

**Heathrow Airport Limited**

**Noise Action Plan  
2013 – 2018**

**Audit Report 2016**

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## **1.0 Introduction**

- 1.1 The Environmental Noise (England) Regulations 2006, as amended, require airports covered by the Environmental Noise Directive (2002/49/EC) (END) to produce, periodically, noise action plans.
- 1.2 Heathrow Airport is covered by the requirements of the END and has published a Noise Action Plan (NAP) for the period 2013 -2018. The content of the plan reflects the guidance published by the Department for Environment, Food and Rural Affairs (Defra) in July 2013<sup>1</sup>.
- 1.3 Stephen Turner Acoustics Limited (STA) was appointed by Heathrow Airport Limited (HAL) in June 2015 to undertake an annual independent audit of the progress being claimed by HAL to have been made against the actions set out in the NAP.
- 1.4 The first audit carried out by STA was undertaken in 2015 and the results were presented in report reference: st/15/19, dated November 2015.
- 1.5 The findings from the 2016 audit are presented in this report.
- 1.6 Section 2 describes the process followed for determining the details of the audit and Section 3 describes how the audit was undertaken. Section 4 sets out the results of the audit and Section 5 contains a summary of the conclusions and the verification statement.

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<sup>1</sup> "Guidance for Airport Operators to produce noise action plans under the terms of the Environmental Noise (England) Regulations 2006 (as amended)", Defra, 2013

## 2.0 The Selection Process for Actions to be Audited

2.1 In Section 9 of the NAP, HAL states that:

*We will produce a summary noise action plan progress report on an annual basis which will detail activity against all of the actions within the plan.*

2.2 The originally published 2013-2018 NAP contained 44 actions sub-divided into the following five generic areas:

- Quieter Planes (5);
- Quieter Procedures (10);
- Land Use Planning and Mitigation (8);
- Operating Restrictions (5); and
- Working with Local Communities (16)

The figures in parentheses indicate the number of separate actions in each category.

2.3 The NAP was updated in October 2016 and included some revisions to the actions previously listed. The generic areas remained the same but the number of actions in each was altered as follows:

- Quieter Planes (6 formerly 5));
- Quieter Procedures (10 unchanged);
- Land Use Planning and Mitigation (8 unchanged);
- Operating Restrictions (5 unchanged); and
- Working with Local Communities (15 formerly 16)

2.4 In some instances, the description of actions had also been updated.

2.5 It is understood that the progress report for 2015 was provided to members of the Heathrow Noise Forum (HNF) at a meeting held on 17<sup>th</sup> March 2016. That progress was based on the revised actions formally published later in the year.

2.6 In order to reduce some of the confusion that was apparently arising between the HNF and the Heathrow Community Noise Forum (HCNF), it was decided to change the name of the HNF to the Heathrow Strategic Noise Group at a meeting held on 21<sup>st</sup> July 2016.

- 2.7 A further change in name, to Heathrow Strategic Noise Advisory Group (HSNAG), was agreed at a meeting held on 14<sup>th</sup> September 2016. For the remainder of this report, the acronym HSNAG will be used when referring to this group.
- 2.8 The previously agreed protocol for the audit involved the HSNAG suggesting ten specific actions to be audited. The independent auditor would select a further five actions so that a total of 15 actions would be audited in any one year.
- 2.9 HAL liaised with members of HSNAG in the Spring of 2016 and the ten actions identified for audit were agreed by HSNAG at its meeting on 21<sup>st</sup> July 2016. These actions are shown in Table 1.

**Table 1**  
**Actions selected by the HSNAG for auditing (by category)**

<b>Category</b>	<b>Action Number</b>
Quieter Planes	1.04,
Quieter Procedures	2.03, 2.05, 2.07, 2.10
Land Use Planning & Mitigation	3.05
Operating Restrictions	4.03
Working with Local Communities	5.02, 5.07, 5.08

- 2.10 The process adopted by STA for selecting the remaining 5 actions for audit took account of the following:
  - Achieving a balance across the five categories;
  - Auditing the new action added in the October 2016 update (1.06); and
  - Those actions that seemed to be pertinent to the current issues regarding noise management at the airport
- 2.11 As a result STA selected the following actions for audit, shown in Table 2 below:

**Table 2**  
**Actions selected by STA for auditing (by category)**

Category	Action Number
Quieter Planes	1.06
Land Use Planning & Mitigation	3.08
Operating Restrictions	4.01
Working with Local Communities	5.03, 5.15

2.12 Table 3 sets out all the actions selected for audit:

**Table 3**  
**Actions selected for auditing (by category)**

Category	Number	Action
Quieter Planes	1.04	With the aim of minimizing and where possible reducing the 50dB Lnight 8 hour contour we will introduce a target for the total quota count points (QC) for the 2300-0700 period and publish performance against this target. This is a voluntary target and is intended to demonstrate the improving noise performance of aircraft operating at night. It is not part of the DfT's Night Flying Restrictions regime.
	1.06	We will establish an independent audit process to ensure our systems for recording noise certification data are robust by 2016.
Quieter Procedures	2.03	Building on the principles of the FlyQuiet Programme and in support of the noise related requirements of Arrivals Code of Practice (ACOP) and Departures Code of Practice (DCOP) and to improve compliance with the AIP, we will establish minimum performance standards, and establish a process for monitoring performance against these standards.
	2.05	We will analyse the number of late running aircraft operating after 2330 local (excluding periods of significant disruption). We will review the reasons, and will seek to reduce the number.
	2.07	Working with local communities and the Heathrow Noise Forum, and subject to the governance of the Noise Steering Group (NSG), we will identify opportunities to develop quieter procedures and agree a programme of trials and activities in line with the Airspace Modernisation Programme. These will be reviewed annually and new actions added as appropriate.
	2.10	In order to manage ground noise, we will continue to apply our operating practices including those in the relevant OSIs. Where any problems are identified, we will set out a programme to address issues.

Category	Number	Action
Land Use Planning & Mitigation	3.05	As part of our current insulation schemes we will undertake an annual survey of recipients to measure their overall satisfaction with scheme.
	3.08	We will seek to work with local authorities to monitor new residential and community building developments on an annual basis. We will track this together with the annual population statistics published with our noise contours.
Operating Restrictions	4.01	We will continue to implement our night restriction regime in line with government policy.
	4.03	We will continue to monitor our voluntary arrangement for arrivals scheduled between 0430-0600 (local) not to arrive prior to 0430.
Working with Local Communities	5.02	We will improve our communications to residents by 1) relaunching the Heathrow Noise website in 2014, making better use of graphics and animation; providing timely and relevant information including daily operational web updates; regularly issuing noise reports including the FPU reports, annual contours, trial and community noise reports; computer animations to explain operations at Heathrow and 2) launching a social media service by December 2013 to keep people updated on unscheduled changes to operations which impact on noise.
	5.03	We will positively respond to requests to attend public meetings regarding aircraft noise, airspace modernisation and expansion plans. We will establish the Community Noise Forum (CNF) and agree a work plan.
	5.07	Build upon Heathrow's noise communications and develop a targeted benchmarking process with local shareholders. Run a workshop session and use outputs to improve our communications tools and activities.
	5.08	We will continue to direct all money raised by departure noise infringements to the Heathrow Community Fund to distribute to community projects in the Heathrow airport area.
	5.15	Through the Heathrow Noise Forum and our development of the My Neighbourhood module, we will work with our stakeholders to further enhance the metrics we use to describe our noise impact throughout the 5 year action plan programme by the end of 2017.

2.13 The reasons for the STA selections were as follows:

1.06 This is a new action that was added with the October 2016 revision of the NAP, seeking to improve the robustness of the noise certification data held and used by the airport.

3.08 This action was audited in 2015 when the conclusion was:

*Circumstances beyond HAL's control have disrupted progress on this action. At the moment, the conclusion is: Agree that this action is "On track". However, it is recommended that this action is kept in focus to try to avoid it drifting.*

Given this outcome, it seemed appropriate to see what progress had been made in the past year.

4.01 This action was also audited last year. Managing the impact of night flights continues to be a key element of the overall noise management of the airport. A process was developed last year to check the

consistency of information provided regarding night flights. Given the importance of this issue, there was merit in examining this action again. Furthermore, by selecting an action from this group provided balance across the action categories.

- 5.03 This action was selected because the description of the action had changed with the October 2016 update of the NAP.
- 5.15 Although audited in 2015 (when it was numbered 5.16), the issue of metrics remains topical and appropriate for auditing.



