Email dated with November 21, 2024

a) *With which software is the infrasonic noise being modeled?*
b) *Please share the contact information of an infrasonic noise specialist from Latvia to consult on how the safety of infrasonic noise has been evaluated in the context of this project.*
c) *If it is known that in Saarde municipality, where 9 wind turbines are located, people 8.5 km from the nearest turbine have reported health issues, how can the residents within the impact area of a new wind farm, with 19 turbines, be sure that they will not face health problems?*
d) *Since infrasonic noise cannot be heard by the human ear, how is its impact considered in the EIA report?*
e) *What is the basis for the understanding that infrasonic noise from 19 turbines is safe? Please provide references to scientific articles as confirmation.*
f) *If life becomes unbearable for people in their homes due to infrasonic noise from the turbines, how will the damages (both material and moral) be compensated? I would like written confirmation that the developer will take responsibility for compensating these damages.*
g) *Since there are plans to add 12+20 turbines to the existing 9 turbines in Saarde, how has the combined effect of these turbines and the planned turbines in Lode been accounted for?*
h) *Has the developer established a decommissioning fund, or is it possible to submit a bank guarantee in case the wind farm's resources are depleted?*
i) *Will there be full health checks for the residents of the affected area before the development begins?*
j) *Has the impact of the wind farms on local climate changes (wind speed, precipitation, temperature, cloud cover, water retention, drought, etc.) been considered?*

Response

a) The WindPro software (developed by EMD International) has been utilized for the assessment and modeling of low-frequency noise. This software is specifically designed to evaluate the impacts of wind turbines and includes a specialized module for the calculation of low-frequency noise.
b) The low-frequency noise assessment was carried out by Kristiāna Siliņa, an expert at SIA "ELLE." For any inquiries, please contact her at kristiana@environment.lv, with a copy to elle@environment.lv. The communication language with the expert is English.
c) To date, the information regarding health disturbances or issues has been presented in a general manner, with the assumption that they may be linked to the Saarde wind farm. During the public consultation, we requested to present official conclusions of relevant authorities confirming that the Saarde wind farm has caused any negative health impacts. To this point, we have not received such information. The results of the EIA proofs that in the surrounding residential areas, environmental or other limit values or thresholds will not be exceeded.
d) The WindPro software (developed by EMD International) has been utilized for the assessment and modeling of low-frequency noise. This software is specifically designed to evaluate the impacts of wind turbines and includes a specialized module for the calculation of low-frequency noise. Detailed information on the approach used for the assessment of low-frequency noise can be found in Chapter 4.1 of the EIA report. The results of the assessment are included in Chapter 4.1.6, with the calculation files attached in Annex E2.
e) See response d).
f) The EIA opinion will specify mandatory conditions applicable to the construction and operation of the wind farm. The developer will be obligated to ensure full compliance with these mandatory

conditions as well as adherence to all relevant regulatory requirements. If, during the operation of the wind farm, non-compliance with the mandatory conditions or regulatory requirements is identified, the competent authorities, within the scope of their responsibilities, may suspend the operation of the wind farm, require corrective actions to address the non-compliance, or take other measures to ensure the observance of the applicable requirements.

g) The cumulative impact has been assessed within the framework of the EIA, considering those that have already commenced operation and the planned wind farms, for which construction permits have been issued, and those undergoing either an EIA or SEA.
h) The developer will ensure compliance with the requirements set forth in the regulatory acts, as well as the fulfillment of any other agreed-upon terms.
i) The EIA opinion will specify mandatory conditions applicable to the preconstruction, construction and operation of the wind farm. the competent authorities impose such a requirement, it will be adhered to. The results of the EIA proofs that in the surrounding residential areas, environmental or other limit values or thresholds will not be exceeded.
j) The impact of the wind farms on local climate changes, such as wind speed, precipitation, temperature, cloud cover, water retention, and drought, has been assessed but is not considered a significant impact. These potential effects are considered as other impacts within the EIA. Based on the findings of the assessment, any changes to local climate conditions are expected to be minimal and do not pose a significant risk to the surrounding environment or community. Consequently, these impacts were not further developed in detail, as they are deemed not to require additional mitigation measures or in-depth analysis due to their limited relevance and significance in relation to the overall project.

