



Gatwick Arrivals Review

Overview and Proposed Action Plan

31st March 2016

YOUR LONDON AIRPORT
Gatwick

Contents

| | |
|--|-----------|
| Executive Summary | 3 |
| Overview of Actions | 4 |
| Reduction of Noise at Source | 4 |
| Noise Abatement through Operational Procedures | 4 |
| Land Use Planning | 5 |
| Community Engagement | 6 |
| Priorities | 6 |
| Monitoring Progress | 6 |
| Action Plans | 8 |
| How to provide feedback | 26 |
| Glossary | 27 |

Executive Summary

For several decades now, the aviation industry has managed to achieve and sustain substantial reductions in noise through advances in airframe and engine technology and various operational efforts. Despite these reductions, noise continues to be a problem for people living near airports around the world, and Gatwick is no exception. As a result of an increase in the number of complaints received by Gatwick, especially with respect to arriving aircraft, the airport's board of directors commissioned an Independent Arrivals Review.

The purpose of the Independent Review was to consider, in relation to arrivals at Gatwick, whether:

- a) Everything that can reasonably be done to alleviate the problems which local communities are raising is in fact being done, whether this involves action by the airport or by other parties most closely involved – National Air Traffic Services (NATS), UK Civil Aviation Authority (CAA), Department for Transport (DfT) or the airlines; and
- b) The mechanisms which Gatwick has adopted for providing information to the local community and for handling of complaints have been fully adequate for the task.

Gatwick Airport Limited (GAL) accepts all of the recommendations of the Independent Arrivals Review. The airport accepts or is minded to accept each recommendation, although in some cases further community engagement is required and in others it is reliant on the support of external organisations. GAL will work with these organisations, described below, to achieve this.

This Action Plan has been prepared by GAL to give a preliminary response and implementation plan for each of the recommendations. It also fulfils one of its recommendations (Imm-19).

Community response to the findings and recommendations of the Arrivals Review has been largely positive. Even so, further analysis will be needed to establish the full impact of implementation of some recommendations, in particular; Imm-10 and Imm-11. This Action Plan therefore also includes the provision of a six week engagement period, ending 16th May 2016, for residents and other stakeholders to feed back any additional views, not already communicated. The associated details of the feedback process are included with this plan.

Although the Arrivals Review was commissioned by GAL, other parties including the CAA, NATS and the DfT, as well as airlines and local Government, also have key roles which are identified where appropriate in the recommendations and in this Action Plan. Each of these organisations has cooperated fully in the arrivals review process and GAL looks forward to such a continued collaboration and engagement. This will be an important factor in the achievement of the steps recommended as a result.

Further refinement of this Action Plan may be needed after more detailed technical and planning work with stakeholders, analysis of community feedback, and the establishment of a Noise Management Board (NMB).

Overview of Actions

The wide range of measures proposed to reduce aircraft noise on arrival at Gatwick is aligned with the principles of aircraft noise management established at the global level by ICAO and adopted by the UK Government. Action on some of the Review recommendations falls entirely within the responsibility of GAL, while others require that GAL initiate discussion with one or more of the other stakeholders involved. In some cases further analysis and community engagement will be necessary, before final decisions can be made on the precise steps to be taken.

Preliminary actions have been defined in the attached Action Plans, together with associated target timescales for the initiation of the task and the ultimate delivery of the outcome intended by the recommended action.

Reduction of Noise at Source

Measures to improve airframe technology and engine innovation have already greatly reduced noise emanating from aircraft and further significant reductions are planned for new build aircraft from 2017¹. In the context of Gatwick today, in order to reduce existing disturbance from some Airbus aircraft, the installation of a modification is desirable. This particularly applies to the Airbus 320 series associated with a high pitch whine that is currently disturbing some local residents.

- GAL will pursue the acceleration of the airframe noise modification of Airbus 320 series aircraft using Gatwick, and will use financial mechanisms to encourage this.

¹ ICAO Annex 16, Chapter 14

Noise Abatement through Operational Procedures

Noise abatement procedures address the operation of aircraft to reduce noise generation and to reduce flight over populated areas. To achieve low noise arrivals, a variety of techniques can be employed to reduce the noise impacts of aircraft as they approach an airport, including:

- Keeping the aircraft high for as long as possible (increasing the distance from the aircraft noise sources to the ground)
- Keeping the aircraft at low engine power for as long as possible (reducing engine noise)
- Keeping the aircraft in a clean aerodynamic configuration for as long as possible (reducing airframe noise), and;
- Minimising over flights of highly populated or sensitive areas

GAL will pursue implementation of the range of recommendations intended to further reduce arrivals noise disturbance through improved use of Continuous Descent Arrival (CDA) techniques.

Gatwick arrival routing scenarios have been developed for the short and medium term, which offers dispersal of flights, or respite measures, as a means of ensuring a fair and equitable distribution of aircraft noise.

This action includes taking steps to:

- Reduce the current level of concentration of arrivals flight paths at Gatwick by widening the point through which flights join the final approach centreline. This would alter the current 10 nautical miles (nm) minimum from touchdown to 8-14 nm. There is also the potential to realise additional noise benefits by increasing the proportion of flights using higher, straight-in and continuous descent approaches during night-time when reduced traffic levels enable controllers to apply greater operating flexibility.

Longer term, Gatwick, like every other airport subject to EU aviation regulation, will be obliged to adopt Precision RNAV approach procedures agreed at the global level within ICAO.

GAL acknowledges that preparation for this change should commence well in advance, through discussions with NATS, CAA and airlines, with full consideration being given to two main aspects:

- a) Establishing multiple RNAV approach paths to join the final approach centreline, spaced sufficiently to ensure a significant degree of noise dispersal and/or respite for communities affected;
- b) Adopting clear and associated arrivals noise reduction strategies (reducing noise at source and land use planning) for Gatwick by CAA, NATS, GAL and planning authorities.

Land Use Planning

Land Use Planning (LUP) is the process whereby approval is granted by planning authorities for noise sensitive developments such as houses, hospitals and schools. This should be on the basis of minimising, as much as possible, the impact of current and planned aircraft operations so as to limit the disturbance of residential communities by aircraft noise. With the aim to prevent new housing developments in the vicinity of agreed flight routes, GAL will actively encourage and support:

- A review of the application of Land Use Policy by planning authorities for areas in southern England impacted by noise from aircraft using Gatwick, and;
- Further steps to encourage more effective consideration of flight routes by planning authorities

Community Engagement

Community feedback on the review recommendations is important. Many residents and organisations concerned about aircraft noise have already responded in writing to Gatwick following the publication of the report of the Arrivals Review. Further discussion may be needed where the impact of any recommendation is expected to have a direct effect on the distribution of noise.

