

NMB Progress Report 2017

Gatwick Airport Airspace and Noise Management Board
Public Meeting

7th December 2017

CONTENTS

- Executive Summary
- Activities Progress Report
- Communications

Annexes:

- A320 Modification Status
- Imm-12 Night Quota usage
- FED metrics
- Acronyms

Executive Summary

This report provides a review of progress made by the NMB to deliver the 20 activities listed on its agreed 2017/2018 workplan. A workplan which was developed through engagement with community groups and builds upon the implemented recommendations of the Independent Arrivals Review.

A substantial amount of work has been undertaken for the NMB and progress has been made in all the key work areas. The majority of this activity has focused on feasibility, benefit and impact analysis which underpin future activities. That work also addresses fresh areas of concern and new proposals to achieve meaningful noise reductions and deliver sustainable growth well into the future.

A key objective identified in the Arrivals Review, and one which has been taken forward into the 2017/2018 workplan, is Fair and Equitable Dispersal (FED). The NMB industry partners have undertaken detailed analysis of Gatwick arrivals data and have identified options for an improved FED environment. I am pleased to say that one of the options is currently being advanced by NATS experts for a potential introduction in the near future.

On Continuous Descent Approaches (CDAs), the NMB has led the way in establishing a national cross-industry project in the UK to develop a new low noise approach metric to complement the current CDA definition and provide an additional performance target for Gatwick and all airports. This metric will allow for the measurement and benchmarking of arrivals against a pragmatic optimum low noise approach. The project is due to be completed in late 2018, by which time it is hoped that airports will be able to apply the new CDO noise measurement criteria for the first time.

GAL has reviewed the guidance provided to pilots through the Aeronautical Information Publication for Gatwick and is working with airlines and commercial flight information service providers to review the availability and clarity of noise abatement information. The study identified areas for improvement and work has now commenced to update this information and publish to all airlines.

The 2017/2018 workplan introduced departures onto the NMB work agenda, including a consideration of applicable Noise Abatement Departure Procedures (NADP) which have the potential to deliver a noise benefit in a short term. Studies have also taken place to identify the feasibility, benefits and impacts of reviewing departure routes to remove designed in climb restrictions. Although most associated improvements for departures will require an airspace change at Gatwick and nearby London Airports, these studies have clearly identified the requirements and likely benefits of this work which will be explored in depth at NMB workshops in 2018.

Finally, the NMB is progressing plans for a Reduced Night Noise (RNN) trial, an agreed NMB priority which has the potential to deliver meaningful noise reduction at a time of day when noise sensitivity is at its peak. The NMB has explored the issues in detail and is finalising the objectives and operating concepts for the trial which will then be further reviewed in a community workshop to be held in early 2018.

In summary, the NMB has made very good progress towards its objectives to improve the situation for those affected by noise from aircraft using Gatwick. Although some of this work will deliver further noise improvements in the short term, it is clear that in many cases and in order to implement the larger changes that will deliver significant benefits, airspace change is necessary.

At NMB/5 in April 2017, the NMB agreed a preliminary 2017/2018 workplan. An updated workplan was provided to NMB/6 in June 2017, incorporating the continuing activity arising from the recommendations of the arrivals review, together with the output from workshops that developed both industry and community guidance for priority issues. This has led to the NMB consolidated 2017/2018 workplan now adopted by the NMB and against which progress is now measured.

The following NMB implementation report accordingly summarises the status of the actions within the NMB 2017/2018 workplan to 31st October. In addition, latest data is provided on:

- The A320 family FOPP modification status.
- The Imm-12 Night Quota KPI reporting on the usage of the night quota period and dispensations applied.
- Extract from NMB FED reports.

Implementation Progress

In total, 20 workstreams are identified as a priority covering the three main focus areas, Fair and Equitable Dispersal (FED), Continuous Descent Operations (CDO) and Departures. Even so, all 20 tasks, which have each been assigned an Activity Reference Number (which is different to and not related to the Arrivals Review Recommendation numbers), are being progressed through the year, more immediate focus will be placed upon the following high-priority initiatives:

1. Activity 3: Determine target distribution for FED;
2. Activity 7: Feasibility assessment of proposed NATS FED initiatives;
3. Activity 9: Creation of low noise approach KPI, *previously: 'Review and update the CDO definition'*¹;
4. Activity 13: Reduced Night Noise, *previously: 'Quiet Night Arrivals'*²;
5. Activity 14: Noise Abatement Departures Procedures (NADP).

Progress is reported to the NMB through a high-level dashboard, providing a management oversight tool for 'at a glance' monitoring by NMB members. Meanwhile the detailed implementation report also provides the NMB with in depth information on the work plan implementation for each component of the activity.

¹ The name of this activity has been changed following an activity scoping meeting which identified the need for this new KPI to exist alongside the current established CDO definition. See Activity 9 for additional information.

² The name of this activity has been changed on request from the NMB.

Activities Progress Report

Activity 1 Ongoing monitoring and reporting	Due: Ongoing
<p>Task: Regular reporting to the NMB and via NaTMAG on several metrics including but not limited to the following:</p> <ul style="list-style-type: none"> • Imm-01 A320 Series FOPP modification • Imm-10 ILS joining point distribution and unstable go-arounds • Imm-12 Night KPI • FED analysis using the community defined gates • Progress reports on ongoing implementation tasks <p>Responsibility: GAL</p> <p>Progress: Reporting is an ongoing activity, and information is provided on the areas listed above. Through the ongoing strategic work of the NMB several performance topics will be passed to NaTMAG for this group to monitor progress and report.</p> <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. Report to NMB/9 - January 2018 2. Report to NMB/10 - April 2018 3. Report to NMB/11 - June 2018 4. Report to NMB/12 - September 2018 	
Activity 2 Review of metrics for NMB activities	Due: January 2018
<p>Task: Review current metrics in use at Gatwick and within the wider industry to identify metrics and reporting structures to support the measurement of NMB work plan initiatives and future airspace design activities.</p> <p>Responsibility: GAL</p> <p>Progress: A GAL-led workshop took place in July 2017 to review best practice, the workshop output along with the resulting data analysis has been presented to the NMB in September 2017.</p> <p>Following the workshop GAL commenced a review of Government policy, its interpretation and Gatwick's performance against the policy. Consideration of alternative metrics is also included. This work is ongoing and is expected to conclude by the end of the year. GAL will engage directly with Community Groups on this work, however, appropriate measures identified through this work may be proposed to the NMB for consideration.</p> <p>Future works, in terms of measurement and management of noise, will be identified at the end of this process with follow-on works potentially included as additional NMB activities. In the meantime suitable metrics may be proposed in draft as necessary to support ongoing activities such as the Reduced Night Noise (RNN) trial.</p> <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. Delivery of initial findings to NMB - Complete, August 2017 (NMB-7 IP04) 2. Delivery of final study findings to NMB - January 2018 	
Activity 3 Determine target distribution for FED	Due: July 2018
<p style="text-align: center;">[This is a high priority activity]</p> <p>Task: Data analysis, discussion and agreement of FED distribution targets for FED between industry and the NMB Community Noise Groups.</p> <p>Responsibility: GAL</p> <p>Progress: Arrivals distributions related to agreed FED targets have been produced and provided to the NMB meetings since NMB/7 in August 2017. In September 2017 CNG have enhanced their intended target distributions for FED, these targets have been incorporated into subsequent FED monitoring reports. The data collected by these monitoring reports will be used to inform the scoping and feasibility of FED initiatives (Activity 7).</p> <p>No further analysis, apart from the regular reporting under Activity 2, is expected until more is known from NATS about the potential options for near term FED delivery under Activity 7.</p> <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. No milestones attached. 	