Letter of MTÜ Looduse ja Inimeste Eest, dated with November 22, 2024

1. Ice throw risk

Section 4.12 of the Lode wind farm Environmental Impact Assessment (EIA) report (starting on page *205) provides a detailed discussion of the risk of ice throw caused by blade icing. Figures 4.12.1 and 4.12.2 present the ice throw modeling maps.*

Although the detailed treatment of the ice throw risk in the EIA report is commendable, it does not entirely neutralize the risk itself.

It is worth noting that in countries like Germany and Austria, wind turbines must be located at least 2 times the full height of the turbine away from public roads, specifically: (mast height + blade diameter) x 1.5.

If a turbine is located closer to a road, it must be equipped with an ice detection system that stops the turbine in case of icing risk.

In the Baltic region, there are plans to install wind turbines with internally heated blades. However, this solution is not reliable and does not neutralize the ice throw risk, as shown by a recent study conducted in North America.

Based on real-world observations, 3% of ice pieces are thrown farther than the full height of the turbine.

PROPOSAL: Given that the construction of the Lode wind farm undeniably poses a real threat to the lives of individuals present on the territory of the Republic of Estonia due to cross-border ice throw, as well as impedes the landowners along the border from utilizing their properties, the Republic of Estonia, represented by the Ministry of Climate, adheres to the precautionary principle and relies on the safety standards in effect in Germany and Austria. Consequently, the Republic of Estonia requires, in order to protect the life and health of its citizens, that no wind turbines be installed closer to the border of the Republic of Estonia on Latvian territory than the following distance: (tower height + blade diameter) x 1.5.

Response

The Netherlands is one of the leading countries in Europe in the field of industrial risk assessment and the application of risk assessment results for land use planning purposes. One of the recognized methods for assessment of accident risks of wind energy farms is the set of guidelines[1] for wind farm risk evaluation, developed in 2002 under the commission of the Netherlands Energy and Environmental Agency, and last updated in 2020. These guidelines incorporate data on incident reports from databases in Denmark, Germany, the United Kingdom, and the Netherlands. The risk assessment within the framework of the EIA has been carried out in compliance with the previously mentioned guidelines.

In Latvia's climatic conditions, ice accretion on wind turbine rotor blades may occur during the winter months. The Lode wind farm is situated in a region where favorable conditions for ice formation can arise for an average of 10-20 days per year. This is further supported by the 'Wind Energy Icing Atlas'

[1] Handreiking Risicozonering Windturbines (Infomil) un Handleiding Omgevingsveiligheid Module IV Specifieke rekenvoorschriften (RIVM)

maintained by the Finnish VTT Technical Research Centre, which indicates that the project area is located within a zone where icing may occur up to 3% of the year.

Based on the calculations conducted, it can be inferred that the area with the highest potential for ice throw-related risks is directly beneath the rotor. In the case of the largest rotor analysed in the EIA, with a diameter of 172 meters, the hazard zone extends within a radius of 86 m from the turbine. Ice throw may also occur in the area up to 311 m from the wind turbine. However, considering the probability of the turbine operating at its maximum rotational speed, the likelihood of the turbine being iced, and the probability of an ice fragment being ejected along an ideal trajectory, the overall probability of an ice fragment striking a person is considered to be low.

Considering that the distance to both residential and public buildings complies with the territorial planning regulations and exceeds the potential ice throw distance, the risk to human health and safety would be limited to individuals who are present or engaged in activities within the project area.