### 3.0 The Audit Process

3.1 Once the selection of the actions for auditing had been completed, HAL identified the owners of the various actions that were to be audited. They were as follows:

**Table 4  
HAL Action Owners**

Number	Action Owner
1.04	P.Rafano
1.06	R.Norman
2.03	Z.Bazso
2.05	P.Rafano
2.07	P.Rafano
2.10	S.Thomas
3.05	D.Young
3.08	R.Norman
4.01	P.Rafano
4.03	P.Rafano
5.02	C.Monk
5.03	C.Monk
5.07	C.Monk
5.08	C.Monk
5.15	R.Norman

3.2 STA was supplied with a copy of the Noise Action Plan Progress Report for 2015. The information supplied for each action included the following:

- The Action Description;
- Performance Indicator;
- Target;
- Progress in 2015; and
- The status at the end of 2015;

3.3 For the 2015 progress report, there were three different types of outcome available for inclusion in the status for the various actions. These were:

- On track;
  - Complete; and
  - Behind - Not at Risk
- 3.4 Unlike in the progress report for 2014, which was audited in 2015, no actions were stated to be “Behind - Not at Risk”.
- 3.5 For each action, the focus of the audit was to examine the Target, the claimed progress in 2015 and the status, to determine whether there was evidence to support the assertions made.
- 3.6 Arrangements were made for STA to meet with the various action owners and a total of five such meetings took place in October and November 2016. STA asked a range of questions relating to the relevant action in order to understand the implementation that had occurred. Some supporting information was supplied to STA at those meetings, and in some cases, HAL were asked to supply additional evidence. Some of this information was received during October and November 2016. Further information was subsequently sought in December 2016, but this request coincided with a staffing re-organisation at HAL and meant that there was a delay in receiving the additional data. STA did manage to secure some of the required information via publicly available sources, but the final details were only delivered in February 2017.
- 3.7 For action 5.08, concerning the allocation of funds arising from airlines breaching departure noise limits to the Heathrow Community Fund, further liaison occurred in March 2017 aimed at clarifying various details.
- 3.8 The 2015 NAP progress report is understood to set out the position at the close of 2015. The audit observations reported here are based, in part, on what information was available at, primarily, October / November 2016. For some actions, therefore, further progress had occurred since the position at the end of 2015, and that progress is reflected in this audit.

**4.0 Results of the Audit**

- 4.1 In this section, each audited action is considered in turn, setting out details of the relevant information obtained. Conclusions are drawn about the accuracy of the statements in the Noise Action Plan Progress Report 2015.

**Quieter Planes– Action 1.04**

4.2 Table 5 shows the relevant information from the Progress report for this action:

**Table 5  
Information taken from the Progress report for Action 1.04**

Action	With the aim of minimizing and where possible reducing the 50dB L <sub>night</sub> 8 hour contour we will introduce a target for the total quota count points (QC) for the 2300-0700 period and publish performance against this target. This is a voluntary target and is intended to demonstrate the improving noise performance of aircraft operating at night. It is not part of the DfT's Night Flying Restrictions regime.
Performance Indicator	Agreement of a night-time QC target based on tracking the moving annual total QC points
Target	To publish an annual target once the new night restrictions have been determined by Government
2015 Progress	Target defined and agreed internally but subject to further review for 2016 target onwards due to achieving better than anticipated performance of reducing late runners flights. New targets anticipated Q2 2016
Status	On Track

- 4.3 The heart of the current night noise management regime at the airport provides control over the so-called Night Quota Period (NQP) which covers 23.30 – 06.00 hours. For many years, the planning regime has considered night in terms of the 8-hour period between 23.00 and 07.00, generally described as the Night Period (NP). The advent of the Environmental Noise Directive (END) and associated Regulations required information regarding the impact in that 8-hour period to be generated.
- 4.4 The Night Noise Guidelines for Europe published by the World Health Organisation in 2009 provided information in terms of the L<sub>night</sub> indicator, which is a measure for the noise exposure for an annual average 8-hour night period. Consequently, whilst the primary management regime considers the NQP, there is merit in monitoring the impact over the Night Period.
- 4.5 The regime for the NQP limits both the number of movements and also the Quota. To determine the Quota, each individual aircraft is assigned a Quota Count value based on the noise it generates as defined by the noise

certification process. The Quota is the total number of QC points associated with the aircraft that operated in the period of interest.

- 4.6 In order to determine an appropriate target for the Night Period in terms of Quota, it is understood that actual data from previous years were compiled. The assessment was based on a calendar year. As indicated in the progress statement, although a provisional target had been identified, it was realised that during the most recent year, the success of the policies that had been implemented to reduce the number of late running departures (i.e. those scheduled to leave before 23.00 but which actually leave after that time), the baseline value may not be truly representative.
- 4.7 Consequently, a revised proposed target is still undergoing review. However, the new target has not yet been agreed.
- 4.8 As mentioned in the Target, there is a dependency with this action on the limits imposed by the Government for the NQP. The current regime runs to October 2017 (see Action 4.01), and a consultation on the proposed limits has, at the time of writing, just finished.

#### ***Observation***

- 4.9 The delay in confirming a Quota target for the 8-hour period is understandable. Hopefully, during 2017, the outcome of the Government consultation on the limits in the NQP will be known and the baseline position will be clear so that a target can be identified.

#### **Auditor's Conclusion**

- 4.10 Agree this action is "On Track".

**Quieter Planes – Action 1.06**

4.11 Table 6 shows the relevant information from the Progress report for this action:

**Table 6  
Information taken from the Progress report for Action 1.06**

Action	We will establish an independent audit process to ensure our systems for recording noise certification data are robust by 2016.
Performance Indicator	Number of erroneous entries
Target	No erroneous entries in our noise certification database identified
2015 Progress	After liaising, the CAA agreed to pick up task. It is scheduled for mid-2016.
Status	On Track

- 4.12 This is a new action that was added to the revised NAP published in October 2016. It recognises the importance of the accuracy of the database used to confirm the noise certification values of specific aircraft. These data affect the charges incurred by the aircraft when using the airport and also the implementation of the night noise regime.
- 4.13 There was a concern that there were inconsistencies in precisely how different airlines sign off the noise certification data for their aircraft. This was demonstrated by information which was supplied from the database for three aircraft types showing a range of values from different airlines even though the engine type and mean maximum take-off weight were the same.
- 4.14 The Environmental Research and Consultancy Department (ERCD) of the Civil Aviation Authority (CAA) were approached to undertake an audit of the accuracy of the database. The outline plan was that over the coming 3 years some 20% of the database would have been audited. That timescale is relevant because the European Aviation Safety Agency (EASA) is understood to be currently building their own definitive database. HAL are working with EASA on this project via the Airports Council International. However, this work is not expected to be completed until at least 2 – 3 years' time.
- 4.15 Evidence was seen of the proposal from the CAA to carry out this work, but progress stalled because of a legal issue. It emerged that HAL cannot share

Airline information with other parties and that includes the detailed noise certification data, unless the Airline in question grants permission.

- 4.16 This difficulty had not been resolved at the time of the audit, although it was noted that CAA can legitimately write to have access to the database under the terms of its charter.

**Observations**

- 4.17 This is a very worthwhile action as the quality of the information in that database underpins various elements of the airport's noise management. It is highly unfortunate that the good progress that was being made has stumbled on a legal point. It is to be hoped that a satisfactory resolution can be found so that the audit work can be carried out.
- 4.18 At the time that the Action Plan Progress Report was prepared, this action was on track. The anticipated progress of the CAA picking up this task in the middle of 2016 was being achieved. The evidence seen showed that the proposal from the CAA had been received in July 2016.

**Auditor's Conclusion**

- 4.19 For the purposes of this audit, which primarily focuses on the position at the end of 2015, the legal difficulty does not affect the outcome and it is agreed that this action is "On Track". However, it is recommended that this action is kept in focus so that the audit of the database can be carried out in a timely manner and the database used with increasing confidence.

**Quieter Procedures – Action 2.03**

4.20 Table 7 shows the relevant information from the Progress report for this action:

**Table 7  
Information taken from the Progress report for Action 2.03**

Action	Building on the principles of the FlyQuiet Programme and in support of the noise related requirements of Arrivals Code of Practice (ACOP) and Departures Code of Practice (DCOP) and to improve compliance with the AIP, we will establish minimum performance standards, and establish a process for monitoring performance against these standards.
Performance Indicator	Report on minimum performance standards based on regular reporting of % achievement of a range of Noise Abatement Procedures
Target	Set minimum performance standards by end of Q2 2014. For all new scheduled airlines to meet the minimum standards within 3 years of starting operations
2015 Progress	Final report on FlyQuiet review delivered by Helios and review meeting held with HAL customers. Presentation of conclusions/recommendations to HNF to take place in Jan HNF.
Status	On track

4.21 This action was audited in 2015 when it was agreed that the action was ‘Behind – Not at Risk’. The focus has continued to be on new airlines flying for the first time into Heathrow.