Activity 4 Publish a noise league table	Due: November 2018
<p>Task: Development and publication of a league table to track airline noise performance.</p> <p>Responsibility: GAL</p> <p>Progress: Helios have conducted a review of best practice from other airports around the world that currently operate noise, airline or 'Fly Quiet' league tables. The international best practice has been compared to current GAL practices and high-level options have been presented to GAL for consideration and refinement. The next step will be to consult on a proposal with airlines, to determine if it will achieve its desired intention.</p> <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. Review of international best practice - Complete, November 2017 2. Agreement on KPIs and reporting procedure between GAL and airlines - June 2018 3. Presentation of reporting processes to NMB - September 2018 4. Publication of first report - November 2018 	
Activity 5 Research into aircraft height perception	Due: January 2018
<p>Task: Commission independent academic research to identify if there is a correlation between aircraft size, noise level and height perception. This is Imm-15 from the Arrivals Review.</p> <p>Responsibility: GAL</p> <p>Progress: Sussex University have been commissioned to undertake the analysis. Field work took place through August and September 2017 with mobile noise monitors placed at Crowborough, Cowden, Penshurst and Tunbridge Wells. The study used a postal survey, street interviews and field visits to gather data.</p> <p>The researchers are currently analysing their findings. A verbal update was provided to NMB/8. The full report will be published at the beginning of 2018 preliminary findings to be presented at NMB/9 in January.</p> <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. Publication of final report - 2018 	
Activity 6 Develop requirements for future London airspace changes	Due: May 2018
<p>Task: Develop requirements for input into future airspace change as part of the London Airspace Management Programme (LAMP 2). This will include the Independent Arrivals Review recommendations:</p> <ul style="list-style-type: none"> • Aspire-21, the implementation of carefully designed routes from the holding fixes to the ILS joining point to provide the opportunity to reduce noise, disturb fewer people and deliver fair and equitable dispersal of noise. • Aspire-22, the moving of the Gatwick holding areas to a higher altitude or relocation over water. <p>In addition, Activities 16 to 19 may also have an input on LAMP and the outcomes of these activities will be provided to the LAMP team.</p> <p>Responsibility: GAL</p> <p>Progress: GAL have recruited specialist personnel to coordinate the requirement development process for LAMP2 (London Airspace Management Programme) to provide input to the NATS programme. LAMP was conceived as part of the Future Airspace Strategy to modernise many different aspects of airspace and air traffic services across the UK.</p> <p>The aim of the NATS En Route Ltd (NERL) led LAMP 2 is to fundamentally redesign the London Terminal Manoeuvring Area (LTMA) and en-route airspace to eliminate chokepoints, alleviate areas of intensive aircraft concentrations and to create a structure that has capacity to accommodate forecast traffic levels beyond 2040. The primary benefits of this redesign will be to significantly reduce delays, enable improvements to airline on time performance and reduce a range of environmental impacts, including noise.</p> <p>GAL has led the way in setting up the LTMA Airports Working Group which will advise NERL on the development of procedural models and design concepts. Gatwick will be monitoring progress and supporting NERL with its concept design throughout the first quarter of 2018.</p> <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. GAL requirements submitted to NERL to support concept design study – Complete October 2017 2. Community representatives briefing on LAMP 2 - Complete - 3rd November 2017 3. LTMA Airports working Group established – October 2017 4. Workshop with CAA to discuss application of CAP 1616 (new Airspace Change Process) – January 2018 5. Ongoing design support to NERL – January to March 2018 6. DfT review of NERL concept design study – Decision Milestone - May 2018 7. Initial detailed design work commences – May 2018 	

Activity 7 Scoping and feasibility assessment of NATS FED initiatives	Due: June 2018
<p style="text-align: center;">[This is a high priority activity]</p> <p>Task: The feasibility assessment to determine the likely benefits and drawbacks of four NATS-led FED options for introduction in the near/medium term. The task will recommend which activity/activities can be taken forward for implementation.</p> <p>The options identified for detailed consideration were:</p> <ul style="list-style-type: none"> • Use of airspace blocks to provide dispersal • Lowering the level of the stacks to reduce track distance • Limiting the departure point from the hold • Review impact on the swathe through the application of increased holding <p>Responsibility: NATS</p> <p>Progress: NATS have conducted expert engagement and operational workshops to review the feasibility of each initiative along with the likely benefits and impacts. NATS concluded that the most effective, timely and safest means likely to deliver noise benefit is option #4 to make increased use of the existing holding stacks when traffic permits.</p> <p>The first three options have now been discounted for technical, operational or safety reasons.</p> <p>NATS are currently assessing potential options for an operational evaluation of this initiative which is subject to a safety and hazard assessment requirement. Once these assessments are complete a further update will be provided to the NMB.</p> <p>Note: This activity covers the scoping and feasibility assessment of the potential FED initiatives. This assessment is expected to conclude by the end of 2017. The development of any trials, or follow-on work will take place as an additional workplan activity during 2018.</p> <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. Completion of feasibility, benefit and impact analysis - Complete, September 2017 2. Approval of draft operating instruction, March 2018* 3. Commencement if operational practice, June 2018* <p>*Milestones subject to change in response to resource availability currently assigned to deliver new technology tools for other operational improvement initiatives.</p>	
Activity 8 Scoping and feasibility assessment of follow on FED initiatives	Due: TBC
<p>Task: The feasibility assessment of additional FED initiatives, this task follows on from Activity 7 and seeks to investigate the following additional proposals which could assist with the delivery of FED:</p> <ul style="list-style-type: none"> • Varying the ILS joining point for predictable periods • Use of a reduced ILS joining point • Reinstating the straight in approach for runway 26 <p>Responsibility: NATS / GAL</p> <p>Note: This activity is planned to take place after the completion of Activity 7. However if the outcome of Activity 7 provides a suitable opportunity for the delivery of FED this activity may be delayed to support the implementation of this proposed activity.</p> <p>Progress: As Activity 7 is likely to provide a suitable opportunity for the delivery of FED, Activity 8 has been delayed due to resource availability. As a result, the due date has not been finalised. It will be updated once Activity 7 has been sufficiently progressed.</p> <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. Milestones will be developed once this task has been fully scoped. 	