GAL also supports:

- Improved and jointly coordinated Noise Management, Community Engagement and Communications Strategies for NATS, CAA and GAL for noise issues affecting Gatwick communities, through the establishment of a dedicated Noise Management Board
- Improvement to noise complaints process for Gatwick, and;
- Increased Gatwick resources allocated to Community Engagement

There will be a six week period of community engagement following publication of this Action Plan. This will take place between 31st March 2016 – 16th May 2016. The purpose of this is to allow residents, community representatives and elected representatives the opportunity to meet with GAL face-to-face; to discuss the action plan and; to influence how the action plans evolve.

GAL is actively seeking feedback on its Action Plan:

By email:

ArrivalsReview@gatwickairport.com

By post:

Gatwick Airport Arrivals Review
FREEPOST RTRB-LUJJ-AGBY
c/o PPS Group
Sky Light City Tower
50 Basinghall Street
London
EC2V 5DE

Website:

www.gatwickairport.com/noise

GAL will be holding a feedback event during the engagement period, details of this will be published on our website. At this event, GAL will present its action plans, explain the purpose of this engagement period and encourage

feedback on its provisional plans. There will be an opportunity for questions and answers with the GAL team. Feedback is welcomed. At the end of the six week period, GAL will analyse the responses and will publish a summary report of the findings.

Priorities

The Review recommendations will contribute to reducing the near term noise impact of Gatwick, and the strengthening of the airport relations with its neighbours through improved communications and information. The recommendations will also enable better coordinated noise strategies, more transparent accountability for noise, the acceleration of planned longer term efficiencies to reduce noise impact and a process for regular review and update. Each of the recommendations is therefore an important step. Even so, some of the measures identified are, if implemented, expected to be able to deliver meaningful near term noise improvements that residents have been seeking. The following recommendations are therefore considered to be particularly important in the short term.

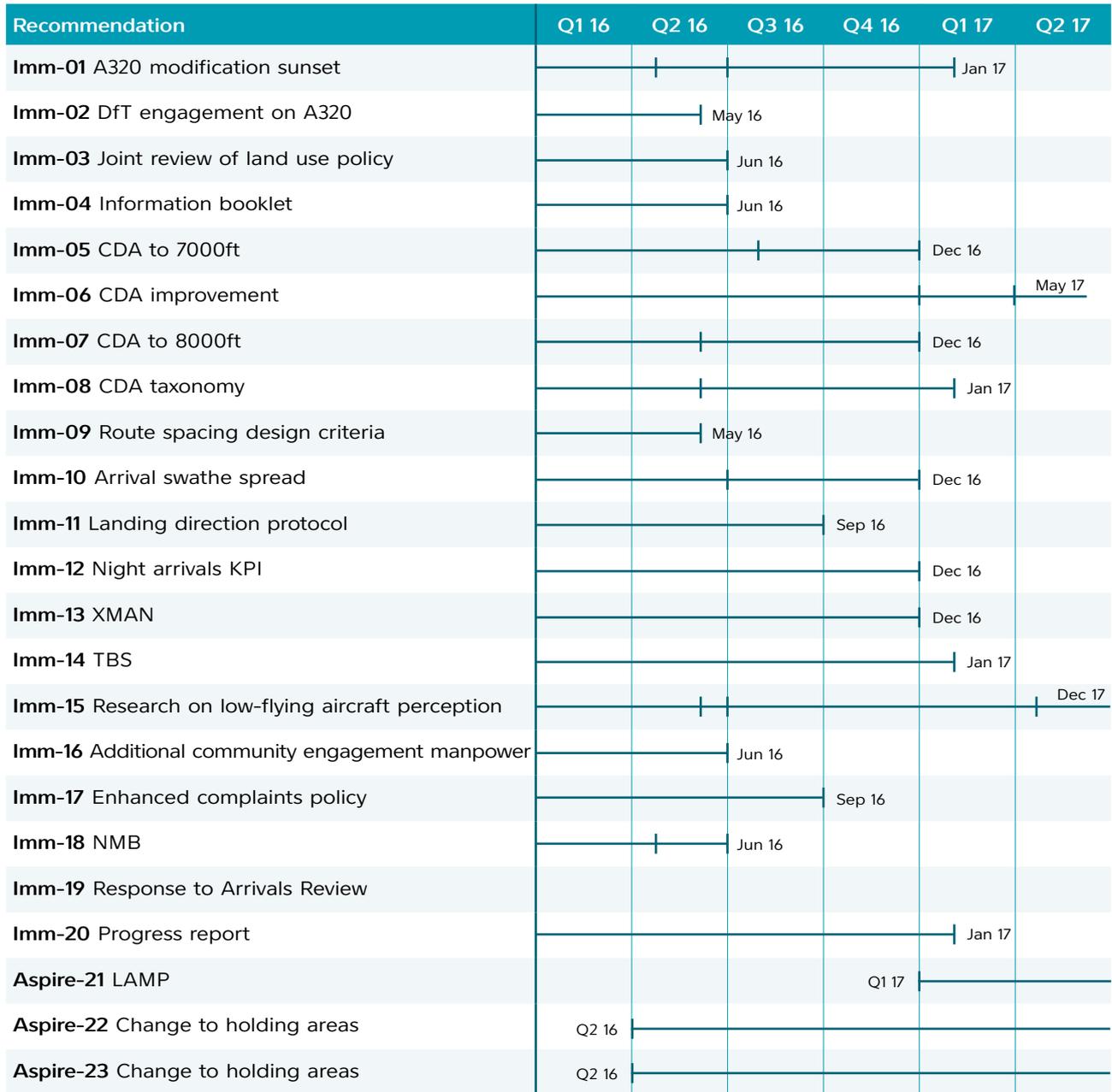
- Imm-01, modifications to Airbus 320 series aircraft
- Imm-10, broadening the approach arrival “swathe” to extend from 8-14 nm
- Imm-05, raising the commencement height and other improvements to CDA procedures

The governance and oversight of noise matters at Gatwick by the stakeholders concerned, including relevant institutions and community representatives is another important consideration. The coordinated consideration and oversight of possible implementation of all of the recommendations will be the responsibility of the proposed Noise Management Board (Imm-18). Its early constitution is accordingly also a priority.