4.22 Evidence was seen of the final FlyQuiet review report by Helios. In addition, the notes of the January 2016 meeting of HSNAG were seen and these showed that two representatives of Helios attended the meeting and that a presentation on the FlyQuiet review was given. The meeting was attended by British Airways and the International Air Transport Association (IATA) representing the airlines.

4.23 The auditor also received a copy of the FlyQuiet summary pack that is given to new airlines. This contained the performance targets for both the core and supplementary Aeronautical Information Publication (AIP) for Heathrow. The pack also included relevant definitions and an indication of the FlyQuiet metrics and thresholds. The pack concludes with a summary of the monitoring process.



- 4.24 The presumption for a new entrant is that, initially, it will take some time before they achieve the relevant level of compliance. It is understood that the early results of monitoring new entrants are not made public but are discussed between the relevant airline and HAL. The pack sets out how an airline would graduate to be eligible for full ranking in the FlyQuiet Top 50.
- 4.25 Work has begun on a second version of FlyQuiet which is expected to come into operation in 2017. It is currently undergoing consultation with the airlines and evidence was seen of a review looking at current and possible future metrics. As a result of a public commitment by HAL regarding emissions, it is likely that the new version of FlyQuiet will include an emissions metric as there are too few measurable emission metrics to justify a separate air pollution regime.
- 4.26 FlyQuiet league tables are published every quarter and can be found on the Heathrow noise website (<http://www.heathrow.com/noise/making-heathrow-quieter/fly-quiet-programme>).

**Auditor's Conclusion**

- 4.27 Agree this action is "On Track".

**Quieter Procedures – Action 2.05**

4.28 Table 8 shows the relevant information from the Progress report for this action:

**Table 8  
Information taken from the Progress report for Action 2.05**

Action	We will analyse the number of late running aircraft operating after 2330 local (excluding periods of significant disruption). We will review the reasons, and will seek to reduce the number.
Performance Indicator	Report on the late running aircraft
Target	Establish baseline numbers of late running aircraft operating after 2330 local in 2013. Monitor against this baseline and engage with airlines as required
2015 Progress	Target has been re-baselined as the underlying algorithm was incorrect, this has enabled a further reduction against the original target this year due to stringent measures being taken
Status	On Track

- 4.29 This action was audited in 2015 when it was concluded that the outcome was, in terms of late running departures ‘On Track’. However, it was noted that there had been no work on late running arrivals.
- 4.30 As last year, it was confirmed that, although the term ‘late running aircraft’ can refer to both departures and arrivals, the focus of work has continued to be on late running departures.
- 4.31 In classifying a departure as late, account is taken of disruption due to circumstances beyond the immediate control of the airport and airlines. Consequently, the key element of the measure is those late running aircraft for which there is no dispensation and no exemption.
- 4.32 The definition of what circumstances would qualify for a late departure to attract dispensation is understood to be similar to that which applies to the controls and limits that apply to the Night Quota Period.
- 4.33 Information was supplied regarding the performance in 2015 and the Moving Annual Total up until October 2016. These are shown below, in Table 9, and include the results shown in the 2015 audit for the years 2013 and 2014:

**Table 9  
Late Running departures**

Year	Total	Total (Not dispensed)
2013	N/A	473
2014	556	353
2015	N/A	295
Moving Annual Total (MAT) to October 2016	484*	284

\* Excludes dispensed aircraft in November and December 2015

- 4.34 It can be seen that the Total (Not Dispensed) has decreased between the years 2013 and 2015. HAL believes that one of the reasons for this improvement is the use of the newly created position of Aircraft Flow Manager, which started to operate in November 2014. As the name implies, this person is responsible for helping maintain good progress with the different activities that occur before an aircraft departs
- 4.35 This action is still one of the Executive Business Key Performance Indicators (KPIs), and is part of the monthly data received by the Chief Executive.
- 4.36 Information was received by the auditor on the HAL Headline KPIs. In that document, it can be seen that the target for Not-Dispensed late running departures in 2016 is 338. Considering the MAT value to October 2016, it appears that the target may just be met.

**Observations**

- 4.37 As with 2015, the main issue with this action is that its description does not align with the activity occurring. The focus of activity has again been on late running departures and yet the action concerns “late running aircraft”. It is understood that late running departures is a much greater issue than late arrivals. Furthermore, it is felt by HAL that it is really not possible to control late running arrivals.
- 4.38 The supporting text in the Headline KPI document states for this indicator:

*Total number of late night flights taking off between 23:30-04:30hrs for non-exceptional reasons*

Thus, the focus of the KPI is departing aircraft.

- 4.39 As stated in the 2015 audit, it is recommended that the action be amended to make it clear that the topic is late running departures, rather than late running aircraft.

**Auditor's Conclusion**

- 4.40 As expressed, the action is not "On track" as there has been no apparent work on late arrivals. In terms of late running departures, agree that this action is "On track".

**Quieter Procedures – Action 2.07**

4.41 Table 10 shows the relevant information from the Progress report for this action:

**Table 10  
Information taken from the Progress report for Action 2.07**

Action	Working with local communities and the Heathrow Noise Forum, and subject to the governance of the Noise Steering Group (NSG), we will identify opportunities to develop quieter procedures and agree a programme of trials and activities in line with the Airspace Modernisation Programme. These will be reviewed annually and new actions added as appropriate.
Performance Indicator	Progress against published programme of activity
Target	Progress against milestones to be set in agreed programme
2015 Progress	Oct - interim reports with heat maps published back to CNF on Bracknell, Lightwater, Englefield Green and Sunningdale. Teddington work still WIP - community concerns starting to rise with regards to altitudes and attaining 4%. Nov - Further work commissioned for Bracknell, Lightwater, Englefield Green and Sunningdale. Dec - Met with Teddington to review findings and letters as a result of analysis. Committed to address altitude concerns by looking at potential trial on 09R DET raising climb gradient for A380's
Status	On Track

4.42 This action was audited in 2015 and found to be 'On Track'.

4.43 The web site for the Heathrow Community Noise Forum (HCNF) showed completed reports for:

- Englefield Green (December 2015);
- Lightwater (January 2016);
- Sunninghill<sup>2</sup> (February 2016); and
- Bracknell (April 2016)

<sup>2</sup> Although the progress mentions Sunningdale – the published report covers Sunninghill.

4.44 A report for Teddington and Twickenham was published in October 2015. It is understood that a meeting did take place in December 2015 to discuss this report but no notes of this meeting seemed to be available.

4.45 Evidence was provided of the work that was subsequently undertaken to examine issues concerning the climb gradient of A380s on the 09R Detling departure route. The background to this study is the requirement in the United Kingdom Aeronautical Information Publication (AIP) for Heathrow Airport. In the section covering noise abatement procedures, there is a requirement, in sub-paragraph 1, that

*After take-off the aircraft shall be operated in such a way that it is at a height of not less than 1000 ft aal<sup>3</sup> at 6.5 km from start of roll as measured along the departure track of that aircraft.*

It goes on to require that

*Where the aircraft is a jet aircraft, after passing the point referred to in sub-paragraph (1) above, it shall maintain a gradient of climb of not less than 4% to an altitude of not less than 4000 ft. The aircraft shall be operated in such a way that progressively reducing noise levels at points on the ground under the flight path beyond that point are achieved*

It is understood that the A380s were not meeting this requirement.

4.46 It is also understood that a process is being developed to monitor compliance with this requirement. It involves using the 3-D gate system, but artificially raising the base level so that it starts at 1,000 ft aal and then rises by 4%. With that framework established, a non-compliance is easily revealed if the actual aircraft track falls below the base level.

4.47 This work was undertaken during 2016 and from examining the HCNF website it could be seen that a presentation of the results was given to the Forum in November 2016. It was confirmed that the results showed there had been a slight reduction of climb performance.

4.48 Evidence was provided to show that arrangements are now being made to undertake a comprehensive monitoring programme during 2017 along the 09R Detling route.