<p>Activity 9 7Development of a low noise approach KPI [Previously: Review and update the CDO definition]</p>	<p>Due: December 2018</p>
<p style="text-align: center;">[This is a high priority activity]</p> <p>Task: GAL will investigate the development of a low noise approach metric to improve upon the current CDO definition. This is not Gatwick specific and there is an understanding and recognition that this activity can only be delivered through a Gatwick proposed and Sustainable Aviation (SA) led initiative with extensive support from the CAA to ensure effective engagement at both UK and European levels.</p> <p>Responsibility: GAL</p> <p>Note: This activity supersedes the independent arrivals review recommendation Imm-08 CDA taxonomy.</p> <p>Progress: An initial scoping assessment has identified that a different approach is required to deliver the desired outcome. The revised activity will identify the optimum low noise approach and produce a Key Performance Indicator (KPI) to track and report performance against the low noise approach baseline. Thus, the alteration to the title of this activity. The new KPI will provide a basis onto which a revised definition can be launched along with additional engagement and improvement works.</p> <p>GAL have developed a draft project plan and proposal to progress the project on a national level. Working with, NATS, CAA (ERCD) and SA, GAL developed a proposal, through several iterations and improvements, which was considered by the Future Airspace Strategy (FAS) Policy and Regulation Programme Board, Investment Board and finally the Delivery Steering Group.</p> <p>To ensure maximum uptake, and therefore a realisation of the benefits, this proposal is based upon a national workstream which will be overseen by SA. The proposal was approved in late November.</p> <p>The revised activity will include the following tasks:</p> <ul style="list-style-type: none"> • The conduct of noise analysis to identify the optimised low noise approach for a variety of aircraft types in the current and future airline fleets; • Identification of an optimum low noise approach profile envelope based upon noise analysis i.e. upper and lower approach profiles; • Testing of the new KPI against historic radar data for participating UK airports; • Recommendations on how to implement the new KPI and introduce low noise approach as a new definition. <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. Agreement on task and development of draft proposal – Complete, October 2017 2. Approval of proposal by FAS – Complete, November 2017 3. Conclusion of noise modelling – August 2018 4. Completion of test and evaluation of new KPI – October 2018 5. Publication of final report – December 2018 	
<p>Activity 10 Review speed limitations on approach</p>	<p>Complete: November 2017</p>
<p>Task: Review current speed limitations on approach and determine if these need to be altered to support optimum continuous descent operations and low power low drag on current and new aircraft types.</p> <p>Responsibility: GAL</p> <p>Progress: GAL have surveyed airlines at Gatwick to gather the views of senior pilots on the current approach speed restrictions and if these could be altered to deliver noise improvements for arrivals.</p> <p>The survey conclusions were discussed in the FLOPSC workshops in October and November 2017. Of those who responded to the survey, there was broad support for the current restrictions as NATS provides a degree of flexibility which allows aircrews to fly in the optimum, low noise, configuration. Despite this, there was interest in a revised final approach speed of 170kt to 5NM because it can delay the deployment of the landing gear on certain types such as the B738 and the A321. This speed restriction was trialled in 2007 at Gatwick Airport and is still available to aircraft upon pilot request. The availability of the 170kt to 5NM option was not known to all workshop attendees and therefore it will be added to the “briefing pack” that is being developed for airlines (activity 12).</p> <p>As NATS will, where possible, accommodate speed requests from aircrews to allow approaches in an optimal configuration, there was no benefit to change the current approach speed regime. The conclusion of the workshop has closed this activity and the outcome was reported to the NMB in November 2017.</p> <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. Submission of findings to NMB – Complete, November 2017 (NMB-8 IP19) 	

Activity 11 Review noise abatement information provided to airlines by commercial flight plan service providers	Due: January 2018
<p>Task: Conduct a gap analysis on the information provided to airlines by commercial flight plan service providers compared with the regulated information contained in the UK AIP and make recommendations to improve the availability and the level detail provided.</p> <p>Responsibility: GAL</p> <p>Progress: GAL has expanded the scope of this study to consider both the information provided by commercial providers along with Gatwick's entry in the UK Aeronautical Information Publication (AIP). A survey has been conducted of airlines at Gatwick to understand which commercial flight plan service providers are used and GAL has engaged with these providers to gather the required information. The study has noted the provision of CDO information on a specific approach chart within the Gatwick AIP could be improved by providing additional information for airlines. This chart is currently in the process of being reviewed and updated. The review of commercial flight information has identified a number of improvements to the level and clarity of information provided. The commercial operators have committed to update their information and the new versions will be available to flight crews in the coming months. This activity is due for completion in January and the findings will be reported to NMB/9.</p> <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. Collection of information from commercial providers – Complete, October 2017 2. Completion of gap analysis and identification of improvements – Complete, November 2017 3. Submission of findings to NMB – January 2018 	
Activity 12 Improve collaboration between airlines to align CDO standard operating procedures and noise training	Due: August 2018
<p>Task: Creation of an airlines engagement and continuous improvement forum and engagement process covering CDO.</p> <p>Responsibility: GAL</p> <p>Progress: GAL currently provides monthly performance data to airlines. In addition, ANS, NATS and Sustainable Aviation all undertake airline engagement to promulgate information to improve operations. The FLOPSC workshops in October and November 2017 looked at these actions and concluded that the best option to share information was through an operator briefing pack which was previously produced by the tower ATC provider (NATS / ANS). The pack would contain information on the specific procedures including those covering noise abatement at Gatwick and will be circulated to current and future operators to advise on noise abatement and operational procedures. It is proposed that the updated document will be developed and owned by GAL with input from ANS, NATS and airlines. As this document will need to provide prescriptive safety, operational and noise abatement information, its development takes time. In addition, document control, management and oversight processes need to be developed. In addition to the new operator briefing pack. GAL has conducted additional one-to-one airline engagement with the following airlines:</p> <ul style="list-style-type: none"> • Turkish Airlines, a meeting with a pilot representative followed the FLOPSC workshop. Discussions centred on noise abatement and operational procedures. Further actions have been identified by GAL and Turkish Airlines to improve engagement and operational improvement. • Travel Service (Smart Wings), a meeting with two pilot representatives took place after the FLOPSC workshop with discussions on noise abatement and operational procedures. The airline is currently reviewing its training program and Standard Operating Procedures to identify opportunities for improvement. • Tunisair, to discuss the topics of the FLOPSC workshops along with the status of the A320 family FOPP modification. • Emirates on the circulation of operational information and Route 4 track conformance. <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. Identification of a suitable engagement process – Complete, November 2017 (NMB-8 IP19) 2. Completion of 1st draft of new operator pack – June 2018 3. Circulation of finalised pack to airlines – August 2018 	

