Noise and Track Monitoring Advisory Group
- West Sussex County Council
- Crawley Borough Council

In addition, the Noise Management Board has been advised of this process. Details of feedback received is included in Annex 9.

SCOPE

Directive 2002/49/EC relates to the assessment and management of environmental noise and is referred to as the Environmental Noise Directive or END. The Environmental Noise (England) Regulations 2006, as amended, transpose this Directive into English law.

The Regulations require that strategic noise maps be produced for the main sources of environmental noise (major roads, major railways, and major airports) and for agglomerations in England. Strategic noise mapping for Gatwick Airport, in scope of the Regulations was produced by the Environment Research Consultancy Department (ERCD) division of the CAA and completed in 2017, showing the situation in 2016 utilising the L_{den} measurement. The contours are shown in Annex 3.

Through the action plan actions set out in this plan, we seek to manage aircraft noise from Gatwick's operation. It is important

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SECTION TWO

PURPOSE AND SCOPE

to note that this document only includes actions related to developments for which the airport has been granted planning permission at the time of publication. For the avoidance of doubt, the scope of this noise action plan does not include a mitigation strategy or specific actions to deal with any new infrastructure or significant airspace change. Nor does it deal with any actions or mitigation schemes in the event Gatwick Airport constructs a second runway.

In the event of any changes or proposals that impact this action plan we will review our noise action plan with the bodies referred earlier in this section, and if appropriate, consult on any proposed amendments publicly.

The legal requirement is for Gatwick Airport Ltd to consider noise issues within the 55dB L_{den} and 50dB L_{night} noise contours. These contours take into account aircraft noise during take-off, landing and ground roll stages of flight.

In revising this Noise Action Plan, we continue to give consideration to actions that seek to address the impacts of aircraft noise in areas beyond the specified contours as well as noise created by taxiing aircraft and engine testing carried out within the airport perimeter.

The 2015 Section 106 Legal Agreement with West Sussex County Council and Crawley Borough Council sets a limit of 250 high powered engine tests per six month rolling period before Gatwick Airport Ltd is required to undertake further prescribed actions. The proposed Boeing Hangar, scheduled for operational use in 2019 is not anticipated to result in a significant increase in engine testing due to the nature if the maintenance work to be undertaken, and high powered engine tests are not expected to occur more than once a month, and probably less than that.

This Noise Action Plan also aligns with Gatwick's Sustainability Strategy, the Decade of Change and the Section 106 Legal Agreement with Crawley Borough Council and West Sussex County Council.

Our strategic approach to noise is described later in this document with more details regarding our Decade of Change and S106 Legal Agreements available on our website in the sustainability section at https://www.gatwickairport.com/business-community/community-sustainability/sustainability/

The action plan does not include noise from airport construction activities or noise from road and rail traffic associated with the airport.

Action plans for noise associated with major road and rail routes are dealt with separately under government legislation and do not fall within the responsibility of airport operators.

Airports bring positive economic and social benefits, as well as environmental impacts. They are important to the economy, providing jobs, encouraging inward investment and boosting local tourism. However airports can also have an impact for those communities that exist around them. Noise remains a significant issue for people living or working close to airports or under flight paths.

Our environmental policy continues to encourage the use of quieter aircraft and to restrict noisier aircraft. As the airport grows, and the frequency and number of flights increase, we know that we must make sure that our policies on controlling noise continue to evolve so they remain appropriate and effective. The Noise Management Board at Gatwick continues to identify innovative new solutions, in partnership with key industry stakeholders and local community groups to control aircraft noise.

At Gatwick Airport, we have a dedicated team whose focus is to continually monitor aircraft operations to ensure compliance with the noise abatement requirements applicable to the airport. Departing aircraft must follow set routes designed, where possible, to avoid flying over densely populated areas. We monitor the noise levels generated by each aircraft as it takes off from the airport. If any aircraft goes over strict noise limits when taking off, the airline must pay a surcharge. We donate these surcharges to the Gatwick Airport Community Trust Fund. Although the average level of noise from departing aircraft is falling over time, the frequency of aircraft movements has increased, we will therefore continue to work closely with airlines and air traffic control to explore opportunities to improve performance even more.

Until recently, noise from aircraft landing has not received the same attention as that from aircraft taking off; the Independent Review of Arrivals commissioned in 2015 has changed this. We have worked with airlines to enhance landing procedures such as the increase in measurement of continuous descent operations from 6,000ft to 7,000ft to control noise as much as possible. We are also looking into ways to distribute aircraft in a fair and equitable manner as they fly towards the final approach in order to provide benefits for the communities around the airport.

The Department for Transport night flying restrictions continues to place tight controls on aircraft noise at night. They limit the total number of flights during the night, and the noisiest types of aircraft cannot be used. The most recent night flying restrictions were announced in early 2017 and came into effect for the winter season 2017/2018 and will remain in place until 2022.

Mitigation schemes play an important role in limiting the disturbance caused by aircraft noise. We have offered a noise insulation scheme for many years and between 2014 and 2017, Gatwick Airport Ltd has spent over £3m providing acoustic insulation to homes within our extended scheme boundary.

We continue to provide schemes where we will offer to purchase properties that may be suffering from either a very high level of noise or a large increase in noise. The Home Owner Support Scheme aims to provide financial reassurance for those property owners whose home may be impacted by the construction of a second runway and

we also offer a Property Relocation Scheme, which covers the costs of moving house to help residents in the noisiest areas to move to a quieter area. Full details of these schemes are included later in this document within Section 15.

We are committed to developing the ways we share information relating to aircraft noise with others. We continue to make information from our Noise and Track Keeping System available online through the 'Casper Noise Lab'*. We continue to regularly publish our performance against a set of performance indicators and will report on the noise complaints we receive and how we handled them. We regularly report our performance on our website, through the Gatwick Airport Consultative Committee, and by engaging with airlines, pilots and air traffic control through the Flight Operations Performance and Safety Committee, along with local authority representatives through the Noise and Track Monitoring Advisory Group.

Our community noise monitoring programme continues to be well used with noise data from a wide range of areas being analysed by local Environmental Health Officers through the Gatwick Noise Monitoring Group and detailed reports shared with the Noise and Track Monitoring Advisory Group and uploaded to the airport website.

As a designated airport operator, the Department for Transport (DfT) has direct control over noise policy at Gatwick Airport and has established over many years a range of operational controls and statutory objectives to manage and where possible reduce noise. Limiting and, where possible, reducing the impact of noise is a long-standing commitment of Gatwick Airport and is critical to maintaining the airport's licence to operate and grow.

Gatwick Airport has had in place for a number of years a detailed noise strategy and a comprehensive and effective approach to aircraft noise management. This is further supported by our Decade of Change strategy as well as our S106 Legal Agreement with West Sussex County Council and Crawley Borough Council which lays the foundations of our Noise Action Plan.

Gatwick Airport is, as defined by the Environmental Noise (England) Regulations 2006, as amended, a major airport and consequently must produce noise maps and publish a Noise Action Plan every five years. These five yearly cycles of noise mapping are referred to as 'Rounds' and this Noise Action Plan is produced in response to the latest 'Round 3' noise mapping exercise.

Noise Action Plans are designed with the aim of 'preventing and reducing environmental noise where necessary', and the Department for Environment, Food and Rural Affairs (DEFRA) has issued guidance to help airport operators prepare their plans.

Under the regulations we must assess, and provide information on, how effectively we are controlling the effect of noise arising from aircraft landing and taking off. We must provide information on our performance in noise maps, together with the numbers of people and homes exposed to a range of noise levels

The Environmental Noise (England) Regulations 2006 align with the Government's aim – as set out in the Aviation Policy Framework – to adopt a balanced approach to securing the benefits of aviation. This is underpinned by two core principles:

- Collaboration: By working together with industry, regulators, experts, local communities and others at all levels, the industry will be better able to identify workable solutions to the

* The airport Noise and Track Keeping System, including the public-facing flight tracking and complaints facility will be replaced in the first half of 2019

challenges and share the benefits of aviation in a fairer way than in the past.
- Transparency: To facilitate improved collaboration, it is crucial to have clear and independent information and processes in place. Those involved in and affected by aviation need to have a clearer understanding of the facts and the confidence that proportionate action will be taken at the international, national or local level.

Government policy is to strike a fair balance between the negative impacts of noise (on health, amenity (quality of life) and productivity) and the positive economic impacts of flights. As a general principle, the Government therefore expects that future growth in aviation should ensure that benefits are shared between the aviation industry and local communities. This means that the industry must continue to reduce and mitigate noise as airport capacity grows. As noise levels fall with technology improvements the aviation industry should be expected to share the benefits from these improvements.

In July 2017, the Department for Environment, Food & Rural Affairs (DEFRA) provided amended guidance to airport operators in respect of the production of noise action plans under the terms of the Environmental Noise (England) Regulations. Existing action plans are to be revised taking into account the updated noise mapping, airport specific operational changes, new actions that may influence aircraft noise and progress against actions within the current action plan.

The guidance states that the airport operator will present their revised action plan to the airport consultative committee and any other appropriate organisation for comment after which the airport operator will reflect on them and include them in the revised plan together with a response to the issues raised.

This document aims to:

- Demonstrate our continuing commitment to managing aircraft noise impacts associated with Gatwick Airport's operations. We have identified this issue as one of our key sustainability priorities
- Allow us to engage with communities affected by aircraft noise and better understand their concerns and priorities, so that we can ensure our airport noise strategies and action plans are well informed
- Enable us to make progress towards our long-term statutory and voluntary aircraft noise objectives
- Enable us, in our role as the competent authority for Gatwick Airport, to meet the requirements of the Environmental Noise Directive 2002/49/EC and The Environmental Noise (England) Regulations 2006.

Over the following paragraphs we have set out the key aspects of sections 3–19 of this Noise Action Plan. There are also a series of Annexes contained in an accompanying document including a glossary of terms (Annex 1).

Section 2 sets out the purpose and scope of the noise action plan. The scope extends beyond the areas identified by the strategic noise mapping to include ground noise issues and actions that impact on areas outside the contours. The section also points out that responsibilities for noise management do not always fall to the airport operator and often fall to the Department for Transport, Air Navigation Services Providers and/or the Civil Aviation Authority. In such cases the airport operator can only recommend any proposed changes.

Section 4 provides a description of Gatwick Airport and comments briefly on future development of the airport.

03 SECTION THREE
INTRODUCTION

Section 5 introduces the issue of aircraft noise and acknowledges that noise contours are not the only way to describe the community impacts of aircraft noise. This section details the Attitude to Noise from Aviation Sources in England (ANASE) study conducted on behalf of the DfT; Survey of Noise Attitudes (SoNA) 2014 commissioned by the UK Government. These studies, some of the early feedback we received during our initial pre-consultation stakeholder meetings and analysis of our complaints data has shown that the frequency of overflight, night flying and our role in influencing associated stakeholders are all key local concerns for community stakeholders.

The interdependencies between noise and air emissions to ensure compatibility between action plans are also briefly discussed. The legal context within which Gatwick Airport operates is complex. The International Civil Aviation Organisation (ICAO) sets international noise certification standards and recommended practices and procedures in relation to aircraft noise. Reference is also made to the requirement for member states to adopt a 'balanced approach' to noise management.

Section 6 provides a detailed overview of aviation policy and what it means for Gatwick. This includes International, European and Domestic policy.

At the European level some detail is provided on key European Union Directives which relate to aircraft noise including the phasing out of older Chapter 2 aircraft in 2002. At a national level a number of significant Acts of Parliament and regulations are set out. These include the Civil Aviation Acts 1982 and 2006 which grant the government powers to introduce noise control measures at designated airports (Gatwick is a designated airport). This section also introduces the UK Aeronautical Information Package (UK AIP) which contains a range of noise controls relating directly to aircraft operations.

Section 7 outlines our strategic approach to aircraft noise management framed around our long-term objective 'to gain the trust of our stakeholders, that we are using best practicable means to minimise aircraft noise impacts'.

This noise action plan sets out the themes to our noise work programme which are:

1. Reducing noise impacts wherever practicable. This includes:
    a. Quietest fleet practicable
    b. Quietest practicable aircraft operations, balanced against NO_X and CO_2 emissions
    c. Effective and credible noise mitigation schemes
2. Engaging with communities affected by noise impacts to better understand their concerns and priorities, reflecting them as far as possible in airport noise strategies and communication plans
3. Influencing planning policy to minimise the number of noise sensitive properties around our airport
4. Organising ourselves to continue to manage noise efficiently and effectively
5. Continuing to build our understanding of aircraft noise to further inform our priorities, strategies and targets.

We also describe the current measures in place to manage noise at Gatwick Airport. In headline terms these include:

- Noise and track keeping monitoring arrangements
- Operating restrictions
- Runway use
- Night flight restrictions
- Operational procedures
- Departure procedures

- Noise Preferential Routes (NPRs)
- 1,000ft rule
- Arrival procedures
- Continuous Descent Operations (CDO or otherwise known as Continuous Descent Approach (CDA))
- Instrument Landing System (ILS) joining point rules
- Reverse thrust
- Noise limits
- Ground noise controls
- Aeronautical charging
- Noise mitigation and compensation schemes
- Stakeholder engagement.

Section 8 details the Independent Review of Arrivals and the establishment of the Noise Management Board, itself a step change in noise management at Gatwick since the last iteration of this Noise Action Plan.

Sections 9 and 10 cover the Control Measures in place at Gatwick and our Environmental Risk Management strategy respectively. Section 12 provides an overview of the various committees that are in existence relating to aircraft noise management, this has been included in this version of the Noise Action Plan to provide more transparency as to 'who does what' given the frequency certain committees are referenced in this document.

Section 14 explains the need for airspace modernisation. While this is a contentious issue in certain communities, the fact remains the present airspace structures are ageing and inefficient. Optimisation of the airspace will provide capacity, resilience and environmental benefits due to aircraft being able to operate more efficiently.

Section 17 summarises the results of the 2016 noise mapping and is supported by the maps in Annex 3. Although the mapping introduces a relatively new metric to describe the noise impact, Gatwick Airport's strong history of noise management controls and frequent contour analysis means it does not highlight any new geographical areas of concern with regard to noise impacts.

Section 18 is the list of actions. There are 58 actions detailed within this Noise Action Plan.

Performance against our Action Plan Actions will be reported quarterly to the Noise and Track Monitoring Advisory Group, annually to the Gatwick Airport Consultative Committee as well as referenced in our Flight Performance, Section 106 and Decade of Change reports.


26L
easyJet

Gatwick became an aerodrome in the 1930s, but the airport today opened in 1958 with just 186,000 passengers passing through the airport in our first year of operation. Today, it's a different story. Gatwick Airport is open 24 hours a day, 365 days a year, and we now help take more than 46.1 million passengers to around 230 destinations in 70 countries around the world every year.

The airport is located approximately 28 miles south of London and about 2 miles north of Crawley. Aside from the nearby towns of Crawley and Horley, it is situated in mostly lightly populated countryside. The airport has one main runway, designated 08R/26L, which is 3,316 metres long. The Runway 26L threshold is displaced by 424 metres, and the Runway 08R threshold is displaced by 393 metres. There is also one standby runway (08L/26R) that can be used if the main runway is out of operation.

Gatwick operates the world's most efficient single runway and is the second largest airport in the UK. Uniquely, it is home to a mix of airline operators from scheduled to low-cost and charter airlines. Fifty-three airlines currently operate (as of December 2016) regularly from the airport including easyJet, British Airways, Norwegian, Virgin Atlantic, Emirates, Cathay Pacific, Thomas Cook, Thomson, Turkish Airlines, Air Transat, Vueling, Iberia Express, Ryanair, Air Lingus, Aurigny and WestJet.

The Airport is the biggest base for easyJet, one of Europe's most successful airlines, and it's also home to key charter operations such as Thomson and Thomas Cook. It is also the airport with most connections to and from other UK regions, with significant numbers of passengers travelling on easyJet, British Airways, Flybe, and Aurigny.

In addition to the major long haul leisure operations of British Airways and Virgin, Gatwick is now seeing the emergence of long haul services to the Far East, with the arrival of Turkish Airlines, Cathay Pacific, China Airways and China Eastern. These complement the existing long haul services provided by airlines such as Emirates, WestJet, and Norwegian.

At the time of publication, the consortium that ultimately owns the Airport currently comprises the following parties*:

Global Infrastructure Partners, LP ("GIP 1")	41.95%
The Abu Dhabi Investment Authority ("ADIA")	15.90%
The California Public Employees' Retirement System ("CalPERS")	12.78%
National Pension Service of Korea ("NPS")	12.14%
Future Fund Board of Guardians ("Future Fund")	17.23%

The strategy for the Airport is to transform the passenger experience and improve efficiency for the airlines and the Airport itself, thereby improving its competitiveness in the London airport market. A key element of Gatwick's strategy is to build and maintain strong relationships with its airline customers, regulators and other stakeholders.

* On 27 December 2018, it was announced that Vinci Airports is to acquire a 50.01% majority shareholding in Gatwick Airport; the remaining 49.99% shareholding will continue to be managed by Global Infrastructure Partners (GIP). This transaction is expected to complete in the first half of 2019.

04 SECTION FOUR
ABOUT GATWICK AIRPORT

Gatwick has set out its ambition – compete to grow and become London's airport of choice, and has established six strategic priorities to which its activities are aligned.

The strategic priorities and the approach Gatwick is taking to achieve them have been outlined below:

- Deliver the best passenger experience: by listening to its passengers and delivering the kind of service that will make them choose to fly from Gatwick;
- Help its airlines grow: by understanding airlines' goals and developing commercial partnerships;
- Increase value and efficiency: by maximising income, lowering its operating costs and driving capital efficiency;
- Protect and enhance its reputation: by building strong and constructive relationships with its stakeholders based on openness and trust;
- Build a strong environment, health and safety ("EH&S") culture: by maintaining a relentless focus on achieving zero incidents; and
- Develop the best people, processes and technology: by investing in high-performing people, continuous improvement and deploying the right systems.

2017–2022 CAPITAL INVESTMENT PLAN

Whilst the airport continues to expand, Gatwick recognises that to improve continually the quality of service which passengers have come to expect requires ambitious investment plans keep pace with rising demand. The 2017 Capital Investment Programme sets out Gatwick's plans to invest £1.15 billion over the next five years through to 2022, with £240 million planned for 2017/18 alone. The airport has continued to invest to improve facilities since it changed ownership in December 2009, and has invested £1.5 billion to date.

One area where the airport is putting more emphasis are projects to enhance the efficiency of the airfield, by optimising infrastructure, to help its airlines operate on time. Gatwick also plans to commence the resurfacing of the main runway during this five year period to protect its most valuable asset. Other projects that are being accelerated to meet the airport's growing demands are the expansion to the North Terminal Border facilities and a suite of IT projects supporting core airport functions. Gatwick continues to develop its plans for expanding the International Departures Lounges in both terminals, for providing additional car parking capacity, and for improving the roads in the vicinity of the airport.

Over the last three years, passengers have benefited from Gatwick's North Terminal Development Programme which has vastly improved the terminal's landside areas; providing check-in and bag drop automation, more efficient security processing and a much more welcoming arrivals concourse. Automation was a key component of this programme, and the airport plans to build on the success it has seen in North Terminal by extending the roll-out of self-service bag drop to South Terminal. Gatwick will also start a programme to automate boarding in gaterooms to make the embarkation process more efficient for passengers and airlines.

As always, Gatwick is committed to maintaining its existing assets, as well as continuing its programme of resilience measures, to ensure passengers consistently receive the best experience possible during their journey through the airport.

One of Gatwick's biggest achievements has been the successful consolidation of easyJet's operations into the North Terminal in late January 2017, simplifying the journey for millions of its passengers. As part of this consolidation British Airways moved to the South Terminal, whilst Virgin Atlantic Airways moved to the North Terminal. It took several years of planning to make this happen, and a wide

ranging suite of infrastructure changes; not only the more obvious front-of-house switches of check-in areas, passenger lounges, baggage reclaim and security facilities, but also changes to the behind-the-scenes facilities that are so critical to a successful airport operation such as airlines' crew and engineering facilities. In the process of making these changes, many improvements to passenger-facing facilities have also been undertaken.

On 1 June 2016 Gatwick opened the new Pier 1, which provided five new aircraft stands with light, bright, modern gaterooms. The building is also home to a brand new departures baggage facility, serving the whole South Terminal, which provides airlines and passengers with greater check-in and baggage processing capacity and flexibility, including allowing passengers to check-in earlier than before.

BOEING HANGAR

Planning permission was granted in October 2017 for the construction of the £88 million Boeing Hangar at Gatwick. Boeing expects construction to start at the facility in late 2017, for an early 2019 opening. Building the facility is expected to support 475 jobs and contribute around £80m of gross value added to the local economy around the airport. Over the first two decades of operation the hangar's activities will generate a further £135m in GVA in the Gatwick area. This development will build on the long term partnership between Boeing and the UK Government, announced at the Farnborough International Airshow in July 2016 and the ground breaking for Boeing's first factory in Europe, to be built outside Sheffield, South Yorkshire and twinned with a facility in Portland, Oregon.

TRANSPORT FACTS

- Gatwick was the world's first airport to have a direct mainline train link with a dedicated railway station
- Gatwick is already the UK's best connected airport by rail and directly connects to more stations than any other European airport station
- Number of direct rail connections: more than 120
- Time by rail to central London: 30 mins with trains running every three minutes
- With planned improvements, by 2030 there could be up to 50 trains an hour departing Gatwick, and a train every 2.5 minutes

FACILITIES

- Number of runways: 1
- Runway length: 3,316m long by 45m wide
- Number of terminals: 2 - South (opened in 1958) and North (opened in 1988)
- South Terminal is 160,000 square metres of which 14,768 square metres is retail facilities
- North Terminal is 98,000 square metres of which 12,530 square metres is retail facilities
- There are 119 stands, with a total of 186 centrelines - the ability to use a stand flexibly means we can park up to 186 aircraft
- 31 South Terminal stands, 31 North Terminal stands, 57 remote stands served by coaches
- We have 346 check-in desks. 187 in South Terminal and 159 in North Terminal. In addition, there are 69 self-service kiosks

WORKFORCE AND ECONOMY

- Around 24,000 staff work on the Gatwick campus across around 250 different companies
- Gatwick Airport itself employs around 3,000 people directly
- As well as providing 24,000 jobs, the airport also creates a further 12,000 jobs indirectly
- The airport directly generates £1.6 billion for the UK economy.

Aviation noise is unwanted sound generated by aircraft, and it is a serious and growing problem in the UK. As airports expand and air services increase, more and more homes are exposed for large parts of the day to a persistent background noise from aircraft.

Noise from aircraft is subject to an entirely different regulatory regime to other noise pollution. The Civil Aviation Act 1982 (updated in 2006) provides that no action for trespass or nuisance can be taken as long as an aircraft observes the rules of the Air and Air Traffic Control Regulations, which also cover ground movements.

The UK's main measure of aviation noise is Equivalent Continuous Sound Level (L_{eq} dB(A)). This averages the sound energy monitored from all aircraft noise events in a certain area over a 16 hour period each day (0700 and 2300). The UK government defines three community annoyance thresholds of low annoyance at 57 L_{eq}, medium annoyance at 63 L_{eq} and high annoyance at 69 L_{eq}.

The government published their Response to their Airspace Consultation in 2017 and acknowledged the evidence from the SoNA study, which showed that sensitivity to aircraft noise has increased, with the same percentage of people reporting to be highly annoyed at a level of 54dB L_{Aeq}, 16hr as occurred at 57 dB L_{Aeq}, 16hr in the past.

BACKGROUND

The Air Navigation Act 1920 provided the basis of the UK's aviation noise regulation regime, by exempting aviation from nuisance sanctions, in order to stimulate the nascent industry.

This principle was reaffirmed in the Civil Aviation Act 1982, which nonetheless set out a number of provisions for controlling noise at larger airports through a process of "designation", which has only been applied to date to Heathrow, Gatwick and Stansted. By their Section 78 designation, the Transport Secretary is responsible for regulating take-off and landing noise at these airports.

In practice, noise restrictions at designated airports have been implemented through restrictions on departing aircraft noise, controls on night flying and (at Heathrow and Gatwick, under Section 79) housing noise insulation schemes.

At other airports, the successive governments have continued to favour local resolution. Councils' main instrument in this regard is the Section 106 Obligation, a condition that can be placed on planning permission.

Aviation is necessarily an international business, making unilateral domestic regulation difficult. However, successive agreements of the International Civil Aviation Organisation (ICAO) have sought to impose controls on aircraft design in order to minimise noise pollution.

Since the 1960s, jet engines have become four times quieter. A process of driving up noise pollution standards has been pursued by the ICAO, and by the European Civil Aviation Conference.

In 2001, the ICAO Assembly agreed that a balance of at -source restrictions, planning controls, operating restrictions and noise

abatement practices by pilots and air traffic controllers would form the appropriate methods to address aviation noise.

