

## **GATWICK AIRPORT NOISE MANAGEMENT BOARD (NMB/10)**

**Wednesday 11<sup>th</sup> April 2018 - Hilton Hotel Gatwick**

### **Meeting Minutes**

#### **Welcome and Introductions**

1. The chairman opened the tenth meeting of the Gatwick Airport Noise Management Board, welcoming participants and noting apologies for absence.
2. During his introduction, the chairman referred to the important work that has been underway since the NMB met in January, and the issues that would be discussed at this April meeting. He noted that the first of the four NMB planned and issue specific workshops to be held in 2018, took place on March 14<sup>th</sup>. The topic was Reducing Night Noise and the planning of a related trial at Gatwick. This is a priority work stream for which at this meeting of the NMB, the chairman would be seeking agreement to continue the concept definition and planning work.
3. The chairman recalled that NMB workshop objectives are:
  - a) Aim to deep dive into NMB priority Workplan topics and facilitate improved collective community discussion
  - b) Where appropriate, to provide relevant background information and tutorials
  - c) To enable broader community engagement by including NMB members and those (currently 15) CNG participating in the community consensus agreement
  - d) Discuss viewpoints and develop conclusions for delivery to the NMB in information papers to help inform the direction of the NMB when progressing its Workplan
4. NMB members had also participated earlier in the day in an Aircraft Noise Metrics & Trends briefing. This was well received and should be expanded at future meetings to allow more time for discussion of the topics arising.
5. The chairman observed that NMB workshops have already increased the amount of information available to members and have facilitated a collective and open review and discussion of key topics, identifying key strategic pointers for the NMB in the reports of workshop output.
6. The chairman noted as a result, that the NMB is now able to make best use of the time and expertise available at its formal meetings to progress delivery of noise reduction strategies.
7. The NMB approved the proposed agenda for NMB/10 and was informed that, in addition to the items proposed, there is now a need to consider several longer-term planning issues. Firstly, the June NMB will review the draft of the 2019 Workplan; members are invited to propose issues for consideration. A draft plan will be circulated before NMB/11 for discussion, with the objective of agreeing a plan for 2019 at NMB/12 in September. The second question relates to the constitution of the NMB. All members are appointed for a three-year term, now is the time to reflect on how to learn the lessons of this initial period of NMB organisation and to consider what, if any, changes could assist the board going forward. NMB/11 will return to these issues.

**Agenda item 1: Approval of the Minutes of NMB/9**

8. The draft Minutes of NMB/9 were opened for comment. The chairman noted that on this occasion the draft minutes had proved more difficult than normal to agree.
9. The secretary reported that the CNG had brought forward two issues of contention that they had identified with the draft. These issues related to proposed record of the discussion of the RNN trial activity and of the discussion of the CNG growth and noise resolution.
10. The issues were discussed and resolved as a result of a bi-lateral meeting held on March 15<sup>th</sup> between the chairman, secretary, and CNG representatives.
11. No further comments were received from the NMB, the draft minutes for NMB/9 were then adopted and are now published on the NMB web pages.

