BEFORE THE NATIONAL GREEN TRIBUNAL,

PRINCIPAL BENCH, NEW DELHI

ORIGINAL APPLICATION No. 528 of 2025

[Under Section 14, 15, 25, 26 and 28 of the National Green Tribunal Act, 2010]

IN THE MATTER OF:

Society for Protection of Culture,

Heritage, Environment, Traditions &

Promotion of National Awareness (Regd.)

(Also known as SP-CHETNA) ... Applicant

Versus

Union of India & Ors. ...Respondents

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PLACE: NEW DELHI
DATE: 23.04.2026

For S P CHETNA
Hony President

APPLICANT

THROUGH

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SHORT REJOINDER AFFIDAVIT ON BEHALF OF THE APPLICANT/PETITIONER TO THE REPLY FILED BY RESPONDENT NO. 7 (DIAL)

I, Anil Sood, a senior citizen, S/o Late Sh. M.C Sood, aged about 70 yrs., R/o C-1/1056, Vasant Kunj, New Delhi-110070, do hereby solemnly affirm and state as under:

That I am the President of the Applicant/Petitioner Society and am well acquainted with the facts and circumstances of the present case and as such, competent to make and affirm the present short rejoinder affidavit. I have gone through and understood the contents of the Reply filed by **Respondent No. 7**. I deny each and every contention raised therein specifically on maintainability of filing of present OA and bar of

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res judicata, save and except those specifically admitted hereunder. The Applicant seeks liberty of this Hon'ble Tribunal to file a detailed rejoinder as and when required or as directed by the Hon'ble Tribunal.

MOST RESPECTFULLY SHOWETH:

1. The objections filed by **Respondent No. 7** are wholly misconceived and run contrary to the binding order dated 01.09.2025 passed by the Hon'ble Supreme Court in Civil Appeal No. 11051 of 2025, relevant text of which is reproduced as under: -

> *We dispose of this Civil Appeal by reserving liberty to the petitioner herein to file a fresh application before the National Green Tribunal along with all supporting material so as to seek appropriate reliefs including the reliefs, if any, which were sought earlier and granted by the Tribunal, but which have not been implemented as yet by way of a mandamus or direction being issued to the concerned respondents.*
>
> *It is needless to observe that if a fresh application is filed by the petitioner herein along with all supporting material for the aforesaid purpose, the National Green Tribunal shall consider the same as expeditiously as possible on its own merits and in accordance with law.*

2. The Hon'ble Supreme Court expressly directed the Applicant to file a fresh Original Application before this Hon'ble Tribunal, and the present OA has been filed strictly in compliance with that direction.

3. That, the Review Petition filed by **Respondent No. 7** seeking review of the order dated 01.09.2025 has already been dismissed by the Hon'ble Supreme Court vide order dated 06.11.2025. The relevant text of order passed is reproduced as under: -

> *Application for listing Review Petition in open Court is rejected.*
> *Having carefully gone through the Review Petition, the order under challenge and the papers annexed therewith, we are satisfied that there is no error apparent on the face of the record or any merit in the Review Petition warranting reconsideration of the order impugned.*
> *The Review Petition is, accordingly, dismissed.*
> *Pending application(s) shall stand disposed of.*

Thus, the directions have, therefore, attained finality and are binding on all parties.

4. The objections now raised by **Respondent No. 7** are wholly misconceived and constitute a veiled attempt to circumvent and defy the binding directions of the Hon'ble Supreme Court. It is settled law that orders of the Hon'ble Supreme Court are binding under Article 141 of the Constitution of India and cannot be diluted, questioned, or indirectly nullified before this Hon'ble Tribunal. The present objections, being contrary to and in derogation of the said directions, are therefore **not maintainable in law** and **merit outright rejection.**

5. The present OA seeks implementation of specific directions that remain unfulfilled. It is respectfully submitted that despite **clear**

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judicial mandates, to steps to mitigate noise pollution, first and **foremost requirement is to assess the Noise Pollution in a manner as prescribed by Procedure 2008** issued by **Respondent No. 2, (at page no. 154-162 of OA) read with manual issued by Respondent No. 1 titled as "Airport EIA Guidance Manual, 2010" (Airport Manual), relevant chapter of which is annexed herewith as Annexure A-1. The Respondents have persistently failed to implement several critical steps for fair assessment of noise pollution, consequently have failed to take proper and adequate steps to mitigate noise pollution and implement directions passed by Hon'ble Tribunal.** This continued non-compliance is evidenced by the following key issues:

A. **Concealment of Foundational Documents:**

The Respondents during earlier proceedings have failed to disclose the existence of **Procedure 2008** leading the Tribunal to believe erroneously that noise standards were being met. No evidence has been led by **Respondent No. 7** to show that this document was placed on record, discussed and deliberated.

B. **Inadequate Monitoring Infrastructure:**

B.1 It is respectfully submitted that it is an undisputed and admitted position that **Respondent No. 7** has installed only **five NMTs** under **the landing funnels, and not under flight paths. Further, NMT have not been installed** alongwith Runways on flimsy grounds of interreference with navigational signals. This is not only

in clear violation of **Procedure 2008** issued by **Respondent No. 2,** the **Airport Manual issued by Respondent No. 1**, and the **Circular 2014** dated 18.12.2014 issued by **Respondent No. 5,** but is also ex facie grossly inadequate for an airport operating **four runways**. Each **runway has two ends,** and **each end is utilized for both landing and take-off operations**, thereby **giving rise to multiple distinct approach and departure corridors (effectively 16 flight paths**), each **having differing noise footprints and exposure patterns.** The installation of only five NMTs is wholly insufficient to capture the spatial dispersion, directional variability, and operational dynamics of aircraft noise, particularly in densely populated areas falling under different flight paths.

The installation of only five NMTs is arbitrary, grossly deficient, and incapable of capturing the true noise profile, thereby defeating the very purpose of scientific and representative noise monitoring as mandated under the applicable regulatory framework.

B.2. It is further submitted that **Airport Manual** is in line with **Procedure 2008** which mandates comprehensive assessment of noise by installing NMT under flight paths two on each Runway i.e. one on both the sides to measure noise parameters such as **Lday, Lnight and Ldn, DNL, TDNL, EDNL and BDNL**, which inherently include a

mandatory night-time penalty of 10 dB(A) which necessarily require continuous, location-specific monitoring across all flight paths and affected zones. In the absence of an adequate number of properly located NMTs, such parameters cannot be reliably computed.

B.3 It is respectfully submitted that **Respondent No. 2**, in complete deviation from its own prescribed mandate, is neither recording nor disclosing aircraft noise levels in terms of **TDNL, EDNL and BDNL**, as mandated under **Procedure 2008** endorsed by **Airport Manual.** On the contrary, **Respondent No. 2** has chosen to record and disclose noise levels in terms of **LAF#1, LAS#1, LAE#1, LCF#1, LCS#1, LCE#1 and LPeakC#1 at its R.K.Puram NMT – installed at DPS, R.K.Puram, which is under landing funnel and not under flight path**, as would be evident from the applicant's documents forming part of objections filed by **Respondent No. 7 (at pages 1006 to 1015 of objections filed by Respondent No. 7).** These parameters neither find mention, definition or prescription in **Procedure 2008**, **Airport Manual,** and even in the **Circular, 2014,** nor in any statutory Rules and Regulations in India governing aircraft noise monitoring. It is further submitted that the Applicant also attempted to access and download the latest noise monitoring data from the portal maintained by **Respondent No. 2,** i.e. **www.cpcb.nic.in/automatic-noise-monitoring-data-2/,** but the same is not available, which itself reflects non-

disclosure and lack of transparency in relation to the relevant data.

B.4 In view of the above, the installation of merely five NMTs— without placement under all approach and departure paths— and along with Runways on imaginary risk of interference with navigational signals, renders the entire exercise of noise monitoring illusory, non-representative, and contrary to the prescribed regulatory framework, thereby vitiating the Respondents' claim of compliance. Both the Compliance Report submitted by **Respondent No. 7** and **validation thereof by Respondent No. 8 (Annexure A- 9 of OA) for the period April 2023 to September 2023 at page no.(s)180 to 320 and for the period October 2023 to March 2024 at page no.(s) 321 to 337 of OA)** are completely silent on this material violation of the EC. Surprisingly **Respondent No.(s) 1, 2, 6 and Respondent No. 8** have failed to take action on **violation of EC-2018** by not installing NMT at the villages abutting boundary of the Airport, **for which no exemption has been granted**, as is evident from response to **application bearing number 11/Patya/R.T.I/101/2024/366 dated 20-11-2024 annexure A-14 (at running page 409 of OA).**

B.5. It is respectfully submitted that the argument of non-installation of NMTs on the sides of Runways is unfounded because **Heathrow Airport with 2 RWYS has installed**

39 NMT, Frankfurt Airport having 4 RWY has installed 29 fixed NMT and 3 Mobile NMT and Amsterdam Airport having 6 RWY has installed 41 NMT. The copies of relevant official publications by relevant airports as downloaded from their official websites are annexed herewith as **annexure A2. (Colly).**

C. **Mixed Mode Use of Runways:**

C.1 The Applicant respectfully takes strong exception to the tone and tenor adopted by Respondent No. 7 in casting unwarranted aspersions and questioning the bona fides of the Applicant and also lack of knowledge. The same is wholly untenable in view of the facts placed on record by the Applicant, many of which stand admitted by **Respondent No. 7** itself. **Respondent No. 7** is, therefore, put to strict proof of all such allegations.

Respondent No.7 while casting aspersions on conduct of the Applicant has claimed that it is a **public utility,** when question of non-compliances by it are highlighted and when information is demanded under **Right to Information Act 2005,** it claims immunity as a private enterprise and not a public utility. Therefore, status of **Respondent No.7** must be decided.

It is a matter of record that each flier in addition to purchasing food items and water at astronomical prices pays **almost 20% of the airfare as Aviation Security**

Fee, User Development Fee, Arrival User Development fee. Each flier Infact subsidies the airport operations by purchasing food and beverages at astronomical cost.

C.2 **Respondent No. 7** in para 67 while dealing with information provided by **Respondent No. 4** and raising issue of Applicant's conduct and lack of knowledge, with a view to avoid legal scrutiny of violation of Mixed Mode Use, has candidly admitted the submissions made by Applicant in **annexure R 21** (at running page no. 1135 of Objections filed) **and fact that 56% of flight operations are** only on **two RWYs 29/11 (old & 29/11(New).** A copy of **R-21 (Comparative of month wise runway usage)** alongwith Reply from **Respondent No.4** is annexed herewith as **Annexure A-3(Colly).**

Once it is an admitted by Respondent No. 7 that on an average in 5 months 56% (53% to 59%) of flights are landing or taking off from RWY(s) 29L, /11R & RWY 29R /11L, Respondent No. 7 thus impacting Residents of Vasant Kunj and Dwarka living under flight path, must be directed to submit Month wise, year wise use of runways from 2017-18 onwards for judicial scrutiny by Hon'ble Tribunal and Respondent No. 7 must tender an unconditional apology.