Monitoring Progress

Continued improvements to arrivals aircraft noise at Gatwick will require the collaboration and cooperation of GAL, NATS, CAA, DfT and airlines. The NMB will bring these organisations together, with the chair of GATCOM and elected community representatives, to jointly monitor and report progress with this Action Plan, as well as to discuss and develop further enhancements to noise management strategy at Gatwick.

Figure 1 Action Plan Implementation Programme



Key:

-  Start
-  End
-  Interim milestone

Action Plans

RECOMMENDATION Imm-01

“That as an indication of GAL commitment to noise reduction, and a further tangible indication to local communities that the noise impact of the airport is taken seriously, and to incentivise an accelerated noise modification by all airlines using A320 family aircraft at Gatwick, GAL should establish an earlier sunset date for unmodified Airbus 320 family aircraft using the airport of December 31st 2017. With an appropriate noise penalty applied for non-compliant aircraft immediately thereafter.”

Accept/Reject

This recommendation is accepted.

Benefits/Issues

This action will expedite the process to reduce the number of aircraft that generate the disturbing noise from the Fuel Over Pressure Protector (FOPP) cavities under the wing.

Eventually all Airbus 320 series aircraft will be modified or replaced.

Implementation Plan

1. GAL to announce that it is minded to accept the recommendation, to engage with airlines to discuss the analysis of the processes and obligations that be undertaken.

Responsibility: GAL

Complete: April 2016

2. To identify the relevant commercial and legal steps necessary in order to deliver a workable solution.

Responsibility: GAL

Complete: June 2016

3. Publish the rules of application for all operators.

4. Include on the agenda for the NMB

Responsibility: GAL

Complete: January 2017

RECOMMENDATION Imm-02

“That GAL to engage with DfT, consider proposing to the European Commission the establishment of a sunset date of December 31st 2020 for the operation in Europe of Airbus 320 series aircraft without the Fuel Over Pressure Protector (FOPP) cavity vortex generator noise modification”.

Accept/Reject

This recommendation is accepted.

Benefits/Issues

Since this Airbus 320 series characteristic is understood and that a technical solution is available, it would make sense to address this issue for all airlines in a European context. Setting an end date for the operation of non-modified aircraft would provide noise improvements at all airports used by these aircraft, as well as ensuring that “occasional” visitors to Gatwick will be retrofitted.

This is a policy issue and, accordingly, DfT should consider bringing the proposal for evaluation in the appropriate European fora.

Implementation Plan

1. GAL to write to DfT and propose that this recommendation be adopted as UK policy, and that the UK should then seek support at EASA for the introduction of a rule of this type in the EU and for the European Common Aviation Area, with the aim to discontinue the operation of non-modified aircraft.
2. GAL to follow up with DfT who will be requested to report regularly to the NMB.

Responsibility: GAL

Complete: May 2016

RECOMMENDATION Imm-03

“That planning authorities for communities impacted by aircraft noise from Gatwick, coordinate to conduct their own joint review of the application of land use policy in context of Gatwick aircraft noise, with the objective of identifying steps that will enable the increase of its effective use and the improvement of the aircraft noise awareness for existing and potential land users.”

Accept/Reject

This recommendation is accepted.

Benefits/Issues

This action will help to raise the profile of this issue with local planning authorities and it will be useful to explore this in more detail with them, for example to understand whether there are any specific underlying factors which contribute to this issue.

This action relies on the commitment of local authorities to embark on a joint review of this issue, therefore early agreement with them on the best process and structure to deliver this joint working will be a priority. Improved planning of new noise sensitive development can, in the longer term, reduce the number of residents and noise sensitive uses in the relevant areas affected by aircraft noise.

Implementation Plan

1. Write to all relevant local planning authority contacts, setting out the arrivals review findings for Land Use Planning and encouraging their feedback. This letter from GAL should make clear that any progress will be included in the progress report in January 2017.

Responsibility: GAL

Complete: June 2016

2. Make contact with the Gatwick Officers Group (GOG) representative at Crawley Borough Council to explore a proposal for a working group to address this issue. GOG membership includes officer representatives from Crawley; Reigate and Banstead; Mole Valley; Mid Sussex; Horsham; Tandridge; West Sussex; East Sussex and Surrey. GAL will also ask GOG for advice on the best route for the involvement of Kent County Council and the Districts/Boroughs of West Kent.

Responsibility: GAL

Complete: June 2016

3. Review current land use planning guidance on noise (including Planning Noise Advice Document Sussex, March 2013) and liaise with councils to advise on additions to set specific standard for new housing affected by Gatwick.
4. Include on the Agenda for the NMB.

Responsibility: GAL

Complete: June 2016

RECOMMENDATION Imm-04

“That Gatwick develop, publish and maintain with annual updates, an information booklet intended for planning authorities, home buyers, estate agents and conveyancing solicitors, to provide reference information on flight routes, terminology and other aspects of the airport operation relevant to communities. NATS and the CAA should also be encouraged to participate and to verify those elements of the content that reflect their own areas of activity”.

Accept/Reject

This recommendation is accepted.

Benefits/Issues

A simple and easy to understand source of noise information would be useful for anybody having an interest in understanding the impact of the airport. A repository of noise material, including maps, which clearly show where air traffic is actually flying, dedicated community information, contacts, and reference material. A booklet of this kind has been found useful elsewhere and GAL considers that this could be helpful for planning purposes.

Implementation Plan

1. Following a desktop review of best practice at other airports, a booklet will be developed and published by GAL in accordance with the recommendation. NATS and CAA will be given the opportunity to provide any relevant input from their side to make the information as complete and accurate as possible.
2. In addition, GAL will liaise with GOG and will seek contact with NAEA so as to establish a) what information would be useful to homebuyers and tenants, and b) how to distribute the booklet effectively to these groups.
3. GAL will consult NMB about the content of the booklet periodically.

Responsibility: GAL

Complete: June 2016

RECOMMENDATION Imm-05

“That as soon as possible, the altitude for commencement of CDA at Gatwick should be increased to 7000 feet (FL070)”.

