Ministry of Infrastructure
and Water Management
of the Netherlands

Additional Notification

Balanced Approach Procedure Schiphol

September 2024

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Summary

On 1 September 2023, the Ministry of Infrastructure and Water Management submitted a package of noise abatement measures to the European Commission, European Member States and other relevant parties for Schiphol Airport[1]. During the notification phase, from 1 September 2023, numerous discussions were held with the European Commission, and several additional questions were asked. As a result, the Ministry of Infrastructure and Water Management has compiled an adjusted notification package. This adjusted notification package is explained in this additional notification document. With this, the Ministry considers the notification complete, and the questions of the European Commission answered.

Noise abatement objective

The September 2023 notification document explained the existence of a noise problem as defined by the Noise Ordinance and Directive (EC) 2002/49 ('Environmental Noise Directive')[2]. Supplementing the September 2023 notification document, this document shows that despite all the efforts made since 2006 to reduce noise nuisance, it has not succeeded in reducing the absolute level of noise nuisance.

In order to strike a new balance between Schiphol and its surroundings by reducing the noise nuisance on the surrounding area, a quantitative noise objective has been formulated for the short term. This noise abatement objective has been established in the Schiphol Environmental Noise Action Plan 2018-2023 and 2024-2029[3]. The noise abatement objective to be achieved is expressed in percentages compared to a reference situation and is in addition to the annual autonomous development. The baseline is the traffic flow and impact on noise exposure that would occur in November 2024 without any additional measures. The table below shows the noise abatement objective.

Measures considered

To arrive at a final proposal for a package of measures, potential measures were (re)considered after September 2023. This also included consideration of potential measures that were already named in the September 2023 notification document and meet the selection criteria used, but which require a longer period of preparation and/or implementation than implementation by November 2024. This leads to a proposal for an adjusted package of measures that differs in composition from the notified package of 1 September 2023. In this new proposal, measures have been adjusted, some new measures have been added, and one measure has been dropped. The new measures are additional fleet renewal, rate differentiation and excluding the noisiest aircraft. The measure that was dropped concerns reducing secondary runway use. In addition, the proposal reserves part of the noise abatement objective for a next phase. Filling in the remainder of the noise

Table S.1

Indicator	Houses	People
Number of houses with a noise exposure of 58 dB(A) L_{den} or higher	minus 20 per cent	
The number of people experiencing severe disruption with a noise exposure of 48 dB(A) L_{den} or higher		minus 20 per cent
The number of houses with a noise exposure of 48 dB(A) L_{night} or higher	minus 15 per cent	
The number of people experiencing severe sleep disturbance with a noise exposure of 40 dB(A) L_{night} or higher		minus 15 per cent

[1] https://www.rijksoverheid.nl/binaries/rijksoverheid/documenten/rapporten/2023/09/01/bijlage-2-notificatiedocument-balanced-approach-procedure-schiphol/bijlage-2-notificatiedocument-balanced-approach-procedure-schiphol.pdf

[2] https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:189:0012:0025:NL:PDF

[3] https://zoek.officielebekendmakingen.nl/stcrt-2023-24836.html

abatement objective depends on the ongoing impact analysis towards more far-reaching measures at night, and monitoring of the current package of measures. Because the measures in the new proposal achieve a more significant part of the noise abatement objective, the result is that a higher total number of aircraft movements is allowed than was included in the September 2023 package of measures.

Additional consultation and implementation tests

Additional consultation took place from 24 May 2024 to 21 June 2024. This additional consultation allowed for comments on the proposed adjusted package of measures. The additional consultation shows that the majority of the stakeholders recognise the importance of noise reduction. Responses varied widely on how to achieve noise reduction and its pace. Most of the responses related to the measures of rate differentiation and reducing secondary runway use.

During the additional consultation, several parties questioned the assumptions and guiding principles used. KLM took this a step further and commissioned an external agency to calculate the same proposed measures based on the assumptions and assumptions KLM would use. KLM's publicly submitted response shows that the external agency's calculations show different results from those calculated by the Ministry. These different outcomes have been further studied.

Further examination of the different outcomes during discussions with technically substantive stakeholders, consisting of airlines, Schiphol Airport, Air Traffic Control The Netherlands (LVNL) and two external research agencies, showed that more detailed information was used for several measures to arrive at the assumptions needed to calculate the measures. Following these discussions, the Ministry received this new and more detailed information. These parties have also given commitments on how they will respond to specific measures and have taken a less conservative look at expectations on the margin of uncertainty applicable to when the new aircraft ordered by airlines will be delivered.

Based on responses from the additional consultation, additional and detailed information and discussions with stakeholders, assumptions were further refined, and the package of measures was adjusted in several respects. Subsequently, under the direction of research firm To70 and with a second opinion from the Royal Netherlands Aerospace Centre (NLR), new calculations were made on the effect of the measures on noise nuisance. These show that the effect of some measures is more significant than previously calculated.

In terms of composition, as a result of the additional consultation, the Ministry has adjusted the proposed package of measures on the following two points:

- The implementation date of the measure concerning the 'use of quieter aircraft at night' has been moved from November 2024 to November 2025 because KLM can no longer realise the measure by November 2024.
- The feasibility and desirability of the measure concerning the reduction of secondary runway use were considered. The impact on Schiphol's operations, the lack of support from local residents and the expected displacement of noise led to the measure being dropped.

Air Traffic Control The Netherlands (LVNL) and the Human Environment and Transport Inspectorate (ILT) tested the feasibility of the measures proposed in this consultation in parallel with the additional consultation. The outcome of the tests by LVNL and ILT is that the proposed measures are feasible. In doing so, both organisations provide points for attention and preconditions.

Amended notification package

The amended notification package is based on two phases. For the first phase, an implementation date of November 2025 is assumed. This date allows for alternative measures compared to the original implementation date of November 2024. The first phase aims to achieve a total of 17% of the 24-hour noise abatement objective. This means that 3% remains. The additional consultation envisaged filling in this remaining percentage in 2026 with measures with a night-time focus. An impact analysis on the consequences of a (partial) night closure is underway. The Cabinet has decided to first monitor the actual impact of the package of measures for a year. It will then decide what further steps to take. The details of Phase 2 are, therefore, not part of the notification at this time but will be notified at a later stage through a separate process, including consultation.

Individual measures notification package

The following measures are included in the notified package of measures:

- *Using quieter aircraft at night (already in the September 2023 notification package):* The measure involves the optimisation of the fleet usage by means of the use of quieter aircraft at night. This involves deploying the airline's fleet so that the quietest aircraft are used at night. Specifically, this means that some noisy aircraft are removed from operation at night and swapped with quieter aircraft.
- *Rate differentiation (new from September 2023 notification package):* This measure aims to reduce noise nuisance by stimulating airlines to replace noisy aircraft types with quieter ones. This is done through greater differentiation of airport charges. This makes using noisy aircraft more expensive for airlines.

- *Additional fleet renewal (new compared to the September 2023 notification package):* This measure includes the fleet renewal that takes place on top of the autonomous development.
- *Excluding noisy aircraft (new compared to the September 2023 notification package):* This measure aims to exclude the noisiest aircraft. This measure excludes aircraft with a margin equal to or less than -13 EPNdB, , from both Chapter 3 and Chapter 4 (cf. Chicago Convention), at night.
- *Reduction in the maximum number of aircraft movements at night (adjusted compared to the September 2023 notification package):* The notified measure package of 1 September 2023 included a maximum number of aircraft movements at night of 28,700. The amended notification package chooses a further reduction at night by setting the maximum at 27,000. This is a cost-effective measure and contributes to both the night and 24-hour sub-objectives. In addition, a reduction to 27,000 aircraft movements at night by November 2025 could potentially have a very positive effect on the number of sleep disturbances.

Reduction in total aircraft movements

The September 2023 notification document already showed that combining noise abatement measures does not lead to full achievement of the noise abatement objective. Due to the exhaustion of measures in the first three categories of the balanced approach procedure (measures at source, land-use planning measures and operational measures), additional capacity reduction is necessary to achieve the noise abatement objective. This adjusted package of measures still requires a capacity reduction of up to 475,000–485,000 aircraft movements annually. This number is higher than the September 2023 notification package and is also outside the May 2024 additional consultation range. This is due to the previously mentioned changes made as a result of the additional consultation and subsequent discussions.

Follow-up process implementation, monitoring and enforcement

Once the balanced approach procedure has been completed, national decision-making follows, consultation with the slot coordinator and network manager and, of course, implementation of the measures. An important part of this is establishing the measures in an amended Airport Traffic Decree (LVB), an amendment to the Noise Operational Limitations Regulations, as well as establishing them in enforceable instruments such as covenants agreed with specific sector parties, such as KLM Group. A plan of action to monitor and enforce the effects of the measures will also be set up with the ILT in the short term. Establishing an amended LVB will also improve the legal position of local residents.

1 Introduction

Schiphol Airport plays a key role in connecting the Netherlands to the rest of the world and it is therefore a cornerstone of the Dutch economy. The impact of the airport on the environment, public health and liveability in the vicinity of Schiphol Airport is also significant. an impact that has grown to such an extent that the government deems intervention necessary. The Cabinet wants to develop a new system with standards for noise exposure and dust emissions. These norms will replace fixed numbers of flight movements per year. Developing such a system, which will be done together with stakeholders, will however take time. Short-term measures are therefore needed as precursors. Putting a cap on noise exposure is important in improving environmental quality and restoring local residents' trust in government and institutions in ensuring that environmental quality. Restoring the legal status of local residents is also important given the legal proceedings surrounding it. The Cabinet wants to make sure that the upward trend in noise nuisance is turned into a permanent downward trend: 'Bending the curve in noise abatement'. This document explains the package of measures through which this can be completed, including the process carried out so far and the changes it has produced.

1.1 Notification September 2023

The September 2023 notification document explained that there is a noise problem as defined by the Noise Ordinance and Directive (EC) 2002/49 ('Environmental Noise Directive'). This notification document shows that despite all the efforts made since 2006 to reduce noise nuisance, it has failed to reduce absolute noise nuisance. Various studies have shown that the trend in noise nuisance is still upwards. Potential reductions in noise exposure, including abatement thanks to the use of ever quieter aircraft, have been accompanied by growth in the number of flights. The net effect has not been an improvement for local residents.

In order to strike a new balance between Schiphol and its surroundings by reducing the noise nuisance on the surrounding area, a quantitative noise objective has been formulated for the short term. This noise objective is established in the Schiphol Environmental Noise Action Plan. The noise abatement objective to be achieved is expressed in percentages compared to a reference situation and is in addition to the annual autonomous development. The baseline is the traffic flow and impact on noise exposure that would occur in November 2024 without any additional measures. A time point in the future has been chosen that does justice to the effect of autonomous developments, such as fleet renewal with quieter aircraft, and measures that have already been planned. In this

manner, the noise problem aligns with the situation now (or in the near future) and counts the industry's efforts in recent years to reduce noise. At the same time, this shows the cleanest comparison between a situation with and without measures to be taken to reduce noise around Schiphol.

Table 1.1

Indicator	Houses	People
Number of houses with a noise exposure of 58 dB(A) L_{den} or higher	minus 20 per cent	
The number of people experiencing severe disruption with a noise exposure of 48 dB(A) L_{den} or higher		minus 20 per cent
The number of houses with a noise exposure of 48 dB(A) L_{night} or higher	minus 15 per cent	
The number of people experiencing severe sleep disturbance with a noise exposure of 40 dB(A) L_{night} or higher		minus 15 per cent

The September 2023 notification document identified many measures that could potentially reduce noise nuisance and fulfil the noise abatement objective. After a thorough analysis of the inventoried measures, it was found that achieving the stated noise abatement objective as a last resort also requires a reduction in the number of aircraft movements. A so-called operating restriction requires the Balanced Approach procedure to be followed. This led to a notification of a package of noise abatement measures in September 2023.

Since 1 September 2023, the notification phase has been ongoing with the European Commission, European Member States and other relevant stakeholders. The notification is part of the prescribed Balanced Approach procedure and followed a process of technical sessions with industry, information sessions, stakeholder discussions and a three-month consultation period between 15 March and 15 June 2023.

1.2 Notified package September 2023

In the 2023 package, the choice was made for a package in which about 15 per cent of the noise abatement objective would be achieved as a first step (by November 2024), and the remaining 5 per cent would be implemented in a subsequent phase. The notification document made it clear that a combination of measures would be needed to achieve the stated noise abatement objective by 2024.

The notified package looked as follows:
1. Using quieter aircraft at night
2. A reduction in the use of secondary runways
3. Reduction of the capacity at night to 28,700 flights
4. Reduction of the capacity to 452,500 flights in total

In addition, the 2023 notification document identified potential measures that meet the selection criteria but require a longer period of preparation and/or implementation than implementation by 2024. These include the introduction of a night closure, further stimulation of fleet renewal with financial instruments, optimisation of various operational take-off and landing procedures and the introduction of new operational procedures, increasing the number of CDA flights (continuous descent approaches), excluding noisy aircraft and concertation of flight paths.

1.3 European Commission talks and additional consultation

Since 1 September 2023, the Ministry of Infrastructure and Water Management (hereinafter: the Ministry) has been in talks with the European Commission on the notified package. As part of this notification phase, the European Commission has requested additional information about the notified measures through rounds of written questions. The Ministry also provided additional substantiation in some parts as a result of the discussions.

As a result of the exchange of information and discussions with the European Commission, the Ministry started looking at options for an adjusted package. The European Commission has inquired about the possibility of implementing specific measures that contribute to noise nuisance reduction in the short term after November 2024, while being less impactful for the aviation sector than the notified package of measures. In doing so, with regard to the proportionality of the package of measures, the European Commission also asked to examine whether an approach was possible that would take more time to achieve the noise abatement objective.

Subsequently, the Ministry sought a package with a later and/or more dispersed distribution to achieve the noise abatement objective and a package with additional alternative measures. This decision followed the observation that the original intended implementation date of November 2024 was no longer feasible within the international deadlines of the final allocation process.

This resulted in an adjusted package of measures that was open for additional consultation from 24 May 2024 to 21 June 2024. All stakeholders had the opportunity to comment on the adjusted package of measures during the consultation. Chapter 5 presents the key outcomes of the additional consultation and explains how they have been taken into account.

1.4 Amended notification package

Based on the various interests and responses from the additional consultation and after careful consideration, the originally notified package has been adjusted in a number of respects. This additional notification document explains the final package of measures. With this, the Ministry considers the notification complete, and the questions of the European Commission answered.

The composition of the adjusted package of measures differs on a number of points from the package notified on 1 September 2023. In the original submitted package, a first step of -15% by November 2024 was specifically defined with the measures to be taken. The remaining 5% was left undefined. Before that, it looked at other promising measures such as additional fleet renewal and the impact of a night closure that had been identified as potential measures in the notification document.

In this new, phased approach, the noise objectives will be achieved over 2 phases. The implementation of the second phase depends among others on the outcome of the ongoing impact analysis that will identify the impact of more far-reaching measures at night and therefore requires further decision-making.

In addition, new measures have been added to the adjusted package of measures, and a measure has been dropped. Also, more detailed information has been used, resulting in different starting points and assumptions in the calculations. Because with these new measures and the application of more detailed information, a larger part of the noise abatement objective of November 2025 is achieved, the reduction in the total number of aircraft movements is less than was included in the September 2023 notified package of measures and the May 2024 additional consultation.

The table below shows the proposed measures of the adjusted package of measures. The second column shows how the measure relates to the September 2023 notification package.

Table 1.2

Measure	
Using quieter aircraft at night	Already in the notification package from September 2023
Rate differentiation	New
Additional fleet renewal	New
Excluding noisy aircraft	New

Chapter 7 details the adjusted package of measures.

1.5 Reading guide

Chapter 2 provides insight into the measures that have been and continue to be taken over the years to reduce noise nuisance in the area surrounding Schiphol Airport.

Chapter 3 describes the noise objective for the 24-hour and night periods. The reference used to relate the objective is also explained here. It also sets out the step-by-step approach to achieving the noise abatement objective.

Chapter 4 describes the measures considered leading up to the September 2023 notification and potential measures further considered after September 2023.

Chapter 5 describes the additional consultation and a general consideration of the responses submitted.

Chapter 6 summarises the results of the feasibility tests of the adjusted package of measures carried out by Air Traffic Control The Netherlands (LVNL) and the Human Environment and Transport Inspectorate (ILT).

Chapter 7 presents the final package of measures. The final package consists of a combination of noise abatement measures and the introduction of these measures in 2 phases.

Chapter 8 looks ahead to the steps following the notification and discusses the coordination that took place with the slot coordinator and the network manager.

The *appendices* provide further explanations about elements identified in the various chapters of this notification document.

The *overview of annexes* lists underlying studies, tests and notification and consultation documents that form part of this Balanced Approach procedure.

2 Noise abatement measures over the years

The current Balanced Approach procedure is not the starting point for tackling noise nuisance. Efforts to reduce noise nuisance have been underway at and around Schiphol for many years. This chapter provides additional historical explanations on some specific points in addition to Chapter 3 of the 2023 notification document.

2.1 Restriction of noise since 2006

A large number of measures have been taken since 2006 to reduce noise nuisance in the vicinity of Schiphol. These measures largely stemmed from opinions issued by the Alderstafel forum and the ORS, the consultative bodies where noise nuisance around Schiphol is discussed with all the stakeholders. In 2008, the Alderstafel forum issued a recommendation for the medium term (up to 2020)[4], which set out agreements on the maximum number of aircraft movements at Schiphol until 2020, nuisance-reducing measures, environmental quality and the introduction of a new standards and enforcement system, among other things. The 2008 Alderstafel Recommendation was adopted by the Dutch government (hereinafter referred to as 'the Cabinet') and the Lower House of the Dutch Parliament. As such, the measures and objectives have also been included in the Schiphol Environmental Noise Action Plan.