In 2002, "Chapter 2" aircraft were outlawed from the EU, and the new "Chapter 4" came into force in January 2006, which improved upon the current "Chapter 3" standard by a cumulative 10 dB(A). The majority of aircraft in service today already meet the Chapter 4 requirements with an ever increasing number qualifying for Chapter 14 status[1]. This was agreed in 2013 and represents the latest requirements for all aircraft certified on, or after 31st December 2017 or 31st December 2017 for aircraft under 55 tonnes.

Night flights are a particularly controversial aspect of aviation noise. Studies have shown that sleep can be disturbed at a relatively low L_{eq} level of just 30 dB(A). The first restrictions on night flights were imposed at Heathrow in 1962. Reviews have taken place since then in 1988, 1993 and 1998 and ten airports are now subject to night noise controls under the Aerodromes (Noise Restrictions) (Rules and Procedures) Regulations 2003.

The Government undertook to consult on a new night noise regime in 2004, and decided that the existing limits on night flights should remain until 2012. This was extended again until 2017 with a new regime coming into effect thereafter following a consultation process.

AIRCRAFT NOISE

For the large majority of commercial jets, the primary noise source is the engines. The secondary one originates in the airflow around the aircraft (aerodynamic source).

Engine Noise – Jet

The jet noise is linked to the intense exhaustion of the burnt gases at high temperature. Downstream of the aeroplane wings, the jet generates strong turbulence as it enters a still area (relative to the jet speed).

The main characteristics of this noise are the following:

- The generation area is located rear of the engines, at a distance equivalent to a few nozzle diameters.
- The noise directivity is strong, heading for the back of the aircraft.
- The noise generated does not contain remarkable tones, and its frequency band is quite wide.

Engine Noise – Fan

The noise produced by the fan results of the superimposition of a wide-band noise (as for the jet) and noise with harmonics.

- The wide band noise is due to the boundary layer developing on the fan blades, and more generally to the airflow around them.
- The harmonics are originating in the intrinsic cycling character of the fan motion (spinning motion). The most remarkable frequency is the fundamental, the value of which is the number of blades times the fan rotation speed. The harmonics are multiples of this fundamental.
- When the engine rating is high (during take-off for instance), the airflow around the fan blades transitions to supersonic and these multiple pure tones are at the origin of the socalled "buzz saw noise".

Engine Noise – Compressor

It is of the same kind than the fan noise, but the harmonics are less emergent due to interaction phenomena.

[1] In 2017, 39% of aircraft movements at Gatwick were billed at the Chapter 14 noise standard. Of these, 63% were in the quietest noise categories, Chapter 14 Base and Chapter 14 Minus

Airframe Noise

The airframe noise would be the noise produced by the aircraft, if all engines were made inoperative. It is generated by the airflow surrounding the moving plane. The main sources are the discontinuities of the aircraft structure, such as high-lift devices (flaps and slats), landing gear wheels (when extended), trailing edges where there is a speed shearing (aircraft speed versus still air).

It was empirically determined that the noise emissions are dependent on the sixth power of the aircraft's true airspeed. This noise produced from aerodynamic phenomena is most sensitive during approach, when engine power is the lowest.

Aircraft Noise Around Airports

The community noise does not only include the aircraft emissions but also other sources, such as road traffic. Actually the airport-side residents are also exposed to these other sources, the noise of which may be higher than the one produced by the aircraft, at least in terms of equivalent acoustic energy.

The noise produced by aeroplanes was not really a major issue before the early 1960's, when the traffic of jet-planes started to grow. Nowadays, it can be considered as the most obvious kind of pollution due to aircraft operations. Nonetheless, one must acknowledge that the noise perception (and especially for aircraft) is very subjective and depends on the sensitivity to noise of each person. This is the reason why even though the global amount of aircraft noise energy has decreased, in the meanwhile the feeling of disturbance has increased.

Aircraft manufactured today are much quieter than they were 20 years ago and these will be replaced by even quieter aircraft in the future. But, even though each individual aircraft is quieter, there are more aircraft flying now than previously. This means that the average level of noise is lower than before, but the frequency of aircraft movements and hence noise 'events' has increased.

Aircraft Noise Measurement

In the UK, daytime aircraft noise is measured by calculating the average noise level in decibels (dB) over 16 hours, to give a single daily figure. The UK Government calls this average decibel measurement 'L_{Aeq}' (which is often shortened to L_{eq}). It means 'equivalent continuous noise level' and is the most common international measure of aircraft noise. The UK Government says that communities become significantly annoyed by aircraft noise above 57dB L_{Aeq}. They use this as the starting point when setting policy on aircraft noise.

In the last 15 years, the number of people affected by noise within Gatwick's 57dB(A) 16 hour L_{eq} daytime noise contour has fallen from 14,500 people in 1996 to 3,650 in 2012. This has been achieved despite a significant growth in air traffic movements per annum from around 220,000 in 2006 to 240,000 flights in 2012. In 2016, the number of people in this contour increased to 4,150. However, looking holistically over the same period the total number of people in this contour has fallen by 70% since 1996 whilst the airport has grown to serve a total of 281,000 aircraft movements and 44.1 million passengers in 2016.

Interdependencies – Noise and Emissions to Air

There are interdependencies between the emissions of local air pollutants and carbon dioxide (CO_2) from aircraft engines, which affect aircraft noise management strategies. Most of the technological advances in aircraft design in the last 20 years have led to both a reduction in noise and CO_2 emissions, but in some cases have resulted in an increase in emissions of local air pollutants such as oxides of nitrogen (NO_X). The challenge for the aviation industry is

to address these three issues simultaneously.

Operational controls also need to be balanced. For example, the adoption of a reduced thrust setting for an aircraft during take-off can reduce NO_X emissions by up to 30% or more compared to a full thrust setting. Many airlines already employ 'reduced thrust' as their standard operating procedure. While this is beneficial in the immediate vicinity of the airport, there can be a small increase in the noise experienced by those further away under the departure flight path as the aircraft decreases its angle of ascent.

Gatwick Airport has long been aware of the interdependencies between noise, local air quality and CO_2 emissions and has undertaken a number of studies to help quantify the exact balance that needs to be struck for specific situations. The level of understanding of this interdependency external to the aviation community is not complete, and Gatwick Airport aims to promote further engagement.

Effects Of Noise

There are many different effects and sources of noise, and individuals experience each of them to different degrees. The effects can include general distraction, speech interference and sleep disturbance. Sometimes these effects can lead to annoyance and complaints. Research into the potential health effects of noise produces varying outcomes. More recently research published in the British Medical Journal in October 2013 states that the exact role that noise exposure may play in ill health is not well established. However, it is plausible that it might be contributing - for example, by raising blood pressure or by disturbing people's sleep. There's a 'startle reaction' to loud noise - if you're suddenly exposed to it, the heart rate and blood pressure increase. And aircraft noise can be annoying for some people, which can also affect their blood pressure, leading to illness. (Dr A Hansell, Imperial College London).

The possibility that severe annoyance might induce stress cannot be ignored. The Government's Aviation Policy Framework aims is to limit and where possible reduce the number of people in the UK significantly affected by aircraft noise as part of a policy of sharing benefits of noise reduction with industry. This is consistent with the Government's Noise Policy, as set out in the Noise Policy Statement for England (NPSE) 93 which aims to avoid significant adverse impacts on health and quality of life.

ANNOYANCE

Extracted from the Civil Aviation Authority publication 'CAP 1588 - Aircraft Noise and Annoyance: Recent findings'.

The ever-increasing demand for regular and convenient road, rail and aircraft transportation consequently brings with it an increase in environmental noise and subsequent effects.

The most widespread and well documented subjective response to noise is annoyance; which can be defined as a feeling of resentment, displeasure, discomfort, dissatisfaction or offence which occurs when noise interferes with thoughts, feelings or activities. The annoyance of populations exposed to aircraft noise varies not only with the acoustical characteristics of the noise, but also with a range of non-acoustical factors of social, psychological or economic nature.

Transportation noise, amongst other noise sources such as that from construction, was brought to people's attention in 1963, via a report entitled "Noise", written by the Committee on the Problem of Noise, and commonly referred to as the "Wilson Report" after Sir Alan Wilson, Chairman of the committee. The Wilson Report stated that solving "noise problems must involve people and their feelings, and its assessment is a matter rather of human values and environments than of precise physical measurement". The issues raised in the Wilson Report are still, if not more, relevant today with an increasing

demand for travel, 24-hour society and requirements for transport links.

Annoyance is considered to be a detriment to quality of life, well-being and ultimately, health. The World Health Organisation's (WHO) definition of health is : *"Health is a state of complete physical, mental and social well-being, and not merely an absence of disease and infirmity."* Annoyance from any source therefore represents a diminished state of well-being.

In order to provide public protection from aircraft noise, an 'annoyance threshold' currently exists within UK policy. The time period for noise exposure used is an average summer day, from June 16th to September 15th and from 7am to 11pm. The Wilson report originally recommended the use of summer days (7am – 7pm) due to the increased likelihood of more people being outdoors and having windows open, and also because aviation levels are at their highest during summer months. The 1982 Aircraft Noise Index Study (ANIS), the outcomes of which were adopted in policy in 1990, extended the reference day period from 7am to 11pm to reflect that there is a difference in terms of daytime and night-time noise exposure and consequently, annoyance reactions, resulting in the need for distinctive daytime and night-time noise exposure metrics. The noise exposure metric L_{Aeq}, 16h, was adopted in 1990 on the basis of the ANIS findings. The UK government defined three thresholds for policy consideration: 57, 63 and 69 dB $L_{Aeq, 16h}$, representing low, moderate, and high annoyance levels.

The 2003 Air Transport White Paper subsequently defined 57dB $L_{Aeq, 16h}$ as marking the approximate onset of significant community annoyance, and this was reaffirmed in the Government's 2013 Aviation Policy Framework. Critics argue that attitudes have changed since the 1982 survey. This could be because of general shifts in attitudes to annoyance, changes in the pattern of aircraft noise experienced, and/or because of changes to lifestyle that are affected by aircraft noise. This ultimately led to the UK government commissioning the *Survey of Noise Attitudes (SoNA) 2014: Aircraft study*.

The government published their Response to their Airspace Consultation in 2017 and acknowledged the evidence from the SoNA study, which showed that sensitivity to aircraft noise has increased, with the same percentage of people reporting to be highly annoyed at a level of 54 dB $L_{Aeq, 16h}$ as occurred at 57 dB $L_{Aeq, 16h}$ in the past.

Taking account of this and other evidence on the link between exposure to noise from all sources and chronic health outcomes, the government decided to adopt the risk based approach proposed in their consultation, so that airspace decisions are made in line with the latest evidence and consistent with current guidance from the World Health Organisation (WHO).

In 2010 the Department for Environment, Food and Rural Affairs (DEFRA) released the *Noise Policy Statement for England (NPSE)*, which aimed to provide clarity on noise and set out the government's long-term vision of noise policy for all noise sources. The noise policy vision was to "promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development."

The NPSE aims, through the effective management and control of environmental, neighbour and neighbourhood noise within the context of government policy on sustainable development:

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

05 SECTION FIVE
AVIATION NOISE

The phrases "Significant adverse" and "adverse" refer to the two established concepts that are applied to noise impacts worldwide, namely:

NOEL – NO OBSERVED EFFECT LEVEL
This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.

LOAEL – LOWEST OBSERVED ADVERSE EFFECT LEVEL
This is the level above which adverse effects on health and quality of life can be detected. Extending these concepts for the purpose of the NPSE leads to the concept of a significant observed adverse effect level.

SOAEL – SIGNIFICANT OBSERVED ADVERSE EFFECT LEVEL
This is the level above which significant adverse effects on health and quality of life occur. It is not possible to have a single objective noise-based measure that defines SOAEL that is applicable to all sources of noise in all situations. Consequently, the SOAEL is likely to be different for different noise sources, for different receptors and at different times. SOAEL is therefore not specifically defined in the NPSE, for flexibility purposes in the future, with the addition of more research findings.

Annoyance from aircraft noise is a global issue, not just confined to the UK. In 2011, the WHO Europe and the Joint Research Centre published the report: *Burden of Disease from Environmental Noise*. The aim of this report was to provide technical support to policymakers in the form of quantitative risk assessment of environmental noise, using the evidence available in Europe.

For each noise-induced outcome, the report estimated the number of life years that are affected by noise, defined as Disability Adjusted Life Years (DALYs). DALYs are the sum of the potential years of life lost due to premature death and the equivalent years of "healthy" life lost by virtue of being in states of poor health or disability. The outcomes included were ischemic heart disease, cognitive impairment of children, sleep disturbance, tinnitus and annoyance. It was estimated that 654,000 years were lost annually due to annoyance in the EU Member States, and other western European countries (from combined noise sources, but predominantly road traffic noise). This was only exceeded by those lost due to sleep disturbance annually, which were calculated as 903,000 years.

All transportation noise sources result in a degree of annoyance, and this remains a growing concern, particularly with the possible links to other health endpoints. This report will focus on aircraft noise-induced annoyance. Annoyance from aircraft noise and other transportation sources is often studied as part of complex pathways which may exist between acute and chronic health effects such as cardiovascular disease, disturbed sleep patterns with subsequent next-day effects, and even the cognitive performance and learning aspects in children, as detailed in the Burden of Disease Report.

ENVIRONMENTAL NOISE GUIDELINES FOR THE EUROPEAN REGION – 2018
The much anticipated update to the 1999 WHO Community Noise Guidelines was published in the form of the Environmental Noise guidelines for the European Region – 2018.

The WHO Regional Office for Europe has developed these guidelines, based on the growing understanding of these health impacts of exposure to environmental noise. The main purpose of these guidelines is to provide recommendations for protecting human health from exposure to environmental noise originating from various sources: transportation (road traffic, railway and aircraft) noise, wind turbine noise and leisure noise. They provide robust

public health advice underpinned by evidence, which is essential to drive policy action that will protect communities from the adverse effects of noise. The guidelines are published by the WHO Regional Office for Europe. In terms of their health implications, the recommended exposure levels can be considered applicable in other regions and suitable for a global audience.

— http://www.euro.who.int/__data/assets/pdf_file/0008/383921/noise-guidelines-eng.pdf?ua=1

CIVIL AVIATION AUTHORITY LITERATURE REVIEW

The United Kingdom Civil Aviation Authority (CAA), at the request of the Department for Transport has undertaken a literature review on the effects of night time aircraft noise on local residents. The CAA's review concluded that:

- It is possible to estimate the proportion of the population who are likely to self-report being highly sleep disturbed for a given noise exposure. Chronic sleep disturbance is regarded as a health effect in its own right with a measurable impact on quality of life, which can be expressed as Years Lost due to Disability (YLD).
- For impacts on cardiovascular health, there is evidence that noise exposure above 55 dB Lnight results in increased risk of myocardial infarctions (heart attacks).
- There is evidence for a correlation between noise exposure and hypertension and there is sufficient evidence in order to value the impacts in terms of hypertension leading to a stroke or dementia.
- For stress and mental health effects, the evidence is inconclusive or limited, showing a possible correlation between noise exposure and mental health symptoms (e.g. depression, anxiety) but not problems such as clinically defined psychiatric disorder.
- For next day effects, there is some evidence to suggest that environmental (night) noise has scientific evidence of chronic objective effects on stress hormone levels, immune system or performance the next day.
- In relation to the impact on children, the evidence is inconclusive. There is a growing amount of research that noise exposure has effects on cognitive development (particularly on reading) and chronic noise may affect children's stress levels, blood pressure and mental health. There is evidence to suggest that aircraft noise may be associated with poorer reading comprehension and recognition memory. However, it is unclear whether the effects are attributable to daytime or night time noise, and there is no evidence for long-term persistent effects on cognitive development.

Following their literature review, the CAA developed a methodology paper, which proposes how the following health impacts associated with aircraft night noise may be quantified and monetised as part of an appraisal:

- Sleep disturbance;
- The increased risk of myocardial infarctions (heart attacks); and
- The increased incidence of hypertension (including secondary effects of stroke and dementia).

The CAA have recently published a new paper, 'Aircraft noise and health effects: Recent findings' which examines evidence on the relationship between aircraft noise and health that has been published since 2009. The report concludes that with regards to night noise and sleep disturbance, there is growing recognition that average indicators, such as L_{night}, are insufficient to fully predict sleep disturbance and sleep quality.

AIRCRAFT NOISE EFFECTS ON HEALTH

As part of the Airports Commission, specific research on aircraft noise

was prepared by Dr Charlotte Clarke of the Queen Mary University of London. The study investigated the health effects of environmental noise on cardiovascular health, sleep disturbance, annoyance, psychological well-being, and effects on children's cognition and learning. Although the study was not an exhaustive review it summarised the strength of the evidence for aircraft noise effects as well as briefly discussing guidelines for environment noise exposure.

ANASE (ATTITUDES TO NOISE FROM AVIATION SOURCES IN ENGLAND)

ANASE was a social study commissioned by the Department for Transport in 2002 aimed at reassessing people's attitudes to aircraft noise, reassessing L_{Aeq} as a measure of annoyance and determining the financial value of noise. The final report was published in 2007, together with the comments of peer reviewers.

The expert peer reviewers advised the DfT that reliance on the detailed outcome of the ANASE study would be misplaced and specifically counselled against using the detailed results and conclusions in the development of Government policy. As a result, the Government stated that they did not propose to use the detailed results from ANASE in the development of policy.

Gatwick Airport continues to support the Government's view of ANASE being an important step forward in understanding people's attitudes towards aviation noise. The report findings will continue to be reflected on and considered by Gatwick Airport when formulating noise strategies, objectives and plans.

SURVEY OF NOISE ATTITUDES (SONA) 2014: AIRCRAFT

Airports aim to satisfy the demands of travellers and provide jobs: but they can cause adverse effects on the environment and people living nearby. A major form of adverse effect is that from aircraft noise. Airport planning and development planning must take account of the aircraft noise exposure to residents; airport operators and interested government departments have to view aircraft operations in the context of the related airport noise. These assessments are usually carried out in the UK, and in most countries of the world, by using noise exposure indices.

This report describes a research study to obtain new and updated evidence on attitudes to aviation noise around airports in England, and how they relate to the UK aircraft noise exposure indices. The study was commissioned by the Department for Transport, and builds on earlier noise attitude surveys commissioned by DEFRA.

In part it aims to review the use of the $L_{Aeq,\ 16h}$ noise contour which was adopted in 1990, based on an aircraft noise attitude survey undertaken in 1982 and reported as the UK Aircraft Noise Index Study (ANIS) in 1985. The 57dB $L_{Aeq,\ 16h}$ contour was chosen as the threshold of community annoyance because it 'indicated a marked increase in some reported measures of disturbance', with 63 and 69dB $L_{Aeq,\ 16h}$ representing medium and high annoyance and subsequently incorporated into planning policy guidance.

The SoNA study considered 1,877 participants using face-to-face surveys on attitudes to civil aircraft noise. Respondents were selected using a random, partially-clustered approach from around nine airports in England, having been exposed to average $L_{Aeq,\ 16h}$ noise levels of at least 51dB in the summer of 2013.

Using the data gathered in the surveys, the study compared reported mean annoyance scores against average summer-day noise exposure defined using different noise indicators including N above (N60 or N70).

Evidence was found that mean annoyance score correlated well with the current average summer day noise exposure contour

($L_{Aeq, 16h}$) whilst there was no evidence found that other metrics correlated better with annoyance than $L_{Aeq, 16h}$.
However, the study did note that residents can struggle to understand the L_{Aeq} measure which is time averaged and reported on a logarithmic scale. It noted that there is merit in considering the greater use of N above (N60 or N70) metrics as supplementary metrics to help portray noise exposure but recognising that evidence-based decisions should continue to use $L_{Aeq, 16h}$.

When comparing the results to previous studies (ANIS, ANASE and Miedema) Annoyance scores were found to be comparable however for a given noise exposure, a lower proportion of respondents was found to be highly annoyed. This was demonstrated with the same percentage of respondents (9%) said by ANIS to be highly annoyed at 57 dB $L_{Aeq, 16h}$ now showing annoyance in SoNA at 54 dB.

Evidence was found that non-acoustic factors such as noise sensitivity, approximated social grade, and expectations – both prior to moving to an area exposed to aircraft noise and in the future – influence reported aircraft noise annoyance and these non-acoustic factors may be as important as the noise exposure level.

The full report can be viewed online by following this link:
https://publicapps.caa.co.uk/docs/33/CAP%201506%20FEB17.pdf

PRE CONSULTATION INFORMATION

In preparing the initial 'Round One' 2010 – 2015 Noise Action Plan we held a series of preconsultation events with representatives from airlines, NATS, Local Authorities, local environment amenity groups and members of the Gatwick Airport Consultative Committee (GATCOM).

In producing this revised action plan we have consulted with the Noise Management Board, GATCOM, members of the Noise and Track Monitoring Advisory Group (NaTMAG), Crawley Borough Council and West Sussex County Council, and advised the Noise Management Board of this process, in line with the guidance issued from DEFRA.

Details of feedback received during this revision process is provided in Annex 9.


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SECTION SIX

AVIATION POLICY AND REGULATION OVERVIEW

06

There are three main tiers of regulation which govern aircraft noise in the UK: International; European and national.

INTERNATIONAL REGULATION

The International Civil Aviation Organisation (ICAO) is an intergovernmental organisation. It aims to develop the principles and techniques of international civil air navigation and foster the planning and development of international air transport. ICAO establishes International Standards, Recommended Practices and Procedures regarding the technical areas of aviation, including aircraft noise. The Standards, once adopted, are put into effect by each ICAO member state in its own country.

An important pillar of the Balanced Approach to Aircraft Noise Management is the reduction of noise at source. Aircraft noise ("noise at source") has been controlled since the 1970s by the setting of noise limits for aircraft in the form of Standards and Recommended Practices (SARPs) contained in Annex 16 to the Convention on International Civil Aviation (the "Chicago Convention"). This continues to be the case today. Noise provisions appear in Volume I of Annex 16. The primary purpose of noise certification is to ensure that the latest available noise reduction technology is incorporated into aircraft design and that this is demonstrated by procedures that are relevant to day-to-day operations. This aims to ensure that noise reductions offered by technology are reflected in reductions around airports.

The first noise standard was developed by the ICAO Committee on Aircraft Noise in 1971 and became applicable in 1973, setting noise limits as a direct function of Maximum Take-off Mass (MTOM) in order to recognize that heavier aeroplanes, which were of greater transport capability, produce more noise than lighter aeroplane types. This is the Chapter 2 Noise Standard contained in Annex 16, Volume I.

In the years following the introduction of Chapter 2, much higher bypass ratio jet engines were introduced into service. Not only did this new technology deliver improved fuel efficiency, it also resulted in reductions in engine noise. This allowed for the ICAO noise standard to be made more stringent and in 1977 the Chapter 3 Noise Standard was added to Annex 16, Volume I. In the following years, further noise reduction technologies were incorporated into engine and airframe designs which led to incremental improvements in aircraft noise performance and this resulted in progressively further increases in the stringency of noise standards as reflected in Annex 16, Volume I, Chapter 4 and Chapter 14.

Over time it has become common parlance when discussing aviation noise to refer to civil jet aircraft by which chapter of Annex 16 Volume 1 they sit in. The adoption of progressively more stringent standards has encouraged the phase out of noisier aircraft meeting the noise standards of earlier Chapters. Chapter 2 aeroplanes have been banned from operating within the EU since 1st April 2002, unless they are granted specific exemptions. The vast majority of civil aircraft now operating therefore fall within Chapters 3 and 4, and are much quieter than the previous Chapter 2 aircraft types. As yet, there is no agreed date for the phase out of Chapter 3 aircraft.

All new aircraft manufactured from 2006 onwards must meet the requirements of Chapter 4. The standard for Chapter 4 has been set at 10dB quieter than Chapter 3. This is based on an aggregate of reductions in noise measured at three standardised locations close to an airport. During the process of agreeing the Chapter 4 standard, the industry discussed a stricter level at 18dB (aggregate) below the current Chapter 3, which would have reflected best available technology. This now forms the basis of Chapter 14 standard

adopted in 2014 by the ICAO Council. This represented a new noise standard for jet and propeller-driven aeroplanes which is Chapter 4 minus 7dB (Chapter 3, -17dB). This new, more stringent standard will be the mainstay ICAO Standard for subsonic jet and propeller-driven aeroplane noise for the coming years. It is applicable to new aeroplane types submitted for certification on or after 31 December 2017, and on or after 31 December 2020 for aircraft less than 55 tonnes in mass.

The new Chapter 14 noise standard is expected to drive the continued reduction in aircraft noise emissions and lead to long term reductions in the number of people affected by aircraft noise.

ICAO also requires Member States to adopt a "balanced approach" to noise management. Both the EU and the UK have adopted the ICAO "Balanced Approach to Airport Noise Management".