C.3 While coining the expressions "**Northern Runways" and "Southern Runways", Respondent No. 7** has once again

concealed a material and fundamental fact, namely, that the usage of runways for landing and take-off is governed strictly by prevailing wind directions—primarily easterly and westerly winds. Easterly wind conditions arise only during limited periods, such as the monsoon season and occasional western disturbances, whereas for the majority of the year, westerly winds prevail.

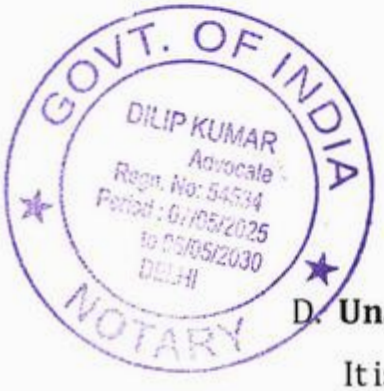
In these distinct wind conditions, the pattern of landing and take-off correspondingly shifts, and the same is not a matter of choice but a mandatory operational requirement dictated by aviation safety norms. The landing and take-off patterns under both conditions are as follows: -

Wind Direction	**Arrivals RWY**	**Departures RWY**
Easterly	09,10,11 and 11R and 11L	27, 28, 29L and 29R
Westerly	27,28,29L and 29R	09,10,11 and 11R and 11L

C.4 It is thus evident that runway usage is not static but highly dynamic, governed by wind direction as well as operational configurations such as mixed/bi-directional use. This results in shifting and, at times, simultaneous corridors of concentrated aircraft noise over different residential zones. The attempt by **Respondent No. 7** to simplistically classify runways as "**Northern**" **and**

"Southern" is therefore misleading and conceals the material reality that multiple densely populated areas are either **alternately or concurrently subjected to high-intensity aircraft noise, depending upon prevailing wind conditions** and capacity-driven operational choices.

C.5. Therefore, having regard to prevailing wind directions as well as the admitted practice of mixed/bi-directional operations, runway usage ought to be balanced and proportionate so as to avoid persistent and concentrated noise exposure over select corridors. However, the data already furnished by **Respondent No. 4** itself demonstrates that no such proportionate or equitable use is being followed in practice, with operations being disproportionately concentrated on particular runway ends and flight paths. The refusal of **Respondent No. 4** to disclose complete operational data for the period from 2017–18 onwards is, therefore, nothing but a deliberate attempt to evade judicial scrutiny of its statements made on oath and to conceal the true pattern of runway utilisation and its consequent environmental impact.



D. **Unauthorized Metric Modification:**

It is respectfully submitted that the Circular dated 18.12.2014 issued by the **Respondent No. 5,** while purporting to endorse **Procedure 2008 issued by R-2**, has in effect diluted its mandatory framework. The **Procedure 2008**, as

originally prescribed, incorporates internationally accepted composite noise indices such as **DNL, TDNL, EDNL and BDNL**, which inherently include a **mandatory night-time penalty of 10 dB(A)** to account for heightened human sensitivity during night hours. However, the said Circular has unilaterally omitted/neutralised the application of such night-time penalties, without any authority conferred on it, statutory backing or scientific justification, thereby undermining the integrity of the prescribed methodology.

E. **Selective Reporting:**

It is further submitted that the Respondents are claiming compliance by solely relying on **Leq (average noise)** and **Lmax** and have not undertaken any measurement or assessment of the aforesaid composite indices, including **DNL/TDNL/EDNL/BDNL**, as prescribed by **Respondent No. 2, endorsed by Respondent No. 1** nor have they applied the mandatory night-time penalty in evaluating aircraft noise impacts, proposed by **Respondent No. 2.** The continued reliance solely on simplified metrics, in deviation of the prescribed **Procedure 2008** and **Airport Manual**, renders the entire exercise of noise assessment **incomplete, non-compliant, and contrary to binding regulatory requirements**, thereby vitiating the claims of compliance made by the Respondents.

F. **Scientifically Flawed NMT Placement:**

The claim that NMTs have been strategically placed in landing funnel is flawed in view of the fact that same should have been placed flight paths as mandated by **Respondent No. 2** and in residential areas without obstructions. This placement in landing funnel results in the recording of random surface noise rather than the actual ambient noise levels experienced by residents under flight paths, rendering the reported data misleading and unreliable.

G. **Failure in Village-Level Monitoring:**

In direct violation of the **Environmental Clearance (EC) of 2018,** NMTs have not been installed in villages abutting the airport boundary, such as Mahipalpur, Bijwasan, and Shahabad Mohammadpur. Admittedly no exemption has been granted from installation of NMT as per response received from **Respondent No. 8** through **letter bearing number 11/Patya/R.T.I/101/2024/366 dated 21-11-2024 annexure A-14 (at running page 409 of OA).** Despite such a gross violation no action has been taken by **Respondent No. 1, Respondent No. 2, Respondent No. 5 against Respondent No. 7.**

H. **Reverse thrust:**

The Applicant respectfully submits that, in view of the short turnaround time fixed by the **Respondent No.(s) 3, 4, 5, and 7** in consultation with airlines aimed at **maximising revenue** through **optimal slot utilisation** by the **Respondent No. 7 enhanced fleet utilisation by airlines,** and **increased**

revenue generation by **Respondent No. 4** the so-called advisory to pilots stands reduced to a mere paper formality. Such **operational constraints, driven predominantly by commercial considerations, effectively negate and render illusory the theory of judgment-based use of reverse thrust** by pilots. **Respondent No. 5** must be directed to place on record the **Turnaround time fixed while approving airlines wise Airport Movement Report - Approved Summer Schedule – Domestic published on 18.03.2026 effective from 29.03.2026 to 24.10.2026.**

I. **Transparency and Reporting Lapses: Respondent No. (s) 1 to 7** have failed to first assess the noise pollution generated and therefore, failed to put in place mitigation measures. Moreover, **Respondent No. 1 and Respondent No. 8** have validated compliance reports in a perfunctory manner without conducting necessary field verifications or addressing these glaring omissions.

6. The objections conspicuously avoid addressing the core issue of non-assessment consequently leading to non-compliance and appear intended only to delay adjudication on merits as directed by Hon'ble Supreme Court

7. At the cost of Repetition, it is respectfully submitted that the **Order dated 01.09.2025** passed by the Hon'ble Supreme Court in **Civil Appeal No. 11051/2025** has merged with all prior proceedings relating to **Execution Application No. 33/2025** and the order of

this **Hon'ble Tribunal dated 26.05.2025**. By virtue of the well-settled doctrine of merger, once the Hon'ble Supreme Court has exercised appellate jurisdiction and passed a reasoned order, the order of the lower forum stands merged with that of the Supreme Court and ceases to have independent existence.

8. Upon dismissal of the Review Petition preferred by **Respondent No. 7**, the order dated 01.09.2025 has attained finality and is binding under **Article 141 and Article 144 of the Constitution of India**. The directions contained therein cannot be diluted, questioned, before this Hon'ble Tribunal.

9. It is settled law that what cannot be done directly cannot be permitted to be done indirectly. The **Respondent No. 7**, having failed before the Hon'ble Supreme Court, cannot now seek to frustrate or circumvent the binding mandate of the Apex Court by raising objections to the maintainability of an Original Application expressly directed to be filed.

10. Accordingly, the present OA is in compliance with the Supreme Court's binding directions, and therefore its maintainability is beyond dispute.

11. Applicant is filing present reply limiting to the objections on maintenance of present OA, and reserves right to file detailed rejoinder on merits after issuance of notice to all Respondents after considering replies which may be filed by them.

PRAYER

In view of the facts and circumstances stated above, and in light of the liberty granted by the Hon'ble Supreme Court vide order dated 06.11.2025, it is most respectfully prayed that this Hon'ble Tribunal may graciously be pleased to:

i. Reject and dismiss in limine the preliminary objections filed by **Respondent No.7**, being contrary to the binding directions of the Hon'ble Supreme Court and amounting to abuse of process;

ii. Hold that the present Original Application is fully maintainable, having been instituted strictly pursuant to the directions contained in the order dated 01.09.2025 passed by the Hon'ble Supreme Court, which has attained finality;

iii. Pass such other order(s) as this Hon'ble Tribunal may deem fit and proper in the interest of environmental rule of law, public health, and protection of fundamental rights under Article 21 of the Constitution of India

DEPONENT

Madhumita
IDENTIFIED BY

VERIFICATION:

Verified at New Delhi on this 23th day of April 2026 that the contents of the above affidavit are true and correct to the best of my knowledge and belief and no part of it is false and nothing material has been concealed therefrom.

GOVT. OF INDIA
DILIP KUMAR
Advocate
Regn. No. 54534
Period : 07/05/2025
to 06/05/2030
DELHI
NOTARY

DEPONENT

PLACE: NEW DELHI

DATE: 23.04.2026

ATTESTED
DILIP KUMAR
NOTARY PUBLIC
Reg. No. 54534

23 APR 2026

जहाँ है हरियाली ।
वहाँ है खुशहाली ।।

Ministry of Environment & Forests
GOVERNMENT OF INDIA, NEW DELHI

Environmental Impact Assessment Guidance Manual for AIRPORTS

Prepared by

Administrative Staff College of India
Bellavista, Khairatabad, Hyderabad

February 2010

4

DESCRIPTION OF ENVIRONMENT

4.0 General

Airport development may create a wide range of impact on the environment by construction work, reclamation, landfills, noise and emissions from aircraft effecting air quality and ground sources, cargo operations, and other airport related activities. Environment facets to be considered in relation to airport development can be categorized into seven groups: (a) land use (b) water quality (c) air quality (d) noise pollution (e) biological changes (f) socio-economic changes and occupational health and (g) solid waste management. Hence it is necessary to ascertain the baseline data of these environmental facets.

4.1 Study Area

Primary data through measurements and field surveys; and secondary data from secondary sources are to be collected in the study area within 10 km radius from Aerodrome Reference Point (ARP). Primary data should cover one season other than monsoon and secondary data is to cover one full year. The basis for selection of these criteria is that the aircraft gains a height of 1000ft in this area below which noise and air pollution are generated maximum during its take off stage. Secondary data should be collected within 15 km aerial distance for the parameters as specifically mentioned at column 9 (III) of Form I of EIA Notification, 2006. Details of secondary data, the method of collection of secondary data, should be furnished. Similarly the proposed locations of monitoring stations of water, air, soil and noise etc should be shown on the study area map.

