

# Communications with Residents

Ways to improve Communication with Residents about Road Traffic Noise

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**RAMBOLL**

 **Vejdirektoratet**  
Danish Road Directorate



# Outline

- Ways to improve communication with neighbours at different levels
- Practical use of auralisation of road traffic noise to support the understanding of noise maps and noise calculation
- Assessment of noise impact on human activities in recreational and natural areas





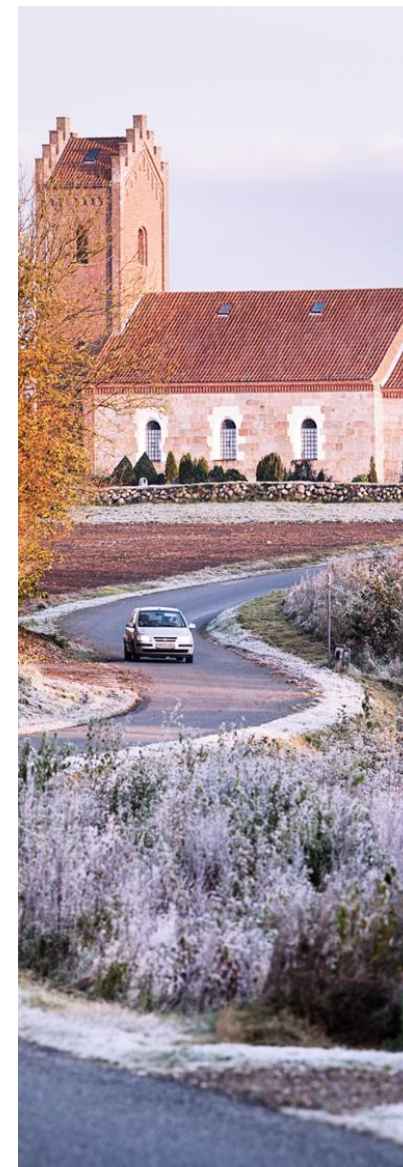
# Purpose of communication

- Balance expectations of the projects
- Uncover objectives
- Set up key messages to stakeholders
- Choose info channels
- Feedback from residents:
  - “Too much focus on nature instead of humans”
- Noise is the main subject when communicating with neighbours



# Goals

- 1) To inform openly, objectively and professionally about the project, so the uncertainty about the future is minimized for the affected residents
- 2) To reduce the number of inquiries from residents later in the project and thereby provide a higher degree of peace to work for the project manager and others involved
- 3) Branding the Road Directorate as open (co-operative), objective (impartial) and professional (holistic and competent).



# Different types of meetings

- Dialogue meetings during public consultation/hearing
- Information meetings
- Cafe meetings with smaller, local groups
- Coffee meetings with neighbours
- Presentation of the projects to the local politicians
- In the future: dialogue on social media like Facebook, Twitter and online meetings (via Skype)





# How do we present noise?

- Noise effects are shown together with mitigating measure on noise maps
- Noise maps can be difficult to understand
- Auralisation is used to support the noise maps
- Used on our homepage and in the coffee breaks at consultation meetings
- Shows effects of different kind of mitigating measures, types of roads, traffic and weather