As also mentioned in the Schiphol Environmental Noise Action Plan 2013-2018, the Alderstafel forum already noted in 2013 that the possibilities of noise nuisance-reducing measures were being exhausted. The Alderstafel indicates that new opportunities are mainly limited to possible innovations in take-off and landing procedures and fleet development. Operational measures – such as adjusting flight paths, for example – tend to displace noise nuisance, not solve it. Comparing the noise contours confirms Alders's picture that there is hardly any increase or decrease in the areas of the noise-exposed sites between 2016 and 2021. There is a different distribution with an increase in the area of high noise impacts and a decrease in the area of relatively low noise impacts.

In his final recommendation to the Minister in 2019, Hans Alders provided an overview of 10 years of nuisance abatement. In it, Alders inventories, among other things, the measures realised with regard to flight operations and procedures such as route changes, runway use and night procedures. Where possible, the extent of the reduction in the number of people affected is indicated for each type of nuisance-reducing measure. Alders concludes that despite all measures taken over the entire 2008-2017 period, the number of people affected by noise in the outlying area has

[4] https://www.tweedekamer.nl/downloads/document?id=bce09f12-844e-4dae-b861-e66465fc28e2&title=Advies%20.doc

increased, as has the number of noise-affected houses in the inner area. This is mainly due to the increase in aircraft movements. All the noise gains from nuisance-reducing measures have been negated by volume growth. Previous studies have shown that without implementing the nuisance-reducing measures, the number of people affected would still be many times higher.

2.1.1 Procedural noise abatement measures

Discussions about aviation in the Netherlands have always been characterised by the search for a balance between the major economic importance of aviation on the one hand and the inevitable accompanying nuisance, especially for those living near an airport, on the other. Once the political decision has been taken to establish or expand an airport, the challenge is to reduce the nuisance it causes as much as possible. Against this background, nuisance-reducing measures for Schiphol also have a long history.

Efforts to reduce nuisance have been made in recent years by various organisations, mainly Schiphol Airport and LVNL, and in various consultative bodies. The most recent in the series is the nuisance abatement programme ('Minder hinder Schiphol')[5], which came about at the request of the Minister of Infrastructure and Water Management. The plan sets out 51 measures, focusing on the use of quieter aircraft and operational procedures to reduce noise and ground noise. Schiphol and LVNL indicate that this set of measures will have a positive effect on reducing perceived noise nuisance in the surrounding area. Before the nuisance reduction plan was adopted, the Minister of Infrastructure and Water Management indicated that he would test the plan's ambition level and the consultation process that led to it. The consultancy firm To70 was asked to conduct a qualitative test of the measures and the level of ambition. To70 concluded that "the measures in the nuisance reduction plan align well with the complaints, the perceived nuisance and the suggestions and proposals for nuisance reduction."

An evaluation follows the implementation of measures, examining whether the measure is effective. The evaluations of the measures concerning 'More efficient landing during reduced visibility, Optimising take-off routes at Bodegraven, Nieuwkoop and Gouda, Higher approach to the Polderbaan runway during the night and Fixed northerly approach route to Zwanenburgbaan runway during the night' were recently completed. Evaluations show that the measures have an effect by, for example, flying around residential areas, or that the average peak load of passing air traffic decreases at the measuring points. The evaluations also show that by avoiding residential centres, the nuisance shifts to other parts of the region.

Furthermore, Schiphol has grown in recent years to an annual volume of almost 500,000 flights (2019). The effect of nuisance-reducing measures is thus partly cancelled out by Schiphol's growth. Moreover, with such a volume, the possibilities for nuisance-reducing measures become exhausted. The Netherlands is a densely populated country. Measures that are still in the picture have only marginal effects and often only produce local effects or sometimes even displacement of nuisance. More drastic measures are needed to tackle noise levels across the board.

Annex 1 details the procedural measures that were under consideration.

2.2 Additional noise abatement measures

Over the years, complementary to source measures, policies have been implemented to reduce the nuisance of aircraft noise. This specifically involves land use planning measures and the implementation of multiple noise insulation programmes.

2.2.1 Land-use planning

Land-use policy around Schiphol aims to protect people and functions close to the airport, where noise nuisance is greatest from a health and safety risk perspective. Under certain conditions, land-use developments are possible further from the airport, where noise nuisance is lower. Outside the areas where land-use restrictions apply, source policy aims to reduce noise pollution and thus protect the surrounding area.

The land-use restrictions around Schiphol are established in the Schiphol Airport Classification Decision (LIB)[6]. This regulates which area is designated for use as an airport and which area around it is subject to safety and noise restrictions. The LIB provides rules for land use and zoning in these areas and is divided into five different zones based on external safety and noise.

Most European countries pursue a form of land-use zoning policy with zones where building is not allowed or only under specific conditions. Compared to other European

[5] https://minderhinderschiphol.nl/

[6] https://wetten.overheid.nl/BWBR0014329/2024-01-01

countries, the Netherlands has a more restrictive land-use policy. Other European countries typically use higher noise values to restrict residential construction.

As a result, around Schiphol the total number of people exposed to noise levels of 55 dB Lden or higher is much lower than at comparable airports. Whereas at Schiphol, 44,500 people are exposed to 55 dB Lden or higher, the figure is 189,300 at Frankfurt Airport and 683,700 at London Heathrow[7].

2.2.2 Integral land-use consideration

The starting point of the land-use policy is to increase the quality of the living environment around Schiphol. The aim is to restore the balance between aviation's contribution to welfare and prosperity on the one hand and its broad impact on the living environment on the other.

Schiphol is located in a highly urbanised area in which several public interests demand space or have an effect on the surrounding area of Schiphol. Besides aviation, local land-use challenges include housing, climate adaptation, and the energy transition. Land-use policy, therefore, broadly considers various functions and activities in the area around Schiphol. In doing so, it was decided to demolish houses close to the airport and not allow housing development and provide opportunities for housing development further away from the airport, based on an integral consideration of public interests. This means that further away from the airport, outside the LIB restriction areas, municipalities can build additional housing on the basis of careful (local) consideration.

There is a high demand for new housing in the Netherlands. The region around Schiphol also faces a considerable housing challenge. The current plans for new construction have been created within the existing regulations and, therefore, take into account the applicable restrictions of the LIB. From the perspective of achieving a good balance between various public interests in the Schiphol region, it is unlikely to result in land-use restrictions further away from the airport. In addition, extending land-use (building) restrictions will not reduce the number of severely affected people and is therefore not an effective measure to achieve a reduction in noise nuisance.

2.2.3 Sound insulation around Schiphol

Several rounds of noise insulation have taken place in the surrounding area of Schiphol Airport to mitigate the adverse effects of air traffic to and from Schiphol Airport. The Schiphol Noise Insulation Scheme (GIS) was carried out in three phases (GIS-1, GIS-2 and GIS-3). A total of 13,279 noise-sensitive properties were insulated. In 1984, the first phase of the noise insulation programme (GIS-1) commenced by insulating houses in the most heavily impacted areas within the 40 Ke contour. Subsequently, the insulation programme was gradually expanded. In 1997, GIS-2 was launched, anticipating the arrival of the Polderbaan runway and a growth to 408,000 aircraft movements. GIS-3 was launched in 2006 following the commissioning of the Polderbaan. At the commencement of GIS-3, the insulation contour was determined based on the actual use of the five-runway system and an expected growth to approximately 508,000 aircraft movements at Schiphol. GIS-3 started in 2006 and was completed in 2012.

However, since the completion of the last GIS project, Schiphol has continued to develop, leading to a change in noise nuisance from flying according to the New Standards and Enforcement System for Schiphol (NNHS). It was therefore decided in 2021 to implement a facade insulation programme at the homes of residents where noise nuisance is the highest according to the NNHS. This noise insulation programme provides for the application of noise insulation measures to houses in the surrounding area of Schiphol Airport within an area close to the airport where the annual noise exposure is high (60 dB Lden contour). This specifically involves houses that were considered under the previous schemes, but where the occupants refrained from noise insulation at the time for various reasons. This concerns about 660 houses.

Sound insulation is mainly used to complement source measures, as sound insulation can only partially contribute to solving noise problems. The following points of attention are thereby considered.

- Noise insulation is not reflected in the calculation methodology and, as such, does not contribute to achieving the noise abatement objective.
- Sound insulation is not effective when opening doors and windows of a dwelling and when residents are sitting in their gardens.
- For houses located further from the airport, noise insulation is less cost-effective, as the nuisance-reducing effect is smaller, but the cost of noise insulation hardly decreases.

[7] https://open.overheid.nl/documenten/ronl-1f6e0f86bddb2afb196df a5c2d7b61584337f27e/pdf

3 The noise abatement objective

The Cabinet wants to reduce the negative impact of Schiphol Airport on people, the environment and nature while at the same time maintaining the airport's valuable function. It is necessary to find a new balance between the quality of the Netherlands' connections with the rest of the world on the one hand, an aspect where Schiphol Airport plays a key role, and the airport's effects on nature, public health, liveability and the environment on the other. The World Health Organization (WHO)[8], and consequently also the National Institute for Public Health and the Environment (RIVM) and the Regional Medical Assistance Organisation (GGD GHOR), point to the negative effects on health of noise nuisance and disturbed sleep. For these reasons, reducing the noise impact of Schiphol Airport on local residents is a high priority for the Cabinet. The court's ruling in the case brought against the State by the Stichting Recht op Bescherming tegen Vliegtuighinder (Foundation for the Right to Protection from Aircraft Nuisance) (hereinafter: RBV) underlines this urgency. To achieve the reduction in noise nuisance, the Ministry has set a noise abatement objective. This chapter describes the noise abatement objective in more detail. This includes the reference situation, the noise abatement objective set and the package of measures.

3.1 Guiding principles for the noise abatement objective

The noise abatement objective is an interim phase towards a new noise system that allows for guidance on noise impacts based on set standards. The noise abatement objective is quantified, in the form of a percentage reduction in noise in different categories of people affected compared to a reference situation. This choice was made because a percentage reduction is a measurable real-world figure for the government's goal of reducing noise nuisance in the short term. The percentages also require a reference situation (baseline) to be defined with specific indicators and scores. The reduction is a decrease in the number of people experiencing disruption, the number of houses and the number of people experiencing sleep disturbance within the relevant contours, compared to a situation in November 2024 in which no measures are taken and on top of developments taking place autonomously. Indeed, these developments, combined with the growth in the number of flights, have so far not led to the reduction in noise nuisance.

[8] World Health Organization Regional Office for Europe, Environmental noise guidelines for the European region. 2018, WHO Regional Office for Europe: Copenhagen, Denmark.

3.2 Reference

An objective is accompanied by a reference to indicate the baseline situation against which the objective is formulated. The reference against which the noise abatement objective is formulated remains unchanged in this proposal, where measures are phased in over several years.

To do justice to the effects of autonomous developments and the measures that are already scheduled to be implemented, they are incorporated in the reference. Only in this way can effects of measures be purely determined. The Noise Ordinance also stipulates that a forecast must be made that includes measures that are already planned but excludes the additional measures. The reference is therefore based on the traffic flow and the noise exposure impact – calculated with Doc29 – corresponding to the situation in November 2024, namely 500,000 flight movements for commercial flights of which 32,000 are at night. The starting point for the underlying traffic scenario in the baseline situation is the Usage Forecast for Schiphol for the operating year 2023[9], with 495,485 aircraft movements, of which 31,300 were at night. This scenario has been scaled up to the stated numbers of 500,000 aircraft movements, of which 32,000 are at night. The reference takes account of the autonomous progress in fleet renewal up to November 2024, and the already announced measures for increased use of the continuous descent approach (whereby approaching aircraft descend slowly in a continuous movement), increased runway capacity and the more frequent use of 'reduced landing flaps' which must be operational by November 2024. The reduction in noise exposure established in the noise abatement objective is in addition to the reduction based on the described autonomous developments and measures already announced. Thus, the reference remains unchanged even as measures are introduced and spread more over time.

3.3 The noise abatement objective

In the Schiphol Environmental Noise Action Plan 2018-2023[10], the Cabinet set a noise abatement objective for Schiphol Airport. The noise abatement objective was set at the beginning of the procedure and remains unchanged. The noise abatement objective is also set out in the updated Schiphol Environmental Noise Action Plan 2024-2029, which has already been published[11]. The noise abatement objective consists of four sub-objectives. The table below shows the noise abatement objective. The noise abatement objective is expressed in percentages relative to the reference.

Table 3.1

Indicator	Houses	People
Number of houses with a noise exposure of 58 dB(A) L_{den} or higher	minus 20 per cent	
The number of people experiencing severe disruption with a noise exposure of 48 dB(A) L_{den} or higher		minus 20 per cent
The number of houses with a noise exposure of 48 dB(A) L_{night} or higher	minus 15 per cent	
The number of people experiencing severe sleep disturbance with a noise exposure of 40 dB(A) L_{night} or higher		minus 15 per cent

[9] https://open.overheid.nl/repository/ronl-ede7418996e363d16ca60af6020c79dd5e4063d6/1/pdf/2022292401-2-bijlage-schiphol-gebruiksprognose-2023.pdf

[10] https://open.overheid.nl/documenten/ronl-c2b885be-d474-4563-ba6c-eb6a1811aa5c/pdf

[11] https://zoek.officielebekendmakingen.nl/stcrt-2023-24836.html

The reduction percentages of the noise abatement objective can be converted into absolute numbers. This has been done based on the 2021 housing stock. This version of the housing stock was the most recent at the start of the procedure and was used throughout the procedure. The table below shows the number of people experiencing severe disruption, houses or severe sleep disturbance within the relevant contours in the November 2024 reference situation without additional measures.

Table 3.2 Noise exposure and noise nuisance in the reference – November 2024

Indicator	Houses	People
Number of houses with a noise exposure of 58 dB(A) L_{den} or higher	7,081	
The number of people experiencing severe disruption with a noise exposure of 48 dB(A) L_{den} or higher		113,862
The number of houses with a noise exposure of 48 dB(A) L_{night} or higher	5,685	
The number of people experiencing severe sleep disturbance with a noise exposure of 40 dB(A) L_{night} or higher		24,365

4 Measures considered

This chapter describes the measures considered leading up to the September 2023 notification. It then describes the potential measures (re)considered after September 2023 to arrive at an adjusted package of measures.

4.1 Measures considered before the September 2023 notification

The Balanced Approach procedure requires looking at different categories of noise abatement measures to achieve the noise abatement objective. An operating restriction is only considered when noise abatement measures in other categories have been exhausted. The four categories are:

1. Measures at the source;
2. Land use planning measures;
3. Operational measures;
4. Operating restrictions.

Using the above four categories, different measures were considered. This was done using the established selection criteria. The selection criteria for the 1 September 2023 notification consisted of:

- Safety: the measure should not introduce a safety risk.
- Feasibility: the measure should have achieved its effect by November 2024.
- Compliance with legislation: the measure should not conflict with international, European or national legislation.
- Reliability of the operation: the measure should not significantly decrease the reliability of the operation.
- Displacement of nuisance: the measure should reduce the nuisance, the nuisance should not just be displaced to other areas around the airport.
- Quality of the network connectivity: the measure should not result in an irreversible negative effect on the quality of the network connectivity.
- Emissions: the measure should not achieve a reduction in noise at the expense of a significant increase in emissions.
- Modelling: it must be possible to determine the effect of the measure using ECAC Doc29 noise modelling as implemented for Schiphol Airport.

Based on the above selection criteria, the measures put forward by the Ministry were analysed. Based on this, a selection of the measures in the 1 September 2023 notification package was made. The 1 September 2023 notification package consisted of the following measures, to be introduced by November 2024:

- Using quieter aircraft at night;
- A reduction in the use of secondary runways;
- Reduction of the capacity at night to 28,700 flights;
- Reduction of the capacity to 452,500 flights in total.

The 1 September 2023 notification document and its underlying appendices contain a detailed description of the measures considered prior to the notification and how the notification package was arrived at. Below, we highlight for each category some of the measures that were considered and the trade-offs made as part of the balanced approach process for the 1 September 2023 notification. Section 4.2 explains which measures were (re)considered after 1 September and where this led.

4.1.1 Measures at the source

The use of quieter aircraft at night is in the category of measures at source. For the 1 September 2023 notification, more measures within this category were considered. One of them was stimulating the use of quieter aircraft through further differentiation of airport charges. This measure dropped out of the 1 September 2023 notification package because the setting of charges is linked to a fixed three-year cycle, with April 2025 as the next point at which they can be adjusted. Fleet renewal is also a measure in this category. Research has shown that the fleet renewal taking place until November 2024 is in line with the assumed autonomous development, which is incorporated in the baseline and to which the measures contributing to the noise abatement objective should be added.

4.1.2 Land use planning measures

The 1 September 2023 notification package did not contain any measures in the land-use planning category. During the 15 March 2023 consultation, some measures in this category were put forward, such as restarting the Environment Fund and intensifying home insulation and noise-adaptive building. However, these measures did not pass the selection criteria. For instance, restarting the Environment Fund has no impact on noise, and home insulation and noise-adaptive building are not reflected in the noise calculations, which the regulation requires.

4.1.3 Operational measures

The 1 September 2023 notification package included the operational measure to reduce the use of secondary runways. More operational measures were considered leading up to the drafting of the 1 September 2023 notification package, including as a result of the 15 March 2023 consultation. The September 2023 notification document suggests that most of these measures are dropped due to enforceability, implementation time or significant nuisance shifting effects.

Further in this chapter, additional explanations are given on the policy around operational measures for Schiphol Airport.

4.1.4 Operating restrictions

The September 2023 notification package contained two forms of operating restrictions: a reduction in the number of night flights and a reduction in the total number of flights. Regarding the reduction in the number of night flights, it worked towards the 15% reduction percentage of the night noise abatement objective. This resulted in a maximum number of 28,700 night flights per year. Then, based on the source measure, the operational measure and the maximum number of night flights of 28,700, it was calculated what the total maximum capacity of the airport could be to achieve the target reduction percentage, as described in the September 2023 notification document for November 2024 of 15%. This resulted in a maximum of 452,500 flights per year.

