

as an important control mechanism for preventing injury-causing risks involving large crowds within the terminal. Crowd-management teams responsible for supervising people flows are deployed to specific hotspots within the terminal, and we also pay close attention to vertical and horizontal walkways, where there is an increased risk of people falling.

### HSE standards

In 2018, Schiphol harmonised the various HSE standards allocated to individual projects or work activities, standardising these into the single, integrated 'HSE standard Schiphol'. Through this action, we aim to further improve safety across our construction and maintenance activities.

This standard will be implemented in early 2019, providing our partners with clear and objective expectations when it comes to guaranteeing safety and protecting the environment. Having a consistent set of standards in place will be increasingly important as construction activity intensifies at Schiphol over the coming years.



### Noise

Aircraft noise has a major impact on the quality of life of local residents, which is why it has a central role in the environmental rules that apply to Schiphol. Given that the airport has reached its limit of permitted air transport movements, this complex issue is becoming increasingly sensitive. In 2018, we succeeded in staying below the agreed maximum of 500,000 movements. The scarcity of airspace and the relative positions of stakeholders are decisive for the course of negotiations on further developments regarding air transport movements beyond 2020. The intensive and extensive public consultations taking place over 2017-2018 will continue through 2019.

### New Environmental Standards and Enforcement System

The Dutch government is working towards the introduction of the New Environmental Standards and Enforcement System (NNHS). The system establishes guidelines regarding preferential runway use at Schiphol with a view to minimising the effects of noise disturbance on the local community. Specifically, Runway 18R-36L (the Polderbaan) and Runway 06-24 (the Kaagbaan) are recognised as preferred options for take-offs and landings by virtue of being at a greater distance from the residential areas around Schiphol.

Although the NNHS has not officially entered into effect, the aviation sector has been actively preparing for its introduction. In 2018, all flights at Schiphol were undertaken in accordance with the NNHS. Enforcement, however, was carried out according to the old system of enforcement points, consisting of 60 points located around the airport. As a consequence, the noise impact

at four of the enforcement points was greater than the limit value under the old system. All night-time enforcement points remained within the old limit value.

Each quarter, Schiphol reports on the application of the rules in relation to the new system. Two elements will require further elaboration: the rules regarding the use of the fourth runway as well as those limiting night-time air traffic. Solutions to these issues must be found before the new system formally takes effect, and are currently being discussed with the Schiphol Local Community Council (ORS).

The Human Environment and Transport Inspectorate will also take the new system into account in anticipation of its implementation, though no penalties will be imposed on the sector if breaches are found to be the result of the application of the new standards. Because the new system is not yet formally in force, a number of local residents have expressed concerns that they are no longer entitled to legal protection and have requested that their rights be maintained in line with the previous system. The residents have filed a lawsuit against the Human Environment and Transport Inspectorate, though this has not proved successful.

A new Airport Traffic Ruling is required to formally anchor the NNHS and will be determined depending on the outcome of an environmental impact assessment (MER). A draft version of the MER was presented in November 2018, with the finalised version expected in the first quarter of 2019.

### Amending the environmental impact assessment (MER)

As part of the draft MER, Schiphol has examined the environmental impact of the new system. The results show that the airport's development towards 500,000 air transport movements in 2020 is achievable within the environmental limits set out by the Alders agreement. The effects (calculated on the basis of the current housing situation) were mapped out in the draft MER and contain an updated calculation based on the new European 'Doc. 29' calculation method. The new model replaces the old Dutch calculation method and is able to determine the level of noise disturbance with greater accuracy, thereby reinforcing the recommendations provided by the Netherlands Commission for Environmental Assessment (NCEA).

Further to the Alders agreement, the environmental impact of Schiphol's development beyond 2020 has been calculated at the request of the Ministry of Infrastructure and Water Management (I&W). A scenario has been calculated based on 540,000 air transport movements. The MER therefore indicates there is scope for further developing the airport, in principle.

The draft MER serves as input for future ORS agreements regarding Schiphol's development beyond 2020. It is therefore important that all parties fully trust that the current content of

the draft is correct. In view of this, at Schiphol's initiative, the draft MER was tested by various experts, local residents and the North-Holland Nature and Environment Federation (Natuur en Milieufederatie Noord-Holland). This involved careful examination of the agreed framework, as well as the process and the calculation model being used.