Where a noise problem has been identified at an airport, the Balanced Approach process requires the agreement of a noise objective. Following this, all potential measures to manage noise at the airport must be identified, and a cost benefit analysis to determine the most cost-effective package of measures, carried out.

The Balanced Approach consists of four main elements:

- Noise at source
- Land use planning
- Operating procedures
- Operational restrictions

Noise at source

Aircraft noise is generated by a number of different 'sources', though the dominant one is still the main engines, on approach airframe noise is now becoming important. Through the work of ICAO and the development of the aircraft chapter standards, the industry has invested heavily in Research and Development to continually reduce the noise impact of aviation.

Land use planning

Land use planning covers a wide range of measures aimed at improving the noise climate around airports. The most effective long-term options include the definition of noise zones in which there are restrictions on residential and other noise sensitive property development, and these are used widely in the UK and across Europe.

Operating procedures

Using defined, or 'noise preferential' routes (NPR's) is one way of minimising exposure to noise for people living near airports. Such routes are chosen because they direct aircraft, where possible, over less densely populated areas.

Although originally developed as a procedure for reducing fuel use, Continuous Descent Operation (CDO) is an important tool for reducing the noise of aircraft approaching airports. It involves starting a continuous steady descent, from 6,000ft or higher, rather than following a number of short descents to set 'cleared' altitudes where level segments are flow before finally joining the 3° approach glide-slope from below, as is normally required by Air Traffic Control.

The CDO technique results in lower noise levels on the ground through two effects:

1. the CDO flight-path is always higher than in the traditional stepped approach - being further from the ground also results in lower noise levels;
2. by keeping the aircraft on a continuous descent, the overall engine power levels are kept lower, generating less noise than

if the aircraft were required to fly level.

Gatwick Airport Ltd raised the level at which a CDO is measured to 7,000ft in 2016 and is exploring ways to raise this further through our work with the Noise Management Board.

Additional noise reductions may be achieved by using a Low Power/ Low Drag (LPLD) procedure. In this, the aircraft is flown in a 'clean' condition (i.e. with no flap or wheels deployed) as long as possible, consistent with safety, this can result in lower noise levels when the aircraft are close to the ground.

Operating restrictions

Operating restrictions may be necessary for some airports where noise mitigation is required, and other methods prove to be ineffective. In this respect, as part of the "Balanced Approach", operating restrictions may be applied to aircraft whose noise emissions are marginally below the Chapter 3 limits. Strict rules apply for the introduction of operating restrictions to ensure fair competition across Europe and maintain the efficiency of the EU aviation network.

At a number of airports, there are restrictions over and above the noise certification standard, the most common of which are applied at night. One example of this is the Night Jet Restrictions Scheme used at the "designated" London airports.

EUROPEAN REGULATION

The EU works to define the approach towards a common aviation policy in Europe. The EU has issued various directives relating to environmental issues including for the regulation of aircraft noise standards. Member States are obliged to comply with the requirements of the directives and incorporate them into national legislation.

On 23 June 2016, the EU referendum took place and the people of the United Kingdom voted to leave the European Union. Until exit negotiations are concluded, the UK remains a full member of the European Union and all the rights and obligations of EU membership remain in force. During this period the Government will continue to negotiate, implement and apply EU legislation.

The directives of most relevance to aircraft noise as follows:

EC Directive 92/14/EEC

This directive banned Chapter 2 aircraft from landing in the EU from 1 April 2002.

EC Directive 2002/49 ("Environmental Noise Directive")

This requires Member States to create noise maps from all transport sources in urban areas by 2007 and to develop and adopt Noise Action Plans to manage noise by 2008, and to repeat the mapping and produce revised Noise Action Plans every five years. This Noise Action Plan meets that requirement. The directive also aims to harmonise methods for measuring noise across the EU, but it does not include noise limits.

EU Regulation 598/2014

This regulation applies rules and procedures with regard to the introduction of noise-related operating restrictions at EU airports. This regulation replaced an earlier EC Directive, 2002/30 (March 2002) which prescribed that the ICAO balanced approach would be followed when the introduction of noise related operating restrictions was considered at EU airports. EU598/2014 updated 2002/30/EC by being more specific regarding the rights and responsibilities of the interested parties during the noise assessment process, and provides for a new and wider definition of what constitutes an operating restriction:

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AVIATION POLICY AND REGULATION OVERVIEW

'operating restriction' means a noise-related action that limits access to or reduces the operational capacity of an airport, including operating restrictions aimed at the withdrawal from operations of marginally compliant aircraft at specific airports as well as operating restrictions of a partial nature, which for example apply for an identified period of time during the day or only for certain runways at the airport.

When a new operating restriction is being considered, EU598/2014 requires a defined objective to be set, and demonstration of why other measures within the balanced approach (which would not restrict capacity) would not achieve the objective. It also prescribes a process for evaluation of the cost effectiveness of the proposed operating restrictions which involves reviewing the relative costs of noise restrictions options and considering how many people would benefit from them. New restrictions must be consulted upon, and then prior to their introduction a period of notice must be given.

EU598/2014 anticipates the introduction of noise restrictions aimed at reducing the number of marginally compliant Chapter 3 aircraft. It prohibits the introduction of restrictions aiming to reduce the number of aircraft meeting the Chapter 4 standard.

NATIONAL REGULATION

Acts of Parliament and Regulations

The UK Government also enacts Acts of Parliament and regulations which deal with aircraft noise. The relevant legislation is detailed below:

• The Civil Aviation Acts 1982 and 2006

These Acts grant the Government powers to introduce noise control measures to limit or mitigate the effect of noise and vibration connected with taking off or landing aircraft at designated airports (the Secretary of State has currently designated Gatwick). These powers are widened by the Civil Aviation Act 2006. The Act also permits an airport authority to charge aircraft operators for use of the airport based on noise and emissions. Airport operators can thereby introduce differential charges to incentivise the use of quieter and cleaner aircraft.

The Act also permits airport operators to levy financial penalties on aircraft operators who breach noise abatement requirements imposed by the Secretary of State. A sum equal to the penalties received must then be paid for the benefit of people who live in the vicinity of the airport. At Gatwick Airport, we enforce this power and did so long before 2006. All fines are paid to an independent charity, the Gatwick Airport Community Trust.

• Airports Act 1986

This Act gives power to the Secretary of State to make orders if it appears to them that the existing runway capacity of the airport is not fully utilised for a substantial proportion of the time during which it is available. It includes powers to limit the number of occasions on which aircraft may land or take off at an airport and schemes to allocate airport capacity.

• Aeroplane Noise Regulations 1999

These regulations set out the noise certificate requirements for both propeller and jet aeroplanes registered in the UK. It makes provision to ensure that no aircraft can land or take off in the UK without a noise certificate issued by its competent authority which meets at least equal requirements to those for UK registered aircraft. The regulations make reference to noise certification standards and noise limits issued by ICAO and also provides a list of aircraft that are exempt from the ICAO noise certification.

In accordance with its powers under the Civil Aviation Acts, the DfT

has direct control over noise at Gatwick Airport and determines the night flight restrictions applicable to the designated London airports.

• The 2003 Air Transport White Paper

The 2003 Air Transport White Paper (2003 ATWP) was intended to provide a strategic framework for the development of air travel in the UK for the next 30 years. In case the conditions attached to the construction of a third Heathrow runway could not be met, the ATWP required that land at Gatwick be safeguarded for development of a second runway after 2019*. This safeguarding presently remains in place.

• The Aerodromes (Noise Restrictions) (Rules and Procedures) Regulations 2003

The Aerodromes (Noise Restrictions) (Rules and Procedures) Regulations 2003 set out the procedures which major airports should follow when considering noise amelioration measures. Broadly, the Regulations require aerodromes to follow the 'balanced approach' when dealing with noise problems at an airport. These regulations transposed the EC Directive 2002/30/EC into UK law, they remain "within" the boundaries prescribed by EU598/2014, however, presumably were the UK to remain part of the EU, would be updated in accordance with it.

The main rules are that aerodromes:

- may consider economic incentives as a noise measure;
- shall not impose a measure or a combination of measures which is more restrictive than is necessary to achieve the environmental objectives established for the airport by the Airport Operator or in the case of a designated airport, the Secretary of State;
- shall not discriminate on grounds of the nationality or the identity of the air carrier or the aircraft manufacturer;
- should take into account the likely costs and benefits of the various noise measures available as well as airport-specific characteristics;
- when introducing restrictions based on an aircraft's noise performance, should base these upon the noise performance of the aircraft as determined by the certification procedure conducted in accordance with ICAO Annex 16;
- shall establish one or more environmental objectives for the airport before considering any measures under the Regulations.

• Environmental Noise Objectives

In June 2006, the Secretary of State published long-term statutory environmental noise objectives for Gatwick Airport. These are:

- to progressively encourage the use of quieter aircraft
- avoid allowing the overall noise from aircraft during the night quota period to increase above what was permitted in 2002-2003
- to meet other noise-abatement objectives as adopted from time to time.
- The Environmental Noise (England) Regulations 2006 (as amended)

These regulations transpose the requirements of EC Directive 2002/49/EC (Environment Noise Directive – see above) into UK law. They place a duty on the Secretary of State to produce strategic noise maps and, under regulation 18, airport operators are obliged to produce noise action plans based on the strategic noise maps.

• Local Authorities

As well as Government legislation, additional noise-related controls are introduced by local planning authorities as part of the planning system. For example at Gatwick Airport there are several planning

* A moratorium on a second runway at Gatwick Airport expires in 2019

conditions relating to North Terminal which require towing of aircraft between 23:00 - 06:30 on some aircraft stands as well as limits of the amount of aircraft engine tests permitted. This is often done by way of planning obligations contained in Section 106 Legal Agreements made between the airport operator and the planning authority. Gatwick Airport signed a re-negotiated S106 Agreement in December 2015. This agreement, valid until 2018*, outlines a number of obligations and action plan action; this is independently audited annually.

For details of Gatwick Airport's S106 Legal Agreement with West Sussex County Council and Crawley Borough Council please refer to our website[2].

• 2013 Aviation Policy Framework

The 2013 Aviation Policy Framework (APF) fully replaced the 2003 ATWP as Government's policy on aviation, alongside any decisions Government would later make taking account of the recommendations of the independent Airports Commission review which was ongoing at the time. The APF strongly supports making best use of existing airport capacity as part of a strategy to promote a vibrant aviation sector (§1.24, §1.60 and other references). This policy has been re-affirmed recently in the revised draft Airports National Policy Statement where Government states that it is supportive of all airports who wish to make best use of their existing runways (e.g. para 1.37).

The 2013 APF focuses on the benefits of aviation and its environmental impacts and frames national policy to strike a balance between the two. The APF seeks to integrate aviation noise policy contextually with other Government policies for land use planning in the National Planning Policy Framework (NPPF) and the promotion of good health and good quality of life through the management of noise in the Noise Policy Statement for England (NPSE). The APF also has wider objectives in relation to Safety, Security, Competition and Regulation Policy and Passenger rights.

• Draft Airports National Policy Statement

A Draft Airports National Policy Statement ("NPS") was published on 2 February 2017, for consultation running through to 25 May 2017. The draft NPS sets out the Government's policy on the need for new airport capacity in the South East of England, and its preferred location and scheme for delivering this capacity. In addition to work on the NPS, the Government plans to consult on various elements of a new Aviation Strategy during 2018. This will replace the Aviation Policy Framework (2013) and to include consideration of airport development requirements at all UK airports.

• Revised Draft Airports National Policy Statement

Between February and May 2017, the Department for Transport consulted on a draft Airports National Policy Statement (NPS), and received more than 70,000 responses from across the UK. In October 2017, the Government launched a period of further consultation to give people the chance to consider updated evidence which was unavailable in February 2017.

• UK Airspace Policy

The Government confirmed in October 2017 that it will be establishing a new independent noise body, which will help to ensure the communities around UK airports have a say in airspace changes which may affect them. The Independent Commission on Civil Aviation Noise (ICCAN) will produce guidance and best practice for making sure the process for taking airspace change decisions is trusted and transparent. To ensure this is happening, there will

* It is anticipated that this will be extended again in 2019 until 2021
[2] https://www.gatwickairport.com/business-community/community-sustainability/sustainability/s106-agreement/

be a review of ICCAN* within two years, with a view to considering whether statutory powers are required.

The announcement confirms that Government accepts recent research regarding the way noise effects should be assessed. These support the continued use of the L_{eq} noise assessment metric, but relating noise to risk of adverse effects to health and quality of life. Supplementary noise metrics are to be used to capture frequency of noise events in areas affected by noise below levels below those where adverse effects to health or quality of life occur.

It is intended that measures set out in October 2017 will enable the UK to make much greater use of new technology which gives the UK the ability to manage its airspace more effectively to tackle delays, cut emissions and reduce the need for stacking above the UK's busiest airports. More detailed methods of assessing the noise impacts of the required airspace changes are being consulted on.

GENERAL PLANNING POLICY – THE NPSE, AND THE NPPF

The Noise Policy Statement for England

The Noise Policy Statement for England (NPSE) of March 2010 states the long-term vision of Government noise policy is to "promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development".

The long-term vision is supported by the following aims; through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:

- Avoid significant adverse impacts on health and quality of life;
- Mitigate and minimise adverse impacts on health and quality of life;
- Where possible, contribute to the improvement of health and quality of life.

The intention is that the NPSE should apply to all types of noise apart from noise in the workplace (occupational noise). For the purposes of the NPSE, "noise" includes:

- "environmental noise" which includes noise from transportation sources;
- "neighbour noise" which includes noise from inside and outside people's homes; and
- "neighbourhood noise" which includes noise arising from within the community such as industrial and entertainment premises, trade and business premises, construction sites and noise in the street.

The NPSE introduced the concepts of the Significant Observable Adverse Effect Level (SOAEL) and the Lowest Observable Adverse Effect Level (LOAEL) to draw the distinction between those noise levels that should be avoided (above SOAEL) and those that should be minimised (above LOAEL), all in the context of Government policy on sustainable development. Recent government research (the SoNA 2014 report) indicates that the LOAEL is at L_{eq} 16 hour 51dB and recent airport planning decisions agree that the SOAEL is at L_{eq} 16 hr 63dB.

The National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these are expected to be applied. The NPPF provides Government's policies to promote sustainable development and sets out that the purpose

* Established January 2019

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of the planning system is to contribute to the achievement of sustainable development[3]. Sustainable development includes three dimensions: economic, social and environmental, and thus, when planning decisions are made to increase capacity, the process requires weighing the relative balance of these three factors.

Planning law requires that applications for planning permission must be determined in accordance with the development plan, unless material considerations indicate otherwise. The National Planning Policy Framework must be taken into account in the preparation of local and neighbourhood plans, and is a material consideration in planning decisions. Planning policies and decisions must reflect and where appropriate promote relevant EU obligations and statutory requirements.

The NPPF does not contain specific policies for nationally significant infrastructure projects for which particular considerations apply. These are determined in accordance with the decision-making framework set out in the Planning Act 2008 and relevant national policy statements for major infrastructure, as well as any other matters that are considered both important and relevant (which may include the National Planning Policy Framework). National policy statements form part of the overall framework of national planning policy, and are a material consideration in decisions on planning applications.

With reference to airports, the NPPF states:
"When planning for ports, airports and airfields that are not subject to a separate national policy statement, plans should take account of their growth and role in serving business, leisure, training and emergency service needs. Plans should take account of this Framework (NPPF) as well as the principles set out in the relevant national policy statements and the Government Framework for UK Aviation."[NPPF §33]

GOVERNMENT AVIATION NOISE POLICY

The Government's current aviation noise policy is encapsulated in the 2017 Airspace Policy Consultation Response, October 2017, as follows[4]:

"The government's overall policy on aviation noise is to limit and, where possible, reduce the number of people in the UK significantly affected by aircraft noise, as part of a policy of sharing benefits of noise reduction between industry and communities in support of sustainable development. Consistent with the Noise Policy Statement for England…"

The Noise Policy Statement for England makes a distinction between those significant adversely affected, and those adversely affected, and requires the focus of noise control to be on those people significantly adversely affected because those are the people most at risk of health impacts.

Within the overarching policy, "limiting" the effects of noise means avoiding significant adverse effects to health and quality of life, mitigating adverse effects, and where possible contributing to the improvement of health and quality of life. [Feb 2017 Airspace Policy Consultation §5.28]. Whereas Government's primary objective is economic growth [Ref APF Executive Summary §5], the noise policy can be interpreted as Government wanting to regulate aviation growth so that it occurs sustainably and so that industry continues to have the incentive to invest and deliver long term reductions in noise.

[3] NPPF §6
[4] §2.69 Consultation Response on UK Airspace Policy: A framework for balanced decisions on the design and use of airspace – October 2017.


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Airports bring positive economic and social benefits as well as environmental impacts. They are important to the economy, providing jobs, encouraging inward investment and boosting local tourism. However, they can also have an impact for those communities that exist around airports. Noise remains a significant issue for people living or working close to airports or under flight paths.

Some of this noise results from Gatwick Airport's own operations; noise which we have the ability to directly control. However, noise is also generated from sources outside our direct control but where we can exert influence to bring about change. Limiting and, where possible, reducing the impact of noise is a long standing commitment of Gatwick Airport and is critical to maintaining the airport's licence to operate and grow.

OUR APPROACH

Gatwick is a designated airport, so the Government sets the policy framework which influences how the airport responds to aircraft noise issues. The Government's Aviation Policy Framework outlines several ways to control, mitigate and compensate for noise.

The Department for Transport has direct control over noise at Gatwick Airport. Local authorities also contribute to noise controls and we also work with airlines, air navigation services providers and local authorities towards achieving our noise objectives.

OUR PLANS

Alongside the statutory noise objectives, Gatwick Airport has set the following long term objective for the management of aircraft noise:

'To gain the trust of our stakeholders that we are using best practicable means to minimise aircraft noise impacts'

CURRENT MEASURES TO MANAGE AIRCRAFT NOISE AT GATWICK AIRPORT

We believe that we have a full and comprehensive range of noise management measures already in place when compared with other similar airports. These measures cover operational procedures, stakeholder communication and engagement as well as mitigation and compensation schemes.

Operational Procedures - Aeronautical Information Publication

In aviation, an Aeronautical Information Publication (or AIP) is defined by the International Civil Aviation Organization as a publication issued by or with the authority of a state and containing aeronautical information of a lasting character essential to air navigation. It is designed to be a manual containing thorough details of regulations, procedures and other information pertinent to flying aircraft in the particular country to which it relates. It is usually issued by or on behalf of the respective Civil Aviation Administration.

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The structure and contents of AIPs are standardised by international agreement through ICAO. AIPs normally have three parts – GEN (general), ENR (en route) and AD (aerodromes). The document contains many charts; most of these are in the AD section where details and charts of all public aerodromes are published.

AIPs are kept up-to-date by regular revision on a fixed cycle. For operationally significant changes in information, the cycle known as the AIRAC (Aeronautical Information Regulation and Control) cycle is used: revisions are produced every 56 days (double AIRAC cycle) or every 28 days (single AIRAC cycle). These changes are received well in advance so that users of the aeronautical data can update their Flight Management Systems (FMS).

A range of noise controls relating directly to aircraft operations are set out in statutory notices and are published in the Gatwick Aerodrome AIP and elsewhere as appropriate. These controls cover aspects such as Continuous Descent Operations (CDOs), Low Power / Low Drag, departures noise abatement procedures and night flight restrictions.

A range of noise controls relating directly to aircraft operations at Gatwick Airport are set out in statutory notices and are published in the UK Aeronautical Information Package (UK AIP).

Gatwick Airport AIP Requirements

Departures:

- After take-off the aircraft shall be operated in such a way that it is at a height of not less than 1,000ft above aerodrome level at 6.5 km from the start of roll as measured along the departure track of that aircraft.
- After taking off the aircraft shall avoid flying over the congested areas of Horley and Crawley.

Arrivals:

- Between the hours of 23:30 (local) and 06:00 (local), inbound aircraft, whether or not making use of the ILS (instrument landing system) localiser and irrespective of weight or type of approach, shall not join the centre-line below 3,000ft (Gatwick QNH) closer than 10nm (nautical miles) from touchdown.
- Before landing at the aerodrome the aircraft shall maintain as high an altitude as practicable and shall not fly over the congested areas of Crawley, East Grinstead, Horley and Horsham at an altitude of less than 3,000ft (Gatwick QNH) nor over the congested area of Lingfield at an altitude of less than 2,000ft (Gatwick QNH).
- Additionally, pilots are requested to avoid the use of reverse thrust after landing, unless required for safe operation of the aircraft, between 23:00 and 06:00 (local time). This is to minimise disturbance in areas adjacent to the airport.

Continuous Descent Operations (CDO)

A CDO is a technique of flight in which a pilot descends at a continuous rate to join the glide-path at the correct height for the distance and thereby avoid the need for extended periods of level flight. The intention is to keep aircraft higher for longer, using reduced thrust and thereby reducing arrival noise. CDO requires co-operation between Air Traffic Control (ATC) and pilots in order to both provide information and guidance to allow the pilot to fly the optimum CDO, and for the pilot to manage the descent to deliver the aircraft safely and efficiently at the ILS joining point. There are numerous factors that can affect the delivery of an efficient CDO including weather, crew and ATC familiarisation and traffic conditions.

Levels of CDO achievement are regularly reported back to the Gatwick Airport Consultative Committee (GATCOM) as well as the Flight Operations Performance & Safety Committee (FLOPSC), which includes airline and ATC representatives. This engagement is focused

on delivering continuous operational improvement in airline CDO achievement.

In 2016, Gatwick Airport raised the altitude from which CDO is measured from 6,000ft to 7,000ft and will continue to explore the feasibility of raising this further.

Low Power / Low Drag

Within the Gatwick Airport AIP, part of the Noise Abatement Procedures require aircraft that are approaching the aerodrome to land shall, commensurate with its ATC clearance, minimise noise disturbance by the use of continuous descent and low power, low drag operating procedures.

Where the use of these procedures is not practicable, the aircraft shall maintain as high an altitude as possible. In addition, when descending on initial approach, including the closing heading, and on intermediate and final approach, thrust reductions should be achieved where possible by maintaining a 'clean' aircraft configuration and by landing with reduced flap, provided that in all the circumstances of the flight this is consistent with safe operation of the aircraft.

Currently, apart from visual observations*, there is no process for measuring low power low drag compliance with the AIP instruction. Thus Gatwick airport has focused on airline engagement and sharing best practice.

* While it is acknowledged that there have been a number of studies focussing on the external characteristics of an aircraft on approach to the runway, these studies frequently do not take into account the activities within the aircraft flight deck itself in preparing the aircraft for landing and the associated factors that affect the aircraft on approach to the runway, for example: weight, speed, meteorological conditions, airline operating procedures.

Night Restrictions

The current night restrictions regime was introduced by the Department for Transport in 2006 and initially was meant to remain in force until 2012. This has since been extended until the end of summer 2017 when a revised regime was introduced.

There have, however, been night restrictions in force at Gatwick Airport for many years. Details of the number of aircraft moments and quota count permitted per season are detailed in Annex 6 – Summary of Limit Values in Place.

Gatwick Airport reports regularly to GATCOM and to the Department for Transport on usage of the movements limits and the quota counts utilised, details of any dispensations or exemptions granted. All dispensations granted by the airport have to be reported to the Department for Transport in writing within one week of the event occurring.

Noise Preferential Routeings (NPRS)

Noise Preferential Routes provide volumes of pre-defined airspace within which Standard Instrument Departure (SID) Routes are established which aircraft must follow on departure from an aerodrome and so provide some certainty as to which areas will be exposed to aircraft activity.

All aircraft leaving Gatwick Airport should follow the Noise Preferential Routes (NPRs) up to an altitude of 3,000ft or 4,000ft depending on the route. Although aircraft may be directed outside of the NPR below this altitude if required to maintain safety of flight, e.g. to avoid thunderstorms, cumulonimbus cloud formations, strong winds or other air traffic in the vicinity.

With reference to Gatwick Airport, as a designated aerodrome, the locations of all of the Noise Preferential Routes are determined

by the Department for Transport and have been in their present locations since the late 1960s and were designed to avoid over flight of built-up areas where possible.

A Noise Preferential Routes (NPR) consists of a 'centreline' and an associated compliance monitoring swathe (3km across, i.e. 1.5km either side of the NPR centreline). As long as aircraft remain within this 'swathe' up to the minimum vectoring altitude (3,000ft or 4,000ft), they are deemed to be on track.

Air Traffic Control is responsible for the routeing of aircraft once airborne, once the aircraft is above the minimum vectoring altitude, they may give a flight a more direct heading (known as vectoring) off the route. This is subject to certain factors including weather conditions and/or other traffic in the vicinity.

There is a map illustrating the location of all of the Noise Preferential Routes (NPRs) at Gatwick Airport in Annex 7.