The study areas mentioned in this document should be considered for guidance purpose but the exact study area for different environmental attributes (water, air, noise and soil etc.) is to be submitted considering the proposed activities and location, along with proper reasoning, for review and approval by the Expert Appraisal Committee.

Baseline data of various environmental parameters envisaged to be effected by airport activities are collected from secondary sources and through primary monitoring in the study area. This baseline data helps in evaluation of the predicted impact on various environmental attributes in the study area by using scientifically developed and widely accepted environmental impact assessment methodologies. This further helps in preparing an Environmental Management Plan (EMP) outlining the measures for improving the environmental quality and scope for future expansions for environmentally sustainable development. The baseline environmental study also helps to identify the critical environmental attributes, which are required to be monitored after implementation of the project.

The methodology involves analysis of secondary data including satellite imagery, to describe the existing environmental status in the study area of the project referring to the source of the data in each case. The primary data on the other hand describes the existing environmental status in an area of 10km radial distance from ARP through scientifically designed monitoring network. The methods defer from one parameter to the other. The basis for this depends on the relevance of the parameter and the impact of the airport activity on it.

4.2 Land Environment

Soil:

Land is one of the important and rare resources. Airport projects require considerable land area for development of activity areas, operational and non-operational buildings, areas for ancillaries, utilities including townships. Sometimes acquisitions of large stretches of land and areas being used by the local habitat may be necessitated requiring rehabilitation measures. Availability of land for earmarking for the airport without causing undue hardship to local habitat and their socio cultural and economic aspects is very important. Studies on land use aspects of ecosystem play an important role in identifying sensitive issues in the past and present development of the region. Existing baseline status of land use can be determined through a study of changes in the land use pattern in the past 10yrs by collecting data from secondary sources such as census, and land records. Interpretation of satellite data of current year will bring out the trends in the changes of land use pattern in the past. The land use pattern in study area is analysed with the help of a map to 1:25000 scale based on recent satellite imagery of the study area delineating the cropping pattern, forest area and built-up area etc. (Annexure-2).

Soil refers to the loose material composed of weathered rock and other minerals and also partly decayed organic matter that covers large parts of the earth's surface. It is an essential component of the terrestrial eco system. It acts as a medium of transport of various dissolved materials to the underlying ground water. Hence, impact on soil is important in EIA study. Soil formation is influenced mainly by climate, geology, relief and other biotic interactions. The soil characteristics in the study area of the project, which would affect the agricultural and afforestation potential of the area need to be studied.

Soil data including type, classification, characteristics, properties, etc are important from engineering considerations for structures etc. Changes in soil parameters may also affect plantation and vegetation, which in turn may endanger the health of habitat. Baseline data consisting of soil analysis -physical and chemical (Tables 4.1 and 4.2) within the project area is to be collected to assess its fertility. Data pertaining to coverage of land for other purposes and general slope of the terrain within the study area is collected to assess the trends in the land use patterns and the natural run off patterns.

Soil samples are collected all around the project site covering the agricultural and reserved forestland, if any in the study areas. Sampling frequencies and the methods of baseline environmental quality monitoring are given in Annexure 3. The samples are collected during the study period and analysed for physical, chemical parameters and heavy metal concentrations, as per standard methods of analysis. The nature of the soil is to be discussed based on the classification.

Physiography and Drainage Patterns:

The terrain and hill slope, general slope and elevation of the area, the flow direction of streams and rivers, the water bodies and wet lands and the vegetation which together describe the physiography of the land, will control the drainage pattern in the region. Land farms, terrain, may get affected due to construction of airport. It may require large scale quarrying, dredging and reclamation, which may cause changes in the topography. This in turn may affect the drainage pattern of the land / terrain. Baseline data pertaining to existing land at the proposed project area including the description of terrain hill slopes terrain features, slope and elevation are to be collected. Study of land use pattern, habitation, cropping pattern, forest cover, environmentally

sensitive places etc., is to be undertaken by employing remote sensing techniques and ground truthing. Ecological features of forest area; agricultural land; grazing land; wildlife sanctuary land & national parks; migratory routes of fauna; water bodies; and drainage pattern including the orders of the drain and water sheds are to be described. Settlements in the study area may be delineated with respect to ARP on the site map. High rise buildings, industrial areas and zones, slaughter houses and other features of flight safety importance may also be marked on the map. Secondary data from Central Water Board GOI; State ground water department, State Irrigation Department is to be obtained. Geomorphology of the region is to be clearly delineated. Study of land use patterns, habitation, cropping pattern, and forest cover data is undertaken. Information on the location of water bodies, drainage, forests, surface travel routes with respect to the project site is obtained within the study area and plotted on a map. This map will show the natural slopes and the drainage patterns, which give a guideline while planning the drains in the airport project. The drains help in discharge of storm water from the airport to avoid flooding and water logging in the project area.

4.3 Water Environment

Ground water quality is important, as change in its chemical parameters will affect the water quality. Airport activities during construction / operation may have impact on ground water quality. Due to airport construction existing low areas may be reclaimed with dredged spoil. The pollutants from dredged spoil are likely to enter into the ground water. This is likely to increase sedimentation of pollutants in airport area, which may migrate in time to the neighbouring ground water. Also runoff from solid waste if any, may percolate into the ground and may contaminate the ground water. Hence, they need to be studied through primary surveys and secondary sources. Monitoring locations are to be finalized as per CPCB norms which can represent the baseline conditions.

Ground water, surface water and waste water within study area are examined for physico-chemical, heavy metal and bacteriological parameters. The samples are collected and analysed as per procedures prescribed (Annexure 3). Baseline data on location sources of surface water like water bodies, lakes, their dimensions, present quality and their utility are to be provided. The location of sampling stations is to be provided as shown in Table 4.3. Similarly baseline data on the groundwater, surface water is to be provided. Water Table contour map for the pre monsoon months are made for the study area based on secondary data collected from state ground water board. Criteria for raw water used for organized community water supplies (surface and ground water) primary parameters are given in Annexure 4.

4.4 Air Environment:

Ambient air quality (AAQ) is important for the airport projects. The significance of aviation's impact on air quality will vary depending on many other factors such as, background pollution levels, other sources of pollution, weather and proximity of residential areas. Around many airports some large emission sources already exist (power stations, factories) that are not related to the airport at all. Also local roads and motorways, even roads associated with an airport, may be heavily used by non-airport traffic.

Aircraft engines produce emissions that are similar to other emissions resulting from any oil based fuel combustion. These, like any exhaust emissions, can affect local air quality at ground level. It is emissions from aircraft below 1,000ft, above the ground (typically around 3km from departure or, for arrivals, around 6km from touchdown) that are chiefly involved in influencing

local air quality. These emissions disperse with the wind and blend with emissions from other sources such as emissions from domestic sources , emissions from industries and from surface transport.

Important sources of emissions from airport include:

- airside and landside ground transport
- aircraft emissions from takeoff, approach and landing, engine testing and taxiing
- use of auxiliary power units to provide energy to stationary aircraft and ground power units.
- Fuel spillages, fire training, and construction activities

The local air quality relevant emissions attributed to aircraft operations at airports are oxides of nitrogen (NOx), carbon monoxide (CO), Hydrocarbons (HC), sulphur dioxide(SO2), particulate matter (PM10 and PM2.5). Aircraft engines, auxiliary power units, apron vehicles, de- icing, and apron spillages of fuel and chemicals that emit these pollutants. Local factors influence the significance of individual emissions for each airport, but often NOx is by far the most abundant and is considered the most significant pollutant from an air quality stand point. Standard emission factors, for various operation types for a range of common civil aircraft engine types maybe obtained from International Civil Aviation Organization (ICAO) database. Annexure 5.1 to 5.3.

The ambient air quality in area with radial distance 10km. from Aerodrome Reference Point (ARP), forms the baseline information. For new airport development, the sources of air pollution, for baseline studies are vehicular traffic, dust arising from unpaved village roads, domestic fuel burning and nearby industrial air emissions. For expansion / modernisation projects, additional pollutants include the airside and geographic sources in the airfield.

Meteorological Data

The methodology adopted for collection of micro meteorological data specific to the site is to compile the Mean monthly normals of atmospheric parameters, from previous 10yrs data recorded by the nearest IMD station. The parameters selected are atmospheric pressure in (mb) and relative humidity in percentage both recorded at 0830hrs & 1730hrs IST of each day. Maximum and minimum temperatures in 0C of each day; 24hrly rainfall in millimetres (mm) recorded at 0830hrs IST and 1730hrs of each day. The normals for each month are to be calculated and shown in a tabular form. Wind Roses for each month giving the wind direction, speed and percentage frequency; as per key Index and scale should be given. Most probable wind speed class and wind direction at the nearest IMD site is to be estimated from this. Sunshine duration, cloud cover "normal values" is to be compiled from secondary data for getting the monthly "normals".

The methodology adopted for monitoring surface observations is to be as per the standard norms. Onsite monitoring will be undertaken for one season except monsoon season for recording various meteorological variables in order to generate the site - specific data (Annexure 3). This data is then compared with the meteorological data of IMD for judging its reliability and consistency with regional meteorology.

The Central Monitoring Station (CMS) equipped with continuous monitoring equipment to record wind speed, direction, temperature (2m & 10m levels) and solar radiation is to be set up at the project site. Relative humidity and atmospheric pressure are recorded manually daily at 0830hr, and 1730hrs. Data on cloud cover and storms is recorded by visual observation. Rainfall is

monitored daily by rain gauge. Hourly averages of maximum and minimum values of wind speed, direction, solar radiation and temperature are recorded continuously at the site.

Upper air climatic data is useful in locating ground and elevated inversions and computing hourly mean mixing heights ,which are required for use in air dispersion models. They can be procured from nearest IMD station and other secondary sources. The air quality monitoring stations should be given as shown in Table 4.4 and the data is to be measured and recorded as shown in Table 4.5. The standards are given in Annexure 5.4.

4.5 Noise Environment

The effect of noise on population depends on the characteristics of the source, the time of its existence and the location with respect to the noise sensitive land use. Noise can cause Noise Induced Hearing Loss (NIHL) to annoyance depending on its loudness. The effects of noise from proposed airport, construction activity, and vehicular traffic can cause potential damage to hearing, physiological responses, annoyance and general community responses. The ambient noise measurement frequencies and standards are given in Annexure 3 and Annexure 6 respectively. The existing noise levels before starting the construction of airport are to be measured for collecting baseline data. The process is to be repeated during construction and operational phases of project as well.