There are no residential or public buildings located within 800 meters of the proposed wind turbine sites. Within the calculated radius of 311 meters from the turbines, there are no national or major state roads. However, municipal roads are located closer than 311 meters to the following proposed turbine locations:

- L_03 – 277 meters
- L_05 – 266 meters
- L_07 – 200 meters
- L_08 – 99 meters
- L_09 – 98 meters

Considering these proximities, it is essential to implement mandatory technical solutions to mitigate environmental risks for these turbines. Specifically, the turbines must be equipped with ice detection systems that automatically suspend operations when icing is detected. If the aforementioned mandatory measures are implemented, the recommended safety distance to municipal roads may be reduced to the rotor blade length, which is 86 meters. The distances to public roads in Estonia exceed 86 meters.

The EIA report does not mention heated rotor blades as a mitigating measure. Therefore, the authors of the letter have made an assumption that is not supported by the information presented in the EIA report.

The assessment, carried out in accordance with international guidelines, indicates that the construction of the wind farms at the proposed sites, along with the implementation of the mitigation measures outlined in the EIA Report, does not pose a threat to human life or health. The project developer respectfully disagrees with this proposal, as the precautionary principle has been applied incorrectly and without due consideration of the assessment results.

2. Inadequacy of Applicable Noise Standards for Public Health Protection

a) In countries with many wind turbines, such as Denmark and Germany, the permitted limits for audible noise from wind turbines are lower than in Estonia: link to report

The EIA report for the Lode wind farm addresses noise from the wind farm in Section 4.1. Section 4.1.1 also discusses Estonia's noise standards, as harmful noise extends across national borders into Estonia.

It is well known that, based on the analysis of various studies, 35 dB has been proposed as the threshold for wind farm noise disturbance (Schmidt et al., 2014). The same value of 35 dB is applied in Germany (and 37 dB in Denmark).

The EIA report uses (Table 4.1.3) the noise limits for Estonia, even though the Estonian Supreme Court has repeatedly stated that target values should be applied. See, for example, rulings no. 3-20-2273 and no. 3-20-19.

Furthermore, it should be noted that the noise standards in Estonia are based on averages, meaning that peak noise levels during the night can exceed the target value of 40 dB many times, as long as the average noise level during the night (from 11:00 PM to 7:00 AM) remains below 40 dB. This means that a person's sleep can be disturbed numerous times during the night under this norm (a person may wake up), which suggests that, in Estonia, due to seasonal factors (especially during the windy spring and autumn periods), it may be impossible to live near a wind farm due to disturbances caused by audible noise and resulting chronic sleep deprivation.

Response

The environmental noise assessment has been conducted in accordance with the relevant national regulations in the affected country, specifically following the Estonian Government Regulation No. 71 of December 21, 2016, on "Ambient Noise Limit Values, Noise Level Measurement, Detection, and Assessment Methods." Chapter 4.1 of the EIA report will be updated to include an evaluation of compliance with the prescribed noise targets.

It is important to note that in all residential areas in the vicinity, with the exception of the Lillemaa farmstead (cadastre number 112027098), the nighttime noise level is significantly below the target value of 40 dB. At the Lillemaa farmstead, the environmental noise level during the nighttime period reaches 40 dB, with the primary impact being attributed to wind turbine AL_19.

In light of the comments received during the public consultation process, the developer has decided to withdraw the plan for the construction of this wind turbine. An updated noise assessment, excluding AL_19, will be incorporated into the revised EIA report.

b) In section 4.1.1 of the EIA report, it is mentioned that there are no low-frequency noise standards in Estonia. It is well known that recommended standard levels were in place until 2017. It is also understood that, in Estonia, the planning of wind farms is based on the document "Ministry of the Environment, 2021. Consideration of Noise in Wind Turbine Planning" (https://envir.ee/keskkonnakasutus/valisohk/mura).