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<sup>3</sup> aal means "Above Aerodrome Level"

4.49 At Paragraph 4.68 of the 2015 audit report regarding this action, it was noted that the minutes of the September 2015 meeting of the HCNF indicated that there may be a specific workshop held examining the question of Concentration versus Dispersion. It is understood that various meetings were held on this issue in 2016 including a meeting on Noise Performance held on 28<sup>th</sup> July. 2016. The minutes of this meeting are available at <http://www.heathrow.com/noise/heathrow-community-noise-forum/other-forums-and-organisations>.

**Auditor's Conclusion**

4.50 Agree this action is "On Track".

**Quieter Procedures – Action 2.10**

4.51 Table 11 shows the relevant information from the Progress report for this action:

**Table 11  
Information taken from the Progress report for Action 2.10**

Action	In order to manage ground noise, we will continue to apply our operating practices including those in the relevant OSIs. Where any problems are identified, we will set out a programme to address issues.
Performance Indicator	Moving Annual Total (MAT) number of OSI non-compliances. Number, location and duration of engine runs. Number of turnaround audits
Target	Notifications of breaches of procedures to be sent to airline and ground handling agents within 48 hours of infringement
2015 Progress	We continue to manage ground noise, we are looking at the market for auto APU monitoring, trial of second generation model is now on-going on stands 233 & 234 with good results. Looking for end of project report March 2016
Status	On Track

4.52 The Environmental Noise Directive is ambiguous regarding the extent to which aircraft ground noise is covered by it. In England, airport noise mapping has only to be carried for air noise. Having said that, paragraph 2.14 of the Defra guidance to airport operators about producing noise action plans<sup>4</sup> states that

*No other noise sources (such as “ground noise” from airport activities) will have been taken into account in the noise mapping, only the noise from aircraft departing and arriving at the airport. However, that does not preclude the action plan covering other airport related noise sources.*

4.53 Therefore, although not mandatory, HAL has elected to include this action about ground noise, with the focus being on the operation of Auxiliary Power Units (APUs) and on Engine testing.

4.54 Operational Safety Instruction OSI/13/14, dated 22<sup>nd</sup> October 2014 sets out the rules for managing ground noise. In particular, at paragraph 5.2, it describes the hierarchy for the usage of power sources by aircraft when on a

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<sup>4</sup> Guidance for Airport Operators to produce noise action plans under the terms of the Environmental Noise (England) Regulations 2006 (as amended) (Defra, updated July 2013)



stand. APUs are only supposed to be used when Fixed Electrical Ground Power (FEGP) or Ground Power Units (GPU) are either not supplied to the stand or both units are unserviceable.

- 4.55 It is understood that there is no specific audit undertaken of APU operation. Instead it forms part of a general Turnaround Audit, which is a manual operation and includes safety as well as APU operation.
- 4.56 Data were supplied showing details of these audits for the years 2013 to 2015. There were between 1600 and 1800 such audits carried out each year. A single audit comprises inspecting one stand whilst in use by a single aircraft.
- 4.57 Table 12 shows the compliance rate for those three years:

**Table 12  
Compliance Rate for APU operation (%)**

Year	Rate
2013	84
2014	83
2015	86

- 4.58 Although the Performance Indicator is described as being a Moving Annual Total (MAT), it is understood that only end of year annual data are routinely available.
- 4.59 Regarding APUs, no evidence was available showing how airlines were informed about any non-compliances nor of what sanctions were imposed.
- 4.60 Work is underway to try to develop a more automatic means of detecting APU usage. Evidence was seen of a project that is currently being carried out between the HAL Innovation Centre and an external company that, if implemented, would avoid the need for manual monitoring and recording of APU use. If such a method can be adopted, there is likely to be scope of making the enforcement of this noise management more efficient.
- 4.61 With regard to Engine testing or Engine Ground Runs, two types of non-compliance can occur. These are
  - A run occurring without prior notification; or

- The duration of a run being found to be longer than had been notified.
- 4.62 Separate rules apply for day and night testing and for runs occurring in the British Airways pens or in the open.
- 4.63 It is understood that the process involves an airline telephoning the Heathrow Control Centre and seeking permission to undertake a run. In that contact, the airline states the length of duration of that run. If it is a high-power test, the airline telephones again, on completion, to confirm that it has finished. If it is a low-power run, the actual times are entered onto an information sheet which is sent to the Control Centre the following morning.
- 4.64 HAL is aware that the current system for confirming the time and duration of Engine Ground Runs is not entirely robust. It is understood that plans are being put in place through developing a Ground Noise Management Plan to improve the process.
- 4.65 Data were supplied for the years 2013 – 2015. There was no evidence of any non-compliances in that period.

***Observations***

- 4.66 HAL should be given credit for volunteering to include an action in their NAP on ground noise. It is not clear, however, that the details and undertakings that can be inferred from the progress report are being completely fulfilled, especially with respect to APUs.
- 4.67 The research project that is underway has the potential of providing an alternative monitoring methodology that will avoid the need for manual detection of APU usage that currently occurs.

**Auditor's Conclusion**

- 4.68 It cannot be asserted that this action is 'On Track'. Instead, given the work being carried out on improving the monitoring of APU usage, it should be classified as 'Behind – Not at Risk'.

**Land Use Planning & Mitigation – Action 3.05**

4.69 Table 13 shows the relevant information from the Progress report for this action:

**Table 13  
Information taken from the Progress report for Action 3.05**

Action	As part of our current insulation schemes we will undertake an annual survey of recipients to measure their overall satisfaction with scheme.
Performance Indicator	Results of survey on effectiveness of noise insulation
Target	Commission annual survey on effectiveness of noise insulation by 2013
2015 Progress	2015 tasks are completed.
Status	On Track

4.70 HAL has operated sound insulation schemes for many years. It is understood that undertaking follow up surveys has formed part of the process over, at least, the last 2-3 years.

4.71 Various insulation schemes operate concurrently. These include:

- The Day Noise Insulation Scheme, which has been operating for over 20 years;
- The Night Noise Insulation Scheme, which has been operating for over 10 years;
- The Quieter Homes Initiative, which has been operating for over 3 years; and
- The Vortex Protection Scheme, which has been operating for over 30 years.

4.72 Eligibility for the Day, Night and Quieter Homes schemes is based on whether or not the property lies within a certain noise contour or footprint. There is no such criterion for the Vortex scheme. Instead, claims are based on whether or not a vortex strike has occurred.

4.73 It is understood, that the Quieter Homes Initiative is currently on hold.

4.74 Follow-up surveys occur annually and assess the satisfaction with the installation work carried out in the previous year. Evidence was seen of the

commissioning of the survey company; the questionnaires used and of the results of the survey.

- 4.75 The process involves the installation contractors supplying to the surveying company a list of addresses where works had been carried out. The surveying company, in turn, seek to hold telephone interviews with the relevant occupants.
- 4.76 The questionnaires remain broadly unchanged year on year, although there is some evolution to enable HAL to obtain the information required. The survey is expected to take around 10 minutes to complete
- 4.77 After providing a general introduction, the questions seek responses on various issues, including the following:
- How the respondent feels about having Heathrow Airport as a neighbour;
  - How the respondent found out about the sound insulation scheme;
  - The respondent's view of the quality and speed of response once they had enquired about the scheme;
  - How well the acoustic assessment of their property was undertaken. This included attitude and knowledge of the assessor;
  - How straightforward it was to liaise with the nominated contractor in terms of choice of products, understanding the price quotation and the final cost quoted;
  - Their view on how well the installation was carried out, in terms of quality, any disruption, tidiness etc.; and
  - How satisfied the respondent felt with the additional sound insulation.
- 4.78 Results have been seen showing the responses obtained in 2015 for the works done in 2014, and the results obtained in 2016 for the works undertaken in 2015.
- 4.79 None of these results are made publicly available, but they are used to try to improve further the implementation of the schemes. It is understood that the surveys have highlighted a need to make it easier for recipients to contact someone with authority if they encounter a problem. In addition, it has been

identified that there is a need to continue impressing upon the contractors the importance of the quality of their attitude to the recipients.

***Observations***

- 4.80 HAL should be commended for carrying out this follow-up work. The feedback obtained clearly assists in trying to maximise the effectiveness of the schemes both in terms of the level of insulation provided but also the effect it has on those receiving it.
- 4.81 It is a pity that none of the results are made publicly available. Clearly, the sample size each year is necessarily small. Certainly, no robust conclusions could be drawn about the overall attitude of people to Heathrow from the results of these surveys. However, within the context of the scheme, it might be beneficial to publish some information regarding the benefits the recipients perceived once the installation was complete.