**Agenda item 2: Review of Matters arising from NMB/9**

12. The secretary reported that each of the Actions arising from NMB/9 were now completed in accordance with the agreed timetable and are now closed. Any written material arising has been distributed to NMB using the Information Paper mechanism. NMB members are invited to provide feedback to VH of GAL on the calendar of meetings (NMB/10 IP07) and to advise what, if any, e-mail alerts they wish to receive.
13. Where a need for further discussion and strategic direction is a consequence of the NMB/9 actions, the topics are included in the agenda of NMB/10.
14. For NMB/9 Action 3, CNG are keen to be involved in the development of noise measurement metrics related to the RNN and accordingly submitted a discussion paper for consideration (NMB/10 IP05).
  - a) In setting out its key points, AF stressed that the discussion paper had been widely circulated and agreed by CNG, with the caveat that they are not noise professionals, but have sought the advice of To70. The paper has identified what CNG consider to be three key noise variables that should be considered for RNN trial planning;
    - I. LMax
    - II. Ambient Noise
    - III. Frequency of overflight
  - b) In the view of CNG, the use of currently applied average noise values will not enable sufficient accuracy of noise measurement when assessing the before and after impact of the proposed RNN trial. It is also clear in their view that the availability of a sufficient number of noise monitors is critical, many will be required to monitor impacted locations. Although the number and siting of noise monitors had yet to be planned, LH advised that in anticipation of increased demand for a noise monitoring capability across a number of activities a further 9 noise monitors have been acquired by GAL, these are due for delivery imminently and are expected to be available for the RNN trial.
  - c) SM cautioned that it will be necessary to use several noise metrics, rather than a single measure, to build a full picture. IH also called for the reporting that is developed for measuring the impact of RNN to be in a form that is easily communicated to and understood by residents. This guidance was acknowledged and noted by the NMB.

- d) In response to a question from SP, it was confirmed by AS/SM that the noise monitors will measure all noise, whether related to arriving or departing aircraft, and that noise contours reflect the totality of noise.
- e) The chairman thanked CNG for the useful input and proposed that the issues raised in the paper and NMB discussion should be put into the wider context of the planning of monitoring and reporting for the RNN trial to provide a fuller basis for NMB debate and any conclusion. **NMB/10 Action 1**

### **Agenda item 3: RNN Trial Planning and Process**

- 15. This priority objective of the NMB was first considered in mid-2016. It is intended to identify and validate viable mechanisms and procedures that are specifically able to reduce noise disturbance from aircraft arriving at Gatwick at night. This has led to the planning of the proposed Reduced Night Noise Trial, which has identified a number of complex and key considerations that are being addressed as a part of the NMB process.
- 16. The trial is intended to learn the lessons from the findings of other noise reduction initiatives at Gatwick. These include Continuous Descent Operations (CDO) and the recently completed study undertaken by Sussex University, related to Height Perception at Gatwick. This study identified some aircraft performance issues also seen in the CDO programme. By taking advantage of sophisticated aircraft trajectory management capabilities, the Reduced Night Noise trial is expected, through the automated flight of an optimum profile, to increase the height of arriving aircraft and to enable participating pilots to operate their aircraft in aerodynamically cleaner configurations, in both cases generating less noise from subject flights. CAA Guidance for noise mitigation considerations as set out in CAP 1378 will also be used to inform the planning.
- 17. An objective of the proposed trial will be achieved through use of mobile noise monitors and noise modelling (which will run in parallel), to measure and assess the noise measured both before, during and after the trial. The resulting noise data will be complemented with radar data overflight analysis. The use of these analysis methods will allow for the collection of objective, scientific data which can be used to assess the ability to achieve the high-level aim and objectives of the trial.
- 18. The trial plans, for a fixed 6-month period, to be operated under the CAA's airspace trial guidance (CAP1616). The trial will initially be operated between 0130 and 0500 as this is the period with the lowest level of traffic and thus affords the safest opportunity to introduce new procedures. LK proposed that stretch targets might be considered to increase the hours in which the trial is conducted, in order to if possible, capture more of the night time arrivals.
- 19. The chairman advised the NMB that the objective of the discussion at this NMB was to build on the work undertaken to date and to identify any further issues that should be considered in the planning process. The associated goal for NMB/10 being to reach an agreement to continue to refine the concepts and proposed operation of the planned trial, such that a fully informed decision on whether or not to proceed could be made later this year. The planned timing of the RNN trial will require a go/no go decision at NMB/11
- 20. NMB/10 was provided with seven papers related to the RNN trial planning and process, including outcomes from the workshops, proposed next steps and CNG views.
- 21. NM presented an overview of the progress to date and planned next steps (NMB/10 IP27) and answered a wide range of questions.