Baseline data on noise survey is collected in the project area on a given day during study period at a given location covering residential, commercial and silence zones continuously for 24hrs, at hourly intervals. During each hour parameters like L10, L50, L90 and Leq are directly computed by the instrument capable of measuring Sound pressure Level (SPL) , Leq and octave band frequency analysis. The description of noise levels measured over a given (Leqs) of time interval is given using statistical quantities. These are calculated as per the noise level exceeding over certain percentage of time during the study period.

L10 is the noise level exceeding 10 percent of time,

L50 is the noise level exceeding 50 percent of the time,

L90 is the noise level exceeding 90 percent of the time,

Leq is the hourly equivalent noise level value computed by the noise integrating sound level meter.

Lday is the equivalent sound level (average noise level during 6am to 10 pm).

Lnight is the equivalent sound level (average noise level during 10 pm to 6 am.)

Ldn is Day Night sound level (24 hr equivalent sound level with weighted penalty for night) for community noise from all sources. Here 10 dB (A) is added to instantaneous sound value during night before calculating 24hrs average.

Ldn= 10 log 1/24 {i=1to15 (sigma) 10 (leq i/10) + i=1to9 (sigma) 10 {(leq i+10)}] .

The data is to be presented as shown in Table 4.6.

4.6 Biological Environment

Airport operations may cause change in local ecosystems, threaten endangered species, and disturb movements and breeding patterns of local wildlife. Airports are located within a variety of settings (both urban and rural), which support habitats and species of their own, some of which will have direct interaction with those located on the airport and vice versa. Some local areas will also be

designated for their nature conservation value. The biological environment of the airport should hence be seen as an integral component of the wider landscape scale ecological network. To accomplish this,

- Baseline data from field observations for various terrestrial and aquatic systems are to be generated.
- Comparison of the data with authentic past records to understand changes is undertaken.
- Environmental components like land, water, flora and fauna are characterised and,
- The impact of airport development on vegetation structure in and around project site is to be understood.

Data on sensitive habitats, wild or endangered species in the project area also is to be collected from Zoological Survey Of India (ZSI), Botanical Survey of India (BSI), Wildlife Institute of India (WII) and Ministry of Earth Sciences. Wildlife symbolizes the functioning efficiency of the entire eco system. Just as wild flora needs special treatment for preservation and growth, wild fauna as well deserves specific conservatory pursuits for posterity. As per Wildlife Act (1972), the various wild animals are enlisted in the schedules of wildlife Act based on the intensity of threat to them as rare, endangered, threatened, vulnerable etc. Primary data on survey of the wild animals and birds in the study area is collected and identified with the classification into various schedules taken from secondary data.

In case water bodies are located in the study area plantation analysis for one season is to be undertaken (Annexure 3)

4.7 Socio- Economic Environment

Airport development may often require relocation of the local community, which, sometimes causes ethnic, cultural, tribal or religious conflicts with local people. Industrialization and modernization may change the cultural traditions of the local community. To study the socio-economic aspects of people in the study area around proposed airport, baseline data on demographics, land used patterns, water resources for agricultural and industrial use, human settlements, health status of the communities, infrastructure facilities and economic conditions in the existing and relocated area, cultural and archaeological assets within the project area should be catalogued and presented.

Baseline data is collected from various secondary sources, such as District Census Statistical Handbooks -1991, and records of National Informatics Centre, New Delhi and supplemented by the primary data generated through process of a limited door to door socio-economic survey during the study period and during other stages of the project. Results are to be compiled and presented as in Table 4.7 and Table 4.8.

4.8 Solid Waste

Solid waste generation, in airport development is in three stages namely, site preparation, construction and operation. The types of waste, which are generated, can be classified into 4 categories namely, construction or demolition waste; municipal waste, i.e., biodegradable and recyclable waste; hazardous waste and E- waste.

Details of authorized municipal solid waste disposal facilities, biomedical treatment facilities and hazardous waste disposal facilities in the area are highlighted. The adequacy of these measures vis a vis waste generated is to be assessed and alternate measures need to be initiated.

Table No. 4.6 Description of Noise Monitoring Stations

S. No	Locations	Class*	Average Day noise level (dBA)	Average Night noise level	Day time (6.00 A.M. to 10.00 P.M) Standard (Leq in dBA)	Day time (10.00 P.M. to 6.00 A.M) Standard (Leq in dBA)	Remarks

*Industrial area/ Commercial area /Residential area /Silence zone

Table 4.7 Demographic Profiles of the Villages in the Atudy Area

Sl. No.	Demographic Feature	Study Area	Share in total Population (%)
1.0	Total Population		
2.0	Households		
3.0	Occupation		

Table 4.8 Other Infrastructural Facilities Available in the Study Area

Sr. No.	Name of the village	DWF	Tp	W	T	TW	HP	R	C	L	S	O	PO	TO	PT	P	B	RS	NW	CB	CoB

Note:

DWF	: Drinking Water Facility	C	: Canal	P	: Phone
Tp	; Tap	L	: Lake	B	: Bus
W	: Well	S	: Spring	RS	: Railway Service
T	: Tank	O	: Others	NW	: Navigable Waterways
TW	: Tube Well	PO	: Post Office	CB	: Commercial Bank
HP	: Hand Pump	TO	: Telegraph Office	CoB	: Co-operative Bank
R	: River	PT	: Post & Telegraph Offices		

Noise monitors

Share

Feedback

Heathrow has an array of fixed and mobile noise monitors located around the airport.

These are used to monitor compliance with noise limits set by the DfT for aircraft departing from the airport, to assist annual noise contour mapping and air traffic management improvement initiatives, and to measure noise in community locations where requests have been received to assist our understanding of aircraft noise and to help us shape future policy commitments.

Noise levels can be viewed in our WebTrak app which also allows users to track flight activity into and out of Heathrow along with information about each aircraft. We also publish community noise reports which can be downloaded from the Reports section of our website.

Further information on noise monitors can be found in the document Community Noise Monitors Update presented at the Noise and Airspace Community Forum on 8 February 2023.

NOISE MONITOR REQUESTS

To request a monitor in your area please contact us via the email address below. All requests are assessed by the NACF and new locations are agreed each year.

noise@heathrow.com

How many are there and how have numbers changed over the last 10 years?

Heathrow has 39 noise monitors currently located at sites around the airport and has added over 30 new monitors within the last ten years.

How has their positioning been decided and does this get reviewed?

What are the important criteria for site selection?

Who makes the noise monitors, how is data fed back to Heathrow and are all the noise monitors the same?

What is the maintenance regime and how is their performance monitored and validated?

What level of accuracy do monitors have to meet in terms of sound energy measurement?

How low or high can they go in terms of decibel reading?

What is the noise monitor failure rate?

What data do Heathrow receive and how frequently is it downloaded?

What form does the data take?

How long is the data kept for and is there a historical database of every reading per monitor?

Is the data validated to see if there are any anomalies?

What applications does the noise data get used for?

How is the data transferred into the various noise measure statistics and contours and how often are they produced?

Do Heathrow observe and analyse noise profiles over time and how they may change? 28

More Topics

Noise and Airspace Community Forum

Noise reports and data

Heathrow Airport Limited,
The Compass Centre,
Nelson Road, Hounslow
Middlesex, TW6 2GW

GET IN TOUCH

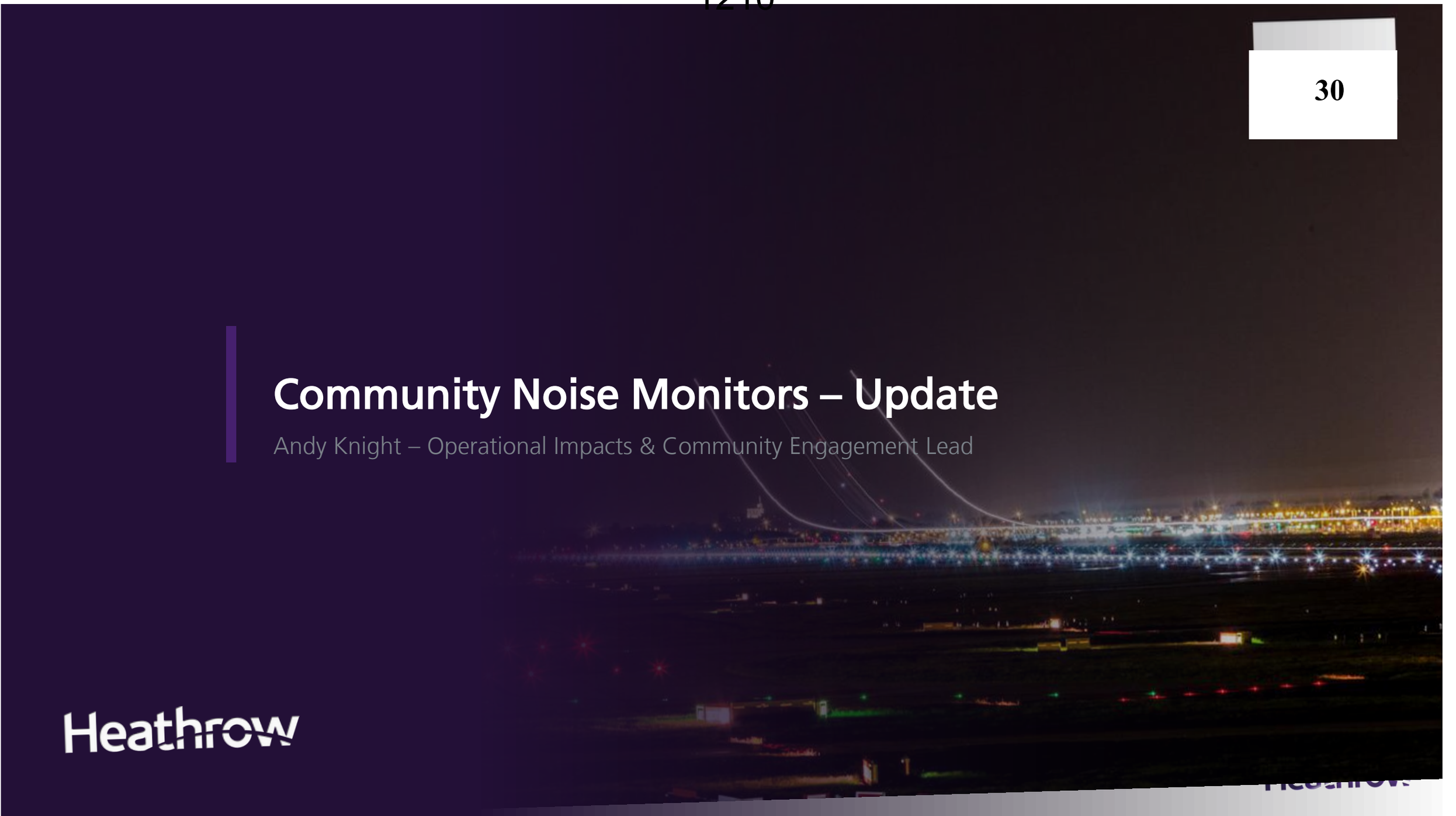
INVESTOR

MEDIA

30

Community Noise Monitors – Update

Andy Knight – Operational Impacts & Community Engagement Lead



Heathrow

Key messages

- Heathrow is able to resume deployment in 2023
- We propose to immediately deploy three noise monitors in line with 2020 recommendations
- We propose to form a new task & finish group in NACF to agree a process to accept new applications and determine new locations for deployment in 2024

What is Heathrow required to do?