Noise Limits

The current departure noise limits of 94 dB(A) (day), 89 dB(A) (shoulder) and 87 dB(A) (night) were implemented at the London airports (Gatwick, Heathrow and Stansted) in 2001. The noise limits are related to a fixed reference distance of 6.5 km from start of roll and have been defined in terms of a maximum A-weighted noise level, LA_{max} since 1992-93.

Recognising that the noise limits had been in place for many years, the Government announced in its March 2013 Aviation Policy Framework that ANMAC would review the departure noise abatement procedures at the London airports, including noise limits and use of penalties, to ensure that these remain appropriately balanced and effective.

The study by the ANMAC Technical Working Group has identified that there is limited scope for reductions in the noise limits at Heathrow until the retirement of the remaining Boeing 747-400 fleet. A small reduction of 1 to 2 dB in the daytime and shoulder limits might be feasible without causing the overall number of infringements to increase above historic levels.

The results for Gatwick and Stansted indicate that the current daytime, shoulder and night limits could be lowered, by up to 3 decibels or more in some cases, without significantly impacting the current fleets at those airports.

A lowering of the noise limits at Gatwick and Stansted would provide a backstop, dissuading the re-introduction of the noisiest aircraft types, but it would mean that the limits would no longer be applied equally across the three airports (which has been a matter of Government policy for many years).

Analysis has shown that whilst reductions in noise levels at the 6.5 km location could be achieved through changes to airline Noise Abatement Departure Procedures, this would be at the expense of noise increases elsewhere along or to the side of the flight path.

Regarding the wider influence of Noise Abatement Departure Procedures on departure noise, ICAO guidance provides two examples: NADP 1 which can mitigate noise close to the aerodrome, and NADP 2 which can mitigate noise more distant from the aerodrome. A wide range of procedures may be developed within the NADP 1 and 2 definitions.

The limits apply at fixed noise monitors only. These night time limits are consistent with the night restrictions regime. Airlines whose aircraft breach the noise limits are fined by Gatwick Airport.

There are no arrivals noise limits.

1,000 Ft Rule

Aircraft are required to be at a height of not less than 1,000 feet at 6.5 km from start-of-roll. After passing the 1,000 feet point (at 6.5 km), aircraft are then required to maintain a climb gradient of not less than 4% to an altitude of 4,000 feet.
The rationale for the climb gradient requirement is to ensure that progressively reducing noise levels at points on the ground under the flight path are achieved.

Ground Noise

Aircraft engine testing is also controlled by Gatwick Airport. This is done by establishing and enforcing ground noise controls by way of Gatwick Airport Directives (GADs).

In the case of engine run-up restrictions*, the GAD states that unless there are urgent operational reasons for engine testing to be carried out at night, ground running must be confined to the period 07:00-22:00 local time. There are additional restrictions regarding the running of auxiliary power units.

A range of ground noise metrics are presented to the quarterly meetings of the Noise and Track Monitoring Advisory Group. These include Fixed Electrical Group Power availability, aircraft Auxiliary Power Unit audit results and the number of aircraft engine tests carried out.

* Above ground idle thrust settings

Noise Monitoring

Gatwick Airport has a noise and track-keeping system, which takes data from ATC radars, combines it with flight information along with data from both fixed and mobile noise monitors situated around the airport.

There are five fixed noise monitors around Gatwick (approximately 6.5km from either end of the runway) and six to seven mobile noise monitors located in communities further away from the airport. The mobile noise monitors are deployed for periods of typically one year and are usually located in areas affected by inbound or outbound aircraft).

The mobile noise monitors allow Gatwick Airport to gain an understanding of the noise climate in a particular area and, in conjunction with the Gatwick Noise Monitoring Group, commission detailed noise studies by our independent acoustic specialists.

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Noise Charges

The Conditions of Use and airport charges for Gatwick Airport are published every year in the Conditions of Use publication. The table below provides an overview of the criteria associated with each aircraft noise charge category.

Figure 1: Overview of the noise performance criteria for ICAO aircraft chapter

CHARGE CATEGORY	NOISE PERFORMANCE CRITERIA	CUMULATIVE MARGIN (CM) RELATIVE TO ICAO CHAPTER 3 LIMITS
Chapter 3 & below	• Does not satisfy Chapter 4 criteria	–
Chapter 4	• Margin at each certification point is greater than 0. • Combined margin at any two certification points is greater than or equal to 2. • Cumulative margin relative to Chapter 3 limits is greater than or equal to 10.	10 <= CM <17
Chapter 14 High	• Margin at each certification point greater than or equal to 1. • Cumulative margin relative to Chapter 3 limits is greater than or equal to 17.	17 <= CM < 20
Chapter 14 Base		20 <= CM < 23
Chapter 14 Minus		CM >= 23

Noise charges vary by time of day (Day / Night). The Day and Night periods are defined in the table below; all times are shown in UTC (GMT).

Figure 2: Defined day/night periods in the summer and winter

CHARGE	DAY (TIMES IN UTC)	NIGHT (TIMES IN UTC)
Summer (1 April – 31 October)	05:00 – 22:29	22:30 – 04:59
Winter (1 November – 31 March)	06:00 – 23:29	23:30 – 05:59

The table below details the aircraft noise charges that apply on take-off and landing*.

Figure 3: Charges per ICAO chapter for the summer and winter seasons

SEASON	CHARGE CATEGORY	CHARGING UNIT	DAY	NIGHT
Summer (1 April – 31 October)	Unmodified A320 Family**	Per movement	£784.40	£988.02
	Chapter 3 & below	Per movement	£78.44	£988.02
	Chapter 4	Per movement	£39.22	£494.01
	Chapter 14 High	Per movement	£23.53	£296.41
	Chapter 14 Base	Per movement	£19.61	£247.00
	Chapter 14 Minus	Per movement	£15.69	£197.60
Winter (1 November – 31 March)	Unmodified A320 Family*	Per movement	£784.40	£988.02
	Chapter 3 & below	Per movement	£0.00	£988.02
	Chapter 4	Per movement	£0.00	£494.01
	Chapter 14 High	Per movement	£0.00	£296.41
	Chapter 14 Base	Per movement	£0.00	£247.00
	Chapter 14 Minus	Per movement	£0.00	£197.60

There are other charges applicable to aircraft movements including passenger charges, demand charges and NO_X emissions charges. Full details are available here; Gatwick Airport: Conditions of Use 2018-2019: https://www.gatwickairport.com/contentassets/e1ba98b2944242ef8caedd3999f720ee/2018-19-conditions-of-use-revised-with-gdpr---sent-23aug18.pdf
Gatwick Airport: Conditions of Use 2019-2020: https://www.gatwickairport.com/globalassets/publicationfiles/business_and_community/all_public_publications/2019/2019-20-conditions-of-use---final---25jan19.pdf

* At the time of revision of the Noise Action Plan
** Unmodified A320 Family Aircraft Noise Charge (1) With effect from 1 January 2018, any Airbus A320 family aircraft (A318 / A319 / A320 / A321) which has not been declared on the 'All Up Weight Return' form detailed in Schedule 5 to this Conditions of Use as having the fuel over pressure protector (FOPP) modification – as described under Section 2.2 of Gatwick Airport Independent Arrivals Review Report dated 28 January 2016 will be subject to this charge.

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Areas Of Outstanding Natural Beauty (AONB)

Gatwick Airport is surrounded by many AONBs hence overflight is often unavoidable. The Air Navigation Guidance (ANG) 2017 is a Department for Transport document which provides the Civil Aviation Authority with guidance on how it should exercise its air navigation functions.

Section 3.3 of the ANG also refers to overflight in the context of the protection of landscapes and scenic beauty. It states that:

a) 'in the airspace from the ground to below 4,000 feet the government's environmental priority is to limit and, where possible, reduce the total adverse effects on people;

b) where options for route design from the ground to below 4,000 feet are similar in terms of the number of people affected by total adverse noise effects, preference should be given to that option which is most consistent with existing published airspace arrangements;

c) in the airspace at or above 4,000 feet to below 7,000 feet, the environmental priority should continue to be minimising the impact of aviation noise in a manner consistent with the government's overall policy on aviation noise, unless the CAA is satisfied that the evidence presented by the sponsor demonstrates this would disproportionately increase CO_2 emissions;

d) in the airspace at or above 7,000 feet, the CAA should prioritise the reduction of aircraft CO_2 emissions and the minimising of noise is no longer the priority;

e) where practicable, it is desirable that airspace routes below 7,000 feet should seek to avoid flying over AONB and National Parks; and

f) all changes below 7,000 feet should take into account local circumstances in the development of the airspace design, including the actual height of the ground level being overflown, and should not be agreed to by the CAA before appropriate community engagement has been conducted by the sponsor'.

STAKEHOLDER COMMUNICATION AND ENGAGEMENT

Accessing Information

• Flight Performance Team (FPT)

Gatwick Airport monitors compliance with the various noise control measures detailed in the Aerodrome Information Publication (AIP) or locally and handles aircraft noise complaints through the Flight Performance Team.

The team also provides relevant statistics to the Department for Transport, the Noise and Track Monitoring Advisory Group, the Noise Management Board and the Gatwick Airport Consultative Committee.

• Reporting

We produce quarterly and annually FPT reports that provide information on performance against noise control measures.

• Website and online flight tracking

Detailed information relating to aircraft noise is available on our website. This has links to various reports, minutes from the Noise and Track Monitoring Advisory Group, the Noise Management Board and information regarding ground noise, aircraft overflight and night flights.

A further facility on the website is our flight tracking tool, the Casper Noise Lab. This is an online self-service aircraft noise complaints system showing Gatwick aircraft flight tracks in real time, heights and aircraft types. By using this facility it is possible to see where planes are flying in relation to where the complainant lives or works together with aircraft noise complaint statics in a given area.
Gatwick Airport Ltd continues to monitor the online complaints system and flight tracking service and when appropriate will introduce modifications to enhance both.

• Complaint handling service

Gatwick Airport's FPT registers and investigates all complaints received in line with our stated complaint handling policy.

Relevant information to help understanding of the issue is offered but the FPT will not repeatedly supply the same or similar information or substantial amounts of data, or undertake extensive data gathering exercises in individual cases.

This allows the FPT to concentrate on performance monitoring and overall studies with the aim of providing useful information about what, if any, improvements might be possible.

The FPT also continuously monitors overall performance, for example track keeping and CDO. This is not dependent on receipt of complaints.

Where there appears to be something unusual occurring it is investigated and the data is used to continue to work proactively with the airline community to enhance performance overall. See Annex 5 for complaint data.

Stakeholder Engagement

In addition to the above measures, Gatwick Airport also regularly engages with stakeholders including airlines, air navigation service providers, local community groups, local authorities and government bodies. This is done through various engagement forums such as the:

- Gatwick Airport Consultative Committee (GATCOM),
- GATCOM Steering Group,
- Noise Management Board,
- Noise and Track Monitoring Advisory Group (NaTMAG),
- Section 106 Steering Group, and
- The Gatwick Noise Monitoring Group.

Mitigation and Compensation Schemes

The Government's Aviation Policy Framework states that their overall objective on noise is to limit and where possible reduce the number of people in the UK significantly affected by aircraft noise. The policy document makes clear that the acceptability of growth in aviation depends to a large extent on the industry continuing to tackle its noise impact and confirms that the Government expects the industry at all levels to continue to address noise.

The principal mitigation measure for aircraft noise impacts (at Gatwick Airport) is the provision of acoustic insulation and can be required on a statutory basis under section 79 of the Civil Aviation Act 1982. In practice however, all Gatwick Airport's current noise insulation schemes are provided on a voluntary basis and exceeds the expectations of the Aviation Policy Framework. Namely:

- Airport operators are to offer households exposed to levels of noise of 69 dB $L_{Aeq,16h}$ or more, assistance with the costs of moving.
- Airport operators are to offer acoustic insulation to noise-sensitive buildings, such as schools and hospitals, exposed to levels of noise of 63 dB $L_{Aeq,\ 16h}$ or more.
- Where acoustic insulation cannot provide an appropriate or cost-effective solution, alternative mitigation measures should be offered.
- If no such schemes already exist, airport operators should consider financial assistance towards acoustic insulation for households. Where compensation schemes have been in place for many years and there are few properties still eligible for compensation, airport operators should review their schemes to ensure they remain reasonable and proportionate.
- Where airport operators are considering developments which result in an increase in noise, they should review their compensation schemes to ensure that they offer appropriate

compensation to those potentially affected. As a minimum, the Government would expect airport operators to offer financial assistance towards acoustic insulation to residential properties which experience an increase in noise of 3dB or more which leaves them exposed to levels of noise of 63 dB L_{Aeq}, 16h or more.

- Any potential proposals for new nationally significant airport development projects following any Government decision on future recommendation(s) from the Airports Commission would need to consider tailored compensation schemes where appropriate, which would be subject to separate consultation.
- Airports may wish to use alternative criteria or have additional schemes based on night noise where night flights are an issue. Airport consultative committees should be involved in reviewing schemes and invited to give views on the criteria to be used.

Details of the boundaries of Gatwick's Noise Insulation Scheme, Home Owner Support Scheme and Property Market Support Bond are included in Section 15.

NEW NOISE SENSITIVE DEVELOPMENTS

Guidance on the planning of new noise sensitive development, such as housing, near airports can be found in some local authority local planning guidance. Following the repeal of national guidance on the subject, the Institute of Acoustics, Chartered Institute of Environmental Health and the Association of Noise Consultants produced Professional Practice Guidance (ProPG) Planning and Noise; New Residential Development in May 2017 which promotes good acoustics design to achieved suitable design standards in new housing in existing noisy environments including near airports. Under the Noise Management Board's work programme Gatwick Airport has worked with local authorities to promote good land use planning, and held a workshop sharing experiences in November 2017.

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THE INDEPENDENT REVIEW OF ARRIVALS

Introduction

In August 2015, in response to feedback from some of our local residents and resident groups, the then Chairman of Gatwick Airport Ltd, Sir Roy McNulty, commissioned an independent review of arrival air traffic around Gatwick.

Background

The Independent Review of Arrivals was led by industry experts Bo Redeborn and Graham Lake who were asked to provide a fully independent, professional analysis and report. As part of the review, the Independent Review of Arrivals team engaged with an extensive range of organisations, individuals, Parish, Town and District County Councils and MPs. They also held three interactive public meetings with local MPs which were attended by several hundred people. In addition, they received feedback and comments by email.

Key Focus of the Review

The review took over four months to complete and was published on 28 January 2016. Its main aim was:

- To make sure everything that can reasonably be done to alleviate issues raised by the local community is being done. This includes by Gatwick Airport as well as other agencies closely involved in the industry i.e. NATS, Civil Aviation Authority, airlines and the Department for Transport.
- To understand if the way Gatwick communicates with and provides information to the local community, including the handling of complaints, is fully adequate.

Main Findings of the Review

The report set out 23 practical steps that can be taken to improve noise and the key recommendations and findings from the review are as follows:

- To reduce the number of aircraft holding over land;
- To improve use of continuous descent arrivals which would generate significantly less noise, and to improve the sequencing and spacing of arrivals;
- To accelerate the modification of the Airbus A320 family of aircraft to reduce the whining noise they make during the approach phase of flight (The 'FOPP' issue);
- To establish an independently chaired Noise Management Board to oversee joint strategies to deal with noise around the airport; and
- To develop a comprehensive online complaint management system.

Gatwick Airport's Response

Gatwick Airport Ltd welcomed the findings of the review and published a detailed response and proposed Implementation Action Plan of the 23 Recommendations contained within the Review Report. This proposed Implementation Action Plan was then subject to a process of engagement with local stakeholders and interested parties.

A planning meeting of the proposed Noise Management Board was held on 18 May 2016.

Following publication of the Proposed Action Plan, Gatwick published its Final Action Plan. The Final Action Plan reflected the constructive feedback to the Arrivals Review and the Proposed Action Plan that has been received from communities and other stakeholders, as well as the results and conclusions of additional analysis.

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NOISE MANAGEMENT BOARD

A key recommendation to come out of the Gatwick Airport Independent Arrivals Review was to establish an independently chaired Noise Management Board (NMB).

The purpose of the NMB is to develop, agree, oversee and maintain a coordinated noise management vision and consequent strategies for Gatwick, for all stakeholder organisations, intended to improve the situation for those affected by noise from aircraft using Gatwick.

This includes joint and coordinated reports through the NMB on progress of the implementation of these agreed strategies and, seeks to ensure consistent communication across all stakeholder groups, using verifiable data and transparent policies, to support the facilitation of their understanding by residents. This also includes when necessary, research and independent verification of information to be published.

The NMB assists in ensuring that community concerns about aircraft noise are fully understood by key stakeholder organisations considering issues that may affect noise management around Gatwick. The NMB focussed initially on the implementation of recommendations from the Arrivals Review, but then extended its remit.

The NMB assists in the progressive development of consensus across its membership, to improve the alignment of responsibilities, initiatives and priorities of the key organisations able to influence change in the effect of noise from aircraft using Gatwick, whether for arrivals, departures or related to aircraft ground noise.

Membership

The Noise Management Board is made up of a wide range of industry experts and stakeholders. There are 13 seats on the Board, some of which are shared between a voting member and an alternate (back-up) member who have one vote and actively attend alternate meetings. The NMB has representation from the following members:

- Gatwick Airport Ltd
- Civil Aviation Authority (CAA)
- Department for Transport (DfT)
- National Air Traffic Services (NATS)
- Air Navigation Solutions - ANS - (the providers of air traffic services in the control tower at Gatwick)
- Airlines
- Chair of GATCOM (Gatwick Airport Consultative Committee)
- East Sussex and West Sussex County Councils
- Surrey and Kent County Councils
- The High Weald Councils Aviation Action Group (HWCAAG) and Association of Parish Councils Action Group (APCAG)
- East Sussex Communities for Control of Aircraft Noise (ESCCAN) and Tunbridge Wells Anti-Aircraft Noise Group (TWAANG)
- Communities against Gatwick Noise Emissions (CAGNE) and Plane Wrong
- Gatwick Obviously Not (GON) and People Against Gatwick Noise Emissions (PAGNE)

The Board is chaired by Bo Redeborn and the secretary is Graham Lake.

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On 18 May 2016, the NMB held a planning meeting in order to establish the membership, constitution and terms of reference for the Board. Following this, the first NMB meeting was held on 21 June 2016.

Objectives

1. The objective of the NMB is to develop, agree and oversee a coordinated noise management vision and consequent strategies for Gatwick, for all stakeholder organisations.
2. The initial focus will be on the implementation of the Recommendations of the Independent Review of Arrivals.
3. The NMB's remit extends to all important noise management issues related to Gatwick, including those related to departures, and aircraft ground noise, as well as arrivals.
4. The NMB's scope includes all commercial matters that might reasonably be expected to have a significant impact on the noise environment at Gatwick.
5. The NMB should be a body with real influence over operational stakeholders around the airport such as on airspace and aircraft operational issues.
6. The NMB should influence and monitor the effective use of noise awareness training policies for staff of all Gatwick stakeholders and reported through NATMAG.
7. The NMB should be consulted on all Gatwick noise related matters, such as compensation policy, noise insulation and community support.
8. The NMB should be a main channel (Notwithstanding the obligations of the Gatwick Areas Joint Authorities Group, hosted by Crawley Borough Council) through which GAL, NATS, ANS, Airlines, DfT and CAA communicate actions that are being taken to address the effects of noise from aircraft using Gatwick.
9. The NMB should seek to ensure the joint and co-ordinated reporting by stakeholders through the NMB, initially on progress of the Arrivals Review implementation and then on other noise issues and initiatives, and seek to facilitate better understanding by residents through more consistent communication and verifiable data.
10. The NMB should establish a mechanism to identify and address unintended and unexpected consequences of noise improvement initiatives.
11. Particular care will need to be taken by the NMB to avoid conflicting with the remits or duties of any of the other bodies already involved in noise matters related to Gatwick.
12. If and when the Government establishes an Independent Noise Authority the NMB should ensure appropriate alignment between its own Terms of Reference and the remit of such a body.
13. The NMB should agree and establish a process to set its SMART objectives and to regularly review and report its progress.
14. The NMB should establish and maintain a transparent mechanism to adapt these Terms of Reference when agreed by members of the NMB.
15. The NMB will seek to positively influence the noise environment of stakeholders by assisting the development of consensus among the various organisations represented through its membership.
16. In the event that it is not possible to reach NMB consensus on any matter, after exhausting all reasonable efforts, a majority decision can be made provided that it represents at least 75% of the NMB Membership.

Meetings And Reporting

- The NMB should meet every 2 months, or at intervals agreed by the members.
- The agenda and minutes of NMB meetings should be published (on the NMB website).
- NMB meetings will not be open to the public, unless agreed by the NMB members for specific dates or specific topics.

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- It is expected that at least one public meeting will be conducted each year by the NMB, to facilitate community dialogue, a reasonable understanding in communities of the work areas of the NMB, and to report NMB progress and plans.

One Year On

The Independent Review of Arrivals 'Recommendation IMM-20' was to provide an in-depth review of the activity and progress of the Gatwick Arrivals Review Final Action Plan developed in response to the Independent Arrivals Review.

The Imm-20 report, published on the 31st January 2017, provided an update on the range of activities and substantial work undertaken by Gatwick, industry stakeholders and the Noise Management Board (NMB). Progress one year on included:

- reduction of noise disturbance from aircraft using Gatwick;
- improved quality and transparency of information available;
- the access available to communities;
- active engagement with aviation stakeholders

A further update on progress was provided at the Gatwick Airport Airspace and Noise Management Board Public Meeting on 7th December 2017.

POST PUBLICATION NOTE:

A formal review process of the Noise Management Board was initiated in September 2018 in order to comprehensively review the purpose of the committee including its objectives, governance structure, membership (and balance thereof), legitimacy, outcomes, leadership and administration; considering and taking into account the views of all the members of the committee.

Changes are proposed to the structure, governance and membership of the Noise Management Board, to include an Executive Committee and a Community Forum. This structure will be a more effective means of drawing together all of the appropriate stakeholders, both local and industry, to collaborate on practical measures to reduce noise.


HSBC
norwegian.no
EI-FMB
easyJet.com

CONTROL MEASURES IN PLACE APPLICABLE TO GATWICK AIRPORT

Aeronautical Information Publication - London Gatwick

• EGKK AD 2.21 Noise Abatement Procedures

Adherence to the noise abatement procedures is reported quarterly and annually through Flight Performance Team Reports to the Noise and Track Monitoring Advisory Group and the Gatwick Airport Consultative Committee. These are published on the Airport website. A performance dashboard is also presented bi-monthly to the Flight Operations Performance and Safety Committee.

The Flight Performance Team provides noise abatement performance data on a continual basis to all airlines and undertakes direct engagement with them when required, in order to improve performance.

Night Flight Restrictions at Heathrow, Gatwick and Stansted Airports

A new night flights regime came into effect in October 2017 and will remain in place until October 2022. The objective of this new regime is to:

> 'Limit or reduce the number of people significantly affected by aircraft noise at night, including through encouraging the use of quieter aircraft, while maintaining the existing benefits of night flights'

The movements limit remains unchanged however the night quota limit has been reduced.

During the summer season, the air traffic movements limit is capped at 11,200 and during winter, this reduces to 3,250. The night quota limits will be reduced to 5,150 in the summer (from 6,200 in 2018) and to 1,785 in the winter (from 2,000 in 2017/18). This will further incentivise the use of quieter aircraft by encouraging industry to plan its operations with sufficient headroom to ensure the limits can still be complied with in the event of unplanned disruption or changes to their schedules.

Performance against the night flight restrictions are reported quarterly and annually through Flight Performance Team Reports to the Noise and Track Monitoring Advisory Group and the Gatwick Airport Consultative Committee. These are published on the Airport website.

A night flight performance dashboard is presented bi-monthly to the Flight Operations Performance and Safety Committee setting out air traffic movement and 'quota count' usage statistics together with details of an dispensations applied and the circumstances surrounding their application.

Proactive direct engagement is undertaken by Gatwick Airport Limited with airlines, Airport Co-ordination Limited, Department for Transport and GAL Sales and Operations Planning to manage allocation, dispensations and usage.

Section 106 Legal Agreement Obligations and Noise Action Plan

• Obligations 4.1 To 4.5, Action Plan Actions 1 – 8

Progress against the actions are reported annually in the Section 106 Annual Monitoring Report. Selected obligations and action plan actions are subject to audit. Final Annual Monitoring Report circulated to Crawley Borough Council and West Sussex County Council for circulation among the wider local authorities and the Gatwick Airport Consultative Committee. This report is published on

the Airport website.

Decade of Change

• The Sustainability Strategy For Gatwick Airport For 2010 – 2020
Qualitative target of "Be consistently recognised as a best practice operator for noise management" and audited noise key performance indicators (track keeping, noise infringements and Continuous Descent Operations (CDO) compliance) included.

Environmental Noise Directive Noise Action Plan

Contains 61 action plan actions (2013-2018) reported quarterly and annually to the Noise and Track Monitoring Advisory Group. The minutes are available online on the airport website where the annual report is also uploaded.