Activity 13 Reduced Night Noise <i>[Previously: Quiet Night Arrivals]</i>	Due: June 2019
<p style="text-align: center;">[This is a high priority activity]</p> <p>Task: Following on from Arrivals Review recommendation Aspire-21, this activity will aim to implement carefully designed RNAV routes in the night period to reduce noise impacts.</p> <p>Responsibility: GAL</p> <p>Progress: An industry workshop took place in July 2017 to review the current night time operations, discuss opportunities for improvement, identify and agree objectives for the Reduced Night Noise initiatives. The workshop outcomes were reported to the NMB in September 2017.</p> <p>Following the workshop, further industry consultation has taken place to mature the concept and commence the scoping for a potential trial. This does not include the design or selection of routes but is only focussed on what might be technically possible to meet the proposed objectives. The NMB was briefed in November 2017 on the work carried out to date, along with the plan for the proposed trial, with the trial objectives to be agreed in principle:</p> <ul style="list-style-type: none"> • Reduce the number of people affected by noise without affecting new people • Increase the altitude of aircraft currently flying an low or sub-optimal approach profile • Validate the use of RNAV for approach • To not increase the track miles normally flown by arriving aircraft <p>However, community groups asked for their specified objectives to be taken into account this will be incorporated for discussion at NMB/9 in January 2018.</p> <p>The proposed trial plan is based upon CAP1616 the revised CAA Airspace Change Process which becomes effective from January 2018. The trial has been deferred to accommodate additional community engagement including initial design considerations. Subject to satisfactory completion of these aspects, the trial is expected to commence in early 2019.</p> <p>The NMB which in November has reaffirmed its support for a reduction of night related noise disturbance will also be provided with an opportunity to influence any decision to proceed with an operational trial.</p> <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. Agreement of objectives and next steps – January 2018 2. NMB Concept and initial design workshop – March 2018 3. Completion of initial design, benefit and impact analysis and decision on whether to proceed with trial¹ – June 2018 2. Completion of detailed design – November 2018² 4. Trial commencement – February 2019² 5. Trial completion – August 2019² <p>¹ NMB will be invited to provide input to the decision.</p> <p>² Dates subject to change in response to initial design and go/no go decision.</p>	

Activity 14 Standardise Noise Abatement Departure Procedures (NADP)	Due: April 2018
<p style="text-align: center;">[This is a high priority activity]</p> <p>Task: Conduct analysis on the Noise Abatement Departure Procedures (NADP) currently used by airlines operating at Gatwick and seek to identify an optimal procedure to become a recommended practice.</p> <p>Responsibility: GAL</p> <p>Progress: NADP is a noise management procedure which is used between 800ft and 3,000ft. The procedure changes the location of noise benefit to either be close to the runway (NADP 1), or at an increased distance from the airport (NADP 2). GAL conducted a survey of airlines and determined that 77% of Gatwick airlines responding to the survey currently operate an NADP 2, equating to approximately 96% of departures.</p> <p>NADP was discussed at the FLOPSC workshops in October and November 2017. In terms of fuel burn and the associated emissions, NADP 2 delivered the optimal profile. In additional initial analysis shows that fewer people are affected by noise when using NADP 2.</p> <p>It is not possible, under ICAO guidance and EU law, to provide a specific NADP 2 procedure for Gatwick such as the use of a prescribed acceleration altitude. The same guidance notes that it is not possible to mandate the use of NADP 2 and thus aircrews will be requested to use the general NADP 2 procedure unless there is a performance limitation or safety issue.</p> <p>The workshops concluded that, subject to the conclusion of the environmental and noise study being undertaken by DfT ANMAC³, NADP 2 should be recommended as the preferred procedure at Gatwick.</p> <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. Completion of desk based research – Complete, November 2017 2. Completion on DfT ANMAC research – February 2018 3. Presentation of study findings to NMB – April 2018 	
Activity 15 Review departure routes to minimise impact	Due: January 2018
<p>Task: Assess current Standard Instrument Departure (SID) routes to identify current issues and develop options for optimised/multiple SID routes within current NPRs.</p> <p>Responsibility: GAL</p> <p>Progress: This feasibility and options study is exploring the ability to deliver multiple route options for runway 26 Route 4 departures. The output paper will document:</p> <ul style="list-style-type: none"> • Constraints as to the maximum lateral displacement of Route 4; • Options with regards to a higher PBN specification which may allow a wider number of design options; • Multiple conceptual options for Route 4 departures. <p>This activity is focussed on Route 4 due to the CAA request for GAL to consider this undertaking as part of its Route 4 Post Implementation Review decision. However, the activity includes Route 3 as well due to the interaction of the two routes. Other SID routes will be considered for this assessment as part of the workplan once this is complete.</p> <p>The study will be conducted in sequence following Activity 19 the Review of constraints placed upon Gatwick departures by routes to/from other airports, which has identified a need to consider changes to arrivals and departure routes to other London airports to enable SID design optimisation. This would require an airspace change.</p> <p>Note: Changes to Route 4 SIDs would be considered an airspace change. This activity does not include the Airspace Change Process which would follow as an additional work program. Any additional work program would be based upon, and guided by the findings of the feasibility, benefit and impact analysis.</p> <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. Completion of feasibility and options study on Route 3 and 4 – March 2018 (delayed from December 2017 due to additional work necessary under Activity 19) 2. Presentation of findings to NMB – April 2018 3. NMB Departures Workshop – May 2018 (this includes discussion on work to review additional departure routes) 	

³ANMAC is an advisory committee for the Department for Transport and includes representatives from all three airports, the airports consultative committees, airport scheduling teams, CAA, NATS and the Department for Environment, Food and Rural Affairs (Defra).