22. The CNG feedback, set out in NMB/10 IP33 was discussed at length during the presentation. The specific bullet points and summary proposals were considered and noted by the NMB, while acknowledging that because it takes a different view of the possible noise impacts, CAGNE does not agree with the proposal 4.2 of the CNG paper supporting the removal or variance of the current DfT noise abatement policy, that requires aircraft to join the ILS at a minimum of 10nm from touchdown at night. The NMB was informed by Helios that the scope of the RNN trial does not include any adjustments to the minimum ILS joining point.
23. CNG outlined their serious concerns that despite assurances to the contrary in the associated papers, that they do not trust that the choice of trial routes will not be used to inform LAMP2 permanent route choices.
24. DN suggested that the current proposals do not contain enough safeguards for communities, while the goal of a scientific noise gathering exercise is fine, the NMB should take steps to ensure that trial routes are not agreed for long term use. IH proposed that the NMB be provided with a set of quantifiable objectives for the RNN trial.
25. AS reminded the NMB that the only way to really impact noise in a significant way is through airspace change and the evolution of aircraft/engine technology. Among the objectives of the RNN trial is to prepare for the benefits of the long-term airspace solutions that the NMB has previously heard several times (from DM) as being essential for noise improvement.
26. The operational concepts for LAMP2 are not yet determined, there will be a need to establish how much capacity can be maintained in the RNAV operating environment. This is also related to the selection of very low traffic periods for the proposed RNN trial, which is an important step in that process.
27. SM pointed out that the proposed trial with the use of the planned noise monitors can also build on the work of CAP 1554, the CAA Review of Arrival Noise Control in identifying through monitoring, non CDO and non-LP/LD approaches.
28. AF observed that CNG are pursuing the FED objective, while the proposed trial is of a P-RNAV procedure that will be required to enable FED, the trial itself is not designed to be able to offer either FED or respite, although aircraft are expected to be higher and operated in quieter configurations. Acknowledging that FED may be the eventual outcome, the near-term prospect is for short term pain for long term gain. In which case CNG questioned what safeguards can be built into the planning to ensure that they can have confidence that the longer-term objectives will be a priority. CNGs also highlighted the challenges they have in communicating the trial plan and objectives and requested more support in this area.
29. CNG concluded their remarks concerning the trial as currently proposed, by noting their very serious reservations with the proposal, which they therefore could not support as it stands. Even so, recognising that noise benefits could accrue, CNG encouraged further NMB work over the coming weeks to address the more quantifiable objectives, communications and safeguards discussed.
30. Planning will continue, specifically to address these three issues and taking into account where possible, CNG views outlined in NMB/10 IP33, with an additional RNN workshop scheduled for May 23rd when it is intended that the outstanding criteria will be proposed and that any remaining questions will be discussed and resolved.
31. The chairman concluded the RNN discussion noting that it remains the NMB objective to reduce noise for those overflown, and noting two actions from the RNN debate:

- a) To develop proposals for quantifiable objectives, safeguards and a communications plan, to be discussed at an ad-hoc NMB RNN meeting which will be held in the morning of May 23, **NMB/10 Action 2**
- b) To gather more information on how RNAV technology for arrivals can be used during busier traffic periods, in particular during the early night and shoulder period arrival peaks. **NMB/10 Action 3**