- Heathrow has three obligations for monitoring and measuring aviation noise:
  - It must monitor compliance with noise limits set by the DfT for aircraft that are departing from the airport
  - It must have a noise track keeping system (NTK)
  - It must undertake noise assessments in line with the Government's noise action planning process

Departure noise limits

- Aircraft departing from Heathrow are subject to individual noise limits set by the UK Department for Transport (DfT). The current limits were introduced in 2001. There are three limits in place – one each for the day, shoulder and night-time periods.
  - Day (07:00 – 23:00 hours) **94dBA L_{max}**
  - Shoulder (23:00 – 23:30, 06:00 – 07:00 hours) **89dBA L_{max}**
  - Night (23:30 – 06:00 hours) **87dBA L_{max}**
- L_{max}, or Maximum Sound Level, is a noise level descriptor representing the highest sound level measured during a single noise event (such as an aircraft passing by), in which the level changes value as time progresses.
- Heathrow has 12 permanent noise monitors which are used to monitor adherence. The limits assume that the noise monitors are exactly 6.5km from the start of the point from which the aircraft commences its take-off roll on the runway and at the same elevation as the airfield. In practice, this is rarely possible and so adjustments are made to the limits to take account of any variances in the monitor's position. These adjustments are set by the DfT.

Departure noise limits

- In the event that an airline infringes one of the limits, they are charged a noise supplement with all proceeds going to the Heathrow Community Trust (HCT), which funds community projects in areas affected by the airport's operations.
- Details concerning the allocation of funds can be found at www.heathrowcommunitytrust.org
- Noise fines are charged based upon the table below:

Period	Time	Decibel Limit	Fine per Decibel
Day	7am to 11pm	94	£500
Shoulder	11pm to 11:30pm & 6am to 7am	89	£1,500
Night	11:30pm to 6:00am	87	£4,000

- In 2021 and 2022 there were 3 noise infringements in each year. Historically the number of annual infringements were much higher and this reflects the trend towards quieter aircraft types. Further details can be found on our website: https://www.heathrow.com/company/local-community/noise/making-heathrow-quieter/departure-noise-infringement-fines

Noise Maps & Noise Action Plan

- The Department for Environment, Food and Rural Affairs (Defra), working in conjunction with the Department for Transport (DfT), oversees the UK's legal obligations under the Environmental Noise Directive (END).

- The END requires certain civil airports, including Heathrow, to produce noise maps and action plans at least every five years. Heathrow commissions the CAA to produce noise contour maps annually under a commitment in its Noise Action Plan. Heathrow also commissions CAA to produce the strategic noise maps every five years to support noise action planning and then it submits draft action plans for adoption to Defra.

- The action planning process uses the mapping results and is designed to manage noise issues and effects arising from aircraft departing from and arriving at those airports. Heathrow is required to publicly consult on proposed actions to manage its noise impacts in line with the Government's stated noise policy objective.

- The END operates in five-yearly cycles. The current cycle is from 2019, using data from 2016. Heathrow is now consulting with stakeholders on the next cycle, which will result in a new action plan being submitted to Defra in September 2023. It is then published within 28 days of Defra's adoption.

What needs to be included?

- The action plan must be drawn up for places near the airport which are affected by noise from airport operations as shown by the results of the noise mapping and meet a number of requirements set out in the Regulations.
- These include (but are not limited to):
  - a summary of the results of the noise mapping, including an evaluation of the estimated number of people exposed to noise
  - identification of problems and situations that need to be improved
  - any noise reduction measures already in force and any projects in preparation
  - actions which the airport operator intends to take in the next five years

How do airports achieve the requirements?

- It is important to understand that while there are maximum noise limits are set for occupational noise exposure, there is no limit defined for environmental noise, including aviation noise.
- The Government expects that action plan requirements set out in the END are instead achieved through noise mitigations and other noise control measures that support its overall policy objective to, "limit and where possible reduce the number of people in the UK significantly affected by aircraft noise."
- These include initiatives such as:
  - Planning conditions or agreements to constrain operations (noise contour limits, noise limits on departure, aircraft movement limits)
  - Noise insulation schemes for residential premises exposed to noise levels greater than 69 dB $L_{Aeq,16h}$
  - Aircraft noise abatement procedures (AIP)

How do noise monitors help?

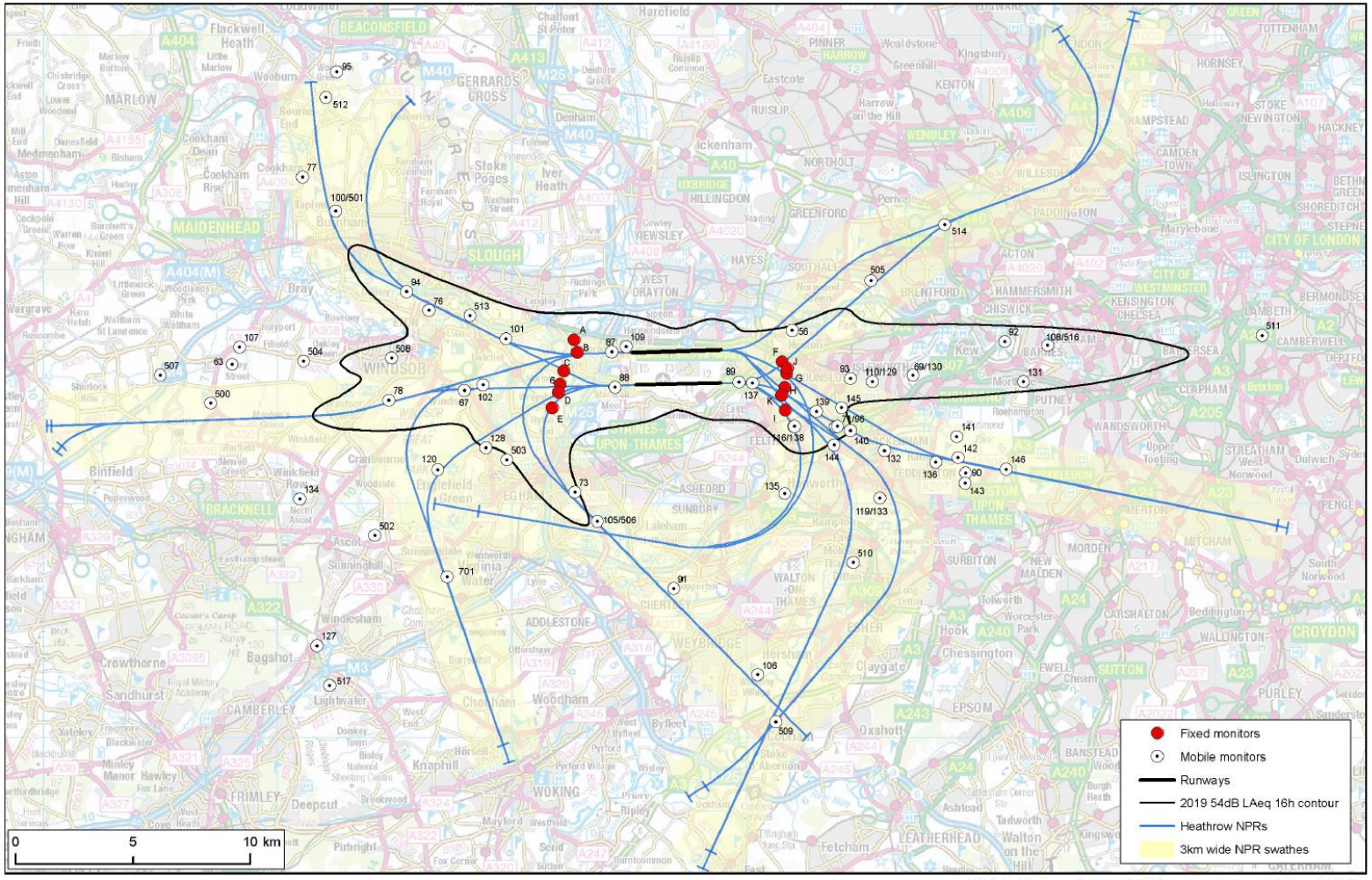
- The data obtained from noise monitors assists in producing noise maps. This helps airports to understand the impact of their operations on their surroundings. Noise maps show the number of people and dwellings that lie within the various contour bands. They may also provide information about other noise sensitive premises such as hospitals, schools other premises or specific types of land use depending on local circumstances and priorities.

- Noise maps for Heathrow are produced by the Environmental Research and Consultancy Department (ERCD) of the Civil Aviation Authority. The noise exposure contours are generated by the UK Civil Aircraft Noise Contour model (ANCON), which calculates the emissions and propagation of noise from arriving and departing aircraft.

- To validate the noise mapping, ERCD collects noise measurements from Heathrow's monitors to produce standard average summer day $L_{Aeq,16h}$ noise contours. It uses the 12 fixed (permanent) noise monitor sites and additional mobile monitors deployed at more distant locations to measure the noise of specific operations, for example to study departure noise along a specified route.

- There is no requirement to have noise data at any distance outside summer day $L_{Aeq,16h}$ contours, so the CAA states that generally noise measurements at UK airports tend to be restricted to locations within and just beyond the 54 dB contours. However, Heathrow places monitors well outside these boundaries.