Independent Review of Arrivals (Published January 2016)

The Noise Management Board initially focussed on the implementation of the 23 recommendations of the Independent Review of Arrivals. An annual update (Imm-20) was published in January 2017 which reported on progress against these recommendations.

A further update on progress was provided at the Gatwick Airport Airspace and Noise Management Board Public Meeting on 7th December 2017.

Noise Management Board Annual Workplan

Annual workplan is negotiated, agreed and published on an annual basis, this details the key priorities and work streams of the Noise Management Board for the upcoming year including a defined short, medium and long term work plan. The workplan is publicly available from the NMB website.

SECTION TEN

EHS & ENVIRONMENTAL RISK MANAGEMENT

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ENVIRONMENT, HEALTH AND SAFETY

At Gatwick Airport, we believe that exemplary environment, health and safety leadership is critical to successfully deliver a world-class service. Gatwick Airport considers environment, health and safety management a core business value and the strategy to deliver and achieve world class performance will be delivered through our approach: *GatwickSAFE - it's the way we do things around here*. It is paramount to our success and therefore demands our attention daily.

We are committed to delivering exemplary levels of environment, health and safety performance. When excellent examples are identified, we will replicate across our business and communicate them extensively so that everyone can benefit. We take our commitment to avoiding incidents, injuries and illness very seriously, learning from any incident, including near miss events, to continually improve our performance.

Our commitment to the environment and to the health and safety of everyone who visits Gatwick is at the heart of everything we do. Our priority is to build a strong EHS culture. We have an executive board member who oversees and is responsible for ensuring that environment, health and safety is always at the top of our agenda.

Environment, Health and Safety (EHS) Policy

At Gatwick Airport we are committed to ensuring the health, safety and well-being of our employees, customers and business partners, as well as managing the impact of our business on the environment. We will achieve this by:

- Implementing and maintaining robust EHS management systems which are certified to industry recognised standards including ISO 14001, OHSAS 18001 and ISO 55001;
- Demonstrating strong, visible, felt leadership and behaviours for EHS where there is collective ownership throughout our business;
- Driving continuous improvement in our EHS performance by setting and monitoring clear, measurable objectives and key performance indicators that are visible and meaningful to our employees, achieving the vision of GatwickSAFE and meeting our Decade of Change sustainability targets;
- Protecting the environment including preventing pollution by managing pollution risks and maintaining pollution prevention systems;
- Protecting the health and well-being of our employees through proactive health surveillance and well-being initiatives;
- Incorporating EHS, both risk and opportunity identification, into our lifecycle decision making including the planning, design, construction, operation and decommissioning of our activities, facilities and assets;
- Verifying the effectiveness of our controls and plans through a robust EHS assurance programme;
- Ensuring compliance with all applicable legislation and other requirements as a minimum standard for performance;
- Ensuring our employees have the necessary information, instruction, training, supervision and resources to deliver EHS competence;
- Maintaining effective channels of communication with our employees, business partners and suppliers to ensure they have the right information, at the right time through the right media;
- Celebrating, rewarding and recognising, our successes and learning from our incidents and sharing what we learn with others.

IMPLEMENTATION

The Gatwick Airport Ltd Executive Management Board (EMB) will monitor and regularly review, this policy and supporting management systems at our Managing Corporate Responsibility (MCR) and Environment, Health & Safety and Operational Resilience

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EHS & ENVIRONMENTAL RISK MANAGEMENT

(EHSOR) forums. Ensuring it remains relevant to the company's EHS risks/opportunities driving continuous performance improvement.

CERTIFICATION

Our performance has been validated by independent certification. In 2010 we obtained the ISO14001 standard for environmental management and in 2012 the OHSAS18001 standard for health and safety, demonstrating that we're managing risks and continuously improving.

ENVIRONMENTAL RISKS

Environmental risks need to be mitigated to ensure compliance with environmental legislation and to minimise environmental impact. Poor environmental performance has the potential to impact Gatwick's reputation, its licence to operate and potential to grow. These risks are mitigated at a number of levels including the implementation of an environmental management system which, as referenced above, is externally audited and certified to the ISO14001 standard. The management system includes the assessment and management of key environmental risks and opportunities including compliance obligations. Gatwick continues to monitor performance against annual improvement targets and undertakes internal audits and training programmes. Gatwick works proactively with stakeholders to ensure that it effectively manages the challenges posed to the environment by the Airport's operation.

The culture at Gatwick Airport is critically important in improving environment, health and safety. This is affected not only by us and those who work with us, but also those who come into contact with the airport. Building a strong EHS culture will not only make our environment, health and safety performance world class, it will enable us to achieve improved performance, and provide a safe, healthy and enjoyable place to work.

MEASURING OUR SUCCESS

We will ensure both our leading and lagging key performance indicators drive the correct actions and behaviours. Our corporate (internal and external) EHS audits will seek to identify inappropriate controls before adverse consequence materialise. Actions taken in response will encourage a proactive culture. In focussing on underlying factors, we will pay particular attention to collating, trending and targeting actions based on incidents and near misses, and, where practicable, utilise safety improvement ideas prior to these incidents occurring.

SECTION ELEVEN

AIRCRAFT NOISE INDUSTRY STAKEHOLDERS

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CIVIL AVIATION AUTHORITY (CAA)

The Civil Aviation Authority (CAA) is the statutory corporation which oversees and regulates all aspects of civil aviation in the United Kingdom. It is a public corporation established by Parliament in 1972 as an independent specialist aviation regulator. One of its four environmental goals is to contribute to a cleaner and quieter aviation industry.

DEPARTMENT FOR TRANSPORT (DFT)

The Department for Transport (DfT) is the government department responsible for the English transport network and a limited number of transport matters in Scotland, Wales and Northern Ireland that have not been devolved.

It has put in place a long-term framework aimed at balancing the delivery of social and economic benefits from aviation, with the need to reduce and mitigate the environmental impacts of air transport and airport development.

DEPARTMENT FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (DEFRA)

The Department for Environment, Food and Rural Affairs (DEFRA) is the UK Government department responsible for safeguarding the natural environment, supporting the UKs world-leading food and farming industry, and sustaining a thriving rural economy. DEFRA's broad remit means it plays a major role in people's day-to-day life, from the food they eat, and the air they breathe, to the water they drink.

NATS

NATS is a UK's provider of air traffic control services, handling 2.4 million flights and 250 million passengers in UK airspace per annum. NATS provides en-route air traffic control services to flights within the UK Flight Information Regions and the Shanwick Oceanic Control Area and provides air traffic control services to fourteen UK airports. NATS is split into two main service provision companies: NATS En-Route PLC (NERL) and NATS Services Ltd (NSL):

- NERL is the sole provider of civilian en-route air traffic control over the UK and is regulated by the CAA who, for example, determine the charges NERL can make. NERL is funded by charging airlines for the provision of air traffic services.
- NSL competes for contracts in the free market to provide air traffic control at airports in the UK and overseas, as well as providing related services including engineering, consultancy, information services and training.

The overarching guiding principle of air traffic control is that safety is paramount.

The airspace about our homes and places of work contain a network of corridors, or airways. They mainly link busy areas of airspace known as terminal control areas, which are normally above major airports like London Gatwick. All of these airways are designated "controlled airspace". Aircraft fly in them under the supervision of air traffic controllers at all times.

AIR NAVIGATION SOLUTIONS (ANS)

Since 1st March 2016 Air Navigation Solutions Ltd has been responsible for the tower air navigation service provision at Gatwick Airport.

The scope of the services to be provided are:

- Aerodrome air traffic control – including, air, ground movement control, delivery and all training;
- Air traffic engineering services – including safeguarding and other support services;

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AIRCRAFT NOISE INDUSTRY STAKEHOLDERS

- Emergency and alerting services;
- Meteorological services.

ANS is a wholly owned subsidiary of the Deutsche Flugsicherung (DFS) and has been awarded a 10-year contract for the future provision of Air Traffic Control and Air Traffic Engineering Services at Gatwick Airport.

AIRLINES

Airlines and their flight crew have a duty to operate their aircraft in order to comply with the various rules and regulations stipulated for flying in UK controlled airspace. The commander of an aircraft has the primary responsibility for the safety of the crew and passengers at all times.

CRAWLEY BOROUGH COUNCIL (CBC)

As the airport's local planning authority, CBC ensure that the airport is compliant with all Section 106 planning obligations, some of which relate to aircraft operations.

WEST SUSSEX COUNTY COUNCIL (WSCC)

As the airport's local highway authority, WSCC, with CBC as the lead members of the Local Authority Gatwick Officers Group ensure that the airport is compliant with all Section 106 planning obligations, some of which relate to aircraft operations.

AVIATION ENVIRONMENT FEDERATION (AEF)

The Aviation Environment Federation (AEF) is the principal UK non-governmental organisation campaigning exclusively on the environmental impacts of aviation and promoting a sustainable future for the sector. It formed as a federation in 1975 at a time when the sector was beginning to grow rapidly and noise was becoming an issue around airfields and airports. As aviation is exempt from noise nuisance legislation its members sought action to influence the national policy level. AEF continues to focus on policy change but its work now extends beyond national policies to influencing European and global policy makers. Its work covers issues ranging from local air quality to global climate change, and from local participation in an airport consultative committees to the overall national economic impact of any new runway.

THE INDEPENDENT COMMISSION ON CIVIL AVIATION NOISE (ICCAN)*

This will produce guidance and best practice for making sure the process for taking airspace change decisions is trusted and transparent. To ensure this is happening, there will be a review of ICCAN within two years, to consider whether statutory powers are required.

This will give communities assurance that noise impacts are being considered and that noise management procedures are being taken forward in the best way possible by industry. Government expects ICCAN to:

- Advise on the best noise management techniques.
- Advise on accessibility of noise information, to facilitate community engagement on proposals.
- Influence proposals through best practice guidance.
- Review recent research and undertake/commission independent research.
- It is proposed that the Independent Commission on Civil Aviation Noise (ICCAN) will have a role in the Tier 1 & 2 airspace change processes.

* Established January 2019

SECTION TWELVE

COMMITTEES ATTENDED REGARDING AIRCRAFT NOISE

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EXTERNAL COMMITTEES

Gatwick Airport Consultative Committee (GATCOM)

GATCOM is constituted to meet the requirements of Section 35 of the Civil Aviation Act 1982 for an airport "to provide adequate facilities for consultation with respect to any matter concerning the management or administration of the airport which affects the interests of users of the airport, local authorities and any other organisation representing the interests of persons concerned with the locality in which the airport is situated".

GATCOM aims to:

- Foster communication and build understanding between the airport and its users, local authorities and interest groups.
- Consider and comment upon the impacts of the airport's administration, operation and development in relation to:
  - o The environment,
  - o The passenger experience,
  - o Surface access issues associated with the airport,
  - o Employment,
  - o The local, regional and national economy,
  - o The circumstances of local communities and their residents.
- Consider and, if appropriate, respond to any factual or consultative reports, from Governmental or other sources, which are material to the operation or development of the airport.
- Make suggestions to Gatwick Airport Limited where this might further the interests of those represented.

The members of the committee are drawn from three broad groups:

- **Users:** travel and tourism industry, aviation industry including airlines, passengers.
- **Local authorities:** all those whose boundary abuts Gatwick Airport or the M23 spur road.

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COMMITTEES ATTENDED REGARDING AIRCRAFT NOISE

- **Local interest groups:** groups representing local people affected by the airport's operations including environmental and noise groups, business and economic groups and employees.

The GATCOM Steering Group

The Steering Group is composed of the Chairman and Vice-Chairman and ten other members of GATCOM reflecting the composition of interests of the main Committee. The role of the Steering Group is to give preliminary consideration to new or detailed matters to be dealt with by GATCOM and to identify the facts and major issues, and to make recommendations to GATCOM. The Steering Group also deals with urgent matters on behalf of GATCOM.

Noise and Track Monitoring Advisory Group

The aims of the Noise and Track Monitoring Advisory Group (NATMAG) are:

- To oversee the operation of the Gatwick Airport Limited's Flight Performance Team's system to ensure that the requirements of the local community are taken into account in respect of the production of statistics, information and complaint handling.
- To advise Gatwick Airport Limited on issues relating to noise and track monitoring which derive from the results obtained from the monitoring equipment.
- To assist Gatwick Airport Limited in seeking improvements to the noise climate and track-keeping performance around Gatwick.
- To provide information and recommendations regarding noise and track monitoring to the GATCOM via the GATCOM Steering Group.

GATCOM also has representation on this group.

Noise Management Board

The core role of the Noise Management Board (NMB) is to develop, agree, oversee and maintain a co-ordinated noise management vision and subsequent strategies for Gatwick on behalf of stakeholder organisations. The main aim of this work is to reduce the impact of noise on the local community.

The Noise Management Board is made up of a wide range of industry experts and stakeholders. There are 13 seats on the Board, some of which are shared between a voting member and an alternate member who have one vote and actively attend alternate meetings. The NMB has representation from the airport, Civil Aviation Authority, Department for Transport, air navigation service providers, airlines, County Councils, the Gatwick Airport Consultative Committee and various community noise protest groups.

The Board is chaired by Bo Redeborn and the secretary is Graham Lake; both conducted and wrote the original Gatwick Airport Independent Arrivals Review.

Gatwick Noise Monitoring Group

This is where local environmental health professionals and representatives from the environment departments of local authorities meet with the Airport to discuss the location of mobile noise monitors, the duration they are to be onsite and to review and verify the data.

This group also makes recommendations on the format the data should be reported to NATMAG and the wider community.

Flight Operations Performance and Safety Committee

The Flight Operations Performance and Safety Committee (FLOPSC) ensures the development of best practice in flight operations by all airlines using Gatwick Airport in order to minimise their effect on the

local community.

Matters discussed include departure track keeping, continuous descent operations and noise infringements. FLOPSC meets bi monthly and is attended by the Airport, air traffic control, airlines and a representative of NATMAG.

Aircraft Noise Management Advisory Committee

The Aircraft Noise Management Advisory Committee (ANMAC) was set up by the Department for Transport (DfT) to advise it on policy relating to aircraft noise at Heathrow, Gatwick and Stansted - these airports being 'designated' for the purposes of s.78 of the Civil Aviation Act 1982.

ANMAC's membership includes representatives from London Gatwick plus representatives from the other designated London airports, NATS, the Environmental Research and Consultancy Department (ERCD) of the Civil Aviation Authority, the Scheduling Committees and a representative of the consultative committee at each of the three airports.

Airspace and Noise Engagement Group

The Airspace and Noise Engagement Group (ANEG) acts as a formal channel of communication between the Department for Transport and airspace and airport noise stakeholders.

The ANEG covers all aspects of national airspace and airport noise policy development. It acts as a sounding board to identify, discuss and, where possible, resolve airspace and airport noise issues that impact on the work of the department. Discussions are at a strategic policy level. The ANEG does not debate or attempt to resolve individual local issues. The ANEG is also an open forum for members to share their own relevant airspace and airport noise projects.

ANEG members include representatives from each of:

- air navigation service providers
- airlines
- airports
- Aviation Environment Federation
- Civil Aviation Authority
- community groups
- express delivery industry
- general aviation
- local authorities
- aerospace manufacturers
- passenger organisations
- Sustainable Aviation
- UK airport consultative committees
- independent noise body (ICAAN when established)

S106 Legal Agreement Meetings

We work closely with the local authorities close to Gatwick on social, environmental and economic matters. In 2001, Gatwick Airport signed a Section 106 (S106) legal agreement with West Sussex County Council and Crawley Borough Council (following consultation with seven other local authorities in the area). The agreement reflected a shared desire to see the airport grow, with measures in place to minimise as far as possible its short and long term impacts. The S106 was renewed for a further seven years in 2008 and in December 2015 it was extended until the end of 2018.

The agreement defines how Gatwick's operation, growth and environmental impacts will be managed responsibly and ensures that our wider sustainability strategy is aligned with local authority partners. It is considered as a best practice case in the UK by external stakeholders. The agreement underpins the important relationship between the airport owner and the local authorities

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with responsibility for planning, environmental management and highways.

To ensure delivery of our S106 obligations, and additional commitments that we have made on sustainable development, we maintain a set of ten action plans on topics covered by the S106 agreement and by our Decade of change sustainability strategy. The current action plans cover the period 2015-2018.

Performance against the S106 agreement is reported in the S106 Annual Monitoring Report which covers our actions to fulfil our obligations and commitments; and is also communicated to the Gatwick Airport Consultative Committee (GATCOM).

The airport meets with Crawley Borough Council and West Sussex County Council a number of times per year to discuss progress against the S106 Legal Agreement Obligations and Action Plan Actions and to discuss matters of mutual interest.

INTERNAL GROUPS

Executive Management Board

This includes the Chief Executive Officer, the Chief Financial Officer and other members of senior management. The Executive Management Board meets monthly and is responsible for the day-to-day management of the Airport. In particular, the Executive Management Board has collective responsibility for assisting the Board of Directors in the performance of their duties for the Group including:

- the development and implementation of strategy, operational plans and budgets;
- the achievement of business plans and targets;
- the assessment and control of risk;
- ensuring compliance with legal and regulatory requirements; and
- the development and implementation of the Group's ethics and business standards and health, safety, security and environmental policies and procedures.

Environment Health and Safety and Operational Resilience Committee

The Environment Health and Safety and Operational Resilience Committee is responsible for reviewing the Airport's strategy with respect to health and safety, operational resilience and business continuity. The Committee monitors the Group's performance against targets and drives management commitment and accountability with respect to managing risks.

(Future) Airspace & ATS Design Integration Panel (AADIP)

The purpose of this committee is to develop and review design and integration of options for future airspace routing/procedures of Gatwick Airport Ltd / NATS Air Traffic Services.

COMMITTEES ATTENDED REGARDING AIRCRAFT NOISE

The panel will consider the strategic design and integration/ development challenges.

- To guide development in the design and integration of Gatwick Airport Ltd/NATS Air Traffic Services.
- To help prioritise, coordinate and integrate service delivery.
- To consider airspace requirements and develop strategies for its acquisition and use.
- To develop coherent inputs to the Master Plan and Gatwick Airport Ltd.'s growth strategy.
- To input into the strategic engagement with third parties: NATS, CAA, Department for Transport policy and local communities.
- To provide strategic input into the Noise Management Board on options to further reduce the impact of Air Traffic Movements.
- To review proposed changes to Department for Transport policy, CAA regulation and Air Traffic Movements.

Decade of Change Working Group

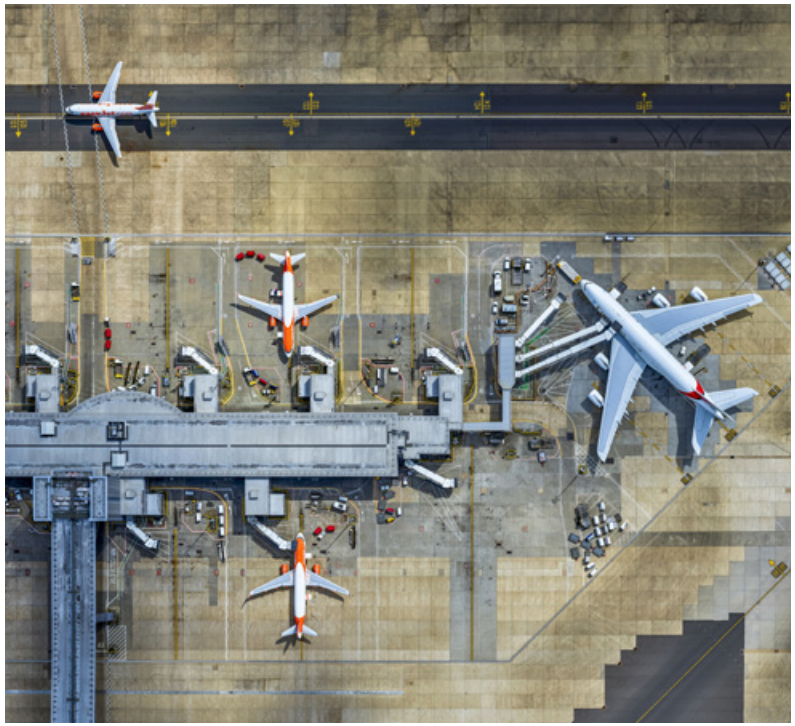
The purpose of the Decade of Change working Group is to improve transparency and efficient coordination around key Decade of Change deliverables, e.g. Decade of Change and Section 106 Action Plan Actions and reporting, certifications and new initiatives.

Key outcomes from this working group are improved audit results on Decade of Change issues and greater awareness of Decade of Change as a proactive driver in the business.

Managing Corporate Responsibility

The role of the Managing Corporate Responsibility (MCR) Committee is to establish a systematic and aligned management approach to:

- Deliver the Company's strategy with respect to Environment, Health, Safety and Operational Resilience (EHSOR) and Sustainability;
- Monitor the Company's exposure to EHSOR and sustainability risks;
- Monitor the Company's performance against EHSOR and sustainability targets; and
- Encourage management commitment and accountability with respect to Company-wide EHSOR and sustainability initiatives, policies and procedures.



Gatwick Airport Ltd is a 'Council' Member of Sustainable Aviation, is a long term strategy which sets out the collective approach of UK aviation to tackling the challenge of ensuring a sustainable future for the aviation industry. Launched in 2005, it is a world first bringing together major UK airlines, airports, manufacturers and air navigation service providers.

The industry is committed to delivering a sustainable future, and Sustainable Aviation is critical to delivering that. The signatories and members are focused on finding collaborative ways of improving environmental performance and creating a balanced debate to ensure sustainable growth of the aviation industry, which is crucial to the health of the UK's island trading economy.

Sustainable Aviation has set a range of goals and commitments covering climate change, local air quality and noise to deliver a sustainable future for the aviation industry. Sustainable Aviation regularly reports on the progress towards these objectives, monitoring and tracking the practical cooperative work being undertaken.

Sustainable Aviation is funded by its signatories who also provide technical expertise. The number of signatories continues to grow, with over 90 per cent of UK airlines, airports and air navigation service providers, as well as all major UK aerospace manufacturers represented.

SUSTAINABLE AVIATION AND AIRCRAFT NOISE

Sustainable Aviation's (SA) goal with respect to aircraft noise is to 'Limit and, where possible, reduce the impact of aircraft noise'. The Sustainable Aviation Noise Road-Map is published in support of this goal.

The Road-Map is structured as a toolkit for individual areas of the UK aviation industry to assess and implement measures to reduce noise from aircraft operations. It also helps inform stakeholders, including those making future strategic decisions in which aircraft noise is an issue.

The document sets out SA's projection of aircraft noise impacts from UK aviation. This projection is based on the UK Government forecasts of aviation demand-growth published in 2013. Together with SA's own assumptions concerning the deployment of technology, operational measures, land use planning, communication, community engagement activities and, where necessary, the use of operating restrictions.

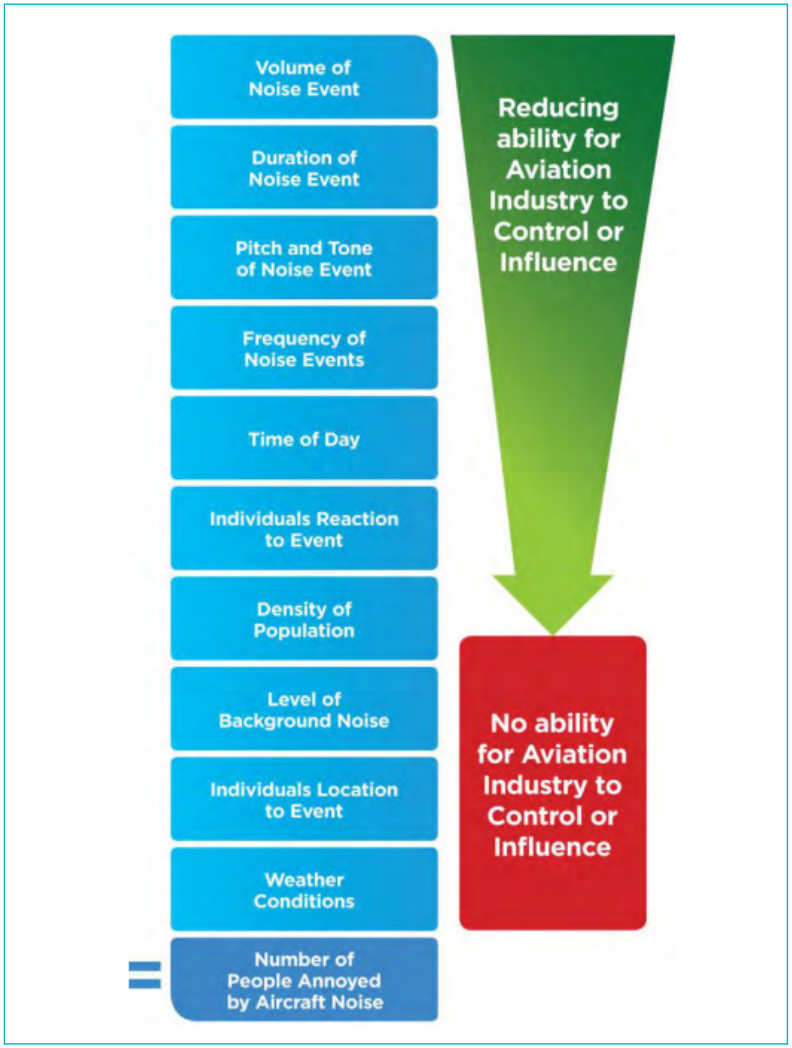
One of the most significant challenges in producing this Road-Map is the subjective nature of noise. As history and experience of seeking to manage aircraft noise issues have shown, people's reactions and perception of aircraft noise is a complex problem. Based purely on 57 Leq noise contour data, the reduction in aircraft noise achieved by the industry over the last half century has resulted in fewer people being significantly affected by noise. However based on regular stakeholder feedback received by the industry and reinforced in the UK Aviation Policy Framework, it is apparent that noise from aircraft operations remains a real source of tension between airports and local communities. Many local communities believe that current noise metrics, including the use of average noise contours, do not fully reflect their experience of aircraft noise.