#### **Agenda item 4: NMB Workplan and Implementation Report**

- 32. Helios presented the status of the NMB Workplan activities and provided an update for all activity areas (NMB/10 IP10), NMB discussion focussed on several specific topics.
- 33. *Fair and Equitable Dispersal*. NATS has previously reported to the NMB that some potential scope for near term FED improvements had been identified from the outcomes of an internal NATS FED workshop. This considered four preliminary options for reducing disturbance prior to the LAMP2 airspace redesign.
  - a) Further work at NATS indicated that the only potentially viable option is the increased use of airborne holding, which required operational simulation and analysis to validate the initial assumptions.
  - b) RC reported the findings of this analysis provided to NMB as a NATS desk top and simulator report of the Hold vs Vector FED initiative (NMB/10 IP32). The NMB was informed that contrary to earlier expectations, the simulation exercises had demonstrated that the proposed technique had negative consequences for holding capacity for Gatwick *and* other London airports, and negative implications for CDA performance and runway capacity at Gatwick. It has not been possible for NATS to confirm in the simulation any predictable FED benefit for Gatwick.
  - c) AF responded that for CNG, this process had shown particularly poor expectations management by NATS, CNG had expected to see some FED improvement as a result of this NATS work. RC agreed to revisit the issue at NATS to verify whether any potential to improve FED can be found and invited suggestions from NMB that could be considered by NATS. **NMB/10 Action 4**
  - d) NM reported that the FED gate monitoring and reporting was still suffering from data integrity management issues, which require resolution. However, that the necessary remedial measures were being taken by CASPER. The FED reports including back dated information is expected to be provided to NMB members during May. This should allow NMB to determine to what extent dispersal of flights has changed compared to 2011.
  - e) CNG expressed serious disappointment that FED data was still not available.
- 34. *IMM-15 Report of Height Perception Research Activity*<sup>5</sup>. GAL provided an overview of the next steps plan (NMB/10 IP19) that has been developed to respond to the findings and conclusions of the Imm-15 height perception research.
  - a) As part of the program to address outliers, the Gatwick Airport Ltd Flight Performance Team (FPT) is working with Helios to review data gathered through specific activities such as follow up from the CDO workshops, RNN workshop and

trial analysis, where track analysis has identified flights flying lower than the 25% percentile.

- b) The airlines operating these flights will be directly engaged with through the FPT and a targeted dialogue commenced to understand reasons, circumstances, views and ways forward to resolution.
- c) Currently, the FPT are reviewing how it engages with airlines to drive continuous improvement. The team are updating their airline contact database and has met with the Airline Operators Committee (AOC). As and when required, the team carry out dedicated one-to-one meetings with airlines, the most recent airline meeting took place in early April.
- d) Opportunities for coordinated airline engagement between UK airports that experience common airline performance issues is also being proactively explored through NATS and Sustainable Aviation.
- e) The airline briefing pack has been developed and is currently under review, reflecting recommendations from the FPT to help improve non-Gatwick based pilot briefing of CDO.
- f) The FPT is also working with Helios to progress NMB Activity 4 which aims to develop an Airline League Table. The implementation of this is expected to also assist with continuous improvement of airlines in addressing CDO outliers.

35. *Low Noise Approach KPI Activity 9*. The NMB was updated on the research and development of a definition for a low noise arrival, the activity does not replace the existing CDO definition, it will be complementary to it. The activity is now about 25% complete.

- a) A refined arrival noise model is being developed to take better account of aerodynamic noise and to determine noise exposure of a wide range of arrival trajectories (analysing up to 20 distinct trajectories) while considering any operational practices and trade-offs.
- b) A series of potential low-noise arrival definitions are being developed for test against historic flight trajectory data for Gatwick and other UK airports. The work will also support the development of appropriate monitoring systems.
- c) 4 aircraft types have been selected for study:
  - Bombardier Dash 8 Q400
  - Airbus A320
  - Boeing 787-8
  - Airbus A380
- d) A refined noise prediction tool is being developed, including airframe noise prediction to capture speed, flap and gear down changes. The tool will be used to predict noise levels for a range of CDA and non-CDA profiles to inform a low-noise approach definition based on both measured and calculated data.

36. *Departures Workplan Activity 14 Standardise Noise Abatement Departure Procedures (NADP)*. NADP was discussed at the FLOPSC workshops in October and November 2017. In terms of fuel burn, NADP2 is preferable, the majority of departures from Gatwick already fly NADP2. Analysis shows that fewer people are affected by noise near Gatwick when NADP2 is used and thus it is proposed to be adopted as the Gatwick recommended procedure. This analysis has been shared with NaTMAG as it will ultimately be a performance issue monitored through NATMAG.