Activity 16 Review departure vectoring practices	Due: TBC
<p>Task: Review of current departure vectoring practices with the aim to inform works to potentially increase the minimum vectoring height on specific SIDs.</p> <p>Responsibility: GAL</p> <p>Note: Activity 19 includes a review of the interactions between the Gatwick departure routes and the routes to other airports. This task will need to be completed prior to the commencement of Activity 16.</p> <p>Progress: The NMB departures workshop, which took place in June 2017, provided initial inputs to this task which has allowed for the task to be scoped and planned. No further activity has taken place on this task as priority has been assigned to Activity 19 which is an important pre-cursor to this activity.</p> <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. Completion of feasibility and options study – TBC* 2. Presentation of findings to NMB – TBC* <p>* Milestone dates will be assigned once this task has been fully scoped.</p>	
Activity 17 Review of departures at night	Due: TBC
<p>Task: Review of current night time departures and identify opportunities for improvements.</p> <p>Responsibility: GAL</p> <p>Note: Both Activity 19, a review of the interactions between the Gatwick departure routes and the routes to other airports, and Activity 20, a review of airport scheduling practices will need to be completed prior to the commencement of Activity 17.</p> <p>Progress: The NMB departures workshop, which took place in June 2017 has provided initial inputs to the Gatwick Scheduling team for consideration. Additional follow-up actions, to work with, and improve departures scheduling and on-time performance, in conjunction with Activity 20 are in the process of being scoped, planned and developed. As this activity is currently being scoped it is not possible to provide an estimated completion date in this progress report.</p> <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. Completion of feasibility and options study – TBC* 2. Presentation of findings to NMB – TBC* <p>* Milestone dates will be assigned once this task has been fully scoped.</p>	
Activity 18 Conduct a feasibility analysis of SID rotation	Due: TBC
<p>Task: Conduct a feasibility assessment on the use of Standard Instrument Departure (SID) route rotation to provide departures FED.</p> <p>Responsibility: GAL</p> <p>Note: Activity 19 includes a review of the interactions between the Gatwick departure routes and the routes to other airports. This task will need to be completed prior to all other departures related activities.</p> <p>Progress: GAL has conducted some initial work (with airlines, NATS and ANS) around the feasibility of SID rotation and to understand how the airport can influence SID usage. The project is in its initial stages and work is needed to develop and assess the options available.</p> <p>No further activity has taken place on this task as priority has been assigned to Activity 15 and 19.</p> <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. Completion of feasibility and options study – TBC* 2. Presentation of findings to NMB – TBC* <p>* Milestone dates will be assigned once this task has been fully scoped.</p>	

Activity 19 Review of constraints placed upon Gatwick departures by routes to/from other airports	Due: May 2018
<p>Task: Conduct a review of arrivals/departures routes to/from other London airports to identify restrictions and develop options to allow Gatwick departures to climb in a more consistent and low noise configuration.</p> <p>Responsibility: GAL</p> <p>Progress: The project has identified which routes impact Gatwick Routes 3 and 4, how often the routes are used and their specific limitations on the operation. The work will inform discussions with NATS to identify potential options for assessment. The output paper will document:</p> <ul style="list-style-type: none"> • The reasons for the existing initial altitude restrictions on both Route 3 (SAM/KENET) and Route 4 (DVR/ADMAG/LAM/CLN/BIG) departures; • The actions required to enable a higher initial altitude; • The feasibility and expected impact of making those changes which will be used to inform next steps. <p>Further work is currently ongoing to identify the benefits and impacts of this change are ongoing and further updates will be provided to the NMB. However, as noted in Activity 15, this activity has identified a need to consider changes to arrivals and departure routes to other London airports which would require an airspace change.</p> <p>The NMB will be briefed on the findings of the study, which will then inform additional workplan activities which could include the implementation of changes to routes 3 and 4, or the expansion of the feasibility, benefits and impacts analysis to other departures routes.</p> <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. Completion of feasibility and options study for Route 3 and 4– October 2017 2. Completion of Route 3 and 4 Continuous Climb Assessment – December 2017 (Additional Activity) 3. Presentation of study findings to NMB – January 2018 4. Discussion of next steps at NMB Departures Workshop – May 2018 <p>Note: This task will need to be completed prior to all other departures related activities as any proposed changes as a result of this task will impact all other departures workstreams.</p>	
Activity 20 Review Gatwick airlines’ scheduling practices	Due: TBC
<p>Task: Review current scheduling practices and identify areas for potential improvements to assist with the delivery of FED. This includes options to optimise the arrivals/departure waves, reduce delays and minimise unscheduled operations in the night period.</p> <p>Responsibility: GAL</p> <p>Progress: The NMB FED and departures workshops, which took place in April and June 2017 both identified options to improve scheduling practices. The outputs from these workshops have been passed onto the Gatwick Scheduling team for consideration. Additional follow-up actions, to work with and improve departures scheduling and on-time performance, in conjunction with Activity 17 are in the process of being scoped, planned and developed. As this activity is currently being scoped it is not possible to provide an estimated completion date in this progress report. However, as part of a Voluntary Industry Resilience Group (VIRG), this topic is being explored as a UK wide initiative, to consider the issue under a programme of aviation resilience. Further updates on this work will be provided to NMB.</p> <p>Activity Milestones:</p> <ol style="list-style-type: none"> 1. Completion of scheduling review – TBC[*] 2. Presentation of findings to NMB – TBC[*] <p>[*] Milestone dates will be assigned once this task has been fully scoped.</p>	

Communications

An extremely important part of the role of the NMB is communications. Communications from the NMB to its Members and their wider communities and communications into the NMB to help inform and shape the workplan and priorities.

The NMB has its own dedicated web page (www.gatwickairport.com/nmb) which has specific pages and areas for each meeting, agendas, minutes, updates, blog and background information.

How we share information through the Airport Governance groups is important too. The three main groups with a remit for noise are the NMB, Gatwick Airport Consultative Committee (GATCOM) and the Noise and Track Monitoring Advisory Group (NaTMAG). These groups also have their own webpages, see contacts section.

Each group has a representative on the other group and information, updates and minutes are shared both between members and publicly through published data and minutes. In order to further enhance these relationships, the NMB has commissioned topic specific workshops through 2018.

The NMB workshop concept has already proven to be a valuable initiative. For instance, the NMB Departures workshop held in summer 2017, was able to involve and engage with a broader group of interested organisations and to independently develop a view on what issues and priorities were considered important by participants. The outcomes were then communicated to the NMB as an unambiguous indication of related objectives and priorities.

The workshops will provide a greater in depth briefing than is currently possible, and will facilitate improved collective CNG discussion of the topics to develop views prior to each NMB. The output and conclusions from each workshop will be used to inform discussion at the NMB, as an input to strategic noise management planning.

Wider participation in the workshops will allow the workshops to incorporate views and opinions from other communities. Therefore, using the CNG consensus agreement which forms the basis for CNG participation in the NMB, attendance at the workshops can be extended to wider groups.

There are at least fourteen such groups participating in the Consensus Agreement. The opportunities available to these additional groups not participating in the NMB to hear details of the topics being addressed by the NMB, and to participate in the development of NMB strategies is limited. Broader engagement and inclusion will better inform the NMB and communities.

The CNGs have an agreed objective; 'Whoever (community representatives) sits on the Noise Management Board will do so with an objective voice representing the views and interests of all the groups.'

Workshop Objectives

- Aim to deep dive into NMB priority workplan topics and facilitate improved collective community discussion
- Where appropriate, relevant background information and tutorials will be provided
- To enable broader community engagement by including community NMB members and those participating in the consensus agreement
- Discuss viewpoints and develop conclusions for delivery to the NMB in information papers to inform the direction of the NMB when progressing its workplan

Topics

- | | |
|---------------------------------------|---------------|
| • Reduced Night Noise | March 2018 |
| • Departures | June 2018 |
| • Continuous Descent Operations | August 2018 |
| • Fair and Equitable Dispersal/LAMP 2 | November 2018 |

Annex: A320 Modification Status

Airlines have been requested to provide updates to their modification programs on a regular basis. The next reporting period is to 31st December 2017.