SA believes that the number of people adversely affected by aircraft noise is influenced by a number of complex variables which combine to generate the total result as illustrated in Figure 4 overleaf.

SECTION THIRTEEN

SUSTAINABLE AVIATION

Figure 4: The challenges in reducing the number of people affected by aircraft noise from the SA Noise Road-Map



Three key conclusions arise from this diagram:

1. The number of people impacted by each variable is not consistent, for instance a loud aircraft event on a windy morning generally results in fewer people annoyed than the same aircraft event on a still, foggy morning.
2. While the aviation industry can take direct control of some of the variables, it has only indirect influence over others and no control at all over the remainder.
3. Research is required to understand in more detail the specific weighting and interrelationships each of the variables has on the final result.

In addition to these complexities, the nature of the noise problem can often change over time, even as a result of attempts to reduce its impact. For example, noise from departing aircraft was at one time the key area of concern among local communities. Technology solutions were developed to reduce departure noise, only for this to make arrival noise much more noticeable. Similarly, reducing the source noise of aircraft engines created a new focus on airframe noise, as that source then became dominant.

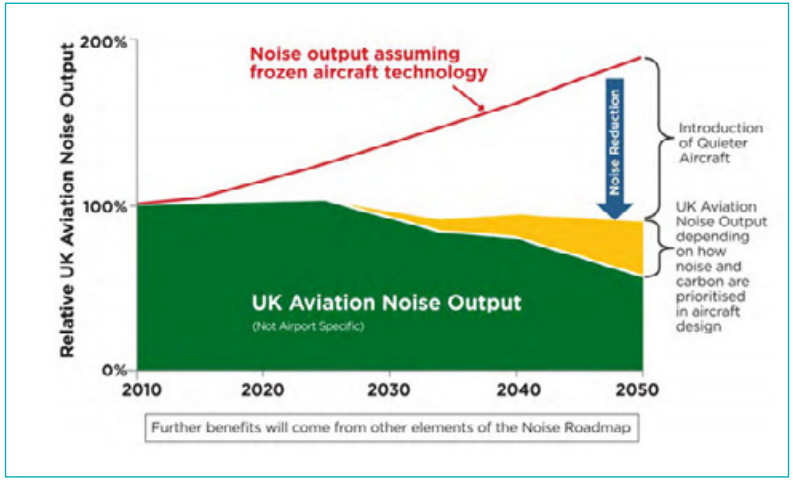
These unintended consequences of initiatives to reduce noise impact are common. There can be other unintended outcomes; reducing engine source noise often makes the engine heavier and therefore leads to additional fuel burn and emissions. Whilst a drive to concentrate noise impact on as few people as possible will obviously be better for those who escape it, but worse for the smaller communities that experience all of the noise.

This dynamic nature of noise problems, together with the risk of trade-offs and unintended consequences is at the forefront of the industry's mind in developing technologies and initiatives to limit and reduce noise impacts.

It makes the job of measuring, managing and reducing the number of people adversely affected by noise from aircraft very challenging. Unlike SA's Carbon Road-Map which used carbon dioxide emissions (CO_2), which are both easily measurable and with definable outcomes, measuring noise is more complex because of the multiplicity of noise metrics and human responses.

This Noise Road-Map therefore seeks to define future scenarios where best practice approaches can be used to limit and, where possible, reduce the number of people exposed to aircraft noise. To that end, the SA Noise Road-Map has been designed to identify and advocate best practice approaches to factors such as improved land use planning controls and community engagement as well as technology and operational advancements.

Figure 5: Sustainable Aviation (SA) Noise Road-Map



SA concludes that UK aviation is able to accommodate significant growth in air transport movements to 2050 and at the same time achieve a potential reduction to UK aviation's total noise output compared to 2010. The diagram below shows how the introduction of imminent and future aircraft and engine technology offers the potential to reduce UK aviation noise output by 2050 compared to 2010. Without this technology, given the forecast growth in demand for air transport, UK aviation's noise output would almost double.

The graph shows an aggregated UK picture of noise output and how this is predicted to change between 2010 and 2050. The graph is not airport specific and cannot be read as the projection of noise output for any particular airport. This will depend on the aircraft types and rates of penetration of newer aircraft at individual airports.

Further improvements can be achieved through the wider implementation of operational improvements in the use of airspace and flying techniques and through better land use planning in the immediate vicinity of airports.

Developing the tools discussed in this Road-Map will require collaboration and co-ordination of efforts across the UK aviation industry, local and national Government along with national and local community groups. Responding to this, the SA signatory companies make the following commitments:

- SA members will use this Road-Map to develop best practice noise management strategies for the future.
- The Aerospace sector will continue to invest in aircraft technology research programmes.
- The Aerospace sector will work to achieve the visionary noise goals of Flightpath 2050 and CLEEN5.
- The industry will increase the use of existing operational techniques that reduce noise where safe and feasible.

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SUSTAINABLE AVIATION

- The industry will collaborate to explore and develop new operational techniques that reduce noise where safe and feasible.
- The industry will actively contribute to improving aircraft noise guidance in local planning policy.
- Airports will review masterplans to ensure they are consistent with Noise Action Plans.
- Airports will work with Government, local authorities and local communities to achieve identified land use planning improvements.
- The industry will promote open and transparent engagement with communities affected by noise, to better understand their concerns and priorities and to establish trust in the engagement process.
- The industry will ensure that any changes to noise impacts or noise mitigation efforts are clearly communicated through agreed channels in a timely and non-technical manner.
- The industry will present the best practice engagement mechanisms from the Road-Map to local stakeholders through channels such as consultative committees to help airport operators better evaluate their engagement techniques.
- The industry will work with Government and other stakeholders to identify and resolve research gaps in:
  - how the variables in the 'Noise Challenge' diagram are weighted and consult on whether a more accurate model can be developed to predict the number of people annoyed by aircraft noise under various 'what if' scenarios,
  - understanding of individual reactions to aircraft noise,
  - noise acceptability vs. noise annoyance and
  - a basis for better noise metrics.

SA requests the UK Government to:

- Support research and development in aerospace technology ensuring the right incentives are in place to enable uptake by the industry.
- Work with the aviation industry to clarify relative environmental impacts between reducing noise and CO_2 emissions to enable future aeronautical design priorities.
- Strengthen and support local authorities' ability to enforce land use planning controls around airports.
- Implement improved airspace structures and operational procedures through the CAA.
- Work with the industry to support independent research to improve our understanding of the noise challenge and how people react to aircraft noise events.
- Work with the industry, local authorities and communities to optimise noise communication, monitoring and reporting processes.
- Ensure that operating restrictions are employed only as a last resort after full consideration has been given to the other dimensions of the ICAO Balanced Approach, namely reduction of noise at source, land use planning and management and noise abatement operational procedures.

SECTION FOURTEEN

THE NEED FOR AIRSPACE MODERNISATION

14

Airports rely on the effectiveness of the airspace that surrounds them to permit efficient operating procedures, and to minimise the environmental impact of operations. Our airspace safely handles over two million flights every year but it has remained little changed in over 50 years and is now in urgent need of modernisation. The airspace above the south-east of England was designed around procedures and infrastructure designed in the 1960's and is rapidly approaching the limit of its capacity. Not only does it contain choke points, but the use of legacy solutions, such as holding 'stacks' and movement limits, compound delays, increases operating costs and intensifies environmental impacts.

Designed over 50 years ago, for an industry vastly different in scale to the one we have today, it was never envisaged that our airspace would eventually handle more than two million aircraft and carry 250 million passengers, as it did in 2015. Many, including the Department for Transport, forecast that passenger demand will grow by a further 30% before 2030, with 3.1 million aircraft carrying 350 million passengers necessitating an additional 1 million aircraft movements per year. The boosts to trade and tourism from this growth are substantial, but if no action is taken it is expected that the current, ineffective design will lead to more than 1 in 3 flights being delayed by at least 30 minutes. It is widely recognised in government and across the aviation industry that urgent action is needed. We need to modernise our invisible infrastructure without further delay.

That means moving from traditional ground-based beacons to modern satellite navigation, the capability for which already exists on many modern aircraft. The UK is at the forefront of aerospace technological development, and since 2005 UK airlines alone have introduced over 470 new aircraft into service, representing an investment of over $49 billion. We now need to modernise our airspace to match. It will improve safety and increase efficiency and capacity whilst minimising the impact on the global environment and benefiting communities under flightpaths.

Through better operating procedures, that can be utilised with a modern airspace structure, there is a potential carbon saving to UK aviation by 2050 of between 9% and 14% and alongside the introduction of quieter aircraft 'the potential to reduce UK aviation noise output by 2050 compared to 2010' according to Sustainable Aviation. Aircraft can fly more directly and routes can be designed to avoid noise sensitive areas or provide a more equitable spread of noise as aircraft are not constrained by ground-based aids.

In essence, aircraft would be able to fly quieter and more efficient routes by greater utilising Continuous Descent and Climb operations which reduce noise and CO_2 emissions. New technology will also reduce the need for conventional orbital holding. It will also benefit the UK economy. Airspace modernisation across Europe will deliver over £29bn to UK GDP and 116,000 jobs by 2035 (IATA, 2016), as well as improving productivity. Without it, delays faced by

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THE NEED FOR AIRSPACE MODERNISATION

passengers are likely to soar to 4 million minutes by 2030, up from 90,000 minutes in 2015 (NATS, 2015).

There will also be benefits to business and leisure fliers. Simpler airspace structures and boundaries will improve safety; and implementing continuous climb and descent operations for commercial air traffic has the potential to release some lower levels of controlled airspace.

FUTURE AIRSPACE MODERNISATION AT GATWICK AIRPORT

In July 2017 the Department for Transport directed NATS to re-energise the work on the Future Airspace Strategy for the southern half of the UK. This will include a fundamental redesign of the en-route airspace and the London Terminal Management Area (LTMA) along with refreshed airport specific procedures, by 2024. The Industry does not underestimate the size and complexity of this challenge. This programme will require the integration of NATS-led changes with parallel airport-led airspace changes and will constitute the single biggest airspace change in the UK. Gatwick Airport embraces the opportunity this programme presents and is helping to shape the programme's design and identify how risks can be shared and mitigated.

Gatwick Airport envisages the new airspace design will utilise Performance Based Navigation (PBN) solutions. PBN will not only allow improved avoidance of noise sensitive areas around airports on departure, but also enable more predictable routing options for arriving aircraft. Additionally, it is anticipated that the use of new technology will allow for more accurate management of arriving flights and so improve the efficiency of the runway operation.

Other design concepts that are expected to be adopted will permit aircraft to climb more steeply and more consistently to their cruising altitudes. This should create smaller noise footprints and decrease the noise levels experienced by some communities. Similarly, arriving flights will be able to make more direct, and continuous descents, saving distance, reducing emissions and reducing their noise and visual impact.

Gatwick Airport considers airspace redesign to be of the highest importance and as a result is actively investing time and resources to assist with the process and seek solutions that will deliver operational and environmental improvements. The airspace redesign will require the airport to update its departure and arrival procedures so that these link seamlessly with the upper airspace network in a considerate and environmentally sensitive manner.

The redesign of the wider airspace will be led by NATS and airspace operators; this will necessitate public consultation on the process and it is envisaged that this will happen during the latter part of 2018. Once there is sufficient clarity on the emerging airspace designs, Gatwick Airport can carry out its own public consultation with the local communities, on the options for connecting Gatwick's approach and departure routes to the updated airspace concept/s. This will provide the opportunity to address local concerns and seek to identify the optimum operational and environmental solutions.

INTERACTION WITH THE NOISE MANAGEMENT BOARD

Gatwick Airport also expects that the airspace change will allow the airport to deliver aspects of the Noise Management Board Action Plan that have the potential do deliver a meaningful improvement in the noise environment. The intent is to engage all parties at the earliest opportunity, explain how change will be managed under the new airspace change process, and to work with the communities to align on what must, should and could be changed.

While this process will place a major burden on the resources of all stakeholders, the airport sees this as a unique opportunity to

modernise a key piece of national infrastructure. If successful there will be more efficient flight operations, with less fuel burn and less delays, along with meaningful noise benefits for local communities. The process will follow the new airspace change process being introduced by the Civil Aviation Authority which requires increased transparency and community engagement. The Noise Management Board will play an important role in the successful completion of this process.

SECTION FIFTEEN

DETAILS OF CURRENT NOISE ASSISTANCE SCHEMES

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NOISE INSULATION SCHEME

The current Noise insulation Scheme was launched in 2014. This scheme was expanded significantly from the previous version covering 1,000 more properties in areas across Surrey, West Sussex and Kent.

The major changes to the scheme are two-fold. First the noise boundary for the scheme has increased by using a lower level of noise from 66 L_{eq} to 60 L_{eq} as a baseline with the boundary line drawn flexibly to ensure entire roads and communities are included. Secondly, the noise contour boundary has been drawn along the flight paths by 15km to both the east and west of the airport.

Gatwick Airport Ltd offered all local households eligible for the previous scheme the opportunity to comment and feedback on it before designing the new scheme, as well as local authorities and the Gatwick Airport Consultative Committee (GATCOM).

All eligible households were notified in writing of their eligibility and can receive up to £3,000 plus VAT towards acoustic insulation.

The Noise Insulation Scheme boundary can be viewed in Annex 7.

HOME OWNER SUPPORT SCHEME

Where land and property values are affected by new infrastructure, such as an airport development, property owners are not usually able to apply for compensation until a year after the new runway comes into use, when owners can seek compensation for the loss in the value of their property under the land Compensation Act 1973.

In the event that a second Gatwick runway goes ahead, it is likely to be many years before any runway would be open. In the meantime, there is no legal obligation to provide any support, although property values could be affected in the years before the development opens.

In these intervening years, it is recognised that an assurance of this later statutory compensation is not always enough to keep a property marketable. To allow for this, certain owner-occupiers have an entitlement in law to serve a Blight Notice, allowing them to require the promoter to purchase their property. These provisions only apply in tightly defined circumstances, and are set out in Schedule 13 of the Town and Country Planning Act 1990.

In order to support the local property market in the years before eligible property owners can receive any statutory support, we have developed a voluntary scheme. At the heart of the scheme is a fully transferable Home Owner Support Scheme (HOSS) Option Agreement. This will allow eligible property owners to require Gatwick to purchase their property for its unblighted market value (as if no runway development had been proposed) if and when Gatwick announces the intention to proceed with construction (having received planning permission).

The Home Owner Support Scheme aims to do four things to support the owners of properties which, if the development went ahead, would be newly exposed to medium-to-high levels of noise (66 decibels L_{eq}):

First, to make sure that affected properties can be bought and sold at normal market rates in the years before any development takes place. This is to counter any negative impact on property prices caused by the Government's proposals for possible runway development.

There are then two schemes for those people who want to move before they can require Gatwick to buy their property:
Once Gatwick announces its intention to apply for planning

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DETAILS OF CURRENT NOISE ASSISTANCE SCHEMES

permission for a new runway, the scheme will allow property owners who wish to move, and have been unable to sell the property for a price within 15% of the prevailing market value, to sell their property to Gatwick at an unblighted price. We are calling this **Early Movers' Home Purchase**.

Once Gatwick announces its intention to apply for planning permission for a new runway, the scheme will provide property owners who wish to move and who are able to sell their properties for a price within 15% of the index-linked option price, with a contribution to sale costs of up to 5% of their property's sale price to property owners. We are calling this **Early Movers' Contribution to Sale Costs**.

Finally, if we receive planning permission for a new runway and once we announce our intention to begin construction, the scheme will enable property owners to sell their property to Gatwick at an unblighted price, without any loss of value threshold.

Our voluntary scheme means that people **will not have to wait until any new development has opened for any support or assistance** against blight, as they would usually have to if Gatwick only fulfilled its legal obligations.

The scheme applies to the area where properties will be newly exposed to medium-to-high levels of noise, resulting from a new runway at Gatwick. The area covered by the 66-decibel Leq noise contour for a second runway has been forecast by the Civil Aviation Authority's Environmental Research and Consultancy Department. The scheme will only apply to properties which would fall within a 66-decibel Leq noise contour for a new runway and are not currently within a 66-decibel Leq noise contour for the existing airport.

A map of the area is enclosed in Annex 7. The area is defined by where a new runway would be sited.

We recognise that when we finalise the details of the new runway, the 66-decibel L_{eq} contour could change. If this happens we will extend the scheme to include any properties which fall inside the revised contour. We will also honour inclusion in the scheme for any properties that were inside but then fall outside the boundary.

PROPERTY MARKET SUPPORT BOND

Where land and properties need to be bought by a public body, statutory undertaker or infrastructure provider (such as Gatwick), the law allows that organisation to apply for a Compulsory Purchase Order, normally during the planning application process or after planning approval has been given.

Under a Compulsory Purchase Order, the land and property have to be bought by the developer at a fair, unblighted market price (i.e. as if no development had been proposed and no reduction in value had occurred). Eligible property owners are therefore guaranteed compensation under law for less of their property. However, this compensation is only paid once the developer has bought the property.

In the event that a second Gatwick runway goes ahead, it is likely to be many years before planning approval is granted and properties will have to be bought. In the meantime, there is no legal obligation to provide any support, although property values could be affected in the years before Compulsory Purchase Orders are granted.

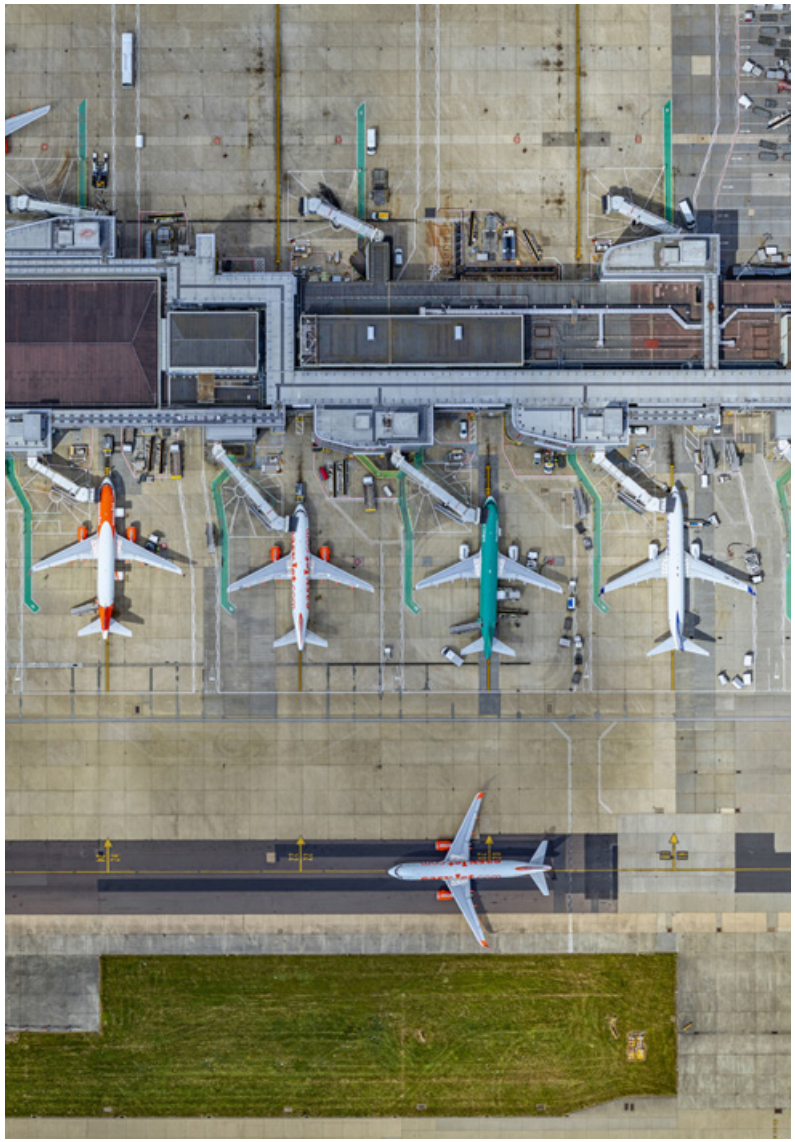
In order to support the local property market in the years before eligible property owners could receive any statutory support, we have developed a voluntary scheme, which aims to do two things:

First, to make sure that properties in the area where land would

be needed for any new runway development can be bought and sold at normal market rates in the years before any development takes place. This is to counter any negative impact on property prices caused by the Government's proposals for possible runway development.

Second, to enable people who take part in the scheme to sell their property to Gatwick, if Gatwick announces its intention to apply for planning permission for a second runway. We stand by our legal agreement that precludes runway construction before August 2019 and it consequently seems unlikely that such an announcement would need to occur much before 2012, and might be some years later than that.

Our voluntary scheme means that people won't have to wait until planning permission is granted for any support or compensation against blight, as they would generally have to if Gatwick only fulfilled its legal obligations. The scheme applies to the area where land would be required by Gatwick for a new runway development. We indicate this area in the map in Annex 7.



We use a set of performance indicators to monitor and assess the effectiveness of our plan. Our performance against these indicators is regularly reviewed internally through our environmental governance structure and reported quarterly to the Noise and Track Monitoring Advisory Group (NaTMAG). An annual performance report is also presented to the Gatwick Airport Consultative Committee (GATCOM).

Set out below is a series of key performance indicators which we publish annually through our S.106 Annual Monitoring Report and Flight Performance Team reports. Certain KPIs are also published within the Decade of Change Annual Report and is subject to independent audit. We have included historical figures for the 'Round One' noise mapping for 2006 together with 'Round Two' for 2011 and the most recent 'Round Three' in order to set a baseline for this Noise Action Plan and to monitor progress.

Figure 6: Key Performance indicators to evaluate the Noise Action Plan

KEY PERFORMANCE INDICATOR	ROUND 1 2006	ROUND 2 2011	ROUND 3 2016
Percentage of Chapter 4 (or equivalent) aircraft	3%	96%	99%
Percentage of Chapter 14 aircraft	-	-	-
Area inside the 55dBA L_{den} contour (km^2)	94.5km^2	85.6km^2	104.9km^2
Area inside the 48dBA L_{night} night-time (winter & summer seasons combined) contour (km^2)	41.3km^2 *2003 figure	34.1km^2	73.2km^2
Area inside the 57dB L_{Aeq} 16 hour daytime summer contour (km^2)	46.7km^2	40.4km^2	44.2km^2
Average quota count of aircraft operating during the night quota period (2330-0600)	0.82 Winter 2005/6 0.71 Summer 2006	0.65 Winter 2011/12 0.53 Summer 2011	0.59 Winter 2016/17 0.43 Summer 2016
Number of infringements of the daytime departure noise limit	9	0	0
Number of infringements of the shoulder and night period	2	4	1
Percentage of aircraft achieving a CDO (24 hour period)	80.8%	90.5%	88.6%
Percentage of aircraft achieving a CDO Day / Shoulder period	79.9%	90.4%	88.2%
Percentage of aircraft achieving a CDO during the core night period	89.6%	94.0%	92.9%
Percentage of departing aircraft on-track (all routes)	98.2%	97.4%	98.6%
1,000ft Infringements (No.)	11	3	0
1,000ft Infringements (No. below 900ft)	6	1	0
Number of individual callers making noise related enquiries	794	343	2,324
Total noise complaints received	4,791	2,673	17,715
Percentage of noise related enquiries responded to within 8 working days	97.2%	95.7%	46.6%

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SECTION SIXTEEN

EVALUATING THE NOISE ACTION PLAN

Figure 7: Airport Traffic Statistics

TRAFFIC STATISTICS	2006	2011	2016
Total aircraft movements	263,371	251,019	280,089
West / east runway split	68/32	67/33	67/33
Total passengers	34,384,000	33,660,146	43,136,306
Night quota movements summer	10,918	9,859	11,303
Night quota movements winter	2,784	1,473	2,022

As a way of measuring the success of the revised noise action plan we have identified a number of expected outcomes. These are also set out below:

- No operations in 2024 by Chapter 3 aircraft.
- At least 80% of aircraft movements by Chapter 14 or equivalent aircraft by 2024.
- Performance against the noise abatement procedures in the UK Aeronautical Information Publication (AIP) will consistently be maintained and where practicable improved against a 2016 baseline.
- No daytime infringements against 94dB (A) daytime departure noise limit.
- 24 hour CDO achievement of no less than 90%.
- Track Keeping of no less than 98%.
- The 48dB (A) 6.5 hour night contour (winter and summer combined) will be within 47km^2.