- a) A final decision on implementation of NADP2 has been deferred awaiting the results of an ANMAC study to see if the preference for NADP2 is confirmed. The conclusion of the first stage of the ANMAC study was presented at the ANMAC Technical Working Group in March and provided detailed noise analysis based on the Emirates A380. It was suggested that ANMAC consider data from the A320 as this is more representative of aircraft flying at other airports. The CAA are now undertaking this analysis, it will be reported to ANMAC and provided to the NMB when available.
- b) A safety question regarding NADP was also raised at the recent FLOPSC meeting in March regarding concerns at the mixed use of NADP1 and 2. If the safety issue is confirmed, then changes will be implemented without delay to standardise on NADP2.
- c) GAL will await the results from CAA work and report back through NMB and NaTMAG, pending the outcome of safety issues.

37. *Departures Workplan Activity 15&19.* Activity 15 has been focussed on Route 4 work due to the CAA request for GAL to consider an undertaking following the PIR. This work has paused due to an ongoing Judicial Review brought about by Plane Justice Ltd against the CAA. Activity 19 work is addressed through the Trax Feasibility and Options study on Route 3 reported to NMB/9 and included in NMB/10 Documentation as IP22.

38. *Other issues: VOR Rationalisation and SID truncation.* SID truncation is simply the process of shortening SIDs by creating an earlier SID termination point. There are no changes to lateral or vertical profiles of the SIDs, so this does not change the tracks that aircraft fly or their altitudes. From the point at which the SID is truncated it is replaced with a 'link' route that follows the existing ground track SID. Truncation will remove some of the dependencies on the VOR (a legacy navigation aid) network which is being progressively withdrawn as part of a UK-wide programme.

- a) Airlines are currently required to carry fuel for the full length of a SID (i.e. CLN 103 nm) but invariably are given clearance to climb much earlier. SID truncation reduces the flight plan fuel requirement and the subsequent fuel uplift and so reduces CO2 emissions
- b) Furthermore, the SID truncations will address regulatory compliance where there are legacy issues relating to naming conventions and the protection of controlled airspace afforded to each route.
- c) The VOR removal programme continues but some removal milestones may slip.
- d) The first phase of truncations will mean Gatwick SIDs using SAM and KEN will be truncated and changes implemented 24 May 18 (AIRAC 6/18). The SIDs are to be re-named NOVMA and IMVUR. Other SID truncation phases (inc. CLN, SFD and BOGNA) are likely to occur in Autumn 2018.

39. *Growth and Noise.* In relation to the new priority work stream for growth and noise, a bi-lateral meeting has taken place between CNG and GAL, at which the NMB chair and secretary were also present. The purpose being to advance discussions on the interpretation of policy and the development of growth and noise metrics. Next steps were

agreed between CNG and GAL. Meanwhile the NMB Workplan Activity 2, review of NMB Metrics, will be expanded to include the wider growth and noise work stream detail and carried forward into the draft 2019 NMB Workplan.

40. The NMB was provided with a summary and status of all on going Workplan implementation activity (NMB/10 IP10). This includes the range of on-going incremental measures, some of which have already been implemented and which (through monitoring and reporting) are shown to be improving noise performance at Gatwick.
41. Perhaps the most significant of these relates to the Airbus A320 family aircraft, a type used by airlines more frequently than any other aircraft at Gatwick. A new charging scheme was proposed to Gatwick by the Arrivals Review in order to incentivise operators to adopt an aircraft modification proven to reduce noise for this aircraft type. GAL implemented such a scheme on schedule at the beginning of this year, it is the first airport in the world to introduce this differential charge designed to incentivise noise modifications for this family of aircraft.
42. Of flights by Airbus A320 series at Gatwick, 97% are now operated by modified aircraft, each flight generated less noise (up to 9db) than the flights operated by aircraft not yet modified. For the first 3 months of 2018, on average just 6 arrivals per day were made by aircraft of this type still to be modified.