### Noise disturbance

Besides determining the rules regarding preferential runway use, the NNHS also sets boundaries regarding the number of people exposed to severe noise disturbance in communities surrounding the airport, with a view to containing them within specific noise contours. The NNHS prescribes the 48 dB(A) and 58 dB(A) Lden noise contours. The figure depicts the contours for 2018 (1 November 2017 until 1 November 2018) as blue and green lines. The contours highlight the areas where the average sound exposure due to aircraft is higher than 48 and 58 dB(a), respectively.

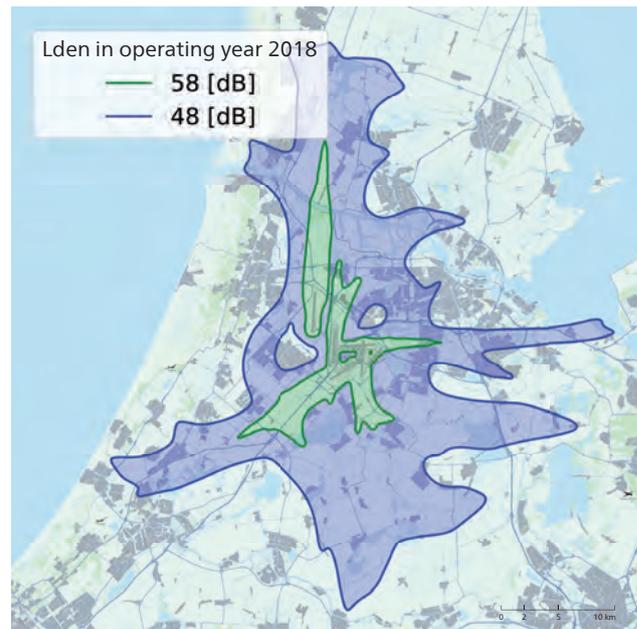
Within the 48 dB(a) contour, the total number of severely affected people is calculated, with the current limit set at 180,000. In 2018, the number of neighbours considered to experience severe noise disturbance totalled 150,000, an increase of 0.7% compared with 2017. Two factors in particular traditionally have an influence on Schiphol's severe noise disturbance figures: runway maintenance and the deployment of the police helicopters stationed at Schiphol-East. In July 2018, unforeseen maintenance work on the Polderbaan had a notable impact on local noise disturbance levels (see Reports by local residents).

### Future residential construction around Schiphol

While Schiphol and the Amsterdam Metropolitan Area (MRA) are highly important to the regional and national economy, the future use of the airport impacts the region's potential as a location for residential construction. Specifically, it is essential that municipalities in the areas surrounding the airport, as well as the provinces of North-Holland and South-Holland, consider existing and future flightpaths when planning new residential developments. The revised Airport Planning Decree (Luchthavenindelingsbesluit), which came into effect in January 2018, contains agreements by the central government, the region and the aviation industry regarding duty of disclosure, complaints handling and the indemnity of aviation stakeholders in the event of any new construction.

### Reports by local residents

The Local Community Contact Centre Schiphol (BAS), a foundation established by Air Traffic Control the Netherlands (LVNL) and Amsterdam Airport Schiphol, provides individuals with details on daily air traffic at, to and from Schiphol, as well as information on runway usage, routes and living near Schiphol. In addition to answering their queries, BAS receives complaints from local residents and makes home visits to those experiencing severe noise disturbance.



Complaints may concern a single aircraft movement or movements over a specific time period, while others may be of a general nature. The focus group, which BAS focuses on in its reports, consists of people submitting 500 notifications or fewer per year, with 99.6% of complainants included in this category. The 2018 figures provided by BAS show a sharp increase in the number of focus group complainants as well as individual reports submitted during the year. Meanwhile, the proportion of habitual complainants (individuals submitting more than 500 reports) fell from 0.43% in 2017 to 0.39%.