This document incorrectly asserts that low-frequency noise and infrasound are not significant for wind turbines. It also incorrectly claims that "trees and other vegetation provide some noise shielding. This is particularly effective at low wind speeds, and the noise associated with lower wind speeds "masks" lower-frequency noise." Based on physical principles and the laws of sound wave propagation, wind noise does not mask lower-frequency noise. Low-frequency sound waves do not disappear in the presence of wind; they continue to propagate. Depending on wind speed, the wavelength may slightly

increase, and the sound frequency (Hz) may change. When sound waves from multiple turbines intersect, their oscillations can align, leading to an increase in amplitude, amplification of the sound waves, and an intensification of the noise. This is the most unfavorable scenario in terms of the cumulative impact of a wind farm.

Response

The assessment of low-frequency noise in the EIA report will be clarified, and the following applicable Estonian regulations will be used as a basis:

- Minister of Social Affairs Regulation No. 42 "Noise Limit Levels in Residential and Recreational Areas, Dwellings, and Public Buildings, and Noise Measurement Methods", including Annex 1, which addresses recommended sound pressure levels for assessing the disturbance of low-frequency noise in living and sleeping rooms and equivalent spaces during nighttime.
- Minister of Social Affairs Regulation No. 75 "Limit Values for Ultrasound and Infrasound Sound Pressure Levels and the Measurement of Ultrasound and Infrasound Sound Pressure Levels."

c) Tables 4.1.10 and 4.1.11 of the EIA report present the modeled values of low-frequency noise for different wind turbine models and wind speeds at properties located in Estonia. However, it is not specified at which frequencies the low-frequency noise was modeled. It is well known that the lower the frequency of the sound wave, the greater the wavelength, and the further the sound wave travels.

Response

The aforementioned tables will be revised to include information on the frequencies of the noise.

d) The Environmental Impact Assessment (EIA) report states that the noise modeling is performed using the WindPro software. However, it is well known that the standard applied in WindPro is inadequate, as ISO 9613-2 is not directly intended for assessing noise at large distances (it was originally designed for evaluating noise propagation up to 1 km from the noise source).

Response:

The WindPro software (developed by EMD International) is specifically designed to evaluate the impacts of wind turbines and includes a specialized module for the calculation of low-frequency noise.

WindPro does not specify a fixed distance limitation for its application. According to the information provided on the developer's website, the accuracy of the calculation results may decrease at greater distances from the wind farm, particularly in areas with complex terrain. Low-frequency noise levels have been assessed for residential buildings located up to 2 km from the wind farm. Consequently, the model is deemed suitable for the calculations conducted within the framework of this Environmental Impact Assessment (EIA).

e) The EIA report refers to the noise standards in Denmark for infrasound. However, it is widely known that Denmark's largest onshore wind farm consists of 22 turbines, each with a capacity of 3.3 MW and a rotor diameter of 112 meters. In contrast, the average capacity of all onshore wind turbines in Denmark is only approximately 1.2 MW. In Lode, however, it is proposed to install onshore turbines comparable to offshore turbines, with a rotor diameter of approximately 160 meters. As the rotor diameter increases, so does the length, width, and weight of the blades, resulting in a higher tip-speed and stronger shockwaves

when the blade passes the turbine mast. For a turbine with a 180-meter rotor, at maximum rotation speed, the tip speed is comparable to the speed of a descending commercial aircraft.
The industrial noise target values currently in force in Estonia, as well as the recommended low-frequency noise values that applied until 2017, are not adequate for onshore wind turbines of the size proposed and do not provide sufficient protection for public health.

Response

WindPRO is the industry-leading software suite for the design and planning of wind farm projects. The WindPro software includes information on models from all major wind turbine manufacturers. The software's performance is not limited to specific turbine models that have been installed in Denmark, as suggested by the comment.

f) The EIA report does not consider the actual cross-sectional results of field studies conducted worldwide regarding the environmental impacts of noise, infrasound, and vibration. For example, in December 2012, a joint report by four research companies (Shirley Report) was published in the United States, focusing on low-frequency noise from the Shirley wind farm and turbines. The report found that wind turbines (Nordex 2.5 MW, approximately 150 meters in height) pose a serious threat to human health.