#### **Agenda item 5. END Noise Action Plan**

43. The Environmental Noise (England) Regulations 2006 require that airports in England produce a Noise Action Plan (END NAP). The third version of this plan will be for the 2019-2024 period. The NMB discussed the development of the new plan for Gatwick. Defra's guidance identifies GATCOM as the main vehicle for consultation in the review of the END NAP.
44. The NMB Workplan will form part of the Gatwick END NAP submission for the first time. CNGs have provided their views to Gatwick on the proposed list of actions to be included in the plan and also on the subsequent draft reviewed END NAP. It is expected that as a result of feedback received from consultees that the END NAP for this next period will be more outcome based, with more robust monitoring and reporting. The iteration of the draft plan is continuing, GATCOM will consider its response to GAL's consultation on the draft reviewed END NAP at its meeting on 26 April.
45. In the meantime, PS reported that GATCOM has highlighted to the parties to the Section 106 agreement of the need to ensure the monitoring and audit regime for Gatwick's action plans provides the right mechanism, to actively assess on a regular basis GAL's performance in delivering the actions in the NAP.

#### **Agenda item 6: CNG/GACC LAMP2 Statement**

46. The NMB discussed the London Airspace Management Programme for airspace modernisation. CNG and GACC had previously submitted a paper to NMB/9 setting out their views on the LAMP planning and implementation process (NMB/10 IP09), in particular raising questions about LAMP2 governance, organisation and leadership. During the discussion, CNG representatives made a number of related comments.
  - a) CNG consider that it is clear that providing capacity to meet medium to long term forecast demand is the primary aim of LAMP2. Whilst NATS and GAL also refer to potential environmental and noise benefits from LAMP2, these are not articulated as objectives in the same way as the overriding aim to meet demand and are not given equivalent priority. The industry appears to see environmental benefits either

- as something that will be achieved as a consequence of LAMP2 changes, for example that reductions in track miles will lead to reductions in emissions, or, in the case of noise, as a secondary matter.
- b) CNG consider the industry's focus on meeting demand and maximising capacity to be unbalanced and inappropriate. For instance, CNG noted that NATS have assumed that environmental benefits need only be on a per plane basis which could suggest that a total noise increase is acceptable.
  - c) CNG also commented on the longstanding absence of any party representing strategic community and environmental interests in the LAMP process and the wider FAS programme. In the view of CNG, this has contributed to the lack of balance and transparency in LAMP development. NATS have also indicated that the LAMP2 airspace modernisation at higher levels is a Level 2 airspace change, thus avoiding community consultation.
  - d) CNG and GACC have accordingly proposed that NATS and GAL together with other London area airports as necessary should develop a set of overarching principles and mechanisms, and revised aims for LAMP2.
  - e) RC provided an overview of the NATS process, noting that a LAMP2 feasibility report is being prepared for delivery next month to the Secretary of State. RC also pointed out that while LAMP2 is a higher-altitude airspace programme, the related Future Airspace Strategy Implementation South FAS(S) programme incorporates the lower airspace around airports which *will* require community consultation. It was noted by GAL that any airspace change would follow the CAP 1616 Airspace Design Guidance.
  - f) Given the timescales involved (several years of planning and concept development), NMB agreed to note these CNG/GACC comments, together with information provided by NATS, and to plan to review the LAMP programme in detail. NMB will return to these questions in preparation for the FED/LAMP work shop scheduled for November 2018, and also to address the topic in the NMB public meeting scheduled for December.
  - g) Further interim updates will be provided to NMB as required. This is expected to include a copy of the NATS feasibility study which has been prepared for submission during May 2018 to the Secretary of State for Transport.