The Flight Performance Team, along with other relevant Gatwick Teams track performance against these outcomes and report on progress within the quarterly and annual reports. Additional information is provided in Section 18.

[5] In 2017, 39% of aircraft movements at Gatwick were billed at the Chapter 14 noise standard. Of these, 63% were in the quietest noise categories, Chapter 14 Base and Chapter 14 Minus

SECTION SEVENTEEN

RESULTS OF THE 2016 NOISE MAPPING

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Gatwick Airport has, for many years, had an extensive noise management system in place and has annually published summer L_{Aeq} 16 hour day contours. Therefore, the results of the 2017 noise mapping of 2016 do not raise any significant new issues. Traditionally our approach to noise management has contained actions aimed at addressing areas outside of these contours and, additionally, ground noise. As stated above, the actions contained within this revised plan will continue to adopt this approach.

The location of Gatwick Airport and the alignment of the main and standby runways mean that aircraft arrive and depart mostly over lightly populated rural areas. The alignment of the main runway means that residents of areas such as Lingfield to the east of the airport and Okewood Hill to the west are impacted by the airport's operation. Gatwick Airport has witnessed steady growth over recent decades, handling approximately 275,633 runway movements in 2016 compared to 220,000 in 1996.

The prevalence of westerly winds means that approximately 70% of aircraft arrivals come from the east and around 70% of departures are to the west however this figure does fluctuate.

There are four departure routes (noise preferential routes - NPRs) to the east of Gatwick and five to the west. The L_{den} maps indicate the impact of these NPRs particularly to the west where the departure routes form a spur in the 55dB L_{den} contour over Capel and the surrounding area.

For aircraft arriving at Gatwick the contour is influenced by arrivals from the east where the 55dB L_{den} contour extends over Lingfield, Marsh Green and Hever. The impact of departures is less marked on the L_{night} contour map reflecting that the night period typically consists of scheduled arrivals.

Detailed overleaf and in Annex 3, are the results of the 2016 noise mapping, showing the estimated number of people and dwellings exposed above various noise levels. This data has been sourced directly from the data pack provided to us by DEFRA. We have included data from L_{day}, $L_{evening}$, L_{night}, L_{den} and L_{eq} noise contours. We considered these results and our current noise mitigation measures in revising this noise action plan.

The number of dwellings has been rounded to the nearest 50, except when the number of dwellings is greater than zero but less than 50, in which case the total has been shown as '<50'.

The associated population has been rounded to the nearest 100, except when the associated population is greater than zero but less than 100, in which case the total has been shown as '<100'.

SECTION SEVENTEEN

RESULTS OF THE 2016 NOISE MAPPING

Figure 8: Estimated Total Number of People and Dwellings above Various Noise Levels, L_{den}

NOISE LEVEL (Db)	NUMBER OF DWELLINGS	NUMBER OF PEOPLE
≥ 55	5,450	13,500
≥ 60	950	2,300
≥ 65	250	600
≥ 70	<50	<100
≥ 75	0	0

Figure 9: Estimated Total Number of People and Dwellings above Various Noise Levels, L_{day}

NOISE LEVEL (Db)	NUMBER OF DWELLINGS	NUMBER OF PEOPLE
≥ 54	4,000	9,800
≥ 57	1,350	3,200
≥ 60	550	1,400
≥ 63	250	600
≥ 66	50	200
≥ 69	<50	<100

Figure 10: Estimated Total Number of People and Dwellings above Various Noise Levels, $L_{evening}$

NOISE LEVEL (Db)	NUMBER OF DWELLINGS	NUMBER OF PEOPLE
≥ 54	3,300	8,000
≥ 57	900	2,100
≥ 60	450	1,000
≥ 63	150	400
≥ 66	<50	100
≥ 69	0	0

Figure 11: Estimated Total Number of People and Dwellings above Noise Levels, $L_{aeq, 16H}$

NOISE LEVEL (Db)	NUMBER OF DWELLINGS	NUMBER OF PEOPLE
≥ 54	3,850	9,400
≥ 57	1,200	2,900
≥ 60	550	1,300
≥ 63	200	600
≥ 66	50	200
≥ 69	<50	<100

Figure 12: Estimated Total Number of People and Dwellings above Various Noise Levels, L_{night}

NOISE LEVEL (Db)	NUMBER OF DWELLINGS	NUMBER OF PEOPLE
≥ 48	3,650	9,000
≥ 51	1,150	2,800
≥ 54	500	1,100
≥ 57	200	500
≥ 60	50	200
≥ 63	<50	<100
≥ 66	0	0

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SECTION SEVENTEEN

RESULTS OF THE 2016 NOISE MAPPING

METHODOLOGY FOR CALCULATION OF POPULATION AND DWELLING EXPOSURE STATISTICS

In order to derive the statistics presented in this section, analysis has been undertaken to count the population and number of dwellings within the specified noise contours. This assessment was carried out utilising a strategic residential population location dataset. The following paragraphs summarise the method used in constructing this dataset.

Residential dwellings and buildings containing residential dwellings were identified through the 2015 (OS) AddressBase Premium and Topography layer respectively. An average population per residential dwelling was calculated for each discrete dwelling utilising population data attained from the mid-year population estimates from the Office of National Statistics (ONS), June 2015.

The total number of residential dwellings and the total associated population were calculated for each residential building polygon, taking into account building polygons with multiple dwellings. Examples of building polygons containing multiple dwellings located within a single polygon include tower blocks and apartments.

The previous noise mapping from 2011 and 2006 is provided within Annex 10 for the purposes of allowing comparisons to be made.


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Over the following pages are the individual actions that make up this Noise Action Plan.

Figure 13: Our Noise Action Plan actions, impact areas, benefits, performance indicators, reporting and targets

QUIET FLEET								
	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
1	We will maintain a charging differential in our published airport charges which incentivises the use of aircraft with the best in class noise performance.	Arrivals, Departures and Ground	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** Increased use of the quietest and cleanest Chapter 14 certified aircraft at Gatwick. These aircraft are 7 EPNdB quieter than Chapter 4 and 10 EPNdB than Chapter 3. **Cost:** Airline fleet replacement.	**Indicator:** Fleet mix including % of Chapters 4 and 14 Aircraft. **Reported:** Quarterly to NaTMAG.	Use of established airline engagement forums and channels.	On-going	By 2024, 90% of movements are by Chapter 14 aircraft.
2	We will continue to apply and report upon charging penalties to those aircraft operators of Airbus A320 family aircraft that have not had the Fuel Over Pressure Protector (FOPP) modification retrofitted.	Arrivals, Departures and Ground	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** Use of FOPP modified A320 family aircraft, a modification which can deliver arrivals noise reductions of up to 9dB. **Cost:** Airline fleet modification.	**Indicator:** Percentage of A320 fleet retrofitted or delivered with modification in place. **Reported:** Quarterly to NaTMAG.	Use of established airline engagement forums and channels.	On-going	By 2020, 99% of all A320 family flights are by FOPP modified aircraft.
2a	If additional aircraft or manufacture specific noise defects which can be rectified by a modification are identified (similar to the FOPP) we will seek to identify, consult and implement corresponding charging penalties	Arrivals, Departures and Ground	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** Identification and rectification of potential fleet/ aircraft specific noise issues. **Cost:** Airline fleet modification.	**Indicator:** To be decided based upon any potential issues identified. **Reported:** Quarterly to NaTMAG.	Use of established airline engagement forums and channels.	On-going	To be decided based upon any potential issues identified.
3	We will review the landing fee differential at least every five years	Arrivals, Departures and Ground	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** As above for Action 1. **Cost:** As above for Action 1.	**Indicator:** Review of the landing fees. **Reported:** Online publication of the Conditions of Use	Use of established airline engagement forums and channels.	5 yearly	Publication of revised conditions of use.

[6] The number of people affected by each action has been based upon an estimate of the area of impact correlated to the strategic noise mapping provided by DEFRA. In cases where the impact contour estimate does not correlate with the specific contours in the DEFRA mapping, the next contour down has been used to maintain a conservative approach.

18 SECTION EIGHTEEN
OUR NOISE ACTION PLAN

QUIET FLEET								
	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
4	Gatwick Airport Ltd will consult with its airline partners annually regarding the Airport Charges Structure. The Noise Management Board will also be asked for its feedback	Strategic Approach	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** As above for Action 1. **Cost:** As above for Action 1.	**Indicator:** Review of the airport charges structure. **Reported:** Online publication of the Conditions of Use.	Use of established airline engagement forums and channels.	Annually	Annual publication of revised conditions of use.
5	In conjunction with our airline partners we will seek to re-introduce, by the end of this Noise action Plan period a programme that will rank our airline partners in relation to their overall performance for a range of noise and any other appropriate topic potentially including, but not limited to metrics such as compliance with abatement techniques, fleet age, engine fit and passenger loads per km.	Arrivals, Departures and Ground	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** Continual operational improvement in noise and emissions by providing a public facing league table whilst also providing clear and transparent information to stakeholders. **Cost:** Development and ongoing management of the league table along with airline engagement to drive improvements.	**Indicator:** Introduction and publication of the Gatwick airline league. **Reported:** Progress prior to implementation will be reported to the NMB. Once prepared the table will be reported regularly.	Use of established airline engagement forums and channels.	2019	Implement, publish and regularly update the league table.

NIGHT TIME OPERATIONS

	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
6	We will continue to administer the Department for Transport night flight regime and ensure that we operate at night within the prescribed ATM and QC limits	Night flights	Communities within and beyond 48dB L_{night} (in excess of 9,000)	**Benefit:** Incentivise the use of the quietest aircraft in the night period through the application of the DfT's night flight regime with reduced QC limits and a new QC category. **Cost:** Implementation of the revisions and ongoing management of the regime.	**Indicator:** Application of and management of the revised DfT night flight regime. **Reported:** Regularly to the DfT and quarterly to NaTMAG.	Program managed by GAL with oversight provided by DfT using established process.	On-going	Controlled management of night flights in accordance with the DfT program.
7	We will report on a quarterly basis to the Noise and Track Monitoring Advisory Group the number of flights delayed from planned daytime arrival into night movements (after 23:30 local).	Night flights	Communities within and beyond 48dB L_{night} (in excess of 9,000)	**Benefit:** : Increased awareness of delayed arrivals allowing for proactive action to be taken within Action 8 **Cost:** Management, data analysis and reporting on the regime	**Indicator:** Off-schedule performance statistics for aircraft affected. **Reported:** Quarterly to NaTMAG	Engagement and participation with NaTMAG, an established group.	Quarterly / Annually	Report off-schedule flights which are delayed into the night period.
8	We will, as far as is practicable, take all necessary steps to manage the late running of aircraft to prevent scheduled day movements taking place during the sensitive night period.	Night flights	Communities within and beyond 48dB L_{night} (in excess of 9,000)	**Benefit:** Reduction in the number of late running aircraft, planned for the daytime, operating in the sensitive night period. **Cost:** Management, data analysis and reporting on the regime. Actions taken could result in the potential cancellation of flights.	**Indicator:** The number of off-schedule flights which are delayed into the night period. **Reported:** Airside operations and airlines.	Use of established airline engagement forums and channels.	On-going	Minimise as far as possible, the number of off-schedule flights which are delayed into the night period.
9	We will implement a voluntary ban on operations of Quota Count 4 aircraft within the core night period by the end of 2022.	Night flights	Communities within and beyond 48dB L_{night} (in excess of 9,000)	**Benefit:** Incentivise the use of the quietest and cleanest aircraft in the night period. **Cost:** Airline fleet replacement.	**Indicator:** Number of QC/4 aircraft operating in the night period. **Reported:** Quarterly to NaTMAG.	Use of established airline engagement forums and channels.	2022	Implement a voluntary ban by 2022.

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GROUND NOISE CONTROL

	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
10	We will continue to monitor adherence to and review the effectiveness of our ground noise operational controls.	Ground	Communities within and beyond 65dB L_{den} (in excess of 600)	**Benefit:** Continual reduction in ground noise and emissions from engine testing and APU running in accordance with our S106 agreement. **Cost:** Management, data analysis and reporting on the operational controls.	**Indicator:** Publication of Gatwick Airport directives pertaining to Auxiliary power unit usage and audit findings reports. **Reported:** Quarterly to NaTMAG.	Engagement and participation with NaTMAG, along with an airline/ ground handler education program on ground noise controls.	On-going	Maintain effective ground noise operational controls.
11	We will report on a quarterly and annual basis the following: • Fixed Electrical Ground Power availability. • The amount of Ground Power Unit dispensations granted. • The number of audit checks of aircraft auxiliary power unit running. • The number of non-compliances of aircraft auxiliary power unit runs identified. • The number of aircraft engine runs undertaken.	Ground	Communities within and beyond 65dB L_{den} (in excess of 600)	**Benefit:** Continual reduction in ground noise and emissions. **Cost:** Management, data analysis and reporting on the operational controls.	**Indicator:** Quarterly Ground noise monitoring reports. **Reported:** Quarterly to NaTMAG and annually in the Section 106 Annual Monitoring Report.	Engagement and participation with NaTMAG, an established group along with an airline/ ground handler education program on ground noise controls.	On-going	Maintain effective ground noise operational controls.
12	We will continue to minimise aircraft auxiliary power unit use in order to reduce ground noise and local air quality emissions via Gatwick Airport Directives and monitoring of compliance.	Ground	Communities within and beyond 65dB L_{den} (in excess of 600)	**Benefit:** Continual reduction in ground noise and emissions. **Cost:** Management, data analysis and reporting on the operational controls.	**Indicator:** Quarterly Ground noise monitoring reports. **Reported:** Quarterly to NaTMAG and annually in the Section 106 Annual Monitoring Report.	Engagement and participation with NaTMAG, along with an airline/ ground handler education program on ground noise controls.	On-going	Maintain effective ground noise operational controls.

ARRIVING AIRCRAFT

	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
13	We will continue to promote adherence to the Arrivals Code of Practice through groups such as FLOPSC, Sustainable Aviation and other engagement events.	Arrivals	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** Continual improvement in operational practices leading to a reduction in arrivals noise and emissions. **Cost:** Airline engagement and operational improvement facilitated by GAL and NATS.	**Indicator:** Quarterly and Annual FPT reports covering metrics such as CDO performance etc. **Reported:** Quarterly to FLOPSC and NaTMAG.	Engagement and participation with established forums (FLOPSC and SA) along with direct airline engagement where required.	On-going	Share code of practice with all new airlines.
14	We will continue to promote, monitor, seek to improve and report on adherence to the arrival noise abatement procedures detailed in the London Gatwick Aeronautical Information Publication.	Arrivals	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** As above for Action 13. **Cost:** As above for Action 13.	**Indicator:** Quarterly and Annual FPT reports covering metrics such as CDO performance etc. **Reported:** Quarterly to FLOPSC and NaTMAG.	Engagement and participation FLOPSC, an established forums along with direct airline engagement where required.	On-going	By 2020 provide, adherence data to airlines on a regular basis to drive continuous improvement.
15	In conjunction with Sustainable Aviation, Gatwick Airport will identify a low noise arrival procedure which will capture Low Power Low Drag measures and result in a metric which will supplement Continuous Descent Operations as an additional measurable target.	Arrivals	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** Introduction of a new, low noise target across the UK, for airlines to enable additional reductions in arrivals noise. **Cost:** The initial study (funded by the Future Aviation Strategy) along with airline training and continual engagement and operational improvement facilitated by GAL and ATC personnel.	**Indicator:** Project progress reports. **Reported:** Reported and tracked by Sustainable Aviation [7].	Program management by Sustainable Aviation with funding from the Future Aviation Strategy.	2019	Implement the low noise arrivals metric at Gatwick.

[7] The number of people affected by each action has been based upon an estimate of the area of impact correlated to the strategic noise mapping provided by DEFRA. In cases where the impact contour estimate does not correlate with the specific contours in the DEFRA mapping, the next contour down has been used to maintain a conservative approach.

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OUR NOISE ACTION PLAN

ARRIVING AIRCRAFT

	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
16	In line with Noise Management Board initiatives and the commitments in the Sustainable Aviation Noise Road Map, we will work with our airlines and air navigation services providers to improve CDO at Gatwick.	Arrivals	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** Continual improvement in operational practices leading to a reduction in arrivals noise and emissions. **Cost:** Airline engagement and operational improvement facilitated by GAL and NATS.	**Indicator:** CDO performance figures. **Reported:** Provided to airlines on a monthly basis and to FLOPSC/NaTMAG at every meeting.	Engagement and participation with FLOPSC, an established forums along with direct airline engagement where required.	On-going	Maintain Gatwick's position as the No. 1 airport for UK CDO performance.
17	We will implement agreed Noise Management Board Work Plan solutions that are intended to reduce the noise impact of arriving aircraft.	Arrivals	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** Reduction in arrivals noise through the delivery of activities listed in the published NMB 2017/18 Work Plan covering Fair and Equitable Distribution (FED), improvements in CDO and the sharing of best practice. **Cost:** Varied depending on the activity in question but will require support from GAL, Airlines NATS, ANS and DfT.	**Indicator:** Initiatives will be tracked according to their individual project plans. **Reported:** in progress updates to every NMB and publicly in an annual report.	Support and engagement with the NMB, an established group, which includes industry and community representatives.	2019 - 2024	Delivery of agreed Noise Management Board Work Plan activities.

DEPARTING AIRCRAFT

	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
18	We will continue to promote adherence to the Departures Code of Practice through groups such as FLOPSC, Sustainable Aviation and other communication events.	Departures	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** Continual improvement in optimal departures performance. **Cost:** Airline engagement and operational improvement facilitated by GAL and ATC personnel.	**Indicator:** Metrics such as track keeping etc. **Reported:** Shared with FLOPSC and NaTMAG and publicly within the FPT reports.	Engagement and participation with established forums (FLOPSC) along with direct airline engagement where required.	On-going	Continue to share code of practice with airlines and by 2020 provide timely performance data to drive continuous improvement.
19	We will continue to promote, monitor, seek to improve and report on adherence to the departure noise abatement procedures detailed in the London Gatwick Aeronautical Information Publication.	Departures	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** As above for Action 18. **Cost:** As above for Action 18.	**Indicator:** Metrics such as track keeping etc. **Reported:** Shared with FLOPSC and NaTMAG and publicly within the FPT reports.	Engagement and participation with established forums (FLOPSC) along with direct airline engagement where required.	On-going	By 2020 provide timely performance data to drive continuous improvement.
20	We have an annual limit of no more than 5% off-track departures. In future, we will compare on an annual basis the percentage of off-track departures against the average performance over the previous five years.	Departures	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** Management and control of departures track keeping up to the minimum vectoring altitude. **Cost:** Airline engagement and operational improvement facilitated by GAL and ATC personnel. In certain cases airspace change may be required to improve track keeping.	**Indicator:** Metrics such as track keeping etc. **Reported:** Shared with FLOPSC and NaTMAG and publicly within the FPT reports.	Engagement and participation with established forums (FLOPSC) along with direct airline engagement where required.	2019 - 2024	No more than 5% off-track departures per year.

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SECTION EIGHTEEN

OUR NOISE ACTION PLAN

DEPARTING AIRCRAFT

	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
21	In conjunction with our partners and the Noise Management Board we will adopt a preferred Noise Abatement Departure Procedure (NADP).	Departures	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** Controlled management of departures noise. **Cost:** Fuel burn, CO_2, NO_X and noise vary depending on the procedure selected however the study will aim to determine the optimum solution.	**Indicator:** Publication of DfT ANMAC and NMB study on NADP. **Reported:** To the NMB and NaTMAG.	Engagement and participation with established forums (DfT ANMAC, FLOPSC and NMB).	2019	Implement a preferred NADP by the end of 2019.
22	We undertake to explore opportunities to remove the altitude restrictions on departure Routes intended to reduce the noise impact of departing aircraft.	Departures	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** Increase in the ability to perform continuous climb operations and reduce noise and emissions. **Cost:** Airspace change and consultation process at Gatwick and nearby London airports.	**Indicator:** Completion of the feasibility studies. **Reported:** To the NMB and NaTMAG.	NATS to validate studies as required.	2024	Identify opportunities and implement options.
23	We undertake to explore the feasibility of introducing an alternative Standard Instrument Departure routes within our Noise Preferential Routes in order to provide dispersions and / or respite.	Departures	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** Use of alternative SID routes within a single NPR could be used to avoid sensitive areas or multiple routes could be used to provide a wider distribution or respite. **Cost:** Airspace change and consultation process.	**Indicator:** Completion of the feasibility study. **Reported:** To the NMB and NaTMAG.	NATS to validate the study	2019	Identify opportunities and implement options.

AIRLINE SUPPLEMENTARY CHARGES

	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
24	We will continue to fine aircraft in breach of the Department for Transport departure noise limits with all such monies passed to the Gatwick Airport Community Trust.	Departures	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** Management of excessively noisy departures. **Cost:** Management and upkeep of the program.	**Indicator:** Aircraft noise infringements identified by the airport Noise and Track Keeping system. **Reported:** in FPT quarterly and annual reports.	Direct airline engagement.	On-going	Apply fines for breaches and direct these to the Gatwick Airport Community Trust.
24a	We will review and increase the fines currently levelled against airlines which breach departure noise limits with all such monies passed to the Gatwick Airport Community Trust.	Departures	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** Management of excessively noisy departures. **Cost:** Review process.	**Indicator:** Aircraft noise infringements identified by the airport Noise and Track Keeping system. **Reported:** in FPT quarterly and annual reports.	Direct airline engagement.	On-going	Increase fines for breaches of noise limits and continue to direct fines to the Gatwick Airport Community Trust.
25	Through engagement with the Department for Transport, Aircraft Noise Management Advisory Committee and/or through unilateral action review our departure noise limits.	Departures	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** Drive continual and further improvement in departures performance. **Cost:** Research and implementation of relevant noise controls.	**Indicator:** Input papers and letters as appropriate to Sustainable Aviation and DfT ANMAC working groups. **Reported:** to FLOPSC, NMB and NaTMAG.	Engagement and participation with established DfT ANMAC forum. Analysis work as required to be carried out by CAA ERCD.	2024	Attendance at meetings and propose the review.

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AIRLINE SUPPLEMENTARY CHARGES

	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
26	We will work with our airlines and noise governance groups to explore the feasibility of introducing supplementary charges for aircraft departures which persistently fail to operate in accordance with Noise Preferential Routes prescribed for the airport as measured by the noise and track monitoring system operated by Gatwick Airport Ltd, with all such monies passed to the Gatwick Airport Community Trust.	Departures	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** Drive continual and further improvement in departures performance. **Cost:** Research on applicable charges, airline engagement and implementation of supplementary charges.	**Indicator:** Input papers and letters as appropriate to Airlines, NMB, NaTMAG and FLOPSC. **Reported:** to FLOPSC, NMB and NaTMAG.	Engagement and participation with established forums (FLOPSC, NaTMAG and NMB) along with direct airline engagement where required.	On-going	Identify opportunities and implement options.

MITIGATION SCHEMES

	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
27	We will continue to provide a vortex-damage repair scheme to repair roofs that have been damaged by aircraft vortices.	Community assistance scheme	Communities within and beyond 60dB L_{den} (in excess of 2,300)	**Benefit:** Community reassurance that GAL will recompense damaged caused by aircraft wake vortices. **Cost:** Management of the program.	**Indicator:** Applications received for the program. **Reported:** to internal management.	Scheme contractor via a commercial agreement.	On-going	Maintain the scheme and introduce transparent reporting.
28	We will continue a scheme that helps with the cost of acoustically insulting homes against the effects of aircraft noise. We undertake to review the scheme every 5 years to ensure it remains appropriate and relevant.	Community noise mitigation initiative	Communities within and beyond 60dB L_{den} (in excess of 2,300)	**Benefit:** Reduction in indoor noise levels for those significantly affected by aviation noise levels. **Cost:** Management of the program.	**Indicator:** Applications received for the current program. Along with a review and implementation of changes as required. **Reported:** to internal management.	Insulation contractor via a commercial arrangement.	2019 - 2024	Maintain the current scheme and implement any changes arising from reviews.
28a	We will undertake a review of our acoustic noise insulation programs by the end of 2019. With subsequent reviews considered every 5 years as noted in Action 28.	Community noise mitigation initiative	Communities within and beyond 60dB L_{den} (in excess of 2,300)	**Benefit:** Updated noise reduction program for those significantly affected by aviation noise levels. **Cost:** Review of the program.	**Indicator:** Review conducted. **Reported:** to internal management.	Insulation contractor.	2019 - 2024	Review completed by the end of 2019.
29	We will continue to offer acoustic insulation to noise sensitive buildings within the 60L_{Aeq} noise contour.	Community noise mitigation	Communities within and beyond 60dB L_{den} (in excess of 2,300)	**Benefit:** Reduction in indoor noise levels for those significantly affected by aviation noise levels. **Cost:** Management of the program.	**Indicator:** Applications received for the current program. **Reported:** to internal management.	Insulation contractor via a commercial arrangement.	2019 - 2024	Maintain the current scheme and implement any changes arising from reviews.