Accept/Reject

GAL accepts this recommendation. It will also seek formal confirmation of NATS agreement, as this is required for implementation.

Benefits/Issues

Keeping aircraft at altitude for as long as possible and applying a continuous decent approach with low thrust reduces noise on the ground. Accordingly, implementing this recommendation will help to reduce the noise generated by arriving aircraft.

Implementation Plan

1. GAL to approach NATS as soon as possible to a) re-confirm formally that NATS supports this recommendation; and b) to request that the initiation of CDA should be raised to 7000 ft by November 2016.
2. GAL to approach CAA to seek their guidance on any related implementation requirements, such as changes to approach charts.
3. NATS to initiate CDAs at 7000 ft or above.
4. This issue should be on the NMB agenda

Responsibility: GAL

Complete: July 2016

Responsibility: NATS

Complete: 2016

RECOMMENDATION Imm-06

“That GAL collaborates with NATS, CAA and airlines, within 12 months, to agree incremental improvements to the application of CDA procedures at Gatwick.”

Accept/Reject

This recommendation is accepted.

Benefits/Issues

CDA procedures deliver important noise reduction benefits through use of Low Power and Low Drag by pilots in the approach phase. Proactive contributions from both air traffic controllers and pilots are important to get the best possible results from a noise reduction perspective. Incremental steps to deliver further improvements are possible. Identifying and defining these noise improvement steps for Gatwick is the intent of this recommendation.

Implementation Plan

GAL will invite NATS, CAA and airlines to collaborate in finding ways to improve the way CDAs are initiated and flown. Progress will be overseen by the NMB.

1. Complete a feasibility study on possible improvements by December 2016.
2. Agree an ideal end state for CDA.

Responsibility: GAL

Complete: December 2016

3. Stepwise implementation of agreed improvements.

Responsibility: GAL to agree with, Airlines, NATS, CAA

Complete: May 2017

4. Regular updates should be provided to the NMB.

RECOMMENDATION Imm-07

“That GAL work with NATS and CAA to raise the Gatwick CDA commencement altitude to 8000 feet when feasible”.

Accept/Reject

GAL accepts this recommendation. It will also seek NATS agreement, as this is required for its implementation.

Benefits/Issues

Note the linkage with Imm-05 and Imm-06. Most noise complaints relate to traffic below 8000 feet and, accordingly, it is desirable to raise the commencement altitude to 8000 feet, so as to further improve the opportunity for efficient CDA operation.

Implementation Plan

1. Raise in parallel with Imm-06 as a means to, as soon as possible, further improve the way CDAs are executed.

Responsibility: GAL

Complete: May 2016

2. NATS to be requested to analyse the options available.
3. Agree implementation plan.
4. NMB to receive reports of implementation.

Responsibility: GAL/NATS

Complete: Plan to be agreed by December 2016

RECOMMENDATION Imm-08

“That GAL proposes a subsidiary CDA taxonomy, which includes the commencement altitude of the procedure, e.g. CDA 6000, be established by the CAA to improve lay understanding and to better benchmark later improvements”.

Accept/Reject

This recommendation is accepted.

Benefits/Issues

A clear description would enable the establishment of a baseline measure of current practice and enable common understanding of the benefits derived from future changes.

Implementation Plan

1. GAL to write to CAA and request a new and updated description of CDA in line with the recommendation.

Responsibility: GAL

Completed: May 2016

2. The new definition to be used to benchmark further CDA improvements and to measure progress.

3. NMB to receive reports of implementation.

Responsibility: GAL

Complete: January 2017

RECOMMENDATION Imm-09

“That GAL considers proposing to the CAA, the establishment in airspace design criteria of a minimum distance between arriving tracks for aircraft, to deliver for arrivals both a meaningful dispersal and an opportunity for respite. This is likely to apply to aircraft before they have joined the final approach track, which for Gatwick will therefore be at 3000 feet or above.”

Accept/Reject

This recommendation is accepted.

Benefits/Issues

Dispersal and respite are clearly important to a large number of residents around Gatwick and this issue will need to be addressed in preparation for PRNAV arrivals routes, which have been mandated for UK airspace and are expected for Gatwick by 2022. In order to provide respite between arrival routes, it is necessary to establish how far apart PRNAV routes will need to be. This information will support the design process to facilitate optimum route selections for Gatwick.

Implementation Plan

1. GAL understands that both CAA and DfT plan to consult on changes to airspace change process and policies. GAL proposes to contribute to this review by suggesting that a minimum distance between routes from a noise dispersal point of view could be developed. This new guidance could then be used to inform future airspace design.

2. NMB to receive a report of CAA and DfT responses to GALs proposal, which should also inform the planning and analysis work for recommendation Aspire 21.

Responsibility: GAL

Complete: May 2016

RECOMMENDATION Imm-10

“That GAL explores with NATS the potential for aircraft to be vectored to be established on the ILS at a minimum of 8nm from touchdown outside of night hours, rather than the current 10nm. This adaptation to vectoring methodology will extend the arrival swathe 2nm further to the west for Runway 26, and east for Runway 08, and will increase the arrivals dispersal to more closely emulate the circumstances prior to 2013 change. Hence the arrival swathe would normally extend from a minimum of 8nm to 14nm, with aircraft joining on a straight in approach when traffic permits”.

Accept/Reject

GAL is minded to accept this recommendation. But its implementation is a complex matter and GAL will therefore seek to ensure that its impact is fully understood before a final decision is taken. Implementation is a matter for NATS, so GAL will also seek confirmation from NATS as to when the recommendation can be implemented, as intended by the authors of the Report.

Benefits/Issues

To address the concerns arising from the increased concentration of arrivals that occurred in some locations after a change of radar vectoring methodology in early 2013, an adjustment of the present swathe is proposed to reduce the increased concentration of aircraft that resulted from that change.

The intended impact of this action would be to recreate a greater geographical dispersal of arriving aircraft tracks, so that they are more closely aligned with the arrivals tracks which existed at Gatwick prior to 2013.

The benefit is expected to be a reduced concentration of arriving aircraft in the swathe, prior to joining the final approach track, supporting the fairer and more equitable dispersal of aircraft sought by many communities.

Because the associated considerations are complex, a more detailed explanation of the issues is provided as an appendix to this action item.