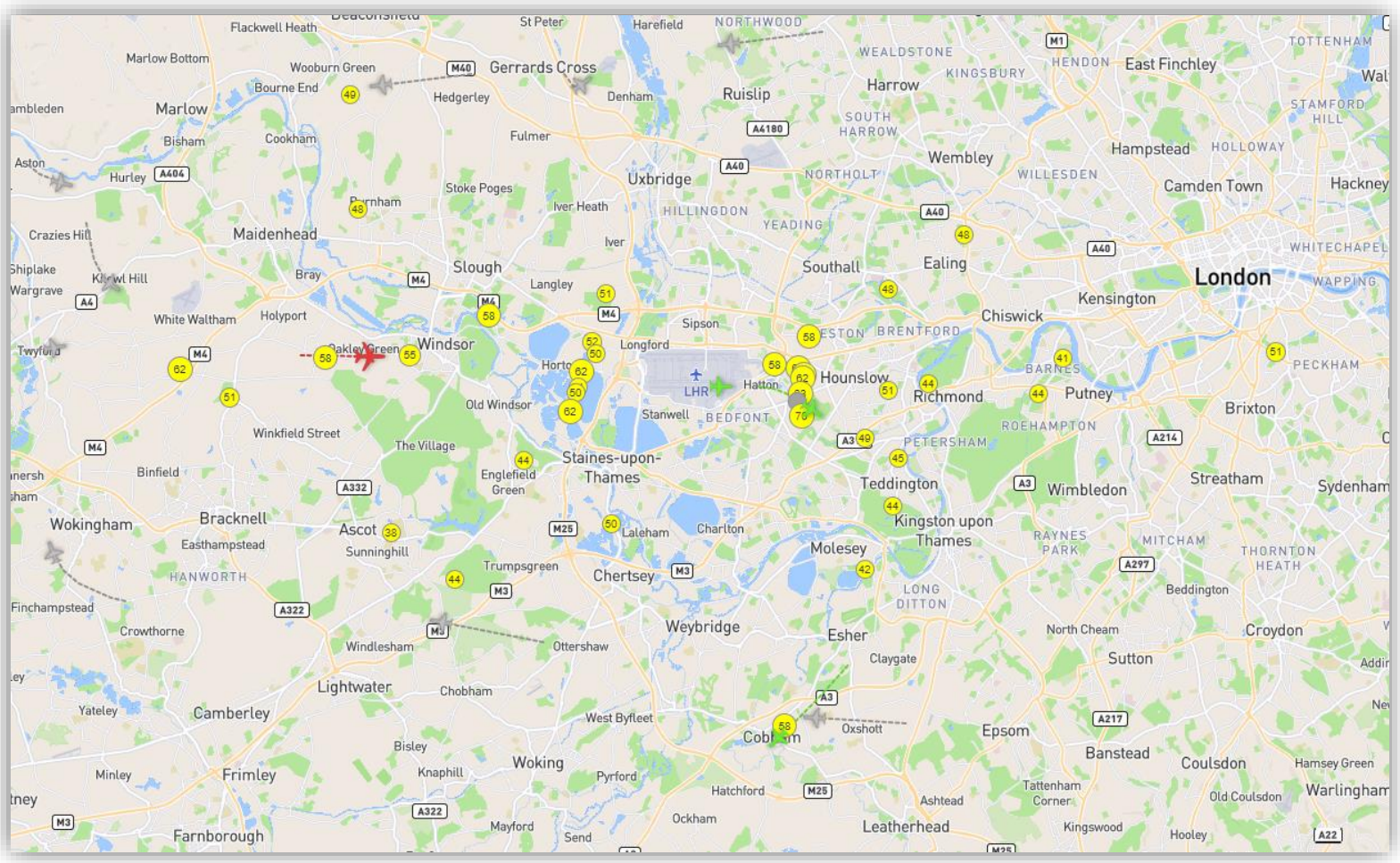
Where are the monitors positioned (CAP1149)?



CAP1149

Ed.8 March 2022

Where are the monitors positioned (WebTrak)?



WebTrak

What are they used for?

Monitor array and purpose as at Sep 2019:

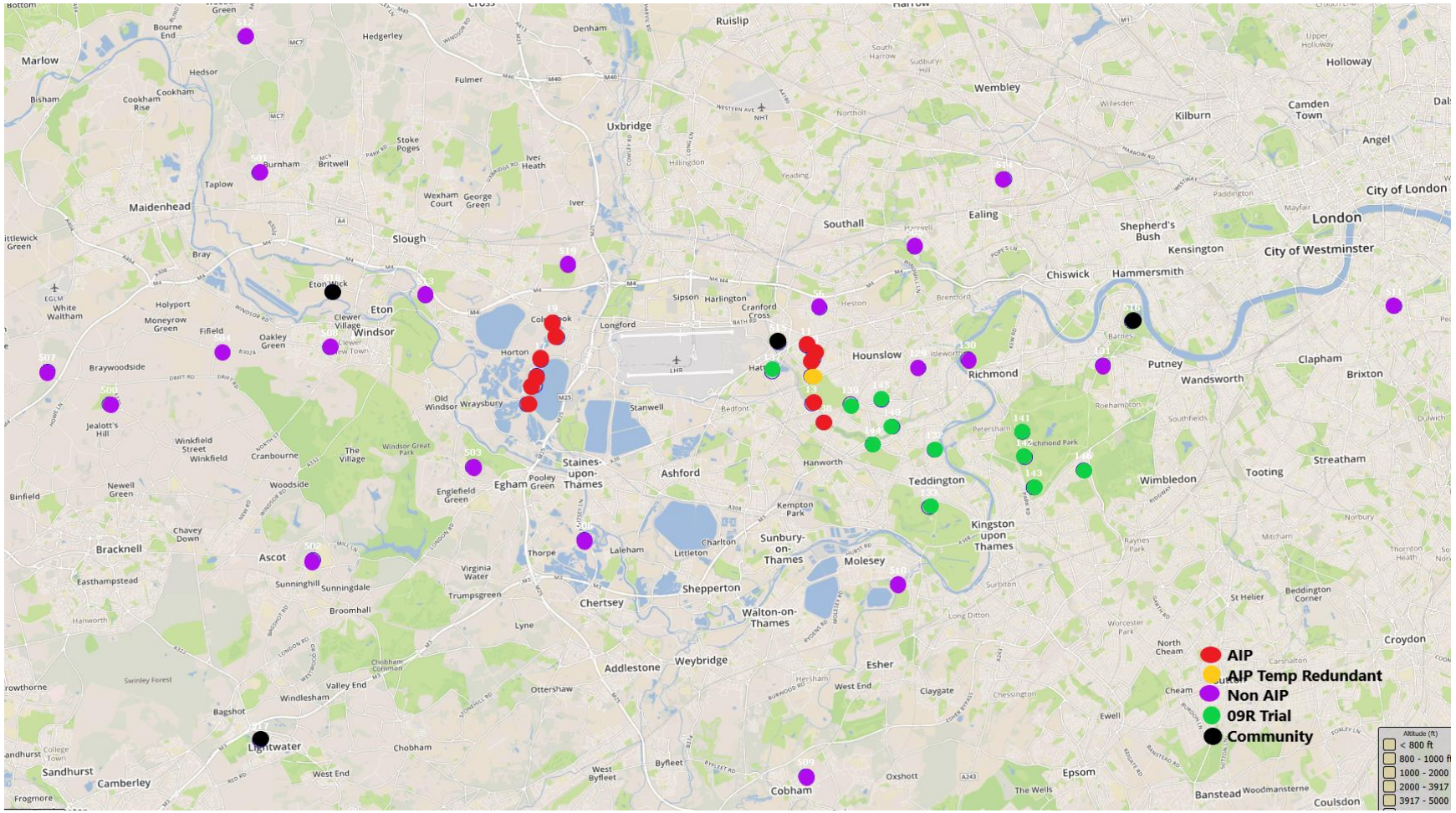
RED – AIP regulatory fixed monitors (**Orange** temporarily redundant)

GREEN – airspace trials (09R Steeper Departures)

PURPLE – Heathrow NTK data, various deployment periods

BLACK – Community Noise Monitors 2019 x 4

47 total



Note that some spares are kept in inventory to allow maintenance, repair, replacement and factory recalibration.

What about community noise monitors?

- Noise monitors at Heathrow are either referred to as fixed (or permanent), or mobile. Fixed monitors measure departure noise limits. Mobile monitors assist annual noise contour mapping and air traffic management improvement initiatives, and they tend to be placed under arrival and departure routes.

- It is important to understand that mobile monitors are not a strict requirement beyond assisting the mapping process, nor is the determination of their number and location.

- Since 2017, the term "community noise monitors" has become more widespread. Under Heathrow's Noise Action Plan, each year the airport has offered a limited number of monitors (usually four) to be placed in community locations where requests have been received. This is a voluntary commitment.

- Each year, following data collection and reporting, the monitors are moved to new areas if possible where further requests have been received – depending on priorities and resource.

What does the Noise Action Plan say?

- Following a commitment to communities as set out in our Noise Action Plan, we have provided additional noise monitors at locations further away from the airport to assist our understanding of aircraft noise and to help us shape future policy commitments, which remain in place.

- We suspended community deployment due to the impacts of Covid-19 but we are able to resume offering a limited number of monitors in 2023.

- Since 2017, the locations have been agreed through the Heathrow Community Noise Forum (HCNF). HCNF changed its name to the Noise and Airspace Community Forum (NACF) in 2022, when an independent chair became appointed. This collaborative work determines a process for how the small number of available mobile monitors can be used in different community locations.

Where did we get to in 2019?