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OUR NOISE ACTION PLAN

MITIGATION SCHEMES

	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
30	To address the impacts of future growth we will continue to offer to purchase those properties suffering from both a high level of noise (63dB(A) L_{eq} or more) and a large increase in noise (3dB(A) L_{eq} or more), in accordance with the Terms of Reference of the Property Market Support Bond and Home Owners Support Scheme.	Community noise mitigation Initiative	Communities within and beyond 65dB L_{den} (in excess of 600)	**Benefit:** Community reassurance that those who may be significantly affected by future growth of Gatwick. **Cost:** Financial commitment to the Scheme.	**Indicator:** Applications received for the current program. Reported: Not currently reported.	None required.	On-going	Maintain the current scheme.

NOISE REDUCTION MEASURES

	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
31	In conjunction with the Noise Management Board we will explore innovative methods to reduce both inbound and outbound aircraft noise levels.	Arrivals, Departures / community trust and awareness	Communities within and beyond 55dB L_{den} (in excess of 13,500)	**Benefit:** Reduction in arrivals and departures noise through the implementation of activities on the NMB 2017/18 work plan (and subsequent iterations). **Cost:** Varied depending on the activity in question but will require support from GAL, Airlines NATS, ANS and DfT. Implementation may require an airspace change process in some cases.	**Indicator:** Implementation progress reports. **Reported:** to each NMB meeting with public reports published annually.	Support and engagement with the NMB, an established group, which includes industry and community representatives.	2019 - 2024	Implement the identified and agreed tasks within the relevant NMB work plan for that period.

MONITORING AND REPORTING OUR PROGRESS

	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
32	We will ensure that our Noise and Track Keeping (NTK) systems are suitable, relevant and reliable, providing updates as appropriate.	Community trust and awareness	Not Applicable	**Benefit:** Provision of a suitable, relevant and reliable NTK system for use by industry and community stakeholders. **Cost:** Licencing and software development to cover regular updates.	**Indicator:** Provision of the NTK service, including updates where required. **Reported:** Updates will be presented to NaTMAG.	Engagement and participation with NaTMAG, an established group. NTK supplier via a commercial agreement.	On-going	Continually review and update the NTK system.
33	We will continue to provide public access to flight track information and noise related data via the Gatwick Airport noise website and the online flight tracking facility, available both on desktop and mobile devices.	Community trust and awareness	Not Applicable	**Benefit:** Provision of a suitable, relevant and reliable flight tracking system for use by industry and community stakeholders **Cost:** Licencing and software development to cover regular updates.	**Indicator:** Provision of the Noise and Track Keeping service on desktop and mobiles. **Reported:** Updates will be presented to NaTMAG.	NTK supplier via a commercial agreement.	On-going	Provision of the Noise and Track Keeping service on desktop and mobiles.
34	We will continue to provide an airspace analysis service and implement service improvements where identified. The team will continue to provide accurate and timely data to aid strategy development and noise complaint handling.	Arrivals Departures Ground along with community trust and awareness	Not Applicable	**Benefit:** Provision of a dedicated analysis, engagement and operational improvement team to deliver further reductions in arrival and departure noise and emissions. **Cost:** Staffing of the FPT along with ATC and airline engagement.	**Indicator:** Provision of FPT services including but not limited to: • Support to NMB initiatives • Noise Abatement Reporting, • Ad-hoc Analysis, • Night Flight Administration, • Complaints Handling. **Reported:** Published quarterly and annually within the FPT report.	None required.	On-going	Continual provision of an FPT service and the publication of quarterly and annual reports.
35	We will improve the availability of, and access to, airspace and noise related data.	Strategic Approach/ community trust and awareness	Not Applicable	**Benefit:** Improved provision of timely and transparent data for airport and community stakeholders. **Cost:** Part of the function of the FPT.	**Indicator:** Review of current information provision. **Reported:** Updates and changes will be presented to NaTMAG.	Engagement and participation with NaTMAG, an established group.	2020	Publication of data in the improved format.

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MONITORING AND REPORTING OUR PROGRESS

	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
36	We will explore the feasibility of introducing an information service for local communities. This could include updates on airport operations, e.g. scheduled northern runway operations, change in runway direction, meteorological information, scheduled number of aircraft movements during the day and night periods, reported thunderstorm activity etc.	Community trust and awareness	Not Applicable	**Benefit:** Improved provision of timely and transparent data for airport and community stakeholders. **Cost:** Part of the function of the FPT.	**Indicator:** Review of available options. **Reported:** Updates and changes will be presented to NaTMAG.	Engagement and participation with NaTMAG, an established group.	2022	Implement the information service.
37	We will continue to provide a Community Noise Monitoring Scheme, operated under the supervision of the Noise and Track Monitoring Advisory Group and the Gatwick Noise Monitoring Group.	Arrivals Departures Community trust and awareness	Not Applicable	**Benefit:** Improved understanding of arrivals and departure noise whilst measuring the benefits delivered by the actions proposed in this plan. **Cost:** Part of the function of the FPT.	**Indicator:** Deployment of mobile noise monitoring terminals to locations around the airport. **Reported:** to NaTMAG via the Gatwick Noise Monitoring Group.	Engagement and participation with NaTMAG, an established group.	On-going	Timely publication of community noise monitoring reports.
37a	We will seek to expand the Community Noise Monitoring Scheme with additional noise monitoring terminals and update the reporting process to include holistic noise reports for the area around Gatwick Airport.	Arrivals Departures Community trust and awareness	Not Applicable	**Benefit:** Additional noise monitoring capability to gather quantifiable data on noise impacts. **Cost:** Procurement of noise monitors and development of reporting processes.	**Indicator:** Procurement of additional noise monitoring terminals and new reporting process. **Reported:** to NaTMAG via the Gatwick Noise Monitoring Group.	Engagement and participation with NaTMAG, an established group.	On-going	Procurement and deployment of additional monitors. Publication of new reports.

MONITORING AND REPORTING OUR PROGRESS

	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
38	We will report progress against the published Noise Abatement Procedures contained within the London Gatwick Aeronautical information Publication and this Noise Action Plan on a quarterly basis to the Noise and Track Monitoring Advisory Group, the Gatwick Airport Consultative Committee and on our webpages.	Arrivals Departures Ground	Not Applicable	**Benefit:** Tracking and reporting of adherence to deliver further reductions in arrival and departure noise and emissions. **Cost:** Part of the function of the FPT.	**Indicator:** Data analysis on the compliance with the AIP. **Reported:** Quarterly to NaTMAG and published quarterly and annually within the FPT reports.	Engagement and participation with NaTMAG and GATCOM, both established groups.	On-going	Timely publication of quarterly and annual FPT reports.
39	We will update to our website the following noise contours: • Summer 16 hour day L_{eq} (actual) • Summer 16 hour day (standard) L_{eq} • Summer Night L_{eq} (actual) • The above compared to the previous year. • Summer Night 10 year average modal split L_{eq}	Arrivals Departures Ground	Not Applicable	**Benefit:** Provision of an independent assessment of noise contours using a long term assessment method. **Cost:** GAL/ CAA ERCD resource.	**Indicator:** Commission the contours from CAA ERCD. **Reported:** Published online.	CAA ERCD via a commercial agreement.	On-going	Noise contours published on the Gatwick website.

OUR NOISE ACTION PLAN

MONITORING AND REPORTING OUR PROGRESS

	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
39a	We will aim to reach a measure of consensus with community groups on future airport utilisation relative to noise impacts. In order to achieve this we will conduct a review of Government policy including how Government policy should be interpreted and how that policy has been applied in practice. Following the establishment of a workable policy baseline we will aim to develop new noise metrics and reporting to complement the current noise contours and measure our future noise performance. This work will be used to more precisely describe outcomes to support this END Noise Action Plan.	Strategic Approach	Not Applicable	**Benefit:** Measurement of noise performance. **Cost:** GAL resource.	**Indicator:** Commencement of the study. **Reported:** Circulated to the relevant airport noise groups (GATCOM, NaTMAG and NMB) as appropriate.	Engagement with, Sustainable Aviation, DfT ANMAC, environmental health officers, GATCOM, NaTMAG and NMB as required.	2020	Publication of supplementary metrics.

MANAGING AIRCRAFT NOISE COMPLAINTS

	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
40	We will seek to respond to at least 95% of all complaints and enquiries within eight working days of receipt, in line with the extant Complaints Handling Policy, and publish our performance in FPT quarterly reports.	Community trust and awareness	Not Applicable	**Benefit:** Timely review, investigation and response to noise complaints. Whilst long term trend analysis supports operational improvement. **Cost:** Part of the function of the FPT.	**Indicator:** Complaint tracking and management by the FPT. **Reported:** Quarterly to NaTMAG and published quarterly and annually within the FPT reports.	None required	On-going	Timely publication of quarterly and annual FPT reports.
41	We will continue to log all complaints relating to aircraft operations in line with the extant Noise Complaints Handling Policy and publish the statistics on our website quarterly.	Community trust and awareness	Not Applicable	**Benefit:** Collection and analysis of complaints to support operational improvement. **Cost:** Part of the function of the FPT.	**Indicator:** Complaint tracking and management by the FPT. **Reported:** Quarterly to NaTMAG and published quarterly and annually within the FPT reports.	None required	On-going	Timely publication of quarterly and annual FPT reports.
42	We will continue to offer various methods for complaints about aircraft noise events.	Community trust and awareness	Not Applicable	**Benefit:** Allow complainants to provide complaints using various methods suited to their individual needs. **Cost:** Part of the function of the FPT.	**Indicator:** Availability of the various methods (Casper and free post). **Reported:** Availability reported publicly.	None required	On-going	Implement a complaints phone line by the end of 2019.
43	In order to achieve community confidence in the Complaints Handling Policy and provide transparency of information, we will, where appropriate update our procedures relating to the receipt, processing and reporting of aircraft noise complaints.	Strategic Approach	Not Applicable	**Benefit:** Improved transparency and confidence in the complaints handling process. **Cost:** Part of the function of the FPT.	**Indicator:** Review and update to the Complaints Handling Policy. Reported: Updates and changes will be presented to NaTMAG.	None required	On-going	Online publication of the policy.

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OUR NOISE ACTION PLAN

ENGAGEMENT								
	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
44	Gatwick will continue to engage actively with Government, the Regulator, Sustainable Aviation and such ad-hoc reviews that may be established and will respond appropriately to relevant consultations, engagement exercises and recommendations arising from those activities.	Strategic Approach	Not Applicable	**Benefit:** Continual improvement in the operational and strategic management of noise and emissions. **Cost:** Staffing to support the ongoing engagement activity.	**Indicator:** Engagement with relevant stakeholders. **Reported:** Submission of consultation responses.	Membership of working groups.	On-going	Submission of consultation responses.
45	Gatwick Airport will implement relevant recommendations resulting from feasibility studies in conjunction with the CAA and the DfT as and when they are released.	Strategic Approach	Not Applicable	**Benefit:** Continual improvement in the operational and strategic management of noise and emissions. **Cost:** Staffing to support the ongoing engagement activity.	**Indicator:** Publication of the findings and recommendations of the relevant studies. **Reported:** Implementation of recommendations as required.	Support from CAA, NATS, ANS and airlines as and when required and achieved through extant working relationships.	On-going	Implement relevant findings.
46	We will continue to engage with local communities through the established noise governance groups.	Community trust and awareness	Not Applicable	**Benefit:** Provision of airport information to the community and an understanding of local issues by the airport. **Cost:** Staffing to support the ongoing engagement activity.	**Indicator:** Continual operation and attendance at community meetings. **Reported:** Meeting minutes published.	Engagement and participation with NaTMAG, GNMG, NMB and GATCOM along with sub-groups as required.	On-going	Attendance at each meeting and production of papers as required.

ENGAGEMENT

	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
47	We will continue to support the existence of, and engage with a Noise Management Board, the workplan and meeting papers, which will be adequately published to our other noise governance groups and online.	Arrivals Departures Ground/ Community trust and awareness	Not Applicable	**Benefit:** Continual improvement in the operational and strategic management of noise and emissions. Whilst implementing operational initiatives and strategies to reduce the impact of aviation noise. **Cost:** Staffing to support the ongoing engagement activity.	**Indicator:** Participation and support to the NMB. **Reported:** Meeting minutes and relevant papers published.	Engagement and participation with NMB and sub-groups as required.	On-going	Attendance at each meeting and production of papers as required.
48	We will continue to engage with and provide noise data as required to local Environmental Health Officers through the Gatwick Noise Monitoring Group.	Strategic Approach	Not Applicable	**Benefit:** Provision of timely and transparent data to Environmental Health Officers. **Cost:** Part of the function of the FPT.	**Indicator:** Participation and support to the GNMG. **Reported:** To NaTMAG and publicly within the NaTMAG minutes.	Engagement and participation with GNMG.	On-going	Attendance at each meeting and production of papers as required.
49	In conjunction with the Gatwick Noise Monitoring Group we will commission noise studies to gain an insight into the noise climate in a particular area and holistically across the Gatwick area. We will publish these reports on our website.	Strategic Approach	Not Applicable	**Benefit:** Improved understanding of arrivals and departure noise whilst measuring the benefits delivered by the actions proposed in this plan. **Cost:** Part of the function of the FPT.	**Indicator:** Participation and support to the GNMG. **Reported:** To NaTMAG and publicly within the NaTMAG minutes.	Engagement and participation with GNMG.	On going	Publication of local and holistic noise studies.
50	We will continue to host an annual airspace seminar, to include an annual update from the Noise Management Board, inviting local interest groups and stakeholders.	Community trust and awareness	Not Applicable	**Benefit:** Provision of airport information to the community and an understanding of local issues by the airport. **Cost:** Staffing to support the ongoing engagement activity.	**Indicator:** Hosting the event. **Reported:** Relevant papers published online.	Support from CAA, NATS, ANS and airlines as and when required and achieved through membership of the NMB.	On going (annually)	Hold an airspace seminar once per year.

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OUR NOISE ACTION PLAN

ENGAGEMENT								
	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
51	We will continue to engage with local planning authorities in order to ensure they are well informed about noise issues at Gatwick, and to provide information on the airport and its operation.	Strategic Approach	Not Applicable	**Benefit:** Provision of timely and transparent data to local planning authorities. **Cost:** Part of the function of the FPT.	**Indicator:** Participation and support to the Quarterly S106 steering group meetings. **Reported:** S106 reports published online.	Engagement and participation with local authorities.	On going	Circulation of data and publication of reports as appropriate.

FUTURE AIRSPACE CHANGE

	ACTION	IMPACT AREA	NOS AFFECTED	EXPECTED BENEFIT AND COST	PERFORMANCE INDICATOR, AND REPORTING	EXTERNAL SUPPORT REQUIREMENT	TIMESCALE	TARGET
52	We will participate in all activities relating to 'LAMP2' – the redesign of the London Terminal Manoeuvring Area (LTMA) and en-route airspace to eliminate chokepoints, alleviate areas of intensive aircraft concentrations, reduce the number of people affected by noise and to create a structure that has capacity to accommodate forecast traffic levels beyond 2040.	Strategic Approach / Arrivals Departures Ground	Not Applicable	**Benefit:** Large, LAMP 2 has the potential to deliver significant reductions in noise and emission through continuous descent and climb whilst providing increased capacity. **Cost:** Large requiring significant and long term input from all airports in the south east of the UK, CAA, NATS and the DfT.	**Indicator:** Engagement with airports, NATS, CAA and DfT via bilateral and established working groups. **Reported:** Progress reports circulated to GATCOM, NaTMAG and NMB as appropriate.	Support from CAA, NATS, ANS and airlines via established LAMP 2 groups.	2024	By 2024 implement LAMP 2 airspace.
53	Ensure that local communities are informed about LAMP 2 plans and the progress and airport plans for the integration of Gatwick specific departure and arrival procedures.	Strategic Approach / Arrivals Departures Ground	Not Applicable	**Benefit:** Local communities are aware of the LAMP 2 plans and area able to provide input to the airspace concept and design. **Cost:** Large requiring significant and long term input from all airports in the south east of the UK, CAA, NATS and the DfT.	**Indicator:** Information provided on the LAMP 2 process along with consultation documents, events and presentation as and when required. **Reported:** As and when required.	Engagement and participation with NaTMAG, GNMG, NMB and GATCOM along with sub-groups as required.	2024	Conduct of airspace consultation in accordance with CAP1616.


WESTJET
virgin atlantic

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QUANTIFICATION OF THE NOISE ACTION PLAN

19

THE ORIGINAL 2010 – 2015 NOISE ACTION PLAN

In developing the original Noise Action Plan we took into account the guidance issued to airport operators at that time. This suggested that residential areas exposed to an annual noise level of 69L_{Aeq}, 16h or more should be considered for further measures as a first priority. However unlike the guidance for the other major environmental noise sources (road and rail) the guidance did not offer a specific level by which to determine important areas within the strategic noise maps.

Subsequently we took the following steps to determine the most appropriate and effective actions to include in our draft noise action plan.

Prior to Public Consultation

Firstly we considered the areas enclosed by the strategic noise maps and our existing noise complaint database. This confirmed our expectation that complaints about the impact of aircraft noise originate from locations both inside and outside the area within the strategic noise maps (see Section 7 of the original report) and are about both air and ground noise. It also showed that issues such as night flying, runway alternation, arrivals noise, the number of over flights and low flying were consistently among the top issues of concern. Without guidance to the contrary and with our evidence and experience in managing noise from Gatwick we were determined that our action plan should include actions to limit, and where practicable, reduce noise impacts for areas both inside and outside the contours as well as ground noise. In this regard we extended the scope of the action plan beyond the END requirements.

Next we used results from three international benchmarking studies by independent consultants, to help identify potential actions we could consider. Over 30 international airports worldwide were selected based on the number of annual movements and regional prominence. This exercise revealed that for operational noise controls Gatwick was one of, if not the leading airport worldwide. Similarly, although direct comparison is difficult, our mitigation and compensation benchmarking study showed Gatwick to be among the leading airports in this area. The final area of benchmarking concerned stakeholder engagement and communication. The results of this showed the greatest opportunities for improvement, with more than a dozen airports more effective in this area.

We used this information to review all our existing noise management activities, identify additional ones and consider how they would impact on the areas enclosed by the 2006 noise mapping results and beyond. These new actions were then given a general ranking (high, medium and low) in terms of costs and benefits.

Following on from this and in order to prepare the then 'draft' noise action plan for full public consultation we held a series of pre-consultation, events with representatives from airlines, NATS, local authorities, local residents groups and members of the Gatwick Airport Consultative Committee.

A number of key themes emerged such as concern over current flight paths, night flights and sleep disturbance, application of noise mitigation and compensation schemes, the frequency of overflight, and a desire for recognition of the impact beyond the areas within the strategic noise maps.

Subsequently a total of 52 actions of which around 14 could be considered new activities were issued for public consultation over 16 weeks between 18 June and 7 October 2009. Key issues raised by the consultation included calls to stop night flights and to provide more financial help for insulation schemes, as well as the need to address issues relating to arrival and departure trajectories (44%). There were also a number of issues raised in relation to changing the current flight paths at Gatwick (30%) and how the action plan should

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QUANTIFICATION OF THE NOISE ACTION PLAN

be enforced (24%).

Responding to the Feedback

In response we reviewed and amended our performance indicators and established targets whenever possible.

As regards our insulation schemes we noted the many comments and remained committed to undertaking a review of the schemes in 2010. We also continued to support efforts to improve operational practices, including examining departure and arrival procedures.

We also added actions indicating our intention to request that the Government review the existing departure noise limit restrictions, airspace utilisation and night noise limits.

We also sought to identify opportunities to further involve key stakeholders in some of the actions detailed in the plan. For example we amended our benchmarking actions to include input from members from the Noise and Track Monitoring Advisory Group. Similarly we also sought the groups input in the formulation of a suite of noise metrics to describe our noise impacts.

REVISION OF THE NOISE ACTION PLAN 2013 – 2018

In 2013 following the second round of noise mapping for Gatwick Airport it was necessary to review and revise, as necessary, the Noise Action Plan that had previously been prepared and adopted by the Secretary of State. As the actions detailed in the original Noise Action Plan were already in existence and are therefore in most instances remained valid the guidance received was to review, update and generally refresh the document taking into account the following:

- the results of the noise mapping completed in 2012;
- the progress made against the actions described in the original action plan;
- any relevant updates about the airport and its operation;
- updating information about relevant legislation and standards;
- updating relevant national and local policies;
- information about any proposed new actions and any on-going actions.

Once the plan had been revised, it was presented to the Gatwick Airport Consultative Committee (GATCOM) for comment. Gatwick Airport Ltd reflected upon the comments received from the Gatwick Airport Consultative Committee, description of which were be included in the revised plan together with a reasoned justification for the response to the issues raised.

REVISION OF THE NOISE ACTION PLAN 2018 – 2024

In 2017, following the third round of noise mapping for Gatwick Airport it once again become necessary to review and revise, as necessary, the Noise Action Plan that had previously been prepared and adopted by the Secretary of State.

The guidance to airport operators remained similar to that of previous years as there had been no substantive changes to the content or underlying regulatory requirements. As Gatwick Airport already had an Action Plan in place, a relatively light touch "review and revise" updating process was proposed by DEFRA. This did not stop airports from undertaking a more detailed review and update should it be deemed appropriate. In revising the Noise Action Plan, the airport was required to include:

- updated details about the airport and its operation;
- the results of the noise mapping completed in 2017;
- the progress made against the actions described in the current Action Plan;
- updated information about relevant legislation and standards;

- updated relevant national and local policies;
- information about on-going actions; and
- information about any proposed new actions.

DEFRA guidance stated that once the plan had been revised it would be presented to the Airport's Consultative Committee for comment, and any other appropriate bodies depending on the extent and nature of the revisions. The Airport Operator would summarise the comments received in the revised plan together with the responses to the issues raised.

It was proposed that:

1. The draft Noise Action Plan be prepared by Gatwick Airport Ltd in accordance with the published guidance.
2. The Noise Management Board be advised of the revision of the draft Noise Action Plan in order for it to advise the Gatwick Airport Consultative Committee accordingly.
3. The draft Noise Action Plan be presented to the Gatwick Airport Consultative Committee, Crawley Borough Council and West Sussex County Council (being the lead local authorities of the Memorandum of Understanding with wider local authorities) for feedback and comment.
4. Any other feedback received be evaluated by Gatwick Airport Ltd and, if appropriate included.
5. Once all feedback has been received, it will be evaluated by Gatwick Airport Ltd and, if appropriate included into the draft Noise Action Plan. Details of feedback received will be included in the annexes of the draft Noise Action Plan. The decision of Gatwick Airport Ltd is final and correspondence will not be entered into regarding the decision to include material or otherwise.
6. The draft Noise Action Plan will be submitted to DEFRA for adoption. Once adopted, the Noise Action Plan will cease to be in draft status.

It was agreed at the meeting of GATCOM on 26 April 2018 that the draft Noise Action Plan, having been updated in response to the feedback received, be presented to the 21 June 2018 meeting of the GATCOM Steering Group for consideration prior to it being presented for a final time to the full meeting of GATCOM, scheduled for 19 June 2018. The effect of this additional stage of consultation is that there has been three stages of consultation; commencing with the circulation of a proposed list of Action Plan Actions, the circulation of an initial draft Noise Action Plan and culminating in the final draft of the Noise Action Plan being presented.

The airport publicised the revision of the END Noise Action Plan through the various committees attended and also online. We encouraged members of the community to contact their GATCOM Representative in the first instance with any feedback or requests for particular issues to be considered for inclusion.

Any other feedback received from interested parties is included in the annexes of this draft Noise Action Plan, in common with previous years.

20 SECTION TWENTY ADOPTION OF THE NOISE ACTION PLAN

NOTICE OF ADOPTION

This EU Environmental Noise Directive (2002/49/EC) 'Round 3' Noise Action Plan was formally adopted by the Parliamentary Under Secretary of State for the Environment on 11 February 2019, as required by the Environmental Noise Directive and the Environmental Noise (England) Regulations 2006 (as amended).

YOUR LONDON AIRPORT
Gatwick

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