At the Saarde wind farm, residents living 2 to 2.5 km away from the nearest turbine have submitted numerous complaints to the Health Board regarding noise, infrasound, and vibration that disrupts sleep. The sound waves emitted by the turbines propagate through the air, causing the building's structures (walls, foundation) to vibrate. The perceptible vibration experienced by the human body is transmitted throughout the entire building.

Additionally, several local residents have experienced heart problems after the wind farm became operational, with these issues being documented.

SUGGESTION: Due to the outdated and inadequate noise standards in Estonia, resulting from the technological advancements and the exponential growth in the size and nominal capacity of onshore wind turbines, the Estonian state applies the precautionary principle. To protect the health of its citizens, the state will implement noise standards for wind turbines that are at least equivalent to those in force in Denmark and Germany, adjusting them proportionally to account for the significantly larger rotor diameter and nominal capacity of turbines planned for the Lode wind farm compared to typical onshore turbines in Denmark and Germany.

Response

Section 4.1 of the EIA report presents the information and rationale for the selected assessment method. The impact assessment of the planned activities, employing modeling tools, is a generally accepted approach, including in Estonia.

To date, the information regarding health disturbances or issues has been presented in a general manner, with the assumption that they may be linked to the Saarde wind farm. During the public consultation, we requested to present official conclusions of relevant authorities confirming that the Saarde wind farm has caused any negative health impacts. To this point, we have not received such information. The results of the EIA proofs that in the surrounding residential areas, environmental or other limit values or thresholds will not be exceeded.

The project developer relies on the existing regulations, assuming that the legislator has duly considered all relevant factors in establishing them. Additionally, the fact that these regulations have not been revised since 2017 suggests that the legislator deems them to be appropriate and aligned with the current situation.

3. Local Climate Changes

The Environmental Impact Assessment (EIA) report for the Lode wind farm does not address the phenomenon of local climate changes induced by wind farms, such as variations in wind speed, precipitation, temperature, and cloud cover, among others.

Numerous scientific studies and decades of satellite observations conducted by the European Space Agency have conclusively shown that wind farms lead to local climate changes, including a significant rise in surface temperatures. Additionally, wind speeds decrease downwind of the wind farm. For example, in offshore wind farms, such windless “zones” (also known as "wind wakes") can extend up to 40 kilometers from the turbines. On land, the rise in surface temperatures and the decrease in wind speeds can have significant negative effects on landowners located downwind of the wind farm. This impact is particularly detrimental to agriculture, affecting crop yields, but also has consequences for both urban and rural gardeners. Furthermore, the increase in surface temperature—most prominent at night—necessitates more energy for cooling buildings downwind during the warmer months, as well as additional irrigation for agricultural crops.

In addition, a reduction in low cloud cover occurs downwind of the wind farm, while it increases upwind, leading to an uneven distribution of precipitation. This exacerbates the temperature rise downwind, due to the reduced rainfall, which results in the formation of rainless and windless heat islands up to several tens of kilometers in size. Upwind of the wind farm, areas with more precipitation and higher wind speeds are created, as the rotation of the turbine blades generates a wind channel, known as the "suction effect".

These local climate changes, while often subtle, can have tangible effects on the environment, land use, and energy consumption, and therefore should be considered in the impact assessment process.

Proposal: Since the environmental planning document has completely overlooked significant negative environmental factors, the existence and scientific validity of which are undisputed, the state of Estonia, adhering to the precautionary principle and the principle of due diligence, demands the suspension of further proceedings concerning the Lode wind farm project. This suspension is required until a comprehensive assessment and mapping of the aforementioned impacts is completed.

Additionally, Estonia requests that the wind farm developer be imposed with a relevant and proportionate obligation to compensate the landowners in Estonia for all damages caused by the operation of the wind farm on their properties.