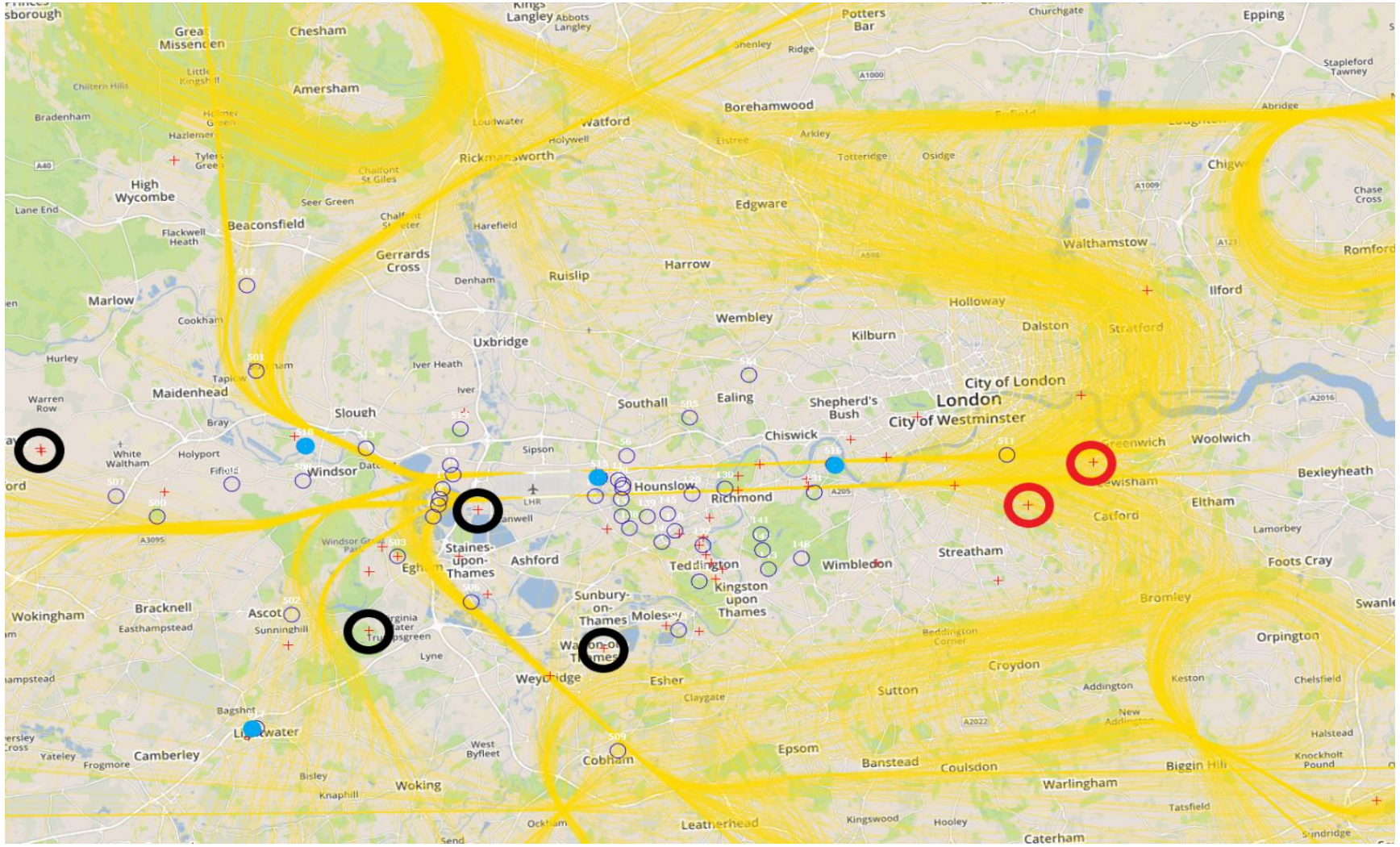
The red crosses indicate those locations requested by local residents & communities to date.

Locations selected may coincide with future airspace requirements (e.g. modernisation) and satisfy duplicate needs.

Blue circles indicate community requests in 2019, four sites were selected for 2020:

1. Kiln Green RG10
2. Stanwell Moor TW19
3. Wentworth GU25
4. Walton on Thames

The two red circles indicate the mirrored environment satisfied by the Kiln Green report.



Heathrow

What will we do in 2023?

- The **Wentworth** monitor was deployed immediately prior to the onset of the pandemic and has remained in place since then. We propose to deploy the remaining three monitors in **Kiln Green**, **Stanwell Moor** and **Walton on Thames**.
- We will need to determine and secure suitable sites (landowner agreements, contracts, servicing).
- We propose that NACF members form a 'task & finish' group to receive applications and determine locations for 2024 onwards.

What is the process?

- Requests may be received through the NACF, or to Heathrow directly via the Airspace and ATM Performance Team.
- The request is validated by a working group of the NACF. The WG is comprised of a balance of industry and community members.
- The data gathered by noise monitors should be prioritised where it can be used to support strategies that improve ATC and airline operating procedures, noise abatement procedures, identification of new noise initiatives, or other projects that support the Government's noise policy objective.
- The requested zone or impact area will be assessed to determine the number and types of properties and dwellings affected, to benefit as many people as possible.
- Deployment needs to take into account the availability of assets and resource, landowners' permission, required timescales, and the priority and benefit of the monitor versus the limited resource availability.


Heathrow

Environmental and Social Data Sheet

Overview

Project Name: FRANKFURT FLUGHAFEN TERMINAL 3

Project Number: 20120310

Country: Germany

Project Description: The project concerns the construction of the first phase of the new Terminal 3 at Frankfurt Airport in the State of Hessen, Germany. It will be located on the southern side of the parallel runway system. The additional terminal capacity and its related infrastructure will enable the airport to handle future growth in traffic and improve passenger service standards across the airport as a whole.

The airport is Germany's main international transport hub and ranks amongst the top five airports in Europe in terms of passenger and freight traffic, handling 61 million passengers in 2015. It is operated by Fraport AG (Fraport), an entity recognised as one of the leading airport operators, with interests around the world.

The project includes the provision of the main terminal building with two piers and 24 stands, the expansion of the existing baggage conveyor system, the extension of the Sky Line people-mover for connecting the new terminal to the existing facilities and various associated airside and landside works. It will increase the peak hour capacity of the airport and raise the annual handling capacity from 64 to 78 million passengers per year.

EIA required: yes

Project included in Carbon Footprint Exercise[1]: no

(details for projects included are provided in section: "EIB Carbon Footprint Exercise")

Environmental and Social Assessment

Environmental Assessment

The project falls under Annex II of the EIA Directive 2011/92/EC. The project components are included in the Frankfurt airport expansion plan that Fraport started to develop in 1997 to cope with growing aviation volumes and which included the provision of a fourth runway and associated terminal, airside and landside facilities. The first phase of the approval procedure, the so-called Regional Planning Procedure (Raumordnungsverfahren or ROV) was concluded in June 2002. The second phase, the Zoning Procedure (Planstellungsverfahren or PFV) began in the fall of 2003. After nearly a decade, the Ministry for Industry, Transport and Regional Development of the State of Hessen (HMWEVL) granted the planning approval decision on 18 December 2007.

The PFV integrated as part of the planning procedure an Environmental Impact Assessment (EIA), a Biodiversity Impact Assessment in accordance with the Habitats and Birds directives, including an appropriate assessment on nearby Natura 2000 sites, and a Landscape

[1] Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO2e/year absolute (gross) or 20,000 tons CO2e/year relative (net) – both increases and savings.

Conservation Plan. The findings of these analyses were reflected in the planning approval decision in a series of auxiliary conditions in order to ensure that all the relevant environmental requirements could be preserved.

The main environmental impact of the project is an increased level of noise associated with future aircraft operations. The main mitigation measure as a consequence of the PFV is the ban on night-time flights between 11 p.m. and 5 a.m. and the limitation on the number of flights in the shoulder hours. In addition, active noise mitigation measures include a package of 27 measures formulated by the expert committee “Active Noise Abatement” of the Airport and Region Forum (FFR) where Fraport AG cooperates closely with partners from the airline industry, the State of Hessen Government and the region. These include noise-reducing approach and take-off procedures, a concept involving alternating use of runways and financial incentives to promote the use of quieter aircraft. An aircraft noise monitoring station network has been expanded to a total of 29 stationary measuring stations and three additional mobile measurement containers in the neighbourhood of the airport. The measuring stations provide continuous monitoring of aircraft noise development and document unusual noise events. The results are posted on the FraportNoise Monitoring (FRA.NoM) website. Moreover, in relation to passive noise abatement measures, Fraport meets all the existing statutory regulations as they are defined in the Aircraft Noise Abatement Act (FluglärmG) in conjunction with the corresponding implementation regulations of the Federal Government and in the “Directive for Defining the Noise Abatement Area for Frankfurt Airport” from 2011. Approximately 86,000 households located in the surrounding area of Frankfurt Airport are entitled to submit claims for passive noise abatement. These are located in a specific noise abatement area which has been determined by the State of Hessen Government in accordance with the relevant noise abatement regulations. Furthermore, Fraport has set up a Regional Fund together with the State of Hessen that provides additional funds to finance supplementary measures. Finally, the "Casa Program" offers real estate owners exposed to increased nuisance due to the operation of the northwest runway financial compensation on a voluntary basis through purchase of the property or settlement payments.

As part of the EIA carried out in the scope of the PFV, a detailed inventory of natural resources including flora and fauna at Frankfurt Airport and in the surrounding areas were recorded in detail in 2005. The subsequent assessment concluded that two major impacts of the expansion plan were the deforestation of 282 ha in the protected areas of “KelsterbachForest”, “Markwald” and “Gundwald” where the species mostly affected were bats and woodworm beetles. As a result of this assessment a comprehensive package of measures was established including protective, avoidance, compensatory, replacement and coherence measures. As an example, 288 ha of land in the Frankfurt-Rhine Main Area have been reforested. In addition, action plans and auxiliary regulations from the competent authorities were added to the Landscape Conservation Plan included in the PFV approval.

Since 2010, there has been an intensive and long-standing environmental monitoring system in place in 10,000 ha of land around the airport. This helps in the early identification of any changes in the local ecology. In parallel to this, the effectiveness of all compensation measures is monitored on an ongoing basis so that improvements can be made where necessary and additional measures can be implemented if the environment is not developing as planned.

A comprehensive part of the PFV addressed the environmental management of the project construction works (i.e. construction-logistics and groundwater management) and assessed the impacts associated with increased construction traffic and noise, management of soil pits and potential contamination of the groundwater. Mitigation measures were established and auxiliary regulations concerning groundwater-metering and groundwater management were included and transport routes regulated.

Besides the impacts associated with the traffic increase and the construction works, planning of the new Terminal 3 also aims at delivering an energy efficient building aligned with the EU

Directive on Energy Performance of Buildings and aims at emitting the lowest CO_2 emissions possible. The technical concept of the building envisages operation of the facility completely without both fossil energy sources and the supply of external heating energy.

Approval for the first phase of Terminal 3 component in accordance to building regulations law (building permit) was granted by the competent building regulatory authority (City of Frankfurt am Main) in August 2014.

Frankfurt Airport has become Germany's largest employment complex at a single location, with more than 500 companies and organizations providing jobs for more than 80,000 people. The project will facilitate the continued growth of the airport and it is likely the project will create additional direct employment. In the context of the PFV and in order to assess the impact of the Frankfurt expansion project on the economy of the region, Fraport commissioned a study which was conducted by Professor Huyer from the Goethe University of Frankfurt/M. The chapter dedicated to employment analysed the development of the workforce number in conjunction with the expansion plans and establishes a significant correlation between traffic development and number of jobs at the airport in the past. Should the correlation remain valid for the future increase in traffic, total employment at the airport could increase from the current 80,000 jobs to 90,000 jobs once the project reaches capacity.

Public Consultation and Stakeholder Engagement

Since the Frankfurt expansion plan started in 1997, there have been three successive fora to involve the stakeholder community of Frankfurt airport.

In the summer of 1998, the State of Hessen Government proposed a mediation procedure on the expansion of Frankfurt Airport. Representatives of local communities, the airport and other aviation companies as well as other regional and local representatives were involved. The mediators' final report was submitted in January 2000 and the recommendations included there were taken on board to a great extent, at the next planning stage.