Before reducing the number of (night) flights, two other measures were also considered in the operating restrictions category, namely, excluding noisy aircraft from the airport and excluding private aircraft. It is not legally possible to completely exclude private aircraft, and it is, therefore, not part of the notified package. Later in this chapter, additional explanations are given on the policy around private planes for Schiphol Airport.

4.2 Measures considered after September 2023

4.2.1 Selection criteria for the additional notification

A phased approach creates a shift in the selection criteria that apply to the inclusion of measures. An important criterion in selecting measures for the September 2023 package of measures was their feasibility to be achieved by November 2024. Measures whose introduction was not feasible by November 2024 were previously excluded based on this criterion. As a result of the phased approach, we are now also looking at a year later, November 2025, as an implementation date for measures. Therefore, it has been reassessed whether previously dropped measures can contribute to achieving the noise abatement objective and the previously mentioned criterion has been adjusted to November 2025. It looked at the measures submitted during the earlier consultation phase – from 15 March to 15 June 2023 – and during the additional consultation. In line with the Noise Ordinance, these measures have been (re)analysed and, if they meet the selection criteria, calculated in terms of objective and cost-effectiveness. This led to some additions with respect to the original package of September 2023.

The measures that have been reviewed or additionally examined since the notification in September 2023 are discussed below.

4.2.2 NADP-2

During the additional consultation and in subsequent discussions with the European Commission, the application of the NADP-2 take-off procedure was again put forward as a measure to reduce noise in the surrounding area of Schiphol. The abbreviation NADP-2 stands for "Noise Abatement Departure Procedure 2", in which the pilot quickly begins flying after take-off with a smaller angle of climb. The NADP-2 take-off procedure has different acceleration heights, with each acceleration height causing a different noise exposure. In the Aeronautical Information Publication (AIP), an NADP procedure can be prescribed as a preferred procedure without a defined acceleration height. Currently, NADP-2 is also prescribed as the preferred procedure. An additional analysis was performed on which take-off procedures are currently followed by pilots at Schiphol. The additional analysis, conducted by LVNL and Schiphol, shows that between 1 January 2023 and 28 July 2024, more than 95% of flights followed a NADP-2 take-off procedure. NADP-2 is, therefore, already by far the most commonly used take-off procedure at Schiphol. In addition, it is a real scenario that pilots who apply a different procedure do so because it is required by the airline they fly for. This shows that it is possible to deviate from the take-off procedure prescribed in the AIP. Before NADP-2, including specific acceleration altitude, can be applied as a balanced approach procedure measure, it must be enforceable and legally binding. According to current understanding, this is not the case. The lack of enforceability and the fact that more than 95% of pilots at Schiphol already fly in accordance with NADP-2 led to it not being included as a measure in this additional notification.

4.2.3 Excluding/regulating private flights

'Private flights' is a diffuse concept that can include several types of aviation activities (citizens with their own aircraft, flights by companies for their own employees, aircraft leased through commercial companies, flights by companies commissioned by third parties, associations, etc). Demarcating which flights should and should not be covered by a ban is therefore not straightforward. It should also be borne in mind that it is not possible to simply restrict free movement of services. In view of the above, a ban on private flights is not feasible. In October 2022 and again in June 2023, the Netherlands joined a number of EU member states at the Transport Council that drew attention to the environmental and climate impact of private flights, with the aim to come up with measures that also include the impact on this part of the sector. This, therefore, requires further European agreements.

Excluding/regulating all private flights to and from Schiphol was reintroduced as an alternative measure during discussions with stakeholders and the European Commission after the September 2023 notification and in the additional consultation. This is emphatically not about public service traffic. This traffic receives an exception with Schiphol's noise limits because of the unique nature and high societal interest of these flights, such as the police and coast guard. The suggestions to limit private flights at Schiphol were made not least by the airport itself. The proposal to exclude private jets from Schiphol was made as part of the 8-point plan. In line with the policy from the Ministry regarding private jets and the legal impossibilities, it was previously indicated that an outright ban on private jets cannot be part of the balanced approach procedure. A complete ban on private flights at Schiphol denies the entire sector access to the market.

In the follow-up to the Balanced Approach, the European Commission raised additional questions about why the number of private flights could not be partially reduced (instead of completely banning it). It stated that regulating private flights would be done through the adoption of a new airport traffic decree (hereinafter: LVB). A new LVB will

establish a total environmental space. Aircraft movements involving private flights, in addition to commercial traffic, must also fit within this available noise space. This environmental space will be enforced, resulting in private flights being unable to take place without limit and thus being regulated. Establishing and enforcing a new LVB is the first step required to regulate private flights. In addition, it was discussed with the airport operator that if regulating private flights is actively possible and appears to be able to lead to a reduction in noise around Schiphol, it is a potential measure that could contribute to meeting the remaining percentages of the noise abatement objective in Phase 2.

4.2.4 Using quieter aircraft at night

The measure involves the optimisation of the fleet usage by means of the use of quieter aircraft at night. The measure was introduced by KLM during the 15 March 2023 consultation. This involves deploying the airline's fleet so that the quietest aircraft are used at night. Enquiries with other airlines based at Schiphol indicate that other airlines cannot contribute to such a night-time optimisation.

Specifically, this means that some noisy aircraft are removed from operation at night and swapped with quieter aircraft. The measure has two elements:

- The transfer of, among others, wide-body aircraft from the night to the day and the filling of that slot with a narrow-body aircraft;
- Replacing a noisier wide-body aircraft with a quieter wide-body aircraft.

4.2.5 Additional fleet renewal

Several sector parties have repeatedly stated that their fleets are being made quieter. The reference situation (the noise situation in November 2024 without additional measures) takes into account autonomous developments. These are developments, including fleet renewal, that occur annually, regardless of the government's introduction of measures, since fleet renewal is an ongoing process. The 20% reduction objective should be achieved on top of this. What has been done so far in terms of noise abatement is not enough to reduce the overall noise nuisance. Therefore, the effect of autonomous development is not part of the noise abatement objective to be achieved but is part of the baseline assumptions. However, in the submitted comments in the consultation phase and follow-up discussions with airlines, it has been indicated that specific airlines will carry out more fleet renewal between November 2024 and November 2025 than assumed within the autonomous development. The part of these airlines' fleet renewal, in addition to the assumed autonomous development, is now included as a measure that contributes to achieving the noise abatement objective. The measure is, therefore, part of the new package of measures.

The Ministry has obtained insight into specific fleet renewal schedules. These schedules are confidential and will not be shared with third parties. Deliveries of new aircraft are subject to external factors, such as possible delays at suppliers such as Airbus, Boeing and Embraer. Also, the data shows that there are many mutations in bringing new aircraft into operation. It is, therefore, important to include an uncertainty margin in the calculations of the noise impact of these new aircraft. This provides additional certainty that calculations are made with the fleet renewal that actually takes place.

The level of the uncertainty margin was determined based on actual changes in specific fleet renewal schedules. This initially looked at how much has changed over the period to November 2025. This shows that the same number of new aircraft are still coming into operation during this period. It is also evident from the data that due to the various mutations, several new aircraft will only come into operation just before November 2025. If the delivery of these aircraft is delayed (again, the same), they will no longer count as additional fleet renewal for the operating year 2025. They will then become part of the fleet renewal for the next operating year. Applying this potential additional delay to the fleet renewal schedule reveals an uncertainty margin of 20% on additional fleet renewal. This 20% uncertainty margin is applied to aircraft delivered within three months before the November 2025 implementation deadline to calculate the measure's impact.

4.2.6 Rate differentiation

This measure aims to reduce noise nuisance by stimulating airlines to replace noisy aircraft types with quieter ones. Airport charges at Schiphol are already differentiated based on aircraft noise levels. Schiphol distinguishes 7 categories of noisiest aircraft, ranging from S1 (noisiest in their class) to S7 (least noisy). The noisiest aircraft tend to be larger, older aircraft. Stimulating the use of quieter aircraft will be done through stronger differentiation of airport charges. This makes using noisy aircraft more expensive for airlines. The setting airport charges follows a three-year cycle and is the responsibility of Schiphol Airport. The next time airport charges will be set is in April 2025. Schiphol is currently consulting on the adjusted airport charges. In it, Schiphol has put forward a proposal for the new rates. Based on this proposal, this measure, particularly its effect, has been reviewed. Schiphol's proposal shows that in addition to the

S1 category, the stronger differentiation also affects categories S2 to S4. This is also expected to lead to swapping more noisy aircraft with less noisy aircraft in these categories, which will have a noise-reducing effect. The assumptions and starting points for the calculations take into account the possibilities airlines have to swap and that the incentive to swap becomes increasingly smaller as the aircraft already fall into a higher category. Including categories S2 to S4 leads to a greater impact than initially assumed.

4.2.7 Reduction in the use of secondary runways

The runways at Schiphol can be characterised as either primary or secondary runways. Using the primary runways is preferred because, on balance, this leads to a lower number of people experiencing severe nuisance. This measure aimed to reduce the use of secondary runways between 13:00 and 15:00 hours. However, responses to the additional consultation questioned the feasibility of this measure. In addition, local residents also questioned this measure, particularly its impact on actual noise nuisance and the transfer of noise to other runways and times of day. As a result of the responses to the additional consultation, both the feasibility and desirability of this measure have been reviewed. This concluded that the measure does indeed have far-reaching effects on operations at Schiphol, given the displacement of flights to other times of the day. The main argument for abandoning this measure as part of the package now is the nuisance displacement effect, which turns out to be greater than initially thought. Partly for this reason, local residents do not support this measure.

4.2.8 Excluding noisy aircraft at night down to -13 EPNdB

The exclusion of noisy aircraft includes the increasing of the permitted limits to a -13EPNdB margin within which aircraft may be excluded from the airport during the night-time period. EPNdB is an abbreviation of "effective perceived noise in decibels" and is an international unit for specifying of the amount of noise that an aircraft makes during a movement. Under current regulations, Schiphol Airport is allowed to exclude aircraft down to -10 EPNdB.

During the consultation of 15 March 2023, Schiphol proposed a measure whereby the permitted limits of aircraft noise categories would be raised to a -12 EPNdB margin for the 24-hour period and to a -13 EPNdB margin for the night, as a result of which aircraft with a margin equal to or smaller than -12 EPNdB would no longer be allowed to land and take off from Schiphol during the day. In addition, aircraft with a margin equal to or smaller than -13 EPNdB will no longer be allowed to land and take off at night. The increase in the permissible limit has been discussed by the Ministry on several occasions and at length with the European Commission. Based on these discussions on the legal feasibility of this measure in relation to the Balanced Approach Regulation, it appears that a measure excluding specific aircraft with a margin higher than -10 EPNdB is only partially permissible. The measure proposed by Schiphol involves completely excluding aircraft with a margin equal to or less than -12 EPNdB and is, therefore, not allowed. However, excluding aircraft at night with a margin equal to or smaller than -13 EPNdB is possible according to the Noise Ordinance and is included as a measure in the package. This will exclude the noisiest and most disruptive aircraft at night. This limit of -13 EPNdB aligns with how this measure is implemented at other European airports, such as in France.

In response to the additional consultation, several airlines commented on the measure. These comments mainly concern the implementation deadline of the measure. The deadline of November 2025 would be too short to make adjustments to the fleet and respond to this measure. The airlines argue that they are currently waiting for new aircraft to be delivered just after the introduction of this measure. With these new aircraft, these airlines would indeed comply with the set standard. Nevertheless, the Ministry insists on introducing this measure by November 2025. Indeed, the measure makes a significant contribution to reducing noise at Schiphol Airport. Also, several signals indicate that deliveries of the new quieter aircraft have been delayed, so postponing this measure in that area does not offer any certainty. In addition, the older aircraft, affected by this measure, can operate as usual during the day and at night as long as the aircraft meets the margin of -13 EPNdB. This can be done by reducing the load. These are mitigating measures that airlines can take.

This measure has not been adjusted as a result of the additional consultation and is part of the current proposal. However, more detailed information has been used to calculate the impact of the measure with regard to the aircraft types to be replaced and how KLM and Transavia will react to this measure in practice.

4.2.9 Capacity reduction

The analyses of the measures show that combining these measures does not lead to the full achievement of the noise abatement objective. Due to the exhaustion of measures in the first three categories of the Balanced Approach procedure (measures at source, land-use planning measures

and operational measures), additional capacity reduction of the total number of flights is necessary to achieve the noise abatement objective within phases 1 and 2.

Considering cost-effectiveness, a further reduction in the number of night flights was chosen after consultation with the European Commission. The notified measure package of 1 September 2023 included a maximum number of aircraft movements at night of 28,700. In the adjusted proposal, that number has been further reduced to 27,000. In the short term, 27,000 aircraft movements at night is a lower limit. According to the research firms involved, further reducing the number of night-time aircraft movements in the short term could have a negative impact on costs and the effect on the operations of various airlines is currently unknown. Therefore, an impact analysis regarding a further reduction in the number of aircraft movements at night is underway. After completion of the impact analysis, a decision can be made on a possible further reduction in the number of aircraft movements at night including a rest period.

The capacity reduction in the total number of flights results from the calculation in which the percentage remaining after implementing the other measures in this proposal is fulfilled by a capacity reduction. Given the reservation of part of the 20% reduction in the 24-hour sub-objectives for fulfilment in a subsequent phase, the Ministry aims to achieve 17% of the 24-hour sub-objectives by November 2025. The remaining percentages will follow depending on the outcome of the impact analysis towards more far-reaching measures at night and monitoring of the package of measures going into effect by November 2025. For completeness' sake, the noise abatement objective of a 20% reduction on the 24-hour sub-objectives remains unchanged.

A capacity reduction between 475,000–485,000 aircraft movements is expected to achieve -17% per November 2025.

5 Additional consultation on the Balanced Approach procedure

This chapter describes the additional consultation and a general consideration of the responses submitted. Annex 2 contains the Ministry's detailed commentary on the submitted responses and indicates how the comments or suggestions were dealt with. The analysis of the submitted responses by an independent consultancy is included in Annex VII.

5.1 Additional consultation

The additional consultation provided an opportunity to respond to the adjusted proposal. In doing so, stakeholders were explicitly asked to comment on the new elements in the package of measures. This concerns: (i) the intended phasing of the noise abatement objective over time and (ii) the new and adjusted measures. Comments on the adjusted proposal were invited from 24 May 2024 to 21 June 2024. A total of 218 responses were submitted, of which 166 were publicly available.

Over the past period, the Ministry analysed all the submitted responses. In doing so, the Ministry was supported by an independent consultancy firm. This allowed the Ministry to accurately identify and respond to the submitted responses in a relatively short period of time.

5.2 General consideration

From the start of the Balanced Approach procedure, there has been widespread attention and engagement from stakeholders. The Ministry appreciates the intensive engagement of local residents, governments (international, provincial, municipalities) airlines, Schiphol Airport and organisations representing entrepreneurs, local residents, nature/environmental organisations during the process. This commitment is evidenced by the high participation in meetings and requests for discussions, as well as by the number of responses to the additional consultation.

These responses and the open communication about views, considerations and expectations, enabled the Ministry to conduct the procedure with care and weigh up the broad interests. That this is a complex process with strong competing interests is evident throughout the Balanced Approach process. The responses to the additional consultation also confirm this.

In general terms, the importance of noise reduction is endorsed by the majority of stakeholders. Responses varied widely on how to achieve noise reduction and its pace. This leads to a divided view on the proposed measures and the proposed timeframe. Sector parties and a number of individual responses perceive the measures as too far-reaching, with some respondents believing that

the phases of the approach start too soon. The economic importance of aviation and the risk to the aviation sector of this approach is brought into play. At the same time, local residents and interest groups perceive the measures as not far-reaching enough, with no expectation that the measures will actually improve the living environment. They indicate that only a reduction in the number of flights will contribute to this. The phased approach is also seen as too delaying. Reference is made to the RBV case and the court ruling last March ordering the State to comply with the ruling quickly. Some respondents argue that the government is not listening to that court ruling with this proposal.

Several responses also address the process. It is submitted that the four-week period for the additional consultation was too short to submit a diligent response and that it is not in line with the deadline set in the Regulation. In addition, it is submitted mainly from the aviation sector that the Balanced Approach procedure was not followed correctly or incompletely. Due to the short implementation period, all measures that do not contain an operating restriction are not feasible for the aviation sector.

The Schiphol Social Council (MRS) is critical of the adjusted package. The MRS points to possible problems in implementation, barely perceptible improvements for local residents and possible shifting of annoyance to other areas and other times. Second, the MRS considers monitoring and enforcement-combined with lowering the maximum number of aircraft movements in case of underperformance-necessary to ensure the achievement of noise abatement objectives.

During the additional consultation, several parties raised questions and commented on the assumptions and guiding principles used. KLM took this a step further and commissioned an external agency to calculate the same proposed measures based on the assumptions and assumptions KLM would use. KLM's publicly submitted response shows that the external agency's calculations show different results from those calculated by the Ministry.

Most of the responses to the measures related to the measures of rate differentiation and reducing secondary runway use. Setting rates is a process for which Schiphol is responsible. Several parties from the aviation sector indicated that Schiphol's alternative proposal with higher rates works better. The measure's effect is, therefore, more significant in practice than assumed in the calculations of the package of measures presented during the additional consultation.

Several parties are critical of the measure reducing secondary runway use. It is frequently mentioned that people do not favour the proposed time of 13:00 and 15:00 hours. It is noted that this is a time when many people are at work and usually experience the least nuisance. There are also concerns about shifting nuisance to other runways or other times of the day.

Sector parties mention that this measure is not feasible without capacity reduction, and there are operational challenges. According to some parties, the likelihood of delays will increase. The aviation parties call for more time to develop this measure further with LVNL and the sector.