**Auditor's Conclusion**

- 4.82 Agree this action is "On Track".

**Land Use Planning & Mitigation – Action 3.08**

4.83 Table 14 shows the relevant information from the Progress report for this action:

**Table 14  
Information taken from the Progress report for Action 3.08**

Action	We will seek to work with local authorities to monitor new residential and community building developments on an annual basis. We will track this together with the annual population statistics published with our noise contours.
Performance Indicator	Number of local authorities worked with
Target	To annually publish the number of developments by contour boundary
2015 Progress	The EHO Group raised this as a topic of interest.
Status	On Track

4.84 This action was audited in 2015 and found to be “On track”, even though circumstances beyond the control of HAL had disrupted progress.

4.85 In addition to the HSNAG, HAL has set up a Noise Performance Meeting which comprises representatives of HAL and local authority Environmental Health Officers. The first meeting appeared to be held in 2016 and notes of these meetings are available here: <http://www.heathrow.com/noise/heathrow-community-noise-forum/other-forums-and-organisations>.

4.86 Local authorities have been requested

*provide data on any noise sensitive development applications within the existing contours for discussion at future meetings*

4.87 No formal report appears to be published annually specifically addressing the number of developments by contour boundary. However, HAL do commission from the CAA the production of Noise Action Plan Contours for the airport. The most recent report (ERCD Report 1504) includes data at Table 4 regarding the change in noise contour area, and the change in population and the number of households, as set out in the Action description. The table is reproduced below

**Table 15**

**Table 4 from ERCD Report 1504**

**(L<sub>day</sub>)**

L <sub>day</sub> (dBA)	2013 area	2014 area	Change in area	2013 pop	2014 pop	Change in pop	2013 house	2014 house	Change in house
55 – 60	104.0	102.9	-1%	325.9	330.3	+1%	132.3	133.8	+1%
60 – 65	34.0	33.9	0%	103.6	104.4	+1%	37.2	39.8	+7%
65 – 70	16.5	16.2	-2%	18.9	18.4	-3%	6.3	6.9	+10%
70 – 75	4.9	4.8	-2%	1.9	2.1	+11%	0.6	0.8	+33%
> 75	3.0	2.9	-3%	< 0.1	< 0.1	(n/a)	< 0.1	< 0.1	(n/a)

4.88 It can be seen that the area in the various contour bands has remained unchanged or decreased slightly. Conversely, the number of households has increased. This comparison cannot provide a precise indication of the number of new developments, as year on year variation in contour location may affect the results. However, the footnote to this table in ERCD Report 1504 states that:

*Areas are given in km<sup>2</sup>, and populations (pop) and households (house) in thousands. The 2013 and 2014 population/household counts are based on 2013 and 2014 CACI updates of the 2011 Census respectively.*

Consequently, the household numbers used are based on information updated since the 2011 census.

4.89 ERCD 1504 contains similar tables covering the results for other noise indicators including, L<sub>evening</sub>, L<sub>night</sub> and L<sub>den</sub>. Those results are less consistent in so far as the change in number of households does reflect more the change in area. For some noise bands, though, a decrease in area is associated with an increase in number of households. Again, as mentioned earlier, this pattern may be due to the year on year variation in contour location.

4.90 A recent development that occurred at the time of preparing this audit report was the publication for consultation of a Supplementary Planning Document entitled Noise Generating and Noise Sensitive Development. This document

had been jointly prepared by the London Boroughs of Hillingdon, Hounslow and Richmond upon Thames.

- 4.91 It is understood that HAL provided comments on this draft SPD. If implemented, it will be interesting to see what effect it has on the number of new developments within the noise contour area.

### ***Observations***

- 4.92 Establishing meetings with the Environmental Health Officers has provided a means for HAL to understand how planning policy is being implemented in their authorities.
- 4.93 Having said that, relying on the annual NAP contour report does not quite provide the information described in the Action Target. National datasets regarding households are available. These datasets are regularly updated and it would be possible to establish a system to acquire and process this information to understand more precisely just how the number of households is changing year on year. It is recommended that this type of approach is considered.

### **Auditor's Conclusion**

- 4.94 In the 2015 audit, although this action was felt to be 'On-Track', it was recommended that this action be kept in focus to try to avoid it drifting. That focus has occurred. The reporting of the Target, though, is not as precise as it could be. Therefore, the conclusion is again 'On-Track' but with a recommendation that consideration be given to improving the reporting.



**Operating Restrictions – Action 4.01**

4.95 Table 16 shows the relevant information from the Progress report for this action:

**Table 16  
Information taken from the Progress report for Action 4.01**

Action	We will continue to implement our night restriction regime in line with government policy.
Performance Indicator	Performance against published limits
Target	No night-time QC 8/16 departure or QC 8/16 arrivals. Non exceedance of seasonal cumulative QC count and movement limits as set by the DfT
2015 Progress	No QC8's this month. Some disruption resulted in dispensations.
Status	On Track

4.96 This action was audited in 2015 and found to be “On Track”.

4.97 The current regime for limiting the number of movements and the quota during the Night Quota Period is set out in a document published by DfT in July 2014<sup>5</sup>.

4.98 For Heathrow, the limits are shown in Table 17 below:

**Table 17  
Heathrow Airport  
Movement and Quota Limits  
in Night Quota period**

Season	Movement Limit	Quota Limit
Winter 2014/15	2550	4080
Summer 2015	3250	5100
Winter 2015/16	2550	4080
Summer 2016	3250	5100
Winter 2016/17	2550	4080
Summer 2017	3250	5100

4.99 During the audit, copies of reports compiled by HAL for the DfT were received covering Summer 2015 and Winter 15/16. The information included a weekly

<sup>5</sup> Night Flying Restrictions at Heathrow, Gatwick and Stansted, DfT, July 2014

record of the number of aircraft movements by Quota Count value, as well as the number of exempt movements.<sup>6</sup>

- 4.100 Regarding the specific targets in this action, the data show that there were no QC 8 or QC16 movements in Summer 15 or Winter 15/16.
- 4.101 The total number of movements and quota for those two seasons are shown in Table 18 below:

**Table 18  
Heathrow Airport  
Movement and Quota Used  
In Night Quota period**

Season	Movements	Quota
Summer 2015	2802	2847.00
Winter 2015/16	2696	2475.25

- 4.102 Although it appears that the Winter 2016/17 movements exceeded the permitted limit, account has to be taken of the end of season flexibility that allows a certain proportion of unused movements to be carried over from one season to the next. Using that flexibility means the night restrictions were met.
- 4.103 The audit also explored how the aircraft movement information shown on the Heathrow noise web site is related to the source information. This followed the principles of the process used for this action in the 2015 audit, and, as last year, this was achieved with the assistance of the Environmental Research and Consultancy Department at the Civil Aviation Authority (ERCD) which has independent access to various datasets.
- 4.104 The airport’s Aircraft Noise and Operations Monitoring System (ANOMS) records each aircraft movement including the precise aircraft that undertook that movement. The CAA provided two extracts from the ANOMS Query Generator report covering the movements in the Night Quota Period for the weeks ending 20<sup>th</sup> June 2015 and 19<sup>th</sup> September 2015.

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<sup>6</sup> The regime allows for some movements to be disregarded meaning that not all aircraft that use the airport in the Night Quota Period necessarily contribute to the movement and quota count. The criteria for such exemptions are set out in the relevant AIP Supplements, with guidance being provided in the July 2014 DfT document (reference 5).

4.105 From that it was possible to reconcile the entries for those weeks in the reports generated by HAL for DfT mentioned in paragraph 4.99 above.

4.106 The relevant information is shown in Table 19 below:

**Table 19**  
**Information from ANOMS Query Generator report**  
**and published information**

Week Ending	ANOMS Query Generator Data				Reported Movements and Quota Summary			
	Total Quota	Total Mov'ts	Disregarded quota	Disregarded Mov'ts	Total Quota	Total Movements against Limit	Total Arrivals	Total Departures
20/6/15	128.75	114	6.5	4	122.25	110	106	8
19/9/15	100.5	110	11.75	17	88.75	92	93	17

- 4.107 It can be seen that the data shown in the Reported Movements and Quota summary aligns exactly for the week ending 20<sup>th</sup> June. There is, however, a discrepancy of 1 movement in the other dataset. From the ANOMS Query Generator, the total of movements against the limit should be 93, whereas it was reported as 92.
- 4.108 The CAA provided, as requested, two extracts from the ANOMS Operations browser covering 14<sup>th</sup> to 17<sup>th</sup> June 2015 and 13<sup>th</sup> to 16<sup>th</sup> September 2015. From that it was possible to compare information from that dataset with that reported on the Heathrow noise web site for the nights of 14<sup>th</sup>/15<sup>th</sup> June<sup>7</sup> and 14<sup>th</sup>/15<sup>th</sup> September<sup>8</sup>. The results are shown in Tables 20 and 21.