#### **Agenda item 7: Any Other Business**

47. The NMB discussed the departure related activities featuring in the current NMB Workplan, as well as hearing an update on the Route 4 post Judicial Review discussions with CAA and others.
- a) MW raised several issues related to departures, again calling for more NMB attention to these issues. MW regards the questions addressed at NMB/9 concerning the Trax Feasibility and Options report (NMB/10 IP22) as not fully answered, with insufficient evidence provided for the conclusions.
  - b) AS responded that although the work on Route 4 would not be advanced at this stage due to the decision to quash the Route 4 Post Implementation Review decision, Trax have been progressing work to identify the means for eliminating the initial altitude restriction on Route 3 departures imposed by Heathrow traffic and would be engaging directly with Heathrow.
  - c) SP also called again for a review of all departures.

- d) AS confirmed that Trax has the capacity to carry out a Feasibility and Options Analysis on other departure routes and other departure related issues/concepts in addition to the on-going work on Route 3 (but not all in the same sort of time frame).
- 48. The chairman noted that the NMB Departures Work Shop will take place on May 23<sup>rd</sup>, providing an opportunity to deep dive into all of these issues. He accordingly proposed that detailed discussion be planned for that occasion, inviting all NMB Members to suggest in writing by May 4<sup>th</sup> departure topics for discussion on the day. **NMB/10 Action 5**
- 49. The chairman thanked members for their contributions and closed the meeting at 17:00.

### Schedule of NMB Meetings

The following NMB Meeting and Workshop dates have now been confirmed:

- |  |                   |
|--|-------------------|
| ○ NMB Workshop, Departures                         | 23 May 2018       |
| ○ NMB/11   | 27 June 2018      |
| ○ NMB Workshop, NMB Workplan 2019                  | 22 August 2018    |
| ○ NMB/12   | 26 September 2018 |
| ○ NMB Workshop Fair and Equitable Dispersal/LAMP2, | 28 November 2018  |
| ○ NMB/Airspace Public Meeting                      | 05 December 2018  |

### Attendance List NMB/10

<b>Member</b>	<b>Representative</b>	
Air Navigation Solutions	Markus Biedermann	(MB)
Department for Transport	Ian Greene	(TM)
Gatwick Airport Limited	Andy Sinclair	(AS)
NATS	Robin Clarke	(RC)
GATCOM	Paula Street	(PS)
Kent County Council	Michael Payne	(MP)
Surrey County Council	Helyn Clack	(HC)
West Sussex County Council	Liz Kitchen	(LK)

<b>Community Noise Group Pairs</b>	<b>Member/Alternate</b>	
APCAG/HWCAAG	Ian Hare*	(IH)
CAGNE/Plane Wrong	Sally Pavey*/Mike Ward	(SP/MW)
ESSCAN/TWAANG	Dominic Nevill*/Irene Fairbairn	(DN/IF)
PAGNE/GON	Atholl Forbes*/Martin Barraud	(AF/MBa)
CNG Coordinator	Charles Lloyd	(CL)
* CNG Speaking role		

<b>Noise Management Board</b>		
Chairman	Bo Redeborn	(BR)
Secretary	Graham Lake	(GL)
NMB Assistant (GAL)	Vicki Hughes	(VH)

<b>Observers and Presenters</b>		
ERM	Steve Mitchell	(SM)
Gatwick Airport Limited	Lee Howes (Chair NATMAG)	(LH)
Gatwick Airport Limited	Dawn Nigli	(DNi)
Helios	Katie Mathias	(KM)
Helios	Nick McFarlane	(NM)
Plane Justice	Chris Quinlan	(CQ)
To70	Ruud Ummels	(RU)

<b>Apologies</b>		
Airline Operators Committee	Douglas Moule	(DM)
Civil Aviation Authority	Mark Simmons	(MS)
East Sussex County Council	Rupert Simmons	(RS)
GATCOM	John Godfrey	(JG)
HWCAAG	Richard Streatfield	(RS)
NATS	Ian Jopson	(IJ)