Schiphol indicates that the adjusted package is a step in the right direction as it involves more measures than the previous package, including two measures that Schiphol also included in its 8-point plan. Furthermore, Schiphol asks whether a decision on a form of night closure can be taken quickly and whether a ban on private aircraft can become part of the package of measures to be notified.

Finally, KLM indicates that the measure *Quieter aircraft at night* that KLM previously submitted is not feasible by 1 November 2024. In doing so, KLM indicates that the measure is viable from 1 November 2025.

5.3 General response by the Ministry

The additional consultation is in addition to the consultation period on the notified package of measures, which ran from 15 March to 15 June 2023. The adjusted proposal includes measures already included in the previous consultation or proposed by stakeholders at that time. In order to go through the Balanced Approach procedure diligently, the Ministry used an additional consultation to enable all stakeholders to give their responses to the adjusted package of measures. The additional consultation thus complements the consultation that took place in 2023. Therefore, instead of a period of another three months, a period of four weeks was chosen. As a result, all interested parties were able to provide input during the additional consultation and did so in large numbers.

With the adjusted proposal, the Ministry has sought an implementation date and combination of measures that, considering the European Commission's concerns about proportionality, can still achieve short-term noise reductions. This will also do justice to noise issues in the surrounding area of Schiphol and improve the balance between Schiphol and the living environment. The ruling in the court case between RBV and the State underlines the urgency of the noise problem in the surrounding area of

Schiphol and the need to ensure improvement in the short term. Even after the inclusion of additional alternative measures, an operating restriction was found to be necessary to achieve the noise abatement objective. Adjusting the package of measures requires a less far-reaching operating restriction.

The Ministry hereby notes that the operating restrictions were only considered a 'last resort' measure throughout the process, both prior to the September 2023 notification and during the notification phase, which led to an adjusted proposal.

The large differences in the results of the calculations by NLR, commissioned by KLM, and To70, commissioned by the Ministry, were further studied after the additional consultation.

5.4 Adjustments to the package of measures following consultation

A closer examination of the various outcomes showed that for several measures, more detailed information was used to arrive at the assumptions needed to calculate the measures. After discussions with technically substantive stakeholders, from airlines, Schiphol Airport, Air Traffic Control The Netherlands (LVNL) and two external research agencies, the Ministry received more detailed information for these measures. Applying this more detailed information and the resulting assumptions have resulted in certain measures proving to have a greater impact than assumed under the assumptions previously used.

In addition, as a result of the additional consultation, the Ministry has adjusted the proposed package of measures on the following two points:

- The implementation date of the measure concerning the 'use of quieter aircraft at night' has been moved from November 2024 to November 2025 because KLM can no longer realise the measure by November 2024.
- The feasibility and desirability of the measure concerning the reduction of secondary runway use were considered. The impact on Schiphol's operations, the lack of support from local residents and the expected displacement of noise led to the measure being dropped.

Chapter 7 provides a complete overview of the adjusted package of measures as notified to the European Commission, including an interpretation of the new, more detailed information used.

6 Results of implementation tests

In parallel with the additional consultation, the adjusted package of measures were assessed by Air Traffic Control The Netherlands (LVNL) and the Human Environment and Transport Inspectorate (ILT). This chapter summarises the results of the tests. The results of the tests are presented in the annex.

6.1 The Human Environment and Transport Inspectorate

The Human Environment and Transport Inspectorate (ILT) carried out an impact assessment in which points of interest regarding safety and any expected impact on noise levels were reported. The ILT indicates that the measures are feasible but does raise some concerns. Without mitigations, measures that lead to a higher operational load may come at the expense of safety. In the current package, this may be reflected in particular in reducing the use of secondary runways (including longer use of primary runways with a greater risk of errors and fewer recovery options). Furthermore, the ILT draws attention to the supervision and enforcement of the measures. At present, it is not sufficiently clear how the measures at hand will be monitored and what the sanction will be if the measure is not or insufficiently implemented or if the noise abatement objective is not met. With a view to enforceability, it is indicated that it is important to establish this in concrete terms.

6.2 Air Traffic Control The Netherlands

When assessing the measures, LVNL tested the ability to carry out a safe operation and the impact on the organisation. In its conclusion, LVNL indicates that the proposed measures, both individually and in combination, are assessed as feasible, provided that certain preconditions are met and the possible resulting implications are accepted. It should be noted that for a number of measures, namely rate differentiation, the use of quieter aircraft at night and fleet renewal, LVNL has no authority regarding the implementation and consequences of those measures. LVNL points out that to properly implement the measure to reduce secondary runway use, the traffic volume must be brought in line with the handling capacity. The proposed measure leads to an increasing amount of traffic at other times of the day and creates less room for delays and repairing faults. A second prerequisite is that the standard

for the average number of delay minutes per flight needs to go up. Regarding the proposed capacity restrictions, LVNL indicates that this does not affect safety. However, the operational consequences should be carefully considered depending on the (re)distribution of the number of flights.

7 The final package of measures

This chapter explains the adjusted package of measures being notified. Besides an overview of the individual measures, the calculation results of the various measures are also presented.

7.1 Starting points in the calculations

In order to calculate the effect of measures, certain assumptions and starting points have to be used. For example, for the rate differentiation measure, an assumption must be made about which airlines replace which aircraft with quieter aircraft as a result of greater differentiation of the rates, and for the measure banning noisy aircraft at night, an assumption must be made about how airlines respond to the measure. Detailed information and examples can make such assumptions better reflect the eventual reality. During the additional consultation, several parties questioned the assumptions and guiding principles used. KLM took this a step further and commissioned an external agency to calculate the same proposed measures based on the assumptions and assumptions KLM would use. KLM's publicly submitted response shows that the external agency's calculations show different results from those calculated by the Ministry. These differences were further examined after the additional consultation.

Further examination of the different outcomes during discussions with technically substantive stakeholders, consisting of airlines, Schiphol Airport, Air Traffic Control The Netherlands (LVNL) and two external research agencies, showed that more detailed information was used for several measures to arrive at the assumptions needed to calculate the measures. Following these discussions, the Ministry received this new and more detailed information. These parties have also given commitments on how they will respond to specific measures and have taken a less conservative look at expectations on the margin of uncertainty applicable to when the new aircraft ordered by airlines will be delivered.

Based on responses from the additional consultation, additional and detailed information and discussions with stakeholders, assumptions were further refined, and the package of measures was adjusted in several respects. Subsequently, under the direction of research firm To70 and with a second opinion from the Royal Netherlands Aerospace Centre (NLR), new calculations were made on the effect of the measures on noise nuisance. These show that the effect of some measures is more significant than previously calculated.

Later in this chapter, it is explained how the individual measures were calculated within the current calculations. Further substantiation of the calculation method and detailed information applied can be found in Annex V.

7.2 Individual measures

The table below features the new shortlist followed by a substantive description of each measure. The substantive description also outlines when the measure can be implemented and its exact content.

Table 7.1 Shortlist of measures

Measure	
Using quieter aircraft at night	Already in the notification package from September 2023
Rate differentiation	New
Additional fleet renewal	New
Excluding noisy aircraft	New

7.2.1 Using quieter aircraft at night

This measure involves the optimisation of the fleet usage by means of the use of quieter aircraft at night. This involves deploying the airline's fleet so that the quietest aircraft are used at night. Enquiries with other airlines based at Schiphol indicate that other airlines cannot contribute to such a night-time optimisation.

Specifically, this means that some noisy aircraft are removed from operation at night and swapped with quieter aircraft. The measure has two elements:

- The transfer of, among others, wide-body aircraft from the night to the day and the filling of that slot with a narrow-body aircraft;
- Replacing a noisier wide-body aircraft with a quieter wide-body aircraft.

7.2.2 Rate differentiation

This measure aims to reduce noise nuisance by stimulating airlines to replace noisy aircraft types with quieter ones. This is done through greater differentiation of airport charges. This makes using noisy aircraft more expensive for airlines. The setting airport charges follows a three-year cycle and is the responsibility of Schiphol Airport. The next time airport charges will be set is in April 2025. The consultation on the adjusted airport charges by Schiphol runs until mid-summer 2024. The further implementation and monitoring of this measure will take into account the final adopted rates. This measure falls under the first pillar of the Balanced Approach (reducing noise nuisance at source). Airport charges at Schiphol are already differentiated based on aircraft noise levels. Schiphol distinguishes 7 categories of noisiest aircraft, ranging from S1 (noisiest in their class) to S7 (least noisy). The noisiest aircraft tend to be larger, older aircraft. The measure assumes a sharp increase in the rate of the two noisiest categories and a decrease in the rate of the two least noisy categories. These assumptions are based on detailed information from the proposal Schiphol is currently working on to set the new charges as of April 2025. Thus, a swap occurs between aircraft in categories S1 to S4 with S6 and S7.

7.2.3 Additional fleet renewal

Several sector parties indicated during the consultation process that their fleets are being made quieter. The reference situation (the noise situation in November 2024 without additional measures) takes into account autonomous developments. These are developments, including fleet renewal, that occur annually, regardless of the government's introduction of measures, since fleet renewal is an ongoing process. The 20% reduction objective should be achieved on top of this. However, what has been done so far in terms of noise abatement is not enough to reduce the overall noise nuisance. Therefore, the effect of autonomous development is not part of the noise abatement objective to be achieved but is part of the baseline assumptions. However, in the submitted comments in the consultation phase and follow-up discussions with airlines, it has been indicated that specific airlines will carry out more fleet renewal between November 2024 and November 2025 than assumed within the autonomous development. This measure, additional fleet renewal, includes the fleet renewal that takes place on top of the autonomous development. The measure is, therefore, part of the new package of measures.

However, deliveries of new aircraft are subject to external factors, such as delays at suppliers and subsuppliers. Airlines that have procured and expect these aircraft often have no direct influence on this. It is important to include this large uncertainty in the calculations of the noise impact of these new aircraft. Therefore, the calculations for this measure include a 20% uncertainty margin applied to aircraft delivered within three months before the November 2025 implementation deadline.

7.2.4 Excluding noisy aircraft

This measure aims to exclude the noisiest aircraft. During the consultation, Schiphol proposed a measure whereby the permitted limits of aircraft noise categories would be raised to a -12 EPNdB margin (a specific noise measure) for the 24-hour period and to a -13 EPNdB margin for the night, as a result of which aircraft with a margin equal to or smaller than -12 EPNdB would no longer be allowed to land and take off from Schiphol during the day. In addition, aircraft with a margin equal to or smaller than -13 EPNdB will no longer be allowed to land and take off at night. After consultation with the European Commission, it appears that a measure excluding specific types of aircraft is only partially permissible. While completely excluding aircraft with a margin equal to or less than -12 EPNdB is not allowed, excluding aircraft at night with a margin equal to or less than -13 EPNdB is possible under the Noise Ordinance. This level is set as a limit at several airports in Europe. It is proposed to exclude aircraft with a margin equal to or less than -13 EPNdB, from both Chapter 3 and Chapter 4 (cf. Chicago Convention), at night. The aircraft that will no longer be allowed to land at Schiphol at night as a result are heavy (old) cargo and passenger aircraft.

Detailed information is known about how KLM and Transavia will respond to and be able to meet the standard set in this measure. This detailed information has been applied to the calculations. This information is not known for the other airlines, and more generic assumptions have been applied.

7.3 Calculations of measures

The results of the noise impact analyses and cost-effectiveness of the measures are presented below. In calculating cost-effectiveness and achieving the objective, the timing of possible implementation was specifically considered.

7.3.1 Results of the analyses

The results of the calculations of the individual measures, both for noise impact and cost-effectiveness, are presented in the following table. During implementation, interfaces between the different measures may arise in the operation. Due to these interfaces, there may be an overlap between the impacts of the individual measures. When combined, because of this effect, the final effect of the combination of measures must always be calculated, and the individual effects cannot simply be added together. Section 7.4 explains the gradual approach including the proposed combination of measures.

7.4 The phased approach

The phased approach is a proposal in which the noise abatement objective is not achieved within one year but the measures are spread over several years. The Ministry has looked for a combination of measures that, taking into account the European Commission's concerns about proportionality, can achieve significant reductions in noise nuisance in the short term. This will also do justice to the noise problems in the surrounding area of Schiphol and the required better balance between Schiphol and its living environment.

For the effective date of the first phase, we looked at when the first measures could be introduced. The additional consultation, which ran from 24 May 2024 to 21 June 2024, also proved important. While the Ministry initially wanted to introduce the first measure in November 2024, it turns out that this is not possible due to the international slot allocation process. KLM has indicated that the measure 'use quieter aircraft at night' should be considered when allocating slots. For the season starting November 2024, the slots are distributed in May 2024. As the package of measures resulting from the balanced approach procedure was not yet final at the time of slot allocation, KLM did not take this into account. Therefore, the implementation of this measure is postponed to a year later. Thus, the package of measures consists of 2 phases, with Phase 1 taking effect from November 2025:

For further implementation of the second phase, after completion of the impact analysis and monitoring of the measures in phase 1, a separate notification process to the European Commission, including a new stakeholder consultation, will be carried out if necessary.

7.4.1 Reduction percentages for Phase 1 and process Phase 2

As mentioned earlier, the noise abatement objective is achieved over several years. Two aspects were taken into account when determining the level of the reduction percentage for Phase 1. Firstly, the ambition is to take a significant step in reducing noise impact in the airport's surrounding area in the shortest possible time. At the same time, the expected effects of the variants of (partial) night closure and other more far-reaching measures at night examined in the ongoing impact analysis have been taken into account. These aspects combined have led to achieving 17% of the noise abatement objective in Phase 1, by November 2025. This means that 3% remains. The additional consultation envisaged filling in this remaining percentage in 2026 with measures with a night-time focus.

An impact analysis on the consequences of a (partial) night closure is underway. The Cabinet has decided to first monitor the actual impact of the package of measures for a year. It will then decide what further steps to take.

7.5 Combination of measures

The calculations of the individual measures show that no single measure can sufficiently achieve the objective of Phase 1 as described above. This means that a combination of measures must be made, which together do reach the 17% reduction in the 24-hour sub-objectives. The table below shows the result of calculating the combination of measures to a percentage of 17% in the 24-hour sub-objectives. As can be seen in the table, the sub-objectives for the night are more than met with the package of measures below.

Table 7.2

Noise abatement objective		**-20%**	**-20%**	**-15%**	**-15%**
Maatregelen		*Houses in 58 dB L_{den}*	*People experiencing severe disruption in 48 dB L_{den}*	*Houses in the 48 dB L_{night}*	*People experiencing severe sleep disturbance 40 dB L_{night}*
Phase 1: 2025	1. Using quieter aircraft at night 2. Rate differentiation 3. Additional fleet renewal 4. Excluding noisy aircraft 5. Capacity reduction at night to 27,000 6. Capacity reduction overall to 475,000–485,000	±-17%	±-20.3%	±-31.4%	±-35.8%

The above table indicates that a reduction to 475,000–485,000 aircraft movementsper year is needed to achieve the phase 1 objective.

7.6 Monitoring and enforcement

After implementing the measures, it is important to keep a finger on the pulse to check whether the measures also have the desired effect. After all, assumptions are made for the effect of the measures that may turn out differently in practice.

After the implementation of the measures, monitoring takes place in two ways. On the one hand, the implementation of the measures, known as input, will be monitored. A number of measures in the package of measures require cooperation from sector parties. This specifically concerns the measures *Using quieter aircraft at night*, *Additional fleet renewal and Rate differentiation*. For compliance with the measure of excluding noisy aircraft, the ILT will be called upon. In addition, the ILT is also asked to draw up a monitoring strategy.

Regarding these measures, concrete agreements will be made with the ILT and sector parties to establish (correct) implementation, as well as agreements on the consequences if implementation is not (correctly) established. It will be considered whether regulations need to be drawn up for this or whether this can be laid down bilaterally – for example, in a covenant. It will also examine whether sanctions (e.g., fines) are an issue if sector parties do not comply with the agreements. The intention is to monitor this after each operating year. In this way, timely adjustments can be made to ensure proper compliance with the agreements made.

Secondly, the actual fulfilment of the noise abatement objective, the output, will be monitored. After all, if the package does not achieve the objective, additional measures will be needed to still fulfil the noise abatement objective.

As part of the phased approach, after the first year of operation, it will be assessed whether the package of measures that takes effect in November 2025 has resulted in a 17% reduction in the number of homes within the 58 dB(A) Lden contour and the number of people experiencing severe nuisance within the 48 dB(A) Lden contour. The outcome of the monitoring will then guide the steps to be taken to achieve the remaining percentage of the noise abatement objective. Full monitoring will consist of an analysis of the following indicators:

1. The number of houses with noise exposure of 58 dB(A) L_{den} or more
2. The number of people experiencing severe disruption with noise exposure of 48 dB(A) L_{den} or more
3. The number of houses with noise exposure of 48 dB(A) L_{night} or more
4. The number of people experiencing severe sleep disturbance with noise exposure of 40 dB(A) L_{night} or more

Once decisions on fulfilling the remaining percentage have been made, monitoring will occur again. Compared to the baseline of November 2024 (the reference situation), the measures must ultimately have led to a decrease of 20% and 15%, respectively. Autonomous development is not taken into account for this, allowing a pure comparison between the effect of the measures and the objective attainment. If the package does not achieve the objective, additional measures will be needed to achieve it. At the same time, it will be necessary to look closely at why the package is not meeting the objective. Which measure is not sufficiently complied with and/or does not deliver sufficient effect? The answer to that question will help determine which additional measures can be taken to achieve the objective still fully. Depending on the measures, the necessary procedure for this will be carried out at that time.

8 Follow-up process implementation, monitoring and enforcement

Completion of the Balanced Approach procedure will be followed by national decision-making, discussions with the slot coordinator and network manager, and, of course, preparation for implementation of the measures.