Implementation Plan

1. Complete a thorough analysis of the issues described in the appendix to this action item.
2. Assess feedback from the period of community engagement.
3. Subject to the outcome of that further analysis, GAL to request NATS to utilise the increased swathe from minimum 8 nm to 14 nm when straight in approach is not applied, for arrivals to both Runway 26 and Runway 08.

Responsibility: GAL

Complete: June 2016

4. If, following further analysis, the recommendation is implemented, the NMB will monitor the impact to verify that the intended fair and equitable dispersal is being achieved.

Responsibility: GAL

Complete: December 2016

RECOMMENDATION Imm-10 Appendix

Background

This recommendation is intended to reverse much of the aircraft concentration and noise consequences of the approach stabilisation initiative taken by GAL and NATS in 2013, by restoring as far as possible the distribution of arriving aircraft that occurred previously.

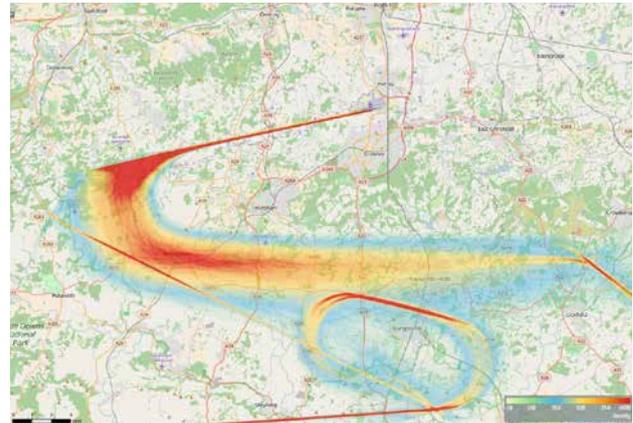
The approach stabilisation initiative of 2013, adopted for both safety and operational reasons, extended the daytime ILS final approach minimum joining point of aircraft from 7nm to 10nm from touchdown. The night time minimum joining point has been located at 10nm (23:30-06:00 local time) since before 2004.

The unforeseen effect of this 2013 change was to concentrate daytime arrivals into a narrower swathe, increasing the number of aircraft 'above' or 'over' particular areas. The effect is discernible in the graphics below, which depicts the actual arrivals track density for Runway 08 and 26, measured in the summer of 2012, contrasted with the same period in 2015.

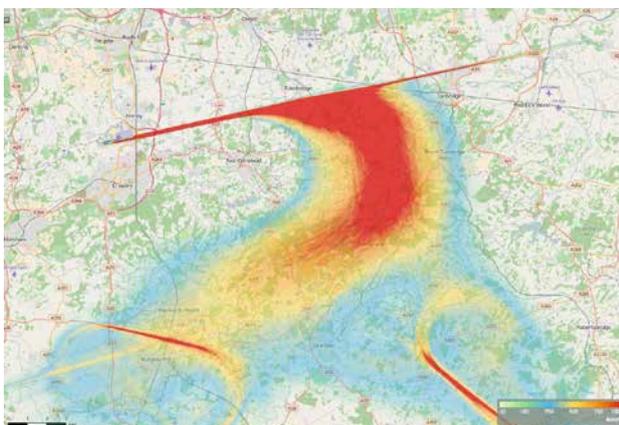
1st April – 30th Sept 2012 Easterly Arrivals



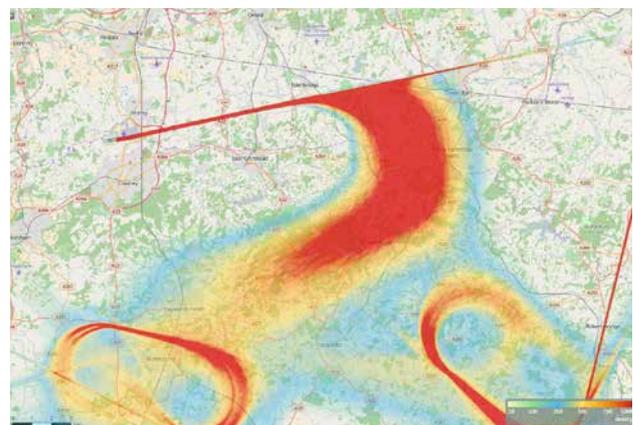
1st April – 30th Sept 2015 Easterly Arrivals



1st April – 30th Sept 2012 Westerly Arrivals



1st April – 30th Sept 2015 Westerly Arrivals



Many requests were made by residents to the Arrivals Review, seeking to reverse the 2013 change. Residents making these requests explained that the prior arrangement (for random radar vectors to the ILS final approach track, both east and west of Gatwick) was an acceptable means of fairly and equitably dispersing aircraft noise.

This proposed action calls for an adaptation to NATS radar vectoring methodology using an ILS joining point located between a minimum of 8nm from touchdown and 14nm, which will in effect largely recreate both the locations and width of the arrival swathes used at Gatwick before 2013.

When traffic conditions permit, aircraft from the east for Runway 26 will join on a straight in approach even further east, and for 08, straight-in further from the west.

Associated considerations

- The achievement of fair and equitable dispersal throughout the swathe
- Requests made by some residents to establish radar exclusion zones around individual towns and villages, and to avoid increased flying over built up areas
- The impact of this proposed arrivals arrangement when combined with departure routes.

The changes made in 2013 were subject to a safety assessment which now precludes a return to an even closer minimum joining point, at 7nm. An updated safety case will be required before any reduction to the 10nm ILS joining point can be made.

The concept of additional radar exclusion (“no-fly”) zones was rejected by the Arrivals Review, firstly because of the lack of any rational and fair basis on which to select one community for exclusion over another, but also because it seems unlikely that such a zone is operationally deliverable because of vertical constraints imposed by the need for Gatwick arrivals to be held below Heathrow traffic. The Review also concluded that it was unlikely that such a zone could in practice deliver any meaningful noise relief.

The precise details of any implementation resulting from this recommendation, including the planned use of the full swathe and the distance from touchdown of the minimum joining point will be subject to further discussions between NATS and the CAA.

In particular, a review by GAL and NATS of the implications of any overlap of arrival and departure routes below 4000 feet will be necessary when considering the implementation of this recommendation, in order to avoid undue and unintended noise impacts.