# Noise exposure of recreational areas





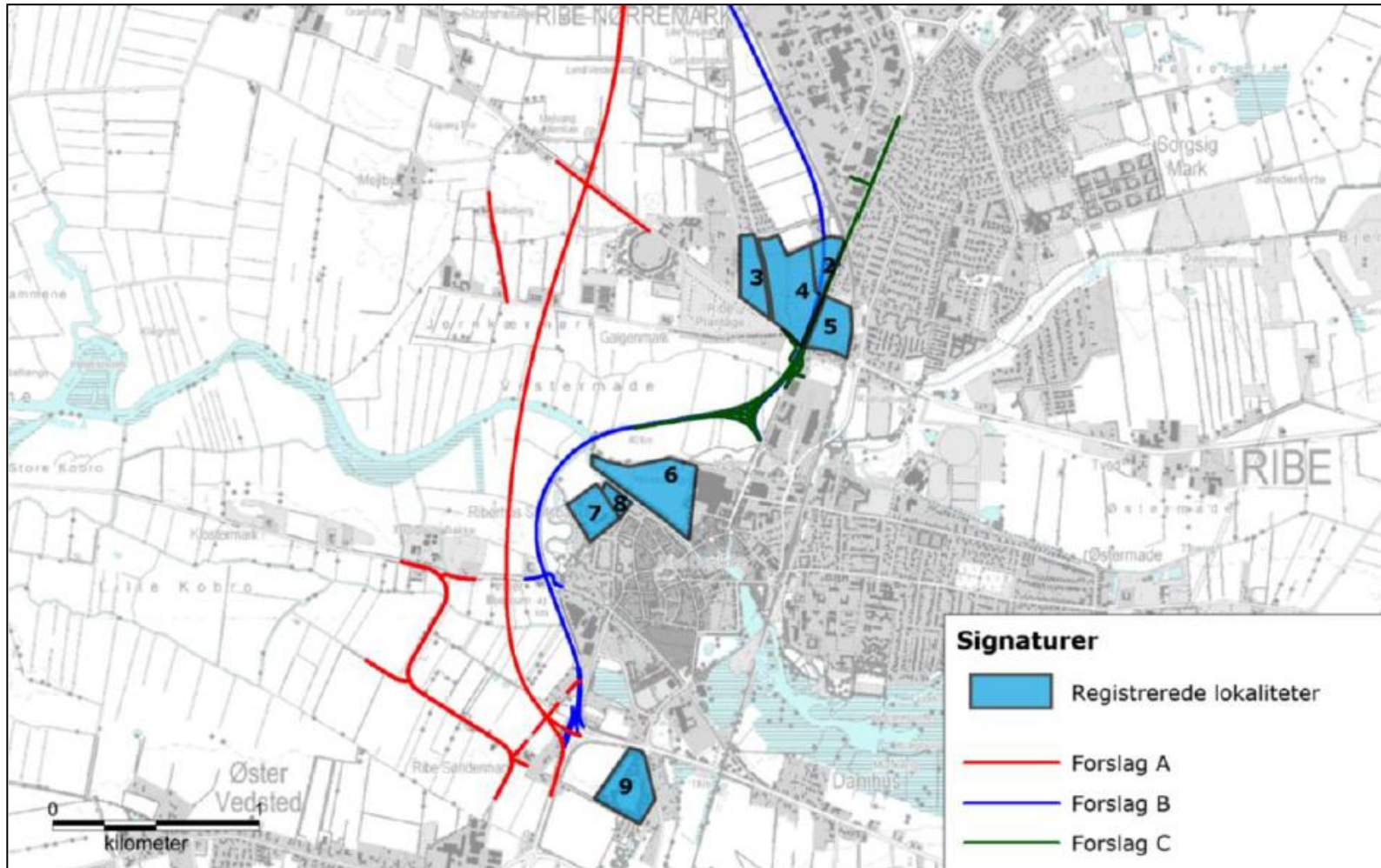
# Background and Purpose

- “Why do you only talk about animals, birds and plants – we are here as well?”
- People are using the landscape for recreation and resting
- Access to (relatively) quiet areas matters to people
- Impacts on these areas must be included in environmental assessments of road projects
- A method to assess noise impact on human activities in recreational and natural areas





# Sites for recreation



# A practical, feasible method

- Identifying sites used for recreational activities
- Site characteristics
- Human activities
- Describing present soundscape
- Noise mapping; present and future road traffic noise
- Assessing noise sensitivity of human activities on each site
- Assessing sensitivity to changes in road traffic noise levels





# Site visit

## The site and it's use

- The site (urban, rural. Forest, park, beach...)
- Type of activities identified (walks, cycling, bathing, hunting...)
- Extent of use (low, medium, high)
- Facilities (roads, paths, tents, tables...)

Støj og menneskers brug af rekreative områder – feltskema  
Version 19. november 2014

## Lokalitet og brug

Lokalitetens navn	Type (Lokalitetens udbredelse i landskabet):		
	Linjeformet	Areal	
Beliggenhed (områdetype, hvor lokaliteten ligger):	Landområde	Vandområde	
Bycentrum	Andet		
Byudkant	Lokalitetens hovedkarakter:		
Landsby	Skov		
Åbent land	Åbent landskab		
Vandområde	Naturområde/udsigt		
Andet	Museum/kultur		
	Formidling/undervisning		
	Park (by-)		
	Strand		
GPS (evt.)	Sti (fod/cykel/ride...)		
Inventar	Istræsanlæg		
Dato og tidsrum	Område til friluftsliv		
Ugedag	Hundeskov el. lign.		