8.1 National decision-making after completion of the Balanced Approach process

After going through the Balanced Approach procedure, the measures will be legally anchored in an amended Airport Traffic Decree (LVB), an amendment to the Regulation of operational restrictions on noisy aircraft, as well as the establishment of enforceable instruments such as covenants with sanctions by which the main sector party KLM Group commits itself to comply with the agreements made (use of quieter aircraft at night and additional fleet renewal). A plan of action to monitor and enforce the effects of the measures will also be set up with the ILT in the short term. Establishing an amended LVB will also improve the legal position of local residents and give Schiphol Airport a new (amended) legal framework.

For the LVB amendment, the environmental effects will be identified in an environmental impact assessment (EIA). The Ministry of Infrastructure and Water Management (IenW) is the initiator of the (new) EIA. This EIA is not a supplement to or update of the EIA prepared in 2021 for the LVB amendment for the New Standards and Enforcement System for Schiphol (NNHS). That 2021 draft LVB will be formally withdrawn when the new draft LVB and associated EIA are submitted to the House.

The draft amendment to the LVB will then be made public along with the new EIA. Anyone can submit their wishes and objections on this through an opinion procedure for six weeks. The Cabinet will then draw up a response and the draft decree will be amended if necessary.

In parallel with the procedure for gathering opinions, the draft decree will be submitted to Parliament (the process known as the 'preliminary procedure'). Parliament can discuss the draft decree if it wishes.

After the preview, the draft decree will be submitted to the Advisory Department of the Council of State for its recommendations. The Cabinet then produces a report on those recommendations and the draft decree is amended accordingly if necessary. Then the draft decree is submitted together with the report to the King for his signature (known as 'assent'). The final decree is published in the Bulletin of Acts and Decrees and comes into effect on the date stated in the decree.

8.2 Effects of the measures on slots

Schiphol is a coordinated airport. This means that a so-called 'slot' is required to be able to take off and land. How airlines can allocate slots (so-called slot allocation) is regulated at the European level. The EU Slot Regulation[12] describes this slot allocation process for coordinated airports. Schiphol determines the capacity allocation twice yearly for the summer and winter seasons. The capacity declaration reflects the available capacity for that particular season, taking account of the technical, operational and environmental constraints. Based on the capacity declaration, the independent slot coordinator (ACNL) allocates slots to airlines for each season.

The proposed reduction in the number of aircraft movements, pursuant to this Balanced Approach procedure, will lead to the available capacity at Amsterdam Airport Schiphol being less than the number of slots to which there are historical claims. The EU Slot Regulation does not provide a methodology on how to deal with this situation. For this reason, the Ministry sent a letter at the end of June 2022 asking ACNL to investigate how to achieve a reduction in the number of aircraft movements, and the associated slot reduction, within the rules and procedures of slot allocation.

8.3 Airport Coordination Netherlands (ACNL)

The EU Slot Regulation requires that slot allocation is done by a functionally and financially independent slot coordinator. In the Netherlands, Airport Coordination Netherlands (ACNL) is the slot coordinator and is (exclusively) responsible for slot allocation. ACNL allocates slots to airlines in a neutral, non-discriminatory and transparent way, aiming to maximise the use of the available airport capacity. ACNL's duties cover the coordinated airports of Amsterdam Airport Schiphol (AMS), Rotterdam The Hague Airport (RTM) and Eindhoven Airport (EIN).

ACNL is a public-law, independent administrative body appointed pursuant to Article 8a.64 of the Dutch Aviation Act. The foundations for slot allocation include the EU Slot Regulation, the Worldwide Airport Slot Guidelines (WASG) and the Slot Allocation Decree (Besluit slotallocatie)[13]. Given the requirement in the EU Slot Regulation that a slot coordinator must be able to carry out their task independently, Articles 21 and 22 of the Non-Departmental Public Bodies Framework Act (Kaderwet zelfstandige bestuursorganen) have been declared inapplicable to ACNL. As a result, the Ministry of Infrastructure and Water Management has no influence on the slot allocation process.

8.4 Recommendations made by ACNL

ACNL issued an advisory report and draft policy rule (containing the reduction methodology) on 14 February 2023[14]. The advisory report discusses the various steps in the process to be taken by the parties involved (the state, the airport, the slot coordinator), based on their individual responsibilities in order to achieve a slot reduction. The roles and responsibilities are as follows:

1. The Ministry of Infrastructure and Water Management adopts an environmental standard within the applicable frameworks in legislation and regulations.
2. Based on this environmental standard, the airport operator determines the capacity declaration (in terms of the number of slots available for allocation) each season, taking account of the worldwide slot allocation calendar.
3. Based on the capacity declaration, ACNL allocates available slots to airlines in compliance with the EU Slot Regulation, among other things. ACNL has no formal role in determining the number of slots available.
4. The airlines are responsible for utilising these allocated slots according to the rules. The airlines are free to choose the destinations and types of aircraft flown within the allocated slots. The Human Environment and Transport Inspectorate (ILT) and ACNL monitor usage of the slots.

In addition to roles and responsibilities, ACNL's advisory report discusses the legal, process, and content requirements for these steps and their implications for the implementation date. It is established that the capacity declaration is leading for the allocation of slots by ACNL. In accordance with Noise Regulation, the outcome of the Balanced Approach procedure must be announced at least two months before defining the coordination parameters for the 2025/2026 IATA winter season. Schiphol should discuss the capacity declaration in the Coordination Committee Netherlands prior to adoption in early May 2025. Thereafter, ACNL can use the capacity declaration as the

[12] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A01993R0095-20221026

[13] https://wetten.overheid.nl/BWBR0009035/2020-04-01

[14] https://www.rijksoverheid.nl/documenten/kamerstukken/2023/02/27/kamerbrief-adviesrapport-en-beleidsregel-slotreductie-van-acnl

foundation for the final allocation for the IATA 2025/2026 winter season.

In parallel with the advisory report, ACNL published a draft policy rule regarding the methodology for allocating slots in the case where there are fewer slots available than historical claims. ACNL published this policy rule on 7 September 2023[15]. This policy rule is based on the principle of proportionality, as also included in the best practice paper for managing temporary capacity constraints (17 July 2020) issued by the World Airport Slot Board (WASB)[16]. If ACNL expects an overrun of historical slots, ACNL will adopt a working procedure for the season in question outlining how ACNL will apply the criterion of proportionality with a holistic approach in practice and what is expected from airlines. ACNL aims to publish this working procedure before the capacity declaration is published.

[15] https://slotcoordination.nl/policy-rule-slot-allocation-in-case-of-exceedance-of-historic-rights/

[16] http://www.wwacg.org/up/files/WWWACG%20Recommandations/WASG%20Guidance%20Temporary%20Capacity%20Reductions_final.pdf

Annex 1 Exhaustion of procedural measures in cooperation with LVNL

An explanation of Schiphol's situation

Schiphol is unique in that it has five runways. Six, if the Eastern runway is included, but it is mainly used for private aircraft. The runways in use are called Buitenveldertbaan, Kaagbaan, Aalsmeerbaan, Zwanenburgbaan and Polderbaan.

This sets Schiphol apart from many other, international airports that often have only two runways. However, not all the runways can be used at the same time. Aircraft prefer to land and take off into the wind. Aircraft take-offs and landings generate a lot of noise from the engines, which can be a nuisance to local residents. To minimise noise nuisance for local residents, a preference list (preference system) is used when choosing runways. The runway use in that preference system depends on the weather and particularly the wind conditions, but it is based on the principle that the take-off and landing runways used most frequently should result in the least noise nuisance for the surrounding area. The so-called primary runways are used the most so that the secondary runways, which are closest to inhabited areas, are used the least. Also, certain runways are only used in specific directions. For example, the Polderbaan is only used to and from the north. All this creates a unique system of runway use, and runway combinations are regularly changed at Schiphol every day.

The history of nuisance-reducing measures

Discussions about aviation in the Netherlands have always been characterised by the search for a balance between the major economic importance of aviation on the one hand and the inevitable accompanying nuisance, especially for those living near an airport, on the other. It is an illusion to think that all local residents anywhere in the Netherlands will greet the expansion of an existing or the arrival of a new airport with approval. Local residents bear a disproportionate burden for an activity deemed necessary from a national perspective. Once the political decision has been taken to establish or expand an airport, the challenge is to reduce the nuisance it causes as much as possible. Against this background, nuisance-reducing measures for Schiphol also have a long history. Despite all the efforts made in this area, a large group of local residents still experience significant nuisance.[17]

For clarity and readability, this memo discusses the efforts made over the past 20 years to reduce noise nuisance. Over that period, Schiphol has grown from +/- 400,000 flights (2005) to +/- 500,000 flights (2018/2019).

[17] Research report noise and sleep disturbance aviation 2020, GGD-GHOR, July 2022

The Alderstafel forums

Following the evaluation of the Schiphol policy, the then Cabinet adopted a position on the Schiphol policy on 25 April 2006.[18] This stated that the Schiphol policy was working but there were several points that could be improved on, both in terms of limiting nuisance, especially in the more remote areas around Schiphol Airport and in terms of the airport's development opportunities. In October 2006, the then State Secretary for Transport, Public Works and Water Management (V&W) and the then State Secretary for Housing, Spatial Planning and the Environment (VROM) decided to elaborate on the Cabinet position. To advise the Cabinet on the balance between aviation growth at Schiphol, nuisance limitation and the quality of the living environment, in December 2006, under the leadership of Mr J.G.M. Alders, a consultation forum was set up (Alderstafel). Representatives of local and regional authorities, residents, aviation sector parties (Schiphol, LVNL and KLM) and the Ministers of V&W and VROM participated in the Alderstafel forum.

For the short term (period up to 2010), Mr Alders had advised the Ministers of V&W and VROM on 13 June 2007. An environmental impact report was also prepared, and the Schiphol Airport Traffic Decree was amended to accommodate the expected use of the airport (maximum 480,000 aircraft movements) per year.[19] The accompanying Schiphol Nuisance Reduction Measures Covenant contained short-term agreements on the planned development of Schiphol and associated nuisance-reducing measures. The Liveability Covenant contained agreements aimed at improving the airport's immediate living environment.

For a brief description of the measures, please refer to the Covenant. The short-term Schiphol Nuisance Reduction Measures Covenant ended with the entry into force of the present medium-term Covenant. Measures from it that had not yet been realised were, therefore, included in the new covenant, updated or not.

The Covenant included a broad package of measures to reduce noise nuisance at source, reduce transmission and protect the receiver. The aim of the measures was to ensure that the development of Amsterdam Airport Schiphol takes place in balance with the airport's living environment. The total package of nuisance-reducing measures in the 2008 Alders Agreement required a reduction of at least 5% in the number of people experiencing severe nuisance in the 48 dB(A) Lden compared to the equivalence limit in 2020. The first four-year review found that with the implementation of various noise abatement measures, including route adjustments and operational measures, more than two-thirds of the measures agreed in the Covenant had been implemented. This implementation resulted in the number of people experiencing severe nuisance in the inner and outer areas decreasing by 10-12% (compared to a situation without these nuisance-reducing measures) for a volume of 510,000 aircraft movements.

An important observation is that the Alderstafel forum had to conclude that the possibilities of nuisance-reducing measures were being exhausted.[20] Improvements in one area often meant new people suffering nuisance in another area. The Alderstafel forum indicated at the time that new opportunities were mainly limited to possible innovations in take-off and landing procedures and fleet development.

Nevertheless, the agreements made at the Alderstafel forums would continue for some time. From 1 January 2015, those agreements continued in the Schiphol Environment Council, as the successor to the Schiphol Alderstafel forum and the Schiphol Airport Regional Consultative Committee (CROS). Schiphol would continue to develop, and on 5 July 2019, the Minister explained to the Lower House the ambitions for further growth.

In 2019, Alders, as chairman of the Advisory Board of the Schiphol Environmental Council, wrote in his final advice to the minister that "parties agree that there is a substantial difference between the nuisance experienced by the inner area, and in particular the area lying in line with the runways, and the nuisance in the outer area. […] As the volume of aircraft movements increases, the question of where the limit lies to what can reasonably be asked of the surrounding area, particularly the inner area, in terms of accepting nuisance is becoming increasingly pressing. A key problem that arises is that the nuisance reduction achieved by the aviation sector through ever lower noise-producing aircraft is barely perceptible, if at all, at the height at which the aircraft pass, especially in the inner area."[21]

[18] Parliamentary Papers II 2005-2006, 29665, No. 28. Schiphol Policy Evaluation

[19] Bulletin of Acts, Orders and Decrees 2008, 390

[20] Parliamentary Papers II 2013-2014, 29665, No. 190. Schiphol Policy Evaluation

[21] Letter from the Schiphol Environmental Council to the Minister of Transport, Public Works and Water Management, 30 January 2019

Minder hinder (Less nuisance)

In July 2019, the Minister of Infrastructure and Water Management asked Schiphol, together with other parties from the sector and the surrounding area, to draw up an implementation plan for noise reduction before the end of that year.[22] It had to involve concrete and visible measures for the surrounding area, which also reflected how local residents experience the nuisance. This resulted in the 'minder hinderplan' implemented under the auspices of LVNL and Schiphol. For the purpose of the plan, concrete proposals submitted by the industry and neighbourhood parties were assessed. Also important was a concrete look at the top 20 complaints about Schiphol and what measures could be taken to address them.

On 5 March 2021, Schiphol and LVNL presented the final nuisance limitation programme ('Minder hinder Schiphol') to the Minister of Infrastructure and Water Management.

The plan sets out 51 measures focused on the use of quieter aircraft and operational procedures for noise and ground noise reduction. Of these, 8 had been realised by 2021, and 8 had been investigated but not realised. Schiphol and LVNL indicate that this set of measures will have a positive effect on reducing perceived noise nuisance in the surrounding area. Before the nuisance reduction plan was adopted, the Minister of Infrastructure and Water Management indicated that he would test the plan's ambition level and the consultation process that led to it.[23] The consultancy firm To70 was asked to conduct a qualitative test of the measures and the level of ambition.

To70 concluded that "the measures in the nuisance reduction plan align well with the complaints, the perceived nuisance and the suggestions and proposals for nuisance reduction. Within the given framework, the plan is ambitious and ensures that nuisance reduction is realised now and in the future. The measures taken together will have a positive effect on reducing noise nuisance and the perception of noise in all clusters around Schiphol. However, a specific measure may be beneficial for a densely populated or large area and less beneficial for another more sparsely populated area."[24]

In its analysis, To70 also makes a number of recommendations for investigations into new nuisance-reducing measures. For example, it suggested investigating whether departure routes could be followed for more extended periods of time, linking up with developments around the airspace review.

Schiphol and LVNL have indicated that they will adopt these recommendations to research new measures. Based on the outcome of these investigations, it may be decided to add new measures to the implementation plan. In this respect, the plan should also be seen as an ongoing process, where it is possible to add promising measures for consideration.

Status of Minder Hinder

An update on the Minder Hinder Implementation Plan was given in June 2023. Since Schiphol and Air Traffic Control the Netherlands (LVNL) started the Minder hinder Schiphol programme in 2020, several nuisance-reducing measures have been successfully implemented. Examples of successfully implemented measures include flying around northern residential areas at night to the Polderbaan and Zwanenburgbaan runways, landing with GPS navigation and optimising departure routes, for example, at Bodegraven. The list below summarises the measures that have been successfully completed.

