



## Tradable Sound Rights

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### Summary

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PACS no. xx.xx.Nn, xx.xx.Nn

## 1. Introduction

The integration of industrial activities has been at odds with the residential environment for quite some time now. This was the case in the 1960s and is still the case now. People have searched for solutions over the years. On the one hand, by promoting noise-reducing measures on the noise-producing side. On the other hand, by allowing more noise in the residential environment in some way. In particular, the seaport-related industrial estates are regularly stuck. This is due to the transition from the “old” ports to living areas, but also because of the intensification of deep-water-related activities.

Seaport-related industrial estates often comply with the Noise Abatement Act for zoned industrial estates. The noise pollution towards the (living) environment is safeguarded by a zone. Exceedance of the zone values is not allowed by law. Even permit applications that lead to the slightest of exceedances must be rejected pursuant to case law.

A noise allowance is of essential importance to companies that want or have established themselves in a zoned industrial estate. They have long been convinced of the “value” of having a noise allowance. The current system works in such a way that, if your noise allowance is insufficient, expansion or intensification is impeded. A noise allowance is no longer available at many locations. If you have kept the required noise allowance for yourself as a company, you can continue, otherwise you have a problem.

A structure vision has been established for the Westpoort and Moerdijk seaports in which a significant growth objective has been included. It applies to both industrial estates that the “noise straightjacket” is constrictive at a number of zone points. The wish to realise the growth objective has been the reason for the Port of Amsterdam and the Port of Moerdijk to have a study carried out into the tradability of noise immission levels. This study was performed within the framework of the Subsidieprogramma Zeehaven Innovatie Project voor Duurzaamheid (Subsidy Programme for the Seaport Innovation Project for Sustainability) of the Dutch Ministry of Infrastructure and the Environment, executed by DPA Cauberg-Huygen B.V.

### 1.1. Approach

A buffer with regard to a noise allowance has been built up consciously or unconsciously by companies on zoned industrial estates. This “buffer” is currently being fostered individually by many companies. Other companies are unaware of the buffer. If this buffer at companies established on the “locked” industrial estates can be eased off, the noise allowance that this would make available can be deployed for new activities or expansions.

By linking a value in terms of money to the noise allowance in dB(A), insight is provided into the value of noise for companies. Speaking in terms of dB(A) does not appeal to many, but speaking in terms of money does.

The total noise impact on the environment is limited by a zoning scheme. Standards apply with regard to the maximum noise immission of companies established on an industrial estate both for the zone boundary and the objects (residences) that are sensitive to noise that are located in that zone. Every company established on the zoned industrial estate contributes to this noise immission. By linking this contribution to a monetary value, insight is provided into the value of the noise immission. The higher the contribution of a company to this noise immission, the higher the monetary value. If the contribution has a monetary value, trading can take place.

A trading platform will be introduced that will be linked to the immission value. This platform will, in principle, only be accessible to the companies that are established on the industrial estate. Within the platform, insight will be provided into the noise contribution of all companies at the relevant immission points. By providing this insight, companies will be able to communicate at an earlier stage and better amongst themselves about the noise allowance.

### 1.2. Available noise allowance

It is expected that approximately 3 dB(A) more noise allowance can, in principle, be unlocked by applying tradable noise immissions.

The reductions to be attained can be found in the noise reserve that companies have obtained within the integrated environmental permit/Activities Decree, which may be deliberate or not. On average, the noise allowance of 3 dB(A) to be attained can be substantiated as follows.

- Many permits have been issued based on an acoustic forecast. A forecast always has a safety margin. The noise models that form the basis of a

forecast are often used as the foundation including the margin for the further permit situation.

- Many permits are 10 to 20 years old. Much equipment has been replaced over the years. New equipment is usually quieter.
- Over time, activities will have been dropped, replaced or their performance changed. The noise consequences of this have not always been included in the permits.
- The available quieter technologies to be applied are currently not being deployed appropriately because of their cost-increasing effect. The trading system will change this.
- By ensuring that there is insight into the costs of “noise” and what it can yield in terms of money in addition to the costs for realisation and maintenance, companies will also include the possible revenue from noise reduction in their calculations through this trading system.

### 1.3. The study

The study has been carried out in different phases. The first part mainly examined the existing trading systems. The elements of these systems that can be used for a noise trading system were studied. There are examples of emission systems with tradable permits both in the European Union and in the United States of America. This, for example, applies to the milk quota system. What is commonly referred to as the MIME study that is related to a system of sound rights in connection with the taking-off and landing at airports within the EU may perhaps be more appealing. This study has not yet been completed, but the elaboration of this system is known to a large extent. The current legal provisions for noise pollution forms the foundation. A system applies for each airport where the noise impact of the taking-off and landing per aircraft type is determined. The LAeq,24h is translated into sound rights per day. These sound rights can be traded. The first allocation takes place based on grandfathering (without financial consideration). The price is determined by supply and demand. By replacing a noisy aircraft by a quieter type, sound rights are released that can be traded. These permits, however, can also be used by the entitled party to have more flights.