Vejrforhold	
Vindretning (N, NØ, Ø, SØ, S, SV, V, NV)	Temperatur, ca. i °C
Vindstyrke (ingen, svag, let, frisk, hård etc.)	Skydække (ingen, let, halv, trekvart, overskyet)

Aktivitetstyper (angiv gerne flere – marker evt. med PRI for primær og SEKUN for sekundær)			
Vandreture/gang/løb inkl. hundeluffning	Lystfiskeri	Leg/børn	Ophold u. overnatning
Cykling	Fuglekigteri o.lign.	Sejlad	Overnatning
Mountainbike	Jagt	Badning	
Ridning			

Anvendelse	
Anvendes f.m. daglig færdsel (tilfra arbejde, skole etc.)	
Lokaliteten opses af brugerne	

Anvendelsesgrad (sæt kryds og supplér med oplysninger om, hvordan anvendelsesgrad er vurderet (fx folk i området, slid på stier etc.))	
Lidt	
Middel	
Meget	

Faciliteter			
Vej	Teltplads/shelter	Mountainbike-bane	Fugletårn
Stier	Bålplads	Lystbådehavn/roklub	Skitning med info til brugere
Mærkede vandreruter	Lejleplads	Badebro	Kiosk/shus el. lign.
Mærkede løberuter	Borde/bænke	Bådepladser	Parkeringsplads
	Træningsbane		

Evt. bemærkninger

# Site visit

## Soundscape at the site

- Noise sources (road, rail, wind turbine, industry...)
- Soundscape indicators
- User expectations on present noise exposure
- Activities' sensitivity to noise exposure (none, slight, medium, strong, extreme)
- Activities' sensitivity to **changes** in noise exposure (none, slight, medium, strong, extreme)

Unpleasant								Pleasant			
0	1	2	3	4	5	6	7	8	9	10	
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Uneventful								Eventful			
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Monotonous								Exciting			
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Chaotic								Calm			
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### User expectations on present noise on the site (estimated during site visit)