**Table 20**  
**Comparison of published data with source data**  
**14<sup>th</sup>/15<sup>th</sup> June 2015**

Statistic	Published	Source
Early Morning Flights between 04.30 and 06.00	17 (4 unscheduled)	17 (4)
Morning Flights between 0600 and 0700	47 (9)	47 (7)
Night Flights in the Quota period between 2330 – 0430 next day	4 (4)	4 (4)

**Table 21**  
**Comparison of published data with source data**  
**14<sup>th</sup>/15<sup>th</sup> September 2015**

Statistic	Published	Source
Early Morning Flights between 04.30 and 06.00	14 (1 unscheduled)	14 (1)
Morning Flights between 0600 and 0700	51 (8)	51 (6)
Night Flights in the Quota period between 2330 – 0430 next day	8 (8)	8 (8)

<sup>7</sup> <http://heathrowoperationaldata.com/14th-june-2015> and <http://heathrowoperationaldata.com/15th-june-2015>

<sup>8</sup> <http://heathrowoperationaldata.com/14th-september-2015> and <http://heathrowoperationaldata.com/15th-september-2015>

4.109 It can be seen that there is good agreement between the published and source information. The only discrepancy concerns the number of unscheduled flights in that time period. This is probably due to how flights that are expected to occur at exactly the time period boundary are allocated. So, should an arrival expected to land at 06.00 be scheduled for the 04.30 – 06.00 period or the 06.00 – 07.00 period?

**Observations**

4.110 The audit examined two weeks' worth of data and two nights of data in more detail. There was good agreement between the source and published information with there being only a discrepancy of one movement in the DfT reported data. Given the quantity of data being handled, some discrepancies are probably inevitable. A couple of discrepancies were also observed in the data on the Heathrow noise web site regarding whether or not a flight was unscheduled in a particular period. However, as mentioned above, this could be due to how the flights are categorised.

4.111 It was noted in last year's audit that, over the years, there has been the potential for confusion over the difference between Night Period (23.00 – 07.00), the Night Quota Period (23.30 – 06.00) and the shoulder periods (23.00 – 23.30 and 06.00 – 07.00). It was noted then that further descriptors appear in the daily reports published on the Heathrow noise website. It seems that these additional descriptors are becoming more established with the former 'shoulder periods' being divided into "Night Shoulder Flights" and "Morning Flights".

**Auditor's Conclusion**

4.112 Agree this action is "On track".

**Operating Restrictions – Action 4.03**

4.113 Table 22 shows the relevant information from the Progress report for this action:

**Table 22**  
**Information taken from the Progress report for Action 4.03**

Action	We will continue to monitor our voluntary arrangement for arrivals scheduled between 0430-0600 (local) not to arrive prior to 0430.
Performance Indicator	Number of pre 0430 arrivals
Target	Zero arrivals pre 0430 by aircraft scheduled to land after 0430
2015 Progress	Zero non-compliances this month
Status	On Track

4.114 This action forms part of the FlyQuiet programme. It is a voluntary arrangement with the airlines such that arrivals scheduled to reach Heathrow between 04.30 and 06.00 hours do not arrive before 04.30.

4.115 The results are shown in the quarterly FlyQuiet report which is available on the Heathrow Noise website: <http://www.heathrow.com/noise/making-heathrow-quieter/fly-quiet-programme>. The reported results for 2015 showed no non-compliances in the period from April to December 2015. However, the report for the 1<sup>st</sup> quarter showed two airlines having at least one movement that arrived before 04.30.

4.116 Information was obtained from airport’s Aircraft Noise and Operations Monitoring System (ANOMS) with the help of the CAA. The data for January to March were examined and it was found that on the 12<sup>th</sup> March a flight expected at 04.50 arrived at 04.19. Similarly, on the 18<sup>th</sup> March, a flight expected at 04.55 arrived at 04.29.

4.117 In addition, an arbitrary sample of days was examined to check that there were no non-compliances on those days. Table 23, below, shows for each of the days examined, the time of the first actual arrival and the corresponding time of the first proposed arrival. (The proposed time reflects the last updated arrival time which may have been adjusted as the flight from the point of departure occurs).

**Table 23**

<b>Date</b>	<b>First Proposed Arrival Time</b>	<b>First Actual Arrival Time</b>
14/6/15	04.45	04.32
15/6/15	04.45	04.39
16/6/15	04.45	04.32
17/6/15	04.45	04.32
13/9/15	04.45	04.33
14/9/15	04.45	04.45
15/9/15	04.45	04.42
16/9/15	04.45	04.58

4.118 It can be seen that, from this limited sample, there were no arrivals before 04.30. The times shown relate to what is known as ‘wheels down’, i.e. when the aircraft touches down on the runway.

4.119 From the FlyQuiet report it is noted that

*Instances where this occurs for reasons outside of the airline’s control are excluded for the calculation*

Such instances would include a medical or aircraft emergency.

**Auditor’s Conclusion**

4.120 Agree this action is “On Track”.



**Working with Local Communities – Action 5.02**

4.121 Table 24 shows the relevant information from the Progress report for this action:

**Table 24  
Information taken from the Progress report for Action 5.02**

Action	We will improve our communications to residents by 1) relaunching the Heathrow Noise website in 2014, making better use of graphics and animation; providing timely and relevant information including daily operational web updates; regularly issuing noise reports including the FPU reports, annual contours, trial and community noise reports; computer animations to explain operations at Heathrow and 2) launching a social media service by Dec 2013 to keep people updated on unscheduled changes to operations which impact on noise.
Performance Indicator	Relaunched website; Twitter service launched
Target	Publication of any updated noise information within 1 week of information availability. Relaunched website by end 2014. Twitter service launched by 2013
2015 Progress	-
Status	Complete

4.122 This action was audited in 2015 and as mentioned in the 2015 audit report, it is understood that this action arose because HAL had received negative comments about the information previously being provided. It is also understood that there was no formal launch when the new noise website came on-line in August 2014.

4.123 The 2016 audit has again considered the various aspects of the web site mentioned in the action.

**Better use of graphics and animation**

4.124 Examples of the use of graphics can be seen. A development since the last audit has been the inclusion of animations, which, so far, explain information about arrivals.<sup>9</sup> It is understood that consideration is currently being given to producing a corresponding departures animation, although it is recognised that this would be more complicated to achieve.

<sup>9</sup> The arrivals animation can be found at <http://www.heathrow.com/noise/heathrow-operations/arrival-flight-paths>

Providing timely and relevant information including daily operational web updates

- 4.125 The home page continues to provide news about the latest developments or relevant reports that are available. It also shows the latest relevant operational postings from the “Heathrow Noise” Twitter feed. This primarily relates to the current runway operation.
- 4.126 Daily operational data continue to be made available. The user has to travel through several pages to find them<sup>10</sup>, but each report does contain a large amount of statistics.

Regularly issuing noise reports including FPU reports, annual contours, trial and community noise reports

- 4.127 These all can be found under “Facts, Stats and Reports”, including the Community Noise reports.

Computer animations to explain operations at Heathrow

- 4.128 As mentioned above, there is now an animation describing arrivals operation.

Twitter

- 4.129 The other part of this action was the launch of a “Heathrow Noise” social media service. In addition to providing operational information, it continues to be an avenue for people to raise queries about operations. The feed provides responses pointing the correspondent to relevant web pages for further information. Some of those links were tested and found to function correctly. There now appear to be over 4,300 followers, an increase of over one-third since the 2015 audit.
- 4.130 The site states that it is operational between 0700 and 2200. The introduction also shows who people should contact to make a complaint.
- 4.131 It is understood that the Community Noise Forum is used to obtain feedback about the website from users. It is understood that no formal feedback has been sought but no negative comments have been received.
- 4.132 The proposed workshop on communications, mentioned in last year’s audit was held in 2015. Evidence of the presentations given at that workshop was seen by the auditor with the main focus being on the noise monitoring reports

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<sup>10</sup> <http://heathrowoperationaldata.com/daily-operational-data/>

with concern being expressed that they were not that accessible. There was also a session on metrics with the result being the structure and format of the reports were revised.