RECOMMENDATION Imm-11

“The development, publication and implementation by GAL of an operating protocol to define the occasions when a change of landing direction will be implemented at Gatwick for noise reasons, if weather, safety requirements and other conditions permit. The objective of the protocol being to achieve a more even split of arrivals, and to fragment the otherwise continuous use of one runway direction or another because of long term weather patterns. The impact should be monitored by GAL and the results regularly reviewed by the NMB. The target implementation of the protocol should be during 2016 following engagement with airlines, air traffic control and communities”.

Accept/Reject

This recommendation is accepted in principle. However, implementation will depend upon establishing a broad consensus on the new operating protocol.

Benefits/Issues

To deliver the objective of a more ‘fair and equitable distribution of noise’, this proposed protocol will provide the opportunity to enable improved respite for residents when weather and other conditions permit.

The criteria for runway selection for the purpose of noise distribution need to be defined and a consensus reached amongst stakeholders at Gatwick.

Implementation Plan

1. GAL will establish a draft implementation plan with an initial discussion with the NMB.
2. After securing NMB endorsement GAL will, in full cooperation with ANS, airlines and NATS, initiate the work to establish a noise protocol for runway selection.
3. GAL will obtain the meteorological data needed to quantify the potential runway usage impact of the protocol.
4. The draft protocol will consider and take account of any related impacts of recommendation Imm-10.
5. The outcomes of this work will be discussed at NMB.

Responsibility: GAL

Complete: September 2016

6. If endorsed, use of the new protocol at Gatwick Airport.

Responsibility: GAL

Complete: September 2016

RECOMMENDATION Imm-12

“That the Gatwick Flight Performance Team (FPT) introduce a KPI, enabling the monitoring and reporting of the number of flights delayed from planned daytime arrival into a night movement (after 23:30 local) and that GAL initiate measures to identify and agree steps, including enhanced use of time based operations, with airlines and with the airport’s scheduling committee for implementation within 12 months, to effectively and progressively reduce unplanned night arrivals at Gatwick”.

Accept/Reject

This recommendation is accepted.

Benefits/Issues

This KPI provides the means to monitor the number of daytime scheduled arrivals that for a variety of reasons actually arrive after 23:30. The objective is to reduce the numbers of late arrivals by better understanding the reasons for them, and then propose corrective measures.

Implementation Plan

1. GAL to engage with airlines and other airport stakeholders to develop and define the KPI
2. GAL to collect data and report on the KPI
3. GAL to report to NMB on the a) the data collected and b) proposals to encourage better adherence to schedule
4. GAL to evaluate opportunities to reduce the number of late daytime arrivals and to introduce measures that deliver improved night performance
5. GAL to report regularly and publish data on KPI’s to NMB

Responsibility: GAL

Complete: December 2016

RECOMMENDATION Imm-13

“That within 6 months, NATS and GAL conduct a joint investigation to establish and agree whether XMAN is an effective tool to reduce arrival holding at Gatwick and if so, to agree and publish within 9 months when XMAN can be deployed for Gatwick and what results are expected”.

Accept/Reject

This recommendation is accepted.

Benefits/Issues

Known as Cross-border Arrivals Management (XMAN), the procedure enables air traffic controllers in the United Kingdom to work closely with those in the surrounding airspace in France, Ireland, Belgium and the Netherlands to regulate aircraft speed up to 350 miles away from London Heathrow, in order to minimise holding times on arrival.

XMAN is deployed for Heathrow at the NATS en-route centre at Swanwick with the support of neighbouring air traffic control centres in Europe (in whose airspace London arrivals are sometimes required to change speed to meet new planned arrival times). In the opinion of the review, the operation of XMAN should be extended as soon as possible to extend the benefits to include Gatwick arrivals.

XMAN implementation for Gatwick relies on the collaboration of NATS, GAL and airlines. The analysis of whether the XMAN tool can deliver the expected gains for Gatwick arrivals will require their collaborative analysis.

Implementation Plan

1. GAL to contact NATS, easyJet and other leading airlines to set out the Arrivals Review findings for operational efficiencies and to propose that GAL should lead review of the feasibility of XMAN for Gatwick including the identification of expected benefits. .
2. If XMAN is validated as a beneficial tool for Gatwick arrivals, a deployment plan should be developed and published. The results of the analysis and its findings will be included in the progress report of the review recommendations in January 2017.

Responsibility: GAL

Complete: December 2016

3. Regular updates should be provided to the NMB.

RECOMMENDATION Imm-14

“GAL and NATS should evaluate the potential efficiency benefits of an earlier implementation of advanced Time Based Separation (TBS) technology (timescale for completion of evaluation within 12 months).”

Accept/Reject

This recommendation is accepted.

Benefits/Issues

TBS capability for Gatwick is included in Single European Sky planning for implementation by 2023. The benefits of TBS at Gatwick include reduced arrival delay and manoeuvring by improving the accuracy of arrival spacing. Future enhancements of TBS are expected to go even further, taking into account the specific arrival and departure aircraft types in order to fully optimise the spacing to be delivered by Approach Control. Because NATS manages the arrival sequencing for Gatwick, it is NATS at Swanwick that will determine the investment case and implementation schedule in collaboration with GAL. The associated devices at Gatwick Tower will rely on the Swanwick system.

Implementation Plan

1. GAL to contact NATS, easyJet, BA and other major airlines setting out the Arrivals Review findings for operational efficiencies; and to propose a review of the feasibility of TBS for Gatwick, including the identification of expected benefits.
2. If TBS is validated as a beneficial tool for Gatwick arrivals prior to 2023, a deployment plan should be developed and published.
3. The analysis and findings will be included in the progress report of the review recommendations in January 2017.

Responsibility: GAL

Complete: January 2017

4. Regular updates will be given to NMB.

RECOMMENDATION Imm-15

“To better inform stakeholders, independent academic research should be undertaken to validate the reasons why arriving aircraft are often perceived by residents to be lower than in the past, and to identify measures to establish the actual facts in a controlled analysis with community involvement”.

Accept/Reject

This recommendation is accepted.

Benefits/Issues

This study should improve understanding of the facts and perceptions relating to the actual heights of arriving aircraft. Firstly by independent audit and verification of the height information reported by Gatwick’s noise and track keeping system. Then, provided that the height information is shown to be correct, to commission research to identify and analyse the reasons that some residents perceive aircraft to be lower than in the past.