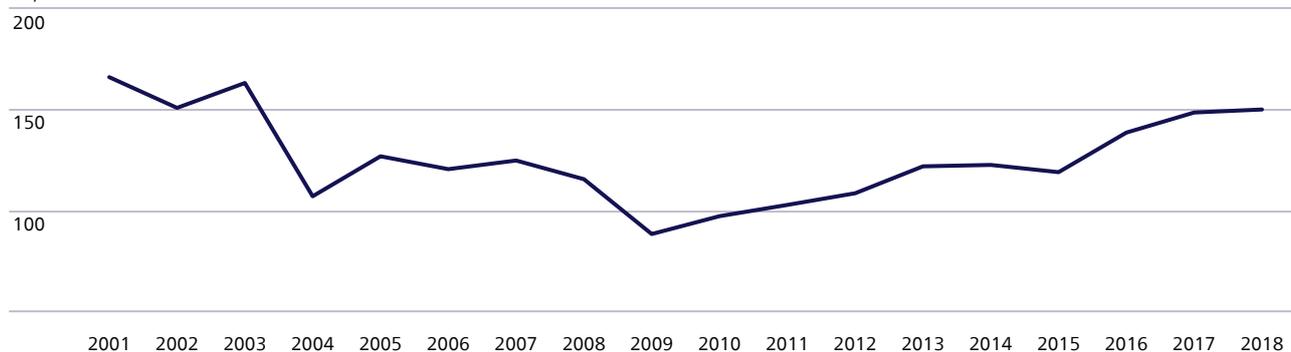
2018 saw the highest number of focus group reports filed since BAS's formation in 2007. The increase is due to the prolonged use of the north runway during the summer months. This unforeseen event was due to Runway the Polderbaan being kept out of use for ten days between 14 and 23 July following the sudden subsidence of one of the lanes leading to the runway. Nearly 1,000 local residents filed a complaint on Sunday, 15 July; this marked the largest volume ever received by BAS in a single day, exceeding the previous record of 636 residents in 2014.

In 2018, the largest share (24%) of complainants originated from the Runway 09-27 (Buitenveldertbaan) 'cluster'. A particular increase was observed in residents from Amstelveen and Amsterdam, who were inconvenienced by the more frequent deployment of the 09-27 and 18C-36C runways for day take-offs while the Polderbaan was out of service, as well as the use of Runway 06-24 for night-time take-offs. Further analysis is available in the BAS annual report at [www.bezoekbas.nl](http://www.bezoekbas.nl).

### Calculated number of people experiencing severe noise disturbance

(norm is 180,000)

x 1,000



■ Calculated number of people experiencing severe noise disturbance

### Number and nature of reports to BAS

	Focus group		Habitual complainants	
	2018	2017	2018	2017
<b>Number of complainants</b>	<b>11,365</b>	8,450	<b>44</b>	36
<b>Number of complaints</b>				
Specific reports	<b>52,795</b>	33,607	<b>131,799</b>	107,781
Period reports	<b>66,685</b>	47,305	<b>16,710</b>	11,607
General reports	<b>1,579</b>	1,180	<b>2,951</b>	7,679
<b>Total number of reports</b>	<b>121,059</b>	<b>82,092</b>	<b>151,460</b>	<b>127,067</b>

For more details, please visit the following websites:

- [Local Community Contact Centre Schiphol \(BAS\)](#)
- [NOMOS](#)
- [Schiphol Local Community Council](#)
- [Schiphol Quality of Life Foundation](#)
- [Samen op de Hoogte](#)

### CO<sub>2</sub> emissions

Carbon emissions contribute to global temperature rises, which can have serious consequences for humans and the environment. We are pursuing an active emissions reduction programme at Schiphol and across our regional airports. Schiphol Group is climate-neutral in its own activities and is transitioning towards becoming a zero-emissions organisation. With the search for long-term climate solutions ever-more urgent, we have now set our sights on a more ambitious target: reaching zero emissions in 2030. This goal means that no carbon and particulates will be emitted in using energy and fuel for our own operations as well as ground operations at airside. This science-based target is in line

with the scale of reductions required to limit the eventual global temperature increase to below 2 degrees Celsius above pre-industrial temperatures.

#### 100% Dutch wind energy

In working to meet our goals, we are making increased use of renewable energy sources, including wind energy and green gas. In April 2018, Royal Schiphol Group, Eneco and the municipality of Vianen opened the new Autena wind farm. This important milestone means that 100% of the electricity Schiphol purchases to run its facilities is now sourced from wind power. Additional turbines are also being developed; by January 2019, all of our electricity will be delivered by newly developed Dutch wind farms.

#### Green gas

In 2018, we also completed the procurement phase for a new biomethane (or green) gas tender. As a result, green gas will comprise 10-15% of Royal Schiphol Group's total gas consumption over the 2019-2021 period, and 100% of the gas used by Eindhoven Airport. We note that, for now, our current use of green gas as part of our wider energy mix remains constrained by its limited availability in the Netherlands. In light of this, we are working hard to limit our use of natural gas while also reducing