[22] Parliamentary Papers II, 2018 – 2019, 31.936 / 29.665, No. 646, Schiphol Policy Evaluation
[23] Parliamentary Papers II, 2020 – 2021, 29665, No. 403, Schiphol Policy Evaluation
[24] Quick scan of the nuisance reduction plan 'Minder hinder Schiphol', To70, February 2022

Measure	Description	Effect	Status
The turn near Uitgeest	At night, aircraft about to land on the Polderbaan runway make a turn near Uitgeest. At the request of local residents and the Regional Forum of the Schiphol Environment Council (ORS), LVNL has investigated whether it is possible to optimise the fixed night-time approach route past Uitgeest to the Polderbaan runway. If the constant radius turn technique is used here, aircraft can avoid Uitgeest as much as possible. This measure was discussed in the Region Forum of 11 December 2020. The fixed night-time approach route to the Polderbaan runway designed by LVNL was implemented on 14 July 2022.	The constant radius turn technique allows aircraft to avoid Uitgeest at night as much as possible, thus reducing nuisance. In 2019, for example, some 7,000 aircraft that can use the constant radius turn technique flew this route towards the Polderbaan. In the future, we expect even more aircraft to be able to fly using this technique.	Completed / 31 May 2024
Landing more efficiently during reduced visibility	When there are reduced visibility conditions such as fog, air traffic follows modified approach procedures to land at a safe distance from each other. We have improved these procedures to allow more efficient landing in reduced visibility conditions. These procedures apply to all runway combinations, reducing the need to use a second runway in low visibility conditions. This means that – depending on visibility conditions – more aircraft per hour can land on the Polderbaan or Kaagbaan runways.	By allowing more aircraft per hour to land on Polderbaan or Kaagbaan runways, the other runways are in use less often or for less time. This creates moments free of air traffic for local residents at the other runways. This measure can ensure that 1 to 2 extra flights per hour can land on the same runway during reduced visibility conditions. Around 119,000 flights landed on the second runway in 2019. Which runway is used when depends, among other things, on weather conditions.	Completed / 22 May 2023
Optimise the take-off route near Bodegraven, Nieuwkoop and Gouda	At the request of the Municipality of Bodegraven-Reeuwijk, the Regional Forum of the Schiphol Area Council (ORS) and the Minister of Infrastructure and Water Management, the ORS working group Bodegraven has reviewed the possibility of optimising the take-off route over Bodegraven, Nieuwkoop and Gouda. Southbound aircraft departing from the Kaagbaan runway now fly past Nieuwkoop, Bodegraven and Gouda. The study showed that it is possible to reroute the take-off route, causing aircraft to detour 1 to 2 kilometres.	Rerouting the take-off route reduces air traffic at Nieuwkoop, Bodegraven and Gouda. This could potentially lead to increased disruption elsewhere. This measure affects around 12,000 flights departing from the Kaagbaan each year and follow this take-off route.	Completed / 01 May 2023

Measure	Description	Effect	Status
Fixed northerly approach route to the Zwanenburgbaan runway at night	When the Polderbaan runway is out of use at night, aircraft approaching from the north may land on the Zwanenburgbaan. This involves air traffic passing over a large part of North Holland. At the request of the IJmond-Alkmaar administrative cluster and the Regional Forum of the Schiphol Area Council (ORS), LVNL investigated whether it is possible for aircraft to follow a fixed approach route to the Zwanenburgbaan runway at night. In doing so, they can also fly higher and use a continuous descent approach and constant radius turn technique.	When aircraft follow a fixed approach route, air traffic is more predictable and less dispersed. A higher approach avoids noise being heard on the ground. When aircraft approach with a continuous descent, less engine power is needed, and noise will also decrease. The constant radius turn technique allows aircraft to avoid residential areas near the approach route as much as possible. The number of night-time landings on the Zwanenburgbaan runway varies annually, depending on maintenance work on the Polderbaan runway. As a result, this measure may involve an average of 500 to 850 night landings per year.	Completed / 01 May 2023
Higher approach to Polderbaan at night	At the request of local residents and the Regional Forum of the Schiphol Area Council (ORS), LVNL has investigated whether flying higher over the North Sea can optimise the fixed approach route at night to the Polderbaan runway. This could reduce nuisance in the surrounding areas of Castricum and Limmen.	Flying higher at night makes a difference to the noise heard on the ground. This measure involves about 8,500 landings* at night. This measure also concerns the night-time fixed approach route to the Zwanenburgbaan runway from the north.	Completed / 01 May 2023
Restrict northeasterly take-offs from the Kaagbaan runway at night during runway maintenance	The Polderbaan runway is occasionally out of use for one night due to scheduled runway maintenance. With winds from the north, aircraft then take off at night from the Kaagbaan in a northeasterly direction. This causes a lot of nuisance in Amsterdam and Amstelveen. In 2017, 142 night flights took off from the Kaagbaan in a northeasterly direction. In 2018, there were 307. To reduce this nuisance, Schiphol postpones maintenance on the Polderbaan where possible during these northerly winds so that this runway is still usable. If scheduled runway maintenance on Polderbaan lasts two or more nights, a waiver to take off from Zwanenburgbaan northbound may be applied for. This measure has now been successfully implemented.	By postponing runway maintenance on the Polderbaan, we limit the number of night-time take-offs from the Kaagbaan in a northeasterly direction. By doing so, we limit the nuisance caused by night flights in Amsterdam (West, Centre, South) and Amstelveen. This measure resulted in only 30 night flights departing from Kaagbaan in a northeasterly direction in 2019 (until November). In 2018, there were around 300 night flights.	Completed / April 2022

Measure	Description	Effect	Status
More precise flying past Leimuiden and Rijsenhout	At the request of the Municipality of Kaag and Braassem and the Regional Forum of the Schiphol Area Council (ORS), LVNL has looked into whether the flight route from the Kaagbaan runway can be more precise so that air traffic is less dispersed and more predictable. An experiment using a constant radius turn near Leimuiden by KLM and Transavia flights showed that the nuisance decreases there. It was, therefore, decided to permanently introduce this measure at the end of November 2019.	Air traffic flying according to the constant radius turn technique to avoid Leimuiden is more predictable because the planes fly less spread out. Unfortunately, this measure does not work out positively for Kudelstaart. There is an added nuisance there. It was agreed that extra attention should be paid to measures for the municipalities that experience more nuisance as a result. Click here to view these measures. In 2019, around 12,200 flights departed from Kaagbaan to the south which can use the constant radius turn technique. In the future, we expect even more aircraft to be able to fly using this technique.	Completed / 2019
Preferential use of the Polderbaan and Kaagbaan runways	In 2010, an experiment was launched to use the Polderbaan and Kaagbaan runways preferentially for air traffic. These generate relatively less noise nuisance compared to the other runways. This is because there are fewer houses in the surrounding area of these runways. In the meantime, the experiment has become the new standard. When conditions allow, we use the Polderbaan and Kaagbaan as much as possible.	By having more aircraft take off from, or land on Polderbaan or Kaagbaan, the other runways are used less often or for less time. This creates moments free of air traffic for local residents at the other runways.	Completed / 2013
Smoother braking at night	After landing at Schiphol Airport, aircraft use their engines for breaking. Aircraft can brake faster by reversing the engines' power using the thrust reversers. As a result, the brakes on the tyres have to do less work, causing both to wear less quickly. Full-power engine braking mainly causes noise in the immediate surrounding area of the runways. We therefore advise pilots to do this more quietly at night, early in the morning and late in the evening. This can be done by idling the engines and applying the brakes on the wheels more.	By not letting aircraft brake at full power at night, there is less noise nuisance in the immediate surrounding area of the Polderbaan and Kaagbaan runways. This has reduced the nuisance caused by braking aircraft at night.	Completed / 2012
Adjustments to take-off routes to alleviate populated areas	In 2005 and 2006, 682 nuisance-reduction proposals were submitted from the surrounding area. All these proposals were assessed for feasibility and their effects on the surrounding area and Schiphol's network. Based on these, we modified six take-off routes to avoid populated areas. We continue to examine many nuisance-reducing proposals from the surrounding area each year.	The adjustments to the take-off routes near Amsterdam, Amstelveen, Rijsenhout, IJmuiden, Beverwijk, Diemen, Duivendrecht, IJburg, Abcoude, Spaarndam and Velserbroek have significantly reduced the number of people experiencing severe nuisance.	Completed / 2008

Measure	Description	Effect	Status
The turn near Hoofddorp and Nieuw-Vennep	The constant radius turn technique allows aircraft to turn a corner more precisely over an existing flight path. This technique has been used since November 2007 in the turn between Hoofddorp and Nieuw-Vennep on the take-off route from the Kaagbaan runway. As a result, aircraft fly less spread out between residential areas, causing less nuisance. This measure was developed with the Schiphol Regional Consultative Committee (CROS), the predecessor of the Schiphol Area Council.	Air traffic flying according to the constant radius turn technique to spare Hoofddorp and Nieuw-Vennep is more predictable because the aircraft fly less spread out.	Completed / 2011
The use of quieter night-time flight procedures expanded	In 2012 and 2015, the use of low-noise flight procedures at the margins of the night was extended. This means that aircraft follow the fixed approach route to the Kaagbaan or Polderbaan runways earlier at night. Early in the morning, air traffic maintains the flight procedure longer. This also means that aircraft approach higher and use continuous descent approaches. Since 2012, in the early mornings, when traffic volume allows, aircraft have been flying the night-time fixed approach route for half an hour longer until 06.30. Since 2015, this has also been done at night: whenever possible, after 22:30, air traffic follows the fixed approach route we use at night. Read more about flying at night here.	By making greater use of the quieter flight procedures at the margins of the night, noise nuisance is reduced. When aircraft follow a fixed approach route, air traffic is more predictable and less dispersed. A higher approach avoids noise being heard on the ground. When aircraft approach with a continuous descent, less engine power is needed, and noise will also decrease.	Completed / 2016

Measure	Description	Effect	Status
Noise-reflecting ridges near Polderbaan	Since the Polderbaan runway was opened in 2003, residents in Hoofddorp-Noord have been more affected by the noise of aircraft taking off. In 2008, it was agreed that Schiphol would take measures to reduce ground noise in Hoofddorp-Noord by at least 10 decibels. TNO studied the disturbing sound waves and devised a solution: sound ridges! These are wedge-shaped mounds whose sloping surfaces reflect the sound waves upwards. The sound ridges are 3 metres high – 1.5 metres above ground level and 1.5 metres below. In 2011, southwest of the Polderbaan, the first sound ridges were constructed in cooperation with the Hoofddorp-Noord Residents' Association and the Municipality of Haarlemmermeer. In 2016, additional noise ridges were constructed closer to the Polderbaan runway.	In 2017, TNO investigated the effects of the noise ridges. These provided 6 decibels less noise nuisance in Hoofddorp-Noord. Following the evaluation, it was agreed that Schiphol will make efforts to reduce ground noise by another 4 decibels to the agreed 10 decibels. The use of quieter aircraft has now reduced ground noise by 1 decibel. Schiphol is starting another investigation to resolve the remaining 3 decibels. A secondary effect of the noise ridges is that they create a remarkable landscape. This park, Buitenschot, is a space for visitors to walk, cycle and play.	Completed / 2017
Parallel take-offs to the north	Carefully established departure routes allow aircraft to take off northbound in parallel from the Polderbaan and Zwanenburgbaan runways. These fixed departure routes ensure that aircraft do not fly too close together. To reduce nuisance, a successful trial was conducted in 2011 by shifting the fixed departure route from the Zwanenburgbaan in a northeasterly direction. For this, the route was partly shifted in the direction of Amsterdam, allowing aircraft to fly between Zwanenburg and Badhoevedorp. This was carefully coordinated with a focus group consisting of local residents, administrators, Schiphol, LVNL and airlines.	By moving the fixed departure route from the Zwanenburgbaan runway, fewer aircraft will fly over Zwanenburg and Halfweg and the noise nuisance is more evenly distributed. The relocation of the route did not affect parallel take-off.	Completed / 2012

Most recently (in 2023), the measures 'More efficient spacing for landing aircraft' and 'Time-based spacing for landing aircraft' were successfully implemented. These reduce noise nuisance for residents living below the approach routes to the most noise-sensitive runways by reducing the frequency or duration of their operations. It is important to note that measures also involve the surrounding area.

An evaluation follows the implementation of measures, examining whether the measure is effective. The evaluations of the measures 'More efficient landing during reduced visibility, Optimising take-off routes at Bodegraven, Nieuwkoop and Gouda, Higher approach to Polderbaan during the night and Fixed northerly approach route to Zwanenburgbaan during the night' were recently completed. Evaluations show that the measures have an effect by, for example, flying around residential areas or that the average peak load of passing air traffic decreases at the measuring points. It should be noted, however, that avoiding residential centres is, in fact, a displacement of nuisance, as the nuisance then reaches people living in rural areas. Schiphol's surrounding area is simply too densely populated.

Conclusion

This memo sets out what has been undertaken recently in terms of noise reduction measures, particularly at the operational level. The question thereby raised is whether enough is being done. As indicated in this note, noise abatement measures have a long history. The most prominent noise reduction measures were successfully implemented years ago. The number of aircraft movements has grown from +/- 400,000 flights (2005) to +/- 500,000 flights (2018/2019). There was a temporary drop during the COVID-19 pandemic, but after the pandemic, Schiphol is close to the 500,000-flight mark again. The point is that measures to reduce noise nuisance do not outweigh the growth in air traffic.

The remaining measures to reduce noise nuisance are expected to yield modest gains and will most likely only cause local effects and sometimes even displacement of noise nuisance. This was also Mr Alders' conclusion in 2013 when he stated 'that the opportunities for noise abatement measures are being exhausted. Operational measures have only marginal effects and often produce only localised effects.' In conclusion, more drastic measures are needed to address noise nuisance across the board.

Annex 2 Ministry response to responses from the additional consultation

Introduction

The additional consultation for the Schiphol Balanced Approach procedure took place in the period from 24 March to 21 June 2024.

A total of 218 responses were submitted, of which 166 are publicly available with the permission of the respondents.

The Ministry has read all the responses. An independent research firm has been asked to analyse the responses. That analysis can be found in Annex VII.

This annex responds to the headlines of the input received in response to the additional consultation. Responses submitted as being 'not for publication' have been rendered anonymous and generalised where possible.

B2.1 Response to the graduated approach

Several parties indicate that there is no gradual approach. The implementation deadline is too early for them. The aviation sector indicates that there is insufficient time to prepare for the measures.

On the contrary, another part of the respondents argue that the gradual approach is not fast enough and causes delays. The fact that part of the noise abatement objective has been advanced to phase 3 is perceived as a delay and possible postponement. Reference is also made here to the court ruling in the so-called RBV case[25], from which it follows that applicable laws and regulations must be enforced in the short term.

Finally, the parties argue that the proposed reduction percentages have changed from the original target without the Ministry explaining this.

The Ministry's Response

Schiphol Airport's total noise abatement objective was set at a 20% reduction for the 24-hour period and a 15% reduction at night. This total noise abatement objective has not been changed.

In the September 2023 notification, it was decided to maintain the noise abatement objective but to achieve a 15% reduction in the 24-hour period as a first step (by November 2024) and the remaining 5% in a subsequent phase. This was because there were measures that could potentially have a lot of impact but whose impact and cost-effectiveness still needed further study. Moreover, those measures could not be implemented by November 2024.

Unlike the September 2023 notification package, the noise abatement objective in the proposal at the time of the additional consultation was distributed over three years, and all three phases were filled with concrete measures, including a possible night closure in 2026. This extended

[25] Court of The Hague 20 March 2024, ECLI:NL:RBDHA:2024:3734.

time distribution would allow for alternative measures compared to the original implementation date of November 2024.

Following the additional consultation, the implementation of the noise abatement objective has been adjusted. The measure that was to be introduced by November 2024 no longer appears to be feasible. Therefore, this measure moves to a year later, November 2025. Thus, the gradual approach still consists of two phases.

Two aspects were taken into account when determining the level of the reduction percentage for Phase 1. Firstly, the ambition is to take a significant step in reducing noise impact in the airport's surrounding area in the shortest possible time. At the same time, the expected effects of the variants of (partial) night closure and other more far-reaching measures at night examined in the ongoing impact analysis have been taken into account. These aspects combined have led to achieving 17% of the noise abatement objective in Phase 1, by November 2025. This means that 3% remains. The additional consultation envisaged filling in this remaining percentage in 2026 with measures with a night-time focus. An impact analysis on the consequences of a (partial) night closure is underway. The Cabinet has decided to first monitor the actual impact of the package of measures for a year. It will then decide what further steps to take.

With this, the Ministry has looked for a distribution of the noise abatement objective, taking into account the concerns of the European Commission and the aviation industry about speed and proportionality, that does achieve a reduction in noise for local residents in the short term.

B2.2 Measures

2.1 Using quieter aircraft at night

2.1.1 *Effect*

Questions have been raised about the exact effect of these measures and how much quieter the new aircraft are. Several individuals and interest groups have argued that using less noisy aircraft does not help reduce nuisance at all. They are also woken up by less noisy aircraft.

The Ministry's response

This measure ensures that KLM's noisiest passenger aircraft are no longer used at night. This will reduce noise exposure at night, as well as peak noise.

2.1.2 *Enforcement*

There are concerns about the enforceability of this measure. There are calls to legally enshrine the agreement reached with the airline.

The Ministry's response

Agreements on this measure will be set out in an instrument that will be determined later.

2.1.3 *Feasibility*

KLM says they cannot implement this measure in time and propose to introduce it by November 2025.

The Ministry's response

This (voluntary) measure concerns only KLM's aircraft. The measure was introduced by KLM during the March 2023 consultation. Based on KLM's consultation response, the measure is included in the combination of measures according to the proposed time, 2024.

KLM indicates in their response to the additional consultation that it is not feasible (anymore) to introduce the measure by 2024. The measure includes rescheduling of flights. This is tied to the international slot allocation process for which deadlines have now passed. Also, the part of the measure not tied to the slot process, swapping noisy aircraft for quieter aircraft, KLM says, is not possible by November 2024. KLM suggests moving the measure in its entirety to November 2025. Following the response, this measure has been moved to November 2025 in the proposal.

2.2 Use of Schiphol for noisy aircraft becomes more expensive – Rate differentiation

2.2.1 *General*

Reactions to this measure vary, and it is also notable that even within the aviation sector, there are both supporters and opponents of this measure. Some are in favour and would like to see further differentiation. In doing so, many airlines carrying cargo call for the measure to be applied non-discriminatively based on noise categories rather than aircraft type. Another part is against the measure.

Impact on cargo transport

Cargo carriers and their representatives feel more disadvantaged than other airlines by this measure. By nature, the cargo fleet does not consist of quieter models, and new (quieter) cargo aircraft will only be available in the future. Therefore, they say, cargo carriers have more difficulty implementing the measure in time than airlines with many passenger aircraft.

The Ministry's response
General
Airlines carrying cargo will not be discriminated against. The categories that become more expensive include both cargo and passenger aircraft. Airlines carrying only cargo are predominantly less flexible in terms of using quieter alternative aircraft. However, even the noisier aircraft will remain welcome at Schiphol (during the day), but at a higher rate. The cargo sector should also invest in quieter and cleaner aircraft.

2.2.2 *Effect*
A number of respondents point out that the impact of the measure is uncertain. This is because the setting of rates depends on a process that lies with the Schiphol operator, the outcome of which is not yet certain. There is also the possibility that airlines will simply pay the higher rates and not deploy quieter aircraft.

A number of sector parties argue, based on the proposal Schiphol is working on to set the new rates, that the Ministry has underestimated the impact of this measure. False assumptions have been used in the calculations.

Another part of the respondents thinks that the measure is not very effective because it will not affect airline behaviour. The measure was also seen as ineffective because the costs of the measure would be passed on to users, and the measure would have little effect at all on the perception of nuisance.

The Ministry's response
The objective of rate differentiation is to encourage airlines to use quieter aircraft for flights to and from Schiphol. For airlines that have their home base at Schiphol, such as KLM, this measure will have no effect in terms of noise in the short term. After all, these airlines fly all their aircraft from Schiphol and, therefore, cannot deploy quieter aircraft.

However, airlines not based at Schiphol could potentially respond to further differentiation by using their available aircraft differently so that quieter, and therefore cheaper, aircraft operate at Schiphol. The uncertainties associated with this measure, such as whether quieter aircraft are actually deployed or simply the higher rate is paid and whether airlines have the option to switch at all, are taken into account in the calculations of the measure's impact.