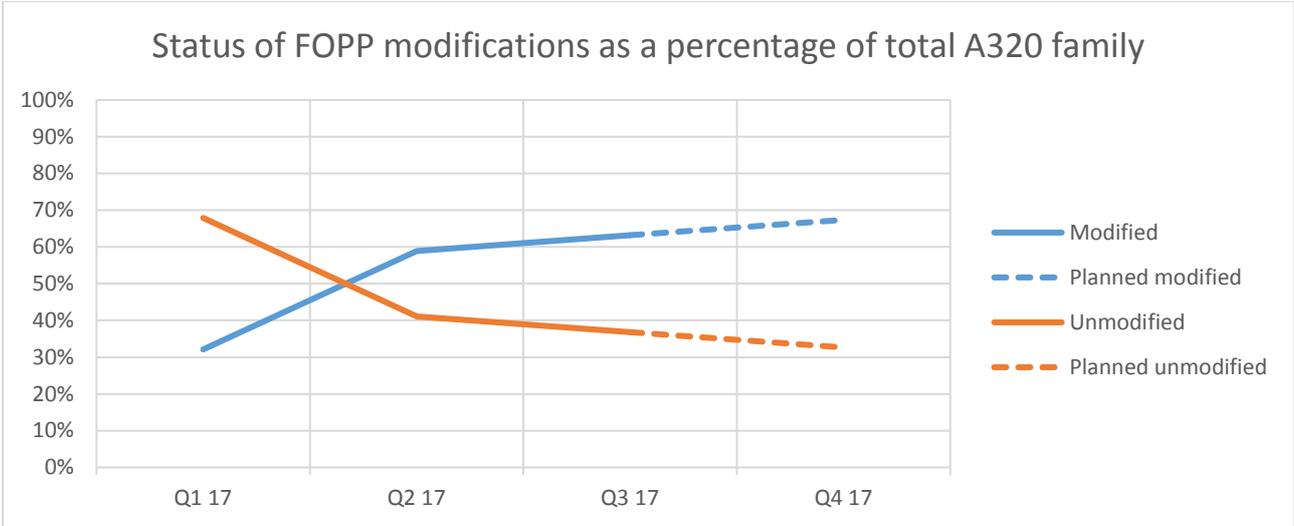
The table below covers the top 15 airlines which are responsible for 99% of A320 family movement at Gatwick, with the top 5 airlines being responsible for 95 % of all A320 family movements. On 2nd October 2017, Monarch Airlines went into administration, their information has been included on this report for information and will be removed from all future reports.

With effect from **1 January 2018**, a new noise charge will apply to any A320 family aircraft (A318 / A319 / A320 / A321) which does not have the FOPP modification. During 2018 we will be reporting the number of flights to and from Gatwick Airport using A320 modified aircraft.

Below is a chart summarising the airline modification data to the end of September reporting period.

Airline	% and number of fleet modified on 1 st January 2017	% and number of fleet modified on 6 th April 2017	% and number of fleet modified on 11 th August 2017	% and number of fleet modified on 15 th September 2017	Number of aircraft in fleet and planned completion by
EasyJet	66% (169)	88% (232)	95% (251)	96% (269)	279 (Dec 2017)
British Airways	56% (73)	85% (111)	97% (128)	-	130 (Nov 2017)
Monarch	6% (2)	82% (28)	100% (34)	100% (34)	34 (Jun 2017)
Vueling	27% (30)	33% (33)	-	-	100 (Dec 2017)
Thomas Cook	33% (7)	55% (27)	-	-	49 (69% by Dec 2017)
Aer Lingus	0% (0)	0% (0)	-	0% (0)	34 (35% by Dec 2017)
Iberia Express	0% (0)	0% (0)	5% (1)	-	21 (38% by Dec 2017)
Small Planet Airlines	Not reported	0% (0)	-	-	8 (TBC)
WOWAir	44% (4)	44% (4)	-	-	9 (67% by Dec 2017)
Turkish Airlines	-	-	-	25% (25)	99 (TBC)
Air Malta	0% (0)	0% (0)	-	-	8 (88% by Dec 2017)
TAP Air Portugal	53% (23)	84% (36)	93% (41)	93% (41)	45 (TBC)
Aegean Airlines	Not reported	33% (15)	-	-	46 (TBC)
Wizz Air	Not reported	100% (77)	Complete		
Tunisair	Not reported	0% (0)	0% (0)	0% (0)	0% (No plans)

The following chart shows the status of the A320 family FOPP modifications as a percentage of modified and unmodified aircraft for the top 15 A320 family operators at Gatwick.



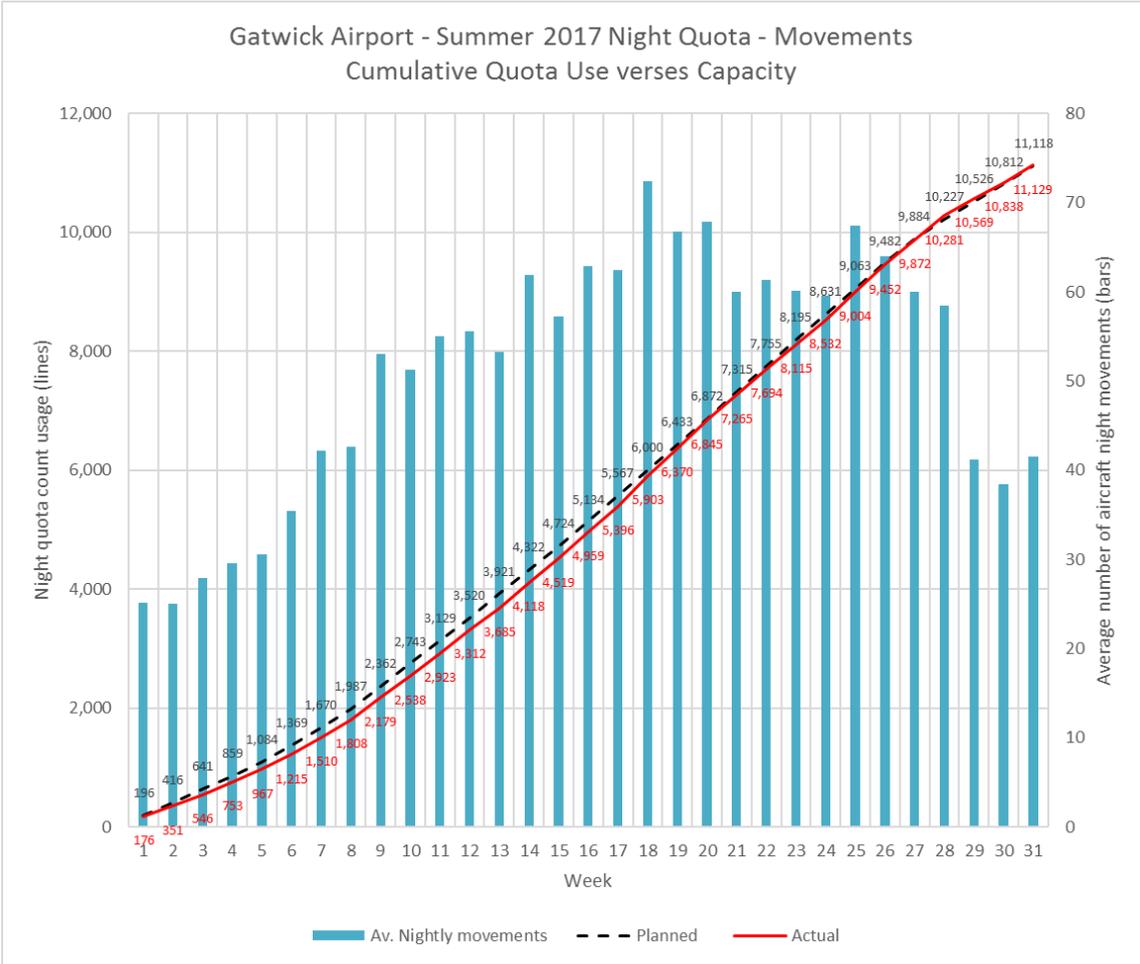
The following charts show the proportion of modified aircraft for the top 5 A320 family operators at Gatwick for each of the reporting periods in proportion to the total number of unmodified A320 family aircraft.