### Summary of Actions

<b><i>NMB/10</i></b>	<b><i>Action</i></b>	<b><i>Due</i></b>	<b><i>Responsible</i></b>
<i>ACTION 1</i>	The issues raised in the CNG discussion paper on RNN metrics (NMB/10 IPO6) and related NMB discussion should be put into the wider context of the planning of monitoring and reporting for the RNN trial, to provide a fuller basis for NMB debate and conclusion. NMB/10 Action 1	<i>RNN work shop May 23</i>	<i>Helios/ERM</i>
<i>ACTION 2</i>	To develop proposals for more quantifiable objectives, safeguards and a communications plan, to be discussed at an ad-hoc NMB RNN meeting which will be held on the morning of May 23	<i>RNN meeting May 23</i>	<i>Helios/GAL</i>
<i>ACTION 3</i>	To gather more information on how RNAV technology for arrivals can be used during busier traffic periods, in particular during the early night and shoulder period arrival peaks.	<i>RNN work shop May 23</i>	<i>Helios/NATS</i>
<i>ACTION 4</i>	NATS to continue to review options for FED improvement prior to LAMP2 and verify whether any potential can be found. NATS will also consider other FED proposals arising from the NMB	<i>NMB/11</i>	<i>NATS/all</i>
<i>ACTION 5</i>	NMB Members to propose in writing by May 4th departure topics for discussion at the Departures Workshop	<i>May 4th</i>	<i>All NMB Members</i>

**Annex 1. Meeting Documentation NMB/10**

<b>Paper</b>	<b>Agenda Item</b>	<b>Title</b>
NMB/10		
<b>WORKING PAPERS</b>		
WP01		NMB/10 Proposed Agenda
WP02	1	NMB/9 Draft Minutes for Ratification
WP03	2	Reduced Night Noise – Next Steps
<b>INFORMATION PAPERS</b>		
IP01		NMB/10 Meeting Documentation - issue 2
IP02		Preview of NMB/10
IP03	2	NMB/9 Matters Arising: Action List
IP04	2	NMB/9 Action 2 CAA good practice principles for environmental charging.
IP05	3	NMB/9 Action 3 CNG proposals for RNN trial noise metrics
IP06	2	NMB/9 Action 4 Letter from NMB Chairman to NATS CEO
IP07	2	NMB/9 Action 6 NMB/GATCOM/NatMAG calendar of meetings
IP08	2	NMB/9 Action 8 Existing growth and noise metrics
IP09	6	CNG/GACC LAMP2 Statement (NMB/9 IP07)
IP10	4	NMB Implementation Report
IP11		Reserved
IP12	4	FED Report
IP13	4	Airbus A320 Flights at Gatwick by unmodified aircraft
IP14	6	LAMP2 NATS Airspace Modernisation Briefing to SoS
IP15		NMB Workplan Implementation Steering Group Minutes
IP16		Letter from NATS CEO to NMB Chairman (re NMB-9 Action 4)
IP17		Reserved: Persistent Complaints
IP18	4	Activity 5: Imm-15 Height Perception Research Final Report & Presentation
IP19	4	Activity 5: Imm-15 proposed next steps
IP20	4	Activity 9: Low Noise Arrivals KPI development progress update
IP21	5	Environmental Noise Directive Noise Action Plan 2019-2024 V2.01
IP22		Trax Departures Report from NMB/9
IP23		FLOPSC Report Nov-Dec 2017
IP24		Correspondence GAL to CNG January 2018;
IP25	3	RNN Industry Workshop outcome
IP26	3	RNN NMB Workshop 14 March 2018 Report
IP27	3	RNN NMB Workshop Presentation 14 March 2018
IP28		Activities: 14,15, 19 & 20 Departures
IP29		NaTMAG Minutes Draft Final
IP30	3	RNN Technical Workshop summary
IP31	5	CNG Comments on Draft END Noise Action Plan 2019-2024 V2.01
IP32	4	NATS FED Hold vs Vector Report
IP33	3	CNG Comments Reduced Night Noise
IP34		CNG Comments on GAL'S Presentation on Government Noise Policy
<b>External PAPERS</b>		
FL01		
FL02		