Response

The impact of the wind farms on local climate changes, such as wind speed, precipitation, temperature, cloud cover, water retention, and drought, has been assessed but is not considered a significant impact. These potential effects are considered as other impacts within the EIA. Based on the findings of the assessment, any changes to local climate conditions are expected to be minimal and do not pose a

significant risk to the surrounding environment or community. Consequently, these impacts were not further developed in detail, as they are deemed not to require additional mitigation measures or in-depth analysis due to their limited relevance and significance in relation to the overall project.

The phenomena mentioned in the comment, such as changes in temperature, are typically localized and of limited extent, specifically under wind turbine generators (WTGs). For example, temperature changes due to wind farms are generally within a range of a tenths of a degree Celsius and are typically confined to the area directly under the turbines. Similarly, changes in wind speed are primarily observed in the wake of the turbines, with reductions in wind speed of up to 10-20% in the immediate vicinity and a much smaller impact further downwind.

These localized effects are not expected to have a significant long-term impact on broader regional climate patterns. However, the developer remains committed to ongoing monitoring of environmental impacts throughout the life of the project to ensure compliance with environmental regulations and to mitigate any unforeseen negative effects. This approach is in line with industry best practices and ensures that any potential issues are identified and addressed promptly.

4. Night-time Light Pollution

The EIA report in section 4.6.7 addresses the mitigation of light pollution caused by wind turbines. It is well-known that wind turbines generate (night-time) light pollution, which transforms rural areas into visually industrialized urban zones. For large turbines, red warning lights are installed at various heights on the mast and on the nacelle for aviation safety, with their flashing visible from tens of kilometers away. This light pollution represents an environmental disturbance, which can pose risks, especially to people with epilepsy.

Currently, there are no regulatory standards in Estonia for night-time light pollution. Under the Law of Property (Section 143), individuals cannot be required to endure repetitive, deliberate, and disturbing light pollution.

Recommendation: The Estonian government demands the avoidance of this repetitive, deliberate, and disturbing light pollution to protect the health of its citizens. It also requires the wind farm developer to find alternative solutions for ensuring aviation safety without contributing to light pollution on its territory.

Response:

Red warning lights on wind turbines are designed to ensure aviation safety, typically consisting of steady or flashing red lights. While light pollution can be disruptive, particularly in the case of strobe lights or high-intensity lighting, there is no substantial scientific evidence supporting the claim that red flashing warning lights, as used on wind turbines, are a direct cause of epilepsy.

Epileptic triggered by light are generally associated with specific types of visual stimuli, such as strobe lights, particularly those with specific frequencies. According to the Epilepsy Foundation, photosensitive epilepsy is usually triggered by flashing light at frequencies between 5-30 Hz, whereas the flashing frequency of red warning lights on wind turbines is typically much lower, often between 0.5 to 2 flashes

per second (which corresponds to 0.5-2 Hz). This flashing rate is far below the threshold needed to trigger epilepsy in photosensitive individuals[2].

5. **Disruptive Shadow Flicker**

Wind turbines can cause environmental disturbances, including unnatural shadow flicker. Section 4.2 of the Environmental Impact Assessment (EIA) report refers to the experience of other countries and time-based restrictions (such as 30 theoretical maximum hours of shadow flicker or 10 total hours considering climatic conditions).

However, the developer of the Lode wind farm assumes, without any legal basis, that residents living within the impact area of the wind farm in Estonia must endure theoretical shadow flicker for at least 30 hours during the calendar year.

It is known that there are no regulatory standards for shadow flicker in Estonia, which means that the right to demand tolerance for recurring, deliberate, and disruptive shadow flicker cannot be invoked based on the Law of Property (§ 143).

***Proposal**: The Estonian state, in order to protect the health and well-being of its citizens, demands the prohibition of the creation of recurring, deliberate, and disruptive shadow flicker on its territory. The developer of the wind farm should be required to implement solutions to completely eliminate such shadow flicker.*

Response

The conditions outlined in the comment do not align with the approach applied to the assessment of flickering in wind farms within the territory of Estonia. For instance, the EIA report of Põlendmaa wind park evaluates compliance with the German threshold values, similar to the approach used in the EIA report for the Lode wind farm. However, as the letter fails to provide a rationale for this request, it remains unclear why a different approach is being sought for the wind farm project planned within the territory of Latvia.