The Ministry carefully analysed the comments of some sector parties that assumptions that were too low were used in the calculations. The Ministry did not have Schiphol's proposal at the time the additional consultation was launched. The proposal causes a shift in rates, which is larger than assumed in the Ministry's earlier calculations. The impact of this measure has been recalculated. The calculations show that the assumed impact of the measure is indeed higher than described in the additional consultation document. The new effect of the measure has been included in the final calculation of the objective of the combination of measures for this additional notification.

2.3 Replacing more aircraft with new aircraft – Additional fleet renewal

2.3.1 *Effect and nuisance perception*
The responses to the additional fleet renewal measure are also diverse. On the one hand, several individuals and interest groups indicate they have no confidence in the effect of this measure. According to these parties, the deployment of less noisy aircraft does not contribute to reducing the nuisance. It is never really 'quiet'. The nuisance is mainly due to the number of flights, according to them. There are also concerns about timely deliveries of the new aircraft.

A social party indicated that the impact of the measure is overestimated. It is mentioned that there is a historical trend. If there are periods when more aircraft are ordered, there will also be a period when fewer aircraft are ordered. It is expected that there will be fewer quiet aircraft in the coming years. There is a call for this to be included in the calculations.

The Ministry's response
The Ministry takes into account autonomous developments and has formulated the noise abatement objective on top of these autonomous developments. After all, autonomous developments by themselves have never led to an absolute decrease in noise. However, if it turns out that more fleet renewal takes place than is assumed in the autonomous development, this can contribute to the absolute reduction in noise and, thus, the achievement of the noise abatement objective.

2.3.2 *Fleet renewal and autonomous situation*
Sector parties see this measure as a solution to the noise problem. They call on the Ministry to also include the investments made in recent years as a measure and not to include them in the autonomous situation. However, some airlines indicate that when they place new orders for quieter aircraft, they will not receive them until after 2025. This means they cannot anticipate the measure in time.

The Ministry's response
From the beginning of the procedure, the Ministry has adopted the principle that the noise abatement objective of -20% for a 24-hour period and -15% have been set for the baseline of which the autonomous fleet renewal is part.

The noise abatement objective has, therefore, been set on top of the autonomous development. Autonomous development, including fleet renewal, has led to noise reduction in recent years but never an absolute decrease in noise (due to the combination with growth in aircraft movements). If the objective had to be set for a situation where autonomous fleet renewal did have to count, the objective would have been higher.

Based on fleet renewal schedules seen by the Ministry, it appears that between November 2024 and November 2025, more fleet renewal is taking place at specific airlines than assumed in the autonomous development. This additional part is included as a measure that contributes to achieving the noise abatement objective.

Uncertainties are taken into account when calculating the effect of this measure. A 20% uncertainty margin has been applied to aircraft delivered in the last three months before the November 2025 implementation deadline. By doing so, the Ministry aims to address uncertainties related to delivery delays.

2.3.3 *Cost-effectiveness*

Several responses indicated a lack of cost-effectiveness for the additional fleet renewal measure.

The Ministry's response

There are no calculations regarding the cost-effectiveness of this measure. In fact, no additional costs apply to this measure. The orders for new aircraft were placed several years ago; therefore, this renewal does not require any additional effort from airlines at the moment. In addition, noise reduction is only one of the reasons why airlines renew their fleets. The investments in fleet renewal made by airlines are also ultimately aimed at being financially profitable. As such, they are primarily investment decisions where cost-effectiveness cannot be calculated. However, this does not alter the fact that fleet renewal, faster than assumed in the autonomous development, contributes to noise abatement and, thus, the noise abatement objective[26].

[26] Decisio, Measuring the cost-effectiveness of noise-mitigating measures for Schiphol Airport, 2nd addendum to initial report, 22 May 2024

2.4 Reducing the use of secondary runways – Less use of runways near densely populated areas

2.4.1 *Timing, displacement & feasibility*

Several responses indicated that people do not favour the proposed time for less use of the secondary lanes, between 13:00 and 15:00. It is when many people are at work and usually experience the least nuisance.

Sector parties mentioned that this measure is not feasible without capacity reduction and that there are operational challenges. According to some parties, the likelihood of delays will increase. There are calls to develop this measure further with LVNL and the sector.

A number of respondents have concerns that this measure creates an unwanted 'water-bed effect' at other times of the day or increases nuisance in other areas. This, according to several respondents, overstates the impact of the measure. A number of respondents also ask for more information on the effects of this measure on different areas and jobs.

The Ministry's response

Also, given the criticism of the timing and question marks over feasibility, it was decided not to include the measure to reduce secondary runway use in the final package of measures.

2.5 Excluding the noisiest aircraft at night

2.5.1 *The effect and displacement of the nuisance*

Various parties see the measure to exclude the noisiest aircraft as a valuable and promising measure with a desired effect. This includes both local residents and the aviation sector. However, some respondents also fear the effect will be limited because quieter aircraft can still cause sleep disturbance. In addition, this measure is expected to result in more flights in the evening and early morning, causing nuisance at other times.

The Ministry's response

This measure is in line with the most frequently heard complaints from local residents, which are collected and analysed by the Schiphol Residents' Contact Centre (Bewonersaanspreekpunt Schiphol, BAS). This concerns large, noisy aircraft flying low and making a lot of noise, especially in the evening and at night. The measure affects peak noise, which is often brought into play.

Airlines have two options if they are affected by this measure. They can either deploy a quieter aircraft that meets the -13 EPNdB standard or load the aircraft which does not currently comply less heavily. A less heavy aircraft makes less noise and would then be allowed to operate at night based

on a new noise certificate showing that it meets the standard.

2.5.2 *The effect on cargo*

The cargo aviation sector, in particular, is critical of this measure because night operations are crucial to their service and revenue model.

The Ministry's response

Both cargo and passenger aircraft are affected by this measure. Airlines have two options if they are affected by this measure. They can either deploy a quieter aircraft that meets the -13 EPNdB standard or load the aircraft which does not currently comply less heavily. A less heavy aircraft makes less noise and would then be allowed to operate at night based on a new noise certificate showing that it meets the standard.

2.5.3 *Legally*

Some parties mention that this measure is not possible under the balanced approach procedure and the Chicago Convention.

The Ministry's response

Banning aircraft during the night period with a margin equal to or less than -13 EPNdB aligns with the Noise Ordinance and the Chicago Convention. Pursuant to Article 5(5) of the Noise Ordinance, there is only a prohibition on a complete withdrawal from service during the entire 24-hour period of this type of aircraft. However, the proposed measure involves excluding this type of aircraft during the night period. A similar measure already applies at other airports in the European Union, including some airports in France.

2.6 Fewer night flights – a maximum of 27,000 flights per year

2.6.1 *Overshooting the night objective*

It is argued by some parties that this measure leads to an 'overshoot' of the set night objective, reducing further than necessary.

The Ministry's response

Indeed, the sub-objectives at night will be amply met by November 2025. However, the measures taken at night also contribute to achieving the sub-objectives on the 24-hour period. Discussions with the European Commission indicate that measures should be taken in order of cost-effectiveness until the entire noise abatement objective is achieved. A further reduction at night is, to some extent, more cost-effective than a reduction in the total number of flights and also contributes to achieving the noise abatement objective. This makes a further reduction in the number of night flights and the associated overshooting of the night sub-objective permissible.

2.6.2 *The effect on the margins of the day*

Operational comments are made on this measure, submitting that a reduction to 27,000 flights at night will lead to more crowding at the margins of the day (morning and evening). The possibility of this leading to a waterbed effect is raised as a risk and concern.

The Ministry's response

If there is still space/capacity left in the hours surrounding the night, it is possible that flights moved from the night to the day could fill this capacity due to the reduction of the maximum number of night flights. However, this also applies to the other hours of the day (between 07:00 and 23:00). Moving flights depends on the airline's choices, but they should always remain within the available capacity at those times.

2.6.3 *Further reduction*

Interest groups and local residents cite that 27,000 night flights will still remain a lot of night flights and a nuisance. Fewer night flights mean that people wake up not every minute but every two minutes. This will continue to affect the sleep of local residents. They would rather see a complete night closure of Schiphol. A few argue for moving night flights to other airports.

The Ministry's response

The Ministry has looked again at the 'fewer flights at night' measure since the September 2023 notification. After consultation with the European Commission, the adjusted proposal opted for a further night-time reduction from 28,700 to 27,000 aircraft movements. This is because this is a cost-effective measure. In the short term, 27,000 aircraft movements at night appears to be a lower limit. According to the research firms hired, further reducing the number of night aircraft movements in the short term may negatively impact the cost-effectiveness of this measure. In addition, the impact on the operation of several airlines is currently unknown. Therefore, an impact analysis is underway regarding a further reduction in the number of aircraft movements at night. After completion of the impact analysis, a decision can be made on a possible further reduction in the number of aircraft movements at night and/or a rest period.

2.7 Partial night closure or other measures at night

Partial night closure or other measures at night will be subject to another round of consultation under the balanced approach procedure. Nevertheless, several respondents have commented on this phase.

Individuals and interest groups indicate that night flights cause a lot of nuisance and that a (partial) night closure is important for the health of many local residents. That phase three has not been developed is perceived by several respondents as an 'open-ended' issue. Upon further investigation, it is indicated that the effect on the margins of the day should be looked closely at.

Most sector parties and some individual responses indicate that they do not favour a complete night closure of Schiphol and argue that night flights are important for Schiphol's attractiveness and economic function.

The Ministry's response
An impact analysis regarding a further reduction in the number of aircraft movements at night is underway. Both the economic and environmental impacts will be considered. It also considers the potential effects on the margins of the day. After completion of the impact analysis, a decision can be made on a possible further reduction in the number of aircraft movements at night and/or a rest period.

2.8 A lower total number of flights – a maximum of between 460,000 and 470,000 flights per year

The responses to this measure that were submitted varied widely. On the one hand, parties and individuals believe that the proposed reduction is not far-reaching enough, partly in the context of legal obligations and regulatory requirements. On the other hand, the majority of sector parties speak out against the operating restriction measure and feel that it should only be used as a 'last resort'. The importance of aviation is brought into this by various parties, sector and individual responses.

The Ministry's response
Response to the need for an operating restriction is further explained below under 'procedure'.

B2.3 Alternative measures

Parties indicate that their input and input from the EU are not sufficiently reflected in the proposal. Regular reference is also made to the alternatives put forward during the BA consultation in 2023.

New concrete or common measures put forward concern:
- 10-point sector plan
- 'Quota count system' to replace rate differentiation
- NADP-2

The Ministry's response
During the earlier consultation period in 2023, participants were explicitly asked about alternative measures. These submitted alternative measures were assessed at the time based on the same selection criteria applied to the measures already proposed in the consultation document and used throughout the procedure. Alternative measures that scored sufficiently on these selection criteria were then calculated in terms of the objective and their cost-effectiveness. They were placed on the shortlist from which the final combination of measures was chosen. This is reflected in the September 2023 notification document.

In the May 2024 additional consultation, participants were asked to comment on the proposed gradual approach and the adjusted package of measures.

During this additional consultation, some alternative measures were also submitted, including recurring measures from the 2023 consultation period. As three measures have recurred several times, we will discuss the 10-point sector plan measures, the quota count system, and NADP-2 below.

10-point sector plan

In 2023, the aviation sector presented the vision document "Toekomstbestendige Luchtvaart voor Nederland" (Future-proof aviation for the Netherlands). This plan includes 10 commitments to contribute to quieter, cleaner aviation. It is good that the aviation sector feels a social responsibility to contribute to quieter, cleaner aviation and a better balance with the surrounding area. These are important objectives to achieve together. As such, the points raised in this plan have been known to the Ministry for some time and are considered in policy-making. The objectives set by the sector are, in many cases, less ambitious than those of the Cabinet. Actions are already being taken on many of the issues mentioned. The aviation sector is also aware that some points from the vision 'Future-proof aviation for the Netherlands' are difficult to realise and/or will take a lot of time. In the short term, the 10 commitments make a very limited contribution to achieving the noise abatement

objective of the balanced approach. This mainly concerns fleet renewal (quieter flying). For this, fleet renewal is already included to the extent that renewal is faster than autonomous development.

Quota-count system
Several responses have suggested a so-called quota count system to curb the amount of noise. Under a quota count system, each aircraft type is classified and assigned a quota count (QC) value. The quieter the aircraft, the smaller the QC value. The QC value can be differentiated according to take-offs and landings, day and night, et cetera. Per season, a maximum quota count of points is set that is distributed among airlines, taking into account, among other things, historical slots. If an airline runs out of points, it must cancel or reschedule flights. While a quota count system gives airlines the flexibility to schedule their own operations, the objection is that noisy aircraft can still continue to fly.

There is currently no discussion of introducing the quota-count system instead of rate differentiation. Completely changing the current system would not be completed in time. In addition, the quota-count system does not necessarily increase noise reduction from rate differentiation.

NADP-2
The responses included the suggestion to introduce the NADP2-800 take-off procedure as a noise reduction measure. The NADP2 procedure in itself (without a specified acceleration height) is already available and is voluntarily applied by several airlines. KLM and Transavia fly according to NADP2. But this does not apply to all airlines. Foreign airlines, in particular, would then have to be asked to apply this procedure. In general terms, one NADP procedure can be applied in the AIP. However, the petitioner's proposal to make the NADP2-800 mandatory is not enforceable because the height cannot be made mandatory (only the procedure itself). More importantly, this measure does not meet our selection criteria because it causes nuisance displacement and an increase in nuisance in places right under the flight paths, which are already heavily congested. In addition, several parties (including Aalsmeer/Uithoorn) have raised concerns about introducing NADP2 and its further roll-out.

B2.4 Procedure

4.1 Balanced approach procedure
A large number of responses, especially from sector parties, object to the procedure as it has been followed so far.

In the context of the Noise Ordinance describing the balanced approach procedure, parties indicated that contraction seems to be an objective in itself, while contraction is a means that should only be used as a 'last resort'. They also indicate that measures other than an operating restriction have not been sufficiently considered in the package of measures and that the short implementation period (2025) makes measures from the other pillars unfeasible.

The Ministry's response
The operating restriction measure is considered a measure of last resort; an operating restriction should only be applied after other measures have been considered. Careful examination of the measures in all categories, both before the 2023 notification and during the notification phase leading to the additional consultation, has shown that an operating restriction is necessary to achieve the established noise abatement objective. The step-by-step approach allows for alternative measures. These alternative measures contribute to reducing noise, making the overall reduction in flights less severe than that notified in September 2023.

4.2 The timing of the additional consultation
There is also criticism of the timing of the additional consultation. A number of parties indicate that stakeholders have not been given sufficient time to provide a substantive response to the adjusted package of measures. According to the regulation, this should be a minimum of three months.

The Ministry's response
The consultation concerns an addition to the package of measures notified last year and an addition to the consultation period that ran for a period of three months from 15 March to 15 June 2023 under the balanced approach procedure for Schiphol. The additional package includes measures already included in the previous consultation or proposed by stakeholders at the time in response to the original package of measures. The Ministry is committed to a diligent, balanced approach procedure and has, through the additional consultation, once again enabled all stakeholders to respond to the adjusted proposals. This is, therefore, an additional consultation, which supplements last year's consultation and notification. All interested parties were able to provide input during the additional consultation and did so in large numbers.

4.3 Strategic importance of aviation, aviation treaties and retaliation

Some airlines discuss international aviation treaties and warn about the risk of retaliation from other foreign governments. Retaliation refers to foreign governments taking measures that adversely affect the Netherlands or airlines based in the Netherlands. Airlines specifically refer to the strategic importance of aviation for the Netherlands. They are also concerned about possible countermeasures that may particularly affect the Dutch aviation sector.

Some parties also cite the possible loss of historical claims to slots as a result of the proposed capacity reduction. Or the loss of slots by airlines with small operations at Schiphol. They also point to the importance of space at the airport for airlines wishing to start operations at Schiphol ('new entrants').

The Ministry's response:
The Ministry is aware that the noise problem at Schiphol Airport and the approach through the balanced approach procedure is complicated and will have an effect on the operations of international airlines at Schiphol. The Ministry is therefore committed to conducting a diligent, balanced approach procedure, adequately weighing up the interests of all stakeholders and complying with the obligations under the Noise Ordinance, the EU Slot Regulation and aviation treaties. In doing so, it is also essential for the Ministry, in close cooperation with the European Commission, to implement the required steps within the balanced approach procedure to complete it diligently.

Schiphol Airport is of economic, social and strategic importance to the Netherlands. The airport contributes to the economy through the employment of 93,000 FTEs and an added value of EUR 10.4 billion (2018 figures). Schiphol's extensive network of direct destinations is an important location factor for internationally operating companies. It is also good for prosperity that Dutch people can travel quickly and affordably to their business destination, holiday destination or family and friends. Schiphol is also of strategic importance. The network quality at Schiphol (including its hub function) and, in a broader sense, the Dutch aviation sector give the Netherlands a strong geopolitical (negotiating) position and strategic autonomy. Importantly, with Schiphol, the Netherlands is not solely dependent on airlines and airports from other EU member states or third countries.

In an aviation treaty, a state authorises an airline to pick up and drop off passengers, cargo and mail on its territory. Airlines that have landing rights in the Netherlands under an aviation treaty do not automatically have the ability to take off or land. Schiphol is a coordinated airport, which means an airline must have slots to use Schiphol. Obtaining landing rights through an aviation treaty does not guarantee slots.

A slot coordinator distributes the available slots based on, among other things, the EU Slot Regulation. It is also the slot coordinator who assesses whether an airline has historical claims to so-called slot series. The government has no influence over this, as the EU Slot Regulation requires the slot coordinator to be independent. In the Netherlands, Airport Coordination Netherlands (ACNL) is the slot coordinator.