They also studied the results of previous studies into emission permit trading. For example, the Dutch Ministry of Housing, Spatial Planning and the Environment provided an explanation regarding the possibilities of emission trading in November 2004 under the title “Emissiehandel, mogelijkheden bij beleidstekorten” (Emission

trading, possibilities when there are policy shortfalls). The following conditions must be met to have an effective emission trade:

1. There must be a quantitatively long-term objective;
2. The emission must be identified as a tradable unit;
3. The sources must be known;
4. Emissions must be measurable or you must be able to determine them in some other way;
5. A market must be created;
6. Trading must take place between the participants because there are sufficient participants;
7. Different types of companies must participate so that investment spreading is possible;
8. Sufficient technical possibilities must be available to take cost-effective measures;
9. It must be relatively irrelevant at which emission source within the system measures are taken;
10. New companies must gain access to the market;
11. Expansion for existing companies must be possible;
12. Abuse of the system to get rid of the competition from the market must not be possible;
13. The legal certainty for participants must be safeguarded;
14. Arrangements must be in place for the legal protection of the participating companies;
15. Arrangement must be in place for enforcement and sanctions;
16. Arrangement must be in place for the legitimacy of the implementing authority;
17. Participants must have sufficient insight into or control over the system;
18. The system must not be undermined by legislation and regulations;
19. The trading method must be transparent.

An exploratory study has also been carried out into the following question at the instructions of the Dutch Ministry of Housing, Spatial Planning and the Environment by the Oranjewoud agency:

“With regard to which environmental aspects can trading in emission permits contribute to attaining national objectives.” The results of the study into the possibilities of using emission trading in the different policy themes have been elaborated in the report “Handel in milieurechten. Onderzoek naar de mogelijkheden op gezondeerde industrieterreinen en doorkijk naar andere beleidsthema’s” (Trading in environmental permits. Study into the possibilities at zoned industrial estates and a view of other policy themes), project no. 180111, review of April 1<sup>st</sup>, 2008.

They conclude with regard to the noise of zoned industrial estates that this noise can be considered a tradable entitlement (i.e. permit). This entitlement ensures that companies can be responsible for the acoustic details of an industrial estate. The distribution between the authorities and the business community will, therefore, be different because of this. The authorities define the size of the zone and the business community determines the distribution of the noise allowance. A possible shrinkage of a zone can be achieved by a municipality by purchasing sound rights and taking them off the market (no trading).

#### 1.4. Set up of the system for industrial estates

Noise Immission Trading Points (NITPs) are established around an industrial estate, by preference, at the zone. The total noise contribution of 50 dB(A) can be linked to an amount, for example, € 15 million per point, for each of these points. This value is built up based on the individual noise contribution of companies. Each company will be given the monetary value related to its own noise contribution “for no financial consideration” during the introduction. This applies to every established NITP. This will ensure that the impact of noise is given a book value in terms of money. When the trading system is introduced, money will not be exchanged. This will only take place when noise is actually traded and changes owner based on supply and demand. If a company wants to realise a specific activity or expansion, this company can purchase noise here. The company can start to be operation with regard to this through the trading register. The trading register will provide insight into the noise contribution of all relevant companies during the day, evening and night periods. A company can submit a purchasing request or even approach other companies actively. Companies can also offer available noise allowance for other companies to buy. The price would then be determined by supply and demand.

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#### 1.5. Elaboration

The zone management system has been taken as the basis. All activities relevant to noise are included in this system provided that they are up-to-date (a crucial condition!). This is based on regulations for activities permitted for enterprises. This also applies to the noise reservations of sites that have not yet been developed. Any residual noise allowance, that is, the allowance to arrive up to a total of 50 dB(A), accrues to the total available noise allowance of the industrial estate.

The contribution of each company to the noise allowance of an NITP will be recorded in a data register. Every contributor will have insight into this data register. When a participant requires an extra noise allowance, the register can be searched for companies that may possibly supply the required noise allowance. These companies can be contacted directly or through the trading system to arrive at a trading transaction. It can be calculated indicatively which costs are incurred with transaction by using the calculation module linked to the register based on previous transactions. The best possible trading mix can be determined by using the calculation module. The price to be actually paid will depend on supply and demand. The costs will be higher if a noise allowance is being requested with regard to a “full” NITP. On the other hand, the costs with regard to a NITP with a high level of free noise allowance may be lower. Different costs will apply because of the difference in the day, evening and night periods.

A noise allowance price that is driven up due to scarcity is not, by definition, a bad thing. After all, when the reward is higher, companies will be more likely to implement noise-low activities or noise-reducing measures. The costs of such activities or measures will be covered more quickly by the reward that this will attract in relation to a higher commercial value.

The implementation must be managed by a reliable party. The trade register must be managed and the transaction must be supervised and verified. A transaction can only be implemented if approval is granted by an authority that must be appointed for this purpose. After such approval, it must be clear how the transaction will also be given concrete form in permits. The determination method of the noise immission levels must be

defined. As must the calculation method for the trading costs for noise allowance.

In view of the objectives, it is recommended that a realisation stipulation is included in a transaction. The decision may be taken to have a realisation period of, for example, 2 years to have the expenditure related to the purchased noise allowance take place effectively.

Sanctions may be linked to not applying the purchased noise allowance in accordance with the objectives of the noise trading system. For example, to prevent stockpiling or to ensure that a monopoly position is not obtained. The size and application conditions can be linked to a commercial contract. An obvious solution would be a penalty clause that has such a scope that it acts as a deterrent when compared to the value of the commercial transaction or a noise permit linked to a plot.