Implementation Plan

1. GAL to commission an independent audit of the height information provided by the Gatwick noise and track keeping system, building on the work of the CAA 2014 report (CAP1246), this audit to be completed in 2016.
2. If this audit confirms that aircraft heights are accurately reported, GAL to seek and obtain expressions of interest from recognised academic experts to conduct academic research (possibly by funding one or more PhD projects) to identify and evaluate the factors influencing the perceptions of aircraft height found in communities affected by aircraft noise.
3. GAL to seek guidance from the NMB on suitable Terms of Reference and objectives for the research work and its reporting This should include inter alia, the provision for community engagement.
4. Taking into account guidance from the NMB, any resulting academic study should publish a report no later than the end of 2017.

Responsibility: GAL

Complete: Height verification 2016
Academic Research and Report 2017

RECOMMENDATION Imm-16

“That GAL allocates additional manpower, as soon as possible, to strengthen the Airport’s community engagement capability.”

Accept/Reject

This recommendation is accepted.

Benefits/Issues

This recommendation will improve the community engagement capability of GAL.

Implementation Plan

1. GAL to identify the requirement for additional manpower and to put recruitment steps into place.
Responsibility: GAL
Complete: June 2016
2. GAL to report progress at the NMB.

RECOMMENDATION Imm-17

“That Gatwick should establish an enhanced complaints policy and fully transparent procedure, as soon as possible, using an on-line form as the primary medium, requiring sufficient detail to allow the location (postcode) of the complainant, the date and time of day of the incident, such that the aircraft in question can be identified and established with the location, to allow empirical data to be developed and analysed so that noise mitigation action can be taken. There should be no limit to the number of complaints per household. For residents not possessing computer access, postal submissions should be accepted, but should be required to contain the basic information outlined above.”

Accept/Reject

This recommendation is accepted.

Benefits/Issues

This proposal would improve GAL’s community engagement and responsiveness; it would also provide reporting data that is more reflective of reported noise issues.

Implementation Plan

1. GAL should draft an updated noise complaints handling policy whilst seeking feedback from local communities, GATCOM and the NMB. The final policy to be presented to GATCOM and the NMB, and then published.
2. In order to provide the ability to fill in the online form with sufficient detail, GAL will need to enhance its current online noise portal, known as ‘Casper’. This will require a software upgrade.
3. A regular report of complaints handling findings shall be provided to the NMB.

Responsibility: GAL

Complete: September 2016

RECOMMENDATION Imm-18

“The establishment of a Noise Management Board (NMB) by summer 2016, to be operated under independent Chairmanship and comprising representatives from each of the institutions able to effect change for Gatwick arrivals, as well as the chair of the Airport Consultative Committee (GATCOM), and both elected council members and residents’ representatives”.

Accept/Reject

This recommendation is accepted.

Benefits/Issues

1. Establishment of an NMB should assist in improving alignment of the responsibilities and initiatives of the key organisations able to effect change in the impact of aircraft noise..
2. An NMB can assist in ensuring that community concerns about aircraft noise are fully understood by those key organisations, and in developing a more co-ordinated set of visions and strategies for noise management around Gatwick – focused initially on implementation of recommendations from the Arrivals Review, but then extending to other important noise management issues.

Terms of Reference will need to be developed in liaison with the NMB once its membership has been determined. It is envisaged that the following points should be reflected in the governance structure:

- Whilst the initial focus is likely to be on implementation of the Arrivals Review, the NMB’s remit should extend to all important noise management issues related to Gatwick
- The NMB should therefore address departures as well as arrivals
- The NMB should be a body with real influence over operations around the airport such as on airspace and aircraft operational issues. It should be consulted on all Gatwick noise related matters, such as compensation policy, noise insulation and community support
- The NMB should establish a mechanism to identify and address unintended and unexpected consequences of noise improvement initiatives
- The aim should be to ensure joint and co-ordinated reporting through the NMB, initially on progress of the Arrivals Review implementation and then on other noise

issues and initiatives, and to facilitate better understanding by residents through more consistent communication and verifiable data

- The NMB should monitor noise awareness training policies for staff of all Gatwick stakeholders
- In developing the Terms of Reference, particular care will need to be taken to avoid conflicting with the remits or duties of any of the other bodies already involved in these matters
- 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

Membership should be determined in line with the undernoted proposed parameters:

- The number of members should ideally not exceed 10-12; above that the NMB's effectiveness will increasingly be at risk.
- GAL's current proposal for membership is:
 - Independent Chair
 - Secretary (appointed by GAL)
 - One person from each of GAL, NATS, CAA, ANS, Gatwick-based airlines and DfT
 - The Chair of GATCOM
 - Two Community representatives (one from East of the airport, and one from West)
 - Two Local Council representatives
- GAL proposes Bo Redeborn as the Independent Chair and Graham Lake as Secretary to the NMB for an initial period, but will consider other proposals received
- GAL plans to invite local Councils and Community Groups to nominate their representatives

- It is important that all representatives are of sufficient seniority, and where appropriate, are empowered, to reach decisions without constant "reference back".
- Each member can have a single named alternate

Frequency of Meetings – initially the NMB should meet every 2 months, with frequency probably moving to every 3 months once implementation of the Arrivals Review recommendations is substantially complete.

The above represents GAL's current thinking on these matters, but we will consider other proposals received.

Implementation Plan

1. Continue dialogue with NATS, CAA, DfT, airlines and community stakeholders seeking suggestions for NMB Membership, Terms of Reference, Independent Chair and Frequency of Meetings.
2. A planning meeting is proposed on 18th May 2016 for invited participants to discuss NMB membership and terms of reference.
3. Finalise the above in the light of stakeholder feedback, publish the agreed outcome with the aim of holding the first NMB meeting on 21st June 2016..

Responsibility: GAL

Complete: May 2016

Responsibility: GAL

Complete: June 2016

RECOMMENDATION Imm-19

"That Gatwick should publish not later than March 31st 2016, a description of the steps that it is intended to take in response to the Arrivals Review report, and which if any of the recommendations it plans to pursue".

Accept/Reject

This recommendation is accepted.

Implementation Plan

Through the publication of this Action Plan, this recommendation has been implemented.

RECOMMENDATION Imm-20

“In the interests of improved community relations that; GAL publish not later than January 31st 2017 a report of overall progress towards delivery of the steps recommended in this report, including relevant status updates from CAA and NATS, with where appropriate the basis for any related decisions”.

Accept/Reject

This recommendation is accepted.