One of the recommendations of the mediation process was the creation of the Regional Dialog Forum (RDF) which was operational since the beginning of the PFV. The mediators wanted to create an entity that would accompany the further process with the interests of the residents and communities affected in mind and that would address all the questions raised in the public debate.

In addition, three extensive public hearing processes were held in the period 2000-2007. They allowed authorities, residents and other interested parties to present their views on the operations, their environment impacts and the proposed measures.

In 2008, after the planning approval decision was granted and in order to capture the grievances still expressed by neighbouring residents, municipalities and other organizations regarding the airport expansion, the Hessian Regional Government, Fraport, Lufthansa, Deutsche Flugsicherung (German Air Traffic Services) and BARIG, the Board of Airline Representatives in Germany, founded the Forum Airport and Region. This forum brings together the dialogues about the development at Frankfurt Airport and the cooperation in the region. It focuses on the exchange of concepts with the population, noise monitoring and the development of noise protection measures.

Since July 2009, the non-profit company Umwelthaus GmbH, founded by the State of Hessen, has been operating the Environment and Community Center (ECC) setting new standards for transparency and information. Its main objective is to improve communication and cooperation between Frankfurt Airport, its users and the neighbouring residents. In addition, the ECC has the task to concentrate the various monitoring activities such as aircraft noise monitoring, social and environmental monitoring and to review the facts and findings in a neutral way.

As part of the stakeholder engagement mechanisms, Fraport receives a significant number of complaints. The majority of them are automatically generated verification requests (automatically sent online by specific software). The rest are sent personally, usually via email. Fraport deals with each individual message and also investigates some flights on its own initiative. All questionable aircraft movements are compared with the values from noise measurement points and with flight plan depictions from German Air Navigation Services (DFS) where required. If, for instance, prescribed flight routes are not complied with, Fraport passes on the information to the aircraft noise protection officer of the HMWEVL. Route precision and altitude are also verified there. In addition, it is also determined whether noise-reducing take-off and landing approaches at Frankfurt Airport have been complied with. If the pilot has acted incorrectly, DFS applies for summary proceedings at the Federal Aviation Office.

Other Environmental and Social Aspects

Fraport is represented in the most important sustainability indices and has received numerous awards for its environmental management expertise.

Since 1999, Fraport AG at Frankfurt Airport has been regularly validated by government accredited and inspected environmental auditors. The basis for this audit is the European regulation 761/2001/EC on Eco-Management and Audit Scheme (EMAS). Since 2002, the verification has also been carried out in accordance with the international standard ISO 14001.

Since 2006, Fraport has been taking part in the Carbon Disclosure Project (CDP)[2] and has been listed in the FTSE4Good[3].

In September 2009, it was the first airport operator to receive accreditation under ACI Airport Carbon Accreditation (ACA). Since 2012, Fraport AG has been accredited at Level 3 Optimization.

Conclusions and Recommendations

Given the above, the following environmental condition is to be applied:

CONDITION

- Prior to first disbursement, the Promoter shall submit to the Bank a signed copy of the Form B completed by the Natura 2000 competent authority (Regional Nature Conservation Authority of the Darmstadt Regional Administrative Council).

Subject to the above condition being met, the project is acceptable for EIB financing.

PJ/ECSO 15.10.15

[2] This is the leading climate reporting initiative in the finance industry worldwide, which analyzes companies and their strategies for climate change and CO2 reporting.

[3] The FTSE4Good is an index published by the London Stock Exchange (FTSE) every six months. Companies are listed in the FTSE4Good Index if they perform above average in the fields of human rights, social standards and environmental protection, and continuously improve their performance.

MEASUREMENT RESULTS AND USE OF ROUTES

At Frankfurt Airport since 1964. The measurement network currently includes 29 fixed and three mobile measurement stations.

Measurement method

The German Institute for Standardization stipulates in standard DIN 45643 “Measurement and assessment of aircraft noise” how to carry out measurements and what data are to be reported. Information on the measurement method explains the basic principles of the measurement.

The data in our interactive → FRA.NoM (Fraport Noise Monitoring) map form the basis for evaluation and reporting.

01 February 2022

Improved noise measurements in the area around Schiphol

As of today, 41 measuring posts around Schiphol are using a smarter algorithm to link noise to flights more accurately. The algorithm can more precisely identity and distinguish aircraft noise from background traffic or weather-related noise. This development will improve the information that is provided to local residents, and measures to limit noise nuisance can be evaluated more effectively.

A pilot with three measuring posts in Nieuw-Vennep, Spaarndam and Castricum revealed that this new way of detecting noise is very effective. In August and September 2021, Schiphol carried out noise measurements over the course of 6 days.

Linking noise to flights

Noise measurements are taken by 41 NOMOS measuring posts in the area around Schiphol. These posts consist of a 6- to 10-metre-tall mast equipped with a microphone. Previously, all noises above a certain volume threshold were measured. That meant that background noises like passing vehicles and wind were recorded along with air traffic. Recordings were then analysed and linked to flights using radar data and noise prognoses.

The new, smarter algorithm works the other way round. It contains information about flight routes and links this information to recordings made underneath these routes to determine noise, irrespective of volume. Because the noise measurements are linked to flight routes, this method is less sensitive to weather conditions and background noise. The aircraft noise measurements can also be compared with expected noise more effectively. This new way of measuring aircraft noise has proven itself to be better at linking flights to specific measurements, meaning that NOMOS can record more flights.

Measuring aircraft noise

As of 1 February, all NOMOS noise measurements will be carried out using this smarter aircraft noise detection method. Local residents and other interested parties can view the data on NOMOS online.

← Newsroom

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Improved noise measurements in the area around Schiphol

ANNEXURE - A3 (COLLY)

1135
Annexure-R21

DIAL Month wise Runway usage				Anil sood airport authority data			
RWY	(A) RWY 29L|11R & RWY 29R|11L	(B) RWY 10|28 & RWY 9|27	Total runway % (A)+(B)	RWY	(A) RWY 29L|11R & RWY 29R|11L	(B) RWY 10|28 & RWY 9|27	Total runway % (A)+(B)
Jul-24	59%	41%	100%	Jul-24	58%	42%	100%
Aug-24	58%	42%	100%	Aug-24	58%	42%	100%
Sep-24	56%	44%	100%	Sep-24	55%	45%	100%
Oct-24	56%	44%	100%	Oct-24	55%	45%	100%
Nov-24	54%	46%	100%	Nov-24	53%	47%	100%
Dec-24	53%	47%	100%	Dec-24	52%	48%	100%
Average	56%	44%		Average	55%	45%	

भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

Date: 26-11-2024

AAI/DP/ATM-66

To,

Anil Sood
A 414 415
Somdutt Chambers 1, 5 Bhikaji Cama Place,
New Delhi – 110066

Subject: Information under Right to Information Act, 2005.

Sir,

Reference may please be made to your RTI application bearing registration number AAIDL/R/E/24/00302. The information pertaining to I.G.I Airport is as follows:

Information Sought	Reply
Please provide month wise number of flights landing and taking off from Runway No(s) 27/9, 28/10, 29/11 and fourth runway for the months of July, August, September and October 2024 .Please confirm that the order dated 21032024 corrected on 16052024 is being complied with by you and the airport operator passed in OA 612 of 2023	1. The Arrival/Departure movement data (Month Wise) for the Runway(s) 27/9, 28/10, 29L/11R and 29R/11L for the months of July, August, September and October 2024 is attached herewith as Annexure-1 2. The Noise Abatement procedures at IGI Airport are complied with as per the published AIP. [Published Noise Abatement Procedures can be accessed via https://aim-india.aai.aero/ → eAIP India → Part-3 (Aerodromes) → AD_2 → Aerodromes → VIDP/Delhi → **AD 2.21** (Noise Abatement Procedures)] *Airport Operator is a Private Entity and a Third party. Therefore, the data/information regarding compliance of the order OA 612 of 2023 by the Airport Operator is not available in this office.

In case, you want to go for an appeal in connection with the information provided, you may appeal to the Appellate Authority indicated below within thirty days from the date of receipt of this letter.

Sh. D K Gautam
FAA & RED (NR)
Address: NATS Complex, IGI Airport New Delhi-110037
Phone No.: 25654212
Email: - rednr@aai.aero

Regards,

26/11/24

Manoj Kumar Lohumi
GM(ATM)/CPIO
Airports Authority of India
IGI Airport

ANNEXURE-1

Arrival:

Month/Runway	RWY09	RWY27	RWY10	RWY28	RWY11R	RWY29L	RWY11L(NEW)	RWY29R(NEW)
Jul-24	Nil	2040	6957	365	7600	3208	195	Nil
Aug-24	2	2030	6988	655	7338	3336	215	20
Sep-24	14	3200	5625	756	5668	4595	120	116
Oct-24	Nil	6010	2319	1541	2199	8932	96	31

Departure:

Month/Runway	RWY09	RWY27	RWY10	RWY28	RWY11R	RWY29L	RWY11L(NEW)	RWY29R(NEW)
Jul-24	3671	Nil	1642	2349	268	61	9231	3198
Aug-24	2859	1	1149	2185	104	232	8085	2711
Sep-24	3355	11	1164	3917	167	42	6685	4730
Oct-24	1256	Nil	684	7313	68	373	2763	8641

Proof of Service by email.

Outlook

Re: Advance Service Rejoinders in O.A. No. 528 of 2025 & IA No. 789/2025

From Madhumita Singh <madhumita@casassociates.in>
Date Thu 4/23/2026 4:41 PM
To shivankar.sukul@Trilegal.com <shivankar.sukul@Trilegal.com>; Ashly Cherian <ashly.cherian@trilegal.com>
Cc secy-moef@nic.in <secy-moef@nic.in>; ccb.cpcb@nic.in <ccb.cpcb@nic.in>; secy.moca@nic.in <secy.moca@nic.in>; chairman@aai.aero <chairman@aai.aero>; dgoffice.dgca@nic.in <dgoffice.dgca@nic.in>; chdpcc@nic.in <chdpcc@nic.in>; roez.lko-mef@nic.in <roez.lko-mef@nic.in>; Anil Sood (SPChetna) <anilsood@spchetna.com>; Sonali Nayak <sonali@casassociates.in>

2 attachments (23 MB)

Final rejoinder on Objections on Maintainability DIAL with annexures.pdf; Final Rejoinder to application for amending prayers with annexures.pdf;

Dear all,

Please treat this email as an advance service of the Rejoinders in the captioned Application.

Regards,
Adv. Madhumita Singh