Annex: Night Quota usage

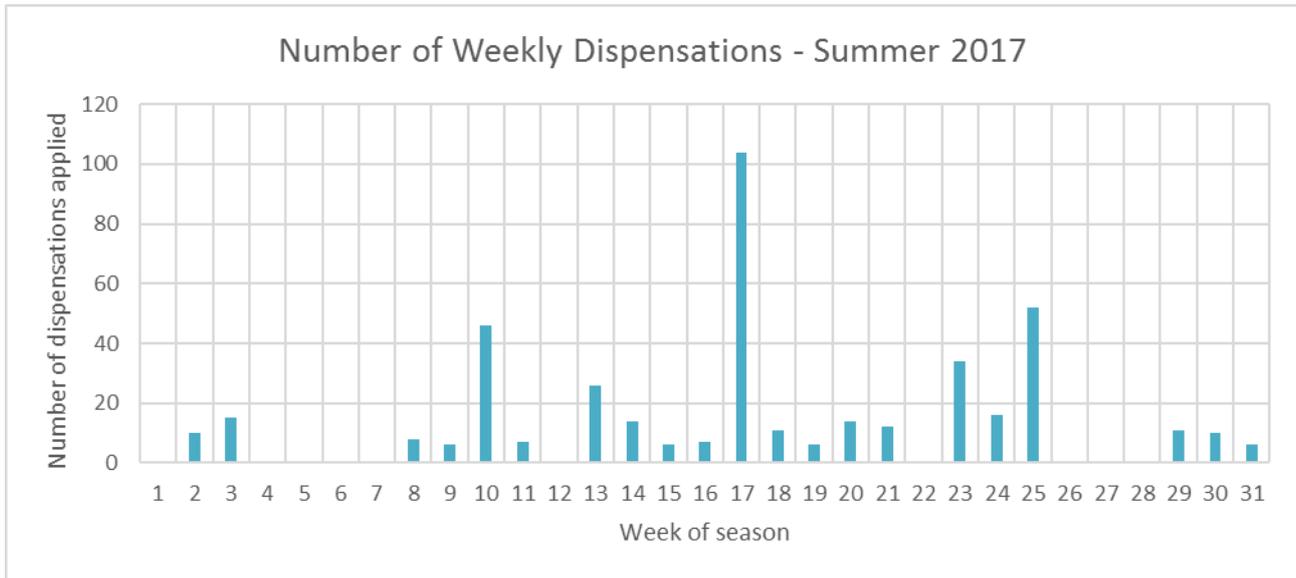
The following chart provides the status of the usage of the Summer 2017 night quota up to 13th October 2017. The number of weekly dispensations are presented on the following page along with the rationale for the dispensation.

It is proposed that this information is reported to, and monitored by the Noise and Track Keeping Advisory Group (NaTMAG) instead of the NMB in the future. This will align with the roles of these groups.

It should be noted that following discussions at the NMB, the DfT will be conducting a review of the Night Jet dispensation guidance and process for the designated airports (including Gatwick) during 2018.



Annex: Dispensations



Week No.	No. Dispensations	Reason for the dispensation
1	0	No dispensations applied.
2	10	Widespread and prolonged air traffic disruption due to low visibility.
3	15	Widespread and prolonged air traffic disruption due to low visibility.
4	0	No dispensations applied.
5	0	No dispensations applied.
6	0	No dispensations applied.
7	0	No dispensations applied.
8	8	Widespread and prolonged air traffic disruption due to weather.
9	6	Widespread and prolonged air traffic disruption due to weather.
10	46	Widespread and prolonged air traffic disruption due to weather.
11	7	Widespread and prolonged air traffic disruption due to weather.
12	0	No dispensations applied.
13	26	Widespread and prolonged air traffic disruption due to weather.
14	14	Widespread and prolonged air traffic disruption due to weather and runway closure at Tenerife Sur Airport.
15	6	Disruption due to drone activity.
16	7	Widespread and prolonged air traffic disruption due to weather.
17	104	Runway closure at Gatwick and widespread and prolonged air traffic disruption due to weather.
18	11	Widespread and prolonged air traffic disruption due to weather.
19	0	No dispensations applied.
20	14	Widespread and prolonged Air Traffic Disruption due to weather.
21	12	Widespread and prolonged Air Traffic Disruption due to weather.

Week No.	No. Dispensations	Reason for the dispensation
22	0	No dispensations applied.
23	34	Widespread and prolonged Air Traffic Disruption due to weather.
24	16	Widespread and prolonged Air Traffic Disruption due to weather and Hurricane Irma.
25	52	Widespread and prolonged Air Traffic Disruption due to weather and French ATC Strike.
26	0	No dispensations applied.
27	0	No dispensations applied.
28	0	No dispensations applied.
29	11	Widespread and prolonged Air Traffic Disruption due to French ATC Strike.
30	10	Widespread and prolonged Air Traffic Disruption due to weather.
31	6	Widespread and prolonged Air Traffic Disruption due to weather.