The current Slot Regulation does not provide a methodology for dealing with a situation where fewer slots are available than the number of slots for which a historical claim is made. Therefore, ACNL has developed a methodology in a policy rule where the starting point is proportionality. That methodology also leaves room for ACNL to consider airlines with small operations at Schiphol.

As ACNL has sole authority to distribute slots, the Ministry of Infrastructure and Water Management has shared with ACNL the concerns of airlines about the loss of historical entitlement to slots, the impact of a reduction task for airlines with a small operation at Schiphol as well as leaving room for airlines that want to start an operation (new entrants).

B2.5 Other

5.1 Calculations of measures

Parties criticise the objectivity and accuracy of data. They point to the way objectives are set, and data are calculated. For instance, according to parties, the noise problem has not been sufficiently objectively substantiated (based on the GGD survey of nuisance perception). They also state that the current and future situations have been calculated based on different models (NRM and DOC29), making them incomparable.

KLM had the calculations carried out by NLR, which, according to them, shows that the measures produce much more noise reduction than is necessary. This makes the measures unnecessary and disproportionate, according to them.

The Ministry's response
The method of determining the objectives, the noise problem and the models used were discussed in detail in the September 2023 notification document[27].

Further discussions were held to clarify the differences between the results of both parties' calculations. These showed that new and more detailed information was applied for some measures to arrive at the necessary assumptions and starting points. This leads to a different effect for several measures.

5.2 Insight into the effects

Several responses requested more information on the effects. Local residents and interest groups lack insight into the effect of the package of measures on the various areas and jobs.

The Ministry's response
The additional documentation document includes so-called 'contour images' showing the noise effect of the measures on the area around Schiphol.

5.3 The balance is not yet 'complete'

Various social parties see the ongoing balanced approach procedure as a first step in the right direction. However, they indicate that the balance is not yet complete, and work must continue to reduce noise and improve the living environment for residents around Schiphol Airport.5.3 balance not yet 'finished'.

The Ministry's response
In the future, the Cabinet no longer wants to focus on a maximum number of aircraft movements, but on environmental standards. Noise emissions must decrease yearly so that the adverse effects of aviation on the surrounding area also continue to decline.

This allows us to permanently monitor the balance between Schiphol and the surrounding area. And within these frameworks, prospects also arise for the aviation sector.

5.4 Evaluation and enforcement

A number of responses indicated that they lack information on evaluation and enforcement. In what way are the measures evaluated and the results published? And what happens if the measures are not realised or do not achieve the intended effect?

There is a call to evaluate not only after five years but after every quarter.

The Ministry's response
Partly as a result of the responses to the additional consultation and subsequent discussions, it was decided to monitor whether the measures introduced are implemented correctly and have the assumed and desired effect.

Chapter 7 of the additional notification document describes monitoring and enforcement and explains the systematics, among other things.

[27] https://www.luchtvaartindetoekomst.nl/documenten/rapporten/2024/05/24/balanced-approach-study-schiphol-airport-to70

Annex 3 Background to Land-use planning and sound insulation

B3.1 Land-use planning

An interplay of source policy and land-use policy provides protection of Schiphol's surrounding area in terms of safety and noise. Source policy focuses on controlling the effects of air traffic on safety, noise, local air pollution, and odour. With the source policy established in the Airport Traffic Decree (LVB), limits are set on the consequences of air traffic (among other things) in terms of external safety risk and noise nuisance. The number of people affected by those consequences is limited by the land-use (construction and use) restrictions established in the Schiphol Airport Classification Decision (LIB).

Land-use policy around Schiphol aims to protect people and functions close to the airport, where noise nuisance is greatest from a health and safety risk perspective. Under certain conditions, land-use developments are possible further from the airport, where noise nuisance is lower. Outside the areas where land-use restrictions apply, source policy aims to reduce noise pollution and thus protect the surrounding area.

Schiphol land-use policy in the Airport Classification Decision

The land-use restrictions around Schiphol are established in the Schiphol Airport Classification Decision (LIB). This regulates which area is designated for use as an airport and which area around it is subject to safety and noise restrictions. The LIB provides rules for land use and zoning in these areas and is divided into five different zones based on external safety and noise.

International comparison

Most European countries pursue a form of land-use zoning policy with zones where building is not allowed or only under specific conditions. Compared to other European countries, the Netherlands has a more restrictive land-use policy. Other European countries typically use higher noise values to restrict residential construction.

As a result, around Schiphol the total number of people exposed to noise levels of 55 dB Lden or higher is much lower than at comparable airports. Whereas at Schiphol, 44,500 people are exposed to 55 dB Lden or higher, the figure is 189,300 at Frankfurt and 683,700 at London Heathrow[28].

B3.2 Explanation of Schiphol zoning policy

Demolition zones external safety and noise (LIB 1 and 2)

No housing may be added within LIB1 (external safety, 10-5) and LIB2 (71 Lden) areas. These are the so-called demolition zones. Once the remaining residents in this area move out, the house is acquired and demolished. Since the adoption of the LIB, the number of houses in LIB 1 and 2 has decreased. Some houses are currently still occupied in this area (about 15 houses).

[28] https://open.overheid.nl/documenten/ronl-1f6eof86bddb2afb196dfa5c2d7b61584337f27e/pdf

Expanding the demolition zone as a possible measure to reduce the total number of people affected will have a very minor effect because there are already relatively few houses immediately outside the demolition zones due to applicable building restrictions (LIB 3). Also, due to the right to stay (the right to continue to occupy houses until relocation), such a measure will only affect the longer term, thus not contributing to achieving a short-term noise abatement objective.

Zones with construction restrictions (LIB 3 and 4)

LIB 3 area is an external safety zone. The LIB 3 area is delimited on the basis of a safety contour (10-6). No new housing, offices, or businesses with many employees may be built within the LIB 3 area. Houses already in the area before the LIB was introduced in 2003 are allowed to remain. As a result, the number of houses in this zone remains almost the same (around 1,000 houses).

LIB 4 is a restriction area to protect against adverse effects of aircraft noise. The outer boundary of this area is based on the 58 Lden noise contour from 2003. In principle, no new houses and other buildings with a noise-sensitive function are allowed in this area.

Land-use restrictions may have a negative effect on land use dynamics locally. Therefore, exceptions apply in the LIB 4 restriction area to combat local impoverishment and ensure liveability. These are exceptions for short-stay (houses for occupancy up to 6 months) and 25 houses per building plan that give municipalities scope to address local liveability issues.

The outer limit of LIB 4 was based on the 58 dB Lden noise contour when the LIB was established in 2003. Since 2003, many source measures have been taken that have lowered the noise nuisance in the area around Schiphol. As a result, the noise nuisance area of the current 58 dB Lden contour is smaller than the contour established in LIB 4. The outer limit of LIB 4 converted to current noise nuisance would be at a lower noise impact value than the 58 dB Lden. Due to the decrease in noise nuisance and the contour remaining the same in LIB, the noise gain from source measures, which have taken place since 2003, has benefited the surrounding area.

LIB 5 consideration area with a restriction on new construction

LIB 5 is a land-use consideration area (based on an old noise contour 20 Ke) within which rules apply that aim to leave sufficient space for aviation on the one hand and to allow (residential) developments on the other. Both are of national importance. In this area, no new housing will be built in locations outside urban areas where it is less desirable from a noise and group risk perspective. This aligns with the principle adopted to fly over densely built-up urban areas as little as possible.

Integral land-use consideration

The starting point of the land-use policy is to increase the quality of the living environment around Schiphol. The aim is to restore the balance between aviation's contribution to welfare and prosperity on the one hand and its broad impact on the living environment on the other.

Schiphol is located in a highly urbanised area in which various public interests request or affect space. Besides aviation, local land-use challenges include housing, climate adaptation, and the energy transition. Land-use policy, therefore, broadly considers various functions and activities in the area around Schiphol. The choice has been made to demolish houses close to the airport and not allow residential construction, while offering opportunities for residential construction further away from the airport based on an integrated assessment. This means that further away from the airport, outside the LIB restriction areas, municipalities can build additional housing in these areas on the basis of careful (local) consideration.

There is a high demand for new housing in the Netherlands. The region around Schiphol also faces a considerable housing challenge. The current plans for new construction have been created within the existing regulations and, therefore, take into account the applicable restrictions of the LIB.

From the perspective of achieving a good balance between various public interests in the Schiphol region, such as the acute housing challenge, it is unlikely to result in land-use restrictions further away from the airport. In addition, extending land-use (building) restrictions will not reduce the number of severely affected people and is therefore not an effective measure to achieve a reduction in nuisance.

The figure below shows where the various housing development plans are planned. This indicates that the planned housing development plans are further away from the airport where noise levels are lower.

Noise insulation

1980 – 2021

In the early 1980s, noise insulation and planning measures were included in the Aviation Act[29] as noise abatement instruments. Sound insulation was used as the last link in the chain of noise abatement, after instruments aimed at abatement at source and reduction of noise transmission. Noise insulation focuses on protecting the receiver from noise nuisance within the so-called 40 Ke noise contour. Already in the early 1970s, the 40 Ke was chosen as the standard for maximum noise exposure for existing buildings and the 35 Ke standard for new buildings. A committee[30] to advise on setting standards for the permissibility of aircraft noise exposure concluded, based on studies conducted, "that a maximum noise exposure of 40 Ke should be considered acceptable in residential areas".[31]

Consideration of all environmental health, land use, financial and other societal consequences resulted in this standard of 40 Ke for noise insulation around Schiphol Airport being retained for existing houses.[32]

The 1981 Structure Plan for Civil Aviation Sites (SBL'81) established a provisional insulation contour based on this standard. In 1984, the first phase of the noise insulation programme (GIS-1) commenced by insulating houses in the most heavily impacted areas within the 40 Ke contour. In 1985, a detailed insulation programme was included in the SBL and all houses within the insulation contour were considered under GIS-1. In the late 1980s, in the National Environmental Plan (NMP), the Cabinet indicated that there was an excessive cumulation of environmental problems in the Schiphol region. By taking an integrated approach to these environmental problems, the aim is to create a living, working and recreational environment such that the desired land-use developments are possible. Subsequently, in 1991[33], in the Cabinet position paper Schiphol and surrounding area (which was elaborated in the Key Planning Decision (PKB) Schiphol), the Cabinet indicated that it is of the opinion that the requirements of sustainable development as formulated in the NMP can be met in terms of noise nuisance. This included the construction of the Polderbaan as a condition in combination with the most environmentally preferable use of the runway system, measures regarding night flights at Schiphol and implementing the noise insulation programme envisaged in the Schiphol Action Plan (PASO). In July 1993, the Cabinet decided to use the so-called LAeq standard as the national night standard. This standard of 26 LAeq or dB(A) night contour was incorporated into the Aviation Act in 1994. The 26 dB(A) night contour encloses the area within which the sleep of more than 20% of the population is disturbed. The explanatory memorandum states that by applying insulation (in the 40 Ke zone and the 26 dB(A) night contour), the noise nuisance in the relevant houses and buildings is brought to an acceptable level in terms of environmental hygiene.

In the PKB Schiphol and its elaboration in the Designation of the Schiphol Airport site in 1994/1995, the following functions of the noise zones were included:

1. defining the maximum noise nuisance caused with an associated objective regarding the maximum number of houses and affected people that could be located within it;
2. indicating areas with land-use restrictions;
3. indicating which houses were eligible for noise insulation, based on a daytime 40 Ke contour and the night-time 26 LAeq dB(A) contour. The 26 dB(A) night contour used was based on a consideration by the Cabinet between health aspects on the one hand and cost and operational aspects on the other. It was weighed up whether, within the framework of the agreements established in the PKB Schiphol, the population should be offered more protection against night-time aircraft noise, and avoidable nuisance should be prevented. All this at a reasonable additional cost level and without substantially affecting the airport's operational capabilities.

With the insulation of houses within the 26 dB(A) night contour, a balance in measures was found with regard to night-time aircraft noise that does justice to both the environmental and mainport objectives.

GIS-2 was launched in 1997. The reason for this was the double objective from the PKB Schiphol – namely to enable the growth of Schiphol to become a mainport (including the Polderbaan) and at the same time to improve the quality of the living environment in the immediate surrounding area of the airport – and the establishment of the night-time standard. The insulation contour of GIS-2 anticipated the arrival of the Polderbaan and 408,000 aircraft movements. As of GIS-2, this made houses eligible for both 24-hour and

[29] Parliamentary Papers II, 1980-1981, 15 880, No. 11, pg 7: Structure Plan for Civil Aviation Sites (part D)
[30] The Standards Committee set up by the then Minister of Transport on 27 March 1968
[31] Parliamentary Papers II, 1974-1975, 13 130, No. 3, pg 18: Amendment to the Aviation Act (Journal of State 1958, 47) with regard to the designation of aerodromes
[32] Parliamentary Papers I, 1981, 16 400 XII , No. 4, pg 2: State Budget 1981 Chapter XII (Department of Transport and Public Works)
[33] Parliamentary Papers II, 1990-1991, 21 964, No. 4, pg 12-14: Cabinet position on the Schiphol Action Plan and surrounding area

night-time insulation. In 2002, the former Aviation Act (Luchtvaartwet) transitioned into the current Aviation Act (Wet Luchtvaart) with the PKB Schiphol system. The use of zones with respect to land-use restrictions and noise insulation (including the 40 Ke/26 LAeq standard) has remained in place in the current Aviation Act. The zone for determining the maximum noise nuisance generated has been replaced by a system with limit values at noise enforcement points. Here, the previous policy objective of reducing the number of people experiencing severe nuisance and sleep disturbance has been included as a precondition for equivalence. The maximum of 10,000 houses within the 35 Ke contour remained here as a limit. GIS-3 was launched in 2006 following the commissioning of the Polderbaan. The GIS-3 programme had already been announced in 1991 as a pre-insulation programme that would include the actual effects of the Polderbaan.

At the commencement of GIS-3, the insulation contour was determined based on the actual use of the five-runway system and an expected growth to approximately 508,000 aircraft movements at Schiphol. As an indication, around 435,000 aircraft movements were realised in 2012.

Noise insulation in three phases The Schiphol Noise Insulation programme was implemented in three phases (GIS-1, GIS-2 and GIS-3). A total of 13,279 noise-sensitive properties were insulated.

1. Under the Schiphol Noise Insulation Project, Phase 1 (GIS-1), a total of about 3,700 noise-sensitive properties were insulated. The cost of GIS-1 was €126.8 million. Implementation of GIS-1 started in 1984 and was completed in 1995.
2. The Noise Insulation Schiphol Phase 2 Project (GIS-2) started in 1997. Insulation under GIS-2 was completed in 2008, with a total of 8,465 noise-sensitive properties insulated. The cost of GIS-2 was €396.6 million.
3. Under the Schiphol Noise Insulation Project, Phase 3 (GIS-3), a total of about 1,114 noise-sensitive properties were insulated in accordance with the Noise Abatement Provisions Regulations (RGV). The current project estimate (VGR 16) is €51.9 million. GIS-3 started in 2006 and was completed in 2012.

Thus, the total cost of implementing these three phases is about €577 million. This includes both direct and indirect costs. This amounts to an average amount of about €43,000 per insulated property.

2021 – the present

However, Schiphol has continued to develop since the completion of the last GIS project, leading to a change in the level of noise nuisance. Flying according to the new standards and enforcement system for Schiphol (NNHS) results in higher noise nuisance and shifts due to a different flight pattern. For example, there is a higher overflight frequency and fewer quiet moments in some places. In addition, research by GGD GHOR Nederland shows that in the areas surrounding the larger airports, many people experience severe noise nuisance and sleep disturbance due to air traffic to and from these airports.

On 10 December 2021, the Lower House was informed[34] that, within the framework of the Aviation Policy Memorandum, work would be accelerated on a programme-based approach to the topic of noise at Schiphol in order to take steps to reduce noise nuisance for residents living near Schiphol Airport caused by air traffic to and from the airport. This is done in the interests of the health of local residents and to contribute to strengthening the broad quality of life in the surrounding area of Schiphol. The Cabinet considers it important to quickly start improving the quality of life of local residents. Therefore, the Cabinet has decided to take a first step in anticipation of the further elaboration of the programmatic approach to the noise theme in order to be able to offer a facade insulation programme to residents of houses where the noise nuisance is highest. These are houses that were considered under the previous schemes, but then refrained from doing so for various reasons. In fact, the offer of facade insulation is always voluntary.

The current noise insulation programme allows for installing noise insulation measures on houses in the surrounding area of Schiphol Airport that lie within the 60 dB Lden contour. This concerns about 660 houses. By starting from houses that have not been insulated before, the (scarce) market capacity is used for the part where the most significant health gains are expected to be achieved.

To conclude

Noise insulation measures are therefore already being taken. Moreover, sound insulation is not reflected in the Doc29 calculation methodology since noise is calculated on the facade. In addition, sound insulation offers only partial protection against noise. The moment someone has a window open or is sitting in the garden, the effect of insulation is gone. This does not address the actual problem of noise nuisance.

[34] Parliamentary Papers II, 2021-2022, 29 665, No. 418

List of annexes

Annex I	Ministry of Infrastructure and Water Management, Stakeholder consultation Balanced approach procedure Schiphol, March 2023
Annex II	Ministry of Infrastructure and Water Management, Notification European Commission, Balanced approach procedure Schiphol, September 2023
Annex III	Ministry of Infrastructure and Water Management, Supplementary consultation Balanced approach Schiphol, May 2024
Annex IV	Ministry of Infrastructure and Water Management, Schiphol Environmental Noise Action Plan 2024-2029, 27 June 2024
Annex V	PM
Annex VI	Decisio, Kosteneffectiviteit maatregelen, August 2024
Annex VII	AT Osborne, Hoofdlijnenverslag aanvullende raadpleging Balanced approach, August 2024
Annex VIII	LVNL, Uitvoeringstoets aanvullende raadpleging Balanced approach procedure Schiphol, 2024
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