High noise level. Disturbing the activities on the site

Medium noise level. Annoying but not disturbing the activities on the site

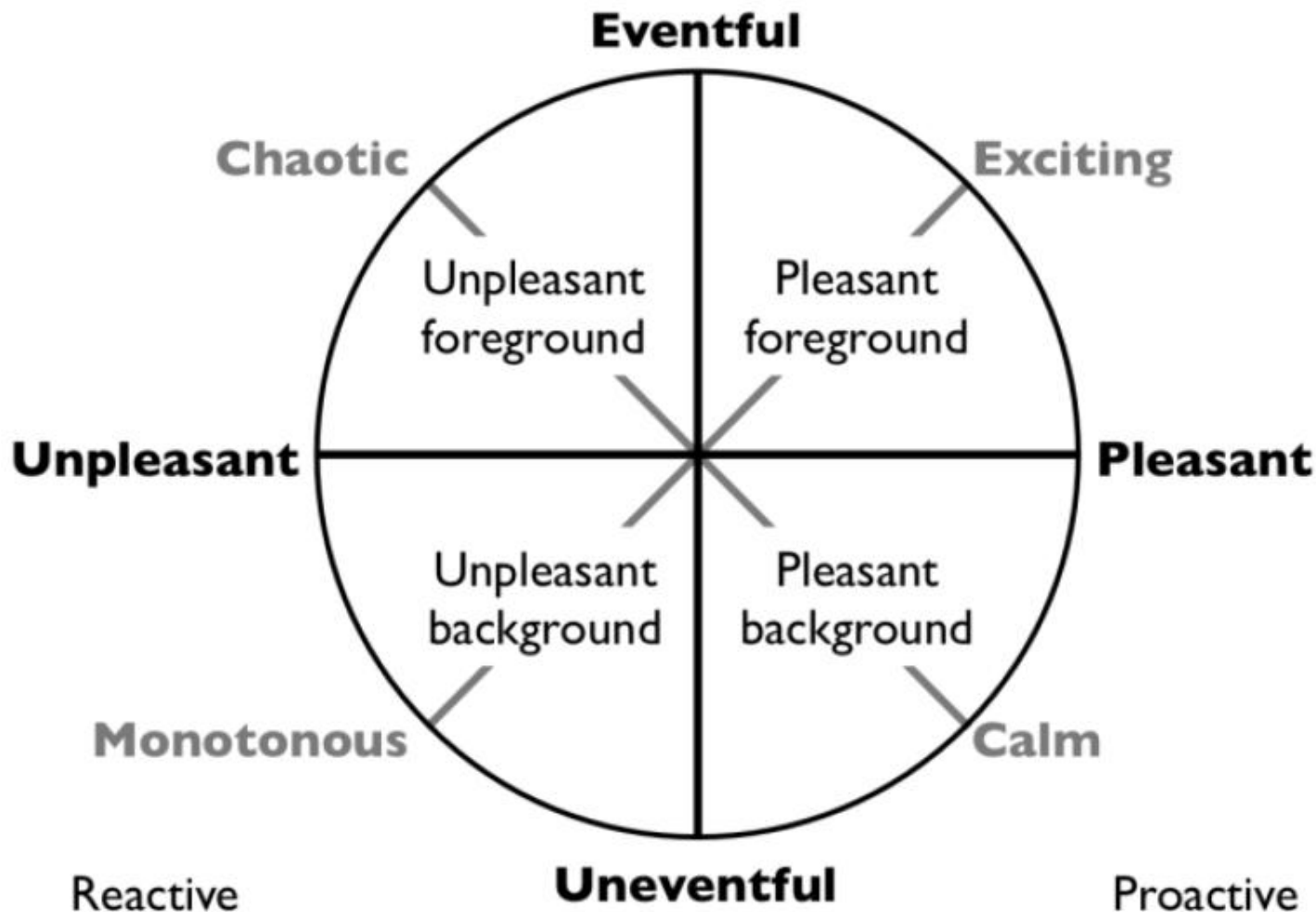
Low noise level (e.g. distant road traffic) – not disturbing

Only noise as occasionally but recurrent incidents, e.g. overflight. Peace and calm

Quiet area/Undisturbed – no or very rare any noise incidents. Peace and calm



# Description of noise perception



Tjeerd C. Andringa \* and J. Jolie L. Lanser  
Int. J. Environ. Res. Public Health 2013, 10, 1439-1461

# Final evaluation

Lokalitet			Anvendelses-grad	Brugernes forventninger om nuværende støj på lokaliteten	Aktiviteters samlede støjfølsomhed	Aktiviteters følsomhed overfor øget trafikstøj	Vurdering af løsningsforslagenes påvirkning af de rekreative aktiviteter på lokaliteten	
Nr.	Navn	Hoved-karakter					Forslag A	Forslag B
1	Skoven	Skov	Lille - middel	Middel støj, som er generende, men ikke forstyrrende	Moderat	Moderat	/	/
2	Vest Skoven	Skov	Lille - middel	Meget støj, som forstyrrer aktiviteterne på lokaliteten	Lettere	Lettere	/	÷ ÷
3	Plantagen	Skov	Lille - middel	Mindre støj, som ikke er generende	Moderat	Moderat	÷	÷
4	Vest Plantagen	Skov	Høj	Middel støj, som er generende, men ikke forstyrrende	Middel	Moderat - høj	/	÷ ÷
5	Øst Plantagen	Skov	Middel	Middel støj, som er generende, men ikke forstyrrende	Lettere	Lettere	/	÷
6	Engen	Park	Høj	Middel støj, som er generende, men ikke forstyrrende	Moderat	Moderat	/	+
7	Mindesmærket	Åbent landskab (natur og kulturhist.)	Høj	Middel støj, som er generende, men ikke forstyrrende	Lettere	Lettere	/	++



# Contribution to EIA

## People and community

- Assessment of noise impact on dwellings
- Assessment of noise impact on areas used by people for recreational activities
- Part of an approach addressing impact on people and community as much as nature and habitats.



# Key lessons

## New method:

- A practical, feasible method
- We have to go out in the field
- Is the site evaluations too subjective - should we measure noise on the sites?

## Communication:

- Communication is essential to involve people and it is essential for a good result
- It is time-consuming, and we need to simplify our messages. There are room for improvement