Annex: FED metrics

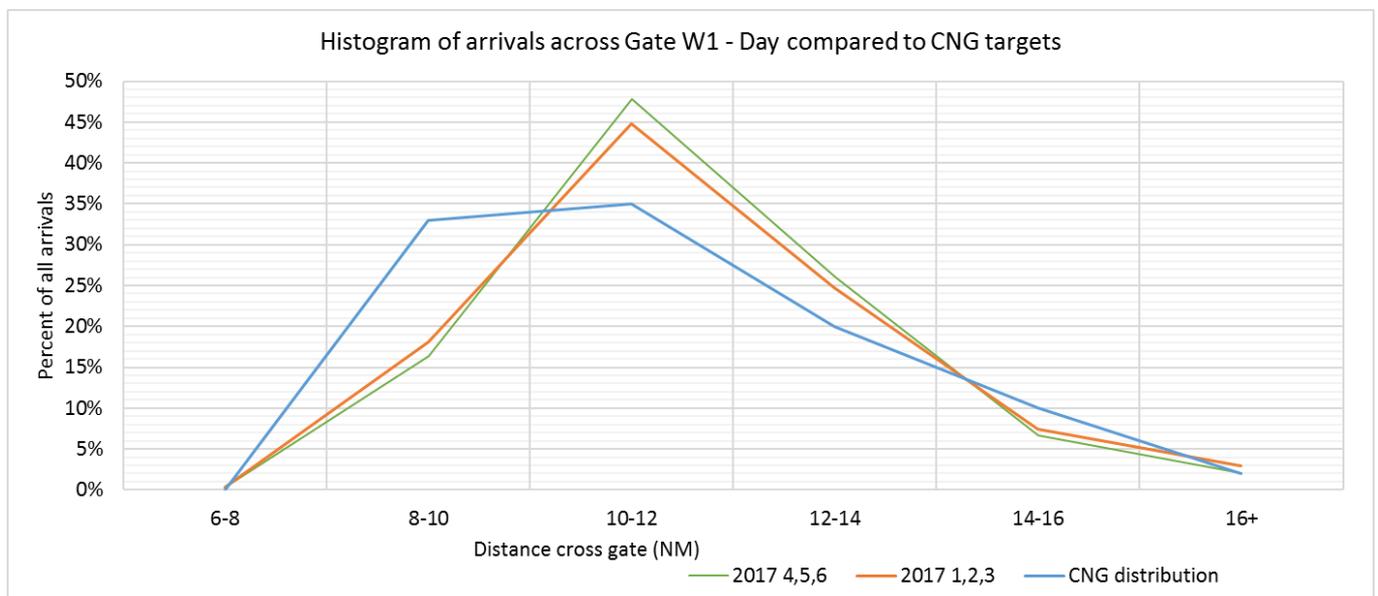
At NMB/6 in June 2017, an action was taken to develop noise impact metrics for Fair and Equitable Distribution (FED) swathe analysis and regular reporting to the NMB.

This analysis includes the delivery of arrivals heatmaps showing the vertical and lateral distribution of all arriving aircraft, along with analysis at 11 community defined gate locations (5 to the east of Gatwick covering westerly arrivals and 6 to the west covering easterly arrivals). For each gate the following charts are produced:

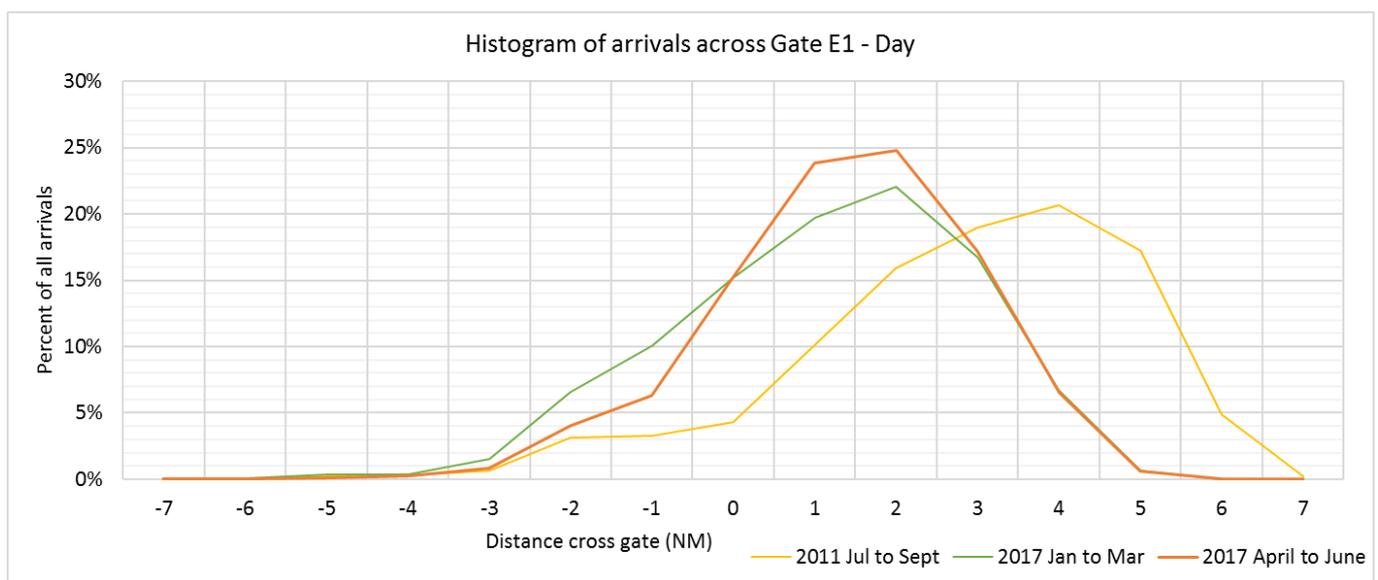
- A histogram showing the lateral dispersal of aircraft across the gate
- A 'rugby-post' chart showing the lateral and vertical dispersal of aircraft across the gate.

To date, two reports have been provided to the NMB covering the period from the 1st January 2017 to 30th June 2017. Due to the size and detail included in these reports only an extract of data is shown in this annex. This extract is based upon the gates located closest to the instrument landing system (ILS) joining point as this reflects the Community Noise Group proposed FED distributions in comparison to arrivals traffic.

ILS joining point distribution Runway 26



ILS joining point distribution Runway 08



Annex: Acronyms

ANMAC	Aircraft Noise Monitoring Advisory Committee
ANS	Air Navigation Services
CAA	Civil Aviation Authority
CDO/CDA	Continuous Descent Operations/Arrivals
CNG	Community Noise Groups
DfT	Department for Transport
FAS	Future Airspace Strategy
FED	Fair and Equitable Distribution
FLOPSC	Flight Operations Performance Safety Committee
FOPP	Fuel Over Pressure Protector
GAL	Gatwick Airport Ltd
GATCOM	Gatwick Airport Consultative Committee
ILS	Instrument Landing System
LTMA	London Terminal Manoeuvring Area
NADP	Noise Abatement Departure Procedure
NaTMAG	Noise and Track Monitoring Advisory Group
NATS	Formerly National Air Traffic Services
NERL	NATS En-Route plc
NMB	Noise Management Board
LAMP	London Airspace Management Programme
RNN	Reduced Night Noise
SID	Standard Instrument Departure
VIRG	Voluntary Industry Resilience Group