The developer will ensure the implementation of the measures outlined in the EIA conclusion to mitigate the flickering effect.

6. Noise, including Cumulative Noise

In section 4.1.3 of the Environmental Impact Assessment (EIA) report, the existing noise situation on the territory of Estonia near the planned wind farm is described. It is noted that the only significant noise sources in the surrounding area are road traffic.

We believe that the noise, including cumulative noise, has not been adequately assessed in the context of the wind farm's implementation. The inclusion of areas on the Estonian territory that fall under the influence of industrial noise originating from Latvia restricts the entrepreneurial freedom and opportunities of Estonian citizens within their own country. Moreover, should cumulative noise effects emerge, the responsibility for mitigating these effects could potentially fall on Estonian businesses.

[2] https://www.aesnet.org/, https://www.epilepsy.com

***Recommendation**: The Republic of Estonia requires a thorough and adequate assessment of all potential noise impacts, including cumulative noise, resulting from the wind farm. Special attention should be given to ensuring that Estonian businesses and citizens are not unfairly burdened with the responsibility for mitigating cross-border noise impacts.*

Response

Section 4.1.3 of the EIA report provides information on existing noise sources in Estonia, which can be identified from publicly available databases. According to the environmental permit registry, no permits have been issued within the potential cumulative impact zone that identify or specify any noise sources.

7. Some of the Supreme Court's positions on noise:

In the case 3-3-1-17-14, the Supreme Court noted: "The Collegium considers it common knowledge that prolonged, intense, unwanted sound can impact a person's psychological well-being and, through that, their health. Noise can induce stress and aggression and disturb activities protected by an individual's fundamental rights. The impact of noise on an individual is subjective, depending on hearing ability, cultural background, health condition, the information contained in the sound, the surrounding environment, and other factors."

In case 3-3-1-88-15, the Court ruled: "The appellant would still have the opportunity to demand adherence to noise regulations if the disputed detailed plan were upheld, but proving a violation of noise norms may prove difficult. Moreover, it is unreasonable to first build a wind turbine and only then address noise concerns. Therefore, the appellant's rights are already violated by the contested detailed plan, not just the subsequent actions related to its implementation."

In case 3-20-2273, the Supreme Court stated: "Despite the fact that, according to § 56(2)(2) of the Environmental Protection Act, the noise target value refers to the maximum allowed noise level in areas with new general plans, this does not mean that noise target values are irrelevant for other areas. Under PlanS § 8, the principle of maintaining existing environmental values must be followed in the planning process. Spatial planning should not be based solely on legal limits but should aim to find an optimal balance between the interests of all affected parties (RKHKo 3-3-1-88-15, p 25). Significant deterioration in noise levels should therefore be avoided even below the noise limit, where reasonably possible (see also § 14 of the Environmental Code). Noise target values are set to prevent health risks. This risk does not depend on whether the area is part of a new general plan or not. Thus, noise levels between the target and limit values should not be considered insignificant from a health perspective outside of areas covered by new general plans. Outside the areas specified in § 56(2)(2) of the Environmental Protection Act, administrative authorities must consider noise target values as a public interest goal, alongside other relevant factors and interests (HMS § 4(2), PlanS § 10(1)). Therefore, the application of noise target values is not excluded when planning new noise sources outside the areas covered by new general plans. The target value is important and must be considered if the existing noise situation could worsen due to the addition of a new noise source."