Benefits/Issues

Acting in this way will inform communities and stakeholders of the implementation progress with each of the recommendations proposed by the review.

Implementation Plan

1. GAL to progress recommendations through the next 12 months in line with each agreed action plan and within its associated timescale.
2. Produce a full, publicly available, report of overall progress. This would be presented first to the NMB.

Responsibility: GAL

Complete: January 2017

RECOMMENDATION Aspire-21

“The adoption of carefully designed routes from the approach holding fixes used for Gatwick, to the ILS final approach tracks, provides real opportunity to reduce noise, to disturb fewer people, to deliver fair and equitable dispersal of noise, and, to deliver well defined respite measures. The London Airspace Management Programme should be developed by NATS and GAL to incorporate alternative proposals to those published in 2013, as soon as reasonably possible, for consultation, agreement and implementation for Gatwick arrivals.”

Accept/Reject

This recommendation is accepted.

Benefits/Issues

The global provisions of ICAO adopted by the UK, require that Precision RNAV is implemented for UK airspace, including for arrival routes.

The timing of any PRNAV arrival routes for Gatwick is subject to a formal design and consultation process. The impact of related changes for other London airports is also relevant. As such, even though there are clear opportunities to disturb fewer people, any implementation is likely to be after 2022.

The review has recommended that, since the design, public consultation, agreement and approval of any new PRNAV routes for Gatwick is likely to be a very lengthy process, the process should be initiated without delay so as to avoid a risk of delaying the noise benefits.

Implementation Plan

1. GAL to write to NATS, CAA and DfT advising them of the recommendation and inviting them to discuss it.
2. GAL, with support of the NMB, to develop and understand the related issues to inform implementation planning for GAL.

Responsibility: GAL

Timescale: Task to begin Q1 2017

RECOMMENDATION Aspire-22

“That the Gatwick holding areas should be higher, or should be relocated to enable holding aircraft to dwell over water, rather than over Sussex.”

Accept/Reject

This recommendation is accepted.

Benefits/Issues

The aspiration of having continuous descent from the cruise level to touchdown at Gatwick will require a number of substantial changes in airspace and traffic management techniques deployed for the London Terminal Airspace during peak hours.

An increase of the altitude from which CDAs are commenced for noise purposes by aircraft arriving at Gatwick at all times must be a priority. Equally, for noise reasons, holding aircraft should be kept higher and the position of the Gatwick Arrivals Fixes (the site of the Gatwick airborne holding areas), should be relocated over the sea, eliminating airborne holding dwell time over Sussex, while permitting longer CDA tracks. Because this will also require widespread airspace and procedural change, it is likely to be still some years away. Clear steps to remove these barriers should be identified by NATS, CAA and GAL, with incremental improvements proposed as interim measures to deliver enhanced CDA.

Implementation Plan

1. GAL to write to NATS, CAA and DfT advising them of the recommendation and inviting them to discuss it.
2. GAL, with support of the NMB, to establish design objectives to reflect DfT policy, CAA guidance and NATS advice.

Responsibility: GAL

Timescale: Task to begin Q3 2016

RECOMMENDATION Aspire-23

“That the requirements specification of any system upgrade to, or replacement of, any sequencing tools must take full account of the need to integrate the AMAN at Swanwick and DMAN at Gatwick, such that they are each fully informed of, and take into account the capacity allocations of both arrival and departure functions”.

Accept/Reject

This recommendation is accepted.

Benefits/Issues

AMAN is used by NATS at Swanwick to plan the sequence of arrivals to Gatwick’s runway, the Departure Manager (DMAN a planning tool) is also in use for Gatwick, but this time located at the airport control tower, intended to improve the departure flows at the airport and increase the predictability of take-off times.

For legacy reasons at Gatwick, in common with many other airports, even though both systems are calculating and managing real time runway capacity allocation, there is no system integration between the AMAN at Swanwick and DMAN at Gatwick Tower. This is not efficient and contributes to arrivals delay. Because the system at Swanwick is operated by NATS and the system at Gatwick is owned by GAL, the investment, procurement and technical policies for the integration of such systems do not appear to be adequately aligned.

Implementation Plan

1. GAL to write to NATS and ANS, advising them of the recommendation and inviting their guidance on how best to align procurement of a single replacement system.
2. GAL, with support of the NMB, to establish design objectives with NATS and ANS.
3. GAL to keep NMB informed of progress.

Responsibility: GAL

Timescale: Task to begin Q2 2016

How to provide feedback on the Arrivals Review Action Plan

By email:

ArrivalsReview@gatwickairport.com

By post:

Gatwick Airport Arrivals Review
FREEPOST RTRB-LUJJ-AGBY
c/o PPS Group
Sky Light City Tower
50 Basinghall Street
London
EC2V 5DE

Website:

www.gatwickairport.com/noise

Please include your full name and address (including email) so that we can contact you for clarification if necessary.

Your feedback will be collected and analysed by PPS (Local & Regional) Ltd on behalf of Gatwick Airport. PPS will provide a report summarising feedback received. Your personal details will be held securely by PPS and Gatwick Airport, in accordance with the Data Protection Act 2000, and will be used solely in connection with the Arrivals Review and will not be passed to any third parties.

Glossary

| | |
|---------------|--|
| AMAN | Arrivals Manager System |
| ANS | Air Navigation Services (Air Traffic provider for Gatwick Airport) |
| CAA | Civil Aviation Authority |
| Casper | Airport noise and flight tracking computer system |
| CDA | Continuous Descent Arrival |
| DfT | Department for Transport |
| DMAN | Departures Manager System |
| EASA | European Aviation Safety Agency |
| EU | European Union |
| FOPP | Fuel Over Pressure Protector |
| FPT | Flight Performance Team |
| Ft | Feet |
| GATCOM | Gatwick Airport Consultative Committee |
| GOG | Gatwick Officers Group |
| ICAO | International Civil Aviation Organisation |
| ILS | Instrument Landing System |
| Imm | Recommendation number (taken from Arrivals Report; Imminent) |
| KPI | Key Performance Indicator |
| LAMP | London Airspace Management Programme |
| NAEA | National Association of Estate Agents |
| NATMAG | Noise and Track Monitoring Advisory Group |
| NATS | National Air Traffic Services |
| Nm | Nautical Mile |
| NMB | Noise Management Board |
| PRNAV | Precision Area Navigation |
| TBS | Time Based Separation |