### **Observations**

- 4.133 The noise web site is very impressive and provides a vast amount of information. As a consequence, it can still take a while to find the data being sought. This is always likely to be a challenge when structuring a site because no two people will wish to access the same information. However, as mentioned in the 2015 audit, there may be a case for trying to establish what aspects of the site regular users tend to wish to access, so that those elements can be reached more readily.
- 4.134 In the 2015 audit, it was also noted that when [www.heathrow.com](http://www.heathrow.com) site was accessed, it was far from clear where to find the 'noise' website from that main web site. The situation is unchanged. It took 5 'clicks' to find the noise web page from the main home page – and that required knowing which links to click. Typing the word 'noise' into the front-page search function provided no assistance either.
- 4.135 Having said that, the equivalent page at Gatwick was no better – it took 3 'clicks' to find the relevant noise information but the route to it was far from intuitive. The search function on the Gatwick home page is limited to flight numbers.
- 4.136 The Birmingham Airport home web page is also similarly opaque. In this case, though, typing the word 'noise' into the front-page search engine provides a list of answers, one of which is the link to their noise page. Conversely, on the Manchester Airport web site, towards the bottom of its home page, there is a link entitled 'Noise Disturbance and WebTrak', which led to a website about investigating a noise disturbance.
- 4.137 Given the importance of noise as an issue, there is probably a case for having a link to the Heathrow noise page, from the main Heathrow page, maybe on the left-hand side of the [www.heathrow.com](http://www.heathrow.com) home page.
- 4.138 In the 2015 audit, it was noted that the noise website, helpfully, shows when new relevant reports have been published, but that an interested party would only know about the publication if the web-site was visited. STA raised this

point again this year, and it is recommended that consideration be given to using the Twitter feed to publicise that a new report is available.

4.139 As with the 2015 audit, there seemed to be some uncertainty over the element of the target regarding publishing updated noise information within one week of it being available. It did not prove possible to check whether that precise time element was being achieved. However, the impression was gained that the relevant information did seem to be available in a timely manner.

4.140 The arrival animation is very good. It felt accessible and clearly explained the current operation and also the dependencies beyond the airport's control, e.g. the wind direction at 3,000 ft. There was just one element of the commentary that did not feel quite right. In describing the arrivals between 04.30 and 06.00, the commentary states:

*.. but Government rules mean only around 16 arrivals are scheduled to land up to 6am and these have to be the quietest types of planes to make sure people living close to the airport get a break.*

It is debatable whether the statement about being the quietest type of plane is strictly true. The language used by Government is more towards a 'ban on the noisiest type of aircraft', which is arguably more accurate.

4.141 Furthermore, the comment about people living near the airport getting a break does not seem right. The point of the night restrictions is more that any disturbance is kept to a minimum. The reference to a break would apply more to alternation than the noise restrictions.

4.142 Overall, the combination of the range of information provided, the way in which it is provided and the good use being made of social media means that this action has achieved its goal.

#### **Auditor's Conclusion**

4.143 Agree this action is "Complete".

**Working with Local Communities – Action 5.03**

4.144 Table 25 shows the relevant information from the Progress report for this action:

**Table 25  
Information taken from the Progress report for Action 5.03**

Action	We will positively respond to requests to attend public meetings regarding aircraft noise, airspace modernisation and expansion plans. We will establish the Community Noise Forum (CNF) and agree a work plan.
Performance Indicator	Publication of CNF Terms of Reference and CNF Workplan
Target	Publish CNF Terms of Reference by end of 2015 and CNF Workplan by March 2016
2015 Progress	On track
Status	On Track

4.145 This action had changed with the October 2016 update of the NAP. Previously it was about establishing a formal outreach programme for residents. From that, the Community Noise Forum (CNF) emerged with its associated work programme.

4.146 It is understood that requests for meetings come, in general, from local Councils or Members of Parliament. As examples, the auditor was informed of meetings with Elmbridge Borough Council and the Royal Borough of Windsor and Maidenhead. Evidence of the outcome of the meeting with Elmbridge Borough Council was seen.

4.147 The Terms of Reference for the CNF can be found on the Heathrow noise web site: [http://www.heathrow.com/file\\_source/HeathrowNoise/Static/HCNF-Terms-of-Reference-Feb-16.pdf](http://www.heathrow.com/file_source/HeathrowNoise/Static/HCNF-Terms-of-Reference-Feb-16.pdf).

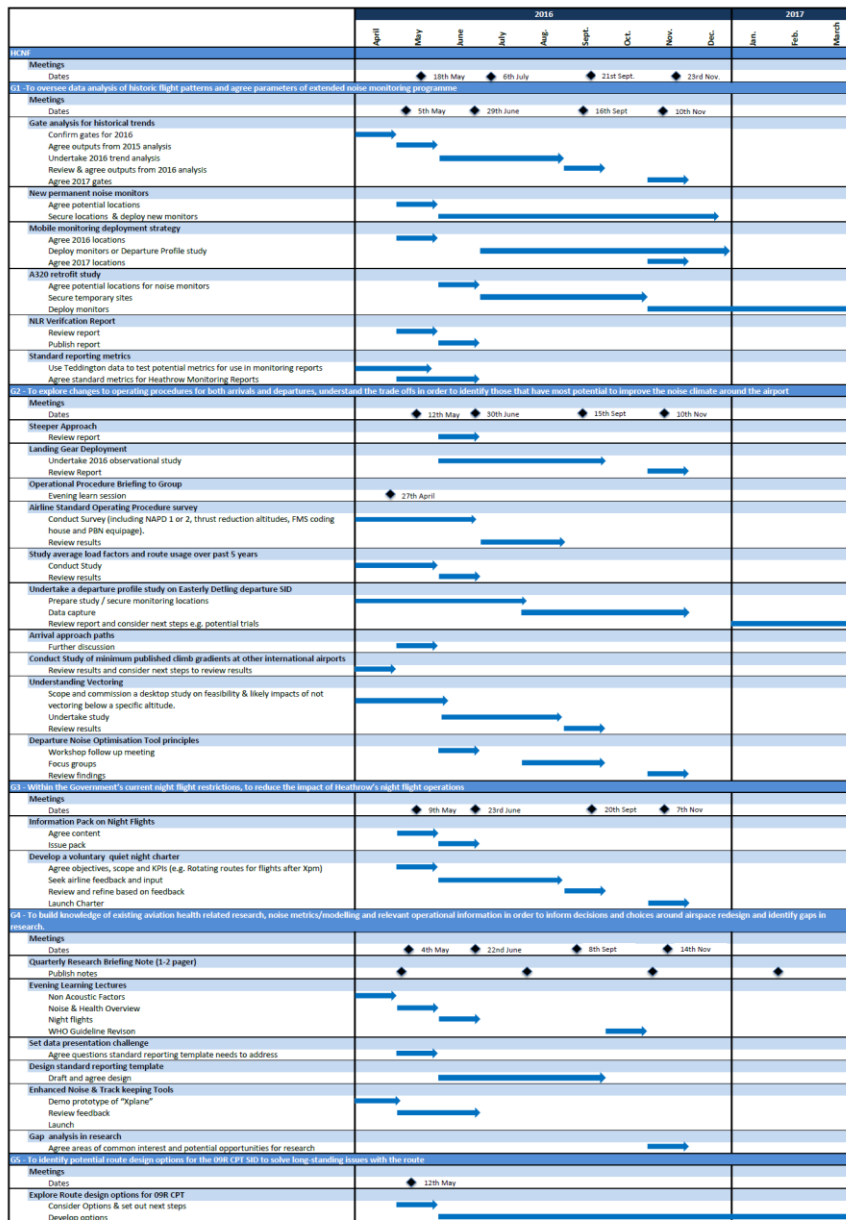
4.148 Five working groups have been identified from the CNF area of the web site. They are covering the following issues:

- Monitoring and verification
- Operating Procedures
- Night Operations/scheduling conditions
- Research, policy and communications
- Compton Route Review

4.149 Notes can be found on that web site of the working group meetings along with other relevant information.

4.150 An overall work plan is also available here:

[http://www.heathrow.com/file\\_source/HeathrowNoise/Static/HCNF\\_Action\\_Plan\\_2016.pdf](http://www.heathrow.com/file_source/HeathrowNoise/Static/HCNF_Action_Plan_2016.pdf) and has been reproduced below:



4.151 It can be seen from the dates that the workplan was published in March 2016.

### Auditor's Conclusion

4.152 Agree this action is "On Track".

**Working with Local Communities – Action 5.07**

4.153 Table 26 shows the relevant information from the Progress report for this action:

**Table 26  
Information taken from the Progress report for Action 5.07**

Action	Build upon Heathrow's noise communications and develop a targeted benchmarking process with local shareholders. Run a workshop session and use outputs to improve our communications tools and activities.
Performance Indicator	Workshop held for community engagement
Target	Run benchmarking workshop by summer 2015
2015 Progress	A workshop on metrics was held with stakeholders.
Status	On Track

4.154 This is a new action following the October 2016 update of the NAP. The focus is understood to be on trying to improve the content of the monitoring reporting template. This included the types of metrics used to present the results.