The Court continues in the same ruling: "Although in the present case, noise limit values must be applied as the norm, this does not prevent local authorities from taking more effective measures to protect the health of the local population than what is strictly necessary. § 56 of the Environmental Protection Act establishes maximum norm levels, and the planning authority cannot allow the development of a more

intense noise source than these norms. Noise norms create a subjective public right for local residents to mitigate excessive noise (RKHKo 3-3-1-15-16, p 15). Below the maximum norm level, however, the developer does not have an unrestricted right to produce noise, but under these conditions, the planning authority has broad discretion. The developer cannot dictate their preferred planning solution within the noise limit (see RKHKm 3-17-643/15, p 14). In situations outside the legal limits of decision-making, the planner must balance various interests, including public interests and values (PlanS § 1(1), § 10(1)). The existing environmental quality must at least be maintained and, if possible, improved (PlanS § 8 and § 12(2))."

Additionally, the Supreme Court notes in the same ruling: "Entrepreneurial freedom does not provide grounds to assume that a local government should alter land use conditions for the sake of business

Further, the Court states: "The defendant has also justified that public interests do not justify the imposition of infringements on residents. Therefore, the defendant has taken into account public interests, such as those related to renewable energy production, but has deemed these interests disproportionate when compared to the infringements on residents."

I also refer to the Supreme Court ruling 3-20-999 by analogy: "The fact that the miner is subject to several obligations under the law, such as compliance with air quality standards, does not justify neglecting to assess impacts or to overlook them during the permit issuance process. The purpose of Environmental Impact Assessment (EIA) is to predict proactively whether compliance with norms is feasible or realistic in carrying out the evaluated activity, and, if necessary, to establish specific conditions to ensure compliance with these norms (e.g., mining methods, natural or artificial barriers to limit air pollution, etc.). The Collegium has previously explained that the EIA requirement reflects the precautionary and preventive principles, aimed at preventing environmental disturbances and avoiding the need for subsequent mitigation measures (RKHKo cases No 3-16-478/44, p 20 and No 3-3-1-15-16, p 41; see also § 2 of the Environmental Impact Assessment and Environmental Auditing Act of 2004, KeHJS 2012 § 2(1)). Furthermore, environmental disturbances are also those adverse effects on the environment that do not exceed numerical limits (KeÜS § 3(1)), and efforts must be made to reduce such disturbances to the greatest extent possible (KeÜS § 1(1), § 14). Although the mentioned KeÜS norms were not in effect at the time of the disputed administrative acts, the environmental law principles expressed therein should have been considered from the perspective of constitutional principles (§ 5 and § 53) and Article 191 of the Treaty on the Functioning of the European Union (formerly Article 174 of the EC Treaty), even earlier, when weighing the various interests in the issuance of environmental permits. Even noise or dust levels that do not exceed limit values can still deteriorate the quality of life for local residents (see also RKHKo No 3-3-1-88-15, p 25), and this must be considered in comparison with the interests of the applicant and the public."

PROPOSAL:
Given that the cumulative noise potential and the possible infringement on the entrepreneurial freedom of Estonian citizens and businesses have not been adequately assessed, the Estonian state, in accordance with the precautionary principle and the protection of its citizens' interests, requires the wind farm developer to move the wind turbines to a distance from the Estonian state border where they would not adversely affect the economic interests of Estonian citizens across borders.

Response

The assessment is based on the precautionary principle, and the evaluation of impacts considers the worst-case scenario. For instance, the noise impact is assessed under the assumption that the wind farm operates continuously at maximum capacity, which generates the highest noise emissions, although the actual period during which the wind farm operates at such capacity, as indicated by wind forecasts, is expected to be shorter. Furthermore, the calculation does not account for the fact that the wind farm will be halted for certain periods to mitigate flicker effects and minimize impacts on bats and birds. Consequently, the compliance with limit values and target thresholds is evaluated based on the worst-case scenario, whereas the actual impact is anticipated to be lower. In accordance with the Espoo Convention and national legislation, transboundary impacts are assessed, and appropriate measures for information dissemination and public consultation are ensured. This process guarantees that conditions are included in the final decision to mitigate or eliminate any potential transboundary impacts. Therefore, the ultimate condition that prohibits any activities in the border area that could potentially affect the territory of the neighboring country is unjustified and contradicts the relevant legal framework.