4.155 Evidence was seen of a workshop having been held in December 2015 on metrics. From the discussions, a new reporting template was developed during 2016 and evidence was seen of liaison with the HCNF over its content.

***Observations***

4.156 The unavoidable complexity of presenting information about noise impact and effect means that it is important regularly to check that the information provided is properly understood. HAL is to be commended for seeking to improve the accessibility of such data.

4.157 It will be interesting to see if the new reporting template is felt to be an improvement.

**Auditor's Conclusion**

4.158 Agree this action is "On Track".

**Working with Local Communities – Action 5.08**

4.159 Table 27 shows the relevant information from the Progress report for this action:

**Table 27  
Information taken from the Progress report for Action 5.08**

Action	We will continue to direct all money raised by departure noise infringements to the Heathrow Community Fund to distribute to community projects in the Heathrow airport area.
Performance Indicator	Grant money given to Community Projects
Target	To respond to requests for funding for community projects within 3 months of application
2015 Progress	On going.
Status	On Track

- 4.160 For many years, aircraft departing from Heathrow Airport have had to meet certain noise limits. If they fail to do so, the airline is fined. The money that is collected in this way goes into the Heathrow Community Fund (HCF).
- 4.161 Information about how the HCF is used to support projects is set out on the fund’s web site [www.heathrowcommunityfund.com](http://www.heathrowcommunityfund.com). The site describes the fund and how it operates. It also includes information regarding how to apply for a grant.
- 4.162 The audit explored the process that occurred: The noise generated by every aircraft departing the airport is monitored and if an infringement of the noise limit occurs, a noise violation is created in ANOMS. A noise infringement report is generated and the data are carefully checked. If the infringement is confirmed, a letter is sent to the relevant airline.
- 4.163 At the same time, the information about the infringement is passed to the airport’s Business Support Centre who raise an invoice for the fine to be paid. The level of fine depends on the extent of the infringement.
- 4.164 STA had a discussion with the Community Fund Trust Director. Information was seen regarding the guidance and criteria used for awarding grants and the advice provided on completing the application form.



- 4.165 The day-to-day administration is outsourced through a Service Level Agreement and it is understood that the success rate for grant applications is around 50%.
- 4.166 Information was seen on the grants awarded, the sums for each award being in the range of £2,500 to £25,000.
- 4.167 The fund periodically receives the fine money from the airport, but a more systematic approach of money being transferred every quarter is expected to be implemented.
- 4.168 Some information was found in a presentation to the July 2016 Noise Performance Meeting that showed that the bulk of the infringements occurred at night. It did not prove possible, however, to reconcile precisely the fines received from the airlines and the money transferred to the Community Fund. There is no evidence, though, to suggest that the monies are not fully hypothecated as described.

**Auditor's Conclusion**

- 4.169 Agree this action is "On Track".

**Working with Local Communities – Action 5.15**

4.170 Table 28 shows the relevant information from the Progress report for this action:

**Table 28**  
**Information taken from the Progress report for Action 5.15**

Action	Through the Heathrow Noise Forum and our development of the My Neighbourhood module, we will work with our stakeholders to further enhance the metrics we use to describe our noise impact throughout the 5 year action plan programme by the end of 2017.
Performance Indicator	Agreement of a range of metrics to describe the noise impact of Heathrow that meets the needs of a range of stakeholders
Target	<i>To carry out and fund two upgrades of the system between 2013-2018 as they become available to enhance the functionality</i>
2015 Progress	Metrics subgroup of HCNF. Template. X-Plane is a new project in development, to be tested with the HCNF in 2016.
Status	On Track

- 4.171 This action was audited in 2015 (when it was numbered 5.16) and was found to be “On Track”. It was noted that there was an error in the Audit Progress report and that the Target had be copied in error from Action 5.06.
- 4.172 The work for this action is linked to Action 5.07 regarding the metrics used when reporting on the community noise monitoring.
- 4.173 Working Group 4 of the HCNF appears to cover metrics and there is evidence of both the draft and final template of a new reporting format being presented to the September and November 2016 meetings of the HCNF. STA was supplied with a copy of the new reporting template.
- 4.174 The X-Plane project is linked with the data shown on WebTrak. It is designed to provide more comprehensive information about the flights passing over a location. STA used X-Plane and found that information was available on the number and types of aircraft that passed through the notional gate at a particular location. In addition, separate data were shown for day, shoulder periods and night. The aircraft altitude can also be seen. X-Plane can be accessed from here: <http://www.heathrow.com/noise/what-you-can-do/track-flights-on-maps>

**Observations**

- 4.175 In terms of the Noise Action Plan, there is probably a case for merging this action with Action 5.07 as the distinction between the two activities was quite narrow.
- 4.176 The X-Plane facility is very impressive and it was reasonably easy to use. It will be interesting to see the extent to which the communities find the information contained within it helpful.

**Auditor's Conclusion**

- 4.177 Agree this action is "On Track".

## 5 Summary of the Results of the Audit

5.1 Table 29 provides a summary of the audit conclusions

**Table 29**  
**Summary conclusions of the audit**

Action Number	Subject	Claimed Outcome	Auditor's Conclusion	RAG rating*
1.04	Voluntary Quota target for 8-hour night period	On track	Agree this action is "On Track".	
1.06	Independent audit of noise certification data	On track	For the purposes of this audit, which primarily focuses on the position at the end of 2015, the legal difficulty does not affect the outcome and it is agreed that this action is "On Track". However, it is recommended that this action is kept in focus so that the audit of the database can be carried out in a timely manner and the database used with increasing confidence.	
2.03	Minimum Performance Standards	On track	Agree this action is "On Track".	
2.05	Late Running Aircraft	On track	As expressed, the action is not "On track" as there has been no apparent work on late arrivals. In terms of late running departures, agree that this action is "On track".	
2.07	Quieter Procedures	On track	Agree this action is "On Track".	
2.10	Ground Running	On track	It cannot be asserted that this action is 'On Track'. Instead, given the work being carried out on improving the monitoring of APU usage, it should be classified as 'Behind – Not at Risk'	
3.05	Surveys about SI schemes	On track	Agree this action is "On Track".	
3.08	New Residential Development	On track	In the 2015 audit, although this action was felt to be 'On-Track', it was recommended that this action be kept in focus to try to avoid it drifting. That focus has occurred. The reporting of the Target, though, is not as precise as it could be. Therefore, the conclusion is again 'On-Track' but with a recommendation that consideration be given to improving the reporting.	
4.01	Night Restriction Regime	On track	Agree this action is "On track".	
4.03	Early Arrivals	On track	Agree this action is "On Track".	
5.02	General Communications	Complete	Agree this action is "Complete"	
5.03	Meeting Requests	On track	Agree this action is "On Track".	
5.07	Benchmarking process (Metrics)	On track	Agree this action is "On Track".	
5.08	Community Fund	On track	Agree this action is "On Track".	
5.15	Metrics	On track	Agree this action is "On Track".	

5.2 \*The RAG (or Red, Amber, Green) Rating gives a visual summary of the conclusion about whether there is evidence of the progress claimed. The key is

	Agree or more advanced than claimed
	Not as much progress as claimed but not at risk
	Disagree with claim and well behind

**Verification Statement**

5.3 Stephen Turner, MA, MSc, HonFIOA, director of Stephen Turner Acoustics Limited, has undertaken an audit of the progress made in 2015 by Heathrow Airport Limited (HAL) against 15 of the actions set out in the Heathrow Noise Action Plan. The audit has concluded that the progress made was at least as good as claimed for 12 of the 15 actions examined (80%). The audit did not agree completely with the claimed outcome for three of the actions audited. However, progress had been made on each of them and they were not felt to be at risk.

Stephen Turner

March 2017

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